

MAINTENANCE SCHEDULE

GROUP 19

THOUSANDS OF MILES OR NUMBER OF MONTHS, WHICHEVER OCCURS FIRST (Except Where Noted)			As Required	6	12	18	24	30	36
ENGINE									
Change engine oil and filter†				X	X	X	X	X	X
Check engine oil level						At Fuel Stops			
Adjust carburetor—idle speed, idle mixture and fast (cold) idle speed (automatic choke only)			X						
Adjust power steering idle speed compensator— All 6-cylinder and Fairlane 8-cylinder			X						
Clean carburetor air cleaner and filter† (paper type only)				X	X	X	X	X	
Replace carburetor air cleaner filter			Paper†						X
			Plastic†				X		X
Clean crankcase oil filler tube breather cap†				X	X	X	X	X	X
Valve tappet adjustment (Conventional) 289—4-V High Performance Engine (Except Falcon)					X		X		X
Check engine accessory drive belts			X				X		
Replace positive crankcase ventilation system valve and clean passages (if so equipped)†					X		X		X
Check ignition timing					X		X		X
Check distributor points			X						
Check spark plugs			X						
Replace fuel filter									X
Adjust accelerator pump lever						Seasonal			
Replace engine coolant									X*
Check engine coolant level			X						
TRANSMISSION									
Adjust C-4 automatic transmission bands	All Except 289-4V Hi. Perf.	Low-Reverse	X						
		Intermediate							X
	289-4V Hi. Perf. only	Low-Reverse		X	X		X		X
		Intermediate		X	X	X	X	X	X
Check transmission oil level				X	X	X	X	X	X
CHASSIS									
Lubricate automatic transmission kickdown linkage			X						
Check clutch linkage adjustment			X						
Inspect and cross-switch wheels and tires			X						
Check power steering reservoir fluid level				X	X	X	X	X	X
Check master cylinder fluid level				X	X	X	X	X	X
Check axle fluid level				X	X	X	X	X	X
Lubricate front suspension ball joints									X
Check steering gear pre-load (except Fairlane is, as required)				X		As Required After 6000 Miles			
Lubricate universal joints									X
Check brake lines and lining and repack wheel bearings if required								X	
Check air conditioning system					Annually at Beginning of A/C Season				
Check front wheel alignment and linkage and adjust			X						
Lubricate power steering actuator valve and ball stud (Fairlane—also lubricate steering linkage)									X
Check tire pressure			X						
Check battery fluid level			X						
BODY									
Lubricate hood latch			X						
Lubricate hood auxiliary catch			X						
Lubricate door lock cylinders			X						
Lubricate luggage compartment lock cylinder			X						
Lubricate tailgate lock cylinders (Except Mustang)			X						
Lubricate tailgate support and hinges (Except Mustang)			X						
Lubricate fuel filler door hinges (Except Mustang)			X						
Check convertible top operation (Except Fairlane)			X						
Clean body drain holes			X						
Check convertible top fluid level (Except Fairlane)			X						
Replace windshield wiper blades			X						
Lubricate door hinge and hinge check			X						
Lubricate hood hinge pivots			X						
Lubricate luggage compartment hinge pivots			X						

†On engine items, more frequent intervals will be required if the vehicle is operated in extremely dusty areas for extended periods of idling or short runs which prevent the engine from reaching normal operating temperatures.

*Or every two years

PART 3-3 MANUAL STEERING

Section	Page	Section	Page
1 Description	3-26	4 Major Repair Operations	3-29
2 In-Car Adjustments and Repairs	3-26	5 Steering Linkage Repair	3-30
3 Removal and Installation	3-28		

1 DESCRIPTION

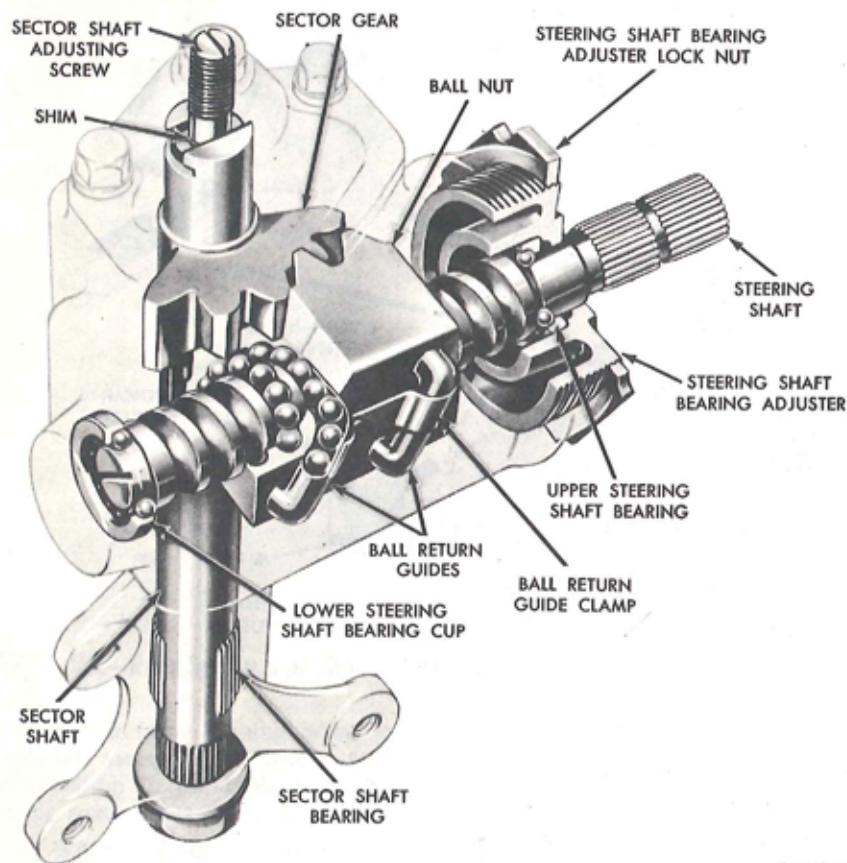


FIG. 1—Recirculating Ball Type Steering Gear

The steering gear (Fig. 1) is of the worm and recirculating ball type. The sector shaft rotates in needle bearings that are pressed into the gear housing.

The worm bearing preload is controlled by the large bearing adjuster which is threaded into the housing. The sector shaft mesh load is controlled by an adjusting screw located in the housing cover.

A steering gear identification tag is provided under one of the cover attaching bolts (Fig. 2).

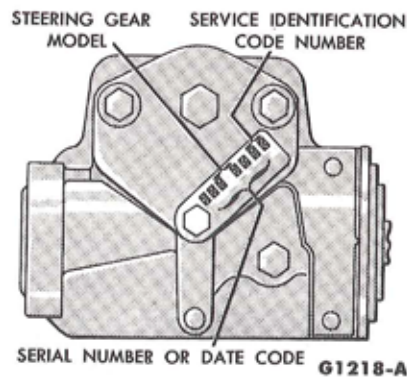


FIG. 2—Steering Gear Identification Tag

2 IN-CAR ADJUSTMENTS AND REPAIRS

STEERING WORM AND SECTOR GEAR ADJUSTMENTS

The ball nut assembly and the sector gear must be adjusted properly to maintain minimum steering shaft end play (a factor of preload adjustment) and minimum backlash between sector gear and ball nut. There are only two possible adjustments within the recirculating ball-type steering gear, and these should

be made in the following order to avoid damage or gear failure.

1. Disconnect the Pitman arm from the sector shaft.
2. Remove the steering wheel, spring and the centering cone from the shaft and note the relation of the shaft to the bearing.
3. If the shaft is not centered, attach a spring scale to it.
4. Center the shaft by pulling on

the scale and note the reading.

5. If more than 20 lbs. pull is required to center the shaft, the steering column should be aligned as detailed in steering gear installation, before adjusting the preload and mesh load.

