

# Texas Commission on Environmental Quality

## Texas Natural Gas Vehicle Grant Program

### List of Eligible Natural Gas Vehicles and Engines

Updated – April 13, 2020

#### Purpose

To qualify under the Texas Natural Gas Vehicle Grant Program (TGVGP), a vehicle, engine, or conversion system must operate solely on natural gas, including compressed natural gas (CNG), liquefied natural gas (LNG), or liquefied petroleum gas (LPG), or operate on a combination of diesel fuel and natural gas (dual-fuel) and capable of at least 60% displacement of diesel fuel use in dual fuel operation. The qualifying vehicle or engine must also meet current U.S. Environmental Protection Agency (EPA) standards or criteria for nitrogen oxides (NO<sub>x</sub>) emissions as listed below.

- **List A. On-Road Heavy-Duty Natural Gas Engines** - new purpose-built heavy-duty engines powered by CNG, LNG, or LPG, and certified by the EPA to the current federal emission standards.
- **List B. Chassis-Certified Natural Gas Vehicles** - new purpose-built chassis-certified heavy-duty vehicles and medium-duty passenger vehicles powered by CNG, LNG, or LPG, and certified by the EPA to the current federal emission standards.
- **List C. Chassis-Certified Vehicle Conversion Systems** - systems to convert a chassis-certified heavy-duty vehicle or medium-duty passenger vehicle powered by CNG, LNG, or LPG, and certified by the EPA to the current federal emission standards.
- **List D. On-Road Heavy-Duty Engine Conversion Systems** - systems to convert an existing on-road heavy-duty diesel or gasoline engine to operate on an eligible fuel, or a combination of the eligible fuel and diesel fuel (dual-fuel). The converted engine must be certified by the EPA to the current federal emission standards.
- **List E. Chassis-Certified Vehicle Conversion Systems *not* Certified to the Current Federal Emission Standard** - systems to convert an existing chassis-certified heavy-duty vehicle or medium-duty passenger vehicle to operate on an eligible fuel under the repower category. The conversion must result in a reduction in NO<sub>x</sub> emissions of at least 25% compared to the unconverted vehicle. The vehicle conversion must have been tested using the EPA Federal Test Procedure (FTP) and result in NO<sub>x</sub> emissions less than the current federal emission standards. Requires documentation of EPA-approved testing.
- **List F. Heavy-Duty Engine Conversion Systems *not* Certified to the Current Federal Emission Standards** - systems to convert an existing heavy-duty diesel or gasoline engine to operate on an eligible fuel or a combination of the eligible fuel and diesel fuel (dual-fuel) under the repower category by converting the existing engine or removing and replacing the existing engine with a converted engine. The engine conversion or replacement of the existing engine with a converted engine must result in a reduction in NO<sub>x</sub> emissions of at least 25% compared to the baseline engine. The engine conversion must have been tested using the EPA FTP and result in NO<sub>x</sub> emissions less than the current federal emission standards. Requires documentation of EPA-approved testing.

This document lists engine family names for heavy-duty on-road vehicles and engines and vehicle test group names for medium-duty passenger vehicles and chassis-certified heavy-duty vehicles that may be eligible under this program. Inclusion on these lists DOES NOT mean that a project involving one of the vehicles or engines included on the list is eligible for a grant. Certification to the required EPA emissions standard is only one of the criteria that must be met for a project to be eligible.

### **How to Update the List**

If a manufacturer has determined that a vehicle, engine, or conversion system not listed on this list meets the eligibility criteria, the manufacturer or applicant should contact the TCEQ for instructions on how to submit the required information. Instructions for manufacturers may be found at the following website:

[https://www.tceq.texas.gov/airquality/terp/tngvgp.html/tngvgp\\_inforeq.html](https://www.tceq.texas.gov/airquality/terp/tngvgp.html/tngvgp_inforeq.html)

If the TCEQ confirms that the vehicle, engine, or conversion system meets the eligibility criteria, the TCEQ will update the table with the applicable test group or engine family. The TCEQ will hold processing of an application for a vehicle, engine, or conversion system that is not on the approved list until the manufacturer documentation is received, reviewed, and approved.

### **Statement Regarding After-Market Vehicle Conversions**

As further outlined in the Request for Grant Applications (RFGA), a natural gas vehicle purchased under the Replacement Project category must be 'new.' Under this requirement, if a newly-manufactured vehicle must be converted from conventional fuel to natural gas, that conversion must occur as part of the purchase of the vehicle.

