

DATE: MARCH 1993

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REF: JD 05/93

ERRATA

WITH REFERENCE TO SERVICE BULLETIN JD 17/92, PLEASE NOTE THAT THE WARRANTY COMPLAINT CODE SHOWN ON PAGE 2 AS 1LBK IS INCORRECT. THIS CODE SHOULD READ 1LKB

V12 AND AJ6 ENGINES

ITEM: 01

12 INTRODUCTION OF GRADED CRANKSHAFT BEARINGS

As part of Jaguar's on-going commitment to improving quality, three grades (sizes) of crank pin and journal bearings have been introduced on all production V12 and AJ6 engines. This will improve engine and vehicle refinement by reducing the maximum crank running clearances by approximately 20%.

Graded bearings were introduced on production from the following engine numbers:

V12 XJS: 8S 86817

V12 Series III: 7P 76912

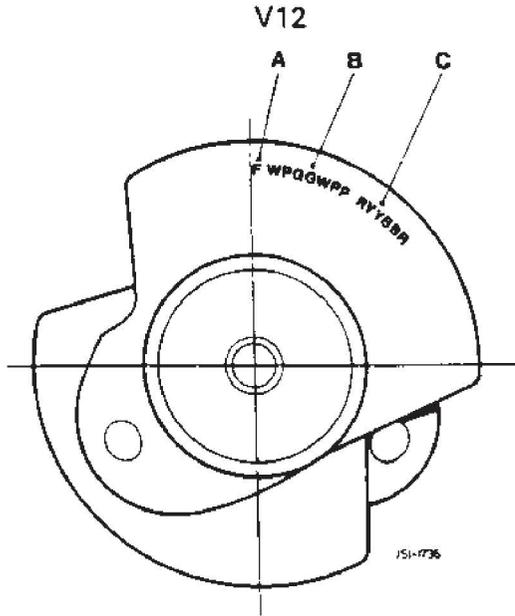
6.0 JaguarSport: TBA *

3.2: 9B 111574

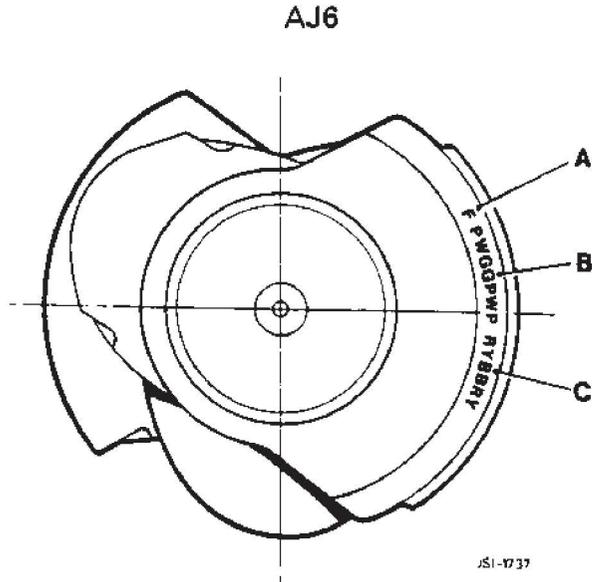
4.0: 9E/9W 164637

* 6.0 litre JaguarSport engines will use the grading system when a common crank shaft is used for both JaguarSport and Jaguar 6.0 litre engines.

The three different grade diameters of the journals and pins are represented by a letter which corresponds to a colour, i.e. "P" equals Pink, "R" equals Red, etc. The grade of each individual journal and pin on each crankshaft is identified by having the grading diameter colour stamped on the No 1 balance weight, indicating the grade of shell to be fitted, as follows:



A: F Indicates front
 B: Journals 1 to 7
 C: Pins 1 to 6



A: F Indicates front
 B: Journals 1 to 7
 C: Pins 1 to 6

The bearing shell is identified by having the colour on one of its edges.

