

PRACTICE EXAM 12: ASE T5 SIMULATION (50 QUESTIONS)

1. A heavy-truck driver complains of a noise from the front of the chassis that occurs only when the truck is loaded heavily, but disappears when the truck is empty. The most likely cause is:

- A. Worn front shock absorbers under any load condition
- B. Worn front spring shackle bushings that compress under load
- C. Excessive caster on both front wheels
- D. Mismatched front tire pressures

2. The component on a heavy-truck steering linkage that is the only adjustable component for setting front-wheel toe is the:

- A. Pitman arm
- B. Drag link
- C. Tie rod adjusting sleeves
- D. Steering knuckle pivot

3. The proper response when a heavy-truck driver complains of grinding noise from a wheel-end on cornering is:

- A. Inspect the wheel bearing for pitting and roller damage that requires replacement
- B. Replace the front shock absorbers
- C. Adjust the cab leveling valve
- D. Re-torque the front spring U-bolts

4. A heavy-truck rear suspension uses an air-spring design. The component that prevents axle wind-up under braking and acceleration torque is the:

- A. Drag link
- B. Pressure-protection valve
- C. Stabilizer bar
- D. Torque rod

5. The proper procedure for inspecting a heavy-truck wheel-end for excessive heat is to:

- A. Disassemble the hub immediately
- B. Use an infrared thermometer on the hub face after a routine drive
- C. Apply water to the hub and observe steam production
- D. Press a wooden stick against the rotating hub

6. A heavy-truck driver complains of vibration that occurs only on rough road surfaces but disappears on smooth pavement. The most likely cause is:

- A. Worn fifth wheel locking jaws
- B. Mismatched dual rear tires
- C. Worn front shock absorbers producing inadequate damping
- D. Excessive caster on both front wheels

7. The proper sequence for adjusting heavy-truck front-end alignment is:

- A. Caster, camber, toe
- B. Toe, camber, caster
- C. Camber, toe, caster

D. Toe, caster, camber

8. A heavy-truck wheel-end has been operated with insufficient bearing preload. The most likely first observable symptom is:

- A. A pull toward the affected wheel
- B. Center-tread wear on the affected tire
- C. Excessive heat at the affected wheel-end
- D. Bearing noise that varies with cornering load

9. The proper response when a heavy-truck wheel speed sensor shows erratic readings only during low-speed driving is:

- A. Replace the entire ABS controller
- B. Verify wheel bearing endplay falls within TMC RP 618 specification
- C. Replace the brake drum
- D. Re-torque the wheel nuts to higher specification

10. A heavy-truck driver complains of slow steering response that occurs only on the first cold morning of winter, then disappears as the engine warms. The most likely cause is:

- A. Worn power steering pump bearing
- B. Excessive bearing endplay
- C. Cold-fluid viscosity producing reduced pump output until warmed
- D. A bent pitman arm

11. The component on a heavy-truck integral hydraulic steering gear that establishes the gear's center mesh tightness during over-center adjustment is the:

- A. Sector shaft
- B. Pitman arm
- C. Recirculating ball nut
- D. Torsion bar

12. The proper response when a heavy-truck driver complains that the steering wheel returns slowly to center after a turn is:

- A. Replace the front shock absorbers
- B. Re-torque the front spring U-bolts
- C. Adjust the cab leveling valve
- D. Verify caster measurement on both front wheels

13. A heavy-truck integral hydraulic steering gear's flow control valve protects:

- A. The torsion bar from over-twisting
- B. System pressure from spiking dangerously at high engine RPM
- C. The kingpin retention plug from premature wear
- D. The pitman arm from impact loads

14. The proper response when a heavy-truck driver complains of a sudden onset of hard steering after driving through a deep puddle is:

- A. Replace the steering gear immediately
- B. Adjust the over-center screw on the gear cover

- C. Verify belt tension and inspect for water-related belt slip
- D. Replace the front shock absorbers

15. A heavy-truck driver complains of vibration that intensifies during cornering on either side and decreases when traveling straight. The most likely cause is:

- A. Bearing wear in both front wheel-ends
- B. Mismatched front tire pressures
- C. Excessive caster on both front wheels
- D. A bent pitman arm

16. The proper response when a heavy-truck driver complains of excessive front tire wear with no obvious alignment cause is:

- A. Replace the front shock absorbers
- B. Adjust toe at the tie rod adjusting sleeves
- C. Re-torque the front spring U-bolts
- D. Verify wheel bearing condition and rear axle thrust angle

17. A heavy-truck rear suspension uses an air-spring design with a height control valve. The component that mechanically links the axle position to the valve is the:

- A. Stabilizer bar end link
- B. Linkage rod (height control link)
- C. Pressure relief valve
- D. Pitman arm extension

