

Chassis Lean

M-721-004

(July 2008)

Valid for

All MRU, LEU Models

Case description

The standard springs used on CX, CH, CV, CL, RD, RB, DM, DMM, LE, MR, MRU and LEU model chassis (excludes CXN and CHN models) are designed to give the operator the smoothest ride possible. In achieving this, however, the chassis becomes susceptible to changes in weight (which may occur after the chassis is manufactured) that will affect chassis height and may result in chassis lean. In most instances, chassis lean can be corrected by replacing the existing front spring spacer blocks with blocks of a different size.

Repair

The following guidelines will aid in correcting chassis lean:

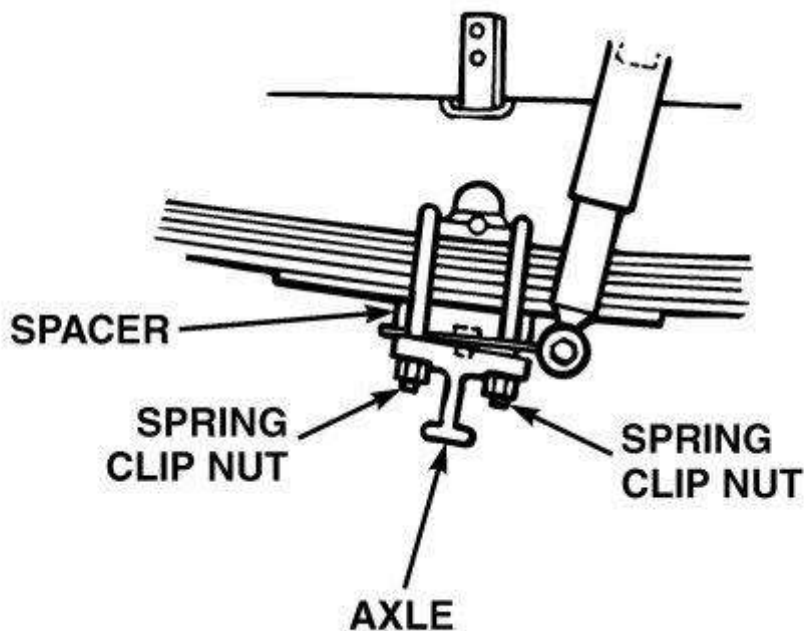
1. Check the chassis builds records to determine the existing spring spacer block and spring part numbers.
2. Before taking any measurements, ensure that the chassis is equipped with all customer required accessories (such as PTOs, extra fuel tanks, tool boxes, etc.), and that all fuel tanks are filled with equal amounts of fuel.
3. To ensure that the chassis lean is not a result of a weight difference between the left- and right-hand sides, weigh both sides of the chassis separately. If a significant difference in weight exists, the load must be redistributed before making any changes to the spring spacer blocks.
4. With the chassis parked on a level surface, measure the frame height on both sides of the chassis at the front and at the rear as follows:
 - a. At the rear, measure the frame height from the bottom of the frame flange to the floor. If the chassis is equipped with a Reyco suspension, ensure that the spring seats are the same on both the left- and right-hand sides. If the chassis is equipped with an AL suspension, ensure that the chassis is set to the correct ride height (for procedures on measuring and adjusting ride height, refer to the applicable MACK air suspension service manual), and that all main beam members are contacting the wear surfaces of the spring hanger.

Note: If the main beam members are not contacting the wear surfaces of the spring hangers on chassis equipped with an AL suspension, loosen, then retorque the spring clips (U-bolts). This, in some instances, may correct a chassis lean.

 - b. At the front, measure the frame height from the bottom of the frame flange to the floor. Take this measurement from behind the front bumper.
5. A 1/4" or less difference in frame height between the left- and right-hand sides of the chassis is acceptable. A difference greater than 1/4" indicates the need to replace the existing spring spacer blocks.

Chassis are built with both equal and unequal spring spacer blocks. When correcting chassis lean, select a spacer from the chart below. Use a spacer with the smallest dimension necessary to correct the lean.

Front Spring Spacer Block



Spacer part number	Dimension
13QK244AP9	2.00" (50.8 mm)
13QK244AP21	2.10" (53.3 mm)
13QK244AP24	1.69" (43.0 mm)
13QK244AP25	1.81" (46.0 mm)

When correcting a chassis lean, always make changes on the right-hand side of the chassis first, then determine if the lean is corrected. Changing the left-front spring spacer can affect steering geometry and may cause additional problems. If changing the right-hand spacer cannot correct the lean, then replace the left-hand spacer.

After adjusting the chassis to an acceptable height, it may be necessary to adjust the front bumper to compensate for any changes. A 1/4" difference at the frame can result in a 3/4" to 1-1/4" difference at the extreme top outside edge of the bumper.

Note: Under rated load, the springs may appear flat or slightly negative arched. Also, a gap may be noticed between the spring blades. These are design characteristics of the springs, not an indication of a "weak spring", and not a reason for replacement. Replacing the springs will have no effect on chassis lean.

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