The 1963 Corvette steering system (fig. 1) is the relay type with the pitman arm connected to a relay rod through an adjustable ball and socket joint. The opposite end of the relay rod is connected to an idler arm bolted to the front right side rail. Two adjustable tie rods join the relay rod to the steering arm through self-adjusting ball and socket joints. Two tie rod mounting holes are provided in each steering arm to allow the steering ratio to be changed from a road ratio of 19.6:1, to 17:1 by disconnecting each tie rod from one hole and moving it to another. A steering damper is incorporated in the steering linkage to dampen out road shock. The damper piston rod is bolted to a bracket on the left frame side rail and the cylinder is attached to the relay rod. The steering gear is a semi-reversible recirculating ball type with a gear ratio of 16:1.
MAINTENANCE AND ADJUSTMENTS

LUBRICATION

The steering gear is filled at the factory with a special all-season gear lubricant. Seasonal change of this lubricant is unnecessary and the housing should not be drained. The steering gear lubricant level should be checked every 30,000 miles. Whenever required, additions should be made using a lubricant which will provide satisfactory lubrication under all conditions.

ADJUSTMENTS

Steering Gear

Before any adjustments are made to the steering gear in an attempt to correct such conditions as shimmy and loose or hard steering, a careful check should be made of front end alignment, shock absorbers, wheel balance and tire pressure for possible causes.

Correct adjustment of steering gear is very important. While there are but two adjustments to be made, the following procedure must be followed step-by-step in the order given.

1. Remove pitman arm nut and mark relation of pitman arm position to sector shaft. Remove piston arm with Tool J-6632 as shown in Figure 2.

2. Loosen the pitman shaft lash adjuster screw lock nut and turn the adjuster screw a few turns in a counterclockwise direction. This removes the load imposed on the worm bearings by the close meshing of rack and sector teeth. Turn steering wheel gently in one direction until stopped by gear, then back away about one turn.

CAUTION: Do not turn steering wheel hard against stops when steering relay rod is disconnected as damage to ball guides may result.
3. Using Tool J-0544 (fig. 4) measure pull at rim of wheel which is required to keep wheel in motion. This should be between \(\frac{3}{8}\) and \(\frac{3}{4}\) pounds.

NOTE: When making this check, it is important that the centerline of the scale be kept at right angles to the wheel spoke.

4. To adjust worm bearings, loosen worm bearing adjuster lock nut and turn worm bearing adjuster until there is no perceptible end play in worm. Check pull at wheel rim, re-adjusting if necessary to obtain proper pull. Tighten lock nut and re-check pull. If the gear feels rough after adjustment of worm bearings, there is probably damage in the bearings due to severe impact or to improper adjustment and the gear must be disassembled for replacement of damaged parts.

5. After proper adjustment of worm is obtained, and all mounting bolts securely tightened, adjust lash adjuster screw. First turn the steering wheel gently from one stop all the way to the other, carefully counting the total number of turns. Then turn wheel back exactly half way, to center position. Note position of mark on top of wormshaft just below the coupling clamp. This mark should be at top of shaft at 12 o'clock position and in line with the saw cut at the coupling lower clamp. Turn lash adjuster screw clockwise to take out all lash in gear teeth, and tighten lock nut.

Check pull at wheel rim with checking scale, taking highest reading of checking scale as wheel is turned through center position. This should be between \(\frac{3}{8}\) and \(1\frac{1}{2}\) pounds. Readjust if necessary to obtain proper pull.

6. Tighten lock nut then recheck pull.

7. Reassemble pitman arm to sector shaft, lining up marks made on disassembly. Torque nut to 100-150 ft. lbs.
Pitman Arm to Relay Rod Ball Joint

1. Remove cotter pin from end of relay rod, then using a drag link bit in end plug slot, tighten end plug until springs are compressed and plug bottoms (fig. 5).
2. Back off end plug ¾ turn plus amount necessary to insert cotter pin, then insert pin.

Steering Wheel Alignment and High Point Centering

1. Set front wheels in straight ahead position.
2. With front wheels set straight ahead, check position of mark on wormshaft designating steering gear high point. This mark should be at the top side of the shaft at 12 o’clock position and lined up with the mark in the coupling clamp.
   Remove steering wheel, if necessary, and align wheel with mark on top of wormshaft (wheel should be set in straight ahead position).
3. If gear has been moved off high point when setting wheels in straight ahead position, loosen adjusting sleeve clamps on both left and right hand tie rods, then turn each sleeve an equal amount in the same direction to bring gear back on high point.

