Technical Guide

XK8 Sports Coupe and Convertible Introduction

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This Technical Guide introduces the new XK8 luxury sports car range. It is intended to give Jaguar Dealer workshop personnel an overview of its construction and operation, and is for information purposes only.

The contents of this Technical Guide must not be used as a reference source for servicing procedures; all servicing procedures must be in accordance with the appropriate Service Manual.

This Technical Guide will not be updated. While every effort is made to ensure accuracy, changes may occur between going to press and the vehicle being introduced to the market. Once the vehicle is in service, details of changes can be obtained from Service Bulletins and revisions to the Service Manuals.

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<th>Description</th>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>AC</td>
<td>air conditioning</td>
<td>MY</td>
<td>model year</td>
</tr>
<tr>
<td>ACCM</td>
<td>air conditioning control module</td>
<td>PAS</td>
<td>power assisted steering</td>
</tr>
<tr>
<td>ABS</td>
<td>anti-lock braking system</td>
<td>PASC</td>
<td>power assisted steering</td>
</tr>
<tr>
<td>ABSCM</td>
<td>anti-lock brake system control</td>
<td>PASC</td>
<td>control module</td>
</tr>
<tr>
<td>ADCM</td>
<td>adaptive damping control module</td>
<td>PDCM</td>
<td>passenger door control module</td>
</tr>
<tr>
<td>airbag/SRS</td>
<td>airbag-supplementary restraint</td>
<td>PDU</td>
<td>portable diagnostic unit</td>
</tr>
<tr>
<td>ALR</td>
<td>automatic locking retractor</td>
<td>PSCM</td>
<td>passenger seat control module</td>
</tr>
<tr>
<td>BCM</td>
<td>brake control modulator</td>
<td>RH</td>
<td>right-hand</td>
</tr>
<tr>
<td>BIW</td>
<td>body-in-white</td>
<td>RHD</td>
<td>right-hand drive</td>
</tr>
<tr>
<td>BPM</td>
<td>body processor module</td>
<td>rpm</td>
<td>revolutions per minute</td>
</tr>
<tr>
<td>CAN</td>
<td>controller area network</td>
<td>SCP</td>
<td>standard corporate protocol</td>
</tr>
<tr>
<td>°C</td>
<td>degree Celsius</td>
<td>SLCM</td>
<td>security and locking control</td>
</tr>
<tr>
<td>CD</td>
<td>compact disk</td>
<td>TC</td>
<td>traction control</td>
</tr>
<tr>
<td>DCM</td>
<td>dimmer control module</td>
<td>TCM</td>
<td>transmission control module</td>
</tr>
<tr>
<td>DDCM</td>
<td>driver door control module</td>
<td>VIN</td>
<td>vehicle identification number</td>
</tr>
<tr>
<td>DSCM</td>
<td>driver seat control module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTC</td>
<td>diagnostic trouble code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Label</td>
<td>European manufacture label</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECM</td>
<td>engine control module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>eg</td>
<td>example</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGR</td>
<td>exhaust gas recirculation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELR</td>
<td>emergency locking retractor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EVAP</td>
<td>evaporative emission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>gall</td>
<td>gallon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMSL</td>
<td>high-mounted stop light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICE</td>
<td>in-car entertainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in</td>
<td>inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISO</td>
<td>International Standards Organisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JDS</td>
<td>Jaguar diagnostic system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kbps</td>
<td>kilobaud per second</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kg</td>
<td>kilogram</td>
<td></td>
<td></td>
</tr>
<tr>
<td>km/h</td>
<td>kilometre per hour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTM</td>
<td>key transponder module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lb</td>
<td>pound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCD</td>
<td>liquid crystal display</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LCM</td>
<td>lamp control module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LED</td>
<td>light emitting diode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LH</td>
<td>left-hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LHD</td>
<td>left-hand drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m</td>
<td>metre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAFS</td>
<td>mass air flow sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mm</td>
<td>millimetre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mph</td>
<td>miles per hour</td>
<td></td>
<td></td>
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</table>
The XK8 is a new luxury sports car available in both coupe and convertible forms. The car is also the launch vehicle for the new AJ-V8 engine and ZF 5-speed automatic transmission, both described in an Introductory Guide which compliments this Guide.

Interiors are trimmed in Classic style, which retains Jaguar's traditional burr walnut veneer and color coordinated trim.

Two computer systems are used to control and monitor vehicle systems, CAN and SCP. CAN is a higher speed system used for management of engine, transmission and brakes. SCP is a slower system used for operation of body systems, such as, seat movement, door window operation and vehicle locking and security.

Some new features are:
- a speed sensitive, variable ratio, power steering system
- an all new front suspension system
- seat belt pretensioners
- power latching convertible top
- steering wheel mounted ICE and cruise control switches
- fade up/down interior lighting on entry and exit
- telescopic headlamp power wash
- wiper blade mounted washer jets
- four-button remote transmitter
- height adjustable driver seat
Vehicle Weights

<table>
<thead>
<tr>
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<th>Approximate Weight, kg (lb)</th>
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<tr>
<td></td>
<td>Coupe</td>
</tr>
<tr>
<td>Kerb weight:</td>
<td></td>
</tr>
<tr>
<td>Front axle</td>
<td>869 (1912)</td>
</tr>
<tr>
<td>Rear axle</td>
<td>811 (1784)</td>
</tr>
<tr>
<td>Total</td>
<td>1680 (3696)</td>
</tr>
<tr>
<td>Gross vehicle weight:</td>
<td></td>
</tr>
<tr>
<td>Front axle</td>
<td>953 (2100)</td>
</tr>
<tr>
<td>Rear axle</td>
<td>1057 (2330)</td>
</tr>
<tr>
<td>Total</td>
<td>2010 (4431)</td>
</tr>
</tbody>
</table>

Trunk capacity (maximum permitted with driver and passenger) 48 (106) 48 (106)

Dimensions

EXTERNAL DIMENSIONS

2588 (101.8) 4760 (187.4)

2016 (79.4) 1829 (72)

1271° (50)

1504 (59.2) 1489 (58.6)

All dimensions in mm (in)

*Height, at Gross Vehicle Weight
Kerb to Kerb Turning Circle 11 000 (36.0 ft)
## Vehicle Features

The features of the XK8 range include those items detailed below. Unless stated otherwise, the features listed apply to both coupe and convertible models.

**NA = Not Available;  O = Optional;  X = Standard**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Applicability</th>
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<tr>
<td>Air conditioning</td>
<td>X</td>
</tr>
<tr>
<td>Air filtration</td>
<td>O</td>
</tr>
<tr>
<td>Automatic transmission</td>
<td>X</td>
</tr>
<tr>
<td>Catalytic converters</td>
<td>X</td>
</tr>
<tr>
<td>Cruise control</td>
<td>X</td>
</tr>
<tr>
<td>Driver and passenger airbag/SRS</td>
<td>X</td>
</tr>
<tr>
<td>Electrochromic interior mirror</td>
<td>X</td>
</tr>
<tr>
<td>Front fog lamps</td>
<td>X</td>
</tr>
<tr>
<td>Garage door opener</td>
<td>X</td>
</tr>
<tr>
<td>Headlamp power wash</td>
<td>O</td>
</tr>
<tr>
<td>Heated windshield</td>
<td>X  Canada only Not available elsewhere</td>
</tr>
</tbody>
</table>

**ICE:**

- Base system xu
- CD autochanger o
- Premium system o
- Integrated telephone o

**Interior trim:**

- Classic leather x

**Locking:**

- Central locking x
- Drive-away door locking x
- Panic locking/unlocking x
- Remote locking/unlocking x
- Remote trunk unlocking x
<table>
<thead>
<tr>
<th>Feature</th>
<th>Applicability</th>
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<tr>
<td>Locking continued:</td>
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<tr>
<td>Trunk valet isolation</td>
<td>X</td>
</tr>
<tr>
<td>Two stage unlocking (key and remote)</td>
<td>X</td>
</tr>
<tr>
<td>Metallic paint</td>
<td>O</td>
</tr>
<tr>
<td>Power operated convertible top with automatic latching</td>
<td>X on convertibles in all markets</td>
</tr>
<tr>
<td>Road wheels:</td>
<td></td>
</tr>
<tr>
<td>17 inch alloy wheels</td>
<td>X</td>
</tr>
<tr>
<td>17 inch chromed alloy wheels</td>
<td>O</td>
</tr>
<tr>
<td>Full size spare wheel:</td>
<td>X</td>
</tr>
<tr>
<td>Spacesaver spare wheel:</td>
<td>NA</td>
</tr>
<tr>
<td>Seating:</td>
<td></td>
</tr>
<tr>
<td>2+2 configuration</td>
<td>X</td>
</tr>
<tr>
<td>Driver’s seat memory</td>
<td>X</td>
</tr>
<tr>
<td>Driver’s seat height adjustment</td>
<td>X</td>
</tr>
<tr>
<td>Electrical front seat adjustment</td>
<td>X</td>
</tr>
<tr>
<td>Heated front seats</td>
<td>X in Canada</td>
</tr>
<tr>
<td></td>
<td>O in all other markets</td>
</tr>
<tr>
<td>Front passenger seat height</td>
<td>X</td>
</tr>
<tr>
<td>Security:</td>
<td></td>
</tr>
<tr>
<td>Base system</td>
<td>X</td>
</tr>
<tr>
<td>Panic alarm</td>
<td>X</td>
</tr>
<tr>
<td>Brakes:</td>
<td></td>
</tr>
<tr>
<td>Stability control</td>
<td>X</td>
</tr>
<tr>
<td>Traction control</td>
<td>O</td>
</tr>
</tbody>
</table>
## Feature | Applicability
--- | ---
Steering:  
Electrically operated tilt and reach adjustment, with automatic tilt away for entry/exit | X
Variable ratio, speed sensitive power assistance | X
Suspension:  
Standard suspension | X
Trip computer | X
Body Structure

Two styles of body are manufactured, a coupe and a convertible. The coupe body is a new superstructure fitted on a modified XJS floorpan. The convertible body style is a cut-down version of the coupe with additional structure to suit, including tubular internal sill reinforcements. Approximately 70% of the panels are double-sided zinc coated. Box sections are wax injected. Underbody sealant is applied to the floorpan and wheel arches and an anti-chip coating is applied to the sills. The convertible has bracing struts passing through the plenum chamber moulding.
**Body Front**

The valance is reinforced for front fender mounting. The front fenders are common parts to both coupe and convertible. The front fenders carry Jaguar badges.

**Body Side**

The coupe body side assembly is a one-piece monoside and incorporates part of the outer sill, 'A' and 'B' posts and central reinforcement. It is joined to the rear tonneau. The convertible uses a cropped coupe monoside and has the outer wheel arch bonded to the tonneau. Both treadplates are bright finish with the car designation, Jaguar XK8, inscription added.

**Body Rear**

The rear end underframe and rear side members are new items to suit the 95MY sedan rear suspension. The luggage floor is a 95MY sedan version cropped to suit but with revised trunk package layout and new battery mounting.

**Hood**

The hood comprises a new outer and one-piece inner panel. Non-locking gas struts support the open hood, which is hinged at the front. The hood release lever is located beneath the fascia at the left-hand side 'A' post. This lever operates two cables, one to each of the two catches. Both catches are modified XJS parts and are mounted inside the forward bulkhead extensions. The right-hand latch is fitted with a security switch wired to the BPM.

**Fuel Filler**

An illuminated switch in the driver’s underscuttle opens the fuel filler flap which is located in the rear upper part of the left rear fender assembly. The flap will not open with the engine ON. Manual release of the flap is made by removing the trunk left side trim panel and pulling the manual flap release lever.
Plenum Chamber
The plenum is fixed in a similar manner to the 95MY sedan and includes the windshield/fender seals and tubing connectors for the windshield wiper wash. It also carries the climate control air intake particle filter, when fitted. The accelerator cable passes through the plenum to ensure that the cable cannot be trapped when the moulding is fitted. Water drain is from a central connection and wiper spindle depressions. Water deflectors keep water away from the control module and forward bulkhead extension areas. A plastic moulding plate closes off the plenum chamber from the central wet area and carries studs for attaching the ignition amplifiers.

Identification Plates and Labels
The Vehicle Identification Number (VIN) is stamped on the right-hand side longitudinal member in the spare wheel compartment. A clear patch in the darkened area at the bottom left of the windshield allows visible access to a VIN plate which is bonded to the windshield reinforcing lower panel. The VIN label is fixed to the B-post on the left-hand side of the vehicle, above the door striker plate. An emissions bar code label is adhered to the drivers door shut face. The E approval label is fixed to the top surface of the LH turret panel.
Vehicle Jacking and Towing

Caution: Do not use the aluminum suspension cross beam for jacking the front of the car. Use only the car jacking points or the steel cross member below the radiator package. Rear jacking points are the normal car jacking points or the rear of the rear suspension subframe.

Road and ship transportation lashdown for the rear of the vehicle is via the rear suspension reinforcement forward of the rear wheels. Slave towing/lashing eyes are provided for road or ship lashdown of the front of the vehicle.

Caution The slave towing/lashing eyes must be removed before the vehicle is driven on the public highway

For vehicle recovery, a single front towing eye, stowed in the trunk, screws in to either the left or right-hand side of the lower cross member. The rear towing eye is a welded double loop on the right-hand side corner of the luggage floor.
Exterior Trim

Front Bumper Beam
The front bumper beam is made of aluminum and is bolted to the body via energy absorbing struts. No adjustment of the beam is possible. Two warning horns and an ambient temperature sensor are mounted on the front bumper beam.

Front Bumper Cover
The body colored front bumper cover is bolted at the top to a cross member, which also has hinge attachments for the hood. The cover is bolted to the lower edge of the fenders and clipped to the lower side of the overrides. The cover has been designed to accept a low speed impact without permanent distortion of the cover. Side markers are incorporated in the bumper covers. An undertray, attached to the lower edge of the bumper cover and body cross member, assists in the flow of air through the cooling pack. Both the overrides and splitter vane are bolted to the beam. The front fog lamps are mounted in the bumper covers.
Rear Bumper Beam and Cover

The rear bumper beam is made from aluminum. The beam is bolted to the body via energy absorbing struts. A gasket is fitted between the strut BIW mounting face to prevent water ingress into the trunk area. Height setting of the rear bumper to body is with adjusters similar to the 95MY sedan.

The bumper cover is riveted to the beam and has a moulded armature attached both sides by rivets. These are then mounted onto guide blocks attached to the body. Bumper covers are body coloured and have the side marker lamp mounting points.
Convertible Top

Introduction
The convertible top is fully lined and padded and fitted to an aluminum frame which has steel linkages. Hydraulic power is used to open, close and latch the top, operated by a single hold-down switch (ROOF) on the center console. This switch also operates the rear quarter glass. The top closes to a low stack height in the body opening of the rear quarter. A green tinted, heated, glass backlight is fitted as part of the top. A new feature is over-center linkage pivoting on the rear wheel arch to hold the top forwards during the latching and unlatching operations.

Caution  
It is imperative that the procedure for manual latching/unlatching of the convertible top is read before any moves are made to un latch the top, (see Manual Latching).

Operating Pump and Hoses
The convertible top operating pump is located in the right-hand side of the trunk mounted on a steel pressing, which also houses the CD player and power amplifier units (where fitted). The pump operates at a pressure of 140 bar (2030 psi) maximum and is equipped with valves and cylinders to operate the two actuators and the latch mechanism. The high pressure hoses are routed through the rear bulkhead to each of the actuators. The latch hoses pass across the rear seat pan and the right heelboard and up the 'A'-post into the latch plate assembly.
Automatic Latching

**WARNING:** Ensure that the convertible top cover is removed and that all personnel and equipment are clear before the convertible top is raised or lowered.

The latching system is supplied as a complete unit and has no serviceable components. Latching of the top is by a hydraulically operated center pull and latch mechanism and two outboard latches. The latch mechanism automatically pulls the top onto the body header and latches it into position. When the top is not latched, an unlatched warning appears on the message center display.

Operation of the convertible top is inhibited, or, if the top is moving it will retract to the lowered position, if the vehicle exceeds 16 km/hr (10 mph). The ROOF NOT LATCHED warning will be displayed on the message center until the next actuation.

The convertible top operating (ROOF) switch must be held to be activated. A short press of the switch operates the rear quarter glass without operating the top. The operating switch will only activate the top if the ignition switch is in either position I or II.

As soon as the top starts to move an audible warning will sound. Raising and lowering of the convertible top is controlled on the SCP network.
Manual Latching
In the event that the top cannot be powered to the raised or lowered position, provision is made for manual operation.

Note: The convertible top frame uses an over-center link to lock the frame in its forward position. It is essential to carry out the following procedure to manually lower the vehicle convertible top. Because of the possibility of damaging the frame, manual lowering of the convertible top is only recommended as a Dealer function and not an Owner/Driver function. Manual lowering has been deleted from the Driver Handbook.

1. Lower the rear quarter glass by pressing the ROOF switch once.
2. Gain access to the pump located in the trunk, (the right-hand side trunk trim carpet must be removed for access to the pump) and turn the manual over-ride tap on the pump body anti-clockwise to place the pump into MANUAL mode.
3. The windscreens header trim has a small round plug, adjacent to the header console, which has to be removed to gain access to the latching mechanism. Insert either the key which is retained in clips on the pump mounting base, or an 8mm Allen key, and un latch the hood by turning the key clockwise.

Caution: Do not attempt to lower the convertible top further at this stage.

4. Prior to lowering the hood, reach behind the headlining rear quarter curtains and locate both of the convertible top cylinder rams and the linkage to which they are fixed.
5. Pull, in turn, both the left and right hand cylinders and linkage down as far as possible. A significant force may be required.
6. Manually lower the top to its stowed position. (if the hood resists movement repeat step 5)

Caution: Failure to carry out steps 4 and 5 will result in severe damage to the convertible top frame and/or linkages.
Sealing
Convertible top seals are slip coated sponge and dense rubber mounted in aluminum carriers. All seals can be replaced without the need for tools except for the cantrail front which is attached by two screws. Rear quarter and top to body seals are made from dense rubber. The rear quarter outer seal includes an aluminum bright finisher and is flange mounted on a pressing which is bolted to the body.
The rear quarter inner seal includes the 'B'-post seal and the 'C'-post seal shot moulded as a single part and is mounted on a carrier screwed to the body and top bearing. The seal is retained by a single screw at the rear end and pegs at the 'B'-post. Top to body seals are flange mounted on BIW parts. The backlight seal is similar to the 1996 MY XJS.

Convertible Top Cover
A one piece soft convertible top cover, color coded to the vehicle interior, provides cover for the convertible top when it is lowered. The cover is held in place by two Tenax fasteners and two press studs. It is retained by the trunk lid when in place and is stowed in a bag in the trunk when not in use. Fit the cover whenever the top is lowered to prevent the top from fading in irregular bands. Always roll with the face side outwards, to avoid creasing.

Glazing
Both the windshield and coupe backlight are supplied as assemblies complete with trim. The trim is fixed to the glass with clips and is fully demountable when the assembly is bonded into the vehicle.
All trim is aluminum alloy painted Dorchester Grey. Windshields, backlights and quarter lights, except for the convertible model backlights and quarter glass, are direct glazed to body.

Windshield
The windshield is 5mm (0.2in) laminated glass, green tinted, with a black obscuration band and has the 95MY sedan interior mirror mounting bracket fitted. Coupe and convertible windshields are common units. Some market options have a fine wire heated windshield, with the switch positioned on the climate control panel (see also Climate Control Section). The finisher is a one-piece, single color with seal.

Backlights
The coupe backlight is 4mm (0.16in) tempered glass, green tinted and heated. The heated backlight remains on for 21 minutes after being switched on unless the driver switches it off before the time delay expires (see also Climate Control Section). Coupe backlights are fitted with a security antenna. The convertible backlight is similar to the coupe but does not have the security antenna fitted and is conventionally glazed.
Door Glass

Caution: Ensure that the glass of both front doors and the convertible quarter lights are lowered by at least 15mm before disconnecting the battery. This is to ensure that the seals and glass are not damaged by opening or closing the doors or convertible top with the glass fully raised.

The door glass is a frameless system with 5mm (0.2in) green, sundym, tempered glass bonded to the mechanism framework. Each door glass is operated electrically and is raised and lowered by a scissor mechanism regulator. The glass can be removed from the door without upsetting the glass setting. Glass inboard and outboard adjustment, when required, is by means of plastic adjusters fitted to the lower ends of the side members. These are accessible by removing the puddle lamp and/or speaker and do not require trim removal. Profile/height adjustment is made through the regulator upstop and regulator slave arm.
Door Glass Movement
The door glass is operated by the DDCM and the PDCM from the switchpacks located in the driver and passenger door arm rests. The switchpacks are illuminated when the sidelights are on.

- Each door glass automatically drops 15mm (0.65in) when the door is opened and closes when the door is closed.

- The glass of both front doors will open when the convertible top is raised and close when the top is fully raised and latched in position.

- Each door glass has a one touch down facility.

- If the key barrel lock switch is held active for more than 1.5 seconds then the door glass and the convertible rear quarter light glass will be driven closed unless the key is released.

The glass in both doors operate with the ignition switch in either position I or II and for 30 seconds after ignition is switched off or the associated door is opened.

Caution: With the transit relay fitted, do not operate more than one door glass at a time.

Resetting Door Glass Position
If the power supply to the DDCM or PDCM is disconnected (battery disconnected, module unplugged or fuse removed) or a PDU or scan tool is connected to the ISO connector and diagnostic checks are made, then the modules must relearn the glass characteristics.

The last known glass position is regarded as top of travel by one touch operation until relearning has taken place. One touch down, manual up and down control and the automatic lowering of the glass for door opening are unaffected. For the control module to learn the glass characteristics the door must be closed (door ajar switch inactive and the ignition switch in position I or II) and then drive the glass fully down and hold it stalled at the bottom of its travel for a minimum of one second. Drive the glass fully up and hold stalled for a minimum of one second. The relearning procedure must also be accomplished before automatic glass closing is allowed.
**Coupe Quarter Lights**
The rear quarter light glass fitted to the coupe is a 4mm (0.16in), tempered direct glazing unit also with a green tint. For adhesive depth control, there are studs bonded to the glass at the B-post and a spacer button at the rear.

**Convertible Quarter Lights**
Rear quarter light glass for the convertible is 5mm (0.2in), tempered, semiflush and green tinted. These quarter lights have a drum and cable lowering and raising system to give full glass drop when the convertible top is lowered. Operation of the rear quarter glass is incorporated into the convertible top operating (ROOF) switch.

**Convertible Quarter Light Logic**
- If the convertible top is lowered, both rear quarter lights will also fully lower, and cannot be raised until the convertible top is raised. The quarter lights will raise automatically when the convertible top is raised but will not power up to a level higher than the door glass.
- As the convertible top is being raised, if the door glass is at the top of its travel then the glass will be powered down 15mm (0.65in) and the rear quarter lights will be powered down to the bottom of their travel. When the convertible top is fully raised and latched, all glass will be powered up to close to form a seal with the convertible top.

**Sealing**
The rear quarter glass on the convertible carries the door glass to quarter glass seal. The convertible top mounted seals are slip coated sponge and dense rubber mounted in aluminum carriers. The moulding at the end of the header incorporates a drip catching feature which drains through the A-pillar seals. The rear quarter and convertible top to body seals are made from dense rubber. The rear quarter seal includes the aluminium bright finisher and is flange mounted on a pressing bolted to the body. The rear quarter inner seal includes the B-post seal and the C-post seal, shot moulded as a single part. This is mounted on a carrier screwed to the body and convertible top main bearing. The seal is retained by a single screw at the rear end and by pegs at the B-post. Convertible top to body seals are flange mounted on BIW parts. The backlight seal is similar to the XJS.
Doors and Door Mirrors

Doors
The doors are common to both coupe and convertible, with a frameless glass system, door mounted seals and demountable hinges with separate multi-stage check arms.
Each exterior handle, has an integrated switch for glass drop on opening. Additionally, the driver door handle has an integrated key barrel.
The interior door handles can be pushed inwards to lock the door and the drivers side surround carries the memory switches.
The cheater is formed from the door mirror base and a felt covered inner cheater. The dense rubber moulded seal is integral with the secondary door seal. Tweeters are fitted in the inner cheater as part of the premium in-car entertainment option.
Door seals are double seals below the waist, peg mounted and terminate in waist mouldings. Driver and passenger doors contain the DDCM and PDCM, which are connected to the SCP network. These are located forward of the glass guide and above the in-car entertainment speakers which are fitted into the door casing.
Door modules control the raising and lowering of the door glass, locking and security, puddle lamp and door mirror movement and heating functions. A driveaway door locking function is incorporated into the software and is activated when the transmission is taken out of Park or Neutral position.
Each door has a combined rearguard/puddle lamp mounted in the door pocket casing.

Door Mounted Switches
Driver door mounted switches enable control of driver and passenger door glass, door mirror adjustment. The passenger door switch only operates the front passenger door glass. The motors are controlled by each door switchpack through the DDCM and PDCM, including memory functions.

Door Mirrors
The color keyed, electrically operated, door mirrors are heated. Control of the heaters is by selection of backlight heating on the air conditioning control panel, no separate switches are provided. Mirror memory is a standard feature on all cars.

Door Mirror Dipping (where fitted)
Dipping of the passenger door mirror for reversing is a function of all vehicles with driver seat memory and mirror memory functions. Firstly, with the ignition switch in position II, the gear selector is moved to reverse. The mirror joystick is then moved rearwards which will dip the mirror. Dipping is either 7 degrees in a downward direction, bottom of travel or 5 seconds of travel dependent on which condition is satisfied first. When the gear selector is moved from reverse, or the joystick is pushed forwards, or the ignition switch is moved from position II, the door mirror will return to its original position.
Windshield Wipers and Washers

Wiper Mechanism
The windshield wiper motor, with integral microswitch for overload protection, and wiper mechanism is mounted in the plenum below the windshield. The vehicle has a conventional twin wiper arm system with synthetic rubber blades and wiper arm mounted windshield wash jets. The blades are common for driver and passenger and are not handed. The wipers park on the windshield. Wiper modes are slow, fast, flick wipe and intermittent wipe. Intermittent wipe has six positions ranging from 2 to 20 seconds. An extra wipe occurs 4 seconds after a wash/wipe to clear any remaining drips from the windshield. The wipers, windshield wash and headlamp power wash are controlled by, and hard wired to, the BPM.

Windshield Wash Jets
Three of the four jets on each wiper arm are made of rubber in the form of a ducks bill, the other, on the underside of the unit facing the screen, is a conventional jet. Jets are designed to resist freezing, eliminating the need for heated nozzles. The jet assembly and windshield washing tubing is supplied assembled to the wiper arm. The tubing is fitted to a connector which is part of the plenum cover assembly. The jet housings are a snap fit to the wiper arms and may be separately removed.
**Washer Reservoir**

The washer reservoir, mounted in the front left side fender forward of the wheel arch, contains up to 7 litres (1.85 US gal) of liquid and has a low level sensor. The sensor is integral with the windshield washer pump. The filler neck cap is located under the hood on the left side adjacent to the power steering reservoir and the brake modulator. Separate wash pumps are fitted, one for windshield wash, and one for headlamp power wash when this feature is fitted. The windshield wash pump is active for a maximum of 20 seconds while the switch is held.
**Headlamp Power Wash**

A vehicle option is headlamp power wash. The power wash unit is a 72mm (2.83in) long telescopic assembly which snaps on to the underside of the headlamp assembly and has a glass cover to maintain the profile appearance of the headlamp. These washers are operational when the headlights are on or daylight running is enabled, the washer fluid does not indicate low level, and the ignition switch is on. When wash/wipe is activated and held, the headlamp wash pump operates and sprays once for 800 milliseconds, waits 6 seconds and then sprays again. When the switch is released, further power wash cycles will be inhibited for the next 5 wash/wipe operations to conserve wash fluid.

All power wash fittings are snap fit. Water pressure extends the telescopic arm and a spring returns it to the closed position after the pump completes its cycle. Jet assemblies are handed and are not heated. The wash/wipe system is operated from switches on the steering column via the BPM.
Interior Trim

Fascia
Integrated within the fascia are the major and minor instrument clusters, air ducting and vents controlling air flow for conditioning the cabin and demist of the windshield and door glass. An in-car sensor for solar loading is incorporated into the driver side of the fascia. Removable flaps are fitted at each end of the fascia to give access to the two fuseboxes, the inertia switch and the dimmer module. The drivers knee bolster has a louvre for the thermistor and motor/fan assembly for cabin air temperature sensing. The steering wheel is 95MY sedan carry-over but incorporates in-car entertainment controls and cruise control switches. The drivers airbag/SRS is mounted in the center of the steering wheel. The horn is operated by pressing the center of the driver airbag/SRS. Below the veneered housing containing the passenger airbag is the illuminated and lockable glovebox. Included within the glovebox is the driver literature pack and pen holder.

FASCIA

Major Instrument Cluster

Minor Instrument Cluster
**Center Console**
The center console houses the:
- Gear selector
- Cruise control switch
- Sport mode switch
- Ashtray and cigar lighter
- Cubby box with cup holder (where fitted) and a telephone with its power supply (where fitted)
- Coin holder
- Convertible top operating (ROOF) switch
It also surrounds the in-car entertainment controls, center console switchpack and climate controls and display.

**Trim**
The coupe rear parcel shelf is trimmed in headlining cloth and has provision for air extraction and cloth covered speaker. Acoustic cloth covered speakers, integral armrests and stowage trays are incorporated in the coupe one-piece rear quarter moulded casing. The convertible rear quarter casing is similar to the coupe but does not have the armrests fitted. The body has two-piece carpets joined at the center console.

Roof trim in the coupe is a one-piece moulded 6mm (0.25in) thick headlining in cloth supported by the sun visor fixings at the front and rear quarter casing at the rear. Storage pockets are provided in the front doors.
Header Console
The header console incorporates two courtesy lamps which include switchable map lights. The convertible has a padded serviceable headlining and header console. Included in the header console is the three-channel garage door opener switches.

Interior Rear View Mirror
The interior rear view mirror is an electrochromic prismatic mirror. The mirror sensor is driver controlled by a mirror mounted switch. This switch is ON/OFF only, not a slider bar as the 96MY sedan. When reverse gear is selected the mirror sensitivity is reduced to allow clear rear vision. For the convertible vehicle the lowering of the convertible top reduces the sensitivity of the sensor. The electrochromic mirror also controls the electrochromic door mirrors, when these are fitted.

Footwell
A drivers footrest is fitted which is two position adjustable to cater for leg length. This is achieved by removing a normally fitted extension section. The base footrest is screwed to the floorpan though two holes. When the extension is removed from the base rest two plugs are extracted with the extension. The two plugs must be removed from the extension and refitted to the base rest. Footwell lamps are provided for driver and passenger. These are mounted on the fascia underside.
Seats
The classic style is standard fit for both the coupe and convertible. Each front seat has five vertical flutes with leather facings and center panels and color keyed stitching. The driver’s seat has height rise adjustment. Seat heating is an optional feature except when fitted as part of the cold climate pack.
Both driver and passenger seat has a rear map/stowage pocket which is ambla trimmed. Mounted on the upper outside of the seats is a lever which allows the seat squab to fold forwards.

Seat Movement Controls
Power seat switch assemblies are fitted in the outboard side of the driver and front passenger seats. The power seat switches are color keyed with the seat trim. These switches, through the seat control modules, operate motors for fore and aft, recline, and raise and lower movements of the seat. A separate switch operates the lumbar pump motor. Only one of the slide, recline or height motor outputs can be driven at any one time under manual control.
Each motor is fitted with feedback potentiometers (except the lumbar pump motor). All motor connectors are adjacent to the respective motor to aid removal without the need to remove the harness. The illuminated seat heater on/off switches, (where fitted) are mounted in the center console.
Front Seat Frames
The front seat frames and slides are modified XJS seats with new upper pressings and integral headrest to achieve a more distinctive and modern style. The DSCM and PSCM are mounted on brackets below the front of the seat frames and are connected to the SCP network. The modules control seat and squab movement, seat heating (where fitted) and the lumbar pump.
**Rear Seat**

The convertible and coupe rear seats are not interchangeable. The rear seats are wire-framed units with cushions and squab to match the front seats. No adjustment of the rear seats is provided. The center of the single piece rear seat has a gaiter incorporated through which the seat belt buckles pass. The buckles can be located in a recess in the squab. The convertible top rear seat is provided with fixing studs at the top rail for attachment of the convertible top cover.
Engine Compartment

Two forward bulkhead extensions are located against the main engine compartment bulkhead and fenders. The left-hand compartment carries the brake booster and master cylinder and relays. The other compartment carries the ECM, TCM, relays, fusebox and a cooling fan. Air for cooling the compartment is taken from, and returned to the cabin by ducting.

At the front left side of the engine compartment are located the windshield/headlamp wash reservoir filler, the power steering oil reservoir, left front fusebox and the brake control module.

An electric motor driven water pump and valve are located centrally against the bulkhead. The valve is located behind a heat shield and below the coolant reservoir/header tank.

**ENGINE COMPARTMENT**

1. Power Steering Reservoir
2. Windscreen Washer Reservoir
3. Engine Oil Dipstick
4. Engine Oil Filler
5. Brake Fluid Reservoir
6. Coolant Reservoir Filler Pressure Cap
Trunk

The trunk lid is a one piece outer panel with clinched inner to outer assembly providing minimum welding. Trunk opening from the car interior is by a switch, adjacent to the fuel filler release switch, mounted in the driver side fascia underscuttle. This switch is operational when the valet mode is inactive, security disarmed (vehicle is unlocked) and the vehicle is stationary. The latch is fixed to the BIW and is operated by cable from the locking mechanism mounted in the trunk right-hand side. An emergency lock, key operated, is provided for access to the trunk. Non-locking gas struts support the open trunk lid. Single color moulded carpets are fitted to the trunk.
Note: This section contains information on those vehicle mounted components and systems that interface with the engine. For detailed information on the engine and the engine management system, refer to the Technical Guide: AJ-V8 Engine & 5HP24 Transmission Introduction.

**Engine Mountings**

An engine mounting on each side of the cylinder block secures the engine to the front suspension cross-beam. A plastic protective cover is installed over the upper part of each mounting.

**Engine Cooling**

The cooling system is a low volume system that provides fast engine warm-up times.

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**COOLING SYSTEM DIAGRAM**

1. Radiator  5. EGR Valve  9. Coolant Reservoir

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303-120
COOLING PACK

1 Engine coolant inlet
2 Refrigeration system outlet
3 Refrigeration system inlet
4 Engine coolant outlet
5 Transmission oil cooler inlet
6 Transmission oil cooler outlet

**Radiator**
The fin and tube radiator combines high performance with low coolant volume and low air resistance. The outlet tank, on the left side of the radiator, incorporates a plate type transmission oil cooler. The bleed outlet vents any air in the radiator into the coolant reservoir.

**Cooling Fans**
Two electric cooling fans are installed in a plastic cowl on the rear of the radiator, similar to the 96MY Sedan. The fans, one 305 mm (12.0 in) diameter and one 325 mm (12.8 in) diameter, are controlled by the ECM via the radiator cooling fans control module. When the fans come on they operate in either slow (series electrical supply) or fast (parallel electrical supply) mode.

**Hoses**
The ends of the cooling system hoses have orientation marks to ensure correct installation. The orientation mark should be at the top of the related spigot, unless the spigot also has an orientation mark, in which case the marks should align. Spring clamps secure the ends of the hoses on the spigots (there are no worm drive clamps). At the rear of the engine, the supply and return hoses of the A/C heater matrix incorporate quick release connectors.
Coolant Reservoir
The coolant reservoir is installed on the left front firewall extension in the engine compartment. It provides the system filling point and incorporates the coolant low level sensor. The coolant should be level with the bottom of the filler neck. The filler cap incorporates a 1 bar (14.5 psi) pressure relief valve which controls the release of pressure to the atmospheric catchment tank.

Atmospheric Catchment Tank
The atmospheric catchment tank is installed behind the wheel arch liner at the rear of the right front wheel. It accommodates the expansion of coolant during normal operation. When the engine cools the coolant is drawn back into the coolant reservoir. Any air vented from the system passes through the catchment tank and vents to atmosphere. An overflow pipe runs from the catchment tank to expel hot coolant on to the ground.
Air Intake

Engine intake air is drawn from under the right front fender. It then passes through the air cleaner, the MAFS/air intake temperature sensor and the air intake pipe to the electronic throttle on the engine.

Air Cleaner
The air cleaner consists of a plastic base and cover, held together by five over-center clips, with an air cleaner element clamped between them. The base is mounted in grommets on a bracket attached to the inner fender. A self-adhesive foam ring seals the joint between the intake duct on the base and the inner fender. The MAFS/air intake temperature sensor, interfaced by a rubber seal, connects to the outlet port of the cover.

Air Intake Pipe
A worm drive clamp secures the plastic air intake pipe to the MAFS/air intake temperature sensor. A rubber ring on the sensor seals the joint. Two screws secure the air intake pipe to brackets on the electronic throttle. A rubber gasket, located on the pipe, seals the joint.
Introduction

The ZF 5HP24 automatic transmission system fitted to the XK8 sports car features five forward gears and one reverse gear and a filled-for-life oil system. A more detailed description of the transmission is included in the AJ26 Engine and Transmission Technical Guide which compliments this guide.

Rear Mounting

The rear mounting is an aluminum casting with four point mounting to the body. A bonded rubber mount and bolt secures the transmission rear extension housing to the mounting casting.
Gearshift Selector
The gear selector lever, has seven gearshift positions, P, R, N, D, 4, 3, and 2, and a mode switch for normal or sport driving. This passes driver requests for gear selection to the TCM, via a rotary switch. The rotary switch is mounted on the transmission casing. The gear selector unit includes a read-only electronic module which gives a red illumination, on the selector surround, of the gear selected. The module has a CAN connection to/from the Instrument Cluster for dimming of the gear surround illumination and for operation of the security indicator light.
Other connectors on the gear selector are, gear shift interlock, park switch, neutral switch and D to 4 switch. The D to 4 switch is a new feature and is necessary because the selector cable does not move the rotary switch when selecting from D to 4th gear. The switch senses the gear selector movement and signals the TCM. An output signal is sent to the BPM to prevent the driver from removing the key from the ignition switch unless the gear selector is in the Park position.
The kickdown switch is floor mounted, under the accelerator pedal.
The mode switch is mounted on the rear of the gear selector unit and is illuminated when sport is selected by the driver.

Transmission Oil Cooling
Cooling of the transmission oil is achieved by pumping the oil to and from the transmission casing to the oil cooler. The cooler is a plate-type design made from aluminum and is located in the car radiator outlet tank.

Technical Data
Road speed/engine speed in lock-up
5th Gear 51 kph (31.9 mph) /1000 RPM
4th Gear 41 kph (25.6 mph) /1000 RPM
3rd Gear 27.2 kph (17.0 mph) /1000 RPM
with Pirelli ZR17 tyres and 3.06 axle ratio.
Transmission Management
Gearshift management is achieved using a TCM, an integral part of the vehicle CAN multiplex network. The TCM is located in the forward bulkhead extension, along with the ECM. Access to the modules is gained through a screwed lid. The vehicle harness connector for the TCM is an 88-way latching connector. The transmission management system uses both analogue and digital signals which are processed by the TCM to and from the CAN multiplex system and from hard wired devices. The CAN system is a high speed serial interface to allow the interchange of sensor and real time digital data between four electronic modules; TCM, ECM, ABS/TCCM and the Instrument Cluster.

Further details of transmission management are incorporated in the AJ-V8/5HP24 Engine/Transmission Technical Guide.

Driveshaft
The driveshaft is constructed in tubular aluminum with a slip joint at the transmission end. The tubular steel splined yokeshaft engages with the aluminum muff in the main tube to allow for longitudinal adjustment when fitting and provide for dynamic axial movement in service. A nylon coating covers the splines which helps to reduce friction and wear. Drive from the transmission output shaft is through a flexible coupling and to the final drive via a universal joint. The driveshaft must be fitted at the final drive end first to avoid damage to the flexible coupling centering bush and transmission spigot. No alignment is necessary due to its one-piece construction. Special tooling is required for torque tightening the transmission and final drive joint fasteners.

The weight of the driveshaft is 6.93 kg (15.28 lb).

Final Drive
A new final drive unit designated 14HU is fitted to the XK8 and is externally similar to the current 95VY sedan unit. The internal design features a stiffened pinion for improved refinement and a new main gearset with reduced offset, increased contact ratio and reduced sliding for greater efficiency. This unit is oil filled-for-life and does not have a drain plug fitted. The only serviceable components are the output bearing and seal and the pinion oil seal. The pinion is on the center line of the vehicle which improves the driveline alignment. The pinion oil seal is a cassette unit. Dedicated tools are required to remove the cassette unit.

The weight of the final drive unit is 46 kg (101 lbs).

Oil capacity is 1.76 litres (0.46 US galls).
Introduction

The fuel system layout continues Jaguar's current practice of a fuel tank in the trunk, over the rear suspension, with fuel lines on the left underside of the vehicle connecting the tank to the engine fuel system.

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**FUEL SYSTEM**

1. Engine Breather  
2. EVAP Valve (purge valve)  
3. Fuel Rails  
4. Fuel Pressure Regulator  
5. Evaporative Loss Flange  
6. Fuel Tank  
7. Fuel Filter  
8. Carbon Canister  
9. Fuel Tank Pressure Control Valve  
10. To Atmosphere
Fuel Tank

The steel fuel tank is a new design common to both the coupe and convertible. Total volume of the tank is 90 litres (23.8 US gallons). Maximum fuel capacity is 75.5 litres (20.0 US gallons), of which 75 litres (19.8 US gallons) can be used. The low level warning on the major instrument cluster comes on if the contents decrease to 10 litres (2.6 US gallons) minimum of useable fuel. The fuel pump and evaporative loss flange are the same as those used in the 96MY Sedan range. The fuel level sensor is new, but similar to previous designs. The front of the fuel tank locates on two lugs on the body. On the coupe, two metal straps secure the rear of the tank. On the convertible, a closing panel secures the rear of the tank.

Fuel Lines

The fuel lines consist of metal center sections with flexible P-CAP hoses at each end. Quick release connectors attach the fuel lines to the engine fuel rails, fuel tank and various vapour lines.

Fuel Filter

The fuel filter is installed below the left rear seat pan. Except for the attachment bracket, it is the same as that installed on the 96MY Sedan.
EVAP System

The EVAP system is similar to previous single canister systems. The carbon canister and tank pressure control valve are the same as those installed on the 96MY Sedan. The EVAP valve is new.

Carbon Canister
The carbon canister is attached to a bracket behind the wheel arch liner at the rear of the left front wheel.

Tank Pressure Control Valve
The tank pressure control valve is attached to the carbon canister bracket. The vacuum signal for the valve is taken from the left side of the engine’s induction elbow.

EVAP Valve
The EVAP valve is installed in the engine compartment, on the left forward firewall extension. This valve is closed with the engine off and modulates with the engine running.
Introduction

The XK8 sports car has an all new, five-muffler, exhaust system fitted. None of the components are carry over from the XJS or XJ sedan ranges. The exhaust arrangement provides a low back-pressure gas flow system which enhances engine performance.

Downpipe assembly

Each engine bank has an exhaust manifold to which is attached a downpipe assembly. For markets which have unleaded fuel, each downpipe has catalytic converter elements. For markets with only leaded fuel, the downpipe elements contain the catalyst components to maintain the exhaust pressure system but they do not have the catalyst coating.

Four threaded studs fitted in the downpipe top mounting flange locate and secure the downpipe to the exhaust manifold. Joint to joint sealing is with a gasket. A heated oxygen sensor is fitted to the upper threaded location of each downpipe which samples the gas prior to the catalytic converter. The lower end of the downpipe is secured by two nuts and bolts to a bracket which is fastened to the engine.

An extra threaded location is provided at the lower end of the downpipe, downstream of the catalytic converter, for the fitting of an oxygen sensor (not heated).

The front exhaust pipes are slip joints to the downpipes and indicator rings on the downpipes provide minimum/maximum and nominal engagement location marks.

Exhaust System Layout

Both front exhaust pipes terminate in a common, centrally positioned, front underfloor muffler. The pipes and muffler are one combined unit, the pipes being welded to the muffler. The front pipes are attached to each other by a bracket welded to each of the pipes and secured together with a strap and two nuts and bolts. The exhaust gases divert on leaving the front underfloor muffler and pass into two intermediate mufflers, through overaxle pipes, into twin rear mufflers and then to the atmosphere. Each intermediate muffler and overaxle pipe are a combined unit and are handed left and right side.

All joints are slip joints and have indicator rings providing minimum/maximum and nominal engagement location marks. No gas sealants are needed for any joint. Attachment points for each of the intermediate mufflers and overaxle pipes are made at the overaxle point by a pin welded to each pipe which locates into a bush in a D-shaped, mounting rubber. The two rubbers being bonded into cradles which are bolted to the rear suspension cross member. Rear attachment for the tailpipe and muffler is an arrow head pin welded to the tailpipe, at the rear of each muffler,
held in a rubber suspension ring from a body attachment point. Each rear muffler tailpipe has an integral tailpipe finisher and are handed left and right side. All mufflers are the packed absorption type. Total system weight is approximately 40 kg (88 lbs).

EXHAUST SYSTEM LAYOUT

- Slip joint clamp
- Downpipe to Engine securing bracket
- Overaxle mounting
- Tailpipe mounting
Front Suspension

Front Crossbeam
The XK8 has a new lightweight, cast aluminum, front suspension crossbeam. It is bolted at four points to the body longitudinal members through bonded rubber to metal bushings.

CAUTION: Do not use the aluminum crossbeam as a jacking point. Damage can occur to either the crossbeam, brake pipes or the steering rack. The steel lower crossbeam beneath the radiator package or the normal car jacking points must be used for front end jacking.

The crossbeam carries the engine mounting points, upper and lower wishbone mounting points, the steel wishbone tie bar, stabilizer bar and the power steering rack.
**Wishbone Assemblies**

Both upper and lower wishbone assemblies are attached to the crossbeam by fulcrum bolts. The upper wishbone is a single-piece steel forging with slipflex bushings, two bushings to each arm, to suit the single fulcrum bolt. The wide base lower wishbone comprises two steel forged arms, bolted together. Each piece is bushed with metal-to-rubber bonded bushings to suit the two mounting point fulcrum bolts. The front lower wishbone is tapped to accept the two bolts which secure the two wishbone arms together. Additionally, the two lower bolts are used to secure the damper mounting brackets to the wishbone. A stabilizer bar is clamped in two places by rubber bushings and brackets to the beam. Location of the stabilizer bar is by a collar on the bar which mates with a groove in one of the rubber mounting bushings. Both bushings are grooved. The outer ends of the stabilizer bar are bolted to drop links which are bolted to the rear arms of the lower wishbones. These bolts are also used to secure the damper mounting brackets outboard side.

**Vertical Link**

The vertical link, which carries the front wheel bearing, hub flange, hub nut/rotor and wheel speed sensor, is attached to the wishbones by a top and a bottom ball joint. The ball joints are press fit to the wishbones. The vertical link also has the steering tie rod end ball joint attachment and brake caliper and disc shield attachments.
FRONT SUSPENSION COMPONENTS

- Front Spring and Damper Assembly
- Upper Wishbone
- Vertical Link
- Lower Wishbone
Hub Nut/Wheel Speed Rotor
The front wheel speed rotor is part of the wheel hub nut. A special socket spanner, JD.228 and hub holding tool, JD.227 are required to torque tighten the front hub nuts. The nut locking device consists of a spring plate with a pin at either end which is placed inside the hub and each pin engages with slots in the nut. The socket spanner is designed to allow the locking pins to engage the nut without removing the socket spanner.
The rear wheel speed rotor is as the 95MY sedan.

Wheel Speed
Each of the two front vertical links and each of the rear hub carriers has a sensor which, together with the rotor, provides hard wired, wheel speed information to the CAN, via the ABSCM.

Front Dampers
The top of each front independent suspension co-axial spring and damper assembly is fitted to the car body. The spring is compressed between the top mounting flange and a spring pan on the damper body. Damper attachment at the lower end is between two plates located on the rear lower wishbone.
Rear Suspension

The rear suspension is similar to the 95MY sedan with new rated springs and dampers. In place of the two single differential struts it has a monostrut. Wheel bearings are as the 95 MY sedan. The new 14 HU final drive is driven through a pinion which is on the center line of the vehicle, improving the driveline alignment. The rear wishbone is cast with pick-up points for the stabilizer bar. All suspension dampers, springs and stabilizer bars are matched to the sport suspension.
Wheels and Tires

<table>
<thead>
<tr>
<th>Wheel Size</th>
<th>Tire Size(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Wheels</td>
<td>Pirelli P Zero 245/50 ZR 17 99Y Asimmetrico</td>
</tr>
</tbody>
</table>

**Sport Wheels**
The Sport road wheels are painted cast alloy and are a standard fit for all vehicles. Chrome finished wheels are available as an option.

**Spare Wheel**
A full size, 17 inch, alloy wheel, which matches the normal roadwheels, is standard fit as a spare wheel.

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**Tire Pressures:**

<table>
<thead>
<tr>
<th>Suspension</th>
<th>Maximum Comfort (Speeds up to 160 kph (100 mph))</th>
<th>Normal Pressures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport</td>
<td>Front 1,7 bar (26 psi)</td>
<td>2,2 bar (32 psi)</td>
</tr>
<tr>
<td></td>
<td>Rear 1,9 bar (28 psi)</td>
<td>2,3 bar (34 psi)</td>
</tr>
</tbody>
</table>

Tires, other than those recommended by Jaguar, must be inflated to the following cold inflation pressure: front and rear - 3,0 bar (43 psi)
Brake Systems

The front wheel brake disks are 28mm x 305mm (1in x 12in) diameter, ventilated rotors with associated cooling ducts. The front brake calipers are as the 95MY sedan but with the hose port facing forwards. The front disk shields have been changed to suit the new disks and can be removed without disturbing the wheel hub and bearings.

The rear brake disks, 20mm x 305mm (0.75in x 12in) ventilated rotors, calipers and disk shields. The brake booster and master cylinder are located in a forward bulkhead extension compartment within the engine compartment. The brake pedal is housed in a plastic pedal box. The brake switch is a carry over from the 95.25 MY XJS.

Brake Control Modulator

The BCM is located in the front left side of the engine compartment. The brake pipes are routed through the front fender and forward bulkhead extension. Normal brake function is pedal force applied by the driver, assisted by a brake vacuum booster. The BCM, fitted as standard to all vehicles, serves as an anti-lock braking device (ABS) and also a wheel spin prevention control device (when traction control is fitted). The BCM comprises an aluminum valve block, solenoid valves, an electrically driven pump, two low pressure accumulators and damping chambers. Each BCM has 6 ABS or 9 ABS plus TC integrated valve coils and integrated main and pump motor relays. The electronic control module is integrated with the valve block. The pump, motor, valve block and control module are supplied as a unit and are non-serviceable. In addition, the BCM with Traction Control has software for individual control of each of the road wheels. Brake software is new Teves Mk20l software with CAN interface. With the new software and CAN controlling the balancing of the front and rear brakes, the need for pressure conscious reduction valves (PCRV's) is removed, therefore PCRV's are not fitted to the XK8. The BCM incorporates CAN software to support traction policy and electrical architecture.

Each road wheel hub contains an inductive wheel speed sensor which provides road speed signals to the BCM. These signals are also fed over the CAN for vehicle use, such as vehicle speed displayed on the instrument cluster, for cruise control or for stability/traction control.

Should a locking tendency of any wheel during braking be sensed, the pump unit will be started and the inlet valves of the corresponding wheel/axle will be closed to stop further pressure increase.

If this does not stop excessive deceleration of the wheel, the pressure in the wheel cylinder will be decreased by opening the outlet valve to release pressure to the low pressure accumulator until the wheel/axle accelerates again. From the low pressure accumulator, brake fluid volume is pumped via the damping chamber to the master cylinder. The pressure to the brake system will then be increased in small steps to maintain maximum friction between the road and wheels. This is achieved by closing the outlet valve and opening the inlet valve to recharge the pressure leaving the master cylinder.

If, during acceleration, any one or more of the road wheels has a tendency to spin caused by excessive engine torque or loss of friction/traction, it is detected by the wheel speed sensor. Potential wheel spin is countered in two ways, either by Stability Control or by Traction Control.
Stability Control
The Stability Control system utilizes engine intervention to reduce the torque/power to the rear wheels to prevent the wheels spinning. Engine power is reduced in three ways: the throttle is moved towards the closed position, the fuel is cut-off at the injectors to the cylinders and the ignition is retarded. Because of the mechanical delays, the throttle response is slower to work than the fuel cut-off and ignition retard. In the event of a tendency for wheel slip, the BCM uses information from the CAN bus to calculate the torque which should be applied by the engine to prevent the slip. Torque reductions are then requested from the ECM via the CAN bus. The throttle is positioned to provide the target torque calculated to prevent slip. During the transient phase of torque reduction the ignition will be retarded and fuel cut off to the cylinders to reduce torque to the target value. Both the fuel cut-off and ignition retard will be restored to their previous settings when the throttle is set to its new position. The stability control switch is mounted in the center console and has an LED illuminated ASC OFF (anti-skid control off).

Traction Control
In addition to the engine torque reduction used with stability control, traction control uses individual wheel braking to control potential spinning of a wheel. To increase brake pressure, the cut-off solenoid valve will be closed and the pump will be started. It will suck brake fluid volume out of the reservoir via the non-actuated master cylinder, the non-actuated hydraulic cut-off valve and the additional pump inlet valve and pumps it via the solenoid inlet valve to the calliper. The traction control switch is mounted in the center console and has an LED illuminated TRAC OFF (traction off). The traction switch does not affect gear shifting except that a message from the BCM that traction is active will switch the TCM to select the traction program. Following the active signal the TCM will inhibit downshifts/torque convertor lockup and select a single shift pattern tailored to meet the traction system requirements for upshifts. When either ASC or TRAC are active a message is displayed on the message center and the amber warning light will flash.
Parking Brake

The sill mounted parking brake is a new component. The parking brake switch is a carry over from the 95.25MY XJS. Rear axle configuration of the parking brake components is a carry over from the 95MY sedan with common mountings for both coupe and convertible. The cable is routed from the handbrake, behind the drivers seat under the carpet and passes into the tunnel to the side abutment bracket. The handbrake cable terminates at a relay lever assembly mounted on the tunnel closing plate.

This converts the sill mounted hand lever system to a 95MY sedan center pull system. The tunnel closing plate is not interchangeable between the coupe and the convertible because the convertible plate is longer. From the relay lever assembly the cable arrangement is as the 95MY sedan. Adjustment of the cable is from a central point in front of the rear axle, as the 95MY sedan. If the vehicle is driven above 5 km/h (3.1 mph) with the parking brake on then a warning light and text message will appear on the message center. The message clears when the parking brake is disengaged or the speed drops below 3 km/hr (1.87 mph).
Power Assisted Steering System (PAS)

Steering Rack
The steering rack is a ZF Servotronic speed sensitive, variable ratio, rack and pinion, power assisted unit and is standard on all models. Service is limited to the transfer pipes, bellows, outer ball joint assemblies, transducer, centralising cap and their clips and fittings. The track rod assembly, including the inner ball joint, is not a serviceable item. Centralisation of the rack is made by a locating pin and the unit cover. The rack is mounted across the rear of the front suspension aluminum crossbeam by wrap-around 'U'-brackets and bushings. The handed and orientated bushings and 'U'-brackets are replaceable without removal of the rack. Incorporated in the rack is an integrated power cylinder, a rotary hydraulic valve and positive center feel torsion bar. The rotary control valve distributes and controls the degree of hydraulic pressure needed to support any given driving situation. This arrangement gives the driver a power assist which is speed sensitive allowing ease of parking combined with high speed feel.

PAS Pump
The power assist pump is a new Hobourn Automotve Series 500, belt driven by the engine and contains no serviceable parts.

PAS Reservoir
The 0.4 litre (0.42 US quart) fluid capacity oil reservoir is rubber mounted in the engine compartment to the rear of the left-hand headlamp. It has a screw cap with integral dipstick and incorporates a 10 micron paper filter. The filter is not a serviceable item. If any major PAS component is replaced then the reservoir and fluid must also be changed.
PAS Oil Cooler and Hoses
An oil cooler is rubber mounted on the front bumper beam. All hoses and the rotary valve have been designed to reduce system noise. Spring band hose clips are used on low pressure joints at the reservoir and reservoir to pump, and in-line self sealing quick fit connectors at all other joints. An in-line quick fit connector with double 'O'-ring seals is used for connecting the cooler and hose assembly to the return line pipe.

PAS Control Module
A PASCM, mounted in the fascia, right-hand side, receives speed signals from the Instrument Cluster and sends signals to the PAS rotary valve to provide speed feel control to the driver.
Steering Wheel
The steering wheel is a modified version of the 95MY sedan. It has the addition of switches mounted on the steering wheel. One set of switches are for control of the in-car entertainment system. A second set of switches are used for cruise control. The driver's airbag/SRS is fitted to the steering wheel and a Jaguar badge is located in the center face of the wheel.

Upper Steering Column
The upper steering column is essentially a carry-over of the 95MY sedan with electric tilt/reach adjustment. With the electric operated column, when the key is removed from the ignition, if the column is selected to AUTO, the column will tilt away for entry/exit. The motors are fitted with feedback potentiometers for the memory feature. Main variations from the X300 are: adjustment range, connected directly to the lower steering column, no knee bolster bracket, new connector mounting brackets and reach adjust motor position (electric). With electrically operated columns, the adjustment switch is mounted on the left-hand side of the lower column cowl, adjacent to the dimmer switch.

Lower Steering Column
The lower steering column is a new design for the XK8 and is handed. There are no serviceable components and the gaiter is part of the assembly. It has a telescopic slider mechanism. No adjustment or setting of the column is required. Column yokes can be connected to the upper column and steering rack in any orientation on the splines. The column must be disconnected from the rack before removing the engine or dropping the front suspension beam. If the slider mechanism is separated, for any reason, it must not be re-assembled.