File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-325-16
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 Compressed Natural Gas (CNG) or Gasoline (Indolene)

Engine Family: XG9XA05.4HBN 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)
3751-5750	50,000	0.100 (0.143)	4.4 (4.4)	0.4 (0.4)	0.009 (0.009)	n/a (12.5)
	120,000	0.160 (0.230)	6.4 (6.4)	0.6 (0.6)	0.013 (0.013)	n/a

The CNG certification exhaust emission values set forth for NMOG reflect application of a reactivity adjustment factor (RAF) for CNG-fueled medium-duty ULEVs, and the addition of the product of the methane exhaust emission value and a RAF for methane emission of CNG-fueled medium-duty ULEVs.

Reactivity Adjustment Factor for NMOG Mass Emission: 0.43

Reactivity Adjustment Factor for Methane Mass Emission: 0.0047

The 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)
3751-5750	50,000	0.042 (0.123)	1.1 (1.5)	0.2 (0.1)	0.0006 (0.0002)	n/a (5.2)
	120,000	0.049 (0.157)	1.3 (3.9)	0.2 (0.2)	0.0007 (0.0002)	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 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

Air Resources Board SUPPLEMENTAL DATA **Sheet**
Passenger Cars, Light Duty Trucks and Medium Duty Vehicles
Model Year 1999

ED A-325-16

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

All Engine Codes in Engine Family: CA _X_ 49s__ 50s___ AB965 _____, ORVR: ~~same as OEM~~ ND

Exh Std: CA Tier-1 TLEV___LEV___ULEV_X_SULEV___, US EPA Tier-1_____

Veh Class(es): PC___LDT1___ LDT2___ MDV1___MDV2_X_MDV3___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_X_LNG___LPG___M85___ Other (specify)_____

Exh Emiss Test Fuel(s): Indo_X_CBG___CNG___LPG___ 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) do Ford Gasoline assigned dfs CNG

NMOG Test Procedure: N/A___ Std_X_ Equiv___ R/L Test Proc: SHED_X_ Ft Source___

Engine Configuration: V8 Displacement: 5.4 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 (FCM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
9vzabu/26f1/be Calibration: 6F2F1C01.R99	F-150 PickUp 4X2, Regular & Supercab	A4	5750 lbm	16.9hp	XL3F-12A650-AKE (gasoline) V24-100 (CNG)	F75E-9D475-CA	XL34-5E214-GB XL34-5E214-HB XL34-5G218-GB XL34-5E218-HB F85B-5E212-ADGF