   CAUTION: Turning the sleeves an unequal number of turns or in different directions will disturb the toe-in setting of the wheels.

4. Position inner tie rod clamps with bolt horizontal and down. Position outer clamps with bolt vertical and to the rear.

Steering Ratio

1. Remove tie rod ball stud nut at steering arm and disconnect tie rod from steering arm.
2. Move tie rod end to forward hole for 17:1 ratio or rear hole for 19:1 ratio (fig. 6).
3. Install tie rod stud nut and tighten securely. Repeat operation on opposite steering arm.

SERVICE OPERATIONS

STEERING COUPLING

Removal

1. Remove steering coupling upper and lower pinch bolts.
2. Remove mast jacket escutcheon screws and loosen mast jacket u-bolt clamp nuts under instrument panel.
3. Disconnect instrument panel harness from mast jacket lower switch.
4. Loosen mast jacket lower clamp at **firewall**.
5. Pull mast jacket and steering shaft assembly up out of steering coupling. When sufficient clearance is obtained, pull coupling off steering gear.

**Repairs**

1. Scribe or paint alignment mark on coupling so that upper and lower halves may be reassembled in same relative position.
2. Separate upper and lower halves by removing attaching nuts and bolts.
3. Inspect flexible coupling for damage and replace if necessary.
4. Assemble upper and lower flanges, aligning scribe marks and assemble with attaching nuts. Torque nuts 15-20 lb.-ft.

**Installation**

1. Install coupling over steering shaft splines, lining up mark on shaft with coupling clamp saw cut.
2. Insert steering gear worm shaft into lower coupling clamp, lining up mark on shaft with coupling clamp saw cut.
3. Install coupling pinch bolts and torque 25 lb. ft.

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**MAST JACKET—FIGURE 7**

**Removal**

1. Pull instrument panel harness from mast jacket lower switch. Disconnect switch from mast jacket.
2. Pry off horn cap (fig. 8). Remove steering wheel nut and washer from steering shaft.
3. Thread J-2927 puller anchor screws into threaded holes provided in steering wheel hub. Turn center screw down against tool centering adaptor and pull steering wheel off shaft.
4. **Remove mast jacket escutcheon screws (fig. 9) and mast jacket**
5. Loosen mast jacket lower clamp at **firewall** (fig. 11).
6. Loosen lower spring stop clamp and slide stop and spring down on steering shaft.
7. Paint mark on steering shaft and coupling. Remove coupling upper clamp bolt.
8. Pull mast jacket and steering shaft assembly out of steering coupling and carefully withdraw out through dash panel, while sliding lower spring stop, spring, bearing and seat off steering shaft.
Disassembly

Steering Shaft

After steering spring stop clamp, bearing, spring and seat assembly are pulled from lower steering shaft, shaft may be withdrawn from mast jacket.

Direction Signal

1. Disconnect horn wire and bowden cable retaining clip from mast jacket and withdraw upper bearing and sleeve (fig. 12).

2. Remove direction signal housing retaining screws. Disconnect bowden cable retaining clip and withdraw direction signal housing and cable from mast jacket. See Section 12 for direction signal diagnosis and service.

Assembly

1. Loosely assemble bowden cable to housing with leading edge of wire loop to back side of crank rod.

2. Loosely assemble bowden cable retaining clip and rotate clip until bowden cable rests in notch in direction signal housing.

3. Position housing over mast jacket with mast jacket slot in line with bowden cable. Tighten bowden cable bracket screw.

4. Install and tighten signal housing to mast jacket screws.

5. Feed horn wire into mast jacket and place upper bearing and sleeve assembly into position.

6. Slide steering shaft into mast jacket.

Installation

1. Carefully insert mast jacket assembly into instrument panel and down through firewall, at the same time sliding lower mast jacket seat, bearing, spring and stop assembly over steering shaft lower splines. Feed shaft into steering coupling, lining up mark on shaft with coupling clamp. Install upper clamp pinch bolt, but do not tighten.

