

**SPECIFICATIONS FOR
ON BOARD DIAGNOSTICS II
(OBDII) ANALYZER
FOR USE IN THE
TEXAS VEHICLE EMISSIONS
TESTING PROGRAM**



**Texas Commission on Environmental Quality
Air Quality Planning & Implementation Division**

May 1, 2005

1.0 GENERAL

1.1	<u>Design Goals</u>	<u>1</u>
1.2	<u>Useful Life</u>	<u>1</u>
1.3	<u>Nameplate Data</u>	<u>1</u>
1.4	<u>Manuals</u>	<u>1</u>
1.5	<u>Certification Documentation</u>	<u>2</u>
1.6	<u>Warranty Coverage/Mandatory Service Contract</u>	<u>5</u>
1.7	<u>Tampering Resistance</u>	<u>5</u>
1.8	<u>Manufacturer Provided Services</u>	<u>7</u>
1.9	<u>Certification Requirements</u>	<u>11</u>

2.0 CONSTRUCTION DESIGN

2.1	<u>Materials</u>	<u>11</u>
2.2	<u>Construction</u>	<u>12</u>
2.3	<u>Mobility</u>	<u>12</u>
2.4	<u>Electrical Materials/Construction</u>	<u>12</u>
2.5	<u>Storage Temperature</u>	<u>12</u>
2.6	<u>Operating Temperature</u>	<u>13</u>
2.7	<u>Humidity Conditions</u>	<u>13</u>
2.9	<u>Operational Design</u>	<u>13</u>
	2.9a <u>OBDII Link Self-Diagnostic Tool</u>	<u>13</u>
	2.9b <u>DLC Cord</u>	<u>13</u>
2.10	<u>Gas Cap Integrity Test</u>	<u>14</u>
2.11	<u>Microcomputer Specifications</u>	<u>17</u>
2.12	<u>Gas Calibration File</u>	<u>19</u>
2.12	<u>Standard Hardware</u>	<u>19</u>
2.13	<u>Required Printer</u>	<u>24</u>
2.13a	<u>Running Changes</u>	<u>24</u>
2.14	<u>Clock/Calendar</u>	<u>25</u>
2.15	<u>Lockout Notification</u>	<u>26</u>
2.15a	<u>Vehicle Diagnosis</u>	<u>26</u>
2.16	<u>Software Loading</u>	<u>26</u>
2.17	<u>Communications with Texas Information Management System</u>	<u>26</u>
2.17b	<u>Form, Manner and Frequency of Data Transmittals for TIMS</u>	<u>28</u>

3.0 DISPLAY PROMPTS AND PROGRAMMING CRITERIA REQUIREMENTS

3.1	<u>Main Menu Selection '1' "Safety and Emissions Inspection"</u>	<u>34</u>
	3.1.1 <u>Access Code Prompt</u>	<u>34</u>

3.1.2	<u>PIN Number Prompt</u>	<u>34</u>
3.1.3	<u>Date Expiration Prompt</u>	<u>35</u>
3.1.4	<u>Insurance Prompt</u>	<u>36</u>
3.1.6	<u>Fuel Type Prompt</u>	<u>36</u>
3.1.7	<u>Model Year Prompt</u>	<u>37</u>
3.1.5a	<u>GVW Prompt</u>	<u>38</u>
3.1.5b	<u>Emissions Test Selection Logic</u>	<u>38</u>
3.1.8	<u>Bar Code Entry of License Plate Type, Number, and VIN Prompt</u>	<u>42</u>
3.1.9	<u>License Type Prompt</u>	<u>43</u>
3.1.10	<u>License Prompt</u>	<u>43</u>
3.1.12	<u>VIN Number Prompt</u>	<u>44</u>
3.1.13	<u>Texas Information Management System</u>	<u>45</u>
3.1.13a	<u>Vehicle Type Prompt</u>	<u>46</u>
3.1.13b	<u>Vehicle Body Type Prompt</u>	<u>47</u>
3.1.14	<u>Vehicle Make Prompt</u>	<u>48</u>
3.1.15	<u>Model Prompt</u>	<u>48</u>
3.1.16	<u>Odometer Prompt</u>	<u>49</u>
3.1.16a	<u>Injection/Carburetion Prompt:</u>	<u>49</u>
3.1.16b	<u>Cylinder Prompt</u>	<u>50</u>
3.1.16c	<u>Engine Units Prompt</u>	<u>50</u>
3.1.16d	<u>Engine Size Prompt</u>	<u>51</u>
3.1.17	<u>GVW Prompt</u>	<u>51</u>
3.1.17a	<u>Transmission Prompt</u>	<u>53</u>
3.1.17b	<u>Ignition Prompt</u>	<u>53</u>
3.1.17c	<u>Exhaust Prompt</u>	<u>53</u>
3.1.17d	<u>Vehicle 80" Width Prompt</u>	<u>54</u>
3.1.18	<u>Test Type Prompt</u>	<u>54</u>
3.1.19	<u>Confirm Vehicle Info Display</u>	<u>55</u>
3.1.20	<u>Safety Inspection Items</u>	<u>55</u>
3.1.21	<u>Safety Repair Cost Prompt</u>	<u>57</u>
3.1.22	<u>Safety Test Fee Prompt</u>	<u>57</u>
3.1.23	<u>Pre-Tune Prompt</u>	<u>58</u>
3.1.24	<u>Update Test Record</u>	<u>58</u>
3.1.25	<u>OBDII Only Test Procedure</u>	<u>59</u>
3.1.25a	<u>OBD II Hookup</u>	<u>59</u>
3.1.25b	<u>OBD II Connector Prompt</u>	<u>59</u>
3.1.25c	<u>OBD II (Key On, Engine Off) Prompt</u>	<u>60</u>
3.1.25d	<u>OBD II Engine Running Prompt</u>	<u>61</u>
3.1.25e	<u>OBD II Key On, Engine Running (KOER) Prompt</u>	<u>61</u>
3.1.25f	<u>OBD II Connection Prompt</u>	<u>62</u>
3.1.25g	<u>OBD II Connection Not Confirmed Prompt</u>	<u>62</u>
3.1.25h	<u>OBD II No Connection Reason Prompt</u>	<u>62</u>
3.1.25i	<u>OBD II Malfunction Indicator Light (MIL) Status Check</u>	<u>64</u>

3.1.25j	<u>OBD II Readiness Evaluation</u>	65
3.1.25k	<u>OBD II Diagnostic Trouble Code (DTC) Check</u>	66
3.1.25l	<u>OBD II Test Evaluation and Messages</u>	67
3.1.25m	<u>OBD II Engine Stop Prompt</u>	72
3.1.26	<u>Gas Cap Missing Prompt</u>	72
3.1.27	<u>Gas Cap Testable Prompt</u>	73
3.1.28	<u>Gas Cap Connect Prompt</u>	73
3.1.29	<u>Gas Cap Results Prompt</u>	73
3.1.30	<u>Second Gas Cap Prompt</u>	74
3.1.31	<u>End of Phase Logic</u>	74
3.1.32	<u>Second Gas Cap Missing Prompt</u>	75
3.1.33	<u>Second Gas Cap Testable Prompt</u>	75
3.1.34	<u>Second Gas Cap Connect Prompt</u>	76
3.1.35	<u>Second Gas Cap Results Prompt</u>	76
3.1.36	<u>End of Phase Logic</u>	77
3.1.37	<u>Emissions Test Fee Prompt</u>	77
3.1.38	<u>Certificate Number Prompt</u>	78
3.1.39	<u>Certificate Number Correction Prompt</u>	79
3.1.40	<u>VI 30A Selection Prompt</u>	81
3.1.41	<u>VI 30A Number Prompt</u>	81
3.1.42	<u>Rejection Receipt</u>	82
3.1.43	<u>Print Vehicle Repair Form (VRF)</u>	83
3.1.44	<u>Print Public Awareness Statement</u>	84
3.1.44a	<u>Print LIRAP Application:</u>	84
3.1.45	<u>Print Vehicle Inspection Report</u>	84
3.1.46	<u>Texas Information Management System</u>	86
3.2	<u>Main Menu Selection '2' "Safety Only Inspection"</u>	86
3.2.1	<u>Access Code Prompt:</u>	86
3.2.1a	<u>PIN Number Prompt</u>	87
3.2.2	<u>Date Expiration Prompt</u>	87
3.2.3	<u>Insurance Prompt</u>	87
3.2.4	<u>Model Year Prompt</u>	87
3.2.5	<u>License Type Prompt</u>	87
3.2.6	<u>License Prompt</u>	87
3.2.7	<u>VIN Number Prompt</u>	88
3.2.8	<u>Fuel Type Prompt</u>	89
3.2.9	<u>Vehicle Type Prompt</u>	89
3.2.10	<u>Vehicle Body Type Prompt</u>	90
3.2.11	<u>Vehicle Make Prompt</u>	91
3.2.12	<u>Model Prompt</u>	92
3.2.13	<u>Odometer Prompt</u>	92
3.2.14	<u>Vehicle 80" Width Prompt</u>	93
3.2.15	<u>Confirm Vehicle Info Display</u>	94

3.2.16	<u>Test Type Prompt</u>	94
3.2.16a	<u>Mud Flaps/Safety Guard Prompt 1</u>	95
3.2.16b	<u>Mud Flaps/Safety Guard Prompt 2</u>	96
3.2.17	<u>Safety Inspection Items</u>	97
3.2.18	<u>Safety Repair Cost Prompt</u>	100
3.2.19	<u>Gas Cap Missing Prompt</u>	101
3.2.20	<u>Gas Cap Testable Prompt</u>	101
3.2.21	<u>Gas Cap Connect Prompt</u>	102
3.2.22	<u>Gas Cap Results Prompt</u>	102
3.2.23	<u>Second Gas Cap Prompt</u>	103
3.2.24	<u>End of Phase Logic</u>	103
3.2.25	<u>Second Gas Cap Missing Prompt</u>	104
3.2.26	<u>Second Gas Cap Testable Prompt</u>	104
3.2.27	<u>Second Gas Cap Connect Prompt</u>	104
3.2.28	<u>Second Gas Cap Results Prompt</u>	105
3.2.29	<u>End of Phase Logic</u>	105
3.2.30	<u>End of Test Logic</u>	106
3.2.31	<u>Safety Test Fee Prompt</u>	106
3.2.32	<u>Rejection Receipt</u>	107
3.2.33	<u>Certificate Number Prompt</u>	109
3.2.34	<u>Certificate Number Correction Prompt</u>	110
3.2.35	<u>VI 30A Selection Prompt</u>	112
3.2.36	<u>VI 30A Number Prompt</u>	112
3.2.37	<u>Print Vehicle Inspection Report</u>	112
3.3	<u>Main Menu Selection '3' "Emissions Only Inspection"</u>	114
3.3.1	<u>Inspection Type Prompt</u>	114
3.3.2	<u>Decal Number Prompt</u>	115
3.3.3	<u>Decal Number Correction Prompt</u>	116
3.4	<u>Main Menu Selection '4' "Re-inspection"</u>	118
3.4.3	<u>Reinspection Prompt</u>	118
3.4.5	<u>Display/Select Reinspection Record</u>	118
3.4.6	<u>Safety Inspection Items</u>	124
3.4.7	<u>Safety Repair Cost Prompt</u>	125
3.4.8	<u>Safety Test Fee Prompt</u>	125
3.4.9	<u>Emissions Reinspection Repairs</u>	126
3.5	<u>Main Menu Selection '5' "Re-Print Vehicle Inspection Report"</u>	136
3.5.1	<u>Access Code Prompt</u>	137
3.5.1a	<u>PIN Number Prompt</u>	137
3.5.2	<u>Date Expiration Prompt</u>	137
3.5.3	<u>Retrieve Previous Records Prompt</u>	137
3.5.4	<u>VIN Number Prompt</u>	137
3.5.5	<u>License Prompt</u>	137
3.5.6	<u>Texas Information Management System</u>	138

3.5.7	<u>Display/Select Pass Records</u>	138
3.5.8	<u>Reprint Prompt</u>	138
3.5.9	<u>Print Vehicle Inspection Report</u>	138
3.6	<u>Main Menu Selection '6' "Vehicle Diagnosis"</u>	139
3.7	<u>Main Menu Selection '7' "Training Mode"</u>	139
3.8	<u>Main Menu Selection '8' "Analyzer Maintenance"</u>	139
3.8.1	<u>Status Screen</u>	139
3.8.2	<u>Gas Cap Integrity Tester Calibration</u>	140
3.9	<u>Main Menu Selection '9' "Audit Menu"</u>	140
		142
3.9.2	<u>Audit Menu Selection '2' "Station Performance Report"</u>	147
3.9.3	<u>Audit Menu Selection '3' "Inspector Evaluation Report"</u>	153
3.9.4	<u>Audit Menu Selection '4' "Gas Cap Integrity Tester Calibration"</u>	155
3.9.6	<u>Audit Menu Selection '6' "Update Station and Inspector Information"</u>	156
3.9.7	<u>Audit Menu Selection '7' "Install New Data Disk"</u>	157
3.9.8	<u>Audit Menu Selection '8' "Reset Date, and Time"</u>	157
3.9.9	<u>Audit Menu Selection '9' "Analyzer/Station Lockout"</u>	158
3.9.10	<u>Audit Menu Selection '10' "Software Update"</u>	158
3.9.11	<u>Audit Menu Selection '11' "Practical Test"</u>	159
3.9.12	<u>Audit Menu Selection '12' "Auditor's Notes"</u>	159
3.9.13	<u>Audit Menu Selection '13' "Search and Retrieve Test Records"</u>	159
3.9.14	<u>Audit Menu Selection '14' "Analyzer Tampering/Access Report"</u>	161
3.9.15	<u>Audit Menu Selection '15' "History Report"</u>	161
3.9.16	<u>Audit Menu Selection '16' "System Settings"</u>	161
3.9.17	<u>Audit Menu Selection '17' "Reprint VIR"</u>	166
3.9.18	<u>Audit Menu Selection '18' "Communications Refresh"</u>	166
3.9.19	<u>Audit Menu Selection '19' "Copy/Download Test Records"</u>	166
3.9.20	<u>Audit Menu Selection '20' "Missing, or Voided Certificates"</u>	167
3.9.20a	<u>Access Code Entry</u>	167
3.9.20b	<u>Certificate Type Prompt</u>	167
3.9.20c	<u>Certificate Condition Prompt</u>	168
3.9.20d	<u>Number of Certificates Prompt</u>	168
3.9.20e	<u>Certificate Number Prompt</u>	168
3.9.20f	<u>Certificate Number Prompt</u>	170
3.9.21	<u>Audit Menu Selection '21' "Certificate Correction/Replacement"</u>	171
3.9.21a	<u>Certificate Search Prompt</u>	171
3.9.21b	<u>Certificate Number Prompt</u>	172
3.9.22	<u>Audit Menu Selection '22' "Status Screen"</u>	173
3.10	<u>Main Menu Selection '10' "Recall Aborted Inspection"</u>	174
3.10.1	<u>Access Code Prompt</u>	174
3.10.1a	<u>PIN Number Prompt</u>	174
3.10.2	<u>Date Expiration Prompt</u>	174
3.10.3	<u>Display/Select Aborted Inspection Record</u>	175

3.10.4	<u>Recall Aborted Test Logic</u>	<u>175</u>
3.11	<u>Gas Cap Integrity Test</u>	<u>175</u>
3.11.1	<u>Gas Cap Connect Prompt</u>	<u>175</u>
3.12	<u>Main Menu Selection '12' "Missing, or Voided Certificates"</u>	<u>176</u>
3.12.1	<u>Access Code Prompt:</u>	<u>176</u>
3.12.1a	<u>PIN Number Prompt:</u>	<u>176</u>
3.12.2	<u>Date Expiration Prompt</u>	<u>176</u>
3.12.2a	<u>Certificate Type Prompt</u>	<u>176</u>
3.12.3	<u>Certificate Condition Prompt</u>	<u>176</u>
3.12.4	<u>Number of Certificates Prompt</u>	<u>176</u>
3.12.5	<u>Certificate Number Prompt</u>	<u>176</u>
3.12.6	<u>Certificate Number Prompt</u>	<u>177</u>
3.13	<u>Main Menu Selection '13' "Certificate Correction/Replacement"</u>	<u>177</u>
3.13.1	<u>Access Code Prompt:</u>	<u>177</u>
3.13.1a	<u>PIN Number Prompt:</u>	<u>177</u>
3.13.2	<u>Date Expiration Prompt</u>	<u>177</u>
3.13.3	<u>Certificate Search Prompt</u>	<u>177</u>
3.13.4	<u>Certificate Number Prompt</u>	<u>177</u>
3.14	<u>Main Menu Selection '14' "Technical Bulletins/Announcements"</u>	<u>177</u>
3.15	<u>Main Menu Selection '15' "Communications Refresh"</u>	<u>179</u>
3.15.1	<u>Access Code Prompt</u>	<u>179</u>
3.15.1a	<u>PIN Number Prompt</u>	<u>179</u>
3.15.2	<u>Date Expiration Prompt</u>	<u>179</u>
3.16	<u>Main Menu Selection '16' "Communications Diagnostics (Loopback)"</u>	<u>179</u>
3.17	<u>Main Menu Selection '17' "ALLDATA Communications"</u>	<u>179</u>
3.18	<u>Main Menu Selection '18' "Inspection Log (VI-8B)"</u>	<u>179</u>
3.19	<u>Main Menu Selection '19' "VI-30A Only"</u>	<u>181</u>
3.19.1	<u>Access Code Prompt</u>	<u>181</u>
3.19.1a	<u>PIN Number Prompt</u>	<u>181</u>
3.19.2	<u>Date Expiration Prompt</u>	<u>181</u>
3.19.3	<u>Model Year Prompt</u>	<u>182</u>
3.19.4	<u>License Type Prompt</u>	<u>182</u>
3.19.5	<u>License Prompt</u>	<u>182</u>
3.19.6	<u>VIN Number Prompt</u>	<u>182</u>
3.19.8	<u>Vehicle Type Prompt</u>	<u>182</u>
3.19.8a	<u>Vehicle Make Prompt</u>	<u>182</u>
3.19.9	<u>Model Prompt</u>	<u>182</u>
3.19.10	<u>Odometer Prompt</u>	<u>182</u>
3.19.11	<u>Test Type Prompt</u>	<u>182</u>
3.19.12	<u>Certificate Number Prompt</u>	<u>183</u>
3.19.13	<u>VI 30A Number Prompt</u>	<u>183</u>
3.19.14	<u>VI-30A Test Fee Prompt</u>	<u>184</u>
3.19.15	<u>Confirm Vehicle Info Display</u>	<u>184</u>

3.19.16	<u>End of Test Logic</u>	<u>184</u>
3.20	<u>Main Menu Selection '20' "Test on Resale Inspection"</u>	<u>184</u>
3.20.1	<u>Access Code Prompt</u>	<u>185</u>
3.20.1a	<u>PIN Number Prompt</u>	<u>185</u>
3.20.2	<u>Date Expiration Prompt</u>	<u>185</u>
3.20.3	<u>Test on Resale Exempt Prompt</u>	<u>185</u>
3.20.4	<u>Test on Resale Prompt</u>	<u>186</u>
Appendix B		<u>188</u>
Appendix D		<u>189</u>
Appendix E		<u>267</u>
Appendix F		<u>268</u>
Appendix G		<u>269</u>
Appendix H		<u>275</u>
Appendix I		<u>276</u>
Appendix J		<u>349</u>
Appendix L		<u>351</u>
Appendix N		<u>352</u>
Appendix O		<u>355</u>
Appendix P		<u>357</u>
Appendix Q		<u>360</u>
Appendix R		<u>363</u>
Appendix V		<u>384</u>
Appendix W		<u>386</u>

1.0 GENERAL

1.1 Design Goals

The OBDII analyzer software shall be designed for maximum operational simplicity. It shall also be capable of providing standardized On Board Diagnostics (OBDII) information , independent of the safety only inspection function..

This document contains the minimum requirements for analyzers performing OBDII tests in the Program. Manufacturers may offer analyzers that meet the minimum requirements contained in this specification that can be easily upgraded to interact with systems that conduct tailpipe emission tests.

1.2 Useful Life

The useful life of the analyzer shall be a minimum of five years, however, this does not imply that the Program will be in effect for five years or that the analyzer specifications will not change within five years.

1.3 Nameplate Data

A nameplate including the following information shall be permanently affixed to the housing of the analyzer:

Name and Address of Manufacturer
Model Description
Serial Number
Date of Assembly

The manufacturer shall affix a stick-on type label to the analyzer which contains a toll-free telephone number for customer service. This number can also be included in a service software message.

1.4 Manuals

Each analyzer shall be delivered with a current hard copy version of the following manuals:

- A. Reference Operating Instructions
- B. Operation Instruction Manual
- C. Maintenance Instruction Manual (limited)

D. Initial Start-up Instructions

OBDII Only analyzer manufacturers may consolidate manuals. The manuals shall be constructed of durable materials and shall not deteriorate as a result of normal use over a five-year period. The analyzer housing shall provide convenient storage for each manual in a manner that will:

E. Allow easy use.

F. Prevent accidental loss or destruction.

OBDII Only analyzer manufacturers may install the manuals in the analyzer software. The analyzer will have the ability to print complete manuals or portions of the manuals. If the manuals reside on the analyzer in the software, the manufacturer shall provide backup of the manuals in an electronic media (i.e., floppy disk, CD-ROM, etc.), and the procedures for loading the manuals onto the analyzer.

1.5 Certification Documentation

The analyzer software shall be fully documented. Six copies of the documentation listed below shall be submitted to the Texas Natural Resource Conservation Commission (TCEQ) as part of the certification application. Software documentation shall include the following:

- A. Complete program listing. Program listings may be on diskette. They are not required to be submitted with the application for certification;
- B. Functional specifications;
- C. Functional flowcharts of the software;
- D. Example inputs and outputs from all processes;
- E. Detailed interface information on system components including the identification of protocol and output specifications; and
- F. All DOS file layouts with file names, file types, file security, field names, field types, field sizes, and field editing criteria.

Documentation provided by the vendor to meet this requirement will be treated as proprietary information by the TCEQ. This documentation must be marked "Confidential" if the vendor desires that the information be protected from distribution.

Confidential Information

If the manufacturer believes that the certification package, or parts of it, are confidential, it must specify that either all or part is excepted from release, and which exception(s) of the Texas Open Records Act (TORA) it believes applies, with specific and detailed reasons. Each page containing confidential information should be clearly marked accordingly. Vague and general claims to confidentiality are not acceptable. This is necessary so that the TCEQ will have sufficient information to provide to the Attorney General of Texas if his opinion is requested. All certification packages or parts of certification packages which are not marked as being confidential will automatically be considered public information.

The TCEQ assumes no responsibility for asserting legal arguments on behalf of the manufacturers. Manufacturers are advised to consult with their legal counsel concerning disclosure issues resulting from this certification process and take precautions to safeguard trade secrets and other proprietary information.

THE MANUFACTURERS OF OBDII Only EMISSIONS ANALYZERS WILL SUBMIT A LETTER OF CORPORATE AUTHORIZATION AGREEING TO PLACE SOFTWARE SOURCE CODES AND OTHER PERTINENT TECHNICAL INFORMATION IN “ESCROW.” CERTIFICATION WILL NOT BE VALID UNTIL THIS CONDITION HAS BEEN MET. ESCROW INFORMATION MUST BE KEPT CURRENT, I.E., SOFTWARE VERSION IN USE MUST CORRESPOND WITH THE ESCROWED INFORMATION. ESCROW PLACEMENT WILL BE APPROVED BY THE TCEQ MOBILE SOURCE DIVISION.

Escrow of Software

The Manufacturer agrees to place the most recent update of all application software in use to meet this specification in the possession of a neutral third party of the manufacturer’s choice. The manufacturer shall notify the TCEQ and provide the name and contact person of the selected third party. The software will be turned over to TCEQ in the event that Manufacturer goes out of business or cannot assure continued performance of the inspection analyzers.

In the event that the software is transferred, the TCEQ shall protect the source code from public dissemination and commercial usage. At a minimum, the TCEQ shall:

- a. limit access to the code to parties necessary to accomplish maintenance and updating of the OBDII Only analyzers;
- b. require all parties to sign a nondisclosure agreement before obtaining access to the code; and
- c. grant no license to any entity permitting that entity to use any part of the code for any commercial purpose other than to update/operate the OBDII Only analyzers.

The purpose of the requirement for the source code is to provide the TCEQ with a mechanism to assure continued performance of inspection analyzers in the event that a manufacturer should fail. The TCEQ is not interested in any disclosure of proprietary information, nor in the detailed inner workings of vendor code. However, it is essential that all of the necessary working codes, schematics, drawings, and so forth be available in case of such demise.

Performance Bond

As a prerequisite to certification, the Manufacturer shall furnish a performance bond to the TCEQ. This bond shall be in a form approved by the TCEQ and shall be executed as surety by a bonding company authorized to do business in the State of Texas and signed by a Licensed Resident Agent. The performance bond shall be for the amount of \$2,000,000. This performance bond will cover all systems (i.e., ASM/TSI/OBDII, TSI/OBD, and OBD-only) that are certified to conduct inspections in the Program.

The performance bond may be utilized by TCEQ at any time if the Manufacturer is in material default of the requirements of these specifications, including but not limited to the following "Events of Default":

- (a) The Manufacturer fails to remedy a breach of covenant, representation, or warranty required by these specifications within thirty (30) days after written notice of such breach has been given to the Manufacturer by the TCEQ;
- (b) The Manufacturer makes a general assignment for the benefit of creditors, admits in writing its inability to pay debts as they mature, institutes proceedings to be adjudicated a voluntary bankrupt, consents to the filing of a bankruptcy proceeding against it, files a petition or answer or consent seeking reorganization, readjustment, arrangement, composition, or similar relief under the federal bankruptcy laws or any other similar applicable law, consents to the filing of any such petition, consents to the appointment of a receiver, liquidator, trustee, or assignee in bankruptcy or insolvency of the Manufacturer or of a substantial part of its property, or takes action in furtherance of any of these purposes; or
- (c) A decree or order by a court of competent jurisdiction is entered adjudging the Manufacturer a bankrupt or insolvent, or approving as properly filed, a petition seeking reorganization, readjustment, arrangement, composition, or similar relief for the Manufacturer under the federal bankruptcy laws or any other similar applicable law, and such decree or order continues undischarged or unstayed for a period of sixty (60) days; or a decree or order of a court of competent jurisdiction for the appointment of a receiver, liquidator, trustee or assignee in bankruptcy or insolvency of the Manufacturer or of a substantial part of its property, or for the winding up or liquidation of its affairs, is entered, and such decree or order remains in force undischarged or unstayed for a

period of sixty (60) days; or any substantial part of the property of the Manufacturer is sequestered or attached and is not returned to the possession of the Manufacturer or released from such attachment within sixty (60) days thereafter.

To require performance by the surety under the performance bond, the TCEQ shall give written notice of the event of default to the Manufacturer, specifying the date upon which surety performance shall begin.

The performance bond shall be released upon determination by the Executive Director of the TCEQ that the manufacturer has satisfactorily completed its obligations in accordance with the terms of this specification, or at an earlier date, if it is determined by the Executive Director to be in the best interest of the State to do so.

1.6 Warranty Coverage/Mandatory Service Contract

A written warranty coverage agreement, signed by an authorized representative of the equipment manufacturer and the vehicle inspection station owner, which provides a complete description of coverage for all systems and components and all manufacturer provided services listed in Section 1.8, must accompany the sale or lease of each OBDII Only emissions analyzer.

An extended service contract must be available upon the expiration of the manufacturer's original warranty period. **ORIGINAL MANUFACTURER'S WARRANTY SHALL BE A MINIMUM OF ONE YEAR FROM THE DATE OF PURCHASE.** Renewals shall be offered at the inspection station owner's request and governed by "good business" practices between the parties involved. Service contract agreements must be available by the manufacturer. The inspection station owner is responsible for maintaining the manner of service for the analyzer. Cost disclosures and detailed descriptions of coverages must be available in printed form and distributed to all OBDII Only emissions analyzer users. Cost disclosure shall also be made for "consumable" inventory items 1.8B. This information would most appropriately be presented with the original manufacturer's warranty.

1.7 Tampering Resistance

Controlled access design shall be the responsibility of the manufacturer. All security measures shall be submitted to the TCEQ for approval. Analyzer operators, State field representatives and manufacturer's representatives shall be prevented, to the TCEQ/DPS's satisfaction, from creating or changing any test results, TCEQ/DPS programs or TCEQ/DPS data files contained in the OBDII Only analyzer as called for in this specification. Manufacturers shall utilize special BIOS, partitions as well as other appropriate software and hardware provisions (or equivalent approved by the TCEQ), to protect the I/M files and programs. File and program protection may consist of mechanical systems in combination with electronic/software systems. The protection features shall prevent access to the secured

disk drives and portions of the hard disk containing I/M programs and test data. The "control" key, or its functional equivalent giving access to the operating system (OS), shall not be activated except through the use of a password on the audit menu. The password shall be chosen by the TCEQ's Mobile Source Section at the time of certification testing. Other security or protection alternatives, such as more sophisticated BIOS limitations and LPT port key, may be proposed by the manufacturer for approval by the TCEQ.

In addition, the emission analyzer and the sampling system shall be made tamper-resistant to the TCEQ's satisfaction. As a minimum, the manufacturer shall develop tamper-resistant features to prevent unauthorized access through the cabinet. Micro switches, keyed locks, software-controlled locks, and software algorithms requiring the use of an access code shall all be utilized where appropriate and would be acceptable provided the physical or logical design effectively prevents unauthorized access. Access codes shall be changed on a monthly basis on an algorithm provided by the TCEQ. Service access codes shall be changed monthly based on a unique algorithm provided by the manufacturer. Both algorithms may be changed as part of any software update.

Manufacturers may utilize keyed locks on the doors securing the disk drives as long as the locks are built-in, good quality and can be easily changed by authorized personnel if a security problem is identified. The following examples illustrate ineffective, and therefore unacceptable, security measures:

- A mercury switch would not be effective if the analyzer can be tipped over to one side to trigger the switch.
- A keyed lock would not be effective if it is placed in a position that allows the analyzer cabinet to be flexed slightly to bypass the lock.
- If there is a dynamometer control cabinet separate from the secured area of the analyzer cabinet, it shall be secured in a manner approved by the TCEQ/DPS.

The inspection technician shall have access to the optional compact disc (CD) drive. However, access security to the BIOS, I/M related programs, and data must be secured from this drive when accessed by a technician. The manufacturer shall provide security for the CD drive to prevent unauthorized read/writes (to memory, ROM, hard drive, etc.). This security shall guard against unauthorized executables that are executed from the CD. The manufacturer shall submit their method for providing this security to TCEQ for approval.

A software-controlled solenoid lock may be used on the secured drive door of all OBDII Only analyzer units submitted for certification. This solenoid lock may be used instead of, or in addition to, any key or combination lock that may be provided. The solenoid lock shall be controlled by the OBDII Only analyzer software, unlatching the doors in response to authorized requests from the audit menu, always maintaining the appropriate levels of

security. All OBDII Only analyzer units shall have sensors, such as Micro switches, to detect the open/closed state of the doors, as well as other secured areas of the OBDII Only analyzer. The OBDII Only analyzer shall monitor these sensors and shall define an inappropriate state as a tamper.

Manufacturers may offer analyzers with additional disk drives that can run optional software application programs. However, the optional disk drives shall be secured from the BIOS, operating system and all other I/M related programs and test data (or equivalent acceptable to the TCEQ). If tampering occurs, a software lockout algorithm shall be activated which aborts any existing test sequence and prevents further I/M testing until the lockout is cleared by a DPS program official (or other representatives authorized by TCEQ/DPS). Manufacturers shall develop a system to allow service technicians to only clear “tamper” lockouts during authorized service calls.

The use of Micro switches to detect unauthorized entry is acceptable. However, unauthorized access to the secured areas of the analyzer shall be detected even when the power is off. The analyzer shall record the type and location of each tamper (excluding the underhood tamper flag). The tamper attempts shall be recorded in a tamper file which includes the date of the tamper-caused lockout, the type and location of the lockout, the date the lockout was cleared and who it was cleared by (State or manufacturer's service representative). The specific tamper type and location shall only be accessible through the audit menu.

The lockout system shall be designed so that it can be activated by a DPS program official from the audit menu. Only State field representatives (or other representatives authorized by TCEQ/DPS) may remove lockouts put in place from the audit menu. Manufacturers shall develop a system by which their service technicians shall be prevented, by some method approved by the TCEQ, from clearing TCEQ/DPS installed lockouts. In particular, the following policies shall apply to the manufacturers' field representatives:

- 1) They shall not be capable of:
 - i. clearing a State-installed lockout, or
 - ii. clearing a lockout due to a requirement for a three-day gas calibration/leak check.
- 2) They shall not add, delete or modify Station or Inspector license number.
- 3) They shall not be capable of altering the calibration gas values.

The tamper resistance features shall be designed so that software programs, especially those which deal with repair and diagnostics of vehicles, can be added at a later date.

Optional software packages supplied by the manufacturer shall not interfere with the normal operation of the I/M inspection and testing software, and shall not compromise the

tamper-resistance of the analyzer.

Access to and from all required and mandatory-option programs shall be "seamless." These programs shall be accessed from the Main Menu or a submenu, and, when exited, shall return directly to the menu or submenu from which they were accessed, without requiring the OBDII Only analyzer to reboot.

1.8 Manufacturer Provided Services

The manufacturer shall agree to provide the following services to the inspection station as part of the manufacturer's original warranty and thereafter as a portion of the service contract agreement. The cost of a service agreement is to be listed at least annually. Future charges cannot exceed the amount published.

- A. Delivery, installation, and verification of the proper operating condition of the OBDII analyzer.
- B. Annual examination shall be required on OBDII only analyzers. Full systems support and repair including loaner units. Upon initial sale, lease, or loan, provide an "extra" printer medium (1 ea.), or a certificate redeemable for a printer cartridge for laser printers. Maintain the availability of "extra" consumable inventory upon examination. **CONSUMABLES AND THE COST(S) THEREOF MUST BE DISCLOSED IN THE SERVICE AGREEMENT.**
- C. Instruct all certified inspectors employed by the inspection station at the time of installation in the proper use, maintenance, and operation of the analyzer. The analyzer shall contain a feature that will allow an inspector to go through the complete inspection procedure without generating an official inspection record. The feature will be identical to an actual emissions test and shall produce a vehicle inspection report. This function will be used for evaluating inspector performance, by DPS program officials, or by the manufacturer for demonstration purposes. The "training mode" shall not require the use of an inspector's access code or allow access to secured areas of hardware or software. The display shall show a message throughout the inspection that this is not an official inspection. During the "training mode," vehicle inspection reports shall indicate to the satisfaction of the DPS that they are for training only. No official vehicle inspection report will be generated during the training exercise.
- D. On-site service response by a qualified repair technician within (2) business days, (48 hours) excluding Sundays, national holidays (New Years, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving, Christmas, and other days when the purchaser's business might be

closed), of a request from the inspection station. The names, toll-free telephone numbers, and service facility addresses of all manufacturer representatives responsible for equipment service shall be provided to the inspection station. A service representative shall be available at all times during normal working hours. Sundays, national holidays, and other days when the purchaser's business might be closed, are not included. All system repairs, component replacements, and/or analyzer adjustments, including reset of quality control lockout systems, shall be accomplished on-site within 48 hours after a service request has been initiated. If the completion of this work is not possible within this time period, a loaner unit shall be provided until the malfunctioning unit is properly repaired and returned to service. Service representatives shall have a software driven menu option or other acceptable method that records the transfer of inspection station, inspector information, and other applicable data files from one analyzer to another without manual inputs and without transfer of previous test files.

- E. Updates of the "Functional" software will be limited to a total of 1,000 programming hours.

Updates of operational software, i.e., file based information, will be on an "as required" basis. Software updating should be designed to utilize modem technology for the updating process. The TCEQ will require the manufacturer to render updates as necessary in the first year of the Program to ensure the Program meets all design criteria. The manufacturer shall provide up to two file/software updates to the State in the first year, and thereafter, updates will be limited to once per year. The 'first year' shall be defined as one calendar year measured from the program start date. The file/software updates shall not exceed a combined total 1,000 programming hours at no cost to the State or analyzer owners. If the manufacturer anticipates that an update shall exceed the 1,000 programming hours limit, a cost quotation shall be prepared by the manufacturer. The cost quotation shall be submitted to the TCEQ prior to commencing work on the update. Then, the TCEQ will approve or not approve in writing that the work be undertaken.

Software updates, provided during the warranty period, **at no charge**, by the supplier of the inspection equipment or software programs shall consist of no more than the following:

- The inclusion of data pertaining to additional vehicles newly included in inspection program;
- The inclusion of data pertaining to new model year vehicles released since the last update;
- Changes to the "cut points" as directed by the Administrator of the program; or

- Software updates that rectify errors found at a later date where the original software was found to be not in compliance with the State specification published at the inception of the program. Software updates shall be warrantied for a period of one year from the date the software becomes operational in the analyzer.

Software updates that involve any of the following revisions shall not be provided by the supplier of the equipment or software programs on a “no charge” basis, but instead the supplier of the inspection equipment or software programs shall be entitled to charge a reasonable fee, based on the resources used by that supplier in producing, releasing, and installing the software update.

- Changes in the vehicle inspection procedure that differ from the original procedure as outlined in the specifications used to certify the equipment and/or software at the program inception. Example would be the addition of visual inspection of components;
- Changes in the software structure as the result of the administrative changes within a state organization. Examples would be changes made to software fields to permit entry of Inspectors Social Security Numbers as opposed to drivers license numbers as required in the original specifications used to certify the equipment and/or software at the program inception;
- Changes in the software structure as the result of a decision to change/include extra functions or procedures that were not part of the original specifications used to certify the equipment/software at the program inception. Example would be changes or additions to Electronic Transmission; or
- Changes mandated by the State as a result of a state error in specifications or procedures found in a previous update.

F. The analyzer software shall be designed so that DPS program officials can insert a floppy disk (or equivalent storage media), prepared by the manufacturer, into the Program system host, and update the existing software version via modem. If the analyzer update is not accomplished via modem, a system of loading updates by program officials utilizing the auditor’s menu shall also be available. Look-up tables and message screens shall be designed sufficiently separate from the main operations software so that it is not possible to interfere in any way with the operations of the analyzer.

The TCEQ will require the manufacturer to render updates as necessary in the first year of the Program to ensure the Program meets all design criteria. Since modem software updating will be utilized, there are no costs to the analyzer owner. A software version

number, consisting of a four-character alpha-numeric code made up of the last two digits of the year followed by a two-character version number, shall be recorded in the analyzer and included on each vehicle test record. The analyzer manufacturer shall not modify any existing software version without obtaining prior written approval from the TCEQ.

- G. The TCEQ may require the manufacturers to conduct on-site or laboratory testing of in-use analyzers in order to document continued compliance. When an analyzer is removed from the field, for repair or testing, manufacturers shall supply to the inspection station from which it was removed, a temporary replacement unit meeting all Program requirements. Manufacturers shall pay for all necessary shipping and transfer costs for the replacement of the analyzer selected for compliance testing. Manufacturers shall also pay for any required testing performed by their personnel or by an independent company.
- H. The manufacturers shall provide training to state officials responsible for oversight of the Program (e.g., TCEQ, DPS). The training will include, but not be limited to, instruction on all operational, maintenance, and quality control features of the analyzers, including full access to and use of inspection menus, audit menus, and calibration menus, as well as optional programs offered to inspectors. Such training shall be conducted at the manufacturer's expense as a condition of certification and thereafter at reasonable intervals (minimum of once per year in each I/M program area and after each major "cost" software revision) upon written request by the TCEQ/DPS.

The manufacturers shall provide a training plan to TCEQ. The training plan will be used by state oversight officials to conduct certification training of potential inspectors on the use of the analyzers for implementation of the Program. The manufacturers shall provide a minimum of four (4) hours training to the potential owners and operators of the analyzer for each analyzer purchased, leased, or upgraded.

1.9 Certification Requirements

The manufacturer shall submit a formal certificate to the TCEQ that states that any analyzer sold or leased by the manufacturer or its authorized representatives for use in the Program will satisfy all design and performance criteria described in these specifications. The manufacturer shall also provide sufficient documentation to demonstrate conformance with these criteria including a complete description of all hardware components, the results of appropriate performance testing, and a point-by-point response to specific requirements.

All equipment shall be tested by an independent test laboratory. The independent laboratory shall have previous experience certifying exhaust gas analyzers (prior BAR 90 certification experience.) The manufacturer shall seek prior written approval from the TCEQ of the

certification laboratory. At least 15 days in advance of commencing the certification process, the manufacturer shall notify the TCEQ. The notification will include the laboratory name, address, telephone number, and the name of a contact person. The TCEQ reserves the right to be present during the evaluation of all equipment. The test laboratory shall issue a test report detailing the objectives, test methods, and test results of the subject equipment. The test report shall then be submitted to the TCEQ, Mobile Source Section for an evaluation of acceptance. Previous certification by the TCEQ may be considered in this process but will not be sufficient to satisfy all necessary documentation requirements. The cost of the certification shall be adsorbed by the manufacturer.

In addition, a full description of the company's service procedures and policies, as well as sample contracts, warranties, and extended service agreements, shall be provided as part of the certification application to ensure proper maintenance of all analyzers throughout their useful life. One fully-functional analyzer shall be presented for TCEQ evaluation.

2.0 CONSTRUCTION DESIGN

2.1 Materials

All materials used in the fabrication of the analyzer and the appropriate housing assembly shall be new and of industrial quality and durability. Only materials that are not susceptible to deterioration when in contact with automobile exhaust gases shall be used. Contact between nonferrous and ferrous metals shall be avoided where possible. Suitable protective coatings shall be applied where galvanic action is likely. All mechanical fasteners shall have appropriate locking features. The locks on the analyzer shall be keyed locks. Use of self-tapping screws shall be limited. All parts subject to adjustment or removal and reinstallation shall not be permanently deformed by the adjustment or removal/reinstallation process and this process shall not cause deformations to adjoining parts.

2.2 Construction

The analyzer shall be complete and all necessary parts and equipment required for satisfactory operation shall be furnished. All parts shall be manufactured and assembled to permit the replacement and/or adjustment of components and parts without requiring the modification of any parts or the basic equipment design. Where practical, components and/or subassemblies shall be modularized. The analyzer cabinet shall have a durable finish (i.e., baked enamel, powder paint, etc.).

2.3 Mobility

The analyzer unit shall be designed for easy and safe movement over rough surfaces and/or graded surfaces (15° inclines). The center of gravity and wheel design shall be such that the

analyzer can negotiate a vertical grade separation of one-half inch (1/2") without overturning when being moved in a prescribed manner. Industrial grade, swivel casters shall be used to permit 360°-rotations of the unit. The caster wheels shall be equipped with oil resistant tires and foot operated brakes capable of preventing movement on a 15°-incline.

Analyzer peripheral equipment, such as bar code readers, OBDII scanners, and keyboards, may utilize wireless communication to interact with the analyzer.

2.4 Electrical Materials/Construction

Unless otherwise specified, all electrical components and wiring shall conform to standards established by the Underwriters Laboratories, Standard for Electrical and Electronic Measuring and Testing Equipment (U.L.-1244).

2.4.1 Electromagnetic Isolation and Interference

1. Electromagnetic signals found in an automotive environment shall not cause malfunctions or changes in accuracy in the electronics of this specification. The analyzer design shall insure that readings do not vary as a result of electromagnetic radiation and induction devices normally found in the garage environment (including high energy vehicle ignition systems, radio frequency (RF) transmission radiation sources and building electrical systems.

2. In addition, the manufacturer shall ensure that the analyzer processor and memory components are sufficiently protected to prevent the loss of programs and test records.

2.5 Storage Temperature

While in storage, the analyzer and all components thereof shall be undamaged from ambient air temperatures ranging from 0° F to 130° F.

The analyzer, including all of the software/hardware enclosed in the cabinet, shall operate within the performance specifications described herein in ambient air temperatures ranging from 35 to 110°F. Analyzers shall be designed so that adequate air flow is provided around critical components to prevent overheating (and automatic shutdown) and to prevent the condensation of water vapor which could reduce the reliability and durability of the analyzer. The analyzer system shall otherwise include necessary features to keep the sampling system within the specified range.

2.6 Operating Temperature

The analyzer and all components shall operate within calibration limits in ambient air temperatures ranging from 41° F to 110° F.

2.7 Humidity Conditions

The analyzer shall be designed for use inside a building that is vented or open to outside ambient humidity. The printer and analyzer, including all components of the analytical, sampling, and computer systems, shall operate within the required performance specifications at ambient conditions of up to 100 percent noncondensing relative humidity throughout the required temperature range, assuming the components are reasonably protected by the inspector from direct contact with water or other condensing moisture. Failure of any component due to exposure to temperature and humidity extremes within the limits specified during actual use shall be corrected at the manufacturer's expense.

2.9 Operational Design

2.9a OBDII Link Self-Diagnostic Tool

OBDII-only analyzers shall be equipped with an OBD connector self-diagnostic tool. This self-diagnostic tool will be configured as a vehicle's diagnostic link connector, and will be used to test the integrity of the analyzer's OBD connector and communications link, whether it is a remote link or a conventional cable link. Integrity verification will be performed using a standard continuity test between the self-diagnostic tool and the analyzer's OBD connector as well as communication from the analyzer's OBD connector to the analyzer. Use of this self-diagnostic tool will be automatically initiated upon communication failure during an OBD inspection. The system will be acceptable, if it can retrieve and display generic OBDII information including, but not limited to: DTCs, readiness status, freeze frame information, MIL status, and the live data stream list for supported components (i.e., RPM, Throttle Position Sensor, etc.) in a mode that is not related to the testing sequences.

2.9b DLC Cord

The analyzer must be equipped with a standard SAE J1978 OBD connector and communications link to allow an RPM signal, OBDII readiness codes, fault codes, and codes Malfunction Indicator Light (MIL) status, VIN number (when available), Calibration ID and PCM-ID, and the PID to be downloaded from the on-board computer for applicable vehicles. The SAE J1978 OBD connector must be such to allow the inspector the ability to connect to a vehicle freely (either remotely with a 25 foot range or with a cord of sufficient length to allow analyzer access to a vehicle 25 feet away). The equipment design and operation must meet all Federal requirements (contained in 40CFR 85.2207-2231) and recommended SAE practices (i.e., J1962, J1978 and J 1979) for OBDII system inspections. The OBDII interrogation process shall be fully integrated into the analyzer system. It must be automated and require no inspector intervention to collect and record the OBD data retrieved via the OBD diagnostic link. The system shall access the onboard computer system on all OBDII equipped vehicles, including vehicles that use the communications protocol called Controller

Area Network, or CAN (ISO 15765-4.3).

2.10 Gas Cap Integrity Test

A. Equipment Specifications

1. The tester shall identify gas caps which leak more than 60 cc/min at 30 inches of water pressure.
2. The flow standard shall be a squared edged circular orifice sized to produce a leak rate of 60 cc/min of air at 30 inches of water pressure.
3. The supply pressure may be obtained using ambient air and any convenient low pressure source. The tester shall control the supply pressure and prevent over pressurization.
4. The tester shall provide a visual or digital signal that the required air supply pressure is within the acceptable range and the flow comparison test is ready to be conducted.
5. If the tester is battery powered, it must be equipped with an automatic shutoff and a low-battery indicator.
6. The system shall be tamper-resistant.
7. A reference passing fuel cap of nominal 52-56 cc/min and a reference failing fuel cap of nominal 64-68 cc/min shall be supplied with the tester for daily test verification.

B. Fuel Cap Adapters

1. Adapters shall be available for at least 95 percent of the fuel caps that are used on U.S. light-duty vehicles and trucks for the most recent 25 model years.
2. Varying internal volumes of the fuel caps and adapter assemblies shall not affect the accuracy of the test results.
3. Adapters shall be made available within two years of the introduction of new model year vehicles.

C. Pre-inspection and Preparation

1. Fuel Cap Missing: If the fuel cap is missing, the vehicle shall fail the fuel cap flow test (rejection shall be recorded as a failure in the data base).
2. Fuel Cap Available: The fuel cap shall be removed and taken to the test device. If the fuel cap is tethered, the cap tester shall be brought to the vehicle.
3. Fuel Cap Untestable: The fuel cap is untestable if it is present on the vehicle and the tester does not have an attachment to fit the fuel cap. (The untestable feature shall be recorded on the analyzer as untestable.)

D. Fuel Cap Integrity Test Sequence

1. The adapter appropriate for the fuel cap shall be fitted to the flow test device.
2. The fuel cap shall be installed on the adapter and the test device shall be pressurized to approximately 30 inches of water.
3. The fuel cap leak rate shall be compared to an orifice with a flow rate of 60 cc/min of air at 30 inches of water.
4. If the leak rate exceeds 60 cc/min at 30 inches of water, the cap fails the flow test.

The analyzer shall prompt the inspector to indicate whether or not the gas cap is testable. Then, the analyzer shall prompt the inspector to remove the gas cap from the vehicle, attach it to the tester, and press continue when ready. The tester shall automatically pressurize the cap, and indicate when the test has commenced and when it has ended. The tester shall indicate whether or not the gas cap passes or fails. The tester shall automatically enter the result into the analyzer. The gas cap connector shall be long enough to reach gas caps that are attached to vehicles.

E. Operating Range

1. All test elevations.
2. A temperature range of 20°F to 120°F.

F. Accuracy

Leak rate measurements shall be accurate to within ± 3 percent cc/min.

G. Output

1. The test device shall provide a visual or digital signal to indicate pass or fail status.
2. The leak test shall not last longer than 45 seconds.

H. Quality Control

1. The flow standard orifice shall be calibrated before initial usage and thereafter on an annual basis unless quality control data suggests other intervals are appropriate. The flow calibration method shall be traceable to the NIST.
2. The flow tester shall be verified daily by testing the two reference fuel caps and correctly identifying the passing and failing fuel caps. Failure to pass this verification shall result in immediate cessation of usage of the tester and its repair or recalibration.
3. Flow calibrations of the reference fuel caps shall be conducted before initial usage and thereafter as required by examining quality control data.
4. The filter shall be maintained in accordance with the leak test manufacturer's recommendations.

H. Data Transmission (for External Fuel Cap Integrity Testers Only)

The tester shall be equipped with a serial data port for future capabilities to transmit pass/fail and calibration information to the central data base via the Texas Information Management System.

- 1) Texas Information Management System. The fuel cap tester shall have the capability to communicate with the OBDII Only analyzer to record information such as pass/fail results, calibration reading, etc. Communication from the unit shall be provided by one cable (if the unit is external). A CPC serial port as shown below, shall be used for communication and to provide the power needed to operate the fuel cap tester.
- 2) The connector on the OBDII Only analyzer and pin outs shall be as follows:

ANALYZER CPC SHELL REVERSE CONNECTOR: This connector must be shielded and must be compatible with an AMP 211398-1. The circuit shall be protected for power surges over 0.5 AMPS. The circuit protection shall be easily accessible to the technician unless it is an automatic reset system. The pin-out shall be as follows:

PINS	SIGNAL
1	GND
2	+12v
3	RTS.....RESET (request to send)
4	RESERVED (open)
5	SHIELD - GND
6	TXD.....TRANSMIT DATA
7	RCV.....RECEIVE DATA

The power for the tester may be provided via the CPC connector as referenced above.

2.11 Microcomputer Specifications

- A. A standard microcomputer must be included in the analyzer and is to be used to control all analyzer functions. Each vendor is to develop disk operating system programs or executable programs for each required function. The development of Windows 95 compatibility is optional. These programs shall:
1. control each of the analyzer functions and time of function;
 2. examine and obtain values from all of the analyzer sensors;
 3. read and write information to a diskette in standard DOS, or equivalent, format;
 4. copy the analyzer inspection station identification information from the hard disk, or equivalent, onto each new floppy diskette, or other storage media, when formatted;
 5. allow access to all TCEQ/DPS functions and be capable of performing these functions via modem such as:
 - auditing functions;
 - tampering, lockout checks;
 - responses to queries;
 - report downloading; etc;

6. transmit vehicle test records, calibration records, and audit records and other analyzer files to the central database via the Texas Information Management System, to a standard 3.5" IBM 1.44Mb compatible floppy disk, or by means of a standard IBM PC fully compatible DB25 enhanced bidirectional parallel port;
7. read and interpret bar code labels read by the bar code reader;
8. read data from compact discs (CD) or other storage media approved by TCEQ;
9. provide storage for archived test and graphic files;
10. access engine RPM on OBD II equipped vehicles and interface with OBD and OBD II scan tools;
11. reprint vehicle inspection reports (VIRs) from information stored on the hard drive, or equivalent storage media, or via information received from the Texas Information Management System

The TCEQ reserves the right to add additional programs and functional performance requirements, up to the technical limits of the hardware, to improve the I/M program.

Sufficient flexibility shall be provided in the design of the microcomputer system to allow expansion of the analyzer to include, but not be limited to, the following additional capabilities:

1. connect and recover data from vehicle on-board diagnostic (OBD) systems meeting EPA/SAE specifications when they become available;
2. monitor vehicle recall data; identify, record, and process data as required when an official EPA/SAE format is identified;
3. accommodate additional input channels in both analog and digital form; two free slots, 16 bit capability;
4. accommodate additional data of vehicle information and test results;
5. inclusion of record-keeping for safety inspection parameters;
6. inclusion of OBD information as part of the inspection process;
7. future revision(s) for emissions repair monitoring and reporting; and

8. inclusion of diesel emissions opacity.

The manufacturer may offer additional features which utilize the microcomputer as a stand-alone personal computer by providing optional software to perform various non-I/M functions. Such offerings must not interfere with the inspection requirements, nor in any manner affect or allow the inspector to tamper with the inspection-related computer programming or data files.

The analyzer shall be equipped with an internal clock which operates independently from the power source and will provide accurate and automatic date and time information for the following functions:

- a. each test performed;
- b. test results;
- c. audit sequence.

All equipment and software submitted for certification must be the full and current configuration proposed for sale. PARTIAL, DATED, OR INCOMPLETE MODELS ARE NOT ACCEPTABLE.

Acceptance of the microcomputer portion of the analyzer system will be dependent upon the satisfactory performance of the full proposed configuration meeting all the requirements of this specification.

The proposed hardware configuration must be fully supported by all software and/or operating systems listed in the acceptance requirements or elsewhere in these specifications. Performance tests to prove compatibility will be conducted. The vendor will bear all shipping and equipment preparation charges for the certification testing.

2.12 Gas Calibration File

At the conclusion of each gas cap tester calibration, the required data shall be placed in the CAL.DAT file.

2.12 Standard Hardware: Minimum Required Configuration

NOTE: OBD only systems that do not use a standard microcomputer configuration will need to demonstrate their functional equivalency with this section to obtain

approval from the TCEQ.

1. Operating System

Each unit may be supplied with an IBM PC-compatible, multi-tasking operating system, which provides TCP/IP capabilities, such as OS/2, Windows, Linux or equivalent operating system (OS) approved by TCEQ. The software program will neither exit to the OS, neither provide a “shell” to the operating system (i.e., “shell to the DOS”), nor be bootable from any unsecured floppy disk drive, or equivalent storage media drive. The manufacturer shall disable the option to boot from any unsecured floppy disk drive, or equivalent storage media drive. OBD only units **must** be supplied with an IBM PC-compatible, multi-tasking operating system, which provides TCP/IP capabilities.

2. Processor

The microprocessor must be fully compatible with the Intel 80486 microprocessor, or equivalent approved by TCEQ. The motherboard shall allow for processor upgrades.

3. RAM Memory

The system must contain at least 16 MB of user available RAM. (expandable to 64 MB) Alternative memory configurations may be approved by TCEQ.

4. POWER UP SEQUENCE

The system must include a power up sequence which provides a self-diagnostic routine to check the on-line presence of critical PC components or equivalent components (including, at a minimum, the processor, firmware ROM, hard disk controller, keyboard, clock, modem, printers, bar code reader I/O ports, set RAM and memory). This power up sequence must support all supplied components.

4a. Cache Memory

The system must contain at least 256K of external cache memory. If more than one processor is used for the central processing, then for each additional processor, 256K more cache memory must be added.

4b. Bus

When equipped with all TCEQ specified options, each unit must provide at least 1 free EISA (16 bit), one free USB slot, and 2 PCI slots for future expansion. The PCI expansion slots must be fully PCI-compliant ("plug-and-play") and be capable of

mapping IRQ 14 & 15. TCEQ may waive the requirement for the spare EISA slot if the OBDII Only analyzer has manufacturer-designated slots for upgraded options which would address potential future expansion.

5. VIDEO

The CRT display must be at least 15" in diagonal measure, of .28 dot pitch or less, and must be in color. The analyzer's monitor shall be interchangeable with a locally purchased, off-the-shelf, IBM PC compatible monitor. The monitor must be capable of non interlaced resolution up to 1024 X 768. The display must interface with a color graphics adapter fully compatible with the IBM SVGA color graphics adapter. This interface must be capable of operating in noninterlaced modes up to a resolution of 1024 X 768 while emulating 64K colors or more. The video adapter must be equipped with a 64-bit accelerator chip (or better) to increase its video processing speed and must be PCI or AGP bus-compliant. The video adapter must be equipped with 8Mb and easily replaceable.

The software shall automatically blank the screen, leave the screen in a blank condition with a bouncing prompt, dim the screen, or use a screen saver mode, if no keyboard entry is made for 10 minutes. The display shall return when the inspector strikes any key. Alternative proposals may be approved by the TCEQ in writing.

6. Floppy Disk (or equivalent)

Each unit must come with an IBM compatible floppy disk drive which will permit full usage of 2sHD 1.44 Mb 3.5" removable media. The drive must be located in a secured area accessible only to TCEQ/DPS program officials and authorized service representatives. That secured drive must also include an approved method to limit logical access. The TCEQ will test the system for drive security and it shall not provide access to the secured floppy except through the approved security procedure. The floppy drives must have an external door protecting them from contamination (dust). The analyzer's cooling fan (if equipped) shall not create a negative pressure in the case unless the floppy drive is sealed to prevent this negative pressure from drawing dust into the drive. The secured floppy drive shall be designated the "A" drive.

6a. Compact Disc (CD) (Optional)

Each analyzer may be equipped with one CD ROM drive. The disk drive must be protected from contamination in the shop environment. The drives must accept disk caddies or other methods acceptable by TCEQ such as a multi-disk changer. The CD ROM drive shall be capable of reading CD ROMs that are formatted per ISO 9660. The CD drive shall be designated the "H" drive. The minimum acceptable sustained

transfer rate is 600 kilobytes per second with a minimum acceptable average random access time of 225ms and must be multimedia and photo CD compatible as a minimum. A means for providing security to prevent unauthorized access to lower level system functions shall be submitted by the manufacturer for TCEQ approval.

7. Hard Disk

Each unit must come with at least 6.4 gigabytes of usable formatted uncompressed hard disk storage. The vendor must leave at least 2.5 gigabytes of usable storage for the TCEQ/DPS and 1.0 gigabyte of graphic/audio and text storage allotted to the technician. Second-by-second data, emission inspection data (including graphics) and vehicle data will be stored in the TCEQ/DPS storage area. The system shall warn the technician with a screen prompt when the hard disk is within 10% of being full in any of the allotted storage areas. The hard disk is to be self-parking, shock mounted, and able to operate reliably in the expected hostile garage environment. The hard disk must also include a TCEQ approved method of limiting logical access to data and programs. The hard disk containing the TCEQ/DPS programs and files shall be designated the "C:" drive. The hard drive's minimum acceptable burst transfer (external transfer) shall be 33Mb per second. The hard drive's minimum acceptable sustained transfer (internal transfer) shall be 5Mb per second. The minimum acceptable average random access time shall be 12ms. No software cache can be used when measuring transfer rate or access times.

7a. Hard Disk Interface

The hard disk interface must be PCI bus-compliant and use enhanced IDE Mode 4 (or better) or Fast SCSI-2 (or better) or alternative approved by the TCEQ. The hard disk must be capable of maintaining a minimum transfer rate of 16,600 kilobytes per second with all peripherals installed (including options).

8. I/O Ports

The unit must include sufficient I/O ports of proper configuration to allow the connection of all required options and the capability to add additional I/O boards. The unit must include at least one MS-DOS/IBM PC standard compatible parallel printer port and one baud rate programmable (300 to 19.2K) IBM PC compatible serial port with a male connector (9 pin or 25 pin (DB025)). The parallel port can be connected to the printers, but the serial port must be available. Serial port only must be clearly labeled and easily accessible by only TCEQ/DPS program officials or authorized representatives.

Three baud rate programmable (300 to 115.2K or more) I/O serial ports using CPC

female connectors with the following pinouts must be provided for future expansion or for use by the manufacturer upon approval by TCEQ.

All TCEQ-reserved serial ports shall use 16550 UART chips or better. All I/O ports shall be clearly labeled and easily accessible and may be shared. All CPC pinouts shall be as follows:

ANALYZER CPC METAL SHELL REVERSE CONNECTOR

This connector must be metal, shielded and must be compatible with an AMP 211398-1.

PINS	SIGNAL
1	GND
2	+12v
3	RTS.....RESET (request to send)
4	RESERVED (open)
5	SHIELD - GND
6	TXD.....TRANSMIT DATA
7	RCV.....RECEIVE DATA

The CPC ports will supply software switchable 12V DC to equipment attached. The +12V pin must provide circuit protection of shorts or overload. The circuit protection can be in the form of a fuse, circuit breaker, etc. The circuit protection must be easily accessible to the operating technician for fuse replacement and or circuit breaker reset (unless automatic reset). The circuit must be capable of handling at least 6 watts.

9. Keyboard

The analyzer keyboard must be fully interfaced with the microcomputer and have all of the necessary normal, numeric, cursor, control, shift, alternate, and function keys needed to operate a standard IBM PC compatible microcomputer, preferably a full 101 keys should be provided. A 101-key keyboard shall be able to interface and fully operate the analyzer. The analyzer's keyboard shall be interchangeable with a locally purchased, off-the-shelf, IBM PC compatible keyboard.

10. Bar Code Scanner

The purchase of a bar code scanner for reading Vehicle Identification Numbers (VINs) is required. Configuration of the analyzer should allow for installation of the bar code scanner. The bar code scanner must be able to read a 2D bar code, and 1D bar code through a windshield, even if the bar code is six to eight inches from the windshield. The bar code scanner shall not be able to read UPC 1D bar codes. The bar code scanner

shall use visible laser diode technology, be able to withstand multiple drops to concrete covering a distance of at least four feet, and be environmentally sealed to withstand the normal operating conditions of an automotive technician environment.

11. Hard Disk Expansion

Each system must include a hard disk interface which will fully support a second internal disk drive of the same type as the original type drive or a functional equivalent approved by the TCEQ. Tamper-resistance shall not be compromised by the use of the second disk drive and/or the hard disk interface.

12. Additional Storage

3.5" 1.44 Mb Floppy Disk Drive, IBM Optical disk drive, CD ROM reader etc., -These options would be for manufacturer offered look up tables, service information, or other options requiring additional storage capability.

13. Communications

The modem hardware must support the following protocols:

Modulation: ITU (International Telecommunications Union, formerly the CCITT) V.22, V.22bis, V.32, V.32bis, V.34.

Error control: ITU V.42, MNP (Microcom Network Protocol) 2, 3 and 4. Compression: ITU V.42bis, MNP 5.

Connect Time: The modem must be capable of achieving a link with the VID in less than 10 seconds at 14.4K baud or higher. The link time will be measured from the point the line is picked up to the point of connect.

The modems must support at least the following baud rates: 36.6k to 56k asynchronous operation.

The modem must support the industry-standard AT command set. If the modem is not using a common expansion bus slot, then a means of disabling the modem and an expansion slot or another high speed I/O port must be provided with the intent of supporting an upgraded modem if needed for future expansion. The analyzer shall have a standard female modular telephone connector located on the back of the analyzer. The telephone cord shall not be attached to the power cord. The telephone line shall be enclosed in a protective cable meeting UL approval.

The analyzer shall be programmed to automatically lockout if a software program update does not load properly via the modem or diskette.

2.13 Required Printer

Vehicle Inspection Report Printer:

A laser printer shall be supplied with each EIS purchased, leased, or upgraded. The printer shall be dedicated to the task of printing vehicle inspection reports, diagnostic reports, or printing other designated information on a vehicle diagnostic form, or other repair type information. Standard printer paper will be used. The printer shall print information on the vehicle inspection report using a minimum of 12 characters per inch and 80 characters per line. The EIS' printer shall be interchangeable with a locally purchased, off-the-shelf, IBM-PC compatible printer

2.13a Running Changes

Any changes to design characteristics, component specifications and any modifications to the hardware must be approved by TCEQ. It will be the instrument manufacturer's responsibility to confirm that such changes have no detrimental effect on the analyzer performance.

- a) Only TCEQ-approved hardware configurations and options may be used in the analyzer.
- b) All proposed hardware modifications and options must be thoroughly tested by a third party before being submitted to TCEQ.
- c) All proposed hardware modifications shall be accompanied by a cover letter containing the following information:
 - 1) A description of all of the proposed modifications to be performed (including manufacturer initiated modifications), a parts list, and the installation instructions for the field service representative.
 - 2) A time line showing when the modifications are expected to be performed (start to finish), and how many existing units will be updated.
 - 3) If any special procedures are needed to perform the hardware modifications, describe the procedures for performing the update.

- 4) If the proposed hardware modifications require changes or additions to the software, documentation for the software update shall be submitted as indicated above.
- 5) Depending on the type and number of modifications proposed, the TCEQ may require testing at TCEQ-approved beta test sites prior to release of the software. The software modifications shall be reviewed by a third party prior to release for beta-site testing.

2.14 Clock/Calendar

The analyzer unit shall have a real time clock/calendar which shall make available the current date and time. Dates will be in month, day, year format, and time will be in a 24-hour format. Both time and date shall be updated by the program system host computer during each transfer of data via the system modem.

The date/time, along with the time the test started and when it ended, is to be included on the test record. The start time is when the inspector's access code is entered and the end time is when the analyzer data is written to the test file.

If the clock/calendar fails or becomes unstable (as referenced to the program host system during modem data transfer), the analyzer unit shall be locked out from I/M testing and a message shall be displayed indicating that service is required.

The analyzer clock shall be checked against the VID clock at the beginning of each test. If the difference between the analyzer clock and the VID clock varies by more than 10 minutes for more than three times within one month, the analyzer shall be locked out from I/M testing and a message shall be displayed indicating that service is required or tampering has occurred.

Resetting of the clock, independent of the host updating, shall require controlled access. The controlled access shall be available only to the State Representatives and the manufacturer's service technician. The access mechanism or procedures shall be approved by the TCEQ. The software shall require the clock to be set each time contact is made with the VID (except for end-of-test contact). The analyzer shall also check the its' clock against the VID clock prior to clearing any lockout.

The analyzer clock/calendar shall be equipped with a battery backup feature that has a battery with at least a five-year expected life. The calendar shall handle the year rollover from 1999 to 2000. The analyzer shall be able to activate a software update by the clock/calendar as directed by the TCEQ.

2.15 Lockout Notification

The analyzer shall alert the inspector of any lockout situation by prominently displaying a message on the CRT. Any lockout condition will be stored to file.

2.15a Vehicle Diagnosis

The analyzer shall be capable of menu selection that will allow the analyzer to be used as an ordinary garage type emissions analyzer for general automotive repair work and diagnostics. Diagnostic capabilities are optional.

2.16 Software Loading

The inspector shall not have to load the microcomputer's operating or applications software to operate the analyzer. On each POWER-ON of the analyzer, the analyzer shall automatically do all microcomputer component self-diagnostics, memory checking, and loading of all necessary operating software without inspector intervention. Upon satisfactory computer component check out, the applications software shall present a menu of available analyzer operations. All offered features are to be menu-driven. For each feature, a context sensitive, on-line help facility is to be provided which can be accessed, preferably with a single key stroke.

2.17 Communications with Texas Information Management System

A required component of the vehicle emissions testing program is the electronic transmission of data/information about the specific vehicle under inspection and the inspection results. The Texas Information Management System (TIMS) is the name that TCEQ has given to the electronic network that enables the analyzer to automatically connect to the TCEQ's centralized Vehicle Information Database (VID) via modem and dial-up connection. The software protocol is provided in greater detail in Section 3 of this Specification.

The communications protocol shall be developed by the TCEQ contractor and provided to the analyzer manufacturers. The manufacturers shall be responsible for submitting a written request to the TCEQ for the communications protocol. Communication between the Texas Information Management System Host, and the analyzer shall be a condition of certification. The analyzer shall demonstrate the ability to receive from the Texas Information Management System Host all applicable data (i.e., inspection records, vehicle information, etc.) needed to conduct the inspections. The OBDII Only analyzer shall also demonstrate the ability to transmit the applicable data (i.e., results of inspections, audit file, etc.) to the Texas Information Management System. The Texas Information Management System Host shall be able to transmit the emissions standards table via modem. The analyzer shall be capable of

automatically installing and using the new files containing the aforementioned items.

When an announcement or bulletin has been received from the host, the software will automatically display a message or other indicator, indicating that an announcement or bulletin has been received from the TCEQ/DPS. At a minimum, the indicator shall be visible to the inspector between inspections and from the main menu. The display shall not stop an inspection from being conducted. Announcements shall be transmitted during initial contact with the Texas Information Management System during an emissions test or during a communications refresh. The analyzer may have a "bulletin display" function and display any announcements or bulletins forwarded from the Texas Information Management System Host system via modem transfer in the past 72 hours. The announcement(s) or bulletin(s) shall be stored on the analyzer in the Announcement file for 180 days from the date of initial receipt from the host or until another announcement is saved over it. The analyzer shall allow an inspector to view and/or print any message contained in the Announcement file.

a) Mandatory TIMS Service:

In order to comply with the TIMS mandate, each inspection station shall obtain and maintain TIMS services through TCEQ's designated TIMS contractor. The following criteria shall be met before a OBDII Only analyzer is used for I/M testing: (1) the OBDII Only analyzer shall be connected to, and shall be fully functional with the TIMS service, and (2) the OBDII Only analyzer shall possess, and be operational with the current software and/or hardware update which includes the TIMS communications protocol.

b) TIMS Service Description:

At the beginning of the test, following the technician's entry of the Vehicle License Plate Number and VIN into the OBDII Only analyzer, the communications software (via the modem and dial-up connection) initiates an automated call (initial call) to the VID. Vehicle-specific information (VLT), previous test results, vehicle description, waiver or extension data, emissions recall information, technical service bulletins, and announcements are electronically returned from the VID. Information that the technician previously filled in manually will be automatically entered into the OBDII Only analyzer and the technician will be responsible for verifying that the information is correct.

At the conclusion of the inspection, test results, repair results (when required), and certificate number for passed tests are transmitted electronically to the VID (end-of-test call). The Vehicle Inspection Report (VIR) serves as the customer's receipt.

Using the TIMS system, the TCEQ is also able to send electronic messages to technicians and inspection station owners. When an announcement or bulletin has been received from the host, the software will automatically display a message or other indicator, indicating that an

announcement or bulletin has been received from the TCEQ/DPS. At a minimum, the indicator shall be visible to the inspector between inspections and from the main menu. The display shall not stop an inspection from being conducted. Announcements shall be transmitted during initial contact with the TIMS during an emissions test, or during a communications refresh. The announcement(s) or bulletin(s) shall be stored on the EIS in the Announcement file for 180 days from the date of initial receipt from the host or until another announcement is saved over it.

c) Optional Diagnostic and Repair Information (ALLDATA):

The TIMS service provides immediate electronic access to diagnostic and repair information for a fee.

d) Charges for TIMS Services:

Inspection stations must maintain TIMS service in accordance with the terms specified by the TCEQ's TIMS contractor.

2.17b Form, Manner and Frequency of Data Transmittals for TIMS

- a) Form: For each inspection, the data transmittal shall consist of the vehicle's test record, VLT data, and when required, repair record (and other records) as described in Appendix I.
- b) Manner: The manner of the data transmittal shall be using the EIS modem via a dial-up connection. The EIS must be maintained to ensure proper operation and shall be connected to a fully operational and dial-up connection during all times of operation.
- c) Frequency: The data shall be transmitted for inspection and repair (when required) and shall include two (2) transmissions per inspection, one for the initial call and another for the end-of-test call.

3.0 DISPLAY PROMPTS AND PROGRAMMING CRITERIA REQUIREMENTS

This section describes the display prompts and programming criteria for the Emissions Inspection/Test Sequence. These items shall be standardized to facilitate training of licensed inspectors. Manufacturers may propose alternative methodologies for the presentation of information and for data entry as long as the substance and the priority of the sequence is not significantly modified. Alternative methodologies shall be presented to the TCEQ for approval. The OBDII analyzer manufacturers shall utilize one or more of the following options to make the analyzer more user friendly:

- A. Direct cursor addressing a first letter selection versus a scrolling display;
- B. Displaying data entry error messages; and
- C. Help screens to assist inspectors with data entry and data verification.

Other options may be proposed for approval by the TCEQ. Data entry from one item to another shall not proceed until a valid entry has been made. During reinspection entry from the Main

Menu, the analyzer shall display the appropriate fail records with no tampering information displayed. Where editing is allowed, the inspector shall have the ability to return to a previous display prompt. At that point, the inspector shall see the prior information and be permitted to insert and delete characters without having to retype the whole field.

Inspection Sequence

The microcomputer software shall control the inspection sequence and equipment process. This software shall, at a minimum, require the inspector to proceed in the following sequence when performing a vehicle inspection:

- A. Enter the inspector access code number.
- B. Enter VIN.
- C. Enter license plate number.
- D. Conduct the EPA approved OBDII test.
- E. Enter the emissions repair data, if applicable.
- F. Update data files, send data to Host/print vehicles inspection reports.

Aborting Inspections

If 'ABORT' is selected on an initial test, the vehicle information will be stored in the RECALL.DAT file for later recall by the inspector via main menu option '10.' Main menu option '10' is described in Section 3.10.

A test record will first be written for an aborted test on the OBD screen in sec. 3.1.25c. Before sec 3.1.25c a test can be exited, and no aborted record recorded. The last prompt a test can be exited or aborted is the gas cap test results prompt. After the gas cap test results prompt a test cannot be

aborted or exited.

If 'ABORT' is selected, the system shall prompt the inspector to ENTER THE CODE THAT BEST DESCRIBES THE REASON THE TEST WAS ABORTED. SELECT AND ENTER THE APPROPRIATE ESCAPE CODE FROM THE LIST BELOW:

If the inspector selects one of the following abort codes, the analyzer shall:

- 1) fail the vehicle; and
- 2) allow the inspector to edit the fee entries, because the fee is due, and
- 3) enter an 'I' in the emiss_init_test and safe_init_test fields if the vehicle is an initial inspection and 'R' if it is an reinspection

01 OIL SYSTEM WARNING LIGHT IS ON

02 COOLANT SYSTEM WARNING LIGHT IS ON

03 FUEL SYSTEM LEAK

04 EXCESSIVE ENGINE NOISE

08 OTHER SAFETY PROBLEM

If the inspector selects one of the following abort codes, the analyzer shall:

- 1) not fail the vehicle;
- 2) set the EMISS_INSP_COST field to \$0.00, because no fee is due;
- 3) enter an 'I' in the emiss_init_test and safe_init_test fields if the vehicle is an initial inspection and 'R' if it is an reinspection, and mark the test as an aborted inspection, and not count the inspection as an initial inspection or reinspection;
- 4) prompt the inspector to indicate if safety related repairs were conducted. If no, set the SAFE_INSP_COST field to \$0.00. Otherwise, allow the inspector to enter a value using the Safety Test Fee Prompt as shown in Section 3.1.22;
- 5) prompt the inspector to indicate if emissions-related repairs were conducted. If no, set the REP_CST_YIS fields to \$0.00. Otherwise, allow the inspector to enter a value using the Emissions Reinspection Repairs Prompt in Section 3.4.9; and
- 6) include all entered safety and emissions related repair costs on the VIR.

05 VEHICLE DOES NOT REQUIRE INSPECTION

07 ANALYZER PROBLEM

99 OTHER (INDICATE REASON ON THE VEHICLE INSPECTION REPORT)

A maximum of two characters has been provided for this entry. The analyzer shall accept one two character abort code which shall be inputted by the inspector and saved to the test record. All of the inspection and test data collected up to the time abort is initiated, shall be recorded in the VEHICLE.DAT and REINSPEC.DAT files, and on the vehicle inspection report. After the abort code confirmation has been made, the analyzer shall allow the inspector to enter or edit the applicable fees, (i.e., safety fee, emissions fee, or both).

If the emissions test must be aborted after the sampling period has started, the latest five-second average (or the average of whatever portion of the first five seconds of the sampling period has elapsed) shall be treated as the "final value." Emissions readings shall be taken during all test modes and the "final" reading shall be recorded on the VEHICLE.DAT and REINSPEC.DAT files and on the vehicle inspection report. The analyzer shall be designed so that the inspector can initiate the 'ESCAPE' or 'ABORT' sequence by depressing a maximum of one key. Leading zeros shall be entered by the analyzer software.

The analyzer shall be designed so that the inspector is required to confirm the initial abort command after entering the applicable abort code. The inspector shall be allowed to edit the abort codes up until the confirmation is made. If the inspector wants to return to the test, and not continue with the abort sequence, the inspector shall be allowed to do so prior to the confirmation. The inspector shall be returned to the same place in the test sequence they are at when the abort was initiated. However, if the abort was initiated during the emissions test, the inspector shall be returned to the beginning of the emissions test sequence. Unconfirmed aborts shall not be recorded on the test record. The abort code selected must be recorded to the VEHICLE.DAT file. The analyzer must then return to the main menu.

Data Entry Errors

Data entry errors will be displayed as the following message(s):

NO VALUE HAS BEEN ENTERED - TRY AGAIN

INVALID ABORT CODE - TRY AGAIN

Menus

The following list contains the menus manufacturers are required to provide. Manufacturers may break the menus down further to increase user friendliness or expedite certain operations. Manufacturers may provide additional menus. The TCEQ/DPS reserves the right to require modification if any menu does not meet minimum requirements.

Upon successful completion of the start-up diagnostics, the system shall display the main menu containing the following options:

1. Safety and Emissions Inspection
2. Safety Only Inspection
3. Emissions Only Inspection
4. Reinspection
5. Reprint Vehicle Inspection Report
6. Vehicle Diagnosis
7. Training Mode
8. Analyzer Maintenance
9. Audit Menu
10. Recall Aborted Inspection
11. Gas Cap Integrity Test
12. Missing, or Voided Certificates
13. Certificate Correction/Replacement
14. Technical Bulletins/Announcements
15. Communications Refresh
16. Communication Diagnostics (Loopback)
17. All data Communications
18. Inspection Log (VI-8B)
19. VI-30A Only
20. Test on Resale (shall be displayed immediately before 'Reinspection')

The inspector shall initiate an official emissions inspection by entering the number "1," the training mode by entering the number "7," and so forth.

Upon power-up of the analyzer, a full system check of all hardware components will be conducted.

The analyzer shall then check for station lockout flags in the LOCKOUT.DAT file. The analyzer shall check for a '1' or 'Y' in the STAT_CERT_SUSP, STAT_CERT_EXP, or STAT_CERT_REVOK fields of the LOCKOUT.DAT file

If a station lockout field equals "Y" or any power-up test fails, the analyzer shall disable all emissions test functions and display a message **"CALL SERVICE FOR REPAIRS OR YOUR LOCAL DPS OFFICE FOR STATION OR INSPECTOR LOCKOUT."**

<u>Programming Criteria:</u>	VEHICLE.DAT	TEST_TYPE EMISS_TEST_TYPE EMISS_INIT_TEST
	REINSPECT.DAT	TEST_TYPE EMISS_TEST_TYPE EMISS_INIT_TEST
	RECALL.DAT	TEST_TYPE EMISS_TEST_TYPE EMISS_INIT_TEST

The analyzer will set the EMISS_TEST_TYPE field to '1' for an OBD only test.

If the inspector selects one of the following choices from the main menu:

- 1 - Safety & Emission Inspection
- 2 - Safety Only
- 3 - Emissions Only
- 5 - Reprint

The system will set test_type field to the following:

- 1 - 'A' 5 - 'K'
- 2 - 'H'

If 3 - Emissions Only is selected, prompt the inspector to indicated if the test is a:

- 1 - required emission only test (decal)
- 2 - voluntary test
- 3 - test on resale (not displayed or used)
- 4 - remote sensing request

The system will set test_type field to the following:

- 1 - 'O' 3 - 'C'
- 2 - 'I' 4 - 'B'

Choice 'F' is reserved for 'minimum expenditure waiver tests,' and choice 'G' is reserved for 'federal tests'. Choice 'D' and choice 'E' are reserved for scrappage tests, and arbitration/dispute tests, respectively. The system will default/highlight selection number 1 in all of the scenarios.

TEST_TYPE

- A) Emission & Safety Test
- B) Remote Sensing Request (Decal)
- P) VI30a Only
- H) Safety Only Test
- I) Voluntary Emissions Test
- K) Reprint
- O) Required Emissions Only Test (Decal)

SPECIAL_TEST

- C) Test on Resale
- D) Accelerated Vehicle Retirement Test
- E) Dispute Test
- F) Not currently in use
- G) Federal Test
- A) Special Certificate Replacement Inspection
- J) Waiver - Individual Vehicles
- L) Waiver - Low Income Time Extension
- M) Parts Availability Time Extension
- N) Other (Special Test)
- P) Waiver - Low Mileage
- O) Required Emissions Only Test (Decal)

3.1 Main Menu Selection '1' "Safety and Emissions Inspection"

3.1.1 Access Code Prompt: ENTER YOUR INSPECTOR'S ACCESS CODE

Programming Criteria:

The OBD only analyzer shall be designed to require the entry of the access code via the 2-D bar code reader. The inspector shall be required to enter his access code using the bar code reader for every inspection.

The OBD only analyzer shall be designed to require the entry of a special access code by the certified inspector before an official emissions inspection can begin. The access

code shall neither be displayed nor printed on the Inspection Vehicle Inspection Report. This access code will be verified and linked to existing I/M Inspector number contained in the **INSPECTR.DAT** file. The analyzer shall not accept duplicate access code for different inspectors. Each inspector's access code shall be unique. The analyzer shall allow three attempts to enter a valid access code. Following each of the first two attempts, Error Message 1 shall be displayed. Error Message 2 shall be displayed for 5 minutes following the third attempt or until the inspector presses "enter/continue". The system shall then return to the main menu.

Error Messages:

1. **"YOUR ACCESS CODE IS NOT VALID--TRY AGAIN"**
2. **"THE ACCESS CODE ENTERED IS NOT VALID. VERIFY YOUR ACCESS CODE NUMBER WITH YOUR LOCAL DPS OFFICE."**

Associated System File: **INSPECTR.DAT** **ACCESS_CODE**

3.1.2 PIN Number Prompt: **ENTER YOUR INSPECTOR'S PIN NUMBER**

Programming Criteria:

The OBDII analyzer shall be designed to require the entry of a special PIN by the certified inspector before an official emissions inspection can begin. The PIN shall neither be displayed nor printed on the Inspection Vehicle Inspection Report. This PIN will be verified and linked to existing I/M Inspector number contained in the **INSPECTR.DAT** file. The analyzer shall not accept duplicate PINs for different inspectors. Each inspector's PIN shall be unique. The PIN will be encrypted on the analyzer and is unreadable to anyone. Also, any other files that contain the PIN (i.e. **INSPECTR.REC**) must be unreadable to anyone. The analyzer may encrypt or delete these files. The analyzer shall allow three attempts to enter a valid PIN. Following each of the first two attempts, Error Message 1 shall be displayed. Error Message 2 shall be displayed for 5 minutes following the third attempt or until the inspector presses "enter/continue". The system shall then return to the main menu.

Error Messages:

1. **"YOUR PIN IS NOT VALID--TRY AGAIN"**
2. **"THE PIN ENTERED IS NOT VALID. CONTACT YOUR LOCAL DPS OFFICE TO RESET YOUR PIN."**

3.1.4 Insurance Prompt:

Programming Criteria: Enter the insurance expiration date in the following format: MM/DD/YY. The analyzer system shall verify that the entry for the month is between 1 - 12, the entry for the day is between 1 - 31, and that the entry for the year begins with 19 or 20 (i.e., 1985, 2001). If the inspector enters a date that has passed, the analyzer shall provide a warning to the inspector. The warning shall indicate that the insurance has expired. The system will accept '000000' as a valid entry. The system will print '000000' on any applicable form, and write the vehicle record to VEHICLE.DAT.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT INSUR_EXP_DT

3.1.6 Fuel Type Prompt: ENTER THE VEHICLE FUEL TYPE. SELECT THE APPROPRIATE FUEL TYPE CODE FROM THE LIST BELOW.

<u>Code</u>	<u>Description</u>
"G"	Gasoline
"B"	Bi-Fueled (Dual-Fueled)
"D"	Diesel

Programming Criteria: Entry of one of the above types is required. The analyzer software shall be designed so that only a "G," a "B," or a "D" can be entered by the inspector for this field. The system software shall default to gasoline for this entry. If the inspector selects "B", the system shall display a message stating that **"YOU HAVE INDICATED THAT THIS VEHICLE IS DUAL FUELED. PLEASE CONFIRM THAT THE VEHICLE IS OPERATING ON GASOLINE FOR THE TEST WITH A "Y."** After confirming the result, the system shall go to the model year prompt. If the inspector presses something other than "Y", the system shall return to the initial fuel type prompt. If the inspector selects "D", the system shall display a message stating **"YOU HAVE INDICATED THAT THIS VEHICLE IS DIESEL FUELED. PLEASE CONFIRM THIS ENTRY BY PRESSING "Y".** If the inspector presses something other than

"Y", the system shall return to the initial fuel type prompt.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

INVALID ENTRY--TRY AGAIN.

Associated System File: VEHICLE.DAT FUEL_TYPE

3.1.7 Model Year Prompt:

ENTER THE LAST TWO DIGITS OF THE VEHICLE MODEL YEAR.

Programming Criteria:

If no value is entered, the analyzer will display Message 1, and prompt the inspector to reenter the last two digits of the vehicle model year.

The system will display Message 3 in the event that the model year is beyond (i.e., strictly greater than) the current year +2, and prompt the inspector to reenter the last two digits of the vehicle model year or the entire model year.

The system shall display message 4 if the model year is strictly less than the value contained in the OBDII_MODEL_YR field of the SYSTEM.DAT file (i.e., is not eligible to receive an OBDII emissions test).

The analyzer shall require the inspector to confirm any model year entry that is less than 1950.

- Error Message:**
1. NO VALUE HAS BEEN ENTERED TRY AGAIN.
 2. NOT REQUIRED TO TEST VEHICLES OLDER THAN YEAR (CURRENT YEAR - 24) AND/OR VEHICLES LESS THAN 2 YEARS OLD. THIS IS AN OPTIONAL TEST.
 3. INVALID MODEL YEAR -- TRY AGAIN.
 4. THIS VEHICLE IS NOT ELIGIBLE FOR AN OBDII ONLY EMISSIONS TEST

Associated System File: VEHICLE.DAT MODEL_YEAR
LOCKOUT.DAT ASM_TSI_LOCKOUT

If DSL_OBD_TESTING = 'Y', and the analyzer system shall determine if this diesel vehicle is required to received an emissions test. This is done by verifying the previously entered GVW is less than or equal to the value in the DSL_OBD_MAX_GVW field, and the previously entered model year is in the acceptable range. The acceptable range is defined as:

DSL_ROLLING_YRS = F and entered model year is greater or equal to DSL_FIXED_YR_MIN, and less than or equal to DSL_FIXED_YR_MAX, or

DSL_ROLLING_YRS = R, and entered model year is less than or equal to calendar year minus DSL_BGN_ROLLN_YR and entered model year is greater than or equal to calendar year minus DSL_END_ROLLN_YR, or

DSL_ROLLING_YRS = A, and entered model year is less than or equal to calendar year minus DSL_BGN_ROLLN_YR and entered model year is greater than or equal to DSL_FIXED_YR_MIN, or

DSL_ROLLING_YRS = B, and entered model year is greater or equal to calendar year minus DSL_END_ROLLN_YR and entered model year is less than or equal to DSL_FIXED_YR_MAX.

If DSL_OBD_TESTING = 'Y', and the analyzer system determines this diesel vehicle **IS NOT** required to receive an emissions test, the analyzer shall display a message stating "YOU HAVE INDICATED THAT THIS VEHICLE IS DIESEL FUELED. HOWEVER, THIS DIESEL FUELED VEHICLE IS NOT REQUIRED TO RECEIVE AN EMISSIONS TEST. THIS IS AN OPTIONAL TEST." If the inspector elects to continue with the optional test, the system shall conduct an OBD test where the entered model year is greater than or equal to the value in the DSL_OBD_MODEL_YR field of the SYSTEM.DAT file, and DSL_OBD_TESTING = 'Y.'

If the inspector elects to continue with the optional test and the system determines that the vehicle is not eligible for an OBD test (i.e., the entered model year is strictly less than the value in the DSL_OBD_MODEL_YR field of the SYSTEM.DAT file, or the DSL_OBD_TESTING = 'N. '), the system shall return to the main menu.

If the inspector elects not to continue with the optional test, the system shall return to the main menu, when the inspector presses the appropriate key.

If DSL_OBD_TESTING = 'Y', and the analyzer system determines this diesel vehicle **IS** required to received an emissions test, the analyzer shall compare the test date to the Diesel OBD testing program start date contained in the DSL_FAIL_ST_DT field. If the test date is less than the date contained in the DSL_FAIL_ST_DT field (i.e., beta testing period) and the DSL_OBD_BETA_DFLT is set to 'S', the analyzer shall only use the results of the Safety

phase to determine if the vehicle passes or fails the inspection. If the test date is greater than the date contained in the DSL_FAIL_ST_DT field (i.e., live testing period), the analyzer shall use all results to determine if the vehicle passes or fails the inspection. Disregard the value of the DSL_OBD_BETA_DFLT field during the live testing period.

If the inspector selected "G," or "B," under the Fuel Type Prompt, the system shall check the value of the OBD testing fields in the SYSTEM.DAT file. When OBD_TESTING = 'N', the analyzer system shall not conduct the OBD emissions test. When OBD_TESTING = 'Y', the analyzer system shall conduct the appropriate emissions test.

The analyzer shall determine if the vehicle is required to receive an emissions test. This is done by verifying the previously entered model year is in the acceptable range. The acceptable range is defined as:

PGRM_ROLLING_YRS = F and entered model year is greater or equal to PGRM_FIXED_YR_MIN, and less than or equal to PGRM_FIXED_YR_MAX, or

PGRM_ROLLING_YRS = R, and entered model year is less than or equal to calendar year minus PGRM_BGN_ROLLN_YR and entered model year is greater than or equal to calendar year minus PGRM_END_ROLLN_YR, or

PGRM_ROLLING_YRS = A, and entered model year is less than or equal to calendar year minus PGRM_BGN_ROLLN_YR and entered model year is greater than or equal to PGRM_FIXED_YR_MIN, or

PGRM_ROLLING_YRS = B, and entered model year is greater or equal to calendar year minus PGRM_END_ROLLN_YR and entered model year is less than or equal to PGRM_FIXED_YR_MAX.

If the inspector selected "G," or "B," under the Fuel Type Prompt, and, OBD_TESTING = 'Y' the analyzer system determines this vehicle **IS NOT** required to receive an emissions test (i.e., the entered model year is not within the acceptable range), the analyzer shall display a message stating "NOT REQUIRED TO TEST VEHICLES OLDER THAN YEAR (minimum of [CURRENT YEAR - PGRM_END_ROLLN_YR, or PGRM_FIXED_YR_MIN]) AND/OR VEHICLES YOUNGER THAN YEAR (maximum of [CURRENT YEAR - PGRM_BGN_ROLLN_YR, or PGRM_FIXED_YR_MAX]). THIS IS AN OPTIONAL TEST." If the inspector elects to continue with the optional test, the system shall conduct an OBD test where the entered model year is greater than or equal to the value in the OBDII_MODEL_YR field of the SYSTEM.DAT file, and OBD_TESTING = 'Y.'

If the inspector elects to continue with the optional test and the system determines that the vehicle is not eligible for an OBD test (i.e., the entered model year is strictly less than the

value in the OBDII_MODEL_YR field of the SYSTEM.DAT file, or the OBD_TESTING = 'N.').

If the inspector elects to continue with the optional test, and the system determines that the vehicle is not eligible for an OBD test, the system shall return to the main menu. If the inspector elects not to continue with the optional test, the system shall return to the main menu, when the inspector presses the appropriate key.

Default Test Selection

Based on the inspector entries of GVW, Fuel Type, and Model Year, and the settings in the System.dat file, the analyzer should be able to determine the default test type for all Diesel and gasoline powered vehicles. Additionally, OBD default tests will be affected by the status of the communications, and status of the readiness monitors. All tests will be affected by whether the analyzer system is set up to perform the default test.

OBD is the default test for diesel vehicles where Fuel Type = D, DSL_OBD_TESTING = Y, the GVW entry is less than or equal to the value in the DSL_OBD_MAX_GVW, and the model year entry is greater than or equal to DSL_OBD_MODEL_YR. This applies to all testing, including live, optional, and beta period testing.

OBD is the default test for gasoline vehicles where Fuel Type = G or B, OBD_TESTING = Y, the model year entry is greater than or equal to OBDII_MODEL_YR. This applies to all testing, including live, optional and beta testing.

Once the default test is determined as OBD use these three letters as replacements for the XXX in the Live Testing part of this section.

Live Testing for Gas Powered Vehicles

Once the default test is determined as OBD use these three letters as replacements for the 'XXX' in this paragraph. If the test date is greater than the date contained in the XXX_FAIL_ST_DT field (i.e., live testing period), the analyzer shall use all results to determine if the vehicle passes or fails the inspection.

If the entered vehicle model year is greater or equal to the value contained in the OBDII_MODEL_YR field of the SYSTEM.DAT file (i.e., is eligible to receive an OBDII emissions test), the analyzer shall conduct an OBDII emissions test on this vehicle.

3.1.8 Bar Code Entry of License Plate Type, Number, and VIN Prompt:

SCAN THE BAR CODE THAT CONTAINS THE LICENSE PLATE TYPE, LICENSE PLATE NUMBER, AND FROM THE VEHICLE INSPECTION REPORT.

OR

PRESS “ENTER/CONTINUE” TO CONTINUE IF THE VEHICLE INSPECTION REPORT IS NOT AVAILABLE.

Programming Criteria:

Prompt the inspector to scan the bar code which contains license plate type, number, and . After the first bar code is successfully scanned, the analyzer shall place a ‘B’ in the BARCODED_LIC_PLT field, , of the test record, and proceed to Section 3.1.12, VIN Number Prompt. If the inspector presses “enter/continue,” the analyzer shall place a ‘K’ in the BARCODED_LIC_PLT field, of the test record, and allow the inspector to enter this information using the keyboard by proceeding to Section 3.1.9, License Type Prompt.

If the system scans a 2-dimensional barcode that contains an ‘X’ in the first position, then the analyzer shall pull the VIN, and plate number from this barcode. The format of this bar code is:

Name	Length	Start	Format
Bar Code Type	1	1	Alphanumeric (X)
Bar Code Version	2	3	Numeric
Document Number	17	20	Numeric
VIN	22	42	Alphanumeric
Residence County Number	3	45	Numeric
Workstation ID (RSPS or POS)	10	55	Alphanumeric
Print County Number	3	58	Numeric
Sticker Print Date	8	66	Numeric
Registration Plate Code	8	74	Alphanumeric
Registration Sticker Code	8	82	Alphanumeric
Plate Number	7	89	Alphanumeric
Expiration Month/Year	6	95	Numeric
Registration Class Code	2	97	Numeric

If this bar code is successfully scanned, the analyzer shall place a 'T' in the BARCODED_VIN field and BARCODED_LIC_PLT field, and a '1' in the LICENSE_TYPE field of the test record, and proceed to Section 3.1.8, VIN Number Prompt.

Error Message: DID NOT SCAN PROPERLY–PLEASE TRY AGAIN

Associated System File: VEHICLE.DAT

LICENSE_TYPE	BARCODED_LIC_PLT
LICENSE_NUM	BARCODED_VIN

3.1.9 License Type Prompt:

"ENTER THE TYPE OF LICENSE PLATE OF THE VEHICLE."

- | | |
|--------------------------|-------------------------------|
| 1. Texas Plate | 5. Exempt (Federal) |
| 2. No Plate | 6. Dealer Plate |
| 3. Out of State | 7. Temporary Buyer Tag |
| 4. Exempt (State) | 8. Other |

Programming Criteria: The inspector will be prompted to enter the license type of the vehicle. If the inspector selects license type '2,' or '8,' the system will assign the License_Num field in the VEHICLE.DAT a value of "V" followed by the last seven digits of the VIN number, and skip the license prompt, number 3.1.10. If the VIN is less than seven digits the entry should begin with a "V" and followed by the entered VIN. The system will default to license type '1.'

Error Message: THIS FIELD MUST BE ENTERED TO CONTINUE WITH THE TEST.

Associated System File: VEHICLE.DAT LICENSE_TYPE

3.1.10 License Prompt:

"ENTER THE LICENSE NUMBER OF THE VEHICLE."

Programming Criteria: The inspector will be prompted to enter the license number of the vehicle. Upon confirming the license plate entry, the vehicle

inspection conducted at the station in the last 17 days (i.e., the test record that contains the most recent date and is less than 17 days old, and a station number that matches the number of the station conducting the current inspection). The test record used to set the SAFE_INIT_TEST field will also be used to determine the eligibility status for the vehicle and the test sequence for reinspections. The EMISS_INIT_TEST and SAFE_INIT_TEST fields may potentially be set based on criteria from two different records (i.e., in a single test, EMISS_INIT_TEST could be set based on the record from the data link, while SAFE_INIT_TEST is set from the local record, and vice versa).

If a test record is available from either the Texas Information Management System Host or the system files, the analyzer shall confirm that the vehicle is eligible for an initial inspection by using the test record that was used to set the SAFE_INIT_TEST field.

If the vehicle has not had an initial inspection at this station within the last 16 days, the vehicle is eligible for an initial inspection. The vehicle is eligible for an initial inspection if:

1. the SAFE_INIT_TEST field in the test record is set to 'R,' or
2. the station number of the previous inspection station does not match the number of the station conducting the current inspection, or
3. the date of this inspection is not within 16 days of the inspection date contained in the previous test record.

If the vehicle is not eligible for an initial inspection, the analyzer shall:

1. display a message indicating why the vehicle is not eligible for an 'initial inspection' (i.e., an initial inspection has already been conducted on this vehicle), and prompt the inspector to inform the customer that they will not be charged for this inspection;
2. save the vehicle information, possibly in the Recall.Dat file for use in the reinspection mode;
3. either transfer operation to the reinspection mode, Section 3.4, or continue in the initial inspection mode if the inspector is prompted to enter repair information about this vehicle; and
4. input the necessary vehicle information from the test record of the previous inspection once the analyzer is in the reinspection mode.

If the vehicle is eligible for an initial inspection because the station numbers do not match and the EMISS_PF_FLAG is set to 'F' in the test record of the previous inspection, the analyzer shall prompt the inspector for the repair data prior to conducting the preconditioned two-speed idle test.

Upon completion of this contact, the analyzer shall display all Technical Service Bulletins, Recall

Information, and Announcements transmitted by the Texas Information Management System. The analyzer shall automatically print a copy of any announcement. The analyzer shall provide the option of printing additional copies prior to continuing with the test, deleting the announcement, or saving the announcement to a predetermined file. The analyzer shall be able to save three messages for later review. Any new announcement saved shall overwrite the oldest announcement in the system.

3.1.13a Vehicle Type Prompt:

SELECT THE VEHICLE TYPE

'P' - PASSENGER CAR/STATION WAGON

'T' - TRUCK/VAN/SPORTS UTILITY VEHICLE

'M' - MOTOR HOME

'B' - BUS

Programming Criteria:

The inspector should select the vehicle type from the above list. The inspector shall be able to use the arrow keys to highlight the appropriate choice and press "continue" to select it. The default choice on this screen shall be the "passenger car/station wagon".

If the inspector selects 'M' or 'B', the analyzer shall skip the Vehicle Body Type Prompt. If the inspector enters a gross vehicle weight for a bus or motor home that is less than 8501 pounds, the analyzer shall set the BODY_STYLE field to 6.

Error Message: NO VALUES HAVE BEEN ENTERED--TRY AGAIN

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT VEHICLE_TYPE

3.1.13b Vehicle Body Type Prompt: ENTER THE VEHICLE TYPE.

SELECT THE APPROPRIATE VEHICLE BODY TYPE FROM THE LIST BELOW:

CODE	VEHICLE BODY TYPE
1	SEDAN
2	STATION WAGON
3	PICKUP
4	SPORT/UTILITY VEHICLE

- 5 **MINIVAN**
- 6 **FULL-SIZE VAN**

Programming Criteria:

If the inspector selected ‘p’ as the vehicle type, the analyzer shall only display choices, 1 and 2. The default choice on this screen shall be the “passenger car/station wagon” selection. If the inspector selected ‘t’ as the vehicle type, the analyzer shall only display choice 3 through 6. In this case, the default choice on this screen shall be the “pickup” selection. The inspector shall be able to use the arrow keys to highlight the appropriate choice and press “continue” to select it. In either case, the analyzer may use the .DAT to display the list of vehicle makes and models. This prompt may be combined with the vehicle type prompt in section 3.1.13a as long as the logic is correct.

If the inspector selected ‘M’ or ‘B’ as the vehicle type, the analyzer shall use the NCIC list to display the list of makes and models.

If the model year, make and model entered describe a unique vehicle (i.e., a single VRT Row number), the body type may be taken directly from the VRT record and the inspector does not need to be prompted to enter the body type.

The Vehicle Body Type will be used to determine the vehicle test standards group (Passenger car or Truck), which will be used for determining the appropriate test standards to be used. Vehicle body type codes 1 and 2 will be tested as passenger cars, while body type codes 3-6 will be tested as trucks.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

<u>Associated System File:</u>	VEHICLE.DAT	BODY_STYLE
		VEHICLE_STNDS_TYPE
	TXVRT.DAT	VEHICLE_BODY_TYPE

3.1.14 Vehicle Make Prompt:

Programming Criteria:

The analyzer will then display a list of vehicle makes that the inspector will use to select the make of the vehicle currently under inspection. The analyzer will store the selected make name using the NCIC make definitions. The analyzer may display subsets of the make list that specifically identify all of the manufacturers of passenger vehicles, trucks, motor homes, or buses. The system shall use the makes contained in the TXVRT.DAT file for passenger cars

and trucks. The system shall use the makes in the NCIC listings for Buses and Motor homes.

The analyzer shall present the option of 'other' as a make definition for use when there is no applicable definition for the vehicle under inspection. The analyzer shall:

- 1) store 'OTHR' in the MAKE field,
- 2) skip the display of associate model names,
- 3) put a message on the screen that instructs the inspector to enter the full make name and at least the first five characters of the model name in the space provided and that the maximum entry length is 20 characters,
- 4) store the inspector's entry in the MODEL field, and
- 5) leave the MODEL_CODE field blank (i.e., fill it with spaces)

The NCIC make/model list may supplied by the TCEQ.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT MAKE

3.1.15 Model Prompt:

Programming Criteria:

The system will then display the appropriate vehicle models based on the vehicle make entry. The analyzer shall present the option of 'other' as a model definition for use when there is no applicable definition for the vehicle under inspection. The analyzer shall:

- 1) put a message on the screen that instructs the inspector to enter the full model name in the space provided and that the maximum entry length is 20 characters, and,
- 2) store the selected make name in the MAKE field, the inspector's entry in the MODEL field, and 'OTH' in the MODEL_CODE field.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

**Associated System File: VEHICLE.DAT MODEL
MODEL_CODE**

3.1.16 Odometer Prompt:

A MINIMUM OF ONE NUMERIC ENTRY IS REQUIRED. DO NOT ENTER THE TENTH'S DIGIT.

Programming Criteria: Enter the vehicle odometer. Do not include tenth's. The system shall

only accept numerical entries in this field. If the analyzer is conducting this sequence as a “Test on Resale” inspection, and the entered values for model year and odometer indicate the vehicle is exempt from this requirement (i.e., model year \geq 1996 and odometer $<$ 50,000), the system will display error message number 2, at any point between this prompt and the Safety Items Inspection Prompt.

- Error Message:**
1. **NO VALUE HAS BEEN ENTERED--TRY AGAIN.**
 2. **THIS VEHICLE IS EXEMPT FROM TEST-ON-RESALE BECAUSE THE MODEL YEAR IS 1996 OR NEWER AND THE ODOMETER READING IS LESS THAN 50,000 MILES. PRESS “ENTER/CONTINUE” TO RETURN TO THE MAIN MENU.**

Associated System File: VEHICLE.DAT ODOMETER

3.1.16a Injection/Carburetion Prompt:

SELECT THE INJECTION/CARBURETION

- F - FUEL INJECTION**
- C - CARBURETION**
- O - OTHER**

Programming Criteria: The inspector should select the appropriate injection/carburetion from the above list.

Error Message: **NO VALUE HAS BEEN ENTERED--TRY AGAIN**

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT INJECT_CARB

3.1.16b Cylinder Prompt: **ENTER THE NUMBER OF CYLINDERS.
FOR ROTARY ENGINES, ENTER AN “R.”**

Programming Criteria:
The analyzer shall display the choice(s) for the expected number of cylinders based on the previously entered engine size. The default for the number of cylinders to be entered shall be the value contained in the CYLINDERS field in the TXVRT.DAT file. The minimum number

of cylinders is “1” and the maximum is “16”. Any entries out of the “1-16” range will be rejected by the system.

For rotary engines, the inspector shall be prompted to enter an "R.”

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

NUMBER OF CYLINDERS IS NOT VALID--TRY AGAIN.

Associated System File: VEHICLE.DAT CYLINDERS

3.1.16c Engine Units Prompt: ENTER THE UNITS OF THE ENGINE SIZE

<u>Letter</u>	<u>Units</u>
L	Liters
I	Cubic Inches
C	Cubic Centimeters

Programming Criteria: This prompt may be combined with the Engine Size Prompt to facilitate ease of entry for the lane inspector. The intent is to allow the inspector to select the correct engine size and unit of measure. Combination entries, such as 3.0 Liter, and 350 Cubic inches, are preferable here. The analyzer shall prompt the inspector to enter the measurement unit for the engine size, and allow the inspector to use the arrow keys to highlight the appropriate selection, and press “continue” to select the correct choice. The analyzer software shall be designed so that an "I," "L," or "C" can also be entered for the units. The default for this screen shall be liters.

Error Message: 1. NO VALUE HAS BEEN ENTERED--TRY AGAIN

2. INVALID ENTRY--TRY AGAIN

3.1.16d Engine Size Prompt: ENTER THE ENGINE SIZE

Unit: “Display selection from previous prompt here” (i.e., Liters, Cubic Inches, Cubic Centimeters)

Size: _____

Programming Criteria: The analyzer shall display the unit of measure that was selected on the previous prompt, and allow the inspector to enter the engine size. When storing this information to the test record, the analyzer shall store the use the first four characters of the ENGINE SIZE field to hold the size entered at this prompt. The last character shall be the engine unit size. The engine unit size shall be "L" for liters, "I" for cubic inches, and "C" for cubic centimeters. The analyzer software shall be designed so that only an "I," "L," or "C" can be entered for the units. Liter size entry format shall be a numeric, decimal point, and numeric (i.e., "3.8", "5.0").

The internal storage on the OBDII Only analyzer record is to be automatically converted to cubic centimeters. The display shall remain in the original units entered. To convert from cubic inches to cubic centimeters, multiply by 16.387. To convert from liters to cubic centimeters, multiply by 1,000. Products shall be rounded to the nearest cubic centimeter.

An error message shall be displayed if the inspector enters an equivalent engine size greater than 9,999 cc or smaller than 655 cc. The inspector shall be instructed to correct the entry or abort the test. Vehicles powered by less than a 40 cubic inch engine (655 cc) shall display Error Message 3. If the test is aborted, no updates will be made to any disk file.

- Error Message:**
1. NO VALUE HAS BEEN ENTERED--TRY AGAIN
 2. INVALID ENTRY--TRY AGAIN
 3. 40 CID OR 655 CC OR SMALLER ARE EXEMPT FROM THE EMISSIONS INSPECTION PROGRAM.

Associated System File: VEHICLE.DAT ENGINE_SIZE

3.1.17 **GVW Prompt:** ENTER THE GVW OF THE VEHICLE.

Programming Criteria:

The system will prompt the inspector to enter GVW. The analyzer shall display the choice for the expected gross vehicle weight rating based on the previously entered engine size. The default for the GVW to be entered shall be the value contained in the GVWR field in the TXVRT.DAT file. If there is no value in the TXVRT.DAT file or there is not listing of the vehicle in the TXVRT.DAT file, the default shall be the value contained in the GVW_ACTUAL field of a previous test record. If the previous weight cannot be determined, no default entry shall be displayed. The inspector shall be allowed to disregard the default and enter his choice.

3.1.17d Vehicle 80" Width Prompt: IS THE VEHICLE 80 INCHES WIDE? (CHOOSE THE CORRECT SENTENCE)

- 1. NO, THE VEHICLE IS LESS THAN 80 INCHES WIDE.**
- 2. YES, THE VEHICLE IS AT LEAST 80 INCHES WIDE.**

Programming Criteria:

The analyzer shall only display this prompt if the previously enter vehicle type is ‘T - Truck/Van/Sports Utility Vehicle’ or ‘M - Motorhome.’ The analyzer shall display these choices and allow the inspector to use the arrow keys, the number keys, or the letters ‘Y,’ and ‘N’ to highlight the appropriate choice and press enter to select.

If the previously entered vehicle type is ‘M - Motorhome,’ then the default is to phrase 2.

If the previously entered vehicle type is ‘T-Truck/Van/Sports Utility Vehicle,’ then the default is to phrase 1.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT 80_INCHES

3.1.18 Test Type Prompt: ENTER THE TYPE OF INSPECTION

G-FMCSR (TRUCK)

**L-1 YEAR WINDSHIELD - OBD
(SAFETY & EMISSIONS)**

Programming Criteria:

The analyzer shall only display one “1 year windshield (safety and emissions) selection. If the model year for the vehicle under inspection is 1996 or newer and the county code under the audit menu is **not** ‘071,’ or ‘71_’ (where the underscore represents a space) for El Paso County, then the system shall only display choices ‘G,’ and ‘L.’

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

3.1.19 Confirm Vehicle Info Display:

The analyzer shall display the vehicle information to the inspector and allow the inspector to edit the information as appropriate. If the vehicle information was populated by the Texas Information Management System, the inspector shall be allowed to edit all vehicle information except the VIN, the license plate type, and the license plate number. The inspector shall be required to press “continue/enter” to continue. Upon confirming the vehicle, the vehicle information is no longer eligible to be stored in the RECALL.DAT file.

3.1.20 Safety Inspection Items:

Programming Criteria:

The Texas Department of Public Safety wants to enhance the entry of the safety items of inspection to collect reasons for failing or repaired items, and to prescribe the order of appearance of the safety items based on the type of inspection selected. Appendix R contains nine lists of safety items in their prescribed order.

The analyzer must display the appropriate list choices based on entries made by the inspector. The analyzer will require the inspector to enter the status of the safety item in the order it appears in the list. The acceptable entries are ‘P,’ for pass, ‘F,’ for fail, ‘R’ for repaired. ‘N’ for N/A is not an acceptable entry. A value of ‘N’ in the safety item field may occur in a test record that is received from the VID (i.e., for reprinting purposes). That is why the ‘N’ is contained in the test record. It is a carry over from the previous version of software where this was an allowable entry. If the inspector selects ‘F’ or ‘R’ for any safety item in the list, a subset list of failure reasons shall be displayed and the inspector shall highlight and select the failure reason or the entry that allows the inspector to return to the previous screen entry of ‘F’ or ‘R’ to edit this selection. The default for this display shall be to the ‘return to previous screen’ selection. The analyzer shall automatically enter the appropriate alpha character based on the selections made by the inspector.

If the vehicle type = ‘P,’ and the safe_test_type = ‘L - 1 year windshield - OBD’ , then the analyzer shall display safety item sequence #1.

If the vehicle type = ‘P,’ and the safe_test_type = ‘G - FMCSR (truck)’ , then the analyzer shall display safety item sequence #8.

If the vehicle type = ‘B,’ and the safe_test_type = ‘L - 1 year windshield - OBD’ , then the analyzer shall display safety item sequence #3.

If the vehicle type = 'B,' and the safe_test_type = 'G - FMCSR (truck)', then the analyzer shall display the titles of safety item sequence #7, and safety item sequence #8, allow the inspector to use the arrow keys to highlight and select the appropriate safety item sequence by pressing 'continue/enter.'

If the vehicle type = 'T,' the safe_test_type = or 'L - 1 year windshield - OBD' and the 80_inches = 'N' (i.e., the truck is less than 80 inches wide), then the analyzer shall display the safety item sequence #1.

If the vehicle type = 'T,' the safe_test_type = 'L - 1 year windshield - OBD' and the 80_inches = 'Y' (i.e., the truck is at least 80 inches wide), then the analyzer shall display the safety item sequence #4.

If the vehicle type = 'T,' and the safe_test_type = 'G - FMSCR (Truck),' (Note: the 80 inches wide entry is not used here to determine the appropriate safety item sequence), then the analyzer shall display the titles of safety item sequence #8, and safety item sequence #5, and allow the inspector to use the arrow keys to highlight and select appropriate safety item sequence by pressing 'continue/enter.'

If the vehicle type = 'M,' the safe_test_type = 'L - 1 year windshield - OBD' and the 80_inches = 'N' (i.e., the truck is less than 80 inches wide), then the analyzer shall display the safety item sequence #1.

If the vehicle type = 'M,' the safe_test_type = 'L - 1 year windshield - OBD' and the 80_inches = 'Y' (i.e., the truck is at least 80 inches wide), then the analyzer shall display the safety item sequence #4.

If the vehicle type = 'M,' and the safe_test_type = 'G - FMSCR (Truck),' (Note: the 80 inches wide entry is not used here to determine the appropriate safety item sequence), then the analyzer shall display safety item sequence #8.

The inspector shall be required to press "enter/continue" after each item. These fields are required and must contain a valid entry. The system does not have to display the screen heading during the test sequence. The system shall enter the date and the inspector's drivers license number. The inspector should be able to access an item's associated help screen by placing the cursor in the parentheses and pressing the 'F1' key. The help screens are in Appendix D for each type of Safety Inspection test. If any safety item is entered as failing (i.e, stored value of 'A,' 'C,' 'E,' 'H,' 'J,' 'L,' 'O,' 'S,' 'U,' 'W,' or 'Y'), then set the SAFETY_PF_FLAG to 'F'. Otherwise, set the SAFETY_PF_FLAG to 'P' for pass (i.e, all safety items entered as passing or repaired.).

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT SAFE_1 SAFE_2

SAFE_3 SAFE_4
SAFE_5 SAFE_6A
SAFE_6B SAFE_7
SAFE_7A SAFE_7B
SAFE_8 SAFE_9
SAFE_10A SAFE_10B
SAFE_10C SAFE_10D
SAFE_10E SAFE_10F
SAFE_11 SAFE_12
SAFE_13 SAFE_14
SAFE_15 SAFE_16
SAFE_17 SAFE_18
SAFE_19 SAFE_20
SAFE_21 SAFE_22A
SAFE_22B SAFE_22C
SAFE_22D SAFE_23
SAFE_24 SAFE_25
SAFE_26 SAFE_27
SAFE_28 SAFE_29
SAFE_30

SAFETY_PF_FLAG
DPS_SAFE_SEQ

3.1.21 Safety Repair Cost Prompt:

ENTER THE TOTAL COST FOR THE SAFETY-RELATED REPAIRS, INCLUDING CENTS. DO NOT INCLUDE THE SAFETY INSPECTION FEE IN THE TOTAL.

Programming Criteria:

The analyzer shall display this prompt if the inspector indicates that repairs were conducted on any of the safety items shown under the Safety Inspection Items Prompt. The inspector shall enter the total cost for all safety-related repairs. If an inspector enters a fee greater than \$450 dollars, the inspector shall be required to confirm the entry before proceeding to the next screen prompt. The analyzer shall display a warning message which states that the fee seems unusually large, please confirm the amount entered or reenter the fee. The analyzer will store this amount locally to be printed on the VIR. The cost entered at the prompt shall be included in the overall cost for the inspection.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT

3.1.22 Safety Test Fee Prompt:

ENTER THE TOTAL COST FOR THE SAFETY INSPECTION, INCLUDING CENTS. (DO NOT INCLUDE SAFETY RELATED REPAIRS.)

Programming Criteria: The inspector shall enter the overall cost for the inspection. If an inspector enters a fee greater than \$150 dollars, the inspector shall be required to confirm the entry before proceeding to the next screen prompt. The analyzer shall display a warning message which states that the fee seems unusually large, please confirm the amount entered or reenter the fee.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT SAFE_INSP_COST

3.1.23 Pre-Tune Prompt:

DID INSPECTOR/FACILITY PERFORM ANY EMISSIONS-RELATED REPAIRS OR ADJUSTMENTS PERFORMED ON THE VEHICLE PRIOR TO THIS TEST?

"Y" - YES "N" - NO

Programming Criteria: The analyzer will ask the inspector if pre-tuning was performed on this vehicle prior to testing. The analyzer software shall be designed so that only a "Y" or an "N" can be entered by the inspector for this field.

Error Message: NO VALUES HAVE BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT PRE_TUNE

3.1.24 Update Test Record:

Programming Criteria:

The analyzer shall update the test record and store a 'J' in the ABORT field. If the test

sequence is not exited properly (i.e., unit is powered down), the analyzer shall be able to send the test record for the affected inspection to the VID during the next communications session. This test record shall contain a 'J' in the ABORT field. If the inspection is aborted properly after 'J' has been stored, the analyzer shall replace the 'J' in the ABORT field with an 'A' and include the entered abort code.

If the emissions phase of the inspection is not aborted after 'J' has been stored, the system shall replace the 'J' in the ABORT field with a blank/space.

3.1.25 OBDII Only Test Procedure

3.1.25a OBD II Hookup:

The analyzer will prompt the inspector to conduct an OBD II check on all vehicles whose model year is equal to or newer than the vehicle model year contained in the OBDII_Model_Year field of the SYSTEM table. The analyzer should automatically search for vehicle-specific test parameters in the TXVRT.DAT file when an OBD II check is conducted. If these test parameters are not located in the TXVRT.DAT file, the analyzer shall use the default parameters in the SYSTEM.DAT file. Unless otherwise stated, the analyzer shall compare vehicle make, model, and model year in matching records with the vehicle being inspected.

The system shall access the onboard computer system on all OBDII equipped vehicles, including vehicles that use the communications protocol called Controller Area Network, or CAN (ISO 15765-4.3).

The equipment design and operation must meet all Federal requirements (contained in 40 CFR 85.2207-2231) and recommended SAE practices (J1962, J1978 and J1979) for OBDII system inspections.

No hand-held unit or separate interface may be used.

3.1.25b OBD II Connector Prompt:

TURN THE CAR OFF (I.E., PUT KEY IN “OFF/LOCK” POSITION)

LOCATE THE VEHICLE’S OBD DIAGNOSTIC LINK CONNECTOR.

ATTACH THE OBDII PORT TO THE VEHICLE CONNECTOR.

LEAVE CAR OFF FOR 12 SECONDS WITH CONNECTOR ATTACHED.

PRESS CONTINUE.

Programming Criteria:

The analyzer will prompt the inspector for an OBD II diagnostic link connection for all passenger vehicles and light-duty trucks whose model year is equal to or newer than the vehicle model year contained in the OBDII_Model_Year field of the SYSTEM table.

The analyzer will be designed to provide assistance to the inspector with OBD II connector locations using an OBD II connector look-up table.

3.1.25c OBD II (Key On, Engine Off) Prompt:

TURN THE IGNITION KEY TO THE ‘ON’ POSITION, BUT DON’T START THE ENGINE. LOCATE THE MIL (MALFUNCTION INDICATOR LIGHT) ON THE DASHBOARD.

DID THE MIL TURN ON? Note: MIL may stay on continuously or go out after only a few seconds. (CHOOSE THE CORRECT SENTENCE)

YES, the MIL did come on.

NO, the MIL did NOT come on at all.

The malfunction indicator light (mil) will either display “service engine soon,” “check engine,” the word “check” along with the international engine symbol, or some combination of these depending on the vehicle make.

Programming Criteria: The analyzer will ask the inspector to perform a key-on/engine-off check to see if the Malfunction Indicator Light/Check Engine Light (MIL) properly illuminates. The analyzer shall prompt the inspector to enter a No if the MIL does not properly illuminate. The analyzer software shall

be designed so that the inspector can use the arrow keys to highlight his choice and press “continue” to select the appropriate sentence. The analyzer software shall not have a default entry for this screen. The inspector must be required press the arrow key at least once, followed by the “continue” key.

The help message for this screen shall contain the following text: “The Malfunction Indicator Light (MIL) is the official term for the warning light that is illuminated by the vehicle’s OBD system when a malfunction occurs. Depending on the vehicle make, the MIL will either display “service Engine Soon,” “Check Engine,” the word “Check” along with the international engine symbol, or some combination of these . The MIL must come on when the ignition key is turned to the “key on, engine off” position. This is to allow inspectors to check that the MIL is capable of illuminating if a malfunction were to occur. On most vehicles, the MIL will stay illuminated as long as the key is in the position. However, on some vehicles, the MIL will illuminate very briefly when the key is turned to the “key on, engine off” position and then go out.”

Error Message: 1. **NO VALUES HAVE BEEN ENTERED--TRY AGAIN.**

Associated System File: **VEHICLE.DAT** **OBD2_MIL_CHECK**

3.1.25d OBD II Engine Running Prompt:

START THE ENGINE AND ALLOW IT TO IDLE FOR AT LEAST 20 SECONDS. (I.E., PUT KEY IN “RUN” POSITION)

PRESS CONTINUE.

Programming Criteria:

The analyzer shall require the inspector to confirm that the vehicle is started and idling, by pressing the “enter/continue” key. The analyzer may attempt to establish communications while displaying this prompt and accepting the response from the inspector.

3.1.25e OBD II Key On, Engine Running (KOER) Prompt:

DID THE MIL TURN OFF? (CHOOSE THE CORRECT SENTENCE)

Yes, the MIL turned off.

No, the MIL stayed on.

Programming Criteria:

The analyzer will ask the inspector to see if the Malfunction Indicator Light/Check Engine Light (MIL) illuminates while the engine is running. The analyzer shall store a No, if the inspector indicates that the MIL does not illuminate while the engine is on. The analyzer software shall be designed so that the inspector can use the arrow keys to highlight his choice and press “continue” to select the appropriate sentence. The analyzer software shall not have a default entry for this screen. The inspector must be required press the arrow key at least once, followed by the “continue” key. The analyzer may attempt to establish communications while displaying this prompt and accepting the response from the inspector.

If the previously entered GVWR is greater than 8500 pounds (i.e., >8500 lbs.), the analyzer shall only collect the data from the vehicle OBD system and not use the data in the pass/fail determination.

Error Message: 1. NO VALUES HAVE BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT OBD2_MIL_ON_RUN

3.1.25f OBD II Connection Prompt:

COMMUNICATION IN PROGRESS, PLEASE WAIT.

Programming Criteria:

The analyzer system shall display this message while attempting to establish communications with the vehicle's OBD computer.

If the inspector has pressed continue and connection cannot be confirmed, the analyzer will proceed to the OBD II Connection Non Confirmed Prompt in Section 3.1.25g. If the inspector has pressed continue and connection is confirmed, the analyzer will proceed to the OBD II Malfunction Indicator Light (MIL) Status Check in Section 3.1.25i.

3.1.25g OBD II Connection Not Confirmed Prompt:

THE OBD II CONNECTION CANNOT BE CONFIRMED CHOOSE THE NEXT ACTION

1. TRY AGAIN

2. DO NOT TRY AGAIN

Programming Criteria:

The analyzer shall display these choices and allow the inspector to use the arrow keys or number keys to highlight the appropriate choice and press enter to select. The default is to phrase 1.

If the inspector selects phrase number 1, the analyzer will attempt to gain a confirmed OBDII connection. The analyzer must allow the inspector unlimited attempts to gain a confirmed OBDII connection.

If the inspector selects phrase number 2, then the analyzer shall proceed to the OBDII No Connection Reason Prompt in Section 3.1.25h.

3.1.25h OBD II No Connection Reason Prompt:

THE OBD II CONNECTION CANNOT BE CONFIRMED CHOOSE THE NEXT ACTION

1. BACK TO PREVIOUS SCREEN

2. CONNECTOR CANNOT BE LOCATED

3. CONNECTOR IS MISSING, DAMAGED, OR TAMPERED.

4. CONNECTOR IS OBSTRUCTED OR INACCESSIBLE AND CONNECTION IS NOT POSSIBLE.

5. COMMUNICATION FAILED, AND OBD II PORT IS ATTACHED TO CONNECTOR.

Programming Criteria:

The analyzer shall display all five choices if the entered GVW is equal to or less than 8500 pounds. If the GVW is equal to or greater than 8501 pounds display all choices except for choice 5 “ COMMUNICATION FAILED, AND OBD II PORT IS ATTACHED TO CONNECTOR.” Allow the inspector to use the arrow keys or number keys to highlight the appropriate choice and press enter to select.. The default is to phrase 1.

If the inspector selects phrase number 1, the analyzer will return to the OBDII Connection Not Confirmed Prompt in Section 3.1.25g.

If the inspector selects phrase number 2, then the analyzer shall:

1. store a ‘L’ in the OBD2_DLC_RES field indicating the connector cannot be located, and,
2. proceed directly to the OBDII Test Evaluation and Messages Prompt in Section

3.1.251.

If the inspector selects phrase number 3, then the analyzer shall:

1. store a 'D' in the OBD2_DLC_RES field indicating the connector is missing, damaged, or tampered, and,
2. proceed directly to the OBDII Test Evaluation and Messages Prompt in Section 3.1.251.

If the inspector selects phrase number 4, then the analyzer shall:

1. store a 'I' in the OBD2_DLC_RES field indicating an inaccessible connector, and,
2. proceed directly to the OBDII Test Evaluation and Messages Prompt in Section 3.1.251.

If the inspector selects phrase number 5, then the analyzer shall:

1. store a 'N' in the OBD2_DLC_RES field indicating failed to establish communication with vehicle, and,
2. Abort the inspection and set the Abort field to 'A', the Abort_Code field to '07,' and display the following message:

SINCE THE VEHICLE DID NOT COMMUNICATE THROUGH THE OBD CONNECTOR, YOU WILL NOT BE ABLE TO COMPLETE THE INSPECTION. PLEASE REFER THE MOTORIST TO A FULL-SERVICE STATION WITH ASM TESTING, AND DO NOT CHARGE THE CUSTOMER.

Press Any Key to Return to the Main Menu.

If the test date is less than the date contained in the OBD2_FAIL_ST_DT field in the SYSTEM.DAT file, the analyzer shall:

1. Place a 'L,' 'D,' 'I,' or 'N,' in the OBD2_DLC_RES field in VEHICLE.DAT,
2. Place a blank in the OBD2_PF_FLAG field in VEHICLE.DAT,
3. A second page will be printed for the VIR indicating that the OBD failure is "**Advisory Only**", and that the vehicle's on-board diagnostic system could not be checked due to: unsuccessful communications if the OBD2_DLC_RES is set to 'N,' or a missing, damaged, or tampered

connector if the OBD2_DLC_RES is set to 'D', or an unlocated connector if the OBD2_DLC_RES is set to 'L', or an inaccessible connector if the OBD2_DLC_RES is set to 'I,'and,

The failure of the OBD portion of the test WILL NOT result in an overall test failure.

