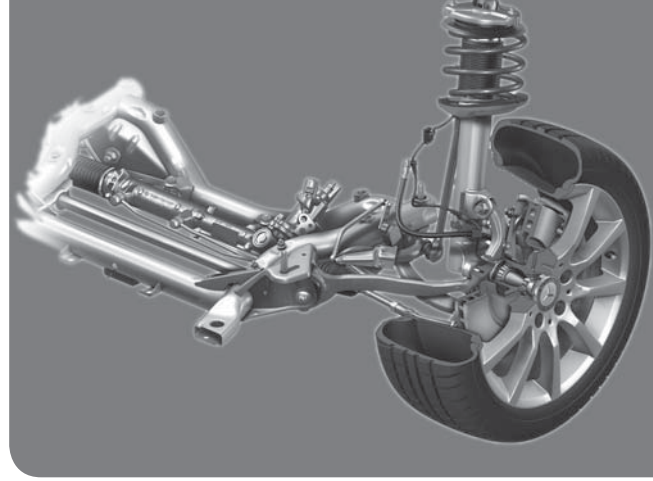


Chapter 78

Steering System Diagnosis and Repair



Name _____

Date _____

Instructor _____

Score _____

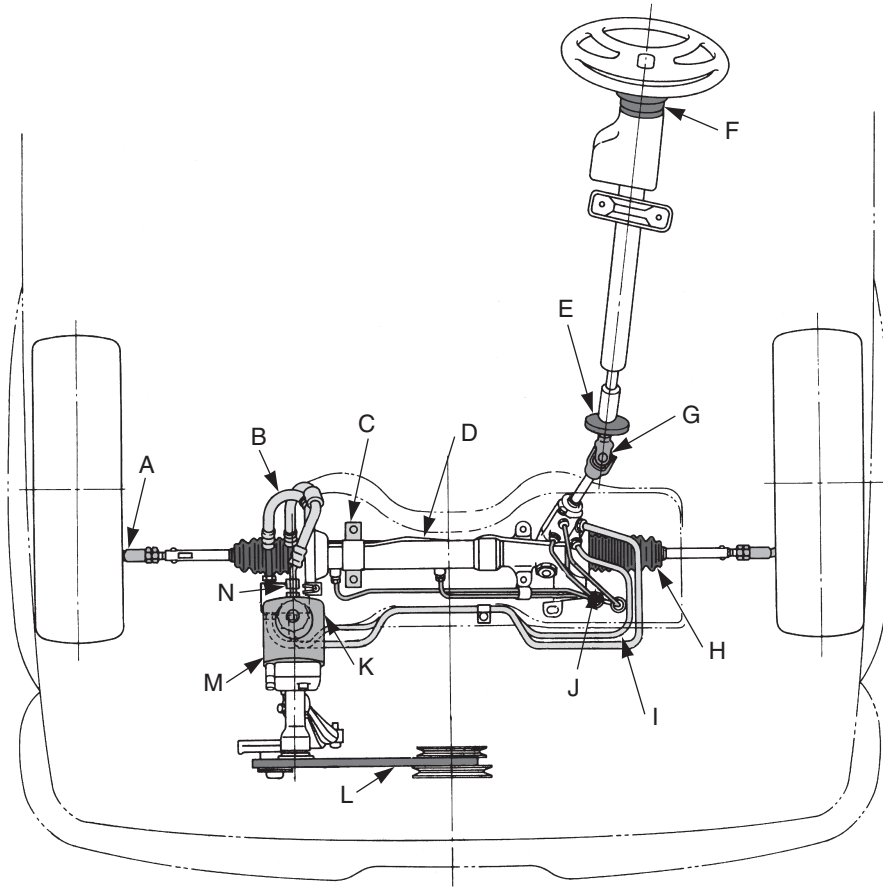
Objective: After studying this chapter, you will be able to summarize how to diagnose and repair steering system troubles.

