F-1 STEERING REBUILD

A quick functional check and inspection can tell you how good a steering box is and what it needs to make it perfect. First, rotate the steering shaft from lock-to-lock in both directions and check for roughness and stiff spots. The steering should turn smoothly in both directions with no apparent notchiness or tightness. (As the sector shaft rotates from lock to lock resistance should increase as it approaches the center of its movement and then diminish as it rotates to the opposite lock. This is a normal condition that helps the steering "center" when the car is moving straight ahead.) Roughness and stiffness are sure signs of galling on the gears or the bearing races on the worm gear, and if the box fails this simple test, keep looking and checking until you find a good one. And, when you do, give it a final check for wear by unscrewing the 9/16-inch cap nut on the lash adjuster and counting the threads on the adjuster screw. If there are only a couple of threads showing, the gears could be severely worn, even if the box feels smooth.

INSPECTION, REBUILD, AND SERVICE

With so many good, affordable donor steering boxes in circulation, it's a relatively inexpensive task to assemble a first-rate box that's as good as new. If you're impatient you can buy all-new internals but they'll cost you several hundred dollars that could be better spent somewhere else on your hot rod.

Check the lower bearing race on the worm gear for galling. This is a fairly common condition and one that creates stiff spots in the rotation of the steering wheel. The remedy is a new worm gear that can be pressed onto your old shaft.

Inspect the sector gear for galling, and pray that there isn't any, because here, too, replacement is the remedy and a new sector gear and pin will set you back $60-$70. An entire new sector assembly -- gear, pin, and shaft -- is a couple hundred bucks!

Plan on parting with $30-$40 (as of this printing) for worm gear bearings, gaskets and shims, a sector shaft bushing, and a sector shaft seal to make the steering box as good as new once the modification work is finished.

Before assembling the steering, clean the sector shaft to remove old seal material. Be gentle and don't scratch or abrade the seal area.

Dress the front and top mounting surfaces on the box with a file to remove ridges or burrs that would prevent oil-tight sealing.

Bearing end play is adjusted by shimming the lower race which protrudes slightly from the case. The end cap is installed to determine the size and number of gaskets needed.

Adjustment is a cut-and-try process. Begin with three thick green gaskets between the end cover and the box. There should be a very slight drag on the steering shaft when it's turned. If there is no drag, remove one gasket and check again. If there is too much drag, add another gasket, a thinner brown one. If you don't hit the right combination at first, be patient; you'll soon get it and then be ready to assemble the steering box.

ASSEMBLY AND ADJUSTMENT

The simple Ford steering box almost assembles itself. Just make sure it's properly lubed and correctly

adjusted.

Apply a generous coat of moly grease to the bearings, worm gear, and sector gear and upper part of the shaft. Oil the lower part of the sector shaft and install it in the case with the gear centered.

Grease the lash adjuster and install it in the top of the sector body with the adjuster screw toward the front of the box. If it's reversed, the cover won't fit on the box.

Apply a thin, even coat of Permatex to the mounting surface on the box, thread the cover onto the adjuster screw, and draw the cover down by turning the adjuster counter-clockwise.

Adjust the lash until the steering turns smoothly, with no play, throughout the full movement from lock to lock and back. Then, install the star lock on the adjuster screw and screw on the locknut to hold the star lock in place.

After the mast jacket has been added, install a new rubber bushing into the upper end to support the top of the steering shaft. Use only silicone lube on the bushing; grease will harden it and cause it to squeak.

SOURCES

ALL FORD PARTS — 232-page catalog, $10
1600 Dell Ave., Suite A — 1-800-532-1932 Order only
Campbell, CA 95008 — 1-408-378-1935 Information

DENNIS CARPENTER REPRODUCTIONS — 1-704-786-8139 Information
P. O. Box 26398 — 1-800-476-9653 Order only
Charlotte, NC 28221

JOBLOT AUTOMOTIVE, INC. — Catalog, 88 pages, $2
98-11 211th St. — 1-800-221-0172 Order only
Queens Village, NY 11429 — 1-718-468-8585 Information

OBSOLETE FORD PARTS, INC.
8701 S. I-35 — 1-405-631-3933 Information
Oklahoma City, OK 73149

SACRAMENTO VINTAGE FORD PARTS, INC. — 916-853-2244
2484 Mercantile Drive
Rancho Cordova, CA 95742-6200

JOE SMITH AUTOMOTIVE, INC. — 1-800-235-4013 Order only
2140 Canton Rd. — 1-770-426-9850 Information
Marietta, GA 30066

SOUTHSIDE OBSOLETE — 1-612-866-1230 Order & Info
6819 James Ave. So.
Minneapolis, MN 55423