18. The proper response when a heavy-truck wheel-end has been operated with discolored oil containing visible metal particles is to:

- A. Top off the oil and continue normal service
- B. Wipe away the metallic residue and continue service
- C. Disassemble the hub and inspect bearings for damage before any further service
- D. Apply additional grease to compensate

19. A heavy-truck integral hydraulic steering gear has been damaged from operating with contaminated fluid. The technician should expect to find:

- A. Reduced maximum pressure during a full-lock dead-head test
- B. Excessive bearing endplay on the front wheels
- C. Off-center steering wheel position
- D. Erratic ABS engagement during normal driving

20. The proper procedure for inspecting heavy-truck stabilizer bar end link bushings is:

- A. Apply a torque wrench to the link mounting bolts
- B. Press on the bar with a dial indicator
- C. Remove the bar from the chassis for bench inspection
- D. Visually inspect the bushings for cracks, tears, or elongation with the wheels turned

21. A heavy-truck driver complains of a clunking noise during cornering that is most pronounced when transitioning over rough pavement. The most likely cause is:

- A. Excessive bearing preload at the wheel-end
- B. Loose front spring U-bolts

- C. A bent pitman arm
- D. Worn stabilizer bar end link bushings

22. The proper response when a heavy-truck rear suspension shows the chassis sitting noticeably lower than design ride height is:

- A. Replace the rear shock absorbers
- B. Verify the height control valve linkage and inspect for a stuck-closed valve
- C. Drain the power steering reservoir
- D. Re-torque the front spring U-bolts

23. The component that holds air pressure inside a tubeless heavy-truck tire is:

- A. The air-impermeable inner liner combined with a sealed bead-to-rim contact
- B. A separate inner tube installed inside the tire
- C. The tire's outer tread surface
- D. A factory-applied sealant inside the tire body

24. A heavy-truck driver complains of a steady pull during cornering that disappears at steady tracking. The most likely cause is:

- A. Worn front shock absorbers
- B. Mismatched dual rear tires
- C. A worn drag link ball stud allowing transient looseness during steering
- D. Excessive caster on both front wheels

25. The proper procedure for inflating a heavy-truck multi-piece rim wheel under OSHA 29 CFR 1910.177 is:

- A. Inflate at a remote location away from any structure
- B. Stand directly in line with the rim during inflation
- C. Use a hand-held inflation chuck for precise control
- D. Use a tire cage with a clip-on remote inflation chuck while standing outside the trajectory zone

26. A heavy-truck driver complains of slow steering response that improves at higher engine RPM. The most likely cause is:

- A. Excessive bearing endplay at the wheel-end
- B. Insufficient pump output at idle from belt slip or worn pump
- C. A bent pitman arm
- D. Mismatched dual rear tires

27. The component on a heavy-truck integral hydraulic steering gear that converts rotational input from the steering wheel into linear motion of the ball nut is the:

- A. Sector shaft
- B. Pitman arm
- C. Worm shaft and recirculating ball mechanism
- D. Torsion bar

28. The proper response when a heavy-truck driver complains that the chassis sits noticeably tilted to one side after sitting overnight, but levels itself when the engine starts is:

- A. Inspect for a leaking air bag or air supply line on the lower side

- B. Re-torque the front spring U-bolts
- C. Replace the rear shock absorbers
- D. Adjust the cab leveling valve

29. The proper response when a heavy-truck wheel speed sensor has been installed correctly with proper air gap and the ABS controller still reads erratic signals is to:

- A. Replace the entire ABS controller
- B. Replace the brake drum
- C. Re-torque the wheel nuts to higher specification
- D. Verify wheel bearing endplay falls within TMC RP 618 specification

30. The component on a heavy-truck rear suspension that allows two drive axles to share load equally as one axle articulates over a bump is the:

- A. Drag link
- B. Equalizing beam
- C. Stabilizer bar
- D. Pitman arm

31. The proper response when a heavy-truck driver complains of vibration that occurs only at one specific speed (around 60 mph) and disappears at slightly higher and lower speeds is:

- A. Replace the front shock absorbers
- B. Re-torque the front spring U-bolts
- C. Adjust the cab leveling valve
- D. Identify the speed-dependent resonance from wheel-and-tire imbalance

32. The component that supports the vertical load between the lower face of the steering knuckle and the lower face of the axle eye on a heavy-truck steer axle is the:

- A. Thrust bearing
- B. Upper kingpin bushing
- C. Lower kingpin bushing
- D. Sealing flange

33. A heavy-truck driver complains of significant steering effort during low-speed cornering with foamy power steering fluid. The most likely cause is:

