

# TECHNICAL BULLETIN



## Tires and Wheels – Tires “Flat Spotting” – Wheel Balance Procedure

**04-15**

MODEL All

DATE 8/94

### ISSUE:

Symptoms of road wheel and vehicle vibration caused by tire “flat spotting” may be confused with vibration symptoms caused by out of balance tire/wheel assemblies.

Tire flat spots develop when the vehicle is at rest. They are characteristic of high performance tires and develop more rapidly when the tires are hot.

### Tire “flat spotting” symptoms:

- A shaking motion of the vehicle at 30 MPH
- Road wheel vibration at 60-64 MPH - Front tire “flat spotting”
- Road wheel vibration at 68-72 MPH - Rear tire “flat spotting”

### ACTION:

If customers complain of vehicle or road wheel vibration, perform the following procedure to determine if the symptoms are caused by tire “flat spotting” or out of balance tire/wheel assemblies.

### Diagnostic procedure:

1. Set cold tire pressure to “comfort settings”.
2. Drive the vehicle for 10 to 15 miles.
3. If the vibration symptoms are caused by “flat spotting”, the vibration will decrease as the tires “run off” the “flat spotting”.

**NOTE:** In extreme cases it may take 15 to 20 miles to “run off” the flat spots.

No repair is necessary for “flat spotting”. Advise the customer that the condition is a characteristic of high performance tires.

4. If the vibration symptoms do not diminish, the tire/wheel assemblies should be balanced.

**IMPORTANT:** If the tire/wheel assemblies are out of balance after the road test, immediately raise the vehicle on a lift until its tires are off the ground. This will avoid the risk of the tires developing flat spots before balance is checked.

### Tire/wheel balance procedure:

1. Set cold tire pressure to “comfort settings”.
2. Mount the tire and wheel assembly on the wheel balancer. Ensure the correct adapters are used and the assembly is mounted correctly on the balancer.
3. Check the tire and wheel assembly balance.

4. If the assembly is out of balance, remove all existing balance weights and clips and recheck balance.

NOTE: For vehicles 1993 MY On use only Jaguar specification two piece, clip-on wheel weights (Illustration 1).

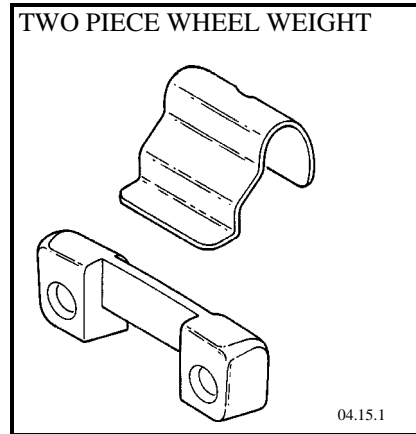


ILLUSTRATION 1

5. Install required wheel weights and recheck balance.

Two piece, clip-on wheel weight installation procedure:

NOTE: This procedure is demonstrated in the XJS Range 1994 Model Year Update video tape at 8 minutes and 45 seconds from the beginning of the program.

1. Compress the inflated tire at the bead, and the shoulder with compression tool HAW 900 (Illustration 2).

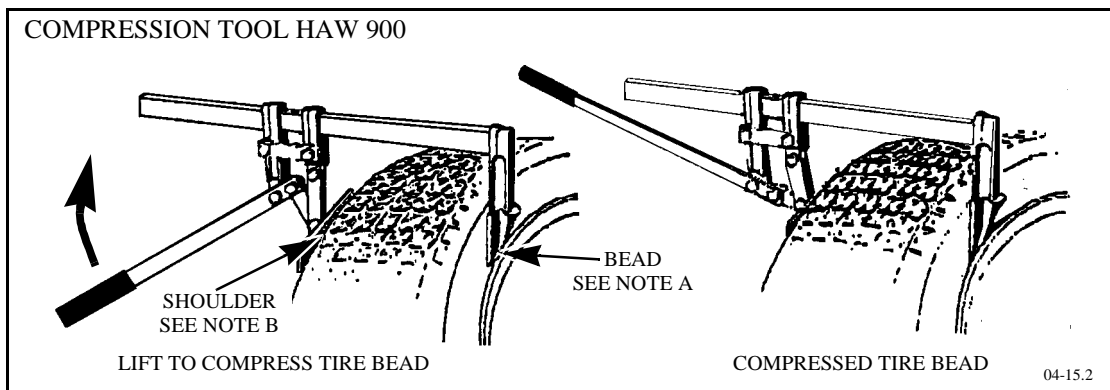


ILLUSTRATION 2

NOTE A: Inner edge of compression tool must be placed close to rim.

NOTE B: Outer swivel foot of compression tool must be placed onto shoulder of tire.

2. Insert the wheel weight clip between the tire bead and the road wheel as shown in Illustration 3. Release the compression tool.
3. Spread the wheel weight clip using the two piece clip tool HAW 900/1. Slide the weight under the clip. Ensure that the weight is fully seated.

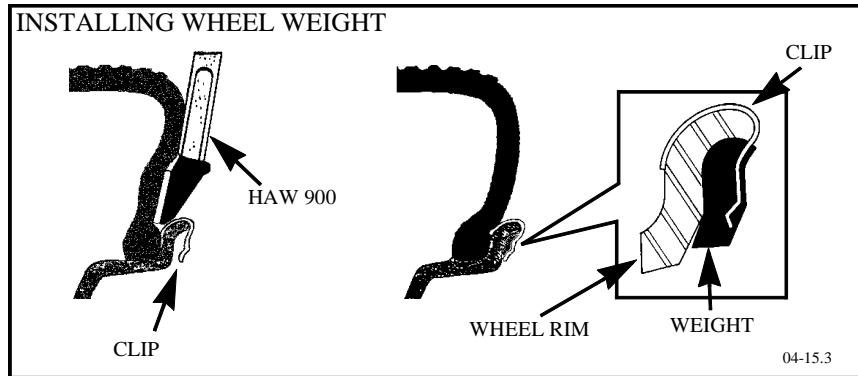


ILLUSTRATION 3

4. Recheck balance.

**TOOL INFORMATION:**

<u>TOOL NUMBER</u>	<u>DESCRIPTION</u>
HAW 900	Compression tool
HAW 900/1	Two piece clip tool

**PARTS INFORMATION:**

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
CCC 6890 1	5g Wheel weight	CCC 6890 8	40g Wheel weight
CCC 6890 2	10g Wheel weight	CCC 6890 9	45g Wheel weight
CCC 6890 3	15g Wheel weight	CCC 6890 10	50g Wheel weight
CCC 6890 4	20g Wheel weight	CCC 6890 11	55g Wheel weight
CCC 6890 5	25g Wheel weight	CCC 6890 12	60g Wheel weight
CCC 6890 6	30g Wheel weight	CCC 6890 13	70g Wheel weight
CCC 6890 7	35g Wheel weight		

**WARRANTY INFORMATION:**

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>
5MBM	74.20.	Use shop time