2. Assemble mast jacket escutcheon to instrument panel, making sure insulator is seated in escutcheon groove.
3. Loosely assemble mast jacket support u-bolt under instrument panel.
4. Adjust mast jacket so that dimple in lower support indexes in depression in mast jacket.
5. Install lower switch to mast jacket and connect wiring harness to switch. Connect horn wire and install wire and cable clips to mast jacket.
6. Install steering wheel over shaft splines, aligning mark on hub with mark on shaft. Install steering wheel nut and torque 35-40 lb. ft. Snap horn cap over hub.

Adjustments

1. Adjust direction signal housing set screw until there is a .070” to .090” gap between housing and steering wheel hub (fig. 13).
2. Compress lower spring with a .010” or .020” shim inserted between two coils. Tighten spring stop clamp in this position and remove shims (fig. 14).
3. Grasp steering wheel and by removing mast jacket in or out of dash panel, adjust to desired fore and aft steering position. Tighten lower clamp bolt and support u-bolts.

NOTE: Lower end of steering shaft is splined to allow a variation in steering wheel positions.

Fig. 15—Steering Gear Cross-Section

1. Housing
2. Sector
3. Worm Bearing Adjuster
4. Lock Nut
5. Worm Bearing
6. Wormshaft Seal
7. Wormshaft
8. Bolt
9. Bolt Guides
10. Clamp
11. Bolt Nut

STEERING GEAR—FIGURE 15

Removal

1. Remove steering coupling lower pinch bolt from worm shaft.
2. Raise vehicle on suitable hoist and remove pitman arm nut. Disconnect pitman shaft with puller J-5504.
3. Remove steering gear to frame through bolts and withdraw steering gear.

Disassembly

It is suggested to clean exterior of steering gear before beginning disassembly to keep bearings and halls free of dirt. Use a clean work surface, preferably covered with paper or clean rags.

1. Support gear in vise by clamping lower mounting ear. Loosen lash adjuster locknut and turn lash adjuster screw several turns counter clockwise. Remove three cap screws retaining side cover assembly and pull side cover-sector shaft assembly from gear housing (fig. 16).

NOTE: If the sector does not clear the opening in the housing easily, turn the wormshaft by hand until the sector will pass through the opening.
2. Remove the worm housing adjuster, adjuster lock nut and upper ball bearing from housing.

3. Draw wormshaft and hall nut assembly from housing (fig. 17). Remove lower hall bearing.

**CAUTION:** Use core that the ball nut does not run down lo either end of the worm. Damage will be done lo the ends of the ball guides if the nut is allowed to rotate until stopped at the end of the worm.

4. Remove lock nut from lash adjuster and unscrew adjuster from side cover by turning adjuster clockwise. Slide adjuster and shim out of slot in end of sector shaft.

5. Remove sector shaft seal.

6. Remove and discard wormshaft seal

**Boll Nut Assembly**

As a rule, disassembly of the hall bearing nut will not be necessary if it is perfectly free with no indication of binding or roughness when rotated on the worm. However, if there is any indication of binding or roughness, the unit should be disassembled, cleaned and inspected as follows:

1. Remove clamp retaining ball guides in nut. Draw guides out of nut.

2. Turn the nut upside down and rotate the wormshaft back and forth until all the balls have dropped out of the nut into a clean pan. With the balls removed, the nut can be pulled endwise off the worm.

**Inspection**

With the steering gear completely disassembled, wash all parts in non-toxic cleaning solvent. Dry them thoroughly with clean rags. With a magnifying glass, inspect the ball bearings, bearing cups, worm and nut grooves and the surface of all balls for signs of indentation. Also check for any signs of chipping or breakdown of the surface.

Any parts that show signs of damage should be replaced. Balls must be replaced with genuine Chevrolet parts made according to specifications for this steering gear.

Inspect the sector shaft and bushings for wear and check the fit of the shaft in the housing bushings.

Check ball guides for damage at ends where they deflect or pick the balls from the helical path. Any damaged guides should be replaced.

Check steering gear wormshaft assembly for damage. Never attempt to salvage faulty steering parts by welding or straightening.

**Repairs**

**Sector Shaft Bushing Replacement**

1. Place housing on arbor press bed, resting side cover mating surface on a piece of hard wood to avoid damage to machined surface.

2. Carefully inspect Tool J-1614 to he sure largest diameter area is free of nicks (if nicks or burrs are found, remove with fine file). Insert J-1614 into sector shaft bore as shown in Figure 18 and press both bushings out of housing.

