

**Front Suspension – Noise Diagnosis**

MODEL 1997 MY-ON  
XK8 Range

VIN

001001-ON

**Issue:**

This bulletin provides a diagnostic routine, (page 2), to follow when investigating a customer complaint of noise from the front suspension.

What at first may appear to be a shock absorber failure, causing the noise, could be one of the other items listed. Complete all of the steps in the routine in order to thoroughly inspect the suspension.

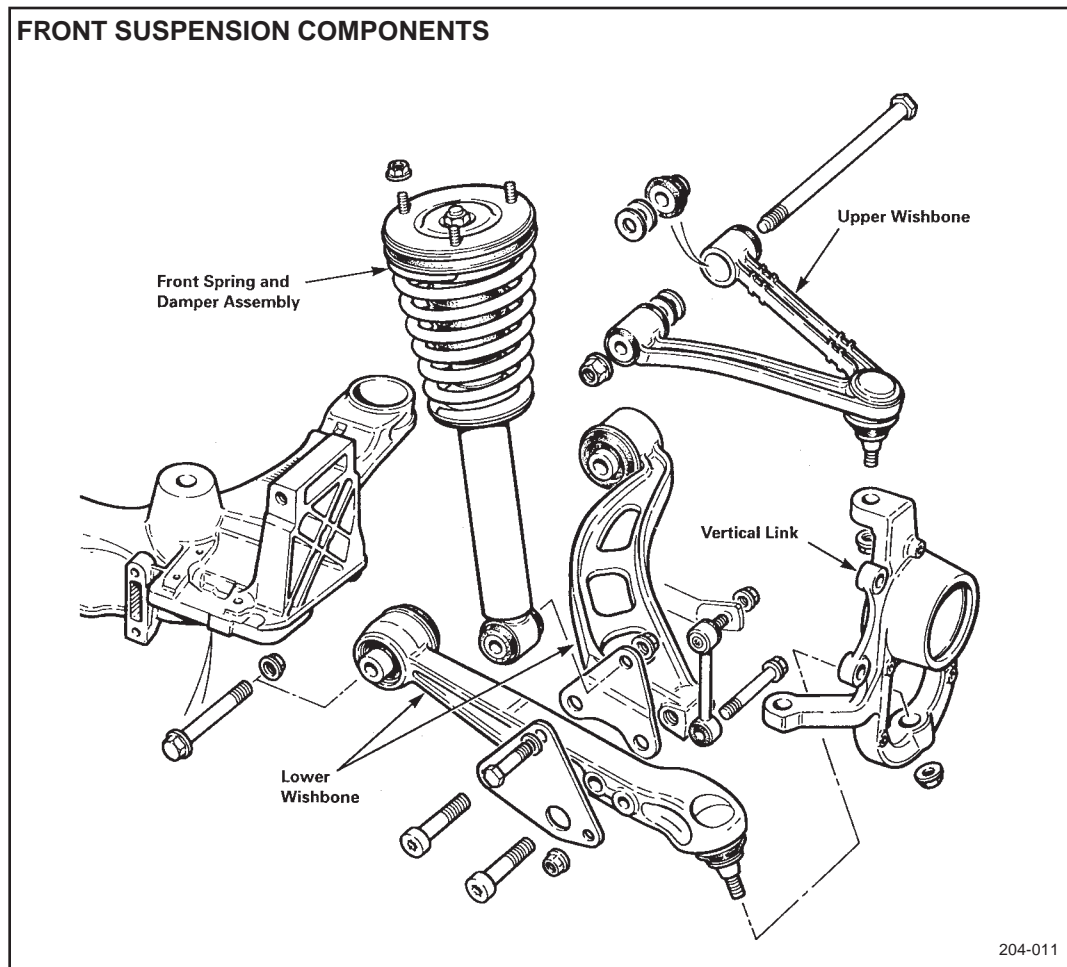


ILLUSTRATION 1

**Action:**

DIAGNOSTIC ROUTINE

1. Question the customer to determine under which conditions the noise is most noticeable, i.e. condition of road surface, speed and gear drive and/or coast, steering to the left or the right, usual load, etc.
2. Road test, and, using the information obtained from the customer, determine if a suspension unit is responsible, and if so, which one.
3. Raise the vehicle on a suitable hoist and then raise each suspension assembly. Support each suspension assembly with a stand directly under the lower spring mounting to relieve the suspension mountings of most of the spring load. Remove the wheels.

**Caution:** When supporting the suspension under the spring/shock absorber mounting always provide additional support, under the usual jacking points, as a safety precaution.

4. Check for 'free play' in the upper and lower ball joints and the anti-roll bar fittings.
5. Using a pry-bar, apply pressure to the suspension arms and the lower mounting bush in the shock absorber to check for any signs of failure of the bush bonding or movement of the bush outer sleeve in the arm.

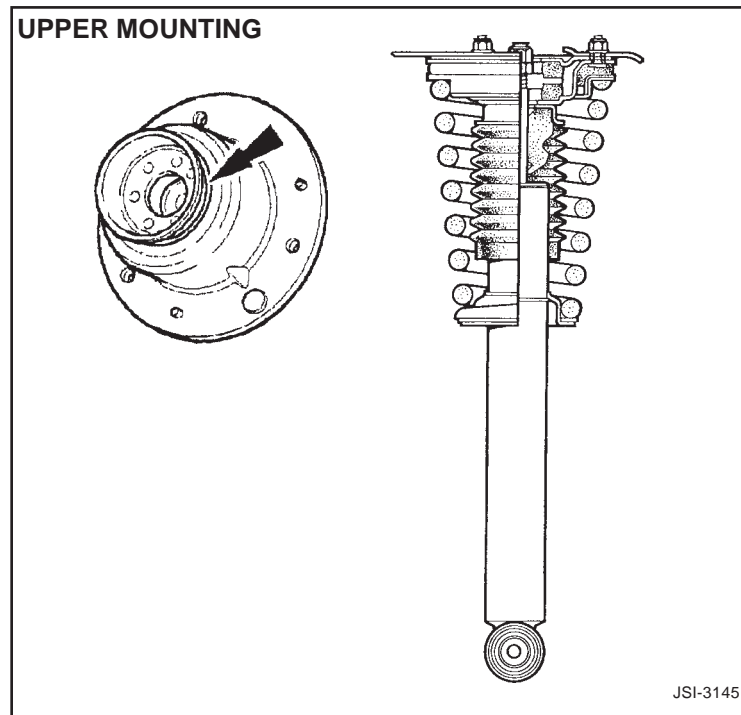


ILLUSTRATION 2

6. Using a pry-bar, carefully probe the area, indicated by arrows in Illustration 2, to check that the spring assister retaining cup has not become detached from the upper mounting. Isolated examples of this were found on vehicles prior to VIN 010565. A detached retaining cup will not affect the suspension other than causing a noise.

7. Check all shock absorbers for oil leaks.
8. Check for excessive 'end-float' in the wheel bearings which could cause a knocking sound.
9. Retest and check for noise.
10. Record any rectification work and the result of the road test.

### SPRING AND SHOCK ABSORBER ASSEMBLY

If the spring and shock absorber assembly has been dismantled, the reassembly of the spring to the shock absorber must include the following:

- a. Install the lower spring pan over the shock absorber to rest on the circlip installed on the shock absorber and then install the spring packer, (flat washer), on the spring pan.
- b. Install the spring packing washer, (arrowed in Illustration 3), on the spring, with the vertical claws gripping the lower spring coil and then rotate the packing washer until the stop on the washer, (arrowed in Illustration 3), comes into contact with the end of the spring wire: this is the correct position for the washer, and it should not be altered during assembly.

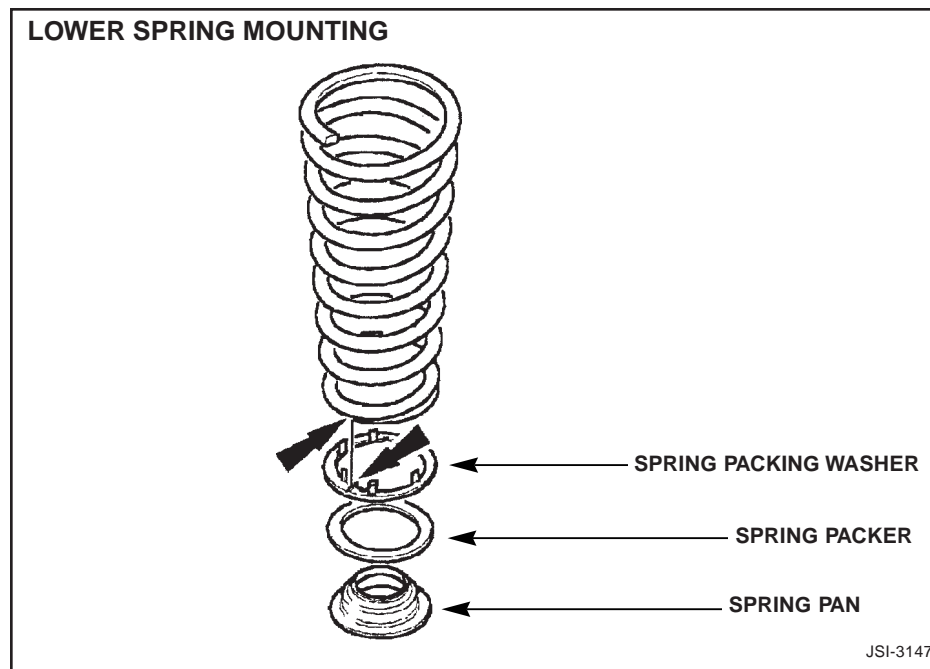


ILLUSTRATION 3

If a problem persists with a particular assembly and the cause is not determined, then the spring and shock absorber assemblies can be exchanged, side to side, to assist in isolating the cause.

## CHECKING THE TORQUE SETTINGS

- A torque setting cannot be rechecked accurately once the fastener has been fixed: additional movement only increases the torque applied.
- The starting torque to move the already tightened fastener is higher than the consequent running torque and the initial torque setting.
- If the fastener is self-locking, the torque required to move it is increased by the locking medium. If the nut is loosened prior to retightening, the locking medium will be destroyed in the process, making the fastener unsafe.
- Once a self-locking fastener has been loosened, it must be removed and discarded, the thread thoroughly cleaned, and a new fastener fitted.

## **Warranty Information:**

<u>DESCRIPTION</u>	<u>FAULT CODE</u>
Shock absorber - leaking	GK - CB- HJ
Shock absorber - knocking	GK - CB - GX
Shock absorber lower bush damaged	GK - CK - NN
Shock absorber lower bolt loose	GK - CL - HR
Spring pan, upper, loose	GK - BD - BP

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME ALLOWANCE</u>
GB CD **	57.55.01	Outer tie rod ball joint - vehicle set - replace	0.95 hrs.
GB CF **	57.55.02	Outer tie rod ball joint - replace	0.80 hrs.
GK FF **	60.10.02	Anti-roll bar link arm - replace	0.20 hrs.
GK FD **	60.10.04	Anti-roll bar rubber - vehicle set - replace	0.55 hrs.
GK FF **	60.10.13	Anti-roll bar link arm - vehicle set - replace	0.30 hrs.
GH BJ **	60.15.02	Upper ball joint - replace	1.35 hrs.
GH BJ **	60.15.07	Upper ball joint - vehicle set - replace	1.95 hrs.
GH FG **	60.25.16	Front hub bearing - vehicle set - replace	3.30 hrs.
GH FG **	60.25.40	Front hub bearing - left hand - replace	2.00 hrs.
GH FG **	60.25.41	Front hub bearing - right hand - replace	2.00 hrs.
GK CB **	60.30.01	Front shock absorber - vehicle set - replace	1.45 hrs.
GK CB **	60.30.04	Front shock absorber - left hand - replace	0.75 hrs.
GK CB **	60.30.05	Front shock absorber - right hand - replace	0.75 hrs.
GK DB **	60.30.19	Front shock absorber/spring upper mount - replace	0.75 hrs.
GK DB **	60.30.20	Front shock absorber/spring upper mount - vehicle set - replace	1.40 hrs.
GK BG **	60.30.21	Front shock absorber spring assister - replace	0.75 hrs.
GK BG **	60.30.22	Front shock absorber spring assister - vehicle set - replace	1.45 hrs.
GH DC **	60.35.30	Lower wishbone rear arm & ball joint - replace	1.70 hrs.
GH DC **	60.35.31	Lower wishbone rear arm & ball joint - vehicle set - replace	2.25 hrs.
GH DJ **	60.35.32	Lower wishbone bush - one side set - replace	1.95 hrs.
GH DD **	60.35.33	Lower wishbone bush - vehicle set - replace	2.80 hrs.
GH BD **	60.35.35	Upper wishbone bush - one side set - replace	1.25 hrs.
GH BD **	60.35.36	Upper wishbone bush - vehicle set - replace	1.80 hrs.