

Service Bulletin



Date MAY 1984
Sheet 1 of 2
Bulletin JD.05/84

03 AMENDMENTS

ITEM 37

XJ-S/XJ-SC

Printing errors have occasioned incorrect information appearing in the English language XJ-S Repair Operation Times, publication number AKM 4412/83.

On page 10, Operation number 26-25-32 should read as follows:—

26-25-32 Fan Motor Diode Pack — Remove & Refit.

The repair times against this operation are correct. Any claims for changing a coolant level probe should be made against the operation:—

26-40-11 Coolant Level Probe — Remove and Refit.

On page 23 the final operation number and description are incorrect. As printed, the final entry reads:—

64-35-28 Radius Arm — Remove and Refit.

Please amend this to read:—

64-35-29 Radius Arm Bushes — Remove and Refit.

The time of 1.00 hrs. against this entry is correct, and no other operations or times are affected.

12 CAMSHAFTS

XJ-SC 3.6/XJ-S 3.6

Since the introduction of the AJ6 engine, a modification has been carried out to the camshafts to give an improved location for the camshaft setting tool 18G 1433. The locating flange diameter has been increased from 39mm to 41.275mm with the effect that the slot for the locating peg is now deeper and the inside faces of the tool fit closely around the flange.

The new camshaft part numbers are:

EAC 6367 – Inlet
EAC 6366 – Exhaust

These camshafts were introduced into continuous production at Engine numbers:—

9DP BLA 100288 – A emission
9DP AMA 100289 – B emission

Certain engines prior to these numbers were modified in Production.

Where Dealers are unable to obtain a positive location for the Camshaft setting tool, when resetting the valve timing on earlier engines, please contact:— Customer Service Department, Jaguar Cars Limited.

ITEM 39

12 SPARK PLUGS

V12 MODELS

To overcome spark plug foul problems associated with multiple cold starts during transit and as a protection against radiated electrical interference with radio telephones, where fitted, copper cored resistive spark plugs have been introduced on V12 engines.

The new spark plugs, Jaguar Part No: JLM 204 (Unipart No: GSP 466, Champion RS5C) were introduced at Engine Numbers:

7P 50256 – Saloon
8S 29277 – XJS

ITEM 40

19 FUEL RECIRCULATION SYSTEM

SERIES III 4.2

To improve the operation and reliability of the fuel recirculation system several revisions have been made to the internal design of the fuel changeover solenoid valve located in the rear of the boot, and to the normally closed recirculation valve located in the rear right hand wheel arch.

Revised changeover solenoid valves were introduced on Jaguar Production at VIN 370660, and revised recirculation valves were introduced at VIN 384100.

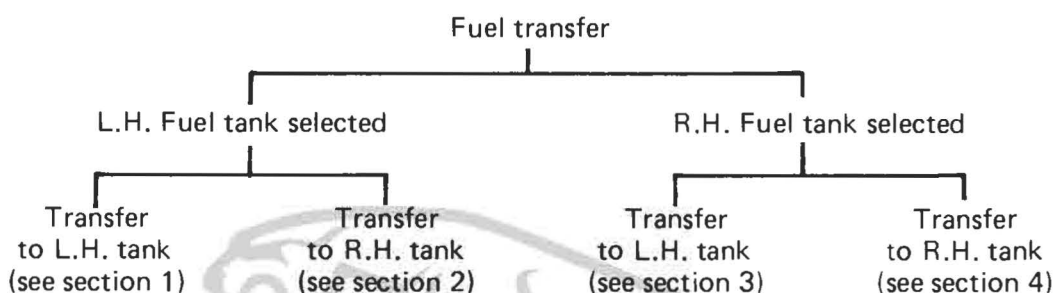
The part numbers for these valves are as follows:—

	New Part No.	Old Part No.
Fuel changeover solenoid	CAC 8000	CAC 3941
R.H. Fuel recirculation valve	CAC 8346	CAC 3988

The new valves are fully interchangeable with the old valves and are available from Parts Division.

To aid fault diagnosis with the fuel recirculation system Service Personnel should refer to the following chart, which was previously issued in Service Bulletin JD 01/80, Item 003.

DIAGNOSTIC CHART



Section 1 FUEL DELIVERY LINE

- (i) Tank change over solenoid (CAC 8000) stuck partially open.
- (ii) Dirt on change over solenoid (CAC 8000) R.H. seat.
- (iii) Pick up filter in L.H. tank partially blocked. This may be accompanied by excessive fuel pump noise.

Section 2 FUEL RECIRCULATION LINE

- (i) R.H. recirculation solenoid (CAC 8346) stuck open.
- (ii) Dirt on seat of R.H. recirculation solenoid.
- (iii) L.H. recirculation solenoid (CAC 3939) stuck closed.

Section 3 FUEL RECIRCULATION LINE

- (i) No electrical feed to L.H. recirculation solenoid (CAC 3939).
- (ii) L.H. recirculation solenoid coil open circuit or high resistance.
- (iii) L.H. recirculation solenoid stuck open or dirt on seal face.
- (iv) R.H. recirculation solenoid (CAC 8346) stuck closed or restricting flow.
- (v) No electrical feed to R.H. recirculation solenoid.
- (vi) R.H. recirculation solenoid coil open circuit or high resistance.

Section 4 FUEL DELIVERY LINE

- (i) Tank change over solenoid (CAC 8000) earth contact not made.
- (ii) Tank change over solenoid open circuit or high resistance.
- (iii) Tank change over solenoid partially open or dirt on L.H. seat.
- (iv) Pick up filter in R.H. tank partially blocked. This may be accompanied by excessive fuel pump noise.

If whilst investigating reports of fuel transfer, it is found that the solenoids are contaminated, the fuel tanks MUST be drained to ensure contaminant is removed.

VALVE OPERATION:

XX Represents electrical feed supplied to a solenoid.

X Represents no electrical feed supplied to a solenoid.

VALVE	R.H. TANK SELECTED	L.H. TANK SELECTED
L.H. Recirculation Solenoid Pt No: CAC 3939	Valve closed XX no fuel flow	Valve open X Allows fuel flow
R.H. Recirculation Solenoid Pt No: CAC 8346	Valve open XX Allows fuel flow	Valve closed X no fuel flow
Tank change over Solenoid Pt No: CAC 8000	Allows fuel flow XX from R.H. tank	Allows fuel flow X from L.H. tank

ITEM 41

86 STARTER MOTOR

SERIES III 4.2 MODELS

IMPORTANT

Will Service Personnel please note that current Parts Technical Literature, and Parts Fiche information appertaining to Series III 4.2 Models showing details of Starter Motor DAC 9505 as a replacement on this model is INCORRECT.

DAC 9505 is specified for Daimler Limousine models ONLY.

Should replacement be required on Series III 4.2 Models, Starter Motor Part No. GEU 424 should be ordered.

Parts information will be amended accordingly.

Service Bulletin



☆ 2nd ISSUE ☆

DATE: JULY 1987
SHEET: 1 of 4
BULLETIN: JD 07/87

ITEM: 49

11/ OIL SEAL REPLACER 99

XJS 3.6/XJ6 2.9 & 3.6

Since the introduction of the AJ6 engine, improved auxiliary drive oil seals have been introduced on engine build. To ensure that a new power hydraulic pump drive oil seal is installed to the correct depth, Service Tool JD.151 auxiliary drives oil seal replacer has been introduced. This replaces 18G 1469 auxiliary drives oil seal replacer.

To avoid confusion, all Dealers on receipt of JD 151/X, should discard 18G 1469/1, but retain the seal installer sleeve 18G 1469/2 for use with JD 151/X.

All new orders for JD 151 to V.L. Churchill however, will receive the new tool JD 151/X together with renumbered sleeve JD 151/2.

Distribution details of this additional minimum standards tool will be advised to you by Service Development Bulletin.

ITEM: 50

19 FUEL RECIRCULATION SYSTEM

S.III

To improve the operation of the fuel recirculation system, a revised fuel changeover solenoid valve and recirculation valve have been introduced on S.III production from VIN 472652.

The part numbers for these valves are as follows:-

	<u>New Part No.</u>	<u>Old Part No.</u>
Fuel changeover solenoid	CBC 4269	CAC 8000
Fuel recirculation valve	CBC 4270	CAC 8346

Parts interchangeability is not affected and new parts are available from Parts Division.

☆ 2nd ISSUE ☆

ITEM: 51

51 FINAL DRIVE OUTPUT SHAFT FITTING PROCEDURE

XJ6 2.9/3.6

When replacing final drive output shaft bearings and seals, the following procedure should be used. This procedure will be incorporated into the Service Manual in due course.

After seal/bearing renewal, overhaul, etc:

Fit and align the original shims to the final drive casing.

Offer up the output shaft assembly to the final drive casing WITHOUT the O ring seal.

Fit and fully seat the assembly. DO NOT fit the securing bolts.

Measure the gap between the bearing housing and the casing. The correct gap should be 0.08 - 0.13 mm (0.003 - 0.005 in).

If the gap is correct, remove the shaft assembly, fit the O ring seal, and refit the assembly to the casing. Fit and tighten the securing bolts.

If the gap is incorrect, remove the shaft assembly and re-shim until the correct clearance is obtained.

NOTE: There should always be THREE shims behind the bearing.

When the clearance is correct, fit the O ring seal, and fit the shaft assembly to the casing.

Fit and tighten the securing bolts.

Fit a magnetic dial gauge to the output flange and measure the end float.

The correct end float should be between 0.03 - 0.15 mm (0.001-0.006 in).

If the end float is outside the given tolerances, the output shaft bearing must be replaced.

ITEM: 52

66 REAR SELF LEVELLING UNIT

XJ6 2.9/3.6

The correct torque figure for the strut upper securing nut is 108 - 149Nm (80 - 110 lbf.ft).

This torque figure will be incorporated in Edition 2 of the Service Manual.

ITEM: 53

80/ BLOWER MOTOR ASSEMBLIES

S.III V12/XJS/XJ6 2.9 & 3.6

82

A material change has been introduced to overcome problems associated with fan retention to the armature shaft of the motor, and fan blade damage due to stress fractures.

Blower motor assemblies incorporating the modified material have been introduced from VINs:-

478064 - S.III V12

142463 - XJS

516122 - XJ6 2.9/3.6

ITEM: 54

86 HIRSCHMANN ELECTRIC AERIALXJS/XJ6 2.9 & 3.6

A high number of Hirschmann electric aerial assemblies returned under warranty are alleged to be inoperative, but are in fact found to have either mast damage or are partially seized through insufficient cleaning. With respect to mast damage, where possible, the mast assembly only should be replaced.

A replacement mast assembly is available under Part No. DBC 2200 and remove/refit instructions are detailed in Service Bulletin JD 07/85 Item 55.

Mast cleaning is and always will be an education process which should be encouraged at all times. To assist cleaning, a mast cleaning kit is available under Part No. JLM 9830 and its use should be promoted.

It must be emphasised that warranty claims for any Hirschmann Aerial returned which only required a mast replacement will be rejected and the Dealer account debited.

ITEM: 55

86 TOW BAR ELECTRICSXJ6 2.9/3.6

Reports have been received of certain difficulties with tow bar electrical kit installation. An addendum to the fitting instructions has been produced but for those kits without the addendum the following information is provided.

Caravan Interior Equipment Power Feed

The increasing use of low voltage electrical appliances in touring caravans has reached a stage where the demand on the car battery is now significant. Without care, the car battery can be sufficiently discharged in a short time so as to make car starting difficult or cause spurious logic circuit signals. In particular, the advent of electric water pumps and toilets has made the provision of a separate battery a necessity for many caravan owners.

With this in mind, the Jaguar tow bar electrical kit has been designed to run in conjunction with a second battery when using a caravan. Auxiliary feed to the caravan from the car battery only occurs when the engine is running with the car battery in a fully charged state, since the auxiliary feed follows the split charge relay.

The split charge relay is, in effect, a load-shedding device, designed to cut in when the car battery has attained 13.5 volts. Therefore, charging to the caravan battery is only active when the car battery voltage is above 13.5 volts, i.e. the car battery is well charged with few car electrical loads. In this way, the car battery's integrity is protected.

NOTE: Auxiliary feed to the caravan will cut in when the car battery voltage is above 13.5 volts but will drop out at a lower voltage.

References to split charging a caravan battery apply equally to other towed vehicles, e.g. a boat and trailer, providing the boat/trailer is equipped with suitable wiring and connectors. Should the boat be equipped with its own charging system, disconnect the boat battery from that system before connecting the car's system.

Fit Fused Link Lead

Locate the unterminated brown cable (split charge feed, RS 73) situated on the RHS bulkhead near the live terminal post (Fig.1).
Remove the tape from the bared wire end.
Crimp the fused link lead to the brown cable and secure the eyelet to the bulkhead live terminal post.

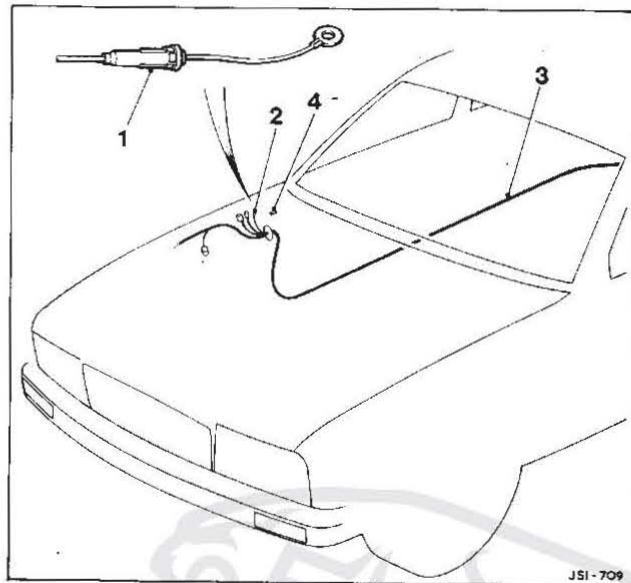


FIG 1

- | | |
|------------------------|--------------------------------|
| 1. Fused Link lead | 3. Right hand side harness |
| 2. Brown cable (RS 73) | 4. Bulkhead live terminal post |

Short Lead Lengths

- 1) Should the lead lengths to the 12N and 12S connectors prove to be too short, increase the twin lead separation length by cutting back 50 to 80 mm (2 to 3 in) of joining tape from point 'A' Fig.2.
- 2) Alternatively, modify the existing connector mounting plates by extending each slot (maintaining the existing width) to the centre point triangulated from the three screw holes (Fig.2 - cut away sections shown shaded).

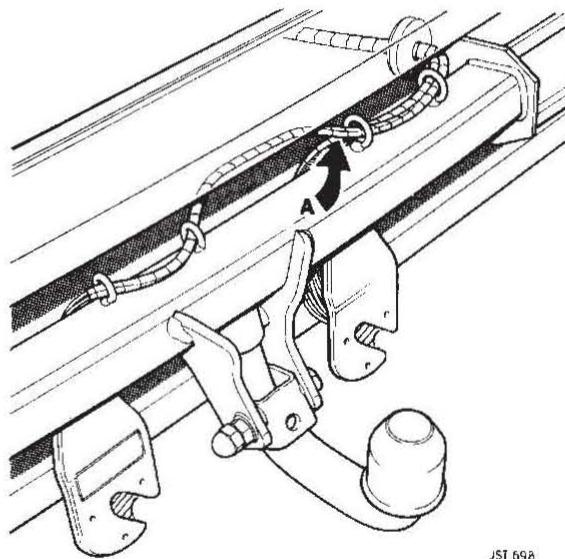


FIG 2

Fit Anti-rattle Foam Pads

- 3) Should a rattle be suspected between the module mounting bracket and the rear wing, fit two self-adhesive foam pads to the bracket rear face (Fig.3).

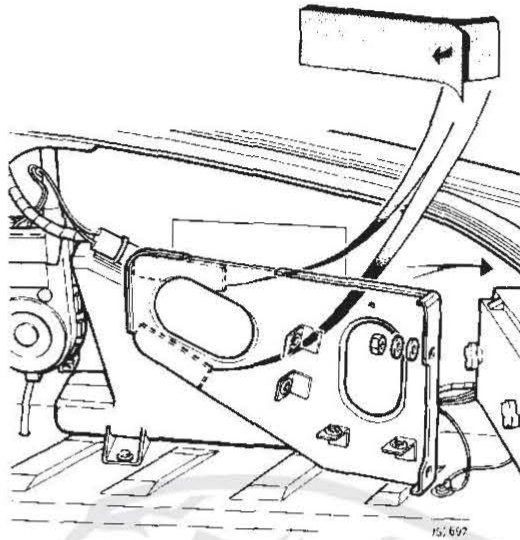


FIG 3

Bracket to Wing Contact

- 1) On certain vehicles the module mounting bracket top rear corner may make contact with the vehicle rear wing.
- 2) Before securing the bracket, place it in position to check the clearance at this point. If the bracket touches the wing, remove the corner section as shown in Fig.4; dimensions 'B' and 'C' are 15 mm (0.6 in).

NOTE: Do NOT cut into or below the top swage point (A) which provides strengthening to the flange.

Module to Mounting Bracket Seating

In certain cases the caravan/trailer module may not seat flush with the module mounting bracket thus preventing the securing bolt from engaging into the bracket. In this instance carry out one of the following solutions:

1. In place of the supplied module securing bolt, substitute a longer (M6 x 19 mm) bolt used in conjunction with a 7 mm spacer (not supplied).
2. Alternatively, remove a flange section to the dimensions referred to on Fig.4, where 'D' = 50 mm (2 in.) and 'E' = 100 mm (4 in).

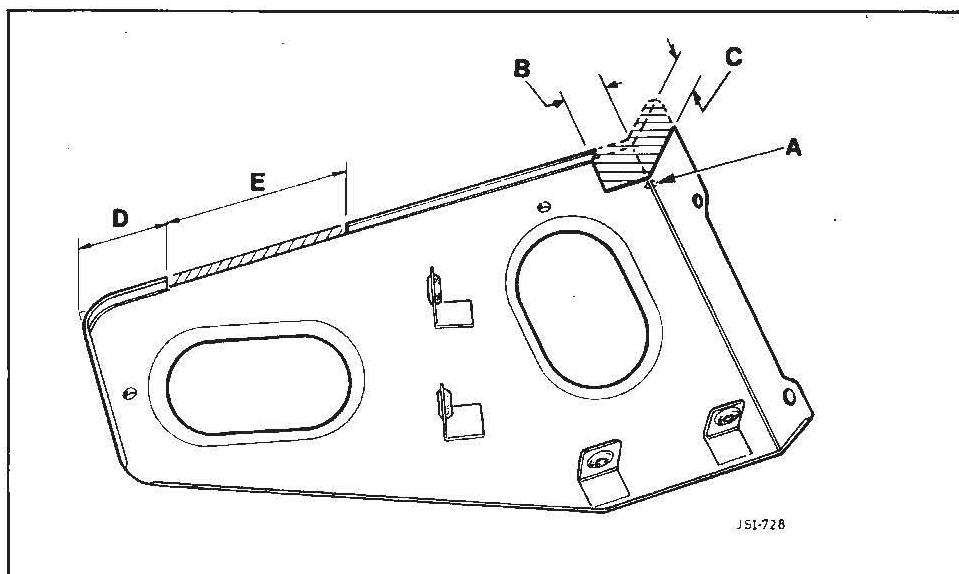


FIG 4

Vehicle/Caravan Lights Malfunction

Observations have arisen concerning vehicle or caravan lights malfunction. As a safeguard, the feed to the 12S connector is disabled unless the black button on the 12N connector (between pin Nos 3 and 4) is depressed. This should be performed automatically when the caravan plug to the 12N connector is inserted. Therefore, ensure the plug is pushed fully home to depress the black button.

NOTE: With the 12N connector plugged in, the car rear fog lamps and reversing lamps are inhibited to prevent unwanted reflections.

A second possible malfunction cause has been traced to corroded bulb contacts creating high resistances to which the caravan/trailer module is particularly sensitive.

12S Connector Matching

Although the cable arrangement for the 12N connector is to a recognised standard, no such standardisation exists for the 12S connector. It may be necessary therefore, to rearrange the 12S connector cables in the connector block to achieve a car/caravan match.

ITEM: 56

86 SEAT BELT AUDIBLE WARNING

XJ6 2.9/3.6
(NOT USA/CANADA/MIDDLE EAST)

Following market research and increasing customer criticism, the seat belt audible warning function has now been deleted from VIN. 513713.

The visual warning displayed on the vehicle condition monitor (VCM) is still retained.

ITEM: 57

88 OIL PRESSURE TRANSMITTERXJ6 2.9/3.6

Following reports of erratic or inaccurate engine oil pressure readings, investigations have resulted in the supplier modifying the oil pressure transmitter.

Revised transmitters are identified by date code, being post week 14 - 7, and have been progressively introduced into production with 100% fitment from vehicle VIN numbers:-

511164 - XJ6 2.9

511548 - XJ6 3.6

Parts stock has been checked and conforms to the latest specification.

1464F



Service Bulletin



DATE: OCTOBER 1987
SHEET: 1 of 7
BULLETIN: JD 09/87

An error has been discovered regarding the new Part Number quoted for the fuel recirculation valve. The amended version of sheet 1 of 4 Service Bulletin JD 07/87 is included with this Bulletin and is clearly identified "2nd ISSUE".

Some errors have also been discovered regarding Description Change - 3rd digit in Item 36, Service Bulletin JD 05/87. Please note the coding error affects JD 05/87 Bulletin only. The coding is correct in Edition 2 & 3 of the XJ6 2.9/3.6 Warranty Complaints Codes, Publication No. JJM 10 06 05. The amended version of sheet 1 of 3 is included with this Bulletin and is clearly marked "2nd ISSUE".

Will Service Personnel concerned please remove and destroy the original copies for both the above items and replace with the amended sheets.

ITEM: 65

04 SPECIFICATION AND ALTERATIONS

XJS (EXCEPT NAS)

3144700 Jaguar are introducing a revised XJS model range for 1988 MY from VIN No. 144691 (vehicles built from 1st September 1987) which incorporate sports features and suspension/steering improvements on the XJS 3.6 model range and sports features fitted as an option on the XJS V12 model range.

The sports features and suspension/steering improvements are as follows:

Suspension/steering changes (XJS 3.6 only).
New 6.5 x 15 ins alloy wheels.
235/60 VR 15 tyres.
Sports steering wheel.
Sports style seats.
Sports coachlines.

SUSPENSION/STEERING CHANGES (XJS 3.6 only)

Steering

Number of turns lock to lock 2.5

Overall ratio = $\frac{\text{Steering wheel angle}}{\text{Road wheel angle}} = 16.10:1$

Front suspension

Semi-trailing upper and lower wishbones incorporating anti-dive geometry.
Coil springs and telescopic dampers. Anti-roll bar.

Springs:

Effective number of coils	3.85
Free length	260 mm
Rate	85 kg/cm
Wire diameter	17,4 mm
Outside diameter	159 mm
Anti-roll bar diameter	22,2 mm

Rear suspension

Lower wishbone with drive shaft acting as upper link. Forward facing radius arms. Combined coil spring and damper units - two per side.
Anti-roll bar.

Springs (two per side):

Effective number of coils	6.78
Free length	251 mm
Rebound length	220 mm
Rate	41,6 kg/cm
Wire diameter	11,5 mm
Outside diameter	97 mm
Anti-roll bar diameter	16 mm

Suspension alignment

Castor angle	$3.5^{\circ} \pm 0.25^{\circ}$ positive
Camber angle	$0^{\circ} \pm 0.25^{\circ}$
Track alignment	0 to 3,2 mm Toe-in
King pin inclination	1.5° positive
Rear camber angle	$0.25^{\circ} \pm 0.25^{\circ}$ negative
Rear track alignment	Parallel $\pm 0,8$ mm
Wheel turning angles:	
Inner wheel	30°
Outer wheel	26°

WHEELS AND TYRES

Wheels

Type	Sports Alloy
Rim Size	6.5 J H2 x 15

Tyres

Type/Size	Pirelli P600, 235/60 VR 15 (Tubeless).
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Tyre pressures

XJ-S 3.6 - Cold inflation pressures for 235/60 size tyres:

- Front	2,39 kgf/cm ² (34 lbf/in ² , 2.35 bar)
- Rear	2,53 kgf/cm ² (36 lbf/in ² , 2.48 bar)

Pressures may be reduced by 0,56 kgf/cm² (8 lbf/in², 0.55 bar) on front and rear tyres to obtain maximum comfort provided the speed does not exceed 160 km/h (100 mph).

XJ-S V12 - Cold inflation pressures for 235/60 size tyres:

- Front	2,53 kgf/cm ² (36 lbf/in ² , 2.48 bar)
- Rear	2,53 kgf/cm ² (36 lbf/in ² , 2.48 bar)

Pressures may be reduced by 0,56 kgf/cm² (8 lbf/in², 0.55 bar) on front and rear tyres to obtain maximum comfort provided the speed does not exceed 160 km/h (100 mph).

Steering wheel

A leather rimmed sports style steering wheel is introduced with two horn pressure points mounted on each side of the steering wheel centre pad.

SPORTS STYLE SEATS

Revised front seats with a reshaped squab and cushion are introduced. Leather seat facings with cloth centre sections are fitted as standard on XJS 3.6 models with full leather facings available as an option. Full leather seats are fitted as standard on XJS V12 models.

REVISED COACHLINES

Twin colour coachlines (Flame Red upper stripe and Pewter lower stripe or Flame Red upper stripe and Quicksilver lower stripe) are matched to interior trim and body colours.

Flame Red upper stripe with Pewter lower stripe are matched with the following body colours:

Jet black	Tungsten
Talisman silver	Arctic blue

Flame Red upper stripe with a Quicksilver lower stripe are matched with the following body colours:

Glacier white	Silver birch	Crimson
Signal red	Solent blue	Dorchester Grey
Jaguar racing green	Moorland green	Satin Beige
Grenadier red	Alpine green	Bordeaux red
Westminster blue		

12 CAMSHAFT COVER WASHERSXJS 3.6/XJ6 3.6

To overcome the possibility of oil leakage from around the camshaft cover fixing screws, revised washers have been introduced from engine number 9D 121359. These washers are manufactured from a nylon material and must be replaced once disturbed. The new part number is EBC 1294 and the fixing torque for the camshaft cover fixing screws remains unchanged at 1.4 Nm (1.0 lb ft).

12 OIL SEALSXJS 3.6/XJ6 2.9 & 3.6

The bi-directional oil seals fitted to both the intermediate and auxillary shaft applications have been replaced by uni-directional oil seals.

These uni-directional oil seals, colour coded and shaft rotation direction marked on the front face for identification, are the same as previously fitted on the XJS 3.6 up to engine number 9DP 102965 and can be used as a replacement for the bi-directional seal.

Model	Engine No.	Intermediate Oil Seal Part No.	Auxillary Oil Seal Part No.
XJ6 2.9/3.6	up to 9AP 103776 9DP 122913	EAC 7263 (Red)	EAC 7263 (Red)
	after 9AP 103777 9DP 122914	EAC 5721 (Red)	EAC 6156 (Green)
XJS 3.6	up to 9DP 102965	EAC 5721 (Red)	EAC 6156 (Green)
	from 9DP 102966 to 9DP 123705	EAC 7263 (Red)	EAC 7263 (Red)
	after 9DP 123706	EAC 5721 (Red)	EAC 6156 (Green)

17 EMISSION SPECIFICATION - CANADAXJS V12/S.III V12/XJ6 3.6

To satisfy changes in exhaust emission legislation, effective from 1st September 1987, vehicles supplied to Canada are now fitted with air injection and downpipe catalysts. Sparking plug specification is revised on V12 models for the Canadian market with EAC 9186 replacing EAC 8554.

These changes were incorporated at the following VINs:-

144700 - XJS V12
 478348 - S.III V12
 521255 - XJ6 3.6 (Progressive introduction)
 521298 - XJ6 3.6 (100%)

ITEM: 69

18 ENGINE HESITATION/MISFIREXJ6 2.9/3.6

Investigations into engine hesitation/misfire, accompanied by unrepresentative tachometer readings, have revealed instances of tooth damage on the crankshaft sensor toothed gear. This can result in spurious signals to the ECU. To prevent any damage occurring during manufacture, revised storage and handling arrangements have been introduced for this component.

When carrying out crankshaft front seal replacements, or any other repairs in the area of the crankshaft sensor toothed gear, care must be taken to avoid damaging the gear teeth.

ITEM: 70

37 GETRAG GEAR NOISEXJ6 2.9/3.6 (MANUAL ONLY)

To improve noise insulation and reduce the incidence of customer complaints of gear noise, a new gear lever grommet Part No. EAC 9997 has been introduced from VIN 515237.

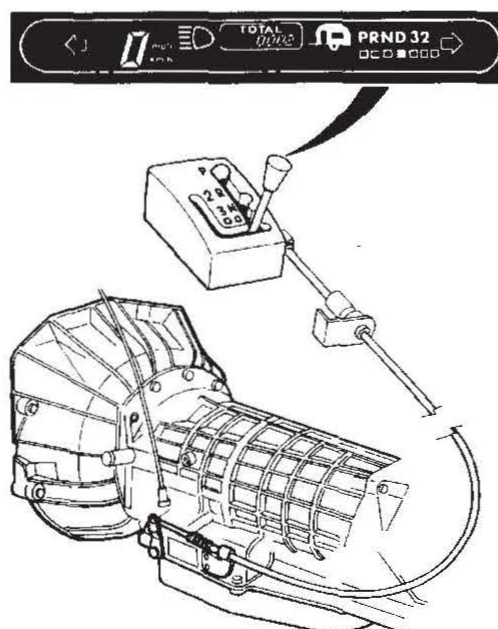
The new grommet can also be used as a replacement for existing Part No. EAC 6620.

ITEM: 71

44 GEAR SELECTOR CABLE ADJUSTMENTXJ6 2.9/3.6 (AUTOMATIC ONLY)

Following a number of instances of incorrectly adjusted selector cables/linear switches, attention to setting on production has been assured from VIN 507776.

If the adjustment is suspect or any of the associated components have been replaced, the following selector checking/adjusting procedure should be used.

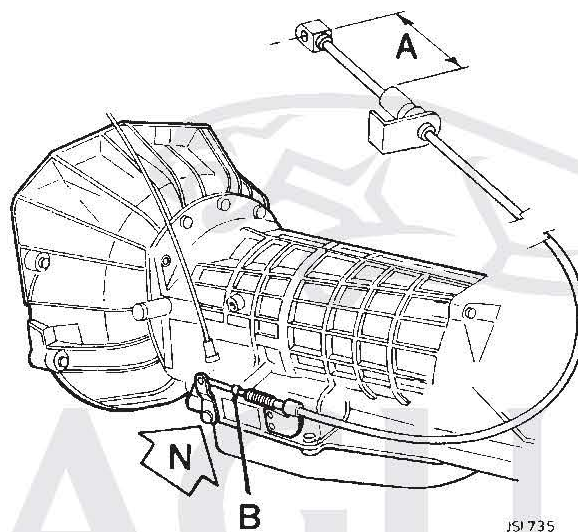


/Si 734

SERVICE CHECKS

- 1 Engine should only start with gear selector in position P or N.
- 2 Reversing lights should be illuminated only when R is selected.
- 3 Instrument pack gear indicator display corresponds with gear selector lever position.
- 4 Transmission parking lock mechanism is engaged with gear selector in position P.
- 5 Gear selector lever aligns centrally with position R and N detents in gear selector module gate.
- 6 Gear selector lever should transfer smoothly across J-gate in D position.

ADJUSTING LINKAGE



A = 72 mm

FIG 1

- 1 Set transmission selector lever in N position.
- 2 Connect selector cable to selector lever.
- 3 Adjust ball end connector Fig 1B to achieve dimension Fig 1A and tighten ball end locknut. Ensure that the inner cable to slider block location remains aligned and inner cable is not twisted within the outer cable.
- 4 Set transmission selector lever and gear selector lever into position 'D'.
- 5 Connect inner cable to slider block Fig 2A and tighten retaining nut.

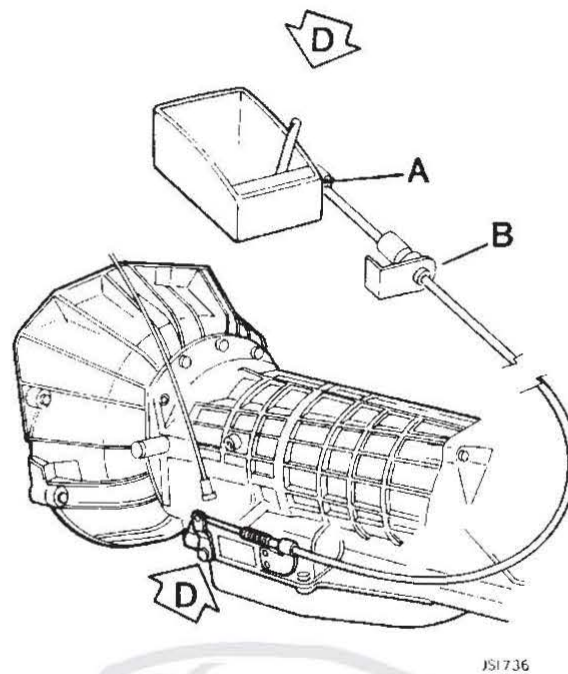


FIG 2

- 6 Adjust outer cable locknuts until gear selector lever transfers smoothly across the J-gate 'D' position with the minimum of inner cable movement. Tighten cable locknuts Fig 2B ensuring that the outer cable aligns to the slider block drive pin.
- 7 Locate gear selector lever module onto housing Fig 3.

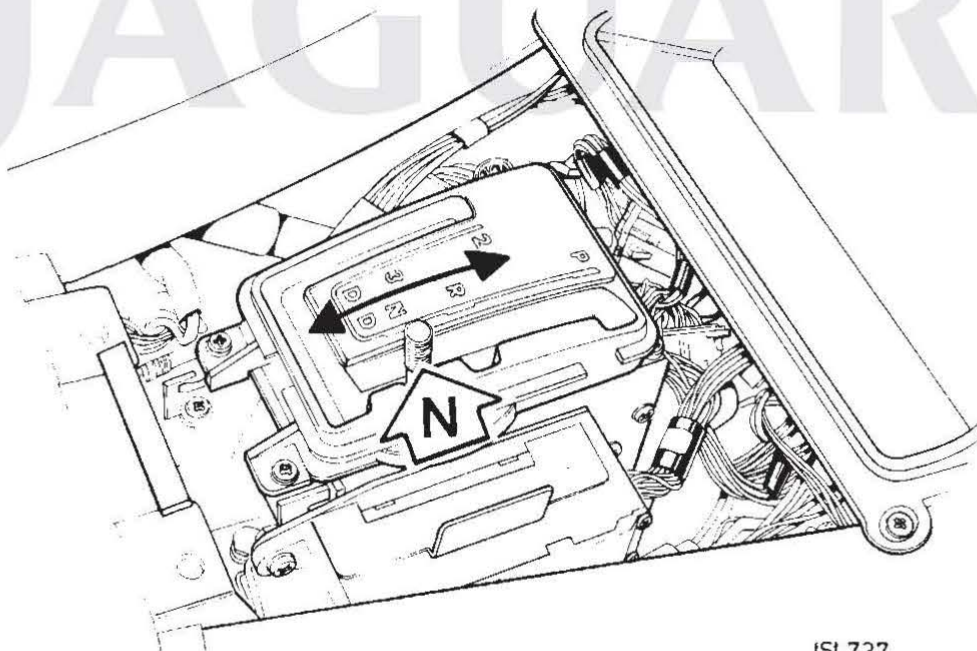


FIG 3

- 8 Ensure gear selector lever (when in N position) aligns centrally with N detent position of module.

NOTE: On early cars it may be necessary to relieve (stretch) the J-gate housing Fig 4A to ensure the correct position is achieved.

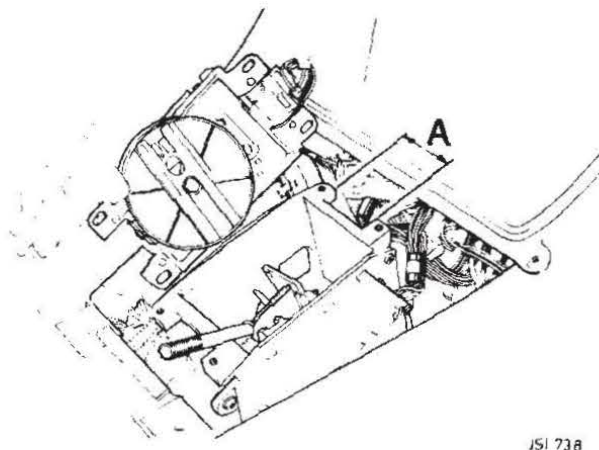


FIG 4

- 9 Secure gear selector lever and tighten the four screws ensuring the lever transfers smoothly across the J-gate.
- 10 Select N position on gear selector.
- 11 Locate linear switch Fig 5A but do not tighten the securing screws Fig 5B.

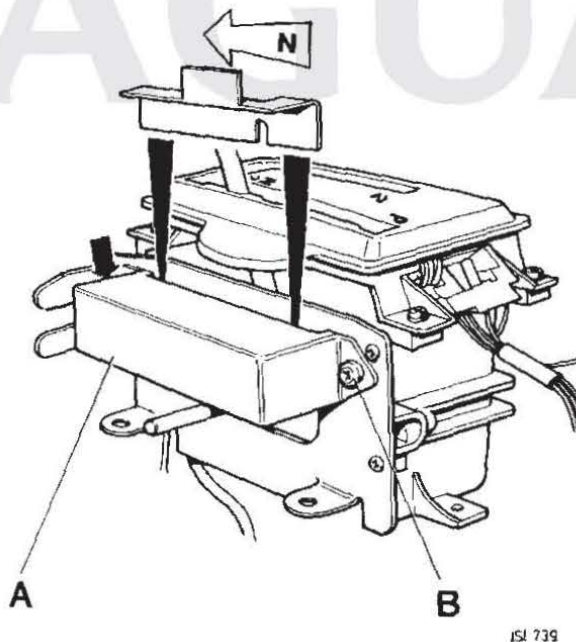


FIG 5

- 12 Position the setting gauge (Service Tool No. JD 127) between the linear switch and side plate.
- 13 Ensure the slot of the setting gauge is fully located onto the pin of the linear switch and tighten the securing screws.
- 14 Remove the setting gauge and repeat Service Checks.

ITEM: 72

47 PROPSHAFT ALIGNMENTXJS 3.6 AUTOMATIC

To overcome instances of propshaft vibration when accelerating from rest, the propshaft centre bearing position should be checked and adjusted if necessary.

Viewed from the rear of the vehicle, the propshaft centre bearing should be positioned to the right of the slots on the centre bearing mounting bracket, ensuring there is a 0.5 - 1.0mm gap between the centre bearing and tunnel.

ITEM: 73

51 DIFFERENTIAL POWR LOK NOISEXJ6 2.9/3.6

To overcome complaints of differential Powr Lok noise when cornering, a revised clutch pack, incorporating an extra 'dead plate' has been introduced from unit serial number 87E 22565. These units were introduced on production progressively from VIN 519425.

Jaguar Parts stocks of 3.54:1 Powr Lock units (CBC 2107 35) are assured to the later condition. Assurance of Parts stocks of other ratios will be advised in due course.

ITEM: 74

66 RIDE LEVEL - SENSITIVITY ADJUSTMENTXJ6 2.9/3.6

When investigating complaints of incorrect functions of the ride level system, the following procedure should be adopted:

- 1) Ensure that the tyre pressures are correct, i.e.

	Front	Rear
UK & European Vehicles	26 lb/in ²	28 lb/in ²
NAS vehicles	27 lb/in ²	30 lb/in ²

- 2) Drive the vehicle onto a ramp.
- 3) Load the vehicle to the following condition:
Driver + 2 rear passengers + 70 kg luggage + full tank of fuel.
- 4) Start the engine. After a 20-30 second delay the ride level should activate.

- 5) Measure the front and rear ride heights, i.e. from the top of the sill to the ground (Fig 1). Note results.

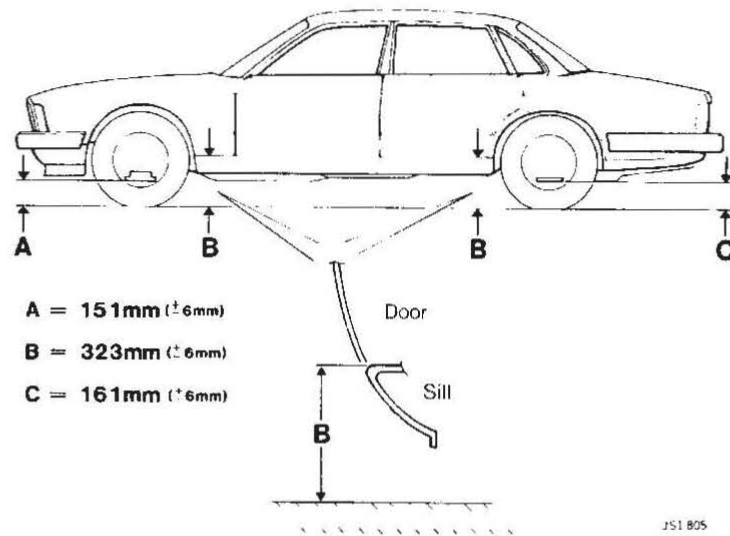


FIG 1

- 6) Apply an additional rear axle load of a least 80 kg.
- 7) Allow the ride level system to activate (approx 20-30 seconds).
- 8) Measure the front and rear ride heights again (Fig 1). If the measurements are within the tolerances specified (Fig 1), then the system is functioning correctly.
- 9) Stop the engine.
- 10) If the ride level does not activate even after the load is added in operation No.6 then the ride level sensor unit requires adjustment as follows:
- Raise the ramp
 - Disconnect the ride height sensor link rod from the R.H.S. wishbone.

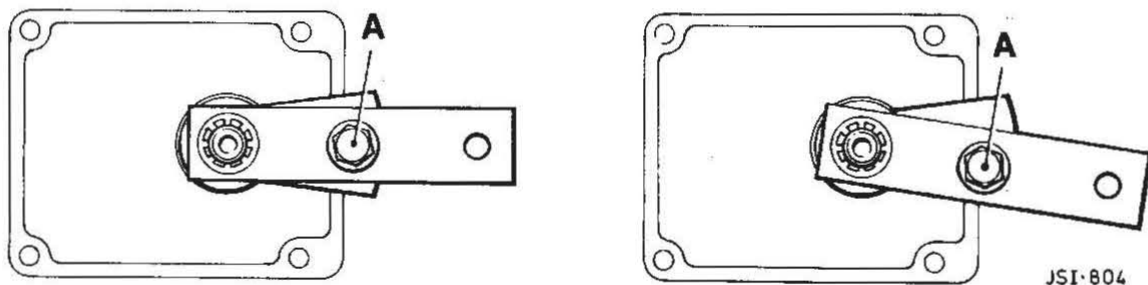


FIG 2

- c) Slacken the nut (A Fig 2) on the sensor unit and adjust the arm as shown (A Fig 2). This will cause the system to activate at the lowest load condition possible within the adjustable range.
 - d) Tighten the nut (A Fig 2). Reconnect the sensor link arm to the wishbone.
 - e) Lower the ramp.
- 11) Repeat instructions 1 to 9.
- 12) If the vehicle still does not conform to the ride height shown (Fig 1) then other causes of system malfunction must be investigated i.e.
- * Incorrect spring/packer combination
 - * Damaged sensor unit/mounting bracket
 - * Malfunction of the solenoid valve block or related electrical circuits.
 - * Contamination or blockage of the pipes to the self levelling units.

ITEM: 75

70 JURID 518 FRONT AND REAR BRAKE PADSXJS/S.III/LIMO

A revised brake lining material known as Jurid 518, has been introduced on Production from the following Vins:

478363 - S.III V12
144578 - XJS
201035 - Limo

These parts can also be used as a 'Service Fix' to overcome complaints of graunch, rumble, pull and judder. In the case of judder caused by disc thickness variation it will also be necessary to replace the discs. The other three complaints only require the brake pads to be replaced, unless excessive brake disc wear is evident.

Brake pads manufactured using this material must only be used in complete vehicle sets and are available under the following part numbers:

Complete Vehicle Set	JLM 1157
Front Axle Set	JLM 1158
Rear Axle Set	JLM 1159 - includes 4 off anti-rattle shims which <u>must</u> be fitted.

NOTE: These pads can be identified by the wording "Jurid 518" printed on the top face of the pad material.

Brake 'bedding-in' is very critical as the unbedded performance of these pads is relatively poor when compared to the bedded condition.

It is essential that at least 10-20 stops are undertaken from speed not exceeding 80 km/hr (50 miles/hr). Each stop must be separated by a minimum of 1.1/4 Km (3/4 mile) using varying amounts of pedal pressure and braking time.

Friction levels should have increased significantly after 10-20 stops. If not, further bedding-in should be carried out as detailed previously.

86 BRAKE/CRUISE CONTROL/CLUTCH MICROSWITCH ASSEMBLIESXJS 3.6 87.5 MY
XJ6 2.9 & 3.6

IMPORTANT: Will all service personnel please note, in the event of a customer complaint of clutch or brake pedal squeak UNDER NO CIRCUMSTANCES SHOULD GREASE OR SILICONE SPRAY LUBRICANT be applied to any pedal operated brake/cruise control/ or clutch microswitch assembly.

If a complaint of squeaking originating from any of the afore mentioned switches is identified, the component should be replaced.

Microswitch assemblies referred to are as follows:

<u>Part No.</u>	<u>Description</u>	<u>Model</u>
DBC 2134	Brake Light Switch	XJS 3.6 87.5 MY
DBC 2960	Brake Switch	XJ6 Cruise Control Auto & Manual
DBC 2959	Clutch Switch	XJ6 Manual Trans.

86 FRONT FOG LAMPSXJS 87.5 MY

Some of the front fog lamps fitted to certain XJS 87.5 MY vehicles were found to be in-operative at Dealer pre-delivery inspection.

Investigations have subsequently identified that during production build cars affected had been incorrectly fitted with a link harness between the master lighting switch and main loom which inhibits the front fog lamp operation, and is normally fitted to XJS models not equipped with fog lamps.

On problem vehicles fog lamp operation has been restored when the link harness was removed.

Correct production build has now been assured from VIN 144273.

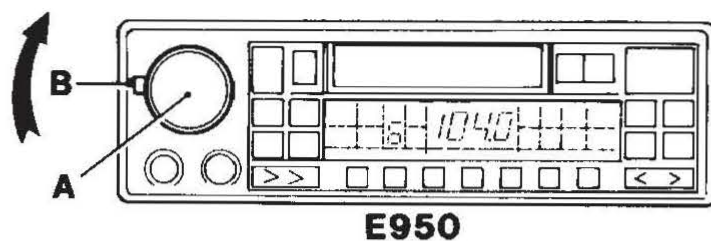
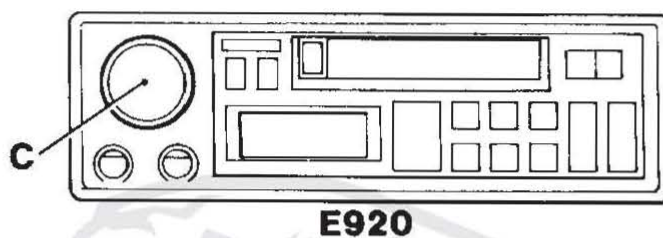
86 RADIO/TAPE ASSEMBLYXJ6 2.9/3.6

The 'Clarion' E920 radio/tape assembly, Part No. DBC 2707, which is currently fitted to XJ6 2.9/3.6 models incorporating four speaker systems, will shortly be deleted from specification. Production build requirements have accounted for all remaining supplier and parts stock.

Due to the non availability of DBC 2707 for parts replacement purposes, the 'Clarion' E950 Model, Part No. DBC 2172, will be supplied as an alternative with immediate affect.

As previously mentioned, the E920 Model is fitted to production vehicles incorporating a four speaker system and when replacing with the E950 type, the following procedure is required to ensure correct speaker function.

- * Before installing the E950 Unit DBC 2172, remove the on/volume knob (A)
- * Turn the fader control fully clockwise and remove it from the spindle (B)
- * Fit the on/volume knob from the E920 unit (C)

**E950****E920**

JSI-785

ITEM: 79

88 INSTRUMENT PACK**XJ6 2.9/3.6**

Following the examination of warranty returned instrument pack assemblies, it has become apparent that certain units may have sustained circuit damage due to being disconnected whilst the ignition was switched on.

Will service personnel please note that UNDER NO CIRCUMSTANCES SHOULD AN INSTRUMENT PACK BE DISCONNECTED WHILST THE IGNITION IS TURNED ON as irreparable damage will occur.

Will Dealer Principles please ensure that all service staff are made aware of this fact.

1527F

Service Bulletin



DATE: FEBRUARY 1988
SHEET: 1 of 6
BULLETIN: JD 01/88

Due to additional information received after Service Bulletin JD 10/87 was issued it has been decided to re-issue two pages of Item 99.

The amended version of Sheets 15 and 16 – Service Bulletin JD 10/87 – is included in this Bulletin and is clearly identified “2nd Issue”.

Will Service personnel concerned please remove and destroy the original copy and replace with the amended sheets.

ITEM: 01

03 REPAIR OPERATION TIMES

XJ6 2.9/3.6

Repair Time Supplement JJM 10 01 05/S1, lists operation 26-25-11: Fan Cowl – Renew as 0.60 hrs. This replaces operation 26-40-07 Radiator Cowl – Renew 0.55 hrs which appears in JJM 10 01 05 and should be deleted.

No other repair times are affected.

ITEM: 02

03 REPAIR TIME AMENDMENT

XJ6 2.9/3.6

Following a review of procedures, could you please alter the following repair times in Repair Operation Times Supplement Part No: JJM 10 01 05/S1:

60-35-26 Suspension Unit Rear Mounting Bush – Renew – to read 6.10 hr.

60-35-27 Suspension Unit Rear Mounting Bush – Vehicle Set – Renew – to read 6.25 hr.

86-70-20 Fuel Pump Link Harness – Renew – to read 0.70 hr.

The repair times shown above are for all XJ6 2.9/3.6 models and variants. No other repair times are affected.

12 CRANKSHAFT MAIN BEARINGS**XJ6 3.4/4.2**

Where crankshaft main bearing failure is experienced on 3.4 and 4.2 models it is possible for some distortion to occur within the cylinder block as a result of the heat generated. To enable effective repairs to be carried out with confidence, new short engines consisting of a cylinder block, crankshaft pistons, con rods and oil pump are now available using normal parts ordering procedures. These are supplied under the following Part Numbers and should be used when repairing engines which have suffered crankshaft main bearing failure, particularly rear main bearing failure:

JLM 1411 N – 3.4
 JLM 1412 N – 4.2 'H' Comp.
 JLM 1413 N – 4.2 'S' Comp. (USA)
 JLM 1414 N – 4.2 'S' Comp. (Middle East)

ITEM: 04**12 STRIPPED ENGINE ASSEMBLY****XJS 3.6**

A revised XJS 3.6 engine Part No. JLM 1564/N with a redesigned crankshaft, eliminating the need for balance weights on the crank damper and drive plate, has been introduced from Engine No. 9DP 128811.

This engine which supercedes JLM 1338/N can also be used as a replacement for Part Nos: JLM 104/N, JLM 569/N and JLM 1046/N provided the necessary modifications are also included.

To determine the full list of modifications applicable to individual vehicles, reference should be made to the application chart after first determining the original engine number fitted to the vehicle.

APPLICATION CHART

REPAIR OPERATION	NEW PARTS REQUIRED PER VEHICLE	JLM 104N up to Engine 9DP102538			
Modify Power Assisted Steering Pump Drive Dog	1 off EAC 7081 Driving Dog 1 off EAC 7107 Coupling	X		JLM 569N Engine Range 9DP102539 9DP103839	
Fit Revised Heater Feed Hose	1 off CAC 9801 Heater Feed Hose	X	X	JLM 1046N Engine Range 9DP103840 9DP108736	
Modify Oil Filler Drain Back and Fit Revised Cylinder Head Rear Cover Stud	1 off EAC 6889 Stud Bolt 1 off EAC 7443 Housing 2 off EAC 3215/1 Clips 1 off EAC 7407 Hose 1 off EAC 7441 Oil Drain Pipe 1 off EAC 4929 Olive 1 off EAC 4927 Nut	X	X	X	JLM 1338N Engine Range 9DP108737 9DP128810
Refit Original Crank Damper, Timing Disc and Timing Indicator	None	X	X	X	X

ITEM: 05

26 ANTI-FREEZE**ALL MODELS**

All vehicles supplied to all markets now have a 50% anti-freeze content in the cooling system from the following VIN Nos:

478841 – S.III V12
 146964 – XJS
 533662 – XJ6
 201064 – Limo
 400303 – Hearse

This ensures cooling system protection to a temperature of –36°C.

ITEM: 06

60/ RIDE REFINEMENT DETAILS**XJ6 2.9/3.6****64/****66 Front/Rear Shock Absorbers and Ride Level Struts – Replacement Guidelines:**

To overcome criticisms of poor ride characteristics, revised settings for front and rear shock absorbers and ride level struts have been introduced on Production from VIN 527357.

Parts stocks are available and parts can be ordered using the following part Numbers:

Front shock absorber – CBC 5954 supercedes CBC 4197
 Rear shock absorber – CBC 5958 supercedes CBC 4186 & CBC 5410
 Ride level strut – CBC 5961 supercedes CBC 4214/050.

The following guide lines **MUST** be adhered to when fitting replacement parts:

1. Replacement of old with new specification units must always be in axle sets, i.e. Units of different ride specification must not be mixed on an axle.
2. Where front shock absorbers are replaced with new ride specification units, then the rear shock absorbers/ride level struts must also be renewed with new specification units. However it is permissible to fit new ride specification rear shock absorbers/ride level struts with old specification front shock absorbers.

ITEM: 07

66 ACCUMULATOR SWITCHES**XJ6 2.9/3.6**

To avoid the necessity to replace the whole accumulator assembly, when investigating fluid leaks from the accumulator switches, the Low Pressure and Charge switches have been made available as separate items. These parts can be ordered using the following Part Numbers:

	Girling Part No.	Jaguar Part No.
Charge Switch	74968666	JLM 1562
Low Pressure Switch	74968667	JLM 1563

The following procedure should be adhered to when renewing either or both of these switches:

CAUTION: EXTREME CLEANLINESS MUST BE OBSERVED AT ALL TIMES.

Remove

1. Depressurise the Power Hydraulic System i.e. switch off the ignition and repeatedly depress the brake pedal until no further assistance is felt.
2. Cut the tie strap securing connector RS25 (green PM4). Disconnect the connector and feed the accumulator harness and multi-plug down through the engine compartment area.
3. Raise the vehicle using either a jack and stands or a vehicle ramp.
4. From below, cut and remove the heat shrink sleeve securing the two accumulator switch harnesses together.
5. Remove the anti-back-out plate from the rear of the multi-plug.
6. Note the positions of the connections in the multi-plug and remove the seal. Remove the appropriate connector pins from the plug using Service Tool JD 137.

NOTE: Further details on pin removal can be found in Book 5, Section 86, Page 86A-4 of the XJ6 2.9/2.6 Service Manual.

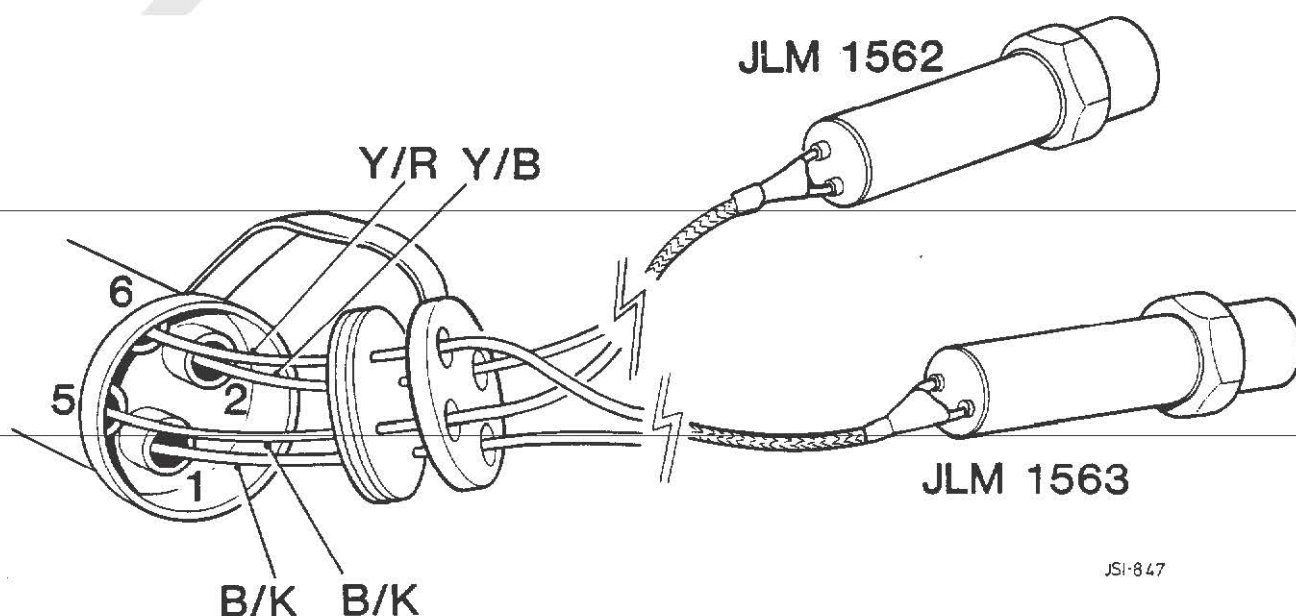
7. Thoroughly clean the accumulator switch assembly ensuring that the surrounding area is free of all dirt and grit etc.
8. Remove the leaking/faulty switch from the accumulator body and discard.

Refitting:

1. Fit the new switch assembly to the accumulator body and tighten to the correct torque i.e. 31–39 Nm.

CAUTION: DURING THIS OPERATION IT IS IMPERATIVE THAT NO FOREIGN BODIES ARE ALLOWED TO ENTER THE ACCUMULATOR.

2. Position the harness pins through the anti-back-out plate and seal. Fully seat the pins into their appropriate positions in the multi-plug See Fig 1.



JSI-847

FIG 1

3. Fully seat the seal and anti-back-out plate in the multi-plug socket.
4. Secure the two switch harnesses together using suitable insulating tape.
5. Feed the accumulator harness up through the engine bay to locate the socket.

NOTE: Ensure that the plug and socket are clean and free of any contamination before connecting them together.

6. Lower the vehicle and connect RS25 plug and socket. Secure with a tie strap.
7. Start the engine and allow the hydraulic system to pressurise.
8. Check for any leaks.
9. Check/top up the power hydraulic fluid reservoir.

Repair Operation Number: Lower Pressure Switch – 66.30.11
Charge Switch – 66.30.12

Labour Allowance: 66.30.11 – 0.5hr
66.30.12 – 0.5hr

ITEM: 08

70 JURID 518 FRONT AND REAR BRAKE PADS

XJ6 2.9/3.6

A revised brake lining material known as Jurid 518 was introduced on Production progressively from VIN 533084 and as 100% fit from VIN 533361.

These pads can be identified by the wording JURID 518 printed on the top face of the pad material.

Part Numbers will be advised in a Parts Information Bulletin when sufficient stocks are available.

ITEM: 09

76 DOOR CLOSURE

XJ6 2.9/3.6

The Service network has identified a condition where during the closure operation, a door latch may not fully engage causing the door to rebound open. This is caused by either maladjustment of the lock linkage or contact between the door assembly and aperture fittings which impedes closure.

This condition mainly affects rear door operation but as the adjustment procedure is identical for both front and rear doors, repair methods are included for both.

This Bulletin Item details in Section One a method for checking if free play exists at the exterior handle. Section Two provides a procedure for setting the lock linkage and Section Three identifies a number of potential contact areas which can affect closure.

SECTION ONE

1. Ensure the sill link is in the fully unlocked position and the latch claw is in a partial closed position (A Fig 1).
2. Place a finger into the striker slot (B Fig 1) where the upper part will make contact with the lock pawl (C Fig 1).

3. Use the other hand to check the exterior handle for free play. If set correctly the pawl will remain stationary during the initial movement of the handle, i.e. 1–2mm. Should pawl movement be identified move to Section Two.

NOTE: Excessive play at the exterior handle can also cause door closure problems and will necessitate adjustment. Refer to Section Two and adjust to attain the correct setting.

SECTION TWO

1. Remove the door veneer panel and upper and lower trim pads. Remove the taped plastic moulding from the door inner panel to allow access to the lock assembly.
2. Release the locknut at the top of the handle link barrel nut (D Fig 1).
3. Place a finger into the striker slot to contact the pawl and with the other hand rotate the barrel nut in the direction of the arrow (E Fig 1) until the pawl ceases to move. Rotate the nut one further full turn or until free play is identified at the exterior handle.
4. Secure the locknut using two spanners and recheck the free play.
5. Refit all trim etc.

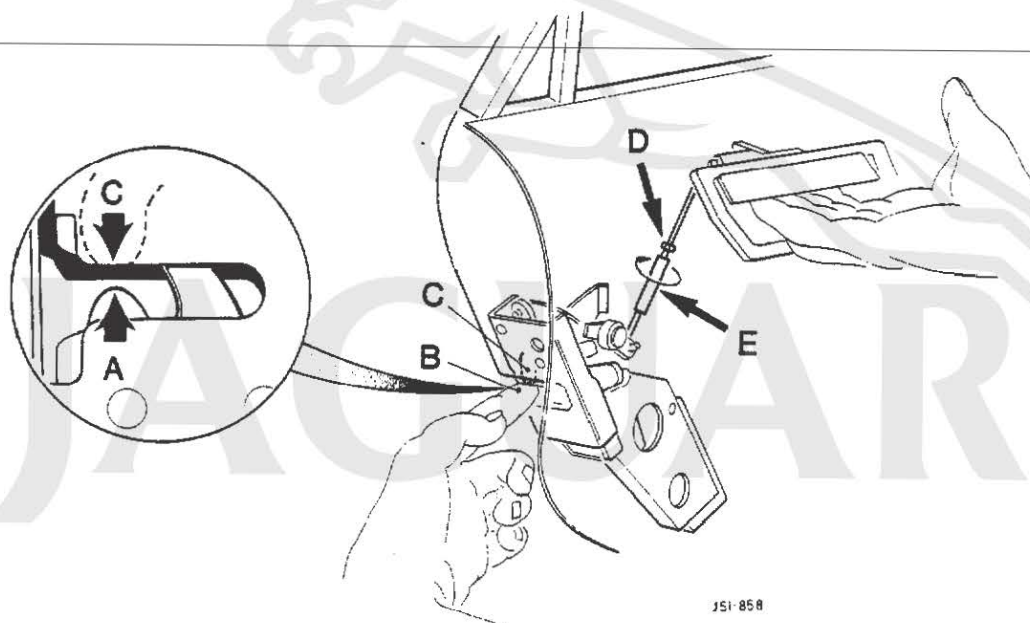


FIG 1

SECTION THREE

Where door closure problems are identified and checks have shown that the lock linkage is set correctly, the door should be examined initially for profile and adjusted as necessary.

Should a closure problem exist after profile setting and it is established that the striker is correctly set, the aperture should be examined for contact marking.

Potential contact areas and corrective actions are detailed below:

1. Draught welt flange. Should hard contact be noted, where possible the flange should be dressed carefully inboard to effect clearance.
2. Tread plate contact. Where this is identified, remove the tread plate and using a suitable file remove sufficient material from the tread plate to obtain clearance.

3. Door seal wrinkling. This usually occurs at the top of the "C" post and inhibits rear door closure. To rectify fit a new seal.

Repair time allowances:

Front Door Exterior Handle Linkage Adjustment
Operation No: 76-37-10 – Time allowance 0.55 hrs.

Rear Door Exterior Handle Linkage Adjustment
Operation No: 76-37-11 – Time allowance 0.55 hrs.

NOTE: Any repair time allowance for Section Three items are covered by normal warranty times where a component is replaced.

ITEM: 10

86 TIME CLOCK

XJ6 2.9/3.6

During July 1987 a new type of time clock was progressively introduced onto XJ6 with 100% fitment from VIN 521288. Visually the old and new clock look identical. The difference between the two being the method of control; the old unit obtained all its power and data signals from the central processor whereas the new unit generates its own timing signals, hence its name being a 'stand alone clock'

To ascertain which type of clock is fitted to a vehicle an inspection of connector RB/LB30 must be undertaken. The wire/pin details are as follows:

	CPU CONTROLLED	STAND ALONE CLOCK
PIN 3	Slate/Yellow	Slate/Yellow
PIN 7	Slate/White	—
PIN 8	Slate	—
PIN 9	Blue	—
PIN 12	White	White
PIN 13	Slate/Brown	Slate/Brown
PIN 14	—	Brown/Green
PIN 15	Orange/Brown	Orange/Brown

It should also be noted that PIN 14 on the bulkhead harness side of the connector should have a brown link wire going directly to the bulkhead positive terminal post. If this wire is not connected then the clock will lose its memory when the ignition is switched off.

JDS Software Issue DBC 4004 covers the CPU controlled clock and not the stand alone clock, this will be incorporated into a future software release.

ITEM: 11

86 HIGH MOUNTED STOP LAMP

XJS/S.III V12/XJ6 2.9 & 3.6
(NOT USA/CANADA)

It has become apparent that Dealers have been approached by owners requesting the fitment of production build USA/Canadian specification high mounted stop lamp assemblies.

Will Dealers please note that the fitment of such lamps in both the U.K. and European markets is strictly governed by legislation.

High mounted stop lamp assemblies as fitted to USA/Canadian specification vehicles do not comply with this legislation and **SHOULD NOT BE FITTED.**

86 FUSES/FUSE BOXES**XJ6 2.9/3.6**

Revised fuse box and failure modules have been introduced into production from VIN 531170. The fuse ratings and colour codes are given on the following charts.

Right Hand Side Fuse Box

Fuse No.	Fuse Colour Code	Value	Circuit
1.	Light blue	15 A	Right-hand front door: window, door guard lamp and mirrors if driver's door.
2.	Light blue	15 A	Door lock control, luggage compartment lock, petrol filler flap.
3.	Yellow	20 A	Right-hand air conditioning (where fitted)/heater fan.
4.	Light blue	15 A	Right-hand main beam headlamp.
5.	Tan	5 A	Right-hand front lamps (side/side marker, direction indicators and repeater).
6.	Yellow	20 A	Heated rear screen, luggage compartment lamp, electric aerial, heated door mirrors, rear quarter reading lamp (R.H. [where fitted]).
7.	Red	10 A	Right-hand rear lamps (stop, reverse, direction indicators and fog [where fitted]).
8.	Yellow	20 A	Front and rear cigar lighters (where fitted).
9.	Tan, Red or Yellow	5 A, 10 A or 20 A	Electric Accessories.
10.	Yellow	20 A	Radio, sun roof, heated door locks (where fitted), glove compartment lamp, map light, interior headrest lamps, 'state' illumination.
11.	Light blue	15 A	Cooling fan, air conditioning compressor clutch (where fitted), under bonnet lamps.
12.	Violet	3 A	Right-hand rear lamps (tail, number plate and side marker).
13.	Light blue	15 A	Right-hand rear door, window, door guard lamp.
14.	Red	10 A	Right-hand dip headlamp, fog lamp (where fitted).

Left-Hand Side Fuse Box

Fuse No.	Fuse Colour Code	Value	Circuit
1.	Light blue	15 A	Left-hand front door: window, door guard lamp and mirrors if driver's door.
2.	Violet	3 A	Instrument pack.
3.	Yellow	20 A	Left-hand air conditioning (where fitted)/heater fan.
4.	Light blue	15 A	Left-hand main beam headlamp.
5.	Tan	5 A	Left-hand front lamps (side/side marker, direction indicators and repeaters).
6.	Violet	3 A	Ride levelling (where fitted), power brakes.
7.	Brown	7.5 A	Left-hand rear lamps (stop, reverse, direction indicators and fog [where fitted]).
8.	Natural (White)	25 A	Right-hand seat movement (where fitted) and seat heater (where fitted).
9.	Tan, Red or Yellow	5 A 10 A or 20 A	Electric Accessories.
10.	Natural (White)	25 A	Left-hand seat movements (where fitted), and seat heater (where fitted).
11.	Yellow	20 A	Windscreen wiper, horns.
12.	Violet	3 A	Left-hand rear lamps (tail, number plate and side marker).
13.	Light blue	15 A	Left-hand rear door, window, door guard lamp, fuel filler flap, rear quarter reading lamp (L.H. [where fitted]).
14.	Red	10 A	Left-hand dip headlamp, fog lamp (where fitted).

Centre Fuse Box

Fuse No.	Fuse Colour Code	Value	Circuit
1.	Violet	3 A	Lamp modules right-hand rear and left-hand front, alternator control.
2.	Violet	3 A	Lamp modules right-hand front and left-hand rear.
3.	Tan	5 A	Speed control (where fitted).
4.	Violet	3 A	Power brakes, ride levelling (where fitted).
5.	Violet	3 A	Cooling fan, heated washer jets.
6.	Violet	3 A	Radio illumination, breather heater.

86 WARRANTY CODES

XJ6 2.9/3.6

Dealers have reported isolated incidences of excessive quiescent battery drain caused by either the main central processor unit or ride height level sensor. Unfortunately when submitting the warranty claim Dealers have been uncertain as to the codes to use.

For ride height level sensor existing code reference 7UJH should be used.

To identify quiescent drain caused by the main CPU, "Central Processor Unit Malfunction" has been allocated to 4th digit code "Y" in Section 7B. Therefore when submitting claims please quote 7BLY.

86 BRAY HEATER

S.III V12/XJS V12/XJ6 3.6

To provide access to the connector on the cylinder block heater it has been re-positioned in the radiator bottom hose. The heater cable is now fitted prior to shipment and strapped as indicated by Fig 1 XJ6 3.6 and Fig 2 S.III V12 and XJS V12.

This modification has been introduced from Engine Nos:

7P 59268 — S.III V12
9DP 133250 — XJ6 3.6
8S 55854 — XJS V12

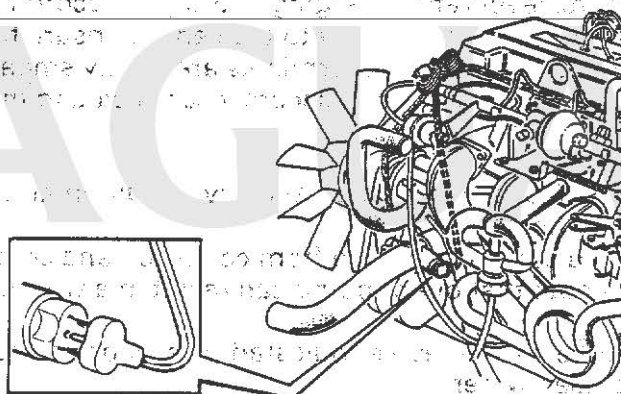


FIG 1

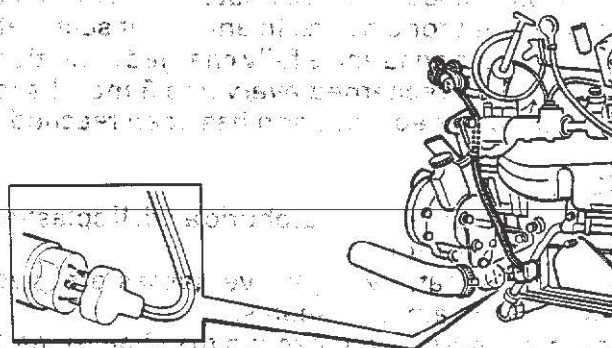


FIG 2

ITEM: 15

86 CHLORIDE DRY CHARGED BATTERY COMMISSIONING

XJS/XJ6 2.5 & 3.6

Investigations into premature battery failure on XJ6 Chloride replacement batteries (Part Nos: DAC 4120, DBC 3135 and DAC 4545) have emphasized the need to commission these units in accordance with the manufacturers instructions. Failure to do so will result in the battery not achieving a full state of charge in service. Full commissioning instructions are attached to Parts supplied replacement Chloride batteries and are reproduced below for reference.

INSTRUCTIONS FOR COMMISSIONING DRY-CHARGED BATTERIES**(a) FILLING:**

1. Remove vent plugs with each cell to the levels indicated in para 2 below with the correct specific gravity acid as given in Table 1.
2. The level of the filling-in acid should be 6mm above the separators, or where applicable, flush with the tops of the ribs of the separator guards or to the level of the acid level indicator bar at the bottom of the filling tube.
3. After a few minutes, the level of the initial filling acid will fall and this should then be restored by adding more acid until the levels are again as in para 2 above.

(b) PUTTING INTO SERVICE:

1. After filling, the battery should be allowed to stand for approximately 20 minutes before charging.
2. It is **essential** prior to fitment to give a battery a conditioning charge for approximately 4 hours at the charge rate of 6 amps to ensure peak performance.
3. Where batteries are stored for a period exceeding one year in a temperate climate of 3 months or more in temperatures greater than 30°C and/or humidity exceeding 80% they must be charged for 12 hours at the rate indicated.
4. Check the electrolyte levels after charging and adjust accordingly as instructions given in section (a). When fitting the battery to the vehicle ensure that it is properly secured by the hold down devices, that the terminals are lightly smeared with petroleum jelly and that the cables are correctly and securely connected to the battery terminals.

(c) BATTERY MAINTENANCE:

1. Keep the top of the battery in a clean and dry condition and the vent plugs securely screwed or pushed home.
2. Keep terminals and connections free from corrosion and coated with petroleum jelly. It is important to note that overtopping can result in a wet battery top which induces corrosion.
3. Maintain electrolyte to the levels indicated in section (a) para 2 by the addition of distilled or de-ionised water.
4. If batteries are used on applications without an engine driven charging unit, then recharging should take place when the specific gravity drops to 1.220 (or 1.180 when low gravity acid has been used for hot climates) until the specific gravity in all the cells rises and remains constant for 3 hours. In any event such batteries should be put on a monthly recharge schedule ensuring a fully charged condition is reached periodically.
5. Stored batteries should be recharged every 2 to 3 months (one to two months in hot climates) until the fully charged condition has been reached.

SAFETY PRECAUTIONS:

1. Take care when filling batteries with sulphuric acid. If splashed on skin or eyes flush the affected parts immediately with water.
2. During the charging of a battery explosive gasses are given off. Keep the top well ventilated and away from flames or sparks.
3. Switch off the charger before disconnecting the charger leads.
4. When putting the battery into service on a vehicle connect the earth lead last and when removing the battery disconnect the earth lead first.
5. Keep the battery **away** from children.

TABLE 1 – SPECIFIC GRAVITY AND TEMPERATURE OF ACID

The specific gravities shown below are corrected to 25°C. To correct the specific gravity reading for other temperatures apply the correction formula shown in the note on temperature correction.

IN CLIMATES WITH AIR TEMPERATURE	SPECIFIC GRAVITIES CORRECTED TO 25°C	
	For Filling New Cells	At End of Charge
Normally below 32°C	1.270	1.270 – 1.290
Frequently above 32°C Low Gravity	1.240	1.240 – 1.260
Maximum Permissible Temperature of Electrolyte during charge	45°C	45°C

Temperature Correction

To correct to 25°C for every 10°C higher subtract 0.007 (7 points) for every 10°C lower add 0.007 (7 points) e.g. 1.267 at 15°C equals 1.260 at 25°C.

ITEM: 16

86 BATTERY

XJS

XJS models (from VIN 145730) are now fitted with a Chloride battery Part No. DAC 4545. This incorporates an integral vent system eliminating the previous vented cap and hold down strap. To accommodate this battery the following components are also introduced:

Battery Tray	BCC 9561
Battery Cover	BCC 9764
Battery Tie Rods	DAC 4754
Battery Clamp	DAC 4727
Positive Battery Lead	DAC 5608
Vent Pipe	C43502

In conjunction a slave battery system, similar to that used for XJ6 models has also been introduced and a new fully charged battery is now fitted to all vehicles at the point of despatch. To ensure the battery drain is kept to a minimum during the transit period, it has been necessary to remove certain fuses on vehicles shipped to export markets. Fuses removed are as follows:-

Fuse No.	Location
1	6 way fuse box – passenger footwell component plate.
1, 2, 3, 15	
17 (passive restraint)	Main fuse box – driver's footwell component plate.
18 (passive restraint)	

Displaced fuses will be placed in a plastic bag and stored in the glovebox. These should be refitted at P.D.I.

Service Bulletin



DATE: MARCH 1988
SHEET: 1 of 3
BULLETIN: JD 05/88

ITEM: 26

09 USED ENGINE OILS

ALL MODELS

The Society of Motor Manufacturers and Traders, having set up a working group reporting to the Car and General Technical Board, have advised motor vehicle manufacturers to disseminate the following information on used engine oils:

Prolonged and repeated contact with mineral oil will result in the removal of natural fats from the skin, leading to dryness, irritation and dermatitis. In addition, **used** engine oil contains potentially harmful contaminants which may cause skin cancer. Adequate means of skin protection and washing facilities should be provided.

Health Protection Precautions:

1. Avoid prolonged and repeated contact with oils, particularly used engine oils.
2. Wear protective clothing, including impervious gloves where practicable.
3. Do not put oily rags in pockets.
4. Avoid contaminating clothes, particularly underpants, with oil.
5. Overalls must be cleaned regularly. Discard unwashable clothing and oil impregnated footwear.
6. First Aid treatment should be obtained immediately for open cuts or wounds.
7. Use barrier creams, applying before each work period, to help the removal of oil from the skin.
8. Wash with soap and water to ensure all oil is removed (skin cleaners and nail brushes will help). Preparations containing lanolin replace the natural skin oils which have been removed.
9. Do not use petrol, kerosine, diesel fuel, gas oil, thinners or solvents for washing skin.
10. If skin disorders develop, obtain medical advice.
11. Where practicable, degrease components prior to handling.
12. Where there is risk of eye contact, eye protection should be worn, for example, chemical goggles or face shields. In addition an eye wash facility should be provided.

Environmental Protection Precautions:

It is illegal to pour used oil on to the ground, down sewers or drains, or into water courses.

The burning of used engine oil in small space heaters or boilers is not recommended unless emission control equipment is fitted; in cases of doubt, check with the Local Authority.

Dispose of used oil through authorised waste disposal contractors, licensed waste disposal sites or to the waste oil reclamation trade. If in doubt, contact the Local Authority for advice on disposal facilities.

ITEM: 27

57 PAS STEERING RACK MOUNTING BUSHES

XJS 3.6 (SPORTS PACK)

The steering rack and pinion mounting bushes fitted to XJS 3.6 vehicles with sports pack suspension, are secured in position with Loctite 601.

Service Tool 18G 1324 should still be used to remove and refit them.

When fitting new bushes use Loctite 601; refer to the manufacturer's guide lines for application instructions.

ITEM: 28

66 RIDE HEIGHT SENSOR

XJ6 2.9/3.6

To improve reliability and reduce quiescent current drain levels, a new ride height sensor Part No. DBC 3439 incorporating "CMOS" technology has been introduced from VIN 523301.

The new sensor is fully interchangeable with the previous "PMOS" type sensor Part No. DBC 3287.

ITEM: 29

74 TYRE REPAIR

ALL MODELS

Due to differing legislative requirements concerning the repair of tyres in all markets and the various make/type of tyres being fitted to Jaguar vehicles, the following statement will be incorporated in all handbooks and service literature:

It is recommended that damaged tyres are replaced and not repaired in view of the high performance capability of the vehicle.

ITEM: 30

76 BONNET/CHASSIS EARTH

XJ6 2.9/3.6

To ensure a good 'earth' exists between the bonnet and the vehicle chassis, an earth braid strap has been introduced from VIN 523964.

The earth strap which is fitted between the LH bonnet hinge and the vehicle chassis hinge bolts has been introduced to prevent the possibility of engine related ignition noise being radiated from this source, which could interfere with radio signal transmissions.

Should Dealers receive reports of radio interference, suspected as ignition based, prior to VIN 523964, then the earth braid strap Part No. DBC 4727 should be fitted as shown in Fig 1 before undertaking further investigations.

Parts Required

Part No.	Description	Qty
DBC 4727	Earth Braid	1
SH 108201J	Bolt	1
FN 108041J	Nut	1
FW 105E	Washer	1

A labour allowance of 0.30 hours may be claimed quoting Fault Code 7QAT, Repair Operation No. 86-91-14.

Procedure:

- 1 Open the bonnet.
- 2 Release and remove the LH bonnet hinge lower bolt and discard (Fig 1 A).
- 3 Clean the paint from around the surrounding surface of the hole to ensure a good earth connection.
- 4 Position the earth lead and secure using a new bolt Part No. SH 108201J and washer Part No. FW 105E (Fig 1 [A & B]).
- 5 Remove the LH side radiator grille assembly.
- 6 Release and remove the fixing nut from the lower hinge bracket (Fig 1 C)
- 7 Clean the paint from the surrounding surface of the studs to ensure a good earth connection.
- 8 Route the earth lead to the lower stud as shown (Fig 1) and secure using a new fixing nut Part No. FN 108041J (Fig 1 C).
- 9 Apply a light smear of grease to the fixing points to prevent the possibility of corrosion.
- 10 Replace the radiator grille panel and close the bonnet.

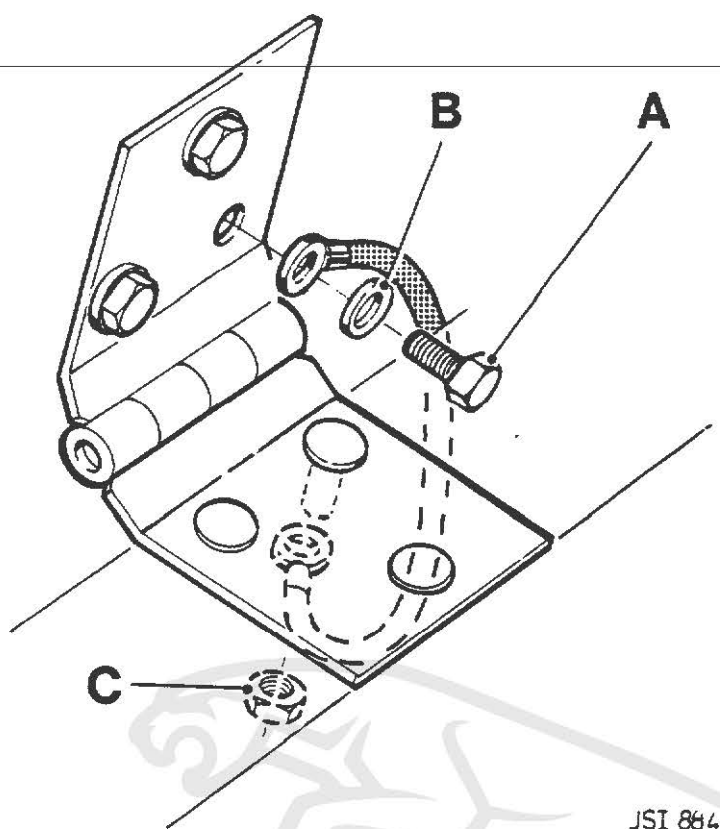


Fig 1.

ITEM: 31

79 PAINT COLOUR CODE

ALL MODELS

Please note the change of Jaguar Sales Code and BLVC on clear over base colour **Glacier White**. This follows reformulation to improve opacity:

JBC 742 (BLVC NDP) Glacier White
replaces
JBC 721 (BLVC NDK) Glacier White

This reformulation was progressively introduced from VINs:

542482 – XJ6
149361 – XJS

ITEM: 32

86 ELECTRIC AERIAL

XJ6 2.9/3.6

During investigations into signal reception quality, improvements in the aerial signal to noise ratio i.e. (weak transmission signal high background noise, strong signal low background noise) have been gained by shortening and repositioning the electric aerial earth braid.

Where instances of weak signal strength are suspected the following detailed modification should be carried out.

Please Note: This modification will offer some improvement in signal strength but will not overcome the more prevalent reception interference encountered in certain areas of the British Isles, resulting from low level transmissions utilized by the BBC and some local radio stations.

The interference referred to is caused by signal break-up which affects Radio 3 VHF transmissions and is commonly interpreted as a "chuffing" sound, which coincides with the vehicle passing land based obstructions i.e. trees, high buildings, etc.

A labour allowance of 0.45 hrs may be claimed quoting Complaint Code 7QAT – Repair Operation No. 86-91-13.

Modification Procedure:

Parts Required: * Eyelet Connector – Internal diameter 4mm (0.15 in)
 * Self Tapping Screw No.8 x 13mm (0.50 in)
 * Suitable Star Washer

- 1 Disconnect the battery negative cable.
- 2 Remove the jack assembly, spare wheel and rear trim panel.
- 3 Remove the RH side trim panel.
- 4 Locate and remove the aerial earth lead from the relay mounting plate fixing (Fig 1 A). Relocate the side harness earth cable to relay mounting plate, refit and secure the fixing screw.
- 5 Mark out the new position for the aerial earth lead as shown in Fig 1 inset B = 10mm (0.40 in) C = 7mm (0.28 in), drill 2.5 mm (3/32 in) hole. Clean the paint from the surrounding surface to ensure a good earth connection.
- 6 Position the aerial mast earth lead to the new fixing point ensuring that the shortest length possible can be fitted without putting any strain on the lead (Fig 1 D). Mark the earth braid ensuring the new length will be approximately 76mm (3.0 in) when measured from the centre of the eyelets.
- 7 Cut the earth braid, secure and solder the new eyelet.
- 8 Locate and secure the eyelet to the new earth point using the recommended self-tapping screw and washer.
- 10 Apply a light smear of grease to the new earth fixing to prevent the possibility of corrosion.
- 11 Refit the trim panels, spare wheel/jack assembly and reconnect the battery.

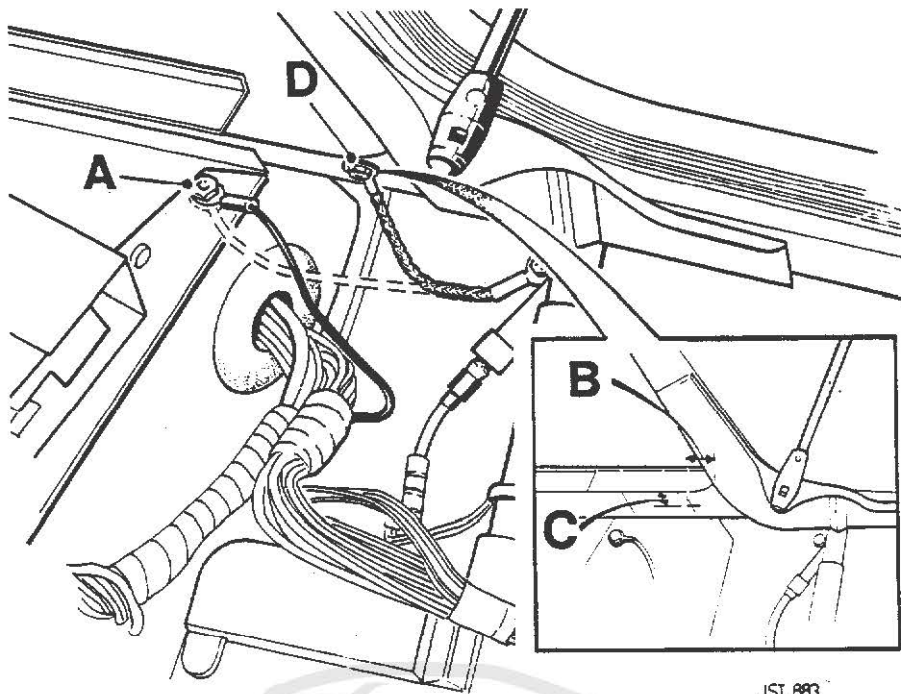


Fig 1.

JAGUAR

Service Bulletin



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ERRATA

Refer to Service Bulletin JD 09/89, Sheet 1, under the heading "Errata".
Owing to a misprint, the imperial and metric values for crankshaft and float are incorrect and should read:-

"0.004 - 0.011 inches (0.1 - 0.28 mm)".

ITEM: 49

12 CYLINDER HEAD GASKET REPLACEMENT

XJS/XJ6 3.6

When cylinder heads or cylinder head gaskets are removed, a new set of cylinder head bolts must be used to ensure no loss of clamping load is experienced due to the bolt stretching. This will be particularly applicable to older engines which have had the cylinder head removed previously.

These bolts must be torqued to 61 Nm and turned through a further 90 degrees (giving a full yield of 84 Nm). Should any cases be identified in service of bolts incorrectly torqued from the following engine numbers, a P.D.R. should be returned, specifying the down-torque found on each bolt.

9DP AMA 159321 - XJ57
9DP ALA 159314 - XJ40

ITEM: 50

12 TENSIONER DAMPER PAD

XJS 3.6 & XJ6 2.9/3.6

A number of cases have been identified of engine noise attributed to excessively tensioned timing chain with resultant damper pad wear.

This noise is more evident at engine speeds of 1400 rpm; in addition, vibration may be felt through the throttle pedal and the vehicle body.

Should such a problem be encountered, the damper pad Part No. EAC 6017 may be modified to elongate the existing upper mounting hole (refer to Fig 1) by 3mm. This modification will shortly be introduced on production when an introductory engine number will be given.

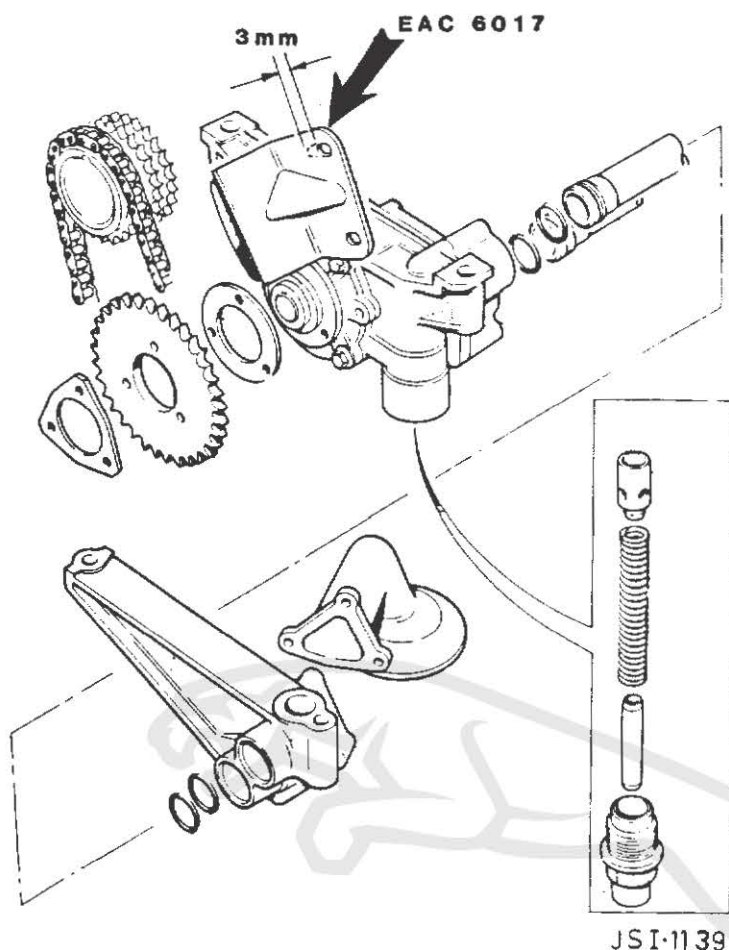


FIG 1

ITEM: 51

18 / IN TRANSIT SPARKING PLUG PROTECTION **86**

S.III V12 / XJS V12

Further to Service Bulletin JD 07/89 - Item 36, disconnection of full load enrichment for transit on V12 models, has now commenced from the following VINs:

481911 - S.III V12
162605 - XJS V12

Reconnection should be carried out in accordance with the procedure detailed in JD 07/89.

ITEM: 52

76 AIRBAG SUPPLEMENTARY RESTRAINT SYSTEM **SPECIAL TOOL**

XJS 1990 MY
USA ONLY

Special Tool No. JD 159 has been developed for use in arming/disarming the airbag module on XJS 1990 Model Year.

The tool is used in conjunction with Special Tool 18G 861 - torque screwdriver.

WARNING: THIS PROCEDURE MUST BE CARRIED OUT PRIOR TO THE REMOVAL OF ANY STEERING WHEEL/COLUMN COMPONENTS. JOBS AFFECTED ARE:

- 57.40.01 Steering column assembly - Renew.
- 57.60.01 Steering wheel - Renew.
- 57.60.03 Steering wheel pad/Airbag module - Renew.
- 57.65.01 Front wheel alignment - Check and adjust.

AIR BAG MODULE - DISARM AND RENEW

Centralise the steering wheel. Tilt the steering column down to its lowest point of adjustment (Fig 1).

Rotate the steering wheel 90° to the left to give access to one of the module securing nuts. Remove the black protective cap (Fig 2). Slacken off and remove the nut (Fig 3).

Rotate the steering wheel 180° to the right to give access to the second module securing nut. Remove the black protective cap. Slacken off and remove the nut.

Centralise the steering wheel with the arming mechanism cover in the uppermost position.

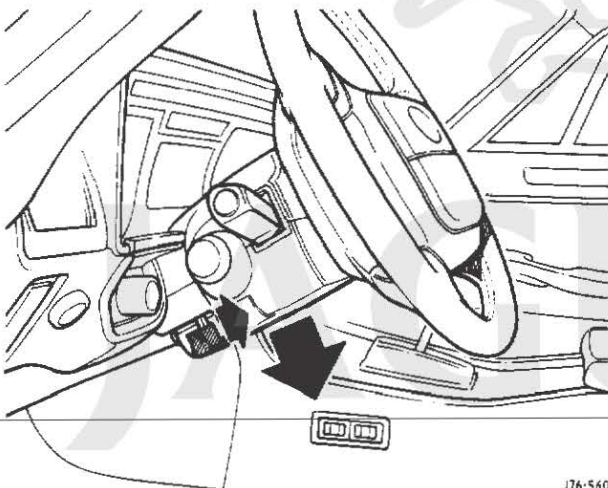


FIG 1

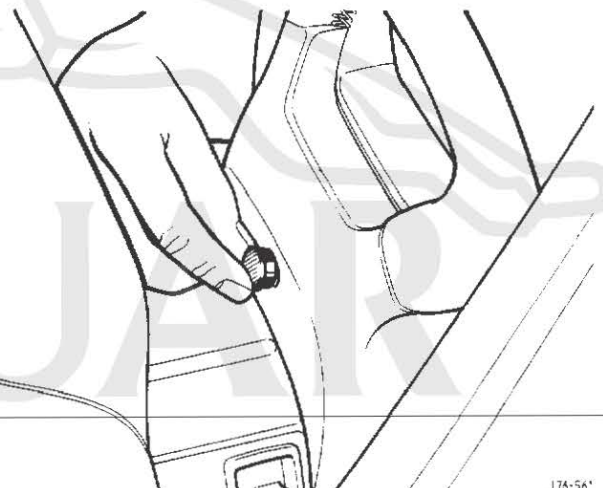


FIG 2

To disarm the air bag system:

Open the arming mechanism cover (1 Fig 4). Using Service Tool JD 159 in conjunction with screwdriver 18G 86 1 (2 Fig 4), unscrew the arming screw (anti-clockwise) until it reaches a stop (12 turns, approximately 15 mm total movement).

To remove the air bag module:

- 1 Slide the access plate across and hold in position. Turn the arming screw clockwise approximately 2 turns to lock the plate, thus giving access to the module securing bolt (1 Fig 5).
- 2 Slacken off and release the module securing bolt (captive).
- 3 Remove the module (Fig 6).
If the module has been removed for disposal, it must be disposed of in line with recommended procedure.

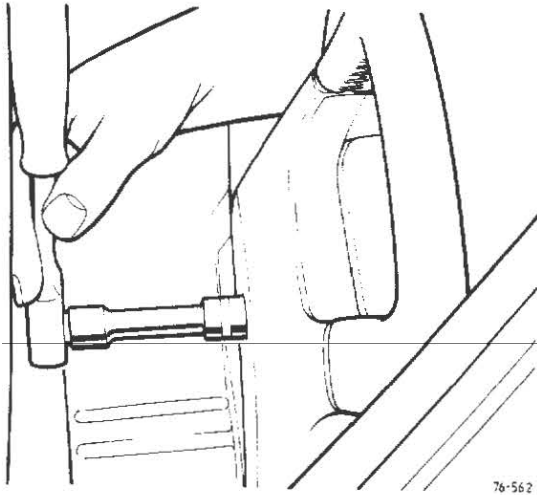


FIG 3

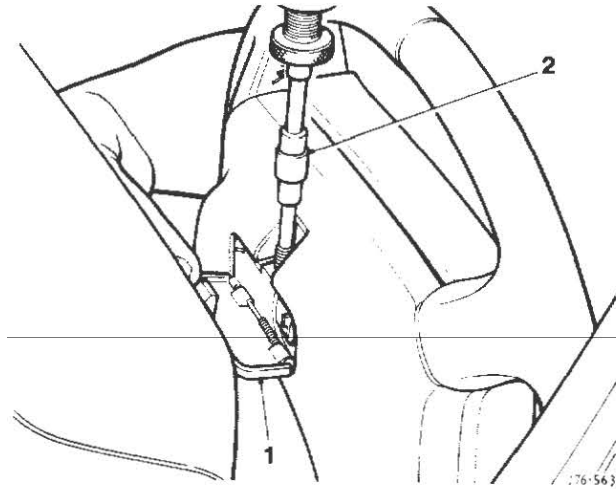


FIG 4

To refit or renew the air bag module:

CAUTION: Do not remove the module from the container until inside the vehicle.

- 1 Carefully fit the module squarely into position on the steering wheel. Apply a light positioning force to the module and start the captive module securing bolt. Tighten the bolt and, at the same time, ensure the module pulls down squarely by pressing down on the top spoke area. Torque tighten to 10-12 Nm.
- 2 Using Service Tool JD 159 in conjunction with screwdriver 18G 861, turn the arming screw clockwise approximately 2 turns to release the sliding access plate. Continue turning the arming screw clockwise approximately 12 turns until it reaches a stop. Torque tighten to 1-2 Nm. The air bag is now armed.

NOTE: The access plate is locked in place so that the captive module securing bolt cannot be removed when the module is armed (a loose access plate indicates that the module is not armed).

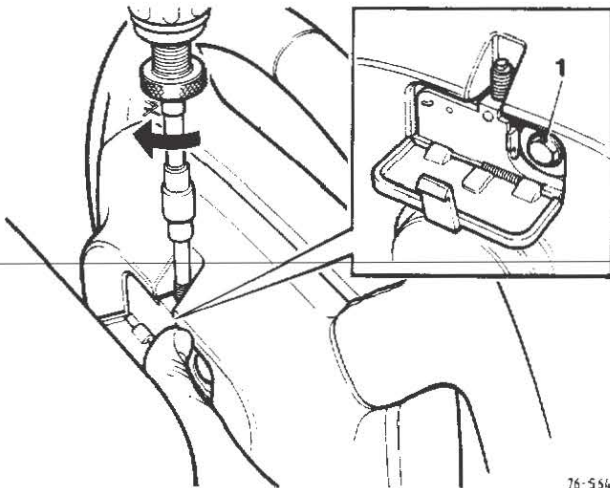


FIG 5

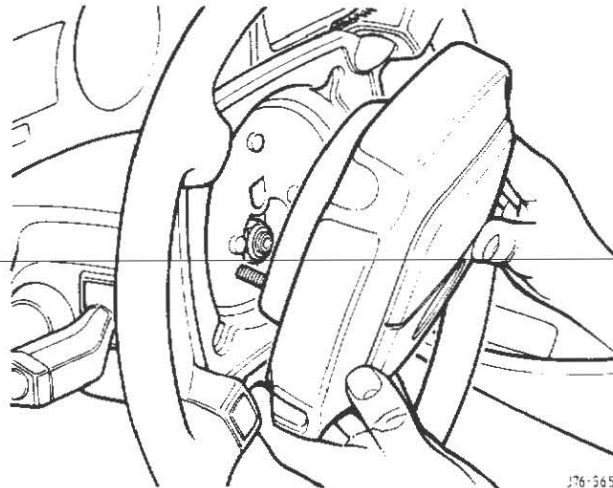


FIG 6

- 3 Close the arming mechanism cover.

NOTE: The cover cannot be closed unless the module is armed, and the steering wheel cannot be rotated until the cover is closed.

- 4 Rotate the steering wheel 90° to the left. Fit and tighten the module securing nut. Torque to 10-12 Nm. Fit the black protective cap.
- 5 Rotate the steering wheel 180° to the right. Fit and tighten the remaining module securing nut. Torque to 10-12 Nm. Fit the black protective cap. Centralise the steering wheel.

DATA

SPECIAL TOOLS

JD 159 Air bag arming tool
18G 861 Torque screwdriver

TORQUE FIGURES

Arming screw 1-2Nm
Module securing nut 10-12Nm
Module securing screw (captive) 10-12Nm

NOTE: More detailed system descriptions and procedures will be issued in the XJS 1990 Model Year Service Bulletin and Edition 3 of the XJS Service Manual.

ITEM: 53

86 BATTERY QUIESCENT DRAIN

XJ6 2.9/3.6

The basic quiescent current is expected to be a maximum of 40 mA. If a vehicle falls outside this value, the following list of modules and their current values are the first areas to be considered as a possible cause. If no fault is found in any of these units, a trapped or damaged harness is the likely cause or fitment of non factory recommended accessories.

Identifying the faulty circuit can be determined by removing individual fuses until the faulty circuit is eliminated.

Front Bulb Failure	1 mA
Rear Bulb Failure	1 mA
Ride Level Unit	2 mA
Central Processor	18 mA
Air Con Panel (Part of CPU current)	1 mA
Centre Console Clock (Part of CPU current)	1 mA
Door Lock ECU	2-3 mA
3.6 Engine ECU	2-3 mA
Caravan Trailer Module	15 mA
Facia Switch Pack (Lighting Logic)	1 mA
Radio Cassette	1-2 mA
Alternator	1 mA
Audible Warning/Wiper Logic	1 mA
Instrument Pack	3 mA
Passive Restraint ECU	1 mA
VDO Alarm Unarmed	25 mA
Armed	35 mA
SCS Alarm (to be released for 90 MY XJ6)	24 mA
Unarmed	28 mA
Armed	

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DATE: OCTOBER 1989
SHEET: 1 of 5
REF: JD 14/89

ITEM: 62

12 ENGINE PINKING / DETONATION

XJ6 2.9

When investigating customer reports of engine pinking/detonation on 2.9 models, the following procedure should be adopted:-

1. Ensure that the engine oil level is within dipstick limits after the engine has been switched off for at least 10 minutes. Check that the inlet manifold is clear of oil.
2. Check that the throttle butterfly is set correctly, (see Repair Operation 19.20.04).
3. Check the throttle switch setting - an audible 'click' should be evident as the throttle starts to open.
4. Check the distributor position (See this Service Bulletin, JD 14/89, Item 67).
5. Ensure that the vacuum pipes are all connected and that the delay valve between the throttle edge tapping and the 3-way solenoid valve is the correct way round, i.e. **black** side towards the **throttle edge**.
6. Ensure that the vacuum pipes are not blocked or restricted, particularly at the rubber elbow ECU connection and the throttle edge stubpipe.
7. Check the ignition HT leads for evidence of tracking or shorting; replace as necessary.
8. Check the condition of the sparking plugs and the plug gaps.
9. Ensure that the latest 'green' coolant temperature sensor is fitted (Part No. EAC 9811).
10. Set the crankshaft sensor gap to the minimum specification, i.e. 0.55mm (0.22").
11. Set the base idle speed and set the idle CO to 1.7%.
12. Ensure that the fuel in the tank is of a known good quality and is 97 Octane 4 star.
13. Road test the vehicle thoroughly to establish if and when pinking occurs.

It should be noted that an occasional short burst of detonation, after a period of urban driving, which cannot be reproduced immediately, is not detrimental and should not be considered unacceptable.

If a customer complains of this condition, he/she should be referred to the owner's handbook. This contains the following statement under General Driving Information:-

"DETONATION (XJ6 2.9 Litre vehicles)

During prolonged urban use, where the engine speed remains consistently low, carbon deposits are built up in the combustion chambers. Subsequently, as the engine speed is increased to high performance levels, the deposits will be quickly dispersed; this may be apparent by a brief period of detonation accompanied by some blue smoke from the exhaust."

