E/O file

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-37-16
Relating to Certification of New Motor Vehicles

LOTUS CARS LTD.

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 1989 model-year Lotus Cars Ltd exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

Engine Family	Displacement Liters (Cubic Inches)	Exhaust Emission Control Systems (Special Features)
KLT2.2V5F1C8	2.2 (132.6)	Three-Way Catalyst Heated Oxygen Sensor (Electronic Port Fuel Injection) (Turbocharger) (Intercooler) (On-Board Diagnostics)

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

The following are the emission standards for this engine family:

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile)
0.41	7.0	0.4

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

Hydrocarbons (Grams per Mile)	Carbon Monoxide (Grams per Mile)	Nitrogen Oxides (Grams per Mile)
0.16	1.2	0.3

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 Administrative Code, 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, 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 Administrative Code, 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 regulations (Title 13, California Administrative Code, 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 7th day of April, 1989.

K. D. Drachand, Chief
Mobile Source Division

17:03:00:00
KLT2.2V5F1C8

Attachment 3

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1989 Air Resources Board Supplemental Data Sheet

Manufacturer LOTUS CARS LTD

Engine Family KLT2.2V5F1C8

Evaporative Family LT4

Engine Type KLT2.2V5F1C8

Litres (CID) 2.2 (132.6)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
ECU-Electronic Control Unit
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA- Vacuum Advance
VR-Vacuum Retard

Fuel System

CFI,EPFI,MPFI, SFI, DID, DIP, HOS, OS
nV-nVenturi Carburetor
VV-Variable Carburetor

Exhaust Emissions Control System

AIP-Air Injection - Pump
AIV-Air Injection - Valve
EGR-Exhaust Gas Recirculation
EIC-Electronic Injection Control (Diesel only)
EM-Engine Modification
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
DBC-Dual Bed Catalyst

TWC-Three way Catalyst
WUOC-Warm up Oxidation Catalyst
WUTWC-Warm up Three way Catalyst
OS-Oxygen Sensor
HOS-Heated Oxygen Sensor

Special Features

CFI-Central Fuel Injection or Throttle Body Injection.
EPFI-Electronic Port Fuel Injection
MPFI-Mechanical Port Fuel Injection
SFI-Sequential Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection Prechamber
TC-Turbocharger
SC-Supercharger
IC-Intercooler or Aftercooler
CCV-Combustion Chamber Valve
OBD-On board Diagnostics

VEHICLE MODELS

Engine: Front ____ Mid ✓ Rear ____

Drive; FWD ____ RWD ✓ 4WD Full Time ____ 4WD Part Time ____

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E O A-37-16

PASSENGER CARS ✓ LIGHT DUTY TRUCKS .... MEDIUM DUTY VEHICLES .... GAS ✓ DIESEL ....

MANUFACTURER: LOTUS CARS LTD ENGINE FAMILY: KLT2.2V5F1C8

LITRE (CID) (132.6) 2.2 ENGINE FAMILY: KLT2.2V5F1C8

EMISSION CONTROL SYSTEM (SPECIAL FEATURES) TWC/HOS/OBD's/EPFI/TC/IC

ENGINE CODE	VEHICLE MODELS (IF CODED SEE ATTACHMENT) (DYNO HP)	TRANS TYPE WEIGHT	EQUIV TEST	IGN SYSTEM PART NO.	FUEL SYSTEM PART NO.	EGR VALVE PART NO.	CATALYST PART NO.
KLT2.2V5F1C8	LOTUS ESPRIT TURBO (7.0 Hp)	M5	3250	A910E6940 Direct ignition system	A910E6946 (Fuel rail assembly)	None	A08256045

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 Issue .....Revisions: