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STEERING INFORMATION REBUILDING KITS & PARTS REBUILDING SERVICES

STEERING SYSTEM

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HOW DOES IT WORK?

1956 - 1978 Non-Integral Saginaw-style Steering Box

A basic working description of the Ford recirculating ball style steering box with attention to the critical adjustments and the common problem areas. The information below pertains specifically to an early Mustang/Falcon/Fairlane steering box, but other models are similar in operation.



Input Shaft/Worm Gear

The top end of the Input Shaft is splined, either to mount directly to the steering wheel, or to connect to a coupler from the steering wheel. The bottom end of the Input Shaft is machined into the shape of a Worm Gear.



On both ends of the Worm Gear section are areas where caged ball bearings ride. The shaft itself acts as the inner race for these ball bearings. There is an outer race for one of these ball bearings located inside the steering box Housing, and another race sets inside the Adjusting Nut. It is these two ball bearings that locate and hold the Input Shaft in place and the shaft rotates in them.





Rack Block

The Rack Block is machined in two different ways and serves two purposes. The inside of the Rack Block is machined in a screw-shaped design, just like the Worm Gear. The individual ball bearings roll inside the Rack Block just like on the Worm Gear.



The outside of the Rack Block has four straight teeth machined into it. These teeth mesh with the four teeth on the top end of the Sector Shaft.



The Worm Gear goes inside the Rack Block and the individual ball bearings fill the grooves cut into both gears. The Rack Block has Ball Guides mounted on it that allow the balls to roll from one end to the other of the grooves cut into the Worm Gear and Rack Block. It is this recirculation of the ball bearings inside the Rack that gives the steering box it's recirculating-ball designation.







As the Steering Shaft is turned, the Worm Gear is turned. The screw-action of the Worm Gear causes the Rack Block to move up and down the length of the Worm Gear. The recirculation ball action inside this setup acts to make the movement smooth and as friction-free as possible.

SECTOR SHAFT

The top end of the Sector Shaft has five vertical teeth machined on it. The bottom end is splined and threaded to hold the Pitman Arm in place and

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