Steering System Service

1. After prolonged use, which parts of the steering system wear? What are the results?

Steering System Problem Diagnosis

2. Label the problems that can occur in the steering system.



- | | |
|-----------|-----------|
| (A) _____ | (H) _____ |
| (B) _____ | (I) _____ |
| (C) _____ | (J) _____ |
| (D) _____ | (K) _____ |
| (E) _____ | (L) _____ |
| (F) _____ | (M) _____ |
| (G) _____ | (N) _____ |

3. Explain two methods of checking the causes of steering wheel play.

Name _____

4. *True or False?* Typically, you should be able to turn the steering wheel more than about 1 1/2" without causing movement of the front wheels. _____

5. What can cause hard steering?

6. Name some problems that can produce abnormal noises in steering systems.

Steering System Maintenance

7. What does steering system maintenance typically involve?

8. *True or False?* To check the level of fluid in the power steering system, the engine should be running. _____

9. *True or False?* To remove and to install a serpentine belt, use a breaker bar to swing the belt tensioner sideways. _____

Steering Column Service

10. How do you remove a steering wheel?

Steering Linkage Service

11. Name some common signs of wear in steering linkage components.

12. *True or False?* A worn idler arm is the most common cause of play in the steering wheel.

13. How do you service an inner tie-rod end on a rack-and-pinion assembly?

14. The inner tie-rod end on a rack-and-pinion assembly is enclosed in a(n) _____.

Manual Rack-and-Pinion Service

15. What is an advantage of a manual rack-and-pinion service over a linkage-type system?

16. How do you remove a rack-and-pinion gear from a vehicle?

Name _____

Power Steering System Service

17. *True or False?* Many of the parts of a power steering system are different from those used on a manual steering system. _____

18. Power steering fluid leakage is a(n) _____ (common/uncommon) _____ problem.

19. Name three things a power steering pressure test checks.

_____ 20. When performing a power steering pressure test, do not close the test valve for more than about _____ seconds.

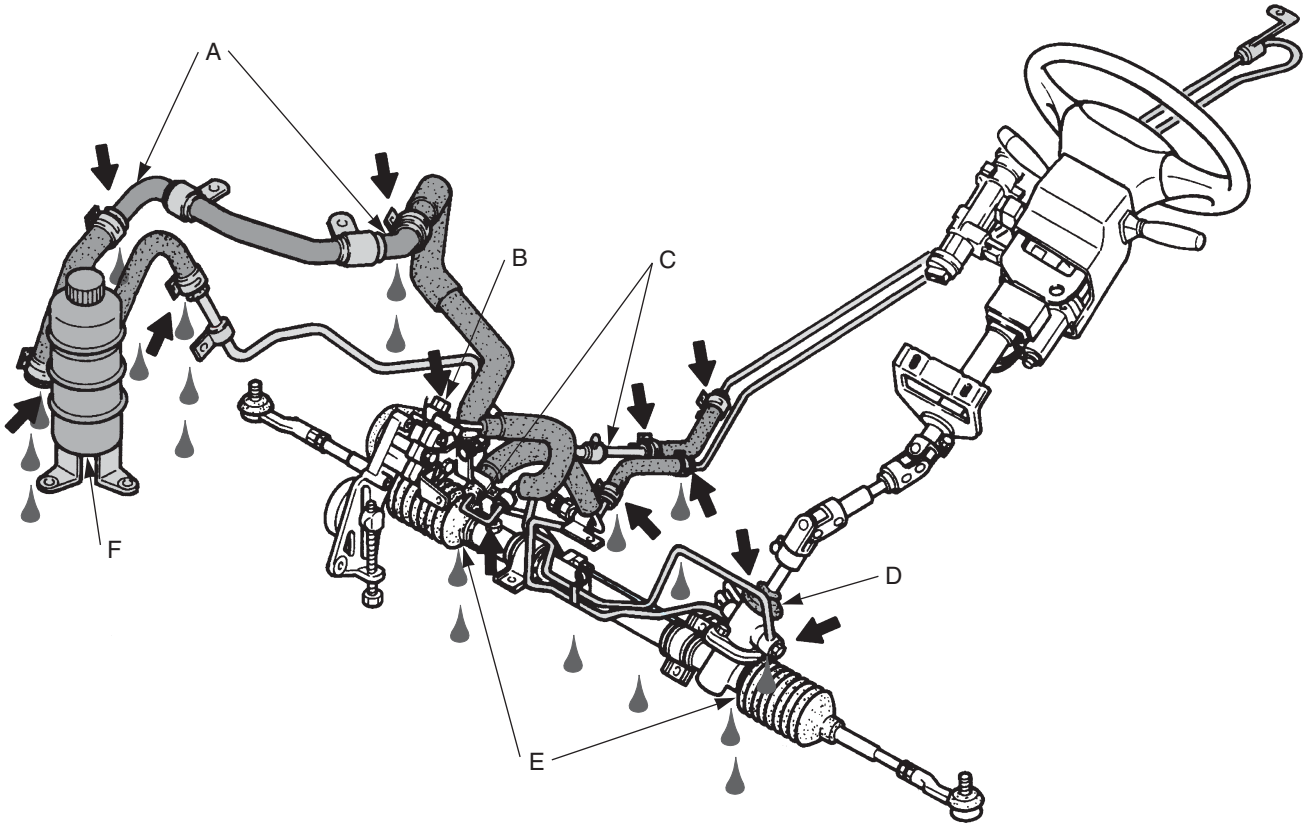
- (A) two
- (B) five
- (C) ten
- (D) twenty

