

SHIM TORSION BARS TO RESTORE COACH HEIGHT

This corrective fix for torsion bars with which correct coach height can no longer be obtained, can produce up to 20° more take up at the adjusting arm and restore coach height adjustment at least temporarily.

Back off the nuts on the torsion bar take-up arm. Note the amount of rotational clearance (freedom) of the torsion bar in the upper control arm socket. Remove the torsion bar. Mark the torsion bars if both are removed at the same time so that they can be reinstalled on the correct side. Damage will result otherwise. Note the clearance (freedom) of the torsion bar in the adjusting arm socket. Using untempered steel shim stock, shim each end of the torsion bar for a light sliding fit in its respective socket to eliminate the excess rotational freedom noted above. Notch the shim material for the retaining pin at the adjusting arm end. Reinstall the torsion bar in the normal manner being careful not to disturb the shim material which has been installed on each end of each bar. Because of the shimming, it may now be necessary to use a large "C" clamp to get engagement of the take-up arm and adjusting screw to start the adjusting nuts.

Shimming is accomplished as follows. Cut shim stock into pieces 5/8 to 11/16 inch wide by 6 inches long. Three pieces are needed for each bar end. Center a shim strip across the end of the bar and fold the strip over so that it lies flat on an opposing set of the flats of the hexagonal shape. (The shim strip will have taken a rectangular "U" shaped configuration.) Tack the loose ends of the shim down with small pieces of tape on the circular portion of the torsion bar. Repeat this twice to cover (shim) the remaining two sets of opposed flats. Now wrap the bar with tape to cover the shim ends and secure them in place. The shim pieces may be a little loose and inadequate looking at this point, but when each end of the bar is pushed into its respective hex socket, total capture and retention of the shims is accomplished. Only trial and error will determine the correct shim thickness. This will range from .004 to .010 inch. Use the same thickness shim pieces at any one end. Clean off any paint, burrs or corrosion from the bar hexes or take-up arm sockets before shimming. After installation, the control arm end is sealed with rubber boots. The adjusting arm end should be sealed each side with silicone caulk (finger applied) to reduce corrosion and binding of the shims, making future torsion bar removal difficult.

In addition to the above, some further amount of adjustment can be obtained by installing a spacer ahead of the first nut on the adjusting arm take-up screw. This gives arm travel beyond the point where the adjusting nut would run out of threads. A spacer made from a nut with the threads removed is suggested. A stack of flat washers will also do.

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