After-market conversions to natural gas of a vehicle already owned, leased, or otherwise commercially financed by the applicant may be considered under the Repower Project category. The vehicle being repowered must have been owned or leased for at least two years prior to submission of the application.

Applicants should contact the TCEQ with any questions regarding the eligibility of systems to convert an existing vehicle to run on natural gas.

## List A On-Road Heavy-Duty Natural Gas Engines

The following on-road heavy-duty natural gas engine families have been issued an EPA Certificate of Conformity indicating the engines are certified to the required federal emissions standard of 0.2 grams per brake horsepower-hour (g/bhp-hr) of NO<sub>x</sub> or better.

New vehicles with one of these engines installed may be eligible for purchase to replace an older conventional fuel vehicle. In addition, these engines may be available for repower of an existing conventional fuel vehicle. The replacement or repower must result in at least a 25% reduction in NO<sub>x</sub> emissions.

This list does not distinguish between engine families that may be available on new vehicles and an engine family that may be available for repower of an existing heavy-duty vehicle. Applicants should work with their selected dealer to ensure that an engine family is applicable to the type of activity being applied for.

Only recent model year engines are listed. See the section entitled *How to Update the List* for information on submitting certificates for engines not on the list.

The TCEQ understands that, in some cases, by the time a purchase is completed, the vehicle and/or engine purchased may be a newer model than was originally listed in the application. Refer to the TNGVGP Request for Grant Applications (RFGA) and contract documents for criteria and directions regarding this situation.

| Manufacturer               | Model Year | Engine Model   | Engine Family Name/Code | Fuel Type | Displacement Liters (L) |
|----------------------------|------------|----------------|-------------------------|-----------|-------------------------|
| Agility Powertrain Systems | 2020       | 488LPI         | LAGIE08.0LPG            | LPG       | 8.0L                    |
| Agility Powertrain Systems | 2019       | 2 Valve        | KAGIE06.0584            | CNG       | 6.0L                    |
| Agility Powertrain Systems | 2019       | 3 Valve        | KAGIE06.8BW6            | CNG       | 6.8L                    |
| Agility Powertrain Systems | 2019       | 2 Valve        | KAGIE06.8BWZ            | CNG       | 6.8L                    |
| Agility Powertrain Systems | 2018       | 2 Valve        | JAGIE06.0584            | CNG       | 6.0L                    |
| Clean Fuel USA Inc.        | 2017       | Clean Fuel LC8 | HCLFE06.0LPG            | LPG       | 6.0L                    |
| Clean Fuel USA Inc.        | 2017       | Clean Fuel LPG | HCLFE08.0LPG            | LPG       | 8.0L                    |
| Cummins Inc.               | 2020       | B6.7N          | LCEXH0408BBC            | CNG/LNG   | 6.7L                    |
| Cummins Inc.               | 2020       | L9N            | LCEXH0540LBL            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2020       | L9N            | LCEXH0540LBM            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2020       | L9N            | LCEXH0540LBN            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2020       | ISX 12N        | LCEXH0729XBC            | CNG/LNG   | 11.9L                   |
| Cummins Inc.               | 2019       | B6.7N          | KCEXH0408BBB            | CNG/LNG   | 6.7L                    |
| Cummins Inc.               | 2019       | L9N            | KCEXH0540LBL            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2019       | L9N            | KCEXH0540LBM            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2019       | L9N            | KCEXH0540LBN            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2019       | ISX 12N        | KCEXH0729XBC            | CNG/LNG   | 11.9L                   |
| Cummins Inc.               | 2018       | B6.7N          | JCEXH0408BBB            | CNG/LNG   | 6.7L                    |
| Cummins Inc.               | 2018       | L9N            | JCEXH0540LBL            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2018       | L9N            | JCEXH0540LBM            | CNG/LNG   | 8.9L                    |
| Cummins Inc.               | 2018       | L9N            | JCEXH0540LBN            | CNG/LNG   | 8.9L                    |