- A. A bent pitman arm
- B. Mismatched front tire pressures
- C. Air ingestion into the suction line producing pump cavitation
- D. Worn front shock absorbers

34. The proper procedure for diagnosing a heavy-truck pull complaint is to:

- A. Replace the front shock absorbers
- B. Verify tire pressures and inspect tires for damage and conicity
- C. Adjust toe at the tie rod adjusting sleeves
- D. Disconnect the steering linkage at the pitman arm

35. The TMC RP 618 specification for final wheel bearing endplay measured with a dial indicator is:

- A. 0.000 to 0.001 inch
- B. 0.005 to 0.010 inch
- C. 0.010 to 0.015 inch

D. 0.001 to 0.005 inch

36. A heavy-truck driver complains of significant steering wheel free play. After verifying linkage components are within specification, the technician should next inspect:

- A. Front shock absorber damping
- B. Wheel bearing endplay
- C. Steering U-joints and intermediate shaft splines
- D. Cab leveling valve adjustment

37. The proper response when a heavy-truck driver complains that the truck "remembers" the last steering input and continues drifting in that direction after the steering wheel returns to center is:

- A. Inspect kingpin pivots and steering column U-joints for binding
- B. Replace the front shock absorbers
- C. Re-torque the front spring U-bolts
- D. Adjust the cab leveling valve

38. A heavy-truck rear suspension uses a walking-beam design. The walking-beam design is typically chosen for:

- A. Highway tractor applications with maximum fuel economy
- B. Light medium-duty delivery trucks
- C. Bus chassis with air-spring requirements
- D. Severe off-highway service such as concrete mixers and oilfield equipment

39. The proper procedure for replacing a heavy-truck wheel seal during hub service is to:

- A. Reuse the original seal if it appears undamaged
- B. Install a new seal regardless of apparent condition of the old one
- C. Apply gasket sealer to the seal lip before installation
- D. Heat the seal to soften it before installation

40. A heavy-truck driver complains of a thumping sound at the fifth wheel during acceleration and braking transitions. The most likely cause is:

- A. Worn fifth wheel mounting bolts at the chassis frame
- B. A worn rear torque rod bushing
- C. Excessive kingpin lock-up clearance in the fifth wheel
- D. Loose slider rail fasteners

41. The proper procedure for measuring rear axle thrust angle on a heavy-truck tractor requires:

- A. Calibrated alignment equipment with the truck on a level rack at curb weight
- B. Lifting the rear axle off the ground for measurement
- C. Disconnecting the trailer from the fifth wheel before measurement
- D. Applying parking brakes during measurement

42. A heavy-truck integral hydraulic steering gear has internal seal failure between the two pressure chambers. The driver will experience:

- A. Loss of power steering pump engagement
- B. Excessive bearing endplay
- C. Off-center steering wheel position

D. Reduced power assist during turns despite normal pump output

43. The proper response when a heavy-truck driver complains of brake-related pull during deceleration is:

- A. Replace the front shock absorbers
- B. Verify equal brake function on both sides before checking other systems
- C. Adjust front-end alignment angles
- D. Re-torque the front spring U-bolts

44. A heavy-truck driver complains of a high-pitched whining noise from the power steering pump that increases with engine RPM. The most likely cause is:

- A. Worn fifth wheel locking jaws
- B. A bent pitman arm
- C. Pump cavitation from low fluid level or air ingestion in the suction line
- D. Excessive bearing preload at the wheel-end

45. The component on a heavy-truck steer axle that combines with caster to produce wheel-return-to-center behavior is:

- A. Steering axis inclination (SAI/KPI)
- B. Toe
- C. Camber
- D. Thrust angle

46. The proper response when a heavy-truck driver complains of a sudden onset of pull after a recent tire change is:

- A. Replace the front shock absorbers
- B. Re-torque the front spring U-bolts
- C. Adjust the cab leveling valve
- D. Inspect the new tire for internal conicity defect by swapping the front tires side-to-side

47. The proper procedure for engaging the trailer kingpin during fifth wheel coupling is to:

- A. Drive forward at high speed for firm engagement
- B. Verify the locking jaws are in the open position before backing under the trailer
- C. Apply trailer brakes only and reverse the truck
- D. Tilt the cab forward to provide additional clearance

48. The component on a heavy-truck rear suspension that resists side-to-side body roll during cornering is the:

- A. Drag link
- B. Pitman arm
- C. Stabilizer bar
- D. Torque rod

49. The proper response when a heavy-truck driver complains that the steering effort changes during low-speed maneuvering and the fluid level appears low is:

- A. Verify fluid level, condition, and inspect for leaks before further inspection
- B. Replace the front shock absorbers
- C. Re-torque the front spring U-bolts
- D. Adjust the cab leveling valve

