State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-277-1
Relating to Certification of New Motor Vehicles

LAND ROVER 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 1987 model-year Land Rover Ltd. exhaust emission control systems are certified as described below for gasoline-powered light-duty trucks:

Engine Family	Displacement Cubic Inches	(Liters)	Exhaust Emission Control Systems (Special Features)
HLR3.5T5FRR7	215	(3.5)	Dual Three-Way Catalysts Three-Way Catalyst Dual Heater Oxygen Sensors (Electronic Fuel Injection)

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

The following are the emission standards for this engine family:

Equivalent Inertia Weight	Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per mile
4000-5999	0.50	9.0	1.0

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

Equivalent Inertia Weight	Hydrocarbons Grams per Mile	Carbon Monoxide Grams per Mile	Nitrogen Oxides Grams per Mile
4000-5999	0.27	1.1	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 1981 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 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 21st day of August, 1986.

K. D. Drachand, Chief
Mobile Source Division

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1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer LAND ROVER LTD.

Engine Family HLR3.5T5FRR7

Evaporative Family RAFI

Engine Type 4-STROKE/90°V8

Liters (CID) 3.528 (215)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
EEC-Electronic Engine Control
EI-Electronic Ignition
ESAC-Electronic Spark Advance Control
VA-Vacuum Advance
VR-Vacuum Retard

Exhaust Emissions Control System

AIP-Air Injection-Pump
AIV-Air Injection-Valve
CL-Closed Loop
EGR-Exhaust Gas Recirculation
EM-Engine Modification
OC-Oxidation Catalyst System
SPL-Smoke Puff Limiter or Throttle Delay
TOC-Trap Oxidizer, Continual
TOP-Trap Oxidizer, Periodical
TR-Thermal Reactor
TWC-Three-Way Catalyst System

Special Features

CCV-Combustion Chamber Valve
CFI-Central Fuel Injection
DID-Diesel Injection-Direct
DIP-Diesel Injection-Prechamber
EFI-Electronic Fuel Injection
IC-Intercooler or aftercooler
MFI-Mechanical Fuel Injection
TC-Turbocharger

Fuel System

CFI, CL, DID, DIP, EFI, MFI
nV-nVenturi Carburetor

VEHICLE MODELS: RANGE ROVER

Drive: Front X Mid. ____ Rear ____

Drive: FWD ____ RWD ____ 4WD Full Time X 4WD Part Time ____

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Date of Issue 2.6.86 Revisions: 8.5.86

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1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Passenger Cars ____ Light-Duty Trucks X Medium-Duty Vehicles ____ Gas X Diesel ____

Manufacturer LAND ROVER LTD. Engine Family HLR3.5T5FRR7

Liter (CID) 3.528 (215) Eng. Type 4-STROKE/90°V8

Emission Control Sys. (Special Features) EFI : TWC/EGS(2)

Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) Part No.	Fuel System Part No.	EGR Valve Part No.	Catalyst Part No.
3.5LCF-87	RANGE ROVER (15.9)	A-4	4500	CA:VA:EI (PRC 5053)	EFI (Y) 84556A	N/A	TWC NTC 3884 NTC 3901 NTC 3949

Comments: See page one 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 2.6.86 Revisions: 8.5.86

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