If the test date is equal to or greater than the date in the OBD2_FAIL_ST_DT field in the SYSTEM.DAT file, and the inspector did not select 'Back to Previous Screen' or 'Communications Failed' (reason 5) in the OBD II No Connection Reason Prompt, the analyzer will:

4. Place a 'L,' 'D,' 'I,' in the OBD2_DLC_RES field in VEHICLE.DAT,
5. Place an 'F' in the OBD2_PF_FLAG field (and later to the OVERALL_RESULTS field) in VEHICLE.DAT,
6. Print 'FAIL' in the OBD portion and the OVERALL TEST RESULT section of the VIR,
7. A second page will be printed for the VIR indicating that the vehicle's on-board diagnostic system could not be checked due to: a missing, damaged, or tampered connector if the OBD2_DLC_RES is set to 'D', or an unlocated connector if the OBD2_DLC_RES is set to 'L', or an inaccessible connector if the OBD2_DLC_RES is set to 'I,'and,
8. Proceed to the OBD Test Evaluation and Messagess Prompt in section 3.1.251 ,

The failure of the OBD portion of the test WILL result in an overall test failure.

<u>Associated System File:</u>	VEHICLE.DAT	OBD2_DLC_RES
		OBD2_PF_FLAG
		OVERALL_RESULTS

3.1.25i OBD II Malfunction Indicator Light (MIL) Status Check:

Programming Criteria:

The analyzer will evaluate the MIL status based on the data returned via the OBD link from the vehicle's on-board diagnostic system. The Yes/No (Y/N) status of whether the MIL has been

commanded to be illuminated will be recorded in the OBD2_MIL_STATUS field of the test record.

If the MIL status returned is NOT COMMANDED ON with the engine running (i.e., RPM is greater than zero), the analyzer shall:

1. store a "P" in the OBD2_MIL_STATUS field, and
2. proceed to the OBD Readiness Evaluation section.

If the MIL status returned is COMMANDED ON with the engine running (i.e., RPM is greater than zero), the analyzer shall:

1. store an "F" in the OBD2_MIL_STATUS field, and
2. proceed to the OBD Readiness Evaluation section.

3.1.25j **OBD II Readiness Evaluation:**

The analyzer shall communicate with the OBD system of the vehicle under inspection to determine if the OBD system has enough readiness monitors completed to allow an evaluation of the OBD system. In accordance with EPA guidance, the readiness of the OBD system for evaluation is dependant on the year of the vehicle, and in some instances, on the model as well. This step is to store the status of the READINESS MONITORS in the OBD system with the engine running to allow the program to evaluate the stored results. If the vehicle has multiple ECMs, the analyzer shall provide the summary of results all the readiness monitors received from the vehicle as the status of the readiness monitors. **Continuous readiness monitors will not be used as criteria for setting the OBD2_READY_RES field.**

Programming Criteria:

- i A request (in accordance with SAE J1979, e.g., Mode \$01, PID \$01) shall be transmitted to the on-board computer to determine the evaluation status of the OBD system, the number of emission-related trouble codes stored in memory, and the Malfunction Indicator Light (MIL) status.

- ii Based on the returned data, the analyzer shall determine which on-board monitors are supported by the OBD system and the readiness code status of the applicable monitors.
- iii Possible monitors include the following:
 - (1) Misfire (continuous)
 - (2) Fuel system (continuous)
 - (3) Comprehensive component (continuous)
 - (4) Catalyst (non-continuous, or once/trip)
 - (5) Heated catalyst (non-continuous, or once/trip)
 - (6) Evaporative system (non-continuous, or once/trip)
 - (7) Secondary air system (non-continuous, or once/trip)
 - (8) Air conditioning system (non-continuous, or once/trip)
 - (9) Oxygen sensor (non-continuous, or once/trip)
 - (10) Oxygen sensor heater (non-continuous, or once/trip)
 - (11) EGR system (non-continuous, or once/trip)
- iv. Continuous monitors should not be used in the Pass/Fail criteria of an OBD inspection. Continuous monitors are those in which the applicable system/condition is checked continuously during vehicle operation; non-continuous, or once/trip monitors are only checked when the vehicle is driven in a certain manner (i.e., over a predefined driving cycle expected to occur in customer service). According to Federal regulation (40 CFR 86.099-17), a vehicle manufacturer is not required to store a readiness code for the continuous operating monitors; however, some may choose to do so.
- v. Possible readiness code responses include: completed/ready, not completed/not ready, and ‘not supported/not enabled.’ A response that a monitor is not supported or enabled means that, for this particular vehicle, that monitor is not applicable. Hence, when a ‘not supported/not enabled’ response is given, the analyzer will not fail the vehicle for that code.
- vi. All readiness code values will be written to the appropriate test record fields in the VEHICLE.DAT file for each inspection using the following format:
 - i. Not supported/enabled = 0,
 - ii. Completed = 1, and
 - iii. Not completed = 2.
- vii If the value specified in the SYSTEM table for a particular readiness monitor is “Y”, that code shall be used for the overall readiness determination. If the value specified for a readiness monitor in the SYSTEM table is “N”, that code shall be ignored by the analyzer and not used

for the overall readiness determination. Each readiness monitor field that contains a value of “Y” is an applicable readiness monitor.

For information on how to set the OBD2_READY_RES field, refer to part (a) of the OBD II Test Evaluation and Messages Prompt below.

3.1.25k OBD II Diagnostic Trouble Code (DTC) Check:

Programming Criteria:

- i. The analyzer shall send a request (i.e., Mode \$03) to the on-board computer to determine the stored emissions-related powertrain trouble codes. The analyzer will repeat this cycle until the number of codes reported equals the number expected based on the previous Mode \$01 response. Any codes listed in the DTC table shall be recorded on the test record and the text fault code description shall be printed on the second page of the VIR.
- ii. If there are no DTCs:
 - i. A ‘P’ will be written to both the OBD2_FAULT_CD_RES and OBD2_PF_FLAG fields in VEHICLE.DAT,
 - ii. Two zeros (‘00’) will be stored in the DTC_STORED field of the VEHICLE. DAT file,
 - iii. A PASS will be printed in the OBD section of the VIR, and
 - iv. The analyzer will proceed to the OBD Test Evaluation and Messages Prompt,
- iii. If one or more DTC’s is found, which cause the MIL to be commanded to be illuminated;
 - i. An ‘F’ will be written to both the OBD2_FAULT_CD_RES and OBD2_PF_FLAG fields in VEHICLE.DAT.
 - ii. The first ten DTC(s), which cause the MIL to be illuminated, that was found will be written to the FAULT_CODES(DTCS) field in the VEHICLE.DAT table.
- ii. The analyzer shall store the total number of stored DTCs (not pending DTCs) causing the MIL to illuminate in the DTC_STORED field of the VEHICLE.DAT file. The analyzer shall also proceed to the OBD Test Evaluation and Messages Prompt in 3.1.251.

3.1.251 OBD II Test Evaluation and Messages:

Programming Criteria:

The result of the OBD section of the test will be determined as follows:

- OBD2_MIL_CHECK is a manual entry
- OBD2_MIL_ON_RUN is a manual entry
- OBD2_DLC_RES is an automatic entry unless there is no communication between the vehicle and the analyzer
- OBD2_MIL_STATUS is an automatic entry
- OBD2_READY_RES is a field populated automatically.
- OBD2_FAULT_CD_RES depends if there are any stored DTCs causing the MIL to illuminate.

Note: If the previously entered GVWR is greater than 8500 pounds (i.e., >8500 lbs.), the analyzer shall only collect the data from the vehicle OBD system and not use the data in the pass/fail determination. The following fields of the VEHICLE.DAT must contain a “Y” in order to pass the OBD test sequence: OBD2_MIL_CHECK, OBD2_MIL_ON_RUN.

(a) The OBD2_READY_RES field is determined by the following criteria: The Pass outcome requires that not more than a certain number of non-continuous monitors return a value of not ready (example: value = 2 for 1996 to 9999 model year vehicles). This number is found in the field called MAX_NUM_NOT_READY in the TXVRT.DAT file and is the number of non-continuous monitors allowed not ready and still PASS the OBD test. If a vehicle match is not found in the TXVRT.DAT file for the vehicle under inspection, then the number of non-continuous monitors allowed “not ready” and still PASS the OBD test will be found in the field called MAX_NOT_READY_NUM in the SYSTEM.DAT file. When using the value from the SYSTEM.DAT file, the applicable model years are contained in the MAX_NT_RDY_BGN_YR and MAX_NT_RDY_END_YR fields.

1. Collect and store the status of the continuous monitors in the test record, but do not use this information as pass/fail criteria for setting the OBD2_READY_RES field,, and
2. If there are fewer than the maximum non-continuous monitors not ready (less than or equal to

MAX_NUM_NOT_READY), then a “P” shall be stored in the OBD2_READY_RES field of the VEHICLE.DAT record, or

3. If too many non-continuous monitors are not ready (greater than MAX_NUM_NOT_READY) then the OBD2_READY_RES_RESULT shall remain “F.”

If the MIL is commanded on with fault codes present (i.e., OBD2_MIL_STATUS = ‘F’, and OBD2_FAULT_CD_RES = ‘F,’), and the date of inspection is greater than the date contained in the OBDII_FAIL_ST_DT field of the SYSTEM.DAT file, the analyzer system shall fail the vehicle, even if the vehicle is deemed “not ready.”

The following cases assume that the “not ready” status of the vehicle is the only failing criterion.

If the vehicle is deemed “not ready,” the date of inspection is greater than the date contained in the OBDII_FAIL_ST_DT field of the SYSTEM.DAT file, and an ‘E’ is present in the NOT_RDY_TO_ASM field of the TXVRT.DAT, the analyzer shall:

1. Store an ‘F’ in the OBD2_READY_RES field indicating vehicle deemed “not ready,”
2. abort the inspection if the system is an OBD only emissions system and “Reject” the vehicle. (Set the abort field to ‘A,’ and the Abort Code field to ‘81,’ and put a space in the OVERALL_RESULTS fields of the test record, and display the following message:

SINCE THE VEHICLE IS KNOWN TO HAVE READINESS MONITOR ISSUES, AND IS NOT READY TO BE INSPECTED THROUGH THE OBD CONNECTOR, YOU WILL NOT BE ABLE TO COMPLETE THE INSPECTION. PLEASE REFER THE MOTORIST TO A FULL-SERVICE STATION WITH ASM TESTING, AND DO NOT CHARGE THE CUSTOMER.

3. Store the results of the OBD inspection in the following fields: OBD2_MIL_CHECK, OBD2_MIL_ON_RUN, OBD2_DLC_RES, OBD2_READY_RES, OBD2_MIL_STATUS, OBD2_FAULT_CD_RES, and OBD2_PF_FLAG.

If the vehicle is deemed “not ready,” the date of inspection is greater than the date contained in the

OBDII_FAIL_ST_DT field of the SYSTEM.DAT file, and an 'E' is **NOT** present in the NOT_RDY_TO_ASM field of the TXVRT.DAT, the analyzer shall:

1. Store an 'F' in the OBD2_READY_RES field indicating vehicle deemed "not ready," complete the remaining entries to the OBD2 fields (i.e., OBD2_MIL_CHECK, OBD2_MIL_ON_RUN, OBD2_DLC_RES, OBD2_READY_RES, OBD2_MIL_STATUS, OBD2_FAULT_CD_RES, and OBD2_PF_FLAG), and proceed to parts (b) and (c) of this section.

(b) The following fields of the VEHICLE.DAT must contain a "P" or "Y" in order to pass the OBD test sequence: OBD2_MIL_CHECK, OBD2_MIL_ON_RUN, OBD2_DLC_RES, OBD2_MIL_STATUS, OBD2_FAULT_CD_RES, and OBD2_READY_RES.

1. If the OBD2_MIL_CHECK, and OBD2_MIL_ON_RUN are set to "Y," and the OBD2_DLC_RES, and OBD2_READY_RES are set to "P," and **either** the OBD2_MIL_STATUS or the OBD2_FAULT_CD_RES are set to "P," then the program will store a "P" in the OBD2_PF_FLAG field of the VEHICLE.DAT file and print a PASS in the OBD Test Result section on the VIR,
2. If the OBD2_MIL_CHECK, or OBD2_MIL_ON_RUN are set to "N," or the OBD2_DLC_RES is set to "D," "I," or "L," or the OBD2_READY_RES is set to "F," or **both** the OBD2_MIL_STATUS and the OBD2_FAULT_CD_RES are set to "F," then the program will store a "F" in the OBD2_PF_FLAG field of the VEHICLE.DAT file and print a FAIL in the OBD Test Result section on the VIR

NOTE: The Texas OBD advisory period starts when the OBD software is loaded on an analyzer and ends when the test date is equal to the value stored in the OBDII_FAIL_ST_DT field of the SYSTEM.DAT file. Currently, the start date of P/F OBD is May 1, 2002 for Harris, Tarrant, Dallas, Collin, and Denton Counties, May 1, 2003 for Montgomery, Fort Bend, Galveston, Brazoria, Ellis, Rockwall, Kaufman, Johnson, and Parker counties.

NOTE: The failing or aborted OBD ADVISORY VIR shall be printed prior to the tailpipe VIR.

1. If the value in the following fields is other than blank, “Y,” or “P,” then the following message(s) shall be printed above the public awareness statement to inform the motorist of possible problems with their vehicle.

(i) If there is an “N” in the MIL KOEO (i.e., OBD2_MIL_CHECK), or the MIL KOER (i.e., OBD2_MIL_ON_RUN) field, then the following shall be printed:

Based on the information received during the test, there may be a problem with your On-Board Diagnostic Computer Malfunction Indicator Light. Repairing any problems that exist will likely improve performance, fuel economy, and reduce pollution. This vehicle must have the On-Board Computer functioning properly to pass the vehicle inspection to register this vehicle next year. (Text subject to change)

OBD PRINT MESSAGE (2)

(ii) If there is a “D” or an “N” in the OBD2_DLC_RES field the following message shall be printed above the public awareness statement indicating that the vehicle’s on-board diagnostic system could not be checked due to a missing, inaccessible, damaged, or tampered connector.

Based on the information gathered during an attempt to perform an On- Board Diagnostic test your vehicle has a missing, tampered, or broken Diagnostic Connector. This vehicle must have the On-Board Computer functioning properly to pass the vehicle inspection to register this vehicle next year. (Text subject to change)

OBD PRINT MESSAGE (3)

(iii) If there is an “I” in the OBD2_DLC_RES field the following message shall be printed above the public awareness statement indicating that the vehicle’s on-board diagnostic system could not be checked due to inaccessible connector,

Based on the information gathered during an attempt to perform an On-Board Diagnostic test your vehicle has an inaccessible Diagnostic Connector. This vehicle must have the Diagnostic Connector accessible to allow the check of the On Board Diagnostic computer system on the vehicle next year. (Text subject to change)

OBD PRINT MESSAGE (4)

(iv) If there is an “F” in the OBD2_READY_RES field of the VEHICLE.DAT the vehicle will be failed and the following message shall be printed above the public awareness statement:

Based on the information obtained from the On-Board Computer in the vehicle, the system is not ready to make a determination regarding the pollution control system on the vehicle. This situation must be corrected before the OBD system can be evaluated and the reinspection made next year. See your owner’s manual for information on

“OBD/Readiness driving procedures” or contact your vehicle service advisor. (Text subject to change)

OBD PRINT MESSAGE (5)

(v). If the OBD2_MIL_STATUS field has an "F" stored in it the following message shall be printed.

Based on the results of the On-Board Diagnostic test, your vehicle indicates there is a failure that is causing higher than allowed pollution levels to be emitted into the atmosphere. The problem(s) causing the failure, when fixed, will increase performance, fuel economy, and reduce pollution. Repair of the failure(s) will be required to pass the OBD test next year. (Text subject to change)

OBD PRINT MESSAGE (6)

(d) If the model year of the vehicle being tested is equal to or greater than the value contained in the OBDII_MODEL_YR field of the SYSTEM.DAT file and the test date is after the mandatory P/F start date as defined in the SYSTEM.DAT file, OBD test results will be used to evaluate the Overall PASS/FAIL result of the vehicle being tested. The vehicle will receive a PASS of the OBD system if the OBD2_PF_FLAG field contains a “P”, or

1. If the OBD2_PF_FLAG is not “P” and

(i) if the result in the OBD2_DLC_RES is an “L” (abort code 80) the following message shall be printed above the public awareness statement:

Based on the information gathered during an attempt to perform an On Board Diagnostic test your vehicle has a missing Diagnostic Connector, or a Diagnostic Connector that cannot be located by the inspector. This vehicle must have the On-Board Computer Diagnostic connector available to the inspector and functioning properly to pass the vehicle inspection. If you have questions regarding this test, ask the inspector who performed this test. (Text subject to change)

OBD PRINT MESSAGE (10)

(ii) if the result in the OBD2_DLC_RES is an “D,” “I,” or an “” the following message shall be printed above the public awareness statement:

Based on the information gathered during an attempt to perform an On Board Diagnostic test your vehicle has a damaged or inaccessible Diagnostic Connector. This vehicle must have the On-Board Computer Diagnostic connector available to the inspector and functioning properly to pass the vehicle inspection. If you have questions regarding this test, ask the inspector who performed this test. (Text subject to change)

OBD PRINT MESSAGE (11)

(iii) if the result in the OBD2_READY_RES field is an “F” the following message shall be printed above the public awareness statement: a “FAIL” shall be printed in the OBD2_PF_FLAG section of the VIR. A failed OBD vehicle shall receive a FUEL CAP TEST.

Based on information obtained from the On-Board Computer in the vehicle, the system is not ready to make a determination regarding the pollution control system on the vehicle. This situation must be corrected before the OBD system can be evaluated and the reinspection made which will allow this vehicle to be registered. See your owner’s manual for information on “OBD/Readiness driving procedures” or contact your vehicle service advisor. (Text subject to change)

OBD PRINT MESSAGE (12)

2. If the value in the following fields is other than blank, “Y,” or “P,” then the following message shall be printed above the public awareness statement to inform the motorist of possible problems with their vehicle.

(i) If there is an “Y” in the OBD2_MIL_CHECK or the OBD2_MIL_ON_RUN field the following shall be printed above the public awareness statement:

Based on the information received during the test, there may be a problem with your On-Board Diagnostic Computer Malfunction Indicator Light. This vehicle must have the On-Board Computer system functioning properly to pass the vehicle inspection. (Text subject to change)

OBD PRINT MESSAGE (13)

(iv) If the OBD2_MIL_STATUS field has an “F” stored in it the following message shall be printed above the public awareness statement:

Based on information obtained from the On-Board Computer in the vehicle, the system has made a determination that there is a problem regarding the pollution control system on the vehicle. This situation must be corrected before the OBD system can be reinspected. See your owner’s manual for information on “OBD/Readiness driving procedures” or contact your vehicle service advisor. (Text subject to change)

OBD PRINT MESSAGE (14)

3.1.25m OBD II Engine Stop Prompt:

Associated System File: VEHICLE.DAT

GAS_CAP_TESTABLE

GAS_CAP_PF_FLAG_1

3.1.28 Gas Cap Connect Prompt:

REMOVE THE GAS CAP FROM THE VEHICLE AND CONNECT IT TO THE GAS CAP TESTER. REFER TO THE OPERATOR'S MANUAL, IF REQUIRED.

Programming Criteria: If the gas cap tester is an integral part of the analyzer or fully automatic, the system will prompt the inspector to press "continue/enter" to conduct the test.

Error Message: ONLY 'CONTINUE/ENTER' WILL BE ACCEPTED--TRY AGAIN

3.1.29 Gas Cap Results Prompt:

ENTER THE RESULTS OF THE GAS CAP INTEGRITY TEST. ('P' OR 'F')

Programming Criteria: If the gas cap tester is an integral part of the analyzer or fully automatic, the system shall not display this prompt, and shall enter the results of the test in GAS_CAP_PF_FLAG_1. The result shall either be 'P' for pass, or 'F' for fail. If the result from the gas cap tester is 'F' for fail, the system shall allow the inspector to conduct the gas cap integrity test again or select 'continue' to fail the gas cap portion of the inspection.

Error Message: ONLY 'P' OR 'F' WILL BE ACCEPTED--TRY AGAIN.

Associated System File: VEHICLE.DAT

GAS_CAP_PF_FLAG_1

3.1.30 Second Gas Cap Prompt:

IS THERE A SECOND FUEL CAP TO BE TESTED? ('Y' OR 'N')

Programming Criteria: This prompt shall not be displayed if the inspector has indicated that the gas cap is missing, or untestable. The default for this screen shall be to 'N.' The analyzer shall only accept an entry of 'Y' or 'N.' The error message shall be displayed, if the inspector enters something other than 'Y' or 'N.' If the inspector indicates that there is a second gas cap to be tested, the analyzer shall proceed to the Second Gas Cap Missing Prompt, in Section 3.1.32.

Error Message: ONLY 'Y' OR 'Y' WILL BE ACCEPTED--TRY AGAIN.

3.1.31 **End of Phase Logic:**

Programming Criteria:

Since the second gas cap will not be tested, the analyzer shall set the flags as follows. If the GAS_CAP_PF_FLAG_1 is set to "P" - pass, then set the GAS_CAP_PF_FLAG to "P." If the GAS_CAP_PF_FLAG_1 is set to "F" - fail, then set the GAS_CAP_PF_FLAG to "F."

For an OBD2 inspection, if the OBD2_PF_FLAG, the EMISS_PF_FLAG, the SAFETY_PF_FLAG, and the GAS_CAP_PF_FLAG are all set to "P" - pass, then set the OVERALL_RESULTS field to "P" for pass. If the OBD2_PF_FLAG, the EMISS_PF_FLAG, the SAFETY_PF_FLAG, and the GAS_CAP_PF_FLAG are not all set to "P" - pass, then set the OVERALL_RESULTS to "F" for fail.

Then, the system shall then proceed to the Emissions Test Fee Prompt, Section 3.1.37.

<u>Associated System File:</u>	VEHICLE.DAT	EMISS_PF_FLAG
		OBD2_PF_FLAG
		SAFETY_PF_FLAG
		GAS_CAP_PF_FLAG
		GAS_CAP_PF_FLAG_1
		OVERALL_RESULTS

3.1.34 Second Gas Cap Connect Prompt:

**REMOVE THE SECOND GAS CAP FROM THE VEHICLE AND
CONNECT IT TO THE GAS CAP TESTER. REFER TO THE
OPERATOR’S MANUAL, IF REQUIRED.**

Programming Criteria: If the gas cap tester is an integral part of the analyzer or fully automatic, the system will prompt the inspector to press “continue/enter” to conduct the test.

Error Message: **ONLY ‘CONTINUE/ENTER’ WILL BE ACCEPTED--TRY AGAIN**

3.1.35 Second Gas Cap Results Prompt:

**ENTER THE RESULTS OF THE SECOND GAS CAP INTEGRITY
TEST. ('P' OR 'F')**

Programming Criteria: If the gas cap tester is an integral part of the analyzer or fully automatic, the system shall not display this prompt, and shall enter the results of the test in GAS_CAP_PF_FLAG_2. The result shall either be ‘P’ for pass, or ‘F’ for fail. If the result from the gas cap tester is ‘F’ for fail, the system shall allow the inspector to conduct the gas cap integrity test again or select ‘continue’ to fail the gas cap portion of the inspection.

Error Message: **ONLY ‘P’ OR ‘F’ WILL BE ACCEPTED--TRY AGAIN.**

Associated System File: **VEHICLE.DAT GAS_CAP_PF_FLAG
 GAS_CAP_PF_FLAG_1
 GAS_CAP_PF_FLAG_2**

3.1.36 End of Phase Logic:

Programming Criteria:

If the GAS_CAP_PF_FLAG_2 and the GAS_CAP_PF_FLAG_1 are set to “P” - pass, then set the GAS_CAP_PF_FLAG to “P.” If either the GAS_CAP_PF_FLAG_2 or the GAS_CAP_PF_FLAG_1 is set to “F” - fail, then set the GAS_CAP_PF_FLAG to “F.”

For an OBD2 inspection, if the OBD2_PF_FLAG, the EMISS_PF_FLAG, the SAFETY_PF_FLAG, and the GAS_CAP_PF_FLAG are all set to “P” - pass, then set the OVERALL_RESULTS field to “P” for pass. If the OBD2_PF_FLAG, the EMISS_PF_FLAG, the SAFETY_PF_FLAG, and the GAS_CAP_PF_FLAG are not all set to “P” - pass, then set the OVERALL_RESULTS to “F” for fail.

Then, the system shall then proceed to the Emissions Test Fee Prompt, Section 3.1.37.

<u>Associated System File:</u>	VEHICLE.DAT	OBD2_PF_FLAG
	GAS_CAP_PF_FLAG	SAFETY_PF_FLAG
	GAS_CAP_PF_FLAG_1	EMISS_PF_FLAG
	GAS_CAP_PF_FLAG_2	OVERALL_RESULTS

3.1.37 Emissions Test Fee Prompt:

**ENTER THE COST FOR THE EMISSIONS INSPECTION,
INCLUDING CENTS.**

Programming Criteria:

The inspector shall enter the cost for the emissions inspection, exclusive of repair costs. The system shall sum the emissions test fee (i.e., EMISS_INSP_COST), the safety test fee (i.e., SAFE_INSP_COST), if applicable, the applicable safety repair costs (i.e. no field name - value entered at the safety repair cost prompt), and the applicable repair cost, (i.e., REP_OVERALL_COST) to obtain the OVERALL_COST. The analyzer shall not accept a value greater than \$99.99 for this entry.

Error Messages: **NO VALUE HAS BEEN ENTERED--TRY AGAIN.**

MAXIMUM ENTRY \$99.99 -- TRY AGAIN.

Associated System File: VEHICLE.DAT

EMISS_INSP_COST

OVERALL_COST

3.1.38 Certificate Number Prompt: ENTER THE INSPECTION CERTIFICATE NUMBER.

Programming Criteria: If the OVERALL_RESULTS flag is “F”, then the system will not give the inspector this prompt and proceed to 3.1.42. If the OVERALL_RESULTS flag is “P”, then the system will prompt the inspector to input the safety inspection sticker number. A minimum of six (6) and maximum of nine (9) characters are required for this field. When the certificate number entered is not a sequential number to the last certificate issued, a warning should be displayed, “Certificate number not in sequential order. Notify DPS if a certificate is missing.” The enter key should allow the inspector to continue.

The safety certificate number consists of an alpha character, followed by up to eight digits. The alpha character usually does **not** correspond to the alpha character contained in the SAFE_TEST_TYPE field. They are however, separated or indexed by the different types of safety inspections. Thus, the sticker numbers should be in sequential order for all one year windshield inspections (type “A” tests), two year windshield inspections (type “B” tests), Trailer/motorcycle inspections (type “C” tests), and so forth. The warning should appear each time the inspector changes books for the same type of inspection. For example, a book of one year windshield inspections (type “A” tests) may end with F00000050, and the next book of one year windshield inspection certificates purchased by the shop owner may begin with F00001000. The books contain 50 sequential certificates.

The system should take the entered certificate number, compare it to the previous certificate issued under the same safety inspection type, and determine if the entered certificate number is next in sequence for that safety inspection type. If the entered number is not next in sequence, the correction prompt should appear.

If the inspector enters fewer than 9 characters, the analyzer shall automatically load leading zeros to the numerical entry and show the analyzer number after the entry is confirmed. For example, an entry of an ‘A’, followed by a ‘123’ shall be converted to ‘A00000123’ and displayed for the inspector to confirm the entry. The conversion will always end in a nine-character certificate number entry. This nine-character value shall be used during comparison testing to facilitate sequential issuance of certificates. The first character of a certificate number shall be an alphabetic character. The analyzer shall be able to enter the certificate

number using the bar code reader. The only acceptable alpha character is 'V' for decals.

The analyzer shall restrict the alpha character to a list of acceptable alpha characters for a particular type of certificate or decal being issued. For '1 year windshield - OBD (safety & emissions)' certificate types, the acceptable alpha characters are 'E,' or 'P.' For Emission only Decals, the only acceptable alpha character is 'V.' For '1 Year Windshield (Safety Only)' certificate types, the acceptable alpha characters are 'G,' 'H,' 'I,' 'J,' 'K,' and 'L.' For '2 Year Windshield' certificate types, the acceptable alpha characters are 'N,' 'W,' and 'Q.' For 'Trailer/Motorcycle' certificate types, the acceptable alpha characters are 'X,' 'Y,' and 'Z.' For 'FMCSR (Truck)' certificate types, the acceptable alpha characters are 'T,' and 'U.' For 'FMCSR (Trailer)' certificate types, the acceptable alpha characters are 'R,' and 'S.' For a table of certificate types and acceptable alpha characters, see Appendix V.

If the inspector selects a '1 year windshield (safety and emissions)' certificate, the vehicle receives the OBD test during the emissions phase, and the vehicle passes all the phases of the inspection, then the vehicle shall receive a certificate that begins with the letter 'E,' or 'P,' also known as an "E-series" or "P-series" sticker, respectively.

Note: Sequential issuance of the '1 year windshield (safety and emissions)' certificates is a requirement in this update.

Associated System File: VEHICLE.DAT CERT_NUM

3.1.39 Certificate Number Correction Prompt:

INDICATE THE CONDITION OF THE PREVIOUS CERTIFICATE

U - UNACCOUNTED FOR

C - ENTERED CERTIFICATE IS CORRECT

R - RE-ENTER CERTIFICATE NUMBER

Programming Criteria:

The system shall only accept 'U,' 'C,' or 'R,' as valid entries. The system shall display the entered certificate number, the safety certificate inspection type ('A' or 'G' certificate) and the 'previously' issued certificate number. This prompt shall only appear if the entered certificate is out of sequence with the previously issue certificate number of the same safety certificate inspection type. If 'R' is entered, the system shall return to the previous screen prompt and allow the inspector to re-enter the current certificate. If 'C,' or 'U' is selected, the system will 1) store the entry of either 'C,' or 'U,' in the CERT_COND field of the test record, and 2) use the entered certificate number as the new 'previous' certificate number for the next comparison. If the inspector selects 'U,' the analyzer shall not allow any further official emissions inspections to be conducted until the inspector has 'accounted for' the certificates by completing the entries required in Section 3.12, Missing, or Voided Certificates.

The analyzer may either:

1. a. complete the inspection as prescribed in Sections 3.1, by proceeding with Section 3.1.40, VI 30A Selection Prompt, and then,
b. complete the screen prompts in Section 3.12. A manufacturer selected lockout shall be used to prevent any subsequent official emissions inspections until the certificates are accounted for by answering the prompts in Section 3.12,
2. a. Or, interrupt the current inspection, then,
b. account for the previous certificates by answering the prompts in Section 3.12, beginning with 3.12.2a and continuing through to 3.12.5, or 3.12.6, and then,
c. complete the inspection, by proceeding with Section 3.1.32, VI 30A Selection Prompt, write the test record, and transmit the results to the Texas Information Management System, thus, satisfying the requirement of accounting for the previous certificates prior to conducting any subsequent official emissions inspections.

If a manufacturer lockout is used, the inspector shall be able to easily identify the reason the

analyzer is preventing subsequent official inspections. The inspector shall be able to easily identify which type of certificate must be accounted for. In any case, the analyzer shall not conduct any subsequent official emissions inspections until the inspector accounts for the previous certificates by answering the questions in Section 3.12.

The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). The system shall store the entry of 'C' in the CERT_COND field, if 'C' is selected, and store the entry of the 'U' in the CERT_COND field, if 'U' is selected in the test record. The default for this screen shall be 'R' for reenter certificate number.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT CERT_COND

3.1.40 VI 30A Selection Prompt:

**DO YOU WISH TO ISSUE AN OUT OF STATE VERIFICATION FORM
(VI-30A)? ('Y' OR 'N')**

Programming Criteria: The system shall give this prompt if the Safety_PF_Flag is "P." The system shall only accept a 'Y' or 'N' entry. If the inspector selects 'N', skip the next screen prompt.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT VI30A_FLAG

3.1.41 VI 30A Number Prompt: ENTER THE VI 30A #.

Programming Criteria: The inspector will enter the VI 30A #. A minimum of one (1) character and a maximum of seven (7) characters are required for this field. If no entry is made, the analyzer shall return to the VI 30A Selection prompt, number 3.1.40.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT VI30A_NUM

3.1.42 Rejection Receipt: EXPLAIN THE REJECTION FULLY.

VEHICLE INSPECTION REJECTION RECEIPT

Date _____ Vehicle Make _____ Model year _____

Vehicle License # _____ Inspection Station# _____

Inspection Station Name _____

REJECTED FOR DEFECTIVE

Turn Signals - Mounting, operation, and approved type

Window Tinting and Sunscreening - Tint or Coating out of Specifications

Turn Signal Switch and Indicator Lamp - Switch accessible & locks in position

Emissions System - Excessive Emissions (see VIR)

Gas Cap Test - Fails Pressure Test

EXPLAIN REJECTION FULLY: (Inspector's explanation goes here) _____

Certified Inspector Making Inspection: _____

If defects indicated above are corrected and the vehicle is returned to the original inspection station within 15 days, (excluding the date of rejection) the vehicle will be reinspected once with no additional fee. THIS IS NOT A PERMIT TO DRIVE A DEFECTIVE VEHICLE OR TO DRIVE A VEHICLE WITHOUT A CURRENT VALID INSPECTION CERTIFICATE.

Fee Paid \$ _____

Programming Criteria:

The system shall prompt the inspector to explain the rejection fully, enter the fee paid on the rejection receipt and print the rejection receipt shown above. The fee paid shall be the overall cost for the complete inspection (i.e., the amount in the OVERALL_COST field). The system shall allow the inspector to type the explanation from the keyboard prior to printing the rejection receipt. If the inspector opts to type the explanation, the explanation shall appear on the printed rejection report. The system shall allow the inspector to print additional copies of the rejection receipt, after the initial report has been printed. The maximum number of entries that can be displayed on the rejection receipt is five (5). If the OBD only test or the gas cap integrity test of the inspection is failed, then the entry for this item must be displayed. If both the OBD only test and the gas cap integrity test are failed, then both entries must be displayed on the rejection receipt. The preferred order of appearance is the OBD only test entry, the gas cap integrity test entry, followed by the remaining safety item entries. In either case, the rejection receipt shall not display more than the maximum of five items. Then, the system should continue to the Print Vehicle Repair Form, Section 3.1.43, followed by the Print Vehicle Inspection Report Prompt Section 3.1.45.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT OVERALL_COST

3.1.43 Print Vehicle Repair Form (VRF):

Programming Criteria: If the EMISS_PF_FLAG flag is “F”, then the analyzer shall print a VRF. The analyzer shall print the following vehicle information on the VRF: make, model, model year, the vehicle identification number (VIN), license plate number, and odometer reading (mileage). A draft VRF format is provided in Appendix O.

3.1.44 Print Public Awareness Statement:

The public awareness statement shall be printed only once, and the VIR shall be printed twice based on the outcome of the emissions phase of the inspection. If the vehicle passes the emissions phase of the inspection (i.e., EMISS_PF_FLAG set to ‘P’), the analyzer shall print the ‘passing’ public awareness statement, and the ‘failing’ public awareness statement, if the vehicle fails the emissions phase of the inspection.

All OBD VIR messages (advisory and mandatory) shall be printed above the public awareness statement on the same page.

3.1.44a Print LIRAP Application:

If the EMISS_PF_FLAG flag is “F”, and the PRINT_LIRAP_APP field of the SYSTEM.DAT file is “Y”, then print the AircheckTexas Repair and Retirement Assistance Program Application. Otherwise, do not print this application. The application is provided in Appendix W.

3.1.45 Print Vehicle Inspection Report:

After the system has displayed the vehicle information and the inspector has confirmed that the vehicle information is correct, the following prompt shall be displayed. **"READY TO REPRINT VEHICLE INSPECTION REPORT? ENTER "Y" FOR YES OR "N" FOR NO."**

Depending upon the pass/fail status of the emissions phase of the inspection, the printer will provide additional information to the customer as outlined in Appendix A. The customer report shall include, but not be limited to, the following information: Test Type (Initial or Reinspection), Test (OBDII only), Test Date, Test Time, Test Cost (differentiated by Emission and Safety), Overall Cost,

Inspector Name, Station Name, Vehicle License Number, VIN, Vehicle Make, Vehicle Model Year, Vehicle Type, Gross Vehicle Weight, Pollution Control System, Status of MIL Light, Fault Codes and Descriptions, Status of the Readiness Monitors, Two Letter Special Test Designation where applicable, the Results of the Gas Cap Integrity Test, and the Overall Result of the Inspection. The subtitle of the report shall indicate that the test was a Safety and Emissions Inspection, Safety Only Inspection, Required Emission Only Decal Inspection or Emission Only Inspection, and whether or not the test was conducted as a Special Test. If the test was conducted as a Special Test, the Two Letter Designation (i.e., LI, ME, IV, AD, ST, PA, or OT) shall be placed on the same line as the Test Type separated by at least two spaces, or a slash, and the words 'Special Test' shall be in the subtitle. The system shall allow the inspector to print additional copies of the vehicle inspection report, after the initial report has been printed. The report shall indicate that the vehicle has failed. After the inspection has been completed, the analyzer shall contact the Texas Information Management System , and transmit all applicable vehicle information.

The analyzer shall print two barcodes on the VIR which contain the VIN, license plate number of the vehicle, and the license type, of the vehicle under inspection. The bar code shall be code 39 format and contain only the previously mentioned information and the start and stop characters.

The bar codes shall be printed on the VIR in the following format: 2 code 3 of 9 bar codes will be utilized, since there is too much information to use a single bar code. One bar code shall be formatted as follows:

Name	Length	Start	Format
Identifier	1	1	'\$'
License Plate Type	1	2	'1', '2', '3', '4', '5', '6', '7', or '8'
License Plate Number	8	3	Alphanumeric
TxDOT Number	10	11	Alphanumeric

The other shall be formatted as follows:

Name	Length	Start	Format
Identifier	1	1	'I'
VIN	17	2	Alphanumeric

Each bar code must be clearly labeled, so that the inspectors can easily tell which bar code is which.

- | | |
|---|--------------------------------------|
| 12 - Invalid TAS number | 21 - No answer |
| 13 - Invalid software version number | 22 - Voice answered |
| 14 - Invalid VID phone number | 23 - Security lagon (to VID) failure |
| 15 - Invalid communications port base address | |
| 16 - Invalid communications port interrupt | |

The no contact counter shall not be incremented for any aborted inspections.

3.2 Main Menu Selection '2' "Safety Only Inspection"

3.2.1 Access Code Prompt:

Refer to section 3.1.1

3.2.1a PIN Number Prompt:

Refer to section 3.1.2

3.2.2 Date Expiration Prompt:

Refer to section 3.1.3

3.2.3 Insurance Prompt:

Refer to section 3.1.4

3.2.4 Model Year Prompt: **ENTER THE LAST TWO DIGITS OF THE VEHICLE MODEL YEAR.**

Programming Criteria:

If no value is entered, the analyzer will display Message 1, and prompt the inspector to re-enter the last two digits of the vehicle model year. The system will display Message 2 in the event that the model year is beyond the current year +2, and prompt the inspector to re-enter the last two digits of the vehicle model year or the entire model year. The analyzer shall require the inspector to confirm any model year entry that is less than 1950.

Error Message:

1. NO VALUE HAS BEEN ENTERED TRY AGAIN.
2. INVALID MODEL YEAR -- TRY AGAIN.

Associated System File: VEHICLE.DAT MODEL_YEAR

3.2.5 License Type Prompt:

Refer to section 3.1.9

3.2.6 License Prompt: "ENTER THE LICENSE NUMBER OF THE VEHICLE."

Programming Criteria: The inspector will be prompted to enter the license number of the vehicle. Upon confirming the license plate entry, the vehicle information is eligible to be stored in the RECALL.DAT file.

Error Message: THIS FIELD MUST BE ENTERED TO CONTINUE WITH THE TEST.

Associated System File: VEHICLE.DAT LICENSE_NUM

3.2.7 VIN Number Prompt: ENTER VIN NUMBER.

Programming Criteria: The system will prompt for the VIN number as it appears on the vehicle. Where available, the inspector will enter the VIN number by using the bar-code reader to scan the bar-coded VIN on the vehicle. If a bar-code reader is not available, the inspector will be capable of entering the VIN number from the keyboard. The analyzer will place a 'B' in the BARCODED_VIN field of the test record, if the VIN is entered using the bar code reader. Otherwise, the analyzer will place a 'K' in the BARCODED_VIN field of the test record.

The system shall allow the inspector to see and edit the VIN as it is being entered. When all

“D” Diesel
“N” None (i.e., Trailers, Electric & Electric Hybrids)

Programming Criteria:

Entry of one of the above types is required. The analyzer software shall be designed so that only a “G,” a “B,” a “D,” or an “N” can be entered by the inspector for this field. The system software shall default to gasoline for this entry.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

INVALID ENTRY--TRY AGAIN.

Associated System File: VEHICLE.DAT FUEL_TYPE

3.2.9 Vehicle Type Prompt:

SELECT THE VEHICLE TYPE

'P' - PASSENGER CAR/STATION WAGON

'T' - TRUCK/VAN/BUS/SPORTS UTILITY VEHICLE

'M' - MOTOR HOME

'B' - BUS

'C' - MOTORCYCLE

'L' - TRAILER

Programming Criteria:

The inspector should select the vehicle type from the above list. The inspector shall be able to use the arrow keys to highlight the appropriate choice and press “continue” to select it. The default

choice on this screen shall be the “passenger car/station wagon” selection.

If the inspector selects ‘M,’ ‘B,’ ‘L,’ or ‘C,’ the analyzer shall skip the Vehicle Body Type Prompt in Section 3.2.10. If the inspector enters a gross vehicle weight for a bus or motor home that is less than 8501 pounds, the analyzer shall set the BODY_STYLE field to 6.

Error Message: NO VALUES HAVE BEEN ENTERED--TRY AGAIN

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT VEHICLE _TYPE

3.2.10 Vehicle Body Type Prompt: ENTER THE VEHICLE TYPE.

SELECT THE APPROPRIATE VEHICLE BODY TYPE FROM THE LIST BELOW:

CODE	VEHICLE BODY TYPE
1	SEDAN
2	STATION WAGON
3	PICKUP
4	SPORT/UTILITY VEHICLE
5	MINIVAN
6	FULL-SIZE VAN

Programming Criteria:

If the inspector selected ‘p’ as the vehicle type, the analyzer shall only display choices, 1 and 2. The default choice on this screen shall be the “passenger car/station wagon” selection. If the inspector selected ‘t’ as the vehicle type, the analyzer shall only display choice 3 through 6. In this case, the default choice on this screen shall be the “pickup” selection. The inspector shall

be able to use the arrow keys to highlight the appropriate choice and press “continue” to select it. In either case, the analyzer may use the TXVRT.DAT to display the list of vehicle makes and models. This prompt may be combined with the vehicle type prompt in section 3.2.9 as long as the logic is correct.

If the inspector selected ‘M,’ ‘B,’ ‘L,’ or ‘C,’ as the vehicle type, the analyzer shall use the NCIC list to display the list of makes and models.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT BODY_STYLE

3.2.11 Vehicle Make Prompt: ENTER THE VEHICLE MAKE.

Programming Criteria: The analyzer will then display a list of vehicle makes that the inspector will use to select the make of the vehicle currently under inspection. The analyzer will store the selected make name using the NCIC make definitions. The analyzer may display subsets of the make list that specifically identify all of the manufacturers of passenger vehicles, trucks, motor homes, motorcycles, trailers, or buses. The system shall use the makes contained in the TXVRT.DAT file for passenger cars and trucks. The system shall use the makes in the NCIC listings for Motor homes, Buses, Trailer, and Motorcycles. If the inspector selected ‘M,’ ‘B,’ ‘L,’ or ‘C,’ as the vehicle type, the analyzer shall use the NCIC list to display the list of makes and models.

The analyzer shall present the option of ‘other’ as a make definition for use when there is no applicable definition for the vehicle under inspection. The ‘other’ option shall instruct the inspector to enter the full make name and at least the first five characters of the model name. The analyzer shall allow the inspector to enter up to 20 characters. The entry of ‘OTHR’ shall be stored in the MODEL field, and the characters ‘OTH’ shall be placed in the MODEL_CODE field in the applicable test record. The NCIC make/model list may supplied by the TCEQ.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT MAKE

3.2.12 Model Prompt: SELECT THE VEHICLE MODEL.

Programming Criteria: The system will then display the appropriate vehicle models based on the vehicle make entry. The analyzer shall present the option of 'other' as a model definition for use when there is no applicable definition for the vehicle under inspection. The 'other' option shall instruct the inspector to enter the model name and allow the inspector to enter up to 20 characters. An 'OTH' shall be placed in the MODEL_CODE field of the test record whenever the 'other' option is selected by the inspector.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT MODEL
MODEL_CODE

3.2.13 Odometer Prompt: ENTER THE VEHICLE ODOMETER READING.
A MINIMUM OF ONE NUMERIC ENTRY IS REQUIRED. DO NOT ENTER THE TENTH'S DIGIT.

Programming Criteria: Enter the vehicle odometer. Do not include tenth's. The system shall only accept numerical entries in this field.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT ODOMETER

3.2.14 Vehicle 80" Width Prompt: IS THE VEHICLE 80 INCHES WIDE? (CHOOSE THE CORRECT SENTENCE)

- 1. NO, THE VEHICLE IS LESS THAN 80 INCHES WIDE.**

- 2. YES, THE VEHICLE IS AT LEAST 80 INCHES WIDE.**

Programming Criteria:

The analyzer shall only display this prompt if the previously enter vehicle type is 'T - Truck/Van/Sports Utility Vehicle' or 'M - Motorhome.' The analyzer shall display these choices and allow the inspector to use the arrow keys, the number keys, or the letters 'Y,' and 'N' to highlight the appropriate choice and press enter to select.

If the previously entered vehicle type is 'M - Motorhome,' then the default is to phrase 2.

If the previously entered vehicle type is 'T-Truck/Van/Sports Utility Vehicle,' then the default is to phrase 1.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT 80_INCHES

3.2.15 Confirm Vehicle Info Display:

The analyzer shall display the vehicle information to the inspector and allow the inspector to edit the information as appropriate. If the vehicle information was populated by the analyzer

using a previous test record, the inspector shall be allowed to edit all vehicle information except the VIN, the license plate type, and the license plate number. Upon confirming the vehicle, the vehicle information is no longer eligible to be stored in the RECALL.DAT file.

3.2.16 Test Type Prompt: ENTER THE TYPE OF INSPECTION

J-1 YEAR WINDSHIELD (SAFETY ONLY)

C-TRAILER/MOTORCYCLE

B-2 YEAR WINDSHIELD

G-FMCSR (TRUCK)

K-FMCSR (TRAILER)

Programming Criteria:

The system shall only accept entries for alphabets 'j,' 'b,' 'c,' and 'g.' The analyzer shall only display one FMCSR selection. For the FMCSR selection, the analyzer shall display only choice 'g' if the vehicle type is a truck, and only choice 'k' if the vehicle type is a trailer. The default for this screen shall be the first choice for all the cases listed below (i.e., 'j,' 'c,').

If the inspector selected 'P' for the vehicle type, then the analyzer shall display the following certificate choices:

- 'J - 1 year windshield,'
- 'B - 2 year windshield', and
- 'G - FMCSR (TRUCK).'

If the inspector selected 'B' for the vehicle type, then the analyzer shall display the following certificate choices:

- 'J - 1 year windshield,' and
- 'G - FMCSR (truck).'

If the inspector selected 'T' for the vehicle type, then the analyzer shall display the following certificate choices:

- 'J - 1 year windshield,'
- 'B - 2 year windshield', and
- 'G - FMCSR (TRUCK).'

If the inspector selected 'M' for the vehicle type, then the analyzer shall display the following certificate choices:

- 'J - 1 year windshield,'
- 'B - 2 year windshield', and
- 'G - FMCSR (TRUCK).'

If the inspector selected 'C' for the vehicle type, then the analyzer shall display the following certificate choice:

- 'C - Trailer/Motorcycle.'

If the inspector selected 'L' for the vehicle type, then the analyzer shall display the following certificate choices:

- 'C - Trailer/Motorcycle,' and
- 'K - FMSCR(Trailer).'

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT SAFE_TEST_TYPE

3.2.16a Mud Flaps/Safety Guard Prompt 1:

IS THE VEHICLE EQUIPPED WITH 4 OR MORE TIRES ON THE REARMOST AXLE?

'N' - NO, the vehicle has less than 4 tires on the rearmost axle.

'Y' - YES, the vehicle has 4 or more tires on the rearmost axle.

Programming Criteria:

The answer to this question and the next question will not be stored in the test records, but it will be used to determine if the Mud Flaps/Safety Guards safety items should be displayed in the list of safety items for safety item sequences 1, 4, 6, 8, and 9 as contained in Appendix R. However, these answer will not affect the presentation of the items of inspections in safety item sequences 2, 3, 5, and 7. The analyzer shall be defaulted to ‘N.’ The inspector shall be able to use the arrow keys or the letters ‘N,’ or ‘Y,’ to select the appropriate answer. If the inspector selects ‘N,’ proceed to Section 3.2.12 and do NOT display the Mud Flaps/Safety Guards as an item of inspection. If the inspector selects ‘Y,’ then proceed to Section 3.2.11b.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

3.2.16b Mud Flaps/Safety Guard Prompt 2:

IS THE VEHICLE A TRUCK TRACTOR, MOTORHOME, BUS, OR POLE TRAILER?

‘N’ - NO, the vehicle is NOT a truck tractor, motorhome, bus, or pole trailer.

‘Y’ - YES, the vehicle IS a truck tractor, motorhome, bus, or pole trailer.

‘R’ - Return to previous screen.

Programming Criteria:

The answer to this question will not be stored in the test records, but it will be used to determine if the Mud Flaps/Safety Guards safety item should be displayed in the list of safety items. The analyzer shall be defaulted to ‘N.’ The analyzer shall be defaulted to ‘Y,’ if the inspector selected ‘Motorhome,’ ‘Bus,’ or ‘Trailer’ as the Vehicle Type in Section 3.2.7b. The inspector shall be allowed to return to the previous screen and edit the previous answer. You may use ‘R,’ as shown above or a manufacturer’s selectable method that is more user-friendly. The inspector shall be able to use the arrow keys or the letters ‘N,’ or ‘Y,’ to select the appropriate answer. If the inspector selects ‘N,’ then **display** the Mud Flaps/Safety Guards as an item of inspection. If the inspector selects ‘Y,’ then do **not** display the Mud Flaps/Safety Guards as an item of inspection. In either case, proceed to Section 3.2.12.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

3.2.17 **Safety Inspection Items:**

Programming Criteria:

The Texas Department of Public Safety wants to enhance the entry of the safety items of inspection to collect reasons for failing or repaired items, and to prescribe the order of appearance of the safety items based on the type of inspection selected. Appendix R contains nine lists of safety items in their prescribed order.

The analyzer must display the appropriate list choices based on entries made by the inspector. The analyzer will require the inspector to enter the status of the safety item in the order it appears in the list. The acceptable entries are 'P,' for pass, 'F,' for fail, 'R' for repaired. 'N' for N/A is not an acceptable entry. A value of 'N' in the safety item field may occur in a test record that is received from the VID (i.e., for reprinting purposes). That is why the 'N' is contained in the test record. It is a carry over from the previous version of software where this was an allowable entry. If the inspector select 'F' or 'R' for any safety item in the list, a subset list of failure reasons shall be displayed and the inspector shall highlight and select the failure reason or the entry that allows the inspector to return to the previous screen entry of 'F' or 'R' to edit this selection. The default for this display shall be to the 'return to previous screen' selection. The analyzer shall automatically enter the appropriate alpha character based on the selections made by the inspector.

If the vehicle type = 'P,' and the safe_test_type = 'J - 1 year windshield', then the analyzer shall display safety item sequence #1.

If the vehicle type = 'P,' and the safe_test_type = 'B - 2 year windshield', then the analyzer shall display safety item sequence #1.

If the vehicle type = 'P,' and the safe_test_type = 'G - FMCSR (truck)', then the analyzer shall

display safety item sequence #8.

If the vehicle type = 'B,' and the safe_test_type = 'J - 1 year windshield,' then the analyzer shall display safety item sequence #3.

If the vehicle type = 'B,' and the safe_test_type = 'G - FMCSR (truck),' then the analyzer shall display the titles of safety item sequence #7, and safety item sequence #8, allow the inspector to use the arrow keys to highlight and select the appropriate safety item sequence by pressing 'continue/enter.'

If the vehicle type = 'T,' the safe_test_type = 'J - 1 year windshield,' and the 80_inches = 'N' (i.e., the truck is less than 80 inches wide), then the analyzer shall display safety item sequence #1.

If the vehicle type = 'T,' the safe_test_type = 'J - 1 year windshield,' and the 80_inches = 'Y' (i.e., the truck is at least 80 inches wide), then the analyzer shall display the titles of safety item sequence #4, and safety item sequence #5, and allow the inspector to use the arrow keys to highlight and select the appropriate safety item sequence by pressing 'continue/enter.'

If the vehicle type = 'T,' the safe_test_type = 'B - 2 year windshield,' and the 80_inches = 'N' (i.e., the truck is less than 80 inches wide), then the analyzer shall display safety item sequence #1.

If the vehicle type = 'T,' the safe_test_type = 'B - 2 year windshield,' and the 80_inches = 'Y' (i.e., the truck is at least 80 inches wide), then the analyzer shall display safety item sequence #4.

If the vehicle type = 'T,' and the safe_test_type = 'G - FMSCR (Truck),' (Note: the 80 inches wide entry is not used here to determine the appropriate safety item sequence), then the analyzer shall display the titles of safety item sequence #8, and safety item sequence #5, and allow the inspector to use the arrow keys to highlight and select the appropriate safety item sequence by pressing 'continue/enter.'

If the vehicle type = 'M,' the safe_test_type = 'J - 1 year windshield,' and the 80_inches = 'N' (i.e., the truck is less than 80 inches wide), then the analyzer shall display safety item sequence #1.

If the vehicle type = 'M,' the safe_test_type = 'J - 1 year windshield,' and the 80_inches = 'Y' (i.e.,

SAFE_5 SAFE_6A
SAFE_6B SAFE_7
SAFE_7A SAFE_7B
SAFE_8 SAFE_9
SAFE_10A SAFE_10B
SAFE_10C SAFE_10D
SAFE_10E SAFE_10F
SAFE_11 SAFE_12
SAFE_13 SAFE_14
SAFE_15 SAFE_16
SAFE_17 SAFE_18
SAFE_19 SAFE_20
SAFE_21 SAFE_22A
SAFE_22B SAFE_22C
SAFE_22D SAFE_23
SAFE_24 SAFE_25
SAFE_26 SAFE_27
SAFE_28 SAFE_29
SAFE_30

SAFETY_PF_FLAG
DPS_SAFE_SEQ

3.2.18 Safety Repair Cost Prompt: ENTER THE TOTAL COST FOR THE SAFETY-RELATED REPAIRS, INCLUDING CENTS. DO NOT INCLUDE THE SAFETY INSPECTION FEE IN THE TOTAL.

Programming Criteria:

3.2.22 Gas Cap Results Prompt:

**ENTER THE RESULTS OF THE GAS CAP INTEGRITY TEST. ('P'
OR 'F')**

Programming Criteria: If the gas cap tester is an integral part of the analyzer or fully automatic, the system shall not display this prompt, and shall enter the results of the test in GAS_CAP_PF_FLAG_1. The result shall either be 'P' for pass, or 'F' for fail. If the result from the gas cap tester is 'F' for fail, the system shall allow the inspector to conduct the gas cap integrity test again or select 'continue' to fail the gas cap portion of the inspection.

Error Message: **ONLY 'P' OR 'F' WILL BE ACCEPTED--TRY AGAIN.**

Associated System File: **VEHICLE.DAT GAS_CAP_PF_FLAG_1**

3.2.23 Second Gas Cap Prompt:

IS THERE A SECOND FUEL CAP TO BE TESTED? ('Y' OR 'N')

Programming Criteria: This prompt shall not be displayed if the inspector has indicated that the gas cap is missing, or untestable. The default for this screen shall be to 'N.' The analyzer shall only accept an entry of 'Y' or 'N.' The error message shall be displayed, if the inspector enters something other than 'Y' or 'N.' If the inspector indicates that there is a second gas cap to be tested, the analyzer shall proceed to the Second Gas Cap Missing Prompt, in Section 3.2.25.

Error Message: **ONLY 'N' OR 'Y' WILL BE ACCEPTED--TRY AGAIN.**

3.2.30 End of Test Logic:

Programming Criteria: If there is no previous inspection for this vehicle, the previous inspection was a reinspection, or the previous inspection was more than 16 days prior to this inspection, set the SAFE_INIT_TEST to 'I.' If the previous inspection was less than or equal to 16 days prior to this inspection, set the SAFE_INIT_TEST to 'R.' Then, the system shall then proceed to the Safety Test Fee Prompt, Section 3.2.31.

Associated System File: **VEHICLE.DAT SAFE_INIT_TEST**

3.2.31 Safety Test Fee Prompt: **ENTER THE TOTAL COST FOR THE SAFETY INSPECTION, INCLUDING CENTS. (DO NOT INCLUDE SAFETY RELATED REPAIRS.)**

Programming Criteria: The inspector shall enter the overall cost for the inspection. The system shall sum the safety test fee (i.e., SAFE_INSP_COST), and the applicable safety repair costs (i.e. no field name - value entered at the safety repair cost prompt) to obtain the OVERALL_COST. If the Safety_PF_Flag is set to 'F,' the system shall continue with prompt number 3.2.32. If the Safety_PF_Flag is set to 'P,' the system shall continue with prompt number 3.2.33. If an inspector enters a fee greater than \$150 dollars, the inspector shall be required to confirm the entry before proceeding to the next screen prompt. The analyzer shall display a warning message which states that the fee seems unusually large, please confirm the amount entered or reenter the fee.

Error Message: **NO VALUE HAS BEEN ENTERED--TRY AGAIN.**

Associated System File: VEHICLE.DAT

**SAFE_INSP_COST
OVERALL_COST**

3.2.32 Rejection Receipt: EXPLAIN THE REJECTION FULLY.

VEHICLE INSPECTION REJECTION RECEIPT

Date _____ Vehicle Make _____ Model year _____
Vehicle License # _____ Inspection Station# _____
Inspection Station Name _____

REJECTED FOR DEFECTIVE

Turn Signals - Mounting, operation, and approved type

Window Tinting and Sunscreening - Tint or Coating out of Specifications

Turn Signal Switch and Indicator Lamp - Switch accessible & locks in position

Emissions System - Excessive Emissions (see VIR)

Gas Cap Test - Fails Pressure Test

EXPLAIN REJECTION FULLY: (Inspector's explanation goes here)

Certified Inspector Making Inspection: _____

If defects indicated above are corrected and the vehicle is returned to the original inspection station within 15 days, (excluding the date of rejection) the vehicle will be reinspected once with no additional fee. THIS IS NOT A PERMIT TO DRIVE A DEFECTIVE VEHICLE OR TO DRIVE A VEHICLE WITHOUT A CURRENT VALID INSPECTION CERTIFICATE.

Fee Paid \$ _____

VI-7 (rev. 2000)

Texas Department of Public Safety

Programming Criteria:

The system shall prompt the inspector to explain the rejection fully, enter the fee paid on the rejection receipt and print the rejection receipt shown above. The fee paid shall be the overall cost for the complete inspection (i.e., the amount in the OVERALL_COST field). The system shall allow the inspector to type the explanation from the keyboard prior to printing the rejection receipt. If the inspector opts to type the explanation, the explanation shall appear on the printed rejection report. The system shall allow the inspector to print additional copies of the rejection receipt, after the initial report has been printed. The maximum number of entries that can be displayed on the rejection receipt is five (5). If the gas cap integrity test of the inspection is failed, then the entry for this item must be displayed. The preferred order of appearance is the gas cap integrity test entry, followed by the remaining safety item entries. In either case, the rejection receipt shall not display more than the maximum of five items. Then, the system will continue to the Print Vehicle Inspection Report Prompt in Section 3.2.37.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT SAFE_INSP_COST

3.2.33 Certificate Number Prompt: ENTER THE INSPECTION CERTIFICATE NUMBER.

Programming Criteria: If the Safety_PF_Flag is set to “F”, then the system will not give the inspector this prompt and proceed to the Main Menu. If the Safety_PF_Flag is set to “P”, then the system will prompt the inspector to input the safety inspection sticker number. A minimum of six (6) and maximum of nine (9) characters are required for this field. When the certificate number entered is not a sequential number to the last certificate issued, a warning should be displayed, “Certificate number not in sequential order. Notify DPS if a certificate is missing.” The enter key should allow the inspector to continue.

The safety certificate number consists of an alpha character, followed by up to eight digits. The alpha character usually does **not** correspond to the alpha character contained in the SAFE_TEST_TYPE field. They are, however, separated or indexed by the different types of safety inspections. Thus, the sticker numbers should be in sequential order for all one year windshield inspections (type “A” tests), two year windshield inspections (type “B” tests), trailer/motorcycle inspections (type “C” tests), and so forth. The warning should appear each time the inspector changes books for the same type of inspection. For example, a book of one year windshield inspections (type “A” tests) may end with F00000050, and the next book of one year windshield inspection certificates purchased by the shop owner may begin with F00001000. The books contain 50 sequential certificates.

The system should take the entered certificate number, compare it to the previous certificate issued under the same safety inspection type, and determine if the entered certificate number is next in sequence for that safety inspection type. If the entered number is not next in sequence, the correction prompt should appear.

If the inspector enters fewer than 9 characters, the analyzer shall automatically load leading zeros to the numerical entry and show the analyzer number after the entry is confirmed. For example, an entry of an ‘A’ followed by a ‘123’ shall be converted to ‘A00000123’ and displayed for the inspector to confirm the entry. The conversion will always end in a nine-character certificate number entry. This nine-character value shall be used during comparison testing to facilitate sequential issuance of certificates. The first character of a certificate number shall be an alphabetic character. The analyzer shall be able to enter the certificate number using the bar code reader. The only acceptable alpha character is ‘V’ for decals.

The analyzer shall restrict the alpha character to a list of acceptable alpha characters for a particular type of certificate or decal being issued. For ‘1 year windshield - OBD (safety & emissions)’ certificate types, the acceptable alpha characters are ‘E,’ or ‘P.’ For Emission only Decals, the only acceptable alpha character is ‘V.’ For ‘1 Year Windshield (Safety Only)’

certificate types, the acceptable alpha characters are 'G,' 'H,' 'I,' 'J,' 'K,' and 'L.' For '2 Year Windshield' certificate types, the acceptable alpha characters are 'N,' 'W,' and 'Q.' For 'Trailer/Motorcycle' certificate types, the acceptable alpha characters are 'X,' 'Y,' and 'Z.' For 'FMCSR (Truck)' certificate types, the acceptable alpha characters are 'T,' and 'U.' For 'FMCSR (Trailer)' certificate types, the acceptable alpha characters are 'R,' and 'S.' For a table of certificate types and acceptable alpha characters, see Appendix V.

