

TECHNICAL BULLETIN



Front Suspension – Vehicle Pulls to One Side – Check Pull Index

MODEL ALL except XJ6 Series III

DATE 10/95

60-6
Amended
5/96

Remove and destroy Bulletin 60-6, Date 10/95.
Replace with this Bulletin.
Revisions are marked with a bar and indicated in Bold Text.

ISSUE:

Sedan Range (from 1988 MY) or XJS Range pulls to one side although alignment values are within specification as listed in Service Bulletin 60-5.

This condition can result from a combination of in-specification alignment value tolerances affecting the vehicle Pull Index. The vehicle Pull Index is a numerical indication of the differences between the left and right camber values (camber balance) combined with the differences between left and right caster values (caster balance).

ACTION:

If a Sedan Range (from VIN 506664) or XJS Range vehicle pulls to one side, check that the vehicle alignment and the Pull Index are within specification for the vehicle model.

CALCULATING PULL INDEX

1. If the vehicle is properly aligned within specification and still pulls to one side, calculate the Pull Index based on the vehicle's current alignment values.

NOTE: The calculated Pull Index will indicate the vehicle's tendency to pull to one side. Values more positive than the desired Pull Index indicate a tendency to pull to the right, while values more negative than the desired Pull Index indicate a tendency to pull toward the left.

Example:

+5 = pull toward right
0 = neutral
-5 = pull toward left

Sedan Range Pull Index limit: -6

XJS Range Pull Index limit: -9

2. Calculate the Pull Index as follows:
(Camber imbalance – Caster imbalance) x 10 = Pull Index
Right side Camber – Left side Camber = Camber imbalance
Right side Caster – Left side caster = Caster imbalance

NOTE: A calculator will perform the subtraction and multiplication of positive and negative values easily.

EXAMPLE 1 - CAMBER IMBALANCE

Subtract the Left Side Camber from the Right Side Camber to give the Camber Imbalance.

Right Side Camber – Left Side Camber = Camber Imbalance

Right side camber value -0.9° Left side camber value -0.6°

$$-0.9^{\circ} - (-0.6^{\circ}) = -0.3^{\circ}$$

NOTE: Always subtract the Left Side Camber value from the Right Side Camber value.

To use a calculator for the example above:

Enter the Right Side Camber value, 0.9. Change the value to a negative (–) number by pressing the [+/-] key).

Press the subtract key [-].

Enter the Left Side Camber value 0.6. Change the value to a negative (–) number by pressing the [+/-] key.

Complete the calculation by pressing the equal key [=].

Record the Camber Imbalance value -0.3 (include the sign, positive [+] or negative [-]).

EXAMPLE 2 - CASTER IMBALANCE

Subtract the Left Side Caster from the Right Side Caster to give the Caster Imbalance.

Right Side Caster – Left Side Caster = Caster Imbalance

Right Side Caster value $+3.9^{\circ}$ Left Side Caster value $+3.3^{\circ}$

$$+3.9^{\circ} - +3.3^{\circ} = +0.6^{\circ}$$

NOTE: Always subtract the Left Side Caster value from the Right Side Caster value

To use a calculator for the example above:

Enter the Right Side Caster value 3.9. The value is a positive number.

Press the subtract key [-].

Enter the Left Side Caster value 3.3. The value is a positive number.

Complete the calculation by pressing the equal key [=].

Record the Caster Imbalance value $+0.6$ (include the sign, positive [+] or negative [-]).

EXAMPLE 3 - PULL INDEX

Subtract the Caster Imbalance from the Camber Imbalance. Multiply the result by 10 to give the Pull Index.

(Camber Imbalance – Caster Imbalance) x 10 = Pull Index

Camber Imbalance -0.3°

Caster Imbalance $+0.6^{\circ}$

$(-0.3 - +0.6) \times 10 = -9$

NOTE: Always subtract the Caster Imbalance value from the Camber Imbalance value first, then multiply the answer by 10.

To use a calculator for the example above:

Enter the Camber Imbalance value 0.3. Change the value to a negative (–) number by pressing the [+/-] key.

Press the subtract key [-].

Enter the Caster Imbalance value 0.6 The value is a positive number.

Multiply by 10 (press the [X] key), enter 10.

Complete the calculation by pressing the [=] key. Record the Pull Index.

ADJUSTMENT GUIDELINES

- If the vehicle pulls to the right, change the caster setting(s) to make the pull index more negative. Do not exceed the limit given on page 1.
- If the vehicle pulls to the left, change the caster setting(s) to make the pull index more positive. Do not exceed the limit given on page 1.

WARRANTY POLICY:

Wheel alignment is covered under the Jaguar New Car Warranty for a period of 12 months or 12,500 miles, whichever comes first, from first retail sale.

Wheel alignments may not be performed under warranty without a customer complaint.

“Before” and “after” settings must be recorded and kept with the repair order in the vehicle file.

WARRANTY INFORMATION:

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME ALLOWANCE</u>
GB HB **	57.65.01		1)

- 1) Refer to the warranty codes and repair times manual for the applicable model.