6. Loosen the nut which locks the sector adjusting screw (Fig. 3), and turn the adjusting screw counterclockwise.

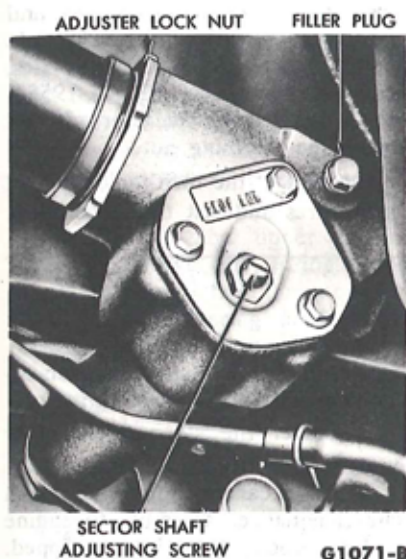


FIG. 3—Steering Gear Adjustments

7. Measure the worm bearing preload by attaching an in.-lb. torque wrench to the steering wheel nut (Fig. 4). With the steering wheel off center, read the pull required to rotate the input shaft approximately $1\frac{1}{2}$ turns either side of center. If the torque or preload is not within specification (Part 3-6), adjust as explained in the next step.

8. Loosen the steering shaft bearing adjuster lock nut, and tighten or back off the bearing adjuster (Fig. 3) to bring the preload within the specified limits.

9. Tighten the steering shaft bearing adjuster lock nut, and recheck the preload.

10. Turn the steering wheel slowly to either stop. Turn gently against the stop to avoid possible damage

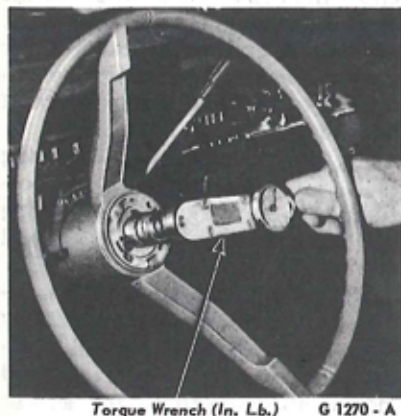


FIG. 4—Checking Pre-Load

to the ball return guides. Then rotate the wheel $2\frac{1}{4}$ turns to center the ball nut.

11. Turn the sector adjusting screw clockwise until the specified pull (Part 3-6) is necessary to rotate the worm past its center high spot (Fig. 4). No perceptible backlash is permissible at 30° on either side of center.

12. While holding the sector adjusting screw, tighten the locknut to specification and recheck the backlash adjustment.

13. Connect the Pitman arm to the sector shaft and torque to specification.

STEERING WHEEL SPOKE POSITION ADJUSTMENT

When the steering gear is on the high point, the front wheels should be in the straight-ahead position and the steering wheel spokes should be in their normal position with the Pitman arm pointing directly forward. If the spokes are not in their normal position, they can be adjusted without disturbing the toe-in adjustment (Part 3-1).

STEERING WHEEL REPLACEMENT

1. Remove the horn ring (or button) assembly and related parts.

2. Remove the steering wheel attaching nut and remove the steering wheel from the shaft, using the tool shown in (Fig. 5).

3. With the front wheels straight forward, position the steering wheel on the steering shaft with the post on the steering wheel hub at the top.

4. Apply Loctite Sealer (C3AZ-

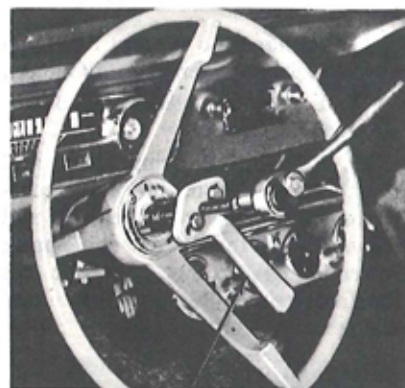


FIG. 5—Removing Steering Wheel—Typical

19554-A) to the steering shaft threads and install the steering wheel nut on the shaft. Torque the nut to specification.