21. *True or False?* Most automotive technicians rebuild a power steering pump in-shop. _____

22. When any of the hydraulic components (pump, power piston, hoses) are serviced, you should _____ the power steering system. _____

23. What trouble codes can a scan tool show when testing an electronic assist power steering system?

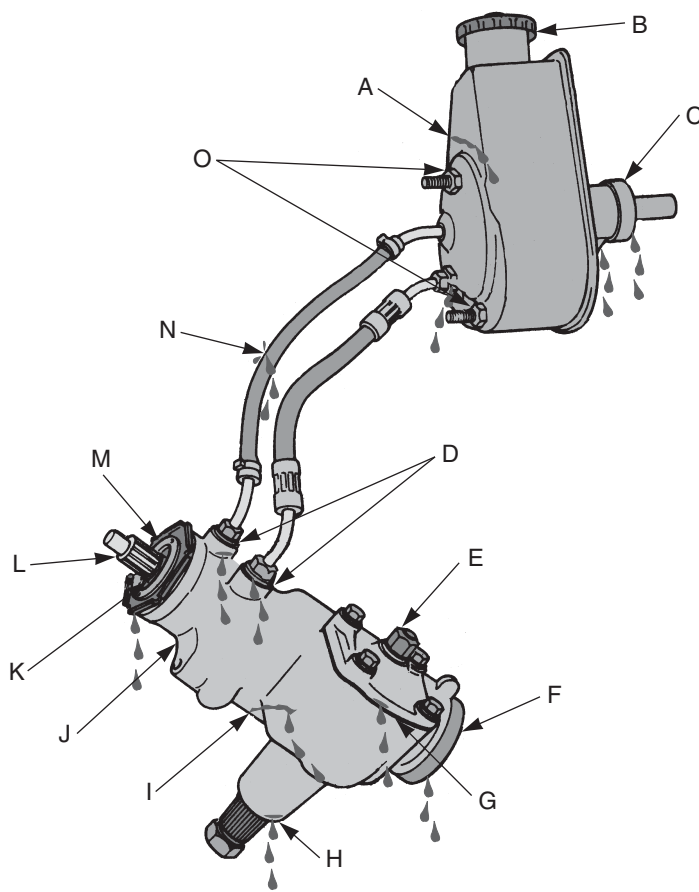
24. Label the parts that can cause power steering system leakage in a rack-and-pinion system.



- | | |
|-----------|-----------|
| (A) _____ | (D) _____ |
| (B) _____ | (E) _____ |
| (C) _____ | (F) _____ |

Name _____

25. Label the parts that can cause power steering system leakage in a linkage system.



- (A) _____
- (B) _____
- (C) _____
- (D) _____
- (E) _____
- (F) _____
- (G) _____
- (H) _____
- (I) _____
- (J) _____
- (K) _____
- (L) _____
- (M) _____
- (N) _____
- (O) _____