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: VLR4.658GFEK 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:

Test Weight (lbs.)	Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
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:

Test Weight (lbs.)	Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
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 complyance 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 11th day of July 1996.

Raphael Susnowitz

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

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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 ____ 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 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 : VLR4.658GFEK 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.
4.0HCF - 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