ITEM: 63

**44 IRREGULAR UPSHIFT CALIBRATION
GM 400 TRANSMISSION**

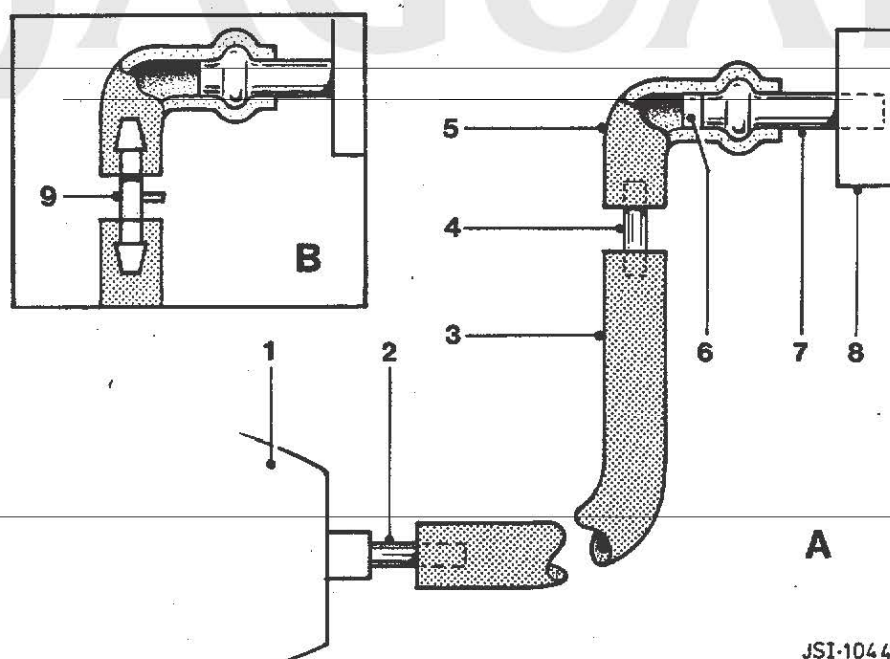
V12 DERIVATIVES & LIMO

Isolated instances of a 1-3-2 shift pattern have been reported on GM 400 transmissions pre-fixed ZWA where the transmission may shift from first to third to second during a 1-2 upshift on 'D' range.

An in-line vacuum restrictor was fitted into the rubber elbow at the inlet manifold to modulator line (Fig 1 A, 6) to ensure that a stable vacuum signal is received by the modulator to prevent this complaint from occurring from initial build. However, this restrictor has subsequently been changed to a plastic in-line restrictor, Part No. EBC 3793, owing to a tendency of the earlier aluminium type to turn within the rubber elbow upon full opening of the throttle (Fig 1 B).

Introduction VIN 161910 - XJS V12
481777 - Daimler Double Six

The restrictor EBC 3793 can be used in place of the earlier aluminium type.



Key: 1) Vacuum Modulator
2) Steel Connector
3) Connecting Hose

4) Steel Connector
5) Rubber Elbow
6) Aluminium Restrictor

7) Manifold Tapping
8) Inlet Manifold
9) New In-line Restrictor

FIG 1

ITEM: 64

44 SHIFT SPEED RE-CALIBRATION**XJ12, XJS V12**

Subject: GM 400 Transmission (pre-fixed ZWA/ZXA) shift speeds.

Reason: To improve the responsiveness of XJS and XJ12 vehicles in the mid-rev range in conjunction with the introduction of Marelli ignition.

Introduction from Engines: 8S 65668
7P 61824

The major differences between 88 MY ZVA and 89 MY ZWA transmission are:-

- a) 1-2 upshifts have been increased by up to 15 mph (24 kph) at part load and full throttle to eliminate "early" upshifts.
- b) 2-3 upshifts have been increased by up to 10 mph (16 kph) at part load and full throttle to eliminate "early" upshifts and to provide better upshift spacing with the new 1-2 upshift line.
- c) 3-2 part throttle has been increased to 60 mph (98 kph) maximum from 55 mph (88 kph).
- d) 2-1 kickdown has been increased by 8 mph (13 kph) to 46 mph (74 kph).

NOTE: The above changes are incorporated in ZXA prefixed transmissions with the introduction of Marelli ignition.

ITEM: 65

44 RE-CONDITIONED TRANSMISSION UNITS**V12 MODELS**

Investigations into low mileage warranty-returned re-conditioned GM400 transmission units have identified a number of failures which have been caused by poor installation of the transmission unit into the vehicle.

When replacing a transmission unit, the following points should be noted:-

- 1) The transmission cooling system should be thoroughly flushed to remove any contamination from the previous failure, prior to fitting the new unit. The flushing operation should be carried out by vigorously pumping transmission fluid through the cooler and pipes, in both directions, until clear fluid can be seen leaving the cooler.
- 2) Should a transmission become noisy shortly after fitment, contamination of the fluid filter should be suspected. In such cases, the fluid filter must be renewed and the vehicle re-tested prior to condemning the transmission.
- 3) When removing and refitting transmission units, a suitable lifting jack must be used to prevent distortion of the sump pan. (Note: distortion of the sump pan will damage the fluid filter and can result in transmission noise).

All warranty-returned transmission units are examined to determine the cause of failure. Any units returned, which are obviously contaminated from a previous failure where the fluid filter has not been renewed, or units which have been damaged during installation, will be returned to the Dealer or Importer and their account debited accordingly.

44 GM 400 VALVE BODY SEPARATOR PLATE**S.III V12/XJS V12 DERIVATIVES**

To improve the quality of 1-2 upshift, the 1-2 intermediate clutch apply orifice has been enlarged and incorporated in the valve body separator plate.

Service Kit EBC 4026, comprising: Separator Plate - 1 off
: Gaskets - 2 off

has been introduced from engine 8S 65468 on XJS transmissions prefixed ZVA only. However, this kit can be fitted to S.III V12 Saloons, should this condition arise.

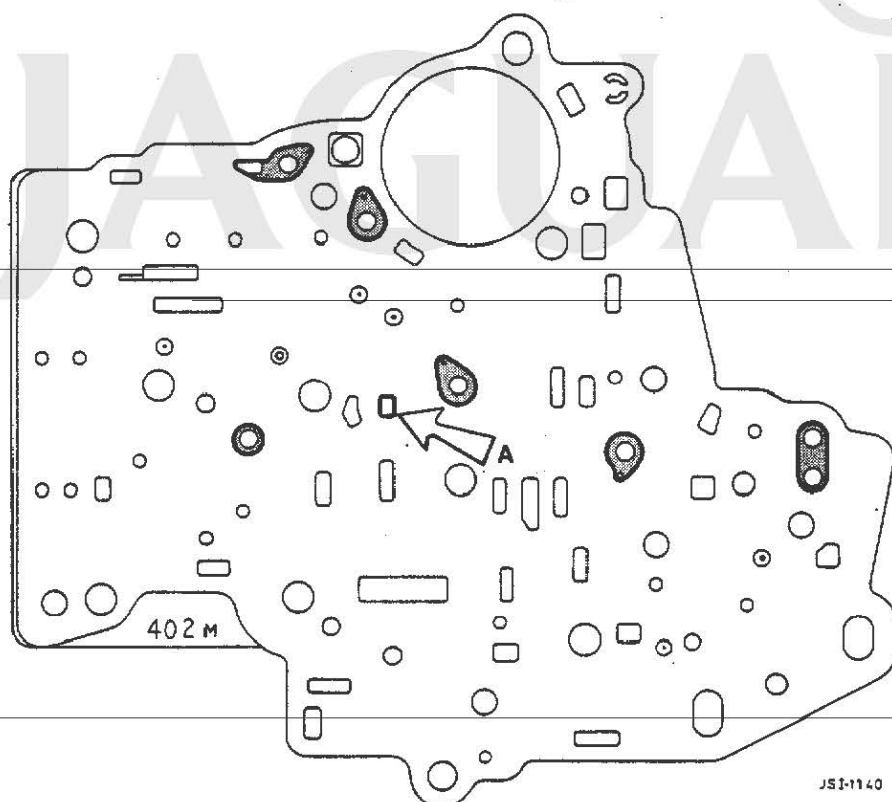
Procedure:

Refer to the XJS Service Manual, Section 44.40.01 and XJ12 Section 44.20.06, Item 11 onwards, for the repair operation.

There are two specifications for ZVA transmissions, which will contain either 6 or 7 steel check ball valves. Fitment of Service Kit EBC 4026 will require the removal of the 7th ball (A Fig 1), if fitted.

Fig 1 shows the separator plate face and gasket as it would be offered up to the transmission casing. The larger holes shown within the shaded area are the positions for the steel check balls.

NOTE: A small amount of Vaseline or Ambre PJ grease can be used to retain these steel balls in position prior to fitment to the transmission casing.

**FIG 1**

IMPORTANT: It is very important that the 1-2 shift valve is polished/cleaned when checking for a 1-2 judder condition as there have been instances of a brown rust-like substance deposited on the valve surface. Vehicles with transmissions prefixed ZVA and ZXA are not affected by this modification as it is already incorporated.

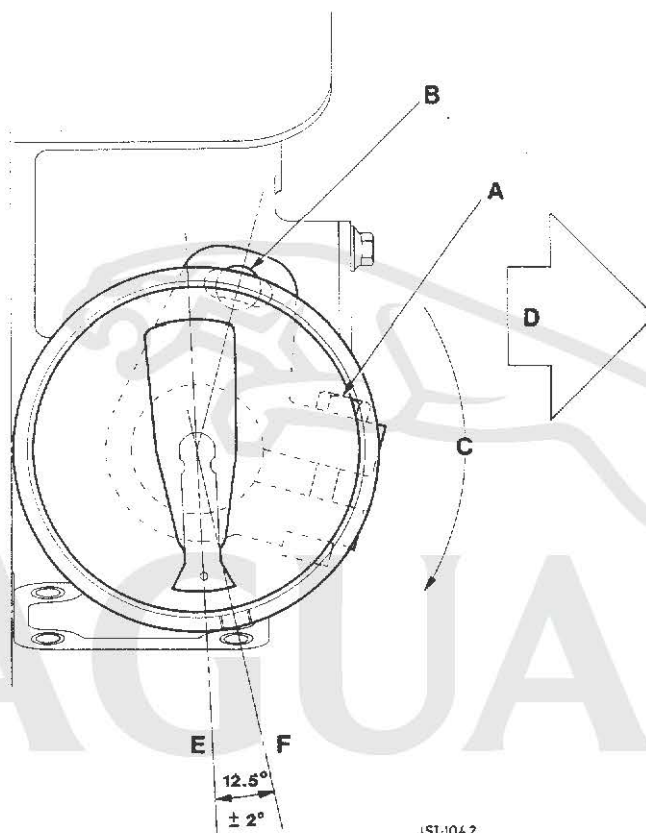
Complaint Code: If reporting this complaint, Fault Code 4DAN should be quoted.

ITEM: 67

86 DISTRIBUTOR ROTOR SETTING**XJ6 2.9/3.6/4.0**

There is a remote possibility that a misfire could be induced at engine speeds in excess of 5000 rpm or at a sustained idle, by misalignment of the rotor position.

Below is the outline setting procedure, which supersedes the procedure given in the Service Manual.

Ignition Distributor Setting (Static) 3.6/4.0 Litre (Lucas)**FIG 1**

Key: A) Clamp Bolt
B) Fixing Plate Setscrew
C) Direction of Rotation

D) Front of Engine
E) Centre Line of Rotor Arm
F) Centre Line of Distributor Cap Location Slot

ROTOR SETTING 3.6/4.0 LITRE ENGINES

With No. 1 piston set at TDC on the compression stroke, the position of the rotor arm centre line (with the distributor cap in position) must be 12.5° after the centre line of No. 1 cylinder distributor cap electrode.

Method of Setting

Rotate the engine clockwise until No. 1 cylinder piston is at TDC on the compression stroke.

The rotor arm should be approximately in the position shown in Fig 1.

Loosen the clamp bolt (A Fig 1) and if necessary reset the position of the fixing plate so that the fixing plate setscrew (B Fig 1) is in the centre of the adjusting slot. Tighten the setscrew sufficiently to enable the distributor body to be rotated by hand pressure.

☆ 2nd ISSUE ☆

The distributor cap location slot should be approximately at the 5 o'clock position.

The centre line of the rotor (E Fig 1) should be 12.5° after the centre line distributor cap location slot (F Fig 1).

Check the position as follows:-

- 1) Measure in a clockwise direction from the distributor cap location slot 5.5 mm (E Fig 3) and scribe a mark on the shoulder of the distributor body (D Fig 3).
- 2) Mark the centre of the rotor arm (A Fig 2) with a pencil.
- 3) Using a straight edge (B Fig 3), align the mark on the rotor (C Fig 3) with that scribed on the distributor body (D Fig 3), rotating the distributor body as necessary.
- 4) Tighten the clamp bolt (A Fig 1) and the fixing plate setscrew, (B Fig 1), ensuring that the setting is not altered. Re-check the setting after tightening.

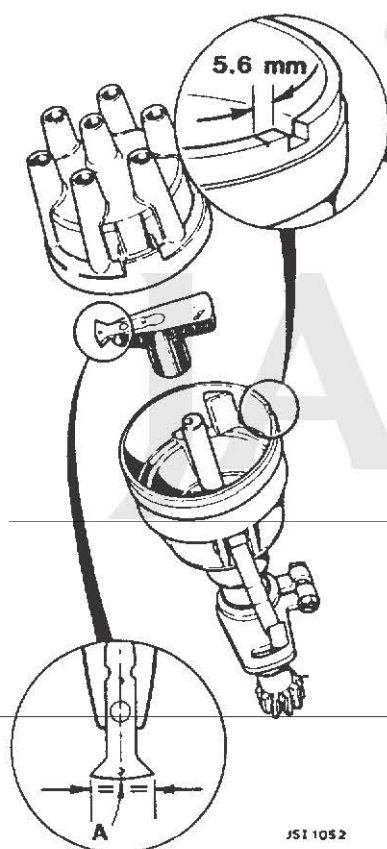


FIG 2

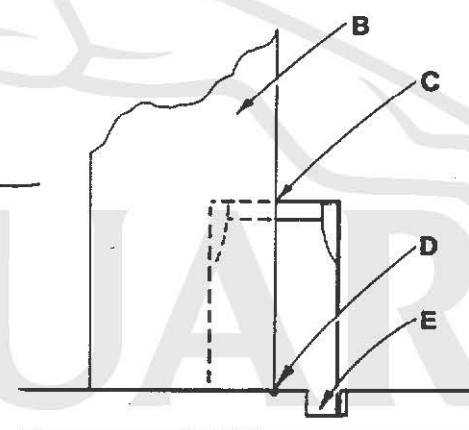
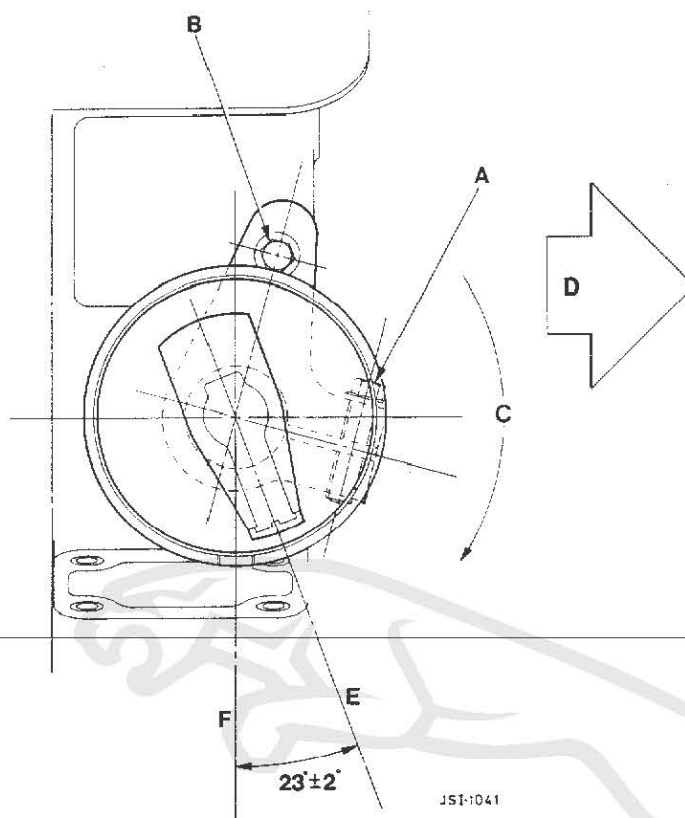


FIG 3

B = Straight Edge
C = Mark (pencil) on Rotor Arm
D = Scribe Mark on Distributor Body
E = Distributor Cap Locating Slot

Ignition Distributor Setting (Static) 2.9 litre Bosch**FIG 4**

Key: A = Clamp Bolt
 B = Fixing Plate Setscrew
 C = Direction of Rotation

D = Front of Engine
 E = Centre Line of Rotor Arm
 F = Centre Line of Distributor Cap Location Slot

ROTOR SETTING 2.9 LITRE ENGINES

With No.1 piston set at TDC on the compression stroke, the position of the rotor arm centre line (with the distributor cap in position) must be 23° after the centre line of No.1 cylinder distributor cap electrode.

Method of Setting

Rotate the engine clockwise until the No. 1 cylinder is at TDC on the compression stroke.

The rotor arm should be approximately in the position shown in Fig 4.

Loosen the clamp bolt (A Fig 4)) and, if necessary, reset the position of the fixing plate so that the setscrew (B Fig 4)) is in the centre of the adjusting slot. Tighten the setscrew sufficiently to enable the distributor body to be rotated just by hand pressure.

Turn the distributor until the distributor cap location slot is at the 6 o'clock position. The centre line of the rotor (E Fig 4) should be 23° before the centre line of the distributor cap location slot (F Fig 4). Check the position as follows:-

- 1) Measure in an anti-clockwise direction from the inner edge of the distributor location slot 12 mm and scribe a line on the shoulder of the distributor body (D Fig 6).
- 2) Mark the centre of the rotor arm (C Fig 6) with a pencil.

- 3) Using a straight edge (B Fig 6), align the mark on the rotor (C Fig 6) with that scribed on the distributor body (D Fig 6), rotating the distributor body as necessary.
- 4) Tighten the clamp bolt (A Fig 4) and fixing plate setscrew (B Fig 4), ensuring the setting is not altered. Re-check the setting after tightening.

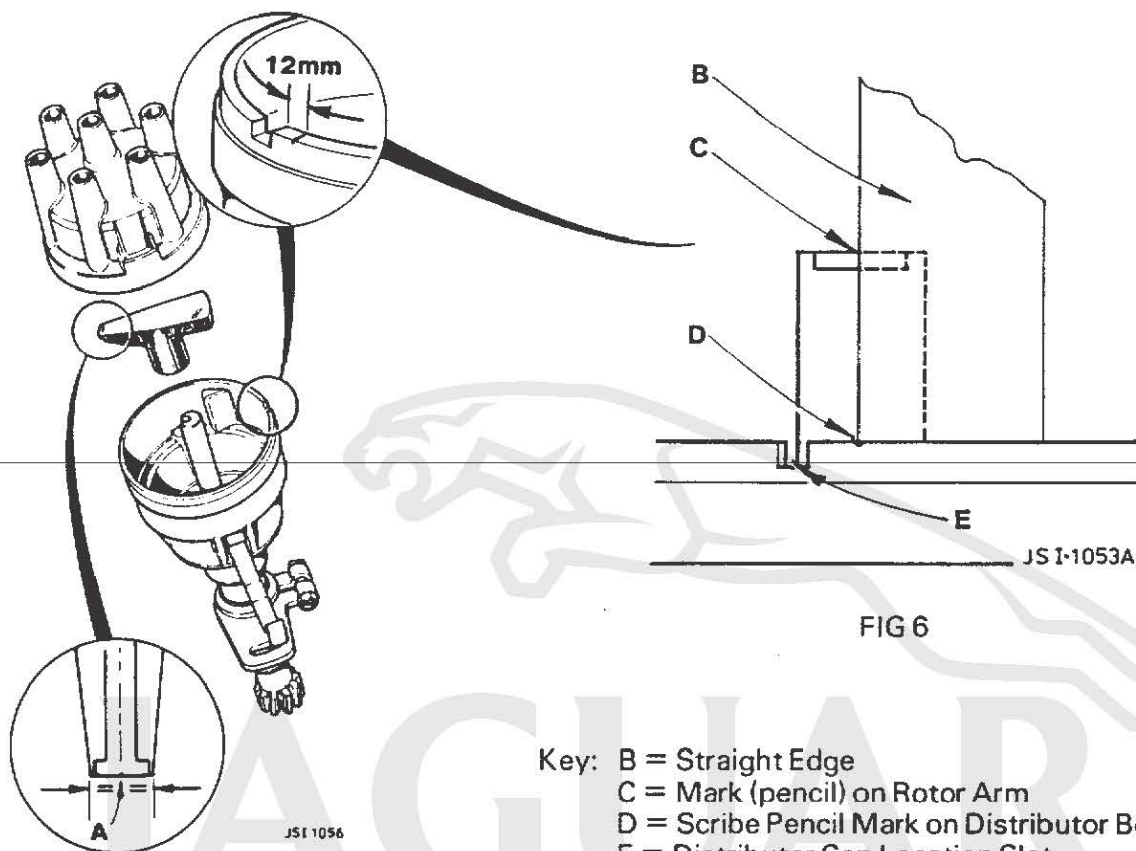


FIG 5

FIG 6

Key: B = Straight Edge
C = Mark (pencil) on Rotor Arm
D = Scribe Pencil Mark on Distributor Body
E = Distributor Cap Location Slot

ITEM: 68

86 TEVES ABS

XJ6 2.9/4.0 1990 MY

In the event of an ABS warning being displayed on 1990 MY XJS models equipped with the "Teves" system, Dealers should initially check the following multiplugs to ensure that pin/socket connections are clean and that good continuity is maintained, before proceeding with further diagnostic procedures.

Component	Connector	
	RHD	LHD
Valve Block	RS 89	LS 77
Reservoir	RS 90	LS 78
Main Valve	RS 91	LS 79
Pump	RS 92	LS 80
Accumulator	RS 94	LS 76

Dealers should also inspect the 3 Amp fuse (No.8) located in the centre fuse box and ensure that RB/LB 149 carrying the single white/red cable to the centre fuse box has not been disturbed.

ITEM: 69

86 ALTERNATOR BELT TENSION**ALL AJ6 ENGINES**

Isolated reports have been received of a 'whine or squeal' emanating from the engine at approximately 1400 rev/min.

Investigations reveal this to be the result of over-tightened alternator drive belts. It is, therefore, important that all alternator pulley belts are tensioned to the correct specification as given in the Service Manual and re-iterated below:-

A load of 1.5 kg (3.3 lb) must give a total belt deflection of 4.4 mm (0.17 in) in the middle of the longest run.

ITEM: 70

88 SPEEDOMETER ASSEMBLY**XJ6 2.9/4.0 1990 MY**

Should instances of speedometer needle flicker be reported on 1990 Model Year XJ6 2.9/4.0 models, the speedometer assembly/instrument pack should **NOT** be renewed until the following action is carried out in order to reverse the speed sensor polarity.

Procedure:

- * Disconnect the battery negative lead.
- * Locate the black PMHD connector RS 58 situated in the boot compartment.
- * Using the approved Jaguar extraction tool, remove the male pin connectors corresponding to the blue (U) and red (R) cables from the connector block. Transpose the position of the two cables and refit them into the connector block.
- * Reconnect the battery negative lead and check speedometer operation.

Warranty Code : 7JAG
Labour Allowance : 0.20 hrs
S.R.O : 88.91.02

Service Bulletin



DATE: MARCH 1990
SHEET: 1 of 1
REF: JD 05/90

ITEM: 19

12 NEW RECOMMENDATIONS ON SPS FIXINGS

AJ6 MODEL ENGINES

SPS JOINT CONTROL SYSTEM

A feature of the engine is the adoption of the SPS joint control system on the cylinder head bolts, crankshaft main bearing bolts and connecting rod nuts and studs. This system ensures that the joints receive maximum clamp loading for a given fixing size and type of material by tightening the fixing to its particular yield point.

With immediate effect, the following recommendations now apply:

- * All SPS fixings should be used only once. Discard fixings on removal and replace with new bolts every time a 'strip down' has been carried out.

New torque figures (listed below) supersede figures quoted in the Service Manual. The Service Manual will be updated at the next reprint.

- * The tolerance relating to the angle through which the bolts are rotated has been deleted; the angle is now 90° exactly.

XJ6/XJS
3.6 litre

XJ6
4.0 litre

Cylinder Head Bolts.
Torque figure:

59 - 61 Nm

59 - 61 Nm

ITEM: 20

86 440 TYPE BATTERY

XJ6/XJS

Based upon the experience to date with the 440 type Battery, we would draw your attention to the Battery Care Manual and in particular to the section relevant to high rate discharge testing of vehicles in Service.

If when carrying out an open circuit voltage test, a reading of below 12.2V is recorded, irrespective of known battery history, the unit **MUST** be subjected to a re-charge prior to a high-rate discharge test being carried out and any decision on replacement being taken.

Strict adherence to this policy will ensure that batteries are not unnecessarily replaced.

Units subsequently returned under warranty must be accompanied by a Battery Returns Label.

DATE: JULY 1990

PAGE: 1 of 2

REF: JD 08/90

S.III V12/XJS V12

ITEM: 36

18/ IN TRANSIT SPARKING PLUG PROTECTION 20

To provide improved protection against the possibility of detrimental overfuelling when loading/unloading vehicles during the delivery cycle, the procedure of disconnecting the full load enrichment circuit covered by Service Bulletin JD 07/89, Item 36, has been discontinued and superseded by a transit fuelling link harness connected to the throttle potentiometer circuit.

Introduction of the link harness has been progressive with 100% fit being assured from VINs:-

174645 - XJS V12

483875 - S.III V12

Vehicles fitted with the link harness will be identified by a warning label adhered to the windscreen (see Fig 1 overleaf).

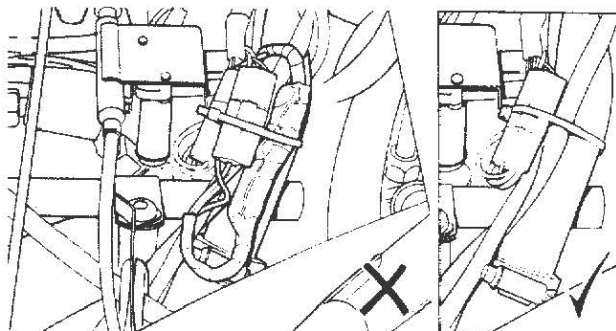
Please note that although the above VINs confirm 100% fitment of the link harness, a small quantity of XJS Models (S.III V12 not affected) prior to the above VIN have been despatched with both the full load switch disconnected and the link harness fitted. Vehicles affected have both warning labels attached to the screen.

The link harness should be removed at PDI and the label removed from the windscreen. Where vehicles are to be driven on the road prior to PDI, the link harness should be removed and the throttle potentiometer reconnected.

NOTE: Where XJS models have been shipped with the full load switch also disconnected, this should be reconnected if the above condition arises.

All V12 Models

Remove transit fuelling link harness from throttle potentiometer before driving on road.



Verwijder brandstof-verbindingkabelbundel voor bescherming gedurende transport van smookklep-potentiometer. Dit kan pas kan met het voertuig worden gereden

Avant de conduire sur route, enlever le faisceau de raccord de carburant, utilisé en cours de transit, du potentiomètre du papillon des gaz

Togliere il fermo di transito del sistema di alimentazione dal potenziometro del gas prima di guidare su strada

Retire la guarnición del conducto de gasolina del potenciometro de la mariposa antes de conducir el coche

Vor dem Straßeneinsatz Transport-Kabelsatz für Kraftstoffversorgung vom Drosselpotentiometer abnehmen

路上で運転する前に、スロットルカメンノ・ス・クカ・ト・ラン・ノ・ト・フ・エリソ・フ・リソ・ク・ハ・キ・メ・ヲ・外・ス

يجب إزالة هذا توصيل وقود الانتفاخ من قبل الخدمة لفحص هذا السواء على الطريق

DAC 7821

FIG 1

Removal of the link harness and reconnection of the throttle potentiometer should be carried out in accordance with the following procedure.

- * Locate the link harness and remove the securing strap.
- * Disconnect the link harness from the potentiometer harness and discard (NOTE: The harness is not required to be returned and should be disposed of by the Dealer).
- * Reconnect the potentiometer harness and resecure to the balance pipe (see Fig 1), using a suitable ratchet strap, recommended Part Number ADU 9028.

DATE: JUNE 1991

PAGE: 1 of 8

REF: JD 05/91

ERRATA

JD 03/91, Item 16, paragraph 2 should read:-

"86-55-35 Door Lock Infra Red Receiver Module Repair Time should read:-
0.45 hours and not 0.10 hours."

ALL AJ6 MODEL ENGINES

ITEM: 29

12 RECOMMENDATIONS ON SPS FIXINGS

A feature of the engine is the adoption of the SPS joint control system on the cylinder head bolts, crankshaft main bearing bolts and connecting rod nuts and studs. This system ensures that the joints receive maximum clamp loading for a given fixing size and type of material by tightening the fixing to its particular yield point.

Revised torque figures for cylinder head bolts are as quoted below. All other SPS fixings remain unchanged. The Service Manuals will be updated at the next reprint.

- * All SPS fixings should be used only once. Set aside fixings on removal and replace with new bolts every time a 'strip down' has been carried out.
- * The tolerance relating to the angle through which the bolts are rotated has been deleted; the angle is now 90° exactly.

Cylinder Head Bolts.
Torque figure:

XJ6 / XJS
3.6 / 4.0 litre

59-61 Nm

XJ6 / XJS / S.III V12 / LIMO

ITEM: 30

70 BRAKE FLUID

Brake fluid is hygroscopic, which means that it takes in moisture from the air. Water affected brake fluid has a reduced boiling point. The water also helps corrosion start

Jaguar Cars Limited

in the braking system. Therefore, the brake fluid should be changed **every two years irrespective of mileage.**

This recommendation is included in the Vehicle Maintenance Sheets as follows:

SIII	JJM 10 51 02 / 02	
XJ6	JJM 10 51 05 / 04	2.9 / 3.6 / 4.0
	JJM 10 51 05 / 10	3.2 / 4.0 (91 MY)
XJS	JJM 10 51 06 / 02	3.6 / V12
	JJM 10 51 06 / 20	4.0 / 5.3 / 6.0 (92 MY)
LIMO	JJM 10 51 01	

The above part numbers cover English Language publications. For translated publications, the first two digits after the letters JJM (i.e. 10) identify the relevant language as follows:-

10	English
11	French
12	Dutch
13	German
14.	Italian
15.	Spanish
17.	Japanese

Please ensure that your Service staff are aware of this requirement and that they use the correct Vehicle Maintenance Sheets.

XJ6 / XJS

ITEM: 31

74 FORGED ALLOY WHEELS

These road wheels (Part No. CBC 9643 for XJ6 and CBC 9175 for XJS) differ from cast alloy wheels in having an anodised finish as opposed to being lacquered.

It is, therefore, essential that they are only cleaned using a non-acid-based cleaner, such as the Jaguar cleaning kit, Part No. JLM 10149.

Fluids containing phosphoric acid must not be used, otherwise the surface finish of these wheels will turn a dull 'milky' colour.

Please inform your service staff and relevant customers, as failure to follow these instructions may result in rejection of any subsequent claims.

90 / 91 MY XJS SALOONS

ITEM: 32

76 TIBBE KEY / LOCK POOR OPERATION

Reports have been received of keys sticking, baulking or not turning in the lock, as a result of key damage, in particular to the edge of the No.1 key cut – see Fig 1:-

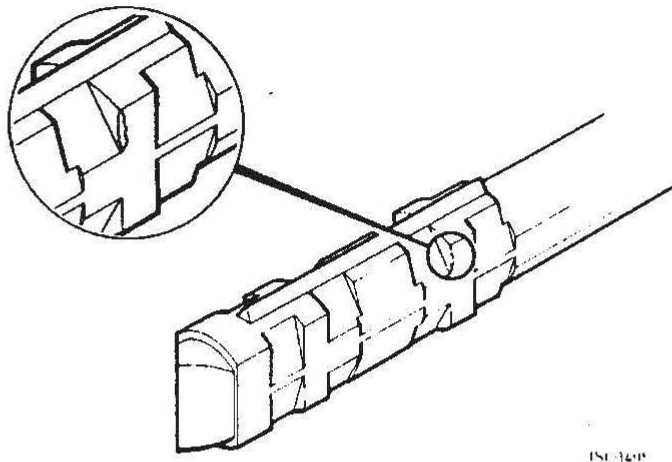


FIG 1

Investigations into this problem have identified that key damage occurs when the key is rotated whilst not being fully inserted into the lock barrel. Subsequently, the resulting damage to the edge of the No. 1 cut prevents the key being rotated when correctly inserted into the lock barrel.

A new lock has been fitted to all saloons built from VIN 646128. The new lock has a re-profiled driving disc which transfers the initial lock open / close loading from the No.1 cut to the No.3 cut position on the key.

In the event of customer complaint follow the lock repair / procedures outlined in Service Bulletin JD 06 / 90 – Item 27 and replace the damaged key.

NOTE: All lock sets and lock replacement kits / assemblies ordered from Jaguar Parts Division from the 1/2/91 are to the new condition as outlined within this Bulletin, e.g. a new driving disc is now incorporated.

1992 MY EXTERIOR COLOUR RANGE**ITEM: 33****79 ALL MODELS**

The Sales Department are now taking orders for vehicles to be painted in the 1992 range of exterior body colours.

The following information is provided to enable workshop staff and body shop staff to identify quickly the correct body colour, if so required.

COLOUR	TYPE	JBC NO.	SALES CODE
Glacier White	Solid	742	NDP
Black	Solid	333	PDH
Signal Red	Solid	748	CFC
Brooklands Green	Solid	753	HFB
Meteor Red *	Solid	736	CFJ
Westminster Blue	Solid	712	JFG
Solent Blue	Metallic	715	JFJ
Oyster	Metallic	751	SDE
Silver Frost	Metallic	750	MDK
Diamond Blue	Metallic	743	JFN
Platinum *	Metallic	775	LEP
Kingfisher Blue *	Metallic	779	HFE
Regency Red	Mica	734	CFA
Gunmetal	Mica	740	LEH
Tuscany Bronze	Mica	754	SDD
Catkin *	Mica	777	HFD
Flamenco *	Mica	765	CFH
Black Cherry	Mica	737	PDP
The following Colours are DELETED from the 91 MY range:			
Arctic Blue	Metallic	337	JFE
Bordeaux Red	Metallic	340	CEK
Savoy Grey	Metallic	731	LEK
Tungsten	Metallic	718	JEX
Jade Green	Mica	735	HEV
NOTE: * New Colour introduction for 1992 MY			

XJS**ITEM: 34****82 AIR CONDITIONING MICROPROCESSOR**

We have been advised that a small quantity of air conditioning units equipped with microprocessor assembly, Part No. DAC 7601, were initially supplied with the microprocessor incorrectly labelled DBC 7601.

In the event that replacement of one of these units is required in service, will Dealers please Quote DAC 7601 when re-ordering.

XJS**ITEM: 35****86 ALPINE RADIO / TAPE ASSEMBLY**

As a result of a rationalisation programme now in place, the Alpine removable Radio 'ARI' version (Automatic Road Traffic Information), Part No. DAC 5931, is now supplied for fitment to the following models:-

XJS Convertible	UK Market	Standard
XJS Coupe	UK Market	Option
XJS Coupe / Convertible	European Market	Standard

It has recently become apparent that some confusion still exists over the ARI facility.

The ARI system enables traffic information broadcasts to be received only in certain European Markets.

To access this function requires the SDK / Loud button to be pressed for less than two seconds. Simultaneously the 'SDK' symbol will be illuminated in the liquid crystal display panel.

In the event that the SDK function is accidentally selected in a market not covered by the traffic information service, the following condition will occur:-

With either the FM waveband selected, or the tape play in operation, the sound will disappear after approximately 30 seconds and will be replaced by a continual bleeping tone. To cancel this and return the radio / tape operation, press the SDK / Loud button again for less than two seconds.

To access the loudness function, press the SDK / Loud button for more than two seconds; this will simultaneously be accompanied by the 'Loud' symbol being illuminated in the liquid crystal display panel. To remove the loudness function, press the button again for more than two seconds.

XJ6 1991 MY MODELS

ITEM: 36

86 HEELBOARD BASS SPEAKER

Should complaints of the following arise:--

- * A loud 'thump' noise when the radio / cassette is switched on or off.
- * No radio / tape sound.
- * Poor bass speaker operation.

The following action should be taken:--

When diagnosing the above conditions prior to replacing the radio / cassette, first check the routing of the heelboard bass speaker wiring.

Note: REPLACING THE RADIO / CASSETTE BEFORE CORRECTING A FAULTY WIRING CONDITION COULD RESULT IN DAMAGE TO THE REPLACEMENT RADIO.

If the wiring is trapped between the speaker housing retaining clips (Fig 1) and the steel heelboard panel, the insulation may wear away, allowing the wire to ground.

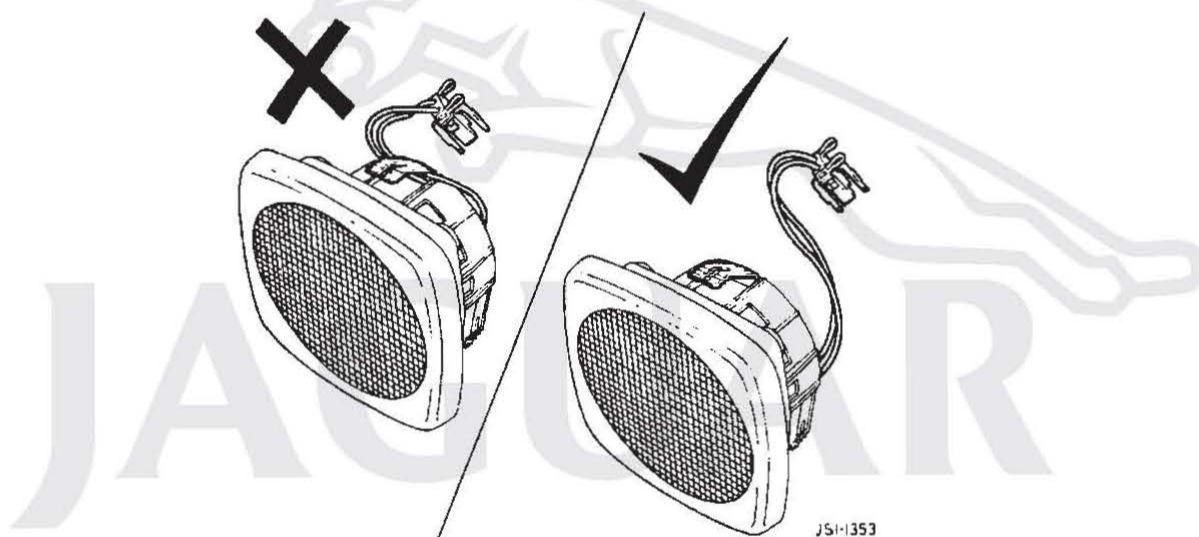


FIG 1

FIG 2

BEFORE replacing the radio / cassette, check both speakers for correct wire routing (Fig 2) using the following procedure:

Gently pry the rear bass speaker grill from the speaker.

Remove the four retaining screws securing the speaker assembly to the housing. Remove the speaker.

Reach in and locate the three retaining clips holding the speaker housing to the heelboard (Fig 3). Depress the clips and remove the housing.

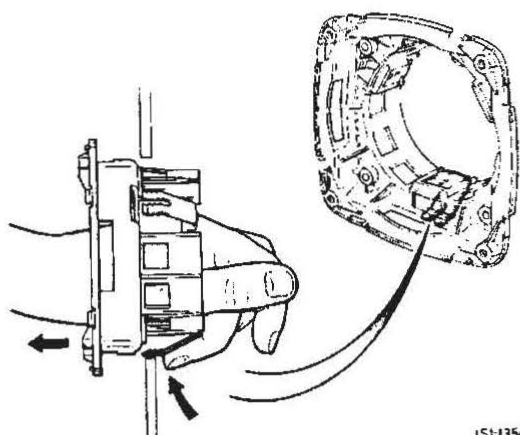


FIG 3

Disconnect the speaker harness multi-plug. Remove the speaker and inspect the wiring for damage.

If wiring damage exists, repair as necessary.

WARRANTY ADMINISTRATION

Where repairs are carried out within the Warranty period, a Warranty claim may be submitted quoting the following information:-

Complaint Code:	7QFJ
Time:	0.35 hrs.
SRO No.:	86.91.37

Note: To enhance the heelboard bass speaker installation and prevent possible harness contact with the housing retaining clips, modifications to the speaker cable length and routing have been introduced from VIN 644135.

AJ6 AND CURRENT V12 ENGINES

ITEM: 37

86 ALTERNATOR BELT TENSION

Information on alternator drive belt tension in current Service Manuals has been superseded. The following information details the latest figures and method of adjustment. This will be incorporated at the next manual updates.

AJ6 Engines

A belt in service should be set at 510 Newtons (115 lbs).

A new belt should be set at 600 to 625 Newtons (135 to 140 lbs). After a short initial period of running, the new belt will relax, stretch and will then need to be readjusted to the service figure of 510 Newtons (115 lbs).

V12 Engines

A belt in service should be set at 310 Newtons (70 lbs).

A new belt should be set at 350 Newtons (79 lbs). After a short initial period of run-

ning, the new belt will relax, stretch and will then need to be readjusted to the service figure of 310 Newtons (70 lbs).

The method of adjusting the belt is as follows :

Raise the vehicle on a ramp. From below, fit a belt tension gauge to the belt (see Fig.1) and take a reading (see Fig.1 inset). Remove the gauge and, if necessary, readjust the belt. Refit the gauge and take a further reading. Repeat this procedure until the belt tension is correct. When the correct reading is achieved, remove the gauge, ensure all alternator fixings are tight, then lower the vehicle to the ground.

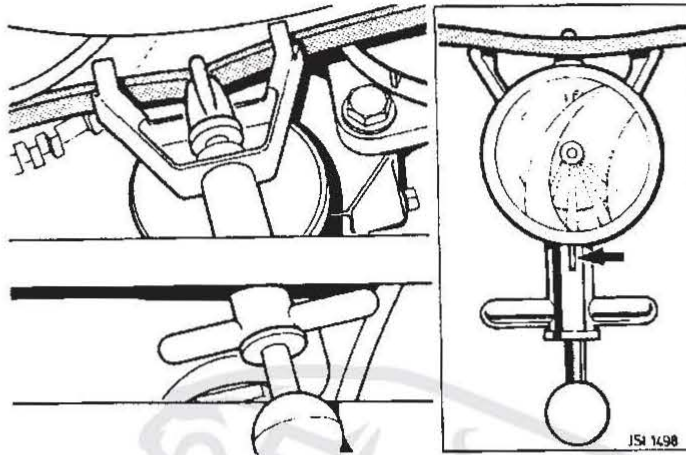


FIG 1

Service Bulletin



DATE: OCTOBER 1991

PAGE: 1 of 7

REF: JD 08/91

XJS

ITEM: 49

WARRANTY CODES

In the latest edition of the XJS Warranty Code book, codes for the battery and spare wheel covers have been duplicated.

To rectify this situation and prevent further confusion when submitting claims, the following codes have been removed from the warranty system:-

CODE	DESCRIPTION
9DS	Spare Wheel Cover
8PZ	Battery Cover Boot

Therefore, with immediate effect, Dealers should NOT submit further claims for these codes.

All future claims for the above parts should be submitted, using the following codes only:-

9DQ	Battery Cover
9DR	Battery Cover Support Panel
8NU	Spare Wheel Cover

XJS (FACELIFT)

ITEM: 50

WARRANTY CODES

The following new warranty complaint code has been allocated to cover the fuel gauge "anti-slosh module", introduced on XJS Facelift models.

Code	Description	SRO
7JU	Anti-Slosh Module	88.25.25

Jaguar Cars Limited

ALL MODELS**ITEM: 51****12 CYLINDER PRESSURE CHECK**

WARNING: Would all technicians please note that before performing a cylinder pressure check, Repair Operation No. 12.25.01, all fuel should be purged from the fuel rail.

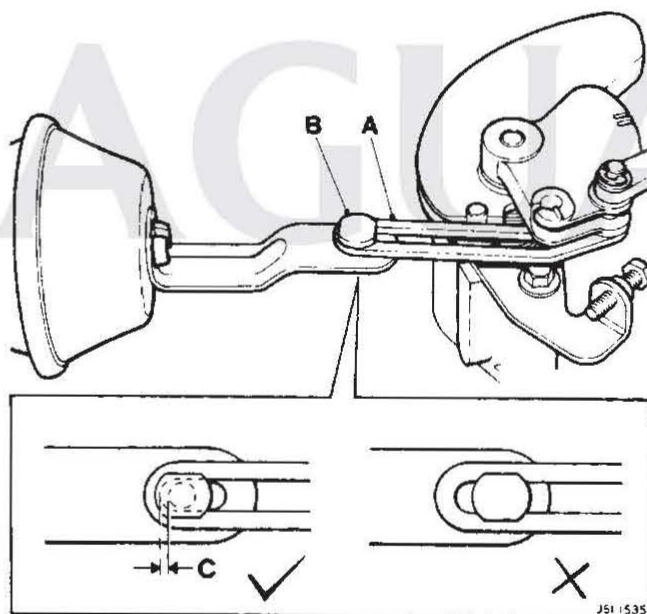
Purging of the fuel rail may be achieved by disconnecting the fuel pump relay and then cranking the engine for ten seconds.

XJ6 ALL MODELS & XJS 3.6 / 4.0**ITEM: 52****19 CRUISE CONTROL ACTUATOR LINKAGE ADJUSTMENT**

Should customer complaints be received of an increase in the cruise control response time and a degree of hunting of the set speed, the cruise control actuator linkage adjustment should be checked in accordance with the following procedure, before taking any further action.

Dealers should ensure that the clearance between the end of the actuator to throttle link slot (A Fig 1) and the shoulder bolt (B Fig 1) is 0.5mm to 1mm (C Fig 1).

S.R.O.	19.75.11
Allowance	0.10 hrs
Complaint Code	7VCP

**FIG 1**

XJS V12

ITEM: 53

44 TRANSMISSION OIL COOLER CONNECTION

There have been a number of oil coolers returned with damaged coupling connector bosses, the cause of which can be attributed to poor workshop practice where backing spanners have not been used to support the integral hexagon connector of the oil cooler. This results in a fracturing of the connecting tube when torque is applied upon tightening or loosening the connection.

Technicians should use a backing spanner to hold the integral boss whilst tightening the cooler pipe connection to a torque of 15 – 17 Nm.

XJ6 / XJS / S.III / LIMOUSINE

ITEM: 54

60 FRONT HUB END FLOAT ADJUSTMENT

The following instructions supersede all previous instructions provided in service manuals. Manuals will be updated at the next reprint.

Front hub end float on the above models should be set between 0,0254 to 0,0762mm (0.001 to 0.003in). To achieve this in service use the following method:

Note: Prior to adjusting the hub end float an absorbent cloth should be placed around the brake fluid reservoir cap.

Slacken the road wheel nuts $\frac{1}{4}$ turn each.

Jack up the front of the vehicle and support with axle stands.

Remove one wheel nut, mark the wheel relative to the stud and remove the remaining wheel nuts.

Remove the roadwheel and tyre assembly.

Dependent upon model, gently prise the brake pads free or manipulate the brake caliper to ensure the brake pads are free within their mountings, i.e. the disc is free to rotate.

Prise off the hub grease cap (1 Fig. 1).

Fit a Dial Test Indicator (DTI) to the hub (Fig. 2).

Grasp the hub unit. Firmly pull and push the unit, oscillating at the same time, to determine the DTI end float reading.

If the reading is within the specification quoted there is no need to carry out the adjustment. If not, remove the hub nut split pin and cover (2, 3 Fig. 1).

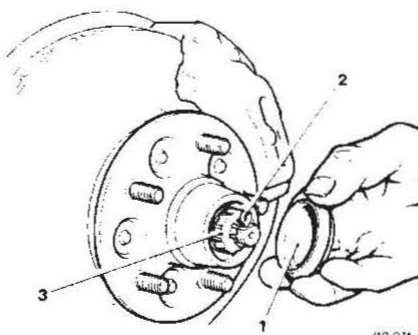


Fig. 1

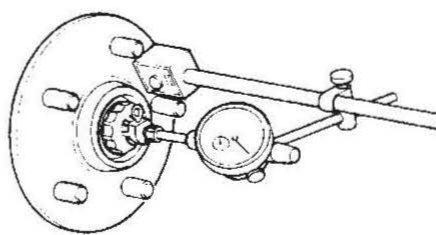


Fig. 2

Note: For identification purposes only,
 Fig. 1 shows XJS, S III & Limo. type hub.
 Fig. 2 shows XJ6 hub.

Adjust the nut, as necessary, to give a reading of 0,0508mm + / - 0,0254mm (0.002in + / - 0.001in).

Always try to achieve the mid-point of the tolerance i.e., 0,0508mm (0.002in).

Align the hub nut cover and secure with a new split pin.

When the new split pin is fitted, ensure the end float is re-checked using the DTI gauge (Fig. 2).

If necessary, re-adjust using the same method, until the end float is correct.

Always finish the adjustment by checking with a DTI gauge.

Always ensure the end float is within the limits quoted.

Refit the grease cap.

Refit the road wheel.

Carry out the adjustment procedure on the opposite front hub.

When finished, lower the vehicle from the stands.

Ensure the wheel nuts are tightened to the specified torque.

Remove the absorbent cloth from around the brake fluid reservoir cap, ensuring the area is clean and dry.

Before moving the vehicle, pump the brake pedal to centralise the pads.

ALL MODELS

ITEM: 55

77 BODY REPAIR

To avoid the risk of causing permanent damage to vehicle ECUs during body repairs, the following precautions must be observed prior to using any electrical welding equipment.

1. Disconnect the vehicle battery and alternator.
2. Disconnect and remove all ECUs in the immediate area of any panels to be electrically welded. As a general rule, all ECUs within 2 feet of the area to be welded should be removed; for more detailed information, refer to the relevant Service Manual.
3. When using welding equipment, the earth return clamp should be located as close as possible to the area of repair.

XJ6 ALL MODELS

ITEM: 56

82 DRIVER'S BLOWER MOTOR ASSEMBLY

The repair operation time for renewing the driver's side blower motor assembly has changed on all XJ6 Vehicles from VIN 629286.

The repair operation times are now as follows:-

Left Hand Drive Vehicles:

82.25.13	Blower assembly – Left Hand – Renew	01.25 Hours
82.25.13/09	As 82.25.13 (Less J.D.S. Allowance)	00.90 Hours

Right Hand Drive Vehicles:

82.25.14	Blower Assembly – Right Hand – Renew	01.25 Hours
82.25.14/09	As 82.25.14 (Less J.D.S. Allowance)	00.90 Hours

Please amend your repair time schedules accordingly.
No other repair times are affected.

To achieve these times in service, adhere to the following procedure:–

REMOVE

Open the bonnet and disconnect the battery earth lead.
Remove the driver's side dash liner.
Remove the retaining clip from the air conditioning unit's pliable trunking.
Displace the pliable trunking from the air conditioning unit.
Displace the relay bases from their mounting brackets.
Cut and remove the ratchet straps securing the brake switch harness.
Disconnect the vacuum hose from the blower motor assembly servo unit.
Disconnect the blower motor multi-way connectors.
Undo and remove the steering column lower mounting securing nuts.
Undo and remove the steering column upper mounting securing nuts.
Lower the steering column assembly.
Retrieve the column upper packing shims.
Remove the washer bracket from the column.
Manoeuvre the steering column towards the centre of the vehicle for access.
Undo and remove the steering column outer stabilizer bar's upper and lower securing nuts.
Displace and remove the steering column stabilizer bar (Fig. 1).
Reposition the vehicle harness connectors to gain access to the blower motor assembly securing bolts.
Undo and remove the blower motor assembly securing bolts.
Displace and remove the blower motor assembly.
Remove and discard the unit intake gasket.
Remove the pliable trunking to assembly securing tape.
Remove the trunking from the unit.

REFIT

Fit and align trunking to the new blower motor assembly.
Secure the trunking to the assembly with tape.
Smear the new intake gasket with a suitable adhesive.
Fit the gasket to the blower motor assembly intake.
Fit and align the blower motor assembly into its mounting position.
Connect the pliable trunking to the air conditioning unit.
Refit and tighten the blower motor assembly securing bolts.
Fit and align the trunking retaining clip.
Connect the blower motor multi-way connectors.
Connect the vacuum hose to the blower motor assembly servo unit.

Fit and align the steering column stabilizer bar and tighten the securing bolts (10 – 14 Nm).

Fit and align the washer bracket to the column.

Loosely fit the steering column upper mounting securing nuts.

Fit the steering column packing shims as necessary.

Fit and tighten the steering column lower mounting securing nuts (20 – 22 Nm).

Fully tighten the steering column upper mounting securing nuts (20 – 22 Nm).

Reposition the brake switch harness to the blower motor assembly.

Secure the brake switch harness to the unit with ratchet straps.

Fully seat the relay bases to their mounting brackets.

Refit the driver's dash liner assembly.

Reconnect the battery earth lead and close the bonnet.

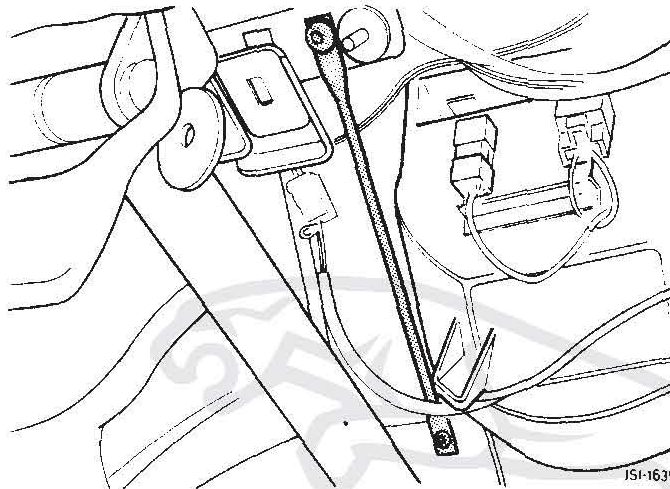


Fig. 1

S.III, XJS & XJ6 UP TO VINs:-
506664 – USA
506448 – CANADA
507471 – R.O.W.

ITEM: 57

82 AIR CONDITIONING COMPRESSOR (GM A6 TYPE)

Investigations have confirmed the unnecessary replacement of compressors for noise and leaks.

If excessive compressor noise exists, check the following items:-

- . Compressor drive belt tension.
- . Compressor mountings.
- . A/C refrigerant hose routing (ensure that hoses are not in contact with other components).
- . Ensure that the refrigerant charge weight is correct (refer to Section 82 of the Service Manual for additional information).

- Ensure that the compressor is filled to the correct level with oil. A MAXIMUM of 4 ozs (114 cc) of refrigerant oil can be added to the compressor without discharging the refrigerant. Using an oil injector tool (such as 'Snap-on' oil injector tool ACT 111), add oil in 2 oz (57 cc) increments. (Refer to the procedure detailed below).

NOTE: LOW OR EXCESSIVE CHARGE WEIGHT OR A LOW OIL LEVEL WILL CAUSE COMPRESSOR NOISE.

- Clutch drag or bearing noise (refer to the clutch replacement procedure, Section 82 of the Service Manual).
- Compressors which leak oil or Freon must have the seals replaced in accordance with the procedure detailed in Section 82 of the Service Manual.

Replace the compressor only after checking all of the above-mentioned items.

NOTE: All returned compressors must be complete and sealed, using the blanking plate provided on the replacement unit.

Procedure for compressor oil injector tool usage:-

- Operate the A/C system. Make sure that the system is full of Freon. Refer to Section 82 of the Service Manual for the test procedure.
- Remove the sealing gaps from the high and low pressure A/C charging points.
- Check that the valve on the oil injector tool is closed.
- Remove the threaded end cap from the oil injector tool and add 2 ozs (57 cc) of compressor oil. Replace the end cap.
- Attach the short flexible hose on the oil injector to the low pressure fitting of the vehicle A/C system.
- Attach one end of an A/C system extension hose to the fitting on the side of the valve of the oil injector tool. Attach the other end of the extension hose to the high pressure fitting of the vehicle A/C system.
- Run the engine at idle with the A/C system operating.
- Slowly open the oil injector tool valve until it is fully open. Allow the oil to flow into the compressor for 2 minutes.
- Close the oil injector tool valve. Let the engine run an additional minute, then switch off the ignition.
- Carefully remove the charging hoses from the high and low pressure fittings and install the sealing caps.
- Check the A/C system for compressor noise. If noise still exists, repeat the procedure once more, adding an additional 2 ozs (57 cc) of compressor oil.
- NOTE: NEVER ADD MORE THAN 4 OZS (114 cc) OF OIL TO THE A/C SYSTEM.
- Attach a self-adhesive label to the A/C hose (adjacent to the low pressure hose fitting), stating how much oil was added and the date.

Service Bulletin



Date JUNE 1984
Sheet 1 of 3
Bulletin JD 06/84

ITEM 42

00 DISTRIBUTION POLICY

UK MARKET ONLY

In future, the Dealer distribution of this Bulletin will be confined to JAGUAR DAIMLER Dealers only.

The circulation to Fleet and other recipients will remain unchanged.

Any non JAGUAR franchise holder who still has cause to require the Bulletins will be reinstated to the circulation upon application:

Customer Service Department
Jaguar Cars Limited
Browns Lane
Allesley
COVENTRY
CV5 9DR

ITEM 43

00 REPAIR OPERATION TIMES

SERIES III/XJ-S

Would any franchise holders who have experienced difficulty in obtaining AKM 9038/83 – Series III Repair Operation Times, and AKM 4412/83 – XJ-S Repair Operation Times from Unipart, please note that matters have been rectified and no further trouble should be encountered.

03 SERIES III REPAIR OPERATION TIMES**SERIES III 3.4/4.2**

There is an alteration to the Series III Repair Operation Times (AKM 9038/83) to three operations concerning six cylinder vehicles.

The Operation Numbers are 82-50-53, 82-20-54, and 82-20-55. The alteration concerns changing the entry in the Repair Time column from NA to NT >, thus allowing the time in the 5.3 column to be claimed.

The Repair Time columns for these three operations should now be altered to the following:

	3.4	4.2	5.3
82-20-53	NT >	NT >	1.90
82-20-54	NT >	NT >	1.65
82-20-55	NT >	NT >	1.60

No other Repair Times are affected.

09 APPROVED LUBRICANTS**ALL**

As part of our programme to evaluate and test oils, the following list of SYNTHETIC oils has been given approval by Jaguar Cars:

PRODUCT NAME	SAE VISCOSITY RATING
Motul 300V	15w/50
Agip Sint 2000	10w/50
Mobil SHC	10w/50 20w/50
Mobil 1	10w/30
Shell Gemini	15w/40
Shell Gemini (Quadro)	10w/40
Mobil 1 Rally Formula	5w/50

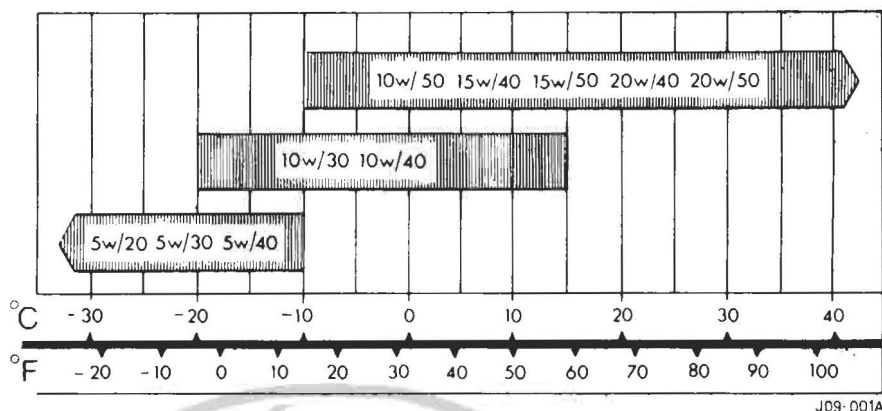
Generally, synthetic oils are superior in performance under extreme operating conditions at higher engine temperatures.

Although all the above SYNTHETIC oils are approved by Jaguar Cars, it is essential that the temperature chart detailed in the Owner's Handbook and Workshop Manual (reproduced below for reference) is referred to. An oil with a viscosity rating which falls within the ambient temperature scale which the vehicle is operated in MUST be used.

e.g. 10w/30 or 10w/40 MUST NOT be used if the ambient temperature EXCEEDS 16°C (60°F).

The above SYNTHETIC oils and normal mineral oils meeting BLS 22.OL.02 are compatible. As such, should synthetic oil not be available, it is acceptable to top up with a normal mineral oil, providing it meets BLS 22.OL.02.

Engine Oil — Recommended S.A.E. Viscosity Range/Ambient Temperature Scale



ITEM 46

19 POOR HOT START (WARRANTY ADMINISTRATION)

V12 MODELS

Reference Service Bulletin JD 11/83 Item 72, please note the following warranty coding should be utilised against this operation:

7G4 A

ITEM 47

19 CRUISE CONTROL BRAKE PEDAL SWITCH

SERIES III

Further to modifications detailed in Service Bulletin JD 02/84 Item 12, the supplier of the brake pedal switch, which disconnects the speed control system when the brake is applied, has introduced additional quality improvements.

From Manufacturing Date Code A4 (A = January, 4 = 1984), switches to the latest condition have been introduced from Vehicle Identification Number:

381034

Parts Division stock is to the latest condition.

ITEM 48**26 LOW COOLANT PROBE****XJ12/XJ-S**

Further to Service Bulletin JD 10/83 Item 66, which detailed the method of relocating the low coolant probe in the header tank to overcome the involuntary flashing of the warning light, this Service Fix has now been incorporated on all production vehicles from the Vehicle Identification Numbers quoted below. The low coolant probe will be situated in the header tank.

384477 – Saloon
115816 – XJ-S

ITEM 49**37 77 MM TRANSMISSION – 5TH GEAR RETENTION****SERIES III XJ6**

Several reports have been received of the 5th speed gear and synchromesh hub coming adrift due to failure of the retaining circlip to secure the assembly to the main shaft.

Investigations have revealed the problem to be due to operator error in not ensuring that the circlip was fully seated in its groove.

Assembly instructions have been amended to ensure that circlip retention is correct.

This has been introduced at:

TRANSMISSION NO.	ENGINE NO.
036688D	8L 158819

ITEM 50**44 GM400 SUMP GASKET LEAKAGE****XJ12/XJ-S/LIMOUSINE**

To overcome the problem of oil leakage from GM400 transmission sump gaskets, the following modifications have been introduced:

1. Thicker gauge material for the sump pan.
2. Improved gasket material.

These modifications were introduced on Transmission Numbers:

84ZU 4057
84ZD 1164

The first engines to have modified transmissions fitted were:

8S 28242 – XJ-S
7P 49806 – XJ12 Saloon

The introduction point for Limousines will be given when it is available.

The part number of the new gasket will be given when parts are available.

ITEM 51

76 AIR EXTRACTOR NOISE

SERIES III

Rectification of rattles emanating from the flaps of the air extractor tray was detailed in Service Bulletin JD 07/83 Item 49.

Self adhesive plastic caps, BAC 3859, are now available for use instead of the self adhesive strips previously recommended.

NOTE: Plastic caps are packaged in strips of 56. When ordering one off BAC 3859, 56 caps will be supplied, which is enough for 7 vehicles (2 caps per flap, 8 caps per vehicle).

BAC 3859 was introduced at Vehicle Identification Number:

376790

ITEM 52

79 REPAIR CONSUMABLES

SERIES III/XJ-S/LIMOUSINE

Continuing the policy of evaluating consumable products for use on Jaguar vehicles, the following products have been approved for service use, and are additional to products previously approved.

NOTE: When using any of the products recommended by Service, reference should be made to the appropriate data sheet supplied by the manufacturer.

ICI AUTOCOLOUR ANTI STONE RESISTANT PRIMER P955-3001	}	Water based primers available in one litre containers for use with suction feed spray gun or Schutz gun.
BERGER STANDOX STONE RESISTANT PRIMER		

3M's BODY CAULKING 8568	}	Water resistant thumbing compounds for sealing openings in body panels.
DUNLOP SEMSTRIP 2208		

3M's BOLTED PANEL SEALER 8574	}	Water resistant sealers for jointing between bolted/ rivetted panels.
DUNLOP SEMSTRIP GP		

3M's SUPER SEAM SEALER 8537		A brush on sealer ideal for footwells and floor seams.
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ITEM 53

84 WINDSCREEN WASHER PUMP

SERIES III 6 CYLINDER MODELS
(NON HEADLAMP WASH/WIPE)

To improve the windscreen wash facility on Series III 6 cylinder non headlamp wash/wipe models, a larger capacity washer reservoir incorporating a "Tudor" heavy duty pump assembly has been introduced from Vehicle Identification Number:

385665

Service Bulletin



DATE: JANUARY 1992

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REF: JD 02/92

NOTE

JD 01/92, which covers XJ-S 92.5 MY preliminary information, has been released for translation purposes only; the English language version will be released nearer to the volume build date of 09.03.92.

XJ-S FACELIFT

ITEM: 02

00 WARRANTY CODES

The following new warranty complaint code has been allocated to cover the "CD Auto Changer Link Lead":

CODE	DESCRIPTION
7QU	CD Auto Changer Link Lead

XJ6 & XJ-S

ITEM: 03

00 WARRANTY CODES

To enable Dealers to code more accurately the causes of radio interference, new 4th digit warranty complaint codes have been allocated to the following sections of the XJ6 and XJ-S code books.

XJ6 AND XJ-S COMPLAINT CODE BOOK - 4TH DIGIT ADDITIONS		
SECTION	4TH DIGIT CODE	DESCRIPTION
2G	Y	Radio Interference
4G	Y	Radio Interference
7A	Y	Radio Interference
7B	W	Radio Interference
7C	E	Radio Interference
7U	W	Radio Interference

Please use the appropriate third digit component code within these sections, if that component is the source of the interference.

Reference to codes in Section 7Q should only be made if components within this area are the cause.

XJ6**ITEM: 04****10 REVISED SERVICING INTERVAL / TIMES**

Servicing times have been re-examined to include inspection of the handbrake shoes and now comply with the following list:

Miles	1000	7500	15000	22500	30000	37500	45000
Kilometres	1500	12000	24000	36000	48000	60000	72000
Hours	1.85	2.05	2.55	2.05	4.05	2.05	2.55

Miles	52500	60000	67500	75000	82500	90000	97500
Kilometres	84000	96000	108000	120000	132000	144000	156000
Hours	2.05	4.70	2.05	2.55	2.05	4.05	2.05

AJ6 ENGINES**ITEM: 05****12 CYLINDER HEAD REAR COVER GASKET**

As a result of oil and coolant leakage from the cylinder head rear cover gasket, gasket EBC 2568 has been introduced to seal the cylinder head rear cover plate instead of the previously used "Hermetite" sealant.

The gasket is of the Dow Print type (ie: it has a sealing bead on one side) and should be fitted with the beading facing the cylinder head. No additional sealant is needed.

This gasket supersedes the paper gasket EBC 1131.

SRO: 12.29.16

TIME: 1.4 Hours

XJ6 2.9**ITEM: 06****18 SPARK PLUG (SERVICE REPLACEMENT)**

For service replacement purposes, Champion N4C spark plugs are recommended to overcome problems of misfire / uneven running conditions which may be experienced with XJ6 2.9 models.

N4C plugs are now available through Parts Operations, under Part No. EBC 8523, and supersede the previously-recommended N3C plug, Part No. EAC 8344.

PLEASE NOTE THAT N4C SPARK PLUG PART NUMBER EBC 8523 SHOULD ONLY BE FITTED TO XJ6 2.9 MODELS.

XJ-S V12 (92 MY)

ITEM: 07

19 FUEL PRESSURE TEST

A fuel pressure test adaptor, JD181, has been developed for use on 92MY XJ-S V12 systems (from VIN 179740).

The adaptor has identical end fittings to the fuel rail and fuel supply hose. It also has a $\frac{1}{4}$ BSP end gauge fitting to be used in conjunction with pressure gauge YWB 107 (Epitest equipment pressure gauge).

Using the following procedure, pressure test the fuel system observing all the safety precautions detailed in the Service Manual:

Open the luggage compartment and displace the right hand trim liner.

Displace the fuel pump relay (Fig. 1) silver relay on black / yellow base) from its mounting, adjacent to the E.C.U. and remove the relay.

Crank the engine to depressurise the fuel system.

Refit the fuel pump relay.

Open the bonnet and fit wing protection.

Undo the union nut (1 Fig. 2), remove the fuel supply hose from the fuel rail and remove the 'Viton' seal.

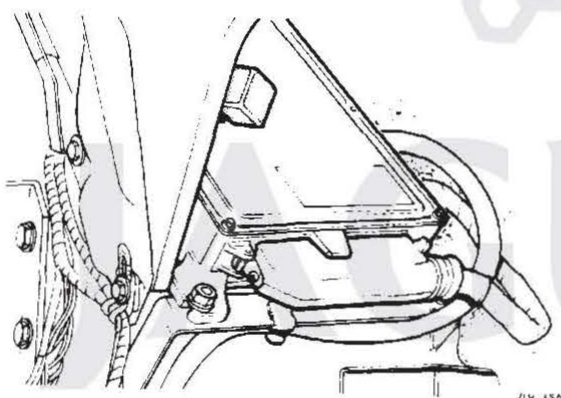


FIG 1

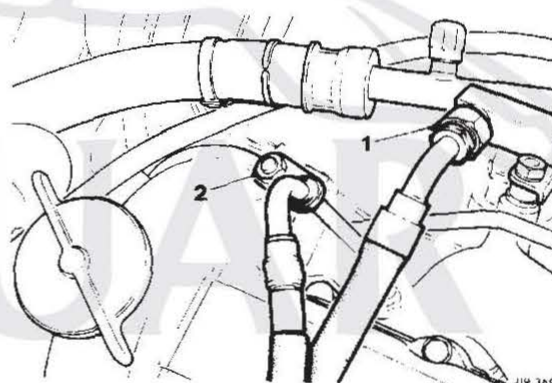


FIG 2

With the seal in place, fit the pressure test adaptor JD 181 to the fuel rail and tighten the union nut.

Fit the seal to the supply hose and connect to the pressure test adaptor. Tighten the union nut.

Fit and tighten the pressure test gauge, YWB 107, to the adaptor (Fig. 3). Ensure a sealing washer is in place.

Disconnect the vacuum hose from the base of the fuel pressure regulator valve (1 Fig. 4).

Run the engine.

Monitor the fuel pressure : 2,5bar \pm 0,1bar.

Switch off the engine.

Depressurise the engine as detailed above.

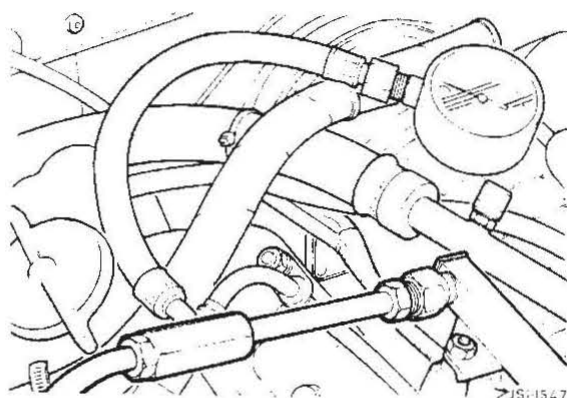


FIG 3

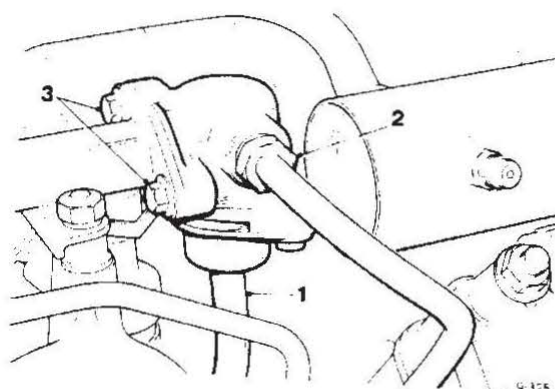


FIG 4

Remove the pressure test adaptor and gauge (Fig. 3).

Fit a new 'Viton' seal and refit the supply hose to the rail. Torque tighten the union nut to 10 to 12 Nm.

Connect the vacuum hose to the fuel pressure regulator valve.

Refit the fuel pump relay and re-position the trim liner.

Remove wing protection, close the bonnet and the luggage compartment.

XJ6 MODELS

ITEM: 08

57 STEERING RACK, PINION VALVE ASSEMBLY SEALS – RENEW – 57.10.09

A set of Service Tools has been developed (JD 184, JD 185, JD 186 and JD 187) to assist in renewing the steering pinion valve energised seals; Service Tool JD 120, steering rack centralising pin, is also needed to carry out the operation.

As a general guide, if lack of steering assistance from cold is experienced, renew the seals. A seal kit is available, Part No. JLM 10839.

To renew the seals, proceed as follows:

Note: Energised pinion seals should only be fitted to steering racks with plated pinion bores. Plated bore racks were fitted from VIN 597940. The plated racks are also identified by the part number stamped on the plate on the underside of the rack (Fig. 1). Part No. CBC 9052 – Right-hand drive vehicles. Part No. CBC 9053 – Left-hand drive vehicles. Energised seals were introduced from Part No. CCC 5650, XJ6 and Part No. CCC 5660, XJS.

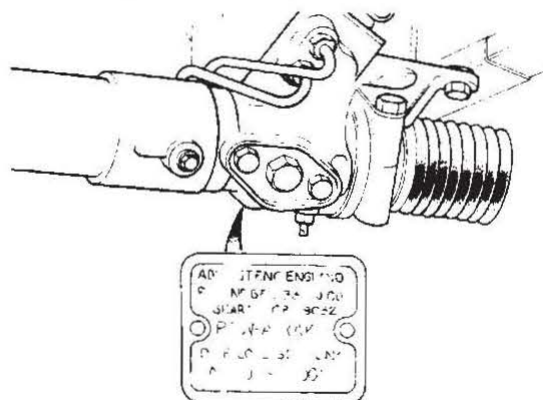


FIG 1

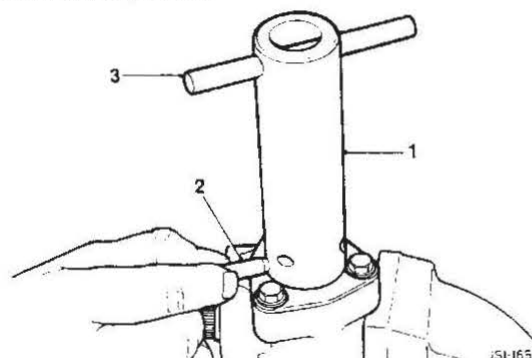


FIG 2

Remove the steering rack as detailed in operation 57.10.01.

Clean the steering rack pinion housing area.

Secure the rack in a vice, ensuring the vice jaws clamp across the pinion housing lugs and taking care not to trap any pipes.

Remove the dirt / dust excluder from the steering rack pinion shaft.

Ensure Service Tools JD 184, JD 185, JD 186 and JD 187 are free of any scores, burrs or marks which could cause damage to components.

Fit the body and handle of tool JD 184 to the pinion shaft (1, 3 Fig. 2). Align the tool with the pinch pin cut-out and fit the brass pinch pin (2 Fig. 2).

Place a suitable container below the pinion housing. Unscrew and remove the blanking plugs from the pinion housing, fitted during operation 57.10.01.

Operate the steering rack from lock to lock to remove any residual steering fluid. Wipe any remaining fluid from the pinion housing.

Unscrew and remove the tapered plug from the steering rack centralising pin-hole. Insert Service Tool JD 120 (centralising pin) into the pin-hole, maintaining light thumb-pressure.

Gently operate the steering rack until the pin is engaged. Remove the centralising pin, JD 120, then refit and lightly tighten the taper plug into the centralising pin-hole. Remove the brass pinch pin from tool JD 184 and remove the tool from the pinion shaft. Mark a line on the edge of the top plate and onto the pinion housing. Ensure it is in line with the centre of the pinion pinch pin cut-out (Fig. 3).

Unscrew, but do not remove, the support plate bolts to give a 10 mm gap between the plate and the pinion housing (Fig. 4).

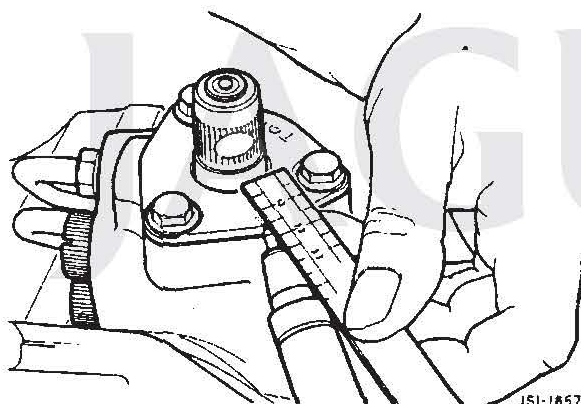


FIG 3

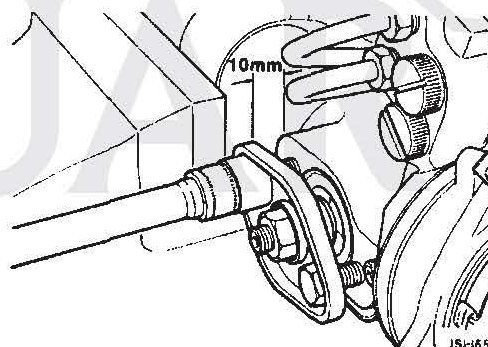


FIG 4

Unscrew the bolts securing the top plate and remove the top plate and shims (Fig. 5). Fit tool JD 184 to the pinion shaft with the brass pinch pin in place, as previously described.

Fit and align tool JD 186 with the taper of the bore towards the pinion housing face. Fit and tighten the cap head screws, securing tool JD 186.

Fit the tool handle and using hand-pressure only, pull the pinion valve assembly partially away from the pinion housing and into tool JD 186 (Fig. 6). Ensure the assembly is kept aligned during this operation.

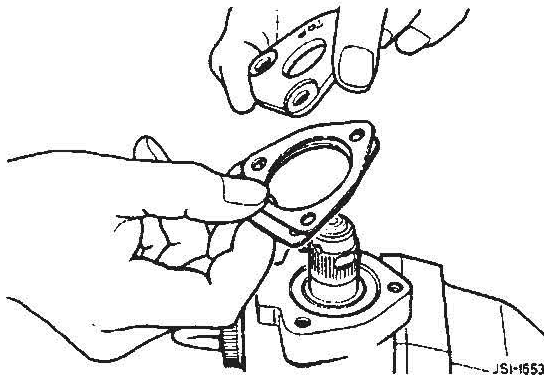


FIG 5

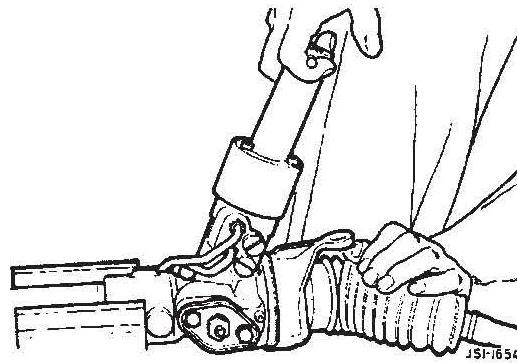


FIG 6

Remove the tool handle. Unscrew and remove the cap head screws, securing tool JD 186 to the pinion housing. Carefully remove tool JD 186 from the pinion valve. Refit the tool handle to tool JD 184. Keeping in alignment, gently pull and rotate the pinion valve assembly until fully removed from the housing. Remove tool JD 184 from the pinion valve assembly.

Remove the thrust washer package from the assembly as follows:
Square section outer seal, P.T.F.E. inner seal and 'O' ring seal.

Clean the thrust washer and place safely to one side.

Remove and discard the quad seal from the pinion or pinion housing.

Clean and inspect the pinion housing bore for any scores or damage.

Cut and remove the P.T.F.E. sealing rings from the pinion valve (Fig. 7). Ensure the valve walls are not marked or scored whilst carrying out this operation.

Note: A suitable tool can be made by grinding a broken hacksaw blade to a narrow chisel shape (1 Fig. 7).

Remove and discard the sealing ring energisers.

Note: Older type seals in unplated racks had no energiser ring. All plated racks are fitted with energised seals.

Clean the pinion valve ready for re-assembly.

Lubricate, fit and seat a new quad seal into the pinion housing.

Lubricate the bore of the pinion housing.

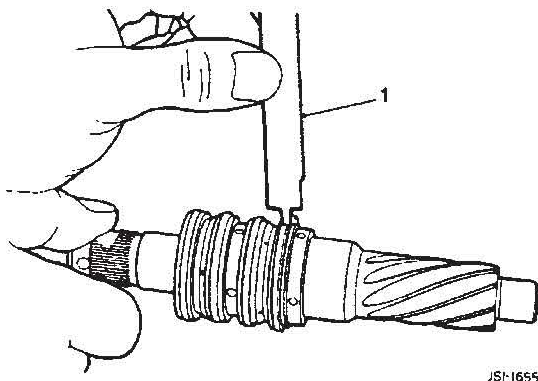


FIG 7

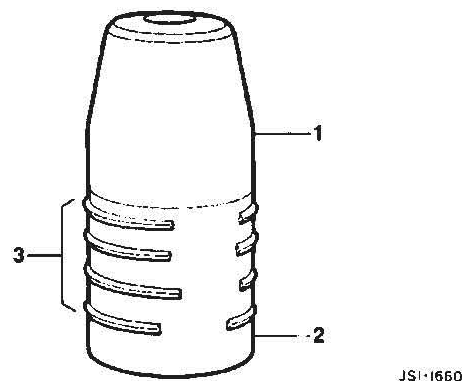


FIG 8

Fit the tapered mandrel of tool JD 185 (1 Fig. 8) into the zinc-plated sleeve (2 Fig. 8). Load four new sealing ring energisers onto the zinc-plated sleeve, leaving a gap between each (3 Fig. 8).

Note: Service Tool JD 185 is a three-piece tool comprising: a tapered mandrel, a zinc-plated sleeve for fitting sealing ring energisers and a black machine-finish sleeve for fitting sealing rings.

Remove the mandrel from the zinc-plated sleeve; carefully fit the loaded sleeve onto the pinion valve and align the tool end parallel with the first seal groove. Slide the energiser from the zinc-plated sleeve into the first seal groove (Fig. 9). Continue until all four energisers have been placed in the four seal grooves.

Remove the zinc-plated sleeve from the pinion valve and place safely to one side.

Fit the tapered mandrel of tool JD 185 (1 Fig. 10) into the black-finish sleeve (2 Fig. 10).

Load four new P.T.F.E. sealing rings (blue) onto the black-finish sleeve, leaving a gap between each (3 Fig. 10).

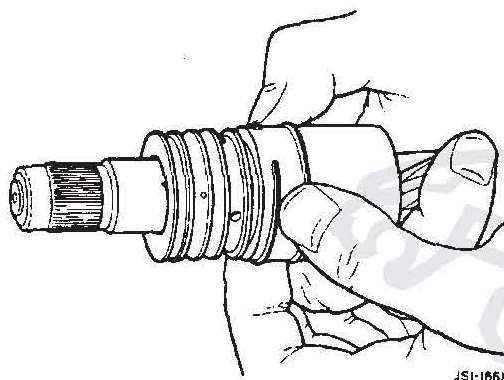


FIG 9

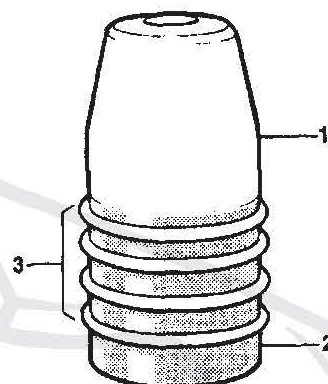


FIG 10

Remove the mandrel from the black-finish sleeve; carefully fit the loaded sleeve onto the pinion valve and align the tool end parallel with the first seal groove.

Slide the seal from the black-finish sleeve into the first seal groove (Fig. 11). Continue until all four seals have been placed in the four seal grooves.

Note: The P.T.F.E. sealing rings should only remain on the black-finish sleeve for the minimum time possible.

Remove the black-finish sleeve from the pinion valve and place safely to one side.

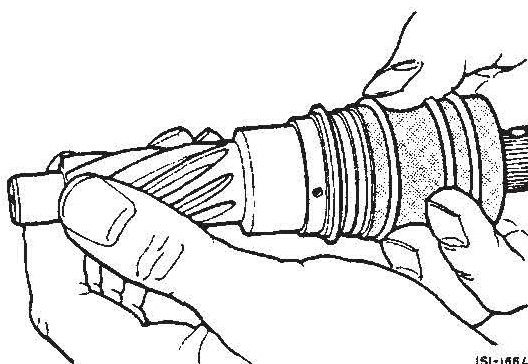


FIG 11

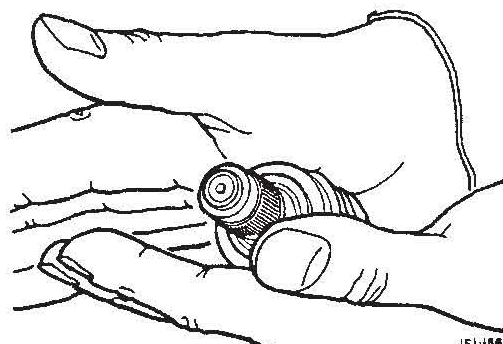


FIG 12

Grasp the pinion valve and rotate between the palms of the hands to compress the P.T.F.E. sealing rings fully onto the energisers (Fig. 12).

Note: Ensure that the P.T.F.E. sealing rings fit fully and evenly over the steel energisers.

Lubricate the P.T.F.E. sealing rings and pinion valve assembly.
Fit tool JD 186 over the pinion valve by passing the tapered bore of the tool over the geared end of the pinion. Pass the pinion through the tool several (five) times to size the sealing rings (Fig. 13).

Note: During the sizing operation, ensure the P.T.F.E. sealing rings do not become trapped or bent over the grooves, thus causing possible damage.

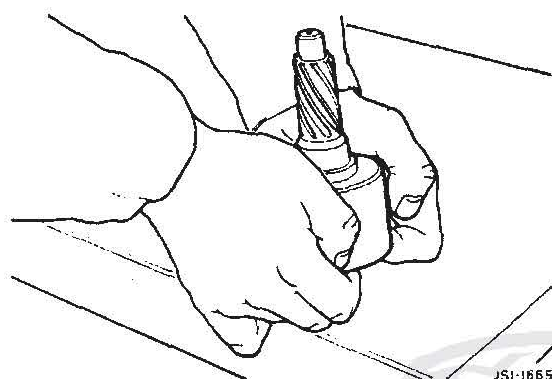


FIG 13

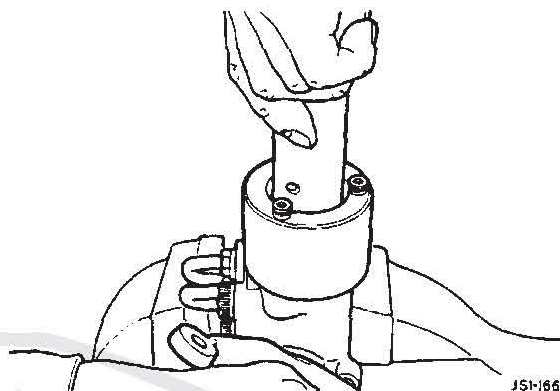


FIG 14

After sizing, position the pinion valve in the parallel part of the tool bore.
Fit and align the pinion and tool assembly to the steering rack housing.
Fit, but do not tighten, the cap head screws that secure tool JD 186. Ensure that the tool is allowed to self-centre.

Remove the tapered plug from the steering rack centralising hole. Fit the centralising pin, JD 120, to ensure that the rack has remained central.
Fit and align tool JD 184 with the tool handle and brass pinch pin in position.
Position the pinion so that, allowing for helix angle rotation (approx. 90°), the pinion arrives at the previously-marked position (Fig. 3).
Allow the pinion to mesh with the rack gear by gently pulling the rack gear away from the pinion. Carefully push and rotate the pinion to seat the pinion valve assembly fully into the rack housing (Fig. 14).

Note: The centre of the pinion pinch bolt cut-out should finally align with the marks on the top plate and housing, shown in Fig. 2.

Note: The handle hole in tool JD 184 is parallel with the pinion pinch bolt cut-out to aid the previous operation.

Remove the centralising pin from the rack.
Fit and tighten the tapered plug into the steering rack centralising pin-hole.
Remove the handle from tool JD 184
Unscrew and remove the cap head screws, securing tool JD 186 to the pinion housing.
Remove tool JD 186 from the pinion housing and place to one side.
Remove the brass pinch pin from tool JD 184.
Remove tool JD 184 from the pinion.
Ensure that the 'O' ring seal has remained seated in the rack support assembly bore.
Tighten the support plate securing bolts.
Align tool JD 186 to the pinion housing with the tapered end of the bore away from the housing. Fit, but do not fully tighten, the cap head screws securing the tool (this will allow the tool to self-centre).
Fit a new set of seals to the thrust washer, i.e. square section seal, 'O' ring seal and

stepped seal.

Ensure that the stepped side of the seal faces inboard in its final fitted position.

Lubricate the thrust washer and seal assembly.

Fit the seal protector, JD 187, onto the pinion spline. Fit the thrust washer assembly onto the seal protector taper with the step side facing inboard.

Using the handle end of tool JD 184, with hand-pressure only, push the thrust washer assembly into the pinion housing (Fig. 15).

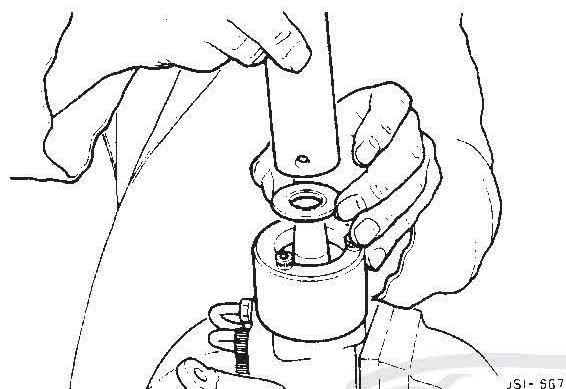


FIG 15

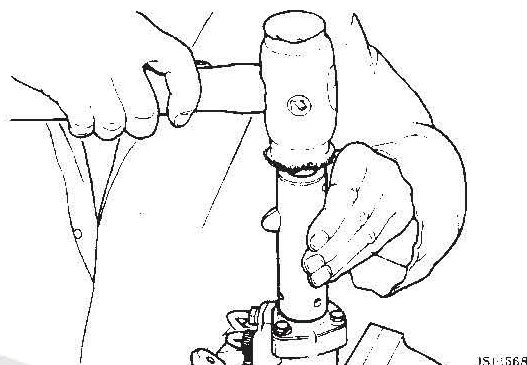


FIG 16

Note: The handle end of tool JD 184 is machined out for the purpose of fitting the thrust washer assembly.

Remove tool JD 184 from the pinion.

Remove the seal protector from the pinion shaft and place safely to one side.

Remove the cap head screws, securing tool JD 186 to the pinion housing.

Remove tool JD 186 and place safely to one side.

Fit the shims to the pinion housing.

Fit the top plate, ensuring it is aligned with the previous markings (Fig. 3).

Centralise the top plate around the pinion shaft and fit and tighten the securing bolts.

Fit a new dirt / dust excluder to the pinion shaft.

Position the brass pinch pin end of tool JD 184 over the pinion and up to the dirt / dust excluder.

Using a soft-faced mallet, carefully drive the dust / dirt excluder onto the pinion shaft (Fig. 16).

Ensure the top face of the dirt / dust excluder is 4,0 to 4,5 mm away from the top face of the top plate (Fig. 17).

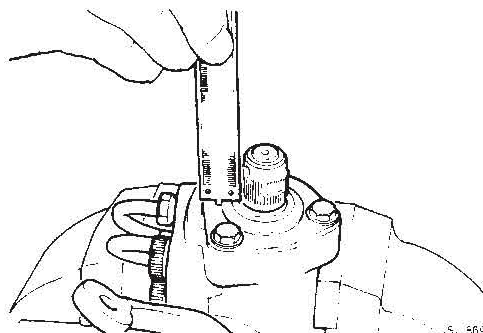


FIG 17

Remove tool JD 184 and place safely to one side.

Remove the container from below the pinion housing; remove the steering rack assembly from the vice and refit to the vehicle (57.10.01).

For vehicles within warranty, the following information applies:

Warranty Claim Code	:	5AAN
S.R.O.	:	57. 10. 09
Time Allowance	:	2.40 hours LHD vehicles
	:	2.35 hours RHD vehicles

XJ40

ITEM: 09

60 FRONT CROSSMEMBER BUSHES – RENEWAL

Should the eccentric bushes, securing the rear of the front crossmember assembly need renewing, proceed as follows:

Remove the front crossmember by following the instructions detailed in operation 76.10.05.

Place the bush replacement tool, JD 143, on to a suitable press. Fit and align the adaptor ring, JD 143-1, to the replacement tool.

Carefully position the front crossmember / bush on to the press / tool.

Fit and align the bush remover tool, JD 143-5, to the bush and using the press, displace and remove the bush from the crossmember.

Remove the crossmember from the press.

Remove the opposite side crossmember bush in the same manner.

Note: The bushes originally used were termed as 'six-shooter' bushes. These have now been redesigned / replaced by the 'smiley-faced' bushes currently being used, see Fig. 1 for identification.

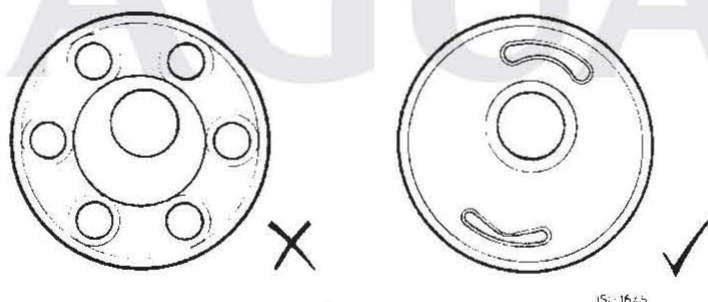


FIG 1

To aid assembly, prior to fitting new bushes, it is **important** they are correctly aligned with the crossmember.

The bush rubber identification pip **must** be 30° clockwise from the top dead centre of the crossmember mounting hole (the horizontal is parallel with the bottom face of the crossmember) see Fig. 2.

Once aligned, scribe a marker line across the crossmember and bush.

When the alignment marks have been scribed, the crossmember is ready for reassembly.

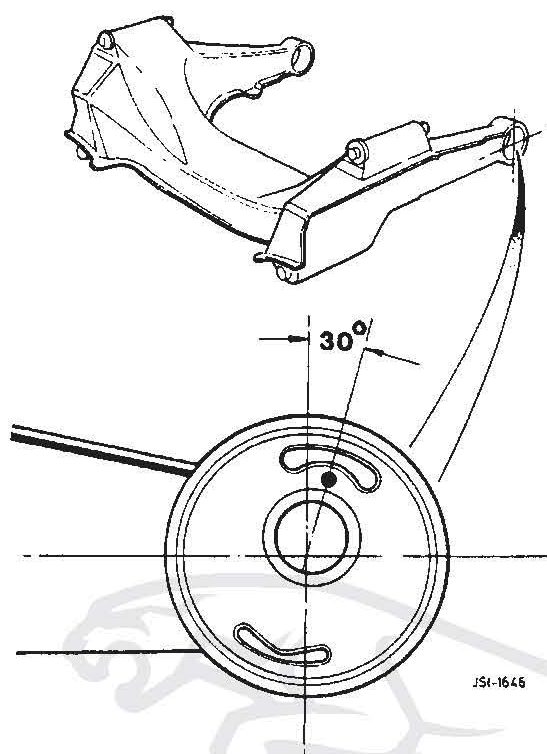


FIG 2

Carefully align the crossmember to the press / tool.
 Fit and align a new bush to the crossmember, ensuring that the scribe mark matches to the mark on the crossmember.
 Fit and align the replacer tool, JD 143-5, to the bush.
 Using the press, fully seat the new bush into the crossmember.
 Remove the replacer tool, JD 143-5, and place to one side.
 Remove the crossmember from the press and repeat the procedure to fit the other new crossmember bush.
 When the new bushes are correctly aligned and fully fitted to the crossmember, refit the crossmember to the vehicle, as detailed in operation 76.10.05.
 On completion, check that the steering geometry is correct, prior to re-using the vehicle.

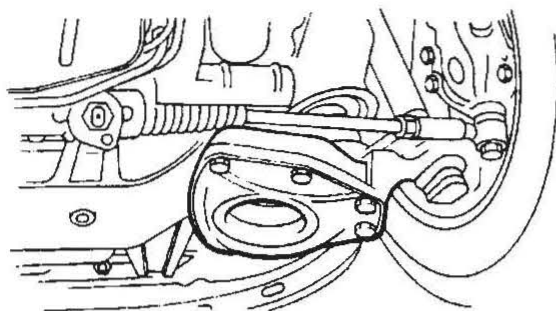
XJ-S / S.III / LIMOUSINE**ITEM: 10****60 FRONT HUB SEAL REPLACEMENT**

A tool has been developed and is now available for replacing front hub seals on the above models

To renew a seal, carry out the following procedure:

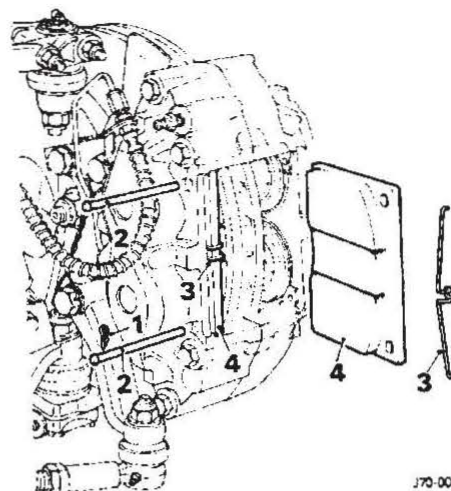
Note: Prior to carrying out the procedure, an absorbent cloth should be placed around the brake fluid reservoir cap

Slacken the road wheel nuts $\frac{1}{4}$ turn each.
 Locate a trolley jack below the front spring pan (Fig.1).



J08 005

FIG 1



J70 007

FIG 2

Jack up the vehicle. Place an axle stand below the appropriate jacking spigot. Lower the vehicle / jacking spigot on to the axle stand. Leave the jack in position as a precautionary measure. Remove one wheel nut, mark the wheel relative to the stud and remove the remaining wheel nuts. Remove the roadwheel and tyre assembly.

Remove the spring clips (1 Fig. 2) securing the brake pad retaining pins (2 Fig. 2); withdraw the pins.

Remove the anti-rattle springs (3 Fig. 2) and withdraw the brake pads (4 Fig. 2).

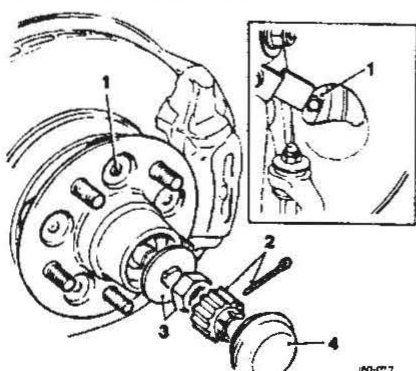
WARNING: BRAKE LINING DUST CAN CONTAIN ASBESTOS WHICH, IF INHALED, CAN DAMAGE YOUR HEALTH. ALWAYS USE A VACUUM BRUSH TO REMOVE DRY BRAKE LINING DUST. NEVER USE AN AIRLINE.

Ensure the brake caliper piston is fully retracted and remains in that position until the pads are refitted.

Position the steering rack to 'full lock' outward. Rotate the brake disc to gain access to the securing bolts through the aperture in the disc shield (1 Fig. 3). Remove the bolts and washers securing the hub assembly to the brake disc.

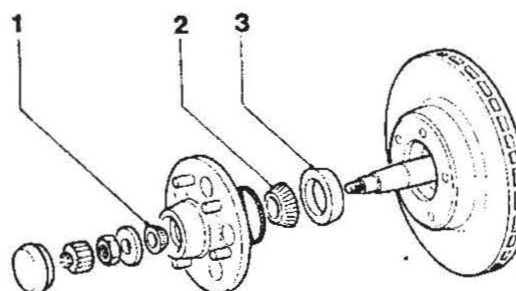
Prise of the hub grease cap (4 Fig. 3). Remove the hub nut split pin and cover (2 Fig. 3). Remove the hub nut and 'D' washer (3 Fig. 3). Carefully remove the hub assembly from the stub axle. Remove the outer bearing (1 Fig. 4) from the hub assembly.

Displace and remove the brake disc from the stub axle carrier assembly. Remove the inner bearing (2 Fig. 4) from the stub axle, then, using a suitable pry bar, remove and discard the hub seal (3 Fig. 4).



J60 077

FIG 3



J60 086

FIG 4

Clean all components and examine for wear and damage. Replace as necessary if worn or damaged.

Pack the hub bearings with grease and fit them to the hub assembly. Coat the stub axle shaft with grease.

Note: Lubricate the new hub seal and ensure grease is applied to all the seal lips.

Fit the new hub seal to the fitting tool, JD 180 (Fig. 5). Using the tool, drift the seal fully on to the stub axle shaft (Fig. 6).



FIG 5

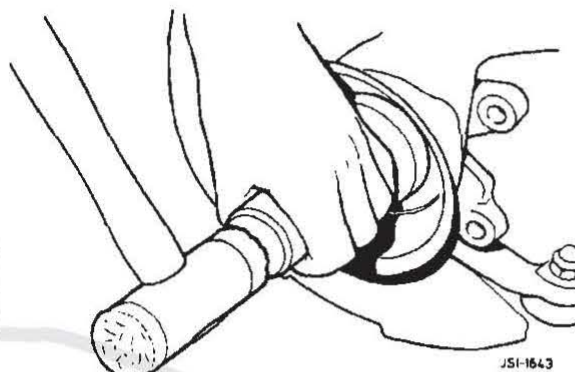
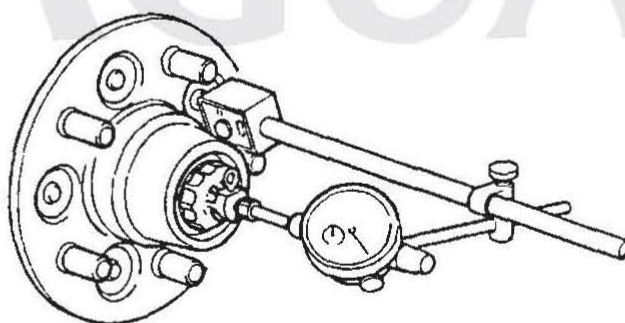


FIG 6

Fit and position the disc to the carrier assembly. Fit and fully seat the hub assembly, complete with bearings and the 'D' washer to the stub axle. Fit, but do not tighten, the securing nut.

Position the hub to align the brake disc mounting holes. Fit and tighten the brake disc to hub securing bolts.

Set the hub and end float between 0,0254 and 0,0762 mm (0.001 to 0.003 in). To do this, fit a magnetic base Dial Test Indicator (DTI) to the hub (Fig. 7).



K60-101

FIG 7

Grasp the hub unit. Firmly pull and push the unit, oscillating at the same time, to determine the DTI end float reading.

Adjust the hub nut as necessary, to give a reading of 0,0508 mm \pm 0,0254 mm (0.002 in \pm 0.001 in).

If possible, **always** try to achieve the mid-point of the tolerance i.e. 0,0508 mm (0.002 in).

When set, align the hub nut cover and secure with a new split pin.

When the new split pin is fitted, ensure the end float is re-checked using the DTI gauge (Fig. 7).

If necessary, re-adjust using the same method, until the end float is correct.

Always finish the adjustment by checking with a DTI gauge.
Always ensure the end float is within the limits quoted.

Refit the grease cap (4 Fig. 3). Return the steering rack to the straight ahead position and refit the brake pads (4 Fig. 2), retaining pins (2 Fig. 2), anti-rattle springs (3 Fig. 2) and retaining pin securing spring clips (1 Fig. 2).

Refit the road wheel, then lower the vehicle from the axle stands and torque-tighten the wheel nuts.

Pump the brake pedal to centralise the pads.

WARNING: APPLICATION OF THE BRAKE PEDAL MUST BE CARRIED OUT, AS THE BRAKES WILL NOT OPERATE EFFICIENTLY UNTIL THE PADS ARE CORRECTLY POSITIONED.

Remove the absorbent cloth from around the brake fluid reservoir cap, ensuring the area is clean and dry.

XJ6

ITEM: 11

60 FRONT HUB SEAL REPLACEMENT

A tool has been developed and is now available for replacing front hub seals on the above model.

To renew a seal, carry out the following procedure:

Note: Prior to carrying out the procedure, an absorbent cloth should be placed around the brake fluid reservoir cap.

Slacken the road wheel nuts $\frac{1}{4}$ turn each.

Jack up the vehicle and support with axle stands.

Remove one wheel nut, mark the wheel relative to the stud, and remove the remaining wheel nuts.

Remove the roadwheel and tyre assembly.

Carefully displace and remove the brake caliper anti-squeal spring (1 Fig. 1).

Displace the pad wear sensor multi-plug from the retaining clip, then disconnect the harness multi-plug (2 Fig. 1).

Remove the caliper securing bolt dust caps, then remove the socket head securing bolts (3 Fig. 1).

Remove the caliper from the carrier and safely secure the caliper to one side.

Note: Ensure the caliper is placed where the brake hose and harnesses are not stressed.

Displace and remove the brake pads (4 Fig. 1).

WARNING: BRAKE LINING DUST CAN CONTAIN ASBESTOS WHICH, IF INHALED, CAN DAMAGE YOUR HEALTH. ALWAYS USE A VACUUM BRUSH TO REMOVE DRY BRAKE LINING DUST. NEVER USE AN AIRLINE.

Ensure the brake caliper piston is fully retracted and remains in that position until the pads are refitted.

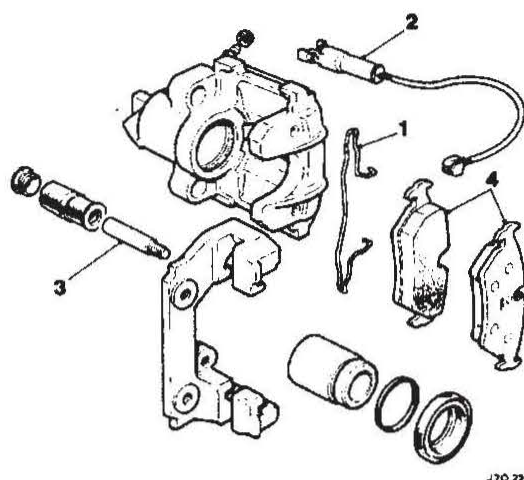


FIG 1

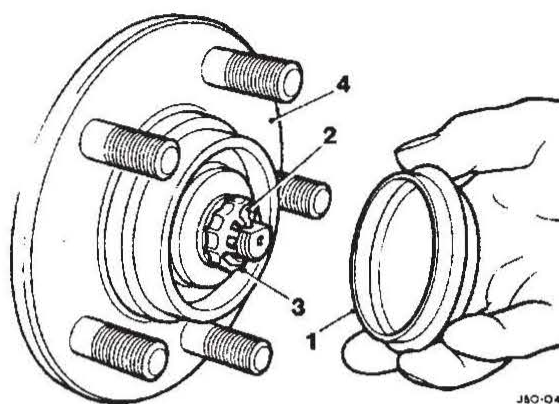


FIG 2

Cut and remove the carrier securing bolt lockwire.
 Unscrew the carrier securing bolts and remove the carrier.
 Remove the disc securing screw and remove the disc.
 Prise off the hub grease cap (1 Fig. 2).
 Remove the hub nut split pin and cover (2, 3 Fig. 2).
 Remove the hub nut and 'D' washer.
 Carefully remove the hub assembly (4 Fig. 2) from the stub axle.
 Remove the inner bearing from the stub axle, then, using a suitable pry bar, remove and discard the hub seal.

Clean all components and examine for wear and damage. Replace as necessary if worn or damaged.
 Pack the hub bearings and coat the stub axle shaft with grease.

Note: Lubricate the new hub seal and ensure grease is applied to all the seal lips.

Fit the new hub seal to the fitting tool, JD 179 (Fig. 3).
 Using the tool, drift the seal fully on to the stub axle shaft (Fig. 4).
 Place the inner bearing on to the shaft and ensure it is pushed fully up to the new hub seal.

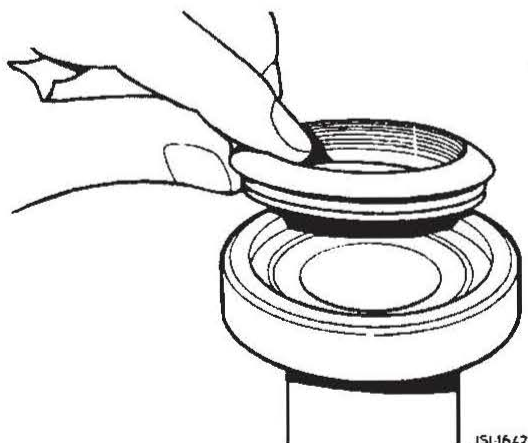


FIG 3

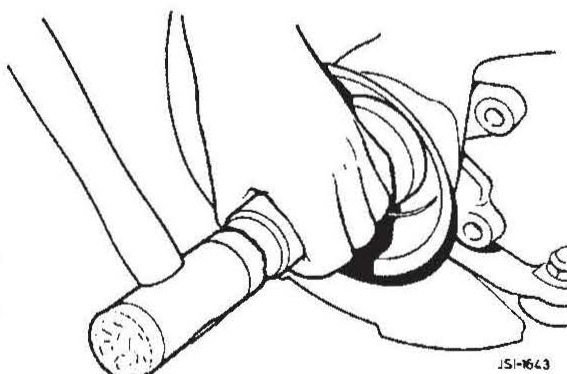
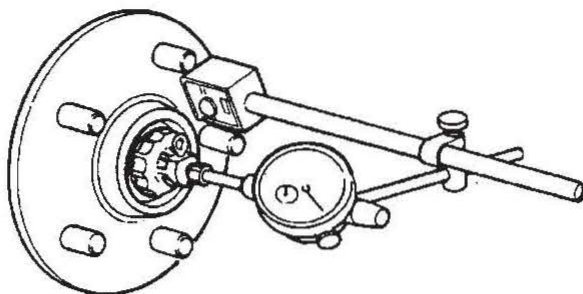


FIG 4

Fit and fully seat the hub assembly, outer bearing and 'D' washer to the stub axle. Fit, but do not tighten, the securing nut.

Set the hub end float between 0,0254 to 0,0762 mm (0.001 to 0.003 in). To do this, fit a magnetic base Dial Test Indicator (DTI) to the hub (Fig. 5).



J50 102

FIG 5

Grasp the hub unit. Firmly pull and push the unit, oscillating at the same time, to determine the DTI end float reading.

Adjust the hub nut as necessary, to give a reading of 0,0508 mm \pm 0,0254 mm (0.002 in \pm 0.001 in).

If possible, **always** try to achieve the mid-point of the tolerance i.e. 0,0508 mm (0.002 in).

When set, align the hub nut cover and secure with a new split pin.

When the new split pin is fitted, ensure the end float is re-checked using the DTI gauge (Fig. 5).

If necessary, re-adjust using the same method, until the end float is correct.

Always finish the adjustment by checking with a DTI gauge.

Always ensure the end float is within the limits quoted.

Refit the grease cap.

Refit the brake assembly, disc, carrier, pads, caliper and all multi-plugs and connectors.

Refit the road wheel then lower the vehicle from the axle stands and torque-tighten the wheel nuts.

Pump the brake pedal to centralise the pads.

WARNING: APPLICATION OF THE BRAKE PEDAL MUST BE CARRIED OUT, AS THE BRAKES WILL NOT OPERATE EFFICIENTLY UNTIL THE PADS ARE CORRECTLY POSITIONED.

Remove the absorbent cloth from around the brake fluid reservoir cap, ensuring the area is clean and dry.

XJ6

ITEM: 12

60 LOWER WISHBONE, BUSH – RENEW – 60.35.22

Part of the above operation is to renew the wishbone bushes, but the description for this part of the operation is not specific; therefore, to renew the bushes, proceed as follows:

Note: Prior to carrying out the procedure, an absorbent cloth should be placed around the brake fluid reservoir cap.

Slacken the road wheel nuts $\frac{1}{4}$ turn each.

Jack up the front of the vehicle and support with axle stands.

Note: Ensure the vehicle is high enough to access Service Tool JD 115.

Remove one wheel nut, mark the wheel relative to the stud, and remove the remaining wheel nuts.

Remove the road wheel and tyre assembly.

Fit the lower adaptors to Service Tool JD 115, then fit the tool to the front spring (Fig. 1). Engage the dowel in the slots in the suspension turret top.

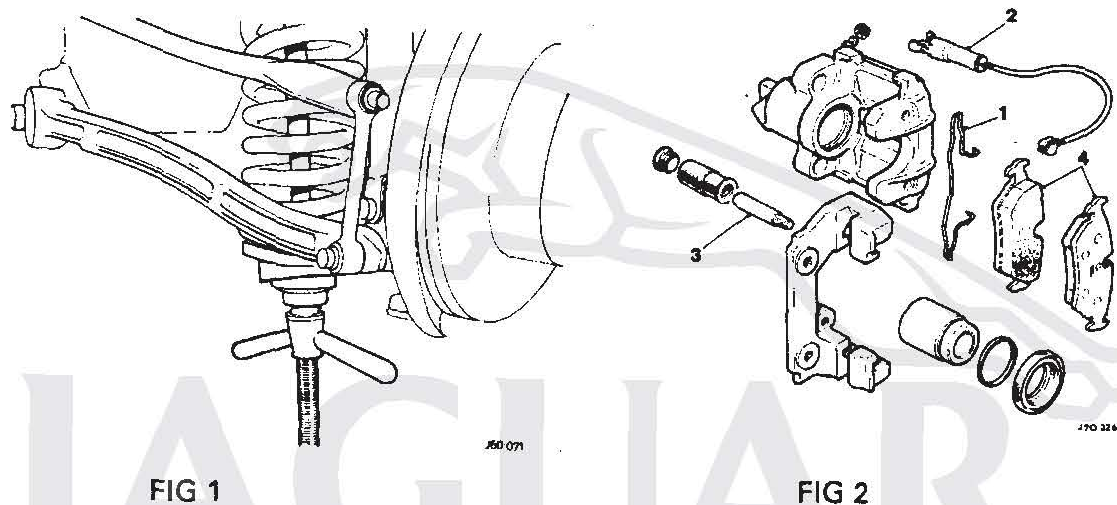
Ensure that the dowel is seated correctly.

Tighten the tool to tension the spring until the load is taken off the spring pan.

Remove the spring pan securing bolts, slacken off the tool wing nut to release the tension on the spring and release the tool from the suspension turret.

Remove the tool from the suspension assembly.

Remove the spring plates and road spring from the tool.



Carefully displace and remove the brake caliper anti-squeal spring (1 Fig. 2).

Displace the pad wear sensor multi-plug from the retaining clip then disconnect the harness multi-plug (2 Fig. 2).

Remove the caliper securing bolt dust caps then remove the socket head securing bolts (3 Fig. 2).

Remove the caliper from the carrier and safely secure the caliper to one side.

Note: Ensure the caliper is placed where the brake hose and harnesses are not stressed.

Displace and remove the brake pads (4 Fig. 2).

WARNING: BRAKE LINING / PAD DUST CAN CONTAIN ASBESTOS WHICH, IF INHALED, CAN DAMAGE YOUR HEALTH. ALWAYS USE A VACUUM BRUSH TO REMOVE DRY BRAKE LINING / PAD DUST. NEVER USE AN AIRLINE.

Ensure the brake caliper piston is fully retracted and remains in that position until the pads are refitted.

Undo and remove the track rod end to steering arm securing nut.

Fit Service Tool JD 100 to the track rod end joint.

Tighten the tool bolt to break the taper.

Undo the tool bolt and place the tool aside.

Undo and remove the steering rack to front crossmember securing nuts and bolts, and remove the spacers.

Undo and remove the anti-roll bar link arm lower securing nut and bolt.

Undo and remove the upper ball joint securing bolts, note the position and collect the castor shims.

Reposition the stub axle assembly outwards.

Displace and remove the split pin securing the fulcrum shaft nut.

Undo and remove the fulcrum shaft nut.

Remove the shock absorber lower mounting securing bolt / nut.

Carefully lower the wishbone / stub axle assembly to the floor.

Displace the pivot bolt to allow removal of the front wishbone, remove the front wishbone.

Remove the serrated spacer.

Manoeuvre the steering rack to give clearance, displace and remove the fulcrum bolt.

Remove the rear wishbone/stub axle assembly.

Remove the remaining serrated spacer.

Using a suitable workbench with a vice:

Secure the front wishbone arm in the vice, ensuring that the top hat of the bush faces upwards.

Using a suitable hacksaw, cut and remove the bush top hat sides (Fig. 3).

Undo the vice.

Position the wishbone arm between the press adaptor plates.

Fit and align bush removal tool JD 143-4 to the bush (Fig. 4).

Using the press, displace and remove the bush.

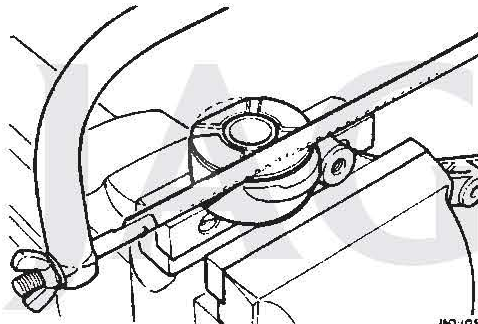


FIG 3

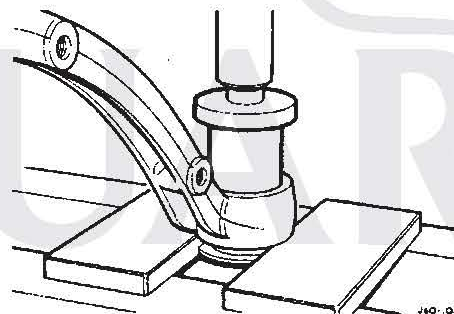


FIG 4

Place tool JD 143 to the press.

Fit and align the adaptor ring JD 143-1.

Fit and align adaptor tool JD 143-2 to the adaptor ring, ensuring that the narrow end of the tool is uppermost.

Install the wishbone in the press and align the new bush to the wishbone.

Align the large diameter of the bush replacer tool JD 143-3 to the bush (Fig. 5).

Using the press fully seat the bush into the wishbone.

Remove the wishbone front arm and bush replacer tool from the press.

Align tool JD 143-3/2 to the press.

Carefully align the wishbone rear arm / hub assembly to give the best / most surface contact between the wishbone and the narrow leg of tool JD 143-3/2.

Align removal tool JD 143-3/1 to the bush (Fig. 6).

Using the press, carefully displace and remove the bush.

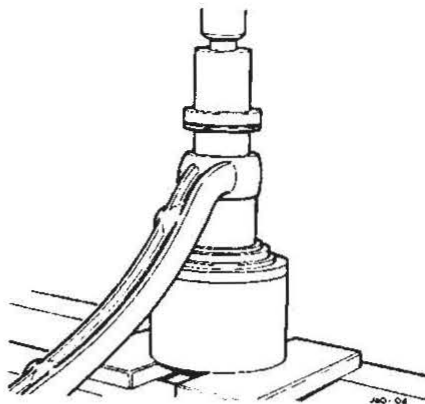


FIG 5

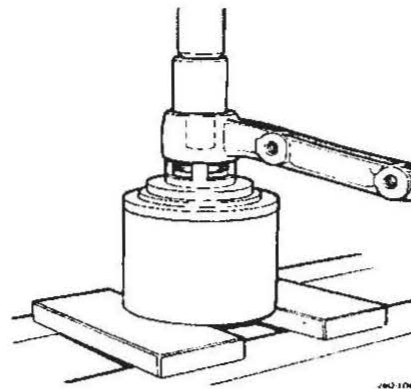


FIG 6

Remove the wishbone assembly from the press.

Using a suitable cleaning agent, clean the wishbone arm faces.

Reposition tool JD 143-3/2 in the press.

Align the wishbone rear arm / hub assembly to give the best / most surface contact between the wishbone and the narrow leg of tool JD 143-3/2.

Carefully align the new bush to the wishbone.

Align bush replacer tool JD 143-3/1 to the bush (Fig. 7).

Using the press, fully seat the bush into the wishbone arm until the upper face of the bush is level with the upper face of the wishbone (see detail in Fig. 7).

Remove the wishbone assembly and the tools from the press.

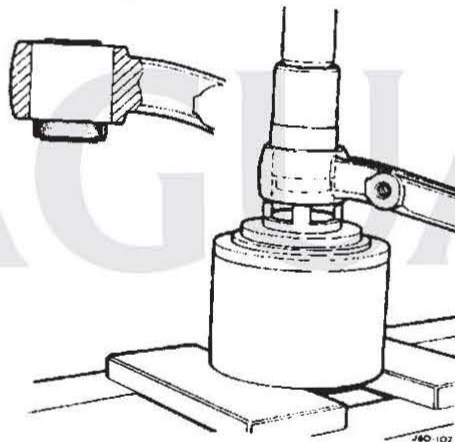


FIG 7

Repeat the procedure on the opposite front side of the vehicle.

When all bushes have been replaced, reverse the removal procedure to refit the wishbones, brake assemblies and road springs.

Refit the road wheels then lower the vehicle from the axle stands and torque-tighten the wheel nuts.

Pump the brake pedal to centralise the pads.

WARNING: APPLICATION OF THE BRAKE PEDAL MUST BE CARRIED OUT, AS THE BRAKES WILL NOT OPERATE EFFICIENTLY UNTIL THE PADS ARE CORRECTLY POSITIONED.

Note: Ensure the steering geometry is checked and set correctly.

Remove the absorbent cloth from around the brake fluid reservoir cap, ensuring the area is clean and dry.

XJ6

ITEM: 13

76 DASH LINER REMOVAL TOOL

A quantity of dash liners has been replaced due to damage caused by their removal. A Service Tool (JD 188) has now been developed to assist with this procedure. To remove a dash liner, driver's or passenger's side of vehicle, proceed as follows:

Open the appropriate door to gain access to the dash liner.
Undo and remove the dash liner securing screws (Fig.1).

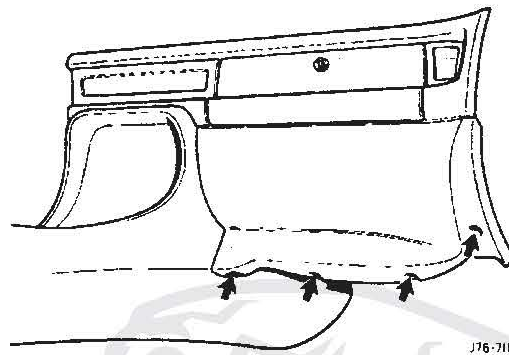


FIG 1

Insert Service Tool JD 188 behind the dash liner. Locate onto the upper flange with the 'V' cut-out in the tool either side of the first fir tree retainer (Fig. 2). Displace the fir tree retainer from the plastic retainer socket by gently twisting the tool handle (Fig. 2). Remove the remaining retainers in the same manner.

Note: On vehicles fitted with a steel armature, the tool **must** be inserted between the dash liner and the steel armature (Fig. 3).

The number of dash liner retainers is different between Federal and U.K. vehicles. To avoid any damage to the dash liner, always ensure all retainers have been carefully displaced before removal.

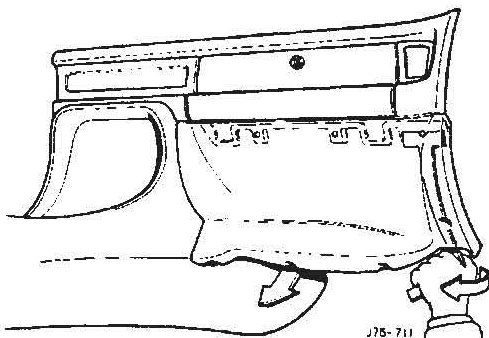


FIG 2

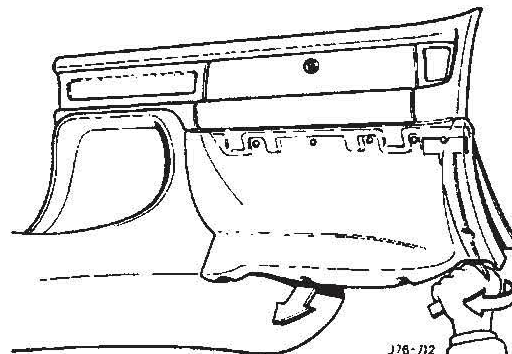


FIG 3

Note: The illustrations show L.H.D. passenger's side only. The procedure for the driver's side and R.H.D. vehicles is carried out in the same manner.

XJ6**ITEM: 14****80 HEATER BLOWER MOTOR ASSEMBLY – DRIVER’S SIDE**

The repair operation time for renewing the driver’s side heater blower motor assembly has changed on all XJ6 vehicles from VIN 629286.

The repair operation times are now as follows:

LEFT-HAND DRIVE VEHICLES

80.20.12	Blower Assembly Left-Hand – Renew	01.25 Hours
80.20.12/09	As 80.20.12 (Less JDS Allowance)	00.90 Hours

RIGHT-HAND DRIVE VEHICLES

80.20.11	Blower Assembly Right-Hand – Renew	01.25 Hours
80.20.11/09	As 80.20.11 (Less JDS Allowance)	00.90 Hours

Please amend your repair time schedules accordingly.

No other repair times are affected.

To achieve these times in service, adhere to the procedure detailed in Service Bulletin JD 08/91, Item 56.

The bulletin item refers to “air conditioning blower motor assembly”, but the procedure for renewal of the heater blower motor assembly is identical.

XJ6**ITEM: 15****82 HEATER TO AIR CONDITIONING RETRO-FIT CONVERSION**

When installing the air conditioning retro-fit kit to vehicles built prior to VIN 607111, the following additional parts are required to supplement main kit JLM 10755 in order to provide efficient and stable air conditioning operation:

- CBC 9133 Electric motor assembly.
- JLM 1947 Motor assembly installation kit.
- JLM 10793 Sensor assembly to A/C unit link harness.

These vehicles are not equipped with a motorised aspirator / in-car sensor as original equipment; the above parts comprise the service fit aspirator / sensor assembly.

Full details of installation of the aspirator / sensor assembly can be found in Service Bulletin JD 09/89, Item 47 and an addendum sheet to be included with main kit JLM 10755.

In addition to the above modification, system installation necessitates replacement of the crankshaft damper/pulley assembly on earlier vehicles.

- 2.9 vehicles produced prior to engine number 107821 require fitment of damper assembly EBC 2225.
- 3.6 vehicles produced prior to engine number 106424 require fitment of damper assembly EBC 1441.

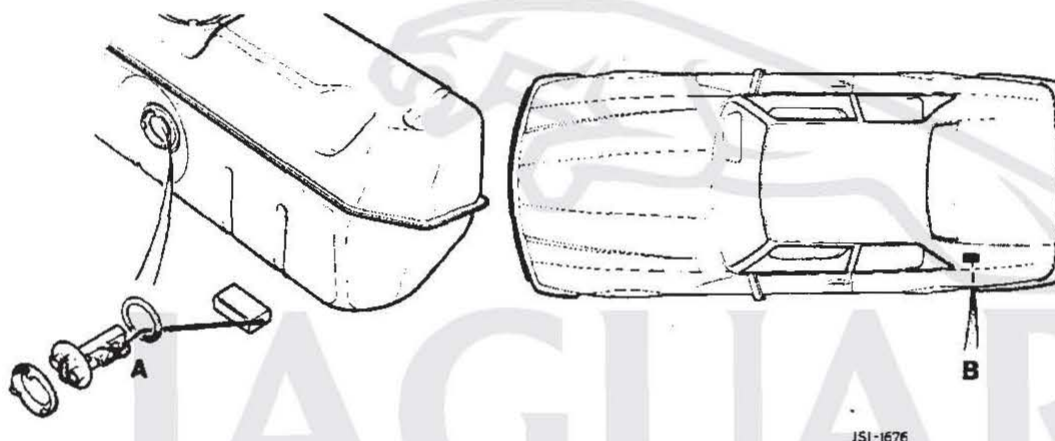
XJ-S FACELIFT**ITEM: 16****86 ANTI-SLOSH MODULE / FUEL TANK SENDER UNIT – FAULT DIAGNOSIS**

With the introduction of the XJ-S Facelift range, an anti-slosh module has been incorporated into the fuel gauge circuit, which damps the gauge needle movement and controls the low fuel warning indication.

Following isolated concerns with this circuit, some Dealer confusion has arisen during fault diagnosis, which has resulted in the unnecessary replacement of components.

In order to assist Dealers, this Bulletin has been designed to identify possible fault conditions which may occur and details the correct diagnosis procedures.

PLEASE NOTE that the following information refers only to the anti-slosh module and the fuel tank sender unit; it is not a fault diagnosis of the fuel gauge.

COMPONENT LOCATION**A – Fuel Tank Sender Unit****B – Anti-Slosh Module****ANTI-SLOSH MODULE TERMINAL VOLTAGES**

The five terminals of the anti-slosh module have the following voltage ranges at normal operating voltage of 13.5 V :

Pin 1	Gauge	2.49 V to 11.08 V dependent on fuel quantity
Pin 2	Low Fuel Warning	Battery voltage (13.5 V) when off; 0.1 V to 1 V when on
Pin 3	Ignition	Battery voltage (13.5 V)
Pin 4	Sender Unit	2.49 V to 11.08 V dependent on fuel quantity
Pin 5	Ground	0 V

POSSIBLE FAULT CONDITIONS**Loss of damping**

Turn off the ignition. Remove the upper wire from the fuel sender unit and connect the wire to ground.

Turn on the ignition and check the gauge; the pointer should rise rapidly to a position above the "full" mark.

Disconnect the upper wire of the sender from ground and check that the fuel gauge starts to fall. If the low fuel warning light illuminates within 12 seconds of this operation, replace the anti-slosh module.

Turn off the ignition and reconnect the fuel sender unit correctly.

No low fuel warning lamp with gauge reading empty.

Turn off the ignition. Remove the upper wire from the fuel sender unit.

Turn on the ignition. Check that the gauge reads empty and that the warning lamp is on.

If the warning lamp fails to illuminate, check the voltage on the warning lamp output of the anti-slosh module (pin 2). If the voltage is less than 0.9 volts, the fault does not lie in the anti-slosh module; therefore, check the lamp and harness. If the voltage is more than 0.9 volts, change the anti-slosh module.

Turn off the ignition and reconnect the sender unit correctly.

Low fuel warning lamp stays on over the full range of the gauge.

Turn off the ignition. Remove the anti-slosh module and turn on the ignition.

If the warning lamp goes out, replace the anti-slosh module. If the warning lamp stays on, check the vehicle wiring.

Too slow to reach final position when the ignition is turned on.

If the fuel gauge takes longer than 15 seconds to display its final position on the gauge when the ignition is turned on, replace the anti-slosh module.

Fuel gauge constantly reads full.

Turn off the ignition. Remove the upper wire from the fuel sender unit. Turn on the ignition.

Check that the gauge reads empty and that the warning light is on.

If the gauge reads full, turn off the ignition and remove the anti-slosh module. Switch the ignition back on; if the gauge reads empty, replace the anti-slosh module. If the gauge reads full, check the vehicle wiring and the gauge.

Turn off the ignition. Refit the anti-slosh module and reconnect the sender unit correctly.

Fuel gauge always reads empty.

Turn off the ignition. Remove the upper wire from the fuel sender unit.

Turn on the ignition. Check that the gauge reads empty and that the warning lamp is on.

Turn off the ignition. Connect the upper wire of the sender unit to ground.

Turn on the ignition and check that the gauge rises to full. If the gauge does not rise to full, turn off the ignition and remove the anti-slosh module. Connect the fuel gauge to ground. If the gauge rises to full, change the anti-slosh module. If the gauge does not rise to full, check the vehicle wiring, the sender unit and the gauge.

Turn off the ignition, refit the anti-slosh module and reconnect the sender correctly.

Fuel gauge reads above empty when tank is empty.

DO NOT remove the sender unit from the tank.

With either a new sender unit or a 250 Ohm resistor connected in place of the existing sender unit, check that the gauge drops to empty. If it is above empty, replace the anti-slosh module. If the gauge reads empty, check the sender unit or the gauge.

Check for normal operation.

SENDER UNIT FAULT DIAGNOSIS

Gauge flickers and swings to zero intermittently.

The likely fault with this symptom is an intermittent open circuit on the sender unit. It is difficult to diagnose this with the sender unit in the fuel tank. The recommended test is to obtain a new sender unit and connect it to the car and holding it in the same orientation as the vehicle, move it through its full travel slowly, watching the gauge for normal operation. If all appears well, the sender unit in the tank should be changed for the new one. If the symptoms persist, check the wiring and the gauge.

Note: During heavy cornering, i.e. traffic islands, etc, needle movement will occur towards the empty position, particularly on right-hand manoeuvring.

Recovery to the correct fuel gauge indication after the cornering manoeuvre will be slow due to the operation of the anti-slosh module. This is normal and should not be interpreted as a fault.

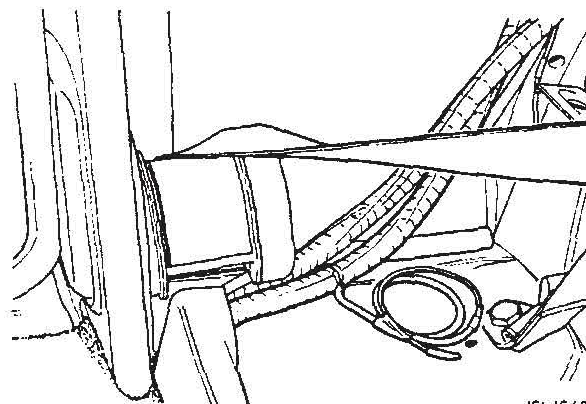
XJ-S COUPE / CONVERTIBLE – 92 MY

ITEM: 17

86 ALARM SYSTEM OPERATION

Investigation into Dealer reports of poor operation of the alarm system on XJ-S 92 MY vehicles has shown that a final operation has been omitted from the supplied installation instructions. Therefore, where customer complaints are received, the following action should be taken.

1. Remove the right-hand rear quarter lower trim pad assembly.
2. Identify the alarm antenna coiled in the harness (refer to Fig 1).



JS1-1648

FIG 1

3. Remove the adhesive tape from the antenna, uncoil and straighten.
4. Position the rear quarter trim panel assembly to the vehicle.
5. Attach the straightened antenna to the rear of the trim panel in vertical attitude, using suitable adhesive tape (refer to Fig 2).

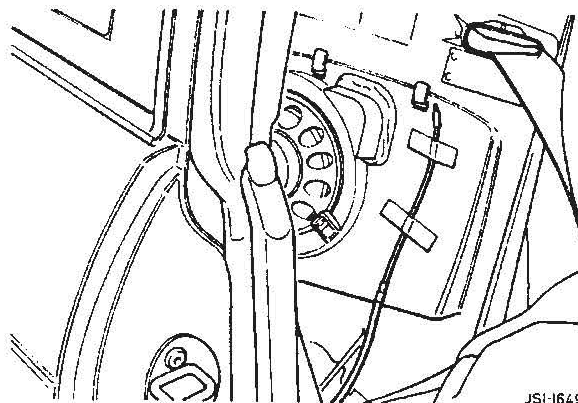


FIG 2

6. Refit the trim panel.

The above action only applies to VIN range 179737 onwards.

Parts Warranty claims for this work should be made using Complaint Code 9SSX and quoting SRO 86-91-42 (Coupe) or 86-91-42/70 (Convertible).

Total time allowance is 0.20 Hours (Coupe) and 0.25 Hours (Convertible).

Dealers and Importers using electronic claim submissions should use Claim Type 03.

It is intended that this operation will shortly be integrated into the vehicle build and an appropriate VIN will be issued in a future Service Bulletin.

XJ6 LHD ONLY

ITEM: 18

86 72AH BATTERY

A larger capacity 72aH battery has been introduced on all left-hand-drive XJ6 vehicles from VIN 653463.

This new battery (Part Nos: DBC 6429 [wet] and JLM 10455 [dry]) is not interchangeable with either previous left-hand-drive or right-hand-drive vehicles.

XJ6 / XJ-S

ITEM: 19

86 18 EM IGNITION AMPLIFIER

Investigation of recent warranty returns has identified instances of ignition amplifiers being changed and, in the process, being removed from their base-plates.

These parts should not be separated and must only be replaced as a complete assembly. Under no circumstances should they be dismantled.

Any parts returned through warranty will be rejected if incomplete or if attempts to split the assembly have been made.

Service Bulletin



DATE: JULY 1992

PAGE: 1 of 10

REF: JD 08/92

ERRATA

WITH REFERENCE TO SERVICE BULLETIN JD 02/92, ITEM 16, THE FOLLOWING IS A CORRECTION TO THE FAULT DIAGNOSIS PROCEDURE ITEM:

"FUEL GAUGE ALWAYS READS EMPTY"

PLEASE NOTE, DURING THE CHECK PROCEDURE DETAILED, THE LOW FUEL WARNING LIGHT WILL ALSO REMAIN ILLUMINATED WHEN THE UPPER WIRE IS CONNECTED TO GROUND TO CHECK THE GAUGE NEEDLE MOVEMENT. THE CURRENT BULLETIN ONLY STATES THAT THIS WILL OCCUR WHEN DISCONNECTING THE UPPER WIRE TO CHECK IF THE GAUGE READS EMPTY.

XJ6 & XJ-S

ITEM: 27

00 WARRANTY CODE BOOK

To enable dealers to diagnose customer concerns of "brake pull" accurately, a new 4th digit code of "R" has been introduced into sections 6E and 6J of the XJ6 Warranty Code Book and section 6J of the XJ-S Warranty Code Book.

Dealers should amend their code books immediately to reflect this addition.

XJ6 3.2 & 4.0

ITEM: 28

03 REPAIR OPERATION TIME AMENDMENT

An error has been discovered within the XJ6 Repair Time Schedule Section 30-15, Exhaust Manifolds. The incorrect times have been issued and affect 3.2 and 4.0 catalyst non-EGR vehicles only. The correct times are as follows:

30-15-09	Exhaust Manifold Heatshield - Renew	0.20 Hrs
30-15-12	Exhaust Manifold Gasket - Engine Set - Renew	1.15 Hrs
30-15-20	Front Exhaust Manifold Gasket - Renew	0.95 Hrs
30-15-21	Rear Exhaust Manifold Gasket - Renew	1.00 Hrs
30-15-36	Front Exhaust Manifold - Renew	0.95 Hrs
30-15-37	Rear Exhaust Manifold - Renew	1.00 Hrs
30-15-38	Exhaust Manifold - Engine Set - Renew	1.15 Hrs

Please amend your Repair Time Schedules accordingly.

No other times are affected.

ALL V12 ENGINE VEHICLES**ITEM: 29****12 REVISED GASKET AND FIXING BOLT (FASTENER) PACKAGE**

A revised gasket and fastener package has been introduced on production for V12 engines to overcome complaints of oil leaks in service.

The package was fitted from the following engine numbers:

7P 67281	S. III
8S 86317	XJ-S
8W 10641	XJR-S 6.0L

The gaskets and fasteners are available from Jaguar Parts Operations and are all able to be retro-fitted to earlier engines. Where specified below, the correct fasteners **MUST** be used. The new fasteners are designed to reduce torque relaxation.

Part numbers and fitting details are as follows:

Oil filter mounting gasket: EBC 9624 replaces EAC 6337. EBC 9624 should be fitted without RTV sealant.

Sump gasket: EBC 9623 replaces EAC 7251. EBC 9623 should be fitted without RTV sealant and must only be used with fasteners JZS 100033 and JZS 100035 in place of C 37175/4 and BH 505141/J, respectively.

The fasteners should be torqued to 21–27 Nm. The dished serrated washer C 30075/2 should not be used.

Sump sandwich plate gasket: EBC 9637 replaces EAC 7252. EBC 9637 should be fitted without RTV sealant on split lines between the cylinder block and the timing cover and must only be used with fasteners JZS 100034 and JZS 100035 in place of SH 505081/J and BH 505141/J respectively. The fasteners should be torqued to 21–27 Nm. The dished serrated washer C 30075/2 should not be used.

"A" bank cam cover gasket: EBC 9627 replaces C 29428. EBC 9627 should be fitted without RTV sealant and must only be used with M6 bolts, Pt No FS 106251/J in place of SN 106251/J, torqued to 9.5–11.5 Nm.

"B" bank cam cover gasket: EBC 9628 replaces C 29429. All other details are as for the "A" bank cam cover gasket.

NOTE: RTV sealant should continue to be used on the rubber half-round seal located at the rear of the cam carrier.

Water rail gasket: EBC 9634 replaces C 30344. EBC 9634 should be fitted without RTV sealant.

Throttle body gasket: EBC 9635 replaces EAC 9759. EBC 9635 should be fitted without RTV sealant and with the tab on the gasket facing downwards.

Water pump elbow gasket: EBC 9636 replaces EAC 9805. The gasket should be fitted without RTV sealant and with the black side of the gasket to the pump body. This makes disassembly easier, should it be necessary.

Water pump gasket: (Between the 2 halves of the water pump) EBC 9630 replaces C 36542. EBC 9630 should be fitted without RTV sealant and grease should not be used to retain the gasket during assembly.

Water pump gasket – pump assembly to timing cover: EBC 9629 replaces C 29626. EBC 9629 should be fitted without RTV sealant and grease should not be used to retain the gasket during assembly.

Top cover gasket: (Also known as "Valley" gasket). EBC 9631 replaces C 29485. EBC 9631 should be fitted without RTV sealant or grease, with the black side of the gasket to the cylinder block. This makes disassembly easier, should it be necessary.

"A" bank timing cover gasket: EBC 9632 replaces EBC 3280.

"B" bank timing cover gasket: EBC 9633 replaces EBC 3281.

Timing cover top gasket: EBC 9625 replaces EBC 3282.

The three timing cover gaskets above must be fitted without RTV sealant or grease. After fitting the timing cover, the ends of the gaskets should be trimmed flush with the block, using a sharp knife.

All fixing bolts/screws and their torques, not mentioned above, remain as before.

XJ-S & S.III V12

ITEM: 30

12 OIL PUMPS

To improve quality, Jaguar is now using an alternative supplier for the V12 oil pump.

In most cases, the new pump can be used as a direct replacement with no modification to the block; however, in some cases, a foul condition may exist between the pump and certain areas of the old sand-cast block. To check for any foul condition, the pump should be offered in the correct position to the mounting bosses. If it lies flat against the bosses, the condition is correct. If the pump lies proud of the bosses, material should be removed from the foul area of the block (refer to shaded areas in Fig. 1 for possible foul areas) by careful use of a rotary file or similar implement.

WARNING: PROTECTIVE EYE WEAR MUST BE WORN WHEN USING ROTARY FILES.

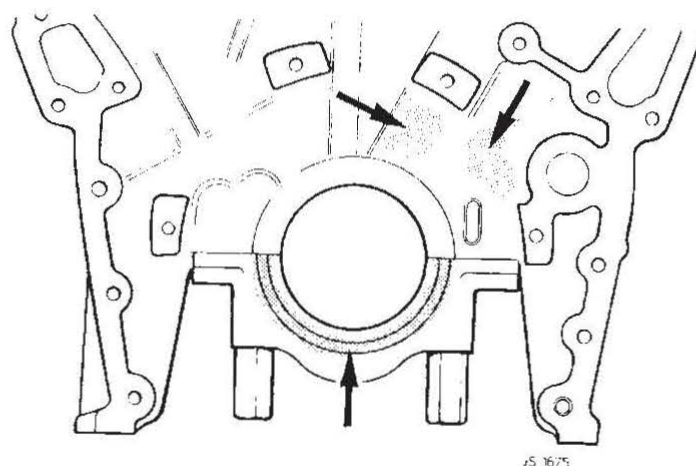


FIG 1

Care should be taken when removing material to ensure that swarf produced by the operation is completely cleared from the area and that no other part of the engine, i.e. crank, main bearing, is damaged during the operation.

In some cases, the new pump may appear to be seized or difficult to turn. This can be explained by "stiction", arising due to storage, and does not mean that the pump is damaged in any way.

If the pump does appear to be seized, 10 ccs of engine oil should be poured into the suction port and the inner rotor of the pump turned, using a suitable implement.

The repair method is as outlined in the relevant Service Manual. Note: the torque for the fixing bolts remains the same at: 21.5 – 28.5 Nm.

Service Tools are as outlined in the relevant Service Manual.

The new part number is EBC 3163 for the pump and EBC 4240 for the adaptor collar, which must be used in conjunction with the pump.

In addition, shorter fixing bolts must be used: 4-off Part No SH 505071J. The washers for the bolts remain the same, Part No C30075 2.

WARRANTY CODE: 1EA
REPAIR OPERATION CODE: SRO 12-60-26

ALL AJ6 ENGINES

ITEM: 31

12 CYLINDER HEAD EROSION

On removal of AJ6 cylinder heads for service work, it has been reported that in some cases a certain amount of erosion exists on the gasket face around the inlet side water jacket holes.

As a guide to whether the cylinder head should be changed, dealers should proceed as follows:

Clean the gasket mating face using fine emery cloth or a soft wire brush.

NOTE: CARE SHOULD BE TAKEN NOT TO SCORE OR DAMAGE THE SURFACE.

Make a paper template of the cored holes in the cylinder block that correspond with the affected water holes in the head. To orientate the template to the head water holes, include the cylinder head bolt holes on the template. (See Fig. 1)

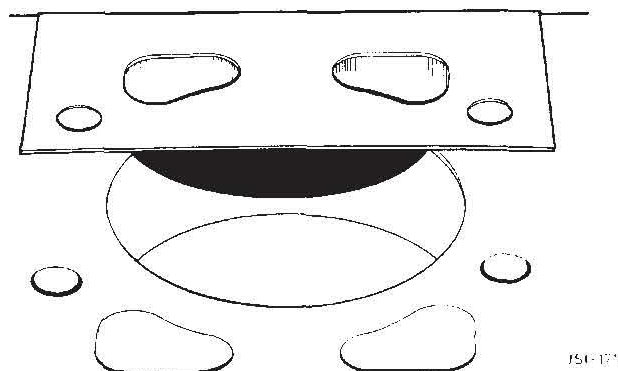
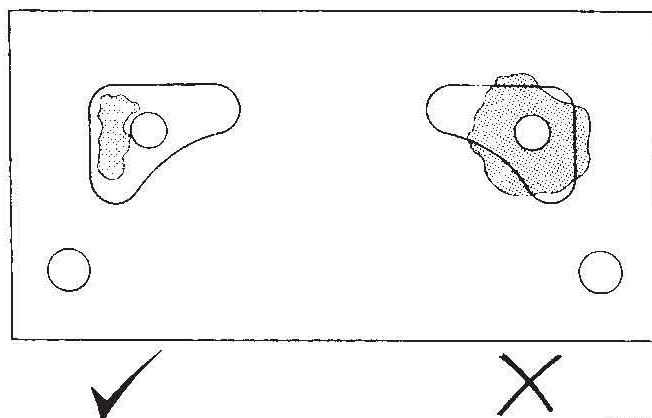


FIG. 1

Position the template on the cylinder head by aligning the cylinder head bolt holes on the template to those on the head.

ONLY IF THE EROSION ON THE HEAD OVERLAPS THE CORED HOLE CUT-OUTS SHOULD THE HEAD BE CHANGED.

If the erosion is within the cut-out the cylinder head should be refitted in the normal manner.



JSI-1718

FIG. 2

Dealers should ensure that Jaguar coolant / anti-freeze / corrosion inhibitor is used in the cooling system at the correct concentration, or, where this is not available, phosphate-free anti-freeze to BS 6580 should be used.

NOTE: CYLINDER HEADS SHOULD NOT BE REMOVED TO LOOK FOR THIS CONDITION. THE ABOVE SHOULD ONLY BE NECESSARY WHEN THE CONDITION IS NOTICED ON REMOVAL OF A CYLINDER HEAD FOR OTHER REPAIR WORK.

AJ6 ENGINES

ITEM: 32

12 DISTRIBUTOR / ROTOR ARM – SETTING GAUGE

Initial setting of the distributor body and rotor arm may be carried out with Service Tool JD 189 as follows:

Unclip and remove the distributor cap (H.T. leads remain connected).

Set the engine to T.D.C., firing on No.1 cylinder (rotor arm at approx. 5 o'clock).

Slacken the distributor clamp bolt.

Fit Service Tool JD 189 ((setting gauge) Fig. 1) to the distributor body.

Adjust the distributor body to enable the tool to engage the distributor body and rotor arm (Fig. 2).

Tighten the distributor clamp bolt.

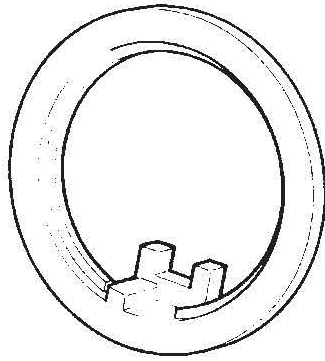


FIG. 1

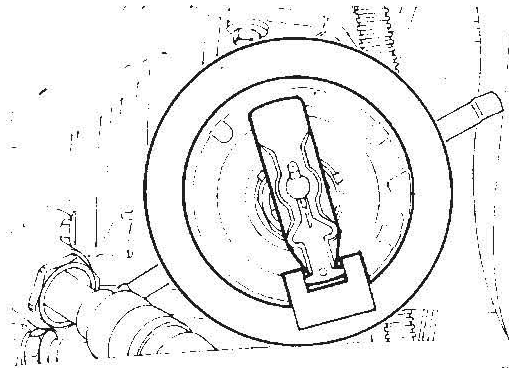


FIG. 2

Remove tool JD 189, setting gauge.

Fit the distributor cap and clamp with the securing clips.

XJ6

ITEM: 33

76 DASH LINERS R/H & L/H

Problems associated with the cosmetic appearance, fit and removal of the dash liners have prompted the following corrective actions.

To assist removal and prevent damage to the dash liner pads, a removal tool JD 188 and Service Bulletin JD 02/92 Item 13 have been issued to all Jaguar Dealers / Importers.

The visual appearance of the facia glovebox lid hinges has been improved on all vehicles built from VIN 658676. Hinges fitted to cars from this VIN are now finished in black.

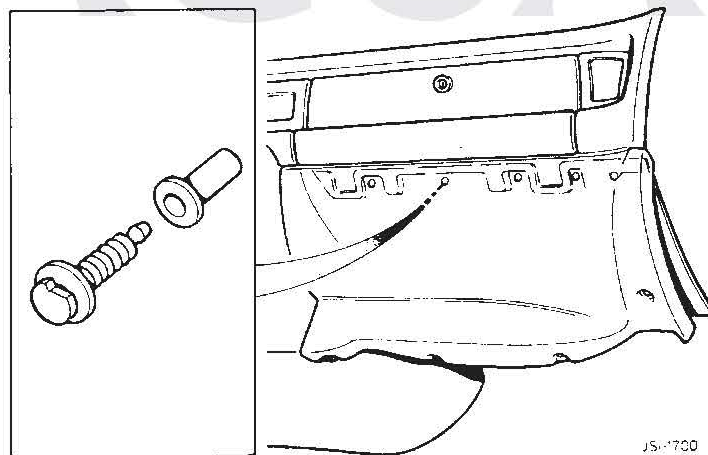


FIG 1

When renewing / refitting a dash liner, the only fixings that should currently be used are the stud fastener push-in fixings (Part No AGU 1425). These should be used in conjunction with the stud anchor plastic retainers (Part No AJU 1136).

NB: The fixings identified above are the only ones that should be used to secure dash liners. Any other fixing currently being used for this purpose should be discarded IMMEDIATELY.

WARRANTY CODES

8RG Dash Liner Driver's side

8RH Dash Liner Passengers' side

REPAIR OPERATION CODES

SRO 76-41-11

SRO 76-46-15

XJ-S

ITEM: 34

76 BONNET – LOCKING GAS-FILLED SUPPORT STRUTS

To provide a positive method of supporting the XJ-S bonnet when in the fully open position, a locking support strut is now fitted to the L.H. side of all bonnets from VIN 184672. This revised strut has been designed to be retrofittable to all XJ-S vehicles.

PROCEDURE FOR OPENING / CLOSING:

- * The method of opening the bonnet has not changed, however the bonnet should be opened fully to engage the locking strut.
- * To close the bonnet: pull the bonnet down slightly, then push it fully open to disengage the lock, then lower the bonnet and close as normal.

SERVICE REPLACEMENT:

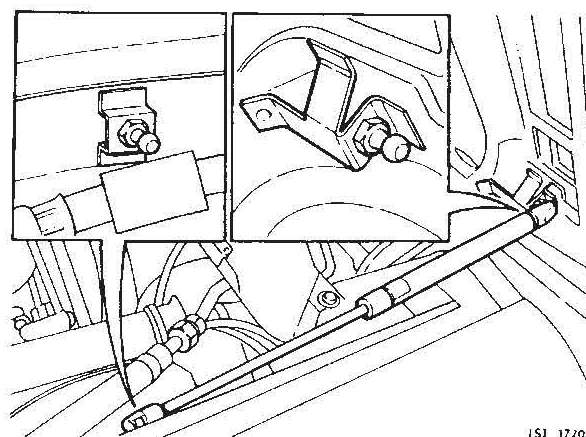
To fit this new strut to existing vehicles, the following parts will be required.

PARTS:

BEC 15544	L.H. gas strut – locking	1 off
BEC 13584	Ball pin	2 off
BEC 17641	Label – underbonnet closing	1 off

FITTING INSTRUCTIONS:

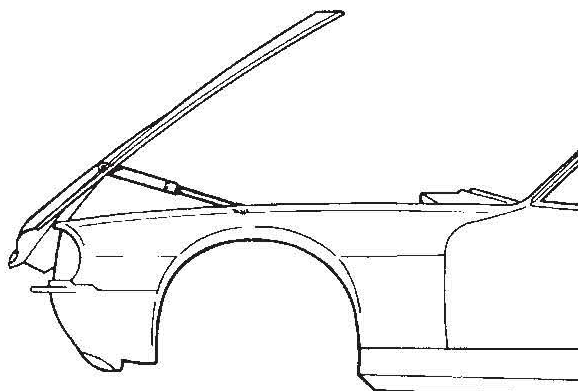
- * Unlock the bonnet and support it in the fully open position – use a wooden wedge.
- * Unbolt and remove the L.H. strut. Discard this strut and its securing bolts.



JS1 1720

FIG 1

- * Refer to Fig 1. Fit the "Ball Pin" strut mountings into the mounting brackets on the bonnet and the inner wing. Secure by applying a torque of 10 Nm minimum to 12 Nm maximum.

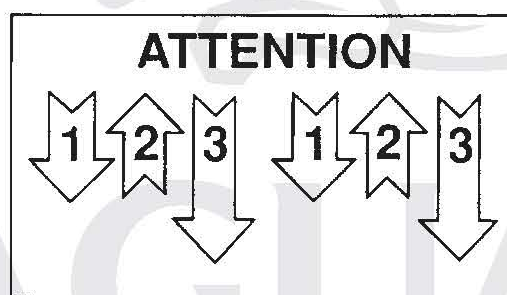


JS1 1721

FIG 2

- * Refer to Fig 2. Mount the lockable strut as shown.

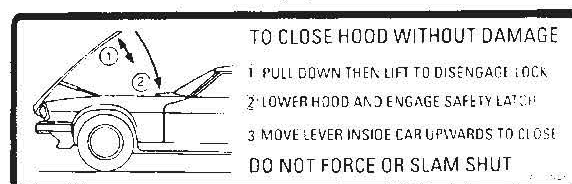
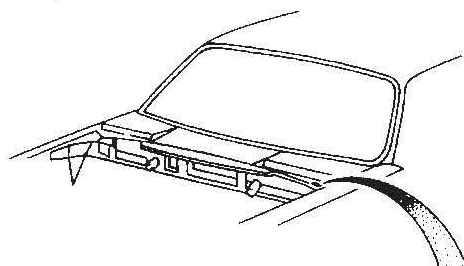
Note: This strut has a bright red warning label, showing the method of operation – Refer to Fig 3.



JS1 1723

FIG 3

- * Remove the bonnet temporary support.
- * Test bonnet open / close function.



JS1 1726

FIG 4

- * Refer to Fig 4. Fit bonnet open / close warning label to the left-hand side of the vehicle exactly as shown.

NOTE: From VIN 184672 both L.H. locking and R.H. non-locking struts will be fitted into the vehicle using the "Ball Pin" swivel mountings.

PARTS DETAILS:

The following parts are fitted to all XJ-S models from VIN 184672. All of these parts are retrofittable.

PART NOS	DESCRIPTION	QUANTITY / VEHICLE
BEC 15544	L.H. bonnet gas strut locking	1 off
BEC 13515	R.H. bonnet gas strut	1 off
BEC 13584	Ball pin	4 off
BEC 17641	Label – underbonnet closing	1 off

APPLICABLE WARRANTY CODES AND SRO:

WARRANTY CODE: R.H. Strut 9CK
L.H. Strut 9CL

SRO: 76-16-14

XJ6

ITEM: 35

82 HEATER TO AIR CONDITIONING RETRO-FIT CONVERSION

Further to Service Bulletin JD 02/92, Item 15, the following comprehensive air conditioning retro-fit kits are now available.

All kits contain the necessary parts for conversion for the relevant model year and vehicle specification and supplementary parts are not required.

JLM 10639 A/C Kit – 91 MY from VIN 629285

JLM 10755 A/C Kit – 90 MY from VIN 607111 to 629284

JLM 10796 A/C Kit – 88 – 90 MY 2.9 after Engine No. 107821
3.6 after Engine No. 106424

JLM 10797 A/C Kit – 2.9 from 1986 to Engine No. 107821

JLM 10798 A/C Kit – 3.6 from 1986 to Engine No. 106424

XJ6 & XJ-S

ITEM: 36

86 HIRSCHMANN ELECTRICAL AERIAL

There has been a recent increase in the number of Hirschmann electrical aerial assemblies replaced, following complaints of abnormally slow operation of the telescopic mast.

Investigations have confirmed that the cause was a change to the carbon brush assembly composite, introduced by the supplier following some minor concerns with brush / commutator noise.

Our supplier has now revised the carbon brush specification to address the concern.

Aerials to the latest condition are identified by a "green spot" on the motor housing and were progressively introduced from VINs:

659651 – XJ6
183682 – XJ-S

Parts Operations' stock has been reworked to the latest level and may also be identified by a "green spot".



Service Bulletin



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ISSUE 2

OCTOBER 1992

PAGE 1 OF 2

S.R.O: 12-29-00

MODEL : AJ6 ENGINES, 3.2, 3.6 & 4.0 ONLY
SUBJECT : EXHAUST VALVES BURNING
CUSTOMER CONCERN : Misfire and poor running of engine owing to exhaust valve(s) burning.

ADVICE TO CUSTOMER : Investigations have revealed that the cause of exhaust valves burning is carbon build-up on the valve seat, preventing adequate sealing during combustion.

Carbon build-up can be greatly reduced by fitting valve guide oil seals to the exhaust valves as well as to the inlet valves, thereby preventing burning. The seals will also help to improve exhaust emissions. Exhaust valve guide oil seals have been fitted on production from the following engine numbers:

4.0 litre: 163523 3.2 litre: 111315

DEALER ACTION : Renew the burnt exhaust valve AND the unaffected exhaust valve for that particular cylinder.
Renew any other suspect valves, as necessary.
Renew the inlet valve guide oil seals and fit oil seals to all of the exhaust valve guides.
Lightly lap in ALL valves and re-set valve clearances.

REPAIR METHOD : The method for carrying out the repair is outlined in Section 12 of the relevant Service Manual.

Note: The inlet valve guide oil seals should be replaced as part of the repair operation.

SERVICE TOOLS : As outlined in the Service Manual.

PARTS INFORMATION : Cylinder head gasket kit, JLM 11088
(This kit includes 24 off valve seals and new head gasket, EBC 10256)

ADMINISTRATION
INFORMATION: WARRANTY CODES

- * 1LKB

REPAIR OPERATION CODE AND TIME

- * For vehicles in warranty, the following labour times may be claimed:

- * XJ6 16.55 hours
- * XJS 4.0 18.00 hours

This includes time for:

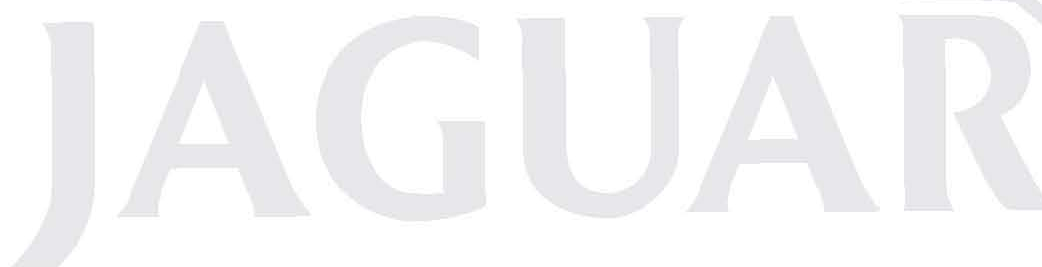
Replacing the affected valve and the unaffected exhaust valve in that particular cylinder.

Replacing any other suspect valves, as necessary, and lapping in ALL valves.

Renewing inlet valve seals and fitting the new exhaust valve seals.

Re-setting all valve clearances.

- * Claims should be submitted quoting SRO 12-29-00 and
- * Warranty Complaint code 1LKB.



JAGUAR

Service Bulletin



ISSUE NO: JD 02/93

JANUARY 1993

SHEET: 1 OF 1

S.R.O: 12-29-01

MODEL : XJ6 3.2 / 3.6 / 4.0, XJS 3.6 / 4.0
SUBJECT : CYLINDER HEAD GASKET
CUSTOMER CONCERN : Gasket material burning between bores.
ADVICE TO CUSTOMER : A revised cylinder head gasket, manufactured from material able to withstand higher temperatures, is now available, which should prevent the problem recurring.
DEALER ACTION : Replace the failed cylinder head gasket with EBC 10256. (Also available as part of cylinder head gasket set JLM 11088)

Lubricate the header tank pressure cap sealing washer, between the washer and the pressure cap, with Silicon fluid. This helps the washer to seal against the header tank filler neck, without having to exert undue turning force on the pressure cap.

Ensure that the cooling system is pressurising sufficiently; the pressure cap is designed to vent between 1 and 1.25 Bar. If the system is not reaching the desired pressure, check that the sealing face of the header tank filler neck is in good condition. If so, either replace the pressure cap or insert an extra sealing washer into the cap.

Ensure that there is no blockage of the water-ways in the cylinder block or head.

Check the cylinder head and block face for flatness and damage (See Parts Information).

Note: Clean up the head and block faces using fine emery cloth or a soft wire brush, taking care not to damage the faces.

Ensure that engine set up is correct using JDS where possible.

SERVICE TOOLS : See relevant Service Manuals.

PARTS INFORMATION : Cylinder head gasket kit, Part No: JLM 11088
Silicon fluid: (e.g. Dow-Corning Molykote III or Kluber Unisilikon L250L)

Note: From engine numbers 165056 (4.0) and 111546 (3.2), 4 extra cooling holes have been added to the cylinder head and block gasket faces between bores 1-2, 2-3, 4-5, and 5-6, on the exhaust side, to aid localised cooling of the area between the bores.

The revised head and/or gasket, i.e. with the cooling holes, can be fitted to any 3.2, 3.6 or 4.0 engines, however, the revised cylinder block must only be used with the revised head and gasket. Only gasket EBC 10256 should be used with the new cylinder head and/or block. Previous head gaskets must not be used. Failure to do so could lead to excessive overheating due to trapped air being unable to bleed from the system.

DAMAGE TO CYLINDER HEAD OR BLOCK AS A RESULT OF THE HEAD GASKET BURNING:

The cylinder head should be checked for flatness as a matter of course. Bow should not exceed 0.003 inch (0.077 mm) measured from end to end.

Damage between the bores, i.e. erosion or scoring, should not be sufficient to prevent the head gasket from sealing correctly (See also Service Bulletin JD 07/92, Cylinder Head Erosion).

If bow, damage or erosion is excessive, the cylinder head may be re-surfaced **PROVIDING THE FOLLOWING CRITERIA ARE ACHIEVED:**

Minimum head thickness, measured between the gasket face and cam cover face, should not be less than:

5.101 inch (129,57mm) for 3.6

5.108 inch (129,76mm) for 3.2/4.0 and

5.064 inch (128,63mm) for 4.0 JaguarSport.

The faces should be parallel to 0.002 inch (0.05mm).

The surface finish should exceed 1.6 micron.

If the cylinder block is damaged between adjacent bores, between bore and water jacket, or the cylinder liners are no longer flush with the block face, then the cylinder block should be changed.

RE-SURFACING OF THE CYLINDER BLOCK IS NOT RECOMMENDED.

**ADMINISTRATION
INFORMATION**

: **WARRANTY CODES: 1KTB/1KTC**
FOR VEHICLES IN WARRANTY, CLAIMS SHOULD BE SUBMITTED QUOTING:

SRO 12-29-01, 4.45 Hours for XJ6

SRO 12-29-01, 5.25 Hours for XJS

Service Bulletin



DATE: FEBRUARY 1994

PAGE 1 OF 7

REF: JD 07/94

00 ERRATUM

PLEASE NOTE THE FOLLOWING ERRATUM IN SERVICE BULLETIN JD 43/93

JD 43/93 dated December 1993, Page 2, line 16:

This line SHOULD read:

(Part Nos. C 2243A to C 2243X).

Please amend the original Service Bulletin accordingly.

XJ6 & XJ12 FROM VIN 593884

ITEM 04

03 REPAIR OPERATION TIMES - ADDITIONAL

The following Service Repair Operation is now available for replacing the vehicle set of wishbone bushes and is applicable to vehicles from VIN 593884:

60-35-29 Upper & Lower Wishbones - Vehicle Set - Strip & Rebuild

4.85 Hours

Please amend your Repair Time Schedule accordingly.

No other Repair Times are affected.

ALL JAGUAR AND DAIMLER MODELS WITH V12 ENGINE

ITEM: 05

12 TIMING CHAIN TENSIONER ACCESS GROMMET

Whenever the access grommet to the timing chain tensioner of a V12 engine is refitted, both the grommet and its location in the timing cover should be cleaned, to remove all traces of oil.

A bead of RTV sealant should be applied between the ridges of the grommet, which will prevent any possibility of an oil weep from the grommet area.

Jaguar Cars Limited

ALL WITH AJ6 ENGINE**ITEM: 06****12 AJ6 ENGINE SUMP DRAIN PLUG - REVISED TORQUE SETTING**

The torque setting for the sump drain plug on ALL AJ6 engines has been reduced from 65 - 79 Nm to:

Revised torque setting: 48 - 63 Nm.

This revised setting should be used whenever a sump drain plug is refitted.

Ensure that the latest pattern of washer, incorporating a rubber sealing ring, is used when refitting a drain plug. (Part No. EBC 9044 available via Jaguar Parts Operations).

In production, engines assembled with the revised torque setting are fitted from approximately VIN 684700 (XJ6) and VIN 189150 (XJS).

**ALL WITH AJ6 ENGINES
PRIOR TO VIN 677386 (XJ6)
PRIOR TO VIN 187754 (XJS)**

ITEM: 07**12 CYLINDER HEAD EROSION**

**THIS SERVICE BULLETIN SUPERSEDES THE ENTIRE CONTENTS OF
SERVICE BULLETIN JD 08/92 ITEM 31**

Where the cylinder head of an AJ6 engine has been removed in the course of a Service Repair Operation, it may be noticed that a certain amount of erosion to the cylinder head face has occurred around the coolant passages of the cylinder head, forming irregular cavities.

Provided that the eroded area (condition C, Fig.1.) does NOT extend into the area occupied by any firing ring, (Item 'A', Fig 1.), of the head gasket, using a head gasket as a template; a repair can be effected and there is no need to replace the cylinder head.

Where erosion has resulted in the formation of cavities in less critical areas around the coolant passages, (condition D, Fig. 1.), repair of the cylinder head should be undertaken. Careful filling of the cavities to restore the cylinder head face to its original surface profile may be undertaken by means of a proprietary 'Plastic Metal' (eg 'BELZONA'). A suitable product will be available shortly from Jaguar Parts Operations under Part No. JIM 11719.

IMPORTANT: CYLINDER HEADS SHOULD NOT BE REMOVED TO LOOK FOR THIS CONDITION. THE ABOVE ACTION SHOULD ONLY BE NECESSARY WHEN THE CONDITION IS NOTICED ON REMOVAL OF A CYLINDER HEAD FOR OTHER REPAIR WORK.

TECHNICAL BACKGROUND

On engines prior to VIN 677386 (XJ6) and VIN 187554 (XJS) the foundry practices involved in the manufacture of the cylinder head and the cylinder block resulted in elongated cored coolant passages at the upper face of the cylinder block, facing small diameter drilled passages in the cylinder head, separated by the gasket. Coolant flow between cylinder block and cylinder head is controlled by the diameter of the holes in the cylinder head gasket (Item B, Fig. 1.)

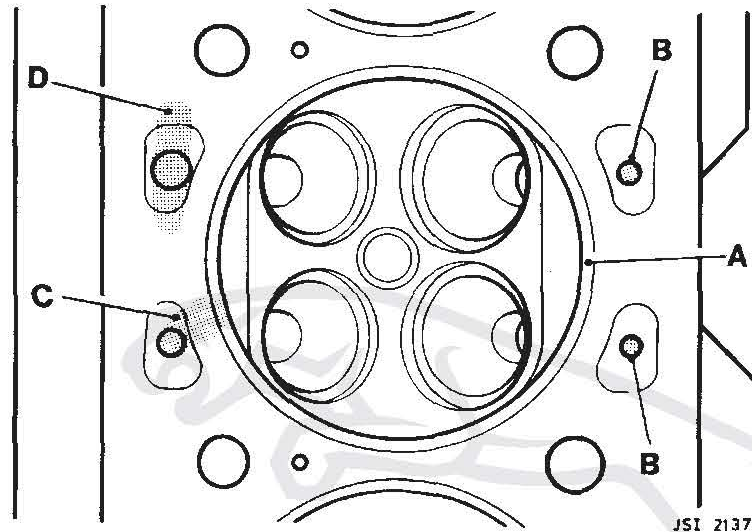


Fig. 1.

In service, the material of the head gasket 'collapses' into the larger cored passage of the cylinder block, leaving a gap between the cylinder head and the gasket, surrounding one or more coolant passages. Coolant in this gap may, in certain circumstances, boil locally and cause erosion of the cylinder head material.

From the above VINs, the coolant apertures in the cylinder head have been enlarged to correspond with the apertures in the cylinder block; hence coolant can no longer be trapped between the cylinder head gasket and cylinder head face.

REPAIR METHOD

On a cylinder head on which erosion, within the above permissible limits, has occurred, the cavities should be filled with a suitable 'Plastic Metal'. It is desirable that such infilling should restore the eroded area to be flush with the machined face, such that any re-machining of the face is unnecessary. However, should it become impossible to maintain the required surface finish and dimensions without machining, reference should be made to Service Bulletin JD 02/93 (Issued January 1993) for full details of sizes, limits, surface finish etc.

IMPORTANT: EXCESSIVE REMOVAL OF MATERIAL FROM THE CYLINDER HEAD FACE MAY LEAD TO PINKING/DETONATION PROBLEMS.

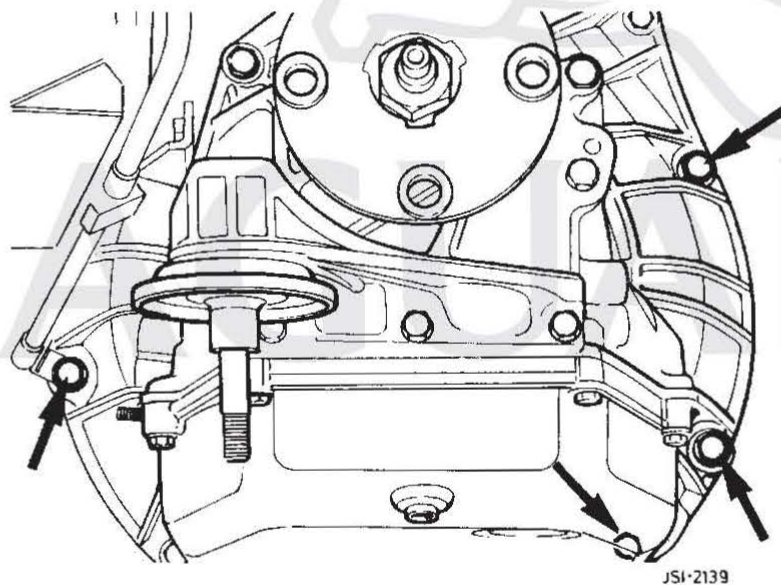
Note: On rebuilding the engine, ensure that the cooling system contains the correct mixture of Jaguar Anti-Freeze/Coolant/Corrosion Inhibitor (See relevant Service Manual, Section 26, 'Description and Anti-Freeze').

XJ6 & XJS 4.0 LITRE 1994 MODEL YEAR
XJ6 3.2 LITRE 1994 MODEL YEAR

ITEM: 08

44 TRANSMISSION FIXING BOLTS

On a number of the above models, manufactured during November and December 1993, four of the ten bolts which fix the automatic transmission convertor housing to the intermediate plate have been found to be of incorrect material specification. The bolts concerned are indicated by arrows in the illustration below.



The suspect bolts are black in colour; if refitted in the course of a service repair operation involving the separation of the transmission from the engine, they would be likely to suffer thread stripping when tightened to the upper limit of recommended torque.

Should the occasion arise to separate the transmission from the engine in the course of a service repair operation, the affected bolts should be replaced by bolts of correct specification. Tests have indicated that there is little likelihood of the affected bolts failing in service.

IMPORTANT: TRANSMISSION UNITS SHOULD NOT BE REMOVED TO LOOK FOR ANY CONCERN. REPLACEMENT OF THE BOLTS CONCERNED IS ONLY REQUIRED AS A PRECAUTION IN THE EVENT OF MAJOR SERVICE REPAIRS.

Vehicles affected may only be recognised by Engine Number, within the ranges:

XJ6 & XJS 4.0 Litre: Engine No. 9E 185496 to 9E 186799
XJ6 3.2 Litre: Engine No. 9B 116832 to 9B 117005

Replacement bolts should be ordered via Jaguar Parts Operations:

Washer-faced bolt. Part No. FB 110125 J. Qty/Vehicle 4.

ANY DISPLACED PARTS SHOULD BE RETURNED TO JAGUAR WARRANTY RETURNS AT BAGINTON, THROUGH THE NORMAL CHANNELS. FAILURE TO DO SO MAY RESULT IN THE CLAIM FOR THE ABOVE PARTS BEING DEBITED.

Torque Setting:

Bolt, Convertor Housing to Intermediate Plate: 49 - 54 Nm.

JAGUAR & DAIMLER XJ6 AND XJ12 1994 MY ALL VARIANTS
FROM VIN 687219

ITEM: 09

76 FRONT FOOTWELL CARPETS - FITTING PROCEDURE

Additional to the information in Service Bulletin JD 38/93 Item 40, a further improvement to the method of retention of front footwell carpets on 1994 MY Saloon models has been introduced.

Both versions are described and illustrated in this Service Bulletin.

Note: In both cases, correct fitment of the carpet within the footwell is essential to eliminate the possibility of subsequent displacement of the carpet.

FROM VIN 687219 TO VIN 697999

Introduced as a first improvement for 1994 Model Year vehicles, the rear edge of both the Driver's and Passenger's footwell carpet (Item 'B', Fig.1.) has a 'J' section plastic strip (Item 'A', Fig.1.), which engages with a corresponding section (Item 'C', Fig.1.) fixed to a bracket on the front of the Seat ECU cover.

CARPET FITMENT PROCEDURE - DRIVER'S SIDE

In a new vehicle, ex-factory, the Driver's side carpet is fitted in the front footwell, and is enclosed within a plastic covering which provides protection during vehicle delivery and PDI. During final preparation of a new vehicle for the customer, the following action should be taken to ensure correct fitting:

1. Remove the Driver's side carpet from the footwell.
2. Remove the plastic protective covering.
3. Fold the carpet in half, and centralise it in the footwell.
4. Lift the rear edge of the carpet; align and fully engage the plastic 'J' section strip on the carpet to the metal bracket on the front of the seat ECU cover. (See Fig. 1.)
5. Align the carpet to the footwell; smooth the carpet flat into the footwell, particularly at the rear and sides of the carpet.
6. Fit the forward edge of the carpet under the control pedals, ensuring that the cut-out in the carpet is correctly aligned over the kick-down switch to provide the required clearance.

Where the carpet is being refitted to a vehicle in service, or should it be necessary to fit a replacement carpet, items 3-6 above should be observed to ensure correct fitment.

CARPET FITTING PROCEDURE - PASSENGER'S SIDE

The carpet on the Passenger's side of the vehicle is similarly retained at the rear edge. Ensure that on a vehicle being prepared for the customer that the carpet has remained correctly fitted during the delivery cycle. Items 3-5 above should also be observed when refitting a carpet, or when fitting a replacement carpet.

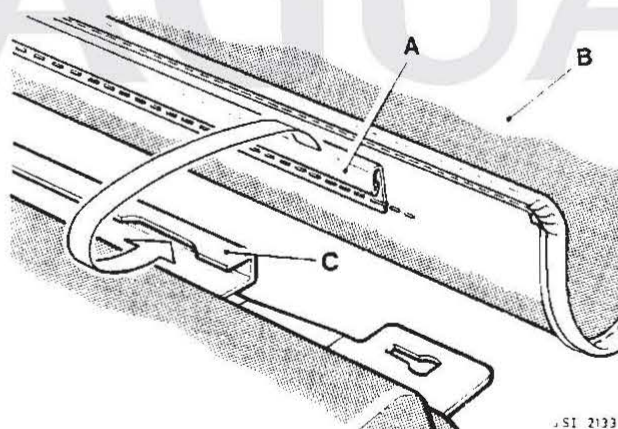


Fig. 1.

FURTHER IMPROVEMENT TO 1994 MY VEHICLESFROM VIN 698000

From the above VIN, the rear edges of both Driver's and Passenger's side carpets are similarly retained by flat plastic strips (Item 'A', Fig.2) engaging in brackets on the front of the seat ECU covers, (Item 'C', Fig.2.). In addition, a strip of 'VELCRO' fastening (Item 'D', Fig.2.) is fitted to the outer ends of both carpets, with a corresponding strip fitted to both ECU covers (Item 'E', Fig.2.), thus providing additional security to the footwell carpet location.

CARPET FITTING PROCEDURE

During final preparation of a new vehicle, or when refitting a carpet or fitting a replacement carpet, the procedure outlined previously should be observed.

In addition, however, ensure that the 'VELCRO' strips (Item 'E', Fig.2.) at the outer edges of both front carpets are fully engaged to the corresponding strips on the ECU covers, after having correctly located the plastic retaining strips to the brackets and aligned each carpet within its footwell.

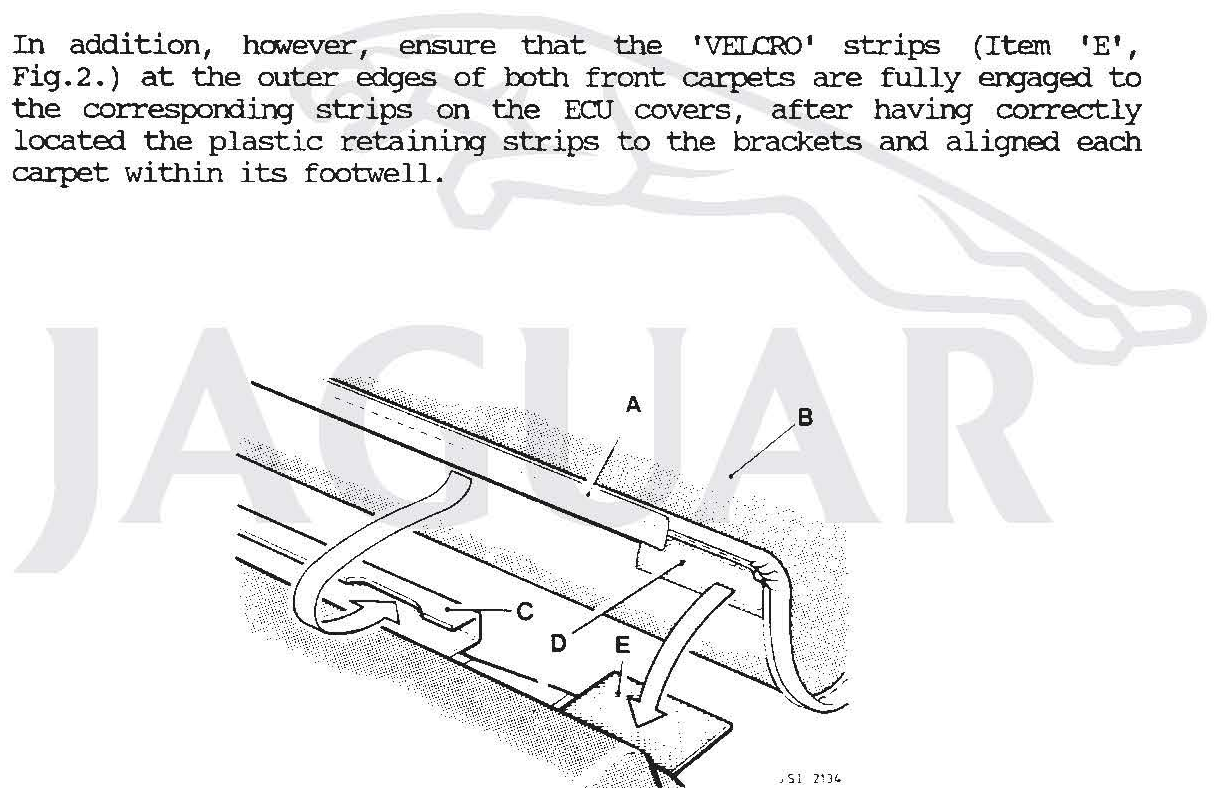


Fig. 2.

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REF: JD 15/94

XJ6 3.2 & 4.0 LITRE 1993 MY VIN 667829 ONWARDS

ITEM: 12

03 REPAIR OPERATION TIME - AMENDMENT

The following Repair Operation Time is amended. Please amend your Repair Operation Time Schedule accordingly.

57-10-01 Power Steering Rack - Renew 1.85 hours

XJ12 6.0 LITRE 1993.25 MY VIN 673299 ONWARDS

ITEM: 13

03 REPAIR OPERATION TIME - AMENDMENT

The following Repair Operation Time is amended. Please amend your Repair Operation Time Schedule accordingly.

57-10-01 Power Steering Rack - Renew 2.00 hours

ALL JAGUAR AND DAIMLER MODELS WITH AJ6 OR V12 ENGINES

ITEM: 14

12 REVISED OIL FILTER

As a running change, a revised pattern of oil filter canister, common to both AJ6 and V12 engine ranges, has been introduced in production.

The revised pattern of filter assists in preventing drain-back of oil when the engine is stationary, thus ensuring that the lubrication system is already primed as the engine is started.

In addition, the oil filter canister is provided with a series of flats at its outer end, which enable Oil Filter Removal/Replacement Tool (Snap-on YA 992) to be utilised to assist removal of an expired filter, which may otherwise be difficult to unscrew after prolonged running in service.

continued../

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The same tool must also be used when fitting a replacement oil filter, when it will enable achievement of the correct rotation of the filter body - 3/8 to 1/2 turn further, after initial contact between the filter seal and the housing - thus eliminating any likelihood of an oil weep at this point. Wherever possible, this final rotation should be carried out using a torque wrench, set to:

13.5 - 16.0 Nm (10 - 12 lb.f/ft.)

The latest pattern of oil filter is available via Jaguar Parts Operations, under Part No. EBC 9658.

Where Dealers have stocks of the previous oil filter Part No. EAC 1467 it is suggested that these are used when undertaking routine servicing on AJ6 engines, with the new filter EBC 9658 being used initially on V12 engines, where more difficult access has previously resulted in cases of inadequate tightening of the filter canister to the housing, with resultant incidents of oil weeps or leakage.

Part No. EBC 9658 may be used on ANY engine in the AJ6 or V12 range, irrespective of the Model Year of the vehicle.

Note: This Service Bulletin is NOT an instruction to change existing oil filters. Filters should only be replaced as recommended at routine service intervals, or where a concern has developed.

**JAGUAR & DAIMLER XJ6 & XJ12 1994 MY ALL VARIANTS
RUNNING CHANGE**

ITEM: 15

19 FUEL TANK DRAIN PLUG

Owing to restricted access, which renders the draining of fuel from the tank via the drain plug difficult without fuel splashing and spillage, the fuel tank drain plug is deleted from VIN 695577.

**JAGUAR & DAIMLER XJ6 & XJ12 ALL VARIANTS 1993 MY ONWARDS
FROM VIN 667829**

ITEM: 16

86 EARTH STRAP - ENGINE TO CHASSIS

The earth strap connecting the engine/transmission assembly to the vehicle chassis, Part No. DBC 10684, is designed to be used ONCE ONLY.

The eyelet at the chassis end of the earth strap is serrated, and together with a 'Paint Clearance' bolt at this point ensures that a good earth connection is made through the painted surface. The serrations are, however, effective once only.

Should the earth strap be unbolted from the chassis, it must ALWAYS be replaced by a new earth strap, as indicated on the warning label attached to the strap.

Whenever possible, where it is necessary to remove the engine or transmission from the vehicle, the earth strap should be unbolted at the engine/transmission end, thus leaving the strap in situ and overcoming the necessity to replace it, as above.



Service Bulletin



DATE: MARCH 1994

PAGE: 1 OF 3

REF: JD 19/94

SRO: 12-91-14

MODELS : ALL XJ6 & XJS WITH AJ6 ENGINE

SUBJECT : ENGINE OIL LEAK FROM ALTERNATOR MOUNTING BRACKET
FIXINGS

CUSTOMER CONCERN : Oil leak from front engine area.

BACKGROUND : Oil leakages from the Front LH side of the sump may
be found to originate from the alternator mounting
bracket bolts. Of these four bolts, two enter
threaded blind holes in the sump housing and the
other two penetrate through into the sump itself.

In production, from VIN 686340, 'Loctite 542' has
been applied to all threads in order to seal them.

DEALER ACTION : Yes, where necessary.

REPAIR ACTION : Seal all bolts with 'Loctite 542'.

WORKSHOP PROCEDURE

For vehicles already in Service prior to the above
VIN:-

Ensure that the radio code is available; disconnect
the battery.

Open the bonnet and fit wing covers.

Raise the vehicle on a suitable '4 post' ramp.

Raise the front end of the vehicle and support on
two stands, the front wheels raised 150mm (6 ins)
clear of the ramp. (This allows engine oil to drain
to the rear of the oil sump, clear of the bolt
holes.)

Slacken the alternator pivot bolt.

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Slacken the bolt which secures the alternator drivebelt adjuster trunnion to the alternator.

Remove the nut securing the adjuster eyebolt to the front cover stud.

Slacken the alternator drivebelt adjusting nut and slacken the drivebelt.

Finally remove the nut securing the trunnion to the alternator. Displace and remove the drivebelt adjuster assembly and remove the drivebelt.

Displace the alternator from the mounting bracket, supporting it on a suitable block of wood.

Note: Do not allow the alternator cables to support the weight of the alternator.

Undo and remove the bolts which secure the alternator lower mounting bracket to the engine sump.

Displace and remove the mounting bracket.

Using a suitable solvent and a 'bottle'-type brush, clean out any residual engine oil from the four holes in the sump and blow out the holes using an airline.

Similarly, using a clean cloth and a 'bottle'-type cleaning brush, apply 'Loctite Primer' or other propriety degreasing/cleansing fluid to the holes. Allow to dry.

IMPORTANT: THE HOLES MUST BE THOROUGHLY DEGREASED, OTHERWISE THE 'LOCTITE' 542 WILL NOT CURE TO CREATE AN EFFECTIVE SEAL.

Thoroughly clean and dry the lower mounting bracket and the sump mating face.

Thoroughly clean and degrease the original bolts and apply 'Loctite 542' evenly to the first five threads.

Realign the alternator mounting bracket to the engine sump.

Fit and tighten the bolts.

Torque Setting = 21.5 - 28.5 Nm

Offer up the alternator to the mounting bracket.

Fit (but do not fully tighten) the alternator pivot bolt.

Refit the drivebelt to the alternator.

Fit and align the drivebelt adjuster assembly.

Fit (but do not fully tighten) the nut which secures the eyebolt to the front cover stud.

Fit (but do not fully tighten) the bolt which secures the trunnion to the alternator.

Correctly tension the alternator drive belt by tightening the drivebelt adjuster nut and tighten the adjuster locknut.

Finally tighten: the alternator pivot bolt, the bolt securing the alternator adjusting trunnion to the alternator and the nut securing the eyebolt to the front cover.

Lower the vehicle.

Remove the wing cover and close the bonnet.

Reconnect the battery; re-code the radio and reset the clock.

PARTS INFORMATION	:	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY/VEH</u>
		Loctite 542	JLM 1746	A/R

ADMINISTRATION INFORMATION	:	<u>WARRANTY CODE</u>
		1JKB

<u>REPAIR OPERATION CODE</u>	<u>TIME ALLOWANCE</u>
SRO: 12-91-14	0.70 Hours

Service Bulletin



Date AUGUST 1984
Sheet 1 of 6
Bulletin JD 08/84

ITEM 61

10 VEHICLE MAINTENANCE SHEETS

SERIES III/XJS

In the new edition of the above, (part numbers listed below), item 65 "Change coolant ensuring the correct grade of antifreeze concentration" is shown as a 24,000 km (15,000 miles) requirement, this is incorrect and as there is no change to policy, the figure of 48,000 km (30,000 miles) should be added against this operation.

In the next print the mileage intervals will be added and corrections made.

The part numbers of the sheets are as follows:—

AKM 9116	English
AKM 9110	French
AKM 9109	German
AKM 9111	Italian
AKM 9112	Spanish
AKM 9118	Dutch

ITEM 62

12 OIL FILTER HOUSING GASKET

ALL MODELS

A new oil filter housing gasket has been introduced to overcome the possibility of oil loss at the housing face.

The new gasket was introduced at the following engine numbers:

8S 28087	XJS
7P 49704	XJ12
8L 157225	4.2
8A 15012	3.4
7M 4858	Limo

The part numbers of the new gasket are:

EAC 6336	4.2 & 3.4
EAC 6337	XJS & XJ12
EAC 6338	Limo

12 OIL FILTER HEAD

XJ6 3.4/4.2

Since the introduction of the engine oil cooler on XJ6 saloons, the oil filter head used on pre-oil cooler engines, Part No. EAC 1669, is no longer available.

Should it be necessary to replace an oil filter head, EAC 1669, which was used up to engine numbers:—

8L 102220	4.2
8A 11903	3.4

Then the following parts should be used:—

Oil filter head	EAC 3144
Gasket	EAC 2429
Camshaft feed pipe	EAC 2430
Bolt	BH 605161 (4)

It will be necessary to relocate the oil pressure transmitter to:—

4.2 litre models: The position occupied by the first gallery plug to the rear of the oil filter head.

3.4 litre models: The position occupied by the anti-run-on valve switch (to the rear of the oil filter head).

Using the following items:—

Banjo bolt	C.44282
Copper washer	C.2296/3 (2)
Adaptor block	C.44281
Cam feed pipe adaptor	C.37218
Plug	C.43638 (4.2 only)

ITEM 64

12 METRIC CYLINDER HEADS

V12 ENGINES

As part of a rationalisation programme, all V12 engines are fitted with metricated cylinder heads. These were introduced at engine numbers:

7P 47587	V12 HE Saloon
8S 24175	XJS HE

This was announced in Parts Technical Information J20 Item 39 dated September 1983.

To clarify queries received by Service, the following information is issued:

Bare replacement V12 engines with metric cylinder heads can be used to replace engines with imperial cylinder heads providing the following parts are used:

Part No.	Description	Application
NH108041	Nut (24)	securing Inlet Manifold
EAC 5277	Nut (24)	securing Exhaust Manifold
AGU 1152	W/F Bolt (8)	securing Water Pipes
AGU 1153	W/F Bolt (8)	securing Lifting Eyes
AGU 1167	W/F Setscrew (2)	securing Crankcase Breather
AGU 1168	W/F Setscrew (2)	securing Cylinder Head Blanking Plates
AGU 1167	W/F Setscrew (2)	Air Pump Adjustment (USA Engines)

Should it be necessary to replace a cylinder head either left or right hand then a metric cylinder head will require the following additional parts:

Part No.	Description	Application
NH108041	Nut (12)	securing Inlet Manifold
EAC 5277	Nut (12)	securing Exhaust Manifold
AGU 1152	W/F Bolt (4)	securing Water Pipes
AGU 1153	W/F Bolt (4)	securing Lifting Eyes
AGU 1168	W/F Setscrew (4)	securing Cylinder Head Blanking Plates
AGU 1167	W/F Setscrew (2)	Air Pump Adjustment (USA)/securing Crankcase Breather

ITEM 65

SERIES III XJ6 4.2L

ALL MARKETS EXCEPT NORTH AMERICA, AUSTRALIA,
CANADA, JAPAN, SWEDEN, SWITZERLAND**12 ENGINE STALL**

Reports have been received of engine stall/idle dip on the above model, particularly when manoeuvring at low speed.

To overcome this complaint, a modification incorporating a supplementary air valve has been devised. This air valve will enable air to by-pass the auxiliary air valve, thus supplying extra air to compensate for the reduction in idle speed when the air conditioning compressor clutch engages or drive is selected.

Vehicles suffering from the above complaint may be modified as follows:

IDLE DIP/ANTI STALL SERVICE FIX

PARTS REQUIRED (supplied in kit JLM 325/K):

Description	Part Number
Supplementary air valve	EAC 6534 D
Mounting bracket	EAC 6502 D
Screw (2 off)	DAZ 810/8C D
U nut (2 off)	AK 610021 D
1 metre length of 8.7mm hose	CAC 5868 D
Relay	DAC 1028 D
Relay	DAC 1027 D
Bracket	DAC 3124 D
T piece	EAC 6433 D
T piece	EAC 6804 D
Clip (4 off)	EAC 3215/6 D
Clip (4 off)	EAC 3215/2 D
Screw (2 off)	AB 610041 D
Lucar with retaining tongue	JLM 310 D

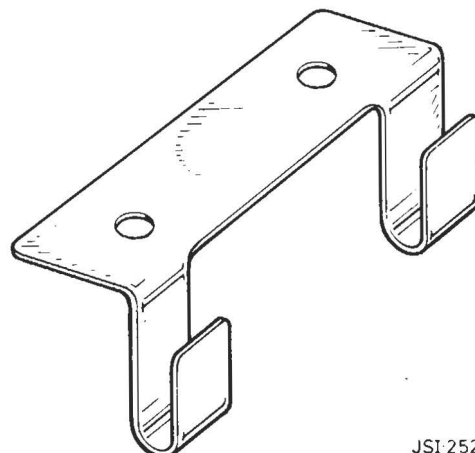
THE FOLLOWING ADDITIONAL ITEMS WILL BE REQUIRED:

Description	Part No.
11 off lucar connectors	GHF 2051
11 off lucar insulation sleeves	GHF 2151
1 off male lucar connector	GHF 2060
1 off insulator sleeve	GHF 2153
2 off snap connectors	GHF 2210
3 off bullet connector	GHF 2200
1 off ring connector	GHF 2431
1 off lucar "piggy back" connector	GHF 2420

When ordering the above connectors, please note they are supplied in packs of 100, 200, 250 or 500 depending on the component.

FITTING PROCEDURE

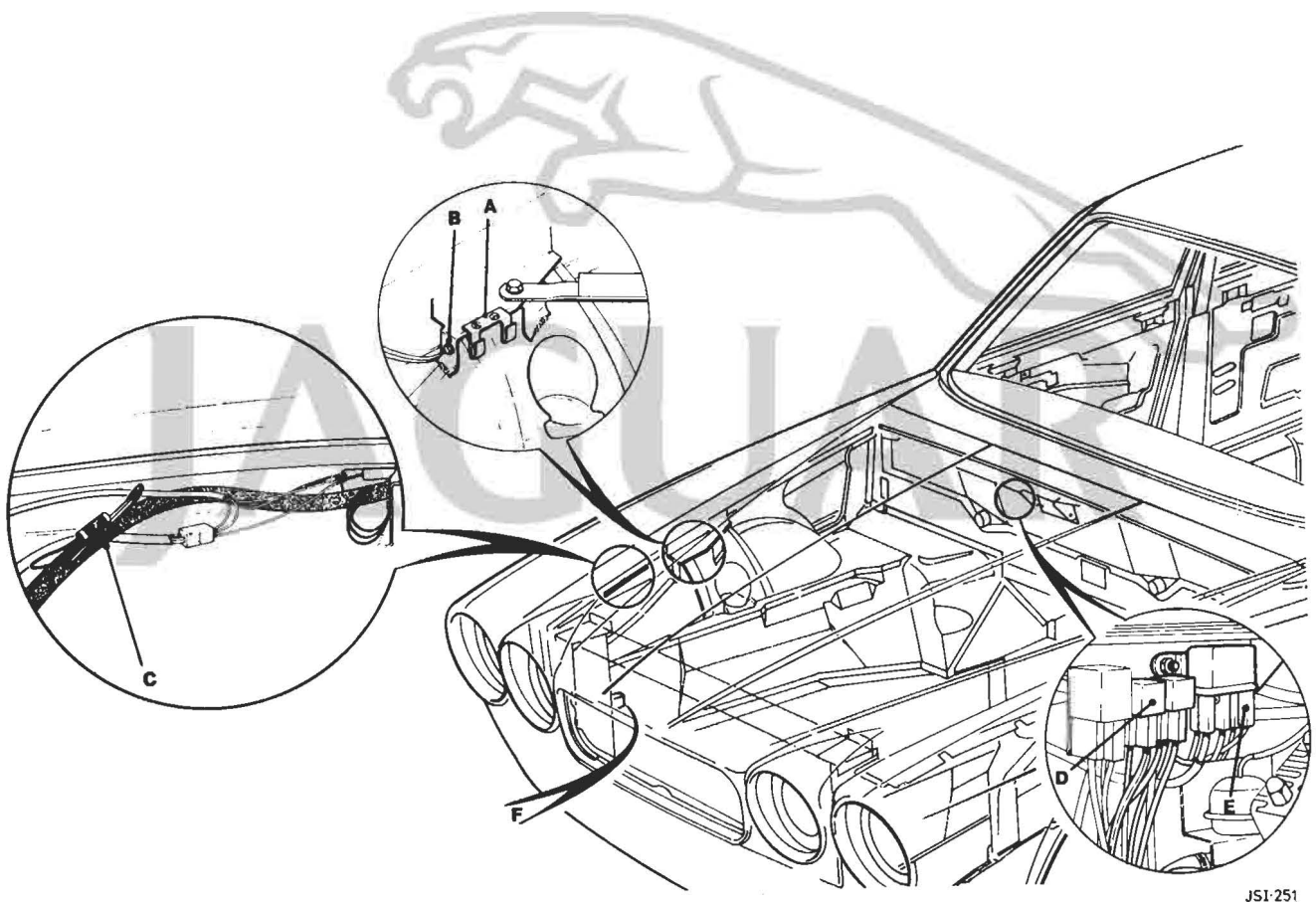
1. Position relay mounting bracket (DAC 3124 D) in a vice with the legs protruding through the jaws. Bend legs back to an angle of 90 degrees (see Fig. 1).



JSI 252

FIG. 1

2. Disconnect battery and remove air cleaner.
3. Position the bracket as shown in Fig. 2(A) and mark the position of the holes. Drill two 3mm (0.125in) diameter holes and secure the bracket using screws AB 610041 D.
4. Raise front of vehicle and place on axle stands or position vehicle on a ramp.
5. Remove the auxiliary air valve from the engine with both hoses still attached.
6. Remove 15mm (0.625in) length of hose from the centre of the valve to air distribution block hose and fit T piece EAC 6804 D (with restriction in small diameter pipe). Use hose clips EAC 3215/6 D but do not tighten clips at this stage.



JS1-251

FIG. 2

7. Fit T piece EAC 6433 D into the valve to manifold hole using the same procedure.
8. Reposition auxiliary air valve on engine and refit hoses without securing the clips.

9. Set T pieces to the required positions and remove auxiliary air valve together with hoses and T pieces. Tighten hose clips to secure T pieces in desired position.

Note: T piece EAC 6804 D should face horizontally forwards, and T piece EAC 6433 D should face downwards (for access) when fitted (see Fig. 4).
10. Refit auxiliary air valve and secure hoses to manifold and air distribution block.
11. Secure supplementary air valve EAC 6534 D to the coil fixing screw using bracket EAC 6502 D, screws DAZ 810/8C D, and U nuts AK 610021 D, ensuring the direction arrow on the body faces towards the rear of the engine.
12. Cut a 485mm (19.00in) length and a 380mm (15.00in) length from hose CAC 5868 D.
13. Connect the long length (A Fig. 4) to T piece EAC 6433 D under the inlet manifold, and feed hose through manifold to connect to the supplementary air valve outlet stub (see Fig. 4). Secure using hose clips EAC 3215/2 D.
14. Connect the short length of hose (B Fig. 4) between the T piece (EAC 6804 D) and the supplementary air valve inlet stub. Secure with clips EAC 3215/2 D.
15. Using 14/0.30mm (14/0.012in) gauge cable, manufacture and assemble harness and attach to relays as shown in Fig. 3. The cable lengths are shown below:

CABLE	COLOUR	LENGTH	FROM	TO
BLACK RELAY X –	A Black (B)	305mm (12'')	30/51	Supplementary air valve
	B Green/brown (GN)	405mm (16'')	86	Compressor feed (C Fig. 2)
	C Black (B)	100mm (4'')	30/51	87A red relay (Z)
	D Black (B)	100mm (4'')	87	85
	E Black (B)	100mm (4'')	85	30/51 red relay (Z)
RED RELAY Z –	F Black (B)	150mm (6'')	30/51	Ring eyelet
	G White (W)	1575mm (62'')	85	Main relay ignition feed
	H Green/red (GR)	1575mm (62'')	87	Starter relay inhibit connection (E Fig. 2)
	J Green/black (GB)	1575mm (62'')	86	
K	Green (G)	915mm (36'')	Horn relay ignition feed	Supplementary air valve

Use lucar connectors GHF 2051 and sleeves GHF 2151 at relay connections and at connections 4 and 7 (Fig. 3), bullet connectors GHF 2000 and snap connectors GHF 2210 at connections 1, 2 and 6 (Fig. 3), and use male lucar GHF 2060 and sleeve GHF 2153 at connection 5 (Fig. 3). Leave the white cable bare at 3 (Fig. 3). Tape cables G, H and J together from the relay to 75mm (3in) from connections 4 and 5.

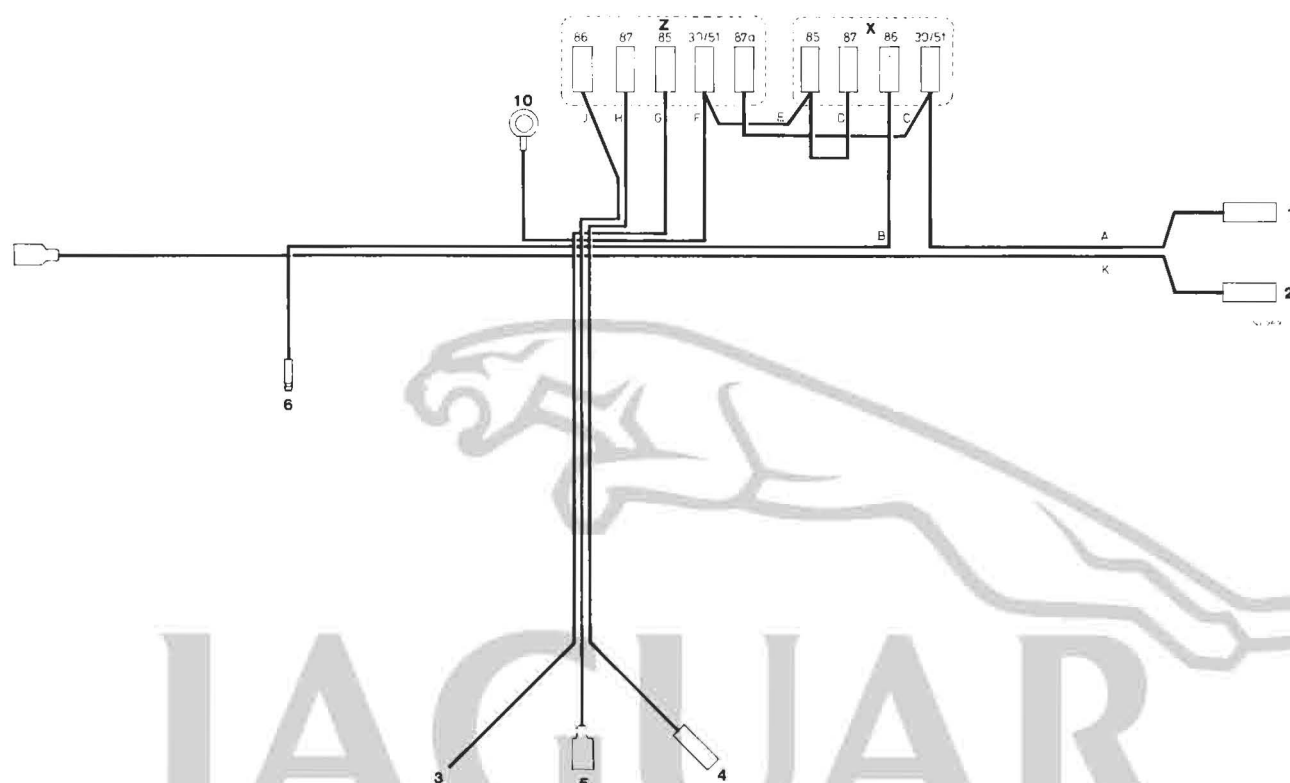


FIG. 3

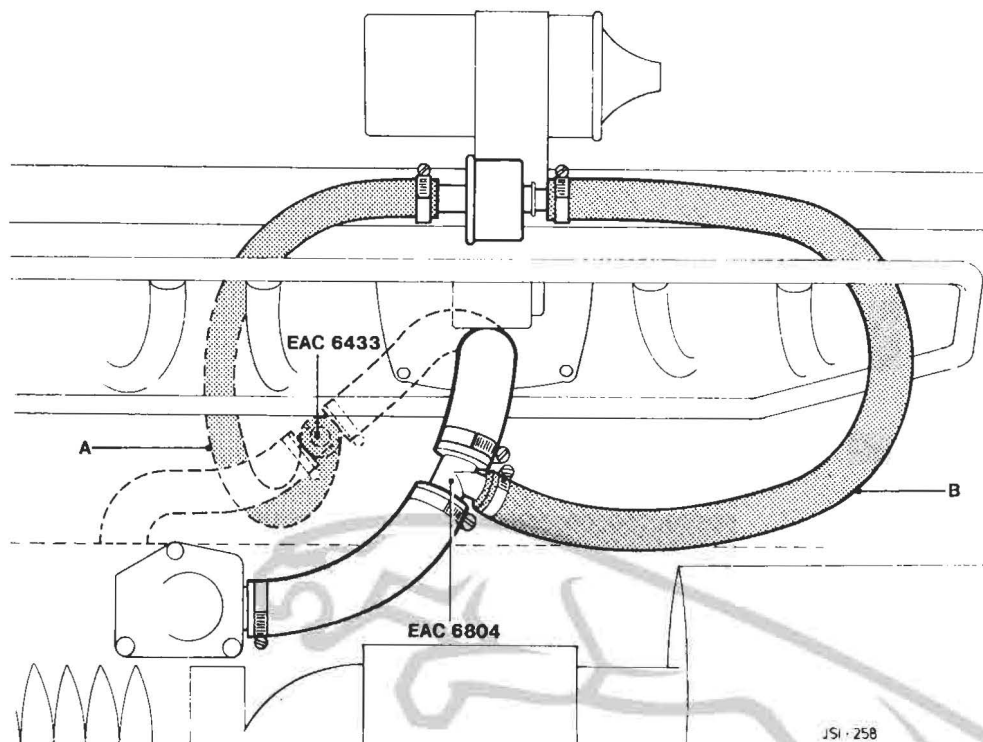


FIG. 4

Attach relays to mounting bracket and connect harness as follows (refer to Fig. 3):

TERMINAL CONNECTION

- 1 & 2 Connect to supplementary air valve.
- 3 Remove connector block from main relay (D Fig. 2) situated on the bulk-head and using a suitable implement (e.g. a small electrical screwdriver), displace the white (W) cable lucar connector. Cut lucar off and discard, join cable to white cable of new harness (3 Fig. 3), attach lucar with retaining tang (Part No. JLM 310), and solder joint. Locate lucar in connector block and refit to main relay. Ensure that lucar retaining tang has locked.

TERMINAL
CONNECTION

- 4 & 5 Remove black/green (BG) cable from the starter relay (E Fig. 2), and attach green/red (GR 4 Fig. 3) to relay. Connect displaced black/green (GB) to green/black (GB) of new harness (5 Fig. 3).
- 6 Connect green/brown (GN) (6 Fig. 3) to green/brown (GN) compressor feed situated on the inner wing panel adjacent to the line splice (C Fig. 2).
- 7 Disconnect green (G) ignition feed from horn relay (F Fig. 2) and attach to piggy back connector (GHF 2420). Connect green cable (7 Fig. 3) to piggy back and refit to horn relay.
- 10 Attach ring eyelet to earth point (B Fig. 2).
- Secure all cables to existing harness using cable ties (recommended Unipart No. C 25969).

Reconnect battery and check operation.

Labour allowance 1.80 hours
Complaint Code 2N4U

ITEM 66

60/64. SHOCK ABSORBER SAFETY

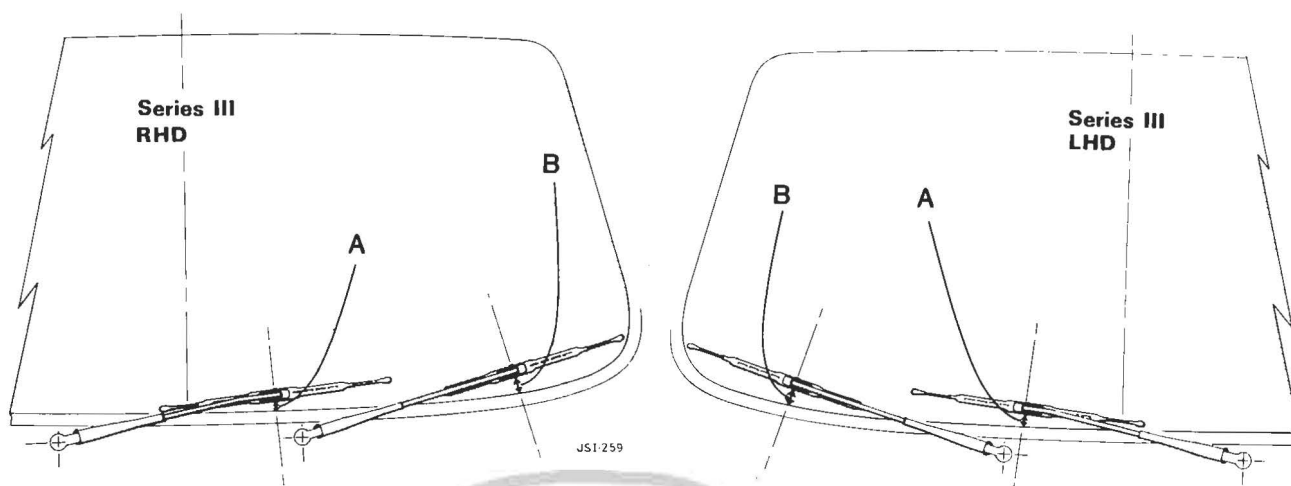
ALL MODELS

Safety demands, and in certain countries it is a legal requirement, that used shock absorbers must have the gas and oil discharged before final disposal.

It is therefore advisable to complete the following procedure on the disposal of gas filled shock absorbers. The procedure allows the shock absorber to be depressurised and the oil to be disposed of in a proper and orderly manner.

1. Mark out and centre punch 2 hole positions as illustrated. If access cannot be gained to mark out the upper hole position on the shock absorber, it will be necessary to cut and remove the upper shroud from the piston rod.
2. Mount the shock absorber vertically in a vice and secure with the lower mounting point uppermost.
3. Carefully drill a 5mm hole at the position marked **A**, nearest to the lower mounting point and allow all gas to escape. Goggles must be worn during the drilling of the shock absorber.
4. Drill a 5mm hole at the second position, **B**, and remove the shock absorber from the vice to allow the oil to drain. This process can be speeded up by carefully working the shock absorber to expel the oil.

* See amendment



ITEM 67

76 WINDSCREEN WIPER ARM/BLADES

SERIES III

Following the introduction of Trico Series '10' wiper arms/blades, reference Service Bulletin JD 06/83 Item 44, and in particular the dimensions detailed regarding the wiper arm/blade setting procedure, further problems have been encountered with blade judder through the possibility of the drivers side blade fouling the screen finisher, resulting in the setting procedure being revised.

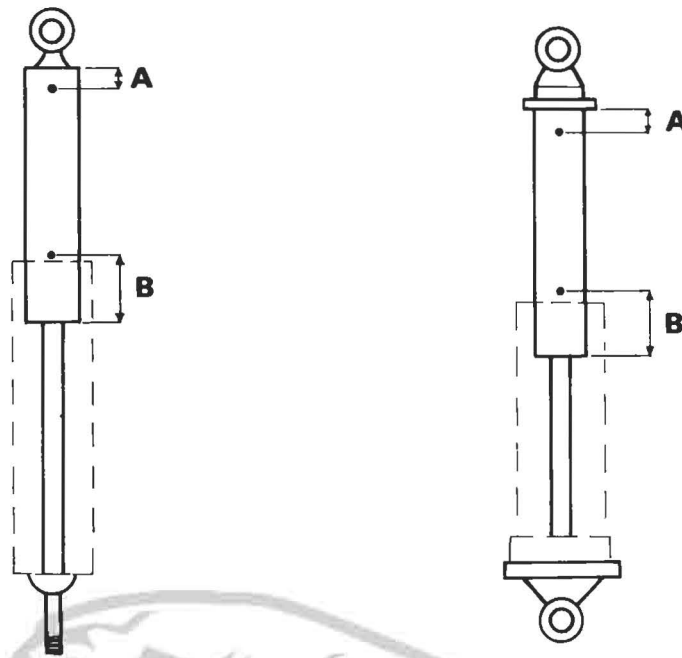
Arms/blades adjusted to the latest condition commenced at VIN: 390343.

To ensure that windscreen wipers perform correctly, it is important that the new type arms/blades are fitted and positioned in accordance with the revised dimensions, see inset A.

These revised dimensions only apply to vehicles fitted with Trico Series '10' assemblies introduced at VIN 365950 (Saloon).

Will Distributors/Dealers please note that all reference to Series III setting procedures for Trico Series '10' blades detailed in JD 06/83 Item 44, should now be disregarded, however XJS setting procedures still apply.

* See amendment



JSI.268

A = 41.0mm (1.5/8in)

B = 79.0mm (3.1/8in)

ITEM 68

* See amendment

86 ERRATA SPARK PLUG TORQUE WRENCH SETTING

AJ6 ENGINES

The torque wrench setting figure for the spark plugs quoted on page 12-40 of the XJ-S 3.6 and XJ-SC 3.6 Service Manual is incorrect and should be 2,35 to 2,90 kgf m (17 to 19 lbf ft). Please ensure that this important information is passed on to relevant staff.

ITEM 69

86 CRUISE CONTROL

XJS HE

To prevent damage occurring to the cruise control electronic control unit (ECU) circuitry, through the possibility of other vehicle components earthing through this system, the earth cable from the ECU has been removed from the vehicle common earth point, to provide a single separate earth connection situated on the left hand side of the transmission tunnel. This modification was incorporated from the following vehicle introduction points:

XJS HE (RHD) VIN 116772
XJS HE (LHD) VIN 117970

Introduction on Series III Models will be advised in a future Service Bulletin.

86 HARNESSES

SERIES III 5.3 HE/XJS HE

Distributor/Dealers have experienced difficulty in identifying part numbers of certain harnesses fitted to the 12 cylinder 'HE' engine.

The following list details by part number and application those harnesses in question.

Part Number	Description
DAC 2691	Main coil to auxiliary coil link harness
DAC 3247	Distributor to ignition amplifier link harness
DAC 2391	Injector harness (with cold start injectors fitted)
DAC 3718	Injector harness (without cold start injectors)

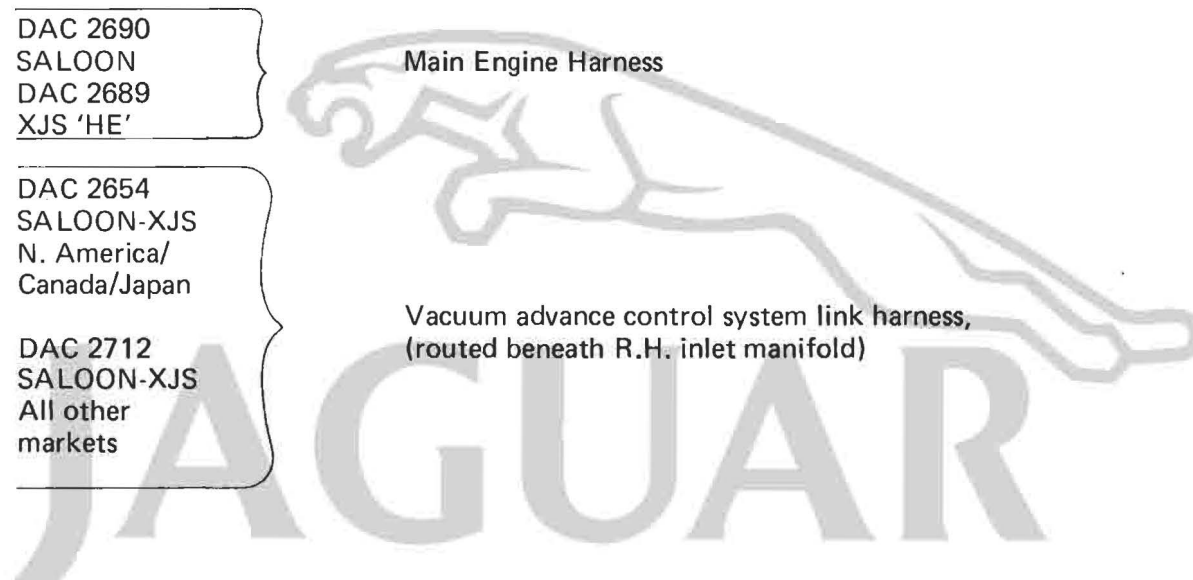
DAC 2690
SALOON
DAC 2689
XJS 'HE'

Main Engine Harness

DAC 2654
SALOON-XJS
N. America/
Canada/Japan

DAC 2712
SALOON-XJS
All other
markets

Vacuum advance control system link harness,
(routed beneath R.H. inlet manifold)



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AMENDMENT

19 CARBURETTER FLOODING

XJ6 3.4 MODELS

In Bulletin JD.10/84 (English language) Item 78, paragraph 2; the last word on line 3, should be LEFT and not right as printed.

Please ensure that this important amendment is applied to the original bulletin copy and circulated to all relevant personnel.

ITEM 80

12 RECONDITIONED ENGINE IDENTIFICATION PLATE

ALL MODELS

To enable accurate monitoring of factory reconditioned engines, an identification plate detailing the part number and new serial number is now being fitted.

The plate is fitted over the top of the original engine number on V12 engines and on the cylinder block between the dipstick tube and the bell housing on XK engines.

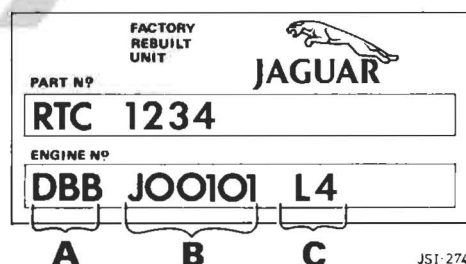


FIG. 1

SIZE CODE	BORE (O/S)	JOURNALS	
		MAIN (U/S)	PIN (U/S)
A	STD	STD	STD
B	.010 in.	.010 in.	.010 in.
D	.020 in.	.020 in.	.020 in.
F	.030 in.	.030 in.	.030 in.
H	.040 in.	.040 in.	.040 in.

JST 277

FIG. 2

Fig. 1 shows the layout of the plate which contains the following information within the identification number:---

- A. Bore size, main journal size, and pin journal size (see Fig. 2).
- B. Sequential unit identification number.
- C. Month and year unit was reconditioned.

In any correspondence with the factory only the unit identification number (B, Fig. 1) is required.

12 CRANKSHAFT AND BEARING FAILURES

SERIES III XJ6

Further to Bulletin JD.12/83, Sursulph hardened crankshafts have now been introduced on all XK engines.

Introduction Numbers:—

8L 168437 -- 4.2, Australia, Canada, Japan, Sweden, Switzerland and U.S.A.

8A 15562 -- 3.4

Emission 'B' 4.2 and Limousine 4.2 introduction numbers were previously issued in Bulletin JD.12/83.

ITEM 82

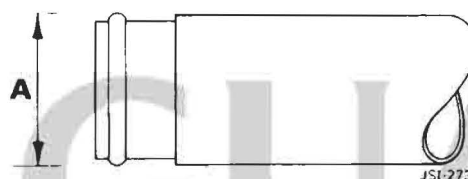
44 TRANSMISSION OIL COOLER

SERIES III XJ6

To prevent the possibility of coolant loss from the transmission oil cooler pipe hose connections, the flare diameter 'A' has been increased from 43,9mm (1.73in) to 45,8mm (1.80in).

This modification was introduced at:—

VIN 397360



ITEM 83

51 FINAL DRIVE UNIT

XJS HE

Following the successful introduction of a trial batch of final drive units, manufactured by DANA and fitted only to N.A.S. vehicles, DANA axles are now an alternative final drive unit for all XJS HE models.

This unit can be identified by the absence of a drain plug. Under normal circumstances it should not be necessary to replace the oil. However, regular oil level checks should still be carried out at the recommended service intervals.

The unit has a ratio of 2.87:1; the gearbox speedometer drive gears remain unchanged.

Introduction for ALL markets was from: VIN 119131.

Due to the different mounting arrangement of the rear brake calipers on the DANA unit, it is not possible to wire lock the caliper securing bolts. Instead, "Scotch Grip" locking bolts are used, holes having been incorporated into the rear discs for access. If the caliper securing bolts are removed for ANY reason, then the bolts should either be replaced, or the threads of the old bolts thoroughly cleaned and coated with Loctite 270 before refitting.

CAUTION: Ensure that the bolt and parent threads are free from oil and grease, otherwise the Loctite will be ineffective.

The part numbers listed below were previously published in the September 1984 issue of New Parts Introduction.

CAC 9281/H	Final Drive Unit	
CAC 9283	Rear Disc	2 off per car
CAC 9376	Caliper Bolt	4 off per car

Further information will be issued when the parts become available.

NOTE: The final drive unit oil specification remains unaltered. If a replacement DANA axle is being fitted, then fill only with the approved brands of oil formulated for a limited slip final drive unit.

ITEM 84

74 MICHELIN TYRES

LIMOUSINE/HEARSE

Michelin 235/70 HR 15 XVS tyres have been fitted from the following VINs:—

200592 — Limousine
400162 — Hearse

These tyres are NOT and should not be fitted on vehicles prior to these VINs as a serious foul condition would occur.

The revised tyre pressures for Michelin 235/70 HR 15 XVS are as follows:—

Driver and up to 3 passengers		
Front	—	26 lbf/in ² , 1,83 kgf/cm ² , 1.79 Bars
Rear	—	28 lbf/in ² , 1,97 kgf/cm ² , 1.93 Bars
Maximum load (2950 kg)		
Front	—	28 lbf/in ² , 1,97 kgf/cm ² , 1.93 Bars
Rear	—	32 lbf/in ² , 2,25 kgf/cm ² , 2.21 Bars

82 COMPRESSOR THERMAL FUSE

SERIES III/XJS HE/XJ-S 3.6/XJ-SC 3.6

If problems are being encountered with the persistent failure of the air conditioning compressor thermal fuse and the normal test procedures cannot identify any obvious fault, then the following procedure should be carried out.

STEP 1

Ensure that the valves of the charge station equipment are fully closed and connect them to the vehicle high and low pressure connections.

CAUTION: Observe all safety precautions as detailed in the Service Manual.

Run the engine at normal operating temperature, and select AUTO, 75°C; and allow the system to stabilise to ensure that the unit is neither on full cooling nor full heating mode. Adjust the engine speed to 1000 rev/min and note the readings on the gauges.

The readings should be as follows:—

The High Pressure gauge should indicate a pressure of between 10,5 and 15,8 kgf/cm² (150 – 225 lbf/in²).

The Low Pressure gauge should indicate a pressure not lower than 2,67 kgf/cm² (38 lbf/in²) when the compressor clutch engages, and not lower than 1,27 kgf/cm² (18 lbf/in²) when the compressor clutch disengages.

NOTE: Where higher ambient temperatures are encountered the high pressure reading may be greater than the above.

Ambient temperature is given as the temperature of the air surrounding the condensor and is taken 50,8mm (2in) in front of the condensor. Normal Ambient Temperature for the U.K. market is assumed to be between 5°C and 25°C (41°F to 77°F).

If the above is satisfactory proceed to Step 2.

If the low pressure reading drops below 1,27 kgf/cm² (18 lbf/in²) with the clutch still engaged, then the expansion valve is faulty.

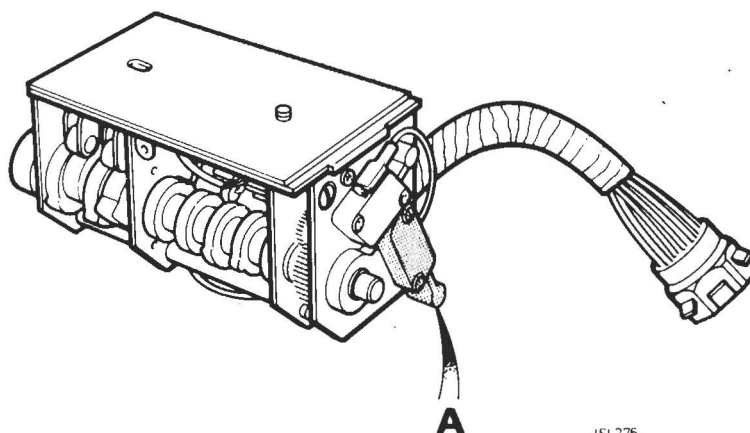
STEP 2

Increase the engine speed to 3000 rev/min and note the reading on the low pressure gauge. The reading should be approximately 0,70 kgf/cm² (10 lbf/in²), at or just prior to, the disengagement of the compressor clutch. If the clutch fails to disengage and the pressure continues to drop to 0,35 kgf/cm² (5 lbf/in²) or below, then the expansion valve is faulty.

If the pressure remains at 0,70 kgf/cm² (10 lbf/in²) and the clutch cycle is correct, select low fan speed. Should the low pressure start to drop, carry out the modification detailed in Step 3.

STEP 3

1. Disconnect the battery.
2. Remove the centre console right hand side trim panel to gain access to the air conditioning/heater unit.
3. Remove the plastic retaining plug from the black plastic cover surrounding the servo motor unit.
4. Carefully move aside the shield to gain access to the Ranco override micro switch, A.
5. Disconnect the green/brown (GN) lead and insulate.
6. Reverse procedure 1 to 4.



NOTE: A significantly high percentage of thermal fuse failures, occurring during high ambients, have been identified as a direct result of selecting low fan speed whilst the unit is in full cooling mode. Prolonged operation of the system in this condition can result in a significant pressure drop in the low pressure side of the system. Should this be the preferred mode selection whilst driving, then Step 3 should be implemented immediately.

ITEM 86**82 EXPANSION VALVE****SERIES III 4.2/XJ-S 3.6/XJ-SC 3.6**

On the Series III 4.2 Parts Fiche RTC 9885 FV, slide 2 of 3, plate code 2C12, and in the Parts Catalogue RTC 9885 CD, page 2C12R, the Expansion Valve is listed as CAC 5934. This is incorrect and should be CAC 2423.

On the XJS 3.6 Parts Fiche RTC 9889 FD, slide 1 of 2, plate code L12, the Expansion Valve, item 6, is listed as CAC 2423. This is incorrect and should be CAC 5934.

Will Service personnel please amend their parts information immediately to read as follows.

Series III 4.2 models, Expansion Valve CAC 2423
XJ-S 3.6 & XJ-SC 3.6 models, Expansion Valve CAC 5934.

ITEM 87**86 CLARION RADIO/TAPE E950 MODEL****SERIES III/XJS HE (UK/EIRE ONLY)**

A new Clarion Radio/Tape E950 Model, Part No. DAC 3716 has been introduced, superceding the previous DAC 3372 unit, at:—

VIN No:	384610	—	S.III
	116928	—	XJS

The new assembly incorporates a dual intensity lighting feature whereby the illumination dims when the vehicle lighting system is operated. Parts Division stock is to the latest condition. Interchangeability with the previous DAC 3372 Model is unaffected.

N.B. The Clarion E950 Model is fitted as standard equipment on:—

Jaguar Sovereign 'HE'
Daimler 4.2, Double Six and XJS 'HE'
Optional on other Series III Models and XJ 3.6 variants

Service Bulletin



Date JANUARY 1985
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ITEM 01

12 OIL PRESSURE SWITCH

ALL MODELS

During investigations into oil leakage from the oil pressure switch, it has been noted that non approved pressure switches are being used. Please note that Unipart switch GPS 117 IS NOT APPROVED for fitment on Jaguar vehicles and must not be used as the hexagon size prevents secure fitment in Jaguar applications.

The only oil pressure switch specified and approved for use on current Jaguar vehicles is C 42200.

ITEM 02

26 COOLANT HEADER TANK

XJS 3.6/XJ-SC 3.6

Following reports of coolant loss from the header tank filler neck joint, all header tanks are now pressure tested after stove enamelling. The solder specification has also been improved to prevent any possibility of the solder melting during the stove enamelling process. Header tanks are quality assured from VIN 119730 and Parts stocks are all to the latest condition.

26 THERMOSTAT HOUSING GASKETS

S.III/XJS HE

To overcome isolated instances of coolant loss from the thermostat housing, new gaskets have been introduced on 6 cyl (XK) and V12 engines. The new part numbers are detailed below:

Model	Description	Part No.
XJ6 3.4, Limo	Thermostat Housing Gasket	EAC 7044
XJ6 4.2	Thermostat Housing Gasket	EAC 7046
XJ6 3.4, 4.2, Limo	Water Outlet Pipe Gasket	EAC 7045
XJ12, XJS HE	Thermostat Cover Gasket LH	EAC 7047
XJ12, XJS HE	Thermostat Cover Gasket RH	EAC 7048

The bolt tightening torques are also revised to:

6 cyl (XK)	23 – 28.5 Nm	(17–21 lb/ft)
V12	10.8 – 12.2 Nm	(8–9 lb/ft)

The improved gasket and revised tightening torques were introduced at the following engine numbers:—

XJ6 3.4	8A 15616
Limo	7M 4974
XJ6 4.2	8L 173271
XJ12	7P 51620
XJS HE	8S 32778

57 POWER ASSISTED STEERING RACK

S.III/XJS

Continual monitoring and examination of returned Power Assisted Steering racks has resulted in the following improvements:

1. To prevent rack bar contamination due to the use of spurious lubricants during Service, extensive testing by Jaguar and Adwest has resulted in the deletion of the rack damper grease nipple. Greasing of the rack damper during Service is NOT necessary as initial greasing by the manufacturer is considered sufficient.
2. To alleviate the possibility of scoring the rack bar with the steering alignment tool, when checking the steering geometry, a deeper and chamfered centralising pin hole has been introduced.
3. A new tangential valve and torsion bar has been introduced.

These improvements have been implemented on steering racks built after date code 4L 0001 and were introduced progressively on to Jaguar production from VINS:

413000	S.III
120500	XJS

ITEM 05

70 BRAKE BEDDING IN PROCEDURE

ALL MODELS

With the recent introduction of semi-metallic brake linings, it is important that all Service Personnel are aware of the optimum procedure for the 'bedding-in' of these linings. Details are as follows:

In order to ensure optimum brake performance and refinement throughout the life of the brake friction linings and brake discs, it is essential that a controlled brake bedding procedure is undertaken during the early life of the friction linings.

The procedure used should ensure that the friction linings quickly achieve normal operating conditions as a result of low energy applications, without being subjected to high energy input levels.

The procedure recommended for the first 320 km (200 miles) is of deliberate, frequent light application wherever possible, similar to that used during normal town driving. On open road driving the above conditions have to be simulated. Try NOT to brake from speeds in excess of 96 km/h (60 mph); reduce speed by short brake applications, i.e. 80–65 km/h (50–40 mph) at intervals of approximately 1.5 km (1 mile).

This procedure will ensure satisfactory brake lining/disc conditioning, and lead to optimum brake life and performance.

ITEM 06

74 ALLOY WHEELS

S.III/XJS

Reports of difficulty in removing alloy wheels due to corrosion between the mating faces of the wheel and the hub spigot has resulted in a greasing operation being introduced on production.

The hub spigot bore of the wheel is now coated with Shell Retinax 'A' grease. This was introduced at VIN Nos:

411159	S.III
119708	XJS

ITEM 07

76 AUTOMATIC REAR SEAT BELTS

XJS (AUSTRALIA)

All XJS vehicles landed in Australia after January 1st 1985 will incorporate 3 point inertia reel rear seat belts.

ITEM 08

82 AIR CONDITIONING SERVO UNIT

S.III/XJS HE/XJ-S 3.6/XJ-SC 3.6

Further to Service Bulletin JD.11/84 – Item 85 Reference Step 3. To prevent excessively low pressure being generated in the air conditioning system under certain operating conditions, the servo motor unit Ranco override function has now been deleted. Units to the modified condition were introduced from VINs:—

411931	S.III
120267	XJS HE/XJ-S 3.6/XJ-SC 3.6

82 RECEIVER DRIER**S.III 4.2 (AIR CON. MODELS ONLY)**

To improve the efficiency of the Receiver Drier, the Drier has been repositioned to enable maximum refrigerant flow through the internal pick-up pipe.

This repositioning has resulted in the sight glass now being on the left hand side and in the vertical position. This change was introduced at VIN 412060.

When fitting replacement Receiver Drier Bottles on Series III 4.2 Models (prior to the above VIN) the Receiver Drier should be fitted as described above.

The fitment of the Receiver Drier Bottle CAC 1881 on Series III 5.3/XJS HE and XJS 3.6 Models remains unchanged, i.e. the Drier mounted with the sight glass on the right hand side and the sight glass angled approximately 15 degrees rearwards.

ITEM 10**86 DOOR POCKET WARNING LAMPS****S.III/JAGUAR VDP & SOVEREIGN ONLY**

During the winter period, especially in markets where the ambient temperatures are particularly severe, it is possible for the electric aerial mast to freeze temporarily. Isolated incidences have been reported of the main circuit fuse blowing through the aerial operation being impaired.

Should this occur it is possible for the door casing puddle lamps to illuminate with the doors closed, and in some cases, due to the problem going unnoticed, can result in the battery discharging when the vehicle is parked.

Through subsequent investigations, the cause has been traced to a feed back circuit developing through the interior light circuit which is also protected by the same fuse link.

Fuse No. 3	Main Fuse Box – LHD
Fuse No. 13	Auxiliary Fuse Box – RHD

To prevent this involuntary illumination and possible battery discharge, modified bulkhead harnesses incorporating diode protection on the interior light circuit will shortly be introduced. Introductory VINs will be issued in a further Service Bulletin.

However should this problem be encountered on vehicles already in Service, the following modification may be implemented:

Labour allowance	0.45 hrs
Complaint Code	7K7S

PARTS REQUIRED

Description	Part No.	Code (see Fig. 2)
1 off Lucar Connector	GHF 2051	A
1 off Lucar Connector	GHF 2060	B
2 off Lucar Insulation Sleeve	GHF 2151	C
1 off Diode	AAU 5034	D

MODIFICATION PROCEDURE

1. Disconnect the battery.
2. Remove the passenger side 'A' post lower trim panel to expose the lower bulkhead/door harness (See Fig. 1). Passenger side RHD is shown, LHD is symmetrically opposite.

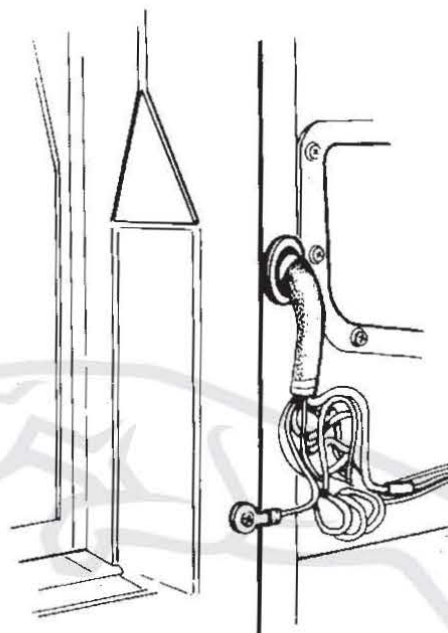


FIG. 1

JSI-281

3. Locate the interior door switch purple/white (PW) cable and cut.
4. Fit insulation sleeves (C, Fig. 2) and crimp/solder Lucar connector (A and B, Fig. 2), to the purple/white (PW) cable. Connect diode unit (D, Fig. 2) in circuit and strap or tape to the harness.

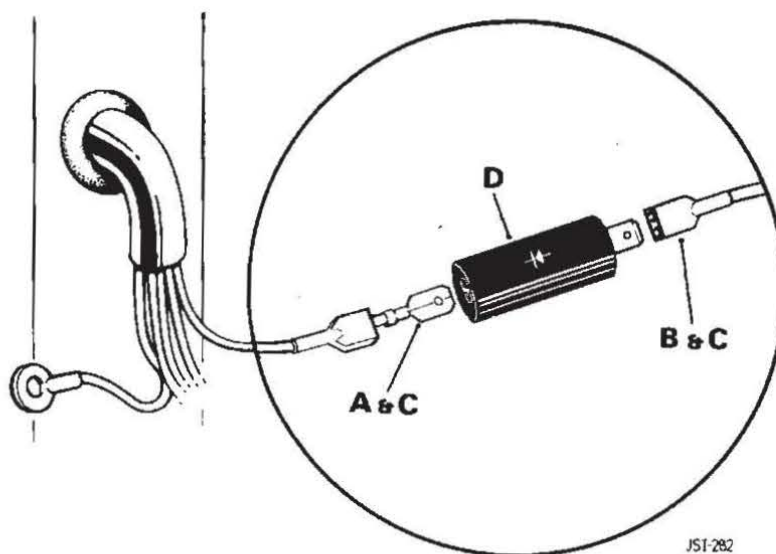


FIG. 2

JSI-282

5. Refit the 'A' post lower trim panel and reconnect the battery.

86 IGNITION COIL**S.III 4.2**

To improve the ignition performance on S.III 4.2 Models, a new Ducellier coil with ballast resistor, together with a modified amplifier and engine harness have been introduced from Engine No:—

8L 173271

Interchangeability with the previous ignition system is affected.



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ITEM 14

12 OIL PRESSURE SWITCH

ALL MODELS

As a result of investigations into oil leakage from the oil pressure switch, the manufacturer has now overhauled and recalibrated all production test equipment. The test method has also been reviewed to incorporate effective leak testing.

In addition to this a fixing torque of 4–5.5 Nm (3–4 lb ft) is now specified.

Assured oil pressure switches fitted at this torque were introduced at the following engine numbers.

8A 15752	—	3.4
8L 176784	—	4.2
7M 4993	—	Limo
7P 52073	—	S.III V12
8S 33518	—	XJS V12
9D 101820	—	XJS 3.6

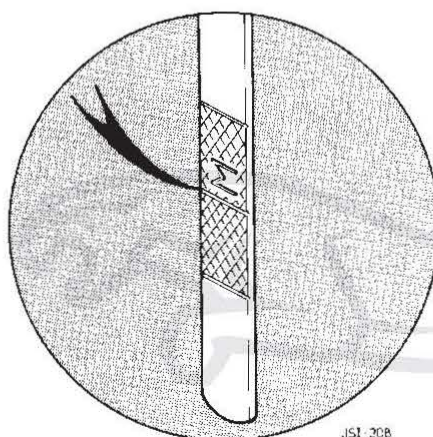
Please Note: The above fixing torque should now be used when fitting replacement oil pressure switches.

12 ENGINE DIPSTICK

XJ-S 3.6/XJ-SC 3.6

To improve oil level checking, a new dipstick with revised marking has been introduced on AJ6 engines. The oil level checks detailed below **MUST** be used with this new dipstick.

1. Forecourt Check:
 - (a) Stop engine – wait one minute.
 - (b) If oil is **on cross hatch** add no oil.
 - (c) If oil is below the cross hatch – add 1 litre and recheck.
2. Overnight Check:
 - (a) If oil is above the mark 'M' Fig. 1 – add no oil.
 - (b) If oil is below 'M' – add 1 litre and recheck.



The dipstick part number is EAC 7321 and this was introduced at Engine No. 9D 101808.

ITEM 16

12 OIL CONSUMPTION

XJ6 4.2

Further to Service Bulletin JD 09/84 item 72, the new piston ring packs recently introduced on 4.2 engines to improve oil consumption, are now available through Parts Division.

New Part No.	Description	Replaces
JLM 324/S	Ring Pack	RTC 2573/S
JLM 324/20	Ring Pack	RTC 2573/20
EAC 6865/S	Piston & Rings Assy (H Comp)	EAC 2041/S
EAC 6865/20	Piston & Rings Assy (H Comp)	EAC 2041/20
EAC 6866/S	Piston & Rings Assy (S Comp)	EAC 2042/S
EAC 6866/20	Piston & Rings Assy (S Comp)	EAC 2042/20

Should it be necessary to replace pistons or piston rings, then the latest components should be used on all 4.2 engines after engine number 8L 103481 (introduction of strutted pistons - ref. JD 06/82 item 44).

Please note: If the cylinder bores require glazebusting only, the method detailed in Service Bulletin JD 07/83 item 47 should be used.

ITEM 17

26 XK WATER PUMP

S.III 3.4/4.2 & LIMO

To improve the durability of the XK engine water pump, a modification has been introduced to increase the size of the pump bearing and improve the impellor seal. This modification was incorporated from engine numbers:

8A 15831	—	3.4
8L 179779	—	4.2
7M 5019	—	Limousine

Further details and part numbers will be issued when parts are available.

ITEM 18

74 WHEEL BALANCING

ALL MODELS

Would all service personnel please note that when balancing a wheel and tyre assembly, the maximum permissible weight that can be added to overcome any out of balance, is 100 grams (3.5 oz).

If, when balancing a wheel and tyre assembly, it is found that the weight required exceeds this maximum, the tyre should be rotated around the wheel 180 degrees and the balance rechecked.

Should this not improve the condition, inspect the wheel and tyre assembly for incorrect bead seating or damage. If the tyre is seated correctly and there is no damage to either wheel or tyre, then the tyre manufacturer's local agent should be consulted and involved in determining the cause of the excessive out of balance condition.

ITEM 19

78 APPROVED REFINISH PAINTS — T.P.A. VEHICLES
ADDITION OF SIKKENS PAINTS

S.III/XJS

INTRODUCTION

As a result of close liaison with Sikkens Paints, Jaguar are able to announce approval of a range of refinish materials, suitable for use in the rectification of vehicles finished in thermoplastic-acrylic paint. These materials have undergone stringent tests and are considered satisfactory both for compatibility and colour match.

Tests have taken into account a complete vehicle paint process from bare metal, as well as rectification of an existing T.P.A. finish.

Restoring a paint finish to an acceptable standard is provided for by the materials listed, these range from bare metal treatments through to a choice of topcoat systems.

Approved topcoat materials Autofine, Autocryl and Autobase are all incorporated into Sikkens mixing scheme systems, with up-to-date formulations recorded on microfiche.

Supply of materials and technical support are identified in later sections of this Bulletin.

Section I	—	Safety Precautions in the handling of paint containing isocyanates
Section II	—	Approved Preparatory Materials and Application
Section III	—	Approved Topcoats and Application
Section IV	—	U.K. Service Technical Support
Section V	—	U.K. Stockists
Section VI	—	Sikkens Worldwide Service Support

SECTION I – SAFETY PRECAUTIONS IN THE HANDLING OF PAINTS CONTAINING ISOCYANATES

This section deals with the basic precautions which should be taken by Refinishers when using paints containing isocyanates.

Spray operations should be carried out in a booth which provides compressed airline breathing equipment to BS 4275 – 1974.

The supply of air to the compressor should be drawn from an uncontaminated source, and an efficient oil/water and fume filter must be fitted to provide respirable air. Within the booth an alarm system should be fitted to warn the operator when the air pressure of the breathing apparatus falls below the minimum safe working level.

Persons entering a spray booth whilst spraying is taking place should wear a suitable respirator to BS 2091 – 1969.

A respirator should continue to be worn whilst the operator stays in the booth after the spraying has ceased until the spray mist has cleared.

Persons engaged in handling these products should wear protective clothing to avoid skin and eye contact. Wash off any splashes with copious amounts of water.

WARNING: Persons with a history of Asthma should not be engaged in spraying or handling of materials containing isocyanates, as they are liable to cause irritation to the respiratory system.

SECTION II – APPROVED PREPARATORY MATERIALS AND APPLICATION

(A) METAFLEX W.R. PRIMER:

A two pack etch primer which performs the dual function of adhesion promoter and metal conditioner.

Metaflex W.R. Primer should be overcoated **within two hours** of application with Autocryl Filler.

Surface preparation:	Degrease the surface thoroughly.		
Mixing ratio:	100 parts by volume of Metaflex WR Primer 100 parts by volume of Metaflex WR Hardener		
Spraying viscosity:	When mixed with hardener in the specified ratio, the product has the proper spraying viscosity of 15–16 secs DIN Cup 4 at 20°C.		
Reaction time to be allowed for after mixing:	– 15 minutes at 20°C – 30 minutes at 15°C		
Pot life at 20°C:	8 hours		
Spray gun fluid tip and working pressure:	Spray gun fluid tip	Working pressure	
	Gravity feed spray gun:	1.2–1.5mm	3–5 bar
	Suction feed spray gun:	1.8mm	3–5 bar
	Airless spray:	0.011"–40°	140–160 bar

Recommended conditions of application:	Temperature:	at a minimum of 15°C
	Relative humidity:	minimum: 35%
		maximum: 75%

Cleaning of equipment: In Sikkens Solvent or nitrocellulose thinner

Spraying technique: Spray one full-flowing, continuous coat

Film thickness: 7.5–10 µm per coat

Drying times at 20°C:

Dust dry:	after 10 minutes
Dry to fix:	after 45 minutes
Recoat:	after 30 minutes to 8 hours

Shelf Life: 1 year if stored at shop temperature

Caution: Metaflex WR Primer must NOT be sanded.

(B) AUTOCRYL FILLER:

A two pack primer surfacer which can be applied to well flatted original T.P.A. finishes, or to suitably prepared bare metal surfaces (see Section II (A) on Metaflex WR Primer).

Autocryl filler can be overcoated with Autofine Autocryl or Autobase.

CAUTION – This paint contains isocyanates. Please refer to Section I of this Bulletin.

APPLICATION DATA:

Mixing ratio and spraying viscosity:

The spraying viscosity of 15 s DIN Cup 22 secs BSB 4 at 20°C is reached by mixing the components in the following ratio:

100 parts by volume of Autocryl Filler
50 parts by volume of Autocryl Hardener
30 parts by volume of thinner APS

This mixing ratio corresponds to the graduation on the Autocryl dip-stick.

Reaction time to be observed after mixing: None

Pot life at 20°C: 4 to 5 hours

Spray gun fluid tip and working pressure:	Spray gun fluid tip	Working pressure
Gravity feed spray gun	1.2–1.5mm	3–5 bar
Suction feed spray gun	1.5mm	3–5 bar
Pressure feed spray gun	1.0–1.2mm	4–6 bar
Airless spray	011"/65°	160–200 bar

Cleaning equipment: Use Sikkens Solvent, nitrocellulose thinner or acrylic thinner.

PROCESS:

Spray booth:

For reasons of health and safety at work to avoid dust ingress, apply this product only in spray booths with extraction facilities. The spraying technique to be used depends on how the substrate has been pre-treated.

Number of coats:

- always start by spraying a thin single coat
 - allow 6 to 10 minutes flash off
 - then proceed by spraying one single full flowing coat OR one double coat OR one double coat to be followed by a second double recoat after 6 to 10 minutes flash off.
- The number of coats to be applied depends on the film thickness required.

Spot repair:

A mist coat of Autocryl Filler can be applied if any spot repairs are made. First spray the area under repair by the method desired. Then add an additional amount of thinner in accordance with the following ratio:

100 parts Autocryl Filler at spraying viscosity
100 parts of Autocryl Thinner

Fade out with this mixture once, then thin down this mixture again with Autocryl Thinner in the ratio 1:1 and fade out once more.

Recoatability/drying time (without sanding):

Following application of the last coat, allow for the following flash-off times:

	Minimum	Maximum
At 15°C	25 min	5 days
At 20°C	15 min	4 days
At 25°C	10 min	3 days

(If sanding is necessary):

Sanding may be necessary in the case of dust ingress or surface damage. If two double coats have been applied, Autocryl Filler can be sanded:

- at 20°C after 7 hours
- at 40°C after 2 hours
- at 60°C after 60 minutes

Recommended abrasive paper grades:

If wet flatted (mechanically and manually)	P800 to P1000
If dry sanded (mechanically)	P240 to P280
If dry sanded (manually)	P280 to P320

(C) AUTOFINE PRIMER SURFACER:

A one pack primer surfacer for application over flatted original T.P.A. finishes, prior to the application of Autofine.

NOTE: This is a repair material only, and is not recommended for use as a primer-surfacer coating on to bare metal. See Autocryl Filler.

APPLICATION:

Mixing ratio: 1 part by volume of Autofine Primer Surfacer,
1 part by volume of Autofine Thinner Fast or Slow,
or a combination of these mixed in any proportion.

Spraying viscosity: 14–16 s DIN Cup 4 at 20°C
17–20 s BSB Cup 4 at 20°C

Spray gun fluid tip and working pressure:		Spray gun fluid tip	Working pressure
	Gravity feed spray gun:	1.5–1.8mm	43–57 psi
	Suction feed spray gun:	1.8mm	43–57 psi

Method of application: Apply one or two single coats, allowing for 5 minutes flash-off between coats at 20°C.

Drying time: Dry to sand (wet or dry) after:

	At 20°C	At 40°C	At 60°C	At 80°C
1 coat:	30 min	20 min	15 min	10 min
2 coats:	60 min	40 min	30 min	20 min

Film thickness: 40–45 µm per double coat

Flatting paper: Dry P360–P400
Wet P800–P1000

Coverage: 6–7m²/ltr of unthinned primer per double coat

Recommended topcoat: Autofine

(D) AUTOCRYL SEALER TRANSPARENT:

A two pack transparent sealer, which should also be used as an adhesion promoter on flatted original T.P.A. finishes, where Autocryl or Autobase topcoats are to be applied without the benefit of a primer surfacer.

CAUTION: This sealer contains isocyanates. Please refer to Section 1 of this Bulletin.

Mixing ratio: 100 parts by volume of Autocryl Sealer Transparent
50 parts by volume of Autocryl Hardener
30 parts by volume of Autocryl Thinner

The mixing ratio corresponds to the graduations on the Autocryl Measuring stick.

Spraying viscosity: 14 secs. DIN Cup 4 at 20°C

Pot life at 20°C: 2.5–3 hours at 20°C

Spray gun fluid tip and working pressure:		Spray Gun fluid tip	Working pressure
	Gravity feed spray gun:	1.2–1.5mm	3–5 bar
	Suction feed spray gun:	1.5mm	3–5 bar
	Pressure feed spray gun:	1.0–1.2mm	4–6 bar
	Airless spray:	011"/65°	160–200 bar
Cleaning equipment:	In Sikkens Solvent, nitrocellulose thinner or acrylic thinner.		
Application in spray booth:	For reasons of safety at work and to prevent dust ingress, apply this product only in spray booths with extraction facilities.		
Number of coats:	Spray 1 single wet coat or up to 2 single wet coats allowing for 5 minutes flash off time between coats.		
Recoatibility:	<p>After the last coat has been applied, allow for 15 minutes flash off time at 20°C.</p> <p>Autocryl Sealer Transparent may be coated wet on wet with Autocryl or Autobase within 3 hours after applying the last coat.</p>		
Selection of sandpaper grades:	<p>P800–P1000 for either mechanical or manual wet flatting.</p> <p>P240–P280 for mechanical dry sanding.</p> <p>P280–P320 for manual dry sanding.</p>		
Film thickness:	<p>Approx. 20 µm of 1 single wet coat is applied.</p> <p>Approx. 30 µm of 2 single wet coats are applied.</p>		
Coverage:	<p>16–19m²/ltr for 1 single wet coat.</p> <p>10–12m²/ltr for 2 single wet coats.</p>		
Addition of Autocryl colour:	<p>In the case of colours that have less satisfactory hiding power Autocryl colour (base paint) may be added to pure Autocryl Sealer Transparent (maximum ratio 1:1 in parts by volume). Next add hardener and thinner to this mixture, adopting the ratio of 100:50:30. This will result in improved opacity of the area under repair.</p>		
Colour:	Transparent		
Container sizes:	1 & 5 ltr.		

SECTION III – TOPCOATS**(A) AUTOFINE**

An air drying acrylic lacquer for spot repairs and resprays. This lacquer can be applied to flatted original T.P.A. finishes or on to surfaces prepared with Autofine Primer Surfacer.

NOTE: This system is not recommended as a complete refinish process from base metal on vehicles in warranty. See Autocryl.

Product and additives: Autofine.
 Autofine Thinner Slow: to be used for complete resprays and at higher temperatures.
 Autofine Thinner Fast: to be used for spot repairs and panel repairs at lower temperatures.
 Autofine Retarder (up to 30 parts by volume may be added to Autofine Thinner Slow): to be used at temperatures above 25°C or when large surfaces are to be sprayed, or if flow out is inadequate.

The Autofine Thinners Slow and Fast can be intermixed so that the thinner composition can be adjusted to the circumstances of application.

Preparation of the surface: Wet flat with P800–P1000 grit paper
 Dry sand with P360–P400 grit paper

Recoatibility: An Autofine topcoat can only be recoated with Autofine Primer Surfacer.

Mixing ratios:
 (a) Non metallic colours
 100 parts by volume of Autofine
 100 parts by volume of Autofine Thinner
 (b) Metallic colours
 100 parts by volume of Autofine
 150 parts by volume of Autofine Thinner

Spraying viscosity: 12–15 s DIN Cup 4 at 20°C (15–19 s BSB4)

Cleaning of equipment: In Sikkens Solvent, Autofine Thinner or a regular nitro-cellulose thinner.

Spray gun fluid tip and working pressure:	Spray gun fluid tip	Working Press. (gauge press.)
Gravity feed spray gun:	1.5mm	2–4 bar (30–60 psi)
Suction feed spray gun:	1.8mm	2–4 bar (30–60 psi)

Process at 20–30°C: Spray three single coats, allowing for a flash-off time of 4–8 minutes between coats.
 Colour variegation of metallic colours can be avoided by adding 30% by volume of Autofine Clear to the Autofine metallic colour prior to applying the last coat of metallic.

Recommended process for spot repairs and fading out areas of one-coat metallic colours:

It is recommended to apply one coat of Autofine Clear after application of the metallic colour in order to avoid variegation when spot repair and fade out areas are polished.

Blending the patch into the background:

The patch can be blended invisibly into the background by misting-over the edges with pure Autofine Thinner immediately after application of the last coat.

Reduce the working pressure by 0.5 bar (7.5 psi) for this operation.

Drying times at 20–30°C:

Dust dry: after 5 minutes
Tack free: after 15 minutes
Dry to polish: after 24 hours

Finishing touch:

Autofine can be polished to the desired high-gloss level with any current polish.

AUTOCRYL

A two pack acrylic enamel suitable for application over original T.P.A. finishes, and surfaces prepared with Autocryl Filler.

NOTE: Where Autocryl is to be applied directly on to T.P.A., adhesion will be improved if the surface is initially coated with Autocryl Sealer Transparent.

CAUTION: This paint contains isocyanates. Please refer to Section I of this Bulletin.

Surface preparation:

Sand with P800–P1000 (360–400) grade paper.

Mixing ratio:

100 parts by volume of Autocryl, 50 parts by volume of Autocryl Hardener and 30 parts by volume of Autocryl Thinner or Autocryl Temp-O-Actif.

Use the Autocryl measuring stick with graduation for easy mixing, even for the smallest quantities.

Spraying viscosity:

20–21 s BSB4 16–17 s DIN Cup 4 at 20°C, also if applied by pressure feed spray gun, airless spray and electrostatic spray.

Pot life:

4 hours at 20°C

Cleaning equipment:

With Sikkens Solvent, nitrocellulose thinner or Autocryl Thinner.

Spray application:

	Spray gun fluid tip	Working pressure
Gravity feed spray gun:	1.2–1.5mm	3–5 bar
Suction feed spray gun:	1.5mm	3–5 bar
Pressure feed spray gun:	1.0–1.2mm	4–6 bar
Airless spray (not possible for metallics):	0.011"/65°	160–200 bar

Brush application: Use supple brushes and do not thin (for door edges).

PROCESSES

Standard method: Apply 2 double coats or 3 single coats allowing for sufficient flash-off between coats.

Flash-off: The flash-off time depends on the temperature.
 At 10°C At 20°C At 30°C
 10–15 mins 6–10 mins 4–6 mins

On thermoplastic acrylic finishes: Because of the sensitivity of this substrate, the film thickness required should be built up with greater care. In this case, apply 3 single wet coats, i.e. no double coats. Allow for sufficient flash-off time between coats as specified above.

Matching metallic colours: If the colour is too light, apply another single coat. If the colour is too dark, add an extra amount of Autocryl Thinner (up to 33%) to the ready-for-use mixture and apply a final mist coat. Never add an extra amount of Autocryl Temp-O-Actif.

Drying of Autocryl:

IF THINNED WITH AUTOCRYL THINNER

	10°C	15°C
Dust dry	1.5 hrs	50 mins
Tack free	12 hrs	4 hrs
Dry to handle	24 hrs	16 hrs
Hard dry	36 hrs	24 hrs

	20°C	40°C	60°C
Dust dry	30 mins	15 mins	5 mins
Tack free	1.5 hrs	45 mins	15 mins
Dry to handle	10 hrs	1 hr	30 mins
Hard dry	16 hrs	1.5 hrs	45 mins

IF THINNED WITH AUTOCRYL TEMP-O-ACTIF

	10°C	15°C
Dust dry	1 hr	40 mins
Tack free	5 hrs	2.5 hrs
Dry to handle	12 hrs	7 hrs
Hard dry	18 hrs	12 hrs

	20°C	40°C	60°C
Dust dry	25 mins	10 mins	5 mins
Tack free	1 hr	15 mins	10 mins
Dry to handle	5 hrs	30 mins	15 mins
Hard dry	8 hrs	50 mins	20 mins

Spreading rate: 8–9m² /ltr of base paint if 2 double coats are applied.

Recoatibility: A subsequent coat of Autocryl can be applied when the previous coat is semi-set or fully dry.

Polishing: Defective areas may be sanded lightly and polished after 45–50 minutes drying at 60°C or 16 hrs drying at 20°C.

AUTOBASE SYSTEM

A two coat system of metallic colours consisting of a base coat, Autobase Metallic, and a two pack clearcoat, Autobase Clear. The Autobase system can be applied over original T.P.A. finishes and surfaces prepared with Autocryl Filler.

NOTE: Where Autobase is to be applied directly on to T.P.A., adhesion will be improved if the surface is initially coated with Autocryl Sealer Transparent.

CAUTION: This paint contains isocyanates. Please refer to Section I of this Bulletin.

Mixing ratios: Autobase Metallic:
100 parts of Autobase Metallic, 100 parts by volume of Autobase Metallic Thinner (or Slow Thinner).
Autobase Clear:
100 parts by volume of Autobase Clear, 50 parts by volume of Hardener for Autobase Clear, 30 parts by volume of Thinner for Autobase Clear or Autocryl Thinner or Temp-O-Actif.

Spraying viscosities: Autobase Metallic:
14–15 s DIN Cup 4 at 20°C (17–19 s BSB4)
Autobase Clear:
15–16 s DIN Cup 4 at 20°C (19–20 s BSB4)

Pot life: Autobase Metallic: 24 hrs at 20°C
Autobase Clear: 4 hrs at 20°C

Cleaning equipment: First flush with a small amount of Autobase Metallic Thinner next with Sikkens Solvent or nitrocellulose thinner.

Spray gun fluid tips and working pressures:	Autobase Metallic	Spray gun fluid tip	Working pressure
	Gravity feed spray gun	1.2–1.5mm	2–4 bar
	Suction feed spray gun	1.3–1.5mm	2–4 bar
	Pressure feed spray gun	1.1–1.2mm	4–5 bar
	Autobase Clear		
	Gravity feed spray gun	1.2–1.5mm	3–4 bar
	Suction feed spray gun	1.3–1.5mm	3–4 bar
	Pressure feed spray gun	1.1–1.2mm	4–6 bar

Application: Autobase Metallic:
General — spray a single coat to the repair area first. After 2–5 minutes flash off time, spray a single wet coat overall. After 2–5 minutes flash off time, apply one or two single coats depending on the hiding power (observe a 2–5 minute flash off period between coats). Allow the base coat to set to a matt finish. Reduce the working pressure to 2 bar and apply one or two mist coats.

Spraying technique for spot repairs:

When making spot repairs reduce the working pressure to 1–1.5 bar and spray light single coats until opacity is achieved. Allow the base coat to set to a matt finish. Next, liberally fade out the repair area twice, using a pressure of 1–1.5 bar. If desired, Autobase Metallic can be masked after 10–15 minutes at 20°C and overcoated with Autobase Metallic of a different colour. After 10–20 minutes setting at 20°C, Autobase Clear can be applied.

Autobase Clear:

Apply 3 single coats. Allow for a flash off time of 5–10 minutes between each coat.

Drying:

Autobase Clear (thinned with Thinner for Autobase Clear):

	15°C	20°C	40°C	60°C
Dust dry	50 mins	30 mins	20 mins	5 mins
Tack free	4 hrs	3 hrs	1 hr	15 mins
Dry to handle	16 hrs	13 hrs	1 hr	30 mins
Hard dry	24 hrs	20 hrs	1.5 hrs	50 mins

Autobase Clear (thinned with Temp-O-Actif or with Temp-O-Actif 2):

	40 mins	20 mins	10 mins	5 mins
Dust dry	40 mins	20 mins	10 mins	5 mins
Tack free	2.5 hrs	1.75 hrs	20 mins	15 mins
Dry to handle	7 hrs	5.5 hrs	30 mins	20 mins
Hard dry	12 hrs	12 hrs	50 mins	30 mins

Coverage:

Autobase Metallic:

7–8m²/ltr of unthinned paint for 3 single coats

Autobase Clear:

6–7m²/ltr of unthinned paint for 3 single coats

Film thickness:

Autobase Metallic: 15–25 µm

Autobase Clear: 55–85 µm

These film thicknesses are achieved provided the above application methods are followed.

Polishing:

Dust ingress and minor damage in the Autobase Clear finish can be removed by polishing, provided the following drying times are allowed for:

15°C	20°C	40°C	60°C
3 days	2 days	4 hrs	1.5 hrs

First rub carefully with P1200 grade paper, then polish the area manually or mechanically.

Points to note:

- do not use Autobase Metallic Thinner in Autobase Clear. This would lead to considerable delays in drying and thorough hardening.
- do not use Thinner for Autobase Clear in Autobase Metallic. This combination is not compatible and would result in too high a spraying viscosity as well.
- do not use Autobase over any coating in which thinner ABM has been used.

SECTION IV – UNITED KINGDOM SERVICE TECHNICAL SUPPORT

Approved materials and repair processes are identified in Sections II and III. U.K. and world market distribution of Sikkens materials are identified in Sections V and VI.

This section identifies action to be taken by Dealers if problems are encountered with Sikkens materials.

1. A Dealer should initially address any queries to the stockist from whom the materials were purchased.
2. If satisfaction cannot be provided by this method, the Dealer should contact his local Sikkens Area Sales Manager who may give on the spot technical support if required.
3. Contact with Sales Managers should be made through Sikkens U.K. Telephone 0235 815141.

Mr. J.A.A. Clarke
49 Rylstone Way
Saffron Walden
Essex
Area Sales Manager – North Thames

Mr. C.D. Cruickshank
7 Pickletullum Road
Perth
Scotland
Area Sales Manager – Scotland

Mr. J. Griffin
Erika
Plough Road
Tibberton
Nr. Droitwich
Worcs.
Area Sales Manager – Midlands

Mr. F.K. McGarty
211 Bickershaw Lane
Wigan
Lancs.
Area Sales Manager – Northern

Mr. R.N. Smith
Little Timbers
Tudor Village
Washington
West Sussex
Area Sales Manager – South Thames

Mr. P.C. Williamson
7 Thorningdown
Chilton
Nr. Didcot
Oxon.
Area Sales Manager – South West

SECTION V -- U.K. STOCKISTS

There are currently 156 stockists of Sikkens refinish materials throughout the United Kingdom. Primarily marketing is through the Brown Bros. organisation of which there are 93 outlets, the remainder of the outlets being local refinish paint suppliers.

Sikkens will provide refinishers with any of the materials identified in this Bulletin through their stockists. Any concern regarding these materials should be addressed initially to the supplier.

Any queries concerning local supply should be directed to:

Sikkens U.K. Ltd.
Telephone 0235 815141

SECTION VI – SIKKENS WORLDWIDE AGENTS

Sikkens are represented worldwide through extensions of the Sikkens Organisation under the trade name of Sikkens or Akzo Coatings, or through importers.

A number of the overseas agents have their own training facilities and are able to provide product training on site, alternatively enquiries will be directed to the relevant Sikkens or Akzo representative.

Only a limited number of Sikkens/Akzo outlets are listed in this section although there is representation in most countries worldwide.

Enquiries concerning local agents or material stockists should be directed to one of the addresses listed here:

NORTHERN EUROPE

- Belgium: Akzo Coatings Belgium N.V.
Donkerstraat 38
B-1740 Ternat
Belgium
Tel: (02)-5823110
- Germany: Deutsche Akzo Coatings
Magirusstr 26
7000 Stuttgart 30
BRD
Tel: 0711-89511, Telex: 721693
- France: Astral S.A.
B.P. 140
Rue Ambroise Croizat 164
93204 St. Denis
France
Tel: 01-8206164
- Holland: Sikkens Verkoop Nederland B.V.
Autolakken Sector
PO Box 3
Sassenheim
Holland
Tel: 1711-86944

Sikkens also represented in Denmark, Finland, Sweden and Norway.

SOUTHERN EUROPE

- Italy: Akzo Coatings Italia
20090 Cesano Boscone (Mi)
Via Benedetto Croce 9
Milan
Tel: (02) 44 042 42 Telex: 315387 SIKLIN I
- Spain: Ivanow SA
Feixa Llarga s/nº (Zona Franca)
Apartado de Cooreos 7072
Barcelona 4
Spain
Tel: 03-3352058

Greece: Delpaco
64 Panepistimiou Street
141 Athens
Greece
Tel: 01-623304 Cable: Oilpa

Switzerland: Graf Lack AG
Motorenstrasse 36
CH8623 Wetzikon ZH
Switzerland
Tel: 01/9311131 Telex: 875331

Sikkens also represented in Portugal and Luxembourg.

U.S.A.

Head Offices: American Sikkens
6040 H Northbelt Drive
Norcross
Georgia 30071
U.S.A.

Akzo Coatings America Inc
650 Stephenson Highway
P.O. Box 1196
Troy
Michigan 48084

Branch Offices: 1694 Maxwell Street, Troy, Michigan 48084
13800 Crenshaw Boulevard, Gardena, California, 90249
829 34th Avenue, Seattle, Washington 98122
10630 Newkirk Suite 109, Dallas, Texas 75220
2395 Delta Lane, Elk Grove, Illinois 60007
201 Manor Drive, King of Prussia, Pennsylvania, 19406
1901 Painters Run Road, Pittsburgh, Pennsylvania, 15241
9160 B Bursa Road, Laurel, Maryland 20707
1045 Pennsylvania Avenue, Linden, New Jersey 07036
11 Sixth Road, Woburn, Massachusetts 01301

CANADA: Wyandotte Paint Products
31 Racine Road
Rexdale
Ontario M9W 2Z4

AUSTRALIA: Spartan Paints Pty Ltd.
Grangers Road West
West Footsaw
3012 Victoria
Australia

MIDDLE EAST

Saudi Arabia: Ahmed Kassem AL—Amoudi Stores
PO Box 371
Alkhobar 31952
Saudi Arabia

Jordan: Zabaneh Bros. Trading Co.
PO Box 6192
Amman
Jordan

Bahrain: Al—Ala Trading Company
PO Box 5149
Manama
Bahrain

Kuwait: Walid Al—Adsani & Partner
Trading Company W.L.L.
PO Box 6017
Hawalli
Kuwait

Oman: Technique LLC
PO Box 3089
Seeb Airport
Muscat
Sultanate of Oman

Abu Dhabi: Kabbani Brothers Trading Co.
PO Box 212
Abu Dhabi
United Arab Emirates

Qatar: Al—Sha'b Garage & Service Station
PO Box 2666
Doha
Qatar

FAR EAST

Head Office: Akzo Coatings Ltd.
The 17th Mori Building 26—5
Toranomon
Minatu Ku
Tokyo 105
Japan

Malaysia: Heap Seng Heng (M) Sdn. Bhd.
GPO Box 2395
Kuala Lumpur
Malaysia

Hong Kong: Universal Cars Ltd.
10th floor sime darby
Industrial Centre
420 Kwun Tong Road
Kwun Tong
Kowloong
Hong Kong

Singapore: Hypercoat Enterprises
21 Loyang Cres.
Loyang Industrial Estate
Singapore 1750

ITEM 20

80 BLOWER MOTOR (PARTS REPLACEMENT)

S.III NON AIR-CON. MODELS

To overcome re-occurring vibration problems experienced in Service when replacing blower motor/bracket assembly, Part No. RTC 690, the blower motor/bracket is now supplied complete with balanced fan assembly.

Part Numbers: JLM 355 RH
JLM 356 LH

The above part numbers supercede RTC 690 motor/bracket and RTC 765 fan assembly and should be quoted when ordering replacement parts.

ITEM 21

80/82 HEATER/AIR CON. BLOWER MOTORS

S.III

To ease production assembly of blower motor units and prevent possible damage to the blower motor plenum flap linkages, the body panel aperture size has been slightly increased.

In conjunction with the increase in size of the panel aperture, blower motors are now equipped with a new seal Part No. CAC 9764 and were introduced at VIN 410733.

The new seal which MUST be used from the above VIN, may also be fitted on vehicles prior to this.

XJS HE/XJS 3.6 Models, with the revised body panel aperture, will be introduced in the next few months and a further Service Bulletin will be issued clarifying introduction points.

ITEM 22

86 IGNITION COIL

S.III 4.2 MODELS

To improve the ignition performance on S.III 4.2 Models, a new ignition coil and ballast resistor together with a new ignition amplifier and engine harness were introduced at VIN 412543. Service Bulletin JD 01/85 Item 11 refers.

Should replacement of an ignition coil be required prior to the above VIN, the new ignition coil and ballast resistor may be fitted in conjunction with a slight modification to the existing engine and ignition amplifier harness. Modification details are as follows:

Parts required

Description	Part No.	FIG Code
Ignition Coil/Ballast Resistor	DAC 3795	
3 off Lucar Connector (Female)	GHF 2051	A
3 off Insulator Sleeve	GHF 2151	B
1 off Insulator Sleeve	GHF 2153	C
2 off Eyelet	GHF 2431	D

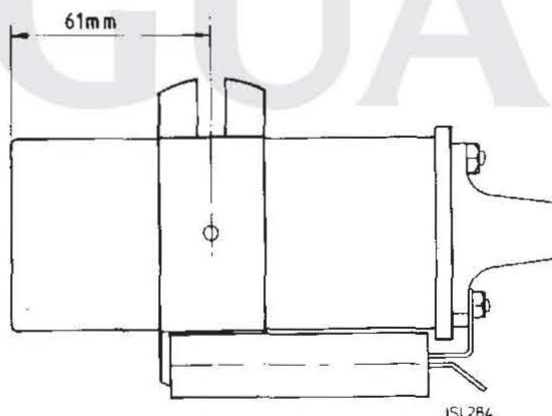
When ordering the above connectors/sleeves, please note they are supplied in packs of 100, 200, 250 or 500 depending on component.

Labour allowance	0.50 hrs.
Warranty Code	7A8-Z
Repair Operation Time	86-91-01

Modification Procedure

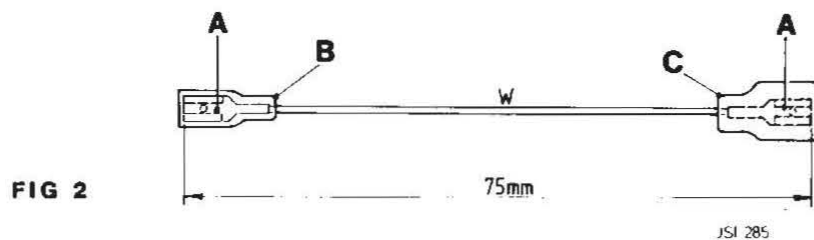
NOTE: All new harness connectors should be properly crimped or soldered. Wiring colour coding: W = White, B = Black, S = Slate, U = Blue.

1. Disconnect the battery earth lead.
2. Disconnect and remove the existing coil.
3. Fit the new coil and ballast resistor assembly to the engine. It is necessary to slide the mounting bracket along the coil to gain access to the slot on the fixing bracket hidden by the ballast resistor. Fit and tighten the outboard fixing screw securing the bracket to the engine.

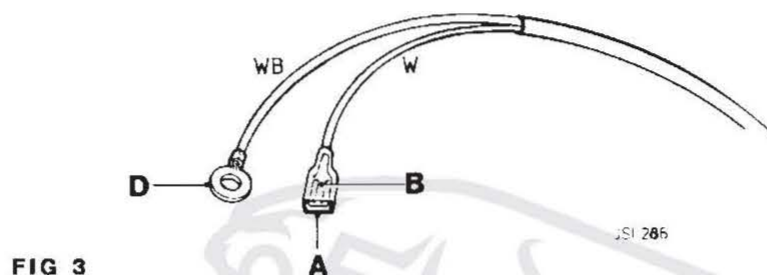
**FIG 1**

Move the coil to the position shown in Fig. 1 and tighten the bracket clamping bolt to the correct torque, DO NOT overtighten. Fit and tighten the coil bracket inboard fixing screw.

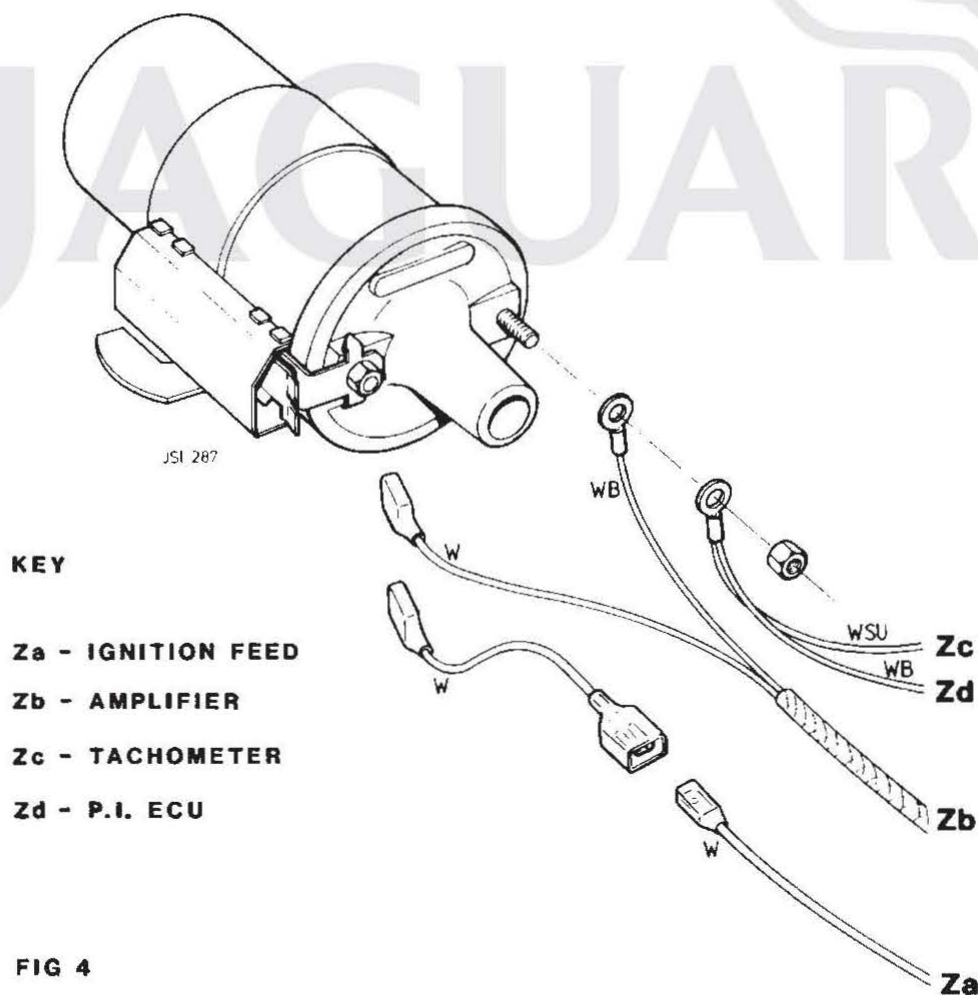
4. Construct a link harness as shown in Fig. 2, and connect it between the ignition coil feed wire (W) and the coil ballast resistor, Za, Fig. 4.



5. Modify the existing ignition harness by cutting off the terminals. Fit lucar connector (GHF 2051) and sleeve (GHF 2151) A & B, Fig. 3 to the white (W) wire and eyelet (GHF 2431) D, Fig. 3 to the white/black (WB) wire. Connect the white (W) wire to the ballast resistor.



6. Cut off the existing terminals from the white/black (WB) engine harness — coil to ECU wire, and the white/slate/blue (WSU) tachometer feed wire. Join these two wires together and fit the other eyelet (GHF 2431) to them.



7. Connect the two eyelet connectors, one on the ignition amplifier harness and the other on the engine harness, to the coil negative stud and secure, (see Zb, Zc and Zd, Fig. 4).
8. Reconnect the battery earth lead and check operation.

ITEM 23**86 ELECTRIC DOOR MIRRORS****XJS HE/XJ-S 3.6/XJ-SC 3.6**

To improve the working margin of the fuse controlling the electric door mirror circuit, the fuse rating has been increased from 1.5 amp continuous/3 amp fuse to 2.5 amp continuous/5 amp fuse. Introductory VIN 122344.

On vehicles prior to the above VIN, where fuses are blowing and there is no apparent fault in the electric door mirror circuit, the fuse specification should be uprated to the latest condition. Will Service Personnel also ensure that vehicle fuse box labels are altered accordingly.

The fuse is located as follows:—

Main Fuse Box No. 8 RH and LH Steering

ITEM 24**86 TRIP COMPUTER****S.III/XJS HE/XJ-S 3.6/XJ-SC 3.6**

A revised trip computer featuring CMOS technology has been introduced to replace the NMOS type at VIN's:

416768	—	Saloon
121421	—	XJS

Part Number DAC 3749 European Vehicles

Part Number DAC 3758 Federal Vehicles

Interchangeability with the previous NMOS unit is unaffected.

Operational features and improvements of the CMOS system are summarised as follows:—

1. When 999.9 miles or kilometers is reached, the decimal place is dropped and the computer will continue to function with all other display modes unaffected until 9999 miles is reached.

On reaching 9999 miles the display automatically returns to zero (with the one decimal place), resetting all speed and fuel functions to zero. Since all the calculations are performed in Imperial measurements then converted to metric when required, the metric odometer will revert back to zero on reaching 9999 Km, then continue to 6092.39 Km, which added together is the equivalent to 9999 miles, and at which point all the trip computer information is reset as detailed above.

2. A condition known as "wipe out" or "crash out" could occur with the previous NMOS computer, which resulted in the display totally disappearing or only showing random segments.

The action required to restore the computer functions was the temporary removal of the controlling fuse.

The new CMOS version incorporates a watchdog circuit which will limit any data loss, i.e. "wipe out" to a few milli-seconds and ensures that the display is restored without loss of fuel/distance or speed calculations.

3. The minimum voltage to retain the memory is reduced from 7.5 to 5.7 volts.
4. The battery drain with the ignition switched off is reduced from 8/12 to 5 milli-amps.

To improve the overall reliability of the computer there have been a number of design alterations to the printed circuit board (PCB) hardware.



Service Bulletin



Date MAY 1985
Sheet 1 of 6
Bulletin JD 05/85

ITEM 31

00 ADDENDUM – VEHICLE MAINTENANCE SHEETS

S.III and XJS

Part Numbers: AKM 9109 – German
 AKM 9110 – French
 AKM 9111 – Italian
 AKM 9112 – Spanish
 AKM 9116 – English
 AKM 9118 – Dutch

Item number 65 'Change coolant ensuring the correct antifreeze concentration': This operation should be performed at 48,000 km (30,000 mile) intervals and not 24,000 km (15,000 mile) intervals as stated.

Would all Service personnel please note and amend sheets accordingly.

ITEM 32

03 SWITCH REPAIR TIMES

S.III

Due to an alteration in vehicle build techniques the following Repair Times have been altered as shown:

86-65-13	Interior Light Switch – Renew	0.45 hrs.
86-65-36	Backlight Heater Switch – Renew	0.45 hrs
86-65-39	Fuel Tank Change Over Switch – Renew	0.45 hrs
86-65-43	Map Light Switch – Renew	0.45 hrs

Please amend your Repair Time Schedule to suit.
No other Repair Times are affected.

ITEM 33**03 VEHICLE SERVICING TIMES****ALL MODELS**

Servicing Times previously published in Policy Letters and Service Bulletins, have now been compiled into the following chart:

SERVICE INTERVALS	S.III 6 Cyl	S.III 12 Cyl + XJS	S.III 12 Cyl HE + XJS HE	XJ-S 3.6 XJ-SC 3.6	OPTION SERVICE
1,000	3.85	3.75	3.75	3.45	
7,500	3.35	3.75	4.00	3.20	0.90
15,000	4.90	5.05	5.30	4.45	0.25
22,500	3.35	3.95	4.20	3.20	0.90
30,000	5.75	5.90	6.15	5.35	0.25
37,500	3.35	3.75	4.00	3.20	0.90
45,000	4.90	5.05	5.30	4.50	0.25
52,500	3.35	3.75	4.00	3.20	0.90
60,000	5.75	5.90	6.15	5.35	0.25
67,500	3.35	3.75	4.00	3.20	0.90
75,000	4.90	5.05	5.30	4.45	0.25
82,500	3.35	3.75	4.00	3.20	0.90
90,000	5.75	5.90	6.15	5.40	0.25
97,500	3.35	3.75	4.00	3.20	0.90

This chart has been produced for your reference and none of the Servicing Times have altered.

ITEM 34**12 SUMP GASKETS****S.III 5.3/XJS HE**

Improved cylinder block to sump sandwich plate and sandwich plate to sump pan gaskets have been introduced on V12 engines from the following engine numbers:

7P 52645	—	S.III 5.3
8S 34842	—	XJS HE

Part numbers will be advised when parts are available.

ITEM 35**12 SUMP PLUG BOSS****S.III XJ6/LIMO**

Isolated reports have been received of the XK sump plug boss cracking due to the hole being off centre. A locating jig, to ensure that the drain hole is always located in the centre of the boss, was introduced at the following engine numbers:

8A 15876	—	3.4
8L 181176	—	4.2
7M 5029	—	Limo

ITEM 36

51 FINAL DRIVE UNIT

S.III

As a result of investigations into cross shaft carrier wear, a revised cross shaft has been incorporated on all GKN non Powr-Lok differentials from unit number 85B 7040.

The new cross shaft features a double flat to improve pinion mate lubrication and was progressively introduced from VIN 420330.

ITEM 37

74 FITMENT OF 235 TYRES

LIMO AND HEARSE

Jaguar have recently introduced a change of tyre, type and size on limousines, from Dunlop 205-70HR15 to Michelin 235-70HR15, Service Bulletin JD 11/84 item 84 refers.

The increased profile of the new tyre has dictated that some modification of body panels is necessary to maintain a minimum distance between tyres and adjacent panels.

Unmodified vehicles built prior to VIN 200592 Limousine, 400162 Hearse, may be fitted with 235 tyres, providing certain body modifications are carried out to ensure the minimum recommended clearances:

1. Front Wheel Arch Flange
Trim off excess metal to ensure a maximum flange width of 20mm (0.75 ins).

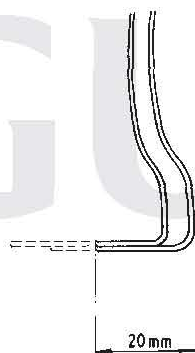


Fig. 1

JS 350

2. Front Wheel Arch Housing
Using a hammer or hard faced mallet reduce the bulge present in the panel at the rear of the wheel arch, to conform with the level of the surrounding panel.

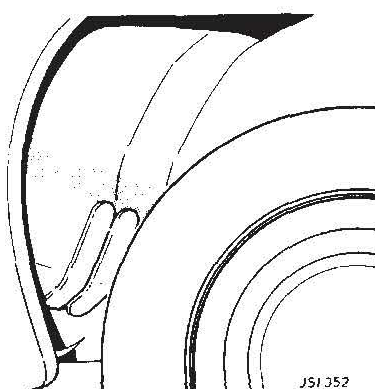


Fig. 2

JS1352

3. **Rear Wheel Arch Flange**
Trim off excess metal to ensure a maximum flange width of 31mm (1.25 ins).

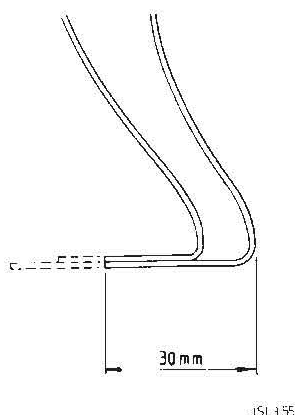


Fig. 3

4. **Rear Wheel Arch Housing**
Using a hammer or hard faced mallet reduce the bulge present in the panel at the front of the wheel arch, to conform with the level of the surrounding panel.

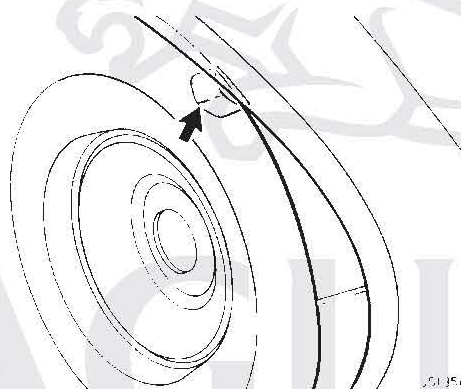


Fig. 4

5. Repair any paint damage resulting from the above procedures by applying an approved paint process.
6. Repair any damaged underseal, do NOT apply directly on to bare metal.

NOTE: Modifications detailed in this item CANNOT be claimed under warranty.

ITEM 38

76 SUNROOF MECHANISM

S.III

This bulletin has been prepared to aid the Service Network in rectifying sunroof problems.

The first section deals with emergency action in the event of the sunroof motor failing and the sliding panel being stuck partly open. The following sections deal with associated components and adjustments.

SUNROOF MANUAL OPERATION

Where a sunroof motor has failed and the panel is stuck partially open, manual operation can be carried out by attaching a small handle (A Fig. 1), supplied with the tool kit, to a shaft protruding from the base of the sunroof motor.

To gain access to the motor, remove boot front trim panel by releasing 2 quarter turn fasteners. (Details are given in the Drivers Handbook).

CAUTION: Where manual operation is to be carried out on a sunroof stuck in the **FULLY OPEN** or **CLOSED** position, it is important that the handle is rotated in the correct direction or damage to the motor wheelbox may result.

NOTE: Direction of rotation when viewing from **UNDERNEATH** the motor.

To open — rotate handle anti-clockwise

To close — rotate handle clockwise (Shown Fig. 1)

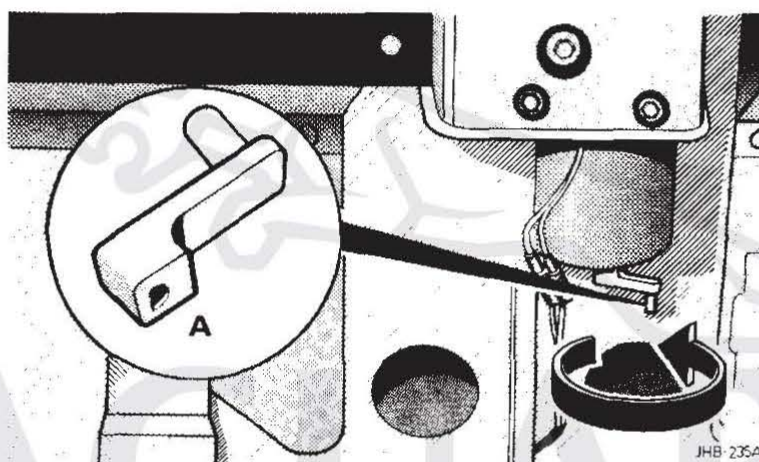


Fig. 1

If the sliding panel cannot be moved because the motor has seized, then the following emergency action can be taken.

1. Remove the rear seat cushion and squab, refer to operation 76-70-37/38.
2. Remove the two nuts securing the wheelbox cover, and remove the cover.
3. Remove the rack tubes from the wheel box.
4. Grasp the sliding roof panel and move it in the desired direction.

SLIDING PANEL — Remove and Refit

1. Open the sunroof panel 15 to 23 cm (6 to 9 in).
2. Remove the four screws from the front flange of the panel.
3. Move the sunroof to the closed position, lifting the front of the panel.
4. Lift the panel clear of the vehicle by pulling forward to release the two spring clips at the rear of the panel, Fig. 2.
5. To refit the panel reverse the above procedure.

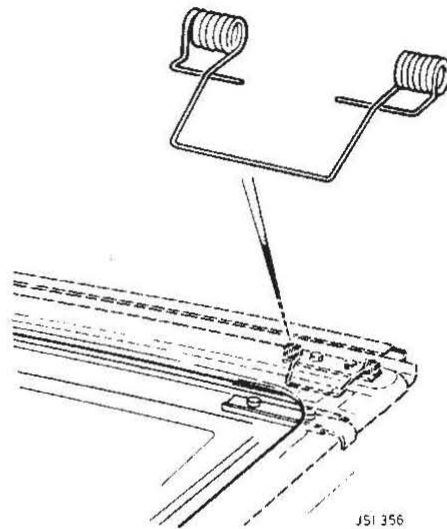


Fig. 2

Repair Operation Number 76-82-05
Repair Time 1.05 hrs

SLIDING PANEL SEAL – Renew

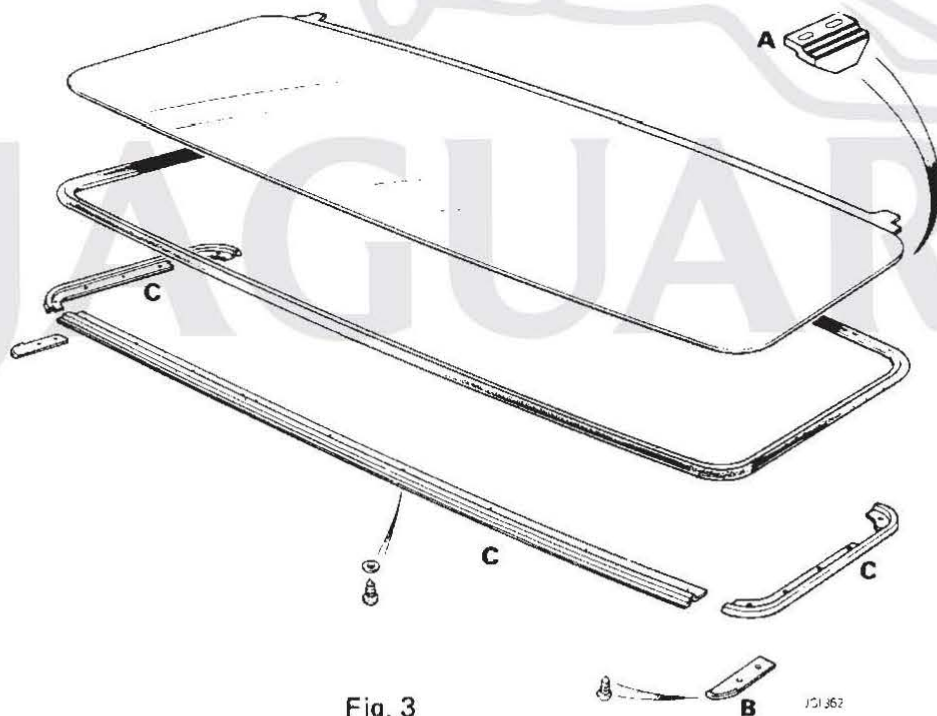


Fig. 3

1. Remove the sliding roof panel following the procedure detailed previously.
2. Remove the screws securing the two nylon lifting brackets and remove the brackets, A Fig. 3.
3. Remove the screws securing the two wind deflector brackets and remove the brackets, B Fig. 3.
4. Remove the screws and remove the seal retaining brackets, C Fig. 3.
5. Remove the seal at the front and sides of the panel, and from the channel at the rear.
6. Apply soft soap to the seal channel at the rear of the panel.

7. Insert the new seal into the channel ensuring that it is fully seated.
8. Position the seal at the front and sides of the panel.
9. Refit the seal retaining brackets and secure with the screws.
10. Refit the sliding roof panel.

Repair Operation Number 76-82-15
Repair Time 0.95 hrs

SLIDING ROOF PANEL RETAINING SPRING(S) – Renew

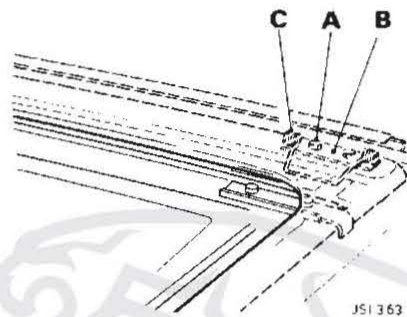


Fig. 4

1. Remove the sliding roof panel for access, refer to operation 76-82-05.
2. Fully close the under panel.
3. Slacken, but do not remove, the two nuts, A Fig. 4, securing the spring retaining bracket, B Fig. 4, sufficiently to allow the spring, C Fig. 4 to be removed.

NOTE: The spring brackets are located at the rear of the sunroof aperture, between the undertray and the roof panel.

4. Fit the new spring; ensure that the bracket is correctly positioned before tightening the nuts.
5. Refit the sliding roof panel.

Repair Operation Number 76-82-28 (One spring)
Repair Time 0.45 hrs

Repair Operation Number 76-82-29 (Vehicle set)
Repair Time 0.65 hrs

WIND DEFLECTOR – Remove and refit

1. Open the sliding roof panel and mark the position of the wind deflector.
2. Undo and remove the two allen screws and remove the deflector.
3. If a new deflector is being fitted, position the screws in the mounting bracket prior to fitting to the vehicle.
4. Position the deflector to the marks previously made, fit but do not fully tighten the screws.
5. Operate the sliding roof panel to check that the wind deflector operates correctly.

6. Adjust as required and tighten the screws.

Repair Operation Number 76-82-07
Repair Time 0.55 hrs

RACK CABLE -- Renew

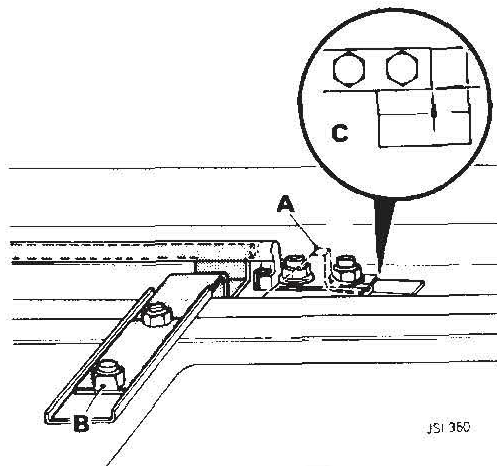


Fig. 5

1. Remove the roof sliding panel for access, refer to operation 76-82-05.
2. Fully close the under panel.
3. Remove the rear seat cushion and squab, refer to operation 76-70-37/38.
4. Remove the nuts securing the wheelbox cover and remove the cover.
5. Move the racks away from the housing.
6. Remove the black plastic lifting block, A Fig. 5.
7. Bend back the lock tabs, B Fig. 5, and remove the two nuts, lockplates, spring plates and rack mounting plate.
8. Mark the position of the rack stop, C Fig. 5. Remove the two nuts securing the rack stop and remove the stop from the rack tube.
9. Withdraw the rack from the tube and clear of the vehicle.

NOTE: Take care as the rack may be heavily greased.

10. Grease the rack as necessary and insert it into the tube. Ensure that the rack enters the second tube adjacent to the motor wheelbox.
11. Refit the rack stop and secure with the two nuts.
12. Refit the rack plate, spring plates, lockplates and secure with the two nuts. Bend up the locking tabs.
13. Refit the lifting block.
14. Fully close the under panel by hand.
15. Refit the racks to the wheelbox housing. Fit the cover and secure with the nuts.
16. Operate the sunroof electrically to ensure that the fully open and closed positions can be obtained.

NOTE: Operation 14 should ensure that full travel of the sliding roof is obtained.

17. Refit the sliding roof panel.
18. Refit the seat squab and cushion.

Repair Operation Number 76-82-42 (One side)
Repair Time 0.85 hrs

Repair Operation Number 76-82-43 (Vehicle set)
Repair Time 1.15 hrs

SUNROOF MOTOR/WHEELBOX/DRIVE GEAR – Renew

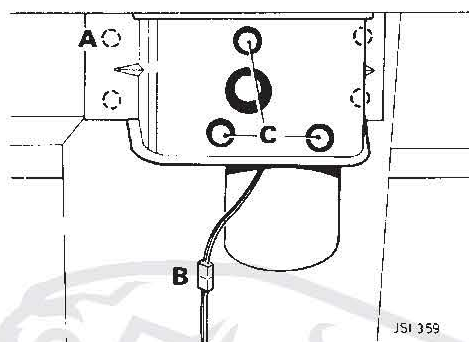


Fig. 6

1. Remove the rear seat cushion and squab, refer to operation 76-70-37/38.
2. Remove the two nuts securing the wheelbox cover and remove the cover.
3. Remove the racks from the housing.
4. Remove the four nuts securing the motor mounting bracket to the rear bulkhead, A Fig. 6.
5. Open the boot lid and remove the front trim panel to gain access to the motor.
6. Disconnect the electrical harness, B Fig. 6.
7. Remove the motor and mounting bracket assembly.
8. Remove the three hexagon headed screws securing the motor to the bracket, C Fig. 6, and remove the motor.

MOTOR – Renew

9. Reverse instructions 1 to 8.

WHEELBOX/DRIVE GEAR – Renew

10. Remove the four screws securing the wheelbox to the motor, A Fig. 7.
11. If the drive gear, AEU 3020 (Fig. 7) is to be renewed it should be done prior to the refitting of the wheelbox.
12. Refit or renew the wheelbox AEU 1564 (Fig. 7), securing with the four screws.

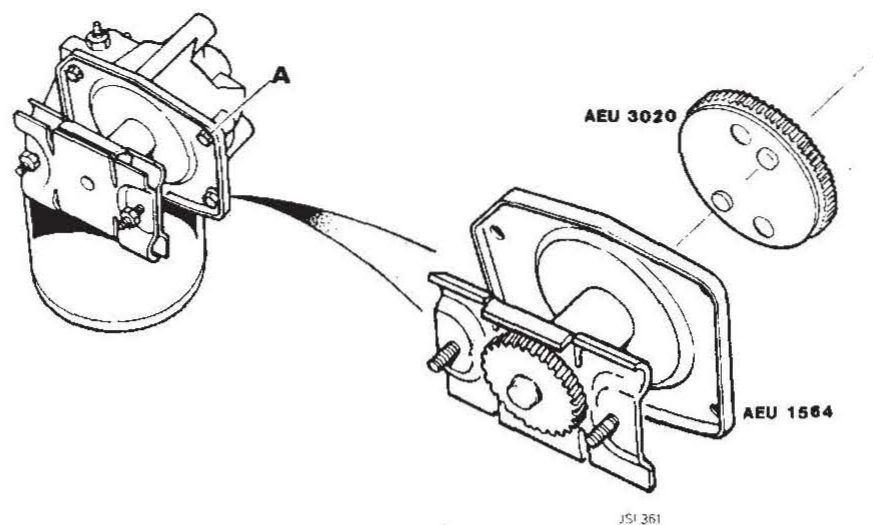


Fig. 7

Description	Repair Operation Number	Repair Times
Motor	86-76-01	0.80 hrs
Wheelbox	76-82-45	0.85 hrs
Drive Gear	76-82-44	0.80 hrs

SUNROOF ASSEMBLY – Remove and refit

Removing

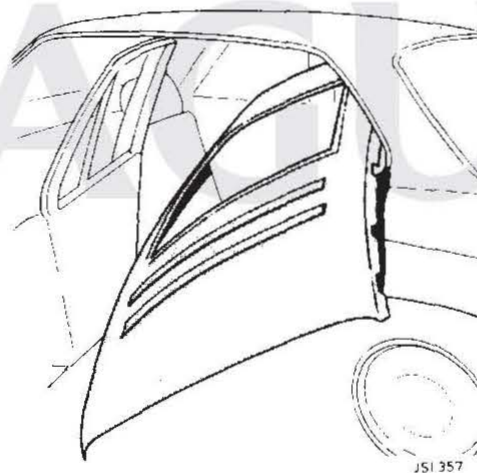
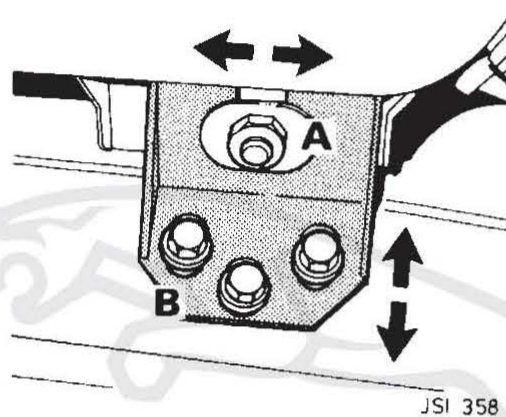


Fig. 8

1. Remove the sun visors, interior mirror, reading lights (where fitted), passenger grab handles, roof aperture flange finisher and necessary door finishers, side cantrail trim rolls, and rear seat cushion and squab.
2. Move the rear seat belt inertia mechanism (where fitted) away from the rear panel shelf.
3. Remove the rear parcel shelf trim panel, rear quarter trim panels, headlining rear trim roll and headlining. The headlining is removed via the rear door aperture (Fig. 8).
4. Cut the plastic straps securing the drain tubes and release the tubes.
5. Remove the wheelbox cover securing nuts and remove the cover.
6. Release the cable clips from the bulkhead and 'D' post.

7. Remove the racks from the wheelbox housing. Tape the tubes together to prevent the possibility of grease marks.
8. Mark the position of the sunroof mounting brackets to the body and remove the set-screws.
9. Remove the nuts securing the brackets to the sunroof and remove the brackets.
10. Lower the sunroof assembly into the car. Rotate through 90 degrees and remove diagonally through the sunroof aperture.

Refitting



11. Lower the sunroof, diagonally through the roof aperture, turn through 90 degrees and lift into position. Ensure that the inner seal is correctly fitted.
12. Fit the mounting brackets to the sunroof. Fit but do not tighten the securing nuts.
13. Fit but do not fully tighten the setscrews securing the mounting brackets to the cantrail.
14. Reposition the rack tubes, fit the clips to the bulkhead and 'D' post. Fit but do not fully tighten the securing screws.
15. Ensure that the sunroof panel is fully closed and refit the rack cables. Refit the wheel-box cover and secure with the nuts.
16. Tighten the cable clip securing screws.
17. Reconnect the drain tubes and secure with the ratchet clips.
18. Refit the sliding roof panel.
19. Align the sliding panel to the roof profile and tighten the mounting bracket setscrews, B Fig. 9.
20. Ensure that the sunroof is correctly aligned in the roof aperture and tighten the mounting bracket nuts, A Fig. 9.
21. Reverse operations 1 to 4.

Repair Operation Number 76-82-01
Repair Time 4.30 hrs

SLIDING PANEL – Adjust

1. The only adjustment possible on a fully trimmed vehicle is that required to raise or lower the rear edge of the panel. Refer to Service Bulletin JD 02/82 Item 13 when carrying out this adjustment.
2. To adjust the alignment of the sliding panel to roof profile refer to operation 19 and B, Fig. 9, in the previous procedure.
3. To ensure correct centralisation of the sliding panel in the aperture, refer to operation 20 and A, Fig. 9, in the previous procedure.

ITEM 39

80/82 HEATER/AIR CON BLOWER MOTORS

XJS

Reference Service Bulletin JD 03/85 item 21.

XJS-HE/XJ-S 3.6/XJ-SC 3.6 models incorporating an increased body panel aperture and a new blower motor seal CAC 9764 were introduced at VIN 122989.

ITEM 40

82 AIR CONDITIONING

S.III 4.2 EFI MODELS

To improve the performance of the air conditioning system, large bore low pressure refrigerant hoses together with a modified fuel cooler, have been introduced on Series III 4.2 Air/Con Models at VIN 424475.

The above modification reduces the pressure drop on the low pressure side and subsequently improves the working margin of the compressor thermal fuse.

Modifications affecting XJS-HE and 12 cylinder saloon models are to follow. Large bore hoses were introduced on XJ-S 3.6 and XJ-SC 3.6 models from production commencement.

ITEM 41

86 DOOR POCKET WARNING LAMPS

S.III (JAGUAR VDP AND SOVEREIGN ONLY)

Warranty Administration

Reference Service Bulletin JD 01/85 Item 10. In addition to Complaint Code 7K7-S, will Service personnel also quote Repair Operation Number 86-91-03 when submitting claims for this modification.

Service Bulletin



★ 2nd ISSUE ★

Date SEPTEMBER 1985
Sheet 1 of 4
Bulletin JD 09/85

ITEM: 62

12 OIL PRESSURE TRANSMITTER

S.III/XJ-S

Investigations into oil loss from the oil pressure transmitter, have revealed that in the majority of cases the leak is via the sealing washer. To ensure that the washer seals correctly, the tightening torque has been increased to 20.3 to 27.1 Nm (15-20 lbs/ft).

This change was introduced at the following engine numbers:

8L 187777 - 4.2
8A 16096 - 3.4
7M 5084 - Limo
8S 36329 - XJS
7P 53368 - XJ12

ITEM: 63

12 ENGINE OIL COOLER PIPE

S.III 3.4/4.2

To eliminate the possibility of oil loss from the engine oil cooler hoses, a new hose material has been introduced which has been designed to withstand higher temperatures.

This has resulted in Part Number changes for the hoses:

CBC 1437 replaces CAC 4557
CBC 1438 replaces CAC 4558

These new hoses were introduced at VIN 432926

ITEM: 64

26 IDLER PULLEY ASSEMBLY

V12 MODELS

Following reports of fracturing of the idler pulley assembly, used for tensioning the water pump drive belt on V12 engines, the material of the pulley arm has been changed from aluminium to S.G. iron.

This modification has resulted in Part Number changes which will be advised when the new parts are available.

The modification was introduced at engine numbers:

7P 53808 - S.III V12
8S 37231 - XJS V12

ITEM: 65

26 THERMOSTAT

XJ-S 3.6/XJ-SC 3.6

To improve heater output on XJS and XJ-SC 3.6 the cooling system thermostat has been changed from 82°C to 88°C.

The new Part Number will be advised when parts are available.

The new thermostat was introduced at Engine Number:

9DPAMA 102481

ITEM: 66

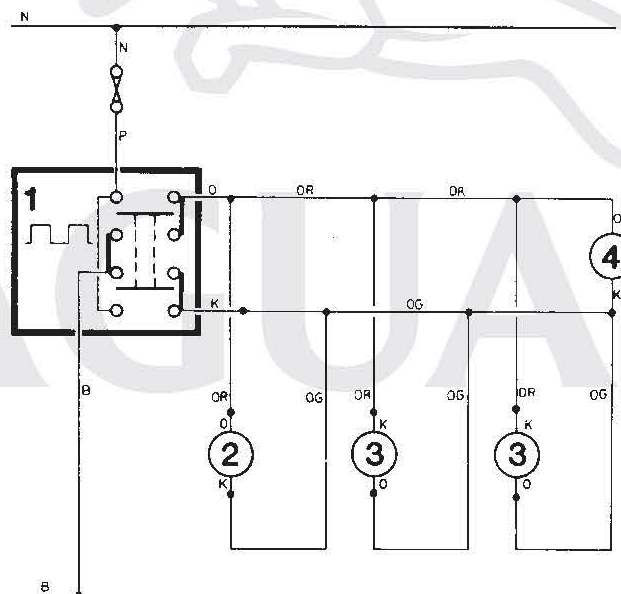
76 CENTRAL LOCKING

S.III

Commencing with 1986 M.Y. a new electric locking system has been introduced onto S.III vehicles, from VIN 428715 L.H.D. and 429455 R.H.D.

In general terms the main change from the previous system introduces electric motor operation to the locks on all passenger doors and boot in place of the electric solenoid operation used on earlier vehicles.

The whole system is activated by a control unit (DAC 3529), situated inside the driver's door (Fig. 1).



J85-384

KEY: 1 Door Locking Control Module (Driver)
2 Front Door Lock Motor (Passenger)

3 Rear Door Lock Motors
4 Boot Lock Motor

FIG. 1

The change in locking systems allows deletion of the lock relays, but necessitate harness changes which will preclude conversion of existing vehicles.

The driver's door control unit and the lock motors are mounted onto brackets welded onto door rails in the same way as the lock solenoids. The boot lock motor is mounted on the lid inner panel adjacent to the lock mechanism.

This Bulletin lists component changes, setting procedures and fault finding.

Service Bulletin



Date: AUGUST 1986
Sheet: 1 of 1
Bulletin: JD 08/86

ITEM: 53

12 COLLOIDAL GRAPHITE SOLUTION

S.III/XJS V12/LIMO

To ensure availability in all markets, colloidal graphite solution, used for rear crankshaft seal sizing, is now available through Parts Division under Part No. JLM 604.

ITEM: 54

19 THROTTLE POTENTIOMETER SWITCH

XJS 3.6

To improve reliability and performance, a new throttle potentiometer switch, in conjunction with a revised throttle housing assembly, has been introduced on XJS 3.6 models at Engine No. 9DPAMA 103568. Interchangeability with the previous type switch is affected. The new switch incorporates a new design of harness multiplug, which will eventually replace conventional type connectors on future model developments. Interface between the switch and the vehicle harness is made by a short link harness. For checking and correct adjustment of the new switch, the current Lucas EFI Throttle Pot Adjustment Gauge, Lucas Part No. 60973067 should be used.

ITEM: 55

76 SUNROOF WIND DEFLECTOR

S.III

To overcome wind buffeting on S.III vehicles fitted with a factory sunroof, Service have liaised with Jaguar Parts to market an exterior deflector for fitment by a Dealer. The deflector is manufactured in tinted acrylic glass, contoured to reduce wind resistance, carries a discreet Jaguar logo and available by ordering Part No. JLM 9831. Full fitting instructions are included.

ITEM: 56

86 SPARK PLUG LEADS

S.III V12/XJS V12

To facilitate easier fitment, angled spark plug lead connectors are now used for ignition leads 1A and 1B on V12 engines. These were introduced at the following engine numbers:

7P 55762 - S.III V12
8S 42573 - XJS V12

The new leads are available through Parts Division as part of HT Lead Kit JLM 726.

86 SIDE LIGHT FUSES - CARAVAN & TRAILERSS.III/XJS

When wiring S.III and XJS Models for towing equipment, harness connection points have been incorporated within the vehicle system and are situated behind the LH rear lamp assembly on both models.

To provide additional protection on the side light circuit red/orange (RO) and red/slate (RS) cables, it is recommended that in line fuses are fitted to the above cables of the trailer connector in the vehicle rearward harness. Each fuse should be rated at 2.5 amps continuous.

A 2.5 amp continuous rated fuse for each cable would then adequately protect the trailer sidelight circuits and provide spare capacity for a caravan/trailer fitted with a twin bulb rear side light system, for example.

These additional in line fuses will eventually be incorporated on production harnesses, and introduction points will be advised in a further Service Bulletin.

99 S.P.S. JOINT CONTROL SYSTEMALL AJ6 ENGINES

To assist in the correct setting of S.P.S. nuts or bolts on the AJ6 engine, V.L. Churchill Ltd., have recently introduced a S.P.S. setting disc. The disc is used in conjunction with a socket spanner and extension and is marked off in 10° increments.

As a special introductory offer, V.L. Churchill or their agents will accept orders for this Special Tool Part No. LST 122 at the special price of £5.05 plus V.A.T. This introductory offer is for a period of 28 days only, from 15th September 1986.

99 XK WATER PUMPS.III XJ6/LIMO

Further to Service Bulletins JD 03/85 Item 17 and JD 07/85 Item 50, isolated incidences have been reported of difficulty being found in the removal of the fan drive bush Part No. EAC 4382 from the viscous coupling.

To overcome this difficulty, the fan drive bush hole should be filled with thick grease and using a 5/8" diameter round bar, inserted in the centre of the hole, tap the bar into the hole. This will effectively 'hydraulic out' the bush from the viscous coupling. After removal of the bush, the grease must be removed from the viscous coupling prior to fitting to the new water pump.