**Texas Commission on Environmental Quality**

**Table 29 Reciprocating Engines**

| **I. Engine Data** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Manufacturer: | | | | | | | | | Model No. | | | | | | | | | | | | | | | | | Serial No. | | | | | | | | | | | | | Manufacture Date: | | | | | | | | |
|  | | | | | | | | |  | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | | | |
| Rebuilds Date: | | | | | | | | | No. of Cylinders: | | | | | | | | | | | | | | | | | Compression Ratio: | | | | | | | | | | | | | EPN: | | | | | | | | |
|  | | | | | | | | |  | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | |  | | | | | | | | |
| **Application:** | | | Gas Compression | | | | | | | | | | | | Electric Generation | | | | | | | | | | | | | Refrigeration | | | | | | | | | Emergency/Stand by | | | | | | | | | | |
| 4 Stroke Cycle | | | | | | | 2 Stroke Cycle | | | | | | | | | | Carbureted | | | | | | | | Spark Ignited | | | | | | | | | Dual Fuel | | | | | | | | Fuel Injected | | | | | |
| Diesel | | Naturally Aspirated | | | | | | | | | | | | | Blower /Pump Scavenged | | | | | | | | | | | | | | | | Turbo Charged and I.C. | | | | | | | | | | | | Turbo Charged | | | | |
| Intercooled | | | | | | | | I.C. Water Temperature | | | | | | | | | | | | | | | | Lean Burn | | | | | | | | | | | | | | | | Rich Burn | | | | | | | |
| **Ignition/Injection Timing:** | | | | | | | | | | | Fixed: | | | | | | | | | | | | | | | | | | | | | | Variable: | | | | | | | | | | | | | | |
| Manufacture Horsepower Rating**:** | | | | | | | | | | | | | | | | | | | | | | | | | | | Proposed Horsepower Rating: | | | | | | | | | | | | | | | | | | | | |
| **Discharge Parameters** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Stack Height (Feet)** | | | | | | | | | **Stack Diameter (Feet)** | | | | | | | | | | | | | | | | | **Stack Temperature (oF)** | | | | | | | | | | | | | | | **Exit Velocity (FPS)** | | | | | | |
|  | | | | | | | | |  | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | |  | | | | | | |
| **II. Fuel Data** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of Fuel: | | | | | Field Gas | | | | | | | | Landfill Gas | | | | | | | LP Gas | | | | | | | | | | Natural Gas | | | | | | | | Digester Gas | | | | | | | | Diesel | |
| Fuel Consumption (BTU/bhp-hr): | | | | | | | | | | | | | | Higher Heating Value: | | | | | | | | | | | | | | | | | | | | | | Lower Heating Value | | | | | | | | | | | |
| Sulfur Content (grains/100 scf - weight %): | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **III. Emission Factors (Before Control)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **NOX** | | | | | | **CO** | | | | | | | | | | **SO2** | | | | | | | | | | **VOC** | | | | | | | | | **Formaldehyde** | | | | | | | | | **PM10** | | | |
| **g/hp-hr** | **ppmv** | | | | | **g/hp-hr** | | | | **ppmv** | | | | | | **g/hp-hr** | | | **ppmv** | | | | | | | **g/hp-hr** | | | | | | **ppmv** | | | **g/hp-hr** | | | | | | **ppmv** | | | **g/hp-hr** | | | **ppmv** |
|  |  | | | | |  | | | |  | | | | | |  | | |  | | | | | | |  | | | | | |  | | |  | | | | | |  | | |  | | |  |
| Source of Emission Factors: | | | | | | | | | | Manufacturer Data | | | | | | | | | | | | | AP-42 | | | | | | Other (specify): | | | | | | | | | | | | | | | | | | |
| **IV. Emission Factors (Post Control)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **NOX** | | | | | | **CO** | | | | | | | | | | **SO2** | | | | | | | | | | **VOC** | | | | | | | | | **Formaldehyde** | | | | | | | | | **PM10** | | | |
| **g/hp-hr** | **ppmv** | | | | | **g/hp-hr** | | | | **ppmv** | | | | | | **g/hp-hr** | | | **ppmv** | | | | | | | **g/hp-hr** | | | | | | **ppmv** | | | **g/hp-hr** | | | | | | **ppmv** | | | **g/hp-hr** | | | **ppmv** |
|  |  | | | | |  | | | |  | | | | | |  | |  | | | | | | | |  | | | | | |  | | |  | | | | | |  | | |  | | |  |
| Method of Emission Control: | | | | | | | | | | | | NSCR Catalyst | | | | | | | | | | Lean Operation | | | | | | | | | | | Parameter Adjustment | | | | | | | | | | | | | | |
| Stratified Charge | | | | | | | | | | | | JLCC Catalyst | | | | | | | | | | Other (Specify): | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Note:*** *Must submit a copy of any manufacturer control information that demonstrates control efficiency.* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Is Formaldehyde included in the VOCs? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Yes  No | | |
| **V. Federal and State Standards (Check all that apply)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NSPS JJJJ | | | | MACT ZZZZ | | | | | | | | | | NSPS IIII | | | | | | | Title 30 Chapter 117 - List County: | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **VI. Additional Information** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Submit a copy of the engine manufacturer’s site rating or general rating specification data.  2. Submit a typical fuel gas analysis, including sulfur content and heating value. For gaseous fuels, provide mole percent of constituents.  3. Submit description of air/fuel ratio control system (manufacturer information is acceptable). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |