

Service Bulletin



Date JANUARY 1984
Sheet 1 of 9
Bulletin JD.01/84

AMENDMENT

Would all recipients please note that Item 51 was used in both JD 07/83 and JD 08/83. No confusion should occur as they refer to different subjects, but a note could be made in the Index for clarification.

ITEM 01

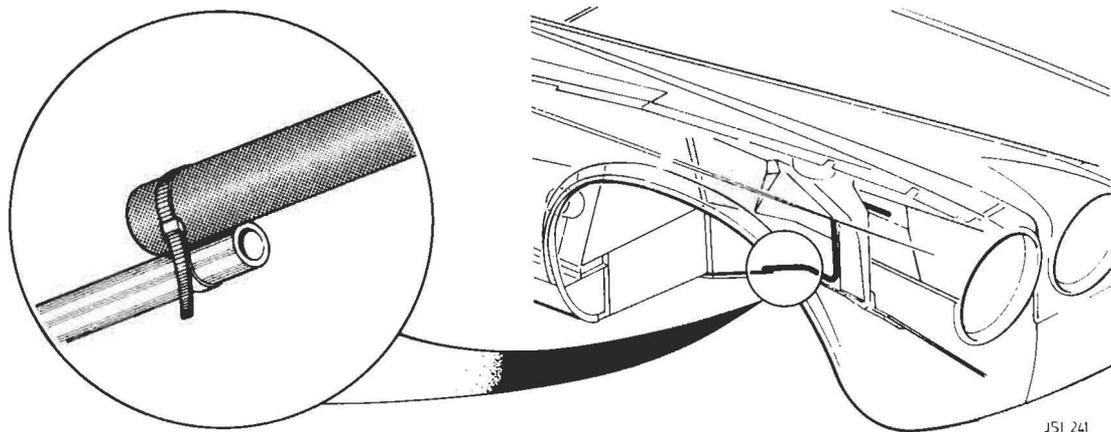
**ALL MODELS
MIDDLE EAST MARKETS**
(Bahrain, Kuwait, Lebanon, Oman, Qatar,
Saudi Arabia, United Arab Emirates)

17. EVAPORATIVE LOSS SYSTEM

To comply with new emission legislation all models destined for the above markets will be fitted with an evaporative loss system as currently fitted to North American, Australian and Japanese vehicles.

For saloon models only, the breather pipe from the fuel tanks to the carbon canister will be disconnected for transit purposes.

The flexible breather pipe situated to the rear of the right hand wheel arch must be connected to the steel bundy pipe at P.D.I.



A full operating description of this system is detailed in the Workshop Manual, Section 17.

ITEM 02

44. RECONDITIONED BORG WARNER TRANSMISSIONS ALL 6 CYL. MODELS

Further to Technical Parts Bulletin No. J5 – J21 Dec. 1983.

Since the introduction of the Borg Warner Model 66 automatic transmission, a number of modifications have been made to improve the performance and reliability of the unit.

All of these modifications have now been incorporated in the reconditioned Model 66 transmission. On the Model 65 reconditioned transmission, Model 66 improvements have been incorporated where practicable.

Listed below are the major improvements which have now been introduced on all reconditioned Model 65 and 66 Borg Warner transmissions.

MODEL 65 and 66

Torque Convertor

(a) Bronze/Steel Thrust Washer

Previously produced in aluminium it was susceptible to wear which gave excessive end float and debris contamination of the transmission.

(b) Torrington Needle Roller

Two locating tags have been added to inhibit rotation of the torrington race thrust washer.

Stator Support

To give added strength and support the splines on the pump adaptor and stator support have been increased in length.

NOTE: The torque convertor for Model 65 reconditioned transmissions is not interchangeable with O.E. or earlier reconditioned Model 65 transmissions.

MODEL 66 ONLY

Sungear Shaft and Output Shaft

Failures of sungear shafts at low mileage are attributed mainly to abnormal use of the transmission. None the less the material of the sungear shaft has been changed to a stronger material. During the development of this material change isolated failures of the output shaft were experienced, and this also resulted in an alternative material being specified.

It must be emphasized that failures of the sungear or Output shaft at P.D.I. or low mileage, have been as a result of driver abuse of the transmission.

Fitting Instructions

A fitting instruction label is attached to every transmission, and must be strictly adhered to. The information on this label was taken from Bulletin JD 04/82 which should be referred to when fitting an automatic transmission.

Assembly of Transmission to Engine

When fitting a transmission to the engine, the correct transmission support must be used. Failure to do so could result in the torque convertor moving out of mesh with the oil pump. As it is possible to mount the transmission to the engine in this condition, the convertor drive tangs will break when the engine is started.

Cables and Pressures

It is most important that the pressures in the transmission are correct. It is known that low mileage transmissions are being replaced because of clutch/band wear/slip due to incorrect pressures.

A pressure gauge must be fitted to every transmission, to ensure that the minimum pressure and INCREASE IN PRESSURE is to specification.

The crimp on the kickdown cable should be used as a guide, and NOT as the sole means of setting pressure.

The part numbers of the updated transmission and parts are quoted in Technical Parts Bulletin No. J5 – J21 Dec. 1983.

ITEM 03

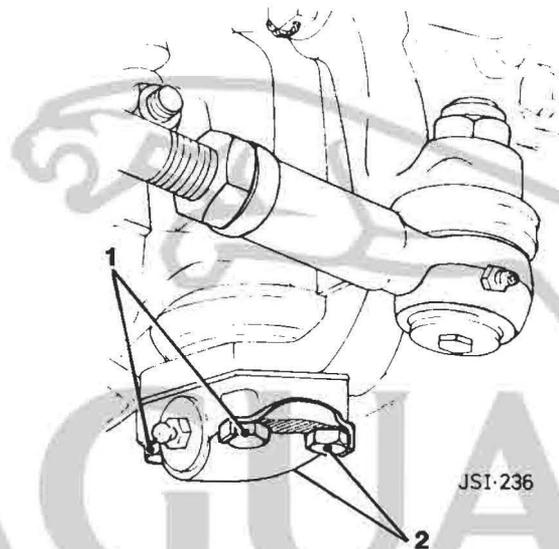
60. LOWER BALL JOINT SECURING BOLTS

ALL MODELS

The bolts securing the lower ball pin cap to the stub axle carrier may on some vehicles be in a mixed condition, i.e. the head of the bolts are of different thicknesses 7.94mm (0.3125in) and 4.76mm (0.1875in).

The bolts with a head thickness of 7.94mm (0.3125in) are fitted on production to the inboard holes of the lower ball pin cap.

It is important that if any of these bolts are removed during service, they should be replaced in the correct position – see diagram.



1. Inboard bolts – head thickness 7.94mm (0.3125in)
2. Outboard bolts – head thickness 4.76mm (0.1875in)

ITEM 04

70 FRONT AND REAR BRAKE PADS

XJS AND SALOONS

As advised in Jaguar Service Bulletin JD.01/83 item 4, semi metallic brake pads were introduced at the following VIN's:

354035 – Series III
109447 – XJS

The semi metallic pads may be used in VEHICLE SETS ONLY as a retrospective fit on Jaguar vehicles, with 4 pot caliper front brakes, built prior to the above VIN's.

However, if non metallic brake pads are required for vehicles PRIOR to the above VIN's then the following part numbers should be ordered:

GBP 224 – Front non metallic brake pad
GBP 209 – Rear non metallic brake pad

ITEM 05

74 FRONT WHEEL ALIGNMENT

LIMOUSINE

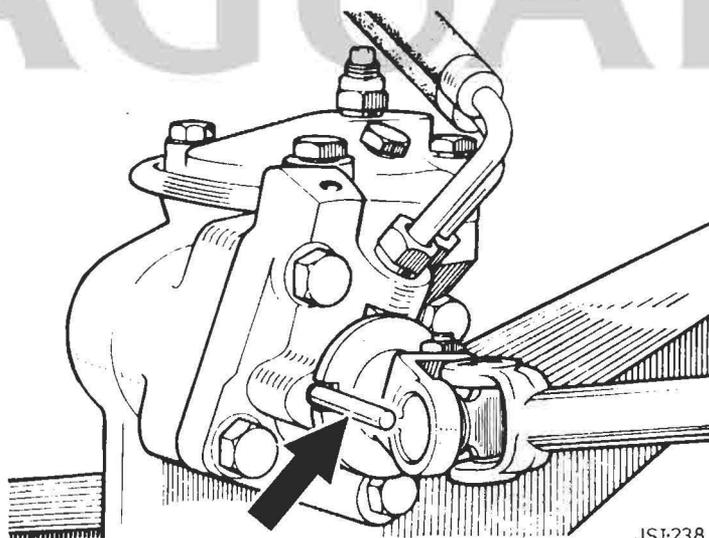
It is essential that the following instructions are observed when checking the front wheel alignment, otherwise steering irregularities may result.

IMPORTANT: The centre tie rod is set to a fixed length of 0.417m (16.4325in) and must not be used for setting the wheel alignment.

Each wheel must be individually adjusted by the outer tie rod to give half the total toe-in of 0–3.2mm (0–1/8in).

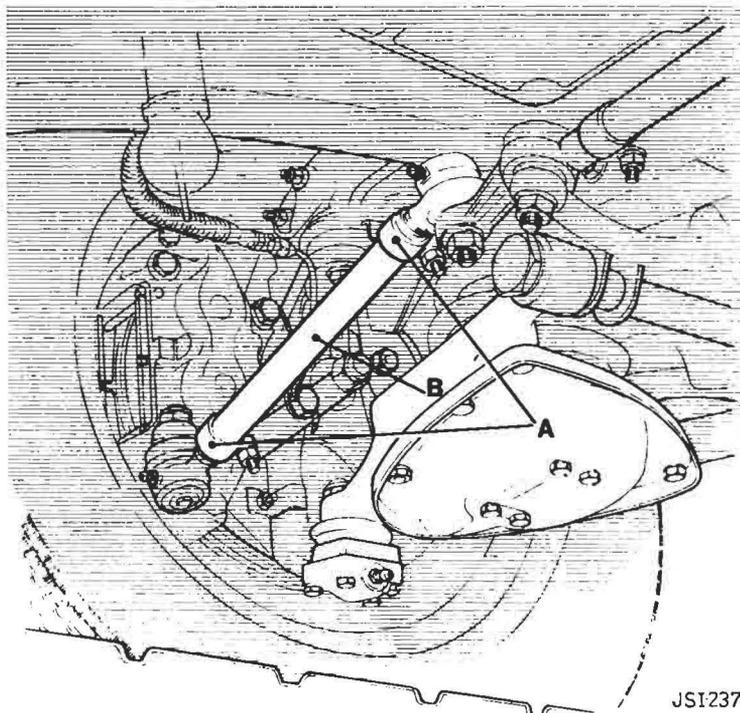
Procedure

1. Inflate all tyres to the recommended pressures.
2. Set the front wheels in the straight ahead position.
3. Centralise the steering unit by adjusting the position of the steering wheel, until the cut out in the centralising plate, on the input shaft, aligns with the hole in the steering box (Fig. 1). Check by inserting a 6.4mm (1/4in) rod suitably bent into the steering box.



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4. Use light beam equipment to check wheel alignment.
5. Adjust the outer tie rod by loosening the clamps (A Fig. 2) at each end of the centre tube (B Fig. 2). The rod length is adjusted by rotating the centre tube (B Fig. 2).
6. When the correct wheel alignment figure is achieved, i.e. half the total toe-in of 0–3.2mm (0–1/8in), secure the clamps.



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7. Repeat the operation for opposite side.
8. Recheck the wheel alignment after pushing the vehicle forward until the wheels have turned half a revolution.

ITEM 06

76 WIND NOISE AND WATER LEAKS

SERIES III & XJ-S

This Bulletin item has been compiled to enable workshop personnel to identify areas which may give rise to wind noise and/or water ingress on current Jaguar vehicles.

Code for materials to be used in rectification:

A	=	Sealstrip
B	=	Seelastic Expandite SR 51
C	=	3M's Drip Chek Sealer Regular
D	=	Kent Quik Leak Chek Clear
E	=	Arbrosil 1081

1. Water ingress via bulkhead plenum chamber – Series III & XJ-S (Fig. 1)

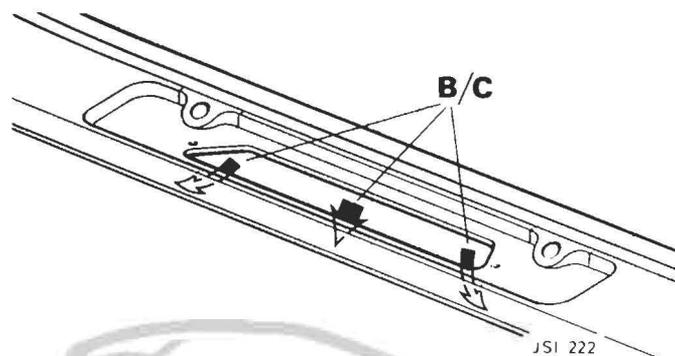
If the seams in this chamber are inadequately sealed, water can enter the vehicle footwells whenever the vehicle is exposed to heavy rainfall.

NOTE: If any water lies in the chamber, the drain tube should be checked for distortion or blockage.

Rectification

1. Remove plenum grille (Series III Workshop Manual Operation 80-15-29, XJ-S Workshop Manual Operation 84-15-12 – Items 1–7).
2. Apply sealant B or C by brush into all seams inside the chamber (Fig. 1).
3. Replace grille.

NOTE: In extreme instances, it may be necessary to remove fan boxes for access
 (Workshop Manual Operation 80-20-15 Heater Cars
 82-25-13 R/H)
 82-25-14 L/H) A/C Cars



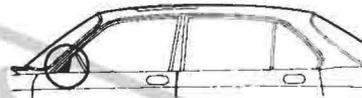
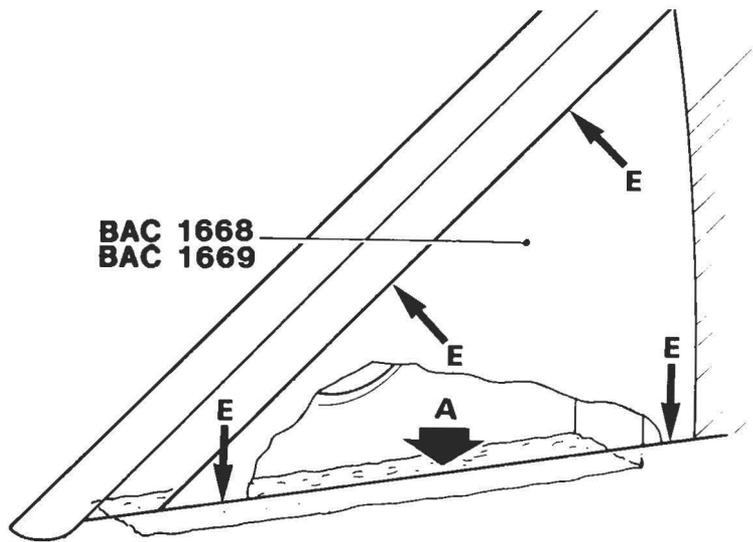
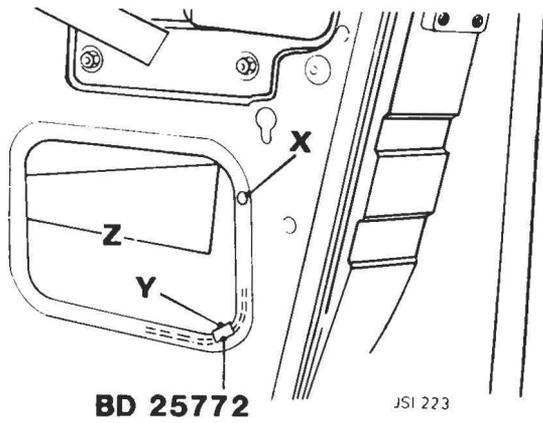
2. Water ingress on to front door trim casings — Series III only

This problem may be caused by any or all of the following:

- A Poor sealing of finisher BAC 1668 or BAC 1669 (Fig. 2A)
- B Tears in the polythene water curtain.
- C Water running along door warning light harness and seeping on to the trim pad (Fig. 2B)

Rectification

- A
 - i. Lower window fully and remove outer weather strip BAC 1298 R/H BAC 1299 L/H.
 - ii. Remove finisher BAC 1668 and/or BAC 1669.
 - iii. Apply sealant A into the door channel (Fig. 2A) refit finisher and apply sealant E around the edge (Fig. 2A) wipe off surplus and refit weather strip.
- B
 - i. Examine the water curtain and repair any tears, ensure that the curtain is hanging correctly.
 - ii. Check all securing bolts, regulator mountings, etc. for seepage. Dry off any doubtful bolts and apply sealant D around the heads.
- C
 - i. Remove the clip securing the wires to the door at "X" (Fig. 2B) fit clip BD 25772 at "Y" and attach the harness so that it is secured below the orifice "Z".

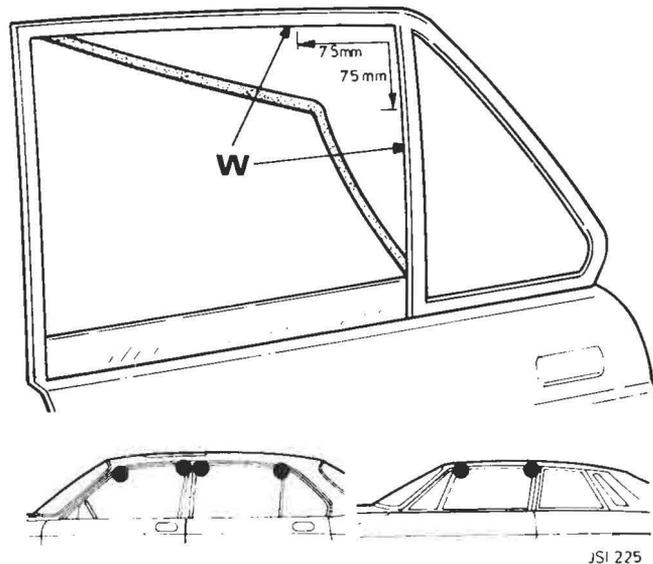


3. Water ingress and wind noise glass channels – All Doors – Series III & XJ-S (Fig. 3)

In most instances this is caused by gaps behind the window seals (BAC 1562 Series III, BD 46041 XJ-S), particularly at top corners.

Rectification

- A Remove glass seal at points marked "W" (Fig. 3).
- B Apply sealant "E" into the channel corner and spread a bead 75mm (3in) from the corner in sufficient quantities to allow extrusion when the seal is refitted. Carefully clean off any surplus sealant.

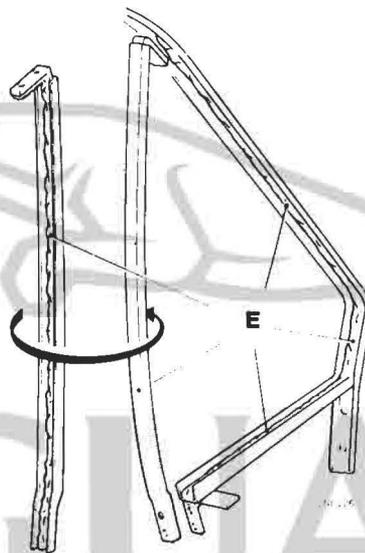


4. Water ingress and wind noise via rear door quarterlight – Series III only (Fig. 4)

Problem identification and rectification in this area is fully covered in Service Bulletin JD 04/83, Item 34. However, it is most important that ADEQUATE sealant is applied around the quarter light, especially at the base.

Rectification

- A Refer to previous Bulletin and apply sealant "E" as directed in sufficient quantities to ensure that the excess will extrude when the quarter light is refitted.
- B Following assembly, wipe off all surplus sealant.

**5. Water ingress drip channels – Series III & XJ-S**

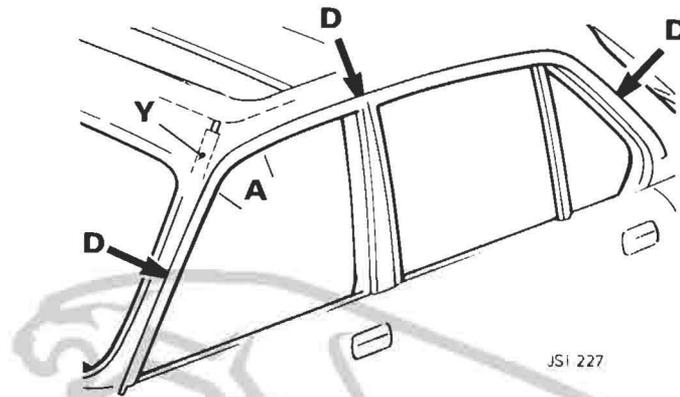
- i. Remove drip rail finishers BAC 2480/2481/2482/2483 for access.
- ii. Apply sealant "D" by tube or brush along the seams of the drip channel (Fig. 5).

NOTE: Sunroof cars only – if after corrective action water is still entering the car at point "A", this may be due to a porous or badly fitted drain tube hose. This can be proved by partly opening the sunroof and pouring water into the drain outlet. If a fault exists, water will seep into the car as indicated.

Rectification

- A Remove headlining (Workshop Manual Operation 76-64-01). Leave in car but remove to allow access to forward sunroof drain tubes.
- B Identify fault, i.e. badly fitted or split hose, at point "Y" (Fig. 5).
- C If the hose requires replacing, remove front wheel arch rear stone guard.
- D Feed a length of wire down the drain tube so that it protrudes from the wheel arch.
- E Pull out the faulty hose, leaving the wire in position.

- F Slide a new drain hose over the wire to ensure correct routing.
- G Remove wire and fit hose on to sunroof. Drain.
- H Refit headlining, etc.



6. Water ingress via seams at "A" post waist – Series III

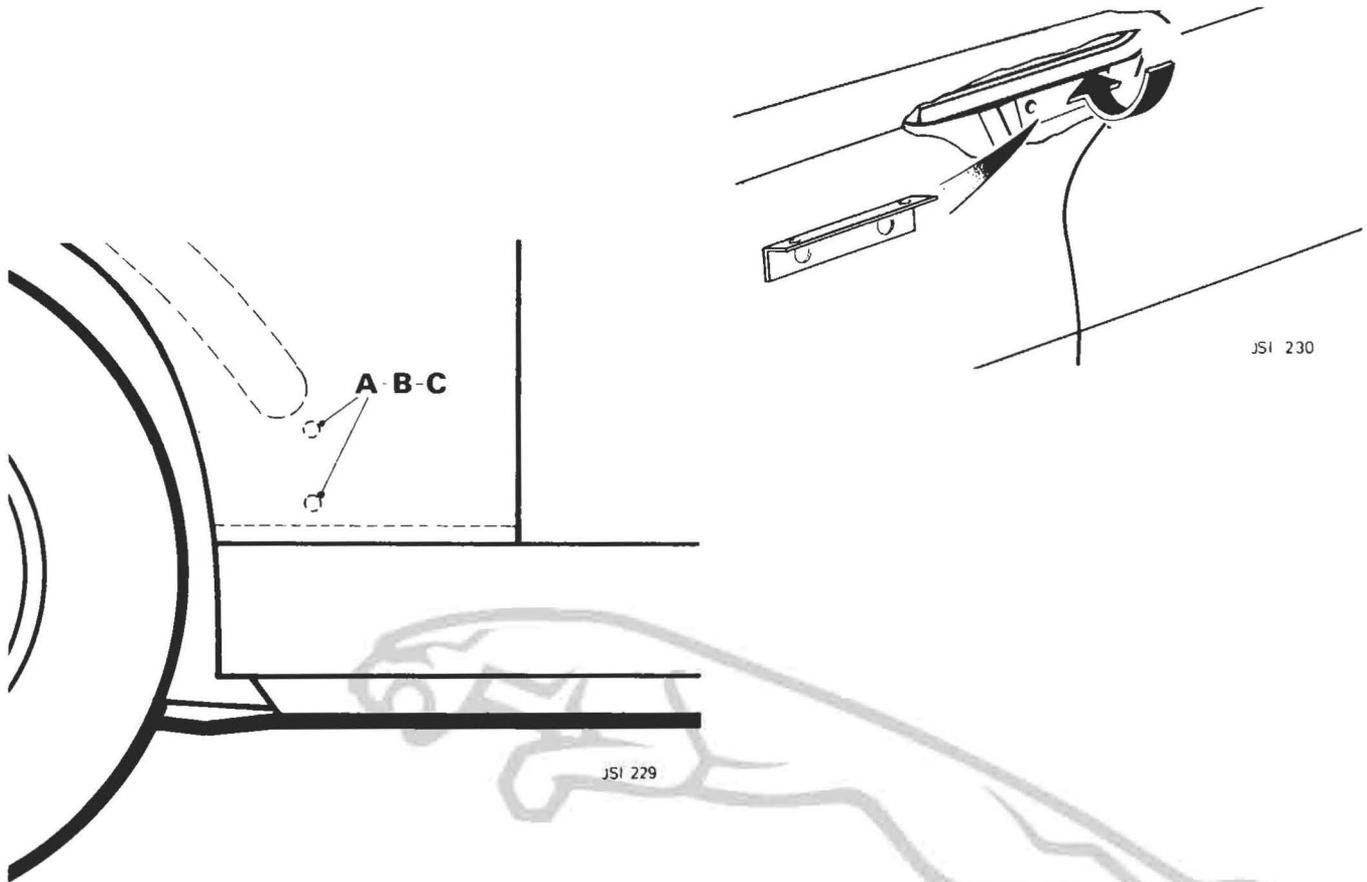
This problem may occur if there is an open seam at the base of the drip rail which allows water to enter the car interior via the "A" post box section.

Rectification

Apply sealant "E" along the seams identified in Fig. 6, allow to dry and water test vehicle.

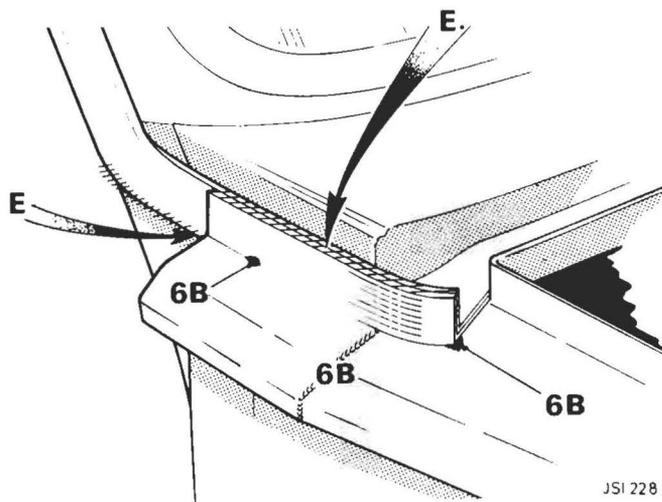
If a leak is still apparent, adopt the following course of action:

- A Remove the "A" post draught welt.
- B Remove trim from footwell at base of "A" post (BD 43251 – RH, BD 43252 – LH, BAC 9906 – RH VDP, BAC 9907 – LH VDP).
- C Examine interior of the box section whilst water is "poured" down drip rails.
- D Refer to Fig. 6A and 6B for possible leak areas, and rectify using one of the following methods:
 - i. Leakage from point 6A – remove front wheel arch stone guard and apply sealant "A", "B", or "C".
 - ii. Leakage from point 6B – remove front wing (Workshop Manual Operation 77-28-29) and apply sealant "A", "B", or "C".



7. Water ingress via seams at "A" post waist — XJ-S (Fig. 7)

Identification and rectification of water leaks in this area have been detailed in Service Bulletin JD 07/82 Item 53.

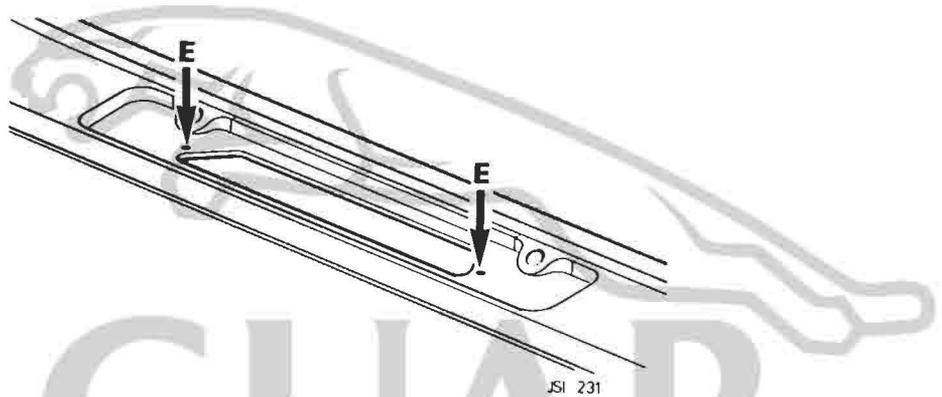


8. Water ingress via plenum grille mounting pin holes – Series III only (Fig. 8)

This may arise due to inadequate sealing around the two mounting pin holes, allowing water to enter the vehicle via the double skin.

Rectification

- A Remove plenum grille (Workshop Manual Operation 80-15-29).
- B Remove two plastic inserts BD 26989.
- C Apply sealant "E" by brush to seal around the holes.
- D Allow ten minutes to dry and reassemble.

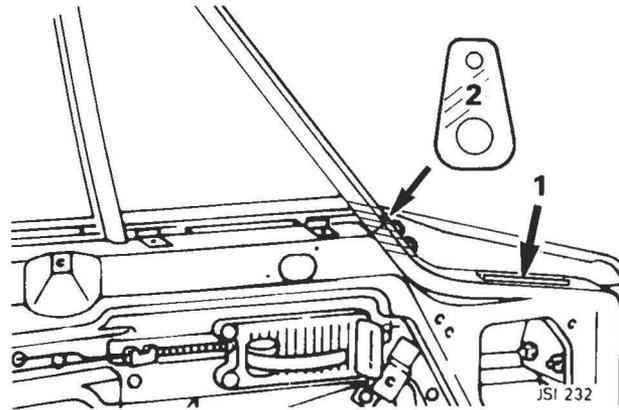


9. Water ingress and/or wind noise between door and "A" post at waist – XJ-S only (Fig. 9)

This may arise due to incompatible sealing surface between the window/door frame joint and the aperture seal, or distortion of the aperture seal by the door waist drain channel.

Rectification

- A Remove and discard the door drain channel and plug the three redundant holes in the door, and paint as necessary (1 Fig. 9).
- B Test the vehicle to establish if the fault has been rectified.
- C If the fault is still apparent, remove the peardrop seal (2 Fig. 9).
- D Apply a proprietary body filler to the joint, DRESS OFF WHEN HARD TO ENSURE A GOOD PROFILE, refit screw and paint as necessary. This action, if properly carried out, will eliminate water leaks in this area.

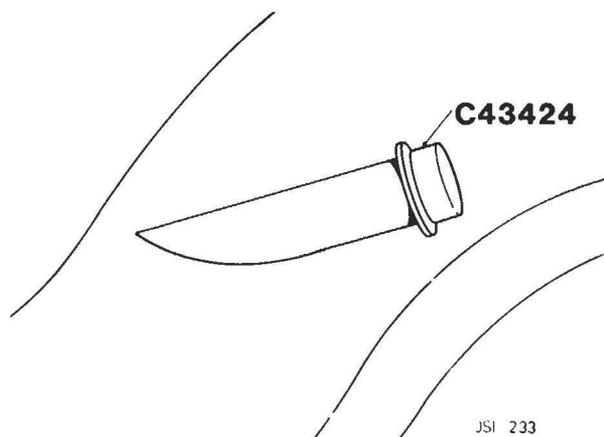


10. Water ingress via handbrake cable tube – XJ-S only (Fig. 10)

This complaint is caused by inadequate sealing of the cable exit, and/or blanking cap not being fitted. This area should be examined if water ingress is apparent in rear footwells only.

Rectification

- A Check the sealing cap of the tube from which the cable exits, and rectify any leaks.
- B Check the plug C43424 for security over the blanking hole and rectify as necessary to ensure complete sealing.



11. Water ingress via windscreens – Series III only (Fig. 11)

This complaint is caused by poor adhesion of Betaseal to screen and/or aperture.

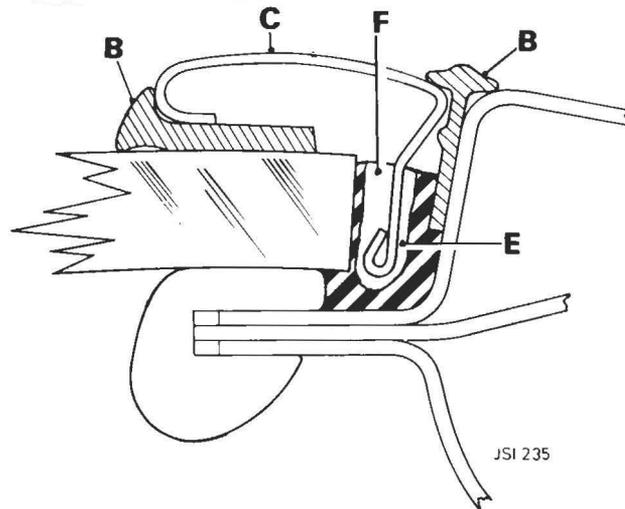
Rectification

Major repair of this fault is detailed in Service Bulletin JD 05/81 Item 35. However, local rectification of small leaks may be carried out using the following method:

- A Identify area of leakage
- B Remove inner and outer lace.
- C Remove the relevant bright finisher.
- D Carefully cut a section of Betaseal from the suspected leak area, prime and apply new Betaseal.

NOTE: PAINT DAMAGE BY SHARP IMPLEMENTS MUST BE AVOIDED AT ALL COSTS as any damage may only become apparent at a later date in the form of rust bleed.

- E A further section of Betaseal will have to be cut out to allow re-fitment of the bright finisher.
- F Apply new Betaseal. Refit finisher. Re-fit laces.



B – Laces
C – Finisher

12. Wind noise and/or water ingress via door seals above waist – Series III & XJ-S

This may be caused by:

- i. Collapsed or damaged door seal.
- ii. Incorrect profile match of door to aperture.

Rectification

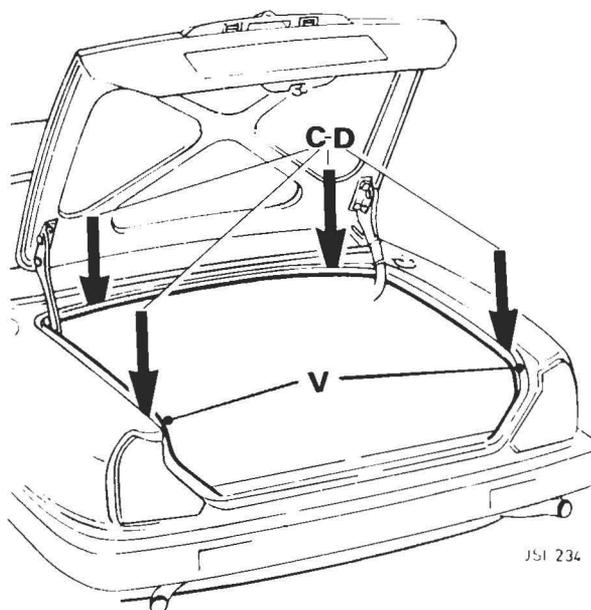
- A Replace any damaged seals.
- B Avoid reprofiling of doors by bending window frames; sluggish electric window operation may result.
- C Where possible adjust by moving door striker or hinges to obtain adequate sealing.

13. Water ingress into boot – Series III (Fig. 13)

This problem is caused by porosity in the channel seams or a badly fitted boot seal.

Rectification

- A Apply sealant "C" or "D" to all seams around the boot channels. Allow to dry and paint as necessary (Fig. 13).
- B If a leak is apparent between the seal and boot lid at point "V", this is due to overstretching the seal when fitting. The old seal should be discarded and a new seal fitted, taking care to avoid stretching on curves.



JSI 234

79 REFINISH PAINT COLOUR APPROVALS

ALL MODELS

Service have introduced a programme in which current O.E. paint suppliers are submitting samples of their approved refinish paints for comparison and re-validation with O.E. master colour panels.

Suppliers must demonstrate an ability to produce refinish paints which can provide the trade with a consistent colour match on repaired areas, when applied correctly using manufacturers data sheets.

The first of these revalidations has been completed, and Service approval confirmed on all of the Ault and Wiborg acrylic refinish colours listed in this bulletin.

Tudor White	BLVC 215
Black	373
Grosvenor Brown	298
Rhodium Silver	396
Cobalt Blue	286
Sapphire Blue	307
Racing Green	281
Coronet Gold	306
Claret	310
Silversand	280
Clarendon Blue	326
Cirrus Grey	320
Cranberry	316
Antelope	321
Sage	314
Regent Grey	315

The approved paint will be in ready mixed form, labelled "Jaguar Colour Matched" and bear a date coded batch number.

The Ault and Wiborg recommended thinner for use with this paint is Z 2404.

Samples of all subsequent batches will be tested to ensure colour consistency.

NOTE: Two other manufacturers also supply refinish paints for use on Jaguar T.P.A. vehicles, this Bulletin does not affect that approval, and Service anticipate giving full colour revalidation to these products upon completion of colour match tests.

ITEM 08

86 V12 H.E. DISTRIBUTOR VACUUM ADVANCE

XJ12 H.E./XJS H.E.
European Spec. only

Reports have been received on V12 H.E. engines of:

- (a) Poor idle
- (b) "Pinking" at low engine speeds

This is attributed to excessive ignition vacuum advance at idle, even though the vacuum advance system is within the specification as quoted in Bulletin JD.08/82, which on 'B' Emission engines is $21.5^{\circ} \pm 6.5^{\circ}$ before T.D.C. at 500 rpm.

It is known that if the ignition advance at idle exceeds 24° B.T.D.C. THERE IS A POSSIBILITY that engine performance MAY be affected.

Therefore, if an abnormal engine condition exists such as described above, and the ignition advance exceeds 24° B.T.D.C., the problem may be overcome by replacing the vacuum regulator EAC 4012 with vacuum regulator Part Number EAC 5157 (as fitted to 'A' Emission engines). This regulator has a brown coloured body and will reduce the vacuum advance at idle by 3° .

ITEM 09

86 ELECTRICAL AERIAL

SERIES III/XJS 'HE'

To improve electric aerial harness connections, and reduce the number of connections in the circuit, the short link harness between the aerial motor and timer relay has now been deleted from VIN's:

364848 – Saloon
112690 – XJS

Aerial motor leads are now fitted with Rists Slimlock Lucar Connectors, which enables direct coupling to the relay unit.

Should replacement of an aerial be required on vehicles prior to the above VIN's, the above modification MUST be implemented.

NOTE: On saloon models the link harness will require taping back to the main harness.
On XJS models, the link harness is separate and should be removed and discarded.

Aerial connections direct to the relay unit are as follows:—

Blue/white (UW) cable to relay terminal – 4
Blue/red (UR) cable to relay terminal – 5

Parts Division stock is to the latest condition, aerial part number is unchanged.

Service Bulletin



JAGUAR

Daimler

Date: JUNE 1986
Sheet: 1 of 5
Bulletin: JD 06/86

An error has been noted regarding the new part number quoted for spark plugs on V12 in the USA, Australia, Canada and Japan.

The amended version of Sheet 2 of 3 - Service Bulletin JD 05/86 - is included with this Bulletin and is clearly identified "Issue 2".

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

ITEM: 40

19 FUEL INJECTION ECU

XJS CABRIOLET

Fuel metering problems caused through incorrect vacuum signals, have been encountered on XJS Cabriolet Models due to the vacuum hose between the in line reservoir and electronic control unit (ECU) becoming kinked. To prevent the possibility of kinking, the hose length has been reduced. This change was introduced at:

VIN 132619

ITEM: 41

19 FUEL TANK ELEMENT

ALL MODELS

To overcome the need to replace complete fuel tank element assemblies in instances where the element float is at fault, the element float is now serviced seperately under Part No. J1M 772.

19 ELECTRONIC CONTROL UNIT

S.III V12/XJS V12
EMISSION C & F ONLY

To improve the reliability of the fuel injection system, a new digital microprocessor electronic control unit (16CU) has been introduced on S.III V12 and XJS V12 emission 'C' and 'F' models from VINs:-

451794 - S.III

130835 - XJS

Markets Affected

Emission 'C' standard equipment - North America

Canada

Japan

Australia

Emission 'F' standard equipment - Switzerland

Austria

Emission 'F' optional equipment - Germany

Interchangeability with the previous type control unit for emission 'A' and 'C' specifications is unaffected.

For introduction of the new digital microprocessor unit on emission 'B' V12 Models, Service Bulletin JD 02/86 - Item 17 refers.

Lucas Feedback Monitor Test Equipment (Emissions 'A', 'C' and 'F' only)

Due to the introduction of the new microprocessor ECU, modifications have been carried out to the Lucas Feedback monitor test equipment, to cater for the previous 6CU type and the latest 16CU units.

Part No. YWB 130 has been allocated to identify the latest test equipment. Modification of test equipment already in service is being arranged through Lucas agencies worldwide, and should now be completed.

Operator instructions regarding Feedback monitor test procedures have been revised for use on vehicles equipped with both 6CU and 16CU ECU assemblies. The revised test procedures are detailed as follows:

- 1 Run the engine until it reaches normal operating temperature. If the engine is already hot, run it for at least 2 minutes before commencing tests.
- 2 Check the ignition timing and idling speed.
- 3 Disconnect the Lambda disable plug from the harness socket, otherwise the Lambda sensors will not function while vehicle is in 'Park' or 'Neutral'.
- 4 Connect the Feedback monitor to the fuel setting diagnostic connector.
- 5 Confirm which model ECU is fitted and select the appropriate switch position.
- 6 Lamp 2 in row A or B should be alight together with lamp 2 or 3 in the other row.

7 If indications in 6 are incorrect:

- (a) Remove the blanking plug from the electronic control unit to expose the idling fuel setting adjuster.
- (b) Slowly turn the adjuster until the correct indications are obtained. If the fault still persists, suspect engine fuelling controls, including the Lambda sensors, ignition system and engine mechanical condition.
- (c) Fit new blanking plug.

If correct setting cannot be obtained:

- (a) It is possible that the engine has idled for too long resulting in the Lambda sensors becoming temporarily contaminated (i.e. sooted). In cases of slight contamination, the Lambda sensors may be cleared by increasing the engine speed whilst the vehicle is stationary. However, if this does not improve the situation or the contamination is deemed more severe, the vehicle should be driven on the road to clear the sensors.
- (b) The electrical circuit can be affected during the switching in/out of the auxillary electric cooling fan which can affect the test readings. To prevent this the auxillary fan should be disconnected during the test programme.

Test Procedure for Suspect Lambda Sensor

Disconnect the pressure regulator vacuum pipe and temporarily seal off the manifold vacuum take off. The Feedback monitor unit indicator(s) should move towards 'rich' (i.e. lamp 2 to lamp 1 or/and lamp 3 to lamp 2 or 1).

If the indicators do not change suspect the Lambda sensor(s) and/or ECU and associated circuits.

Reconnect the pressure regulator vacuum pipe.

Disconnect the Feedback monitor unit and ensure all connections are secure.

ITEM: 43

19 MANUAL CHOKE POOR COLD START/WARM START

LIMO
RIGHT HAND DRIVE

To overcome complaints of poor AED operation, a Service fix has been developed to enable the fitment of a manual choke. It is intended that this kit should only be fitted to vehicles where detailed rectification has failed to overcome the complaint. It cannot be over emphasized that the engine should be correctly tuned in order to obtain the optimum performance from the AED, e.g. ignition timing, condition of the contact breaker points, carburettor settings, C.O. readings, float levels etc.

Should the detailed attention to the above areas and the replacement of the AED not overcome the complaint, then a manual choke may be fitted.

Warranty Complaint Code 2K3Y
S.R.O. 19-90-02
Labour allowance 3.3hrs
Kit Part No. JLM 602

Part No. JLM 602 comprises of the following items:-

Part No.	Description	Qty
AB 606031	Self Tapping Screw	4
BCC 3397	Mounting Bracket	
C 15787	Bulb	
C 17432	Grommet	
C 30075/2	Spring Washer	2
C 45099	Ratchet Strap	2
C 45491	Gasket - Air Cleaner to Carburettor	2
C 7221	Gasket - Carburettor to Space	2
CAC 5866	Hose - Y Piece to Front Carburettor (355 mm)	
CAC 5866	Hose - Front to Rear Carburettor (145 mm)	
CAC 5867	Hose - Breather Pipe to Rear Carburettor (240 mm)	
CAC 5867	Hose - Breather Pipe to Front Carburettor (180 mm)	
CBC 1460/1	Choke Cable	
DAC 4324	Choke Switch Assembly	
DAC 4331	Harness	
EAC 3215/1	Hose Clip	6
EAC 5866	Hose - Y Piece to Rear Carburettor (406 mm)	
EAC 5920	Aluminium Spacers	2
EAC 5967	Throttle Connecting Lever Assembly	
EAC 5968	Choke Connecting Lever Assembly	
EAC 6829	Carburettor - Front	
EAC 6830	Carburettor - Rear	
EAC 8813	Lever Stop Bracket	
FW 104/T	Washer	2
JLM 607	Solderless Nipple	
JLM 608	Lens Assembly (Amber)	
JLM 9566	Bolt	
NH 605041	Nut	2

Limousine Choke Modification Procedure

Disconnect the battery earth lead and remove the following items:

Air cleaner, carburettors, spacers, gaskets and AED assembly. Retain the 'Y' piece, vent tube, vacuum elbow and adaptor for re-use.

1. Lever the stop plate from the throttle linkage and remove the hot air pick up pipe from the pick up plate on the rear exhaust manifold and the throttle bracket on the inlet manifold. Refit the two nuts to secure the throttle bracket.
2. Remove the blanking plug from the bulkhead, fitted between the offside bonnet hinge and the inner wing valance (A Fig 1).

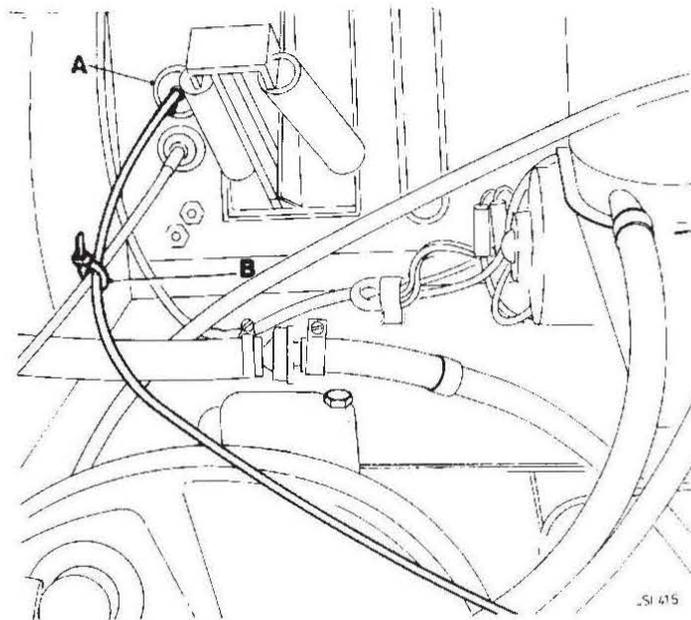


FIG 1

From the parts supplied fit:-

Carburettor Assembly

1. Position the throttle, choke connecting rods and levers to the carburettors. Fit the carburettors using gaskets and spacers supplied, ensuring that the smaller diameter of tapered hole in the spacer faces towards the carburettor, and the distributor vacuum hose clip is fitted to the front right hand stud. Secure with nuts and spring washers.
2. Cut the hoses to length, fit and secure to the carburettor using the 'Y' piece from the displaced assembly (Fig. 2), ensuring that they do not and can not foul the operating cams.

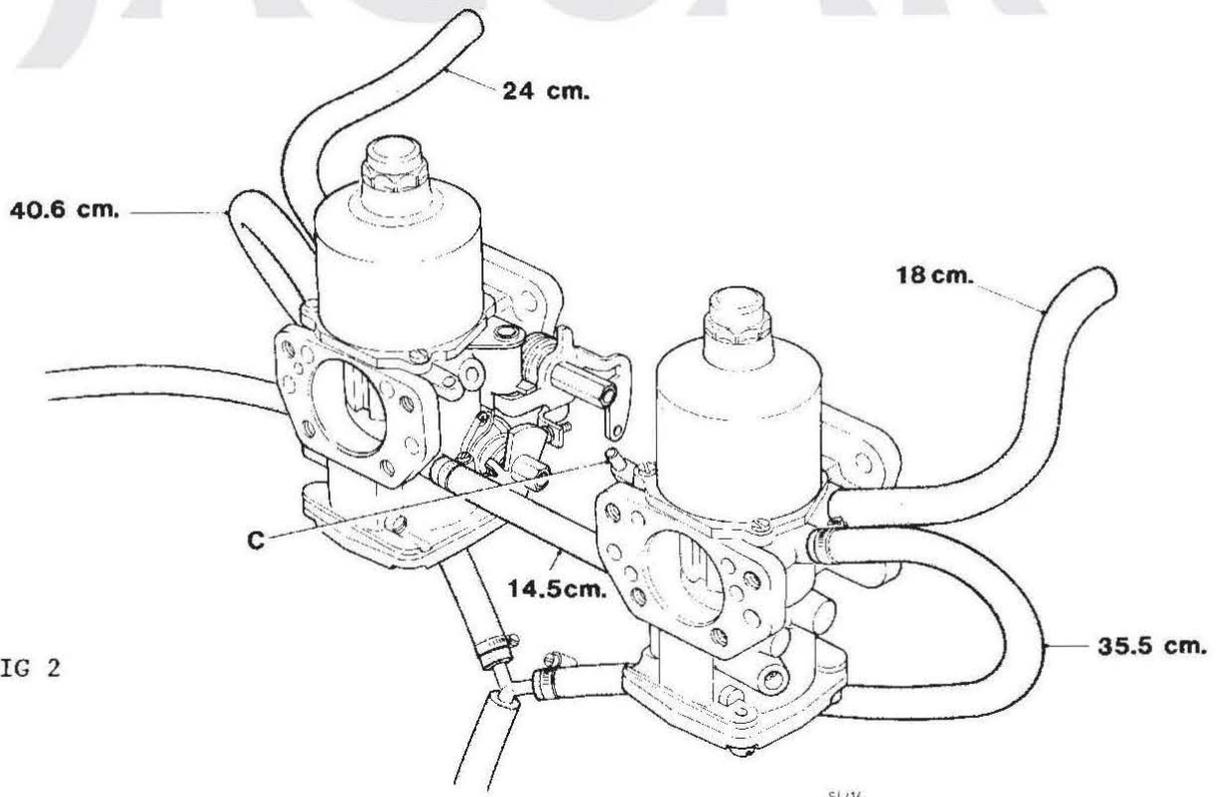


FIG 2

3. Fit and secure the lever stop plate ensuring that the two plain washers are located between the lever stop and support bracket to allow adequate clearance for throttle spring. Fit bolt and nut to lever stop plate and adjust for full throttle.
4. Remove the vacuum hose from the distributor, shorten to 35.5 cm (14 ins) long and refit, route through the securing clip located on the front carburettor and attach to the vacuum take off point using the rubber elbow and adaptor from the displaced assembly.
5. Position and tighten the throttle, choke operating levers and link rods to the carburettors.
6. Remove the 'P' clip securing the transmission dip stick tube and relocate the tube away from the throttle linkage to the rear of the bracket. Refit and secure the 'P' clip.

Choke Cable

1. Locate the choke cable mounting bracket to the rear of the facia panel (B Fig C) and secure with the 4 screws provided. Under no circumstances use longer screws as damage will be caused to the wood veneer.
2. Fit the grommet (A Fig 1) and position the choke cable assembly through the support bracket. Secure with the nut supplied. Feed the cable through the grommet and using a ratchet strap, secure to the bonnet release cable 20.0 cm (8 ins) from the bulkhead (B Fig 1).

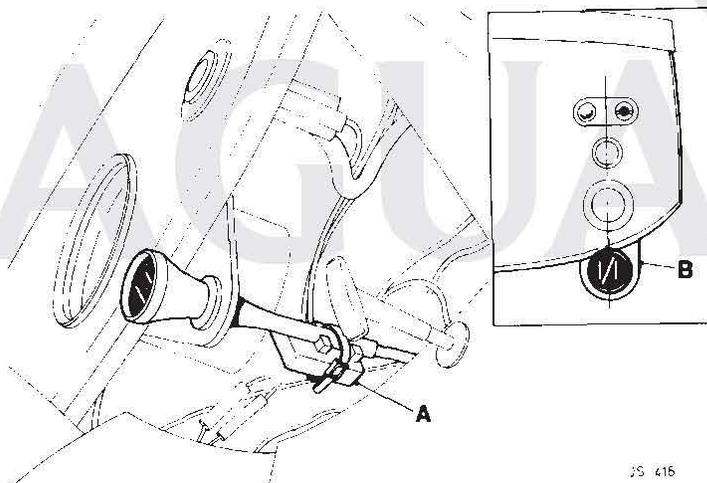


FIG 3

3. Locate the choke cable through the ferrule in the front carburettor (C Fig 2) and through the solderless nipple (which must be located in the lower hole in the choke operating cam). Ensure that the choke cable is in the fully closed position before tightening the securing screw.
4. Refit the air cleaner assembly using new gaskets.

Choke Warning Light

1. Drill a 12 mm (0.472 in) diameter hole through the switch panel, midway between the cigar lighter and the fuel tank changeover switch (Fig 4) and locate the choke warning light. Care must be taken when drilling the hole in the trim panel to prevent damage.

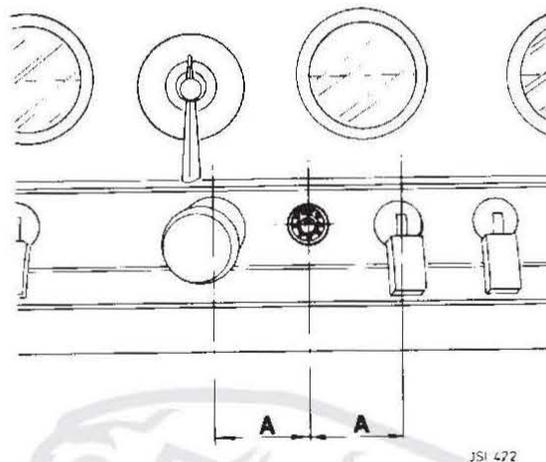


FIG 4

2. Fit and secure the operating switch to the choke cable with a ratchet strap (A Fig 3) and connect the warning light link harness between the switch and warning light.
3. Remove the lower green cable from the right hand fuse block. Fit the 'piggy back' connector on the warning light harness to the fuse block. Refit the green cable to the spare connection on the 'piggy back' connector and fit the earth lead to the common earthing point on the right hand side.
4. Connect the battery, start and run the engine until normal operating temperature is reached. Slacken the front carburettor throttle linking rod and ensure that the adjusting screws contacting the choke operating cams are clear. Restart the engine, balance and adjust the idle speed to 750 rpm. Retighten the throttle linking rod and adjust the choke operating screws to ensure that they just contact the choke operating cams. Using suitable equipment, check and adjust the CO reading.

ITEM: 44

79 CLEAR OVER BASE PAINT

S.III/XJS

A change of paint technology from thermo-plastic acrylic to clear over base enamel is to be introduced on S.III and XJS vehicles from June 1986. Introduction VIN numbers will be released at a later date.

C.O.B. technology has become well established in the automobile industry in recent years for use on metallic finishes. Jaguar will be extending this technology to encompass solid colours.

A Paint Manual offering in depth guidance on C.O.B. repair, is to be released in the coming months. This Bulletin precedes the Manual by providing information relevant to C.O.B. launch, plus selected paragraphs from the manual.

Identification of Paint Finish

At the time of C.O.B. launch, there will be 17 new colours (see table one) intermixed with T.P.A. vehicles whilst the body supply pipeline is purged. As Dealers will receive vehicles of similar colour in differing paint finishes, correct identification is vitally important should paint rectification need to be carried out. This is achieved in any of the following ways:

1. Identification by an orange label bearing C.O.B. printed in black letters, attached to the inside of the front screen for removal by the Dealer.
2. Checking the paint colour code stamped onto the underbonnet VIN plate against the codes detailed in this Bulletin.
3. Lightly sanding a small discreet area with fine flattening paper. If the paper is not discoloured the surface has been clearcoated.

Rectification

Jaguar have liaised with a number of paint companies to provide a comprehensive range of refinish materials and technical support for C.O.B. and T.P.A. Approved suppliers, products and markets are listed in table two.

Repair Process

1. Always refer to the relevant supplier data sheets when carrying out rectification.
2. Always spray out a test panel in colour and clear when matching for panel or local repair.
3. When carrying out a local repair where it is not feasible to spray out a complete panel, i.e. a roof, rectify using the following method:
 - a) Thoroughly clean the complete panel with solvent.
 - b) Mask up the surrounding panels.
 - c) Flat the defective area locally, spirit wipe and prime any breakthrough.
 - d) When the primer is dry, wet or dry flat.
 - e) Key the whole of the panel with Scotchbrite Ultrafine and water soluble compound.
 - f) Thoroughly clean and dry the panel and move the vehicle into a spray booth.

- g) Spirit wipe, tack rag wipe.
- h) Apply basecoat in single wet overlapping coats allowing 5 mins. between coats, or according to the paint manufacturer's data sheets.
- j) Tack off after basecoat has flashed off for 20 mins.
- k) APPLY TWO COATS OF TWO PACK CLEARCOAT OVER THE COMPLETE PANEL, FLASHING OFF BETWEEN COATS.
- l) Stove, force or air dry as required to the manufacturer's instructions.
4. Always ensure the basecoat has flashed off properly before applying clearcoat. Failure to do so can result in clearcoat sinkage and a subsequently dull finish.
5. Where a small panel or panels offering a convenient break line are to be rectified, it may be feasible to basecoat the complete panel, particularly where a good match as been obtained.

TABLE ONE

<u>Paint Colour</u>	<u>Sales Colour Code</u>	<u>BLVC/JBC</u>
Nimbus White	NDJ	700
Grenadier Red	CEH	332
Jaguar Racing Green	HEN	701
Westminister Blue	JFG	712
Jet Black	PDH	333
Bordeaux Red Metallic	CEK	340
Crimson Metallic	CEV	714
Solent Blue Metallic	JEW	715
Arctic Blue Metallic	JFE	337
Tungsten Metallic	JEX	718
Talisman Silver Metallic	MDF	336
Dorchester Grey Metallic	LDP	342
Sovereign Gold Metallic	GDF	341
Satin Beige Metallic	AFV	711
Silver Birch Metallic	MDJ	716
Alpine Green Metallic	HES	709
Moorland Green Metallic	HET	717

TABLE TWO

<u>Market</u>	<u>Supplier</u>	<u>Basecoat</u>	<u>Clearcoat</u>
Europe	I.C.I.	P422 2K Basecoats P420 2K Acrylic	2 Pack P190-435 1 Pack P190-390 Local Repair Only
Europe	Ault & Wiborg	Aultragem	2 Pack Z4375
Europe	Dupont	Centari 600	2 Pack 120S 2 Pack AX1060
Europe	Sikkens	Autobase Autocryl	2 Pack clear 2 Pack clear
Europe	Berger	2K Standocryl Metallic Basislack	2 Pack Klarlack 2 Pack Klarlack
Europe	Inmont	Dia-Mont	Diamontop
Europe	P.P.G.	Acryline	2 Pack Acryline
Europe	Glasurit	Glasomax 54 Glassodur 21	Glassodur M.S. Top Clear 923-85
U.S.A.	Dupont	Lucite Cronar	580S Cronar Clear
U.S.A.	Rinshed-Mason	Miracryl 2	MC 1000 Clear
U.S.A.	Sikkens	Autobase Autocryl	2 Pack 2 Pack
Canada	Inmont	Dia-Mont	D7600 Clear
Canada	Dupont	Hi-Tech	Hi-Tech 680S
Canada	C.I.L.	2K Basecoat	2000-600 Clear
Canada	Sikkens	Autobase Autocryl	2 Pack Clear 2 Pack Clear
Australia	Spartan	Eurobase 131 Eurocryl	Eurobase Clear 124-2468
Australia	Dulux	Dulux 354 2K Acran Enamel	2K Clearcoat 455-30900

R.O.W. Represented by the above via importers or local agents. The materials may be marketed under an alternative trade name.

Service Bulletin



JAGUAR

Daimler

Date: AUGUST 1986
Sheet: 1 of 1
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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.

ITEM: 57

86 SIDE LIGHT FUSES - CARAVAN & TRAILERS

S.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.

ITEM: 58

99 S.P.S. JOINT CONTROL SYSTEM

ALL 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.

ITEM: 59

99 XK WATER PUMP

S.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.

Service Bulletin

JAGUAR

Daimler

DATE: MARCH 1987
SHEET 1 of 7
BULLETIN: JD 03/87

ITEM: 24

00 TRANSPORTATION SECURITY AND TOWING RECOMMENDATIONS

XJ6 2.9/3.6

To dispel any confusion within the Jaguar distribution network worldwide, Service have identified a need to clarify the uses and limitations of the transportation and towing attachments on XJ6.

1. Transporter lashdown brackets:

Location - under the vehicle, identified by one round and one rectangular hole.

Front brackets are bolted to the longitudinal members at the rear mounting of the front suspension.

Rear lashdown points are incorporated into the rear suspension forward mountings.

THESE BRACKETS ARE NOT SUITABLE, AND MUST NOT BE USED FOR, ANY FORM OF TOWING.

NOTE: Temporary lashdown straps may be attached to front and rear bumper mountings to meet certain market transportation requirements. (For boat transportation only and no other purpose).

2. Towing Loops:

Location - Front loops are attached to the right hand bumper mounting bracket (except current vehicles fitted with energy absorbing bumpers).

Rear loops are welded to the right hand boot underfloor panel.

These loops are for emergency use only when removing a vehicle from a place where it is causing an obstruction and where no specialised towing equipment is available. The loops are not recommended for use as ordinary towing aids, except for very short distances. See cautionary notes.

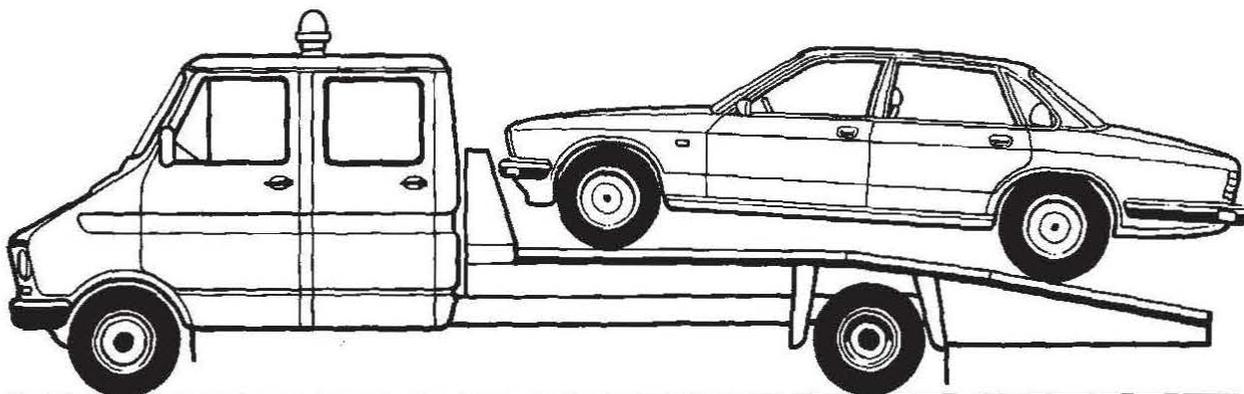


FIG. 1

3. Approved modes for transportation of damaged or disabled vehicles:

a) Flat bed trailer (Fig.1).

The towing loop, where fitted, may be used to winch a vehicle onto a trailer.

Where no loop is fitted a rope or chain should be attached to one of the front suspension lower wishbones (not around the front beam).

This method should also be used for short distance towing of vehicles in emergency.

NOTE: Care should be taken to avoid unnecessary damage to the front spoiler assembly.

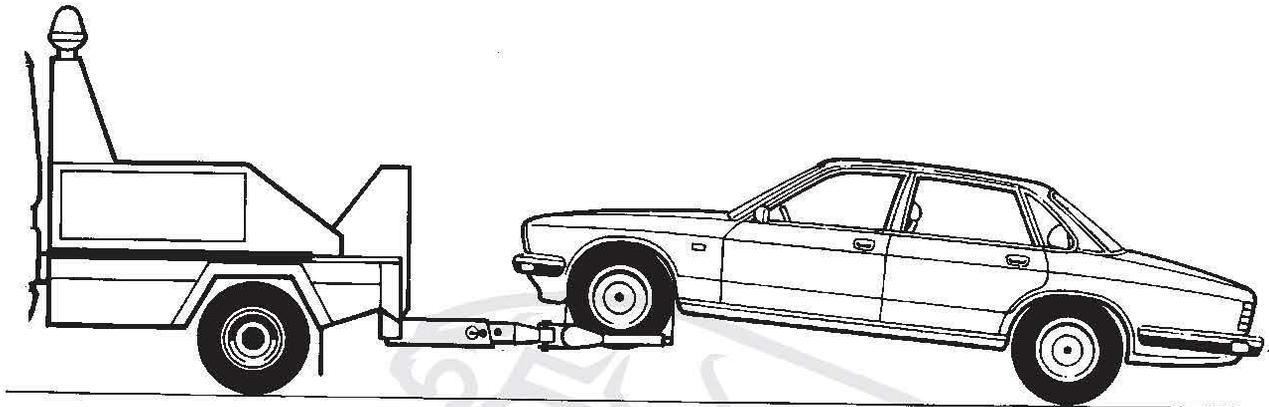


FIG.2

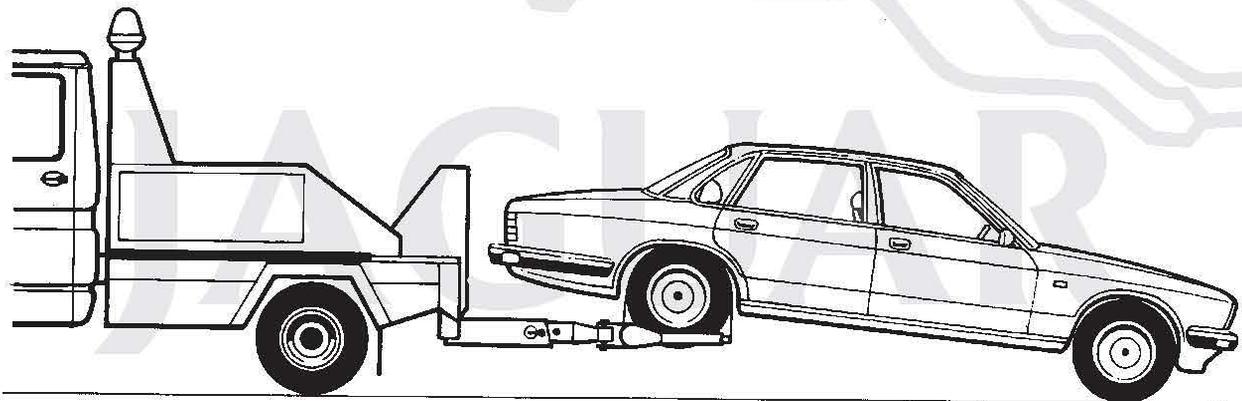


FIG.3

b) Suspended tow (Figs. 2 and 3):

The only recommended method of suspended tow involves the use of the "spectacle" lift.

The vehicle front or rear wheels are positioned onto two loops enabling the complete front or rear of the vehicle to be lifted.

See cautionary notes.

CAUTIONARY NOTES

1. Towed vehicles (except during suspended tow):

Insert ignition key and turn to position II to allow operation of the steering, indicators, horn and brake lights.

The ignition key must be removed from vehicles undergoing suspended tow.

2. Vehicles with automatic transmission:

- a) Engage 'N' in drive selector.
- b) Where the rear wheels remain in contact with the road, the propshaft must be disconnected at the final drive input shaft, or an additional 1.7 litres (3 pints) of transmission oil added to the gearbox via the filler tube. Where the second option is applied a maximum towing distance of 48 kilometers (30 miles) is recommended.
- c) Towing speed must not exceed 48 kph (30 mph)
- d) Where the vehicle has a suspected transmission fault the rear wheels must be suspended whilst towing, or the propshaft disconnected.

WARNING: There will be no power assistance to steering or brakes on a towed vehicle unless the engine is running. Care must be taken to prepare for heavy steering and a hard brake pedal on the towed vehicle.

ITEM: 25

00 WARRANTY FAULT CODESXJ6 2.9/3.6

It is apparent that Dealers are still having problems finding a fault code for the vehicle Central Processor Unit. There is no specific fault code for the Central Processor Unit itself; the fault codes are compiled to reflect the function of the C.P.U. that has failed and created the problem.

As an example, assume that the heated backlight has failed and diagnosis using JDS has shown that the Central Processor Unit is defective - in this instance the fault code for Heated Backlight is 7GJ and the 4th digit of the fault code is 'Y', which denotes a Central Processor Unit malfunction. The complete code is 7GJY. This shows that, although the complaint was non-operation of the heated backlight, the cause was a CPU malfunction.

This method of establishing the fault code must be used for all functions controlled by the Central Processor Unit where the JDS shows this item to be at fault.

ITEM: 26

18 OVERRUN SHUNTINGXJS 3.6

Isolated instances of 'shunting' on engine overrun condition have been reported on the XJS 3.6.

Generally this condition can be improved by detailed attention to engine tuning. Where this condition is suspected, preliminary checks should be carried out on the fuel system, ignition setting, vacuum and electrical connections. If all are satisfactory and the problem persists, then the following checks and adjustments should be made:

- a) Throttle butterfly valve setting
- b) Valve clearances
- c) CO setting

70 DISCALLOY FRONT BRAKE DISCSS.III V12/XJS

A revised front disc material has been introduced on all V12 models from the following VIN's:

468981 - S.III
 135731 - XJS V12
 139780 - XJS 3.6

These discs are available in pairs under Part Number JLM 776, and can be used on all S.III and XJS models in conjunction with Jurid 518 Pads, to overcome problems of pull and judder.

76 WIND NOISEXJ6 2.9/3.6

Since the launch of XJ6 several wind noise/ingress points have been identified. The following Bulletin item has been compiled to assist Jaguar Service Personnel to detect specific air leak paths and recommend a suitable method of rectification.

The Bulletin item is subdivided to enable the workshop technician to refer directly to the section(s) indicated and carry out the recommended actions.

Sections:

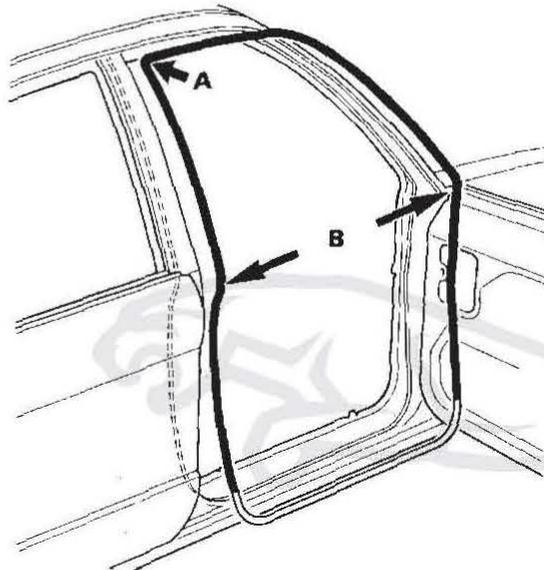
- 1 Front door aperture seal LH and RH - Fig 1 area A and B
- 2 Rear door aperture seal LH and RH - Fig 2 area A and B
- 3 Front door inner waist seal to drop light LH and RH - Fig 3
- 4 Outer waist seal to window frame LH and RH front doors - Fig 4
- 5 Door mirror mounting to window frame LH and RH doors - Fig 5
- 6 Top roll side window demist ducting LH and RH front doors - Fig 6
- 7 Window frame LH and RH front, glass channel seal - Fig 7
- 8 Six light LH and RH - Fig 8
- 9 Door aperture seal retainer 'C' section - Fig 9
- 10 Door to window frame 'rubber' waist seal - Fig 10

N.B. To trace specific leak paths following general location by road test, Jaguar recommend the use of equipment that uses smoke as a means of leak detection, e.g. the 'Drager Airflow Tester'. Service Bulletin JD 04/86 Item 32 Appendix A, gives full instructions for using this equipment.

SEALING/ADHESIVE MATERIALS

- A Silastic 732, Arborsil 851 or equivalent.
 B Kent Quik Leak Chek (Clear) "
 C Seelastrip Expandite (Dum Dum) "
 D Perma Bond C6 Adhesive "

IMPORTANT: Please read each section carefully before commencing rectification.



JSI 564

FIG.1

SECTION ONE

Refer to Fig 1 Area A and B. Check the condition of the aperture seal at these locations.

Area A: The seal may be puckerred or creased at the shot moulded corner.

Area B: The seal may be stretched/taut where it follows the aperture profile.

Reasons for these conditions are:

- (i) Poor/inconsistent production fit of the aperture seal
- (ii) Incorrect door or window frame adjustment.

Corrective Action:

- (i) Area A: If the seal is puckerred or creased, remove and inspect for damage.
Change damaged seals. Refit seal (Refer to Appendix A for correct method of seal fitment).
- (ii) Check door and window frame to aperture fit. If adjustment is required, refer to Appendix B.

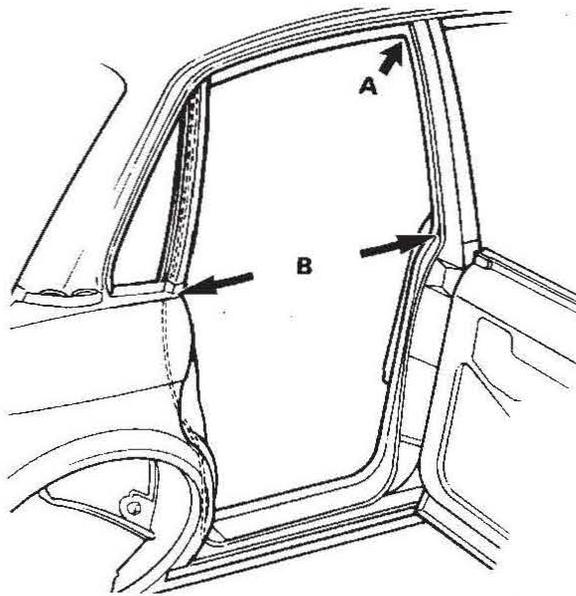


FIG.2

J51665

SECTION TWO

Refer to Fig 2 Area A and B. Check condition of the aperture seal at these locations:

- Area A: The seal may be puckered or creased at the shot moulded corner.
- Area B: The seal may be stretched/taut where it follows the aperture profile.

Reasons for these conditions are:

- (i) Poor/inconsistent production fit of the seal.
- (ii) Incorrect door or window frame adjustment.

Refer to Section One for corrective actions.

SECTION THREE

Door interior wind noise has been determined as air leakage between the top roll inner waist seal and window glass. Wind noise becomes apparent at speeds in excess of 40 mph (60 kph). Air passage at this location may be detected by briefly passing a hand along the top roll waist seal during the road test.

Corrective Action:

- 1 With the door glass in the fully closed position determine the size of the gap.

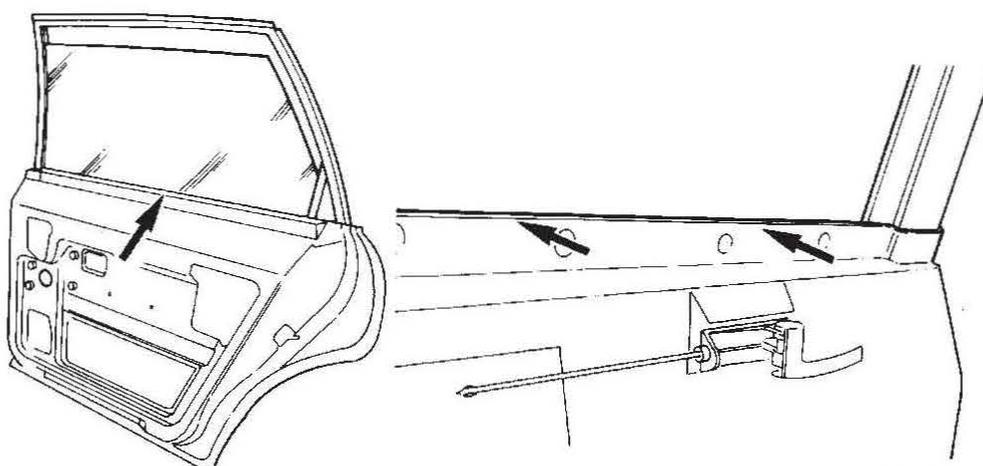


FIG.3

J51656

- 2 With the door glass fully open, remove the top roll door casing to expose the inner door 'letterbox' top flange (Fig 3).
- 3 Dress the flange inboard by the amount required to close the gap, and form an air tight seal between the window glass and the top roll waist seal (Fig 3).

N.B. Care should be taken to avoid reducing window lift operating speed.

- 4 Refit the door trim and check the operation of the side window.
- 5 Road test.

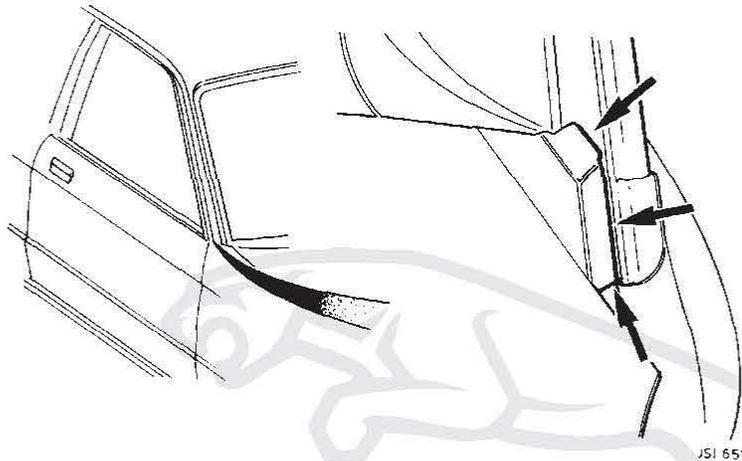


FIG.4

SECTION FOUR

With reference to Fig 4, an air leakage point may exist at the indicated areas due to gaps between the outer waist finisher moulding and the window frame. The gap is caused by inconsistent tolerances at the area indicated.

Rectification:

- 1 Apply sealant A into the gap between the waist finisher and the window frame.
- 2 Ensure the gap is completely filled, then remove any surplus sealant to achieve a good cosmetic appearance.
- 3 Road test.

SECTION FIVE

Wind noise/ingress has been identified in this location, and is due to poor/inconsistent fit between the door mirror mounting and the window frame.

Rectification:

- 1 Remove the plastic cover to expose the area where the sealant should be applied (Fig 5).

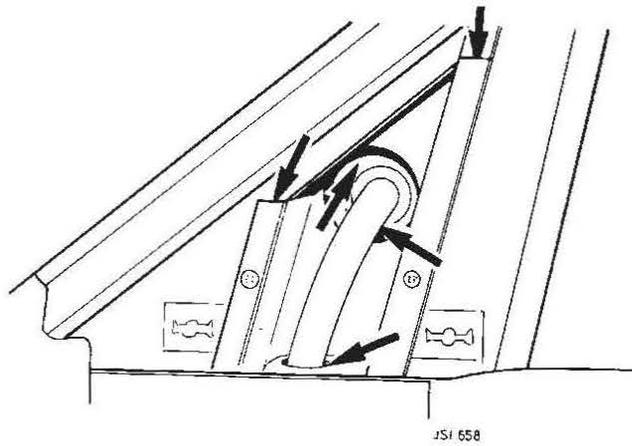


FIG. 5

- 2 Apply sealant C to the locations indicated and ensure they are completely sealed.
- 3 Refit the trim cover and road test

SECTION SIX

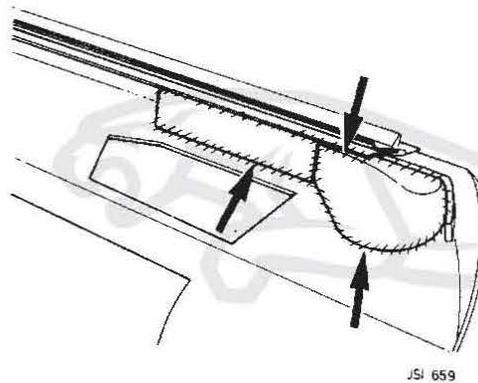


FIG. 6

Some incidence of air leakage has been identified at the locations indicated in Fig 6. If when checking the vehicle for wind noise this area is suspected, the following rectification should be carried out:

Rectification:

- 1 Remove the door top roll trim to expose the inner plastic demist air duct.
- 2 Apply sealant C around the edge of the plastic air duct to seal between the duct and the top roll (Fig 6).
- 3 Refit the top roll and road test.

SECTION SEVEN

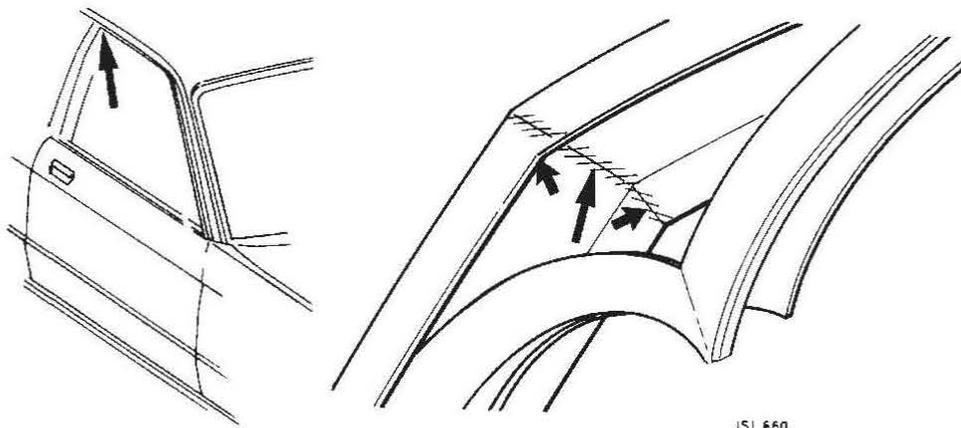


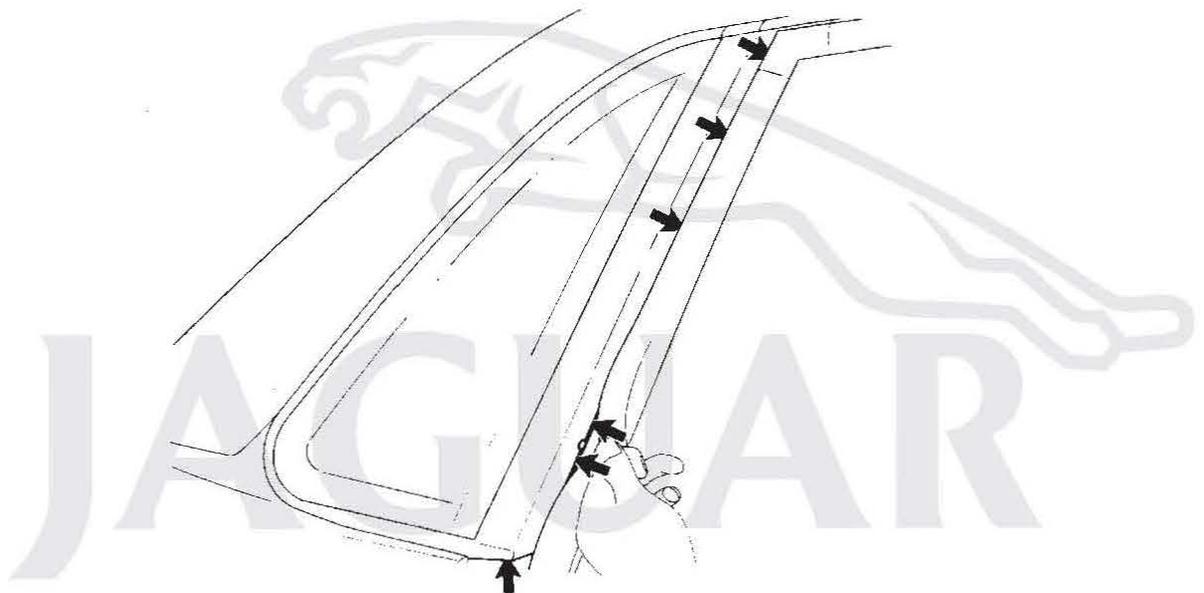
FIG. 7

When investigating wind noise/ingress around the top rear corner of the window frame (Fig 7), the following rectification should be carried out. This area has been clearly identified as an air leakage point.

Rectification:

- 1 Displace the glass channel seal to expose the area where the sealant should be applied.
- 2 Apply sealant A to the area as indicated in Fig 7.
- 3 Refit the channel seal and remove any surplus sealant.
- 4 Road test.

SECTION EIGHT



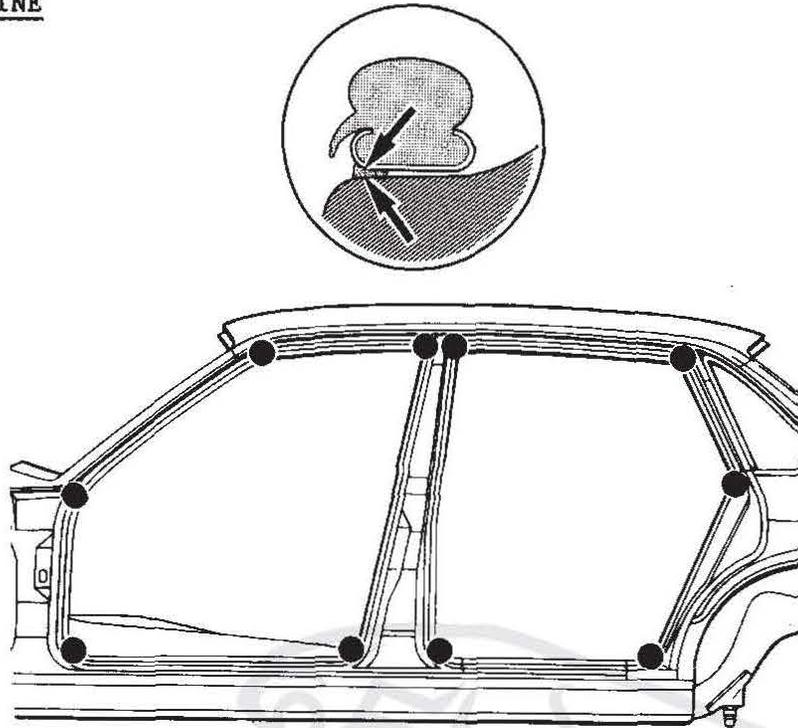
J51 661

FIG.8

Investigations have identified windnoise/ingress at the rear quarter light (sixth light) on some vehicles. If, after road testing the vehicle, windnoise is highlighted at this location, carry out the following rectification:

- 1 Open the rear door to expose the aperture quarter light finisher.
- 2 Apply sealant B to the areas indicated in Fig 8. NOTE: It may be necessary to displace the aperture seal when carrying out rectification. When refitting the seal refer to Appendix 'A'.
- 3 To ensure a good cosmetic appearance, remove all surplus sealant.
- 4 Road Test.

SECTION NINE



JS1662

FIG.9

The points indicated on Fig 9 identify where there is a probability of wind noise/ingress. This is due to poor/inconsistent fit between the door aperture and the aperture seal retainer (Section C) channel. This may result in pronounced gaps in these areas.

Rectification

- 1 Remove the door seal to expose indicated areas.
- 2 Apply sealant B to the indicated areas if gaps are evident.
- 3 Remove surplus sealant and refit the seal - refer to Appendix A.
- 4 Road Test.

SECTION TEN

Door to Window Frame 'Rubber' Waist Seal:

Early cars may be subject to air leakage at this point. This is due to poor/inconsistent fit of the rubber moulded finisher to the body. A modification was introduced on later cars whereby a mechanical fixing operation (plastic rivetting) improved the seal/fit of the rubber moulding.

To correct any leakage at these finishers the following fix should be carried out.

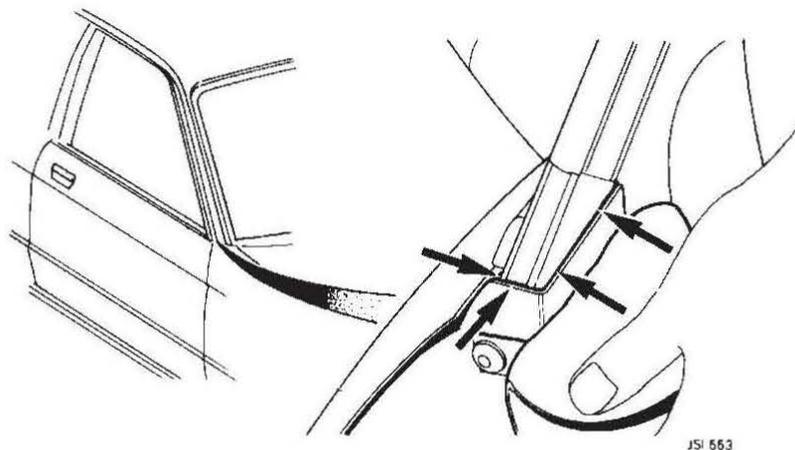


FIG.10

- 1 Remove the rubber finisher (Fig 10) to expose the door to window frame junction.
- 2 Apply sealant 'A' as indicated in Fig 10. Remove any surplus sealant.
- 3 Apply adhesive 'D' to inner surface of the rubber finisher as per adhesive application instructions.
- 4 Refit the rubber moulded finisher pressing firmly to achieve a good bonded seal. Remove any surplus adhesive.
- 5 Road test for wind noise.

APPENDIX 'A'

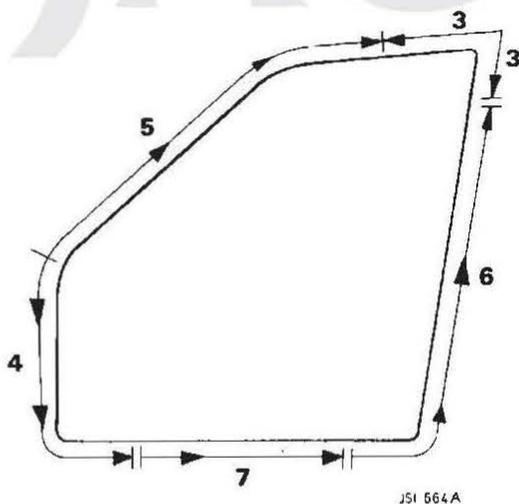


FIG 1.1

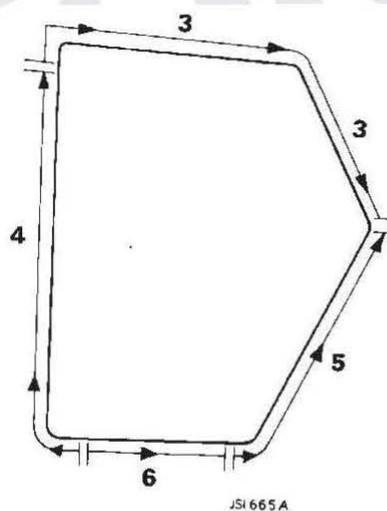


FIG 1.2

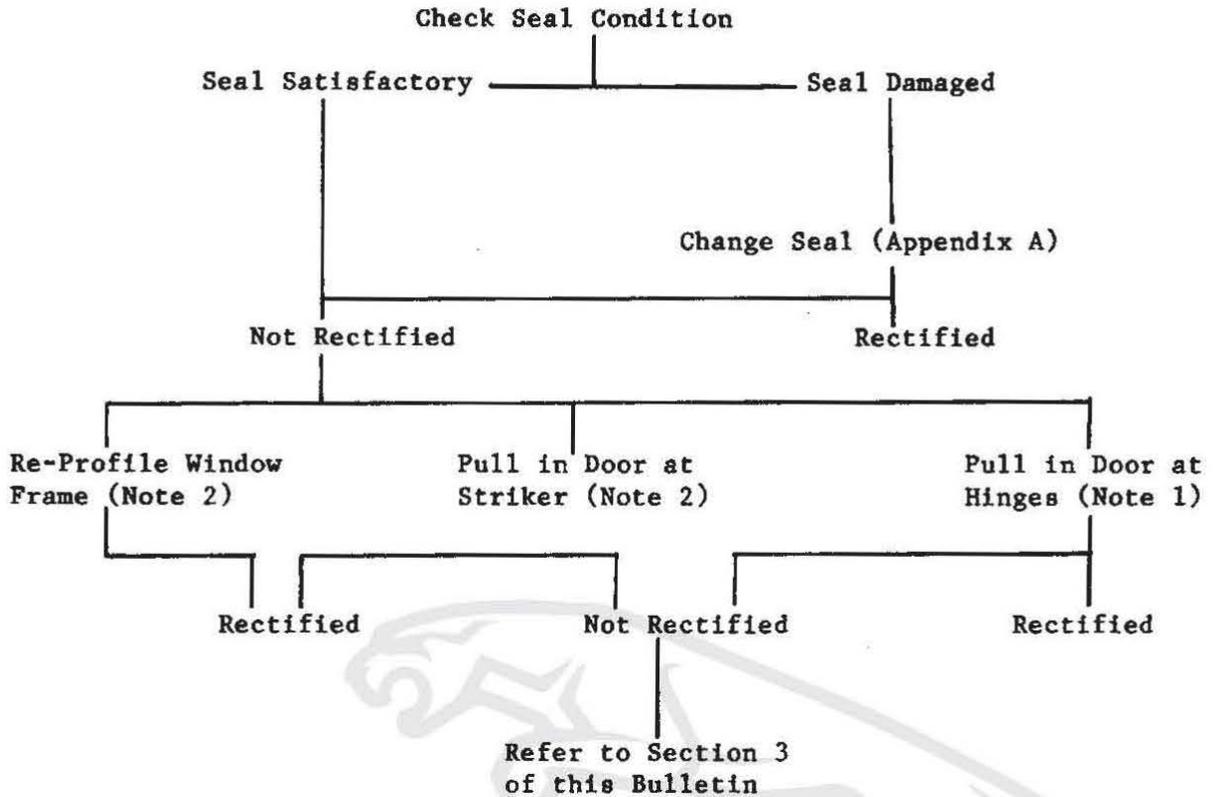
Front Door Aperture Seal - Fig 1.1

- 1 Check the condition of the new or original seal for splits or cuts. It is advisable to seal these splits or cuts with a quick acting adhesive. This will allow easier fitment of the seal.
- 2 Smear the seal with soft soap or a similar lubricant.
- 3 Begin fitting the seal at the top rear corner of the door. Secure the seal into the channel for approximately 30cm in both vertical and horizontal directions.
- 4 Select the front lower corner of the seal as the next area to be fitted. For ease of fit, begin inserting the seal corner into the lowest accessible area of the aperture channel. Ease the seal down the until it is correctly positioned.
- 5 Complete the front and top of the aperture by working upwards.
- 6 Insert the bottom rear corner of the seal and then the remainder of the vertical area.
- 7 Finally, insert the seal along the bottom section of the aperture, working from the front.
- 8 Road test the vehicle for wind noise.

Rear Door Aperture Seal - Fig. 1.2

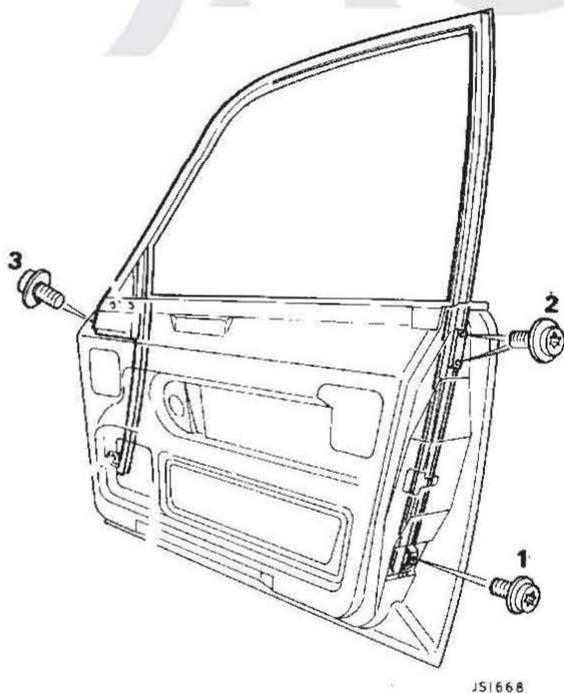
- 1 Check the condition of the new or original seal for splits or cuts. It is advisable to seal these splits or cuts with a quick acting adhesive. This will allow easier fitment of the seal.
- 2 Smear the seal with soft soap or a similar lubricant.
- 3 Begin fitting the seal at the top front corner of the aperture. Working towards the rear, secure the seal into the channel as far as the quarter light (six light) finisher lower edge.
- 4 Secure the seal into the front of the aperture working from the bottom corner upwards.
- 5 Secure the seal into the rear lower corner of the aperture and upwards to the quarter light.
- 6 Finally insert the seal along the bottom section of the aperture, working from the front.
- 7 Road test the vehicle for wind noise.

APPENDIX B



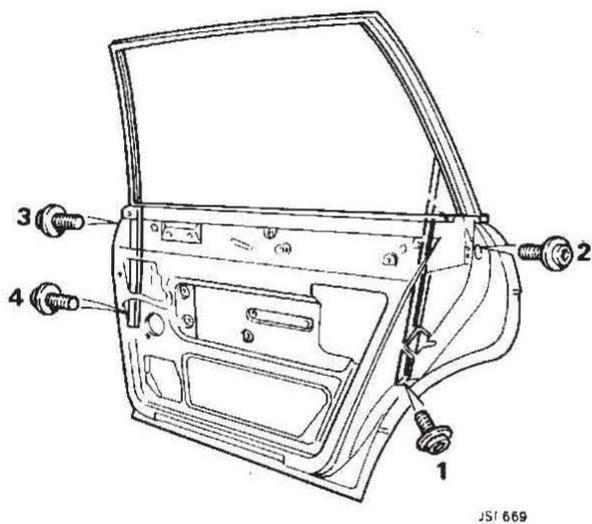
NOTE 1: When adjusting doors, consideration must be given to profile and closure loads, or further problems may be created.

NOTE 2: When adjusting the frame slacken screws 1 to 4 (see Fig 2.1 front doors and Fig 2.2 rear doors). Re-shape window frame (adjustment is only minimal so exercise caution when carrying out this operation). Retighten screws and check window to ensure smooth operation.



JS1668

FIG 2.1



JS1669

FIG 2.2

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Daimler

DATE: JULY 1988
SHEET: 1 OF 2
BULLETIN: JD 08/88

ITEM: 45

03 BULLETIN ITEM CORRECTION

XJ6 2.9/3.6

Item 36 in Bulletin JD 06/88 contains information and repair times for the new style glazing system on the XJ6 2.9/3.6. The repair times and numbers are correct but incorrect VIN range information has been given. The repair times shown are both for VIN range 5302 12 on but where an old style glazing system screen is replaced by a new system screen, the time is increased by 0.75 hrs to accommodate the changes in method for screen removal and any subsequent work required to prepare for the new screen.

The repair times and numbers should be as follows:-

Up to VIN 5302 11: 76-81-01 Windscreen - Renew - 2.80 hrs.

VIN 5302 12 on: 76-81-01 Windscreen - Renew - 2.05 hrs.

76-81-40 Windscreen - Remove, Reseal and Refit 2.35 hrs.

No other times are affected.

ITEM: 46

03 NEW REPAIR TIME SCHEDULES

XJ6 2.9/3.6

Due to a printing error on Page 80-1 of the new XJ6 2.9/3.6 Repair Time Schedule, a small block of repair operations have been given the wrong numbers. In Section 80-10 the final eleven S.R.O's begin 76-82 instead of 80-10. The fifth and sixth digits and descriptions of these S.R.O's are correct, therefore please amend the schedule references in this section from 76-82 to 80-10 as quickly as possible to prevent any confusion.

No repair times are affected and the relevant schedule repair operation numbers will be corrected at the next opportunity.

The affected schedules are as follows:-

Part Number	Language
JJM 17 01 05 Ed.2	Japanese
JJM 21 01 05 Ed.2	English LHD

09 UNLEADED FUEL**ALL MODELS (UK ONLY)**

Increased customer awareness through the efforts of motor vehicle organisations, environmentalists, press articles and petrochemical companies' promotions, will undoubtedly encourage the use of unleaded petrol. The growing number of distinctly marked unleaded petrol pumps on forecourts makes enquiries likely. Since this fuel is now cheaper than leaded in the UK and is becoming more readily available, owners may express an interest in having their car run or converted to run on unleaded petrol.

With this in mind, the following information is provided to give positive guidance on current and past models regarding the suitability or otherwise of unleaded petrol for specific models.

Which current UK vehicles can run on unleaded fuel?

The use of unleaded fuel is confined to the Limousine 4.2 low compression engine which may run on either 95 octane unleaded or 2 star (91 octane) leaded. As all other UK specification vehicles are fitted with high compression engines, 4 star (97 octane) leaded fuel is the only fuel recommended for use by the Company on XJ6, XJS, and S.III V 12 ranges.

Why can unleaded fuel not be used?

It is the lower octane rating (95 instead of 97) of unleaded fuel that makes its use unacceptable. If unleaded fuel is used in those Jaguar vehicles which are not designed to run on it, engine detonation (known commonly as knocking or pinking) could occur leading to possible piston damage.

The Company has no plans to develop a conversion kit or service fix for current or past vehicles. It would not be possible to retrospectively fit components, such as ECU's, from export market vehicle specifications currently capable of operating on unleaded fuel to UK vehicles already in service. Such an action would have to be accompanied by a reduction in compression ratio which would involve major engine rework, at considerable cost.

Why is lead added to petrol?

Adding a specific quantity of lead to petrol is a cost-effective way of increasing the octane rating of petrol and overcoming many of the problems associated with higher compression engines, such as detonation and valve seat recession.

On the average forecourt until recently the choice has usually been 2 star with an octane rating of 91 RON; 3 star (93 RON) and 4 star at 97 RON. All contain lead, which is added during the refining process in carefully controlled ratios.

From January 1986, the lead content was reduced from 0.4 to 0.15 grammes per litre in line with British Standard 4040. Consequently although 'normal' petrol is now low-lead petrol, it must not be confused with unleaded fuel. When this change occurred, all current Jaguar engines were retuned to be compatible with low-lead fuel.

What is unleaded petrol?

As the name implies, premium unleaded petrol (95 RON) goes one step further than 'normal' petrol with no lead intentionally added. In order to achieve a high octane rating and hence maintain engine efficiency, unleaded petrol is blended using other compounds combined during the refining process to partly compensate for the loss of lead additives.

What if leaded / unleaded is filled by mistake?

If a driver mistakenly fills his vehicle fuel tank with unleaded fuel, the risk of engine damage will be reduced if the vehicle is driven gently and the tank is diluted with leaded fuel as soon as possible.

Conversely, future non-catalyst Jaguar vehicles that are designed to run on unleaded fuel, will not be damaged by filling up with leaded 4 star if, for instance, the driver is out of range of a petrol station offering unleaded.

Future Plans

For UK new vehicle sales over the next four years, models will be gradually phased in which will satisfactorily operate on unleaded fuel. The first engine to be capable of running on either 97 octane leaded or 95 octane unleaded will be the XJS V12. First production vehicles to this condition will be introduced during autumn 1988. XJ6 engine variants are scheduled to follow in due course.

ITEM: 48

60/ RIDE LEVEL KNOCK 64

XJ6 2.9 / 3.6 (WITH RIDE LEVEL)

When investigating complaints of ride level knock it is important to bear in mind the following points.

- 1) If the ride level knock disappears when the vehicle is laden and returns when unladen, or
- 2) If after the system has been bled the ride level knock disappears but returns after a short period of time, then the cause is probably due to a fault with the trap line pressure valve which is part of the solenoid valve block. Should Dealers encounter such complaints then the solenoid valve block must be replaced.

Current parts stock have been checked and are to the latest assured condition.

ITEM: 49

86 ALTERNATOR LOAD DUMP MODULE

XJ6 2.9 / 3.6

From VIN 547922 a modified load dump module (Part No. DBC 4267) was fitted. The effect of this change was to reduce the engine speed for alternator 'cut-in' from approximately 950 rpm to 700 rpm. The benefits of this reduction are: immediately upon engine start up the alternator will begin to generate current, this in turn will raise the system voltage, which ensures that where vehicles are fitted with ABS (provided that there is no ABS fault) the warning symbol extinguishes.

1749F

Service Bulletin



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☆ **2nd ISSUE** ☆

DATE: JULY 1988
SHEET: 1 OF 3
BULLETIN: JD 09/88

ITEM: 50

03 REPAIR TIME SCHEDULE CORRECTIONS

XJS/XJ6 2.9 & 3.6

Several printing errors have come to light in the newly published XJ6 2.9/3.6 and XJS repair time schedules. The publication numbers and errors involved are printed below:-

OPERATION NUMBER		DESCRIPTION
XJ6 2.9/3.6 - JJM 100105 ED2		
60-35-23	Should Read	Lower Wishbone - Vehicle Set - Strip and Rebuild
XJS - JJM 100106		
76-40-14	Should Read	Main Frame Seal Channel - Stage 1 Adjust
86-35-02	Should Read	Spark Plugs - Renew The repair time in the XJS Convertible Column should read 1.20.

In all cases these errors only occurred in the printed schedules, the computer based warranty files have always shown the correct descriptions and repair times, therefore no underpayments should have occurred. No repair times are affected.

ITEM: 51

47 JURID PROPSHAFT COUPLING

XJ6 2.9/3.6

Further to Service Bulletin JD 03/88 Item 22, revised propshaft and final drive units are now fitted to all XJ6 models from the following VINs:-

XJ6 3.6	Powr lok	542185
	Non powr lok	540933
XJ6 2.9		549503

When removing the propshaft from the vehicle it should be removed with the coupling attached (to retain optimum propshaft balance), unless the coupling is to be replaced, in which case the following points should be noted:-

- Thoroughly clean and regrease the propshaft centring bush prior to reassembly.
- Always renew the coupling fixing bolts, nuts and washers whenever these are disturbed.
- Align the moulded arrows on the circumference of the coupling with the propshaft and pinion flange arms as shown in Fig 1.

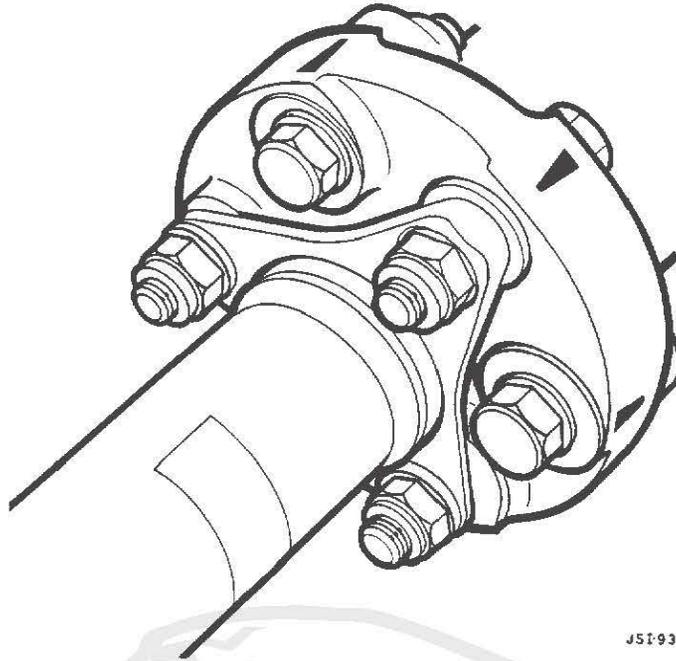


FIG 1

Should any vibration be evident after coupling replacement, a slight out of balance of the propshaft and coupling assembly has resulted. This may be improved by rotating the coupling 120 degrees relative to the propshaft.

New Part Numbers are as follows:-

PART NO	DESCRIPTION	QTY PER VEHICLE
CAC 7576	Propshaft Coupling	1
BX 112131 J	Bolt	3
WA 112081 J	Washer	3
NY 112051 J	Locknut	3

NOTE:-

Service Bulletin JD 03/88 quoted the propshaft centre bearing part number as CBC 6229. This is incorrect and should read AAU 6066.

ITEM: 52

51 DIFFERENTIAL POWR LOK NOISE

XJ6 2.9 / 3.6

Investigations into differential Powr Lok noise when cornering have highlighted the need to ensure adequate "bedding in" of the clutch pack and sufficient oil circulation prior to subjecting a new final drive unit to tight turns. Therefore, when fitting a new Powr Lok final drive unit to a vehicle **Use Only Shell Spirax Super 90 Oil** for initial fill and avoid sharp cornering or figure of eights, until the unit has "bedded in". This takes approximately 30 miles.

ITEM: 53

86 RADIO / TAPE SPEAKER INTERFERENCE XJ6 2.9 / 3.6 & XJS 3.6 (FROM 87.5 MY)

Isolated cases have been encountered of interference (described as a ticking noise) being received through the radio/cassette speaker system, resulting from the operation of certain vehicle equipment. The specific areas of concern identified and models affected are as follows:-

- A. A noise coinciding with the operation of the indicators or brake lights (Long and Medium wave only). XJ6 2.9/3.6.
- B. A noise is evident only with the tape player in operation and the radio telephone (where fitted) is switched on. XJ6 2.9/3.6.
- C. A noise coinciding with the injectors operating and evident only when the tape player is operating. XJS 3.6 87.5 MY onwards.

For details of modifications to overcome the above problems please refer to the following procedures.

NOTE:

Capacitors and encapsulated choke assemblies referred to in this Bulletin Item are available from most reputable radio/electronic specialists.

IMPORTANT:

When installing a capacitor and choke assembly the capacitor must always be installed nearest and as close as possible to the component. (Figs 2 and 3).

PROCEDURE "A" - INDICATOR AND BRAKE LIGHT INTERFERENCE - XJ6 2.9 / 3.6

This source of interference can be considerably reduced by the use of two 0.47µf (micro farad) capacitors with a voltage rating of 35 volts.

NOTE:

IT IS IMPORTANT THAT 0.47µf CAPACITORS MUST BE USED. IF CAPACITORS OF A HIGHER VALUE ARE USED THEY WILL AFFECT THE BULB FAIL MONITORING CIRCUIT AND CAUSE SPURIOUS BULB FAIL INDICATIONS ON THE INSTRUMENT PACK VCM.

Connect one of the capacitors from the N/LG (brown/light green) cable of the RH rear bulb fail module harness to a good earth point and the second capacitor from the NR (brown/red) cable to a good earth point ensuring a metal to metal earth contact (Fig 1).

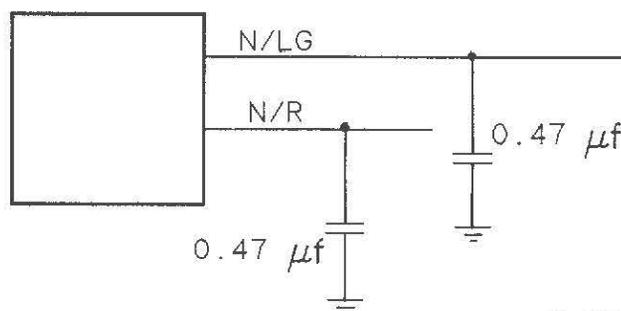


FIG 1

PROCEDURE "B" - NOISE EVIDENT WITH THE TAPE PLAYER IN OPERATION AND RADIO TELEPHONE SWITCHED ON XJ6 2.9 / 3.6

Should this problem be encountered remove the N/W (brown/white) battery supply cable from the yellow PM4 connector of the telephone link harness RN/LB 32 situated in the centre console area.

Using a suitable crimp connector extend the cable to enable it to be connected directly to the battery positive terminal post situated on the bulkhead.

Should the above modification fail to eliminate the interference proceed as follows:-

Connect a $15\mu\text{H}$ (Microhenries) 3 amp encapsulated choke assembly in the N/W (brown/white) battery supply lead. Connect a $2.2\mu\text{f}$ Microfarad capacitor with a voltage rating 35 volts from the N/W (brown/white) to a good earth point ensuring metal to metal contact (Fig 2).

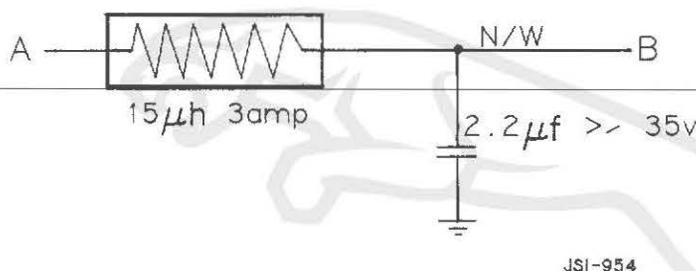


FIG 2

PROCEDURE "C" - TICKING NOISE COINCIDENT WITH INJECTORS WHEN THE TAPE PLAYER IS IN OPERATION XJS 3.6 87.5 MY

Investigations have shown this interference to be generated by the fuel injector circuitry and conducted or radiated through to the speaker circuit.

The following diagnostic procedure should be followed to determine the route of the interference:-

Insert a blank cassette into the radio/tape unit and turn the volume up to maximum. Start the engine and listen for a ticking noise coinciding with the operation of the injectors. This can best be detected by momentarily increasing the engine speed to 2500 rev/min, releasing the throttle pedal then listening for the fuel cut off function coming into operation, at which point the injectors will not operate for a few seconds, hence the interference will be absent for those few seconds.

With the cassette still operating remove the radio/cassette player from its location in the centre console. If the interference ceases by the removal of the radio/cassette player then the cause is due to radiation, a problem which is currently under investigation.

If the interference is still present with the removal of the radio/cassette player then the interference is being conducted through the cable harness to the radio/cassette player.

To determine along which cable the interference is being conducted, disconnect in turn, the battery supply and the lighting input cables to the radio/cassette player. Once the cable(s) conducting the interference have been identified proceed as follows:-

Connect a $15\mu\text{H}$ (Microhenries) encapsulated choke with a 7 amp rating in the offending cable(s) and connect a $2.2\mu\text{f}$ (Microfarad) capacitor with a rating of 35 volts from the cable(s) to a good earth point ensuring metal to metal contact. (Fig 3).

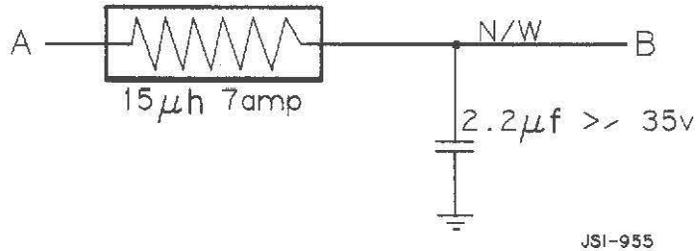


FIG 3

ITEM: 54

86 ANTI THEFT ALARM

XJS V12 CONVERTIBLE

A new anti theft alarm system has been developed and will shortly be available through the Jaguar Parts Division. The new system will initially be available for fitment to XJS V12 Convertible Models. Installation kits to enable fitment to XJS Coupe and XJ6 2.9/3.6 models will become available towards the latter half of 1988.

IMPORTANT:

Following installation on XJS V12 Models, Dealers should be aware that if both door locks fail to lock when operating the transmitter, the cause of this may be that the door lock actuation is out of synchronisation. The door locks can be synchronised using the procedure described in the XJS Service Manual section 86.25.50 "Door Lock Actuator - Adjust"

ITEM: 55

86 BULB FAIL MODULES

XJ6 2.9/3.6

Investigations into a recent increase in bulb fail module replacements has been traced to a suspect batch of resistors inadvertently supplied to the manufacturer and incorporated into units built between April and June 1987.

Subsequent action has been taken and modules incorporating correct "IMR" Resistors have been fitted from the following VINs:-

- Rear Bulb Fail Modules: DBC 2262,3 & 4 issue 6 Introduced at VIN 548666.
- Front Bulb Fail Modules: DBC 3264,5,6 & 9 issue 3 Introduced at VIN 551722.

ITEM: 56

86 INJECTOR HARNESS

XJ6 2.9 / 3.6

Instances of injector harness connector rubber boots splitting have been encountered on XJ6 2.9/3.6 models.

To overcome this problem the harness manufacturer has now introduced a more durable heat shrink sleeving.

The modified sleeving together with an improved harness installation were introduced from engine numbers:-

9APVPA 101880 - XJ6 2.9

9DPBPA 109970 - XJ6 3.6

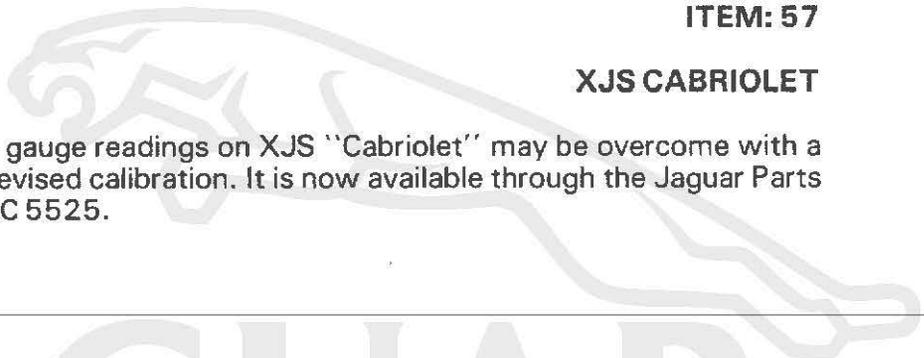
ITEM: 57

88 FUEL TANK ELEMENT

XJS CABRIOLET

Complaints of inaccurate fuel gauge readings on XJS "Cabriolet" may be overcome with a new fuel tank element, with revised calibration. It is now available through the Jaguar Parts Operations under Part No. DAC 5525.

0040S



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DATE: SEPTEMBER 1988
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ITEM: 65

18 STEPPER MOTOR HOUSING / INDUCTION MANIFOLD

XJ6 / XJS 3.6

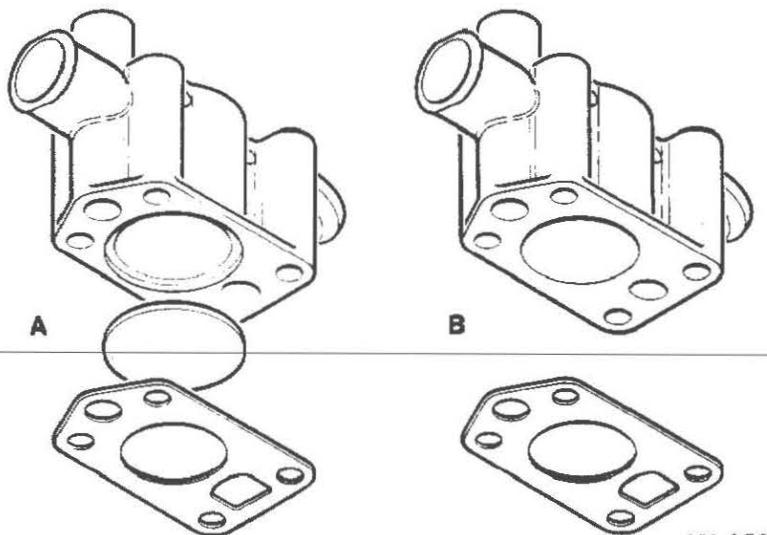
Investigations have shown that the deceleration valve within the idle speed control valve assembly fitted to all 3.6 models is no longer required. From engine number 9D 139921 the deceleration valve and the appropriate aperture in the induction manifold have been deleted.

Following this, problems have been experienced with air leakage due to insufficient clamping area for the idle speed control valve gasket. To overcome the leakage a blanking plate has been fitted in place of the deceleration valve to restore the original gasket clamping area (Fig 1 A).

From engine number 9D 143566 a modified idle speed control valve housing, Part No. EBC 2675, with no deceleration valve recess has been fitted (Fig 1 B).

Service replacements should be made as follows:

	Up to 9D139921	After 9D 139921
Idle Speed Control Valve Housing	EBC 1789	EBC 2675
Induction Manifold XJ6 3.6	EAC 7748	EBC 2054
Induction Manifold XJS 3.6	EAC 8989	EBC 2057



JSI 973

FIG 1

76 PASSIVE RESTRAINT FAULT CODES**XJ6 3.6 FEDERAL SPEC ONLY**

From the introduction of XJ6 89 MY vehicles, cars will be fitted with a passive restraint system. To facilitate warranty and fault reporting requirements for individual passive restraint components, the following codes and corresponding parts descriptions have been assigned:

Complaint Code	Description
8WS	Passive Restraint Guide Rail R.H.
8WT	Passive Restraint Guide Rail L.H.
8WV	Passive Restraint Lap Belt Assembly R.H.
8WW	Passive Restraint Lap Belt Assembly L.H.
8WX	Passive Restraint Lap Belt Buckle R.H.
8WY	Passive Restraint Lap Belt Buckle L.H.
7PH	Passive Restraint Motor Drive Assembly
7PT	Reverse Inhibit Relay
7PU	Electronic Control Unit
7PV	Docking Switch R.H.
7PW	Docking Switch L.H.
8QY	Passive Restraint Dash Liner Armature R.H.
8QZ	Passive Restraint Dash Liner Armature L.H.

ITEM: 67

82 AIR CONDITIONING / HEATER 'IN CAR' SENSOR**XJ6 2.9 / 3.6**

To improve the 'in car' temperature sensor response of XJ6 2.9/3.6 RHD & LHD models and prevent the sensor being affected by temperature variations in and around the facia crashroll area, an insulated sensor assembly has been introduced together with a modified asperator arrangement for RHD models.

These improvements were progressively introduced from VIN 540086.

In addition to these modifications the temperature differential specification has been revised to achieve a more consistant temperature differential and acceptable temperature blend.

The above modifications and alterations to the temperature differential specification may be incorporated by Dealers investigating complaints of temperature instability or slow sensor reaction time.

Service Kits Part No. JLM 16 16 (RHD) and JLM 16 17 (LHD) are now available and should be used in conjunction with the following procedures.

Service Kit Contents - Part No. JLM 16 16

Description	Qty	Part No.
Sensor Assembly	1 off	CBC 5952
Rubber Elbow	1 off	CBC 1835
Hose	1 off	C 15150/5

Elbow	2 off	CAC 3398
LH Blower Duct	1 off	CBC 5939
Plastic Clip	2 off	AGU 2481
Rawlnut	2 off	AAU 4931
Screw	2 off	SE 105161 J
Ratchet Strap	1 off	C 45099
Sleeve (Inlet)	1 off	JLM 1618
Sleeve (Outlet)	1 off	JLM 1619

Service Kit Contents - Part No. JLM 1617

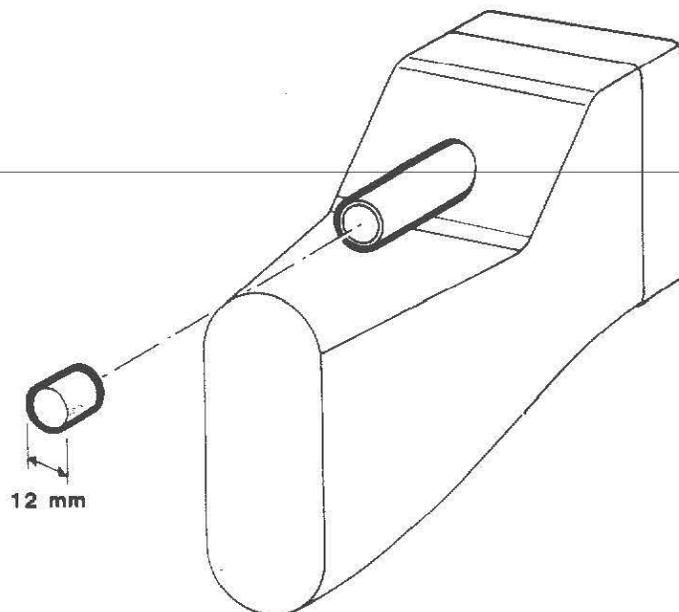
Description	Qty	Part No.
Sensor Assembly	1 off	CBC 5953
Plastic Clip	2 off	AGU 2481
Rawlnut	2 off	AAU 4931
Screw	2 off	SE 105161 J

Modifications Procedure RHD Models

Repair Operation Number	— 82-91-05
Warranty Code	— 7TF-X
Labour Allowance	— 1.70 hrs.

Procedure (RHD)

1. Disconnect the battery negative lead.
2. Remove both the driver and passenger side dash liners.
3. Displace the existing asperator hose/elbow assembly from the RH side blower motor ducting.
4. Utilising a suitable blanking plug, external diameter 12 mm, seal off the RH blower motor asperator duct (Fig 1).



JSI-912

FIG 1

5. Disconnect the 'in car' sensor harness multiplug AC7.
6. Remove the glovebox assembly.
7. Disconnect and remove the main vehicle microprocessor and mounting bracket situated adjacent to the LH side blower motor assembly.
8. Remove the LH blower motor securing bolts. Ease the blower assembly forwards but do not remove from the vehicle. Displace the securing tape from the blower motor ducting, remove the ducting and discard. For ease of accessibility it is recommended that before assembling the new blower ducting and refitting the blower assembly, the heater matrix inlet and outlet pipe insulation sleeves are fitted at this stage.
9. To fit the insulation sleeves, cut the sleeves (Fig 2 A), open the sleeves and wrap round the inlet and outlet matrix pipes. To secure the sleeving, staple together using a conventional paper clip staple gun. For ease of assembly it is recommended that a small hand held type of stapler is used (Fig 2 B).

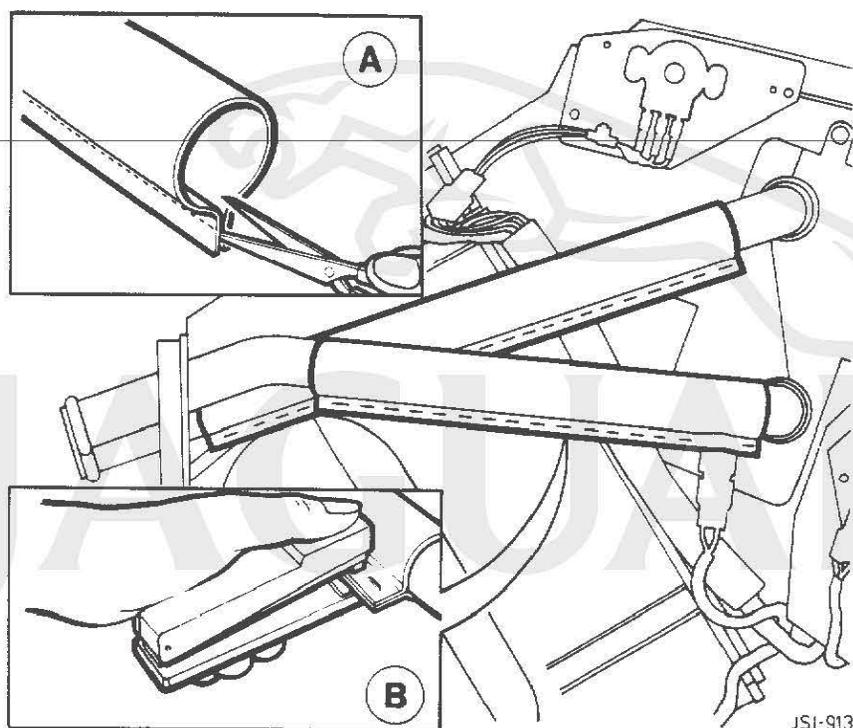
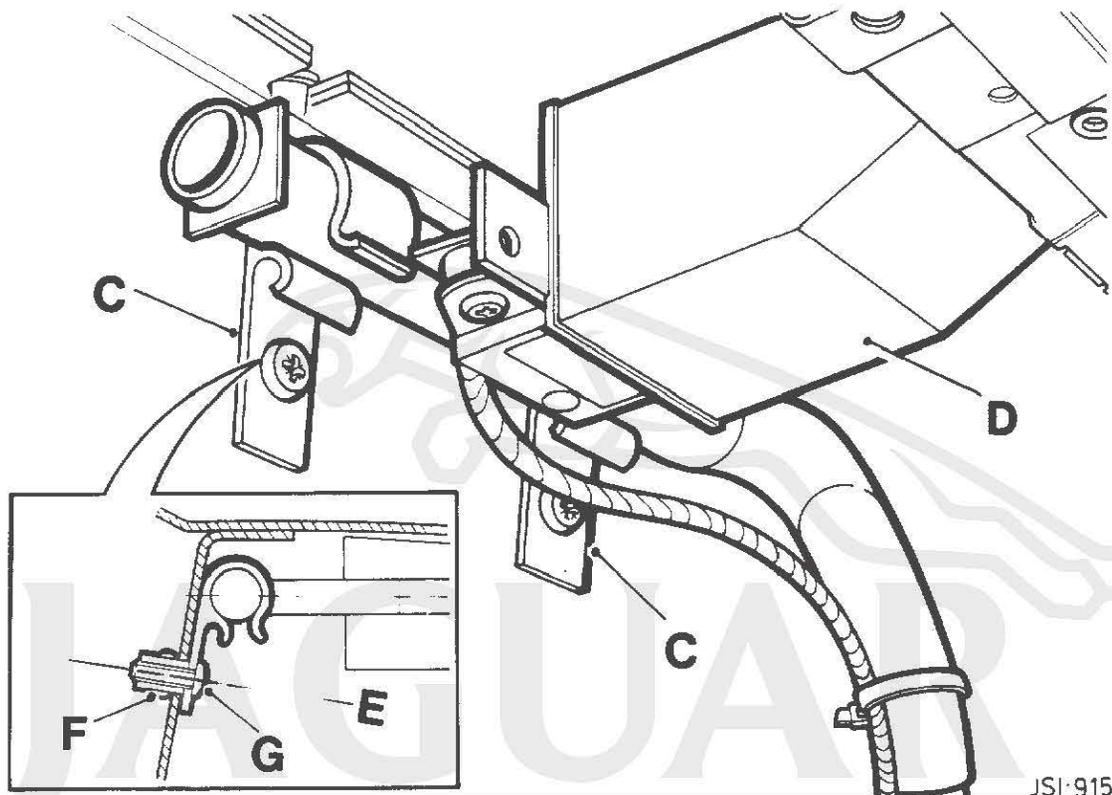


FIG 2

10. Fit and re-tape the new duct assembly Part No. CBC 5939 to the blower motor. Locate the ducting onto the air conditioning unit, reposition the blower motor assembly into the plenum recess and secure to the mountings.
11. Ensure the ducting is fully seated onto the air conditioning unit outlet and fit retaining clip.
12. Release and remove the 'in car' sensor securing screws and displace the sensor assembly from the facia. Displace the asperator pipe from the metal clips behind the facia and withdraw the sensor/asperator assembly from the vehicle.
13. Fit and align the 'P' clips (Part No. AGU 2481 - 2 off) to the new sensor assembly (Part No. CBC 5952). Push the clips fully inwards against the sensor housing flanges (Fig 3 C).
14. Locate the sensor assembly into the crash roll (Fig 3 D); position the 'P' clips flush with the facia air ducting; push the sensor assembly fully upwards and mark the position of the 'P' clip fixing holes.

15. Remove the sensor assembly and drill the marked positions with a 10 mm drill (Fig 3 Inset E).
16. Fit and fully seat the rawnuts (Part No. AAU 4931) (Fig 3 Inset F).
17. Fit the sensor assembly and secure the 'P' clips to the rawnuts using screws (Part No. SE 105161 J) (Fig 3 G).



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FIG 3

18. Fit and fully seat the elbow pipe (Part No. CAC 3398) into the blower motor ducting (Fig 4 H).
19. Connect the rubber hose (Part No. C 15 150/5) to the elbow (Fig 4 J).
20. Connect the second elbow (Part No. CAC 3398) to the hose (Fig 4 K).
21. Connect the adaptor hose (Part No. CBC 1835) to the 'in car' sensor and connect the elbow to the adaptor hose (Fig 4 L).
22. Route the 'in car' sensor harness behind the fascia panel and connect to the multiplug AC7 on the RH side of the unit.
23. Secure the sensor harness to the aspirator pipe utilizing the ratchet strap (Part No. C45099) (Fig 4 M).
24. Reposition the main vehicle microprocessor and mounting plate; secure.

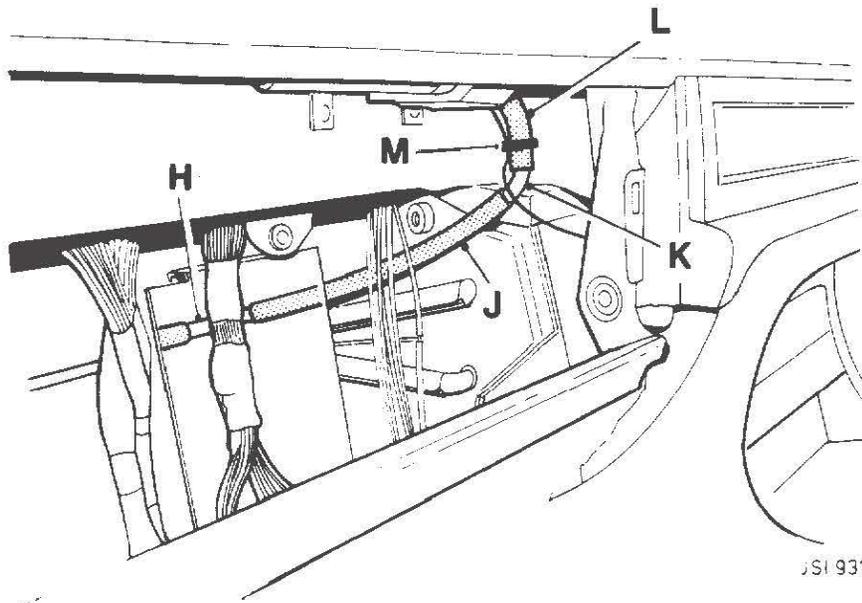


FIG 4

25. **DO NOT REFIT TRIM ITEMS AT THIS POINT**
 IN ADDITION TO THE ABOVE MODIFICATIONS THE FACIA TO FOOTWELL
 TEMPERATURE DIFFERENTIAL SHOULD BE CHECKED AND ADJUSTED IF REQUIRED
 AS PER THE FOLLOWING PROCEDURE:

THE TEMPERATURE DIFFERENTIAL SPECIFICATION HAS RECENTLY BEEN REVISED
 RESULTING IN A 0°C - 5°C TEMPERATURE DIFFERENCE WITH THE FACIA LEVEL
 COOLER THAN THE LOWER LEVEL, FOR EXAMPLE:

Facia	Footwell	Difference
24°C	29°C	5°C
28°C	30°C	2°C

PLEASE NOTE: THE FACIA/FOOTWELL TEMPERATURE DIFFERENCE WAS
 PREVIOUSLY QUOTED AS 0°C - 12°C. REFERENCE SERVICE BULLETIN JD 06/87
 ITEM 45.

26. Start and run the engine with the air conditioning system engaged, until the normal engine operating temperature is reached. Ensure all manually operated facia vents are open.
27. Select the fan speed switch to normal and the temperature demand control switch to the mid position (Fig 5).

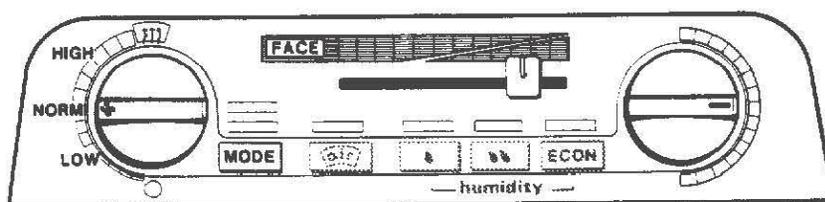
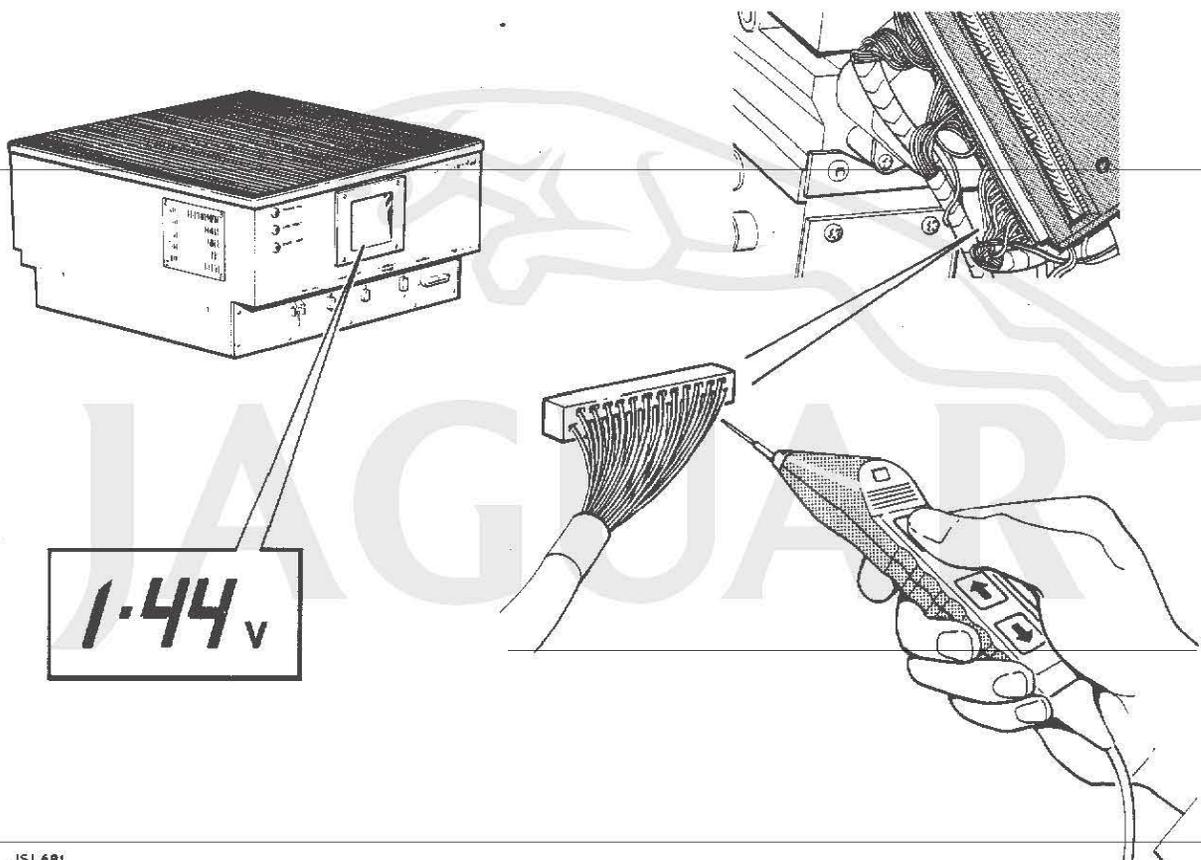


FIG 5

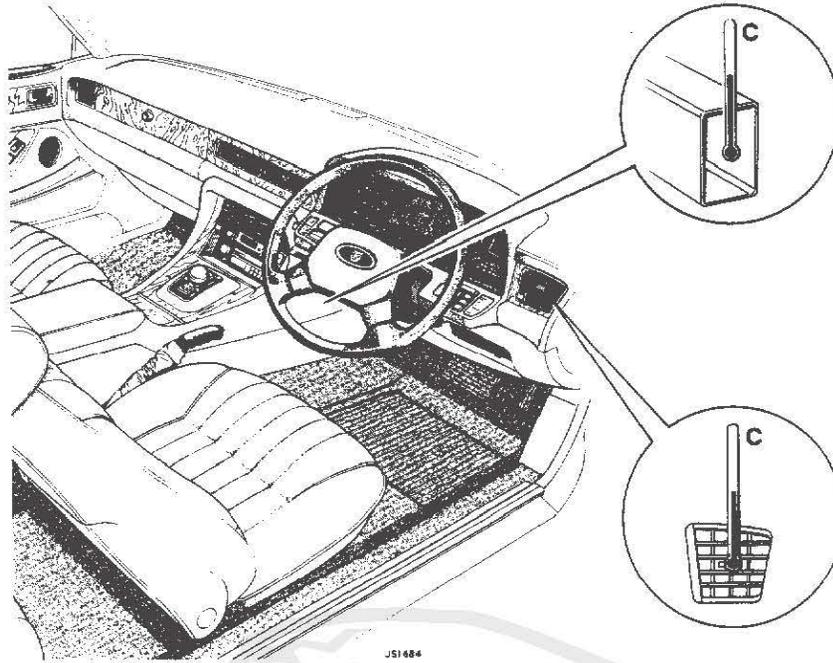
28. Move the face level differential control to the minimum differential position, i.e. full heat position.
NB: For explanation of the face level differential control and its affect on temperature variation see additional information.
29. Select manual mode. This is achieved by pressing the mode button, so that (MAN) is illuminated above the button. This automatically adjusts the rotary flaps to a pre-determined position, which will be maintained and ensure consistency of the differential temperatures during the adjustment process.
30. With the JDS diagnostic unit in the voltage multimeter mode, probe connector AC4 pin 5, brown/green (N/G) wire at the ECU and simultaneously adjust the temperature demand switch until the voltage reading shown on the VDU is 1.44 volts (Fig 6).



JS1 681

FIG 6

31. With the engine rpm maintained at approximately 1500 rpm and utilising temperature monitoring equipment, observe the temperature difference at the facia side vent and the footwell outlet on the same side of the car. The temperature difference should be 0°C - 5°C with the facia level cooler than the lower level.
NOTE: When positioning temperature monitoring equipment probes, ensure that they are positioned in the outlet airflows so that an average temperature reading is taken (Fig 7).



JS1484

FIG 7

32. If the temperature differential is outside the specification or in extreme cases, inverted, the following adjustment may be carried out:-
33. Slacken the lower feedback potentiometer securing screws and to correct any temperature anomalies adjust the potentiometer as follows:-
 - (a) Clockwise for cooler air at the footwell outlets to reduce differential.
 - (b) Anti-clockwise for warmer air at the footwell outlets, to overcome inverted temperature differentials (Fig 8).
 - (c) On earlier XJ6 2.9/3.6 models (VIN range 500001 - 525400) equipped with the smaller metal type feedback potentiometer, Part No. JLM 754, difficulty may be encountered in achieving the 0°C - 5°C setting. In order to achieve the correct setting it may be necessary to replace the lower feedback potentiometer with the later type assembly, Part No. CBC 5660, before completing the adjustment procedure.

IMPORTANT: BEFORE FITTING THE LATER TYPE POTENTIOMETER IT WILL BE NECESSARY TO FILE THE POTENTIOMETER FIXING SCREWS FLUSH WITH THE MOUNTING PLATE IN ORDER THAT THE MOUNTING PLATE CAN BE ACCEPTED INTO THE A/C UNIT CASE RECESS (THIS ACTION IS ONLY REQUIRED WHEN REPLACING POTENTIOMETER PART NO. JLM 754). SEE INSET FIG 8.

Should the above modification be required, then Dealers should submit a separate claim covering the replacement of the potentiometer quoting:-

Repair Operation No:	— 82-20-60
Warranty Code:	— 75E - X
Labour Allowance:	— 0.25 hrs

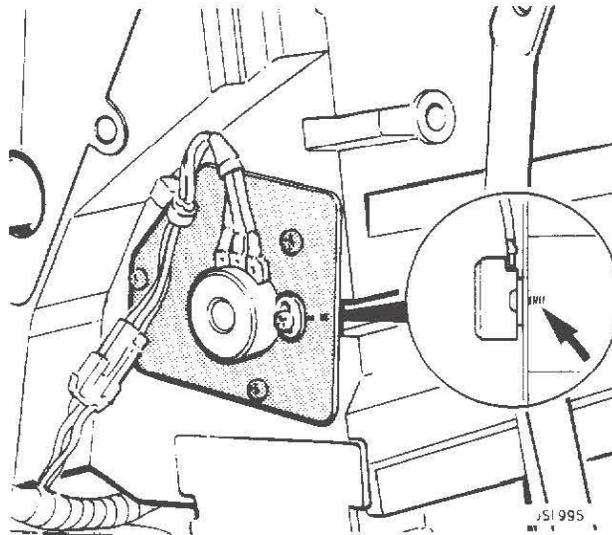


FIG 8

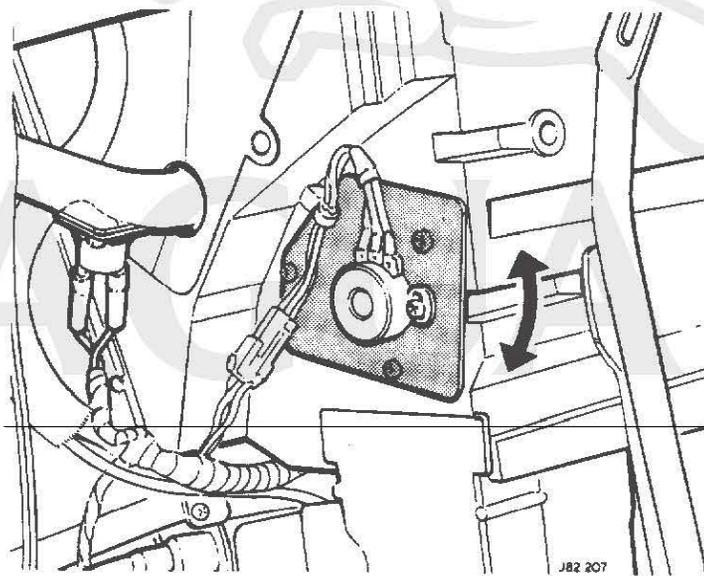


FIG 9

34. **IMPORTANT:** The slightest adjustment of the potentiometer results in a significant change in the position of the lower rotary flap.

Following adjustment of the potentiometer wait approximately 5 minutes for the temperature to stabilize before taking readings.

With a satisfactory temperature differential obtained, re-tighten the potentiometer fixing screws.

35. Refit the glovebox and trim items. Reconnect the battery and check the system operation.

Modification Procedure LHD Models

Repair Operation No:	— 82-91-05
Warranty Code:	— 7TF-X
Labour Allowance:	— 1.05 hrs

Procedure (LHD)

On LHD models, modification to the 'in car' sensor installation together with check-adjustment of the temperature differential are all that is required. Aspiration is sourced from the RH blower motor and as such does not require modification.

For installation of the insulated sensor assembly (only) on LHD models repeat the fitting instructions detailed in the RHD drive procedure.

Additional Information

The function of the face level control (Fig 5) appears to have caused some confusion to both owners and service personnel.

The description used for this control 'face level differential' suggests that the face level temperature only is altered when the control is moved between the red scale (hot) and the blue scale (cold), this is not strictly correct.

When the face level control is moved both the facia and footwell temperatures are affected i.e: the temperature differential is altered.

If the slide control, for example, is moved fully to the LH side (blue scale), the temperature differential between the facia and footwell is at its maximum i.e: the face level temperature is cooled and the footwell temperature will become warmer. Likewise if the control is moved fully to the RH side (red scale) the temperature differential is at its minimum i.e: the face level temperature will become warmer and closer to the footwell temperature.

ITEM: 68

84 ELECTROLUX WIPER MOTOR ASSEMBLY (RHD)

ALL RHD XJS

The above wiper assembly was introduced for RHD vehicles at VIN 152511. A problem occurred with the heated washer jet(s) which could result in either fluid leakage at the jet elbow or poor screenwash performance.

The vehicles concerned were re-worked at Jaguar with modified screenwash jets. The last vehicle built prior to re-worked units fitted was VIN 153314. However, if any vehicle is found to suffer from the above mentioned problem(s) then renew the complete jet assembly (DAC 6141).

A labour allowance of 0.60 hrs may be claimed quoting 76-91-80, Complaint Code 7LDT.

ITEM: 69

86 VEHICLE CONDITION MONITOR (VCM) CODES

XJ6 3.6

From 1989 MY the VCM written display which accompanies the exclamation symbol (!) has changed from 'FUELLING FAILURE' to 'CHECK ENGINE'. The follow-up fault codes can be raised by switching off the ignition and waiting for at least 10 seconds before again switching on the ignition and starting the engine. The codes' interpretation has changed for numbers 1,4,7 and 8. Definitions for all eight codes are given below:

1. Oxygen (lambda) sensor output failure
2. Air flowmeter failure: either open circuit or short circuit to ground
3. Coolant temperature sensor failure
4. Oxygen (lambda) sensor indicates permanent leanness
5. Air flowmeter failure: low throttle potentiometer voltage with high air flowmeter voltage
6. Air flowmeter failure: high throttle potentiometer voltage with low air flowmeter voltage
7. Oxygen (lambda) sensor indicates permanent richness
8. Air thermistor open circuit or short circuit

ITEM: 70

86 WARRANTY COMPLAINT CODES

XJ6 2.9 / 3.6 (89 MY)

The following new Warranty Complaint Codes have been allocated to cover "Infra Red" door locking components introduced at 1989 MY.

7RX - Infra Red Transmitter

7RY - Infra Red Receiver

7YG - Infra Red Receiver Harness (Part of Bulkhead Harness)

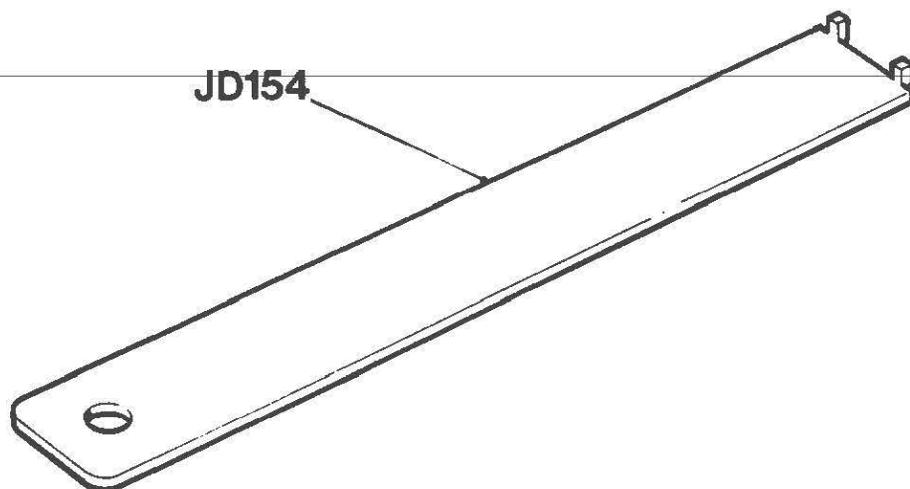
Please note: Warranty Code 7RR has been amended to battery-key/handset.

ITEM: 71

88 SPEEDO REMOVAL

XJ6 2.9 / 3.6

A new Service Tool has been developed to aid removal of the connection from the speedometer/tachometer printed circuit. The tool (JD 154) is illustrated below (Fig 1).



J88 057

FIG 1

To remove the speedometer:

Remove the instrument panel as per 88.20.01, Volume 5 of the XJ6 Service Manual.

CAUTION: Dismantle the speedometer in a clean area, i.e. free from dirt, grease and dust. Do not handle the instrument panel lens, as fingerprints are difficult to remove.

Displace the instrument panel lens retaining clips and remove the lens.

Displace the legend plate retaining clips and remove the plate.

Remove the speedometer securing screws. Displace the speedometer for access to the printed circuit.

Insert Service Tool JD 154 into the printed circuit retaining clip and carefully withdraw the clip (Fig 2). **NOTE:** A gentle 'twisting' motion as illustrated in Fig 2 will assist withdrawal. **DO NOT EXERT ANY PRESSURE/PULL ON THE PRINTED CIRCUIT.**

Remove the speedometer.

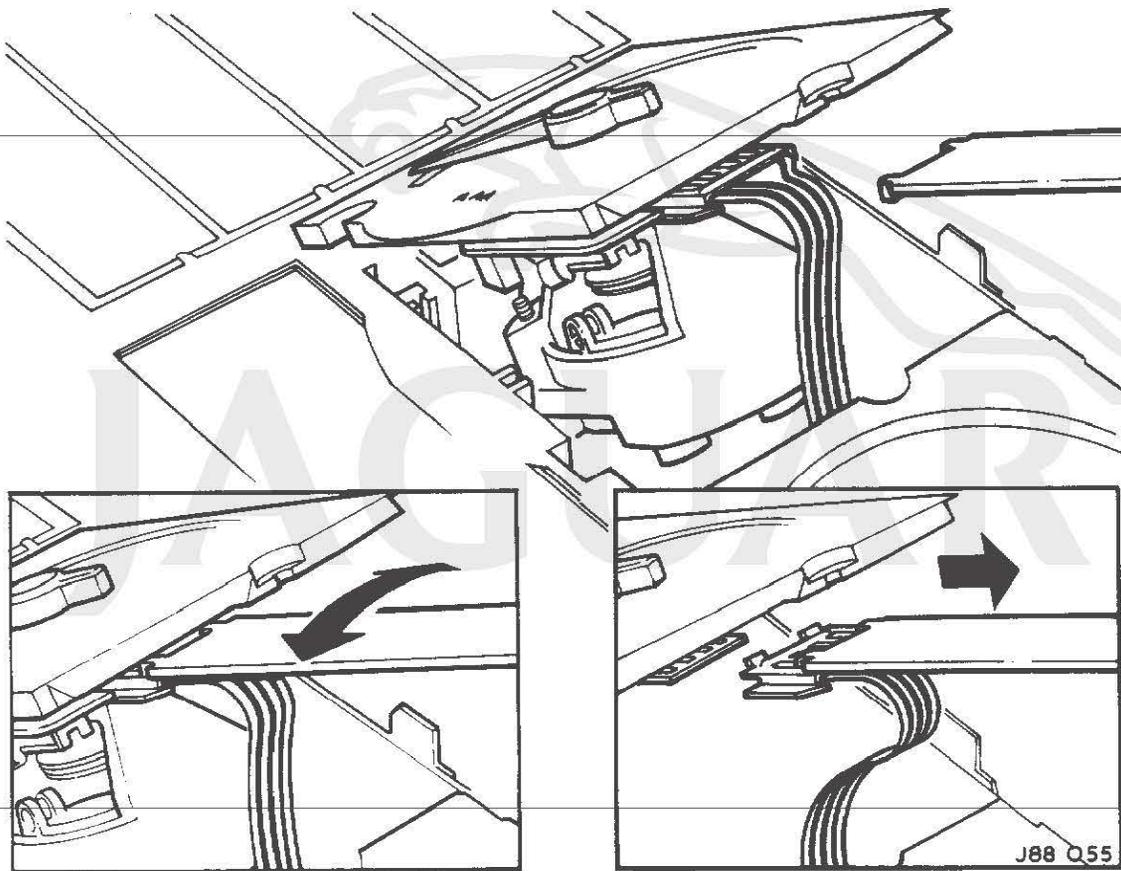


FIG 2

To refit the speedometer:

Ensure the retaining clip is correctly fitted to the printed circuit as illustrated in Fig 3.

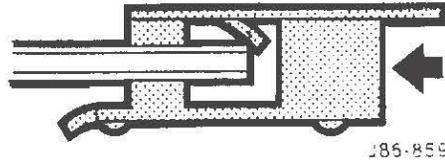
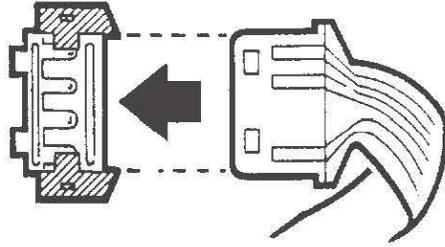
Locate the speedometer in position. Connect the printed circuit retaining clip to the speedometer (Fig 4). **ONCE AGAIN, DO NOT EXERT ANY PRESSURE/PULL ON THE PRINTED CIRCUIT.**

Fit and tighten the speedometer securing screws.

Refit the legend plate and lens.

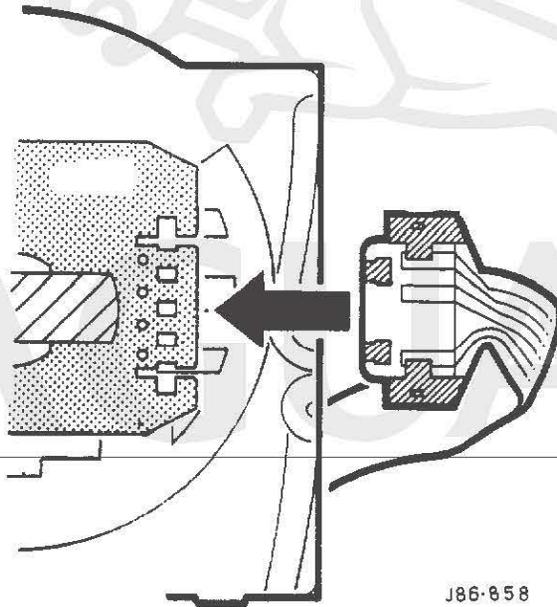
Refit the instrument panel.

NOTE: The above procedure is the same for the tachometer.



J86-859

FIG 3



J86-858

FIG 4

Service Bulletin



DATE: FEBRUARY 1989
SHEET: 1 of 3
REF: JD 02/89

ITEM: 06

18 95 OCTANE UNLEADED FUEL

XJ6 3.6 & XJS 3.6

To accommodate the increasing availability of 95 octane unleaded fuel a modification is now available to allow its use in 3.6 XJ6 models and 3.6 XJS models after VIN 139052 (introduction of the "micro-fuelled" engine management system). This involves fitting a revised crankshaft sensor housing as detailed below, which effectively retards the ignition timing by approximately 3° throughout the ignition map. This modification is made available as a cost option and as such is chargeable to the customer.

Modification Details

Parts Required:	Ignition Timing Kit	JLM 1825
	Comprising:-	
	Sensor Housing	EBC 3383
	Fixing Screw	SF 10825 1J
	Fixing Bolt	FB 10806 1J
	Label	EBC 36 11

Fitting Time: 0.45 hrs.

Procedure:

- * Detach the distributor cap from the distributor and place aside to gain access.
- * Remove the bolt securing the crankshaft sensor harness 'P' clip to the front cover.
- * Slacken the alternator and remove the belt.
- * Remove the sensor housing fixing bolts and discard.
- * Withdraw the sensor housing from the front cover and remove the sensor from the housing.
- * Remove the ring dowels from the displaced housing and discard the housing.
- * Locate the ring dowels and the crankshaft sensor into the new sensor housing.
- * Locate the housing onto the front cover and secure using the new screw and bolt supplied.
- * Secure the sensor harness 'P' clip to the front cover.

- * Refit the alternator belt and tension in accordance with Repair Operation 86. 10.03.
- * Refit distributor cap.
- * Affix supplied identification label to the LH inner wing panel adjacent to the existing emission label.

ITEM: 07

19 BLACK SMOKE AFTER COLD START

**V12 MODELS, USA, CANADA,
SWITZ, GERMANY & AUSTRIA ONLY**

A number of reports have been received of excessive black smoke immediately after cold start on V12 models. To overcome this, a revised ignition vacuum system and auxiliary air valve have been introduced from the following VINs:

XJSV12 - 148945
S.III V12 - 479354

If this problem is experienced on vehicles prior to the above VINs, then the vehicle may be modified to this later specification as detailed below.

The necessary parts are supplied in a conversion kit under Part Number JLM 1681.

Vehicles should be modified on a customer complaint basis only quoting Complaint Code H333, Repair Operation 19.91.10 with a labour allowance of 1.55 hrs.

NOTE: Vehicles prior to VINs 139052 (XJS) and 474043 (S.III) are not affected.

MODIFICATION PROCEDURE

Vehicles Fitted With Air Injection

1. Remove R.H. air cleaner.
2. Disconnect water hose from R.H. rear water rail.
3. Disconnect vacuum pipes from thermal vacuum switch and remove R.H. rear water rail.
4. Displace rubber seal and fit to new water rail.
5. Fit water pipe adaptor from displaced water rail to rear-most outlet port of new water rail.
6. Fit three-port thermal vacuum valve to centre outlet port of new water rail. Use suitable thread sealant to prevent possibility of coolant leakage.
7. Fit two-port thermal vacuum valve from displaced water rail to remaining outlet port of new water rail and fit rail to engine.
8. Remove and discard solenoid vacuum valve and fixing bracket from below R.H. inlet manifold together with vacuum pipes to vacuum regulator and 'T' piece.
9. Insulate and tape back solenoid vacuum valve harness.
10. Connect existing short vacuum hose from 'T' piece to side connector of two-port thermal vacuum valve.

11. Connect existing vacuum hose from air switching valve via existing delay valve to top connector of two-port thermal vacuum valve.
12. From supplied vacuum hose, cut a 90mm (3.5") length and connect between vacant 'T' piece connection and lower port of three-port thermal vacuum valve. (Refer to supplied vacuum routing label for schematic layout of system).
13. Cut a 230mm (9") length of vacuum hose and connect between vacant vacuum regulator port and centre port of three-port thermal vacuum switch.
14. Remove and discard vacuum hose between upper throttle edge tapping and lower vacuum regulator port.
15. Assemble vacuum system sub-assembly shown in Fig. 1 and connect as illustrated to throttle edge tapping, vacuum regulator and three-port thermal vacuum valve.

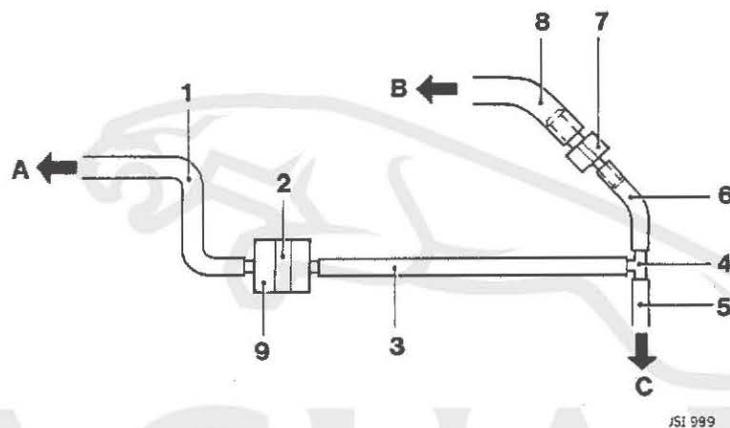


FIG 1

- A - to top port of three port thermal vacuum valve.
 B - to lower port of vacuum regulator
 C - to upper R.H. throttle edge tapping.

1. Vacuum hose 310mm (12") long
2. Vacuum delay valve, EAC 4025
3. Vacuum hose 140mm (5.5") long
4. 'T' piece, C 15644
5. Vacuum hose 180mm (7") long
6. Vacuum hose 40mm (1.5") long
7. Reducer, EAC 9286
8. 140mm (5.5") length of original vacuum regulator to throttle edge hose. Alternatively a 140mm length of vacuum hose CBC 2591/11 may be used.
9. Grey side towards three-port valve

16. Reconnect water hose to R.H. water rail.
17. Refit air cleaner.
18. Affix supplied vacuum routing label over existing label on bonnet underside.
19. Remove auxiliary air valve and replace with new unit supplied in kit. Repair Operation 12.20.16 refers.

20. Locate and remove starter relay cover from R.H. inner wing panel (XJS only).
21. Displace and invert starter relay.
 Relay Location: XJS - RH inner wing panel (A Fig 2)
 Saloon - Centre of engine bay bulkhead panel

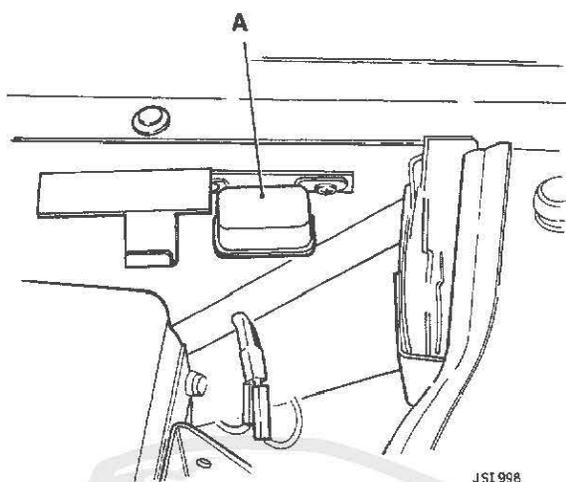


Fig. 2 (XJS Location)

22. Disconnect thin red/white cable from terminal C1 and connect to terminal C4. Ensure thick red/white cable remains at terminal C1.
23. Refit relay and relay cover.
24. Locate black 45 second "pecktron" timer unit and remove multiplug.
 Timer Location: XJS - Behind passenger side dash liner
 Saloon - Behind driver's side underscuttle panel
25. Insulate and tape back harness.
26. Refit dash liner.
27. Run engine to normal operating temperature and adjust auxiliary air valve to achieve correct idle speed.

Vehicles not fitted with Air Injection

Delete Operations: 7, 10, 11, 12, and blank unused water rail outlet port using a suitable plug and sealing washer. Connect 230mm (9°) length of vacuum hose between inlet manifold vacuum tapping and lower port of three-port thermal vacuum switch.

ITEM: 08

66 POWER HYDRAULIC SOLENOID VALVE BLOCK

XJ6 2.9/3.6

To overcome reports of brake 'off load noise' being emitted from the solenoid valve block, two modified valve blocks have been introduced from VIN 572952.

Revised valve blocks can be ordered using the following Part Nos:

CBC 7720 - Ride Level
 CBC 7721 - Non Ride Level

NOTE: This noise should not be confused with the 'groan' some valve blocks emit when the ride level system operates.

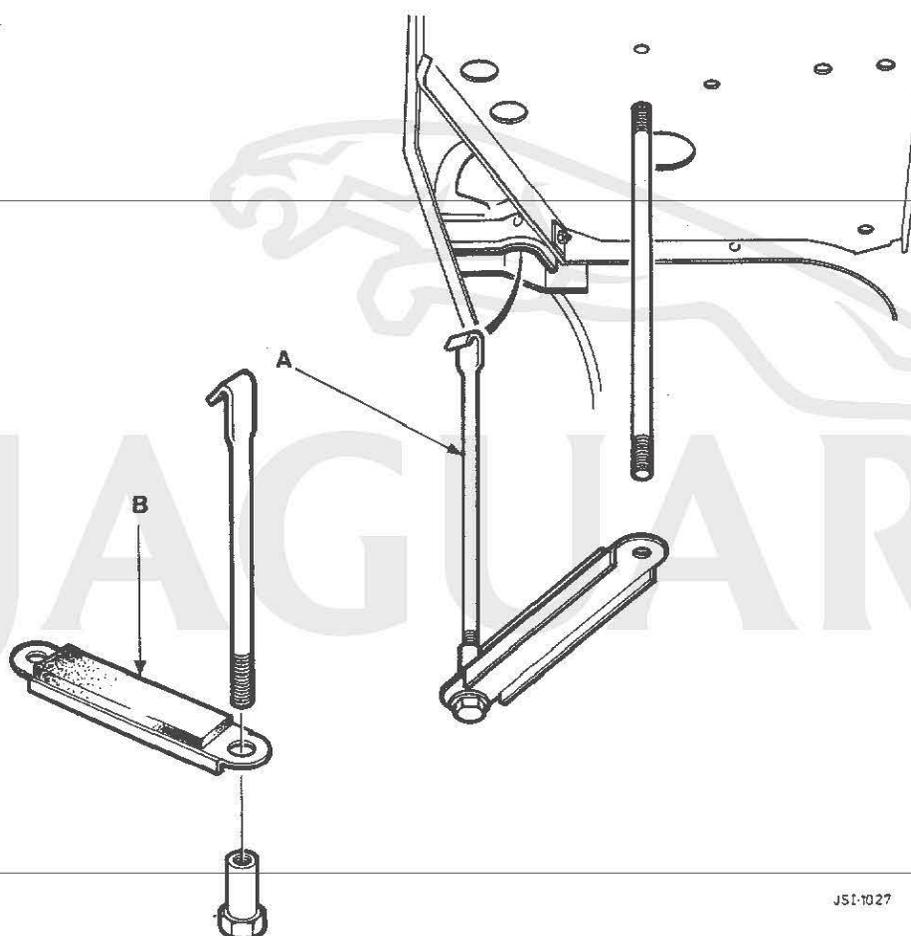
ITEM: 09

84 SCREEN / POWER WASH RESERVOIR**XJ6 2.9 / 3.6**

As a result of investigations into screen wash reservoir fluid leakage, various modifications to the assembly have been instituted. These are a revised upper and lower reservoir with an improved 'O' ring seal introduced at VIN 562596.

Due to instances of reservoir cracks/splits in the area where the support bracket is located, two modifications have been introduced. The outer support rod (A) has been turned through 180°. A self-adhesive pad (B) has been added to this bracket (Part No. BCC 7496). Both modifications introduced at VIN 563702.

NOTE: When replacing reservoirs, the above installation modification must be carried out. It is most important that the reservoir fixing torques (1-3 Nm) 4lb/ft are adhered to.



ITEM: 10

86 SMALL BULBS**XJ6 2.9 / 3.6**

A supplier manufacturing fault has caused premature failure of 12V/21W bulbs, predominantly affecting front and rear flasher lamps. This is isolated to a batch of bulbs manufactured during March 1988.

Investigations conclude that the failure was due to carbon contamination of the filament.

All lamp assemblies utilising C 9 126 12V/21W bulbs and tool kit spares are now to an assured condition from VIN 57 1260.

Our Parts stock is unaffected.

Service Bulletin



DATE: JULY 1989
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ITEM: 54

10 ADDITION TO 1000 MILE SERVICE

XJ6 2.9/3.6/4.0

All future 1000 mile services are to include an extra item on all XJ6 2.9/3.6/4.0 models. This item will be added to the Mechanical Function Check section of the Vehicle Maintenance Sheet and will be as follows:-

''Check tightness of steering rack securing bolts''.

The torque figure for these bolts is 50 Nm \pm 5 Nm. These bolts are known as ''Patch'' bolts and the correct procedure for tightening them is as follows:-

Set torque wrench to required torque and tighten bolt to pre-set figure. DO NOT back off the bolt to re-tighten it. DO NOT exceed specified torque figure.

This operation will be added into the Vehicle Maintenance Sheet at the next opportunity. Until then, please ensure that your Service staff are aware of this requirement and that they carry out this operation at 1000 mile services.

ITEM: 55

19 95 OCTANE UNLEADED FUEL

ALL MODELS, EUROPEAN
NON-CATALYST SPECIFICATION

Further to Service Bulletin JD 02/89 Item 06 a number of enquiries have been received regarding other models currently in service. The adjustments detailed below will allow these vehicles to operate satisfactorily using either 95 octane unleaded fuel or 97 octane 4 star fuel, but a slight reduction in performance and fuel economy will be experienced. Where these adjustments are carried out, a label indicating that 95 octane fuel may be used should be affixed to the underbonnet area adjacent to the existing emission control label. These labels are available from Parts Division under part number EBC 3611. All ignition timing setting should be carried out with the engine at normal operating temperature.

XJS 3.6 up to VIN 139052 (Pre Micro Fuelling)

Retard ignition timing by 3°

ie, set to 18° BTDC at 2000 rpm with the distributor vacuum disconnected.

S.III XJ6 4.2 (Fuel Injection)

Retard ignition timing 4°

ie, set to 2° BTDC at idle with the distributor vacuum disconnected.

NOTE: A 4° ignition timing retard from the original setting should enable previous XK engine derivatives originally designed for 97 octane 4 star fuel to perform satisfactorily on 95 octane unleaded fuel. However, evaluation of earlier vehicles has not been possible and therefore any such vehicles modified should be road tested thoroughly to ensure the absence of engine pinking and ideally not be subjected to sustained high speed cruising.

**XJS V12 up to VIN 105048 (Pre HE)
S.III V12 up to VIN 326520 (Pre HE)**

Retard ignition timing by 4° from the original setting.

XJS V12 HE from VIN 105049 up to introduction of Marelli Ignition System.

S.III V12 HE from VIN 326521 (To VIN 481680 UK and Eire specification)

Retard ignition timing by 5°

ie, set to 13° BTDC at 3000 rpm with the distributor vacuum disconnected.

THE LOSS OF PERFORMANCE RESULTING FROM RETARDING THE IGNITION TIMING IS MORE SEVERE WITH THE V12 HE ENGINE AND IS ACCOMPANIED BY A 3 - 5 MPG FUEL ECONOMY PENALTY. SOME REDUCTION IN ENGINE FLEXIBILITY IS ALSO NOTICEABLE AND IN VIEW OF THIS IT IS RECOMMENDED THAT V12 HE ENGINES ARE NOT MODIFIED UNLESS THE CUSTOMER IS MADE FULLY AWARE OF, AND ACCEPTS, THE PERFORMANCE PENALTY.

Reducing the engine compression ratio to standard compression also enables the use of 95 octane unleaded fuel in V12 HE vehicles with the ignition timing set at 16° BTDC at 3000 rpm (distributor vacuum disconnected).

Standard compression pistons have been introduced on XJS V12 coincident with the introduction of Marelli ignition and on UK and Eire specification S.III V12 at VIN 481680 and consequently no action is required on these vehicles as they are designed for use with 95 octane unleaded fuel.

98 Octane Super Unleaded Fuel

Super unleaded 98 octane fuel is now becoming available in certain areas. It is acceptable to use this fuel in any Jaguar engine originally recommended to run on 97 octane 4 star fuel without any modifications to the engine.

ITEM: 56

57 STEERING - TRACK SETTING

XJ6 2.9/3.6/4.0

Road test reports show that, after adjustment, front wheel alignment carries on settling in the direction of adjustment, e.g. a vehicle that is adjusted from 2.00mm toe in to the nominal track alignment figure of 0.8mm toe in will, after road use, have settled past parallel (the minus limit) and be toe out. The same applies if a vehicle is adjusted from a toe out setting to the nominal (0.8mm toe in), the wheel alignment will continue settling to a setting of more than the (1.6mm toe in) allowed limit.

It is therefore recommended that, when correcting wheel alignment, set the track to the nearest outer tolerance figure Fig 1.

This only applies when correcting wheel alignment not when setting the wheel alignment after replacement parts are fitted.

Front wheel alignment 0.8mm \pm 0.8mm toe in:-

+ 0.8mm = 1.6mm toe in



nominal = 0.8mm toe in

- 0.8mm = 0.0mm (parallel)



JS I-1142

FIG. 1

ITEM: 57

86 TRANSIT PROTECTION FOR BATTERIES

XJ6 2.9/4.0

This Bulletin supersedes the original Service Bulletin JD 04/89, Item 24.

In order to reduce the possibility of excessive quiescent drain occurring during shipment and during the time before delivery to the customer, a TRANSIT ISOLATION RELAY has been introduced together with a new 440 series battery from 1990 MY, VIN 594576. However, a number of 90 MY vehicles have also been built prior to this introduction point on XJ6 vehicles ranging between VIN 591102 - 594575.

IMPORTANT: REMOVE THE RELAY AND SET CLOCK/RADIO PRIOR TO HAND-OVER TO THE CUSTOMER.

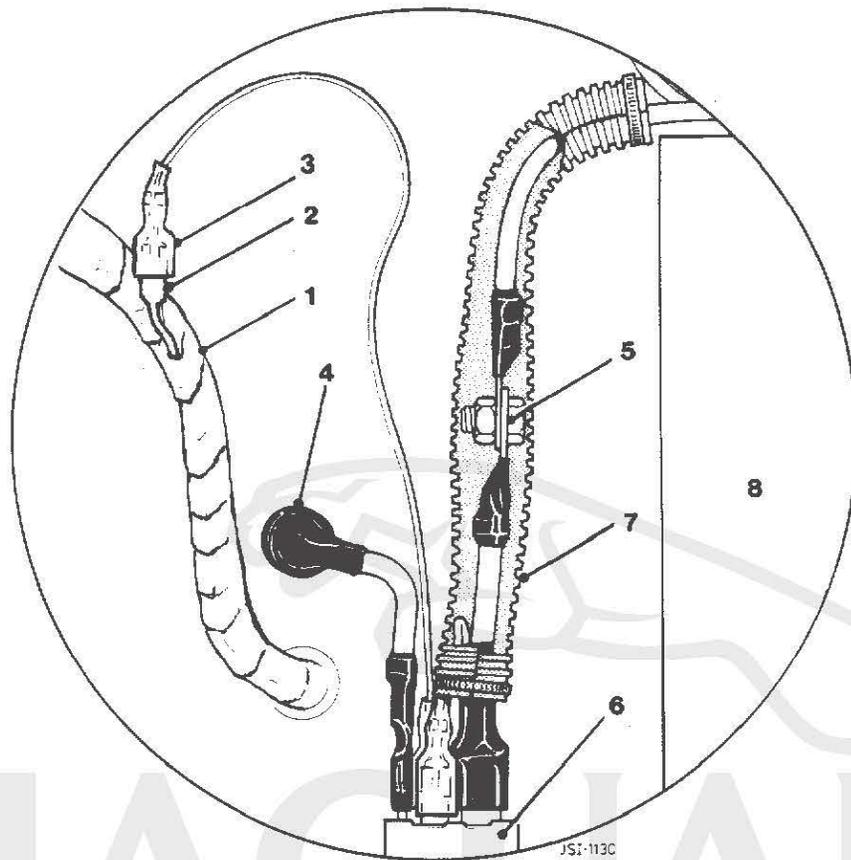
UNDER NO CIRCUMSTANCES SHOULD THE RELAY BE USED/RETAINED AS AN ISOLATION DEVICE FOR ROAD USE AS:

- It does not comply with legislative requirements.
- Should the relay become open circuit the engine will stop.
- Any attempt to alter the wiring configuration can cause the relay to induce a 200 mA drain on the battery.

All vehicles will have the CPU and fuses connected once the in-transit relay is fitted on production. The exception to this is the electric aerial fuse and trim panel cover. Please be aware that the fitment of this in transit relay in conjunction with the new 440 battery, causes a revised in storage period for this battery (see text over for details).

REMOVING BATTERY ISOLATING RELAY

The following procedure to remove the battery isolating relay must be completed no earlier than 24 hours prior to the vehicle being handed over to the customer.



LH BULKHEAD
FIG 1

NOTE: The RH bulkhead is symmetrically opposite to Fig 1.

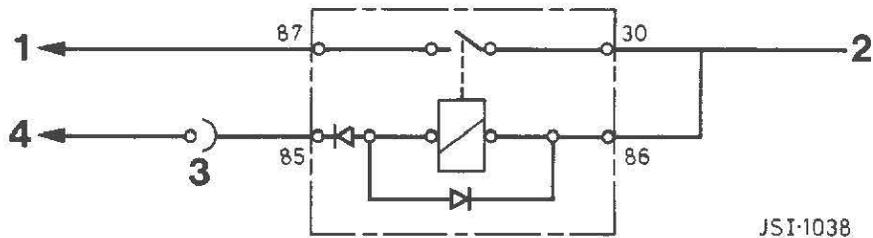
KEY: Fig 1

1. Side Harness
2. Male Spade Connector from Harness
3. Female Spade Connector from Relay
4. Pos + Terminal Post
5. Connect Leads Using M8
6. Relay Assembly DBC 5236
7. Protective Sleeve
8. Battery

PROCEDURE

1. Disconnect the battery earth lead and disconnect the connector (3) from the spade connector (2).
2. Insulate the harness spade connector.
3. Disconnect the relay lead from the bulkhead terminal post (4).
4. Remove the protective sleeving positioned over the battery lead and the relay lead.

5. Undo the nut and bolt securing the battery lead to the relay lead (5).
6. Disconnect the leads from each other.
7. Remove the relay (6).
8. Connect the leads from the battery and engine management ECU to the bulkhead terminal post (4) and correctly position the rubber boot over the terminal post.
9. Reconnect the battery earth lead.



RELAY
FIG 2

KEY:

1. Pos + Terminal Post
2. To Battery +
3. Side Harness Connection
4. Earthed Through Ignition

CAUTION: It is essential that the harness spade connector (2) is fully insulated and secured. If the connector should go to ground after being disconnected from the battery isolating relay, the ignition will be SWITCHED ON, which would cause the engine to continue to run although the ignition had been switched off.

VEHICLES IN STORAGE

Models with the new battery 440 fitted:

Days in Storage		Temperature	
With Relay	Battery Disconnected	°F	°C
14	21	104	40
18	28	95	35
24	36	86	30
32	48	77	25
37	56	68	20
48	70	59	15
56	84	50	10

1990F

DATE: AUGUST 1990

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ALL XJ6 MODELS

ITEM: 37

10 ADDITION/CHANGES TO PDI & SERVICE SCHEDULES

With immediate effect, the following additions/changes are to be made to the Maintenance Schedules.

- a) P.D.I. – add screen clean using approved cleaning paste.
- b) 7500 mls (12000 kms) – Replace Wiper Blade.

Top-Up Screenwash reservoir using approved fluid. Clean windscreen using approved screen clean paste.

The above additions to the 7500 mls (12000 km) schedule are also to be included in all subsequent schedules.

The additional items are available individually under the following part numbers:-

Wiper Blade	- DBC 1917
DBC 3972 (Winter Blade)	- UK/Eire/Canada/Europe only)
Screenwash Fluid	- JLM 10152 (5 litre) - DBC 5178 (550 ml) - JLM 10150 (Sachet)
Screen Clean Paste	- DBC 5676 (100 ml)

Dealers using the Service Kits currently available through Jaguar Parts should continue with these for the present time, ordering wiper blades separately. Parts Operations will shortly advise you of new kit numbers which will include all necessary parts to cover the above changes.

- c) Road Test:- This item which was previously a part of the 15000 ml (24000 km) Schedule and all subsequent 15000 ml (24000 km) intervals is now required to be carried out at every service interval from 7500 ml (12000 km) onwards.

All of the above details will be reflected in the modified Service Sheets, Service Record and Warranty Booklets and Drivers' Handbooks, soon to be issued.

Revised servicing times are listed below:-

1000	7500	15000	22500	30000	37500	45000	52500	60000	67500	75000	82500	90000	97500	mls
1500	12000	24000	36000	48000	60000	72000	84000	96000	108000	120000	132000	144000	156000	km
1.85	2.05	2.55	2.05	4.05	2.05	2.55	2.05	4.25	2.05	2.55	2.05	4.05	2.05	

ALL XJS MODELS

ITEM: 38

19 SUMP TANK VAPOUR VENTING

An improved sump tank venting kit has been introduced as a service fix for all XJS models to overcome drive hesitation caused by fuel vaporisation under adverse climatic/fuel supply conditions.

The kit comprises a vent directly from the vapour separator feed hose into the sump tank to prevent fuel vapour being drawn into the main fuel system.

The benefits of the above change can be obtained by fitment of Kit No. JLM 2163 to any XJS vehicle affected in service.

Part Number	Description	Quantity	Fig Reference
CAC 5866/30	Vapour Hose	1	5 Fig 3
DCB 1167	Tee Piece	1	4 Fig 3
CAC 8773	Hose Clip	4	3 & 6 Fig 3
EBC 4281	Suction Pipe Assy.	1	1 Fig 3

Fitting Instructions:

1. Open the boot, remove the spare wheel cover and the wheel, battery cover, boot floor carpet and the RH boot side liner. Pull back the RH side of fuel tank carpet.
2. Using suitable tools, clamp the hoses in the positions shown (1 Fig 1) to the fuel tank/auxiliary tank hoses.

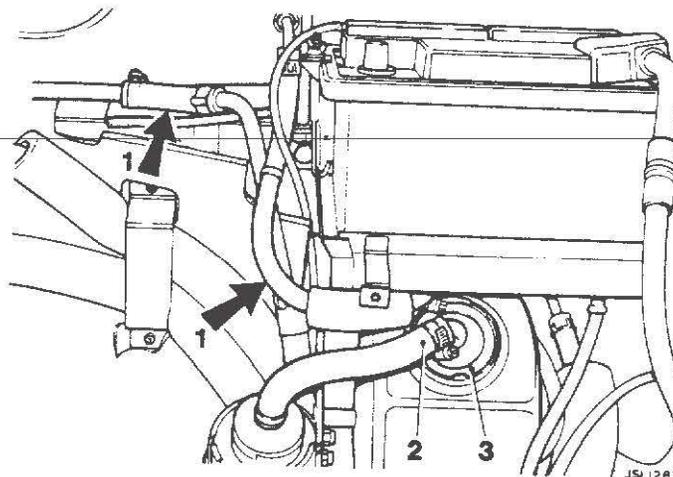


FIG 1

3. Start and run the vehicle for three minutes to lower the fuel level in the auxiliary tank.

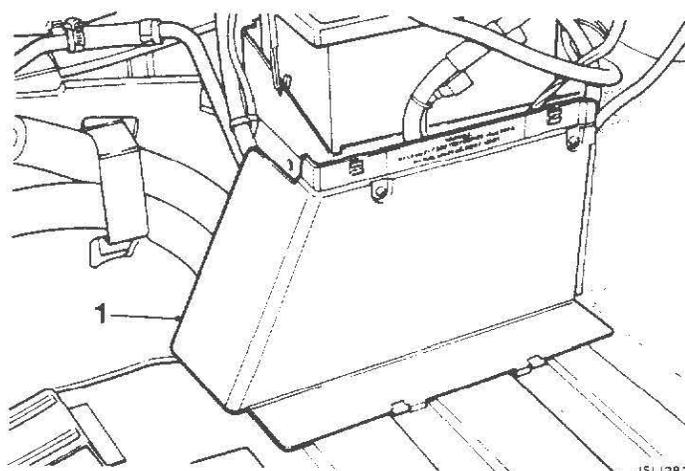


FIG 2

4. Disconnect the battery and remove the fuel pump cover (1 Fig 2).
5. Position an absorbent cloth under the auxiliary tank and disconnect the hose from the auxiliary tank suction pipe assembly (2 Fig 1).
6. Remove the suction pipe assembly and sealing ring (3 Fig 1) from the auxiliary tank using a brass drift.

NOTE: Because of the presence of petroleum spirit; under no circumstances should a steel drift be used for this operation.

7. Remove the fuel filter from the suction pipe assembly.
8. Refit the fuel filter to the new suction pipe assembly.
9. Fit the new suction pipe assembly and using a brass drift fit the sealing ring to the auxiliary tank (1 Fig 3).

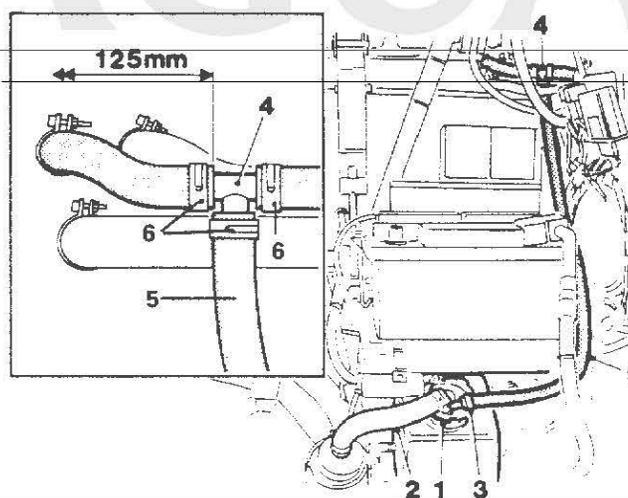


FIG 3

10. Connect the fuel pump to auxiliary tank hose (2 Fig 3) to the new suction pipe assembly (1 Fig 3).
11. Attach the new vapour hose to the remaining outlet on the suction pipe assembly using the hose clip supplied (3 Fig 3).

12. Slacken the hose clip and remove the LH vapour hose from the top of the fuel tank (1 Fig 4).

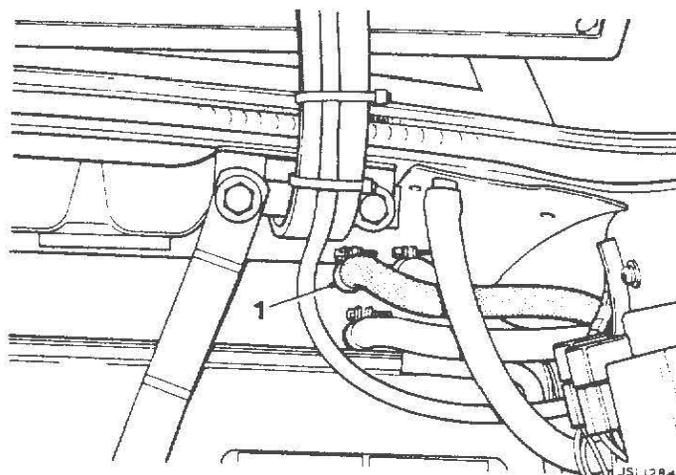


FIG 4

13. Measure 125 mm from the end of this hose and cut through.
14. Connect the cut ends of the hose together using the hose clips (6 Fig 3) and the tee-piece supplied (4 Fig 3).
15. Refit the vapour hose to the fuel tank and fasten with the hose clip.
16. Route the new vapour hose (5 Fig 3) around the battery carrier tray and up to the tee-piece. Connect to the remaining outlet of the tee-piece using the remaining hose clip (6 Fig 3).
17. Refit the fuel tank carpet and the boot side liner, ensuring that the new vapour hose is hidden.
18. Remove the fuel tank to auxiliary tank hose clamps and the cloth from under the auxiliary tank.
19. Replace the fuel pump cover.
20. Reconnect the battery, start the engine and check for leaks.
21. Stop the engine, refit the boot floor carpet, spare wheel and cover.
22. Close the boot.

For vehicles in warranty, a claim may be submitted quoting Warranty Code 2PBX
 S.R.O. Time 0.65 hrs.
 S.R.O. No. 19.91.18

ALL XJ6 MODELS

ITEM: 39

66 REAR HUB FITMENT

In order to permit finer control of rear hub bearing end float revised hubs, spacers and shims have been introduced from VIN 608960 as the following chart shows.

	Old Condition Part Number	New Condition Part Number
Hub	CAC 6400	CBC 8936
Spacer Shim	CBC 8935/1-13 (0.003" increments)	CBC 9505/1-26 (0.002" increments)
Spacer/Distance Piece	CAC 5825	CBC 8207

It is important to ensure that components of the respective hub assemblies are not intermixed.

XJS CONVERTIBLE ONLY

ITEM: 40

76 ADJUSTMENT CAM FITMENT

In order to refine the sealing of the convertible hood, an adjustment cam has been fitted to later cars.

This cam achieves the following:-

1. It reduces or removes the number of packers that are required between the hood frame and the seal carriers.
2. It allows greater pressure to be exerted by the centre cantrail seals on to the door and quarter glass top edges. The cam will resist the upward pressure from the door/quarter glass that tends to distort the cantrail seals at the joint.
3. It improves the ability of the hood to remain in shape following adjustments.

This Bulletin outlines the procedure for fitting the adjustment cam to older vehicles and the following method is recommended.

1. Ensure that the vehicle parking brake is on and that the gear selector is in the park or neutral position.
2. Release the hood front clamping hooks.
3. Switch the ignition to position "1" and motor the hood to the half-open position.
4. Measure from the front cantilever bar mounting bush 29 mm (Fig 1) rearward along the retraction bar.

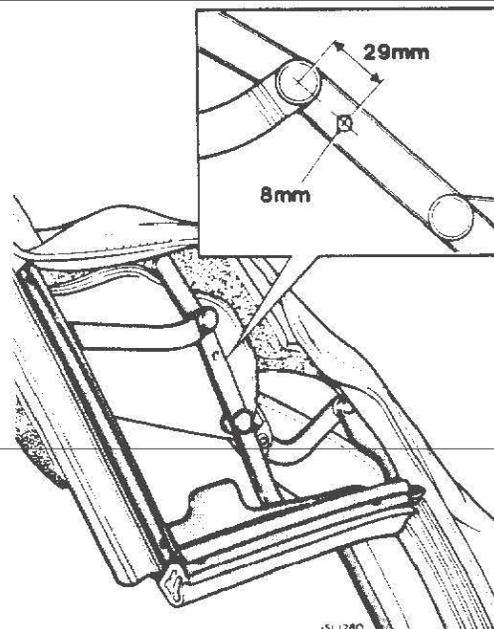


FIG 1

5. Measure to the centre of the width of the retraction bar.
6. With assistance, place a suitable support block behind the retraction bar, then at the cross-point of the above dimensions, mark the position with a centre punch.
7. Fit and position a suitable protective covering around the work area.
8. Using a drill with a 3 mm bit, carefully drill-out a pilot hole.
9. With an 8 mm bit, drill-out the mounting hole.
10. De-burr the hole, remove the protective covering and clean away all debris from the area.
11. Repeat this procedure for the other side.
12. Position the cam body to the outside of the retraction bar, ensuring that the cam-lobe is uppermost. This gives the minimum amount of adjustment.
13. Fit and tighten the nut which secures the cam to the inside of the retraction bar. Repeat this procedure for the opposite side.
14. Motor the hood to the closed position and close the hood front clamping hooks. Ensure that the front windows are in the fully up position and close the doors.
15. Check that the glass-to-seal relationship is in its optimum condition, i.e., the seal is sufficiently close to the glass to make good contact without the seal-flip becoming trapped.
16. After the cam has been fitted, any adjustment should be made as follows:-
17. Release the hood front clamping hooks and motor the hood to the half open position.
18. Slacken the retraction bar cam securing bolt (1 Fig 2) and rotate the cam (2 Fig 2) to increase/decrease the adjustment as necessary.
19. When satisfied with the condition, fully tighten the cam securing bolt. Close the hood and switch off the ignition.

Where the adjustment cam is being fitted to a vehicle in warranty to rectify a warranty defect, Warranty Claims should be submitted quoting Warranty Fault Code 9USP and Repair Operation No. 76.91.46.

A labour allowance of 0.40 hrs may be claimed.

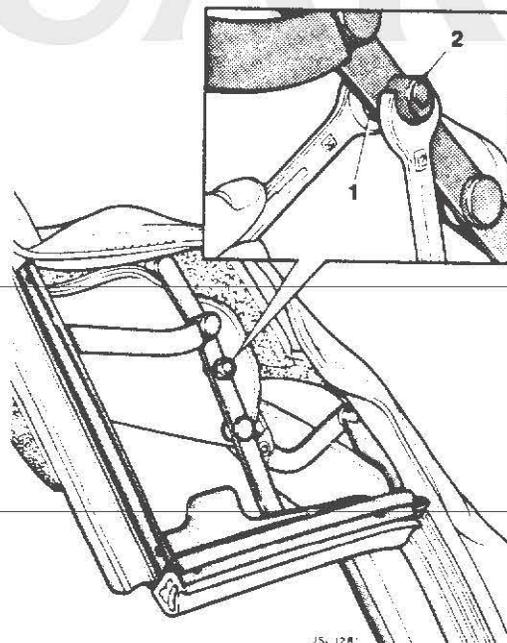


FIG 2

XJS CONVERTIBLE ONLY**ITEM: 41****76 REAR SCREEN RE-ATTACHMENT**

This Bulletin outlines the procedure for re-attaching the two components of the inner-to-outer glass frame on the convertible hood, should they become separated. For vehicles in warranty claims should be made against Warranty Fault Code 9 BQA, quoting S.R.O. 76-92-03; an allowance of 3.45 hrs may be claimed. Dealers are advised that this operation should not be attempted until approved by their Regional Service Manager.

Part of this Bulletin involves the removal/re-fitting of the convertible hood. These operations are covered by S.R.O. 76-13-12 (Rear 1/4 panel trim pad - Renew) and S.R.O. 76-11-16 (Rear stowage compartment - Renew). The allowances for these operations have been included in the time of 3.45 hrs.

1. Remove the backlight rubber finisher.
2. With the doors open, follow the procedures in S.R.O. 76-13-12 and 76-11-16.
3. Remove the hood from the vehicle and place on a clean bench with the inside of the rear screen glass uppermost.
4. Undo and remove the rear screen glass frame support bracket securing bolts.
5. Remove the brackets from the frame. (Note: These brackets are handed).
6. Position the hood cover tensioning straps through the rear screen frame mounting slots.
7. Displace and then remove the rubber roll tubes from the tensioning strap ends.
8. Displace the tensioning straps from the rear screen frame.
9. Working from the point at which the inner and outer frames have separated, carefully ease apart any portion of the inner/outer frame which is still attached.
10. Carefully clean away old sealant/adhesive from the rear screen frame inner well.
11. In order to secure fully the two portions of the frame, it will be necessary to fix four self-tapping screws through the metal frame and into the fibrous inner core of the outer frame, which carries the rear screen. Two of the screw heads will be visible on the upper frame edge, two on the lower frame edge.

The following method of fitting the screws is recommended:-

12. Position the frame assembly so that the inner edge is uppermost.
13. On the upper frame edge, use the tensioning strap slots as a datum. Measure and mark a point 86 mm from the inner edge of the slot towards the centre.
14. Measure half the width of the flange and mark the intersection of the two points.
15. Repeat this process for the other side of the frame upper.
16. On the lower frame edge, use the rear screen frame support bracket mounting holes as a datum.

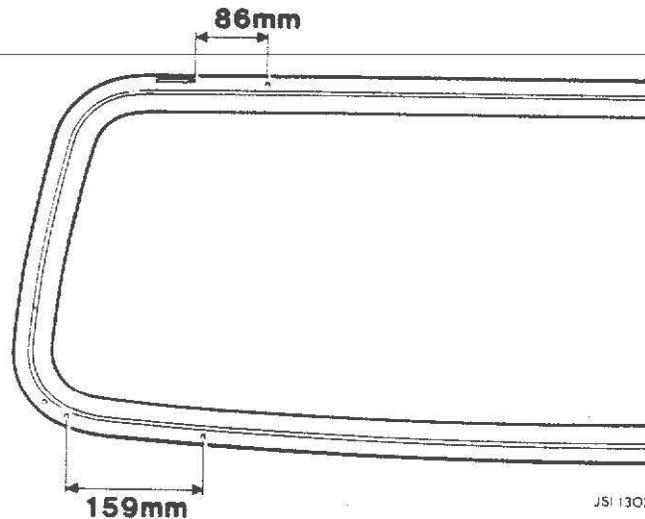


FIG 1

17. Measure and mark a point 159 mm from the centre of the inner hole.
18. Measure half the width of the flange and mark the intersection of the two points.
19. Using a drill and a 5 mm bit, drill through the metal frame at the marked points.
20. Using a 45° countersinking bit, countersink and de-burr the drilled holes. Clean away ALL swarf.
21. In order to drill into the fibrous inner core of the outer frame, it will be necessary to use the metal frame as a template.
22. Fit the two parts of the frame together securely.
23. Using a drill and a 3 mm bit, drill into the core to a depth of 14 mm.
24. Separate the frame inner and outer and clean away any plastic debris.
25. Apply de-greasant to the channel of the frame inner.
26. When the frame inner is clean and dry, apply windshield sealant primer to the channel of the frame inner.
27. Apply de-greasant to the frame outer, ensuring that it is clean and dry.
28. Apply a 5 mm (approx.) bead of sealant to the outer third of the frame inner channel.
29. Fit and fully seat the frame outer to the frame inner.
30. Fit and fully tighten the self-tapping screws which secure the frame inner to the frame outer.
31. Whilst allowing time for the sealant to set (following the manufacturers' instructions), it will be necessary to use four G-clamps (one at each mid-point of the four sides of the frame). A suitable protective pad will be required between the feet of the clamps and the frame assembly.

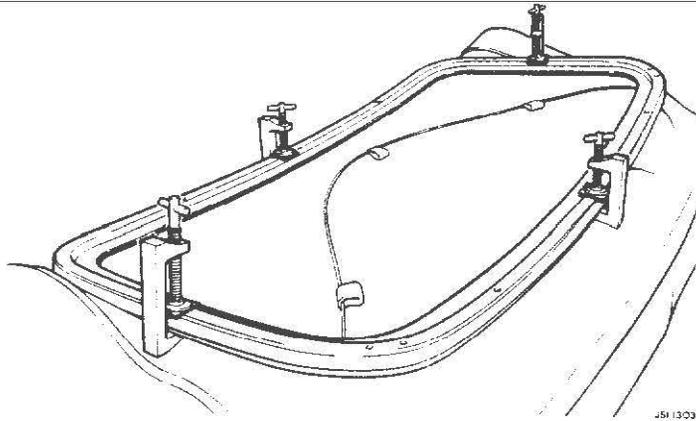


FIG 2.

32. When the betaseal has fully cured, remove the clamps and protective pads from the frame assembly.
33. Re-fit the hood cover tensioning straps through the rear screen frame mounting slots.
34. Fit and position the rubber roll tubes to the tensioning strap ends, ensuring that the straps are positioned and fully seated.
35. Position the rear screen frame support brackets to the frame and secure, using bolts.
36. Re-fit the hood to the vehicle, following the procedure in S.R.O.'s 76-13-12 and 76-11-16.
37. Fit and fully seat the backlight rubber finisher.
38. Close the doors.

XJ6 MODELS

ITEM: 42

82 BLOWER MOTOR ASSEMBLIES

Noise problems encountered with blower motor assemblies following the launch of XJ6, resulted in the introduction of a revised fan blade material (Noryl GTX) from Vin 516122.

Service Bulletin JD 10/87 – Item 98, was subsequently issued to notify Dealers of this modification and advise action required on vehicles built prior to this VIN.

Owing to the nature of the fault, the Bulletin instructed that blower motor assemblies should be fitted, in car sets, when a noise problem was reported.

Although this instruction applied only to vehicles built between VINs 500001 to 516122, it would appear that some Dealers are still carrying out this practice regardless of the VIN.

Will Dealers please note, when attending to noise problems affecting the blower motor assemblies, that only the blower motor at fault should be replaced. In the un-

likely event that both blower motor assemblies are diagnosed as faulty, this should be clearly identified on the Warranty Returns documents, to prevent any confusion.

XJ6 2.9/4.0

ITEM: 43

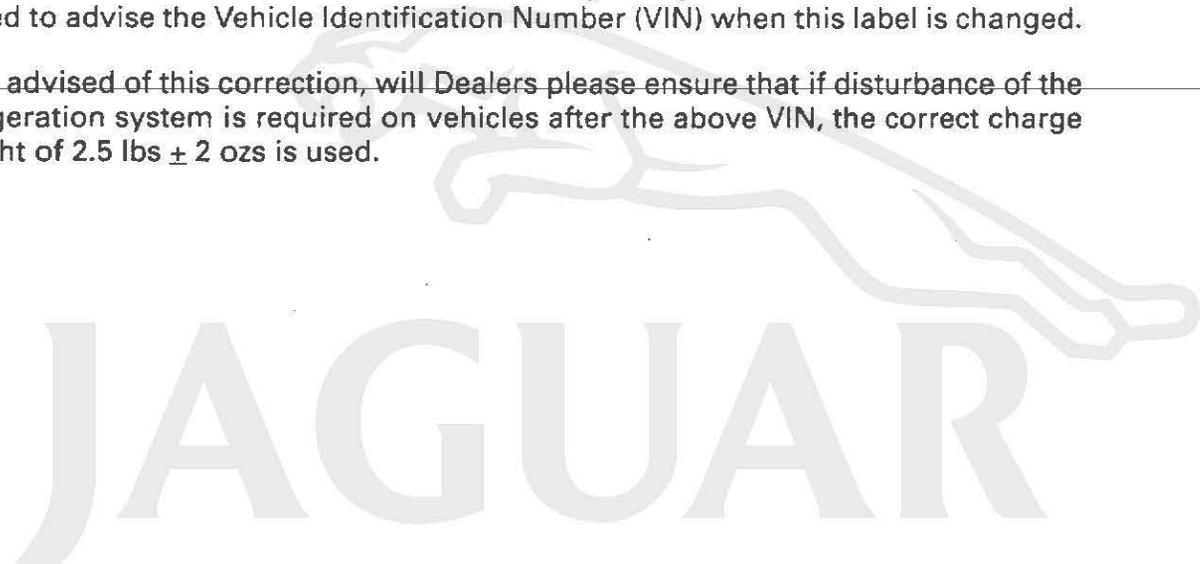
82 AIR CONDITIONING CONDENSER

To improve the performance of the air conditioning condenser, a new thin wall condenser has been introduced from VIN 613462.

In conjunction with this change, the previously-specified refrigerant gas charge weight of 3 lbs \pm 2 ozs has now been reduced to 2.5 lbs \pm 2 ozs.

Unfortunately, the instruction label attached to the refrigerant hose muffler assembly is yet to be altered to indicate the revised charge weight. A further Bulletin will be issued to advise the Vehicle Identification Number (VIN) when this label is changed.

Until advised of this correction, will Dealers please ensure that if disturbance of the refrigeration system is required on vehicles after the above VIN, the correct charge weight of 2.5 lbs \pm 2 ozs is used.



JAGUAR

DATE: APRIL 1991

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REF: JD 03/91

XJ6

ITEM: 16

03 REPAIR OPERATION TIMES

A printing error has been highlighted in the XJ6 Repair Time Schedule.

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

In addition to this amendment, would Dealers please add:-
"86-55-35/01 as 86-55-35 (less JDS allowance) 0.10 hours".

No other Repair Times are affected.

ALL MODELS

ITEM: 17

57 STEERING GEOMETRY DATA

This Bulletin item has been compiled to assist workshop personnel, by providing a complete steering / suspension geometry data sheet for current models:-

STEERING & SUSPENSION GEOMETRY DATA

MODEL	FRONT				REAR		
	RIDE HEIGHT	TOE	CASTOR	CAMBER	RIDE HEIGHT	TOE	CAMBER
ALL XJ6 SALOONS	6" (153mm) UNDER BEAM	TOE IN PARALLEL TO $\frac{1}{16}$ " (1.6mm)	+ 3.5° TO + 4.5°	0° TO - 0.5°	DRIVE SHAFTS HORIZONTAL 6.3" (160mm) UNDER REAR EDGE OF 'A' FRAME	TOE IN PARALLEL TO $\frac{1}{16}$ " (1.6mm)	- 0.5° TO - 1.0°
ALL XJS VARIANTS	6" (153mm) UNDER BEAM	TOE IN PARALLEL TO $\frac{1}{8}$ " (3.2mm)	+ 3.25° TO + 3.75°	- 0.25° TO - 0.75°	DRIVE SHAFTS HORIZONTAL 6.4" (162mm) UNDER CRADLE	PARALLEL TO $\pm \frac{1}{32}$ " (0.8mm)	- 0.5° TO - 1.0°
S.III V12	6" (153mm) UNDER BEAM	TOE IN PARALLEL TO $\frac{1}{8}$ " (3.2mm)	+ 3.25° TO + 3.75°	- 0.25° TO - 0.75°	DRIVE SHAFTS HORIZONTAL 6.4" (162mm) UNDER CRADLE	PARALLEL TO $\pm \frac{1}{32}$ " (0.8mm)	- 0.5° TO - 1.0°
LIMOUSINE	SPECIAL TOOLS USED TO SET FRONT RIDE HEIGHT	TOE IN $\frac{1}{8}$ " (3.2mm)	- 0.5° TO - 0.5°	0° TO - 1.0°	SPECIAL TOOLS USED TO SET REAR RIDE HEIGHT	PARALLEL TO $\pm \frac{1}{32}$ " (0.8mm)	- 0.5° TO - 1.0°

Note: Please ensure the relevant service tools are used whenever the steering geometry is checked.

Jaguar Cars Limited

XJ6**ITEM: 18****60 FRONT SUSPENSION LOWER WISHBONE BUSHES**

To extend the service life of lower wishbone bushes, a revised bush has been introduced. Part numbers are unchanged. Parts stock is to the latest condition. Introduction VIN: 637400.

XJ6**ITEM: 19****64 REAR SHOCK ABSORBERS**

To overcome reports of rear shock absorber failure, a revised unit has been introduced.

Introduction VIN – 631228
Revised Part No. – CCC 3538

Replacement Policy

Front and rear shock absorbers may be changed individually provided that the following criteria are satisfied:–

- 1 The remaining shock absorber has covered less than 25,000 miles (40,000 kms)
- 2 The replacement shock absorber has the same part number as that of the shock absorber fitted to the vehicle.

XJ6**ITEM: 20****64 REAR SUSPENSION 'A' FRAME MOUNTING BUSHES**

To extend the service life of rear suspension 'A' frame mounting bushes, a revised bush as been introduced. Part numbers remain unchanged. All parts in stock are to the latest condition. Introduction VIN: 636200.

XJ6**ITEM: 21****70 BRAKE DISC**

With the introduction of the 1990 MY XJ6 models, changes were made to the brake disc dimensions. Disc dimensions are as specified in the following table:–

MODEL		DIAMETER	NEW THICKNESS	MINIMUM THICKNESS	MAXIMUM DISC RUNOUT	MAXIMUM THICK / THIN VARIATION
XJ6 (90 MY ON)	Front Disc	291.0 to 290.8 mm	28.0 to 28.5 mm	27.0mm	0.10mm	0.01mm
	Rear Disc	295.0 to 294.8 mm	10.0 to 09.5 mm	8.8mm	0.10mm	0.01mm
XJ6 (Pre 90 MY)	Front Disc	295.0 to 294.5 mm	22.5 to 22.0 mm	21.0mm	0.10mm	0.01mm
	Rear Disc	278.1 to 277.9 mm	10.0 to 09.5 mm	8.8mm	0.10mm	0.01mm

Note: Maximum rear handbrake drum diameter – 181mm.

Would Dealers please note that Jaguar Cars does not recommend the re-grinding of discs and once the minimum disc thickness is reached, the disc should be changed. Please also note that grooved discs are NOT detrimental to the operation of the brakes.

ALL MODELS

ITEM: 22

76 P.D.I. LABEL REMOVER

Since December 1990, all cars despatched have a new system of windscreen label fixing. A strip of clear film with special adhesive is now placed at the top portion of the windscreen and all labels are affixed to the clear film. Hence, at PDI, the clear film can be removed and all labels will be removed at the same time.

Occasionally, residue windscreen adhesive or hardened bird lime may be difficult to remove. Never use a metal scraper to remove these substances. **ALWAYS USE A PLASTIC SCRAPER.**

XJ6

ITEM: 23

76 CLOTH COVERED SEATS – WOOL FIBRE MIGRATION

Some incidence of cloth (wool tweed) covered seats showing wool fibres "balling / pilling" has been recognised on XJ6 saloons.

This effect which is usually experienced between approximately 1 to 3 months in service, is NOT premature wear of the seat cloth; it is actually caused by surplus wool fibres which migrate out of the cloth when occupants' clothing comes into abrasive contact with the seat cloth. The effect is further enhanced by fibres from occupants' clothing combining with these surplus seat cloth fibres.

To re-address this issue, Jaguar, in conjunction with the supplier of the seat fabric, is developing a shorter woven fibre which should not exhibit fibre migration. The introduction of this modified cloth will be indicated in a future Service Bulletin issue.

During the intervening period up to the introduction of this modified cloth, all seat covers identified as suffering from "balling / pilling" should have these fibres removed by carrying out the following rectification:-

- 1) Remove all visible loose fibres from the seat covers by hand.
- 2) Clean Jaguar covers using Jaguar cloth upholstery cleaning agent available through Parts Operations. Follow the directions for use as shown on the cleaning agent dispenser, Part No. JLM 9870 refers.

N.B. DO NOT REPLACE SEAT COVERS TO OVERCOME "BALLING / PILLING".

XJS / XJ6

ITEM: 24

82 AIR CONDITIONING CONDENSATE DRAIN TUBES

Should water appear in the footwells of vehicles within the following Vin range XJ6 - 553357 to 611400 and XJS - 145000 to 169700 then the following modification may be carried out. NOTE: The tool to carry out this modification is JD 178 Condensate Drain Hole Tool. The tool consists of two parts, an oilite bush which acts as a guide for the burr, which is used as the cutting tool.

XJ6

1. Remove the driver's side dash liner.
2. Remove the passenger's side dash liner.
3. Undo and remove the footwell vent securing screws and remove the footwell vents.
4. Reposition the carpet from the transmission tunnel for access to the drain tube.
5. Remove the drain tube assembly (1 Fig. 1) from the air con drain stub pipe (2 Fig. 1).
6. Fully seat the cutting tool guide to the air con stub pipe (3 Fig 1).
7. Using the 6mm cutting tool, carefully cut a hole in the air con baffle plate.
8. Remove the tool guide.
9. Clean the stub pipe.
10. Fully seat the drain tube to the air con stub pipe.
11. Reposition the transmission tunnel carpet.
12. Repeat the above procedure for the other side.
13. Fit and align the footwell vents.
14. Fit and tighten the securing screws.
15. Refit the dash liners.

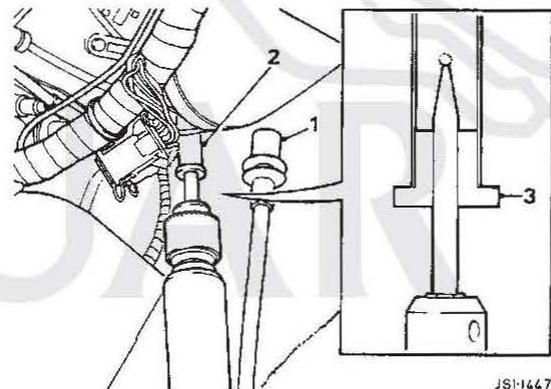


FIG. 1

JSI-1447

XJS

1. Remove the driver's side dash liner.
2. Remove the passenger's side dash liner.
3. Undo and remove the console side casing vent screws.
4. Remove the vents and side casings.
5. Remove the air con unit outlet duct securing screws and remove the duct.
6. Reposition the carpet from the transmission tunnel for access to the drain tube.
7. Reposition the vehicle harness for access.
8. Displace the drain tube from the transmission tunnel grommet.
9. Remove the drain tube assembly (1 Fig. 2) from the air con drain stub pipe (2 Fig. 2).
10. Fully seat the cutting tool guide to the air con stub pipe (3 Fig. 2).
11. Using the 6mm cutting tool, carefully cut a hole in the air con baffle plate.
12. Remove the tool guide and clean the stub pipe.
13. Fit and fully seat the drain tube to the air con stub pipe.
14. Reposition the tube through the transmission tunnel grommet.
15. Fit and align the outlet duct to the air con unit.
16. Fit and tighten the securing screws.
17. Reposition the harness and the transmission tunnel carpet.
18. Repeat the above procedure for the remaining side.
19. Refit the dash liners.
20. Fit and align the console side casings.
21. Fit and align the outlet vents.
22. Fit and tighten the securing screws.

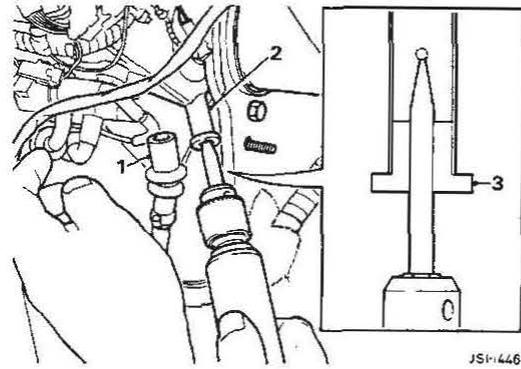


FIG. 2

WARRANTY CLAIMS

Warranty claims should be submitted quoting the following:-

Complaint Code: 7STQ
 S.R.O. time 1.00 hr (XJS), 0.45 hr (XJ6)
 S.R.O. number 82-91-10

XJ6 / S.III V12

ITEM: 25

86 COMPACT DISC CD PLAYER FAULT CODES

In the event of customers complaining of compact disc player malfunction, the relevant CD error message will be displayed on the radio digital display. The following table gives a fault diagnosis for each error message that may be displayed.

INDICATION	CAUSE	SOLUTION
E-01	Disc-change malfunction.	Replace the CD player. Refer to Warranty Policy procedure if the unit is covered by manufacturer's warranty.
E-02	Disc is in player mechanism.	Press the magazine eject button, and insert an empty magazine.
E-03 E-04 E-05	Disc-change malfunction.	If the code disappears within a few seconds, the unit is functioning correctly. If the code remains illuminated, replace the CD Player. Refer to Warranty Policy procedure if the unit is covered by manufacturer's warranty.
E-06	Disc-change malfunction.	Press the magazine eject button and pull out the magazine. Check that the error indication is extinguished then operate the function again. If the magazine cannot be pulled out, replace the CD Player. Refer to Warranty Policy procedure if the unit is covered by manufacturer's warranty.
E-07	Magazine ejection impossible.	Press the magazine eject button. If the magazine does not eject, replace the CD Player. Refer to Warranty Policy procedure if the unit is covered by manufacturer's warranty.
E-30	High temperature.	The error message will extinguish when the temperature returns to the operation range.
EEEE	Misconnection or disconnection of the CD changer.	Check connection between CD changer and control unit.
----	No CD magazine in the CD changer.	Insert the CD magazine.
2----	No CD at No. 2 pocket of CD magazine.	Insert a CD into the No. 2 pocket of CD magazine.

ALL MODELS (UK MARKET ONLY)**ITEM: 26****86 ALPINE RADIO RDS SYSTEM**

This Bulletin Item is an explanation of the capabilities and operational instructions for the Radio Data System (RDS). This system is primarily intended for use within the United Kingdom but, as there are some aspects of the broadcast information system transmitted in most European countries, these explanatory notes will also be relevant to such territories.

RADIO DATA SYSTEM (RDS)

The Jaguar radio is equipped with an advanced Radio Data System decoder to assist the driver in finding and staying tuned to a chosen radio station. This system enables the radio to pick up inaudible signals transmitted on the FM wave band which permit automatic programme tuning, display of the stations identity name and up-to-the-minute traffic information.

RDS Programme Service Name

The RDS system displays the station name rather than the frequency. This information is sent with all the other RDS data and is known as the 'Programme Service Name'. It is shown on the radio display in eight characters. The Programme Service Name feature also identifies network 'splits', when different programmes are being broadcast on FM and Medium Wave or Long Wave.

For example: The normal display for Radio 4 is 'BBC R4' but when there are educational programmes on Long Wave the display will show 'BBC R4ED'.

RDS Auto-Tuning

RDS is radio's first fully automatic tuning system. Its benefit is that it tunes to a signal not a frequency. RDS radio will search out the strongest signal available and automatically switch frequencies as necessary.

To broadcast FM radio services throughout the UK, the BBC uses over 100 transmitters and 22 different frequencies. So as you travel you move out of range of one transmitter into the influence of another. Without RDS the driver, on a long journey, has to retune manually several times; with the Jaguar RDS radio system retuning is automatic.

RDS Travel Service

Although there is a wide range of travel information available from National and Local Radio, a driver only requires traffic information relevant to the locality. RDS provides this precise information, automatically. As soon as the authorities learn of a traffic problem they inform the nearest local radio station, who then signal the BBC and IBA central computers. The traffic news is then re-broadcast by the BBC or IBA transmitters in the relevant area. This broadcast will interrupt a radio programme, cassette tape or CD play on all radios with the RDS feature, provided Traffic Programme 'TP' has been selected. When the traffic news flash is over, the system automatically switches back to the driver's original listening choice.

RDS Operation

1. To activate, press the RDS button on the radio and hold for at least 2 seconds when a 'beep' will be heard and a red light will show on the button. The radio then gathers RDS information and displays the Programme Service name in place of the frequency, provided the programme chosen is an RDS station. If it is not an RDS station, the radio will automatically retune to the strongest RDS station it can find.
2. To select Traffic Programme, press the RDS momentarily, TP will appear on the display. If the radio is not tuned to an FM station with RDS traffic information, it will search for one that is. If no RDS TP station is within range, the TP mode will cancel and the TP indicator will disappear from the display.

RDS Traffic Programme Stations

At the present time only a few RDS stations carry the Traffic Information facility. However, an increasing number of RDS stations are being equipped to provide TP data. The existing RDS TP stations are:-

BBC Radio Stations	IBA Radio Stations
Radio West Midlands	Power FM (Southampton)
Greater London Radio	Key 103 (Manchester)
Radio Bedfordshire	L.B.C. (London)
Radio Kent	
Radio Essex	

Auto Memory (A-Mem)

In normal operation, the Auto Memory (A-Mem) will programme the six strongest stations on the selected wave band into the presets 1 to 6. When RDS is selected and the A-Mem function operated, the radio will programme the six strongest RDS stations into the presets. If there are less than six RDS stations in range, the latter of the presets will display 'No FM'. Similarly, if TP is used with A-Mem activated, the radio will only programme the six strongest RDS stations carrying traffic information. This means, at the present time, that most of the presets will display 'No FM'.

NOTE: When used correctly, RDS and TP are very effective additional features to the car radio capability. However, if these facilities are used without full understanding, they may cause a situation confusing to the operator. This is less likely to occur as more RDS radio stations become available.

If drivers are not fully familiar with the RDS and TP systems they should be advised to switch them off until they can be satisfactorily instructed in the proper use.

When the RDS and TP are switched off, the red light on the RDS button will go out, and the 'TP' indicator will disappear from the display.

RDS TROUBLE-SHOOTING GUIDE

INCORRECT RESPONSE FROM RDS	REASON AND RECTIFICATION
Radio does not display programme service name	Press RDS button for 2 seconds, the red light on the button will come on. If programme service still does not appear, the radio station selected is not an RDS station. The radio will then retune to the strongest station it can find. Note: This may not be the desired station; if not de-select RDS.
Radio keeps searching for another station but returns to original station selected	RDS button is pressed but no RDS station found due to non-availability of, or insufficient signal strength, to receive RDS data. Radio will continue search every minute until RDS station found. To stop this, de-select RDS by holding button for 2 seconds.
Radio retunes to another station even though station was previously an RDS station.	Radio has lost reception of the RDS data due to vehicle moving out of transmitter range, or loss of signal owing to being in a tunnel, under a garage forecourt canopy or similar shielding. If the latter is the case, wait until the vehicle is clear of the shielding then retune to the original station. There is a 45 second delay before retuning occurs.
Upon operating the A-Mem, most or all of the presets display 'No FM' when pressed.	The radio cannot find six FM stations, or if RDS is selected, the radio cannot find six RDS FM stations. Similarly, if TP has been selected then the radio is unable to find RDS stations providing traffic information. If this occurs, switch off the TP function.
Upon pressing the TP button, the radio retunes to another station.	The station selected does not have traffic information facility and will retune to one that does. If it cannot find one it will automatically switch off TP mode and retune to the original station. This means until many more stations have RDS TP services, it may not be possible to listen to a chosen station and receive traffic news when in radio mode.
Whilst in TP mode the radio retunes.	The signal of the station selected has become too weak to receive the TP identification data. The radio will retune to another TP station. If none available the radio will turn off TP function.
Radio is searching for a station continuously.	Radio cannot find any stations. Allow the radio to make two full sweeps of the wave band. If it continues to search, check that the aerial cable is plugged in at radio and aerial connections.
Radio starts retuning.	Check that the RDS button has not been accidentally pressed during the last 45 second (TP indicator will show on display).

XJ6 2.9 / 3.6**ITEM 26****88 FUEL TANK ELEMENT**

Fuel tank element DBC 4735 has been superseded by DBC 10284 for all XJ6 models up to the introduction of 1991 MY. The change has been required because of a rationalisation of terminal housing mouldings introduced by the supplier.

Interchangeability is unaffected.

DBC 10284 will become effective when stock of DBC 4735 held by Parts Operations is exhausted.

XJS CONVERTIBLE**ITEM: 27****88 FUEL TANK ELEMENT**

Owing to supplier tooling modifications, minor changes have been required to the fuel tank sender unit, resulting in Part No. DAC 10183 superseding Part No. DAC 6103 as a running change during 1990 MY. Fuel tank assemblies equipped with the latest element are identified by a red spot on the rear face of the sender unit.

Part No. DAC 10183 is fully interchangeable with Part No. DAC 6103. However, will Dealers please note that the connections for the WARNING LIGHT and the EARTH have been reversed.

The warning light terminal is now at the bottom and the earth terminal is now in the middle.

Harness Identification and Colour Code			DAC 6103	DAC 10183
+ V Supply	G / O	Green / Orange	Top	Top
Earth	B	Black	Bottom	Middle
Warning Light	N / K	Brown / Pink	Middle	Bottom

Note: Parts Operations now only stock the latest condition element, Part No. DAC 10183.

Service Bulletin

JAGUAR

Daimler

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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

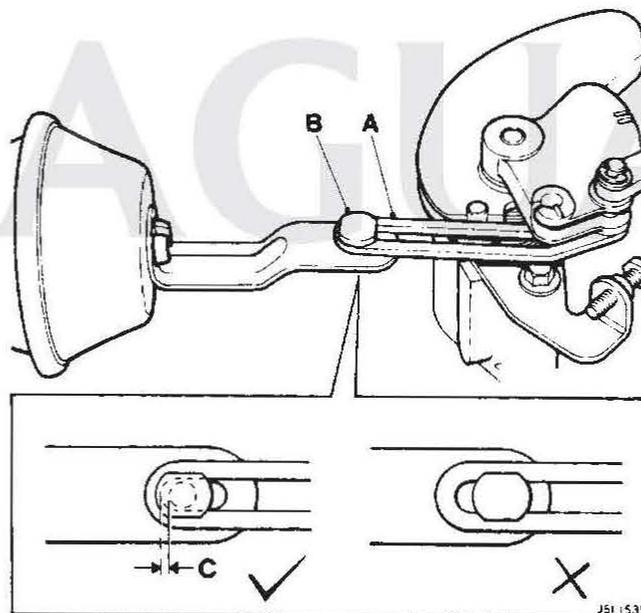


FIG 1

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.

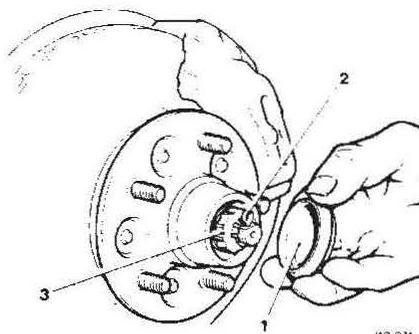
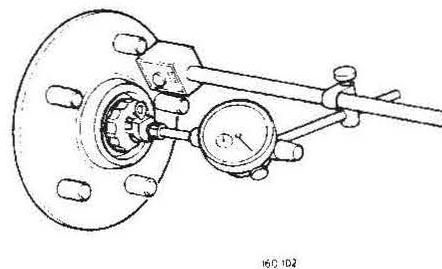
Dependent upon model, gently prise the brake pads free or manipulate the brake caliper to ensure the brake pads are free within their mountings, i.e. the disc is free to rotate.

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.

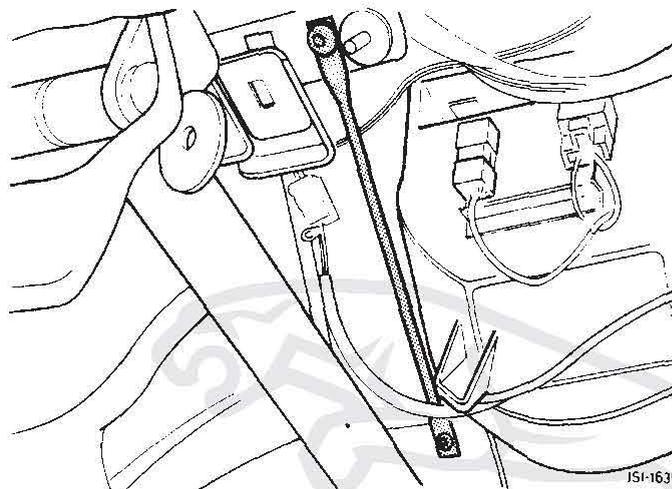


Fig. 1

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.

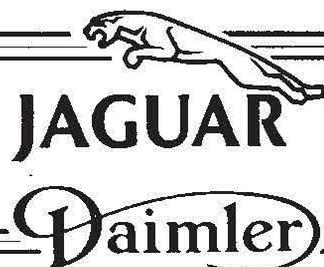
Replace the compressor only after checking all of the above-mentioned items.

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.

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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.

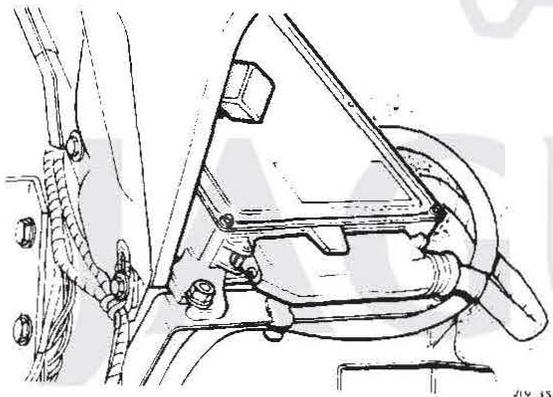


FIG 1

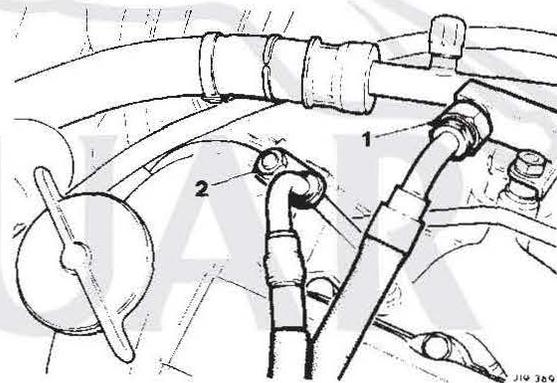


FIG 2

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.

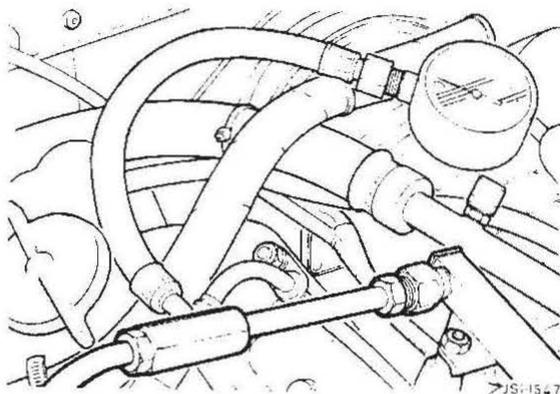


FIG 3

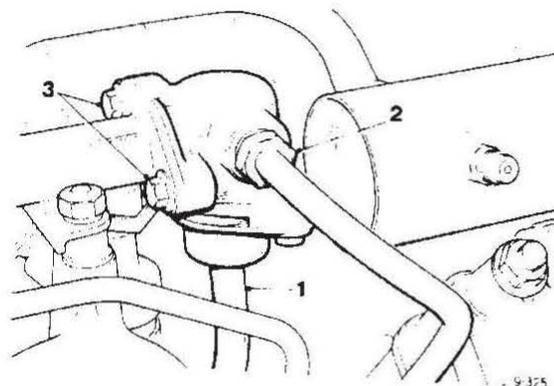


FIG 4

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.

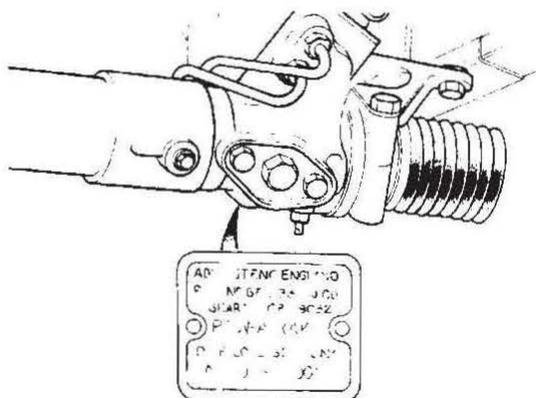


FIG 1

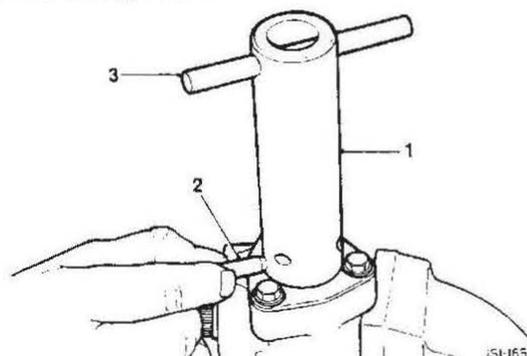


FIG 2

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).

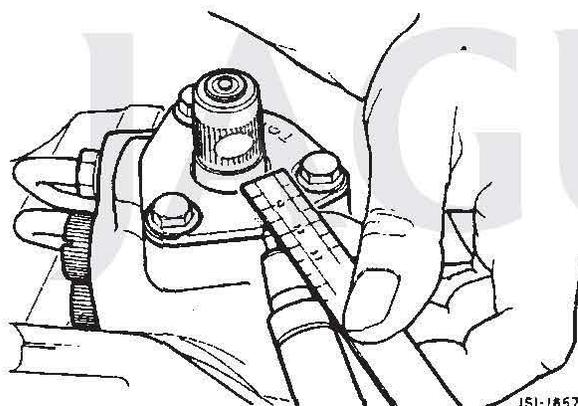


FIG 3

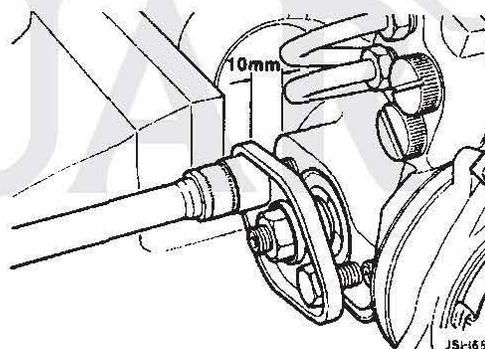


FIG 4

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.

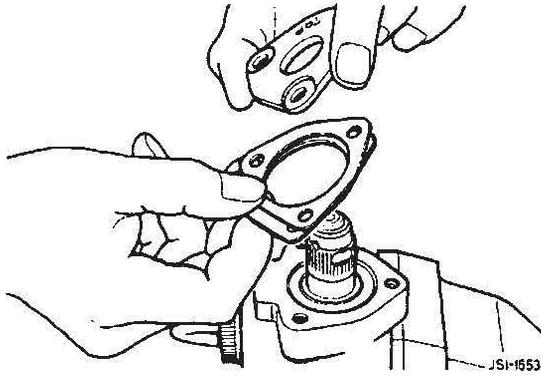


FIG 5

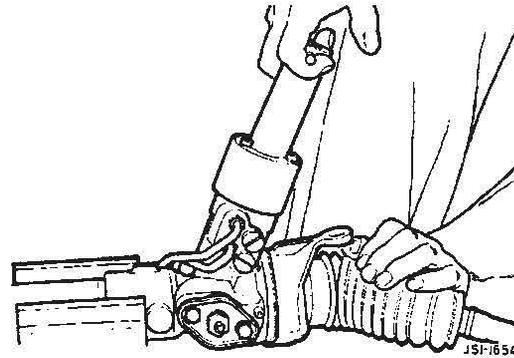


FIG 6

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.

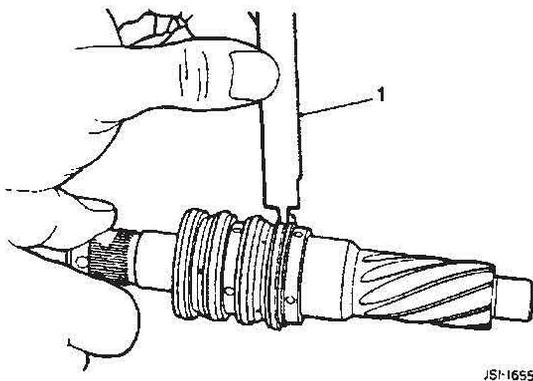


FIG 7

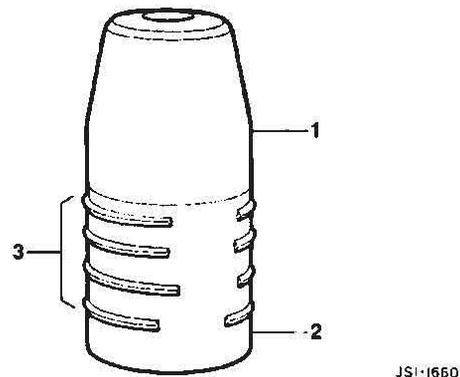


FIG 8

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).

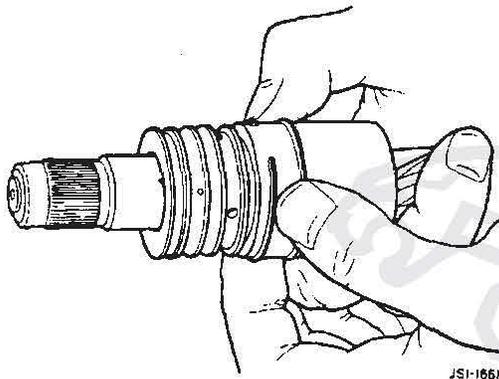


FIG 9

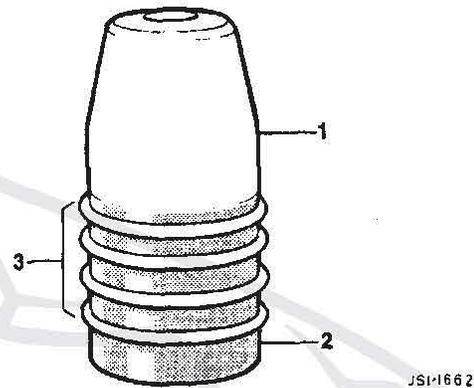


FIG 10

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.

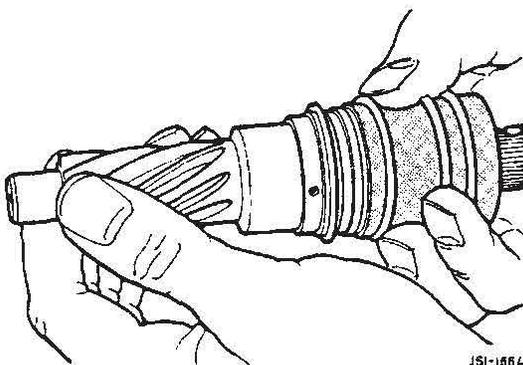


FIG 11

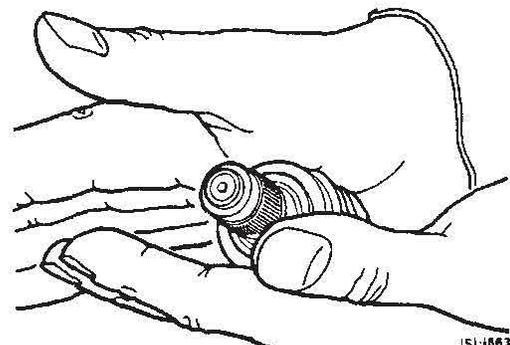


FIG 12

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.

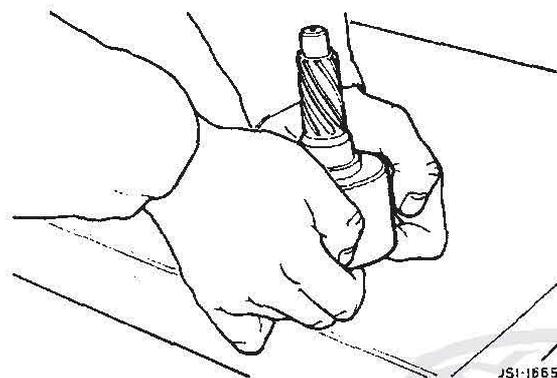


FIG 13

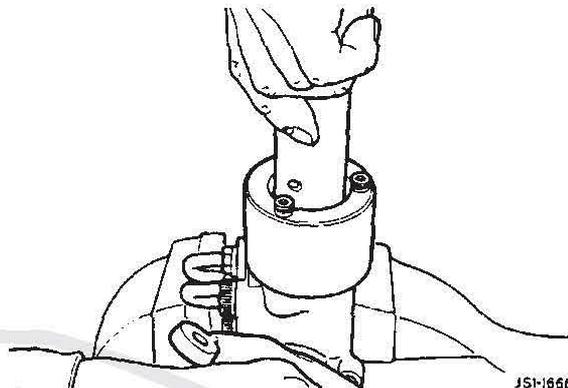


FIG 14

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).

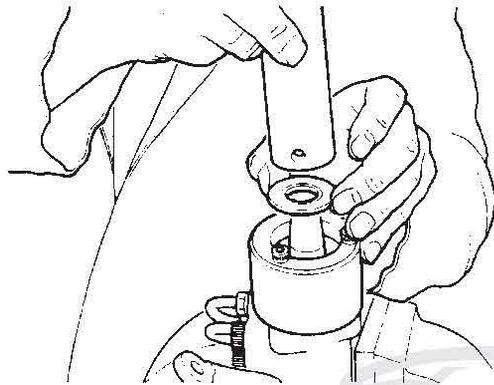


FIG 15

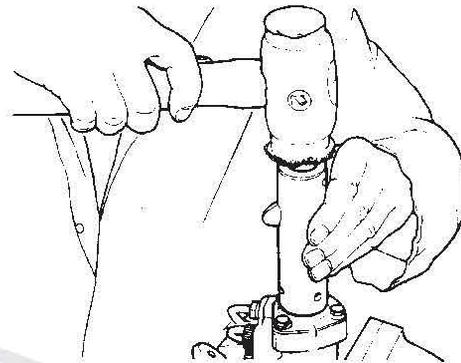


FIG 16

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).

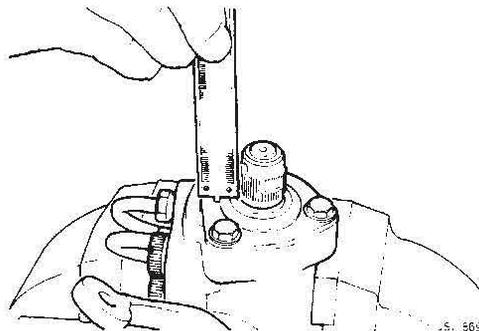


FIG 17

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.

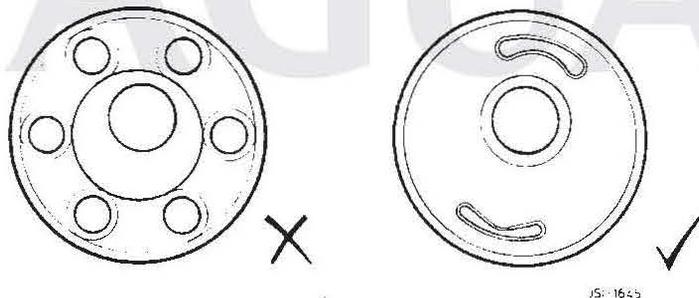


FIG 1

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.

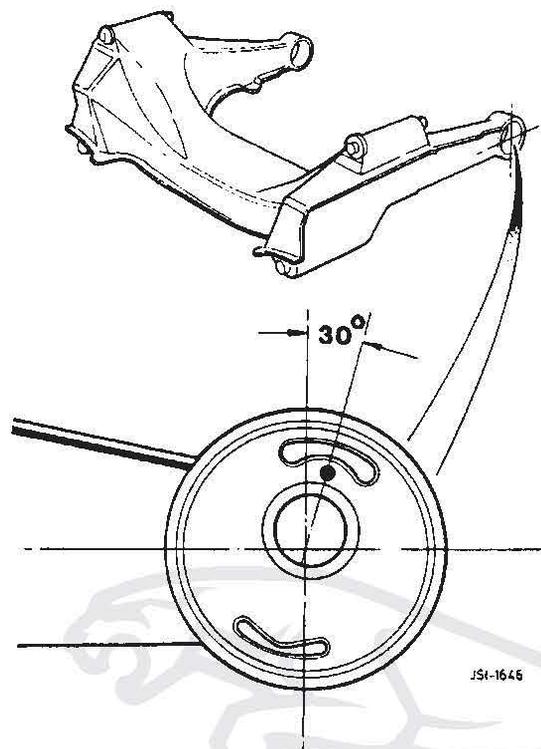


FIG 2

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.

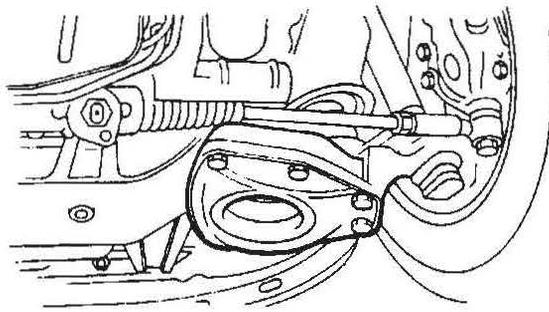
XJ-S / S.III / LIMOUSINE**ITEM: 10****60 FRONT HUB SEAL REPLACEMENT**

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:

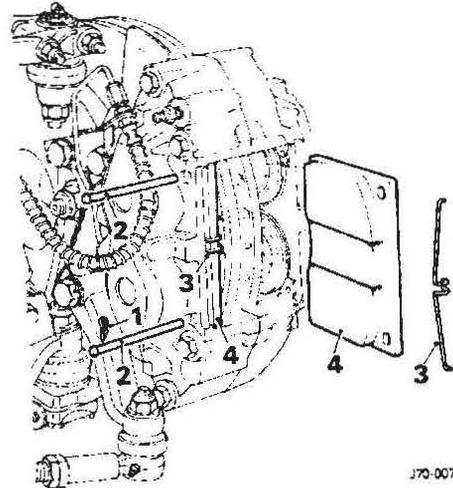
Note: Prior to carrying out the procedure, an absorbent cloth should be placed around the brake fluid reservoir cap

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).

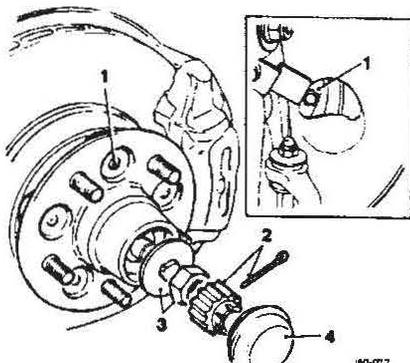
WARNING: BRAKE LINING DUST CAN CONTAIN ASBESTOS WHICH, IF INHALED, CAN DAMAGE YOUR HEALTH. ALWAYS USE A VACUUM BRUSH TO REMOVE DRY BRAKE LINING DUST. NEVER USE AN AIRLINE.

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.

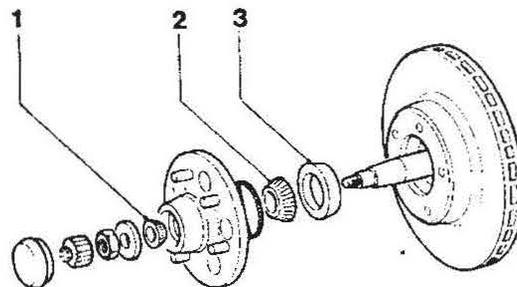
Prise of the hub grease cap (4 Fig. 3). Remove the hub nut split pin and cover (2 Fig. 3). Remove the hub nut and 'D' washer (3 Fig. 3). Carefully remove the hub assembly from the stub axle. Remove the outer bearing (1 Fig. 4) from the hub assembly.

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

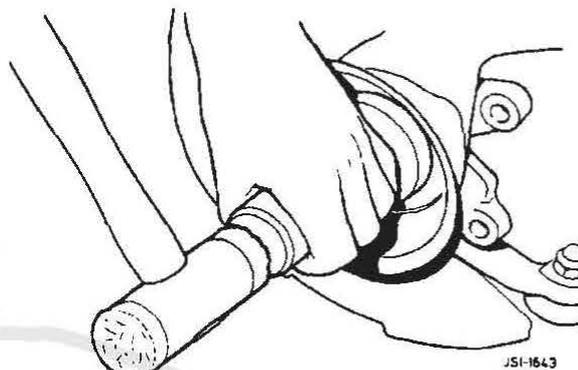
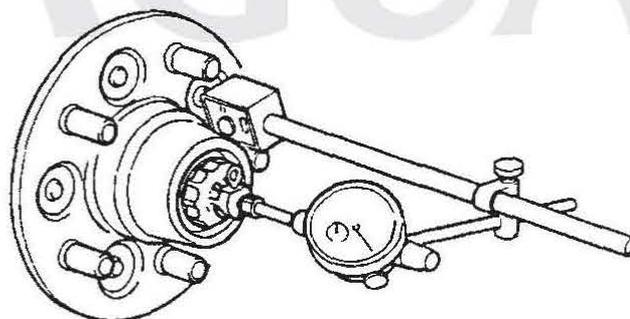


FIG 6

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.

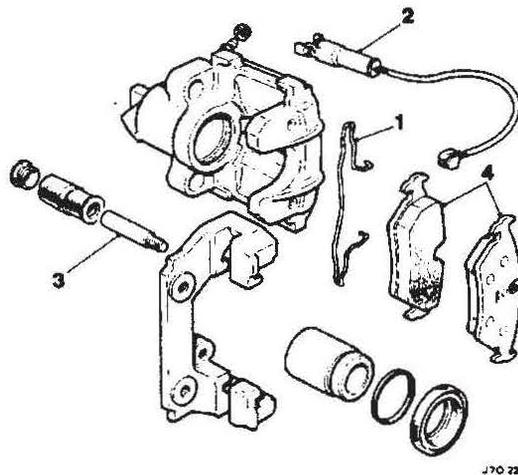


FIG 1

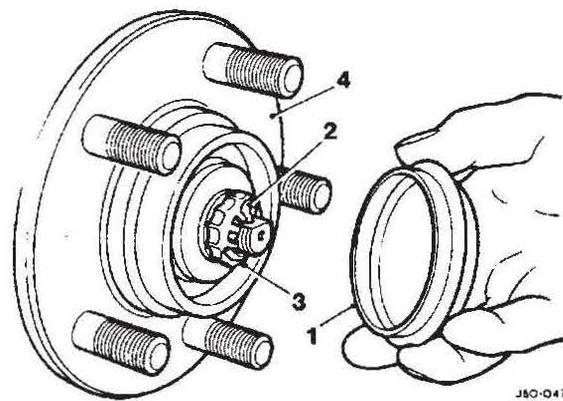


FIG 2

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 of 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.

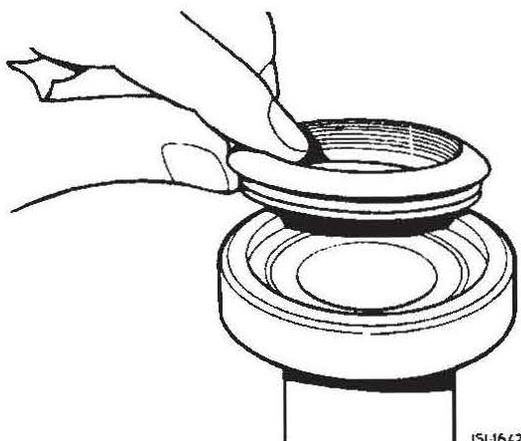


FIG 3

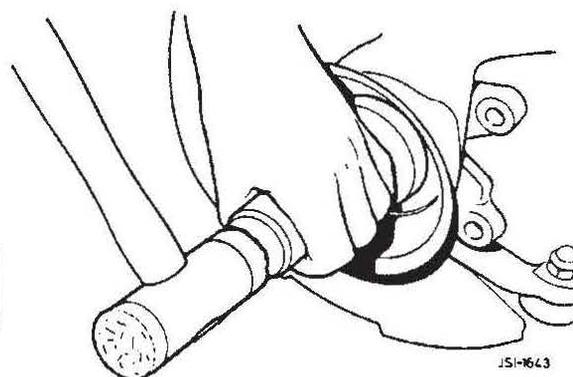
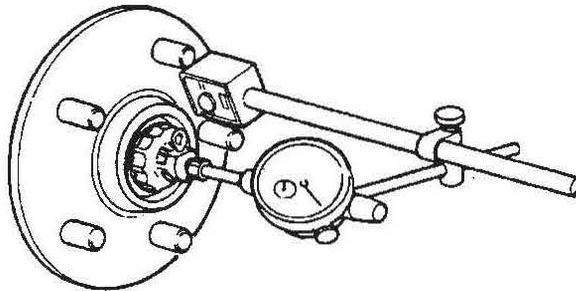


FIG 4

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).



J60 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.

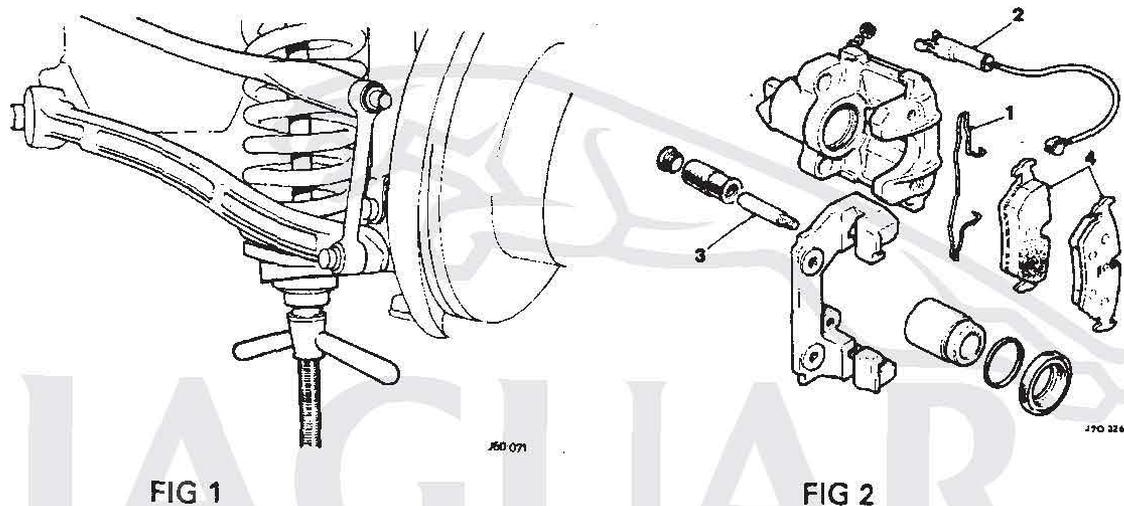
Ensure that the dowel is seated correctly.

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.

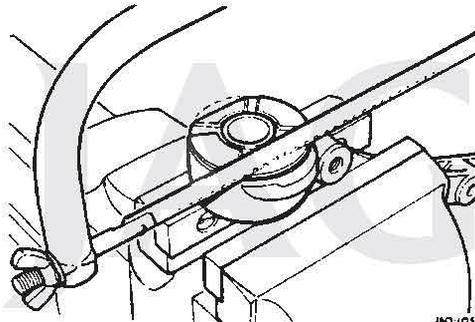


FIG 3

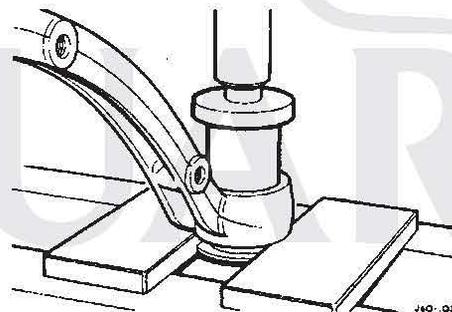


FIG 4

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.

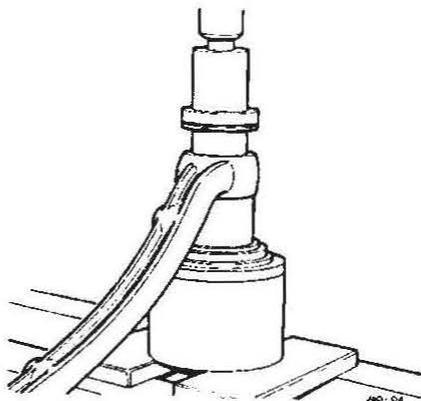


FIG 5

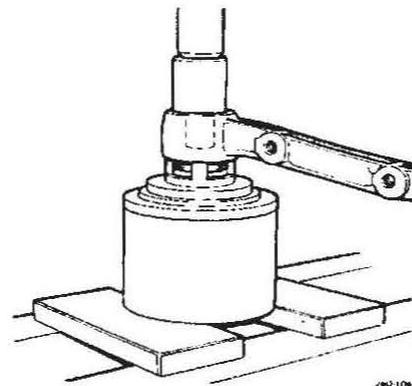


FIG 6

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.

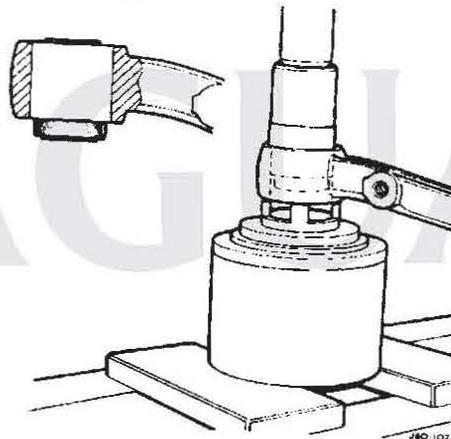


FIG 7

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).

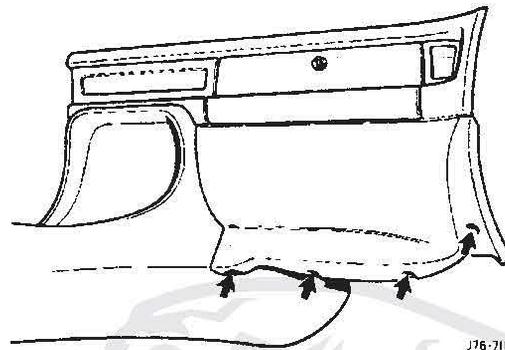


FIG 1

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.

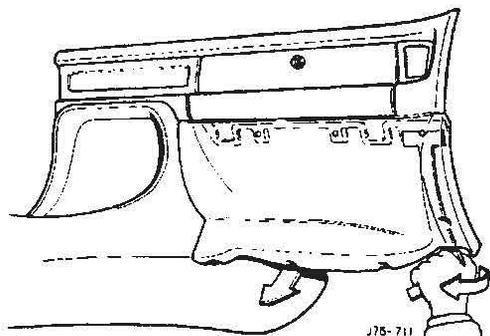


FIG 2

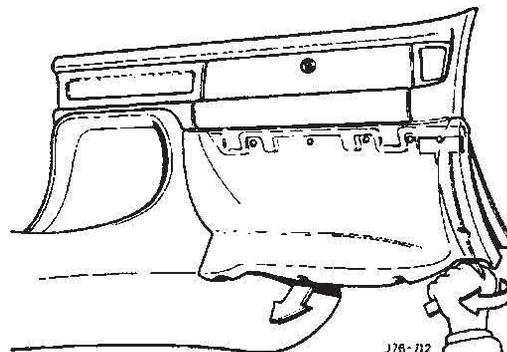


FIG 3

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.

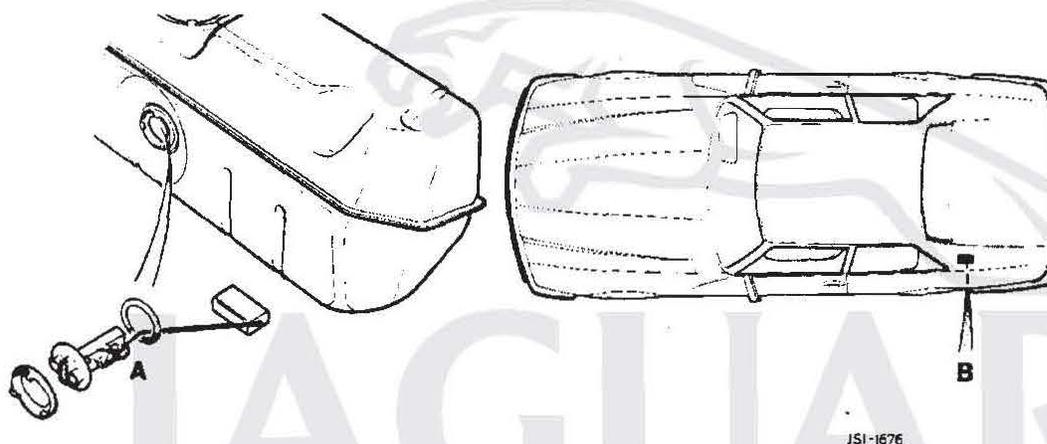
XJ-S FACELIFT**ITEM: 16****86 ANTI-SLOSH MODULE / FUEL TANK SENDER UNIT – FAULT DIAGNOSIS**

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 CONDITIONSLoss 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).

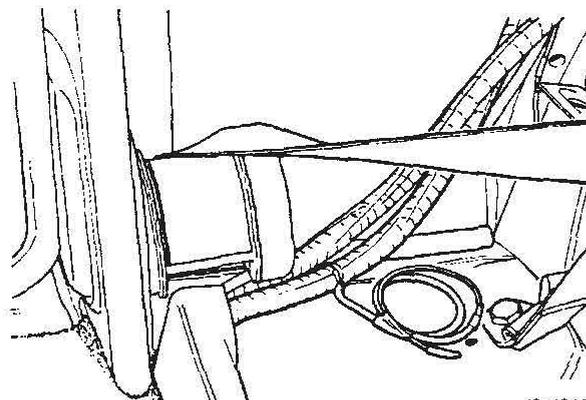


FIG 1

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).

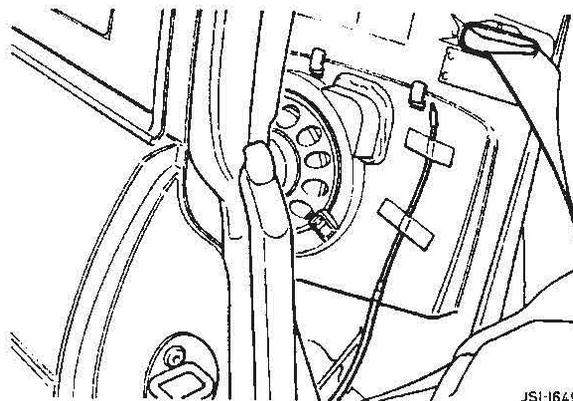


FIG 2

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



ISSUE NO: JD 19/93

AUGUST 1993

PAGE: 1 OF 3

SRO: 86-91-59

MODEL : ALL 1991 AND 1992 MY XJ6 & XJS VEHICLES FITTED WITH 3.2 & 4.0 AJ6 ENGINES
ANY 1989 AND 1990 MY XJ6 & XJS VEHICLES FITTED WITH 3.6 AJ6 ENGINES HAVING SERVICE REPLACEMENT AIR FLOW METERS

SUBJECT : AIR FLOW METER CONNECTOR

CUSTOMER CONCERN : Intermittent loss of power, or stalling.

ADVICE TO CUSTOMER : These symptoms may be caused by a poor electrical connection to the air flow meter. Rectification action involves the fitment of a revised connector between the meter unit and the harness to the engine management ECU.

BACKGROUND

Vehicles manufactured in 1989 and 1990 Model Years were fitted with air flow meters, which may be identified by a Brown-coloured connector, together with an earthing stud.

Vehicles manufactured in 1991 and 1992 Model Years were fitted with air flow meters which may be identified by either a Black or a White-coloured connector; this pattern does not have an earthing stud.

However, replacement air flow meters supplied for the 1989 and 1990 MY vehicles were of the same pattern as those used for 1991 and 1992 manufacture, hence any vehicle to which a replacement air flow meter has been fitted in service is effectively to 1991 / 2 MY condition, though variations in wire colours occur within the main wiring harness, depending on Model Year. These variations are tabulated later in this bulletin.

DEALER ACTION : Yes

REPAIR METHOD : 1. Open the bonnet, and fit a wing cover.
2. Disconnect the battery.
3. Disconnect the harness connector to the air flow meter.

4. Remove the harness from under the air flow meter and cut the ratchet strap which retains the harness to the inlet manifold.
5. Unwrap the tape from the harness, sufficient to allow new joints to be made between the wires from the replacement connector and the wires in the harness, using heat-shrinkable in-line crimp connectors.

Note 1: In carrying out the subsequent operations, the overall length of the harness to the outer end of the replacement connector must be no shorter than the existing length, but should not be extended by more than 25mm. (1 inch)

Note 2: The replacement connector is slightly longer than the connector to be displaced.

Note 3: The ends of the leads from the replacement connector are of staggered length, so that no bunching will occur at the crimp joints.

6. Observing the above conditions, match the wire colours and cut the wires in the existing harness to appropriate lengths. Discard the displaced connector.

Note 4: On 1991 and 1992 MY vehicles, the wire colours of the vehicle harness correspond to those of the revised connector.

If fitting the revised connector to a 1989 or 1990 MY vehicle, the table below indicates the wire colours of the vehicle harness which must be connected to the corresponding wires from the revised connector.

7. Suitably strip back the insulation from the cut ends of the existing harness wires and the wires from the new connector.
8. Use crimp connectors to join the corresponding wires to the existing harness.
9. Using a hot air gun, shrink the outer tubing of the crimp connectors.
10. Ensuring that the crimp connectors remain staggered, re-wrap the exposed length of harness with insulation tape.
11. Fit the connector to the air flow meter.
12. Reposition the harness under the air flow meter and fit a ratchet strap to retain the harness to the inlet manifold.
13. Reconnect the battery and close the bonnet.

PARTS INFORMATION : CONNECTOR / LEAD ASSEMBLY:

XJ6 - Part No. DBC 12191

XJS - Part No. DAC 11325

ADMINISTRATION : WARRANTY CODE:
INFORMATION 7CD

REPAIR OPERATION CODE:

SRO 86-91-59 0.35 hours

The table below identifies the harness wire colours for 1989 and 1990 MY vehicles.

REVISED CONNECTOR WIRE COLOURS		VEHICLE MAIN HARNESS WIRE COLOURS		
Pin Number	Colour	XJ6 3.6L 1989 MY	XJ6 4.0L 1990 MY	XJS 3.6L 1989 & 1990 MY
1	BY	BO	BY	BO
2	BY	BO	BY	BO
3	GK	GK	GK	GK
4	-	-	-	-
5	WN	WN	WN	WN
6	GR	GR	GR	GR
Earth Strap	N/C	B	B	B

Service Bulletin



JAGUAR

Daimler

ISSUE NO: JD 12/94

FEBRUARY 1994

PAGE: 1 OF 8

SRO: 18-91-07

- MODELS : ALL 1991, 1992, 1993 AND 1994 MY XJ6 VEHICLES
FITTED WITH 3.2 LITRE OR 4.0 LITRE ENGINES
PRIOR TO SAFE VIN 699043
- ALL 1992, 1993.5 AND 1994 MY XJS VEHICLES FITTED
WITH 4.0 LITRE ENGINES
PRIOR TO SAFE VIN 192404
- SUBJECT : AIR FLOW SENSOR CONNECTOR QUALITY
- CUSTOMER CONCERN : Intermittent loss of power, or stalling.
- ADVICE TO CUSTOMER : A revised air flow sensor and harness connector are
now available, featuring gold plated pins, the use
of which should overcome this concern.

In addition, a comprehensive trouble shooting flowchart is incorporated within this bulletin, which will help to ensure that all possible causes of stalling have been investigated and eliminated.

BACKGROUND

This Bulletin supersedes all previous Bulletins, Service Actions and other literature issued in the past by Jaguar Cars on the subject of the air flow sensor/connector and stalling.

Note: If any vehicle has need for the replacement of the Air Flow Sensor, for any reason, the Air Flow Sensor Connector Fly Lead **MUST** also be replaced.

TIN PLATED HARNESS CONNECTORS ARE NOT COMPATIBLE WITH GOLD PLATED AIR FLOW SENSOR CONNECTOR PINS. AIR FLOW SENSORS WITH TIN PLATED CONNECTOR PINS WILL NOT BE AVAILABLE THROUGH JAGUAR PARTS OPERATIONS. HENCE IF THE AIR FLOW SENSOR IS TO BE REPLACED THE HARNESS FLYLEAD MUST BE CHANGED IN ADDITION.

Jaguar Cars Limited

- DEALER ACTION : Yes, where necessary, if the vehicle has NOT been fitted with an Air Flow Sensor AND Fly Lead Connector with gold plated terminals. Follow the Diagnostic Procedure within the attached flow chart; replace the Air Flow Sensor if necessary as a result of the Diagnostic Procedure.
- REPAIR METHOD : DIAGNOSTIC
- Work through the attached flow chart and record information as indicated.

1993 MY 3.2 LITRE & 4.0 LITRE ENGINE STALLING

TROUBLE-SHOOTING FLOWCHART

The accompanying flowchart (Pages 3-5) is designed to facilitate tracing and rectification of the causes of engine stalling.

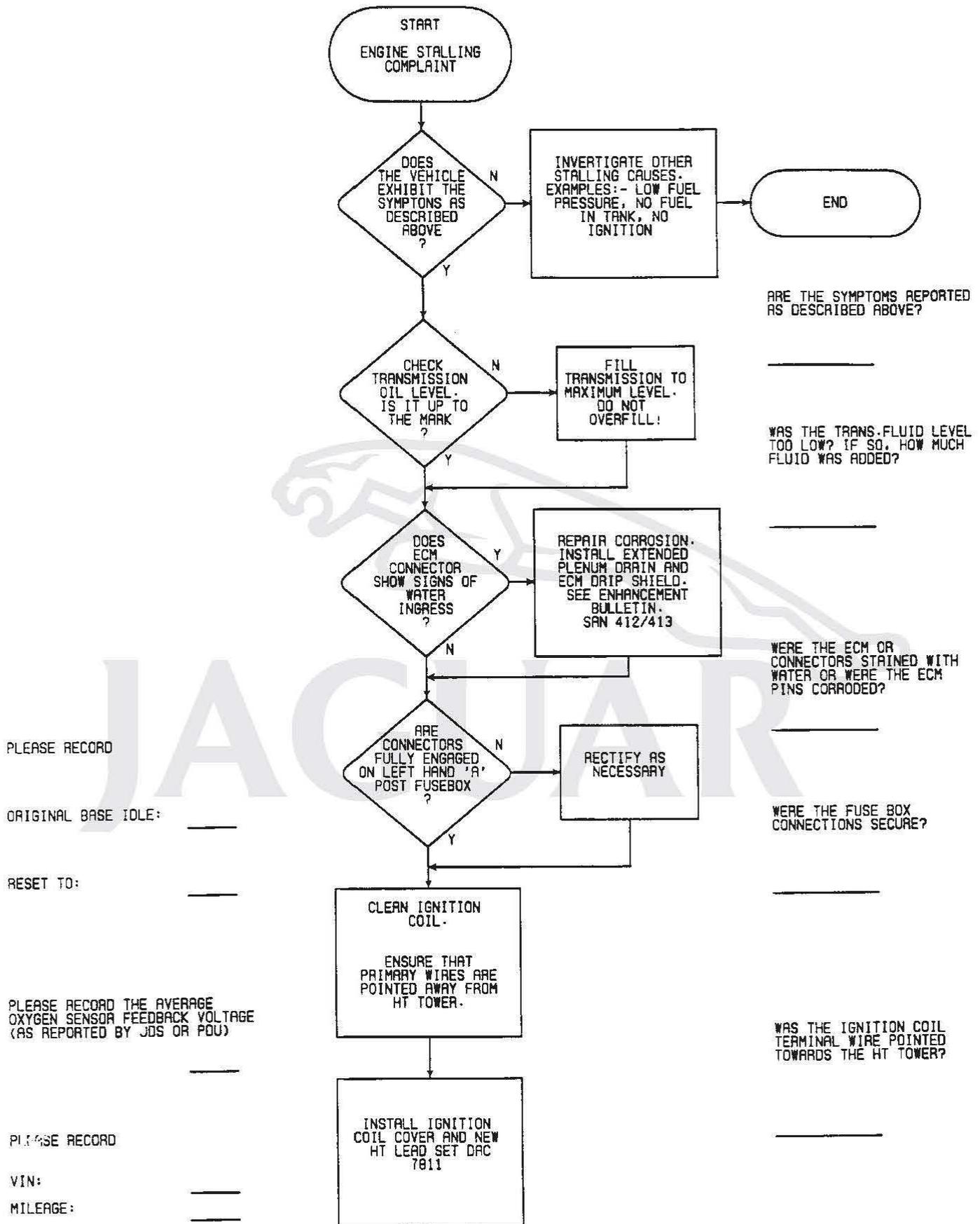
Symptom: With the engine running at normal temperature, it will hesitate or stall as the vehicle accelerates from rest, slows to a stop, or while idling. The engine can be re-started immediately and without difficulty.

Complete each step and record the findings in the space provided on the flowchart. Since stalling may be caused by more than one fault, it is important that EVERY step be performed, whether or not any fault is found.

Should the symptoms not correspond to those described above, this flowchart may not enable the cause to be traced, in which case other causes should be investigated. Refer to the Service Manual, Engine Management, Fuel System and Emissions sections.

The completed flowchart should be filed with Vehicle Service History details retained by the Dealer.

Dealers should make available photocopies of the attached flowchart to their Workshop, as required.



Continued on Page 4

AIR MASS METER DATE CODE: _____

AIR MASS METER SERIAL NUMBER: _____

TODAY'S DATE: _____

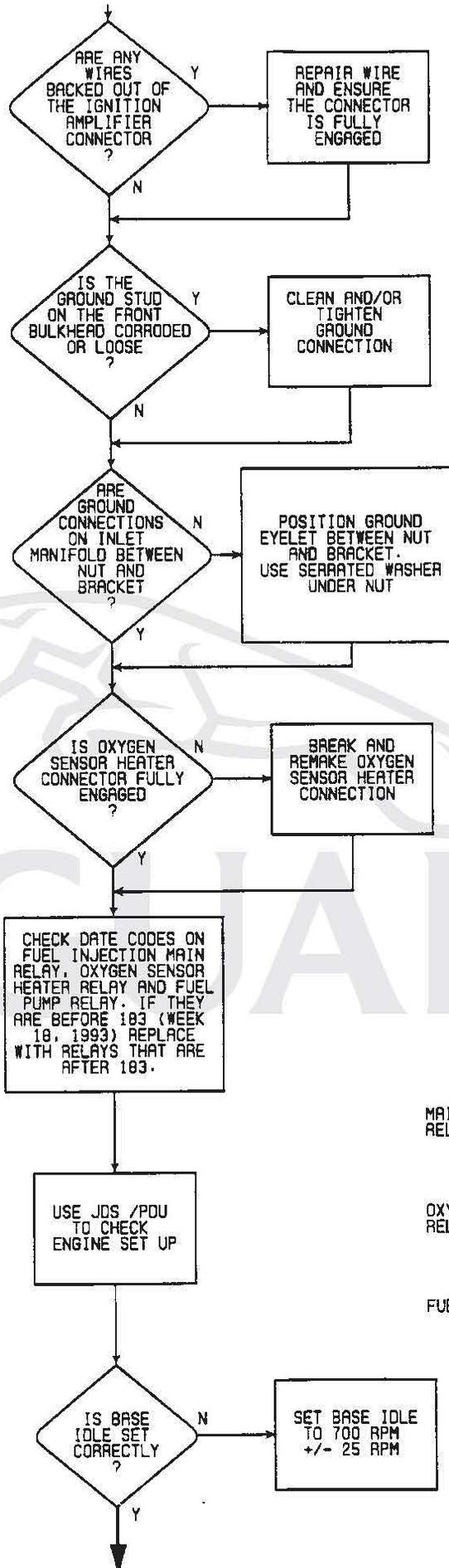
DEALER NAME: _____

TECHNICIAN: _____

NOTE:

THE AIR MASS METER DATE CODE IS A FOUR DIGIT NUMBER STAMPED ON THE LABEL (EXAMPLE: 4592 IS WEEK 45, 1992).

THE SERIAL NUMBER IS A 6 (SIX) DIGIT NUMBER ON THE SIDE OF THE AIR MASS METER, ON A BAR CODED LABEL.



WERE ANY WIRES BACKED OUT OF THE IGNITION AMPLIFIER CONNECTOR?

WAS THE GROUND CONNECTION TO THE BULKHEAD STUD LOOSE OR CORRODED? IF SO, PLEASE DESCRIBE.

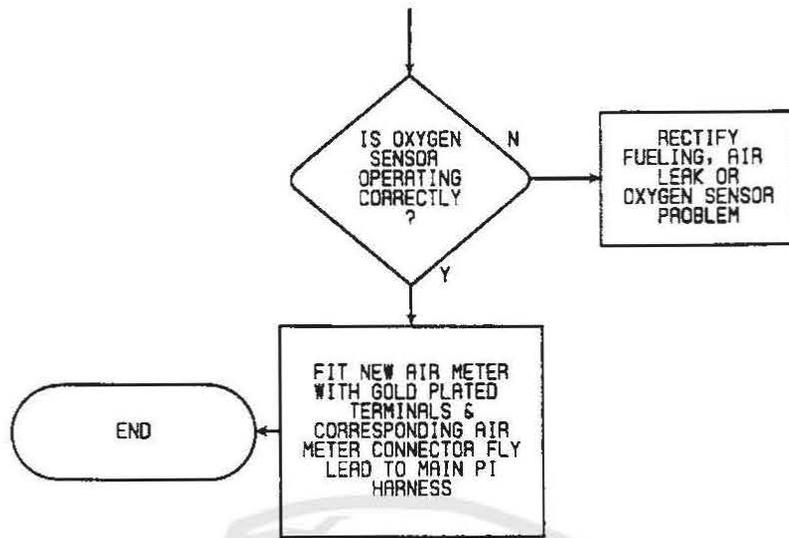
WAS THE INLET MANIFOLD GROUND EYELET LOCATED BETWEEN THE NUT AND THE BRACKET OR BETWEEN THE BRACKET AND THE MANIFOLD? SPECIFY.

WAS THE OXYGEN SENSOR HEATER CONNECTOR FULLY ENGAGED?

PLEASE LIST THE DATE CODE PRINTED ON EACH OF THE RELAYS IN THE VEHICLE.

	NEW	OLD
MAIN FUEL INJECTION RELAY	_____	_____
OXYGEN SENSOR HEATED RELAY	_____	_____
FUEL PUMP RELAY	_____	_____

Continued on Page 5



REPAIR METHOD : FITMENT OF MASS AIR FLOW SENSOR

1. Open the bonnet and fit a wing cover.
2. Disconnect the air flow sensor multi-plug.
3. Slacken the clips securing the air flow sensor to the intake elbow hose.
4. Undo and remove the earth lead securing nut.
5. Disconnect the earth lead.
6. Reposition the hose away from the air flow sensor.
7. Release the clips securing the air flow sensor to the air cleaner assembly.
8. Carefully displace and remove the air flow sensor assembly from the vehicle.
9. Remove and discard the 'O' ring seal.
10. To the replacement air flow sensor fit and fully seat the new 'O' ring seal.
11. Fit and align the new air flow sensor to the air cleaner assembly.
Note: Ensure the correct seating of the 'O' ring seal and locating dowel in the air cleaner.
12. Secure the air flow sensor to the air cleaner with retaining clips.
13. Reposition the elbow hose to the air flow sensor.
14. Position and tighten the hose clips.
15. Connect the earth lead.
16. Fit and tighten the earth lead securing nut.

IMPORTANT: UNLESS THE HARNESS CONNECTOR HAS BEEN CHANGED TO THE LATEST PATTERN, HAVING GOLD-PLATED PINS, IN THE COURSE OF A PREVIOUS REPAIR OPERATION, THE CONNECTOR MUST BE CHANGED, AS DETAILED IN ITEMS 17 - 28 ON THE FOLLOWING PAGES.

17. Disconnect the battery.
18. Remove the harness from under the air flow sensor and cut the ratchet strap which retains the harness.
19. Unwrap the tape from the harness, sufficient to allow new joints to be made between the wires from the replacement connector and the wire in the harness, using heat-shrinkable in-line crimp connectors.

Note 1: In carrying out the subsequent operations, the overall length of the harness, to the outer end of the replacement connector, must be no shorter than the existing length, but should not be extended by more than 25mm (1 inch).

Note 2: The replacement connector is slightly longer than the connector to be displaced.

Note 3: The ends of the leads from the replacement connector are of staggered length, so that no bunching will occur at the crimp joints.

20. Observing the above conditions, match the wire colours and cut the wires in the harness to appropriate lengths. Discard the displaced connector.

Note 4: On 1991 and 1992 MY vehicles, the wire colours of the vehicle harness correspond to those of the revised connector.

21. Suitably strip back the insulation from the cut ends of the existing harness wires and the wires from the new connector.
22. Use crimp connectors to join the corresponding wires to the existing harness.
23. Using a hot air gun, shrink the outer tubing of the crimp connectors.
24. Ensuring that the crimp connectors remain staggered, rewrap the exposed length of harness with insulation tape.
25. Fit the connector to the air flow sensor.

26. Reposition the harness under the air flow sensor and fit a ratchet strap to retain the harness to the inlet manifold.
27. Reconnect the battery; re-code the radio and reset the clock.
28. Connect the air flow sensor multi-plug.
29. Complete engine set-up using J.D.S.
30. Remove the wing cover and close the bonnet.

PARTS INFORMATION :

MODEL	DESCRIPTION	PART NO.	QTY/ VEH
XJ6	AIR FLOW SENSOR		1
Up to VIN 667828	Cat & Non-Cat	DBC 12517	
From VIN 667829	Catalytic Non-Catalytic	DBC 12516 DBC 12517	
XJS except USA	AIR FLOW SENSOR		1
Up to VIN 188104	Cat & Non-Cat	DBC 12517	
From VIN 188105	Catalytic Non-Catalytic	DBC 12516 DBC 12517	
XJS (USA ONLY)	AIR FLOW SENSOR		1
Up to VIN 185819	Cat & Non-Cat	DBC 12517	
From VIN 185820	Catalytic Non-Catalytic	DBC 12516 DBC 12517	
ALL XJ6	MAFS FLYLEAD & CONNECTOR	IMD3345AA	1
ALL XJS	MAFS FLYLEAD & CONNECTOR	LHD3345AA	1

ADMINISTRATION
INFORMATION

: WARRANTY CODE: 7 C D X

REPAIR OPERATION CODE

SRO 18-91-07

TIME ALLOWANCE

2.15 Hours

Service Bulletin



DATE: DECEMBER 1994

PAGE 1 OF 2

REF: JD 67/94

ALL MODELS WITH AJ6/AJ16 ENGINES

ITEM: 69

17 EMISSION SPECIFICATION DATA

When conducting certain tests using the PDU equipment, the information on the screen display may request entry of the Emission Specification.

The Emission Specification for the vehicle concerned may be ascertained by reference to the Engine Number of the vehicle, in conjunction with the diagram reproduced overleaf and the table below.

The fifth character of the Engine Number, an alphabetical letter in the series L to S, provides the information for the Emission Specification, in the form of alphabetical letters A to F, as shown in the table.

For example, where the fifth character is L, the corresponding Emission Specification to be entered in the PDU is A. Where the fifth character is S, the Emission Specification is F, etc., as below:

<u>Fifth Character in Engine Number</u>	<u>Emission Specification for PDU entry</u>
L	A
M	B
N	C
P	D
R	E
S	F

The table overleaf also confirms specification of engine cubic capacity, application, and compression ratio.

continued../

TYPICAL ENGINE: 9 J P F S A 198911
 NUMBER

Marque

9 = Jaguar

Serial No.

Fuel

P = Petrol

Engine Type

- A = AJ6 2.9
- B = AJ6 3.2
- D = AJ6 3.6
- E = AJ6 4.0
- H = AJ16 3.2 Saloon 1995 MY
- J = AJ16 4.0 " "
- K = AJ16 4.0 S/C " "
- L = AJ16 4.0 XJS 1995 MY

Specification
 Change
 Identification

Compression Ratio

- A = 9.8:1
- B = 8.3:1
- C = 9.5:1
- D = 8.5:1
- F = 10.0:1
- M = 9.75:1
- N = 8.3:1

Emission Specification

- L = Specification A
- M = " B
- N = " C
- P = " D
- R = " E
- S = " F
- X = Military Spec.

ooOoo