

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).

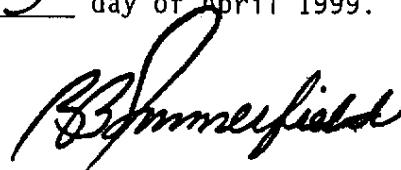
BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned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

A handwritten signature in cursive script, appearing to read "R. B. Summerfield".

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 1996

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 _____ *do Ford Gasoline*
 Service Accum: Std AMA _____ Mod AMA _____ MF: ADP _____ Other (specify) assigned dts CNG
 NMOG Test Procedure: N/A _____ Std X Equip _____ 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): SEI EGR, 2HO2S(2)ZWU, TWC, 2TWC, TWC
 (See 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.
9vzabw/26f1/be Calibration: 652F1C01.R09	F-150 PickUp 4X2, Regular & Supercab.	A4	5750 lbm	16.9hp	XL3F-12A650- AKE (gasoline) V24-100 (CNG)	P75B-9D475-CA	XL34-5E214-GB XL34-5E214-HB XL34-5G218-GB XL34-5E218-EB P838-5E212- ADGF

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