| <b>Manufacturer</b>                | <b>Model Year</b> | <b>Engine Model</b>           | <b>Engine Family Name/Code</b> | <b>Fuel Type</b> | <b>Displacement Liters (L)</b> |
|------------------------------------|-------------------|-------------------------------|--------------------------------|------------------|--------------------------------|
| Cummins Inc.                       | 2018              | ISX 12N                       | JCEXH0729XBC                   | CNG/LNG          | 11.9L                          |
| Encore Tec LLC                     | 2019              | 2 Valve                       | KEL3E06.0584                   | CNG              | 6.0L                           |
| Encore Tec LLC                     | 2019              | 3 Valve                       | KEL3E06.8BW6                   | CNG              | 6.8L                           |
| Encore Tec LLC                     | 2019              | 2 Valve                       | KEL3E06.8BWZ                   | CNG              | 6.8L                           |
| Encore Tec LLC                     | 2018              | 2 Valve                       | JEL3E06.0584                   | CNG              | 6.0L                           |
| Encore Tec LLC                     | 2018              | 3 Valve                       | JEL3E06.8BW6                   | CNG              | 6.8L                           |
| Encore Tec LLC                     | 2018              | 2 Valve                       | JEL3E06.8BWZ                   | CNG              | 6.8L                           |
| Encore Tec LLC                     | 2017              | 2 Valve                       | HEL3E06.076P                   | CNG              | 6.0L                           |
| Encore Tec LLC                     | 2017              | 3 Valve                       | HEL3E06.8BW6                   | CNG              | 6.8L                           |
| Encore Tec LLC                     | 2017              | 3 Valve                       | HEL3E06.8BWZ                   | CNG              | 6.8L                           |
| Greenkraft Inc.                    | 2017              | V-8                           | HGKTE06.0GM2                   | CNG              | 6.0L                           |
| Greenkraft Inc.                    | 2017              | V-8                           | HGKTE06.0PRO                   | LPG              | 6.0L                           |
| Greenkraft Inc.                    | 2017              | V-8                           | HGKTE08.0GC8                   | CNG              | 8.0L                           |
| Greenkraft Inc.                    | 2017              | V-8                           | HGKTE08.0GL8                   | LPG              | 8.0L                           |
| IMPCO Technologies Inc.            | 2017              | E-Series                      | HZ9XE06.8DC2                   | CNG              | 6.8L                           |
| IMPCO Technologies Inc.            | 2017              | F450/550/650/<br>750 Step Van | HZ9XE06.8DC6                   | CNG              | 6.8L                           |
| Power Solutions International Inc. | 2020              | LPG 270                       | LPSIE08.8LPG                   | LPG              | 8.8L                           |
| Power Solutions International Inc. | 2019              | LPG 270                       | KPSIE08.8LPG                   | LPG              | 8.8L                           |
| Power Solutions International Inc. | 2017              | PSI LC8 CNG                   | HPSIE06.0CNG                   | CNG              | 6.0L                           |
| Power Solutions International Inc. | 2017              | 8.8L 235 CNG                  | HPSIE08.8CNG                   | CNG              | 8.8L                           |
| Power Solutions International Inc. | 2017              | PSI LPG                       | HPSIE06.0LPG                   | LPG              | 6.0L                           |
| Power Solutions International Inc. | 2017              | 8.8L 270 LPG                  | HPSIE08.8LPG                   | LPG              | 8.8L                           |
| Westport Dallas Inc.               | 2017              | V-10                          | HBAFE06.8BW6                   | CNG              | 6.8L                           |

**List B**  
**Chassis-Certified Natural Gas Vehicles**

The following heavy-duty vehicle and medium-duty passenger vehicle test groups have been issued a certificate of conformity meeting the required emissions standards of 0.2 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 8,501 - 10,000 GVWR, 0.4 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 10,001 - 14,000 GVWR, or 0.07 g/mi of NO<sub>x</sub> or better for medium-duty passenger vehicles.

A natural gas vehicle purchased under the TNGVGP must be new. Therefore, only recent certificates are listed. See the section entitled *How to Update the List* for information on submitting certificates for vehicles not on the list.

The TCEQ understands that, in some cases, by the time a purchase is completed the vehicle and/or engine purchased may be a newer model than was originally listed in the application. Refer to the TNGVGP RFGA and contract documents for criteria and directions regarding this situation.

| Vehicle Model(s) | Model Year | Manufacturer | Test Group/Code | Fuel Type |
|------------------|------------|--------------|-----------------|-----------|
|------------------|------------|--------------|-----------------|-----------|

**List C**  
**Chassis-Certified Vehicle Conversion System**

The following heavy-duty natural gas vehicle and medium-duty passenger vehicle conversion system test groups have been issued a certificate of conformity meeting the required emissions standards of 0.2 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 8,501 - 10,000 GVWR, 0.4 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 10,001 - 14,000 GVWR, or 0.07 g/mi of NO<sub>x</sub> or better for medium-duty passenger vehicles.

A natural gas vehicle purchased under the TNGVGP must be new. Therefore, only recent certificates are listed. See the section entitled *How to Update the List* for information on submitting certificates for conversion systems not on the list.

