

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-37-17
Relating to Certification of New Motor Vehicles

LOTUS CARS LIMITED

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 Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1990 model-year Lotus Cars Limited emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family: LLT2.2V5FP40 Displacement: 2.2 Liters (133 Inches³)

Equipped with the following exhaust emission control systems:

- Heated Oxygen Sensor
- Turbocharger
- Three-Way Catalyst
- Multipoint Electronic Fuel Injection
- On-Board Diagnostic System

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

The following are the emission standards for this engine family:

<u>Hydrocarbons</u> <u>(Grams per Mile)</u>	<u>Carbon Monoxide</u> <u>(Grams per Mile)</u>	<u>Nitrogen Oxides</u> <u>(Grams per Mile)</u>
0.41	7.0	0.7

The following are the certification emission values for this engine family:

<u>Hydrocarbons</u> <u>(Grams per Mile)</u>	<u>Carbon Monoxide</u> <u>(Grams per Mile)</u>	<u>Nitrogen Oxides</u> <u>(Grams per Mile)</u>
0.08	0.7	0.4

BE IT FURTHER RESOLVED: That the listed models are certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Code of Regulations which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying to the optional NOx standard based on actual sales of 1989 model-year California-certified passenger cars.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

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" (Title 13, California Code of Regulations, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards 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 Label Specifications" (Title 13, California Code of Regulations, Section 1965) for the aforementioned model year.

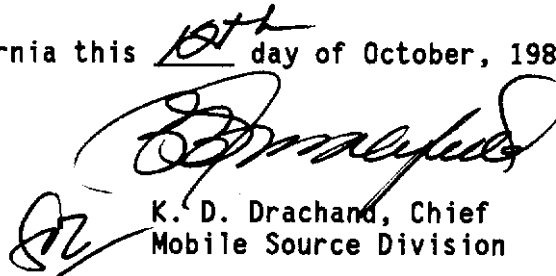
BE IT FURTHER RESOLVED: That the vehicle models listed also comply with the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Code of Regulations, Section 1968) for the aforementioned model year.

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 (California Health and Safety Code Section 43205).

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 10th day of October, 1989.



K. D. Drachand, Chief
Mobile Source Division

Attachment 3

E.O. A-37-17

1990 Air Resources Board Supplemental Data Sheet

Manufacturer LOTUS CARS LTD Engine Family LLT2.2V5FP40
 Evaporative Family LT4 Engine Type L-4
 Litres (CID) 2.2 (132.6)

ABBREVIATIONS

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Special Features</u>
CA-Centrifugal Advance	AIP-Air Injection - Pump	CFI-Central Fuel Injection or Throttle Body Injection.
ECU-Electronic Control Unit	AIV-Air Injection - Valve	EPFI-Electronic Port Fuel Injection
EI-Electronic Ignition	EGR-Exhaust Gas Recirculation	MPFI-Mechanical Port Fuel Injection
ESAC-Electronic Spark Advance Control	EIC-Electronic Injection Control (Diesel only)	SFI- Sequential Fuel Injection
VA- Vacuum Advance	EM-Engine Modification	DID-Diesel Injection-Direct
VR-Vacuum Retard	SPL-Smoke Puff Limiter or Throttle Delay	DIP-Diesel Injection Prechamber
	TOC-Trap Oxidizer, Continual	TC-Turbocharger
	TOP-Trap Oxidizer, Periodical	SC-Supercharger
	DBC-Dual Bed Catalyst	IC-Intercooler or Aftercooler
		CCV-Combustion Chamber Valve
		OBD-On board Diagnostics
<u>Fuel System</u>	TWC-Three way Catalyst	
CFI,EPFI,MPFI, SFI, DID, DIP, HOS, OS	WUOC-Warm up Oxidation Catalyst	
nV-nVenturi Carburetor	WUTWC-Warm up Three way Catalyst	
VV-Variable Carburetor	OS-Oxygen Sensor	
	HOS-Heated Oxygen Sensor	

VEHICLE MODELS

Engine: Front Mid Rear
 Drive; FWD RWD 4WD Full Time 4WD Part Time

1990 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E O **A-37-17**

PASSENGER CARSLIGHT DUTY TRUCKSMEDIUM DUTY VEHICLESGASDIESEL....

MANUFACTURER: LOTUS CARS LTD

ENGINE FAMILY: LLT2.2V5FP40

LITRE (CID) (132.6) 2.2

ENGINE FAMILY: LLT2.2V5FP40

EMISSION CONTROL SYSTEM (SPECIAL FEATURES)

TWC/HO2S/OBD/MI/TC

ENGINE CODE	VEHICLE MODELS (IF CODED SEE ATTACHMENT)	TRANS TYPE	EQUIV TEST WEIGHT	IGN SYSTEM	FUEL SYSTEM	EGR VALVE	CATALYST
(DYNO HP)				PART NO.	PART NO.	PART NO.	PART NO.
LLT2.2V5FP40	LOTUS ESPRIT TURBO	M5	3125	A910E6940 Direct ignition system	A910E6946 (Fuel rail assembly)	None	C08256045
(5.6 Hp)							

Comments: See Page 1 for abbreviations and evaporative emission family identification. Please refer to manufacturer's Hp list for correct dyno test Hp settings based on model and equipment. If two test weights are listed, the lower weight will be used for testing.

Date of IssueRevisions: