State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-311-3
Relating to Certification of New Motor Vehicles

VECTOR AEROMOTIVE CORPORATION

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 1997 model-year Vector Aeromotive Corporation exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: VG25.7VJGFHK Displacement: 5.7 Liters (348 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Sequential Multiport Fuel Injection
Dual Heated Oxygen Sensors (two)
Dual Warm Up Three Way Catalytic Converters
Dual Three Way Catalytic Converters

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

The certification exhaust emission standards for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20^0F)
50,000	0.25	3.4	0.4	10.0
100,000	0.31	4.2	0.6	n/a

The certification exhaust emission values for this engine family in grams per mile are:

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20^0F)
50,000	0.11	2.1	0.3	7.9
100,000	0.15	3.1	0.3	n/a

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 vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 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 shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," pursuant to provisions in said standards and test procedures applicable to small-volume manufacturers.

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 manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").

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 12th day of November 1996.

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O.# A-311-3

1997 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: Vector . Exh Eng Fam: VG25.7VJGFHK Evap Fam: VG21130AYMAE

All Codes in Eng Fam: CA___ 49S___ 50S XX AB965___

Exh Std: CA Tier-1 X TLEV___ LEV___ ULEV___ ZEV___; US EPA Tier-1 X

Evap Std: 50K X Useful Life with R/L___ In-Use Exh Std: Full In Use X Alt In Use___

Veh Class(es): PC XX LDT1___ LDT2___ MDV1___ MDV2___ MDV3___ MDV4___ MDV5___

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

Fuel Type(s): Dedicated XX Flex-Fuel___ Dual-Fuel___ Bi-Fuel___ Gasoline XX Diesel___

CNG___ LNG___ LPG___ M85___ Other (specify)___

Emiss Test Fuel(s): Indo XX Ph2___ CNG___ LPG___ M85___ Other (specify)___

Diesel: 13 CCR 2282___ 40 CFR 86.113-90___ 40 CFR 86.113-94___

Service Accum: Std AMA XX Mod AMA___ Mfr ADP___ Other (specify) ADF

IMOG Test Procedure: N/A XX Std___ Equiv___ R/L Test Proc: SHED___ Pt Source___

Hybrid: Type A___ B___ C___, APU Cycle (e.g., Otto, Diesel, Turbine):___

Engine Configuration: V-12 Displacement: / 5.7 Liters / 348 Cubic Inches

Valves per Cylinder: 4 Rated HP: 492 @ 6800 RPM

Engine: Front___ Mid XX Rear___ Drive: FWD___ RWD XX 4WD-FT___ 4WD-PT___

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

(use abbreviations per SAE J1930 SEP91)

Code also list A/49S/50ST	Vehicle Models (if coded see attachment)	Trans. (M5, A4 etc.)	ETW or Test Wt.	OPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
CNG 96 L529/71 (50 ST)	Avtechsc / M12	M-5	4000	11.7	522-20-37603	------	132-44-31149

Revised:

Revisions:

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1997 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Eng Fam: VTY4.55JGKEK Evap Fam: VTY1095DYMB0
All Eng Codes in Eng Fam: CA 49S 50S x AB965
Exh Std: CA Tier-1 x TLEV LEV ULEV ZEV ; US EPA Tier-1 x
Evap std: 50K x Useful Life with R/L In-Use Exh Std: Full In Use X Alt In Use
Veh Class(es): PC LDT1 LDT2 MDV1 MDV2 x MDV3 MDV4 MDV5
Single Cert Std for Multi-Class Eng Fam: N/A (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type(s): Dedicated x Flex-Fuel Dual-Fuel Bi-Fuel Gasoline x Diesel
CNG LNG LPG M85 Other(specify)
Emiss Test Fuel(s): Indo x Ph2 CNG LPG M85 Other(specify)
Diesel: 13CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94
Service Accum: Std AMA x Mod AMA Mfr ADP Other(specify)
NMOG Test Procedure: N/A x Std Equiv R/L Test Proc: SHED Pt Source
Hybrid: Type A B C , APU Cycle(e.g., Otto, Diesel, Turbine):
Engine Configuration: I-6 Displacement: 4.5 / Liters 273.2 / Cubic Inches
Valves per Cylinder: 4 Rated HP: 212 @ 4,600 RPM
Engine: Front x Mid Rear Drive: FWD RWD 4WD-FT x 4WD-PT
Exhaust ECS(e.g., MFI, EGR, TC, CAC): SFI, EGR, HO2S(2), TWC(2)
(use abbreviations per SAE J1930 SEP91)

Engine Code/ (also list CA/ 49S/ 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.
2	FZJ80L-GNPEKA FZJ80L-GNPGKA	L4	5,500	18.0	89661-60650	25620-66011	C11, F16

Comment : Please refer to manufacturer's HP list for correct dyno test HP setting based on model and equipment.

VEHICLE MODELS :

Land Cruiser Wagon 4WD	LX450
FZJ80L-GNPEKA	FZJ80L-GNPGKA