Associated System File: VEHICLE.DAT CERT_NUM

3.2.34 Certificate Number Correction Prompt:

INDICATE THE CONDITION OF THE PREVIOUS CERTIFICATE

U - UNACCOUNTED FOR

C - ENTERED CERTIFICATE IS CORRECT

R - RE-ENTER CERTIFICATE NUMBER

Programming Criteria:

The system shall only accept 'U,' 'C,' or 'R,' as valid entries. The system shall display the entered certificate number, the safety certificate inspection type ('J,' 'C,' 'B,' 'K,' or 'G' certificate), and the 'previously' issued certificate number. This prompt shall only appear if the entered certificate is out of sequence. If 'R' is entered, the system shall allow the inspector to return to the previous screen prompt to re-enter the current certificate. If 'C' or 'U' is selected, the system will use the entered certificate number as the new 'previous' certificate number for the next comparison. If 'U' is selected, the system shall complete the test, write the test record, transmit the results to the Texas Information Management System during the next emission-related inspection, and continue with the Certificate Type Prompt, number 3.12.2a. If the inspector selects 'U,' the analyzer shall not allow any further official inspections to be conducted until the inspector has completed the entries required in Section 3.12, Missing, or Voided Certificates.

The analyzer may either:

1. a. complete the inspection as prescribed in Sections 3.2, by proceeding with Section

- 3.2.35, VI 30A Selection Prompt and;
- b. complete the screen prompts in Section 3.12. A manufacturer selected lockout shall be used to prevent any subsequent official inspections until the certificates are accounted for by answering the prompts in Section 3.12; or
2.
 - a. interrupt the current inspection; and
 - b. account for the previous certificates by answering the prompts in Section 3.12, beginning with 3.12.2a and continuing through to 3.12.5, or 3.12.6; and
 - c. complete the inspection, by proceeding with Section 3.2.35, VI 30A Selection Prompt, write the test record, and transmit the results to the Texas Information Management System during the next emissions-related inspection, thus, satisfying the requirement of accounting for the previous certificates prior to conducting any subsequent official inspections.

If a manufacturer lockout is used, the inspector shall be able to easily identify the reason the analyzer is preventing subsequent official inspections. The inspector shall be able to easily identify which type of certificate or decal must be accounted for. In any case, the analyzer shall not conduct any subsequent official inspections until the inspector accounts for the previous certificates by answering the questions in Section 3.12.

The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). The void indicator shall show 'VOID' if 'V' is in the CERT_COND field or 'MISS' if 'M' is in the CERT_COND field of the record created using the Missing or Voided Certificates function. The system shall store the entry of 'C' in the CERT_COND field, if 'C' is selected, and store the entry of the 'U' in the CERT_COND field, if 'U' is selected in the test record. The default for this screen shall be 'R' for reenter certificate number.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT CERT_COND

3.2.35 VI 30A Selection Prompt:

**DO YOU WISH TO ISSUE AN OUT OF STATE VERIFICATION FORM
(VI-30A)? ('Y' OR 'N')**

Programming Criteria: The system shall give this prompt if the Safety_PF_Flag is "P." The system shall only accept a 'Y' or 'N' entry. If the inspector selects 'N', the system shall skip the next screen prompt and continue to the Print Vehicle Inspection Report Prompt in Section 3.2.37.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT VI30A_FLAG

3.2.36 VI 30A Number Prompt: ENTER THE VI 30A #.

Programming Criteria: The inspector will enter the VI 30A #. A minimum of one (1) character and a maximum of seven (7) characters are required for this field. If no entry is made, the analyzer shall return to the VI 30A Selection prompt, number 3.2.17. Then, the system shall continue to the Print Vehicle Inspection Report Prompt in Section 3.2.37.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT VI30A_NUM

3.2.37 Print Vehicle Inspection Report:

After the system has stored the test record, the following prompt shall be displayed. **"READY TO**

PRINT VEHICLE INSPECTION REPORT? ENTER "Y" FOR YES OR "N" FOR NO."

The custom report shall include, but not be limited to, the following information: Test Type (Initial or Reinspection), Test (Safety), Test Date, Test Time, Test Cost (differentiated by Inspection Fee and Repair), Overall Cost, Inspector Name, Station Name, Vehicle License Number, VIN, Vehicle Make, Vehicle Model Year, Vehicle Type, Engine Size, Cylinders, Transmission, Odometer, Gross Vehicle Weight, Two Letter Special Test Designation where applicable, the Results of the Gas Cap Integrity Test, and the Overall Result of the Inspection. The vehicle's ignition type shall be placed on the same line as the number of cylinders separated by at least two spaces or a slash. The subtitle of the report shall indicate that the test was a Safety and Emissions Inspection, Safety Only Inspection, Required Emission Only Decal Inspection or Emission Only Inspection, and whether or not the test was conducted as a Special Test. If the test was conducted as a Special Test, the Two Letter Designation (i.e., LI, ME, IV, AD, ST, PA, or OT) shall be placed on the same line as the Test Type separated by at least two spaces, or a slash, and the words 'Special Test' shall be in the subtitle. The system shall allow the inspector to print additional copies of the vehicle inspection report, after the initial report has been printed. Prior to returning to the main menu, the analyzer shall store the results of the safety only inspection in the appropriate file structure. When the analyzer conducts and completes the next emissions test, the information for the safety only inspection(s) shall be transmitted to the Texas Information Management System Host.

The analyzer shall print two barcodes on the VIR which contain the VIN, license plate number of the vehicle, and the license type, of the vehicle under inspection. The bar code shall be code 39 format and contain only the previously mentioned information and the start and stop characters.

The bar codes shall be printed on the VIR in the following format: 2 code 3 of 9 bar codes will be utilized, since there is too much information to use a single bar code. One bar code shall be formatted as follows:

Name	Length	Start	Format
Identifier	1	1	'\$'
License Plate Type	1	2	'1', '2', '3', '4', '5', '6', '7', or '8'
License Plate Number	8	3	Alphanumeric
TxDOT Number	10	11	Alphanumeric

The other shall be formatted as follows:

Name	Length	Start	Format
Identifier	1	1	'I'
VIN	17	2	Alphanumeric

Each bar code must be clearly labeled, so that the inspectors can easily tell which bar code is which. The location of the bar codes on the VIR shall be determined by the manufacturers. The State only requires that they be present and labeled.

Error Message: NO VALUES ENTERED -- TRY AGAIN

**Associated System File: VEHICLE.DAT SAFE_INSP_COST
OVERALL_COST
CERT_NUM
OVERALL_RESULTS**

3.3 Main Menu Selection '3' " Emissions Only Inspection"

For an emissions only inspection refer to section 3.1 Safety and Emissions Inspection and exclude the following sections: 3.1.20, 3.1.21, and 3.1.22.

Following 3.1.3 Date Expiration Prompt add Inspection Type Prompt:

3.3.1 Inspection Type Prompt: ENTER THE INSPECTION TYPE

- 1 - Required Emissions Only Test (Decal)**
- 2 - Voluntary Test**
- 3 - Test on Resale (Do Not Display or Use)**
- 4 - Remote Sensing Request (Decal)**

Programming Criteria: The analyzer shall display the type of test selected by the inspector so

that the inspector can confirm the selection. The default for this screen shall be the required emission only test. The system shall set test_type field as follows:

- | | |
|---------|---------|
| 1 - 'O' | 3 - 'C' |
| 2 - 'I' | 4 - 'B' |

Associated System File: **VEHICLE.DAT** **TEST_TYPE**

Replace sections 3.1.38 Certificate Number Prompt and 3.1.39 Certificate Number Correction Prompt with Decal Number Prompt and Decal Number Correction Prompt.

3.3.2 Decal Number Prompt: **ENTER THE INSPECTION DECAL NUMBER.**

Programming Criteria: This prompt shall only be displayed if the vehicle passes the inspection and the inspection is a required emissions only test (decal), or a remote sensing request (decal). If the inspection is a required emission only test, set the SAFE_TEST_TYPE to 'H.' Otherwise, leave the SAFE_TEST_TYPE blank. If the OVERALL_RESULTS flag is "F", then the system will not give the inspector this prompt and proceed to 3.3.26. If the OVERALL_RESULTS flag is "P", then the system will prompt the inspector to input the safety inspection decal number, and proceed to 3.3.27. A minimum of six (6) and maximum of nine (9) characters are required for this field. When the decal number entered is not a sequential number to the last decal issued, a warning shall be displayed, "Decal number not in sequential order. Notify DPS if a decal is missing." The enter key should allow the inspector to continue.

The safety decal number consists of an alpha character, followed by up to eight digits. The alpha character usually does **not** correspond to the alpha character contained in the SAFE_TEST_TYPE field. The decal numbers should be in sequential order. The warning should appear each time the inspector changes strips for the 'emissions only test (decal)' inspection. For example, a strip of decals (type "H" tests) may end with V00000050, and the next strip of decals purchased by the shop owner may begin with V00001000. The strips contain 10 sequential emissions decals.

The system should take the entered decal number, auto populate the entry with leading zeroes, compare it to the previous decal issued, and determine if the entered decal number is next in

sequence. If the entered number is not next in sequence, the correction prompt should appear.

If the inspector enters fewer than 9 characters, the analyzer shall automatically load leading zeros to the numerical entry and show the analyzer number after the entry is confirmed. For example, an entry of an 'A', followed by a '123' shall be converted to 'A00000123' and displayed for the inspector to confirm the entry. The conversion will always end in a nine-character decal number entry. This nine-character value shall be used during comparison testing to facilitate sequential issuance of decals. The first character of a decal number shall be an alphabetic character. The only acceptable alpha character is 'V' for decals.

The analyzer shall restrict the alpha character to a list of acceptable alpha characters for a particular type of decal being issued. For example, during a safety and emission inspection or reinspection, if the inspector selects the '1-year windshield (safety & emissions)' certificate on the type of inspection prompt in Section 3.1.20 and the vehicle passes the inspection, the inspector may only enter an 'A,' 'B,' 'C,' 'D,' 'E,' or 'F,' as the alpha character in the certificate number entry prompt. For Emission only Decals, the only acceptable alpha character is 'V.' For '1 Year Windshield (Safety Only)' certificate types, the acceptable alpha characters are 'G,' 'H,' 'I,' 'J,' 'K,' and 'L,' For '2 Year Windshield' certificate types, the acceptable alpha characters are 'N,' 'W,' and 'Q.' For 'Trailer/Motorcycle' certificate types, the acceptable alpha characters are 'X,' 'Y,' and 'Z.' For 'FMCSR (Truck)' certificate types, the acceptable alpha characters are 'T,' and 'U.' For 'FMCSR (Trailer)' certificate types, the acceptable alpha characters are 'R,' and 'S.' For a table of certificate types and acceptable alpha characters, see Appendix V.

Associated System File: VEHICLE.DAT

DECAL_NUM

SAFE_TEST_TYPE

3.3.3 Decal Number Correction Prompt:

INDICATE THE CONDITION OF THE PREVIOUS DECAL

U - UNACCOUNTED FOR

C - ENTERED DECAL IS CORRECT

R - RE-ENTER DECAL NUMBER

Programming Criteria:

The system shall only accept 'U,' 'C,' or 'R,' as valid entries. The system shall display the entered decal number, the safety inspection type (decal) and the 'previous' decal number. This prompt shall only appear if the entered decal is out of sequence. If 'R' is entered, the system shall allow the inspector to return to the previous screen prompt to re-enter the current decal. If 'C,' or 'U' is selected, the system will use the entered decal number as the new 'previous' decal number for the next comparison. If 'U,' is selected, the system shall complete the test, write the test record, transmit the results to the Texas Information Management System, and continue with the Certificate Type Prompt, number 3.12.2a. If the inspector selects 'U,' the analyzer shall not allow any further official inspections to be conducted until the inspector has completed the entries required in Section 3.12, Missing, or Voided Certificates/Decals.

The analyzer may either:

1. a. complete the inspection as prescribed in Section 3.3 by proceeding with Section 3.3.26, Rejection Receipt, and then,
 - b. complete the screen prompts in Section 3.12. A manufacturer selected lockout shall be used to prevent any subsequent official inspections until the decals are accounted for by answering the prompts in Section 3.12,
2. a. Or, interrupt the current inspection, then,
 - b. account for the previous decals by answering the prompts in Section 3.12, beginning with 3.12.2a and continuing through to 3.12.5, or 3.12.6, and then,
 - c. complete the inspection by proceeding with Section 3.3.26, Rejection Receipt, write the test record, and transmit the results to the Texas Information Management System, thus, satisfying the requirement of accounting for the previous decals prior to conducting any subsequent official inspections.

If a manufacturer lockout is used, the inspector shall be able to easily identify the reason the analyzer is preventing subsequent official inspections. The inspector shall be able to easily identify which decal must be accounted for. In any case, the analyzer shall not conduct any subsequent official inspections until the inspector accounts for the previous decals by answering the questions in Section 3.12.

The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). The void indicator shall show 'VOID', if 'V' is in the DECAL_COND field, or 'MISS', if 'M' is in the DECAL_COND field of the record created using the Missing or Voided Certificates/Decals function. The system shall store the entry of 'C' in the DECAL_COND field, if 'C' is selected, and store the entry of the 'U' in the DECAL_COND field, if 'U' is selected in the test record. The default for this screen shall be 'R' for reenter decal number.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN

INVALID ENTRY--TRY AGAIN

Associated System File: VEHICLE.DAT DECAL_COND

3.4 Main Menu Selection '4' "Re-inspection"

Refer to Section 3.1 for the following prompts:

Access Code Prompt

PIN Number Prompt

Date Expiration Prompt

Proceed to 3.4.3

3.4.3 Reinspection Prompt :

**WAS THE PREVIOUS INSPECTION A SAFETY
ONLY INSPECTION (NO EMISSIONS AT ALL)? (Y
OR N)**

Programming Criteria: The system shall only accept an entry of 'Y' or 'N.' If the inspector indicates that the previous inspection was a Safety Only Inspection, the analyzer shall search locally for a VIN and/or license plate match, and not call the VID using the Texas Information Management System. If the inspector indicates that the previous inspection was **not** a Safety

Only Inspection, the analyzer shall call the VID using the Texas Information Management System. The analyzer shall set the default for this screen to 'N' for no.

3.4.5 Display/Select Reinspection Record:

Programming Criteria:

The system shall prompt the inspector to enter the license number and VIN, contact the Texas Information Management System (refer to section 3.1.13), and display the record that meets the search criteria. If the system can not contact the Texas Information Management System Host, then, the system shall either search the system files (i.e., VEHICLE.DAT, REINSPECT.DAT, etc.), and display the record that meets the search criteria or display the license number and VIN of all records currently contained in REINSPEC.DAT files, and prompt the inspector to select the desired record. The system will then display vehicle information for verification by the inspector. The following prompt shall be displayed, **“IS THIS THE CORRECT VEHICLE? ENTER “Y” FOR YES OR “N” FOR NO.”** If the inspector enters an “N” indicating that the vehicle record selected is incorrect, the software shall display a prompt instructing the inspector to select another record. If the inspector enters a “Y” indicating that the vehicle record selected is correct, the following prompt shall be displayed, **“IS THIS VEHICLE INFORMATION CORRECT? ENTER “Y” FOR YES OR “N” FOR NO.”** If any of the displayed information is incorrect (e.g., model year, GVW, etc.), the software shall display a prompt instructing the inspector to correct the vehicle information and press “continue” when ready. The analyzer shall not allow the inspector to edit the VIN or license plate number. The analyzer must display a prompt directing the inspector to update odometer reading. Upon confirming the vehicle, the vehicle information is no longer eligible to stored in the RECALL.DAT file. The analyzer will then begin the OBDII emissions test.

If the search of the system files does not provide a match, or the REINSPECT.DAT file does not contain a record of the vehicle, the inspector must be prompted to enter all information concerning the vehicle. Upon confirming the vehicle, the vehicle information is no longer eligible to be stored in the RECALL.DAT file.

If the analyzer can not obtain a previous test record from either contacting the Texas Information Management System or searching the files contained on the analyzer, the analyzer shall:

1. Prompt the inspector to enter the type of reinspection (i.e., Safety and Emissions, Safety Only, or Emissions Only),
2. Prompt the inspector to enter the applicable vehicle information,
3. Upon test completion, set the SAFE_INIT_TEST to 'I,' and if an emissions test is conducted, set the EMISS_INIT_TEST to 'R.'

After the inspector has selected the proper record, confirmed the correct vehicle, and updated the odometer reading, the system shall give the vehicle the same test it was issued initially, unless the vehicle was deemed "not ready" and received an ASM emissions test on the initial inspection. If the vehicle was deemed "not ready" and received an ASM emissions test on the initial inspection, the vehicle shall received the OBD test on the reinspection. If the vehicle passes the OBD test, the vehicle shall pass the emissions phase of the test. The system shall use the EMISS_TEST_TYPE field of the previous record to determine which emissions test the vehicle was issued initially (1 for OBD test, 2 for 2-speed idle test, and 3 for ASM test). The TEST_TYPE field can be used to determine the previous inspection type(i.e., Safety Only, Safety and Emissions, or Emissions Only).

If the TEST_TYPE field contains an 'H' - 'Safety Only Inspection,' the system shall conduct a 'Safety Only Inspection'. The analyzer will determine if the vehicle is eligible for a reinspection by using the value contained in the SAFE_INIT_TEST field of the target record. The target record is the test record of the most recent previous inspection of this type (i.e., Safety Only Inspection). If the target record was created from conducting an initial inspection, an 'I' will be stored in the SAFE_INIT_TEST field. If the target record was created from conducting a reinspection, an 'R' will be stored in the SAFE_INIT_TEST field.

If the vehicle has had an initial inspection at this station within the last 16 days (i.e., the SAFE_INIT_TEST is set to 'I' in the previous inspection, the station number of the previous inspection station matches the number of the station conducting the current inspection, and the date of this inspection is within the last 16 days of the inspection date contained in the previous test record), then, the vehicle is eligible for a reinspection.

If the vehicle is not eligible for a reinspection, the analyzer shall:

- 1) display a message indicating why the vehicle is not eligible for a 'reinspection' (i.e., a reinspection has already been conducted on this vehicle), and prompt the inspector to inform the customer that they will be charged for this inspection;

- 2) save the vehicle information, possibly in the Recall.Dat file for use in the initial inspection mode;
- 3) either transfer operation to the initial inspection mode for 'Safety Only Inspection', or cease the reinspection operation, prompt the inspector that this inspection must be conducted in the initial inspection mode; and
- 4) input the necessary vehicle information from the test record of the previous inspection once the analyzer is in the initial inspection mode.

If the re-inspection is conducted on the same day (Day 1) or before the sixteenth day following the day of the initial inspection (Day 17), the analyzer shall:

1. Only allow the inspector to enter values in the fields that failed during the previous inspection;
2. Administer the gas cap integrity test if the gas_cap_pf_flag was set to 'F' (fail) during the previous inspection. (i.e., use the gas_cap_pf_flag field); and
3. Display the safety repair cost prompt only if a 'B,' 'D,' 'G,' 'I,' 'K,' 'M,' 'Q,' 'T,' 'V,' 'X,' or 'Z' (repaired) is entered in an available field; and
4. Display the safety test fee prompt if the station number is different from the station number of the previous inspection, if applicable.

If the reinspection is conducted on the seventeenth day (Day 17), the analyzer shall:

1. Conduct a complete safety only inspection requiring new entries in all fields; and
2. Administer the gas cap integrity test if the gas_cap_pf_flag was set to 'F' (fail) during the previous inspection. (i.e., use the gas_cap_pf_flag field); and
3. Display the safety test fee prompt.

In each case, the inspection will be stored as a new record in the Vehicle.dat file.

If the TEST_TYPE field contains a 'C' (Test on Resale), 'I' (Voluntary Emissions Test), 'O' (Required Emissions Only Test (Decal), or 'B' (Remote Sensing Request (Decal)), the analyzer shall conduct an "Emissions Only Inspection" test using the screen prompts in Section 3.3. The analyzer will determine if the vehicle is eligible for a reinspection by using the value contained in the SAFE_INIT_TEST field of the target record. The target record is the test record of the most recent previous inspection of this type (i.e., Safety Only Inspection). If the target record was created from conducting an initial inspection, an 'I' will be stored in the SAFE_INIT_TEST field. If the target record was created from conducting a reinspection, an 'R' will be stored in the SAFE_INIT_TEST field.

If the vehicle has had an initial inspection at this station within the last 16 days (i.e., the SAFE_INIT_TEST is set to 'I' in the previous inspection, the station number of the previous inspection station matches the number of the station conducting the current inspection, and the date of this inspection is within the last 16 days of the inspection date contained in the previous test record), then, the vehicle is eligible for a reinspection.

If the vehicle is not eligible for a reinspection, the analyzer shall:

- 1) display a message indicating why the vehicle is not eligible for a 'reinspection' (i.e., a reinspection has already been conducted on this vehicle), and prompt the inspector to inform the customer that they will be charged for this inspection;
- 2) save the vehicle information, possibly in the Recall.Dat file for use in the initial inspection mode;
- 3) either transfer operation to the initial inspection mode for 'Emissions Only Inspection', Section 3.3, or continue in the reinspection mode if the inspector is prompted to enter repair information about this vehicle; and
- 4) input the necessary vehicle information from the test record of the previous inspection once the analyzer is in the initial inspection mode.

If the reinspection is conducted on the same day (Day 1) or before the sixteenth day following the day of the initial inspection (Day 17), the analyzer shall:

1. Administer the OBDII test if the `emiss_pf_flag` was set to 'F' (fail), ' and
2. Administer the gas cap integrity test if the `gas_cap_pf_flag` was set to 'F' (fail) during the previous inspection. (i.e., use the `gas_cap_pf_flag` fields);
3. Obtain the repair information requested in 3.4.9 immediately prior to conducting the OBDII test if the `EMISS_PF_FLAG` is set to 'F' in the target record, if applicable; and
4. Display the emissions test fee prompt only if the station number is different from the station number of the previous inspection, if applicable.

If the re-inspection is conducted on the seventeenth day (Day 17), the analyzer shall:

1. Conduct the complete 'Emissions Only Inspection' test sequence;
2. Obtain the repair information requested in 3.4.9 immediately prior to conducting the appropriate OBD II test if the `EMISS_PF_FLAG` is set to 'F' in the target record, if applicable; and
3. Display the emission test fee prompt.

If the `TEST_TYPE` field contains an 'A,' the analyzer shall conduct an "Safety and Emissions Inspection" using the screen prompts in Section 3.1. The analyzer will determine if the vehicle is eligible for a reinspection by using the value contained in the `SAFE_INIT_TEST` field of the target record. The target record is the test record of the most recent previous inspection of this type (i.e., Safety Only Inspection). If the target record was created from conducting an initial inspection, an 'I' will be stored in the `SAFE_INIT_TEST` field. If the target record was created from conducting a reinspection, an 'R' will be stored in the `SAFE_INIT_TEST` field.

If the vehicle has had an initial inspection at this station within the last 16 days (i.e., the

SAFE_INIT_TEST is set to 'I' in the previous inspection, the station number of the previous inspection station matches the number of the station conducting the current inspection, and the date of this inspection is within the last 16 days of the inspection date contained in the previous test record), then, the vehicle is eligible for a reinspection.

If the vehicle is not eligible for a reinspection, the analyzer shall:

- 1) display a message indicating why the vehicle is not eligible for a 'reinspection' (i.e., a reinspection has already been conducted on this vehicle), and prompt the inspector to inform the customer that they will be charged for this inspection;
- 2) save the vehicle information, possibly in the Recall.Dat file for use in the initial inspection mode;
- 3) either transfer operation to the initial inspection mode for 'Safety and Emissions Inspection', Section 3.1, or continue in the reinspection mode if the inspector is prompted to enter repair information about this vehicle; and
- 4) input the necessary vehicle information from the test record of the previous inspection once the analyzer is in the initial inspection mode.

If the reinspection is conducted on the same day (Day 1) or before the sixteenth day following the day of the initial inspection (Day 17), the analyzer shall:

1. Only allow the inspector to enter values in the fields that failed during the previous inspection, if applicable (i.e., the safety_pf_flag was set to 'F' (fail) during the previous inspection);
2. Display the safety repair cost prompt only if a 'B,' 'D,' 'G,' 'I,' 'K,' 'M,' 'Q,' 'T,' 'V,' 'X,' or 'Z' (repaired) is entered in an available field during the reinspection, if applicable;
3. Obtain the repair information requested in 3.4.9 immediately prior to conducting the OBDII test if the EMISS_PF_FLAG is set to 'F' in the target record, if applicable; and

4. Administer the OBDII test if the `emiss_pf_flag` was set to 'F' (fail),
5. Administer the gas cap integrity test if the `gas_cap_pf_flag` was set to 'F' (fail) during the previous inspection. (i.e., use the `gas_cap_pf_flag` fields); and
6. Display the emission test fee prompt and the safety test fee prompt only if the station number is different from the station number of the previous inspection, if applicable.

If the reinspection is conducted on the seventeenth day (Day 17), the analyzer shall:

1. Conduct the complete "Safety and Emission Inspection" test sequence as described in Section 3.1;
2. Display the safety test fee prompt;
3. Obtain the repair information requested in 3.4.9 immediately prior to conducting the OBDII test if the `EMISS_PF_FLAG` is set to 'F' in the target record, if applicable; and
4. Display the emissions test fee prompt.

In all the aforementioned cases, the system shall purge the record from the `Reinspect.Dat` file if the vehicle passes and is issued a certificate.

3.4.6 Safety Inspection Items:

Refer to Section 3.1.20

3.4.7 Safety Repair Cost Prompt:

ENTER THE TOTAL COST FOR THE SAFETY-RELATED REPAIRS, INCLUDING CENTS. DO NOT INCLUDE THE SAFETY INSPECTION FEE IN THE TOTAL.

Programming Criteria:

The analyzer shall display this prompt if the inspector indicates that repairs were conducted (i.e., a 'B,' 'D,' 'G,' 'I,' 'K,' 'M,' 'Q,' 'T,' 'V,' 'X,' or 'Z' (repaired) was entered in an available field) on any of the safety items shown under the Safety Inspection Items Prompt in Section 3.4.4. The inspector shall enter the total cost for all safety-related repairs. If an inspector enters a fee greater than \$450 dollars, the inspector shall be required to confirm the entry before proceeding to the next screen prompt. The analyzer shall display a warning message which states that the fee seems unusually large, please confirm the amount entered or reenter the fee. The analyzer will store this amount locally to be printed on the VIR. The cost entered at the prompt shall be included in the overall cost for the inspection.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT

3.4.8 Safety Test Fee Prompt: ENTER THE TOTAL COST FOR THE SAFETY INSPECTION, INCLUDING CENTS. (DO NOT INCLUDE SAFETY RELATED REPAIRS.)

Programming Criteria:

This prompt shall only appear if the following scenario occurs:

1. a. if the reinspection is being conducted on or after the sixteenth day following the day of the initial inspection (Day 17)

If the EMISS_PF_FLAG was set to 'P' during the initial inspection, add the value entered to the SAFE_INSP_COST field to the OVERALL_COST field. If the vehicle passes the safety reinspection (i.e., SAFETY_PF_FLAG is set to 'P' - pass) for this inspection, then the inspector shall enter the overall cost for the inspection. If an inspector enters a fee greater than \$150 dollars, the inspector shall be required to confirm the entry before proceeding to the next screen prompt. The analyzer shall display a warning message stating that "The fee seems unusually large. Please confirm the amount entered or reenter the fee."

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

3.4.9 Emissions Reinspection Repairs

Programming Criteria:

This prompt shall only appear if one of the following scenarios occurs:

1. a. if the reinspection is being conducted on the same day as the initial inspection (Day1) or before the sixteenth day following the day of the initial inspection (Day 17), and
b. the EMISS_PF_FLAG was set to 'F,' 'T,' or 'D' during the initial inspection, or
- 2 a. if the reinspection is being conducted on or after the sixteenth day following the day of the initial inspection (Day 17)

On an emissions reinspection, the system will prompt the inspector to provide repair information prior to conducting the retest. However, the inspector shall not be able to completely bypass the screen prompts requesting repair information.

Provided below is the complete list of specific repair items, organized according to engine/emissions system, each with a 1-digit (0-9) or 2-digit (10-99) numeric code assigned to it. The analyzer will provide the inspector with the ability to print out the Numeric Repair Chart for reference purposes (such as posting next to the monitor).

- A. Fuel Supply
- B. Evaporative (EVAP) Emissions Control System
- C. Fuel Metering (Carbureted / Fuel Injected)
- D. Idle Speed (Carbureted / Fuel Injected)
- E. Air Supply
- F. Ignition System
- G. Electrical / Electronic
- H. Emissions Systems
- I. Engine Mechanical

- J. Engine Exhaust
- K. Engine Cooling
- L. Vehicle Fluids
- M. Transmission / Final Drive
- N. Miscellaneous

The inspector will highlight and select the category(s) for any repairs done to the vehicle. Upon selection of a repair category, the system will display the associated sub-menu detailing the actual items. The following is a list of the repair categories and associated sub-menus:

REPAIR ANALYSIS

A. Fuel Supply

1. Pump
2. Tank
3. Lines / Hoses / Filters
4. Fuel Pressure Control
5. Fuel Distribution (if applicable)

B. Evaporative (EVAP) Emissions Control System

6. Canister
7. Vent Lines / Hoses / Purge Hoses
8. Fuel Cap
9. Purge Valves / Solenoids / etc.
10. Mechanical Control System (includes vacuum)
11. Electronic Control System

C. Fuel Metering (Carbureted / Fuel Injected)

12. Mechanical Control System (includes vacuum)
13. Electronic Control System
14. Injector(s)
15. Throttle Body
16. Carburetor - Internal
17. Carburetor - External
18. Idle Mixture Control
19. Cold Start System / Choke
20. Metering Device (if applicable)
21. Oxygen Sensor (O2S), Heated Oxygen Sensor (HO2S)
22. Engine Coolant Temperature (ECT) Sensor
23. Air Flow Sensor(s) (all)
24. Inlet Air Temperature (IAT) Sensor
25. Throttle Position Sensor (TPS)
26. Manifold Absolute Pressure (MAP) Sensor, Manifold Differential Pressure Sensor, Manifold Vacuum Zone Sensor, or Barometric Pressure (BARO) Sensor
27. Crankshaft Position (CP) Sensor
28. Camshaft Position (CMP) Sensor
29. Knock Sensor (KS)
30. Vehicle Speed Sensor (VSS)
31. Other Sensor(s)

D. Idle Speed (Carbureted / Fuel Injected)

32. Idle Speed Adjustment
33. Idle Air Control (IAC) / Idle Speed Control (ISC)

E. Air Supply

- 34. Air Filter
- 35. Hot/Cold Intake-Air System and Control / Thermostatic Air Cleaner (TAC)
- 36. Intake Manifold / Gaskets
- 37. Other Vacuum / False Air Leaks
- 38. Turbo / SuperCharger System

F. Ignition System

- 39. Ignition Control Module (ICM)
- 40. Primary / Reference (Circuit & Components)
- 41. Coil(s) / Secondary
- 42. Spark Plug Wires
- 43. Spark Plugs
- 44. Spark Timing

G. Electrical / Electronic

- 45. Powertrain Control Module (PCM)
Engine Control Module (ECM)
Program Read-Only Memory (PROM) Computer Chip
- 46. Clear Diagnostic Trouble Codes (DTC)
- 47. Actuators (other)
 - a) Wiring (all systems)
 - 48. Open Circuit

- 49. High Resistance (power / ground)
- 50. Shorted Circuit
- 51. Battery
- 52. Charging System

H. Emissions Systems

a) Catalytic Converter

- 53. Empty / Melted / Damaged
- 54. Low Efficiency
- 55. Secondary Air Injection Reaction (AIR) tube

b) Exhaust Gas Recirculation (EGR)

- 56. Flow Passages
- 57. Mechanical Control System (includes vacuum)
- 58. Electronic Control System
- 59. Valve / Actuator Assembly(ies)

c) Secondary Air Injection System (AIS)

- 60. Belt(s)
- 61. Pump(s)
- 62. Bypass / Diverter / Switch Valve(s)
- 63. Mechanical Control System (includes vacuum)
- 64. Electronic Control System
- 65. Reed, Check, and Other Valves
- 66. Plumbing

d) Positive Crankcase Ventilation (PCV)

- 67. Valve

68. Other

I. Engine Mechanical

- 69. Internal Short-Block
- 70. Cylinder Head Structure / Head Gasket
- 71. Camshaft(s)
- 72. Cam Timing / Belt / Chain
- 73. Valves (Mechanical)
- 74. Valves (Oil Seals)
- 75. Other (including valve adjustment)
- 76. Other Seals / Gaskets

J. Engine Exhaust

- 77. Exhaust Manifold / Gaskets
- 78. Back pressure

K. Engine Cooling

- 79. Fan
- 80. Thermostat
- 81. Radiator, Coolers, and Caps
- 82. Mechanical Control System (includes vacuum)
- 83. Electronic Control System

L. Vehicle Fluids

- 84. Engine Coolant
- 85. Engine Crankcase Oil
- 86. Fuel

M. Transmission / Final Drive

- 87. Internal (hydraulic / mechanical)
- 88. Electronic Control System
- 89. External Control (vacuum, cables)
- 90. Final Drive Ratio
- 91. Tire Size

N. Miscellaneous

- 92-98. Reserved for future use
- 99. All other types of repairs

HELP SCREEN - INSTRUCTIONS FOR ENTERING EMISSIONS REPAIR INFORMATION

- Complete repair data must be entered BEFORE an emissions retest can be performed on a vehicle.
- When reporting repair information, use one or more of the following items:
 - your Inspection Station's own records;
 - receipts from other repair facilities;
 - parts receipts provided by the motorist; and/or

- questions asked of the motorist.

- If repairs were done in more than one category (i.e., Fuel System, and Ignition/Electrical System), select the category whose cost is the largest percentage of the total repair cost. The category that would have cost the most if the repairs were done separately. However, enter the total cost of the repairs (since the last inspection) in question #2.

- Depending on where emissions repairs were performed on the vehicle, please enter the appropriate information in one the following categories:
 1. Recognized Emissions Repair Technician (completed repairs);

 2. Other Repair Technician (Non-Recognized); or

 3. Motorist (Self-Performed).

- If two or more non-recognized repair facilities performed repairs on the vehicle, just select the Other Repair Technician (Non-Recognized) category and enter the total of the repair costs in the question #2.

- If two or more Recognized Emissions Repair Technicians performed repairs on this vehicle, just enter the total of the repair costs in the question #2, and select the Recognized Emissions Repair Technician category.

- Please provide as much of the requested repair information as possible. Please note that an abnormally high amount of incomplete repair information entries may result in an audit of your Inspection Station.

Press Enter or type "C" to Continue

SCREEN 1 - EMISSIONS REPAIR QUESTIONS

Question #1:

Please select the system that was replaced or repaired from the following list:

Fuel System (Supply & Metering Systems including O2S)

Ignition/Electrical System (Battery, Spark plugs, Spark plug wires, timing, ECM, etc.)

Emissions System (Catalytic Converter, EGR, AIS, PCV, EVAP, TAC, etc.)

Engine Mechanical (Engine Valve, Camshaft, Block, etc.)

Miscellaneous (Trans./Final Drive, Vehicle Fluids, Eng. Cooling, Engine Exhaust, etc.)

No Repairs Performed on Vehicle

Response Format:

Provide the list and allow the inspector to highlight a choice using the arrow keys and select it by pressing the 'continue or enter' key. The system shall store the inspector's selection in the REP_GRP field of the test record. If the inspector selects 'No Repairs Performed on Vehicle', the analyzer will prompt the inspector to enter the source of the info (motorist, or self), and re-enter his access code and PIN. The system shall continue to the applicable emissions test (3.4.6a or 3.4.7) after the access code and PIN have been entered, even if the entries do not match the entries from the beginning of the inspection.

Question #2:

What is the total cost of emissions repairs performed on this vehicle?

Response Format:

Total Repair Cost (Diagnostics, Parts, & Labor): \$ __ , ___ . __

Question #3:

Please indicate who performed the emissions repairs on this vehicle:

1. Recognized Emissions Repair Technician
2. Other Repair Technician (Non-Recognized)
3. Motorist (Self-Repair)

Response Format:

Provide the list and allow the inspector to highlight a choice using the arrow keys or by pressing “1,” “2,” or “3,” and select it by pressing continue. The system shall store the inspector’s selection in the PERF_REPAIRS field of the test record. If the inspector selects “3,” skip question #4. Display entries of the three questions, and prompt the inspector to confirm the entries by pressing continue. The total repair cost entered in question 2 will be stored in the REP_OVERALL_COST field. The same value will be stored in the REP_CST_RRF field, the REP_CST_NRF field, or the REP_CST_MSP field, when the inspector selects “1,” “2,” or “3,” respectively.

Question #4:

Choose the appropriate sentence:

4. Yes, repairs were done at this station. Repair costs will be added to the overall inspection costs and displayed on the VIR.
5. No, repairs were not done at this station. Repair costs will not be added to the overall inspection costs nor displayed on VIR.

Response Format:

Provide the list and allow the inspector to highlight a choice using the arrow keys or by pressing “1,” or “2,” and select it by pressing continue. If the inspector select “1,” then the analyzer shall:

1. Store the value entered in question 2 in the REP_CST_YIS field and the REP_OVERALL_COST field,
2. Calculate the sum of the values stored in the REP_OVERALL_COST field, the EMISS_INSP_COST, the value entered at the safety repair cost prompt, and the SAFE_INSP_COST field, where applicable, to arrive at the total inspection cost and store the sum in the OVERALL_COST field,
3. Print the repair costs, the emissions costs, and the safety costs, where applicable, on the VIR.

If the inspector selects “2,” then the analyzer shall:

1. Store the value entered in question 2 in the REP_OVERALL_COST field,
2. Calculate the sum of the values stored in the the EMISS_INSP_COST, the value entered at the safety repair cost prompt, and the SAFE_INSP_COST field, where applicable, to arrive at the total inspection cost and store the sum in the OVERALL_COST field (store the repair costs, but do not use them to calculate the total inspection cost),
3. Print the repair cost on the VIR as ‘0.00’, and print the emissions costs, and the safety costs, where applicable, on the VIR. print the repair cost on the VIR as ‘0.00’, and do not add these costs when

computing the total inspection cost.

After the inspector makes the selection, display the entries of the four questions, then, prompt the inspector to confirm the entries by pressing continue.

Go to OBD II test

Note to Software Developers:

- For each question or data request, hitting the enter key after the response is typed-in should indicate completeness.
- Provide the inspector with the ability to print out the Numeric Repair Chart for reference purposes (such as posting next to the monitor).
- Even though recognized facilities will have copies of blank VRFs, provide the inspector with the ability to print one out when necessary. A draft VRF format is provided in Appendix O.
- At a later date, recognized repair technicians may have the opportunity to enter their own repair data through either one or both of the following methods:
 - having direct access to the Texas Information Management System (TDL); and
 - touch-tone entry from a telephone.

The system will accumulate all costs entered above for use in cost waiver determination. The total repair cost will be stored in the REP_OVERALL_COST field of the VEHICLE.DAT file. The cost of repairs done at this station (i.e., REP_CST_YIS) will be added to the EMISS_INSP_COST, the applicable safety repair costs (i.e, the value entered at the safety repair cost prompt), and SAFE_INSP_COST, if applicable, and stored in the OVERALL_COST field of the VEHICLE.DAT file.

Associated System File: VEHICLE.DAT

ANALYZER_NUMBER	STATION_NUM
INSPECTOR_NUM	
TEST_DATE	VIN_ID_NUM
LICENSE_NUM	REP_CST_YIS
REP_CST_CRF	REP_CST_NRF

REP_CST_MSP REP_ITM_YIS
REP_ITM_CRF_AFR REP_ITM_CRF_ADL
REP_ITM_CRF_REC REP_ITM_NRF
REP_ITM_MSP CERF_ID_NUM
CERT_ID_NUM VH_AF_BR
VH_AF_AR VH_OB_SR
REP_OVERALL_COST

VEHICLE.DAT EMISS_INSP_COST
 SAFE_INSP_COST
 OVERALL_COST

3.5 Main Menu Selection '5' "Re-Print Vehicle Inspection Report" / "VIR"

There are no requirements to write a test record for reprinting a VIR. An analyzer that writes a test record for reprints shall not be deemed unacceptable.

3.5.1 Access Code Prompt:

Refer to Section 3.1.1

3.5.1a PIN Number Prompt:

Refer to Section 3.1.2 .

3.5.2 Date Expiration Prompt:

Refer to Section 3.1.3

3.5.3 Retrieve Previous Records Prompt:

SELECT THE SEARCH LOCATION

SEARCHING THE ANALYZER SYSTEM FILES (LOCAL SEARCH)

SEARCHING THE TEXAS INFORMATION MANAGEMENT SYSTEM (CALL DATABASE)

Note: The database search will only return results of the most recent inspection.

Programming Criteria: The system shall prompt the inspector to indicate that the search will be performed on system files or by contacting the Texas Information Management System. A message shall be displayed indicating that a search of the Texas Information Management System will only return the results of the most recent inspection. If the inspector elects to contact the Texas Information Management System, the system shall proceed to Section 3.5.6. If the inspector elects to search the system files, the system shall proceed to Section 3.5.7.

3.5.4 VIN Number Prompt:

Refer to Section 3.1.12

3.5.5 License Prompt:

"ENTER THE LICENSE NUMBER OF THE VEHICLE."

Programming Criteria: The inspector will be prompted to enter the license number of the vehicle.

Error Message: THIS FIELD MUST BE ENTERED TO CONTINUE.

Associated System File: VEHICLE.DAT LICENSE_NUM

3.5.6 Texas Information Management System :

The analyzer shall contact the Texas Information Management System , retrieve all applicable vehicle information, and enter the information into the appropriate fields.

3.5.7 Display/Select Pass Records

Programming Criteria: The system will then display vehicle information for verification by the inspector.

3.5.8 Reprint Prompt: "DO YOU WANT TO REPRINT THIS VIR?" (Y OR N)

Programming Criteria: The system shall only accept an entry of 'Y' or 'N.' If the inspector selects 'N', the system shall return to the Main Menu.

Error Message: INVALID ENTRY--TRY AGAIN

3.5.9 Print Vehicle Inspection Report:

After the system has displayed the vehicle information and the inspector has confirmed that the vehicle information is correct, the following prompt shall be displayed. **"READY TO REPRINT VEHICLE INSPECTION REPORT? ENTER "Y" FOR YES OR "N" FOR NO."**

The system will print the original date of the initial test on the reprint vehicle inspection report. The system will print the VIR based on the data contained in the test record received from the Texas Information Management System (VID). The system shall print 'Local Reprint' on the line for station address. The system shall print 'N/A' on the lines for station city and station zip code.

When the analyzer has completed printing the reprinted VIR, and the inspector chooses not to print additional copies, the analyzer shall return to the Main Menu.

3.6 Main Menu Selection '6' "Vehicle Diagnosis"

Refer to owner's manual for proper use of the OBDII Scan Tool.

3.7 Main Menu Selection '7' "Training Mode"

The analyzer shall contain a feature that will allow an inspector or student to go through the complete inspection procedure without generating an official emissions inspection vehicle inspection report. This capability will be used by the auditors for evaluating inspector performances, by the

manufacturers for training purchasers of analyzers, or by analyzer owners to train new employees. The training mode selection shall not require the users access code or allow access to secured areas of hardware or software. The display shall show a message throughout the inspection that this is a training exercise and not an official inspection. Vehicle inspection reports shall indicate to the satisfaction of the TCEQ that they are for training only.

3.8 Main Menu Selection '8' "Analyzer Maintenance"

Upon selection of this menu, the analyzer shall display the following list for the inspector:

- 4. Status Screen

 - 5. Gas Cap Integrity Tester Calibration

 - 99. Return to Main Menu
-

3.8.1 Status Screen

When the Auditor has selected 4, the analyzer shall display the Status Screen. The analyzer shall use information stored in the CAL.DAT file and other sources to generate the Status Screen.

Station Number

Analyzer Number

Remaining space will store approximately ___ test records (the analyzer should fill in the blank with a number.)

Date analyzer was last serviced

Current date and time

Software Version Number

The system shall post a recurring warning when sufficient space remains to store 200 records.

3.8.2 Gas Cap Integrity Tester Calibration

When the inspector has selected five (5), the analyzer shall initiate a gas cap tester calibration sequence.

1. Selection of this item shall bring up a set of gas cap tester calibration procedures. The procedures shall be user friendly and shall indicate every step needed to properly perform the gas cap tester calibration (including when it is necessary to identify which the reference cap is being attached, and when to switch reference caps). TCEQ/DPS reserves the right to approve the procedures. Results of the gas cap tester calibration shall be displayed to the screen and recorded on the CAL.DAT. The affected fields are CAL_DATE, CAL_TIME, and GAS_CAP_CHECK_RSLT. The results shall be automatically written to CAL.DAT file. If the analyzer fails the gas cap tester calibration, a message shall be displayed indicating that it failed and instructing the inspector to call for repairs.
2. When the gas cap calibration is completed, the analyzer shall return to the Main Menu.

3.9 Main Menu Selection '9' "Audit Menu"

The information (e.g., test data files) from the analyzer in the station should be accessible to an auditor from a host computer for the purposes of conducting an audit. The auditor shall be able to conduct audit functions from the host as if he/she were in the station, with the exceptions of gas calibrations and leak checks. If an audit is conducted on-site, the auditor should encounter the following prompts.

If the Audit Menu (9) is selected from the Main Menu:

TCEQ/DPS Access Code Prompt: ENTER TCEQ/DPS ACCESS CODE

Programming Criteria:

The system will prompt the auditor to enter the TCEQ/DPS Access Code. The ACCESS CODE shall be changed by algorithm provided by the TCEQ/DPS on the first day of every month. The analyzer shall check the entered code against the TCEQ/DPS Access Code field of the STATION.DAT file.

If an invalid Access Code is entered, the system will write a record to the AUDITLOG.DAT file containing the date, time and "U" for unauthorized login attempt. The record should be written when the 'enter/continue' key is pressed after the access code is entered. The system shall then return to Main Menu.

If the Access Code is valid, the system will write a record to the AUDITLOG.DAT file containing the date, time and "A" for the authorized login attempt. The record should be written when the 'enter/continue' key is pressed after the access code is entered. If the Auditor selects the inspection log search under Section 3.9.13, the record for the successful log on shall be appended with a 'Y' in the SEARCH field, and the time of the search in the TIME field when the Auditor presses 'continue/enter.' Otherwise, leave these fields blank.

Upon successful validation of the TCEQ/DPS access Code, the auditor shall be prompted to enter his 6-digit employee identification number. This is a required entry. The 6-digit employee identification number enter by the auditor must be compared to the DPS_ID field of the AUDITOR.DAT file. If the 6-digit employee identification number does not match a value in the AUDITOR.DAT file, the system shall place a 'U' in the BAD_DPS_ID field of the AUDITLOG.DAT file. If the 6-digit employee identification number does match a value in the auditor.dat file, the system shall place an 'A' in the BAD_DPS_ID field of the AUDITLOG.DAT file and display the Audit Menu. The system shall report this number to complete the Inspection log (VI-8B). Then, the Audit Menu will be displayed as follows:

1. Station Evaluation Report
2. Station Performance Report
3. Inspector Evaluation Report
4. Gas Cap Integrity Calibration Tester
5. Gas Audit (N/A for OBD analyzers)
6. Update Station and Inspector Information (Reset PIN)
7. Install New Data Disk
8. Reset Date, Time and Telephone Numbers
9. Analyzer Lockout/Station Lockout
10. Software Updates
11. Practical Test
12. Auditor's Notes
13. Search and Retrieve Test Records

14. Analyzer Tampering/Access Report
15. History Report
16. System Settings
17. Reprint VIR
18. Communications Refresh
19. Copy/Download Test Records
20. Missing, or Voided Certificates Function
21. Certificate Correction/Replacement Function
22. Status Screen
99. Return to Main Menu

The analyzer shall store the entry and exit time of each time a selection is made from the the Audit Main Menu. These entries shall be stored in the AUDTMENU.DAT file and transmitted to the VID via the Texas Information Management System . Submenu selections will not be collected.

The auditor shall have the option of printing all reports and items displayed on the Audit Menu Options to the printer. The system will make provisions for the date and signature of the station manager and the I/M auditor at the end of every report. Upon exiting the State Menu, the analyzer shall store the changes made by the Auditor in the appropriate file structure. When the analyzer conducts and completes an emissions test, the state information and auditor changes shall be transmitted to the Texas Information Management System along with the vehicle inspection information.

When the auditor selects Audit Menu Option (1), the station evaluation report shall be initiated.

The Station evaluation report shall be generated by the analyzer from the information stored in the hard disk. The auditor shall have the ability to select the time interval over which the analyzer will calculate for the evaluations. The time interval for calculation will be 30 days, 60 days, and 90 days. Upon the request of the auditor, the system shall be designed to display all three time interval calculations for comparison. In addition, the auditor will be able to request an “ad hoc” report starting on a specific date and ending on a specific date. The analyzer shall complete the following fields automatically: station number, today's date, and the time the report was activated.

When the auditor selects this Audit Menu Option (1), the system shall display a screen which lists

the Station Evaluation Report Menu as the Header and lists the following choices: Comparison Report, Multi-day Report, 30 Day Report, 60 Day Report, 90 Day Report. The inspector shall be able to use the arrow keys to highlight the appropriate choice and press “continue/enter” to select the desired report.

The Multi-day Report shall have a date entry screen that allows the auditor to enter the specific starting and ending dates. The date entry screen shall require the auditor to only enter number characters. The blank date entry shall look like:

Starting Date: __/__/____

Ending Date: __/__/____

The auditor shall not be required to enter the separation slashes. The format of the date shall be MMDDYYYY. If the auditor elects to print the report, the system shall print the reports as shown below. The header shall contain a title which indicates the type of report (i.e., 30 day, 60 day, Multi-day, etc.) on the first line. The header shall also contain the date and time of the report, the station name, station number, and analyzer number. The column headings, at a minimum, shall be underlined. A border is not required.

Station Evaluation Report Sample:

60 DAY REPORT			
STATION NAME & NUMBER			
DATE/TIME			
ANALYZER NUMBER			
DESCRIPTION	INITIAL	REINSPECTION	TOTAL
Total Inspections			
Total OBD Inspections			
Total Safety Only Inspections			
Initial Repair Safety (R in Safety Item)			
Fail Emission			
Fail Gas Cap			
Fail Safety			
% Fail Emission			
Abort Sequence (No Test)			
Abort Sequence (Failure)			
Abort Sequence (Referral)			
Bypass Gas Cap			
Heavy Duty Emissions Inspections			

Total Inspections are where TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null.

Total Initial Inspections are where TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null and SAFE_INIT_TEST = I

Total Reinspection Inspections are where TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null and SAFE_INIT_TEST = R

Total OBD Inspections are where TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1

Total OBD Initial Inspections are where TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1 and SAFE_INIT_TEST = I

Total OBD Reinspections Inspections are where TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1 and SAFE_INIT_TEST = R

Total Safety Only Inspections are where TEST_TYPE = H, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE is null

Total Safety Only Initial Inspections are where TEST_TYPE = H, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE is null and SAFE_INIT_TEST = I

Total Safety Only Reinspections Inspections are where TEST_TYPE = H, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE is null and SAFE_INIT_TEST = R

Total Repair Safety Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFE_1 through SAFE_30 or SAFE_33 through SAFE_36 = B, D, G, I, K, M, Q, T, V, X, Z is null.

Total Repair Safety Initial Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFE_1 through SAFE_30 or SAFE_33 through SAFE_36 = B, D, G, I, K, M, Q, T, V, X, Z, and SAFE_INIT_TEST = I

Total Repair Safety Reinspections Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFE_1 through SAFE_30 or SAFE_33 through SAFE_36 = B, D, G, I, K, M, Q, T, V, X, Z, and SAFE_INIT_TEST = R

Total Fail Emissions Inspections are where ABORT is null and TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P

Total Fail Emissions Initial Inspections are where ABORT is null and TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P, and SAFE_INIT_TEST = I

Total Fail Emissions Reinspection Inspections are where ABORT is null and TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P, and SAFE_INIT_TEST = R

Total Fail Gas Cap Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null and GAS_CAP_PF_FLAG = F

Total Fail Gas Cap Initial Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null and GAS_CAP_PF_FLAG = F, and SAFE_INIT_TEST = I

Total Fail Gas Cap Reinspections Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, B, and OVERALL_RESULTS is not null and GAS_CAP_PF_FLAG = F, and SAFE_INIT_TEST = R

Total Fail Safety Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFETY_PF_FLAG = F

Total Fail Safety Initial Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFETY_PF_FLAG = F, and SAFE_INIT_TEST = I

Total Fail Safety Reinspections Inspections are where ABORT is null and TEST_TYPE = A, H, and OVERALL_RESULTS is not null and SAFETY_PF_FLAG = F, and SAFE_INIT_TEST = R

Total % Fail Emissions Inspections is a count of the Total Fail Emissions Inspections (i.e., where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P) divided by the count of Total Inspections (i.e., where TEST_TYPE = A, O, I, B, and OVERALL_RESULTS is not null.)

Total % Fail Emissions Initial Inspections is a count of the Total Fail Emissions Initial Inspections (i.e., where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P, and SAFE_INIT_TEST = I) divided by the count of Total Initial Inspections (i.e., where TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and SAFE_INIT_TEST = I).

Total % Fail Emissions Reinspections Inspections is a count of the Total Fail Emissions Reinspection Inspections (i.e., where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_PF_FLAG <> P, and SAFE_INIT_TEST = R) divided by the count of Total Reinspection Inspections (i.e., where TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and SAFE_INIT_TEST = R).

Total Abort Sequence (No Test) Inspections are where ABORT = 'A', and ABORT CODE = '05,' '06,' '07,' '09,' '99,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null.

Total Abort Sequence (No Test) Initial Inspections are where ABORT = 'A', and ABORT CODE = '05,' '06,' '07,' '09,' '99,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null and SAFE_INIT_TEST = I

Total Abort Sequence (No Test) Reinspection Inspections are where ABORT = 'A', and ABORT CODE = '05,' '06,' '07,' '09,' '99,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null and SAFE_INIT_TEST = R

Total Abort Sequence (Failure) Inspections are where ABORT = 'A', and ABORT CODE = '01,' '02,' '03,' '04,' '08,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS = F.

Total Abort Sequence (Failure) Initial Inspections are where ABORT = 'A', and ABORT CODE = '01,' '02,' '03,' '04,' '08,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS = F and SAFE_INIT_TEST = I

Total Abort Sequence (Failure) Reinspection Inspections are where ABORT = 'A', and ABORT CODE = '01,' '02,' '03,' '04,' '08,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS = F and SAFE_INIT_TEST = R

Total Abort Sequence (Referral) Inspections are where ABORT = 'A', and ABORT CODE = '81,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null.

Total Abort Sequence (Referral) Initial Inspections are where ABORT = 'A', and ABORT CODE = '81,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null and SAFE_INIT_TEST = I

Total Abort Sequence (Referral) Reinspection Inspections are where ABORT = 'A', and ABORT CODE = '81,' and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is null and SAFE_INIT_TEST = R

Total Bypass Gas Cap Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, or B, and OVERALL_RESULTS is not null and GAS_CAP_MISS = N and GAS_CAP_TESTABLE = N

Total Bypass Gas Cap Initial Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, or B, and OVERALL_RESULTS is not null and GAS_CAP_MISS = N and GAS_CAP_TESTABLE = N and SAFE_INIT_TEST = I

Total Bypass Gas Cap Reinspection Inspections are where ABORT is null and TEST_TYPE = A, H, O, I, or B, and OVERALL_RESULTS is not null and GAS_CAP_MISS = N and GAS_CAP_TESTABLE = N and SAFE_INIT_TEST = R

Total Heavy Duty Emissions Inspections are where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1 and GVW_ACTUAL > 8500

Total Heavy Duty Emissions Initial Inspections are where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1 and GVW_ACTUAL > 8500 and SAFE_INIT_TEST = I

Total Heavy Duty Emissions Reinspection Inspections are where ABORT is null and TEST_TYPE = A, O, I, or B, and OVERALL_RESULTS is not null and EMISS_TEST_TYPE = 1 and GVW_ACTUAL > 8500 and SAFE_INIT_TEST = R

3.9.2 Audit Menu Selection '2' "Station Performance Report"

Audit Menu Selection "2," "STATION PERFORMANCE REPORT." The Station Performance Report sequence shall be initiated by the selection of "2" from the Audit Menu. The analyzer shall display the following four choices, and allow the auditor to use the arrow keys to highlight the appropriate choice and press "continue/enter" to select the type of

station contact:

1. Compliance Audit
2. Administrative Contact
3. Investigation
4. Certification Contact

The analyzer shall display the Station Performance Report to the screen. The type of station contact shall appear as a subheading or hyphenated heading when the Station Performance Report is displayed to the screen. The analyzer shall complete the following fields automatically: Station Name, Station Number, Analyzer Number, today's date, the date of the last report. The analyzer shall display the most recent auditor's notes entry, and allow the auditor to review and edit previous entries and create a new entry in the Auditor's notes window. The analyzer shall allow for auditor entry of "P" (pass) or "F" (fail) for each item on the station equipment checklist. The analyzer shall allow for auditor entry of "Y" (yes) or "N" (no) for each item on the Audit Procedures Checklist. The analyzer shall allow for free-form auditor's notes to be entered and reviewed.

The analyzer shall allow the free-form entry of at least 5 violation codes, corrective action codes, and ticket numbers, if issued. At the completion of the entries for the Audit Procedures Checklist, the analyzer shall display the following prompt: Do you wish to enter any Deficiency Information? (Yes or No). The default for this prompt shall be No. If no is selected, the analyzer shall display the report to the screen to allow the auditor to confirm that the entries are correct. The auditor shall be required to press the "continue/enter" to confirm the entries are correct. The analyzer shall prompt the auditor to highlight and select the number of copies to be printed "1," "2," or "3." If yes is selected, the analyzer shall prompt the auditor to enter the Violation Code.

If no code has been entered and the auditor pressed continue, the analyzer shall display a prompt asking the auditor to select one of the following actions: 1) Return to the Violation Code Entry Screen, 2) Violation Code Entry Completed, 3) Skip the Deficiency Information - Go to Confirmation Screen. The second action can only be displayed, when at least one deficiency code has been properly entered. The analyzer will go to the Action Code Entry Prompt. The analyzer will go back to the Violation Code Entry screen, if the auditor selects the first action. The analyzer shall go to the confirm screen if the last action is selected by the auditor.

If the entered code does not match a code contained in the DefLK.dat file, the analyzer shall

display an error message indicating that the code is not acceptable and to try again. The analyzer shall display the list of codes in numerical order when the auditor presses the “F5” function key, display the list of codes in alphabetical order when the auditor presses the “F6” function key, or display the list of top 20 most used codes contained in the DefLK20.dat file. No matter what list is displayed, the analyzer shall allow the inspector to use the arrow keys to highlight the different choices, and use the “continue/enter” key to select the appropriate code.

Once the code is selected, the analyzer shall return to the prompt requesting the Auditor to enter the Violation Code. The 40 most used violation codes will be contained in the DEFLK.DAT file, which will be received by the analyzer via the Texas Information Management System . The format of the violation codes is alphanumeric of length 5.

The analyzer shall prompt the inspector to enter the Action Codes. The analyzer shall allow the inspector to highlight and select from the following list of action codes:

ENTER THE ACTION CODES: _ _

- ‘C’ - Citation Issued,
- ‘W’ - Warning Issued,
- ‘S’ - Suspension Recommended, and
- ‘R’ - Revocation Recommended.

The analyzer shall allow the auditor to enter the action codes by pressing the letters on the keyboard that correspond to the action codes listed above. If the inspector uses the arrow keys, and presses ‘continue/enter’ to select, the corresponding letter shall appear in the space provided. At least one entry must be made. If the auditor presses ‘continue/enter’ after the first successful entry is made, the analyzer shall display a confirmation screen which lists the entered action codes, as well as two action choices: 1) continue, 2) go back to make changes. The default shall be to continue. When the auditor selects ‘continue,’ the analyzer shall proceed to the Ticket Number prompt. Action codes are alphanumeric of length 2, and have expected values of ‘C’ - for Citation Issued, ‘W’ for Warning Issued, ‘S’ for Suspension Recommended, and ‘R’ for Revocation Recommended.

The analyzer shall prompt the auditor to enter the Ticket Number.

ENTER THE TICKER NUMBER: _____

Press 'continue/enter' when done entering the ticket number.

The analyzer shall allow the free form entry of fourteen alphanumeric characters. The analyzer shall require the auditor to press 'continue/enter' when the entry of the ticket number is complete. When the auditor presses 'continue/enter' the analyzer shall display the entered number and two action choices: 1) continue, 2) go back to make changes. The default shall be to continue. When the auditor selects 'continue,' the analyzer shall display the completed report and prepare to print the necessary number of copies. The format of the ticket numbers is alphanumeric of length 14.

The report generated from this selection will be stored in the PERFORM.DAT. This is both a hard disk and floppy-based file accessed through the audit screen.

The Station Performance Report shall contain the following items:

- A. Station Name
- B. Station Number
- C. Analyzer Number
- D. Today's Date
- E. Date of the last Station Performance Report
- F. The Station Equipment Checklist
- G. The Audit Procedures Checklist
- H. The Auditor's Notes

Station Equipment: Entry of "P" or "F" required.

- 1. Station Sign
- 2. Certificate of Appointment
- 3. Display Board
- 4. Flex Probes (N/A for OBDII only Tests)
- 5. Approved Bar 90 Gases (N/A for OBDII only Tests)

6. Rules and Regulations Manual
7. Brake Test Area
8. Required Equipment (Laundry Marking Pen, Scraping Device, Tread Depth Gauge, Measuring Devices, ¼" Round-Hole Punch)
9. Tachometer Lead
10. Gas Cap Tester
11. Inspector on Duty
12. Inspection Bay
13. Approved Window Tint meter
14. Analyzer, Printer & Supplies
15. Overall Result

Audit Procedures: Entry of "Y" or "N" required

1. New data disk
2. Reset tamper
3. Software updates
4. Station lockout
5. Inspector lockout
6. Letter delivered
7. Technical Bulletins

Deficiencies: No entries required

1. Violation Code
2. Action Taken
3. Ticket #

Station Performance Report - Compliance Audit

Station Name (e.g., FRIDAYS AUTOMOTIVE)

Today's Date (e.g., 01/12/2000)

Station Number, Analyzer Number				1P10753, TX123654		
Last Station Performance Report /				09/21/1999,		
Last Leak Check				12/20/1999		
Station Equipment		Pass	Fail	Audit Procedures		
1. Station Sign 2. Certificate of Appointment 3. Display Board 4. Flex Probes 5. Approved Bar 90 Gases(N/A) 6. Rules and Regulations Manual 7. Brake Test Area 8. Required Equipment (Laundry Marking Pen, Scraping Device, Tread Depth Gauge, Measuring Devices, ¼" Round-Hole Punch) 9. Tachometer Lead 10. Fuel Cap Tester 11. Inspector on Duty 12. Inspection Bay 13. Approved Window Tint meter 14. Analyzer, Printer & Supplies 15. Overall Result				1. New data disk 2. Reset tamper 3. Software updates 4. Station lockout 5. Inspector lockout 6. Letter delivered 7. Technical Bulletins		
Auditor Notes						
01/12/2000		CA Cksheet - OK, Tint Meter - OK, Gas Cap Tester - OK, Analyzer Audit - Pass 1/2				
Deficiencies						
Violation Code (5 Digits)					Action Taken	Ticket #

Station Manager: _____

Date: _____

DPS Auditor: _____ Date: _____

3.9.3 Audit Menu Selection '3' "Inspector Evaluation Report"

When the auditor selects "3" from the Audit Menu, the analyzer will display:

1. Inspector Evaluation Report
2. Multiple Repairs

5. After Hours Test

The system will display inspector number and name.

The analyzer shall complete the following fields automatically: today's date, the time the report was activated.

