

1973 MAZDA

RX-2 (1973)
 RX-3 (1973)
 808 (1973)
 B1600 (1973)

DESCRIPTION

Steering gear is a recirculating ball type with a ratio of 17:1-19:1, depending on turning angle of sector shaft. The pinion worm gear and steering shaft on some models may be an integral assembly, while the shaft is separable from the pinion on other models. Steering linkage on all these models is basically the same and consists of pitman arm, center link (or cross shaft), adjustable tie rods, and idler arm.

ADJUSTMENT

NOTE — Some adjustments are performed during gear reassembly. See *Overhaul*.

WORM BEARING PRELOAD

All Models — Gear must be removed from vehicle. With a torque wrench, or pull-scale, rotate worm shaft and check

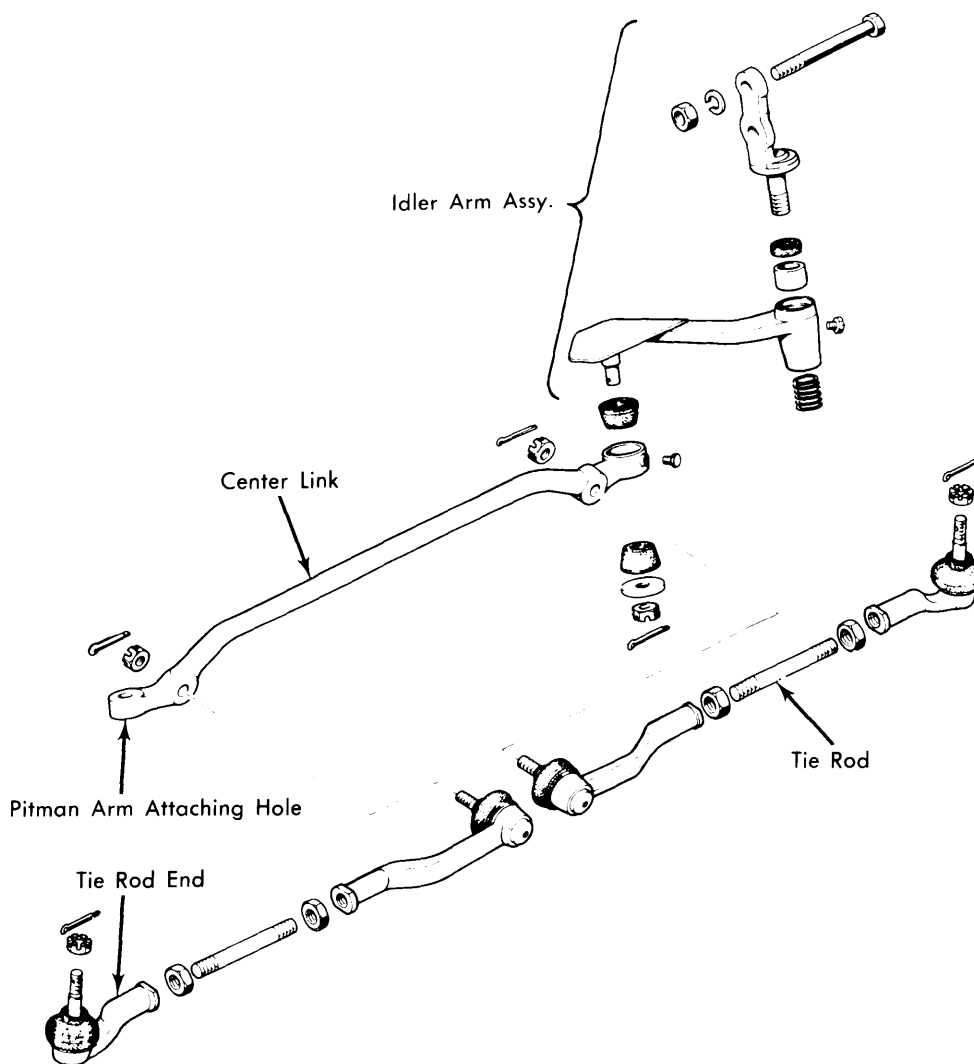
rotating torque; it should be 5.2-6.9 INCH lbs. (6-8 cm-kg). If not within limits, make the following adjustment:

Remove end cover (with shims). If reading was below minimum, reduce shims; if reading was above maximum, increase shims. Replace end cover and recheck preload. *NOTE* — If this is performed as part of reassembly procedure, and sector shaft is not yet installed, preload should be 0.9-3.5 INCH lbs. (1-4 cm-kg). Same adjustment procedure should be followed.

SECTOR GEAR & BALL NUT

All Models — Sector shaft adjusting screw raises or lowers sector gear to provide proper mesh between tapered teeth of sector gear and rack of ball nut. This adjustment can be accurately made only after proper worm bearing preload has been established. Adjust as follows:

Turn worm shaft gently and stop at center position. Loosen lock nut of adjusting screw and turn it in or out until the following backlash is obtained: On RX-2 and B 1600, 0-.004" (0-.1 mm); on RX-3 and 808, 0-.017" (0.42 mm). *NOTE* — This is equivalent to movement of approximately 3° on worm shaft. Retighten lock nut, then rotate worm shaft and check to ensure smooth gear movement.



