

File

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-277-16  
Relating to Certification of New Motor Vehicles

ROVER GROUP 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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1997 model-year Rover Group Limited exhaust emission control systems are certified as described below for medium-duty vehicles:

Fuel Type: Gasoline

Engine Family: VLR4.658GF EK Displacement: 4.55 Liters (278 Cubic Inches)  
3.95 Liters (241 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

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

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

The certification exhaust emission standards (in-use compliance standards in parentheses) for this engine family in grams per mile are:

<u>Test Weight (lbs.)</u>	<u>Miles</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Carbon Monoxide (20°F)</u>
3751-5750	50,000	0.32 (0.40)	4.4 (5.5)	0.7 (0.9)	12.5 (12.5)
	120,000	0.46 (n/a)	6.4 (n/a)	0.98 (n/a)	n/a

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

<u>Test Weight (lbs.)</u>	<u>Miles</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Carbon Monoxide (20°F)</u>
3751-5750	50,000	0.24	1.9	0.4	7.7
	120,000	0.29	2.7	0.45	n/a

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, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, 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."

BE IT FURTHER RESOLVED: That, based on a separate compliance plan submitted by the vehicle manufacturer, the listed vehicle models are permitted alternative in-use compliance as set forth 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 submitted alternative in-use compliance plan satisfies the requirement that a maximum of 50 percent of the manufacturer's projected sales of 1997 model-year California-certified medium-duty vehicles will be subject to alternative in-use compliance as stipulated in the above-referenced standards and test procedures.

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 Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

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 11<sup>th</sup> day of July 1996.

*Raphael Snovitz*  
for R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

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

Manufacturer : Rover Group Ltd Exh Eng Fam : VLR4.658GFEK Evap Fam : VLR1095AYPBD (1)  
VLR1060AYPBC (2)

All Eng Codes in Eng Fam : CA \_\_\_ 49S \_\_\_ 50S \_\_\_  AB965 \_\_\_

Exh Std : CA Tier-1  TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_ ; US EPA Tier-1

Evap Std : 50K  Useful Life with R/L \_\_\_ In-Use Exh Std : Full In Use \_\_\_ Alt In Use

Veh Class (es) : PC \_\_\_ LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2  MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_

Single Cert Std for Multi-Class Eng Fam : N/A (specify : N/A, LDT1, MDV1, NDV2, MDV3, MDV 4)

Fuel Type (s) : Dedicated  Flex-Fuel : \_\_\_ Dual-Fuel \_\_\_ Bi-Fuel \_\_\_ Gasoline \_\_\_  Diesel \_\_\_  
CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ M85 \_\_\_ Other (specify) \_\_\_\_\_

Emiss Test Fuel (s) Indo  Ph2 \_\_\_ CNG \_\_\_ LPG \_\_\_ M85 \_\_\_ Other (specify) \_\_\_\_\_

Diesel : 13 CCR 2282 \_\_\_ 40 CFR 86.113-90 \_\_\_ 40 CFR 86.113-94 \_\_\_

Service Accum : Std AMA  Mod AMA \_\_\_ Mfr ADP \_\_\_ Other (specify) \_\_\_\_\_

NMOG Test Procedure : N/A  Std \_\_\_ Equiv \_\_\_ R/L Test Proc : SHED \_\_\_ Pt Source \_\_\_

Hybrid : Type A \_\_\_ B \_\_\_ C \_\_\_ , APU Cycle (e.g. Otto, Diesel, Turbine) : \_\_\_\_\_

Engine Configuration : V8 Displacement : 4.55/3.95 Liters 278/241 Cubic Inches

Valves per Cylinder : 2 Rated HP : 222/188 @ 4750 RPM

Engine : Front  Mid \_\_\_ Rear \_\_\_ Drive : FWD \_\_\_ RWD \_\_\_ 4WD-FT \_\_\_  4WD-PT \_\_\_

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

(use abbreviations per SAE J1930 SEP91)

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 (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
4.6HCF - 96D (50ST)	Range Rover (1)	A4	5500	13.9	ERR 6648	N/A	ESR 3738
4.0HCF - 95P (50ST)	Range Rover (1)	A4	5500	13.9	ERR 6648	N/A	ESR 3738
4.0HCF-95Q (50ST)	Discovery (2)	A4	5250	14.3	ERR 6378	N/A	ESR 3844 ESR 3845
4.0HCF-95R (50ST)	Discovery (2)	M5	5250	13.4	ERR 6378	N/A	ESR 3844 ESR 3845
4.0HCF-95T (50ST)	Discovery (2)	M5	5250	13.4	AMR 6326	N/A	ESR 3844 ESR 3845

Date Issued : 3.11.96

Revisions : 6.27.96 ; 9.30.96

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

Manufacturer : Rover Group Ltd Exh Eng Fam : VLR4.658GFEK EVAP Fam : VLR1095AYPBD (1)  
VLR1060AYPBC (2)