3. Coat new bushings with steering gear lube and press one into each end of bore so that bushing is flush with or slightly lower than end of bore. Refer to Figure 15 for correct installed position of bushings.
**Wormshaft Seal Replacement**

Wormshaft seal should be replaced whenever steering gear is disassembled.

1. **Remove** old seal, using Tool J-5822 with slide hammer J-2619.
2. Coat new seal with steering gear lube, both inside and out. Position over the center hole in *worm* bearing adjuster and press in, using socket of suitable outside dimension. When correctly installed, seal edge should be flush with inner edge of small bore in adjuster.

**Sector Shaft Seal Replacement**

Replace seal whenever gear is disassembled. It may be installed after bushings are replaced as follows:

1. Coat seal inside and out with steering gear lube.
2. Position seal in sector shaft bore. Place a socket or piece of pipe of suitable diameter on top of seal and drive seal into bore by tapping socket or pipe with soft hammer.

A faulty seal may be replaced without removal of steering gear from car by removing pitman arm as outlined under "Maintenance and Adjustments—Steering Gear Adjustments" and proceeding as follows:

1. Loosen lash adjuster lock nut and turn lash adjuster screw several turns counter clockwise.
2. Remove three cap screws holding side cover to gear housing.
3. Pull side cover and sector shaft from gear housing as a unit. Do not separate side cover from sector shaft.
4. Pull sector shaft seal from gear housing using hooked tool or pliers.
5. Coat new seal with chassis grease and position in sector shaft bore.
6. Place a socket or piece of pipe of suitable diameter on top of seal and drive seal into bore by tapping pipe or socket with soft hammer.
7. Install sector shaft side cover assembly, being careful not to damage new seal with splines on end of shaft; splines may be wrapped with a few turns of tape to prevent this.
8. Install new side cover gasket and align side cover on gear housing and install cap screw.

9. Perform steering gear adjustment and install pitman arm as outlined under "Maintenance and Adjustments."

**Wormshaft Bearing Cups—Replacement**

1. Place steering gear housing or worm adjuster in vise with bore horizontal.

2. Install J-5822 on end of J-2619B. Place feet of J-5822 behind bearing cup and tap out cup with slide hammer. See Figure 20.

3. Press in new cups (fig. 21) using arbor press in conjunction with Tool J-5755.

Continue until ball circuit is full from bottom of one guide hole to bottom of the other or until stopped by reaching the end of the worm.

**NOTE:** In cases where the balls are stopped by the end of the worm, hold down those balls already dropped into the nut with the blunt end of a clean rod or punch (fig. 21) and turn the worm in the reverse direction a few turns. The filling of the circuit can then be continued. It may be necessary to work the worm back and forth, holding the balls down first in one hole then the other, to close up the spaces between the balls and fill the circuit completely and solidly.

**Ball Nut Assembly**

1. Place the wormshaft flat on the bench and slip the nut over the worm with the ball guide holes up and the shallow end of the rack teeth to the left from the steering wheel position. Align the grooves in the worm and nut by sighting through the ball guide holes.

2. Count 27 balls into a suitable container. This is the proper number of balls for half the circuit. Place these balls into one of the guide holes while turning the worm gradually away from that hole.
7. Assemble the ball guide clamp to the nut, being sure to use a lock washer under the clamp screw, then tighten the screw securely.

Check the assembly by rotating the nut on the worm to see that it moves freely. Do not rotate the nut to the end of the worm threads as this may damage the ball guides. If there is any "stickiness" in the motion of the nut, some slight damage to the ends of the ball guides or to other gear components may have been overlooked.

Steering Gear Assembly

After a major service overhaul where all of the original factory installed lubricant has been washed out of the steering gear assembly, the threads of the adjuster, side cover bolts and lash adjuster should be coated with a suitable non-drying, oil resistant sealing compound. This is to prevent leakage of gear lubricant from the steering gear assembly. The compound should not be applied to female threads and extreme care should be exercised in applying this compound to the bearing adjuster, as the compound must be kept away from the wormshaft bearing. Also apply steering gear lube to the worm bearings, pitman shaft bushings, and ball nut teeth.