The TCEQ understands that, in some cases, by the time a purchase is completed the vehicle and/or engine purchased may be a newer model than was originally listed in the application. Refer to the TNGVGP RFGA and contract documents for criteria and directions regarding this situation.

| Conversion System       |  |                      | Original Vehicle (Pre-conversion)   |               |               |                      |                              |           |
|-------------------------|--|----------------------|---|---------------|---------------|----------------------|------------------------------|-----------|
| Conversion Manufacturer | Conversion Test Group/ Family Code                   | Conversion Fuel Type | Vehicle Model(s)  | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type |
| AGA Systems LLC         | KAGTD06.039P<br>(005, 006, 007, 008)                 | LPG                  | <b>Chevrolet:</b> C25/C35 Silverado 2WD, K25/K35 Silverado 4WD, G2500/G3500 Express 2WD Cargo/Passenger, G3500 Express 2WD Cutaway. | HD-2-b        | 2019          | General Motors       | KGMXD06.0394<br>KGMXD06.0395 | Gasoline  |
|                         | KAGTD06.0B95<br>(009, 010, 011, 012)<br>KAGTD06.0D95 | CNG                  | <b>GMC:</b> G2500/G3500 Savana 2WD Cargo/Passenger, C25/C35 Sierra 2WD, K25/K35 Sierra 4WD, G3500 Savana 2WD Cutaway.               |               |               |                      |                              |           |

| Conversion System       |  |                      | Original Vehicle (Pre-conversion)  |               |               |                      |                              |                       |
|-------------------------|--|----------------------|--|---------------|---------------|----------------------|------------------------------|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code                    | Conversion Fuel Type | Vehicle Model(s)   | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type             |
| AGA Systems LLC         | KAGTD06.0B99<br>(014, 015, 016, 017)<br>KAGTD06.0D99 | CNG                  | <b>Chevrolet:</b> C35 Silverado 2WD / C35 Chassis Cab 2WD; K35 Silverado 4WD; G3500 & G4500 Express 2WD Cutaway, K3500 Suburban 4WD<br><b>GMC:</b> C35 Sierra 2WD / C35 Chassis Cab 2WD, K35 Sierra & Chassis Cab 4WD; G3500 & G4500 Savana 2WD Cutaway Chassis Cab                | MDV5          | 2019          | General Motors       | KGMXD06.0398<br>KGMXD06.0399 | 85% Ethanol, Gasoline |
| AGA Systems LLC         | JAGTD06.039P<br>(006, 007, 008, 009)                 | LPG                  | <b>Chevrolet:</b> C25/C35 Silverado 2WD, K25/K35 Silverado 4WD, G2500 Express 2WD Cargo/Passenger, G3500 Express 2WD Cargo/Passenger/Cutaway.<br><b>GMC:</b> G2500 Savanna 2WD Cargo/Passenger, C25/C35 Sierra 2WD, K25/K35 Sierra 4WD, G3500 Savanna 2WD Cargo/Passenger/Cutaway. | MDV4          | 2018          | General Motors       | JGMXD06.0394<br>JGMXD06.0395 | 85% Ethanol, Gasoline |
|                         | JAGTD06.0D95   | CNG                  |  |               |               |                      |                              |                       |
| AGA Systems LLC         | JAGTD06.0B99<br>(018, 019, 020, 021)<br>JAGTD06.0D99 | CNG                  | <b>Chevrolet:</b> C35 Cab Chassis/Silverado 2WD, K35 Cab Chassis/Silverado/Suburban 4WD, G3500/G4500 Express 2WD Cutaway.<br><b>GMC:</b> C35 Cab Chassis/ Sierra 2WD, K35 Cab Chassis/Sierra 4WD, G3500/G4500 Savanna 2WD Cutaway.   | MDV5          | 2018          | General Motors       | JGMXD06.0398<br>JGMXD06.0394 | Gasoline              |