Inspector Evaluation Report Sample:

60 DAY REPORT			
INSPECTOR NAME & NUMBER			
DATE/TIME			
ANALYZER NUMBER			
DESCRIPTION	INITIAL	REINSPECTION	TOTAL
Total Inspections			
Total OBD Inspections			
Total Safety Only Inspections			
Initial Repair Safety (R in Safety Item)			
Fail Emission			
Fail Gas Cap			
Fail Safety			
% Fail Emission			
Abort Sequence (No Test)			
Abort Sequence (Failure)			
Abort Sequence (Referral)			
Bypass Gas Cap			
Heavy Duty Emissions Inspections			

Selection Option 2 displays a prompt which asks if the auditor wants to see all the inspectors/repair technicians, or an individual inspector/repair technician. After the auditor

makes this selection a screen showing the number of vehicles with retests and the number and percent of those which have more than one retest.

If the auditor selects all, the statistics are displayed for the station as a whole and for each individual inspector.

The vehicles retested by an inspector can be called from this screen and vehicle data on repairs, emissions levels and time of test can be compared.

Selection Option 5 "After Hours Test" displays any tests that have been conducted outside of normal business hours. The auditor will be prompted to enter these hours.

3.9.4 Audit Menu Selection '4' "Gas Cap Integrity Tester Calibration"

The Analyzer Maintenance Menu shall be activated by an entry of four (4) from the Audit Menu. This will present a set of maintenance functions that may be performed by the auditor. Upon selection of the Analyzer Maintenance the analyzer will display the following options:

- 5) Gas Cap Integrity Tester Calibration
- 99) Return to Audit Menu

- A. If the analyzer is not fully automatic, the final results of the daily gas cap tester calibration shall be entered by the inspector and recorded to the CAL.DAT file.

This option shall be available if the Gas Cap Integrity Tester is fully automatic. When the inspector has selected five (5), the analyzer shall initiate a gas cap tester calibration sequence.

- 1. Selection of this item shall bring up a set of gas cap tester calibration procedures. The procedures shall be user friendly and shall indicate every step needed to properly perform the gas cap tester calibration (including when it is necessary to identify which the reference cap is being attached, and when to switch reference caps). TCEQ/DPS reserves the right to approve the procedures. Results of the gas cap tester calibration shall be displayed to the screen and recorded on the CAL.DAT. The affected fields are CAL_DATE, CAL_TIME, and GAS_CAP_CHECK_RSLT. The final results shall be entered by the inspector and recorded to the CAL.DAT file, if the analyzer is not fully automatic. The

results shall be automatically written to CAL.DAT file, if the tester is fully automated. If the analyzer fails the gas cap tester calibration, a message shall be displayed indicating that it failed and instructing the inspector to call for repairs.

2. When the gas cap calibration is completed, the analyzer shall return to the Audit Menu.

3.9.6 Audit Menu Selection '6' "Update Station and Inspector Information"

The update Station and Inspector Information sequences shall be initiated when six (6) is selected from the Audit Menu.

- A. The analyzer shall display the contents of the inspector file. The INSPECTR.DAT file shall contain the information for up to 100 inspectors.
- B. Access codes shall be displayed as Xs. The access codes may be displayed only while holding down a key specified by the manufacturer. Changing the access codes shall be accomplished by receiving inspector information during a successful communications refresh.
- C. Entries which are to be removed from the file will be done via successful communications refresh.
- D. Hold down the (specified key) key to display the access codes.

STATION.DAT
 Station Number: ____ char(7)
 Station Name: _____ char(25)
 Station Street Address: _____ char(20)
 City: _____ char(13) Zip: _____ num(10)
 Analyzer Number: ____ num(7) - ____ (extension, where applicable)
 Station Exp Date _____ num(6)(display format: MM/DD/YY)
 Station Lockout _____ char(1)
 Hours of Operation (M-F): Open ____ num(4) Close: ____ num(4)
 Hours of Operation (Sat.): Open ____ num(4) Close: ____ num(4)
 Hours of Operation (Sun.): Open ____ num(4) Close: ____ num(4)
 (display format for Hours is HH:MM)
 Mailing Street Address: _____ char(20)
 City: _____ char(13) Zip: _____ num(10)
 Email address: _____ char(50)

INSPECTR.DAT					
Inspector Last Name	Inspector First Name	Access Code	Inspector Number	Expiration Date	Lockout Flag
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

- D. The changes entered by the auditor shall be recorded to STATION.DAT file.
- E. System setting shall include the screen prompts that allow the TCEQ/DPS Representative to enter or edit all the information in the STATION.DAT file.
- F. If the auditor chooses to lockout an inspector, the analyzer shall allow the auditor to select the affected inspector from the displayed list, enter the lockout status ('Y' or 'N').
- G. The analyzer system shall a method of encryption so that the stored PIN number cannot be read as text or printed. The encryption method will be left to manufacturers' discretion and must be demonstrated during certification.

3.9.7 Audit Menu Selection '7' "Install New Data Disk"

The Install New Data Disk sequence shall be initiated when seven (7) is selected from the Audit Menu.

- A. The analyzer shall display instructions, on a single screen, for changing the floppy diskette. This procedure shall properly format the new diskette. The instructions must be approved by the TCEQ.

- B. When the change is complete and the analyzer security devices (doors, etc.) are secure, the analyzer shall return to the Audit Menu.

3.9.8 Audit Menu Selection '8' "Reset Date, and Time"

The reset date, and time sequence shall be initiated when eight (8) is selected from the Audit Menu.

The analyzer shall display the date, and time update screen. The time, and date can be updated by the I/M auditors when required. The analyzer shall automatically switch to daylight savings time and back to central standard time, when applicable. The analyzer date and time shall be updated when the analyzer contacts the Texas Information Management System. Upon a successful update, the analyzer shall return to the Audit Menu.

3.9.9 Audit Menu Selection '9' "Analyzer/Station Lockout"

The lockout sequence shall be initiated when "9" is selected from the Audit Menu. The analyzer manufacturer shall devise a method to allow the inspection operation (Main Menu option 1, 2, 3, and 4) to be disabled and still allow all other options to work normally. Software shall allow the auditor to set the analyzer/station lockouts listed below in items 1, 6, and 7, and clear the lockouts in items 1, 2, 3, 5, 6, 7, 8, or 9 with the understanding that these lockout could be reset during a communications session with the Texas Information Management System. Software shall allow the Texas Information Management System to set the lockouts in items 1, 4, 6, 7, 8, and 9 and clear the lockouts in items 1, 4-9. Software shall allow the manufacturer's service technician to clear items 2, or 3. The analyzer may display the station name, station number and the analyzer number on this screen.

Lockout Status Screen

- 1. State Lockout
- 5. Station Certification Expired

- | | |
|--|------------------------------------|
| 2. Cabinet Tamper | 6. Station Certification Suspended |
| 3. Floppy Tamper | 7. Station Certification Revoked |
| 4. Communications Failure to Pay | 8. Maximum Tests w/o Comm. |
| 9. Maximum OBDII Tests (LOW_VOL_STATION) | |

No Contact Limit: XXX

Number of Test w/o Communications: XXX

The analyzer shall also display an appropriate error messages in the event of an error or a failure of the following components: Floppy Disk Failure, Analyzer Tamper, Hard Disk Failure, Analyzer Failure, Internal, and Clock Failure.

3.9.10 Audit Menu Selection '10' "Software Update"

The analyzer shall perform a software update when "10" is selected from the Audit Menu.

- A. When emergency software updates are required between annual software updates, the manufacturer is responsible for developing the update and provide the update to the TCEQ/DPS on a three and one-half inch (3-1/2") floppy diskette, or equivalent storage media (i.e., CD, etc.). The TCEQ/DPS may install the update, but reserves the right to have it done by the manufacturer. If the TCEQ/DPS performs the update, multiple copies may be required.
- B. The update shall be made as simple as possible for the auditor by using display driven instructions, batch files, etc.
- C. Software Updates will cause the software version number to change.
- D. When the update is complete, the analyzer will automatically reboot and return to Main Menu.

3.9.11 Audit Menu Selection '11' "Practical Test"

This item is optional, if the Training Mode can be operated from the Main Menu.

2 - TEST TYPE

If the auditor selects 1, the analyzer shall search the VEHICLE.DAT file for test records based on the knowledge of the inspector's identification number, the vehicle license number, VIN, date/time, approximate week ending or certificate number issued to the vehicle. The analyzer shall be able to locate, display, and print out the test record(s). The information shall be displayed in the format outlined in Appendix G for the Inspection Log (VI-8B), inclusive of the 'audited by' line, where applicable. The auditor shall be given the option of printing the results of the search on the printer. The auditor shall press a key designated by the manufacturer to return to the Audit Menu.

If the auditor selects 2, the analyzer shall provide the following prompt:

ENTER THE SAFETY INSPECTION TYPE

**L-1 YEAR WINDSHIELD - OBD
(SAFETY & EMISSIONS)**

B-2 YEAR WINDSHIELD

C-TRAILER/MOTORCYCLE

K-FMCSR (TRAILER)

**J-1 YEAR WINDSHIELD
(SAFETY ONLY)**

H-EMISSIONS DECAL

G-FMCSR (TRUCK)

Once the auditor has selected, the analyzer shall prompt the auditor for the search one or more of the following search criteria: Vehicle license number, VIN, Inspector Identification Number, date/time, or certificate number. The analyzer shall search the VEHICLE.DAT file for test records that match the search criteria. The items shall be displayed in the format displayed in Appendix G, inclusive of the 'audited by' line, where applicable. The items shall be listed in sequential order according to certificate numbers. The analyzer shall place an indicator or flag (i.e. an asterisk, question mark, etc.) beside any item whose certificate number is not next in sequence to the previous item. The auditor shall be given the option of printing the results of the search on the printer. The auditor shall press a key designated by the manufacturer to return to the Audit Menu.

3.9.14 Audit Menu Selection '14' "Analyzer Tampering/Access Report"

The system will purge this information after 12 months. This menu selection allows the auditor to review the following sample items:

1. Analyzer Tampering Lockout - the analyzer will display the tampering lockout number and give a description of the location of the tamper.

2. Clear Analyzer Tampering Lockout

3. Analyzer Service

4. Date

5. Time

3.9.15 Audit Menu Selection '15' "History Report"

This menu selection allows the auditor to review all , tamper history, , gas cap tester calibration history, stored in the hard disk for at least the past 180 days.

3.9.16 Audit Menu Selection '16' "System Settings"

When the auditor selects "16" from the Audit Menu, the analyzer will display:

Type Station: _____

County Setting: _____

Station Volume: _____

Settings Prompt: ENTER THE SETTING YOU WISH TO CHANGE.

- 1 - Type Station
- 2 - County Code Setting

- 3 - Station Volume
- 4 - Special Testing (i.e. waiver tests, arbitration tests, etc.)
- 5 - Return to Audit Main Menu

The analyzer shall complete the display from the information contained in the STATION.DAT file. The Type Station shall display 'Public,' 'Government,' or 'Fleet.' The County Setting shall display the name of the county in which the station is to be used. The Station Volume shall display 'Low,' or 'High.' The auditor shall be able to access the type station selection by selecting '1', the county selection by entering '2', the station volume setting by entering '3,' and the special testing selection by entering '4.' The auditor shall be returned to the Audit Main Menu by entering '5', the <Esc> key, or a key designated by the manufacturer.

Type Station

The Type Station selection should access the following selections:

- 'P' - Public (Lockout until print VI-8B log weekly)
- 'F' - Fleet (Lockout until print VI-8B log weekly)
- 'G' - Government (Lockout until print VI-8B log weekly)

After the Auditor has selected the Type Station, the analyzer shall automatically return to the System Settings Display Screen/Menu.

County Code Setting

The County Code Setting selection shall give the following prompt and access the selections:

County Code Prompt: ENTER SELECT THE COUNTY WHERE THE ANALYZER WILL BE USED.

- | | | |
|----------------------|------------------------|----------------------|
| Dallas - 057 | Denton - 061 | Parker - 184 |
| El Paso - 071 | Fort Bend - 079 | Johnson - 126 |
| Harris - 101 | Galveston - 084 | Ellis - 070 |

Collin - 043	Brazoria - 020	Kaufman - 129
Liberty - 146	Chambers - 036	Rockwall - 199
Tarrant - 220	Montgomery - 170	Bexar - 015
Waller - 237	Travis - 227	Comal - 046
Hays - 105	Williamson - 246	Bastrop - 011
Wilson - 247	Guadalupe - 094	Smith - 213
Nueces - 178	San Patricio - 205	Kleberg - 137
Milam - 166	Lee - 144	Bastrop - 011
Burnet - 027	Blanco - 016	Bell - 014
Other - 999	Out of State or Federal - 000	

The analyzer shall provide the list of counties shown above, excluding the codes. The auditor shall be able to select the appropriate county by using the arrows keys. The auditor shall highlight the appropriate county, and press the 'enter/continue' key to confirm his selection. The analyzer shall convert the selection to the corresponding three digit code shown above and store the code in the COUNTY_CODE field in the STATION.DAT file. The analyzer shall be designed to have the county code set by the Texas Information Management System. The county selection shall correspond to the county in which the analyzer is to be used. After the auditor has selected the County Code, the analyzer shall automatically return to the System Settings Display Screen/Menu.

Station Volume Setting

The Station Volume Setting selection shall give the following prompt:

Station Volume Setting: ENTER THE STATION VOLUME DESIGNATION

- 1 - HIGH VOLUME**
- 2 - LOW VOLUME**

The analyzer shall allow the auditor to select the station designation as a High Volume station, or a Low Volume station. After the auditor has selected the Station Volume, the analyzer shall automatically return to the System Settings Display Screen/Menu.

Special Testing

When the auditor selects "4" from the Setting Prompt, the analyzer will display:

Special Testing Prompt: SELECT THE TYPE OF TEST TO BE CONDUCTED FROM THE LIST BELOW.

1. LOW INCOME TIME EXTENSION (LI)
2. WAIVER - LOW MILEAGE (LM)
3. WAIVER - INDIVIDUAL VEHICLE (IV)
4. ARBITRATION/DISPUTE TEST (AD)
5. ACCELERATED VEHICLE RETIREMENT TEST (ST)
6. PARTS AVAILABILITY TIME EXTENSION (PA)
7. OTHER (OT)

The analyzer shall provide the list of tests shown above. The auditor shall be able to select the appropriate test by using the arrows keys or by entering the number associated with each test. The auditor shall highlight the appropriate test and press the 'enter/continue' key to confirm his selection. If the auditor selects 1, the analyzer shall set the SPECIAL_TEST field to 'L.' If the auditor selects 2, the analyzer shall set the SPECIAL_TEST field to 'P.' If the auditor selects 3, the analyzer shall set the SPECIAL_TEST field to 'J' for the next emissions test. If the auditor selects 4, the analyzer shall set the SPECIAL_TEST field to 'E' for the next emissions test. If the auditor selects 5, the analyzer shall set the SPECIAL_TEST field to 'D' for the next emissions test. If the auditor selects 6, the analyzer shall set the SPECIAL_TEST field to 'M' for the next emissions test. If the auditor selects 7, the analyzer shall set the SPECIAL_TEST field to 'N' for the next emissions test.

The analyzer shall record the results of the test and allow the inspector to enter the certificate number issued to the vehicle, regardless of the actual pass or fail result. The auditor shall be able to return to the Audit Main Menu by pressing the <Esc> key or a key determined by the manufacturer.

After the auditor has selected confirmed his selection, the analyzer shall prompt the Auditor:

**THE (TEST NAME) HAS BEEN SELECTED. PRESS 'ENTER/CONTINUE'
TO CONFIRM. PRESS ANY OTHER KEY TO CHANGE YOUR SELECTION.**

If the auditor does not press 'enter/continue', the analyzer shall return to the Special Testing Prompt/Screen. If the auditor presses 'enter/continue', the analyzer shall return to a **special menu** to allow the inspector to conduct the applicable emissions **reinspection** test.

The **special menu** shall consist of the following two selections:

- 1) Safety and Emissions Inspection (Main Menu selection 1), or
- 2) Emissions Only Inspection (Main Menu selection 3).

If the customer is in the rotation for a free reinspection (i.e., paid for the previous inspection), the analyzer shall recognize this situation and use the menu selections from Section 3.4 Reinspection (Main Menu selection 4). The analyzer shall look for the information needed to make the determination from two sources:

- 1) data transmitted by the Texas Information Management System, or
- 2) data contained in the analyzer.

Only one **reinspection** test can be administered when a special test type is selected from this menu. After the reinspection is conducted and a complete test record is written, the analyzer shall return to standard operation.

The analyzer shall not print a rejection receipt for any of the special tests regardless of the actual outcome of the inspection. The analyzer shall print a vehicle inspection report (VIR) for all special tests regardless of the actual outcome of the inspection. The analyzer shall place a two digit code next to the test type to indicate the type of special test being conducted. The two digit codes are in parenthesis next to the list of special tests.

For **all** special tests, the analyzer shall provide the inspector with the option of entering a safety certificate/decals number regardless of the actual outcome of the inspection. When the vehicle fails the test, and the inspector is prompted to enter the safety certificate/decals number, a warning message shall be displayed instructing the inspector to leave this screen blank if a safety certificate or decal will not be issued to the vehicle. If a safety certificate or

decal is issued, the analyzer shall then, prompt the auditor to enter the waiver number for all special tests, except the arbitration/dispute test, selection number 4. The waiver number is an alphanumeric entry of length seven (7). The analyzer shall make the auditor enter a minimum of 4 characters, press enter, and reconfirm the entry before proceeding to the next screen (VI-30 A Prompt).

3.9.17 Audit Menu Selection '17' "Reprint VIR"

The analyzer shall conduct a reprint the a VIR from a test record. The screen prompts shall be identical to Section 3.5, beginning with the Display Records prompts, Section 3.5.7. The search shall not be limited to passing records. The analyzer shall search for all records that match the criteria whether the vehicle passed or failed. .

3.9.18 Audit Menu Selection '18' "Communications Refresh"

The analyzer shall conduct a Communications Refresh as described in Main Menu Selection, in Section 3.15. The communications refresh shall not require the entry of an access code..

3.9.19 Audit Menu Selection '19' "Copy/Download Test Records"

The analyzer shall provide a State menu item that allows an auditor to copy the VEHICLE.DAT, VEHICLE.HST, AUDITLOG.DAT, and AUDITLOG.HST from the hard disk to an auditor installed floppy disk (target disk). The analyzer shall copy the AUDITLOG.DAT file on to the target disk. The system shall prompt the auditor to enter the download date. The analyzer shall copy the test records from the hard drive to the floppy disk. The date of the test records shall begin with the download date, and copy backward from the download date (i.e., records prior to the download date). The analyzer shall copy records to the disk until there are no more records on the hard drive or the disk is full. If the disk fills up prior to the copying all the records on the hard drive, the analyzer shall display the date of the last record, and the number of records copied on to the disk. The last record date shall be displayed until the auditor presses 'continue/enter'. The analyzer shall allow the inspector to run the download procedures again. If the analyzer determines that all of the test records will fit on the floppy, the analyzer may copy the AUDITLOG.DAT file, the test records, and display one of the following:

- 1) the date of the oldest test record on the hard drive,
- 2) the 180 maximum default date,
- 3) or a message stating all test records have been copied.

The analyzer may prompt the auditor to format the target disk prior to copying the records.

The analyzer may erase or write over any preexisting information on the target disk. If it is necessary to remove the state data disk prior to copying the files, the analyzer shall provide instructions for the auditor to follow to remove the data disk and reinstall the data disk after the copy procedure is complete.

3.9.20 Audit Menu Selection '20' "Missing, or Voided Certificates"

3.9.20a Access Code Entry: ENTER YOUR INSPECTOR'S ACCESS CODE

Programming Criteria: The OBDII Only Analyzer shall be designed to automatically place the Auditor's 6-digit employee identification number in the INSPECTOR_NUM field of the test record when this function is successfully completed.

Associated System File: VEHICLE.DAT REPL_ID_NUM

3.9.20b Certificate Type Prompt: INDICATE THE TYPE OF INSPECTION CERTIFICATE(S).

L-1 YEAR WINDSHIELD - OBD (SAFETY & EMISSIONS)	J-1 YEAR WINDSHIELD (SAFETY ONLY)
B-2 YEAR WINDSHIELD	K-FMCSR (TRAILER)
C-TRAILER/MOTORCYCLE	G-FMCSR (TRUCK)
H-EMISSIONS TEST ONLY DECAL	

Programming Criteria: The system shall only accept the following entries: 'B,' 'C,' 'G,' 'H,' 'J,' 'K,' 'L,' Each entry shall be followed by hitting the "enter/continue" key. The system shall display the two previous numeric entries, and the type of certificate or decal that

needs to be accounted for. The system shall display the previous two entries, and the type of certificate or decal that caused the lockout or prevention of subsequent official inspections.

Associated System File: **VEHICLE.DAT** **SAFE_TEST_TYPE**

3.9.20c Certificate Condition Prompt:

**INDICATE THE CONDITION OF THE INSPECTION
CERTIFICATE(S).**

V - VOIDED M - MISSING

Programming Criteria: The system shall only accept the following entries: V-voided, or M - missing. Each entry shall be followed by hitting the “enter/continue” key.

Associated System File: **VEHICLE.DAT** **CERT_COND**
DECAL_COND

3.9.20d Number of Certificates Prompt: **INDICATE HOW MANY
CERTIFICATES/DECALS ARE
AFFECTED.**

1 - ONE 2 - MORE THAN ONE

Programming Criteria: If the auditor selects 1, display the next prompt. If the auditor selects 2, the system shall display prompt number 3.9.20f.

3.9.20e Certificate Number Prompt:

ENTER THE INSPECTION CERTIFICATE/DECAL NUMBER.

Programming Criteria:

A minimum of six (6) and maximum of nine (9) characters are required for this field. The system shall write a test record which shall consist of the current date in the TEST_DATE field, the 6-digit employee identification number of the auditor voiding the certificates/decals in the REPL_ID_NUM, the type of certificate in the SAFE_TEST_TYPE field, the entered certificate number in the CERT_NUM field, and the previously entered condition of the certificates (i.e., 'V'-voided, 'M'-missing) in the CERT_COND field in the VEHICLE.DAT file, or the entered decal number in the DECAL_NUM field, and the previously entered condition of the decal in the DECAL_COND field in the VEHICLE.DAT file. If the miss/void function is being conducted using the station manager menu, the entry in the REPL_ID_NUM shall be 10 9's (i.e., '9999999999'). The record shall be stored on the analyzer and transmitted to the Texas Information Management System along with the next emissions test. The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). The void indicator shall show 'VOID', if 'V' is in the CERT_COND (or DECAL_COND) field, or 'MISS', if 'M' is in the CERT_COND (or DECAL_COND) field. Then, the analyzer shall return to the Audit main menu.

The records for missing or voided certificates/decals must contain entries in the following fields, at a minimum, to be accepted as a valid test record:

VERSION		LICENSE_NUM	(Set to 'MISSVOID')
TEST_DATE	(Date of Entry)	SAFE_TEST_TYPE	
TEST_START_TIME	(Time of Entry)	TIMEOUT_FLAG	(Set to 'N')
TEST_END_TIME	(Time of Entry)	CERT_NUM	(Beginning Certificate Number)
STATION_NUM		CERT_NUM_2	(Ending Certificate Number)
STATION_NAME		CERT_COND	
ANALYZER_NUMBER		TIME_REDO	(Set to 'N')
INSPECTOR_NUM		DECAL_NUM	(Beginning Decal Number)
INSPECTOR_LNAME			
INSPECTOR_FNAME		DECAL_COND	
COUNTY_CODE			
VIN_ID_NUM	(Set to 'MISSVOID')	REPL_ID_NUM	(ID # of Miss/Void auditor)

(All other fields shall be appropriately filled with blanks/spaces and zeros).

The analyzer shall complete the VIN_ID_NUM and LICENSE_NUM fields automatically when this function is conducted by the auditor.

Associated System File: VEHICLE.DAT

CERT_NUM
TEST_DATE
CERT_COND
DECAL_NUM
DECAL_COND
REPL_ID_NUM
SAFE_TEST_TYPE

3.9.20f Certificate Number Prompt: ENTER THE SERIES OF CERTIFICATE/DECAL NUMBERS.

BEGINNING: _____ ENDING: _____

Programming Criteria:

A minimum of six (6) and maximum of nine (9) characters are required for each field. The system shall write a test record for the certificate range indicated by the auditor. The test record shall consist of the current date in the TEST_DATE field, the 6-digit employee identification number of the auditor voiding the certificates/decals in the REPL_ID_NUM field, the type of certificate in the SAFE_TEST_TYPE field, the entered beginning certificate number in the CERT_NUM field, the entered ending certificate number in the CERT_NUM_2 field, and the previously entered condition of the certificates (i.e., 'V'-voided, 'M'-missing) in the CERT_COND field in the VEHICLE.DAT file, or the entered beginning decal number in the DECAL_NUM field, the entered ending certificate number in the DECAL_NUM_2 field, and the previously entered condition of the decal in the DECAL_COND field in the VEHICLE.DAT file. If the miss/void function is being conducted using the station manager menu, the entry in the REPL_ID_NUM shall be 10 9's (i.e., '9999999999'). The record shall be stored on the analyzer and transmitted to the Texas Information Management System along with the next emissions test. The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). Each certificate number in the range shall appear on the Inspection Log (VI-8B) as a separate entry. For example, the range of certificates numbered 001 to 005 shall appear on the Inspection Log on five separate lines. Each line will have the same void indication. The void indicator shall show 'VOID', if 'V' is in the CERT_COND (or DECAL_COND) field, or 'MISS', if 'M' is in the CERT_COND (or DECAL_COND)

field. Then, the analyzer shall return to the main menu.

The analyzer shall limit the range of certificates that can be voided based on the beginning certificate number that is entered by the auditor. The maximum ending certificate number shall be the next multiple of 50. For example, if the auditor enters A00238432, the maximum entry is A00238450. If the auditor enters A32985353, the maximum entry is A32985400. For decals, the maximum ending decal number shall be the next multiple of 10. If the auditor enters V32994822, the maximum entry is V32994830.

The records for missing or voided certificates/decals must contain entries in the following fields, at a minimum, to be accepted as a valid test record:

VERSION		LICENSE_NUM	(Set to 'MISSVOID')
TEST_DATE	(Date of Entry)	SAFE_TEST_TYPE	
TEST_START_TIME	(Time of Entry)	TIMEOUT_FLAG	(Set to 'N')
TEST_END_TIME	(Time of Entry)	CERT_NUM	(Beginning Certificate Number)
STATION_NUM		CERT_NUM_2	(Ending Certificate Number)
STATION_NAME		CERT_COND	
ANALYZER_NUMBER		TIME_REDO	(Set to 'N')
INSPECTOR_NUM		DECAL_NUM	(Beginning Decal Number)
INSPECTOR_LNAME		DECAL_NUM_2	(Ending Decal Number)
INSPECTOR_FNAME		DECAL_COND	
COUNTY_CODE			
VIN_ID_NUM	(Set to 'MISSVOID')	REPL_ID_NUM	(ID # of Miss/Void auditor)

(All other fields shall be appropriately filled with blanks/spaces and zeros).

The analyzer shall complete the VIN_ID_NUM and LICENSE_NUM fields automatically when this function is conducted by the auditor.

Associated System File: VEHICLE.DAT

CERT_NUM
CERT_NUM_2
TEST_DATE
CERT_COND

Programming Criteria: A minimum of six (6) and maximum of nine (9) characters are required for this field. Upon confirmation of the replacement certificate/decal number, the analyzer shall write one test record.

The test record shall place the current date and time in the TEST_DATE and TEST_START_TIME field, the date and time of the target record in the ORIG_TEST_DATE, and ORIG_TEST_TIME fields, the 6-digit employee identification number of the auditor replacing the certificate/decal in the REPL_ID_NUM field, and the type of certificate in the SAFE_TEST_TYPE field. If the replacement is being conducted using the station manager menu, the entry in the REPL_ID_NUM shall be 10 9's (i.e., '999999999'). For certificate replacement, the record shall be a duplicate of the target test record with an 'R' in the CERT_COND field, the replacement certificate number in the CERT_NUM field, and the certificate number of the target test record (the voided certificate number) in the CERT_NUM_2 field in the VEHICLE.DAT file. For decal replacement, the record shall be a duplicate of the target test record with an 'R' in the DECAL_COND field, the replacement decal number in the DECAL_NUM field, the certificate number of the target test record (the voided decal number) in the DECAL_NUM_2 field in the VEHICLE.DAT file. The analyzer will store the information in the VEHICLE.DAT file and print it on the weekly inspection log report (VI-8B). The entry shall appear on two separate lines on the Inspection Log (VI-8B). The first line shall contain the date of the original test, the type of certificate (or decal), the void indicator displaying 'VOID,' and the certificate (or decal) number of the target test record (i.e., the certificate number contained in CERT_NUM_2, or decal number contained in DECAL_NUM_2). The second line shall contain the entries from the duplicate using the replacement certificate number as the valid certificate number. The void indicator in this line shall display 'REPL.' The void indicator shall show 'REPL,' if 'R' is in the CERT_COND field or DECAL_COND field. The system shall transmit the test record to the Texas Information Management System, and return to the main menu.

Associated System File: VEHICLE.DAT

CERT_NUM
CERT_NUM_2
TEST_DATE
CERT_COND
DECAL_NUM
DECAL_NUM_2
DECAL_COND
REPL_ID_NUM
SAFE_TEST_TYPE

3.9.22 Audit Menu Selection '22' "Status Screen"

The Auditors would like to access one screen which will:

- display the station and analyzer number, and software version number
- display the status of each lockout,

- display the contact limit, and the value of the no-contact limit counter, and
- display the date of the last gas calibration, leak check, and gas cap tester calibration.

When the auditor has selected twenty-two (22), the analyzer shall display the Status Screen. The analyzer shall use information stored in the CAL.DAT file and other sources to generate the Status Screen.

Status Screen:

1. Station Number
2. Analyzer Number
3. Propane Equivalency Factor (PEF) Number (N/A for OBD analyzers)
4. Span Gas Cylinder Values (N/A for OBD analyzers)
5. Date/time of last gas calibration & leak check (N/A for OBD analyzers)
6. Remaining space will store approximately test records (the analyzer should fill in the blank with a number.)

7. Date analyzer was last serviced
8. Current date and time
9. Software Version Number

Lockout Status Screen

- | | |
|--|------------------------------------|
| 1. State Lockout | 5. Station Certification Expired |
| 2. Cabinet Tamper | 6. Station Certification Suspended |
| 3. Floppy Tamper | 7. Station Certification Revoked |
| 4. Communications Failure to Pay | 8. Maximum Tests w/o Comm. |
| 9. Maximum OBDII Tests (LOW_VOL_STATION) | |

No Contact Limit : XXX
Number of Test w/o Communications: XXX

The analyzer shall also display an appropriate error messages in the event of an error or a failure of the following components: Floppy Disk Failure, Analyzer Tamper, Calibration Failure, Hard Disk Failure, Analyzer Failure, Internal Clock Failure.

3.10 Main Menu Selection '10' "Recall Aborted Inspection"

3.10.1 Access Code Prompt:

Refer to Section 3.1.1

3.10.1a PIN Number Prompt:

Refer to section 3.1.2

3.10.2 Date Expiration Prompt:

Refer to Section 3.1.3

3.10.3 Display/Select Aborted Inspection Record

Programming Criteria: The system will display the license number and VIN of all records currently contained in RECALL.DAT file. The inspector will select the desired record.

The system will then display vehicle information for verification/modification by the inspector.

3.10.4 Recall Aborted Test Logic

Programming Criteria: Based on the value of the test_type field in the RECALL.DAT file, the system will perform the test sequence, 'Safety and Emissions Inspection,' 'Safety Only Inspection,' 'Emissions Only Inspection' or 'Reinspection' as defined in 3.1, 3.2, 3.3, or 3.4, respectively.

Associated System Files: RECALL.DAT TEST_TYPE

- 1 - Safety and Emissions Inspection
- 2 - Safety Only Inspection
- 3 - Emissions Only Inspection
- 4 - Reinspection

3.11 Gas Cap Integrity Test

The gas cap integrity check is an integral part of the OBDII Analyzer system. It shall be a fully automatic feature of the analyzer system.

3.11.1 Gas Cap Connect Prompt:

**REMOVE THE GAS CAP FROM THE VEHICLE AND
CONNECT IT TO THE GAS CAP TESTER. REFER TO THE
OPERATOR'S MANUAL, IF REQUIRED.**

Programming Criteria: After the test is complete, the system shall then display the result.

Error Message: ONLY 'CONTINUE/ENTER' WILL BE ACCEPTED--TRY
AGAIN

3.12 Main Menu Selection '12' "Missing, or Voided Certificates"

This selection works better using two submenus to accommodate accounting for inspection certificates, and/or emissions only decals.

3.12.1 Access Code Prompt:

Refer to Section 3.1.1

3.12.1a PIN Number Prompt:

Refer to Section 3.1.2

3.12.2 Date Expiration Prompt:

Refer to Section 3.1.3

3.12.2a Certificate Type Prompt:

Refer to Section 3.9.20b

3.12.3 Certificate Condition Prompt:

Refer to Section 3.9.20c

3.12.4 Number of Certificates Prompt:

Refer to Section 3.9.20d

3.12.5 Certificate Number Prompt:

Refer to Section 3.9.20e

3.12.6 Certificate Number Prompt:

Refer to Section 3.9.20f

3.13 Main Menu Selection '13' "Certificate Correction/Replacement"

This selection works better using two submenus to accommodate replacing inspection certificates, and emissions only decals. VI30 Replacement is not and should not be included.

3.13.1 Access Code Prompt:

Refer to Section 3.1.1

3.13.1a PIN Number Prompt:

Refer to Section 3.1.2

3.13.2 Date Expiration Prompt:

Refer to Section 3.1.3

3.13.3 Certificate Search Prompt:

Refer to Section 3.9.21a

3.13.4 Certificate Number Prompt:

Refer to Section 3.9.21b

3.14 Main Menu Selection '14' "Technical Bulletins/Announcements"

The analyzer shall be able to receive and display technical bulletins and announcements transmitted from the Texas Information Management System. The announcement shall be displayed and allow the inspector three options:

- 1) print the announcement,
- 2) save the announcement to the announcement file, or
- 3) delete the announcement.

The print option shall allow the inspector to print the announcement and return to the announcement display with the same three options. The delete option shall delete displayed announcement without saving it to the announcement file. The save option shall save the announcement to the announcement file.

Upon selecting this item from the main menu, the analyzer shall display the announcement receive most recently from the Texas Information Management System. The analyzer shall hold an announcement a maximum of 180 days from the date of receipt at the analyzer or until another save announcement replaces it. Announcement older than 180 days from the date of receipt shall be purged from the system. The inspector shall be able to page down, or scroll through the announcement, and shall have the option of printing any announcement while it is displayed on the screen. The option to delete announcement should be restricted to a lead technician or manager.

An inspector may receive an announcement during the initial contact with the Texas Information Management System. Upon receipt of the announcement, the analyzer shall print one copy of the announcement, display the announcement and allow the inspector three options:

- 1) print the announcement;
- 2) save the announcement to the announcement file; or
- 3) delete the announcement.

The print option shall allow the inspector to print the announcement and return to the announcement display with the same three options. The delete option shall delete displayed message without saving it to the announcement file. The save option shall save the announcement to the announcement file.

Emissions related recall information, if available, shall be transmitted by the Texas Information Management System Host for use during emissions-related inspections. The initial information that will appear on the analyzer screen will be the pertinent vehicle information as provided by the Texas Data host. The inspector shall review this information to ensure its accuracy. If manufacturer issued emission-related recall information is transmitted by the Texas Information Management System Host, the analyzer shall display the emission-related recall information.

Emission related Technical Service Bulletins (TSB) information, if available, shall be transmitted to the analyzer for use during emissions-related inspections. The TSB information may contain multiple bulletins. The TSBs are provided as information only (to assist the inspector if the vehicle subsequently fails the inspection). The TSB information is displayed at the time of, and immediately following, the display of the emissions-related recall information.

3.15 Main Menu Selection '15' "Communications Refresh"

3.15.1 Access Code Prompt:

Refer to Section 3.1.1

3.15.1a PIN Number Prompt:

Refer to Section 3.1.2

3.15.2 Date Expiration Prompt:

Refer to Section 3.1.3

The analyzer shall contact the Texas Information Management System. The Texas Information Management System shall transmit bulletins, and update applicable files on the analyzer. After the update is complete, the system shall return to the main menu.

3.16 Main Menu Selection '16' "Communications Diagnostics (Loopback)"

The analyzer shall contact the Texas Information Management System and transmit the diagnostics test information. The Texas Information Management System shall transmit an echo of the information sent by the analyzer. After the communications session is complete, the system shall display the status of the Communications Diagnostics, then return to the main menu.

3.17 Main Menu Selection '17' "ALLDATA Communications"

The analyzer shall contact the Texas Information Management System and transmit the information necessary to connect with ALLDATA. After the ALLDATA communications session is complete, the system shall return to the main menu. When the directory structure becomes available, it will be placed in Appendix P. The files for the ALLDATA communications shall be contained in the subdirectory called C:/TASDATA/. The three files are called ALLREP.DAT, VIDCOMM.DAT, and ALLDATA.DAT.

3.18 Main Menu Selection '18' "Inspection Log (VI-8B)"

The Inspection Log (VI-8B) shall print after the analyzer's power up sequence or warm-up is complete. The analyzer will not conduct any official inspections until the Inspection Log has printed. The analyzer shall print two copies of the Inspection Log (VI-8B), and the operator shall be able to print additional copies after the initial two copies have printed. The analyzer shall print the log each Monday morning. The analyzer shall store the date (locally) when the last Inspection Log was printed, so that if the unit is powered up on a day other than Monday, the analyzer will know to print this report and/or prevent testing until the report is printed..

If the station has not conducted any inspections since printing of the previous Inspection Log, the system shall print a report reflecting that no inspections have been conducted during the reporting period. The analyzer shall allow an inspector or station manager to print the Inspection Log (VI-8B) from the main menu by pressing a key determined by the manufacturer, preferably 'F8.' The analyzer shall allow the inspector or station manager to

print Inspection Logs from previous weeks by entering the appropriate week ending date. The Inspection Logs from previous weeks shall be based on the information available on the analyzer at the time of the request. The analyzer shall also allow an inspector or station manager to print an Inspection Log (VI-8B) for one inspector, in the event of a departing inspector. The inspector or station manager shall be required to input the upcoming week ending date, and the departing inspector's identification number. The analyzer shall be able to display all inspections conducted by the departing inspector and print the inspections in the format prescribed for an Inspection Log (VI-8B).

The format for an Inspection Log is contained in Appendix G. The items shall be displayed in the format displayed in Appendix G, inclusive of the 'audited by' line, where applicable. The items shall be listed in chronological order according to the test date. The analyzer shall place an indicator or flag (i.e. an asterisk, question mark, etc.) beside any item whose certificate or decal number is not next in sequence to the previous item. The analyzer shall determine sequential issuance by comparing the number of an issued certificate to the number of the previously issued certificate of the same type. Also, the number on an issued decal shall only be compared to the number of the previously issued decal. For example, the system shall compare the number of a 1-year Safety & Emissions certificate to the number of the previously issued 1-year Safety & Emissions certificate, and place the indicator beside the item if the numbers are not sequential. The analyzer shall not compare a 1-year Safety & Emissions certificate to any other type of issued certificate (i.e., 1-year Safety Only, 2-year windshield, etc.,) or decal to determine sequential issuance. Appendix G states that the words 'FAIL:', and/or 'REPAIR:' shall appear only if fail codes or repair codes, respectively, are to be displayed. Fail codes are defined as the corresponding numerical value of a safety inspection item field name (i.e., SAFE_1, etc.) in which the stored value is an 'A,' 'C,' 'E,' 'H,' 'J,' 'L,' 'O,' 'S,' 'U,' 'W,' or 'Y.' For example, if the SAFE_1 contains an 'A,' then the Fail code that is to be displayed is '1_'. The ending space is optional. However, a space is required between each fail code for an inspection record that contains multiple failing entries. A repair codes is defined as the corresponding numerical value of a safety inspection item field name (i.e., SAFE_1, etc.) in which the stored value is an 'B,' 'D,' 'G,' 'I,' 'K,' 'M,' 'Q,' 'T,' 'V,' 'X,' or 'Z.' For example, if the SAFE_16A, and the SAFE_22B contained values of B and D, respectively, then the repair codes that are to be displayed are '16A_22B_'. Again, the ending space is optional. These fail codes and repair codes are in addition to the failure code numbers that must be displayed vehicle that fail the emissions phase or gas cap integrity phase of the inspection. The preference is to print the fail code for the emissions phase, followed by the fail code for the gas cap integrity phase, followed by the failing codes for the safety items. The repair codes are not affected by the emissions and gas cap integrity failures. However, the blank line shall remain when there are no fail or repair codes to be displayed. Also, the analyzer shall print twelve (12) 3-line entries per page on the VI-8B. Count the 'audited by' line as a 3-line entry.

The analyzer shall indicate emissions phase failures on the Texas Department of Public Safety for VI-8b, which prints out weekly. The analyzer shall display failure code number 31 on the VI-8b, if a vehicle fails the emissions phase of the inspection. The analyzer shall display failure code 32 on the VI-8b, if a vehicle fails the gas cap integrity test.

When an auditor enters the audit mode, the system writes a record to the AUDITLOG.DAT file containing the date, time and "A" for the authorized login attempt. The record is written when the 'enter/continue' key is pressed after the access code is entered. If the Auditor selects the inspection log search under Section 3.9.13, the record for the successful login shall be appended with a 'Y' in the SEARCH field, and the time of the search in the TIME field when the Auditor presses 'continue/enter.' This selection by the auditor shall cause the 'audited by' line to appear in the VI-8B in chronological order with the entries caused by the test records. The auditor shall be given the option of printing the results of the search on the printer.

If the auditor selects the test type search while under Section 3.9.13, the items shall appear in the VI -8B format displayed in Appendix G. The items shall be displayed in sequential order according to the certificate number for all items that meet the search criteria. The analyzer shall place an indicator or flag (i.e., an asterisk, question mark, etc.) beside any item whose certificate number is not next in sequence to the previous item. The auditor shall be given the option of printing the results of the search on the printer. The auditor shall press a key designated by the manufacturer to return to the Audit Menu.

3.19 Main Menu Selection '19' "VI-30A Only"

3.19.1 Access Code Prompt:

Refer to section 3.1.1

3.19.1a PIN Number Prompt:

Refer to section 3.1.2

3.19.2 Date Expiration Prompt:

Refer to section 3.1.3

3.19.3 Model Year Prompt:

Refer to section 3.1.7

3.19.4 License Type Prompt:

Refer to section 3.1.9

3.19.5 License Prompt:

Refer to 3.1.10

3.19.6 VIN Number Prompt:

Refer to Section 3.1.12

3.19.8 Vehicle Type Prompt:

Refer to Section 3.1.13a

3.19.8a Vehicle Make Prompt:

Refer to Section 3.1.14

3.19.9 Model Prompt:

Refer to Section 3.1.15

3.19.10 Odometer Prompt:

Refer to Section 3.1.16

3.19.11 Test Type Prompt:

**IF THE INSPECTION CERTIFICATE ON THE VEHICLE WASN'T
ISSUED WITHIN THE LAST 30 DAYS, A COMPLETE INSPECTION IS
REQUIRED. VERIFY THAT INSPECTION CERTIFICATE ON THE
VEHICLE WAS ISSUED WITHIN THE LAST 30 DAYS.**

**ENTER THE TYPE OF INSPECTION CERTIFICATE ON THE
VEHICLE.**

L-1 YEAR WINDSHIELD - OBD (SAFETY & EMISSIONS)

J-1 YEAR WINDSHIELD (SAFETY ONLY)

C-TRAILER/MOTORCYCLE

B-2 YEAR WINDSHIELD

G-FMCSR (TRUCK)

K-FMCSR (TRAILER)

Programming Criteria:

The system shall only accept entries for alphabets 'l,' 'j,' 'b,' 'c,' and 'g,' or 'k.' The analyzer shall only display one FMCSR selection. For the FMCSR selection, the analyzer shall display only choice 'g' if the vehicle type is a truck, and only choice 'k' if the vehicle type is a trailer. The analyzer shall only display one "1 year windshield (safety and emissions) selection. If the model year for the vehicle under inspection is 1996 or newer and the county code under the audit menu is **not** '071,' or '71_' (where the underscore represents a space) for El Paso County, then the system shall only display choice 'L.' The default for this screen shall be 'L.'

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

Associated System File: VEHICLE.DAT SAFE_TEST_TYPE

3.19.12 Certificate Number Prompt:

Refer to Section 3.1.38

3.19.13 VI 30A Number Prompt: ENTER THE NEW VI 30A #.

Programming Criteria: The inspector will enter the VI 30A #. A minimum of one (1) character and a maximum of seven (7) characters are required for this field. If no entry is made, the analyzer shall display the error message below. A valid entry must be made before the analyzer can proceed.

Error Message: NO VALUE HAS BEEN ENTERED--TRY AGAIN.

3.20.1 Access Code Prompt:

Refer to Section 3.1.1

3.20.1a PIN Number Prompt:

Refer to Section 3.1.2

3.20.2 Date Expiration Prompt:

Refer to Section 3.1.3

3.20.3 Test on Resale Exempt Prompt:

VEHICLES ARE EXEMPT FROM THE TEST-ON-RESALE REQUIREMENT IF THE MODEL YEAR IS 1996 OR NEWER AND THE ODOMETER READING IS LESS THAN 50,000 MILES. Do you wish to continue?

YES, CONTINUE WITH THE INSPECTION. (This vehicle is not exempt.)

NO, STOP THE TEST AND RETURN TO THE MAIN MENU.

Programming Criteria:

The system shall display the message listed above, and require the inspector to select the appropriate choice. The default shall be to the “yes, continue with the inspection.” The inspector shall be able to use the arrow keys to highlight the appropriate selection and press “enter/continue” to select it. If the inspector selects “no, stop the test and return to the main menu,” the system will end the sequence at this prompt and return to the Main Menu. Otherwise, the inspection will continue to the next prompt.

Error Message:

- 1. NO VALUE HAS BEEN ENTERED TRY AGAIN.**

- 2. THIS VEHICLE IS EXEMPT FROM TEST-ON-RESALE**

**BECAUSE THE MODEL YEAR IS 1996 OR NEWER AND
THE ODOMETER READING IS LESS THAN 50,000
MILES. PRESS “ENTER/CONTINUE” TO RETURN TO
THE MAIN MENU.**

3.20.4 Test on Resale Prompt: SELECT THE TYPE OF INSPECTION

- 1. SAFETY & EMISSIONS INSPECTION**
- 2. EMISSIONS ONLY**

Programming Criteria:

If the inspector selects one, the analyzer will conduct a safety and emissions inspection beginning with the Insurance expiration prompt in Section 3.1.4. The system will set the test_type field to ‘A’, and the special_test field to ‘C’.

If the inspector selects two, the analyzer will conduct an Emissions Only inspection beginning with the Inspection Type Prompt in Section 3.3.1. The system will prompt the inspector to indicate if the test is a:

- 1 - required emission only test (decal),
- 2 - voluntary test,
- 3 - test on resale (not displayed or used), or
- 4 - remote sensing request (decal).

The system will set the special_test field to ‘C,’ and set the test_type field to the following letters, based on the inspector selection:

- | | |
|---------|---------|
| 1 - ‘O’ | 3 - ‘C’ |
| 2 - ‘I’ | 4 - ‘B’ |

The system will default/highlight selection number 1 in this scenario.

In either case, the previously entered data shall be used as defaults when the model year and odometer screen prompts appear in the inspection sequence. The analyzer may skip these screen prompts since the data has already been entered.

Appendix B

Customer Comments/Explanations
to be printed on
Vehicle Inspection Reports

(Reserved)

Appendix D

Help Screens
for the Safety Inspection

(69 pages)

(Reserved)

Safety Inspection

Item: Horn

Help Screen # 1

Inspect for:

- a. Mounting.
- b. Wiring and actuating device.
- c. Harsh sound and audibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with a horn.
- b. Horn or horn switch is not securely fastened.
- c. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor connection.
- d. Horn switch not readily accessible to vehicle operator.
- e. Horn is actuated by grounding two naked wires or similar method.
- f. Sound is not audible under normal conditions for 200 feet.
- g. Horn emits an unusually loud or harsh sound or whistle.
- h. Operation of the horn interferes with the operation of any other circuit.
- I. Horn switch missing or inoperative.

Safety Inspection
Item: Windshield Wipers
Help Screen #2

Inspect for:

- a. Required number of wipers.
- b. Condition of wiper blade.
- c. Free operation, making contact and control.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with the number of wipers with which it was originally equipped.
- b. Wiper is inoperative, does not operate freely, or is improperly adjusted.
- c. Wiper blade has damaged, hardened or badly worn rubber elements.
- d. The portion of the rubber element that contacts the windshield is torn more than one inch on one end or is torn a total of one inch on both ends.
- e. Any part of the rubber element is torn loose from the metal backing or blade base.
- f. Metal parts of wiper blades or arms are damaged or come in contact with the windshield.
- g. Wiper is incapable of adequately cleaning the windshield.
- h. Wiper blades are not making proper contact with windshield.
- I. Wiper controls are not operating properly or are located beyond the driver's reach.

Safety Inspection

Item: Mirror

Help Screen #3

Inspect for:

- a. Mounting & view to the rear.
- b. Condition of reflecting surface.
- c. Cracked or broken glass.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Mirror does not provide the driver with a clear view to the rear of 200 feet.
- b. Vehicle is not equipped with at least one mirror.
- c. Mirror offers unsafe interference with driver's forward vision.
- d. Reflective surface of mirror is cracked, broken, peeled, or tarnished, or has sharp edges.
- e. Mirror is not mounted securely to prevent swing or excessive vibration unless the vehicle is equipped with another mirror which meets requirement.

NOTE: An inside mirror would meet all the above requirements. If the vehicle is equipped with more than one mirror, only one, either inside or outside, needs to meet all requirements.

Safety Inspection
Item: Steering System
Help Screen # 4

Inspect for:

- a. Lash and free movement without jamming.
- b. Mounting and condition of steering mechanism.
- c. Fluid level and visible leaks in power steering unit.
- d. Small or modified steering wheel.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. There is more than 2 inches of lash measured on the outside periphery of steering wheel rims 18 inches or less in diameter.
- b. There is more than 3 inches of lash measured on the outside periphery of steering wheel rims over 18 inches in diameter.
- c. It is impossible to turn the steering wheel from full right to full left without binding or jamming other than at wheel stops.
- d. Steering mechanism is not firmly attached and free of frame cracks or missing bolts.
- e. Modification of the steering systems so as to affect the proper steering of the vehicle or steering wheel has been modified or replaced with one that is noticeably smaller than original factory equipment.
- f. Any excessively worn or broken parts in the steering system.
- g. Visible leaks in power steering unit or hoses.
- h. Power steering belt is cracked, frayed, or has pieces missing or tension is not adequate.
- I. Fluid in power steering unit is below manufacturer recommended level. Do not overfill.
- j. On motorcycles and motor driven cycles, handlebars or steering head is bent,

loose, broken or damaged so as cause unsafe condition in steering.

- k. On motorcycles and motor driven cycles, handlebars grips extend to a height in excess of 15 inches above the saddle level.

NOTE: On vehicles equipped with power steering, engine must be running and the

fluid level, belt tension and condition must be adequate before testing.

Safety Inspection

Item: Seat Belts

Help Screen #5

Inspect for:

- a. Presence of front seat belts (when required).
- b. Unsafe belts, attachment fittings and buckles.
- c. Anchor bolts.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Front lap seat belts are required and not present.
- b. Seat belt webbing is frayed, spilt, or torn.
- c. Belt anchorages or attachment fittings are loose, badly corroded, missing or not fastened to belt.
- d. Belt buckles loose or inoperative.
- e. All seat belt anchor bolts are not securely fastened to floor or are missing.
- f. Pelvic restraint is not present.
- g. Seat belt will not adjust to allow proper fit.

Safety Inspection

Item: Service Brake System

Help Screen #6A

Inspect for:

- a. Visible leaks in brake lines, wheel cylinders or other part of the system.
- b. Frayed or leaking hoses or cables, or unsafe mechanical parts.
- c. Pedal reserve.
- d. Stopping distance and equalization.
- e. Fluid level in master cylinder.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with required service brakes .
- b. Upon first application, there is less than 2 inches of pedal reserve as determined by the use of an accurate measurement on the fully applied brake pedal of vehicles equipped with conventional brakes.
- c. Upon first application, there is less than 1 inch of pedal reserve as determined by the use of an accurate measurement on the fully applied brake pedal of vehicles with power brakes (power must be on and operating when tested).
- d. On service brakes that cannot be checked with the use of an accurate measurement, there is less than a reserve of one third of the total travel distance of the brake actuator.
- e. Brake pedal height cannot be maintained under moderate foot force (40 to 60 pounds for conventional - 15 to 20 pounds for power) for a period of 1 minute.
- f. There is visible leakage or audible seepage in hydraulic lines and cylinders, or any other part of the service brake system.
- g. Fluid level in the master cylinder is more than 1 inch below the top of the reservoir or below manufacture's recommended level.
- h. Hoses or cables are restricted, abraded, crimped, cracked, leaking, frayed, or

broken.

- I. Brake rods or mechanical parts are missing, broken, badly worn or misaligned.
- j. Brake operating levers or control cables do not operate freely, improperly positioned, or misaligned.

Safety Inspection

Item: Service Brake System (Continued)

Help Screen #6A

- k. Any part of the service brake system has been removed, disconnected, rendered inoperative.
- l. There is an obvious metal to metal contact sound when brakes are applied, and upon investigation, drum or disk is being scored.
- m. The service brakes do not develop the required total braking force as determined by machine tests.
- n. Brakes do not meet requirements for stopping distances for the class of vehicle.
- o. The brakes are not equalized as determined from road testing or by machine tests of the vehicle.
- p. Brake warning lamp or signal comes on during test.

NOTE: It is imperative that brake system reservoir cover and the surrounding area be thoroughly cleaned before cover is removed for inspection to assure that NO DIRT OR WATER is mixed with the brake fluid.

Safety Inspection
Item: Parking Brake System
Help Screen #6B

Inspect for:

(Required on all motor vehicles beginning with year model 1960).

- a. Operating mechanism.
- b. Condition of mechanical parts and pull cables.
- c. Holding ability.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Motor vehicle is not equipped with a parking brake.
- b. Operating mechanism, when fully applied, does not hold the vehicle.
- c. Actuating mechanism is not fully released when the release control is operated.
- d. Any mechanical parts are missing, broken, badly worn or not operating properly.
- e. Pull cables are badly worn, stretched, frayed, or not operating freely.
- f. Parking brake will not hold the vehicle in place when, with the engine running, the vehicle is placed in forward gear and the engine is accelerated enough to cause a pull on the braking mechanism.

Safety Inspection

Item: Tires

Help Screen #7

Inspect for:

- a. Worn spot that exposes ply or cord through the tread.
- b. Tread cuts, fabric breaks, snags and sidewall cracks.
- c. Visible bumps, bulges or knots.
- d. Tread wear less than 2/32" in any two adjacent major grooves at one location.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Any tire with a localized worn spot that exposes the ply or cord through the tread.
- b. Any tire with tread or sidewall cracks, cuts, or snags (as measured on the outside on the tire) in excess of one inch in any direction and deep enough to expose the body cords.
- c. Any tire which has any visible bumps, bulges, or knots apparently related to tread or sidewall separation or partial failure of the tire structure, including bead area.
- d. Any tire which has been regrooved or recut below the original groove depth, except special (regroovable) tires which have extra undertread rubber for this purpose (commercial vehicles only) and are identified as such.
- e. Any dual wheel assembly where the side of one tire is in contact with the other. (Any dual tires that contact each other).
- f. Any tire that is marked "Not for Highway Use", "Farm Use Only," "For Racing Purposes Only" or with other use restrictions that would indicate the tire is not meant for highway use. This includes temporary spares, inflatables, or small high pressure spares.
- g. Any tire which has been repaired temporarily by the use of blowout patches and boots. Nail hole plugs or patched are not cause for rejection.
- h. Any tire without tread wear indicators

worn so that less than $\frac{2}{32}$ ($\frac{1}{16}$) of an inch of tread design depth remain when measured (with a tread depth gauge) at the lowest points in any two adjacent major grooves in the center or middle of the tire.

- I. Any tire with tread wear indicators worn so that the tread wear indicators contact

the road in any two adjacent major grooves in the center or middle of the tire.

Safety Inspection
Item: Wheel Assembly
Help Screen #8

Inspect for:

- a. Defective or bent rim flanges; loose, missing or damaged bolts, nuts, studs or lugs.
- b. Defects and cracks that may impair safe mounting and proper retention of tires.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Loose, missing, or damaged wheel studs, bolts, nuts or lugs.
- b. Any part of the wheel bent, cracked, rewelded, or damaged so as to affect safe operation of the vehicle.
- c. Wheel nuts, studs, and clamps which are loose, broken, missing, or mismatched. Adequate thread engagement is imperative. Stud and nut threads on wheel lugs must engage completely through the entire threaded portion of the nut.
- d. Rims and rings which are mismatched, bent, sprung, or otherwise damaged. Check for evidence of rim slippage - this is an indication of wear of loose nuts.
- e. Disc wheels with elongated bolts, holes, or cracks between hand holes or stud holes, or both.
- f. Cast wheels with cracks, evidence of wear in the clamp area, or both.
- g. Rims have defects or cracks to the extent that they impair the safe mounting and proper retention of tires.
- h. Any wheel cannot be securely fastened to the hub of the vehicle.
- I. On motorcycles and motor-driven cycles, any spokes are bent, loose, broken, or missing.

Safety Inspection
Item: Exhaust System
Help Screen #9

Inspect for:

- a. Loose or leaking joints.
- b. Holes, leaking seams or patches.
- c. System or its elements not securely fastened to vehicle.
- d. Any part of exhaust system passes through (or terminates beneath) the passenger compartment.
- e. Tail pipe broken, pinched or eroded off allowing fumes to penetrate passenger compartment.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with a muffler.
- b. Any joint is loose or leaking, including manifolds. Does not include minor leakage at exhaust control valve (manifold damper or heat riser valve).
- c. Manifold is cracked or broken causing leakage.
- d. Holes, leaking seams, or patches on the muffler, resonators, exhaust pipe, tail pipe, or catalytic converter.
- e. Exhaust system is not secured to the vehicle by mounting brackets designed for exhaust systems (wire is not acceptable).
- f. Any brackets are loose, broken, or missing.
- g. There is excessive vibration of exhaust line.
- h. Any part of the exhaust system passes through the passenger compartment.
- I. The tail pipe is broken, pinched, or eroded off to extent to allow exhaust fumes to penetrate into the interior of the passenger compartment.
- j. The tail pipe fails to discharge exhaust from the rear, side or top of the passenger compartment of the vehicle.

NOTE: Holes in the exhaust system made by the manufacturer for drainage are not cause for rejection. The tail pipe must direct the exhaust fumes out from under the

passenger compartment.

Safety Inspection
Item: Emission System
Help Screen #10

Inspect for:

(Required on motor vehicles equipped by manufacturer beginning with 1968 models).

- a. Examine visually for presence of system.
- b. Plumbing is loose, broken, leaking or improperly routed.
- c. Systems has been altered, removed, or disconnected.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. The exhaust emission system has been removed.
- b. The exhaust emission system has been disconnected.
- c. The plumbing or hoses are loose, broken, leaking, or improperly routed.
- d. Air pump (air injection type) belt is loose, removed, cracked, frayed, or has pieces missing.
- e. The exhaust emission system has been altered in any manner to make it ineffective.
- f. The catalytic converter has been removed, leaking, or disconnected on a 1984 or later model vehicle.

Safety Inspection
Item: Beam Indicator
Help Screen #11

Inspect for:

(Required on all motor vehicles beginning with 1948 models, except motorcycles and motor-driven cycles).

- a. Proper switching indication.
- b. Visibility without glare.

Reject if:

- a. Vehicle not equipped with a beam indicator.
- b. Improper switching indication.
- c. Produces glaring light.
- d. Inoperative for any reason.

NOTE: For more details, see Rules and Regulations Manual.

Safety Inspection

Item: Tail Lamp

Help Screen #12

Inspect for:

- a. Mounting visibility and required number.
- b. Color and condition of lens.
- c. Wiring and visibility.
- d. Connected to burn when headlamps burn.
- e. Any lamp projects a white light to the rear (except license plate lamp and backup lamp).

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Required lamp or lamps are not present.
- b. Lamp is not securely mounted to vehicle.
- c. Lamp does not completely emit a red light plainly visible 1,000 feet to the rear.
- d. Lamp lens is cracked, broken, painted, missing, discolored, or does not fit properly.
- e. Wiring is shoddy or electrical connections are poor.
- f. Lamp is not wired so as to be lighted when head lamps or auxiliary driving lamps are lighted.
- g. Lamp is obstructed by any part of body.
- h. Lamp lens is not red color.
- I. Lamps are not mounted on the same level and as widely spaced laterally as practicable.
- j. Lamps are not mounted on rear of vehicle.
- k. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection

Item: Stop Lamp

Help Screen #13

Inspect for:

- a. Mounting, visibility and required number.
- b. Color and condition of lens.
- c. Actuation by application of service brakes.
- d. Wiring and visibility.
- e. Glaring or dazzling light.
- f. Any lamps projects a white light to the rear (except license plate lamp and backup lamp).

NOTE: Lamp lens cannot be repaired with repair tape or repair kit.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Required lamp or lamps are not present.
- b. Lamp is not securely mounted to the vehicle.
- c. Lamp does not emit a red or amber light which is actuated on application of the service (foot) brake.
- d. Lamp is not visible from a minimum distance of 300 feet to the rear of the vehicle to which it is attached.
- e. Lamp lens is cracked, broken, painted, missing, discolored, or does not fit properly.
- f. Wiring is shoddy or electrical connections are poor.
- g. Lamp projects a glaring or a dazzling light.
- h. Lamp is not mounted on rear of vehicle.
- I. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection
Item: License Plate Lamp
Help Screen #14

Inspect for:

- a. Mounting and wiring.
- b. Illumination of license plate.
- c. Lighting when headlamps are lighted.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamp is not present.
- b. Lamp is not securely mounted to the vehicle.
- c. Lamp is not placed to illuminate with a white light the rear registration plate.
- d. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- e. Lamp is not wired so as to be lighted when head lamps or auxiliary driving lamps are lighted.
- f. Lamp emits a glaring light to the rear.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection
Item: Rear Reflectors
Help Screen #15

Inspect for:

- a. Color, location and condition of lens.
- b. Mounting and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Reflector is not present.
- b. Reflector is not of red color.
- c. Reflector is not properly and/or securely mounted to the vehicle.
- d. Reflector is cracked to the extent that the reflecting ability is impaired.
- e. Reflector is discolored, deteriorated, or painted.
- f. Visibility distance is not as required.
- g. Requirements shown on lighting diagram are not met.

Safety Inspection
Item: Turn Signal Lamps
Help Screen #16

Inspect for:

(When required according to Rules and Regulations Manual).

- a. Mounting, visibility and approved type.
- b. Color and condition of lens.
- c. Wiring, switch, telltale and proper indications.
- d. Self-illumination and automatic flashing.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are required and not present.
- b. Device is not securely mounted or properly located on the vehicle.
- c. Device is not of a type meeting Department standards.
- d. Lamp lens is cracked, broken, discolored, or missing.
- e. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- f. Switch is not convenient to driver or indicator light does not operate.
- g. Signal shows any color other than white or amber to the front, or signal shows any color other than red or amber to the rear.
- h. Signal does not flash or is not operating properly.
- I. Signal is not clearly visible to the front and to the rear of the vehicle.
- j. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

NOTE: Selector switch must lock in proper turn position when applied but need not cancel automatically.