All Eng Codes in Eng Fam : CA 49S 50S  AB965

Exh Std : CA Tier-1  TLEV  LEV  ULEV  ZEV ; US EPA Tier-1

Evap Std : 50k  Useful Life with R/L  InUse Exh Std :  Full In Use  Alt In Use

Veh Class (es) : PC  LDT 1  LDT 2  MDV 1  MDV 2  MDV 3  MDV 4  MDV 5

Single Cert Std for Multi-Class Eng Fam : N/A (specify : N/A, LDT 1, MDV1, MDV2, MDV3, MDV 4)

Fuel Type (s) : Dedicated  Flex-Fuel :  Dual-Fuel  Bi-Fuel  Gasoline  Diesel   
CNG  LNG  LPG  M85  Other (specify) \_\_\_\_\_

Emiss Test Fuel (s) Indo  Ph2  CNG  LPG  M85  Other (specify) \_\_\_\_\_  
Diesel : 13 CCR 2282 \_\_\_\_\_ 40 CFR 86.113-90 \_\_\_\_\_ 40 CFR 86.113-94 \_\_\_\_\_

Service Accum : Std AMA  Mod AMA  Mfr ADP  Other (specify) \_\_\_\_\_

NMOG Test Procedure : N/A STD  Equip  R/L Test Proc : Shed :  Pt Source

Hybrid : Type A  B  C  , APU Cycle (e.g. Otto, Diesel, Turbine) : \_\_\_\_\_

Engine Configuration : V8 Displacement : 4.55/3.95 Litres 278/241 Cubic Inches

Valves per Cylinder : 2 Rated HP : 222/188 @ 4750 RPM

Engine : Front  Mid  Rear  Drive : FWD  RWD  4WD-FT  4WD-PT

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

(use abbreviations per SAE J1930 SEP 91)

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 (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
4.6HCF-96E (50ST)	Range Rover (1)	A4	5500	13.9	ERR7379	N/A	ESR 3738
4.0HCF-95W (50ST)	Range Rover (1)	A4	5500	13.9	ERR 7379	N/A	ESR 3738
4.6HCF-96F (50ST)	Range Rover (1)	A4	5500	13.9	MKC 104410	N/A	ESR 3738
4.0HCF-95X (50ST)	Range Rover (1)	A4	5500	13.9	MKC 104410	N/A	ESR 3738

Date Issued : 9.30.96

Revisions : 2.6.97

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

Manufacturer : Rover Group Ltd Exh Eng Fam : VLR4.658GF EK Evap Fam : VLR1095AYPBD (1)  
VLR1060AYPBC (2)

All Eng Codes in Eng Fam : CA \_\_\_ 49S \_\_\_ 50S \_\_\_  AB965 \_\_\_

Exh Std : CA Tier-1  TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_ ; US EPA Tier-1

Evap Std : 50K  Useful Life with R/L \_\_\_ In-Use Exh Std : Full In Use \_\_\_ Alt In Use

Veh Class (es) : PC \_\_\_ LDT1 \_\_\_ LDT2 \_\_\_ MDV1 \_\_\_ MDV2  MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_

Single Cert Std for Multi-Class Eng Fam : N/A (specify : N/A, LDT1, MDV1, NDV2, MDV3, MDV 4)

Fuel Type (s) : Dedicated  Flex-Fuel : \_\_\_ Dual-Fuel \_\_\_ Bi-Fuel \_\_\_ Gasoline \_\_\_  Diesel \_\_\_  
CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ M85 \_\_\_ Other (specify) \_\_\_\_\_

Emiss Test Fuel (s) Indo  Ph2 \_\_\_ CNG \_\_\_ LPG \_\_\_ M85 \_\_\_ Other (specify) \_\_\_\_\_  
Diesel : 13 CCR 2282 \_\_\_ 40 CFR 86.113-90 \_\_\_ 40 CFR 86.113-94 \_\_\_

Service Accum : Std AMA  Mod AMA \_\_\_ Mfr ADP \_\_\_ Other (specify) \_\_\_\_\_

NMOG Test Procedure : N/A  Std \_\_\_ Equiv \_\_\_ R/L Test Proc : SHED \_\_\_ Pt Source \_\_\_

Hybrid : Type A \_\_\_ B \_\_\_ C \_\_\_ , APU Cycle (e.g. Otto, Diesel, Turbine) : \_\_\_\_\_

Engine Configuration : V8 Displacement : 4.55/3.95 Liters 278/241 Cubic Inches

Valves per Cylinder : 2 Rated HP : 222/188 @ 4750 RPM

Engine : Front  Mid \_\_\_ Rear \_\_\_ Drive : FWD \_\_\_ RWD \_\_\_ 4WD-FT \_\_\_  4WD-PT \_\_\_

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

(use abbreviations per SAE J1930 SEP91)

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 (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
4.0HCF-95S (50ST)	Defender 90 (2)	A4	5000	20.0	ERR 6937	N/A	ESR 3844 ESR 3845
4.0HCF-95AB (50ST)	Defender 90 (2)	A4	5000	20.0	MKC 104440	N/A	

Date Issued : 6.27.96

Revisions : 2.6.97