| Conversion System       |  |                      | Original Vehicle (Pre-conversion)  |               |               |                      |  |                       |
|-------------------------|--|----------------------|--|---------------|---------------|----------------------|--|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code  | Conversion Fuel Type | Vehicle Model(s)   | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code   | Fuel Type             |
| AGA Systems LLC         | JAGTD06.0D17   | CNG                  | <b>Chevrolet:</b> C35 Silverado/Chassis Cab 2WD, G3500/G4500 Express 2WD Cutaway, K35 Silverado/Cab Chassis 4WD, K3500 Suburban 4WD.<br><b>GMC:</b> C35 Sierra/Cab Chassis 2WD, G3500/G4500 Savana 2WD Cutaway, K35 Sierra/Cab Chassis 4WD | MDV5          | 2017          | General Motors       | HGMXD06.0398<br>HGMXD06.0399                                 | Gasoline              |
| Altech-Eco              | KAECT03.75HA   | CNG                  | Transit T150 Wagon   | MDPV          | 2019          | Ford                 | KFMXT03.75HK<br>KFMXT03.75HJ                                 | Gasoline              |
| Altech-Eco              | KAECD03.76BA<br>(021, 021-R01, 022, 022-R01)   | CNG                  | Transit T150/T250/T350 Van/Wagon, Transit T250/T350 Cutaway/Chassis Cab.   | MDV4          | 2019          | Ford                 | KFMXD03.76BX<br>KFMXD03.76BK                                 | Gasoline              |
| Altech-Eco              | KAECD03.77BA<br>(023, 024)   | CNG                  | Transit T350 Van/Wagon/Cutaway/Chassis Cab   | MDV5          | 2019          | Ford                 | KFMXD03.77BX   | Gasoline              |
| Altech-Eco              | KAECD06.26BA<br>(001, 007, 008, 009, 010)<br>KAECD06.27BA<br>(002, 003, 004, 005, 006) | CNG                  | F250/F350 Pickup 2WD/4WD, F250/F350 2WD/4WD Bed Delete, F350 2WD/4WD Incomplete, F350 Pickup 2WD/4WD FFV, F350 4WD Bed Delete FFV  | MDV4          | 2019          | Ford                 | KFMXD06.26BC<br>KFMXD06.26CH<br>KFMXD06.27BC<br>KFMXD06.27CH | 85% Ethanol, Gasoline |
| Altech-Eco              | JAECT03.75HA<br>(035, 035-R01, -R02, -R03)   | CNG                  | Transit T150 Wagon   | MDPV          | 2018          | Ford                 | JFMXT03.75HJ<br>JFMXT03.75HK                                 | Gasoline              |

| Conversion System       |  |                      | Original Vehicle (Pre-conversion)   |                              |               |                      |                              |                       |
|-------------------------|--|----------------------|---|------------------------------|---------------|----------------------|------------------------------|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code                                    | Conversion Fuel Type | Vehicle Model(s)  | Vehicle Class                | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type             |
| Altech-Eco              | JAECD03.76BA<br>(027-R01, 028-R01)                                   | CNG                  | Transit T150 Van, Transit T250 Cutaway 2WD, Transit T250 Chassis Cab 2WD, Transit T250 Van 2WD, Transit T250 Wagon 2WD, Transit T350 Cutaway 2WD, Transit T350 Chassis Cab 2WD, Transit T350 Van 2WD, Transit T350 Wagon. | MDV4                         | 2018          | Ford                 | JFMXD03.76BX                 | Gasoline              |
| Altech-Eco              | JAECD03.77BA<br>(029, 030)   | CNG                  | Transit T350 Van/Wagon/Cutaway/Chassis Cab  | MDV5                         | 2018          | Ford                 | JFMXD03.77BX                 | Gasoline              |
| Altech-Eco              | JAECD06.26BA<br>(003, 003-R01, 004, 004-R01, 007, 007-R01, 019, 020) | CNG                  | F250/F350 Bed Delete 2WD/4WD, F250/F350 Pickup 2WD/4WD, F250/F350 Pickup 2WD/4WD FFV, F350 Incomplete 2WD/4WD, F350 Incomplete 2WD/4WD FFV.   | MDV4                         | 2018          | Ford                 | JFMXD06.26BC<br>JFMXD06.26CH | 85% Ethanol, Gasoline |
|                         | MDV5   |                      |   | JFMXD06.27BC<br>JFMXD06.27CH |               |                      |                              |                       |
| ICOM North America      | KICMD03.783M   | LPG                  | Transit T350 Van/Wagon  | MDV5                         | 2019          | Ford                 | KFMXD03.77BX                 | Gasoline              |
| ICOM North America      | JICMD03.782M<br>(012, 013)   | LPG                  | Transit T250 Chassis Cab, Transit T250 Cutaway, Transit T350 Chassis Cab, Transit T350 Cutaway, Transit T150 Van, Transit T250 Van, Transit T350 Van, Transit T350 Wagon.   | MDV4                         | 2018          | Ford                 | JFMXD03.76BX                 | Gasoline              |
| ICOM North America      | JICMD03.783M<br>(016, 017)   | LPG                  | Transit T350 Van/Wagon/Cutaway/Chassis Cab  | MDV5                         | 2018          | Ford                 | JFMXD03.77BX                 | Gasoline              |