Safety Inspection

Item: Headlamps

Help Screen #17

Inspect for:

- a. Mounting and approved type.
- b. Improper connections, switching and dimmer switch.
- c. Cracked, broken or missing lens.
- d. Wiring.
- e. Physical damage that would obviously cause a headlight beam to fail to sufficiently illuminate the roadway ahead of the vehicle.
- f. Dirt moisture, contaminations or discolorations.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamp or lamp assembly is not securely fastened to the vehicle.
- b. Lamp is improperly connected and does not light the proper filament for different switch positions.
- c. Lamp lens is cracked, broken, discolored, or missing. (Exception: Composite or halogen type lamps will not be rejected for being cracked unless the reflector material inside the lamp is discolored or deteriorated).
- d. Lamp is not of a type meeting Department standards.
- e. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electric connections.
- f. Lamp lens is rotated, upside down, canted, or is marked "Right", "Left", #1 or #2 and not appropriately installed.
- g. Lamp fails to function properly in any manner.
- h. Lamp has dirt or any contamination or discoloration inside or moisture except condensed moisture in composite head lamps or nonsealed beam halogen lamps.
- I. Lamp switch or dimmer switch does not operate properly and is not convenient to the driver.
- j. Foreign material placed on head lamp lens, such as shields, half of lens, paint, tape, etc., that interferes with the light beam of the lamp.
- k. Vehicle is not equipped with head lamps

as required.

- l. Lamp can be moved easily by hand, due to a broken fender or loose support.
- m. Lamp is missing.
- n. Lens is other than clear (white).

Safety Inspection

Item: Headlamps (Continued)

Help Screen #17

- o. Any filament in head lamps fails to burn except composite lamps with more than one bulb when both upper and lower beam burn when selected.
- p. Wiring is dangling or connections are loose.
- q. A good ground is not made by the lamp mounting.
- r. Lamp is mounted on vehicle more than or less than prescribed mounting heights.
- s. Head lamp is covered by any lens or cover located in front of the head lamp which is any shade or color other than clear.
- t. There is physical damage that would obviously cause a headlight beam to fail to illuminate the roadway ahead of the vehicle sufficiently.

Safety Inspection
Item: Clearance Lamps
Help Screen #18

Inspect for:

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are cracked, broken, discolored, or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection
Item: Side Marker Lamps
Help Screen #19

Inspect for:

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken, or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are cracked, broken, discolored or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection

Item: Cab Lamps

Help Screen #20

Inspect for:

(Truck tractors only)

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are required and not present.
- b. Lamp is not securely mounted and properly located.
- c. Lamp does not emit required color; lens or bulb painted.
- d. Lamp lens is cracked, broken, discolored, or missing.
- e. Lamp is not visible from distance between 500 feet and 50 feet.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

Safety Inspection
Item: Side Reflectors
Help Screen #21

Inspect for:

- a. Color, location and condition of lens.
- b. Mounting and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Reflectors are not present.
- b. Reflectors are not of the required color for its location on the vehicle.
- c. Reflectors are not properly and/or securely mounted to the vehicle or if visibility distance is not as required.
- d. Reflector is cracked to the extent that the reflecting ability is impaired.
- e. Reflectors are discolored, deteriorated, or painted.
- f. Requirements shown on lighting diagram are not met.

Safety Inspection
Item: School Buses
Help Screen #22

Inspect for:

- a. School bus signs.
- b. Fire extinguisher.
- c. Warning lamps.
- d. Convex crossover mirror.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. All equipment required by size, weight, or class of the vehicle does not meet requirements.
- b. Signs are not present, readable, and of proper height.
- c. Fire extinguisher is not of required capacity, proper type, or in good condition and properly located.
- d. School bus RED signal lamps are not present, properly working, and in good condition.
- e. Crossover mirror mounting is loose or will not adjust to different positions or will not hold firm after adjustment.
- f. Crossover mirror offers unsafe interference with driver's forward vision or hides either front turn signal from view of oncoming driver.
- g. Crossover mirror's reflective surface is cracked, broken, peeled, or tarnished, or has sharp edges.

NOTE: Some school buses may be equipped with eight warning signal lamps, four red and four amber, working in an automatic integrated system. This system of alternately flashing warning lamps will be accepted provided it has two red lamps on the front and two red lamps on the rear.

Safety Inspection
Item: Safety Guards or Flaps
Help Screen #23

Inspect for:

- a. Mounting, condition and location.
- b. Construction and material.
- c. Height and width.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Safety guard or flap is not present.
- b. Safety guard or flap is not securely mounted.
- c. Safety guard or flap is not as wide as the tire that it is protecting.
- d. Safety guard or flap is spilt or torn to the extent that it is ineffective.
- e. The bottom edge of safety guard or flap is more than twelve (12) inches from the surface of the roadway.

Safety Inspection
Item: Sun-Screening
Help Screen #24

Inspect for:

- a. 1988 model & later.
- b. Light transmission.
- c. Color (must not be red or amber).
- d. Tint is below AS-1 line or 5" if no AS-1 line is present.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Glass coating or sunscreening devices on windshields;
 - 1) Extends downward past the AS-1 line or more than five inches from top of windshield on vehicles without an AS-1 line; or
 - 2) is red or amber in color.
- b. Glass coating or sunscreening devices on windows;
 - 1) windows immediately to the right and left of the driver which opens has less than 20 percent light transmittance.
- c. Check calibrations before rejecting vehicles

EXEMPTIONS:

- a. The following will not be considered as sunscreening or glass coating devices:
 - 1) Rearview mirror
 - 2) Sun Visors
 - 3) Motor carrier destination signs
 - 4) Rear Window wipers and motors
 - 5) Trunk lid handle or hinge.
 - 6) Luggage racks.
- b. Do not inspect glass coating on vehicles used to transport passengers on a regular basis for a fee, i.e., taxi, limousine, and buses.
- c. Vehicles used by persons with medical

permits. Drivers of these vehicles must present a letter of authorization from the Texas Department of Public Safety to gain his exemption.

- d. Multipurpose vehicles may be equipped with any non-reflective film on the side windows that is to the rear of the driver. No label required. (Those motor vehicles designed to carry 10 or fewer persons constructed either on a truck chassis or with special features for occasional off-road use.)

FMCSR Inspection

Item: Horn

Help Screen #1

Inspect for:

- a. Mounting.
- c. Wiring and actuating device.
- b. Harsh sound and audibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with a horn.
- b. Horn or horn switch is not securely fastened.
- c. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor connection.
- d. Horn switch not readily accessible to vehicle operator.
- e. Horn is actuated by grounding two naked wires or similar method.
- f. Sound is not audible under normal conditions for 200 feet.
- g. Horn emits an usually loud or harsh sound or whistle.
- h. Operation of the horn interferes with the operation of any other circuit.
- I. Horn switch missing or inoperative.

FMCSR Inspection
Item: Windshield Wipers
Help Screen #2

Inspect for:

- a. Required number of wipers.
- b. Condition of wiper blade.
- c. Free operation, making contact and control.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with the number of wipers with which it was originally equipped.
- b. Wiper is inoperative, does not operate freely, or is improperly adjusted.
- c. Wiper blade has damaged, hardened or badly worn rubber elements.
- d. The portion of the rubber element that contacts the windshield is torn more than one inch on one end or is torn a total of one inch on both ends.
- e. Any part of the rubber element is torn loose from the metal backing or blade base.
- f. Metal parts of wiper blades or arms are damaged or come in contact with the windshield.
- g. Wiper is incapable of adequately cleaning the windshield.
- h. Wiper blades are not making proper contact with windshield.
- I. Wiper controls are not operating properly or are located beyond the driver's reach.

FMCSR Inspection

Item: Mirrors

Help Screen #3

Inspect for:

- a. Mounting and view to the rear.
- b. Condition of reflecting surface.
- c. Cracked or broken glass.
- d. Required number.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Proper number of mirrors.
- b. Clear view of 200 feet to rear
- c. Interference of drivers forward vision
- d. Reflective surface of mirrors is cracked, broken, peeled, or tarnished.
- e. Not mounted securely to prevent swing or excessive vibration.

FMCSR Inspection
Item: Steering System
Help Screen #4

Inspect for:

- a. Lash and free movement without jamming.
- b. Mounting and condition of steering mechanism.
- c. Fluid level and visible leaks in power steering unit.
- d. Small or modified steering wheel.
- e. Cracks and welds on steering axle and gear bow.
- f. Loose Pitman arm.
- g. Loose power assist cylinder on power steering unit.
- h. Motion between linkage member and attachment point.
- I. Loose clamps or bolts on tie rods or drag links.
- j. Any modification or other condition that interferes with free movement of any steering component.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Steering Lash
- b. Steering column.
 - 1. Any absence or looseness of U-bolt(s) or positioning part(s).
 - 2. Worn, faulty or obviously welded universal joint(s).
 - 3. Steering wheel not properly secured.
- c. Front Axle beam and all steering components other than steering column.
 - 1. Any crack(s).
 - 2. Any obvious welded repair(s).
- d. Steering Gear Box.
 - 1. Any mounting bolt(s) loose or missing.
 - 2. Any crack(s) in gear box or mounting brackets.
- e. Pitman Arm.
 - 1. Any looseness of the pitman arm on the steering gear output shaft.
- f. Power Steering.
 - 1. Auxiliary power assist cylinder loose.
- g. Ball and Socket Joints.
 - 1. Any movement under steering load of a stud nut.
 - 2. Any motion, other than rotational, between any linkage member and its attachment point of more than 1/4 inch..

- h. Tie rods and drag links.
 - 1. Loose clamp(s) or clamp bolt(s) on tie rods or drag links.
 - 2. Any looseness in any threaded joint.
- I. Nuts. Nut(s) loose or missing on tie rods, pitman arm, drag link, steering arm or tie rod arm.
- j. Steering System. Any modification or other condition that interferes with free movement of any steering component.

FMCSR Inspection

Item: Seat Belts

Help Screen #5

Inspect for:

- a. Presence of front seat belts (when required).
- b. Unsafe belts, attachment fittings and buckles.
- c. Anchor bolts.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Front lap seat belts are required and not present.
- b. Seat belt webbing is frayed, spilt, or torn.
- c. Belt anchorages or attachment fittings are loose, badly corroded, missing or not fastened to belt.
- d. Belt buckles loose or inoperative.
- e. All seat belt anchor bolts are not securely fastened to floor or are missing.
- f. Pelvic restraint is not present.
- g. Seat belt will not adjust to allow proper fit.

FMCSR Inspection

Item: Brake System

Help Screen #6A

Inspect for:

- a. Present of required number of brakes.
- b. Stopping distance.
- c. Equalization.
- d. Fluid level.
- e. Frayed, leaking, damaged hoses or cables.
- f. Visible leaks or audible leaks in brake lines and wheel cylinders.
- g. Missing or broken mechanical components (shoes, pads, linings, anchor pins, etc.).
- h. Readjustment limits.
- I. Condition of linings and pads.
- j. Mismatch air chamber sizes and slack adjuster length.
- k. Cracks on brake drums and rotors.
- l. Improper repair of hoses.
- m. Tubing cracked, broken, or crimped.
- n. Low pressure warning device.
- o. Loose air compressor mounting bolts.
- p. Broken or loose pulleys and brackets.
- q. Break away device.
- r. Low fluid warning light.
- s. Vacuum reserve.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Absence of braking action on any axle required to have brakes upon application of the service brakes (such as missing brakes or brake shoe(s) failing to move upon application of a wedge, S-cam, or disc brake).
- b. Missing or broken mechanical components including: shoes, lining, pads, springs, anchor pins, spiders, cam rollers, push rods, and air chamber mounting bolts.
- c. Loose brake components including air chambers, spiders, and cam shaft support brackets.
- d. Audible air leak at brake chamber (Example-ruptured diaphragm, loose chamber clamp, etc.).
- e. Any brake stroke is at the readjustment limit.
- f. Brake linings or pads.
 - 1. Lining or pad is not firmly attached to the shoe:
 - 2. Saturated with oil, grease, or brake fluid; or
 - 3. Non-steering axles: Lining with a thickness less than 1/4 inch at the shoe center for air drum brakes, 1/16 inch or less at the shoe center for hydraulic and electric drum brakes and less than 1/8 inch air disc brakes.
 - 4. Steering axles: Lining with a thickness less than 1/4 inch at the

shoe center for drum brakes, less than 1/8 inch for air disc brakes and 1/16 inch or less for hydraulic disc and electric brakes.

- g. Brake is missing on any axle required to have brakes.
- h. Mismatch across any power unit steering axle of:
 - 1. Air chamber sizes.

FMCSR Inspection

Item: Brake System (Continued)

Help Screen #6A

2. Slack adjuster length.
- I. Parking Brake System.
 1. In accordance with Chapter 3.
- j. Brake drums or rotors.
 1. Any external crack or cracks that open upon brake application (do not confuse short hairline heat check cracks with flexural cracks).
 2. Any portion of the drum or rotor is missing.
- k. Brake Hose.
 1. Hose with any damage extending through the outer reinforcement ply.
 2. Bulge or swelling when air pressure is applied.
 3. Any audible leaks.
 4. Two hoses improperly joined (such as a splice made by sliding the hose ends over a piece of tubing and clamping the hose to the tube).
 5. Air hose cracked, broken or crimped.
- l. Brake Tubing.
 1. Any audible leak.
 2. Tubing cracked, broken or crimped.
- m. Low pressure warning device.
 1. Missing, inoperative, or does not operate at 55 psi and below, or the governor cut-out pressure, whichever is less.
- n. Tractor protection valve.
 1. Inoperable or missing tractor protection valve(s) on power unit.
- o. Air Compressor.

1. Compressor drive belts cracked or frayed.
 2. Loose compressor mounting bolts.
 3. Cracked, broken or loose pulley.
 4. Cracked or broken mounting brackets, braces or adapters.
- p. Electric brakes.
1. Absence of braking action on any wheel required to have brakes.
 2. Missing or inoperable breakaway braking device.

FMCSR Inspection

Item: Brake System (Continued)

Help Screen #6A

- q. Hydraulic Brakes. (Including power assist over hydraulic and engine drive hydraulic booster).
 - 1. Master cylinder fluid level is 1 inch or more below the top of the reservoir or below manufacturers recommended level.
 - 2. No pedal reserve with engine running except by pumping pedal.
 - 3. Power assist unit fails to operate.
 - 4. Seeping or swelling brake hose(s) under application of pressure.
 - 5. Missing or inoperative check valve.
 - 6. Has any visually observed leaking hydraulic fluid in the brake system.
 - 7. Has hydraulic hose(s) abraded (chafed) through outer cover -to- fabric layer.
 - 8. Fluid lines or connections leaking, restricted, crimped, cracked or broken.
 - 9. Brake failure or low fluid warning light on and/or inoperative.
- r. Vacuum Systems.
 - 1. Has insufficient vacuum reserve to permit one full brake application after engine is shut off.
 - 2. Has vacuum hose(s) or line(s) restricted, abraded (chafed) through outer cover to cord ply, crimped, cracked, broken or has collapsed of vacuum hoses(s) when vacuum is applied.
 - 3. Lacks an operative low-vacuum warning device as required.

FMCSR Inspection
Item: Parking Brake System
Help Screen #6B

Inspect for:

(Required on all motor vehicles beginning with model year 1960).

- a. Operating mechanism.
- b. Condition of mechanical parts and pull cable.
- c. Holding ability.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Motor vehicle is not equipped with a parking brake.
- b. Operating mechanism, when fully applied, does not hold the vehicle.
- c. Actuating mechanism is not fully released when the release control is operated.
- d. Any mechanical parts are missing, broken, badly worn, or not operating properly.
- e. Pull cables are badly worn, stretched, frayed, or not operating freely.
- f. Parking brake will not hold the vehicle in place when, with the engine running, the vehicle is placed in forward gear and the engine is accelerated enough to cause a pull on the braking mechanism.

FMCSR Inspection
Item: Steering Axle Tires
Help Screen #7A

Inspect for:

- a. Worn spot that exposes ply or cord through the tread.
- b. Tread cuts, fabric breaks, snags, sidewall cracks or separation.
- c. Visible bumps bulges or knots.
- d. 4/32" tread.
- e. Mixed tire construction.
- f. Boot, blowout patch or other ply repair.
- g. Tire inflation.
- h. regrooved tires.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. With less than 4/32 inch tread when measured at any point on a major tread groove.
- b. Has body ply or belt material exposed through the tread or sidewall.
- c. Has any tread or sidewall separation.
- d. Has a cut where the ply or belt material is exposed.
- e. Labeled "Not for Highway Use" or displaying other marking which would exclude use of steering axle.
- f. A bus operated with regrooved, recapped or retreaded tires on the front wheels.
- g. A truck or truck tractor with regrooved tires on the front wheels.
- h. A tube-type radial tire without radial tube stem markings. These markings include a red band around the tube stem, the word "radial" embossed in metal stems, or the word "radial" molded in rubber stems.
- I. Mixing bias and radial tires on the same axle.
- j. Tire flap protrudes through valve slot in rim and touches stem.
- k. Regrooved tire except motor vehicles used solely in urban or suburban service (see exception 393.75 (e))
- l. Boot, blowout patch or other ply repair.
- m. Weight carried exceeds tire load limit. This includes overloaded tire resulting from low air pressure.

- n. Tire is flat or has noticeable (e.g., can be heard or felt) leak.
- o. So mounted or inflated that it comes in contact with any part of the vehicle.

FMCSR Inspection
Item: Tires (all other)
Help Screen #7B

Inspect for:

- a. Worn spot that exposes ply or cord through the tread.
- b. Tread cuts, fabric break, snags or sidewall cracks.
- c. Visible bumps, bulges, or knots.
- d. Tread wear less than 2/32" in any two adjacent major grooves at one location.
- e. Tire inflation.
- f. Spare tire secured to vehicle.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Weight carried exceeds tire load limit. This includes overloaded tire resulting from low air pressure.
- b. Tire is flat or has noticeable (e.g., can be heard or felt) leak.
- c. Has body ply or belt material exposed through the tread or sidewall.
- d. Has any tread or sidewall separation.
- e. Has a cut where ply or belt materials is exposed.
- f. So mounted or inflated that it comes in contact with any part of the vehicle. (This includes a tire that contacts its mate.)
- g. Is marked "Not for highway use" or otherwise marked and having like meaning.
- h. With less than 2/32 inch tread when measured at any point on a major tread groove.

FMCSR Inspection

Item: Wheel Assembly

Help Screen #8

Inspect for:

- a. Defective or bent rim flanges, loose, missing or damaged bolts, nuts, studs or lugs.
- b. Defects and cracks that may impair safe mounting and proper retention of tires.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Loose, missing, or damaged wheel studs, bolts, nuts, or lugs.
- b. Any part of the wheel bent, cracked, rewelded, or damaged so as to affect safe operation of the vehicle.
- c. Wheel nuts, studs, and clamps which are loose, broken, missing, or mismatched. Adequate thread engagement is imperative. Stud and nut threads on wheel lugs must engage completely through the entire threaded portion of the nut.
- d. Rims and rings which are mismatched, bent, sprung, or otherwise damaged. Check for evidence of rim slippage - this is an indication of wear of loose nuts.
- e. Disc wheels with elongated bolts, holes, or cracks between hand holes or stud holes, or both.
- f. Cast wheels with cracks, evidence of wear in the clamp area, or both.
- g. Rims have defects or cracks to the extent that they impair the safe mounting and proper retention of tires.
- h. Any wheel cannot be securely fastened to the hub of the vehicle.
- I. On motorcycles and motor-driven cycles, any spokes are bent, loose, broken, or missing.

FMCSR Inspection
Item: Exhaust System
Help Screen #9

Inspect for:

- a. Loose or leaking joints.
- b. Holes, leaking seams or patches.
- c. System or its elements not securely fastened to vehicle.
- d. Any part of exhaust system passes through (or terminates beneath) the passenger compartment.
- e. Tail pipe broken, pinched or eroded off allowing fumes to penetrate passenger compartment.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Vehicle is not equipped with a muffler.
- b. Any joint is loose or leaking, including manifolds. Does not include minor leakage at exhaust control valve (manifold damper or heat riser valve).
- c. Manifold is cracked or broken causing leakage.
- d. Holes, leaking seams, or patches on the muffler, resonators, exhaust pipe, tail pipe or catalytic converter.
- e. Exhaust system is not secured to the vehicle by mounting brackets designed for exhaust systems (wire is not acceptable).
- f. Any brackets are loose, broken, or missing.
- g. There is excessive vibration of exhaust line.
- h. Any part of the exhaust system passes through the passenger compartment.
- I. The tail pipe is broken, pinched, or eroded off to extent to allow exhaust fumes to penetrate into the interior of the passenger compartment.
- j. The tail pipe fails to discharge exhaust from the rear, sides or top of the passenger compartment of the vehicle.

NOTE: Holes in the exhaust system made by the manufacturer for drainage are not cause for rejection. The tail pipe must direct the exhaust fumes out from under the passenger compartment.

FMCSR Inspection
Item: Emission System
Help Screen #10

Inspect for:

(Required on motor vehicles equipped by manufacturer beginning with 1968 models).

- a. Examine visually for presence of system.
- b. Plumbing is loose, broken, leaking or improperly routed.
- c. System has been altered, removed, or disconnected.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. The exhaust emission system has been removed.
- b. The exhaust emission system has been disconnected.
- c. The plumbing or hoses are loose, broken, leaking, or improperly routed.
- d. Air pump (air injection type) belt is loose, removed, cracked, frayed, or has pieces missing.
- e. The exhaust emission system has been altered in any manner to make it ineffective.
- f. The catalytic converter has been removed, leaking, or disconnected on a 1984 or later model vehicle.

**FMCSR Inspection
Item: Beam Indicator
Help Screen #11**

Inspect for:

(Required on all motor vehicles beginning with 1948 models, except motorcycles and motor-driven cycles).

- a. Proper switching indication.
- b. Visibility without glare.

NOTE: For more details, see Rules and Regulations Manual.

Reject if: (when required)

- a. Vehicle not equipped with a beam indicator.
- b. Improper switching indication.
- c. Produces glaring light.
- d. Inoperative for any reason.

FMCSR Inspection

Item: Tail Lamp

Help Screen #12

Inspect for:

- a. Mounting, visibility and required number.
- b. Color and condition of lens.
- c. Wiring and visibility.
- d. Connected to burn when headlamps burn.
- e. Any lamp projects a white light to the and rear (except license plate lamp backup lamp).

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Required lamp or lamps are not present.
- b. Lamp is not securely mounted to vehicle.
- c. Lamp does not completely emit a red light plainly visible 1,000 feet to the rear.
- d. Lamp lens is cracked, broken, painted, missing, discolored, or does not fit properly.
- e. Wiring is shoddy or electrical connections are poor.
- f. Lamp is not wired so as to be lighted when headlamps or auxiliary driving lamps are lighted.
- g. Lamp is obstructed by any part of the body.
- h. Lamp lens is not red color.
- I. Lamps are not mounted on the same level and as widely spaced laterally as practicable.
- j. Lamps are not mounted on rear of vehicle.
- k. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

FMCSR Inspection

Item: Stop Lamp

Help Screen #13

Inspect for:

- a. Mounting, visibility and required number.
- b. Color and condition of lens.
- c. Actuation by application of service brakes.
- d. Wiring and visibility.
- e. Glaring or dazzling light.
- f. Any lamps projects a white light to the rear (except license plate lamp and backup lamp).

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Required lamp or lamps are not present.
- b. Lamps is not securely mounted to the vehicle.
- c. Lamp does not emit a red or amber light which is actuated on application of the service (foot) brake.
- d. Lamp is not visible from a minimum distance of 300 feet to the rear of the vehicle to which it is attached.
- e. Lamp lens is cracked, broken, painted, missing, discolored, or does not fit properly.
- f. Wiring is shoddy or electrical connections are poor.
- g. Lamp projects a glaring or a dazzling light.
- h. Lamp is not mounted on rear of vehicle.
- I. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

NOTE: Lamps lenses cannot be repaired with repair tape or repair kit.

FMCSR Inspection
Item: License Plate Lamp
Help Screen #14

Inspect for:

- a. Mounting and wiring.
- b. Illumination of license plate.
- c. Lighting when headlamps are lighted.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamp is not present.
- b. Lamp is not securely mounted to the vehicle.
- c. Lamp is not placed to illuminate with a white light the rear registration plate.
- d. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- e. Lamp is not wired so as to be lighted when head lamps or auxiliary driving lamps are lighted.
- f. Lamp emits a glaring light to the rear.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**FMCSR Inspection
Item: Rear Reflectors
Help Screen #15**

Inspect for:

- a. Color, location and condition of lens.
- b. Mounting and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Reflector is not present.
- b. Reflector is not of red color.
- c. Reflector is not properly and/or securely mounted to the vehicle.
- d. Reflector is cracked to the extent that the reflecting ability is impaired.
- e. Reflector is discolored, deteriorated, or painted.
- f. Visibility distance is not as required.
- g. Requirements shown on lighting diagram are not met.

FMCSR Inspection
Item: Turn Signal Lamps
Help Screen #16

Inspect for:

- a. Mounting, visibility and approved type.
- b. Color and condition of lens.
- c. Wiring, switch, telltale and proper indications.
- d. Self-illumination and automatic flashing.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are required and not present.
- b. Device is not securely mounted or properly located on the vehicle.
- c. Device is not of a type meeting Department standards.
- d. Lamp lens is cracked, broken, discolored, or missing.
- e. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- f. Switch is not convenient to driver or indicator light does not operate.
- g. Signal shows any color other than white or amber to the front, or signal shows any color other than red or amber to the rear.
- h. Signal does not flash or is not operating properly.
- I. Signal is not clearly visible to the front and to the rear of the vehicle.
- j. Lens is cracked or broken to the extent that a portion of the lens is missing an/or separated, permitting light from the bulb to emit through the crack or break.

NOTE: Selector switch must lock in proper turn position when applied but need not cancel automatically.

FMCSR Inspection

Item: Headlamps

Help Screen #17

Inspect for:

- a. Mounting and approved type.
- b. Improper connections, switching and dimmer switch.
- c. Cracked, broken or missing lens.
- d. Wiring.
- e. Physical damage that would obviously cause a headlight beam to fail to sufficiently illuminate the roadway ahead of the vehicle.
- f. Dirt, moisture, contaminations or discolorations.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamp or lamp assembly is not securely fastened to the vehicle.
- b. Lamp is improperly connected and does not light the proper filament for different switch positions.
- c. Lamp lens is cracked, broken, discolored, or missing (Exception: Composite or halogen type lamps will not be rejected for being cracked unless the reflector material inside the lamp is discolored or deteriorated).
- d. Lamp is not of a type meeting Department standards.
- e. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- f. Lamp lens is rotated, upside down, canted, or is marked "right", "left", #1 or #2 and not appropriately installed.
- g. Lamp fails to function properly in any manner.
- h. Lamp has dirt or any contamination or discoloration inside or moisture except condensed moisture in composite head lamps or nonsealed beam halogen lamps.
- I. Lamp switch or dimmer switch does not operate properly and is not convenient to the driver.
- j. Foreign material placed on head lamp lens, such as shields, half of lens, paint, tape, etc., that interferes with the light beam of the lamp.
- k. Vehicle is not equipped with headlamps as required.
- l. Lamp can be moved easily by hand, due to a broken fender or loose support.
- m. Lamp is missing.
- n. Lens is other than clear (white).

FMCSR Inspection
Item: Headlamps (Continued)
Help Screen #17

- o. Any filament in head lamps fails to burn except composite lamps with more than one bulb when both upper and lower beam burn when selected.
- p. Wiring is dangling or connections are loose.
- q. A good ground is not made by the lamp mounting.
- r. Lamp is mounted on vehicle more than or less than prescribed mounting heights.
- s. Headlamp is covered by any lens or cover located front of the headlamp which is any shade or color other than clear.
- t. There is physical damage that would obviously cause a headlight beam to fail to illuminate the roadway ahead of the vehicle sufficiently.

FMCSR Inspection
Item: Clearance Lamps
Help Screen #18

Inspect for:

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken, or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are cracked, broken, discolored, or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**FMCSR Inspection Item:
Side Marker Lamps
Help Screen #19**

Inspect for:

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken, or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Lamps are not securely mounted and properly located.
- c. Lamps do not emit required color; lens or bulb painted.
- d. Visibility requirements are not met.
- e. Lenses are cracked, broken, discolored, or missing.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

**FMCSR Inspection
Item: Cab Lamps
Help Screen #20**

Inspect for:

(Truck tractors only)

- a. Mounting and location.
- b. Required color.
- c. Cracked, broken, or missing lens.
- d. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are required and not present.
- b. Lamp is not securely mounted and properly located.
- c. Lamp does not emit required color; lens or bulb painted.
- d. Lamp lens is cracked, broken, discolored, or missing.
- e. Lamp is not visible from distance between 500 feet and 50 feet.
- f. Wiring insulation is worn, rubbed bare, or shows any evidence of burning, short circuiting, or poor electrical connections.
- g. Lens is cracked or broken to the extent that a portion of the lens is missing and/or separated, permitting light from the bulb to emit through the crack or break.

FMCSR Inspection
Item: Side Reflectors
Help Screen #21

Inspect for:

- a. Color, location and condition of lens.
- b. Mounting and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Reflectors are not present.
- b. Reflectors are not of the required color for its location on the vehicle.
- c. Reflectors are not properly and/or securely mounted to the vehicle or if visibility distance is not as required.
- d. Reflector is cracked to the extent that the reflecting ability is impaired.
- e. Reflectors are discolored, deteriorated, or painted.
- f. Requirements shown on lighting diagram are not met.

**FMCSR Inspection
Item: School Buses
Help Screen #22**

Inspect for:

- a. School bus signs.
- b. Fire extinguisher.
- c. Warning lamps.
- d. Convex crossover mirror.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- 1. a. All equipment required by size, weight, or class of the vehicle does not meet requirement.
- 2. b. Signs are not present, readable, and of proper height.
- 3. c. Fire extinguisher is not of required capacity, proper type, or in good condition and properly located.
- d. School bus RED signal lamps are not present, properly working, and in good condition.
- e. Crossover mirror mounting is loose or will not adjust to different positions or will not hold firm after adjustment.
- f. Crossover mirror offers unsafe interference with driver's forward vision or hides either front turn signal from view of oncoming driver.
- g. Crossover mirror's reflective surface is cracked, broken, peeled, or tarnished, or has sharp edges.

NOTE: Some school buses may be equipped with eight warning signal lamps, four red and four amber, working in an automatic integrated system. This system of alternately flashing warning lamps will be accepted provided it has two red lamps on the front and two red lamps on the rear.

**FMCSR Inspection Item:
Safety Guards Or Flaps
Help Screen #23**

Inspect for:

- a. Mounting, condition and location.
- b. Construction and material.
- c. Height and width.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Safety guard or flap is not present.
- b. Safety guard or flap is not securely mounted.
- c. Safety guard or flap is not as wide as the tire that it is protecting.
- d. Safety guard or flap is split or torn to the extent that it is ineffective.
- e. The bottom edge of safety guard or flap is more than twelve (12) inches from the surface of the roadway.

FMCSR Inspection
Item: Window Tinting or Coating
Help Screen #24

Inspect for:

- a. Tinting on either side of the driver compartment.
- b. Tint or coating extended more than 2" below the top of the windshield.
- c. Tinting or coating has more than a 1" border at each side of windshield.
- d. Tinting or coating or any other visor restricting materials are not above the top most portion of the steering wheel.

Reject if:

- a. Tint or coating is extending more than 2 inches below the top of the windshield.
- b. Tint or coating has more than 1 inch border at each side of windshield.
- c. Tinting or coating and any vision restricting materials are not above the top most portion of the steering wheel.
- d. No tinting is allowed on either side of the driver's compartment.

NOTE: For more details, see Rules and Regulations Manual.

FMCSR Inspection

Item: ID Lamps

Help Screen #25

Inspect for:

- a. Presence of lamps.
- b. Mounting and location.
- c. Required color.
- d. Cracked, broken or missing lens.
- e. Wiring and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Not securely mounted and properly located.
- c. Lamp does not emit proper color; lamp or bulb painted.
- d. Lens cracked, broken, discolored or missing.
- e. Wiring insulation is worn, rubbed bare or evidence of burning, short circuiting or poor connection.
- f. Visibility requirements not met.
- g. Lens is cracked or broken.

**FMCSR Inspection Item:
Hazardous Warning Lamps
Help Screen #25**

Inspect for:

- a. Presence of lamps.
- b. Mounting.
- c. Required color.
- d. Cracked, broken, or missing lens.
- e. Visibility and wiring.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Not securely mounted and properly located.
- c. Lamp does not emit proper color; lamp or bulb painted.
- d. Lens cracked, broken, discolored or missing.
- e. Wiring insulation is worn, rubbed bare or evidence of burning, short circuiting or poor connection.
- f. Visibility requirements not met.
- g. Lens is cracked or broken.

FMCSR Inspection
Item: Backup Lamps
Help Screen #25

Inspect for:

- a. Presence of lamps.
- b. Mounting.
- c. Required color.
- d. Cracked, broken, or missing lens.
- e. Visibility and wiring.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Lamps are not present.
- b. Not securely mounted and properly located.
- c. Lamp does not emit proper color; lamp or bulb painted.
- d. Lens cracked, broken, discolored or missing.
- e. Wiring insulation is worn, rubbed bare or evidence of burning, short circuiting or poor connection.
- f. Visibility requirements not met.
- g. Lens is cracked or broken.
- h. Lamps are not activated properly when vehicle is in reverse.

FMCSR Inspection
Item: Coupling Devices
Help Screen #26

Inspect for:

- a. Mounting.
- b. Movement between components.
- c. Fasteners missing or defective.
- d. Any welds or metal cracks.
- e. Pivot bracket pin missing.
- f. Movement between pivot and bracket pin.
- g. Any fore or aft stop missing or not securely attached.
- h. Movement between slider bracket and slider base.
- I. Horizontal movement between upper corner of 5th wheel halves.
- j. Operating handle in closed or locked position.
- k. King pin properly engaged.
- l. All locking mechanism must be in good working order.
- m. Any leaking air or hydraulic cylinder, hoses, or chambers.
- n. Unattached or incapable of secure attachment (includes spare tire).
- o. Any worn or repaired chains or cables or any safety devices missing.

NOTE: For more details, see rules and regulations manual.

- 1. Inspect fifth wheel for and reject if:
 - a. Any fasteners missing or ineffective.
 - b. Any movement between mounting components.
 - c. Any mounting angle iron cracked or broken.
 - d. Any fasteners missing or ineffective on mounting plates and pivot brackets.
 - e. Any welds or parent metal cracked.
 - f. More than 3/8 inch horizontal movement between pivot bracket pin and bracket.
 - g. Pivot bracket pin missing or not secured.
 - h. Any latching fasteners missing or ineffective on sliders.
 - I. Any fore or aft stop missing or not securely attached.
 - j. Movement more than 3/8 inch between slider bracket and slider base.
 - k. Any slider component cracked in parent metal or weld.
 - l. Horizontal movement between the upper and lower fifth wheel halves exceeds 1/2 inch on lower coupler.
 - m. Operating handle not in closed or locked position.
 - n. Kingpin not properly engaged.
 - o. Separation between upper and lower coupler allowing light to show through from side to side.
 - p. Cracks in the fifth wheel plate.
Exceptions: Cracks in fifth wheel approach ramps and casting shrinkage crack in the ribs of the body of a cast fifth wheel.
 - q. Locking mechanism parts missing, broken, or deformed to the extent the kingpin is not securely held.
- 2. Inspect Pintle Hooks for and reject if:

FMCSR Inspection
Item: Coupling Devices (Continued)
Help Screen #26

- a. Any missing or ineffective fasteners (a fastener is not considered missing if there is an empty hole in the device but not corresponding hole in the frame or vice versa).
 - b. Mounting surface cracks extending from point of attachment (e.g., cracks in the frame at mounting bolt holes).
 - c. Loose mounting.
 - d. Frame cross member providing pintle hook attachment cracked.
 - e. Cracks anywhere in pintle hook assembly.
 - f. Any welded repairs to the pintle hook.
 - g. Any part of the horn section reduced by more than 20 percent.
 - h. Latch insecure.
3. Inspect Drawbar/Towbar Eye for and reject if:
- a. Any cracks in attachment welds.
 - b. Any missing or ineffective fasteners.
 - c. Any part of the eye reduced by more than 20 percent.
4. Inspect Drawbar/Towbar Tongue for and reject if:
- a. Ineffective latching mechanism.
 - b. Missing or ineffective stop.
 - c. Movement of more than 1/4 inch between slider and housing.
 - d. Any leaking, air or hydraulic cylinders, hoses, or chambers, (other than slight oil weeping normal with hydraulic seals).
 - e. Any cracks.
 - f. Movement of 1/4 inch between subframe and drawbar at point of attachment.

FMCSR Inspection
Item: Coupling Devices (Continued)
Help Screen #26

5. Inspect Safety Devices for and reject if:
 - a. Safety devices missing.
 - b. Unattached or incapable of secure attachment.
 - c. Chains and hooks.
 - 1) Worn to the extent of a measurable reduction in link cross section.
 - 2) Improper repairs including welding, wire, small bolts, rope and tape.
 - d. Cable
 - 1) Kinked or broken cable strands.
 - 2) Improper clamps or clamping.
6. Inspect Saddle-Mounts for and reject if:
 - a. Any missing or ineffective fasteners.
 - b. Loose mountings.
 - c. Any cracks or breaks in a stress or load bearing member.
 - d. Horizontal movement between upper and lower saddle-mount halves exceeds 1/4 inch.

**FMCSR Inspection
Item: Fuel System
Help Screen #27**

Inspect for:

- a. Visible leaks.
- b. Filler cap presence.
- c. Properly mounted fuel tank.
- d. LPG decal.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Visible leaks.
- b. Filter cap missing.
- c. Fuel tank not securely mounted.
- d. No valid Liquefied Petroleum Gas Tax Decal Issued by the State Comptroller for LPG powered vehicles.

FMCSR Inspection
Item: Suspension System
Help Screen #28

Inspect for:

- a. Any cracked broken, missing or loose parts on any part of the suspension system.
- b. Deflated air suspension.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. U-bolt, spring hanger or other axle parts are cracked broken, loose or missing.
- b. Any leaf spring assembly leaves broken or missing.
- c. Coil spring broken.
- d. Rubber spring missing.
- e. Any leaves displaced that could cause contact with a tire, rim, brake drum, or frame.
- f. Broken torsion bar spring.
- g. Deflated air suspension.
- h. Torque, radius, or tracking component cracked, loose, broken or missing.

FMCSR Inspection

Item: Frame

Help Screen #29

Inspect for:

- a. Any part of frame member is cracked, broken loose or sagging.
- b. Any loose or missing fasteners to any body of mechanical part.
- c. Body or frame contact with tire or wheel assembly.
- d. Any missing or non-engaged locking pins or adjustable axle assemblies.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Any part of frame member is cracked, broken, loose, or sagging.
- b. Fasteners attaching the engine, transmission, steering gear, suspension, body parts and fifth wheel loose or missing.
- c. Any condition that causes the body or frame to be in contact with a tire or wheel assembly.
- d. Locking pins missing or not engaged on adjustable axle assemblies.

FMCSR Inspection
Item: Commercial Windshield
Help Screen #30

Inspect for:

- a. Cracked or damaged.
- b. Tinting and visibility.

NOTE: For more details, see Rules and Regulations Manual.

Reject if:

- a. Any crack over 1/4 inch wide.
- b. Any damaged area of 3/4 inch or more in diameter.
- c. Damage area is closer than 3 inches to any other damaged area.
- d. Any crack less than 1/4 inch wide intersecting with any other crack.

Appendix E

Help Screens
for the VI - 7 Rejection Receipt

(Reserved)

Appendix F
Help Screens
for the VI - 8B Inspection Log
(Reserved)

Appendix G
Format for
VI - 8B Inspection Log

TEXAS DEPARTMENT OF PUBLIC SAFETY
VEHICLE INSPECTION STATION LOG
NANNNNN EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE
WEEK ENDING, SATURDAY, MMDDYY

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE REPAIR: EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE
\$9,999.99 INSPECTOR: EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE

AUDITED BY 4444 ON MMDDYY @ HHMM

STATION REPRESENTATIVE: _____ PAGE NN OF NN

N = Numeric Character
A = Alpha Character
E = Either Alpha or Numeric Character
MM = Month (Date)
DD = Day (Date)
YY = Year (Date)
VOID = Void Indicator
YYYY = Year including century (Vehicle Year Model)
\$9,999.99 = Cost/Fee

Header Fields (Top to Bottom, Left to Right)

Line 1 (Centered)

No Variable Fields
Text: **“TEXAS DEPARTMENT OF PUBLIC SAFETY”**

Line 2 (Centered)

No Variable Fields
Text: **“VEHICLE INSPECTION STATION LOG”**

Line 3 (Centered)

Two Variable Fields: Station Number and Station Name
Field #1: Station Number - Characters 7; **NANNNNN**
Field #2: Station Name - Characters 25; **EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE**

Line 4 (Centered)

One Variable Field
Text: **“WEEK ENDING, SATURDAY, “**
Field #1: Date - Characters 6; **MMDDYY**

Line 5

No Variable Fields
Text: **“-----
-----”**

Record Fields (Top to Bottom, Left to Right)

Line 1

One Counter Field, Ten Variable Fields, No Text

Counter Field: Record Number - Characters 3; **NNN** (Sequentially numbered beginning with 001 for each week, include leading zeroes).

Field #1: Date of Inspection - Characters 5; **MM/DD**

Field #2: Void Indicator - Characters 4; **AAAA** (Read **VOID**, **MISS**, or **REPL** if cert_cond field is set to 'V,' 'M,' or 'R,' respectively, blank and strip if cert_cond is blank).

Field #3: Type of Test - Characters 1; **A**

Field #4: Certificate or Decal Number - Characters 9; **ANNNNNNNNN**

Field #5: VI-30A Number - Characters 7; **NNNNNNN**

Field #6: Vehicle Registration Number - Characters 8; **EEEEEEEE**

Field #7: Vehicle Identification Number - Characters 17; **EEEEEEEEEEEEEEEEEEEE**

Field #8: Vehicle Year Model - Characters 4; **NNNN**

Field #9: Vehicle Make - Characters 4; **AAAA**

Field #10: Odometer Reading - Characters 6; **NNNNNN**

Line 2 (Begin at column 5)

Two Variable Fields with Dependant Text

Text: "**FAIL:** " (Should only appear if there are fail codes to display)

Field #1: Fail Codes - Characters up to 4 with separators; NNA/... (Maximum field length: 30 characters)

Text: "**REPAIR:** " (Should only appear if there are repair codes to display)

Field #2: Repair Codes - Characters up to 4 with separators; NNA/... (Maximum field length: 30 characters)

If there are no fail or repair codes to display this line should be left blank and stripped from the record.

Line 3 (Begin at column 5)

Two Variable Fields with Text

Field #1: Cost - Characters 9; **\$9,999.99**

Text: "**INSPECTOR:** "

Field #2: Inspector Driver License Number - Characters 20; **EEEEEEEEEEEEEEEEEEEE**

Text: " _____ "

There should be a blank line inserted after each record to separate them from one another, unless it is the last record on the page.. There should be no partial records on a page. If it will not fit on the page, the whole record should be printed on the next page.

Footer Fields (Top to Bottom, Left to Right)

Line 1

No Variable Fields

Text: “-----
-----”

Line 2

To be left Blank

Line 3

Two Counter Fields with Text

Text: “**STATION REPRESENTATIVE :**

PAGE ”

Counter Field #1: Page Number - Characters 2; **NN**

Text: “**OF** “

Counter Field #2: Total Number of Pages - Characters 2; **NN**

Auditing Indicator

If a DPS Representative accesses the Analyzer data base for the purpose of conducting a station audit, the following caveat will be inserted on the report immediately following the last certificate issued prior to the access.

Line 1

Three Variable Fields and Text

Text: "**AUDITED BY** "

Field #1: DPS Representative's Last Name - Characters 15; **AAAAAAAAAAAAAAAA**

Text: "**ON** "

Field #2: Date of Audit - Characters 8; **MMDDYYYY**

Text: "**@** "

Field #3: Time of Audit - Characters 4; **HHMM**

The Date (Field #2 above) and Time (Field #3 above) shall be automatically entered into the Inspection Log (VI-8B). There should be a blank line inserted after each caveat to separate them from other records, unless it is the last entry on the page.

TEXAS DEPARTMENT OF PUBLIC SAFETY
VEHICLE INSPECTION STATION LOG
NANNNNN EEE
WEEK ENDING, SATURDAY, MMDDYY

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

AUDITED BY AAAAAAAAAAAAAA ON MMDDYYYY @ HHMM

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

NNN MM/DD VOID A ANNNNNNNNN NNNNNNNN EEEEEEEE EEEEEEEEEEEEEEEEEEE YYY AAAAA NNNNNN
FAIL: EEE REPAIR: EEE
\$9,999.99 INSPECTOR: EEE

STATION REPRESENTATIVE: _____ PAGE NN OF NN

Appendix H

Help Screen for
VI - 18 Requisition
for
Inspection Certificates

(Reserved)

Appendix I
File Layout

APPENDIX I

FILE LAYOUT

(Subject to Change based on
EPA's Final OBD Guidance)

The following terms are used in describing the files found in this appendix.

<u>TERM</u>	<u>DESCRIPTION</u>
NUM(X)	The field is X bytes long and can contain only numeric characters "0" - "9" and any fixed characters specified in the format description. Numeric fields will be filled.
CHAR(X)	The field is X bytes long and can contain any alphanumeric character unless otherwise specified. Character fields are left justified and filled with spaces.
: . / -	These are fixed characters which are always placed in the same place within the field as indicated in the format description.

In general a term will be followed by a format description which indicates any fixed character locations. For example the format description HH:MM indicates that a colon will be present in the 3rd byte of the field. The format description XXX.XX indicates a fixed decimal point location with the "." being located in the 4th byte of the field. An 'e' in the left margin indicates that the field contains safety and emissions information. An 's' in the left margin indicates that the field contains only safety information. The offsets for each field are in the left margin listed prior to the e's and s's.

All records shall be prepared by first blank filling them. All numeric data fields shall be prepared by zero filling them.

When a new floppy is initialized by the auditor, the following hard disk files will be copied to the floppy disk. The purpose of backing up the data files to the floppy disk is to allow analyzers to be exchanged in the case of loaner units, and to be present in case of system failure.

HARD DISK FILES COPIED TO FLOPPY

STATION.DAT
INSPECTR.DAT
REINSPEC.DAT
CAL.DAT
AUDITGAS.DAT
AUDITNOT.DAT
AUDITLOG.DAT
LOCKOUT.DAT
PERFORM.DAT

STATION.DAT

This is both hard disk and floppy based file accessed through the audit screen, containing data specific to the individual stations. Record length is 512 bytes.

0,e	STATION_NUM	CHAR(7)	Entered by the DPS under the audit menu.
7,e	ANALYZER_NUMBER	CHAR(8)	Entered by the DPS under the audit menu.
15,e	STATION_NAME	CHAR(25)	Entered by the DPS under the audit menu.
40,e	ST_ADDRESS	CHAR(20)	The street address of the station.
60,e	CITY	CHAR(13)	The city in which the station is located.
73,e	ZIP	CHAR(10)	The zip code of the station.
83,e	STAT_TX_PHONE	CHAR(12)	The analyzer phone number that is tied to the OBDII Only analyzer. XXX XXX-XXXX
95,e	STAT_PHONE	CHAR(12)	The station's telephone number for the OBDII Only analyzer is housed. XXX XXX-XXXX
107,e	STAT_EXP_DATE	NUM(8)	(MMDDYYYY)
115,e	SAFE_STATION_TYPE	CHAR(1)	Default to 'P' - 'Public'. Set to 'F' - 'Fleet' or 'G' - 'Government' by state representative under audit menu or via electronic transmission.
116,e	M-F_HR_OPEN	NUM(4)	(HHMM) Time the station opens Mondays - Fridays <ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
120,e	M-F_HR_CLOSE	NUM(4)	(HHMM) Time the station closes Mondays - Fridays <ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
124,e	SAT_HR_OPEN	NUM(4)	(HHMM) Time the station opens on Saturday. <ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
128,e	SAT_HR_CLOSE	NUM(4)	(HHMM)

			Time the station closes on Saturday.
			<ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
132,e	SUN_HR_OPEN	NUM(4)	(HHMM) Time the station opens on Sunday.
			<ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
136,e	SUN_HR_CLOSE	NUM(4)	(HHMM) Time the station closes on Sunday.
			<ul style="list-style-type: none"> Value of positions one and two (hour) must not be greater than "24." Value of positions three and four (minute) must not be greater that "59."
140,e	COUNTY_CODE	CHAR(3)	The county where tested.
140,e	COUNTY_CODE	CHAR(3)	The county where tested.
	Dallas - 057, 57_	Denton - 061, 61_	Parker - 184
	El Paso - 071, 71_	Fort Bend - 079, 79_	Johnson - 126
	Harris - 101	Galveston - 084, 84_	Ellis - 070, 70_
	Collin - 043, 43_	Brazoria - 020, 20_	Kaufman - 129
	Liberty - 146	Chambers - 036, 36_	Rockwall - 199
	Tarrant - 220	Montgomery - 170	Bexar - 015, 15_
	Waller - 237	Travis - 227	Comal - 046, 46_
	Hays - 105	Williamson - 246	Bastrop - 011, 11_
	Wilson - 247	Guadalupe - 094, 94_	Smith - 213
	Nueces - 178	San Patricio - 205	Kleberg - 137
	Milam - 166	Lee - 144	Bastrop - 011
	Burnet - 027	Blanco - 016	Bell - 014
	Other - 999	Out of State or Federal - 000	
	Note: The VID will transmit county codes with values less that 100 in the following format: NN_, where the '_' represents a space. For example, the county code for Denton will be received as '61_'.		
143,e	OBDII_ONLY	CHAR(1)	'Y' - OBDII only station, do not allow any tailpipe testing. 'N' - Not an OBDII only station, allow tailpipe testing.
144,e	MAIL_ST_ADDRESS	CHAR(20)	The station or corporate office mailing address.
164,e	MAIL_CITY	CHAR(13)	The station or corporate office mailing address city.
177,e	MAIL_ZIP	CHAR(10)	The station or corporate office mailing address zip code.
187,e	EMAIL_ADDRESS	CHAR(50)	Email address of the station or corporate office.

237,e	ANALYZER_NO_EXT	CHAR(3)	Analyzer extension for server/node solution, entered by the DPS under the audit menu.
240,e	SPACE	CHAR(270)	
510,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

SYSTEM.DAT

This is both hard disk and floppy based file containing data specific to the individual stations. Record length is 256 bytes.

0,e	OBDII_MODEL_YR	NUM(4)	Received from VID. Threshold Model year for OBD testing on gas vehicles. If less than, do tailpipe. Otherwise, do OBD.
4,e	OBDII_FAIL_ST_DT	NUM(8)	(MMDDYYYY)
12,e	MISFIRE_MON	CHAR(1)	OBD II Readiness Monitor for engine Misfire 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
13,e	FUEL_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Fuel System 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
14,e	COMPR_COMPR_MON	CHAR(1)	OBD II Readiness Monitor for the Comprehensive Components 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
15,e	CATALYST_MON	CHAR(1)	OBD II Readiness Monitor for the Catalytic Converter 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
16,e	HEAT_CATALYST_MON	CHAR(1)	OBD II Readiness Monitor for the Heated Catalytic Converter 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
17,e	EVAP_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Evaporative System 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
18,e	SEC_AIR_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Secondary Air System 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
19,e	AIR_COND_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Air Conditioner System 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
20,e	OXYGEN_SENSOR_MON	CHAR(1)	OBD II Readiness Monitor for the Oxygen Sensor 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
21,e	HEAT_O2_SENS_MON	CHAR(1)	OBD II Readiness Monitor for the Oxygen Sensor Heater 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase

22,e	EGR_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Exhaust Gas Recirculation (EGR) Valve 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
23,e	THERMOSTAT_MON	CHAR(1)	OBD II Readiness Monitor for the Thermostat (beginning with M/Y 2000) 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
24,e	PCV_MON	CHAR(1)	OBD II Readiness Monitor for the PCV Valve (beginning with M/Y 2002) 'Y' - Yes, use as pass/fail criteria for OBDII phase 'N' - No, do not use as pass/fail criteria for OBDII phase
25,e	SECXSEC_FLAG	CHAR(1)	'Y' - Yes, collect second-by-second data for this inspection. 'N' - No, do not collect second-by-second data.
26,e	MAX_NOT_READY_NUM	NUM(2)	Maximum number of OBDII readiness monitors that can be set to "not ready" during a valid OBDII inspection.
28,e	MAX_NT_RDY_BGN_YR	CHAR(4)	YYYY-max number of readiness monitors applies to vehicles whose model year is greater than or equal to the year contained in this field.
32,e	MAX_NT_RDY_END_YR	CHAR(4)	YYYY-max number of readiness monitors applies to vehicles whose model year is less than or equal to the year contained in this field.
36,e	COUNTY_CODE	CHAR(3)	Three digit number identifying a specific county in Texas. Range from 001 to 254. Leading zeros will be stored.
	Dallas - 057, 57_	Denton - 061, 61_	Parker - 184
	El Paso - 071, 71_	Fort Bend - 079, 79_	Johnson - 126
	Harris - 101	Galveston - 084, 84_	Ellis - 070, 70_
	Collin - 043, 43_	Brazoria - 020, 20_	Kaufman - 129
	Liberty - 146	Chambers - 036, 36_	Rockwall - 199
	Tarrant - 220	Montgomery - 170	Bexar - 015, 15_
	Waller - 237	Travis - 227	Comal - 046, 46_
	Hays - 105	Williamson - 246	Bastrop - 011, 11_
	Wilson - 247	Guadalupe - 094, 94_	Smith - 213
	Nueces - 178	San Patricio - 205	Kleberg - 137
	Milam - 166	Lee - 144	Bastrop - 011
	Burnet - 027	Blanco - 016	Bell - 014
	Other - 999	Out of State or Federal - 000	

Note: The VID transmits county codes with values less than 100 in the following format: NN_, where the '_' represents a space. For example, the county code for Denton will be received as '61_'.

39,e	COUNTY_NAME	CHAR(15)	Name of corresponding Texas County
54,e	PRINT_LIRAP_APP	CHAR(1)	'Y' - Print the LIRAP application for vehicles that fail the

			emission test in this county. 'N' - Print the LIRAP application for vehicles that fail the emission test in this county.
55,e	OBD_TESTING	CHAR(1)	'Y' - OBD tests conducted in this county. 'N' - OBD tests not conducted in this county.
56,e	NON_COMM_2_TAILPIPE	CHAR(1)	'Y' - Yes, OBD non-comm may transition to tailpipe test 'N' - No, OBD non-comm may not transition to tailpipe.
57,e	PGRM_ROLLING_YRS	CHAR(1)	'R' - use Rolling years coverage for emissions testing. 'F' - use Fixed model year coverage for emissions testing. 'A' - limits are begin rolling year and fixed year Minimum. 'B' - limits are end rolling year and fixed year Maximum.
58,e	PGRM_BGN_ROLLN_YR	NUM(2)	Calendar year minus this value equals largest model year vehicle to be required to receive emissions test.
60,e	PGRM_END_ROLLN_YR	NUM(2)	Calendar year minus this value equals smallest model year vehicle to be required to receive emissions test.
62,e	PGRM_FIXED_YR_MIN	CHAR(4)	Minimum model year vehicle required to receive emissions test. If using rolling year, fixed yr will be left blank.
66,e	PGRM_FIXED_YR_MAX	CHAR(4)	Maximum model year vehicle to be required to receive emissions test. If using rolling year, fixed yr will be left blank.
70,e	TSI_TESTING	CHAR(1)	'Y' - TSI tests conducted in this county. 'N' - TSI tests not conducted in this county.
71,e	TSI_FAIL_ST_DT	NUM(8)	(MMDDYYYY)
79,e	TSI_BETA_DFLT	CHAR(1)	'S' - Safety & Gas Cap Result
80,e	ASM_BETA_DFLT	CHAR(1)	'S' - Safety & Gas Cap Result 'T' - TSI Result, Safety Result, & Gas Cap Result
81,e	OBD_BETA_DFLT	CHAR(1)	'S' - Safety & Gas Cap Result 'T' - TSI Result, Safety Result, & Gas Cap Result
82,e	DSL_OBD_BETA_DFLT	CHAR(1)	'S' - Safety & Gas Cap Result
83,e	ASM_TESTING	CHAR(1)	'Y' - ASM tests conducted in this county. 'N' - ASM tests not conducted in this county.
84,e	ASM_FAIL_ST_DT	NUM(8)	(MMDDYYYY)
92,e	DSL_OBD_TESTING	CHAR(1)	'Y' - OBD tests conducted on diesel vehicles in this county. 'N' - OBD tests not conducted on diesel vehicles in this

county.

93,e	DSL_FAIL_ST_DT	NUM(8)	(MMDDYYYY)
101,e	DSL_ROLLING_YRS	CHAR(1)	'R' - use Rolling years coverage for emissions testing. 'F' - use Fixed model year coverage for emissions testing. 'A' - limits are begin rolling year and fixed year Minimum. 'B' - limits are end rolling year and fixed year Maximum.
102,e	DSL_BGN_ROLLN_YR	NUM(2)	Calendar year minus this value equals largest model year vehicle to be required to receive emissions test.
104,e	DSL_END_ROLLN_YR	NUM(2)	Calendar year minus this value equals smallest model year vehicle to be required to receive emissions test.
106,e	DSL_FIXED_YR_MIN	CHAR(4)	Minimum model year vehicle required to receive emissions test. If using rolling year, fixed yr will be left blank.
110,e	DSL_FIXED_YR_MAX	CHAR(4)	Maximum model year vehicle to be required to receive emissions test. If using rolling year, fixed yr will be left blank.
114,e	DSL_OBD_MAX_GVW	NUM(4)	'8500' - Diesel vehicle below this value are OBDII compliant.
118,e	DSL_NON_CMM_2_SAFE	CHAR(1)	'Y' - Yes, OBD non-comm may default to safety result. 'N' - No, OBD non-comm may not default to safety result.
119,e	DSL_OBD_MODEL_YR	NUM(4)	Threshold Model year for diesel vehicles. If greater than, do OBD test, if less than, do nothing.
123,e	SPACE	CHAR(131)	
254,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

INSPECTR.DAT

This is both hard disk and floppy based file accessed through the audit screen containing information about the stations inspectors. Record length is 512 bytes.

0,e	INSPECTOR_NUM	CHAR(20)	Number assigned by the DPS through the audit screen.
20,e	INSPECTOR_LNAME	CHAR(15)	Inspector's last name.
35,e	INSPECTOR_FNAME	CHAR(10)	Inspector's first name.
45,e	ACCESS_CODE	CHAR(5)	This is the access code/password for the inspector which is verified prior to each test.
50,e	INSP_EXP_DATE	NUM(8)	(MMDDYYYY) The date the inspectors license expires. This is checked along with the access_code prior to each test.
58,e	INSP_LOCKOUT_FLAG	CHAR(1)	This is a flag which is set by the system or the audit screen to prevent an individual inspector from performing tests. Set to 'Y' by system or audit screen. Set to 'N' by audit screen or electronic transmission.
59,e	ASM_ESP	CHAR(1)	Inspector is certified to do ASM inspections on an ESP analyzer. 'Y' - certified, 'N' - not certified
60,e	ASM_SNAP	CHAR(1)	Inspector is certified to do ASM inspections on an Snapon analyzer. 'Y' - certified, 'N' - not certified
61,e	ASM_SPX	CHAR(1)	Inspector is certified to do ASM inspections on an SPX analyzer. 'Y' - certified, 'N' - not certified
62,e	ASM_WW	CHAR(1)	Inspector is certified to do ASM inspections on an Worldwide analyzer. 'Y' - certified, 'N' - not certified
63,e	PIN_NO	CHAR(5)	Encrypted access number known only by the inspector.
68,e	SPACE	CHAR(442)	
510,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

VEHICLE.DAT

This is both a hard disk and floppy based file containing all vehicle/test information for each test conducted. These records are maintained on hard disk for a period of 180 days. Records older than 180 days should be automatically purged from the hard disk by the system. Record length is 1024 bytes.

0,e	VERSION	CHAR(4)	XXXX This is the software version in use.
4,e	TEST_DATE	NUM(8)	(MMDDYYYY) This is the date of the test. <ul style="list-style-type: none">• First two positions of test_date must be between “01” and less than “12”(inclusive)• Date (positions 2 and 3) must not be greater than the number of days in a given month• Date (positions 2 and 3) must not be greater than 29 if the given month is February in leap year
12,e	TEST_START_TIME	NUM(6)	(HHMMSS) This is the time the test started. <ul style="list-style-type: none">• Value of test_start_time positions one and two (hour) must not be greater than “24.”• Value of test_start_time positions three and four (minute) must not be greater than “59.”• Value of test_start_time positions five and six (second) must not be greater than “59.”
18,e	TEST_END_TIME	NUM(6)	(HHMMSS) This is the time the test ended.
24,e	EMISS_TEST_TYPE	CHAR(1)	Set the EMISS_TEST_TYPE field to ‘1’ if the inspector conducts an OBDII emissions test, ‘2’ if the inspector conducts a two-speed idle emissions test, and a ‘3’ if the inspector conducts an ASM emissions test.
25,e	TEST_TYPE	CHAR(1)	If the inspector selects one of the following choices from the main menu: <ul style="list-style-type: none">1 - Safety & Emission Inspection2 - Safety Only3 - Emissions Only4 - Reinspection5 - Reprint The system will set test_type field to the following: <ul style="list-style-type: none">1 - ‘A’ 5 - ‘K’2 - ‘H’ If 3 - Emissions Only is selected, prompt the inspector to indicated if the test is a: <ul style="list-style-type: none">1 - required emission only test (decal)2 - voluntary test3 - test on resale (not displayed or used)

4 - remote sensing request (decal)

The system will set test_type field to the following:

1 - 'O' 3 - 'C'
2 - 'I' 4 - 'B'

The system will default/highlight selection number 1 in all of the scenarios.

NOTE: The tests and their corresponding letters are cross-referenced below:

A) Emission & Safety Test	H) Safety Only Test
B) Remote Sensing Request (Decal)	I) Voluntary Emissions Test
C) Test on Resale	J) Waiver - Individual Vehicles
D) Accelerated Vehicle Retirement Test	K) Reprint
E) Dispute Test	L) Waiver - Low Income Time Extension
F) Waiver - Minimum Expenditure	M) Parts Availability Time Extension
G) Federal Test	N) Other (Special Test)
	O) Required Emissions Only Test (Decal)
	P) Waiver - Low Mileage

26,e	SPECIAL_TEST	CHAR(1)	Reserved for character mentioned above. Choice 'F' is reserved for 'minimum expenditure waiver tests,' and choice 'G' is reserved for 'federal tests'. Choice 'D' and choice 'E' are reserved for accelerated vehicle retirement tests, tests, and arbitration/dispute tests, respectively. Choice 'J' is reserved for 'individual vehicle waiver tests. Choice 'L,' 'M,' and 'N,' are reserved for 'low income time extension tests,' 'parts availability time extension tests,' and 'other special tests,' respectively. Choice 'C' is reserved for Test on Resale tests. Otherwise, left blank.
27,e	VID_ID_NUM	CHAR(11)	Sent by Texas Information Management System.
38,e	EMISS_INIT_TEST	CHAR(1)	After an inspection has been completed, the system will set initial_test_type to the character "I" for initial test. After an reinspection has been completed, the system shall set initial_test_type to the character "R" for reinspection test. Otherwise, left blank.
39,e	SAFE_INIT_TEST	CHAR(1)	If there is no previous inspection for this vehicle, or the previous inspection was more than sixteen days prior to this inspection, set the SAFE_INIT_TEST to 'I.' If the previous inspection was less than sixteen days prior to this inspection, set the SAFE_INIT_TEST to 'R.' Otherwise, left blank.
40,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.

47,e	STATION_NAME	CHAR(25)	Entered by the DPS under the audit menu.
72,e	ANALYZER_NUMBER	CHAR(8)	This field must be the analyzer number from the STATION.DAT file.
80,e	INSPECTOR_NUM	CHAR(20)	This is the inspector number from INSPECTR.DAT associated with the inspector's access code.
100,e	INSPECTOR_LNAME	CHAR(15)	Inspector's last name.
115,e	INSPECTOR_FNAME	CHAR(10)	Inspector's first name.
125,e	MODEL_YEAR	CHAR(4)	YYYY Model year of the vehicle.
129,e	COUNTY_CODE	CHAR(3)	The county where tested.
	Dallas - 057	Denton - 061	Parker - 184
	El Paso - 071	Fort Bend - 079	Johnson - 126
	Harris - 101	Galveston - 084	Ellis - 070
	Collin - 043	Brazoria - 020	Kaufman - 129
	Liberty - 146	Chambers - 036	Rockwall - 199
	Tarrant - 220	Montgomery - 170	Bexar - 015
	Waller - 237	Travis - 227	Comal - 046
	Hays - 105	Williamson - 246	Bastrop - 011
	Wilson - 247	Guadalupe - 094	Smith - 213
	Nueces - 178	San Patricio - 205	Kleberg - 137
	Milam - 166	Lee - 144	Bastrop - 011
	Burnet - 027	Blanco - 016	Bell - 014
	Other - 999	Out of State or Federal - 000	
132,e	VIN_ID_NUM	CHAR(17)	The VIN number of the vehicle.
149,e	VIN_FLAG	CHAR(1)	If DPS check digit algorithm indicates bad VIN number, set to 'B'-bad. If not, leave blank.
150,e	LICENSE_NUM	CHAR(8)	License number of the vehicle or dealer number if unlicensed.
158,e	LICENSE_TYPE	NUM(1)	This is type of plate. 1 - Texas Plate 2 - No Plate 3 - Out of state 4 - Exempt (State) 5 - Exempt (Federal) 6 - Dealer Plate (Metal/Hard) 7 - Temporary Sticker (Paper) 8 - Other After selecting number '2' or '8,' the license_num field should be set to 'V' followed by the last 7 char of the VIN number. The default for this field is number '1.'

159,e	INJECT_CARB	CHAR(1)	Injection/carburetion. 'F' - Fuel Injection 'C' - Carburetion 'O' - Other Otherwise, left blank.
160,e	VEHICLE_TYPE	CHAR(1)	'P' - Passenger Car/Station Wagon 'T' - Truck/Van/Bus/Sports Utility Vehicle 'M' - Motor home 'B' - Bus 'C' - Motorcycle 'L' - Trailer
161,e	GVW_TYPE	NUM(1)	Gross vehicle weight class. 1 - Light 2 - Heavy Otherwise, zero (0) filled.
162,e	GVW_ACTUAL	NUM(5)	Actual gross vehicle weight rating. Otherwise, left blank.
167,e	MAKE	CHAR(4)	Vehicle make selected from possible list using NCIC make definitions.
171,e	MODEL	CHAR(20)	Vehicle model type is selected based on the vehicle make entry.
191,e	ENGINE_SIZE	CHAR(5)	Values converted to cubic centimeters by the analyzer. Otherwise, left blank.
196,e	CYLINDERS	CHAR(2)	The number of cylinders, "1-16." 'R' - Rotary This entry is made by the inspector if the vehicle inspected is equipped by a rotary engine. Otherwise, left blank.
198,e	TRANSMISSION	CHAR(1)	Transmission type. 'A' - Automatic 'M' - Manual Otherwise, left blank.
199,e	ODOMETER	NUM(6)	The odometer reading excluding tenths.
205,e	FUEL_TYPE	CHAR(1)	The fuel type 'G' - Gas 'D' - Diesel 'B' - Bi-fueled (Dual Fueled) 'N' - None Otherwise, left blank.
206,e	IGNITION	CHAR(1)	The ignition type. 'C' - Conventional

'D' - Distributorless

'Q' - Quad4

Otherwise, left blank.

207,e	DUAL_EXHAUST	CHAR(1)	This is 'Y' Yes or 'N' No. Otherwise, left blank.
208,e	PRE-TUNE	CHAR(1)	This is a 'Y' Yes or 'N' No to the question "Was pre-tuning done on this vehicle prior to testing?" Otherwise, left blank.
209,s	SAFE_TEST_TYPE	CHAR(1)	Safety Inspection Type. The inspector will select "A"- "K" excluding "I" from the keyboard. If the selection is not "G" or "K", then fields SAFE_25 through SAFE_30 will be left blank. Valid entries for this field are A - K, excluding I. Otherwise, left blank.
210,s	SAFE_1	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair (i.e., B, D, G, I, K, M, Q, T, V, X, Z) 'N' - NA Acceptable entries are (A, B, P, F, R, N) Otherwise, left blank.
211,s	SAFE_2	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair (B, D, G, I, K, M, Q, T, V, X, Z) 'N' - NA Acceptable entries are (A, B, C, D P, F, R, N) Otherwise, left blank.
212,s	SAFE_3	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, P, F, R, N)
213,s	SAFE_4	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, H, I, J, K, P, F, R, N)
214,s	SAFE_5	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank.

Acceptable entries are (A, B, C, D, E, G, P, F, R, N)

215,s	SAFE_6A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, H, I, J, K, L, M, O, P, Q, S, T, U, V, F, R, N)
216,s	SAFE_6B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
217,s	SAFE_7	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
218,s	SAFE_7A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
219,s	SAFE_7B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
220,s	SAFE_8	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
221,s	SAFE_9	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank.

Acceptable entries are (A, B, C, D, E, G, P, F, R, N)

222,e	SAFE_10A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
223,e	SAFE_10B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
224,e	SAFE_10C	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
225,e	SAFE_10D	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
226,e	SAFE_10E	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
227,e	SAFE_10F	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
228,s	SAFE_11	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)

229,s	SAFE_12	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
230,s	SAFE_13	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
231,s	SAFE_14	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
232,s	SAFE_15	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
233,s	SAFE_16	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
234,s	SAFE_17	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, H, I, J, K, P, F, R, N)
235,s	SAFE_18	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)

236,s	SAFE_19	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
237,s	SAFE_20	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
238,s	SAFE_21	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
239,s	SAFE_22A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Acceptable entries are (A, B, C, D, P, F, R, N)
240,s	SAFE_22B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
241,s	SAFE_22C	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
242,s	SAFE_22D	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
243,s	SAFE_23	CHAR(1)	'P' - Pass

'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

244,s SAFE_24 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

245,s SAFE_25 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (P, F, R, N)

246,s SAFE_26 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, P, F, R, N)

247,s SAFE_27 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

248,s SAFE_28 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, P, F, R, N)

249,s SAFE_29 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (E, G, P, F, R, N)

250,s SAFE_30 CHAR(1) 'P' - Pass
'F' - Fail

'R' - Repair
 'N' - NA
 Otherwise, left blank.
 Acceptable entries are (A, B, P, F, R, N)

251,e	PRI_CURB_IDLE_CO	NUM(5)	XX.XX	Otherwise, zero filled.
256,e	PRI_CURB_IDLE_HC	NUM(4)	XXXX	Otherwise, zero filled.
260,e	PRI_CURB_IDLE_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
264,e	PRI_CURB_IDLE_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
268,e	PRI_CURB_IDLE_RPM	NUM(4)	XXXX	Otherwise, zero filled.
272,e	PRI_HIGH_SPEED_CO	NUM(5)	XX.XX	Otherwise, zero filled.
277,e	PRI_HIGH_SPEED_HC	NUM(4)	XXXX	Otherwise, zero filled.
281,e	PRI_HIGH_SPEED_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
285,e	PRI_HIGH_SPEED_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
289,e	PRI_HIGH_SPEED_RPM	NUM(4)	XXXX	Otherwise, zero filled.
293,e	ALT_CURB_IDLE_CO	NUM(5)	XX.XX	Otherwise, zero filled.
298,e	ALT_CURB_IDLE_HC	NUM(4)	XXXX	Otherwise, zero filled.
302,e	ALT_CURB_IDLE_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
306,e	ALT_CURB_IDLE_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
310,e	ALT_CURB_IDLE_RPM	NUM(4)	XXXX	Otherwise, zero filled.
314,e	ALT_HIGH_SPEED_CO	NUM(5)	XX.XX	Otherwise, zero filled.
319,e	ALT_HIGH_SPEED_HC	NUM(4)	XXXX	Otherwise, zero filled.
323,e	ALT_HIGH_SPEED_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
327,e	ALT_HIGH_SPEED_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
331,e	ALT_HIGH_SPEED_RPM	NUM(4)	XXXX	Otherwise, zero filled.
335,e	DILUTION	NUM(4)	XX.X	Otherwise, zero filled.
339,e	DILUTION_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.	

340,e	DILUTION_LIMIT	NUM(4)	The applicable dilution criteria for the vehicle. Otherwise, zero filled.
344,e	HC_CUTPOINT_HI	NUM(4)	The applicable HC cutpoint/standard for the vehicle. Otherwise, zero filled.
348,e	CO_CUTPOINT_HI	NUM(5)	The applicable CO cutpoint/standard for the vehicle.
353,e	RPM_BYPASS	CHAR(1)	'B' - Bypass If the rpm bypass selection is selected, then fill this field with the letter 'b'. Otherwise, left blank.
354,e	TIMEOUT_FLAG	CHAR(1)	'Y' - Yes 'N' - No If the emissions test ended due to time out conditions, set TIMEOUT_FLAG to 'Y.' Otherwise, set to 'N.' If no emissions test, left blank.
355,e	HC_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
356,e	CO_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
357,s	INSUR_EXP_DT	NUM(8)	(MMDDYYYY) This is the expiration date of the vehicle owner's proof of insurance. Otherwise, zero filled.
365,s	VI30A_NUM	CHAR(7)	This is the safety inspection's VI 30A number, if applicable. Otherwise, left blank.
372,s	VI30A_FLAG	CHAR(1)	'Y' - 'Yes', indicates if VI 30A is applicable. 'N' - 'No' Otherwise, left blank.
373,s	SAFETY_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
374,e	EMISS_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail 'T' - Time ran out during test. 'D' - Dilution condition ended test Otherwise, left blank.
375,e	GAS_CAP_MISS	CHAR(1)	'Y' - Yes 'N' - No Otherwise, left blank.

376,e	GAS_CAP_TESTABLE	CHAR(1)	'Y' - Yes 'N' - No Otherwise, left blank.
377,e	GAS_CAP_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
378,e	CERT_NUM	CHAR(9)	Certificate number entry. If no certificate issued, left blank.
387,e	CERT_NUM_2	CHAR(9)	Certificate number entry. If no certificate issued, left blank.
396,e	CERT_COND	CHAR(1)	Condition of previous certificate, 'V' - voided, 'M' - missing, 'C' - correct, 'R' - replacement. Otherwise, left blank.
397,e	EMISS_INSP_COST	NUM(5)	99.99 Emission inspection price (market driven, fixed) Otherwise, zero filled.
402,s	SAFE_INSP_COST	NUM(7)	9999.99 Safety inspection cost plus applicable safety related repairs. Otherwise, zero filled.
409,e	OVERALL_COST	CHAR(7)	9999.99 Sum of all costs associated with the inspection including repair costs, where applicable. Otherwise, zero filled.
416,e	OVERALL_RESULTS	CHAR(1)	'P' - Pass 'F' - Fall This is the overall test results of the vehicle inspected.
417,e	REP_CST_YIS	NUM(8)	99999.99 - Total cost of repairs performed at the same facility where inspection was performed. Otherwise, zero filled.
425,e	REP_CST_RRF	NUM(8)	99999.99 - Total cost of repairs performed at a Recognized Emissions Repair Facility. Otherwise, zero filled.
433,e	REP_CST_NRF	NUM(8)	99999.99 - Total cost of repairs performed at a non-recognized repair facility. Otherwise, zero filled.
441,e	REP_CST_MSP	NUM(8)	99999.99 - Total parts costs for self-performed repairs by the motorist. Otherwise, zero filled.
449,e	SPACE	CHAR(152)	
601,e	REP_OVERALL_COST	NUM(8)	99999.99 Otherwise, zero filled.
609,e	ABORT	CHAR(1)	'J'-Before sampling, 'A'-Aborted Test, Blank, if test

			completed and not aborted.
610,e	ABORT_CODE	NUM(2)	01 OIL SYSTEM LEAK WARNING LIGHT IS ON 02 COOLANT SYSTEM LEAK WARNING LIGHT IS ON 03 FUEL SYSTEM LEAK 04 EXCESSIVE ENGINE NOISE 05 VEHICLE DOES NOT REQUIRE INSPECTION 06 BMW, PEUGEOT, VOLVO AUTOMATIC TRANSMISSION 99 OTHER (INDICATE REASON ON THE VIR) Otherwise, left blank.
612,e	MODEL_CODE	CHAR(3)	The NCIC model code or acceptable TCEQ code. Otherwise, left blank.
615,e	TIMEOUT_REDO	CHAR(1)	'Y' - Yes 'N' - No If after 290 seconds a valid test condition was not obtained, and the inspector elects to restart the emissions test, set this field to 'Y'. Otherwise, set to 'N'.
616,e	ORIG_TEST_DATE	NUM(8)	MMDDYYYY Otherwise, zero filled.
624,e	ORIG_TEST_TIME	NUM(6)	HHMMSS Otherwise, zero filled.
630,e	REPL_ID_NUM	CHAR(20)	ID number of the individual that conducts the replacement. INSP_NUM for inspectors, DPS_NUM for Auditors, and '9999999999' (10 9's) for Managers. Otherwise, left blank.
650,e	HC_CUTPOINT_LOW	NUM(4)	HC cutpoint for the low speed idle portion of the emissions phase of the inspection. Otherwise, zero filled.
654,e	CO_CUTPOINT_LOW	NUM(5)	CO cutpoint for the low speed idle portion of the emissions phase of the inspection. Otherwise, zero filled.
659,e	DECAL_NUM	CHAR(9)	Safety Emissions Decal number. Otherwise, left blank.
668,e	DECAL_NUM_2	CHAR(9)	Safety Emissions Decal number for replacements. Otherwise, left blank.
677,e	DECAL_COND	CHAR(1)	Condition of previous decal, 'V' - voided, 'M' - missing,

			'C' - correct, 'R' - replacement. Otherwise, left blank.
678,e	TXDOT_NUM	CHAR(10)	TxDOT number entered by inspector when Texas plate present. Otherwise, left blank.
688,e	WAIVER_NUM	CHAR(7)	Waiver number entered by auditor if a waiver is issued. Otherwise, left blank.
695,e	2ND_GAS_CAP_MISS	CHAR(1)	'Y' - Yes 'N' - No Blank, if only one gas cap tested.
696,e	2ND_GAS_CAP_TEST	CHAR(1)	'Y' - Yes 'N' - No Blank, if only one gas cap tested.
697,e	GAS_CAP_PF_FLAG_1	CHAR(1)	'P' - Pass 'F' - Fail Blank, if gas cap not tested.
698,e	GAS_CAP_PF_FLAG_2	CHAR(1)	'P' - Pass 'F' - Fail Blank, if only one gas cap tested.
699,e	REP_GRP	CHAR(1)	'1' - Fuel System, '2' - Ignition/Electrical System, '3' - Emissions System, '4' - Engine Mechanical, '5' - Miscellaneous, '6' - No Repairs Performed on Vehicle
700,e	PERF_REPAIRS	CHAR(1)	'1' - Recognized Emissions Repair Tech '2' - Other Repair Technician (Non-Recognized) '3' - Motorist (Self-Repair)
701,e	BARCODED_VIN	CHAR(1)	
702,e	BARCODED_TXDOT_NO	CHAR(1)	
703,e	BARCODED_LIC_PLT	CHAR(1)	
704,e	OBD2_MIL_CHECK	CHAR(1)	Y, N
705,e	OBD2_MIL_ON_RUN	CHAR(1)	Y, N
706,e	OBD2_PF_FLAG	CHAR(1)	P, F
707,e	OBD2_READY_RES	CHAR(1)	P, F - Outcome of OBD Readiness Monitors
708,e	OBD2_FAULT_CD_RES	CHAR(1)	

709,e	OBD2_MIL_STATUS	CHAR(1)	
710,e	OBD2_DLC_RES	CHAR(1)	D - damaged N - No communication/signal L - Connector could not be located I - inaccessible/obstructed connector P - Pass
711,e	MISFIRE_READY	CHAR(1)	
712,e	FUEL_SYS_READY	CHAR(1)	
713,e	COMPR_COMPNT_RDY	CHAR(1)	
714,e	CATATLYST_READY	CHAR(1)	
715,e	HEATED_CAT_READY	CHAR(1)	
716,e	EVAP_SYS_RDY	CHAR(1)	
717,e	SEC_AIR_SYS_RDY	CHAR(1)	
718,e	AIR_COND_SYS_RDY	CHAR(1)	
719,e	O2_SENSOR_READY	CHAR(1)	
720,e	O2_SENSOR_HTR_RDY	CHAR(1)	
721,e	EGR_SYS_READY	CHAR(1)	
722,e	THERMOSTAT_RDY	CHAR(1)	
723,e	PCV_RDY	CHAR(1)	
724,e	FAULT_CODES(DTCs)	CHAR(50)	
774,e	DTC_STORED	NUM(2)	
776,e	OBD2_RPM	NUM(4)	
780,e	PID_COUNT	CHAR(2)	
782,e	PCM_ID	CHAR(2)	
784,e	OBD_VIN	CHAR(17)	VIN from the OBD computer, where available
801,e	80_INCHES	CHAR(1)	'Y' - Yes, the vehicle is at least 80" wide 'N' - No, the vehicle is less than 80" wide
802,e	PRI_AVG_5015_CO	NUM(5)	XX.XX Otherwise, zero filled.

807,e	PRI_AVG_5015_HC	NUM(4)	XXXX	Otherwise, zero filled.
811,e	PRI_AVG_5015_CO2	NUM(4)	XX.X	Otherwise, zero filled.
815,e	PRI_AVG_5015_NO	NUM(4)	XXXX	Otherwise, zero filled.
819,e	PRI_AVG_5015_O2	NUM(4)	XX.X	Otherwise, zero filled.
823,e	PRI_AVG_2525_CO	NUM(5)	XX.XX	Otherwise, zero filled.
828,e	PRI_AVG_2525_HC	NUM(4)	XXXX	Otherwise, zero filled.
832,e	PRI_AVG_2525_CO2	NUM(4)	XX.X	Otherwise, zero filled.
836,e	PRI_AVG_2525_NO	NUM(4)	XXXX	Otherwise, zero filled.
840,e	PRI_AVG_2525_O2	NUM(4)	XX.X	Otherwise, zero filled.
844,e	ALT_AVG_5015_CO	NUM(5)	XX.XX	Otherwise, zero filled.
849,e	ALT_AVG_5015_HC	NUM(4)	XXXX	Otherwise, zero filled.
853,e	ALT_AVG_5015_CO2	NUM(4)	XX.X	Otherwise, zero filled.
857,e	ALT_AVG_5015_NO	NUM(4)	XXXX	Otherwise, zero filled.
861,e	ALT_AVG_5015_O2	NUM(4)	XX.X	Otherwise, zero filled.
865,e	ALT_AVG_2525_CO	NUM(5)	XX.XX	Otherwise, zero filled.
870,e	ALT_AVG_2525_HC	NUM(4)	XXXX	Otherwise, zero filled.
874,e	ALT_AVG_2525_CO2	NUM(4)	XX.X	Otherwise, zero filled.
878,e	ALT_AVG_2525_NO	NUM(4)	XXXX	Otherwise, zero filled.
882,e	ALT_AVG_2525_O2	NUM(4)	XX.X	Otherwise, zero filled.
886,e	PRI_AVG_5015_RPM	NUM(4)	XXXX	Otherwise, zero filled.
890,e	PRI_AVG_2525_RPM	NUM(4)	XXXX	Otherwise, zero filled.
894,e	ALT_AVG_5015_RPM	NUM(4)	XXXX	Otherwise, zero filled.
898,e	ALT_AVG_2525_RPM	NUM(4)	XXXX	Otherwise, zero filled.
902,e	ASM_RESTART_CNTR	NUM(1)	X, Number of restarts during the test procedure.	
903,e	SPACE	CHAR(1)		

904,e	DILUTION_5015	NUM(4)	X.XX	Dilution Correction Factor. Otherwise, zero filled.
908,e	DILUTION_2525	NUM(4)	X.XX	Dilution Correction Factor. Otherwise, zero filled.
912,e	SPACE	CHAR(1)		
913,e	RELATIVE_HUMIDITY	NUM(5)	XX.XX	Otherwise, zero filled
918,e	HUMIDITY_CORR_5015	NUM(4)	X.XX	Otherwise, zero filled.
922,e	HUMIDITY_CORR_2525	NUM(4)	X.XX	Otherwise, zero filled.
926,e	SPACE	CHAR(1)		
927,e	ACCEL_VIOLAT_5015	NUM(1)		The number of acceleration violations during the ASM 5015 Mode.
928,e	ACCEL_VIOLAT_2525	NUM(1)		The number of acceleration violations during the ASM 2525 Mode.
929,e	THP_5015	NUM(4)	XX.X	Total Horsepower used to set the dynamometer.
933,e	THP_2525	NUM(4)	XX.X	Total Horsepower used to set the dynamometer.
937,e	AMB_BULB_TEMP	NUM(3)	XXX	Otherwise, zero filled. Ambient dry bulb temperature in °F prior to each test.
940,e	BARO_PRESSURE	NUM(3)	XXX	Otherwise, zero filled. Barometric Pressure (Absolute) measured in mm of Hg prior to each test.
943,s	SAFE_10	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA	Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
944,s	SAFE_16A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA	Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
945,s	SAFE_16B	CHAR(1)	'P' - Pass 'F' - Fail	

			'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
946,s	SAFE_33	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (J, K, E, G, P, F, R, N)
947,s	SAFE_34	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
948,s	SAFE_35	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
949,s	SAFE_36	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
950,e	NO_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
951,e	TEST_WEIGHT	CHAR(5)	
956,e	SPACE	CHAR(5)	
961,e	AXLE_TYPE	CHAR(1)	'Y' - vehicle has AWD, Full-Time Four Wheel Drive or non-disengageable traction control. 'N' - vehicle is testable on the ASM two wheel dynamometer.
962,e	TEST_REC_NUM	NUM(6)	Id for second-by-second data, if turned on.
968,e	TAILPIPE_START_TIME	NUM(6)	(HHMMSS) This is the time the tailpipe (ASM or TSI) test started.

- Value of test_start_time positions one and two (hour) must not be greater than “24.”
- Value of test_start_time positions three and four (minute) must not be greater that “59.”
- Value of test_start_time positions five and six (second) must not be greater than “59.”

974,e	TAILPIPE_END_TIME	NUM(6)	(HHMMSS) This is the time the tailpipe (ASM or TSI) test ended.
980,e	BODY_STYLE	CHAR(1)	Vehicle Body style for ASM test.
981,e	ANALYZER_NO_EXT	CHAR(3)	Analyzer extension for server/node solution, entered from the VID or by the DPS under the audit menu .
984,e	DPS_SAFE_SEQ	CHAR(1)	Number of the DPS safety item sequence selected by the lane inspector.
985,e	HC_CUTPOINT_2525	NUM(4)	XXXX
989,e	CO_CUTPOINT_2525	NUM(5)	XX.XX
994,e	NO_CUTPOINT_2525	NUM(4)	XXXX
998,e	HC_CUTPOINT_5015	NUM(4)	XXXX
1002,e	CO_CUTPOINT_5015	NUM(5)	XX.XX
1007,e	NO_CUTPOINT_5015	NUM(4)	XXXX
1011,e	SPACE	CHAR(11)	
1022,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

REINSPEC.DAT

This is both a hard disk and floppy based file containing all vehicle/test information for each test conducted. These records are maintained on hard disk for a period of 180 days. Records older than 180 days should be automatically purged from the hard disk by the system. Record length is 1024 bytes.

0,e	VERSION	CHAR(4)	XXXX This is the software version in use.
4,e	TEST_DATE	NUM(8)	(MMDDYYYY) This is the date of the test. <ul style="list-style-type: none">• First two positions of test_date must be between “01” and less than “12”(inclusive)• Date (positions 2 and 3) must not be greater than the number of days in a given month• Date (positions 2 and 3) must not be greater than 29 if the given month is February in leap year
12,e	TEST_START_TIME	NUM(6)	(HHMMSS) This is the time the test started. <ul style="list-style-type: none">• Value of test_start_time positions one and two (hour) must not be greater than “24.”• Value of test_start_time positions three and four (minute) must not be greater than “59.”• Value of test_start_time positions five and six (second) must not be greater than “59.”
18,e	TEST_END_TIME	NUM(6)	(HHMMSS) This is the time the test ended.
24,e	EMISS_TEST_TYPE	CHAR(1)	Set the EMISS_TEST_TYPE field to ‘1’ if the inspector conducts an OBDII emissions test, ‘2’ if the inspector conducts a two-speed idle emissions test, and a ‘3’ if the inspector conducts an ASM emissions test.
25,e	TEST_TYPE	CHAR(1)	If the inspector selects one of the following choices from the main menu: <ul style="list-style-type: none">1 - Safety & Emission Inspection2 - Safety Only3 - Emissions Only4 - Reinspection5 - Reprint The system will set test_type field to the following: <ul style="list-style-type: none">1 - ‘A’ 5 - ‘K’2 - ‘H’ If 3 - Emissions Only is selected, prompt the inspector to indicated if the test is a: <ul style="list-style-type: none">1 - required emission only test (decal)2 - voluntary test3 - test on resale (not displayed or used)

4 - remote sensing request (decal)

The system will set test_type field to the following:

1 - 'O' 3 - 'C'
2 - 'I' 4 - 'B'

The system will default/highlight selection number 1 in all of the scenarios.

NOTE: The tests and their corresponding letters are cross-referenced below:

TEST_TYPE

A) Emission & Safety Test	H) Safety Only Test
B) Remote Sensing Request (Decal)	I) Voluntary Emissions Test
P) VI30a Only	K) Reprint
	O) Required Emissions Only Test (Decal)

SPECIAL_TEST

C) Test on Resale	J) Waiver - Individual Vehicles
D) Accelerated Vehicle Retirement Test	L) Waiver - Low Income Time Extension
E) Dispute Test	M) Parts Availability Time Extension
F) Not currently in use	N) Other (Special Test)
G) Federal Test	P) Waiver - Low Mileage
A) Special Certificate Replacement Inspection	

26,e	SPECIAL_TEST	CHAR(1)	Reserved for character mentioned above. Choice 'F' is reserved for 'minimum expenditure waiver tests,' and choice 'G' is reserved for 'federal tests'. Choice 'D' and choice 'E' are reserved for accelerated vehicle retirement tests, tests, and arbitration/dispute tests, respectively. Choice 'J' is reserved for 'individual vehicle waiver tests. Choice 'L,' 'M,' and 'N,' are reserved for 'low income time extension tests,' 'parts availability time extension tests,' and 'other special tests,' respectively. Otherwise, left blank.
27,e	VID_ID_NUM	CHAR(11)	Sent by Texas Information Management System.
38,e	EMISS_INIT_TEST	CHAR(1)	After an inspection has been completed, the system will set initial_test_type to the character "I" for initial test. After an reinspection has been completed, the system shall set initial_test_type to the character "R" for reinspection test. Otherwise, left blank.
39,e	SAFE_INIT_TEST	CHAR(1)	If there is no previous inspection for this vehicle, or the previous inspection was more than sixteen days prior to this inspection, set the SAFE_INIT_TEST to 'I.' If the previous inspection was less than sixteen days prior to this

inspection, set the SAFE_INIT_TEST to 'R.' Otherwise, left blank.

40,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
47,e	STATION_NAME	CHAR(25)	Entered by the DPS under the audit menu.
72,e	ANALYZER_NUMBER	CHAR(8)	This field must be the analyzer number from the STATION.DAT file.
80,e	INSPECTOR_NUM	CHAR(20)	This is the inspector number from INSPECTR.DAT associated with the inspector's access code.
100,e	INSPECTOR_LNAME	CHAR(15)	Inspector's last name.
115,e	INSPECTOR_FNAME	CHAR(10)	Inspector's first name.
125,e	MODEL_YEAR	CHAR(4)	YYYY Model year of the vehicle.
129,e	COUNTY_CODE	CHAR(3)	The county where tested.
	Dallas - 057	Denton - 061	Parker - 184
	El Paso - 071	Fort Bend - 079	Johnson - 126
	Harris - 101	Galveston - 084	Ellis - 070
	Collin - 043	Brazoria - 020	Kaufman - 129
	Liberty - 146	Chambers - 036	Rockwall - 199
	Tarrant - 220	Montgomery - 170	Bexar - 015
	Waller - 237	Travis - 227	Comal - 046
	Hays - 105	Williamson - 246	Bastrop - 011
	Wilson - 247	Guadalupe - 094	Smith - 213
	Nueces - 178	San Patricio - 205	Kleberg - 137
	Milam - 166	Lee - 144	Bastrop - 011
	Burnet - 027	Blanco - 016	Bell - 014
	Other - 999	Out of State or Federal - 000	
132,e	VIN_ID_NUM	CHAR(17)	The VIN number of the vehicle.
149,e	VIN_FLAG	CHAR(1)	If DPS check digit algorithm indicates bad VIN number, set to 'B'-bad. If not, leave blank.
150,e	LICENSE_NUM	CHAR(8)	License number of the vehicle or dealer number if unlicensed.
158,e	LICENSE_TYPE	NUM(1)	This is type of plate. 1 - Texas Plate 2 - No Plate 3 - Out of state 4 - Exempt (State) 5 - Exempt (Federal)

6 - Dealer Plate (Metal/Hard)

7 - Temporary Sticker (Paper)

8 - Other

After selecting number '2' or '8,' the license_num field should be set to 'V' followed by the last 7 char of the VIN number. The default for this field is number '1.'

159,e	INJECT_CARB	CHAR(1)	Injection/carburetion. 'F' - Fuel Injection 'C' - Carburetion 'O' - Other Otherwise, left blank.
160,e	VEHICLE_TYPE	CHAR(1)	'P' - Passenger Car/Station Wagon 'T' - Truck/Van/Bus/Sports Utility Vehicle 'M' - Motor home 'B' - Bus 'C' - Motorcycle 'L' - Trailer
161,e	GVW_TYPE	NUM(1)	Gross vehicle weight class. 1 - Light 2 - Heavy Otherwise, zero (0) filled.
162,e	GVW_ACTUAL	NUM(5)	Actual gross vehicle weight rating. Otherwise, left blank.
167,e	MAKE	CHAR(4)	Vehicle make selected from possible list using NCIC make definitions.
171,e	MODEL	CHAR(20)	Vehicle model type is selected based on the vehicle make entry.
191,e	ENGINE_SIZE	CHAR(5)	Values converted to cubic centimeters by the analyzer. Otherwise, left blank.
196,e	CYLINDERS	CHAR(2)	The number of cylinders, "1-16." 'R' - Rotary This entry is made by the inspector if the vehicle inspected is equipped by a rotary engine. Otherwise, left blank.
198,e	TRANSMISSION	CHAR(1)	Transmission type. 'A' - Automatic 'M' - Manual Otherwise, left blank.
199,e	ODOMETER	NUM(6)	The odometer reading excluding tenths.
205,e	FUEL_TYPE	CHAR(1)	The fuel type 'G' - Gas

			'D' - Diesel 'B' - Bi-fueled (Dual Fueled) 'N' - None Otherwise, left blank.
206,e	IGNITION	CHAR(1)	The ignition type. 'C' - Conventional 'D' - Distributorless 'Q' - Quad4 Otherwise, left blank.
207,e	DUAL_EXHAUST	CHAR(1)	This is 'Y' Yes or 'N' No. Otherwise, left blank.
208,e	PRE-TUNE	CHAR(1)	This is a 'Y' Yes or 'N' No to the question "Was pre-tuning done on this vehicle prior to testing?" Otherwise, left blank.
209,s	SAFE_TEST_TYPE	CHAR(1)	Safety Inspection Type. The inspector will select "A"- "K" excluding "I" from the keyboard. If the selection is not "G" or "K", then fields SAFE_25 through SAFE_30 will be left blank. Valid entries for this field are A - K, excluding I. Otherwise, left blank.
210,s	SAFE_1	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Acceptable entries are (A, B, P, F, R, N) Otherwise, left blank.
211,s	SAFE_2	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Acceptable entries are (A, B, C, D P, F, R, N) Otherwise, left blank.
212,s	SAFE_3	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, P, F, R, N)
213,s	SAFE_4	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, H, I, J, K, P, F, R,

N)

214,s	SAFE_5	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
215,s	SAFE_6A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are A, B, C, D, E, G, H, I, J, K, L, M, O, P, Q, S, T, U, V, F, R, N)
216,s	SAFE_6B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
217,s	SAFE_7	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
218,s	SAFE_7A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
219,s	SAFE_7B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
220,s	SAFE_8	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank.

Acceptable entries are (A, B, C, D, E, G, P, F, R, N)

221,s	SAFE_9	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, P, F, R, N)
222,e	SAFE_10A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
223,e	SAFE_10B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
224,e	SAFE_10C	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
225,e	SAFE_10D	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
226,e	SAFE_10E	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
227,e	SAFE_10F	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)

228,s	SAFE_11	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
229,s	SAFE_12	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
230,s	SAFE_13	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
231,s	SAFE_14	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
232,s	SAFE_15	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
233,s	SAFE_16	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
234,s	SAFE_17	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, E, G, H, I, J, K, P, F, R, N)

235,s	SAFE_18	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
236,s	SAFE_19	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
237,s	SAFE_20	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
238,s	SAFE_21	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
239,s	SAFE_22A	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Acceptable entries are (A, B, C, D, P, F, R, N)
240,s	SAFE_22B	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
241,s	SAFE_22C	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (P, F, R, N)
242,s	SAFE_22D	CHAR(1)	'P' - Pass

'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

243,s SAFE_23 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

244,s SAFE_24 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

245,s SAFE_25 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (P, F, R, N)

246,s SAFE_26 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, P, F, R, N)

247,s SAFE_27 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

248,s SAFE_28 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, P, F, R, N)

249,s SAFE_29 CHAR(1) 'P' - Pass
'F' - Fail

'R' - Repair
 'N' - NA
 Otherwise, left blank.
 Acceptable entries are (E, G, P, F, R, N)

250,s	SAFE_30	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA Otherwise, left blank. Acceptable entries are (A, B, P, F, R, N)	
251,e	PRI_CURB_IDLE_CO	NUM(5)	XX.XX	Otherwise, zero filled.
256,e	PRI_CURB_IDLE_HC	NUM(4)	XXXX	Otherwise, zero filled.
260,e	PRI_CURB_IDLE_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
264,e	PRI_CURB_IDLE_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
268,e	PRI_CURB_IDLE_RPM	NUM(4)	XXXX	Otherwise, zero filled.
272,e	PRI_HIGH_SPEED_CO	NUM(5)	XX.XX	Otherwise, zero filled.
277,e	PRI_HIGH_SPEED_HC	NUM(4)	XXXX	Otherwise, zero filled.
281,e	PRI_HIGH_SPEED_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
285,e	PRI_HIGH_SPEED_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
289,e	PRI_HIGH_SPEED_RPM	NUM(4)	XXXX	Otherwise, zero filled.
293,e	ALT_CURB_IDLE_CO	NUM(5)	XX.XX	Otherwise, zero filled.
298,e	ALT_CURB_IDLE_HC	NUM(4)	XXXX	Otherwise, zero filled.
302,e	ALT_CURB_IDLE_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
306,e	ALT_CURB_IDLE_O ₂	NUM(4)	XX.X	Otherwise, zero filled.
310,e	ALT_CURB_IDLE_RPM	NUM(4)	XXXX	Otherwise, zero filled.
314,e	ALT_HIGH_SPEED_CO	NUM(5)	XX.XX	Otherwise, zero filled.
319,e	ALT_HIGH_SPEED_HC	NUM(4)	XXXX	Otherwise, zero filled.
323,e	ALT_HIGH_SPEED_CO ₂	NUM(4)	XX.X	Otherwise, zero filled.
327,e	ALT_HIGH_SPEED_O ₂	NUM(4)	XX.X	Otherwise, zero filled.

331,e	ALT_HIGH_SPEED_RPM	NUM(4)	XXXX	Otherwise, zero filled.
335,e	DILUTION	NUM(4)	XX.X	Otherwise, zero filled.
339,e	DILUTION_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail	Otherwise, left blank.
340,e	DILUTION_LIMIT	NUM(4)		The applicable dilution criteria for the vehicle. Otherwise, zero filled.
344,e	HC_CUTPOINT_HI	NUM(4)		The applicable HC cutpoint/standard for the vehicle. Otherwise, zero filled.
348,e	CO_CUTPOINT_HI	NUM(5)		The applicable CO cutpoint/standard for the vehicle.
353,e	RPM_BYPASS	CHAR(1)	'B' - Bypass	If the rpm bypass selection is selected, then fill this field with the letter 'b'. Otherwise, left blank.
354,e	TIMEOUT_FLAG	CHAR(1)	'Y' - Yes 'N' - No	If the emissions test ended due to time out conditions, set TIMEOUT_FLAG to 'Y.' Otherwise, set to 'N.' If no emissions test, left blank.
355,e	HC_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail	Otherwise, left blank.
356,e	CO_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail	Otherwise, left blank.
357,s	INSUR_EXP_DT	NUM(8)	(MMDDYYYY)	This is the expiration date of the vehicle owner's proof of insurance. Otherwise, zero filled.
365,s	VI30A_NUM	CHAR(7)		This is the safety inspection's VI 30A number, if applicable. Otherwise, left blank.
372,s	VI30A_FLAG	CHAR(1)	'Y' - 'Yes', indicates if VI 30A is applicable. 'N' - 'No'	Otherwise, left blank.
373,s	SAFETY_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail	Otherwise, left blank.
374,e	EMISS_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail	

			'T' - Time ran out during test. 'D' - Dilution condition ended test Otherwise, left blank.
375,e	GAS_CAP_MISS	CHAR(1)	'Y' - Yes 'N' - No Otherwise, left blank.
376,e	GAS_CAP_TESTABLE	CHAR(1)	'Y' - Yes 'N' - No Otherwise, left blank.
377,e	GAS_CAP_PF_FLAG	CHAR(1)	'P' - Pass 'F' - Fail Otherwise, left blank.
378,e	CERT_NUM	CHAR(9)	Certificate number entry. If no certificate issued, left blank.
387,e	CERT_NUM_2	CHAR(9)	Certificate number entry. If no certificate issued, left blank.
396,e	CERT_COND	CHAR(1)	Condition of previous certificate, 'V' - voided, 'M' - missing, 'C' - correct, 'R' - replacement. Otherwise, left blank.
397,e	EMISS_INSP_COST	NUM(5)	99.99 Emission inspection price (market driven, fixed) Otherwise, zero filled.
402,s	SAFE_INSP_COST	NUM(7)	9999.99 Safety inspection cost plus applicable safety related repairs. Otherwise, zero filled.
409,e	OVERALL_COST	CHAR(7)	9999.99 Sum of all costs associated with the inspection including repair costs, where applicable. Otherwise, zero filled.
416,e	OVERALL_RESULTS	CHAR(1)	'P' - Pass 'F' - Fail This is the overall test results of the vehicle inspected.
417,e	REP_CST_YIS	NUM(8)	99999.99 - Total cost of repairs performed at the same facility where inspection was performed. Otherwise, zero filled.
425,e	REP_CST_RRF	NUM(8)	99999.99 - Total cost of repairs performed at a Recognized Emissions Repair Facility. Otherwise, zero filled.
433,e	REP_CST_NRF	NUM(8)	99999.99 - Total cost of repairs performed at a non-recognized repair facility. Otherwise, zero filled.

441,e	REP_CST_MSP	NUM(8)	99999.99 - Total parts costs for self-performed repairs by the motorist. Otherwise, zero filled.
449,e	SPACE	CHAR(152)	
601,e	REP_OVERALL_COST	NUM(8)	99999.99 Otherwise, zero filled.
609,e	ABORT	CHAR(1)	'J'-Before sampling, 'A'-Aborted Test, Blank, if test completed and not aborted.
610,e	ABORT_CODE	NUM(2)	01 OIL SYSTEM LEAK WARNING LIGHT IS ON 02 COOLANT SYSTEM LEAK WARNING LIGHT IS ON 03 FUEL SYSTEM LEAK 04 EXCESSIVE ENGINE NOISE 05 VEHICLE DOES NOT REQUIRE INSPECTION 06 BMW, PEUGEOT, VOLVO AUTOMATIC TRANSMISSION 99 OTHER (INDICATE REASON ON THE VIR) Otherwise, left blank.
612,e	MODEL_CODE	CHAR(3)	The NCIC model code or acceptable TCEQ code. Otherwise, left blank.
615,e	TIMEOUT_REDO	CHAR(1)	'Y' - Yes 'N' - No If after 290 seconds a valid test condition was not obtained, and the inspector elects to restart the emissions test, set this field to 'Y'. Otherwise, set to 'N'.
616,e	ORIG_TEST_DATE	NUM(8)	MMDDYYYY Otherwise, zero filled.
624,e	ORIG_TEST_TIME	NUM(6)	HHMMSS Otherwise, zero filled.
630,e	REPL_ID_NUM	CHAR(20)	ID number of the individual that conducts the replacement. INSP_NUM for inspectors, DPS_NUM for Auditors, and '9999999999' (10 9's) for Managers. Otherwise, left blank.
650,e	HC_CUTPOINT_LOW	NUM(4)	HC cutpoint for the low speed idle portion of the emissions phase of the inspection. Otherwise, zero filled.
654,e	CO_CUTPOINT_LOW	NUM(5)	CO cutpoint for the low speed idle portion of the emissions

phase of the inspection. Otherwise, zero filled.

659,e	DECAL_NUM	CHAR(9)	Safety Emissions Decal number. Otherwise, left blank.
668,e	DECAL_NUM_2	CHAR(9)	Safety Emissions Decal number for replacements. Otherwise, left blank.
677,e	DECAL_COND	CHAR(1)	Condition of previous decal, 'V' - voided, 'M' - missing, 'C' - correct, 'R' - replacement. Otherwise, left blank.
678,e	TXDOT_NUM	CHAR(10)	TxDOT number entered by inspector when Texas plate present. Otherwise, left blank.
688,e	WAIVER_NUM	CHAR(7)	Waiver number entered by auditor if a waiver is issued. Otherwise, left blank.
695,e	2ND_GAS_CAP_MISS	CHAR(1)	'Y' - Yes 'N' - No Blank, if only one gas cap tested.
696,e	2ND_GAS_CAP_TEST	CHAR(1)	'Y' - Yes 'N' - No Blank, if only one gas cap tested.
697,e	GAS_CAP_PF_FLAG_1	CHAR(1)	'P' - Pass 'F' - Fail Blank, if gas cap not tested.
698,e	GAS_CAP_PF_FLAG_2	CHAR(1)	'P' - Pass 'F' - Fail Blank, if only one gas cap tested.
699,e	REP_GRP	CHAR(1)	'1' - Fuel System, '2' - Ignition/Electrical System, '3' - Emissions System, '4' - Engine Mechanical, '5' - Miscellaneous, '6' - No Repairs Performed on Vehicle
700,e	PERF_REPAIRS	CHAR(1)	'1' - Recognized Emissions Repair Tech '2' - Other Repair Technician (Non-Recognized) '3' - Motorist (Self-Repair)
701,e	BARCODED_VIN	CHAR(1)	
702,e	BARCODED_TXDOT_NO	CHAR(1)	
703,e	BARCODED_LIC_PLT	CHAR(1)	
704,e	OBD2_MIL_CHECK	CHAR(1)	Y, N

705,e	OBD2_MIL_ON_RUN	CHAR(1)	Y, N
706,e	OBD2_PF_FLAG	CHAR(1)	P, F
707,e	OBD2_READY_RES	CHAR(1)	
708,e	OBD2_FAULT_CD_RES	CHAR(1)	
709,e	OBD2_MIL_STATUS	CHAR(1)	
710,e	OBD2_DLC_RES	CHAR(1)	D - damaged N - No communication/signal L - Connector could not be located I - inaccessible/obstructed connector P - Pass
711,e	MISFIRE_READY	CHAR(1)	
712,e	FUEL_SYS_READY	CHAR(1)	
713,e	COMPR_COMPNT_RDY	CHAR(1)	
714,e	CATATLYST_READY	CHAR(1)	
715,e	HEATED_CAT_READY	CHAR(1)	
716,e	EVAP_SYS_RDY	CHAR(1)	
717,e	SEC_AIR_SYS_RDY	CHAR(1)	
718,e	AIR_COND_SYS_RDY	CHAR(1)	
719,e	O2_SENSOR_READY	CHAR(1)	
720,e	O2_SENSOR_HTR_RDY	CHAR(1)	
721,e	EGR_SYS_READY	CHAR(1)	
722,e	THERMOSTAT_RDY	CHAR(1)	
723,e	PCV_RDY	CHAR(1)	
724,e	FAULT_CODES(DTCs)	CHAR(50)	
774,e	DTC_STORED	NUM(2)	
776,e	OBD2_RPM	NUM(4)	
780,e	PID_COUNT	CHAR(2)	

782,e	PCM_ID	CHAR(2)		
784,e	OBD_VIN	CHAR(17)	VIN from the OBD computer, where available	
801,e	80_INCHES	CHAR(1)	'Y' - Yes, the vehicle is at least 80" wide 'N' - No, the vehicle is less than 80" wide	
802,e	PRI_AVG_5015_CO	NUM(5)	XX.XX	Otherwise, zero filled.
807,e	PRI_AVG_5015_HC	NUM(4)	XXXX	Otherwise, zero filled.
811,e	PRI_AVG_5015_CO2	NUM(4)	XX.X	Otherwise, zero filled.
815,e	PRI_AVG_5015_NO	NUM(4)	XXXX	Otherwise, zero filled.
819,e	PRI_AVG_5015_O2	NUM(4)	XX.X	Otherwise, zero filled.
823,e	PRI_AVG_2525_CO	NUM(5)	XX.XX	Otherwise, zero filled.
828,e	PRI_AVG_2525_HC	NUM(4)	XXXX	Otherwise, zero filled.
832,e	PRI_AVG_2525_CO2	NUM(4)	XX.X	Otherwise, zero filled.
836,e	PRI_AVG_2525_NO	NUM(4)	XXXX	Otherwise, zero filled.
840,e	PRI_AVG_2525_O2	NUM(4)	XX.X	Otherwise, zero filled.
844,e	ALT_AVG_5015_CO	NUM(5)	XX.XX	Otherwise, zero filled.
849,e	ALT_AVG_5015_HC	NUM(4)	XXXX	Otherwise, zero filled.
853,e	ALT_AVG_5015_CO2	NUM(4)	XX.X	Otherwise, zero filled.
857,e	ALT_AVG_5015_NO	NUM(4)	XXXX	Otherwise, zero filled.
861,e	ALT_AVG_5015_O2	NUM(4)	XX.X	Otherwise, zero filled.
865,e	ALT_AVG_2525_CO	NUM(5)	XX.XX	Otherwise, zero filled.
870,e	ALT_AVG_2525_HC	NUM(4)	XXXX	Otherwise, zero filled.
874,e	ALT_AVG_2525_CO2	NUM(4)	XX.X	Otherwise, zero filled.
878,e	ALT_AVG_2525_NO	NUM(4)	XXXX	Otherwise, zero filled.
882,e	ALT_AVG_2525_O2	NUM(4)	XX.X	Otherwise, zero filled.
886,e	PRI_AVG_5015_RPM	NUM(4)	XXXX	Otherwise, zero filled.
890,e	PRI_AVG_2525_RPM	NUM(4)	XXXX	Otherwise, zero filled.

894,e	ALT_AVG_5015_RPM	NUM(4)	XXXX	Otherwise, zero filled.
898,e	ALT_AVG_2525_RPM	NUM(4)	XXXX	Otherwise, zero filled.
902,e	ASM_RESTART_CNTR	NUM(1)	X,	Number of restarts during the test procedure.
903,e	SPACE	CHAR(1)		
904,e	DILUTION_5015	NUM(4)	X.XX	Dilution Correction Factor. Otherwise, zero filled.
908,e	DILUTION_2525	NUM(4)	X.XX	Dilution Correction Factor. Otherwise, zero filled.
912,e	SPACE	CHAR(1)		
913,e	RELATIVE_HUMIDITY	NUM(5)	XX.XX	Otherwise, zero filled
918,e	HUMIDITY_CORR_5015	NUM(4)	X.XX	Otherwise, zero filled.
922,e	HUMIDITY_CORR_2525	NUM(4)	X.XX	Otherwise, zero filled.
926,e	SPACE	CHAR(1)		
927,e	ACCEL_VIOLAT_5015	NUM(1)		The number of acceleration violations during the ASM 5015 Mode.
928,e	ACCEL_VIOLAT_2525	NUM(1)		The number of acceleration violations during the ASM 2525 Mode.
929,e	THP_5015	NUM(4)	XX.X	Total Horsepower used to set the dynamometer.
933,e	THP_2525	NUM(4)	XX.X	Total Horsepower used to set the dynamometer.
937,e	AMB_BULB_TEMP	NUM(3)	XXX	Otherwise, zero filled. Ambient dry bulb temperature in °F prior to each test.
940,e	BARO_PRESSURE	NUM(3)	XXX	Otherwise, zero filled. Barometric Pressure (Absolute) measured in mm of Hg prior to each test.
943,s	SAFE_10	CHAR(1)	'P' - Pass 'F' - Fail 'R' - Repair 'N' - NA	Otherwise, left blank. Acceptable entries are (A, B, C, D, P, F, R, N)
944,s	SAFE_16A	CHAR(1)	'P' - Pass	

'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

945,s SAFE_16B CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

946,s SAFE_33 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (J, K, E, G, P, F, R, N)

947,s SAFE_34 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

948,s SAFE_35 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

949,s SAFE_36 CHAR(1) 'P' - Pass
'F' - Fail
'R' - Repair
'N' - NA
Otherwise, left blank.
Acceptable entries are (A, B, C, D, P, F, R, N)

950,e NO_PF_FLAG CHAR(1) 'P' - Pass
'F' - Fail
Otherwise, left blank.

951,e TEST_WEIGHT CHAR(5)

956,e SPACE CHAR(5)

961,e AXLE_TYPE CHAR(1) Y - vehicle has AWD, Full-Time Four Wheel Drive or non-

disengageable traction control.
 N - vehicle is testable on the ASM two wheel

dynamometer.

962,e	TEST_REC_NUM	NUM(6)	Id for second-by-second data, if turned on.
968,e	TAILPIPE_START_TIME	NUM(6)	(HHMMSS) This is the time the tailpipe (ASM or TSI) test started. <ul style="list-style-type: none"> • Value of test_start_time positions one and two (hour) must not be greater than "24." • Value of test_start_time positions three and four (minute) must not be greater that "59." • Value of test_start_time positions five and six (second) must not be greater than "59."
974,e	TAILPIPE_END_TIME	NUM(6)	(HHMMSS) This is the time the tailpipe (ASM or TSI) test ended.
980,e	BODY_STYLE	CHAR(1)	Vehicle Body style for ASM test.
981,e	ANALYZER_NO_EXT	CHAR(3)	Analyzer extension for server/node solution, entered from the VID or by the DPS under the audit menu .
984,e	DPS_SAFE_SEQ	CHAR(1)	Number of the DPS safety item sequence selected by the lane inspector.
985,e	HC_CUTPOINT_2525	NUM(4)	XXXX
989,e	CO_CUTPOINT_2525	NUM(5)	XX.XX
994,e	NO_CUTPOINT_2525	NUM(4)	XXXX
998,e	HC_CUTPOINT_5015	NUM(4)	XXXX
1002,e	CO_CUTPOINT_5015	NUM(5)	XX.XX
1007,e	NO_CUTPOINT_5015	NUM(4)	XXXX
1011,e	SPACE	CHAR(11)	
1022,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

RECALL.DAT

This is both a hard disk and floppy based file containing vehicle information for tests aborted after the vehicle information is entered and prior to initiating sampling for the official emissions test. The system will automatically purge any record in this file on both hard and floppy disk older than 72 hours. Record length is 204 bytes long.

0,e	TEST_DATE	NUM(8)	(MMDDYYYY) This is the date of the test. <ul style="list-style-type: none">• First two positions of test_date must be between “01” and less than “12”(inclusive)• Date (positions 2 and 3) must not be greater than the number of days in a given month• Date (positions 2 and 3) must not be greater than 29 if the given month is February in leap year
8,e	EMISS_TEST_TYPE	CHAR(1)	The analyzer will set the EMISS_TEST_TYPE field to ‘1’ if the inspector conducts an OBDII emissions test, ‘2’ if the inspector conducts a two-speed idle emissions test, and a ‘3’ if the inspector conducts an ASM emissions test.
9,e	TEST_TYPE	CHAR(1)	If the inspector selects one of the following choices from the main menu: <ul style="list-style-type: none">1 - Safety & Emission Inspection2 - Safety Only3 - Emissions Only4 - Reinspection5 - Reprint The system will set test_type field to the following: <ul style="list-style-type: none">1 - ‘A’ 5 - ‘K’2 - ‘H’ If 3 - Emissions Only is selected, prompt the inspector to indicated if the test is a: <ul style="list-style-type: none">1 - required emission only test (decal)2 - voluntary test3 - test on resale (not displayed or used)4 - remote sensing request (decal) The system will set test_type field to the following: <ul style="list-style-type: none">1 - ‘O’ 3 - ‘C’2 - ‘I’ 4 - ‘B’ The system will default/highlight selection number 1 in all of the scenarios.

NOTE: The tests and their corresponding letters are cross-referenced below:

TEST_TYPE

A) Emission & Safety Test

H) Safety Only Test

- | | | | |
|----|--------------------------------|----|--------------------------------------|
| B) | Remote Sensing Request (Decal) | I) | Voluntary Emissions Test |
| P) | VI30a Only | K) | Reprint |
| | | O) | Required Emissions Only Test (Decal) |

SPECIAL_TEST

- | | | | |
|----|--|----|------------------------------------|
| C) | Test on Resale | J) | Waiver - Individual Vehicles |
| D) | Accelerated Vehicle Retirement Test | L) | Waiver - Low Income Time Extension |
| E) | Dispute Test | M) | Parts Availability Time Extension |
| F) | Not Currently in use | N) | Other (Special Test) |
| G) | Federal Test | P) | Waiver - Low Mileage |
| A) | Special Certificate Replacement Inspection | | |

10,e	SPECIAL_TEST	CHAR(1)	Reserved for character mentioned above. Choice 'F' is reserved for 'minimum expenditure waiver tests,' and choice 'G' is reserved for 'federal tests'. Choice 'D' and choice 'E' are reserved for accelerated vehicle retirement tests, and arbitration/dispute tests, respectively. Choice 'J' is reserved for 'individual vehicle waiver tests. Choice 'L,' 'M,' and 'N,' are reserved for 'low income time extension tests,' 'parts availability time extension tests,' and 'other special tests,' respectively.
11,e	VID_ID_NUM	CHAR(11)	Sent by the Texas Information Management System host.
22,e	EMISS_INIT_TEST	CHAR(1)	After an inspection has been completed, the system will set initial_test_type to the character "I" for initial test. After a reinspection has been completed, the system shall set initial_test_type to the character "R" for reinspection test.
23,e	SAFE_INIT_TEST	CHAR(1)	If there is no previous inspection for this vehicle, or the previous inspection was more than sixteen days prior to this inspection, set the SAFE_INIT_TEST to 'I.' If the previous inspection was less than sixteen days prior to this inspection, set the SAFE_INIT_TEST to 'R.'
24,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
31,e	STATION_NAME	CHAR(25)	Entered by the DPS under the audit menu.
56,e	ANALYZER_NUMBER	CHAR(8)	This field must be the analyzer number from the STATION.DAT file.
64,e	INSPECTOR_NUM	CHAR(20)	This is the inspector number from INSPECTR.DAT associated with the inspector's access code.
84,e	INSPECTOR_LNAME	CHAR(15)	Inspector's last name.
99,e	INSPECTOR_FNAME	CHAR(10)	Inspector's first name.

109,e	MODEL_YEAR	CHAR(4)	YYYY Model year of the vehicle.
113,e	COUNTY_CODE	CHAR(3)	The county where tested. Dallas - 057 Denton - 061 Parker - 184 El Paso - 071 Fort Bend - 079 Johnson - 126 Harris - 101 Galveston - 084 Ellis - 070 Collin - 043 Brazoria - 020 Kaufman - 129 Liberty - 146 Chambers - 036 Rockwall - 199 Tarrant - 220 Montgomery - 170 Bexar - 015 Waller - 237 Travis - 227 Comal - 046 Hays - 105 Williamson - 246 Bastrop - 011 Wilson - 247 Guadalupe - 094 Smith - 213 Nueces - 178 San Patricio - 205 Kleberg - 137 Milam - 166 Lee - 144 Bastrop - 011 Burnet - 027 Blanco - 016 Bell - 014 Other - 999 Out of State or Federal - 000
116,e	VIN_ID_NUM	CHAR(17)	The VIN number of the vehicle.
133,e	VIN_FLAG	CHAR(1)	If DPS check digit algorithm indicates bad VIN number, set to 'B'-bad. If not, leave blank.
134,e	LICENSE_NUM	CHAR(8)	License number of the vehicle or dealer number if unlicensed.
142,e	LICENSE_TYPE	NUM(1)	This is type of plate. 1 - Texas Plate 2 - No Plate 3 - Out of state 4 - Exempt (State) 5 - Exempt (Federal) 6 - Dealer Plate (Metal/Hard) 7 - Temporary Sticker (Paper) 8 - Other After selecting number '2' or '8,' the license_num field should be set to 'V' followed by the last 7 char of the VIN number. The default for this field is number '1.'
143,e	INJECT_CARB	CHAR(1)	Injection/carburetion. 'F' - Fuel Injection 'C' - Carburetion 'O' - Other
144,e	VEHICLE_TYPE	CHAR(1)	'P' - Passenger Car/Station Wagon 'T' - Truck/Van/Bus/Sports Utility Vehicle 'M' - Motor home
145,e	GVW_TYPE	NUM(1)	Gross vehicle weight class. 1 - Light

2 - Heavy
Otherwise, zero (0) filled.

146,e	GVW_ACTUAL	NUM(5)	Actual gross vehicle weight rating.
151,e	MAKE	CHAR(4)	Vehicle make selected from possible list using NCIC make definitions.
155,e	MODEL	CHAR(20)	Vehicle model type is selected based on the vehicle make entry.
175,e	ENGINE_SIZE	CHAR(5)	Values converted to cubic centimeters by the analyzer.
180,e	CYLINDERS	CHAR(2)	The number of cylinders, "1-16." 'R' - Rotary This entry is made by the inspector if the vehicle inspected is equipped by a rotary engine.
182,e	TRANSMISSION	CHAR(1)	Transmission type. 'A' - Automatic 'M' - Manual
183,e	ODOMETER	NUM(6)	The odometer reading excluding tenths.
189,e	FUEL_TYPE	CHAR(1)	The fuel type 'G' - Gas 'D' - Diesel 'B' - Bi-fueled (Dual Fueled) 'N' - None
190,e	IGNITION	CHAR(1)	The ignition type. 'C' - Conventional 'D' - Distributorless 'Q' - Quad4
191,e	DUAL_EXHAUST	CHAR(1)	This is 'Y' Yes or 'N' No.
192,e	PRE-TUNE	CHAR(1)	This is a 'Y' Yes or 'N' No to the question "Was pre-tuning done on this vehicle prior to testing?"
193 ,s	SAFE_TEST_TYPE	CHAR(1)	Safety Inspection Type. The inspector will select "A"- "G" from the keyboard. If the selection is "A" - "F," then fields SAFE_25 through SAFE_30 will be left blank.
194,s	INSUR_EXP_DT	NUM(8)	(MMDDYYYY) This is the expiration date of the vehicle owner's proof of insurance.
202,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

AUDITNOT.DAT

This is both a hard disk and floppy based file containing all auditors notes. The auditors notes will be maintained on the hard disk until it is deleted by the auditors. This file allows the auditors to make entries and comments after the monthly audit. This should allow for free form notes to be entered and reviewed by the auditors. Record length is 361 bytes.

0,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
7,e	ANALYZER_NUMBER	CHAR(8)	This field must be the authorized analyzer number from the STATION.DAT file.
15,e	DATE	NUM(8)	(MMDDYYYY)
23,e	TIME	NUM(6)	(HHMM)
29,e	SPACE	CHAR(4)	Former DPS representative/technician ID number.
33e	NOTES	CHAR(319)	Record length may vary (maximum 319 characters).
352,e	GAS_CAP_CAL_RES	CHAR(1)	Gas Cap Tester Calibration Results 'P' - Pass 'F' - Fail 'N' - Not Done
353,e	DPS_REP_ID	CHAR(6)	DPS representative/technician ID number, new length
359,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

AUDITLOG.DAT

This is both a hard disk and floppy based file containing all audit login attempts. Records will be maintained on hard disk for 180 days. Procedures must be programmed that periodically purge the collected records from the hard disk older than 180 days. Only audit log records are to be stored in this file. Record length is 64 bytes.

0,e	STATION_NUM	CHAR(7)		This field must be the authorized station number from the STATION.DAT file.
7,e	ANALYZER_NUMBER	CHAR(8)		This field must be the authorized analyzer number from the STATION.DAT file.
15,e	DATE	NUM(8)		(MMDDYYYY) Date of the login attempt.
23,e	TIME	NUM(4)		(HHMM) Time of the login attempt.
27,e	LOGON	CHAR(1)		'U' - Unauthorized login attempt 'A' - Authorized login attempt
28,e	DPS_REP_ID	CHAR(4)		old DPS representative/technician ID format.
32,e	SEARCH	CHAR(1)		'Y' - Yes, otherwise, blank.
33,e	TIME	NUM(4)		(HHMM) Time of the DPS search request. Zero filled if SEARCH is blank.
37,e	BAD_DPS_ID	CHAR(1)	'U' -	Did not match DPS_REP_ID in AUDITOR.DAT file, login unauthorized. 'A' - Matched value in DPS_REP_ID - login authorized
38,e	DPS_REP_ID	CHAR(6)		DPS representative/technician ID number, new length
44,e	SPACE	CHAR(18)		
62,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)		2 BYTES

AUDITOR.DAT

This is both a hard disk and floppy based file containing all DPS representatives/inspectors authorized to access the Audit Menu. Records will be maintained on hard disk. Record length is 64 bytes.

0,e	DPS_REP_ID	CHAR(6)	DPS Representative/technician ID number, new length
6,e	AUDITOR_LNAME	CHAR(15)	DPS Representative/Auditor's last name.
21,e	AUDITOR_FNAME	CHAR(10)	DPS Representative/Auditor's first name.
31,e	SPACE	CHAR(31)	
62,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

AUDTMENU.DAT

This is both a hard disk and floppy based file containing activity of the DPS representatives/inspectors during the authorized access of the Audit Menu. Records will be maintained on hard disk. Once this file is successfully transmitted to the TIMS, it may be erased. Record length is 64 bytes.

0,e	DPS_REP_ID	CHAR(6)	DPS Representative/technician ID number, new length
6,e	MENU_NUMBER	CHAR(2)	Audit Main Menu selection number
8,e	MENU_IN_OUT	CHAR(1)	'I' - In the menu. 'O' - Out of the menu.
9,e	DATE	NUM(8)	(MMDDYYYY) Date of the login attempt.
17,e	TIME	NUM(4)	(HHMM) Time of the login attempt.
21,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
28,e	ANALYZER_NUMBER	CHAR(8)	This field must be the authorized analyzer number for the STATION.DAT file.
36,e	SPACE	CHAR(26)	
62,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

DEFLK.DAT

This is both a hard disk and floppy based file containing the top forty used deficiency codes that will be entered by the DPS representatives/inspectors during the authorized access of the Audit Menu. Records will be maintained on hard disk. Record length is 256 bytes.

0,e	LK_CODE	NUM(5)	This field contained the DPS deficiency code number.
5,	SPACE	NUM(3)	
8,e	LK_DESC_TXT	CHAR(200)	DPS deficiency code description for the corresponding code number.
208,e	SPACE	CHAR(46)	
254,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

LOCKOUT.DAT

This is both a hard disk based file containing lockout information. The record will be maintained on the hard disk and updated by the Texas Information Management System host. Only lockout information is to be stored in this file. This file indicates that the fields shall toggle between entries of Y's and 'N's or 1's and 0's. A lockout is active or 'on' if the field contains a '1' or 'Y.' The lockout is disabled or 'off' if the field contains a '0' or a 'N.' If the analyzer uses 0's and 1's in this file, the lockout status screen shall display N's or No's and Y's or Yes's. The logic by which the lockouts are set and cleared shall not be affected. Record length is 14 bytes.

0,e	STATE_LOCKOUT	CHAR(1)	Set to '1' or 'Y' by audit screen. Set to 'N' by electronic transmission.
1,e	CABINET_TAMPER	CHAR(1)	Set to '1' or 'Y' by system. Set to '0' or 'N' by service technician, or audit screen.
2,e	FLOPPY_TAMPER	CHAR(1)	Set to '1' or 'Y' by system. Set to '0' or 'N' by service technician, or audit screen.
3,e	STAT_CERT_EXP	CHAR(1)	Set to '1' or 'Y' by system. Set to '0' or 'N' by electronic transmission.
4,e	STAT_CERT_SUSP	CHAR(1)	Set to '1' or 'Y' by system. Set to '0' or 'N' by electronic transmission.
5,e	STAT_CERT_REVOK	CHAR(1)	Set to '1' or 'Y' by system. Set to '0' or 'N' by electronic transmission.
6,e	COMM_FAIL_PAY	CHAR(1)	Set to '1' or 'Y' or to '0' or 'N' by electronic transmission.
7,e	MAX_TEST_WO_COMM	CHAR(1)	Set to '1' or 'Y' by system or electronic transmission. Set to '0' or 'N' by electronic transmission.
8,e	NO_CONTACT_LIMIT	NUM(3)	Sent by Texas Information Management System host. Maximum number of tests that can be conducted without contact with the Texas Information Management System host.
11,e	LOW_VOL_STATION	CHAR(1)	Set to '1' or 'Y' or to '0' or 'N' by electronic transmission
12,e	ASM_TSI_LOCKOUT	CHAR(1)	Set to '1' or 'Y' by audit menu. Set to '0' or 'N' by electronic transmission or audit screen.
13,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

ESC.DAT

This is a hard disk based file containing emissions standards. Records will be maintained on the hard disk until updated by the Texas Information Management System. Only emissions standards are to be stored in this file. Record length is 64 bytes.

0,e	EMISS_STND_CAT	NUM(2)	Ranges from 1 to 50
2,e	START_YEAR	NUM(4)	XXXX
6,e	END_YEAR	NUM(4)	XXXX
10,e	GVW_TYPE	NUM(1)	1 = Light-duty, or 2 = Heavy duty
11,e	AVG_HC_IDLE_PASS	NUM(4)	Reserved for future use. (XXXX)
15,e	AVG_CO_ILDE_PASS	NUM(5)	Reserved for future use. (XX.XX)
20,e	AVG_HC_HIGH_PASS	NUM(4)	Reserved for future use. (XXXX)
24,e	AVG_CO_HIGH_PASS	NUM(5)	Reserved for future use. (XX.XX)
29,e	MAX_HC_IDLE	NUM(4)	(XXXX)
33,e	MAX_CO_IDLE	NUM(5)	(XX.XX)
38,e	MAX_HC_HIGH	NUM(4)	(XXXX)
42,e	MAX_CO_HIGH	NUM(5)	(XX.XX)
47,e	MIN_CO+CO2	NUM(5)	(XX.XX)
52,e	MAX_IDLE_RPM	NUM(4)	(XXXX)
56,e	SPACE	CHAR(6)	
62,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

TXVRT.DAT

This is a hard disk based file containing vehicle test parameters. Records will be maintained on the hard disk until updated by the Texas Information Management System. Only vehicle test parameters are to be stored in this file. Record length is 247 bytes.

0,e	VRT_RECORD_ID	NUM(5)	VRT identifier
5,e	MODEL_YR	NUM(4)	(YYYY) Vehicle Model year
9,e	VEHICLE_BODY_TYPE	NUM(1)	1 = SEDAN, 2 = STATION WAGON, 3 = PICKUP, 4 = SPORT/UTILITY VEHICLE, 5 = MINIVAN, 6 = FULL-SIZE VAN
10,e	VEHICLE_STNDS_TYPE	CHAR(1)	P - passenger, T - truck
11,e	VEHICLE_MAKE	CHAR(17)	Make of Vehicle Under Test (VUT). Vehicle make selected from possible list using the Sierra Lookup Table naming convention
28,e	MAKE	CHAR(4)	Vehicle make selected from possible list using NCIC make definitions.
32,e	VEHICLE_MODEL_NM	CHAR(23)	Model of Vehicle Under Test (VUT). Vehicle model selected from possible list using the Sierra Lookup Table naming convention
55,e	MODEL	CHAR(20)	Vehicle model type is selected based on the vehicle make entry.
75,e	MODEL_CODE	CHAR(3)	The NCIC model code or acceptable TCEQ code. Otherwise, left blank.
78,e	NUMBER_CYLINDERS	NUM(2)	Number of cylinders: valid numbers 3-17 (17=rotary)
80,e	ENGINE_SIZE	NUM(4)	Engine Size in cubic centimeters (cc)
84,e	TRANSMISSION	CHAR(1)	A=Auto, M=Manual, E=Either
85,e	VEHICLE_REF_NO	CHAR(8)	Row source reference
93,e	GVWR	NUM(5)	Gross vehicle weight from inspector entry
98,e	VEHICLE_TEST_WT	NUM(4)	Weight from table
102,e	ASM_HP_2525	NUM(4)	test hp 2525
106,e	ASM_HP_5015	NUM(4)	test hp 5015
110,e	DYNO_TEST_AVAIL	CHAR(1)	Y=YES N=NO M=MAYBE

111,e	FUEL_CAP_ADAP	CHAR(1)	A=Dark Blue, B=Yellow, C=Red, E=Green, F=Black, G=Gray, H=Threaded, L=Light Blue, O=Orange, T=Tan/Brown, Z=Varies, U=Untestable, N=unknown or no adapter required
112,e	ASM_CUTPT_ROW_ID	NUM(5)	
117,e	MISFIRE_MON	CHAR(1)	OBD II Readiness Monitor for engine Misfire
118,e	FUEL_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Fuel System
119,e	COMPR_COMPR_MON	CHAR(1)	OBD II Readiness Monitor for the Comprehensive Components
120,e	CATALYST_MON	CHAR(1)	OBD II Readiness Monitor for the Catalytic Converter
121,e	HEAT_CATALYST_MON	CHAR(1)	OBD II Readiness Monitor for the Heated Catalytic Converter
122,e	EVAP_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Evaporative System
123,e	SEC_AIR_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Secondary Air System
124,e	AIR_COND_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Air Conditioner System
125,e	OXYGEN_SENSOR_MON	CHAR(1)	OBD II Readiness Monitor for the Oxygen Sensor
126,e	HEAT_O2_SENS_MON	CHAR(1)	OBD II Readiness Monitor for the Oxygen Sensor Heater
127,e	EGR_SYS_MON	CHAR(1)	OBD II Readiness Monitor for the Exhaust Gas Recirculation (EGR) Valve
128,e	THERMOSTAT_MON	CHAR(1)	OBD II Readiness Monitor for the Thermostat (beginning with M/Y 2000)
129,e	PCV_MON	CHAR(1)	OBD II Readiness Monitor for the PCV Valve (beginning with M/Y 2002)
130,e	EXEMPT_MK_OBD2TST	CHAR(17)	(NCIC) Make to exempt OBD II test
147,e	EXEMPT_MD_OBD2TST	NUM(23)	(999) Model code for Model to exempt from OBD II test
170,e	MAX_NUM_NOT_READY	NUM(1)	Maximum number of monitors not set to allow a pass
171,e	DLC_LOCATION	NUM(1)	Location of DLC, number 1-9 Per EPA Locator Grid
172,e	DLC_COVERED	CHAR(1)	Y=DLC is covered, N=No cover Per EPA Locator Grid
173,e	FORCE_TEST_TYPE	CHAR(1)	A=ASM, T=TSI, O=OBD, or Blank (default test based on MY of vehicle being tested)

174,e	NOT_RDY_TO_ASM	CHAR(1)	E = if present, and vehicle deemed not ready, then transition to tailpipe test.
175,e	SPACE	CHAR(62)	
237,e	ROW_DATE	NUM(8)	MMDDYYYY - date of the last VRT update.
245,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

DFLTHP.DAT

This is a hard disk based file containing vehicle test parameters. Records will be maintained on the hard disk until updated by the Texas Information Management System. Only vehicle test parameters are to be stored in this file. Record length is 247 bytes.

0,e	VEHICLE_BODY_TYPE	NUM(1)	1 = SEDAN, 2 = STATION WAGON, 3 = PICKUP, 4 = SPORT/UTILITY VEHICLE, 5 = MINIVAN, 6 = FULL-SIZE VAN
1,e	NUMBER_CYLINDERS	NUM(2)	Number of cylinders: valid numbers 3-17 (17=rotary)
3,	SPACE	CHAR(4)	
7,e	DYNO_ROLL_SIZE	NUM(4)	XX.X, 08.6, 20.0
11,e	ASM_HP_5015	NUM(4)	test hp 5015
15,e	SPACE	CHAR(4)	
19,e	ASM_HP_2525	NUM(4)	test hp 2525
23,e	SPACE	CHAR(4)	
27,e	VEHICLE_TEST_WT	NUM(4)	Weight from table
31,e	SPACE	CHAR(214)	
245,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

PERFORM.DAT

This is both hard disk and floppy based file accessed through the audit screen. The system will purge records older than 180 days automatically from the hard disk. Record length is 768 bytes.

0,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
7,e	STATION_NAME	CHAR(25)	This field must be the station name from the STATION.DAT file.
32,e	ANALYZER_NUMBER	CHAR(8)	
40,e	TODAY'S DATE	NUM(8)	(MMDDYYYY)
48,e	DATE_LAST_REPORT	NUM(8)	(MMDDYYYY) Date of the last Station Performance Report.
56,e	DATE_LAST_CALIBRAT	NUM(8)	(MMDDYYYY) The date of the last three-day gas calibration and leak check.
64,e	STATION_SIGN	CHAR(1)	'P' - Pass 'F' - Fail
65,e	PRICE POSTED	CHAR(1)	'P' - Pass 'F' - Fail
66,e	HOURS POSTED	CHAR(1)	'P' - Pass 'F' - Fail
67,e	CERT_OF_APPT	CHAR(1)	'P' - Pass 'F' - Fail
68,e	INSPECTOR LICENSE	CHAR(1)	'P' - Pass 'F' - Fail
69,e	DISPLAY_BOARD	CHAR(1)	'A' - Pass 'B' - Fail
70,e	CURR_EMISS_MANUAL	CHAR(1)	'P' - Pass 'F' - Fail
71,e	CERTIFICATES	CHAR(1)	'P' - Pass 'F' - Fail
72,e	PUBLIC RELATION PAMPHLET	CHAR(1)	'P' - Pass 'F' - Fail
73,e	TUNE-UP TOOLS	CHAR(1)	'P' - Pass 'F' - Fail

74,e	PROPANE ENRICH- MENT KIT	CHAR(1)	'P' - Pass 'F' - Fail
75,e	FUEL INLET RESTRICTOR GAUGE	CHAR(1)	'P' - Pass 'F' - Fail
76,e	FLEX PROBES	CHAR(1)	'P' - Pass 'F' - Fail
77,e	APPVD_BAR90_GAS	CHAR(1)	'A' - Pass 'B' - Fail
78,e	RULES_REGS_MANUAL	CHAR(1)	'P' - Pass 'F' - Fail
79,e	BRAKE_TEST_AREA	CHAR(1)	'P' - Pass 'F' - Fail
80,e	REQUIRED_EQUIP	CHAR(1)	'A' - Pass 'B' - Fail
81,e	TACHOMETER_LEAD	CHAR(1)	'A' - Pass 'B' - Fail
82,e	GAS_CAP_TESTER	CHAR(1)	'A' - Pass 'B' - Fail
83,e	INSP_ON_DUTY	CHAR(1)	'A' - Pass 'B' - Fail
84,e	INSPECTION_BAY	CHAR(1)	'A' - Pass 'B' - Fail
85,e	APPR_WIN_TINT_MTR	CHAR(1)	'P' - Pass 'F' - Fail
86,e	ANLYZR_PRNTR_SUPPL	CHAR(1)	'A' - Pass 'B' - Fail
87,e	OVERALL_RESULT	CHAR(1)	'P' - Pass 'F' - Fail
88,e	CHANGE ACCESS CODE	CHAR(1)	'Y' - Yes 'N' - No
89,e	NEW DATA DISK	CHAR(1)	'Y' - Yes 'N' - No
90,e	RESET TAMPER	CHAR(1)	'Y' - Yes 'N' - No

91,e	SOFTWARE UPDATE	CHAR(1)	'Y' - Yes 'N' - No
92,e	STATION LOCKOUT	CHAR(1)	'Y' - Yes 'N' - No
93,e	INSPECTOR LOCKOUT	CHAR(1)	'Y' - Yes 'N' - No
94,e	LETTER DELIVERED	CHAR(1)	'Y' - Yes 'N' - No
95,e	TECHNICAL BULLETINS	CHAR(1)	'Y' - Yes 'N' - No
96,e	DPS_REP_ID	CHAR(6)	DPS Representative/technician ID number, new length
102,e	BARCODE_SCANNER	CHAR(1)	'Y' - Yes, 'N' - No, can also be edited under FSR menu
103,e	CD_ROM	CHAR(1)	'Y' - Yes, 'N' - NO, can also be edited under FSR menu
104,e	DVD	CHAR(1)	'Y' - Yes, 'N' - NO, can also be edited under FSR menu
105,e	MODEL_NUM	CHAR(15)	Analyzer model number, can also be edited under FSR menu
120,e	SERIAL_NUMBER_1	CHAR(15)	Primary analyzer serial number, can also be edited under FSR menu
135,e	SERIAL_NUMBER_2	CHAR(15)	Secondary analyzer serial number, can also be edited under FSR menu
150,e	MANU_ID	CHAR(20)	Free text for Manu ID, can also be edited under FSR menu
170,e	VIOLATION_CDS	CHAR(25)	These are the violation codes entered by the DPS auditor.
195,e	ACTION_CDS	CHAR(10)	These are the action codes entered by the DPS auditor. Each action code is alphanumeric of length 2, and has expected values of 'C' - for Citation Issued, 'W' for Warning Issued, 'S' for Suspension Recommended, and 'R' for Revocation Recommended, or a combination of these values.
205,e	TICKET_NOS	CHAR(70)	The ticket numbers entered by the DPS auditor.
275,e	NOTES	CHAR(319)	Record length may vary (maximum 320 characters). Copy of the NOTES field in AUDITNOT.DAT file for transmission to VID.
594,e	SPACE	CHAR(172)	

766,e CARRIAGE RETURN CHAR(2) 2 BYTES
AND LINE FEED

VIRMSG.S.DAT

This is both a hard disk and floppy based file containing the messages that will be printed on the VIR at the conclusion of an inspection. Records will be maintained on hard disk. Record length is variable.

0,e	MESSAGE_DELIMIT	CHAR(3)	&*&
3,e	MESSAGE_NUM	NUM(2)	Record number of this message block in file.
5,e	NUM_MSG_BLKs	NUM(2)	Total number of message blocks in file.
7,e	MESSAGE_ID	CHAR(8)	Message Identifier
15,e	DATE_UPDATE	NUM(8)	MMDDYYYY, date of last update.
23,e	MESSG_LN_COUNT	NUM(2)	Message line count
25,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	<CR><LF>
27,e	MESSAGE_TEXT	CHAR(Var)	ASCII text with up to 76 characters per line for screen messages/ 110 characters per line for printed messages. 1000 bytes/message. Each message line terminates with <CR><LF>.

SECXSEC.DAT

This is both a hard disk and floppy based file containing the second by second data from the last ASM test. Records will be maintained on hard disk. Once this file is successfully transmitted to the TIMS, it may be erased. Record length is 64 bytes.

0,e	TEST_REC_NUM	NUM(6)	
6,e	STATION_NUM	CHAR(7)	This field must be the authorized station number from the STATION.DAT file.
13,e	ANALYZER_NUM	CHAR(8)	This field must be the authorized analyzer number from the STATION.DAT file.
21,e	TIME_INCREMENT	NUM(3)	"001" - " 270"
24,e	VEHICLE_SPEED	NUM(4)	XX.X, vehicle speed during the inspection.
28,e	HC	NUM(4)	HC reading in ppm (Not DCF Adjusted), XXXX
32,e	CO	NUM(5)	CO reading in ppm (Not DCF Adjusted), XX.XX
37,e	CO2	NUM(4)	CO2 reading in ppm (Not DCF Adjusted), XX.X
41,e	NO	NUM(4)	NO reading in ppm (Not DCF Adjusted), XXXX
45,e	O2	NUM(4)	O2 reading in ppm (Not DCF Adjusted), XX.X
49,e	AIR_FUEL_RATIO	NUM(4)	Air Fuel Ratio, XX.X
53,e	SPACE	CHAR(9)	
62,e	CONTROL_CHARS	CHAR(2)	<CR><LF>, 2 BYTES

TXDTC.DAT

This is both a hard disk and floppy based file containing the OBDII diagnostic trouble codes that if present when the malfunction indicator light is commanded on, will result in failure of the emissions phase of the inspection. Records will be maintained on hard disk. Record length is 128 bytes.

0,e	FAULT_CODE(DTC)	CHAR(5)	
5,e	FAULT_CD_DESC	CHAR(66)	Written description of the fault code.
71,e	FAIL_FLAG	CHAR(1)	'Y' - Yes, fail the vehicle if this code is present, when MIL commanded on. 'N' - No, do not fail the vehicle if this code is present, when the MIL is commanded on.
72,e	SPACE	CHAR(54)	
126,e	CONTROL_CHARS	CHAR(2)	<CR><LF>, 2 BYTES

ESC_ASM.DAT

This is a hard disk based file containing emissions standards. Records will be maintained on the hard disk until updated by the Texas Information Management System. Only emissions standards are to be stored in this file. Record length is 64 bytes.

0,e	ASM_CUTPT_ROW_ID	NUM(5)	
5,e	MODEL_YEAR	NUM(4)	XXXX
9,e	VEHICLE_TEST_WT	NUM(4)	XXXX
13,e	VEHICLE_STNDS_TYPE	CHAR(1)	P = Passenger, or T = Truck
14,e	MIN_GVWR	NUM(4)	
18,e	MAX_GVWR	NUM(4)	
22,e	HC_CUTPOINT_2525	NUM(4)	XXXX
26,e	CO_CUTPOINT_2525	NUM(5)	XX.XX
31,e	NO_CUTPOINT_2525	NUM(4)	XXXX
35,e	HC_CUTPOINT_5015	NUM(4)	XXXX
39,e	CO_CUTPOINT_5015	NUM(5)	XX.XX
44,e	NO_CUTPOINT_5015	NUM(4)	XXXX
48,e	DATE	DATE(8)	MMDDYYYY, date of last update
56,e	SPACE	CHAR(6)	
62,e	CARRIAGE RETURN AND LINE FEED	CHAR(2)	2 BYTES

Appendix J
Sample of a
Vehicle Inspection
Report

Subject to Change

TEXAS VEHICLE INSPECTION REPORT

Safety and Emissions Inspection

Vehicle Identification

Test Date: 5/24/01
Test Time: 10:56
Test Type: Initial/Reinspection
Test: OBD Test
Version Number: 0101
License Number: CKS72E
Vehicle ID Number: 124329RIOE2833LK4
Vehicle Make: CHEV
Vehicle Model: CAMARO
Vehicle Year: 1996
Vehicle Type: P
Engine Size: 3800
Cylinders/Ignition: 6 C
Transmission: AUTOMATIC
Vehicle Weight: 3990
Fuel Type: GASOLINE
Odometer: 73592

Station Identification

Station Name: Bob's Texaco
Station Number: 1P00000
Station Address: 123 Forest Lane
Station City: Dallas
Station Zip Code: 12345
Inspector First Name: Guy
Inspector Last Name: Heine
Analyzer Number: TX983271
Safety Inspection Fee: XXXX.XX
Safety Repair Costs: XX.XX
Emissions Test Fee: XXXX.XX
Emissions Repair Costs: XX.XX
Total Inspection Cost: XXXX.XX

Emissions Test Results

MIL Cmd Status	On	Misfire	Ready	Heated Cat	N/A	O2 Sens	Ready
MIL:		Fuel Sys	Ready	Evap	Not Ready	O2 Sens Htr	Ready
Engine On:	Pass	Comp Cmpnt	Ready	2 nd Sys	N/A	EGR Sys	Ready
Engine Off:	Pass	Catalyst	Ready	Air Cond	N/A	DLC	Pass

Fault Codes: No Codes Present

Gas Cap Integrity: PASS

Safety Items: PASS

Overall Result: Pass
Certificate Number: E00000005

Vehicles that fail the emissions test must be repaired and pass a retest before a safety certificate can be issued. Some newer vehicles that fail the test may be covered by manufacturers' warranties. Consult your owner's manual or your dealer for details.

I certify that I have properly performed the emissions test according to applicable rules and regulations.

Certified Inspector's Signature

1st Barcode and label appears here

2nd Barcode and label appears here

Appendix L
Flow Charts
(Available Upon Request)

Appendix N

Example
Public Awareness Statements

(Draft/Sample - Subject to revisions as needed)
(Emissions Passed)

PUBLIC AWARENESS STATEMENT PASSING VEHICLE

CONGRATULATIONS, your vehicle has passed the emissions (I/M) test portion of your annual safety inspection! By maintaining your car in good working condition you are doing your share for clean air. You are also saving money on gas and extending the life of your vehicle because your emissions control equipment is working as it should.

There is an air pollution problem in many Texas cities and cars and trucks cause a large amount of that pollution. High levels of air pollution affect the health and welfare of many citizens. Identifying cars and trucks that are not working properly and ensuring that they are repaired helps in the air pollution battle. Thanks for doing your part, continue to follow your vehicle manufacturers' maintenance schedule, and drive safely!

If you have any additional questions regarding the I/M test, call your local Department of Public Safety Motor Vehicle Inspection Office.

I certify that I have performed the Emissions Test according to state regulations and procedures manuals.

Inspector _____

(Draft/Sample - Subject to revisions as needed)
(Emissions Failed)

PUBLIC AWARENESS STATEMENT FAILED VEHICLE

Your vehicle has failed the emissions (I/M) portion of your annual safety inspection. The rating your vehicle received indicates that emissions related components are not operating at highest efficiency and repairs are needed.

The testing inspector should provide you with a list of Recognized Emissions Repair Facilities and a fact sheet of additional information on what you should do next. Vehicles that fail the test must be repaired and pass a retest before an inspection sticker can be issued. Some newer vehicles that fail the I/M test may be covered by manufacturers' warranties. Consult your owner's manual or your dealer for details.

The fact sheet you receive also includes information on various waivers available, retest details and referee services. Feel free to go over this information with your testing inspector. This information is also available in more detail on the Department of Public Safety's website at www.airchecktexas.com. If you have any additional questions regarding the I/M test, call your local Department of Public Safety Motor Vehicle Inspection Waiver Office.

There is an air pollution problem in many Texas cities and poorly running cars and trucks cause a large part of that pollution. By having the proper repairs made you will be doing your share for clean air. Also, keeping your vehicle in good repair will improve performance, give you better fuel economy, and extend the life of your vehicle.

I certify that I have performed the emissions test according to state regulations and procedures manuals and have provided additional information to the customer on repairs, retest and waivers.

Inspector_____

Appendix O
Sample
Vehicle Repair Form (VRF)

Appendix P
ALLDATA File Structure
&
File Layout

Texas file structure, ALLREP.DAT
to be used with ALLDATA software.

Directory\Filename: C:\TASDATA\ALLREP.DAT

Offset	Description	Length	Format	Justification
0	VIN	17	Alphanumeric	left
17	License Plate Number	8	Alphanumeric	left
25	Model Year	4	Numeric	left
29	Make	5	Alphanumeric	left
34	Model	20	Alphanumeric	left
54	Num. Cylinders	2	Numeric	left
56	Engine Size (Cubic cm.)	5	Numeric	
61	Transmission Type	1	Alpha (A,M)	
62	<CR><LF>	2	Control Char.	
	Total	64		

TEXAS file structure, VIDCOMM.DAT
to be used with ALLDATA software.

Directory\Filename: C:\TASDATA\VIDCOMM.DAT

Offset	Description	Length	Format	Justification
0	Network phone number	15	Alphanumeric w/special chars.	left
15	Station license number	8	Alphanumeric	left
23	TAS number	8	Alphanumeric	left
31	Name D&R vendor 1	20	Alphanumeric	left
51	Name D&R vendor 2	20	Alphanumeric	left
71	Name D&R vendor 3	20	Alphanumeric	left
91	Name D&R vendor 4	20	Alphanumeric	left
111	Name D&R vendor 5	20	Alphanumeric	left
131	Phone number (D&R) 1	15	Alphanumeric	left
146	Phone number (D&R) 2	15	Alphanumeric	left
161	Phone number (D&R) 3	15	Alphanumeric	left
176	Phone number (D&R) 4	15	Alphanumeric	left
191	Phone number (D&R) 5	15	Alphanumeric	left
206	D&R file name vendor 1	12	Alphanumeric	left
218	D&R file name vendor 2	12	Alphanumeric	left
230	D&R file name vendor 3	12	Alphanumeric	left
242	D&R file name vendor 4	12	Alphanumeric	left
254	D&R file name vendor 5	12	Alphanumeric	left
266	Comm. port base address	3	Hexadecimal	left
269	Comm port interrupt	2	Numeric	
271	No contact limit	3	Numeric	
274	<CR><LF>	2	Control Char.	
	Total	276		

Directory\Filename: C:\TASDATA\ALLDATA.DAT

Offset	Description	Length	Format	Justification
0	Modem Type	4	Numeric	left
4	Dial Prefix	4	Numeric	left
8	Printer Port	1	Numeric	left
9	Printer Type	3	Numeric	left

Modem Type is an ASCII number where the number equals:

1	ATI-2400etc
2	Okidata-Okitel-2400B Plus
3	US Robotics 2400
4	US Robotics 14400
5	US Robotics 28800
6	Practical Peripherals 2400
7	Practical Peripherals 14400

If the modem is not known, or not on the list, then leave the 4 chars blank (spaces). If the modem is not known, the alldata program will ask the customer in the setup account screen. We can add modems to this list as needed.

Dial Prefix is ASCII. This is just prepended to the telephone number for dialing into alldata (e.g. 9).

Printer Port is ASCII. The number corresponds to LPT1, LPT2, etc.

Printer Type is an ASCII number where the number equals:

1	HP deskjet
2	Epson LQ / Epson LQ emulation
3	IBM proprinter / emulation
4	Epson FX / Epson FX emulation
5	Okidata ML-380
6	IBM X24 / emulation

Most printers work with the alldata application with one of the above printers. If you happen to use a printer that doesn't work with one of these, we can write the appropriate driver and include it here. If you have printers available to test, we can quickly determine which emulation will work with that printer. If your program doesn't know the type of printer to use, leave it blank (spaces). The alldata program will inquire from the customer (Alldata customer service will help pick the proper printer driver if help is needed).

Appendix Q
Diagnostic Link Connector (DLC)
Mapping Diagram

Diagnostic Link Connector (DLC) Mapping Diagram Explanation

The mapping diagram of DLC locations contains a divided instrument panel (IP) with numbered areas. Each numbered area represents specific sections of the IP where manufacturers may have located DLCs. This document briefly clarifies the numbered locations on the mapping diagram. We will use this mapping diagram to catalog manufacturer responses to the recent 208 letter requesting OBD DLC locations for 96MY and future vehicles. Areas 1-3 fall within the preferred DLC location while the remaining areas, 4-8, fall into the allowable DLC location according to EPA requirements. Areas 4-8 require that manufacturers label the vehicle in the preferred location to notify parties of the alternate connector location.

Preferred Location(s)

Location #1:

This location represents a DLC positioned on the underside of the IP directly under the steering column (or approximately 150mm left or right of the steering column). Visualizing the underside of an IP divided into three equal parts from inside the passenger compartment, this represents the center section.

Location #2

This location represents a DLC positioned on the underside of the IP between the steering column and the driver's side passenger door. Visualizing the underside of an IP divided into three equal parts from inside the passenger compartment, this represents the left section.

Location #3

This location represents a DLC positioned on the underside of the IP between the steering column and the center console. Visualizing the underside of an IP divided into three equal parts from inside the passenger compartment, this represents the right section.

Allowable Location(s)

Location #4

This location represents a DLC positioned on the upper part of the IP between the steering column and the center console (but not on the center console, see location #6).

Location #5

This location represents a DLC positioned on the upper part of the IP between the steering column and the driver side, passenger door.

Location #6

This location represents a DLC positioned on the vertical section of the center console and left of the vehicle center line.

Location #7

This location represents a DLC positioned 300 mm right of the vehicle centerline either on the vertical section of the center console or on the passenger side of the vehicle.

Location #8

This location represents a DLC positioned on the horizontal section of the center console either left or right of the vehicle center line. This does not include the horizontal section of the center console that extends into the rear passenger area (see location #9).

Location #9

This location, not shown, represents any DLC positioned in an area other than those mentioned above (e.g., in the rear passenger area on the driver side armrest).

Appendix R

Safety Screen Lists Entry Item Sequences

**(HS represents “help screen,”
so HS - 5 = help screen #5.
FHS represents “FMCSR help screen,”
so FHS - 5 = FMCSR help screen #5)**

**INSPECTION PROCEDURE (Sequence #1)
PASSENGER CAR/MOTOR HOME/TRUCKS UNDER 80" WIDTH**

Seat Belts (SAFE_5)(display HS - 5)

- Presence (Failed - A, Repaired - B)
- Cut or frayed (Failed - C, Repaired - D)
- Mounting (Failed - E, Repaired - G)

Parking Brake System (SAFE_6B)(display HS - 6B)

- Does not hold vehicle (Failed - A, Repaired - B)
- Missing/Broken parts (Failed - C, Repaired - D)

Horn (SAFE_1)(display HS - 1)

- Operation (Failed - A, Repaired - B)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display "For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.")

- Switch accessible and locks in position (Failed - A, Repaired - B)
- Indicator lamp operation (Failed - C, Repaired - D)

Beam Indicator (SAFE_11)(display HS - 11)

- High beam indicator (Failed - A, Repaired - B)
- Switch mounting (Failed - C, Repaired - D)

Wipers (SAFE_2)(display HS - 2)

- Switch and Operation (Failed - C, Repaired - D)
- Blade condition (Failed - A, Repaired - B)

Rear view mirror (SAFE_3)(display HS - 3)

- Presence (Failed - A, Repaired - B)

Window Tinting and Sunscreening (SAFE_24)(display HS - 24)

- Light transmission (Failed - A, Repaired - B)
- Tint or Coating out of Specifications (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display HS - 17)

- Mounting, operation, & approved type (Failed - A, Repaired - B)
- Lens cracked, broken, or discolored (Failed - C, Repaired - D)
- Reflective material discolored or deteriorated (Failed - E, Repaired - G)
- Lamp contaminated (Failed - H, Repaired - I)
- Liquid (Failed - J, Repaired - K)

Turn Signals (SAFE_16A) new

(display "For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.")

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display HS - 12)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display HS - 13)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display HS - 14)

Operation (Failed - A, Repaired - B)

Lens cracked or broken (Failed - C, Repaired - D)

Tires (SAFE_7)(display HS - 7)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive tire wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display HS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing lugs or studs (Failed - A, Repaired - B)

Mud Flaps/Safety Guards (SAFE_23)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Presence/condition (Failed - A, Repaired - B)

Mounting (Failed - C, Repaired - D)

Brake System (SAFE_6A)(display HS - 6A)

Leaks (Failed - E, Repaired - G)

Brake cables (Failed - J, Repaired - K)

Stopping distance (Failed - A, Repaired - B)

Pulling right or left (Failed - C, Repaired - D)

Metal on Metal (Failed - O, Repaired - Q)

Exhaust System (SAFE_9)(display HS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)

Components disconnected/disabled (Failed - C, Repaired - D)

Power Steering System (SAFE_4)(display HS - 4)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)

Excessive lash (Failed - A, Repaired - B)

Modification (Failed - C, Repaired - D)

Binding/jamming (Failed - E, Repaired - G)

Master Cylinder (SAFE_33) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Fluid level (Failed - J, Repaired - K)

Fluid leaks (Failed - E, Repaired - G)

INSPECTION PROCEDURE (Sequence #2)
MOTORCYCLE/MOTOR-DRIVEN CYCLE/MOPED

Horn (SAFE_1)(display HS - 1)

Operation (Failed - A, Repaired - B)

Rear View Mirror (SAFE_3)(display HS - 3)

Presence (Failed - A, Repaired - B)

Steering System (SAFE_4)(display HS - 4)

Handlebar height (Failed - H, Repaired - I)

Binding/jamming (Failed - E, Repaired - G)

Service Brake System (SAFE_6A)(display HS - 6A)

Stopping Distance (Failed - A, Repaired - B)

Missing/Broken parts (Failed - L, Repaired - M)

Leaks (Failed - E, Repaired - G)

Metal on Metal (Failed - O, Repaired - Q)

Tires (SAFE_7)(display HS - 7)

Cuts/Tears (Failed - C, Repaired - D)

Excessive tire wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display HS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing lugs or studs (Failed - A, Repaired - B)

Spokes (Failed - E, Repaired - G)

Exhaust System (SAFE_9)(display HS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Tail Lamp (SAFE_12)(display HS - 12)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamp (SAFE_13)(display HS - 13)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display HS - 14)

Operation (Failed - A, Repaired - B)

Lens cracked or broken (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display HS - 17)

Mounting, operation, & approved type (Failed - A, Repaired - B)

Lens cracked, broken, or discolored (Failed - C, Repaired - D)

Reflective material discolored or deteriorated (Failed - E, Repaired - G)

Lamp contaminated (Failed - H, Repaired - I)

Liquid (Failed - J, Repaired - K)

INSPECTION PROCEDURE (Sequence #3)
SCHOOL BUS-SAFETY INSPECTION

Horn (SAFE_1)(display HS - 1)

Operation (Failed - A, Repaired - B)

Wipers (SAFE_2)(display HS - 2)

Switch and Operation (Failed - C, Repaired - D)

Blade condition (Failed - A, Repaired - B)

Rear View Mirror (SAFE_3)(display HS - 3)

Presence (Failed - A, Repaired - B)

Steering System (SAFE_4)(display HS - 4)

Modification (Failed - C, Repaired - D)

Binding/jamming (Failed - E, Repaired - G)

Excessive lash (Failed - A, Repaired - B)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)

Seat Belts-Driver Only (SAFE_5)(display HS - 5)

Presence (Failed - A, Repaired - B)

Cut or frayed (Failed - C, Repaired - D)

Mounting (Failed - E, Repaired - G)

Service Brake System (SAFE_6A)(display HS - 6A)

Stopping distance (Failed - A, Repaired - B)

Pull left or right (Failed - C, Repaired - D)

Missing/Broken parts (Failed - L, Repaired - M)

Leaks (Failed - E, Repaired - G)

Metal to Metal (Failed - O, Repaired - Q)

Parking Brake System (SAFE_6B)(display HS - 6B)

Does not hold vehicle (Failed - A, Repaired - B)

Missing/Broken parts (Failed - C, Repaired - D)

Tires (SAFE_7)(display HS - 7)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive wear (Failed - A, Repaired - B)

Approval type (Failed -E, Repaired - G)

Wheel Assembly (SAFE_8)(display HS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing lugs/studs (Failed - A, Repaired - B)

Exhaust System (SAFE_9)(display HS - 9)

Required muffler, clamps, and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)

Components disconnected or disabled (Failed - C, Repaired - D)

Beam Indicator (SAFE_11)(display HS - 11)

High beam indicator (Failed - A, Repaired - B)

Switch mounting (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display HS - 17)

- Mounting, operation, & approved type (Failed - A, Repaired - B)
- Lens cracked, broken, or discolored (Failed - C, Repaired - D)
- Reflective material discolored or deteriorated (Failed - E, Repaired - G)
- Lamp contaminated (Failed - H, Repaired - I)
- Liquid (Failed - J, Repaired - K)

Tail Lamps (SAFE_12)(display HS - 12)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display HS - 13)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display HS - 14)

- Operation (Failed - A, Repaired - B)
- Lens cracked or broken (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Switch accessible and locks in position (Failed - A, Repaired - B)
- Indicator lamp operation (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display HS - 18)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display HS - 19)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Reflectors (SAFE_21)(display HS - 21)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

School Bus Signs (SAFE_22A)(display HS - 22)

- Size (Failed - A, Repaired - B)
- Location (Failed - C, Repaired - D)

Hazard Warning Lighting (SAFE_35) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Mounting, operation, approved type (Failed - A, Repaired - B)
- Color and condition of lens (Failed - C, Repaired - D)

Convex Mirror (SAFE_22D)(display HS - 22)

- Mounting (Failed - A, Repaired - B)

Condition (Failed - C, Repaired - D)

Fire Extinguisher (SAFE_22B)(display HS - 22)

Presence (Failed - A, Repaired - B)

Approved type (Failed -C, Repaired - D)

**INSPECTION PROCEDURE (Sequence #4)
TRUCKS/MOTOR HOMES OVER 80" WIDTH**

Seat Belts (SAFE_5)(display HS - 5)

- Presence (Failed - A, Repaired - B)
- Cut or frayed (Failed - C, Repaired - D)
- Mounting (Failed - E, Repaired - G)

Service Brake System (SAFE_6A)(display HS - 6A)

- Stopping distance (Failed - A, Repaired - B)
- Pulling right or left (Failed - C, Repaired - D)
- Metal on Metal (Failed - O, Repaired - Q)
- Leaks (Failed - E, Repaired - G)

Parking Brake System (SAFE_6B)(display HS - 6B)

- Does not hold vehicle (Failed - A, Repaired - B)
- Missing/Broken parts (Failed - C, Repaired - D)

Horn (SAFE_1)(display HS - 1)

- Operation (Failed - A, Repaired - B)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Switch accessible and locks in position (Failed - A, Repaired - B)
- Indicator lamp operation (Failed - C, Repaired - D)

Beam Indicator (SAFE_11)(display HS - 11)

- High beam indicator (Failed - A, Repaired - B)
- Switch mounting (Failed - C, Repaired - D)

Wipers (SAFE_2)(display HS - 2)

- Switch and Operation (Failed - C, Repaired - D)
- Blade condition (Failed - A, Repaired - B)

Rear view mirror (SAFE_3)(display HS - 3)

- Presence (Failed - A, Repaired - B)

Window Tinting and Sunscreening (SAFE_24)(display HS - 24)

- Light transmission (Failed - A, Repaired - B)
- Tint or Coating out of Specifications (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display HS - 17)

- Mounting, operation, & approved type (Failed - A, Repaired - B)
- Lens cracked, broken, or discolored (Failed - C, Repaired - D)
- Reflective material discolored or deteriorated (Failed - E, Repaired - G)
- Lamp contaminated (Failed - H, Repaired - I)
- Liquid (Failed - J, Repaired - K)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display HS - 12)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display HS - 13)

Mounting, operation and approved type (Failed - A, Repaired - B)
Color, condition of lens, visibility (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)
Color, condition of lens, visibility (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display HS - 18)

Mounting, operation and approved type (Failed - A, Repaired - B)
Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display HS - 19)

Mounting, operation and approved type (Failed - A, Repaired - B)
Color, condition of lens, visibility (Failed - C, Repaired - D)

Cab Lamps (SAFE_20)(display HS - 20)

Operation (Failed - A, Repaired - B)
Presence (Failed - C, Repaired - D)

Side Reflectors (SAFE_21)(display HS - 21)

Mounting, operation and approved type (Failed - A, Repaired - B)
Color, condition of lens, visibility (Failed - C, Repaired - D)

Reflective Tape (SAFE_34) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Presence (Failed - A, Repaired - B)
Location (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display HS - 14)

Operation (Failed - A, Repaired - B)
Lens cracked or broken (Failed - C, Repaired - D)

Tires (SAFE_7)(display HS - 7)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)
Excessive tire wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display HS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)
Missing lugs or studs (Failed - A, Repaired - B)

Mud Flaps/Safety Guards (SAFE_23)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Presence/condition (Failed - A, Repaired - B)
Mounting (Failed - C, Repaired - D)

Exhaust System (SAFE_9)(display HS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)
Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)
Components disconnected/disabled (Failed - C, Repaired - D)

Power Steering System (SAFE_4)(display HS - 4)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)
Excessive lash (Failed - A, Repaired - B)
Modification (Failed - C, Repaired - D)
Binding/jamming (Failed - E, Repaired - G)

Master Cylinder (SAFE_33) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Fluid level (Failed - J, Repaired - K)
Fluid leaks (Failed - E, Repaired - G)

**INSPECTION PROCEDURE (Sequence #5)
TRUCK TRACTOR**

Horn (SAFE_1)(display HS - 1 or FHS - 1)

Operation (Failed - A, Repaired - B)

Wipers (SAFE_2)(display HS - 2 or FHS - 2)

Switch and Operation (Failed - C, Repaired - D)

Blade condition (Failed - A, Repaired - B)

Rear View Mirrors (SAFE_3)(display HS - 3 or FHS - 3)

Presence (Failed - A, Repaired - B)

Steering System (SAFE_4)(display HS - 4 or FHS - 4)

Excessive lash (Failed - A, Repaired - B)

Modification (Failed - C, Repaired - D)

Binding/jamming (Failed - E, Repaired - G)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Switch accessible and locks in position (Failed - A, Repaired - B)

Indicator lamp operation (Failed - C, Repaired - D)

Seat Belts - (SAFE_5)(display HS - 5 or FHS - 5)

Presence (Failed - A, Repaired - B)

Cut or frayed (Failed - C, Repaired - D)

Mounting (Failed - E, Repaired - G)

Service Brake System (SAFE_6A)(display HS - 6A or FHS - 6A)

Stopping distance (Failed - A, Repaired - B)

Pulling right or left (Failed - C, Repaired - D)

Metal on Metal (Failed - O, Repaired - Q)

Leaks (Failed - E, Repaired - G)

Parking Brake System (SAFE_6B)(display HS - 6B or FHS -6B)

Does not hold vehicle (Failed - A, Repaired - B)

Missing/Broken parts (Failed - C, Repaired - D)

Tires (SAFE_7)(display HS - 7 or, for FMCSR(Truck), either “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual,” or both FHS - 7A and FHS - 7B)

Cuts, Tears, Cord Exposed, Visible Bulges (Failed - C, Repaired - D)

Excessive Wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display HS - 8 or FHS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing lugs or studs (Failed - A, Repaired - B)

Exhaust System (SAFE_9)(display HS - 9 or FHS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)

Components disconnected or disabled (Failed - C, Repaired - D)

Beam Indicator (SAFE_11)(display HS - 11 or FHS - 11)

High beam indicator (Failed - A, Repaired - B)

Switch mounting (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display HS - 12 or FHS - 12)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display HS - 13 or FHS - 13)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15 or FHS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Cab Lamps (SAFE_20)(display HS - 20 or FHS - 20)

Operation (Failed - A, Repaired - B)

Color Condition of Lens (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display HS - 17 or FHS - 17)

Mounting, operation, & approved type (Failed - A, Repaired - B)

Lens cracked, broken, or discolored (Failed - C, Repaired - D)

Reflective material discolored or deteriorated (Failed - E, Repaired - G)

Lamp contaminated (Failed - H, Repaired - I)

Liquid (Failed - J, Repaired - K)

Hazard Warning Lighting (SAFE_35) new (display only if during a FMCSR (TRUCK) inspection)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation, approved type (Failed - A, Repaired - B)

Color and condition of lens (Failed - C, Repaired - D)

Coupling Devices (SAFE_26)(display FHS - 26) (display only if during a FMCSR (TRUCK) inspection)

Loose, cracked, excessive wear (Failed - A, Repaired - B)

Fuel System (SAFE_27)(display FHS - 27) (display only if during a FMCSR (TRUCK) inspection)

Leaks (Failed - A, Repaired - B)

Mounting (Failed - C, Repaired - D)

Suspension (SAFE_28)(display FHS - 28) (display only if during a FMCSR (TRUCK) inspection)

Broken, loose, missing parts (Failed - A, Repaired - B)

Frame (SAFE_29)(display FHS - 29) (display only if during a FMCSR (TRUCK) inspection)

Cracked, broken, loose, sagging (Failed - E, Repaired - G)

Window Tinting and Sunscreening (SAFE_24)(display HS - 24 or FHS - 24)

Light transmission (Failed - A, Repaired - B)

Tint or Coating out of Specifications (Failed - C, Repaired - D)

**INSPECTION PROCEDURE (Sequence #6)
SAFETY TRAILER & MOBILE HOME**

Service Brake System (SAFE_6A)(display HS - 6A)

- Stopping distance (Failed - A, Repaired - B)
- Leaks (Failed - E, Repaired - G)
- Wiring (Failed - H, Repaired - I)
- Metal on Metal (Failed - O, Repaired - Q)

Tires (SAFE_7)(display HS - 7)

- Cuts, Tears, Cord Exposed, Visible Bulges (Failed - C, Repaired - D)
- Excessive Wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display HS - 8)

- Bent, broken, cracked (Failed - C, Repaired - D)
- Missing lugs or studs (Failed - A, Repaired - B)

Mud Flaps/Safety Guards (SAFE_23)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Presence/condition (Failed - A, Repaired - B)
- Mounting (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display HS - 12)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display HS - 13)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display HS - 14)

- Operation (Failed - A, Repaired - B)
- Lens cracked or broken (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display HS - 15)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display HS - 18)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display HS - 19)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

INSPECTION PROCEDURE (Sequence #7)
SCHOOL BUS-F.M.C.S.R INSPECTION

Horn (SAFE_1)(display FHS - 1)

Operation (Failed - A, Repaired - B)

Wipers (SAFE_2)(display FHS - 2)

Switch and Operation (Failed - C, Repaired - D)

Blade condition (Failed - A, Repaired - B)

Windshield (SAFE_30)(display FHS - 30)

Excessive cracks (Failed - A, Repaired - B)

Rear View Mirror (SAFE_3)(display FHS - 3)

Presence (Failed - A, Repaired - B)

Steering System (SAFE_4)(display FHS - 4)

Modification (Failed - C, Repaired - D)

Binding/jamming (Failed - E, Repaired - G)

Excessive lash (Failed - A, Repaired - B)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)

Seat Belts-Driver Only (SAFE_5)(display FHS - 5)

Presence (Failed - A, Repaired - B)

Cut or frayed (Failed - C, Repaired - D)

Mounting (Failed - E, Repaired - G)

Service Brake System (SAFE_6A)(display FHS - 6A)

Stopping distance (Failed - A, Repaired - B)

Pull left or right (Failed - C, Repaired - D)

Missing/Broken parts (Failed - L, Repaired - M)

Leaks (Failed - E, Repaired - G)

Metal to Metal (Failed - O, Repaired - Q)

Low air warning device (Failed - S, Repaired - T)

Wiring (Failed - H, Repaired - I)

Parking Brake System (SAFE_6B)(display FHS - 6B)

Does not hold vehicle (Failed - A, Repaired - B)

Missing/Broken parts (Failed - C, Repaired - D)

Steering Axle Tires (SAFE_7A)(display FHS - 7A)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive wear (Failed - A, Repaired - B)

Approval type (Failed -E, Repaired - G)

All Other Tires (SAFE_7B)(display FHS - 7B)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive wear (Failed - A, Repaired - B)

Approval type (Failed -E, Repaired - G)

Wheel Assembly (SAFE_8)(display FHS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing lugs or studs (Failed - A, Repaired - B)

Exhaust System (SAFE_9)(display FHS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)

Components disconnected or disabled (Failed - C, Repaired - D)

Beam Indicator (SAFE_11)(display FHS - 11)

High beam indicator (Failed - A, Repaired - B)

Switch mounting (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display FHS - 17)

Mounting, operation, & approved type (Failed - A, Repaired - B)

Lens cracked, broken, or discolored (Failed - C, Repaired - D)

Reflective material discolored or deteriorated (Failed - E, Repaired - G)

Lamp contaminated (Failed - H, Repaired - I)

Liquid (Failed - J, Repaired - K)

Tail Lamps (SAFE_12)(display FHS - 12)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display FHS - 13)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display FHS - 14)

Operation (Failed - A, Repaired - B)

Lens cracked or broken (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display FHS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Switch accessible and locks in position (Failed - A, Repaired - B)

Indicator lamp operation (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display FHS - 18)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display FHS - 19)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Reflectors (SAFE_21)(display FHS - 21)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

School Bus Signs (SAFE_22A)(display FHS - 22)

Size (Failed - A, Repaired - B)

Location (Failed - C, Repaired - D)

Hazard Warning Lighting (SAFE_35) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation, approved type (Failed - A, Repaired - B)

Color and condition of lens (Failed - C, Repaired - D)

Back-up Lamps (SAFE_36) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Fuel System (SAFE_27)(display FHS - 27)

Leaks (Failed - A, Repaired - B)

Mounting (Failed - C, Repaired - D)

Suspension (SAFE_28)(display FHS - 28)

Broken, loose, missing parts (Failed - A, Repaired - B)

Frame (SAFE_29)(display FHS - 29)

Cracked, broken, loose, sagging (Failed - E, Repaired - G)

Window Tinting and Sunscreening (SAFE_24)(display FHS - 24)

Light transmission (Failed - A, Repaired - B)

Tint or Coating out of Specifications (Failed - C, Repaired - D)

Convex Mirror (SAFE_22D)(display FHS - 22)

Mounting (Failed - A, Repaired - B)

Condition (Failed - C, Repaired - D)

Fire Extinguisher (SAFE_22B)(display FHS - 22)

Presence (Failed - A, Repaired - B)

Approved type (Failed -C, Repaired - D)

**INSPECTION PROCEDURE (Sequence #8)
FMCSR VEHICLES**

Horn (SAFE_1)(display FHS - 1)

Operation (Failed - A, Repaired - B)

Wipers (SAFE_2)(display FHS - 2)

Switch and Operation (Failed - C, Repaired - D)

Blade condition (Failed - A, Repaired - B)

Windshield (SAFE_30)(display FHS - 30)

Excessive cracks (Failed - A, Repaired - B)

Rear View Mirror (SAFE_3)(display FHS - 3)

Presence (Failed - A, Repaired - B)

Beam Indicator (SAFE_11)(display FHS - 11)

High beam indicator (Failed - A, Repaired - B)

Switch mounting (Failed - C, Repaired - D)

Seat Belts (SAFE_5)(display FHS - 5)

Presence (Failed - A, Repaired - B)

Cut or frayed (Failed - C, Repaired - D)

Mounting (Failed - E, Repaired - G)

Steering System (SAFE_4)(display FHS - 4)

Modification (Failed - C, Repaired - D)

Binding/jamming (Failed - E, Repaired - G)

Excessive lash (Failed - A, Repaired - B)

Fluid level and belt condition (Failed - H, Repaired - I)

Fluid leaks (Failed - J, Repaired - K)

Service Brake System (SAFE_6A)(display FHS - 6A)

Stopping distance (Failed - A, Repaired - B)

Pull left or right (Failed - C, Repaired - D)

Missing/Broken parts (Failed - L, Repaired - M)

Metal to Metal (Failed - O, Repaired - Q)

Low air warning device (Failed - S, Repaired - T)

Tractor protection device (Failed - U, Repaired - V)

Leaks (Failed - E, Repaired - G)

Wiring (Failed - H, Repaired - I)

Parking Brake System (SAFE_6B)(display FHS - 6B)

Does not hold vehicle (Failed - A, Repaired - B)

Missing/Broken parts (Failed - C, Repaired - D)

Steering Axle Tires (SAFE_7A)(display FHS - 7A)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive wear (Failed - A, Repaired - B)

Approval type (Failed - E, Repaired - G)

All Other Tires (SAFE_7B)(display FHS - 7B)

Cuts, tears, cord exposed, visible bulges (Failed - C, Repaired - D)

Excessive wear (Failed - A, Repaired - B)

Approval type (Failed - E, Repaired - G)

Wheel Assembly (SAFE_8)(display FHS - 8)

Bent, broken, cracked (Failed - C, Repaired - D)

Missing, loose, lugs or studs (Failed - A, Repaired - B)

Mud Flaps/Safety Guards (SAFE_23)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Presence/condition (Failed - A, Repaired - B)

Mounting (Failed - C, Repaired - D)

Exhaust System (SAFE_9)(display FHS - 9)

Required muffler, clamps and hangers (Failed - C, Repaired - D)

Leaks (Failed - A, Repaired - B)

Emission System (SAFE_10)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Components presence (Failed - A, Repaired - B)

Components disconnected or disabled (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display FHS - 12)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display FHS - 13)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display FHS - 14)

Operation (Failed - A, Repaired - B)

Lens cracked or broken (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signal Switch and Indicator Lamp (SAFE_16B) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Switch accessible and locks in position (Failed - A, Repaired - B)

Indicator lamp operation (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display FHS - 15)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display FHS - 18)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display FHS - 19)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Cab Lamps (SAFE_20)(display FHS - 20)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Reflectors (SAFE_21)(display FHS - 21)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Headlamps (SAFE_17)(display FHS - 17)

Mounting, operation, & approved type (Failed - A, Repaired - B)

Lens cracked, broken, or discolored (Failed - C, Repaired - D)

Reflective material discolored or deteriorated (Failed - E, Repaired - G)

Lamp contaminated (Failed - H, Repaired - I)

Liquid (Failed - J, Repaired - K)

Hazard Warning Lighting (SAFE_35) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation, and approved type (Failed - A, Repaired - B)

Color and condition of lens (Failed - C, Repaired - D)

Back-up Lamps (SAFE_36) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

Mounting, operation and approved type (Failed - A, Repaired - B)

Color, condition of lens, visibility (Failed - C, Repaired - D)

Coupling Devices (SAFE_26)(display FHS - 26)

Loose, cracked, excessive wear (Failed - A, Repaired - B)

Fuel System (SAFE_27)(display FHS - 27)

Leaks (Failed - A, Repaired - B)

Mounting (Failed - C, Repaired - D)

Suspension (SAFE_28)(display FHS - 28)

Broken, loose, missing parts (Failed - A, Repaired - B)

Frame (SAFE_29)(display FHS - 29)

Cracked, broken, loose, sagging (Failed - E, Repaired - G)

Window Tinting and Sunscreening (SAFE_24)(display FHS - 24)

Light transmission (Failed - A, Repaired - B)

Tint or Coating out of Specifications (Failed - C, Repaired - D)

**INSPECTION PROCEDURE (Sequence #9)
COMMERCIAL TRAILER**

Service Brake System (SAFE_6A)(display FHS - 6A)

- Stopping distance (Failed - A, Repaired - B)
- Leaks (Failed - E, Repaired - G)
- Wiring (Failed - H, Repaired - I)
- Metal on Metal (Failed - O, Repaired - Q)

Tires (SAFE_7)(display FHS - 7B)

- Cuts, Tears, Cord Exposed, Visible Bulges (Failed - C, Repaired - D)
- Excessive Wear (Failed - A, Repaired - B)

Wheel Assembly (SAFE_8)(display FHS - 8)

- Bent, broken, cracked (Failed - C, Repaired - D)
- Missing lugs or studs (Failed - A, Repaired - B)

Mud Flaps/Safety Guards (SAFE_23)

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Presence/condition (Failed - A, Repaired - B)
- Mounting (Failed - C, Repaired - D)

Tail Lamps (SAFE_12)(display FHS - 12)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Stop Lamps (SAFE_13)(display FHS - 13)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

License Plate Lamp (SAFE_14)(display FHS - 14)

- Operation (Failed - A, Repaired - B)
- Lens cracked or broken (Failed - C, Repaired - D)

Rear Reflectors (SAFE_15)(display FHS - 15)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Turn Signals (SAFE_16A) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and Regulations Manual.”)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Clearance Lamps (SAFE_18)(display FHS - 18)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Marker Lamps (SAFE_19)(display FHS - 19)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Side Reflectors (SAFE_21)(display FHS - 21)

- Mounting, operation and approved type (Failed - A, Repaired - B)
- Color, condition of lens, visibility (Failed - C, Repaired - D)

Reflective Tape (Vehicles Over 80" Width) (SAFE_34) new

(display “For help with this item, please see the Texas Department of Public Safety Rules and

Regulations Manual.”)

Presence (Failed - A, Repaired - B)

Location (Failed - C, Repaired - D)

Coupling Devices (SAFE_26)(display FHS - 26)

Loose, cracked, excessive wear (Failed - A, Repaired - B)

Suspension (SAFE_28)(display FHS - 28)

Broken, loose, missing parts (Failed - A, Repaired - B)

Frame (SAFE_29)(display FHS - 29)

Cracked, broken, loose, sagging (Failed - E, Repaired - G)

Appendix V
Certificate Format Table

**Texas Department of Public Safety Certificate Formats
(As of November 9,2004)**

CERTIFICATE TYPE (SPEC NAME)	FORMAT (CHARACTERS)	EXAMPLE NUMBER	BARCODED	SAFE_TEST_ TYPE	ACCEPTABLE ALPHA CHARACTER GROUPINGS
ASM Safety/Emission 1 year (1 year windshield - asm (safety & emissions))	1 alpha, and 8 numeric (9 positions)	F00734251 M00203023	Yes	M	F, M - ASM
OBD Safety/Emission 1 year (1 year windshield - obd (safety & emissions))	1 alpha, and 8 numeric (9 positions)	P00734251 E00203023	Yes	L	E, P - OBD
TSI Safety/Emission 1 year (El Paso only) (1 year windshield - tsi (safety & emissions))	1 alpha, and 8 numeric (9 positions)	C00734251 D00203023	Yes	A	A, B, C, D - TSI
Safety/Emission 1 year (Austin only) (1 year windshield - obd/tsi (safety & emissions))	1 alpha, and 8 numeric (9 positions)	A00734251 B00203023	Yes	N	A, B
Commercial - Windshield (FMCSR (Truck))	1 alpha, and 8 numeric (9 positions)	T00382851	No	G	T, U
Commercial - Trailer (FMCSR(Trailer))	1 alpha, and 8 numeric (9 positions)	R00896611	No	K	R, S
Safety Only - 1 year (1 year windshield (safety only))	1 alpha, and 8 numeric (9 positions)	G05379551	Yes	J	G, H, I, J, K, L
Safety Only - 2 year (2 year windshield)	1 alpha, and 8 numeric (9 positions)	N00674076	Yes	B	N, W, Q
Trailer/Motorcycle (Trailer/Motorcycle)	1 alpha, and 8 numeric (9 positions)	Z00957626	No	C	X, Y, Z
Emissions Only Decal (Emissions Test Only Decal)	1 alpha, and 8 numeric (9 positions)	V00102110	No	H	V

Appendix W

AirCheckTexas Repair and
Retirement Assistance Program Application

AirCheckTexas Repair and Retirement Assistance Program Application

Is there financial assistance for vehicle repairs?

The state of Texas has established a financial assistance program for certain owners of vehicles that fail the emissions test. The assistance program is called the **AirCheckTexas Repair & Retirement Assistance Program**.

How do I apply for help?

The assistance program is currently operating in Brazoria, Fort Bend, Galveston, Harris, Montgomery, Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant counties. To find the location of the office nearest you, call toll free **1-800-898-9103** in the **Dallas-Fort Worth** area, or **1-866-237-9392** in the **Houston-Galveston** area.

Application must be received by the county program administrator for the **AirCheckTexas Repair & Retirement Assistance Program no later than 30 days** from the date of failing the emissions test.

SECTION 1: Applicant Information (filled out by applicant)

1. Applicant's name: _____
2. Address: _____
3. City: _____ 4. State: _____ 5. Zip: _____
6. Telephone number: () _____
7. If you are not the owner of the vehicle, provide the owner's name and telephone number:
Name: _____ Telephone number: () _____

SECTION 2: Vehicle Information and Eligibility Requirements (filled out by applicant)

8. County where vehicle is registered: _____

Information for items 9-14 can be taken from the Vehicle Inspection Report (VIR).

9. Vehicle make: _____ 10. Vehicle model: _____ 11. Model year: _____
12. Vehicle ID number (VIN): _____ 13. License plate: _____
14. Odometer reading: _____ 15. Attach a copy of the Vehicle Inspection Report:
16. Was the vehicle driven under its own power to the emissions inspection station, Yes No ; and could the vehicle be driven to a vehicle retirement facility? Yes No

SECTION 3: Vehicle Owner Eligibility (filled out by applicant)

17. Total annual family take-home pay: \$ _____ 18. Number of members in family at home: _____
19. Proof of income (*check one* and include photocopy):
Pay stubs (last 3 months); _____
Tax return; _____
OR Case number from a federal or Texas Department of Human Services program: _____

20. Name of any other financial assistance program: _____

Affidavit: I hereby certify under penalty of perjury, that all the information contained herein is true and correct. I acknowledge that all information given is subject to verification and/or monitoring. I authorize AirCheckTexas Repair & Replacement Assistance Program representatives to verify information needed to certify my eligibility

Signature of vehicle owner

Date

Printed Name

AirCheckTexas Repair and Retirement Assistance Program Application

Is there financial assistance for vehicle repairs?

The state of Texas has established a financial assistance program for certain owners of vehicles that fail the emissions test. The assistance program is called the **AirCheckTexas Repair & Retirement Assistance Program**.

How do I apply for help?

The assistance program is currently operating in Travis, and Williamson counties. To find the location of the office nearest you, call toll free 1-800-978-1766 for **Williamson County** area and 512-267-0301 for the **Travis County** area.

Application must be received by the county program administrator for the **AirCheckTexas Repair & Retirement Assistance Program no later than 30 days** from the date of failing the emissions test.

SECTION 1: Applicant Information (filled out by applicant)

1. Applicant's name: _____

2. Address: _____

3. City: _____ 4. State: _____ 5. Zip: _____

6. Telephone number: () _____

7. If you are not the owner of the vehicle, provide the owner's name and telephone number:

Name: _____ Telephone number: () _____

SECTION 2: Vehicle Information and Eligibility Requirements (filled out by applicant)

8. County where vehicle is registered: _____

Information for items 9-14 can be taken from the Vehicle Inspection Report (VIR).

9. Vehicle make: _____ 10. Vehicle model: _____ 11. Model year: _____

12. Vehicle ID number (VIN): _____ 13. License plate: _____

14. Odometer reading: _____ 15. Attach a copy of the Vehicle Inspection Report:

16. Was the vehicle driven under its own power to the emissions inspection station, Yes No ; and could the vehicle be driven to a vehicle retirement facility? Yes No

SECTION 3: Vehicle Owner Eligibility (filled out by applicant)

17. Total annual family take-home pay: \$_____ 18. Number of members in family at home: _____

19. Proof of income (*check one* and include photocopy):

Pay stubs (last 3 months); _____

Tax return; _____

OR Case number from a federal or Texas Department of Human Services program: _____

20. Name of any other financial assistance program: _____

Affidavit: I hereby certify under penalty of perjury, that all the information contained herein is true and correct. I acknowledge that all information given is subject to verification and/or monitoring. I authorize AirCheckTexas Repair & Replacement Assistance Program representatives to verify information needed to certify my eligibility

Signature of vehicle owner

Date

Printed Name