State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-220-47
Relating to Certification of New Motor Vehicles

JAGUAR 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 Order G-45-9;

IT IS ORDERED AND RESOLVED: That 1997 model-year Jaguar Cars, Ltd. exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: VJC4.0VJGKHK Displacement: 4.0 Liters (243 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

Dual Warm Up Oxidation Catalytic Converters
Dual Warm Up Three Way Catalytic Converters
Dual Three Way Catalytic Converters
Dual Heated Oxygen Sensors (two)
Exhaust Gas Recirculation
Secondary Air Injection
Sequential Multiport Fuel Injection
Supercharger
Charge Air Cooler

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

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

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.25	3.4	0.4	10.0
100,000	0.31	4.2	0.6	n/a

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

Miles	Non-Methane Hydrocarbons	Carbon Monoxide	Nitrogen Oxides	Carbon Monoxide (20°F)
50,000	0.19	1.1	0.4	6.9
100,000	0.24	1.5	0.4	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 the 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," pursuant to provisions in the said standards and test procedures applicable to small-volume manufacturers.

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 listed vehicle models also comply with the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) 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 (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 7th day of October 1996.

John Kowalski for

R. B. Summerfield, Chief
Mobile Source Operations Division

JAGUAR MY 1997 Engine Family VJC4.0VJGKHK 17-16

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07.02.01 **1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**

PASSENGER CARS, LIGHT-DUTY TRUCKS & MEDIUM-DUTY VEHICLES

Manufacturer: Jaguar Cars Ltd Exh Eng Fam: VJC4.0VJGKHK Evap Fam: VJC1142AYMA0

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

Evap Std: 50K X Useful Life with R/L _

In-Use Exh Std: Full In-Use X Alt In-Use _ Eng. Codes 50ST

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

Single Cert Std for Muti-Class Eng Fam: N/A

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

Emission Test Fuel(s): Ind X Ph2 _ M85 _ CNG _ LPG Other
Diesel: 13 CRR 2282 _ 40CFR86.113-90 _ 40CFR86.113-94 _

Service Accum: Std AMA Mod AMA _ Mfr ADP _ Other X ADF

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

Hybrid: Type A _ B _ C _ ; APU Cycle _

Engine Configuration: L6 Displacement: 4.0 liters 243 cubic inches

Valves per Cylinder: 4 Rated HP: 322 @ 5000

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

Exhaust ECS: AIR:EGR:2HO2S(2):2WUOC:2WUTWC:2TWC:SFI:CAC:SC

Engine Code	Vehicle Models	Trans A- Auto M- Man	ETW	DPA	ECM Part No	EGR System Part No	Catalyst Part No.
4.0SFC-97 (50ST)	XJR	A	4500	7.1	LNB1410DB	LHE1550AB	D/P: PCD U/F: PDB

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07.02.02 **1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**

PASSENGER CARS, LIGHT-DUTY TRUCKS & MEDIUM-DUTY VEHICLES

Manufacturer: **Jaguar Cars Ltd** Exh Eng Fam: **VJC4.0VJGKHK** Evap Fam: **VJC1142AYMA0**

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

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

Evap Std: 50K X Useful Life with R/L _

In-Use Exh Std: Full In-Use X Alt In-Use _

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

Single Cert Std for Muti-Class Eng Fam: **N/A**

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

Emission Test Fuel(s): Ind X Ph2 _ M85 _ CNG _ LPG _ Other _
Diesel: 13 CRR 2282 _ 40CFR86.113-90 _ 40CFR86.113-94 _

Service Accum: Std AMA X Mod AMA _ Mfr ADP _ Other _

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

Hybrid: Type A _ B _ C _; APU Cycle _

Engine Configuration: **L6** Displacement: **4.0** liters **243** cubic inches

Valves per Cylinder: **4** Rated HP: **322 @ 5000**

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

Exhaust ECS: **AIR:EGR:2HO2S(2):2WUO:2WUTWC:2TWC:SFI:CAC:SC**

Engine Code	Vehicle Models	Trans A- Auto M- Man	ETW	DPA	ECM Part No	EGR System Part No	Catalyst Part No.
4.0SFC-97 (50ST)	XJR	A	4500	7.1	LNB1410DC*	LHE1550AB	D/P: PCD U/F: PDB

* Introduced by RC # 4.0s/c-97/5 - see Page 21-5

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02.01 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

PASSENGER CARS, LIGHT-DUTY TRUCKS & MEDIUM-DUTY VEHICLES

Manufacturer: Jaguar Cars Ltd Exh Eng Fam: VJC4.0VJGKHK Evap Fam: VJC1142AYMA0

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

Evap Std: 50K X Useful Life with R/L _

In-Use Exh Std: Full In-Use X Alt In-Use _ Eng Code: 50ST

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

Single Cert Std for Multi-Class Eng Fam: N/A

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

Emission Test Fuel(s): Ind X Ph2 _ M85 _ CNG _ LPG _ Other _
Diesel: 13 CRR 2282 _ 40CFR86.113-90 _ 40CFR86.113-94 _

Service Accum: Std AMA Mod AMA _ Mfr ADP _ Other X ADP

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

Hybrid: Type A B C : APU Cycle _

Engine Configuration: L6 Displacement: 4.0 liters 243 cubic inches

Valves per Cylinder: 4 Rated HP: 322 @ 5000

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

Exhaust ECS: AIR:EGR:2HO2S(2):2WUOC:2WUTWC:2TWC:SFI:CAC:SC

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	C/O MY & ID	1995 XJ40/974*			
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* Evap DF only.

Issued 1st April 1996: Revised 02.03.96