With wormshaft bearing cups pressed into housing and adjuster, wormshaft and sector shaft seals installed, sector shaft bushings in place and ball nut assembled to worm, proceed as follows:

1. Place steering gear housing in vise with wormshaft bore vertical and side cover opening up.

2. Place a wormshaft bearing in housing cup. Slide adjuster assembly with bearing over end of wormshaft and lower wormshaft into housing, being careful to index end of shaft in bearing.

NOTE: Keep ball nut away from end of worm threads. This may be accomplished by taping nut in place.

3. Thread worm bearing adjuster into housing until nearly all slack is out of wormshaft bearings. Remove tape from ball nut.

4. Assemble the lash adjuster with shim in the slot in the end of sector shaft. Check the end clearance which should not be greater than .002" (fig. 25). For the purpose of adjusting this end clearance, a steering gear lash adjuster shim unit is available. It contains four shims—.063", .065", .067" and .069" thick.

After correct lash adjuster clearance has been obtained, install gasket on side cover and insert sector shaft into housing, being careful not to damage sector shaft seal with serrations. This damage may be avoided by taping serrations before assembly. When engaging ball nut with sector teeth, be sure to index center tooth of sector in center space of ball nut rack.

5. Align holes in side cover with those in housing and install the upper cap screw. Place steering gear assembly in a vise in its approximate position when installed in the car. Fill steering gear by injecting steering gear lubricant into lowest side cover cap screw opening until lubricant appears in other opening. Install two remaining cap screws and lockwashers to complete assembly of side cover.

Bench Adjustment

The steering gear worm bearing and lash adjustments may be made before the assembly is installed in the car.

With gear clamped in vise at about the same angle as its installed position in the car, temporarily install the steering wheel on wormshaft and proceed as outlined under Maintenance and Adjustments—Steering Gear Adjustments.

STEERING LINKAGE

Tie Rods

There are two tie rods used on all models. Each tie rod is of three piece construction, consisting of the tie rod and two tie rod end assemblies. The ends are threaded into the rod and locked with clamps. Right and left hand threads are provided to facilitate toe-in adjustment and steering gear centering.
The tie rod ends are self adjusting for wear and require no attention in service other than periodic lubrication and occasional inspection to see that ball studs are tight. Replacement of tie rod ends should be made when excessive up and down motion is evident or if any lost motion or end play at ball end of stud exists.

Removal
1. Remove cotter pins from ball studs and remove castellated nuts.
2. To remove outer ball stud, tap on steering arm at tie rod end with a hammer while using a heavy hammer or similar tool as a backing. If necessary pull downward on tie rod to remove from steering arm.
3. Remove inner ball stud from relay rod using same procedure as described in Step 2.
4. To remove tie rod ends from tie rods loosen clamp bolts and unscrew end assemblies.

Installation
1. If the tie rod ends were removed, install ends on tie rod making sure both ends are threaded an equal distance from the tie rod.
2. Make sure that threads on ball studs and in ball stud nuts are perfectly clean and smooth. Install neoprene seals on ball studs.
   NOTE: If threads are not clean and smooth, ball studs may turn in tie rod ends when attempting to tighten nut.
3. Install ball studs in steering arms and relay rod.
4. Install ball stud nut, tighten securely and install cotter pins. Lubricate tie rod ends.
5. Adjust toe-in as described in Section 3.
   NOTE: Before locking clamp bolts on the rods, make sure that the tie rod ends are in alignment with their ball studs (each ball joint is in the center of its travel). If the tie rod is not in alignment with the studs, binding will result.

STEERING DAMPER

Removal
1. Remove bolt from damper pivot bracket at relay rod.
2. Remove nut from damper pivot at frame bracket and withdraw damper assembly.
3. Damper is serviced as a unit. Replace damper when leakage or bushing wear become excessive.

Installation
1. Place piston rod end into frame bracket, install nut and torque 23-33 lb.-ft.
2. Insert cylinder end pivot into relay rod bracket, install through bolt and torque 20-28 lb. ft.

RELAY ROD

Removal
1. Remove steering damper from relay rod as outlined under Steering Damper—Removal. Remove anchor bracket from relay rod by disconnecting two mounting bolts.
2. Remove inner ends of tie rods from relay rod as described under Tie Rod—Removal.
3. Remove cotter pin from end of relay rod at pitman arm ball stud attachment, and remove stud nut.
4. Tap ball stud out of pitman arm and lower relay rod.
5. Remove cotter key and nut from idler arm and remove relay rod from idler arm. Remove washer and seal from idler arm.

