

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-220-44-1  
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 1996 model-year Jaguar Cars, Ltd. exhaust emission control systems are certified as described below for passenger cars:

Fuel Type: Gasoline

Engine Family: TJC4.0VJGK GK Displacement: 4.0 Liters (243 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

- Dual Warm Up Three-Way Catalytic Converters
- Dual Three Way Catalytic Converters (XJ6 and Vanden Plas Models)
- Three Way Catalytic Converter (XJS Models)
- Dual Heated Oxygen Sensors (two)
- Exhaust Gas Recirculation
- Secondary Air Injection
- Sequential Multiport Fuel Injection

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:

| <u>Miles</u> | <u>Non-Methane Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Carbon Monoxide (20°F)</u> |
|--------------|---------------------------------|------------------------|------------------------|-------------------------------|
| 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:

| <u>Miles</u> | <u>Non-Methane Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> | <u>Carbon Monoxide (20°F)</u> |
|--------------|---------------------------------|------------------------|------------------------|-------------------------------|
| 50,000       | 0.21                            | 0.8                    | 0.4                    | 7.6                           |
| 100,000      | 0.29                            | 0.9                    | 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 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)(6.1) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines").

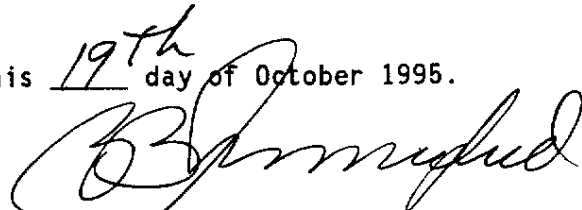
BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et 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.

Executive Order A-220-44 dated October 2, 1995, is superseded by Executive Order A-220-44-1.

Executed at El Monte, California this 19<sup>th</sup> day of October 1995.



R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

17.00.00.00 cont'd

.06.01.03 **1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**  
**PASSENGER CARS, LIGHT-DUTY TRUCKS & MEDIUM-DUTY VEHICLES**

Manufacturer: Jaguar Cars Ltd Exh Eng Fam: TJCA.OVJGK GK Evap Fam: TJC1142AYMA0  
 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: XJ6-245 @ 4800 RPM XJS-237 @ 4700 RPM  
 Engine: Front X Mid \_ Rear \_ Drive: FWD \_ RWD X 4WD-FT \_ 4WD-PT \_  
 Exhaust ECS: XJ6- AIR: EGR: 2HO2S(2); 2WUTWC; 2TWC; SFI  
 XJS- AIR: EGR: 2HO2S(2); 2WUTWC; TWC; SFI

| Engine Code | Vehicle Models | Trans<br>A- Auto<br>M- Man | ETW | DPA | ECM<br>(ICM)<br>Part No | EGR<br>System<br>Part No | Catalyst<br>Part No. |
|-------------|----------------|----------------------------|-----|-----|-------------------------|--------------------------|----------------------|
|-------------|----------------|----------------------------|-----|-----|-------------------------|--------------------------|----------------------|

|                          |                    |   |      |     |           |           |                    |
|--------------------------|--------------------|---|------|-----|-----------|-----------|--------------------|
| 4.0HFC<br>-96<br>(50ST)  | XJ6                | A | 4250 | 7.0 | LNA1410VD | LHE1550AB | D/P:NCC<br>U/F:NDB |
| 4.0HFC<br>-96<br>(50ST)  | Vanden Plas        | A | 4500 | 7.0 | LNA1410VD | LHE1550AB | D/P:NCC<br>U/F:NDB |
| 4.0HFC<br>-96S<br>(50ST) | XJS Coupe          | A | 4000 | 7.3 | LHE1410DD | LHE1550AB | D/P:NCC<br>U/F:BDE |
| 4.0HFC<br>-96S<br>(50ST) | XJS<br>Convertible | A | 4250 | 7.3 | LHE1410DD | LHE1550AB | D/P:NCC<br>U/F:BDE |

New EGR valve and AIR pump introduced by R/C #4.0-96/3. See page 21-4 for description of the change.

17.00.00.00 cont'd

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.06.01.05 1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS & MEDIUM-DUTY VEHICLES

Manufacturer: Jaguar Cars Ltd Exh Eng Fam: TJC4.OVJGK GK Evap Fam: TJC1142AYMA0

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 Muti-Class Eng Fam: N/A

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

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

Service Accum: Std AMA  Mod AMA  Mfr ADP  Other

NMOG Test Procedure: N/A  Std  Equip  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: XJ6-245 @ 4800 RPM XJS-237 @ 4700 RPM

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

Exhaust ECS: XJ6-Vanden Plas E ATR:EGR:2HO2S(2):2WUTWC:2TWC:SFI  
XJS-ATR:EGR:2HO2S(2):2WUTWC:TWC:SFI

| Engine Code | Vehicle Models | Trans<br>A- Auto<br>M- Man | ETW | DPA | ECM<br>(ICM)<br>Part No | EGR<br>System<br>Part No | Catalyst<br>Part No. |
|-------------|----------------|----------------------------|-----|-----|-------------------------|--------------------------|----------------------|
|-------------|----------------|----------------------------|-----|-----|-------------------------|--------------------------|----------------------|

|                          |                    |   |      |     |           |           |                    |
|--------------------------|--------------------|---|------|-----|-----------|-----------|--------------------|
| 4.OHFC<br>-96<br>(50ST)  | XJ6                | A | 4250 | 7.0 | LNA1410VF | LHE1550AB | D/P:NCC<br>U/F:NDB |
| 4.OHFC<br>-96<br>(50ST)  | Vanden Plas        | A | 4500 | 7.0 | LNA1410VF | LHE1550AB | D/P:NCC<br>U/F:NDB |
| 4.OHFC<br>-96S<br>(50ST) | XJS Coupe          | A | 4000 | 7.3 | LHE1410DF | LHE1550AB | D/P:NCC<br>U/F:BDE |
| 4.OHFC<br>-96S<br>(50ST) | XJS<br>Convertible | A | 4250 | 7.3 | LHE1410DF | LHE1550AB | D/P:NCC<br>U/F:BDE |

New ECM calibration introduced by R/C #4.0-96/5. See page 21-6 for description of the change.