The grade letter and colour for each diameter are as follows:

V12

JOURNALS		
GRADE LETTER	GRADE COLOUR	GRADE DIAMETER
P	PINK	3.0005 INS (76.212MM)
		3.0008 INS (76.220MM)
W	WHITE	3.0009 INS (76.222MM)
		3.0012 INS (76.230MM)
G	GREEN	3.0013 INS (76.233MM)
		3.0016 INS (76.240MM)

PINS

GRADE LETTER	GRADE COLOUR	GRADE DIAMETER
R	RED	2.2993 INS (58.402MM)
		2.2996 INS (58.409MM)
Y	YELLOW	2.2997 INS (58.412MM)
		2.3000 INS (58.420MM)
B	BLUE	2.3001 INS (58.422MM)
		2.3004 INS (58.430MM)

AJ6

JOURNALS		
GRADE LETTER	GRADE COLOUR	GRADE DIAMETER
P	PINK	3.0002 INS (76.207MM)
		3.0006 INS (76.216MM)
W	WHITE	3.0006 INS (76.217MM)
		3.0010 INS (76.226MM)
G	GREEN	3.0010 INS (76.227MM)
		3.0014 INS (76.236MM)

PINS		
GRADE LETTER	GRADE COLOUR	GRADE DIAMETER
R	RED	2.0852 INS (52.966MM)
		2.0856 INS (52.975MM)
Y	YELLOW	2.0856 INS (52.976MM)
		2.0860 INS (52.985MM)
B	BLUE	2.0860 INS (52.986MM)
		2.0864 INS (52.995MM)

New Part Numbers for the graded bearing shells are as follows:

V12 GRADED BEARING SHELLS (5.3 & 6.0 LITRE)

PART NUMBERS

		PART NO	NO PER ENGINE	COLOUR CODE	REPLACES
CONN ROD BEARING	SIZE 1	JLM 11138/01	12	RED	C 38933
	SIZE 2	JLM 11138/02		YELLOW	
	SIZE 3	JLM 11138/03		BLUE	
MAIN BEARING – FRONT/INTERMEDIATE	SIZE 1	JLM 11139/01	5	PINK	C 29313/1
	SIZE 2	JLM 11139/02		WHITE	
	SIZE 3	JLM 11139/03		GREEN	
MAIN BEARING – CENTRE	SIZE 1	JLM 11140/01	1	PINK	C 29314/1
	SIZE 2	JLM 11140/02		WHITE	
	SIZE 3	JLM 11140/03		GREEN	
MAIN BEARING – REAR	SIZE 1	JLM 11141/01	1	PINK	EAC 3973
	SIZE 2	JLM 11141/02		WHITE	
	SIZE 3	JLM 11141/03		GREEN	
CRANKSHAFT 5.3L		EBC 10961			
CRANKSHAFT 6.0L		EBC 10992			

AJ6 GRADED BEARING SHELLS (3.2 & 4.0 LITRE)

PART NUMBERS

		PART NO	NO PER ENGINE	COLOUR CODE	REPLACES
CONN ROD BEARING	SIZE 1	JLM 11135/01	6	RED	EAC 2502
	SIZE 2	JLM 11135/02		YELLOW	
	SIZE 3	JLM 11135/03		BLUE	
MAIN BEARING – FRONT/INTERMEDIATE/REAR	SIZE 1	JLM 11136/01	6	PINK	EAC 7957 (red) EAC 7958 (blue)
	SIZE 2	JLM 11136/02		WHITE	
	SIZE 3	JLM 11136/03		GREEN	
MAIN BEARING – CENTRE	SIZE 1	JLM 11137/01	1	PINK	EAC 7961 (red) EAC 7962 (blue)
	SIZE 2	JLM 11137/02		WHITE	
	SIZE 3	JLM 11137/03		GREEN	
CRANKSHAFT 3.2L		EBC 10916			
CRANKSHAFT 4.0L		EBC 10915			

If a crankshaft or bearing problem is encountered on engines built prior to the introduction of graded bearings, the following applies:

If the bearing shells only have to be replaced, sets of the old condition shells will still be available and should be ordered as before.

If the crankshaft needs to be changed, a graded bearing crankshaft will be supplied from Parts Operations and the relevant graded bearings will need to be fitted.

If a crankshaft or bearing problem is encountered on engines with the graded bearings, the following applies:

If the bearing shells only have to be replaced, the relevant shells, as noted on the No. 1 balance weight (see above), should be ordered.

If the crankshaft needs to be replaced, a graded bearing crankshaft will be supplied by Parts Operations and the relevant graded bearings should be ordered separately.