5. With the front wheels straight forward (post on steering wheel hub at the top), install the horn ring (or button) assembly and the related parts.

STEERING COLUMN SHIFT TUBE REPLACEMENT

REMOVAL

1. Remove the steering wheel, spring and centering sleeve.

2. Remove the turn indicator lever. Place the gear shift selector lever in the neutral position and remove the lever.

3. Remove the bearing retainer and move the turn signal switch to one side.

4. Loosen the flange retaining nuts until pressure on the nuts (toward the column center) will disengage the bolt heads. Lift the flange from the column and drape the flange and the signal wires over the top of the column.

5. Remove the gear shift lever socket from the steering column tube.

6. Remove the shift tube.

INSTALLATION

1. After applying Lubriplate to the lower area of the shift tube, position the shift tube in the steering column tube. The shift tube is seated when spring pressure can be felt.

2. Install the gear shift lever socket, being careful not to damage the wiring insulation as the socket is positioned.

3. Install the flange and tighten the retaining nuts.

4. Install the turn signal switch and bearing retainer.

5. Install the turn signal lever and the selector lever.

6. Install the centering sleeve, spring and steering wheel.

STEERING COLUMN UPPER BEARING REPLACEMENT

1. Disconnect the horn wire and the turn indicator wires at the connectors. Remove the horn ring (or button) and the spring.

2. Remove the steering wheel attaching nut. Remove the steering wheel (Fig. 5) with a puller. Lift

the spring and the centering sleeve from the shaft.

3. Remove the turn indicator lever. Remove the upper bearing retainer screws and move the turn signal switch to one side.

4. Remove the steering column upper bearing from the flange.

5. After applying Lubriplate, install the new upper bearing.

6. Position the upper bearing retainer and the signal switch and install the three retainer screws.

7. Apply Loctite Sealer (C3AZ-19554-A) to the turn indicator lever and install the turn indicator lever.

Position the centering sleeve and the spring. After applying Lubriplate to the horn switch brush plates, apply Loctite Sealer (C3AZ-19554-A) to the steering shaft threads and install the retaining nut.

8. Connect the turn indicator and horn wires and test their operation.

3 REMOVAL AND INSTALLATION

STEERING GEAR REMOVAL AND INSTALLATION

REMOVAL

1. Disconnect the horn and turn indicator wires under the instrument panel. Also on a car with an automatic transmission, disconnect the neutral switch wires.

2. Remove the horn ring (or button). Remove the steering wheel retaining nut and the steering wheel (Fig. 5).

3. Remove the upper bearing centering sleeve and spring.

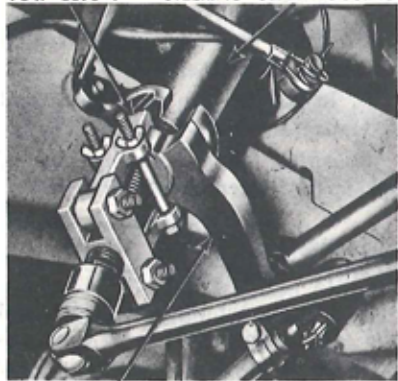
4. Remove the steering column clamp to instrument panel bolts and remove the clamp and the insulator.

5. Pull the rubber seal up on the steering column, fold the floor mat aside, and move the dash panel insulation out of the way.

6. Remove the retaining screws from the steering column weather seal on the dash panel. Remove the steering column cover plates and gasket.

7. Slide the steering column tube assembly from the steering gear shaft, guiding the shift lever (s) up

Tool—
T64P-3590-F STEERING GEAR HOUSING



PITMAN ARM

G1073-D

FIG. 6—Removing Pitman Arm—Typical

through the opening in the dash panel.

8. Raise the car and remove the clutch equalizer and bracket assembly from the frame side rail and engine if so equipped to obtain clearance.