Cleaning and Inspection
Remove accumulated grease and dirt from assembly and inspect for damage or excessive wear.

Installation
1. Place relay rod on idler arm stud, making certain idler stud seal and washer are in place, then install and tighten nut to 45 ft. lbs. Advance nut just enough to align castellation with cotter pin hole and install pin.
2. Install new seal and clamp over ball at end of pitman arm.
3. Install inner spring seat and spring to relay rod.
4. Raise end of rod and install on pitman arm.
5. Install spring seat, spring, and end plug.
6. Tighten end plug until springs are compressed and plug bottoms, then back off 3/4 turn plug amount necessary to insert cotter pin. Insert cotter pin to lock adjustment.
7. Install tie rod ends to relay rod as previously described under Tie Rods.
8. Lubricate tie rod ends and pitman arm to relay rod ball joint.
9. Install steering damper bracket and torque bolts 20-28 lb.-ft. Install damper as outlined under Steering Damper—Installation.
10. Adjust toe-in and align steering wheel as described previously in this section.

IDLER ARM

Removal
1. Remove cotter pins and nuts from ends of idler arm and remove relay rod from idler arm, using method outlined in step two of Tie Rod Removal. Do not hammer on idler arm assembly.
2. Remove idler arm from frame.
Cleaning and Inspection

Remove stud seals and accumulated grease and dirt from assembly and inspect for damage or excessive wear. The studs must turn smoothly, without restriction. A grating noise indicates dirt within unit.

Set idler arm in bench vise and check torque required to rotate idler shaft. Torque should be 30-55 in. lbs. Attach nut to ball stud and check torque required to rotate ball stud. Torque should be 10-35 in. lbs. If torques are not within these limits, idler arm should be replaced.

Installation

1. Position idler arm on frame and install mounting bolts; tightening nuts to 25-35 ft. lbs.
2. Install relay rod to idler arm, making certain seal is on stud, and install and tighten nut to 45 ft. lbs.
3. Install cotter key and secure.

TROUBLES AND REMEDIES

Symptom and Probable Cause

Hard Steering
a. Lack of lubrication.
b. Turn signal housing rubbing steering wheel.
c. Underinflated tires.
d. Improper worm bearing and/or high spot preload adjustment.
e. Interference between steering shaft and mast jacket assembly caused by misalignment, bent steering shaft, or damaged parts within the mast jacket assembly.
f. Incorrect front suspension alignment.

Loose Steering
a. Improper worm bearing and/or high spot preload adjustment.
b. Defective front wheel bearings.
c. Worn steering knuckle ball joints.
d. Worn pitman shaft bushings.
e. Worn steering linkage components.
f. Gear assembly loose on body member.

Shimmy
a. Unbalanced front wheels.
b. Faulty front wheel bearings.
c. Loose wheel nuts.
d. Defective front brakes.
e. Worn tie rod ends.

Road Wonder
a. Underinflated tires.
b. Improper worm bearing and/or high spot preload adjustment.
c. Defective front wheel bearings.
d. Worn tie rod ends.

Probable Remedy

a. Lubricate steering gear, tie rod ends, steering relay rod ball joints and steering knuckle joints. Replace or repair part if not corrected by lubrication (Sect. 0).
b. Adjust to proper clearance (Sect. 9).
c. Inflate tires to recommend pressure (Sect. 10).
d. Adjust according to instructions (Sect. 9).
e. Adjust or replace parts as required (Sect. 9).
f. Adjust to specifications (Sect. 3).

a. Adjust according to instructions (Sect. 9)
b. Adjust or replace as required (Sect. 3).
c. Replace steering knuckle ball joints (Sect. 3).
d. Replace bushings (Sect. 9).
e. Replace worn parts as required (Sect. 9).
f. Tighten bolts to proper torque (Sect. 9).

a. Balance wheel assemblies (Sect. 10).
b. Adjust or replace as required (Sect. 3).
c. Tighten to proper torque (Sect. 3).
d. Repair as required (Sect. 5).
e. Inspect and repair as required (Sect. 9).
a. Inflate to recommended pressures (Sect. 10).
b. Adjust to proper specifications (Sect. 9).
c. Adjust or replace as required (Sect. 3).
d. Inspect and repair as required (Sect. 9).

SPECIFICATIONS

Specifications of manual steering components may be found in Section 14 of this book.