| Conversion System       |   |                      | Original Vehicle (Pre-conversion)   |               |               |                      |                              |                       |
|-------------------------|---|----------------------|---|---------------|---------------|----------------------|------------------------------|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code                   | Conversion Fuel Type | Vehicle Model(s)  | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type             |
| ICOM North America      | HICMD03.762M (012, 013)<br>HICMD03.763M (015, -R01) | LPG                  | Transit T150 Van FFV, T250/T350 Van/Chassis Cab/Cutaway FFV, T350 Wagon FFV   | MDV4          | 2016          | Ford                 | GFMXD03.76BG                 | 85% Ethanol, Gasoline |
| ICOM North America      | HICMD03.772M (018, 023)                             | LPG                  | Transit T150 Van FFV, Transit T250 Chassis Cab 2WD FFV, Transit T250 Cutaway 2WD FFV, Transit T250 Van 2WD FFV, Transit T250 Wagon 2WD FFV, Transit T350 Chassis Cab 2WD FFV, Transit T350 Cutaway 2WD FFV, Transit T350 Van 2WD FFV, Transit T350 Wagon 2WD FFV. | MDV4          | 2017          | Ford                 | HFMXD03.76BG                 | 85% Ethanol, Gasoline |
| ICOM North America      | HICMD03.773M (021, 022)                             | LPG                  | Transit T350 Chassis Cab/Cutaway/Van/Wagon.   | MDV5          | 2017          | Ford                 | HFMXD03.77BX                 | Gasoline              |
| Landi Renzo USA         | KLDRD06.2C10  | CNG                  | Ford F250 2WD Bed Delete and F250 4WD Bed Delete, Ford F250 Pickup 2WD and 4WD, Ford F350 2WD Bed Delete and F350 4WD Bed Delete, Ford F350 2WD Incomplete and F350 4WD Incomplete.   | MDV4          | 2019          | Ford                 | KFMXD06.26BC<br>KFMXD06.26CH | 85% Ethanol, Gasoline |
| Landi Renzo USA         | KLDRD06.2C12  | CNG                  | Ford F350 2WD Bed Delete and Incomplete, Ford F350 4WD Bed Delete and Incomplete, Ford F350 Pickup 2WD and 4WD.   | MDV5          | 2019          | Ford                 | KFMXD06.27BC<br>KFMXD06.27CH | 85% Ethanol, Gasoline |
| Landi Renzo USA         | JLDRT06.2C10  | CNG                  | Ford F250 2WD/4WD Pickup/Bed Delete FFV, F350 2WD/4WD Pickup/Incomplete/Bed Delete FFV.   | MDV4          | 2018          | Ford                 | JFMXD06.26CH                 | 85% Ethanol, Gasoline |

| Conversion System       |                                   |                      | Original Vehicle (Pre-conversion)   |               |               |                      |                              |                       |
|-------------------------|-----------------------------------|----------------------|---|---------------|---------------|----------------------|------------------------------|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code | Conversion Fuel Type | Vehicle Model(s)  | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type             |
| Landi Renzo USA         | JLDRT06.2C12                      | CNG                  | Ford F350 2WD/4WD Pickup/Incomplete/Bed Delete FFV.                         | MDV5          | 2018          | Ford                 | JFMXD06.27BC                 | 85% Ethanol, Gasoline |
| Landi Renzo USA         | JLDRT06.2E10                      | CNG                  | Ford E350/E450 Cutaway/Strip Chassis FFV.                                   | MDV5          | 2018          | Ford                 | JFMXD06.27CX                 | 85% Ethanol, Gasoline |
| Landi Renzo USA         | HLDRT06.2C10                      | CNG                  | Ford F250/F350 2WD/4WD Bed Delete FFV.                                      | MDV4          | 2017          | Ford                 | HFMXD06.26CH                 | 85% Ethanol, Gasoline |
| Landi Renzo USA         | HLDRT06.2C11                      | CNG                  | Ford F350 2WD/4WD Incomplete FFV.   | MDV4          | 2017          | Ford                 | HFMXD06.26CH                 | 85% Ethanol, Gasoline |
| Landi Renzo USA         | HLDRT06.2C12                      | CNG                  | Ford F350 2WD/4WD Bed Delete FFV.   | MDV5          | 2017          | Ford                 | HFMXD06.27BC                 | 85% Ethanol, Gasoline |
| Landi Renzo USA         | HLDRT06.2C13                      | CNG                  | Ford F350 2WD/4WD Incomplete FFV.   | MDV5          | 2017          | Ford                 | HFMXD06.27CH                 | 85% Ethanol, Gasoline |
| Westport Dallas Inc.    | KBAFD03.76BX                      | CNG                  | Transit T150 Wagon  | MDPV          | 2019          | Ford                 | KFMXT03.75HJ                 | Gasoline              |
|                         |                                   |                      | Transit T150/T250/T350 Van, T250/T350 Chassis Cab/Cutaway, T350 Wagon.      | MDV4<br>MDV5  |               |                      | KFMXD03.76BX<br>KFMXD03.77BX |                       |
| Westport Dallas Inc.    | KBAFD06.26BC                      | CNG                  | Ford F250/F350 2WD/4WD Pickup/Bed Delete/ FFV, F350 2WD/4WD Incomplete FFV. | MDV4          | 2019          | Ford                 | KFMXD06.26CH<br>KFMXD06.26BC | 85% Ethanol, Gasoline |
|                         |                                   |                      |   | MDV5          |               |                      | KFMXD06.27CH<br>KFMXD06.27BC |                       |
| Westport Dallas Inc.    | JBAFD03.76BX                      | CNG                  | Transit T150 Wagon  | MDPV          | 2018          | Ford                 | JFMXT03.75HJ                 | Gasoline              |
|                         |                                   |                      | Transit T150/T250/T350 Van, T250/T350 Chassis Cab/Cutaway, T350 Wagon       | MDV4<br>MDV5  |               |                      | JFMXD03.76BX<br>JFMXD03.77BX |                       |