9. On power steering equipped vehicles, remove pal nut attaching nut insulator and washer and remove the power steering cylinder rod from the bracket to obtain clearance for removal of Pitman arm.

10. Remove the inlet pipe from the manifold to obtain clearance.

11. Remove nut and washer. Install Tool T64P-3590-F and remove the Pitman arm from the sector shaft (Fig. 6).

12. Remove steering gear retaining bolts.

13. Lower the car and disconnect the wires from the left bank of spark plugs to prevent damaging them.

14. On Comet and Falcon 8-cylinder models, remove the manifold from the engine to obtain clearance.

15. On vehicles equipped with column mounted shift mechanism, disconnect the transmission shift rod(s) at the gear shift lever(s).

16. Remove brake booster if necessary.

17. Remove the support rod from cowl to spring tower (except Comet).

18. Loosen air cleaner to obtain clearance if necessary.

19. Lift the steering gear and shaft assembly from the engine compartment by raising the gear up and forward past the engine and spring tower taking care not to soil or tear the front seat fabric with the end of the steering shaft.

INSTALLATION

1. Install the steering gear from engine side and guide the shaft through the dash panel being careful not to soil or tear the front seat

fabric. Install the steering gear attaching bolts but do not tighten.

2. Center the steering shaft for straight ahead drive position.

3. Raise car on hoist and install clutch equalizer assembly to engine and underbody if car is so equipped.

4. Install inlet pipe to manifold.

5. Install Pitman arm to the sector shaft and install the lock washer and the torque nut to specification.

6. If equipped with power steering, install power cylinder rod to bracket and install insulator washer and nut to retain.

7. Partially lower car onto safety stands and install the steering column tube assembly over the steering shaft, guiding the shifting arms through the opening in the dash panel.

8. Position the steering column assembly and retaining clamp and insulator, and loosely install the attaching bolts and nuts.

9. Tighten the steering gear to side rail mounting bolts and column to instrument panel retaining bracket.

Check steering shaft to column upper bearing clearance. If the shaft does not touch the bearing, no further readjustment is required. If the shaft is touching the column upper bearing, it will be necessary to check the pull required to center the shaft in the column, using a fish scale. Where pull exceeds 20 lbs. at either plane to center the shaft in the column, the following correction must be made:

Vertical movement of the steering shaft can be accomplished by loosening the steering gear mounting bolts and pivoting the gear up and down.

Horizontal movement of the steering shaft can be accomplished by loosening the steering column to instrument panel retaining bracket and moving the column to the left or right.

Should additional horizontal move-

ment be required to align the steering shaft, it will be necessary to insert shim(s) of proper thickness between the steering gear assembly and the vehicle side rail. Front end alignment shims can be used for this purpose. After the steering shaft is centered, torque all bolts to specification.

10. Position the upper bearing centering sleeve and spring. After applying Lubriplate to the upper surface of the steering shaft upper bearing and the horn switch brush plate, position the steering wheel on the steering shaft. Apply Loctite sealer (C3AZ-19554-A) to the steer-

ing shaft threads and install the retaining nut. Apply Loctite sealer sparingly to the turn indicator lever threads and install the lever.

11. Install the horn ring (or button) and spring, and steering wheel to the center point.

12. Set gap between column tube and steering wheel and tighten column to instrument panel.

13. Lower the car from the safety stands. Connect the horn, turn indicator wires, and (on a car with an automatic transmission) the neutral switch wires.

14. Position the steering column

cover plates and gasket on the dash panel and install the retaining screws.

15. Position the dash panel insulation just above the steering column. Position the floor mat and push the rubber seal down to the floor mat.

16. Connect the transmission shift rods and correct adjustment of shift lever(s) and the neutral switch.

17. Install the exhaust manifold on Falcon and Comet 8-cylinder models.

18. Connect ignition wires.

19. Connect cowl to spring tower support rod (except Comet).

20. Tighten the air cleaner.