State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-325-19
Relating to Certification of New Motor Vehicles

GFI CONTROL SYSTEMS, INC.

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1999 model-year GFI Control Systems, Inc. exhaust emission control systems are certified as described below for medium-duty vehicles:

Emission Standard Category: Ultra-Low-Emission Vehicle (ULEV)

Fuel Type: Dual-Fuel Liquefied Petroleum Gas (LPG) or Gasoline (Indolene)

Engine Family: XG9XA05.4JBP Displacement: 5.4 Liters (330 Cubic Inches)

Exhaust Emission Control Systems & Special Features:

Dual Warm-Up Three Way Catalytic Converters
Dual Three Way Catalytic Converters
Three Way Catalytic Converter
Dual Heated Oxygen Sensors (two)
Exhaust Gas Recirculation
Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The non-methane organic gases (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) ULEV certification exhaust emission standards for this engine family in grams per mile are: (The standards in parentheses are for gasoline.)

| Test Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 5751-8500 | 50,000 | 0.117 (0.195) | 5.0 (5.0) | 0.6 (0.6) | 0.011 (0.011) | 12.5 (12.5) |
| | 120,000 | 0.167 (0.280) | 7.3 (7.3) | 0.9 (0.9) | 0.016 (0.016) | n/a |

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.50 (LPG)
1.00 (Indolene)

The certification exhaust emission values set forth for NMOG reflect application of a 0.50 or 1.00 RAF for 1999 model-year ULEVs. The ULEV certification exhaust emission values for this engine family in grams per mile are: (The values in parentheses are for gasoline.)

| Test Weight (lbs.) | Miles | NMOG | CO | NOx | HCHO | CO (20°F) |
|---|---|---|---|---|---|---|
| 5751-8500 | 50,000 | 0.063 (0.120) | 2.2 (2.6) | 0.1 (0.2) | 0.001 (0.0004) | 4.6 (6.0) |
| | 120,000 | 0.073 (0.177) | 2.5 (5.0) | 0.1 (0.3) | 0.001 (0.0004) | n/a |

BE IT FURTHER RESOLVED: That the manufacturer shall not be subject to the phase-in requirement as specified in Title 13, California Code of Regulations, Section 1960.1(h)(2) Endnote (10)(d) applicable to small-volume manufacturers of medium-duty vehicles.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the running loss and useful life standards applicable to 1995 and subsequent model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control and Smog Index Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 5th day of April 1999.

R. B. Summerfield, Chief
Mobile Source Operations Division

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# Air Resources Board Certification Review Sheet
## Passenger Cars, Light Duty Trucks and Medium Duty Vehicles
## Model Year 1999

Manufacturer: **GFI CONTROL SYSTEMS INC**. Exh Eng Fam: **XG9XA05.4JBP** Evap Fam: **XFMXE0155BAG**

All Engine Codes in Engine Family: CA X 49s___ 50s___ AB965 _____, ORVR: same as OEM

Exh Std: CA Tier-1 TLEV___ LEV___ ULEV X SULEV___, US EPA Tier-1_____

Veh Class(es): PC___ LDT1___ LDT2___ MDV1___ MDV2___ MDV3 X MDV4___ MDV5___

Single Cert Standard for Multi-Class Eng Family: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)

Fuel Type(s): Dedicated___ Flex Fuel___ Dual Fuel X Bi-Fuel___ Gasoline X Diesel___

CNG___ LNG___ LPG X M85___ Other (specify)_____

Exh Emiss Test Fuel(s): Indo X CBG___ CNG___ LPG X M85___ Other (specify)_____

Diesel: 13 CCR 2282___ 40 CFR 86.113-90___ 40 CFR 86.113-90_____

Evaporative Emissions Test Procedure: California X Federal_____

Service Accum: Std AMA___ Mod AMA___ Mfr ADP___ Other (specify)_____

NMOG Test Procedure: N/A___ Std X Equiv___ R/L Test Proc: SHED X Pt Source___

Engine Configuration: V8 Displacement: 5.8 Liters 330 Cubic Inches

Valves Per Cylinder: 2 Rated HP 235 @ 4250 RPM

Engine: Front X Mid___ Rear___ Drive: FWD___ RWD X 4WD-FT___ 4WD-PT___

Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,EGR,2HO2S(2),2WU-TWC,2TWC,TWC

(use abbreviations per SAE J1930 Jun93)

| Engine Code (also list CA/49st/50st) | Vehicle Models (if coded see attachment) | Trans. (M5, A4 etc.) | ETW or Test Wt. | DPA or RLHP | Ignition (ECM/PCM) Part No. | EGR System Part No. | Catalytic Converter Part No. |
|---|---|---|---|---|---|---|---|
| 9vzabu/26f1/be Calibration: 6F1F1P01.R99 | F-150 PickUp 4X4, Regular & Supercab. | A4 | 6875 lbs | 16.2hp | XL3F-12A650-AKE (gasoline) V23-100 (LPG) | F75E-9D475-CA | XL34-5E214-GB XL34-5E214-HD XL34-5G218-GH XL34-5G218-HB F858-5E212-ADGF |
| 9vzabv/26f1/be Calibration: 6F1F2P01.R99 | F-250 Pickup 4x2,4x4,Regular & Supercab | A4 | 6875 lbs | 16.2hp | XL3F-12B579-BA | F75E-9D475-CA | XL34-5E214-GA3 XL34-5E214-HA3 XL34-5G218-GA3 XL34-5G218-HA3 F858-5E212-ADGF |