

**S-TYPE**DATE 11/00
Amended 12/00**S204-R136****SERVICE****TECHNICAL BULLETIN****Recall R136 –
Front Lower Ball Joints –
Check Torque or Replace**MODEL 2000-01 MY
S-TYPE

VIN L00001-L92349

Remove and destroy Bulletin S204-R136, dated 11/00.
Replace with this Bulletin.
Revisions are marked with a bar and in **bold text**.

Issue:

As a result of ongoing process assessments, Jaguar has identified a safety-related defect on a number of S-TYPE vehicles.

On the vehicles involved, it is possible that an under-torque condition may exist on the front lower ball joint assembly. This may result in a high bending fatigue loading condition on the joint. In some cases the high bending loads could result in a fracture in the first thread of the ball stud that could then lead to separation of the lower control arm from the vertical link.

Jaguar has made the decision to recall all S-TYPE vehicles in the above VIN range to check and, if necessary, replace the front lower ball joint. If replacement is required, the easiest way to do this is to replace the complete vertical link assembly. This work will be performed free of charge to the customer.

Only a very small number of the vehicles checked will require replacement parts.

⚠ WARNING: NO DEALER STOCK SHOULD BE RELEASED UNTIL THIS CHECK AND ANY NECESSARY RECTIFICATION IS CARRIED OUT. Customer vehicles, with a VIN prior to L92349, **MUST** be checked before releasing the vehicle to the customer.

Jaguar is writing to all affected customers in North America (copy of letter attached) requesting them to contact an authorized Jaguar Dealer as soon as possible to arrange for the lower ball joint assembly to be checked and, if necessary, replaced at the earliest opportunity.

Action:

Check and, if necessary, replace the required components on all S-TYPE vehicles that are within the affected VIN range.

The workshop procedure for checking vehicles, as well as, for replacing components is outlined in this bulletin.

Jaguar has shipped a torque wrench to dealers that makes it possible to perform this check without the need to remove the wheel and tire assembly. By not removing the wheel and tire assembly the current dynamic balance characteristics will be retained.

LOWER BALL JOINT SECURING NUT TORQUE CHECK

1. Set torque wrench to 80 Nm and apply to the lower ball joint retaining nut (Illustration 1).

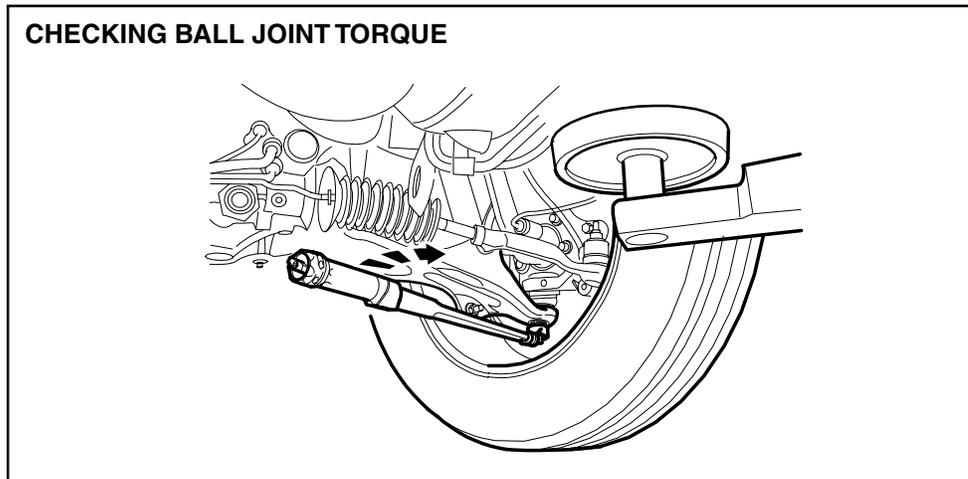


ILLUSTRATION 1

Note: Hold the ball joint stud with a suitable wrench to prevent possible rotation while performing the 80 Nm check (Illustration 2).

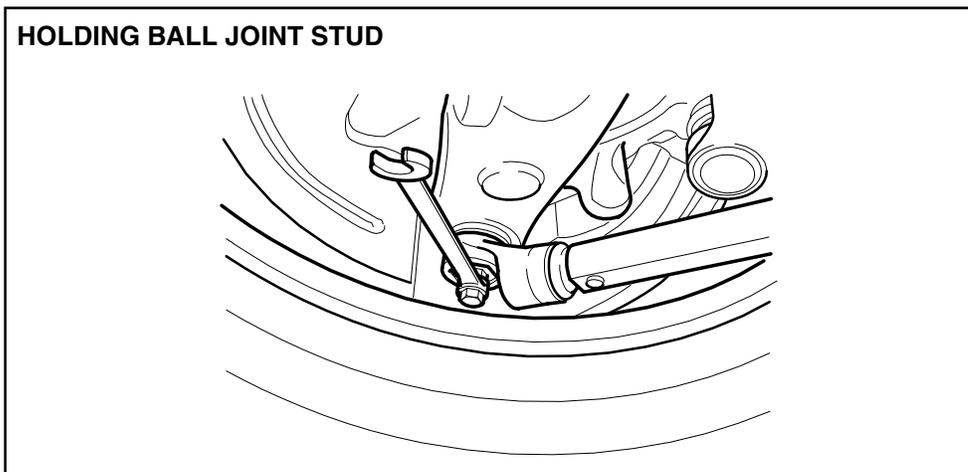


ILLUSTRATION 2

2. If the torque wrench reaches 80 Nm without moving, reset the torque wrench to 150 Nm and torque tighten the nut.

Note: To show that the retaining nut has been tightened to 150 Nm, a painted identification mark must be added to the nut.

3. If the retaining nut moves prior to reaching 80 Nm or the nut is visually loose, then the vertical link assembly will have to be replaced.
 - Dismantle the vertical link (ball joint) and inspect the lower arm, checking the stud-through hole for damage caused by looseness.

Note: Also check for deterioration of the cone face; e.g. pitting, scoring or an elliptical shape.

- If the arm is damaged the lower arm will need to be replaced along with the vertical link.

Note: After replacing the lower arm, vertical link or both, the painted identification mark needs adding to the retaining nut.

REPLACING LOWER BALL JOINT/VERTICAL LINK

If one or both lower ball joint securing nuts fail the check, the corresponding vertical link will need to be replaced using the following procedure:

1. Remove front brake disc for access. See JTIS 206-03 (SRO 70.10.10).
2. Remove the three pushpins from the inner fender skirt, then position the skirt aside to access the anti-lock brake (ABS) sensor electrical connector.

⚠ Caution: Do not remove the ABS sensor and wire from the hub assembly. The sensor O-ring may be damaged.

3. Disconnect the ABS sensor from the vehicle wiring harness. Detach the ABS sensor wiring from the retaining clips.
4. Loosen and remove front hub securing bolts (Illustration 3).

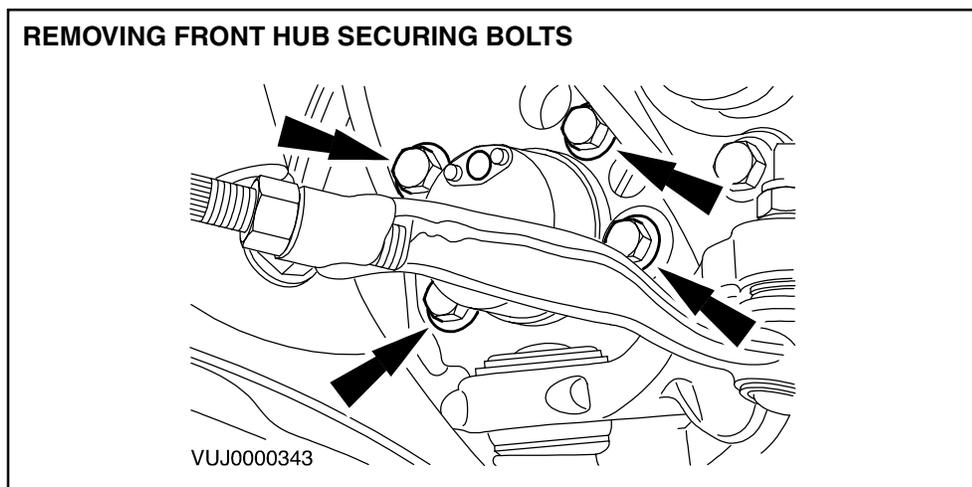


ILLUSTRATION 3

REMOVING FRONT HUB

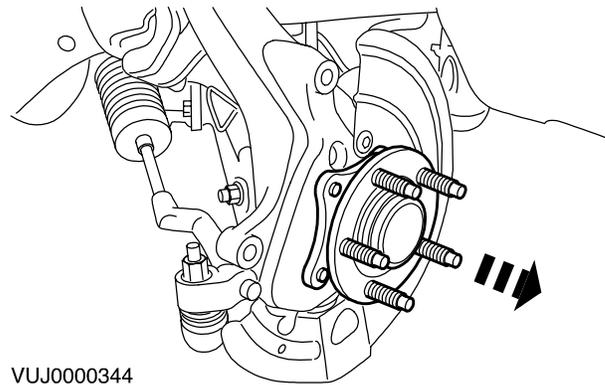


ILLUSTRATION 4

5. Remove front hub from vertical link (Illustration 4).
6. Loosen, but do not remove upper wishbone ball joint securing nut (hold ball joint stud to prevent rotation).
7. Loosen and remove tie rod end to vertical link securing nut (hold ball joint stud to prevent rotation).
8. Disconnect tie rod end from vertical link.
9. Loosen and remove lower wishbone ball joint securing nut (hold ball joint stud to prevent rotation).
10. Disconnect vertical link from lower wishbone.
11. Finally remove securing nut from the upper wishbone ball joint (hold ball joint stud to prevent rotation).
12. Remove vertical link **and front disc shield from the vehicle as an assembly.**
13. Clean components and mating surfaces.
14. Check the condition of the lower ball joint mounting hole in the lower wishbone for damage caused by looseness.

Note: Check for deterioration of the cone face e.g. pitting, scoring or an elliptical shape.

Note: If no damage is visible proceed to step 34 (install and align new vertical link to upper wishbone) of this workshop procedure.

15. If the mounting hole is damaged, the lower wishbone will need to be replaced.
On vehicles equipped with 3.0 V6 engines, the generator plastic cover will have to be removed for access if the right hand lower wishbone is to be replaced and must be reinstalled after completing the alignment check and adjust.
 - Displace and remove generator cover upper fir tree fastener.
 - Loosen and remove generator cover/front under tray securing screw.

- Loosen and remove generator cover rear securing screw.
- Remove generator cover.

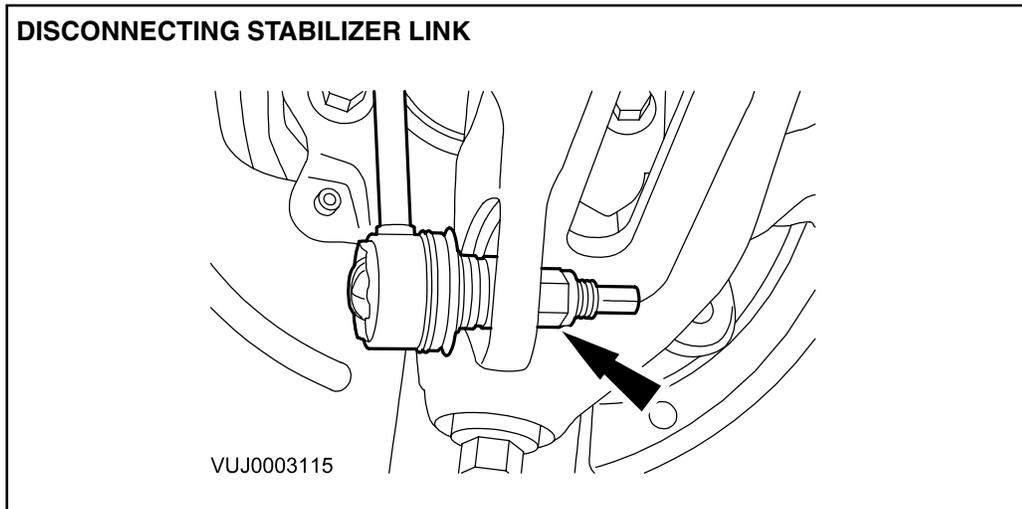


ILLUSTRATION 5

16. On all vehicles, loosen, remove and discard stabilizer link arm to lower wishbone-securing nut (Illustration 5). (Hold ball joint stud to stop rotation.)
17. Reposition link arm away from lower wishbone.

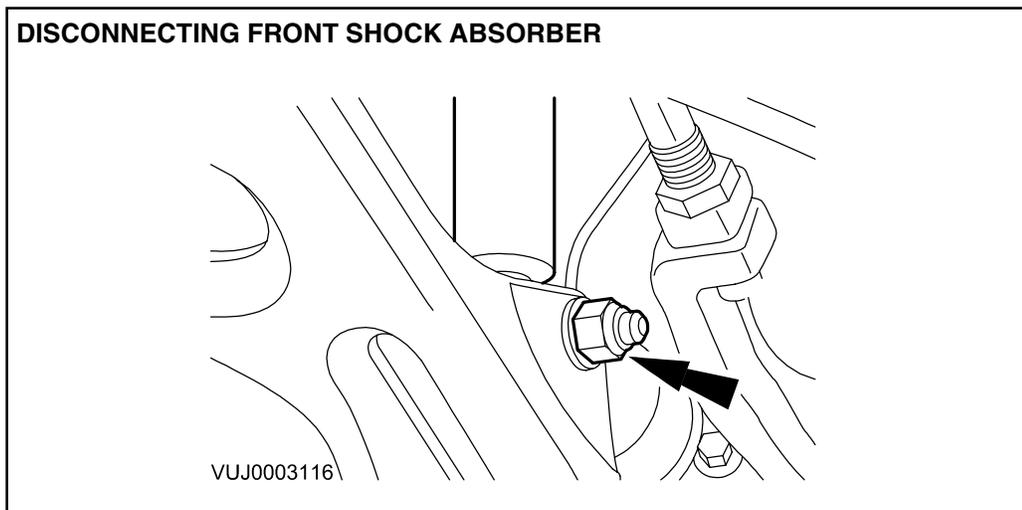


ILLUSTRATION 6

18. Loosen and remove front shock absorber to lower wishbone-securing bolt. Discard the nut (Illustration 6).

REMOVING STEERING RACK BOLTS

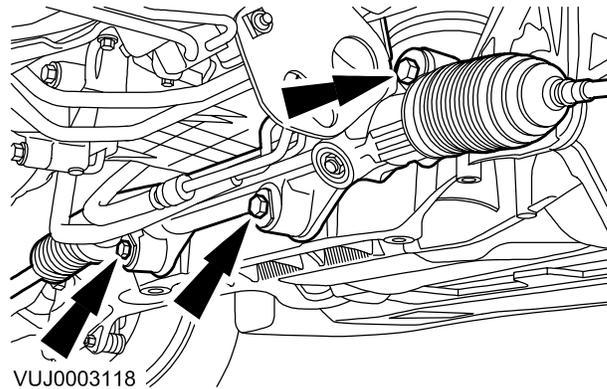


ILLUSTRATION 7

19. Loosen and remove steering rack securing bolts (Illustration 7). Discard the nut.
20. Displace and reposition steering rack for access.
21. Loosen, remove and discard lower wishbone front and rear securing nuts.
22. Remove and discard lower wishbone front and rear bolts.

Note: If cam bolts are already installed, retain them for reuse.

23. Displace and remove lower wishbone.

Note: When replacing a damaged lower wishbone on a vehicle with the early type front bushings, the lower wishbone on the opposite side must also be replaced since both sides must have the same style bushings. The later style bushings can be identified by polyurethane inserts in the forward mounting bushing. Earlier type bushings do not have the polyurethane inserts.

24. Position and align new lower wishbone to no. 1 and No. 2 front beams.
25. Install new wishbone cam bolts if required, as described on the next page.

⚠ Caution: Do not tighten newly installed cam bolts and securing nuts **until the alignment check and adjust procedure is performed with the vehicle lowered**, to prevent the wishbone bushes being prestressed during normal operation.

FRONT CAM BOLT

Install the bolt from the rear, with the cam lobe down (Illustration 8).

Note: Ensure the cam lobe is fitted centrally between the cam guides on the no. 1 cross-member.

Note: Fit but do not fully tighten the lock nut, until after the alignment check.

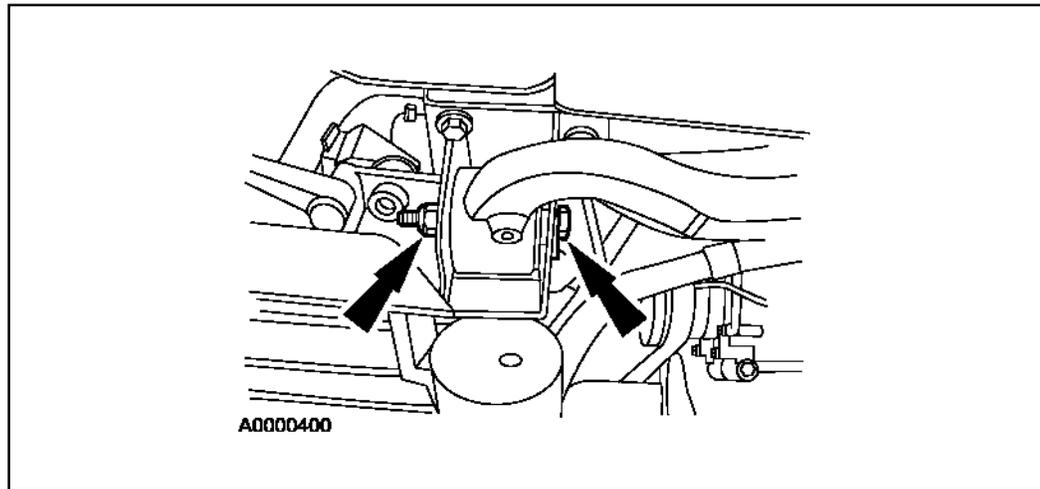


ILLUSTRATION 8

REAR CAM BOLT

Install the bolt from the rear, with the cam lobe down (Illustration 9).

Note: Ensure the cam lobe is fitted centrally between the cam guides on the no. 2 cross-member.

Note: Fit but do not fully tighten the lock nut, until after the alignment check.

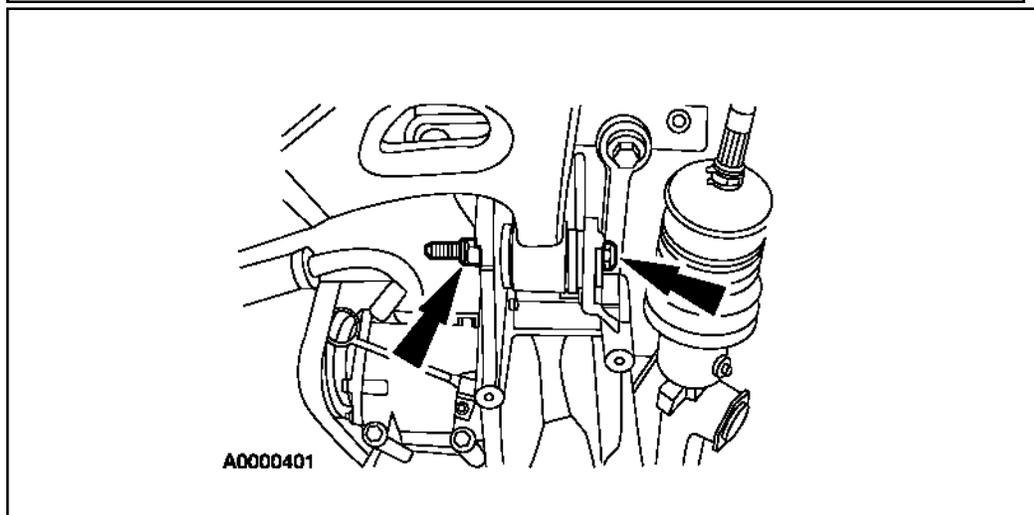


ILLUSTRATION 9

26. Reposition and align lower wishbone to front damper.
27. Install and tighten front damper to lower wishbone-securing nut/bolt. Torque setting 175 Nm.
28. Fit but do not fully tighten new cam bolt securing nuts.
29. Reposition and align steering rack.
30. Install and tighten steering rack securing nuts/bolts. Torque setting 103 Nm.

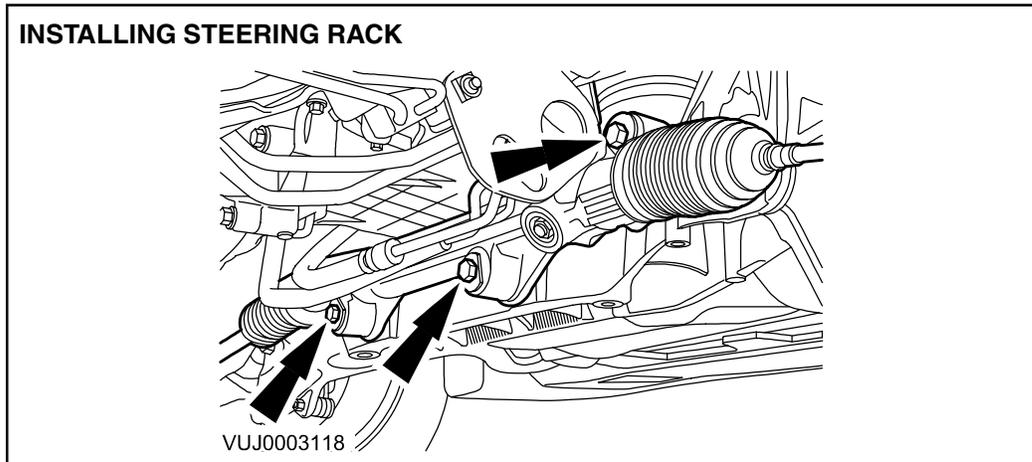


ILLUSTRATION 10

31. Connect stabilizer link arm to lower wishbone.
32. Install and tighten the nut that secures the stabilizer link arm to the lower wishbone. (Hold ball joint stud to stop rotation). Torque setting 55 Nm.

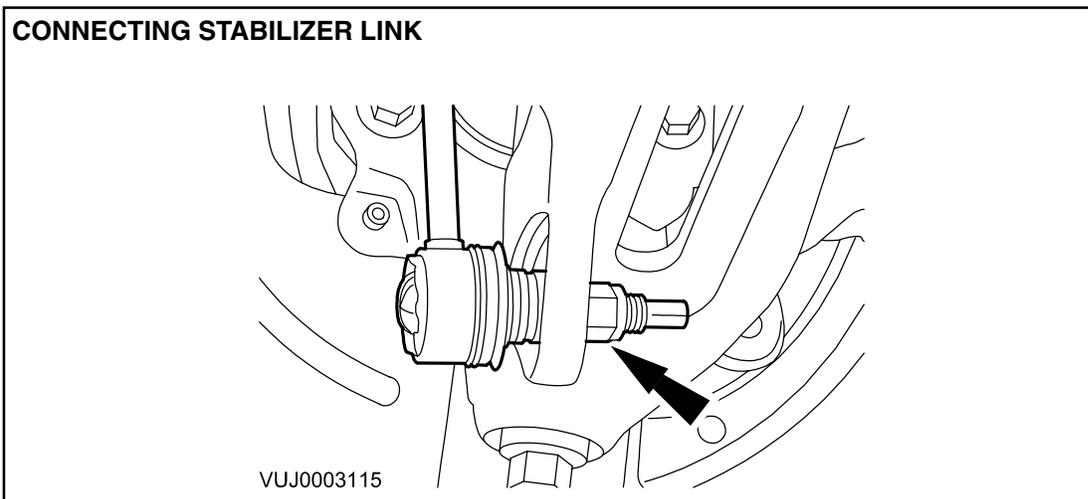


ILLUSTRATION 11

33. Install and align new vertical link to upper wishbone.
34. Fit but do not fully tighten upper wishbone to vertical link securing nut (hold ball joint to prevent rotation).
35. Reposition vertical link to lower wishbone.

36. Fit but do not fully tighten lower wishbone ball joint securing nut (hold ball joint stud to prevent rotation).
37. Install and fully tighten lower wishbone ball joint securing nut with torque wrench to 150 Nm.
38. Position vertical link to tie rod ball joint.
39. Connect tie rod ball joint to vertical link.
40. Install and tighten ball joint securing nut (hold ball joint stud to prevent rotation). Torque setting 100 Nm.
41. **If the disc shield is not already installed on the vertical link**, reinstall disc shield using the 1/4" rivets supplied. See JTIS 206-03 (SRO 70.10.18).

Note: It is imperative that the brake disc shield is reinstalled with the three 1/4" rivets supplied in the kit. Installing the shield with a smaller rivet will result in a rattle condition and customer dissatisfaction.

42. Install and align hub assembly.
43. Install and tighten hub assembly securing bolts. Torque setting 90 Nm.
44. Route the ABS sensor wiring and attach the wiring to the retaining clips. Connect the ABS sensor wiring to the vehicle harness.
45. Position the inner fender skirt and install the pushpins.
Final tighten upper ball joint securing nut (hold ball joint stud to prevent rotation). Torque setting 90 Nm.
46. Reinstall front disc. See JTIS 206-03 (SRO 70.10.10).
47. Reinstall front road wheels to the previously marked position and partially tighten the wheels nuts by hand. Lower the vehicle and fully tighten the wheels nuts to a torque setting of 128 Nm.
48. If only one or both **vertical links** are replaced, the vehicle will have to undergo a geometry check and adjust for front wheel alignment only (Toe). See JTIS, section: 204-00.
If one or both **lower wishbones** are replaced, the vehicle will have to undergo a full steering geometry and front wheel alignment check and adjust. See JTIS, section: 204-00.
49. On V6 vehicles only, reinstall the generator cover after the alignment has been checked and adjusted with the new cam bolts installed and nuts final tightened.
Install and align generator cover front edge fits between front under tray and beam one.
Install and tighten generator cover rear securing screw.
Install and tighten generator cover/front under shield securing screw.
Install and secure generator cover upper fir tree fastener.
50. Lower the vehicle.

Parts Information:

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
Left Hand Vertical Link Kit	XR8 26884	1
Right Hand Vertical Link Kit	XR8 26883	1
Left Hand Lower Arm Kit	XR8 27077	1
Right Hand Lower Arm Kit	XR8 27076	1
Lower Damper Nut	XR8 1737	1 per side
Stabilizer Link Nut	XR8 1593	1 per side
Steering Rack Securing Nut	XR8 1755	3

Vertical Link Kits include:

<u>DESCRIPTION</u>	<u>QUANTITY</u>
Vertical Link	1
Ball Joint Nut Upper	1
Ball Joint Nut Lower	1
Tie rod nut	1
Caliper to vertical link bolts	2
Hub bearing to vertical link bolts	4
Brake dust shield	1
Rivets for attaching brake dust shield	3
Plastic push pins	3
Total Pieces	17

Lower Wishbone Kits include:

<u>DESCRIPTION</u>	<u>QUANTITY</u>
Wishbone	1
Camber/Caster Alignment Bolts	2
Alignment bolt nuts	2
Total Pieces	5

 Warning: All self-locking nuts and bolts that have been used must be replaced with new fasteners.

Warranty Information:

Recall R136

SUMMARY CODE	DESCRIPTION	SRO	TIME	PART NUMBER	DESCRIPTION	QTY
E C	Check & Retighten to 150 Nm (Wheels on)	60 91 21	0.20			
E D	Check & Retighten to 150 Nm (Wheels on) Drive In/Drive Out	60 91 21 10 10 10	0.20 0.15			
E E	Check – if LH side loose renew Vertical Link & Check Wishbone – wishbone OK Toe alignment Check	60 91 22	1.65	XR8 26884	LH Vertical Link Kit	1
E F	Check – if LH side loose renew Vertical Link & Check Wishbone – wishbone OK Toe alignment Check Drive In/Drive Out	60 91 22 10 10 10	1.65 0.15	XR8 26884	LH Vertical Link Kit	1
E G	Check – if RH side loose renew Vertical Link & Check Wishbone – wishbone OK Toe alignment Check	60 91 22	1.65	XR8 26883	RH Vertical Link Kit	1
E H	Check – if RH side loose renew Vertical Link & Check Wishbone – wishbone OK Toe alignment Check Drive In/Drive Out	60 91 22 10 10 10	1.65 0.15	XR8 26883	RH Vertical Link Kit	1
E J	Check – if LH side loose renew Vertical Link & Renew Wishbone – Pre VIN L77700 both wishbones to be replaced Full Geometry Check	60 91 39	2.75 2.85	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 2 2 3
E K	Check – if LH side loose renew Vertical Link & Renew Wishbone – Pre VIN L77700 both wishbones to be replaced Full Geometry Check Drive In/Drive Out	60 91 39 10 10 10	2.75 2.85 0.15	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 2 2 3
E L	Check – if RH side loose renew Vertical Link & Renew Wishbone – Pre VIN L77700 both wishbones to be replaced Full Geometry Check	60 91 40	2.75 2.85	(4.0 Litre) (3.0 Litre) XR8 26883 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	RH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 2 2 3

E M	Check – if RH side loose renew Vertical Link & Renew Wishbone – Pre VIN L77700 both wishbones to be replaced Full Geometry Check Drive in/Drive Out	60 91 40 10 10 10	2.75 2.85 0.15	(4.0 Litre) (3.0 Litre) XR8 26883 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	RH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 2 2 3
E N	Check – if LH side loose renew Vertical Link & Renew Wishbone – From VIN L77700 (one side only) Full Geometry Check	60 91 24	2.40	XR8 26884 XR8 27077 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit LH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 3
E P	Check – if LH side loose renew Vertical Link & Renew Wishbone – From VIN L77700 (one side only) Full Geometry Check Drive in/Drive Out	60 91 24 10 10 10	2.40 0.15	XR8 26884 XR8 27077 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit LH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 3
E Q	Check – if RH side loose renew Vertical Link & Renew Wishbone – From VIN L77700 (one side only) Full Geometry Check	60 91 25	2.50 2.55	(4.0 Litre) (3.0 Litre) XR8 26883 XR8 27076 XR8 1737 XR8 1593 XR8 1755	RH Vertical Link Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 3
E R	Check – if RH side loose renew Vertical Link & Renew Wishbone – From VIN L77700 (one side only) Full Geometry Check Drive in/Drive Out	60 91 25 10 10 10	2.50 2.55 0.15	(4.0 Litre) (3.0 Litre) XR8 26883 XR8 27076 XR8 1737 XR8 1593 XR8 1755	RH Vertical Link Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 3
E S	Check – if Both sides loose renew Vertical Link & Check Wishbones – wishbones OK Geometry Check (Full)	60 91 23	2.45	XR8 26884 XR8 26883	LH Vertical Link Kit RH Vertical Link Kit	1 1
E T	Check – if Both sides loose renew Vertical Link & Check Wishbones – wishbones OK Geometry Check (Full) Drive In/Drive Out	60 91 23 10 10 10	2.45 0.15	XR8 26884 XR8 26883	LH Vertical Link Kit RH Vertical Link Kit	1 1
E U	Check – if Both sides loose renew Vertical Link & renew Wishbones – both wishbones to be replaced Geometry Check (Full)	60 91 32	3.45 3.50	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 26883 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 2 2 3

E V	Check – if Both sides loose renew Vertical Link & renew Wishbones – both wishbones to be replaced	60 91 32	3.45 3.50	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 26883 XR8 27077 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit LH Lower Arm Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 2 2 3
	Geometry Check (Full) Drive in/Drive Out	10 10 10	0.15			
E W	Check – if Both sides loose renew Vertical Link & LH Wishbone – From VIN L77700 (one side only)	60 91 28	3.25	XR8 26884 XR8 26883 XR8 27077 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit LH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 1 3
	Geometry Check (Full) Drive in/Drive Out	10 10 10	0.15			
E X	Check – if Both sides loose renew Vertical Link & LH Wishbone – From VIN L77700 (one side only)	60 91 28	3.25	XR8 26884 XR8 26883 XR8 27077 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit LH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 1 3
	Geometry Check (Full) Drive in/Drive Out	10 10 10	0.15			
E Y	Check – if Both sides loose renew Vertical Link & RH Wishbone – From VIN L77700 (one side only)	60 91 29	3.25 3.30	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 26883 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 1 3
	Geometry Check (Full) Drive in/Drive Out	10 10 10	0.15			
E Z	Check – if Both sides loose renew Vertical Link & RH Wishbone – From VIN L77700 (one side only)	60 91 29	3.25 3.30	(4.0 Litre) (3.0 Litre) XR8 26884 XR8 26883 XR8 27076 XR8 1737 XR8 1593 XR8 1755	LH Vertical Link Kit RH Vertical Link Kit RH Lower Arm Kit Damper Nut Stabilizing Link Nut Steering Rack Nut	1 1 1 1 1 3
	Geometry Check (Full) Drive in/Drive Out	10 10 10	0.15			

November 2000

RECALL R136

Dear Jaguar Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

As a result of ongoing quality assessments, Jaguar Cars has identified a defect which relates to motor vehicle safety on a number of S-TYPE vehicles involving the Front Lower Ball Joint Assembly.

On the vehicles involved, it is possible that the front lower ball joint may not have been adequately tightened during the production process. As a result, the joint may be subjected to high bending loads and could eventually cause the ball stud to fracture.

Jaguar has voluntarily decided to recall all affected vehicles to check, and if necessary replace, the front lower ball joint on all S-TYPE's produced between March 1999 and 19 September 2000, including your vehicle.

For your personal safety and that of your passengers, we would ask that you arrange for the front lower ball joint assembly inspection as soon as possible by contacting an authorized Jaguar dealer. Labor time to inspect front lower ball joint assembly is approximately ½ hour, however to accommodate service scheduling your dealer may require your car for the day. All replacement parts will be replaced free of charge. We must emphasize that your assistance in ensuring the vehicle is rectified as soon as possible would be greatly appreciated.

Should your dealer be unable or unwilling to repair your Jaguar within 60 days or a reasonable time, we would ask you to contact the Jaguar Customer Assistance Center at 1-800-4Jaguar. In the event you are still not satisfied, you may submit a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street S.W., Washington, D.C. 20590, or call the toll free Auto Safety Hotline at 1-888-327-4236.

Should you no longer be the owner of the vehicle, it would greatly assist us if you would nevertheless complete and return to us the Owner Change of Address card attached to this letter enabling us to update our records.

Sincerely yours,

Gary L. Temple
Vice President Customer Care