| Conversion System       |                                   |                      | Original Vehicle (Pre-conversion)   |               |               |                      |                              |                       |
|-------------------------|-----------------------------------|----------------------|---|---------------|---------------|----------------------|------------------------------|-----------------------|
| Conversion Manufacturer | Conversion Test Group/Family Code | Conversion Fuel Type | Vehicle Model(s)  | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code         | Fuel Type             |
| Westport Dallas Inc.    | JBAFD06.26BC                      | CNG                  | Ford F250/F350 2WD/4WD Pickup/Bed Delete FFV, F350 2WD/4WD Incomplete FFV,              | MDV4          | 2018          | Ford                 | JFMXD06.26BC<br>JFMXD06.26CH | 85% Ethanol, Gasoline |
|                         |                                   |                      |   | MDV5          |               |                      | JFMXD06.27BC<br>JFMXD06.27CH |                       |
| Westport Dallas Inc.    | HBAFD03.76BX                      | CNG                  | Ford Transit T150 Wagon FFV   | MDPV          | 2017          | Ford                 | HFMXT03.75HG                 | 85% Ethanol, Gasoline |
|                         |                                   |                      | Ford Transit T150/T250/T350 Van, T250/T350 Chassis Cab/Cutaway, T350 Wagon              | MDV4          | 2017          | Ford                 | HFMXD03.76BX                 | Gasoline              |
|                         |                                   |                      | Ford Transit T150/T250/T350 Van FFV, T250/T350 Chassis Cab/Cutaway FFV, T350 Wagon FFV. | MDV4          | 2017          | Ford                 | HFMXD03.76BG                 | 85% Ethanol, Gasoline |
|                         |                                   |                      | Ford Transit T350 Chassis Cab/ Cutaway/Van/Wagon.                                       | MDV5          | 2017          | Ford                 | HFMXD03.77BX                 | Gasoline              |
| Westport Dallas Inc.    | HBAFD06.26BC                      | CNG                  | Ford F250/F350 2WD/4WD Pickup/Bed Delete Gasoline/FFV                                   | MDV4          | 2017          | Ford                 | HFMXD06.26BC<br>HFMXD06.26CH | 85% Ethanol, Gasoline |
|                         |                                   |                      | Ford F350 2WD/4WD Pickup/Bed Delete Gasoline/FFV  | MDV5          | 2017          | Ford                 | HFMXD06.27BC<br>HFMXD06.27CH |                       |

**List D**  
**On-Road Heavy-Duty Engine Conversion Systems**

The following on-road heavy-duty natural gas engine conversion systems have been issued a certificate of conformity meeting the required emissions standards of 0.2 g/bhp-hr of NO<sub>x</sub> or better.