3MA02

MAZDA STEERING LINKAGE (TYPICAL)

1973 MAZDA (Cont.)

REMOVAL & INSTALLATION

STEERING GEAR

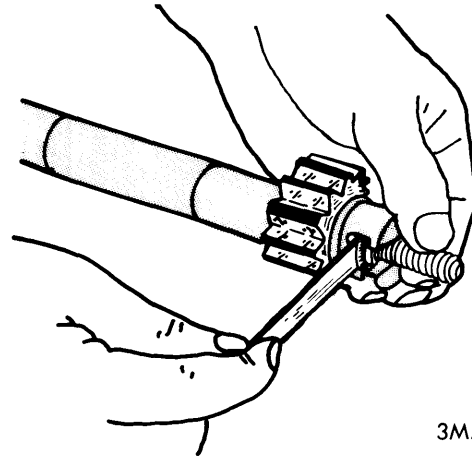
Removal, Exc. RX-2 – 1) Remove horn cap and horn ring. Mark relative position of steering wheel to shaft and remove steering wheel. Detach column cover and remove combination light switch assembly. Disconnect wire coupling from ignition lock and switch assembly. Cut slotted groove in head of assembly attaching bolt; unscrew and remove assembly.

2) Remove steering column support bracket. Open hood and remove column dust cover. Raise vehicle and remove front wheels. Disconnect pitman arm from center link. Remove bolts attaching steering gear to body. Note position of any mounting shims. Remove gear, with steering column, from vehicle.

Installation, Exc. RX-2 – To install, reverse removal procedure, noting the following: Temporarily attach steering column to instrument panel before attaching gear to body. Replace any mounting shims in original position.

Removal, RX-2 – Loosen bolt securing worm shaft to steering joint. Raise vehicle and remove front wheels. Disconnect center link from pitman arm. Remove gear-to-body attaching bolts, collect any mounting shims, and remove gear from vehicle.

Installation, RX-2 – To install, reverse removal procedure, replacing mounting shims in original position.



3MA03

CHECKING ADJUSTING SCREW CLEARANCE

3) Turn worm shaft and place rack in center position. Insert sector shaft and adjusting screw into housing, using care not to damage bushings and seal. Align sector and rack in center position as shown.

STEERING LINKAGE

Steering linkage may be removed as an assembly or as individual components. Whenever tie rod setting is disturbed, toe-in must be reset. See *Mazda* in **WHEEL ALIGNMENT** Section.

OVERHAUL

STEERING GEAR

Disassembly, All Models – 1) Before disassembly, thoroughly clean outside of gear assembly. Drain oil, then place housing in padded vise. Unscrew pitman arm retaining nut, and pull pitman arm from sector shaft.

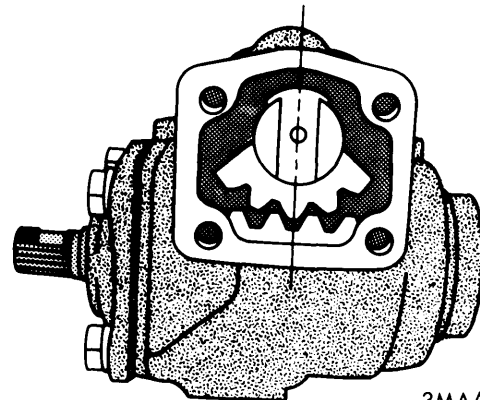
2) Remove sector shaft adjusting screw lock nut. Turn adjusting screw clockwise and remove side cover and gasket. Remove adjusting screw and shims from slot in end of sector. Carefully withdraw sector shaft from housing so as not to damage bushings and seal. Remove end cover (with shims).

3) On vehicles with steering shaft as an integral extension of the worm shaft, remove bolts securing column jacket to housing. On all vehicles, remove worm gear and ball nut assembly from housing.

Inspection – Check for smooth operation of ball nut on worm shaft. If rough spots are apparent, replace assembly. Do not attempt to service ball nut. Check worm bearing for wear; replace as necessary. Check sector bushings and seal; replace if needed.

Assembly, All Models – 1) Insert worm shaft and ball nut assembly into gear housing. Position end cover with preload adjusting shims, and adjust preload to .9-3.5 INCH lbs. (1.4 cm-kg). See *procedure as outlined under Adjustment*.

2) Install adjusting screw into slot at end of sector. Check end clearance with feeler gauge (see illustration). Clearance should be .0008-.0031" (.02-.08 mm). Insert proper shims as necessary.



3MAA04

ALIGNING SECTOR GEAR & RACK

4) Install side cover and gasket onto adjusting screw by turning screw counterclockwise until cover is in position. Insert and tighten cover bolts. Adjust backlash between sector gear and rack by applying procedure previously explained. See *Adjustment*. Install pitman arm and torque retaining nut.

TIGHTENING SPECIFICATIONS

Application	Ft.Lbs. (mkg)
Pitman Arm	110 (15.2)
Idler Arm-to-Center Link	45 (6.2)
Tie Rod End-to-Center Link	22 (3.0)
Idler Arm-to-Bracket	45 (6.2)