ALL MODELS**ITEM: 02****17 EVAPORATIVE EMISSION CONTROL SYSTEM**

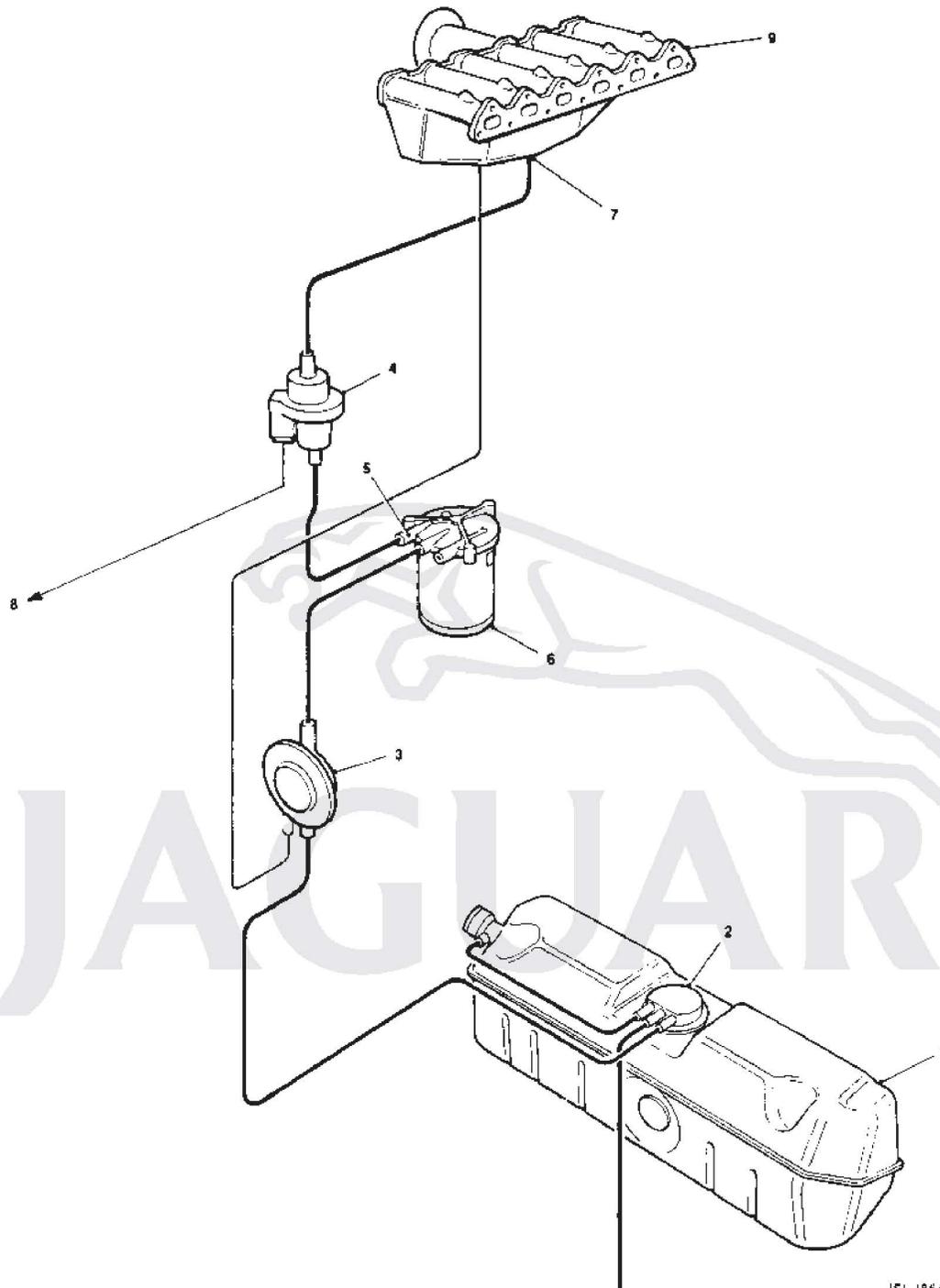
In order to meet stricter world-wide emission regulations, an Evaporative Emission Control System is now fitted to all Jaguar vehicles.

Introduction VIN's are:

XJS – 184907
 SERIES III – 486831
 XJ6 – 664941

Evaporative Emission Control Systems are designed to prevent fuel vapour, which consists mainly of hydro-carbons, escaping into the atmosphere.

The following is a resumé of major components of the system and the way in which the system functions:

MAJOR COMPONENTS:


J51-1860

1. Fuel Tank
2. Evaporative loss flange
3. Pressure/Vacuum relief valve with vacuum operated by-pass valve
4. Purge control valve
5. Purge air port (on charcoal canister)
6. Charcoal canister
7. Purge port (on induction manifold)
8. Electrical connection to ECU
9. Induction manifold

THE SYSTEM FUNCTIONS IN THE FOLLOWING WAY:

Fuel vapour, generated in the fuel tank, is passed in a controlled manner to a storage device, located at the front left-hand side of the vehicle, in front of the road wheel. The storage device is a plastic canister filled with charcoal, (6, Fig 1). The charcoal absorbs the vapour, enhancing the storage capacity of the canister.

When a vehicle is at rest with the engine turned off, the flow of vapour is controlled by a pressure/vacuum relief valve (3, Fig 1), so that a low positive pressure is maintained in the fuel tank. If this pressure exceeds approximately 1.5 psi, the pressure/vacuum relief valve opens, to allow the excess pressure and fuel vapour to bleed into the charcoal canister, thus maintaining the low positive pressure.

Should there be any blockage of the line between the fuel tank and the charcoal canister, there are further pressure relief valves, in both the evaporative loss flange and the fuel filler cap, to prevent any excess tank pressure.

When the engine is running, the pressure/vacuum relief valve is held open by engine vacuum, allowing an unchecked flow of vapour from the fuel tank to the canister and "zero" pressure in the fuel tank (i.e. atmospheric pressure.)

The charcoal canister is connected to the vehicle's induction manifold via a purge control valve (Fig 1, item 4), the operation of which is controlled by an electrical signal from the engine management ECU, according to a pre-determined map.

The canister is purged by drawing the vapour into the induction manifold, the volume of vapour being controlled by the purge valve via the ECU. The vapour is then disposed of during the combustion process.

ALL 4.0L AUTO MODELS

ITEM: 03

18 TRANSMISSION CONTROL UNIT (TCU)

Should an automatic transmission failure warning be accompanied by fault codes 17 and 08 (torque control and select – possible open circuit), technicians may assume that the transmission control unit (TCU) is faulty and erroneously logging the fault codes, particularly if no fault is immediately evident with the wiring. However, it is unlikely that the TCU is at fault, as the most likely cause of the fault is in the wiring to the engine management ECU.

The "pull-up" resistors for the torque control and select lines are located in the engine management ECU. If the supply to this ECU is faulty, there will be no pull-up and the voltage on the select and control lines will drop. The TCU will diagnose this as an open circuit failure. Therefore, when fault codes 17 and 08 are seen together, the supply to the engine management ECU should be checked.

It is also possible that this fault may be caused by any non-approved security/alarm systems, which immobilise the engine management system by cutting its power supply.

ALL MODELS**ITEM: 04****26 DELETION OF BARRS LEAK**

When draining and refilling the cooling system during vehicle maintenance, it is no longer necessary to add 'Barrs Leak' radiator leak sealer.

Process improvements and improved component quality now render the continued use of 'Barrs Leak' unnecessary.

Note: On vehicles prior to the following VIN's 'Barrs Leak' radiator leak sealer should still be used.

XJ6 Models – VIN. 670522

XJS Models – VIN. 186210

XJ6 92 MY**ITEM: 05****51 FINAL DRIVE UNIT**

VIN range 665838 to 667716

A number of vehicles within the above VIN range have been fitted with an alternative final drive unit. The current and alternative units can be distinguished by the number of bolts in the output shaft seal housing, five in the current final drive unit and three in the alternative. The alternative final drive will not be supported with spare parts until mid-1993, therefore, should there be any service concerns, Jaguar Parts Operations will only supply the current final drive units. To complete the repair it will be necessary to fit the appropriate speed sensor bracket.

For final drive unit part numbers EBC 10910/1/2/3 and EBC 10911/1/2/3, fit speed sensor bracket EBC 9820 (identified by a blue paint spot). For all other final drive unit part numbers, fit speed sensor bracket CAC 9884.

JCM. 11242 – NON P.LOK
 JCM. 11241 – P.LOK.

XJ6 1991 MY – 1993 MY

ITEM: 06**86 BATTERY QUIESCENT DRAIN INFORMATION**

To enable Jaguar Dealers and their technicians to keep abreast of both past and present quiescent drain specifications, the following information covers the vehicle range over the last three years.

METHOD OF MEASUREMENT

In order to correctly measure quiescent current, technicians **MUST** adhere to the following procedure:

- Disconnect the battery negative lead.
- Connect ammeter between the battery negative post and negative lead.
- Select high meter range (ie: equal to or more than 10 amps)
- Switch the ignition "on" then "off", then remove the key. (Do not crank the engine)
- Observe and record the measurements obtained over the time scales identified in this Bulletin.