See the section entitled *How to Update the List* for information on submitting certificates for engines not on the list.

| Conversion System       |                                    |                      | Original Engine (Pre-conversion)  |              |               |                     |                         |           |
|-------------------------|------------------------------------|----------------------|---|--------------|---------------|---------------------|-------------------------|-----------|
| Conversion Manufacturer | Conversion Engine Family Name/Code | Conversion Fuel Type | Engine Model(s)   | Displacement | Model Year(s) | Engine Manufacturer | Engine Family Name/Code | Fuel Type |
| Landi Renzo USA         | LLDRE07.3BW7                       | CNG                  | E-Series, Medium Duty, Super Duty Truck, Step Van, Motor Home.                    | 7.3L         | 2020          | Ford                | LFMXE07.3BW7            | Gasoline  |
| Roush Industries Inc.   | LRIIE06.8BW2<br>LRIIE06.8BWL       | LPG                  | Blue Bird Vision School Bus, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2019          | Ford                | KFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | KRIIE06.8BC1<br>KRIIE06.8BC2       | CNG                  | Blue Bird Vision School Bus, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2019          | Ford                | KFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | KRIIE06.8 BW2<br>KRIIE06.8BWL      | LPG                  | Blue Bird Vision School Bus, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2019          | Ford                | KFMXE06.8BW6            | Gasoline  |

| Conversion System       |                                    |                      | Original Engine (Pre-conversion)   |              |               |                     |                         |           |
|-------------------------|------------------------------------|----------------------|--|--------------|---------------|---------------------|-------------------------|-----------|
| Conversion Manufacturer | Conversion Engine Family Name/Code | Conversion Fuel Type | Engine Model(s)  | Displacement | Model Year(s) | Engine Manufacturer | Engine Family Name/Code | Fuel Type |
| Roush Industries Inc.   | KRIIE06.8BWZ                       | LPG                  | Blue Bird Vision School Bus, E450 Incomplete, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2019          | Ford                | KFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | JRIIE06.8BW2<br>JRIIE06.8BWL       | LPG                  | Blue Bird Vision School Bus, F450/550, F650/750 Chassis Cab, Motor Home, Step Van                  | 6.8L         | 2018          | Ford                | JFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | JRIIE06.8BWZ                       | LPG                  | Blue Bird Vision School Bus, E450 Incomplete, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2018          | Ford                | JFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | HRIIE06.8BWC<br>HRIIE06.8BWL       | CNG                  | Blue Bird Vision School Bus, F450/550, F650/750 Chassis Cab, Motor Home, Step Van                  | 6.8L         | 2017          | Ford                | HFMXE06.8BW6            | Gasoline  |
| Roush Industries Inc.   | HRIIE06.8BWZ                       | LPG                  | Blue Bird Vision School Bus, E450 Incomplete, F450/550, F650/750 Chassis Cab, Motor Home, Step Van | 6.8L         | 2017          | Ford                | HFMXE06.8BW6            | Gasoline  |

## List E

### Chassis-Certified Vehicle Conversion Systems not Certified to the Current Federal Emission Standards

The following heavy-duty natural gas vehicle and medium-duty passenger vehicle conversion system test groups have been evaluated by the TCEQ and determined to have been tested under Federal Test Procedures (FTP) to required emissions 0.2 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 8,501 - 10,000 GVWR, 0.4 g/mi of NO<sub>x</sub> or better for heavy-duty vehicles 10,001 - 14,000 GVWR, or 0.07 g/mi of NO<sub>x</sub> or better for medium-duty passenger vehicles.

See the section entitled *How to Update the List* for information on submitting information on vehicle conversion systems not on the list.

| Conversion System       |                            |                      | Original Vehicle (Pre-conversion) |               |               |                      |                      |           |
|-------------------------|----------------------------|----------------------|-----------------------------------|---------------|---------------|----------------------|----------------------|-----------|
| Conversion Manufacturer | Conversion Test Group/Code | Conversion Fuel Type | Vehicle Model(s)                  | Vehicle Class | Model Year(s) | Vehicle Manufacturer | Test Group Name/Code | Fuel Type |

## List F

### Heavy-Duty Engine Conversion Systems not Certified to the Current Federal Emission Standards

The following on-road heavy-duty natural gas engine conversion systems have been evaluated by the TCEQ and determined to have been tested under Federal Test Procedures (FTP) to required emissions of 0.2 g/bhp-hr of NO<sub>x</sub> or better.

See the section entitled *How to Update the List* for information on submitting certificates for engines not on the list.

| Conversion System       |                                    |                      | Original Engine (Pre-conversion) |              |               |                     |                         |           |
|-------------------------|------------------------------------|----------------------|----------------------------------|--------------|---------------|---------------------|-------------------------|-----------|
| Conversion Manufacturer | Conversion Engine Family Code/Name | Conversion Fuel Type | Engine Model(s)                  | Displacement | Model Year(s) | Engine Manufacturer | Engine Family Name/Code | Fuel Type |