50. The component on a heavy-truck steering linkage that connects the pitman arm to the left front steering knuckle is the:

- A. Tie rod
- B. Drag link
- C. Stabilizer bar
- D. Sector shaft

PRACTICE EXAM 12: ANSWER KEY AND EXPLANATIONS

1. B — Worn front spring shackle bushings that compress under load. Noise that occurs only when the truck is loaded heavily and disappears when empty is the diagnostic signature of a load-dependent fault. Worn shackle bushings compress under load and produce contact noises that don't appear at empty weight.
2. C — Tie rod adjusting sleeves. Toe is the most heavily adjusted alignment angle on a heavy truck and is the only adjustable component for setting front-wheel toe. The opposing thread directions on the sleeves allow simultaneous lengthening or shortening of both threaded connections by simply rotating the sleeve.
3. A — Inspect the wheel bearing for pitting and roller damage that requires replacement. Grinding noise from a wheel-end on cornering is the diagnostic signature of bearing damage. The cornering load intensifies the noise from the worn surfaces, and replacement is the only acceptable response.
4. D — Torque rod. Air bags themselves cannot transmit longitudinal forces, so air-spring suspensions rely on torque rods to fix the axle's longitudinal position and resist axle wind-up under braking and acceleration. Without torque rods, the axle would simply rotate about its own axis.
5. B — Use an infrared thermometer on the hub face after a routine drive. Excessive heat from a wheel-end is the early warning sign of bearing damage or excessive preload. An infrared thermometer scan compares wheel-end temperatures across the chassis, identifying bearings that run hotter than companions on the same axle.
6. C — Worn front shock absorbers producing inadequate damping. Vibration that occurs on rough surfaces but disappears on smooth pavement is the diagnostic signature of inadequate damping. Worn shocks lose their hydraulic resistance and let the spring oscillate freely on rough roads.
7. A — Caster, camber, toe. This sequence exists because earlier adjustments affect later readings but not vice versa. Adjusting toe last ensures that caster and camber adjustments do not disturb the final toe setting after the work is complete.
8. D — Bearing noise that varies with cornering load. Insufficient preload allows the bearing rollers to skid rather than roll, producing characteristic bearing noise that increases on the loaded side during cornering. The lack of preload allows movement that produces the load-dependent noise.
9. B — Verify wheel bearing endplay falls within TMC RP 618 specification. At low speeds, hub wobble produces detectable variation in the sensor-to-tone-ring air gap, generating erratic ABS

readings. At highway speed, the rotational momentum stabilizes the hub motion and the ABS signal becomes consistent.

10. C — Cold-fluid viscosity producing reduced pump output until warmed. Cold hydraulic fluid is significantly thicker than warm fluid, which reduces flow through the pump and gear. As the fluid warms during operation, viscosity drops and steering response returns to specification.
11. A — Sector shaft. The sector shaft's axial taper, combined with the over-center adjusting screw bearing against the shaft end, sets the gear's center mesh tightness. Tightening the screw advances the sector shaft into deeper mesh with the ball nut teeth, reducing lash at the gear's center position.
12. D — Verify caster measurement on both front wheels. Slow return-to-center after a turn indicates inadequate self-centering force, which positive caster provides. Verifying caster is the next diagnostic step when the symptom describes weak return-to-center behavior.
13. B — System pressure from spiking dangerously at high engine RPM. A constant-displacement pump driven by an engine produces flow proportional to RPM, which would create unsafe pressure spikes at high engine speeds. The flow control valve bypasses excess flow internally to maintain steady output regardless of engine speed.
14. C — Verify belt tension and inspect for water-related belt slip. Sudden onset of hard steering after driving through water typically traces to a wet drive belt slipping under load. The slip reduces pump output during turning maneuvers, producing the rapid onset of hard steering until the belt dries.
15. A — Bearing wear in both front wheel-ends. Vibration that intensifies during cornering on either side and decreases when traveling straight indicates bearing wear in both front wheels. The cornering load transfers additional weight to the affected bearing on each side, intensifying noise from each.
16. D — Verify wheel bearing condition and rear axle thrust angle. Front tire wear without an obvious alignment cause often originates in worn wheel bearings (allowing camber-like tilt) or rear axle thrust angle (forcing the driver to compensate with steering input that scrubs the front tires).
17. B — Linkage rod (height control link). The linkage rod connects the height control valve's lever arm to a reference point on the axle, allowing the valve to sense axle position. As the axle moves up or down relative to the frame, the lever rotates and opens the appropriate fluid passage.
18. C — Disassemble the hub and inspect bearings for damage before any further service. Discolored oil with metal particles is the diagnostic signature of bearing damage in progress. Continuing service or topping off without inspection will allow the damage to propagate, leading to bearing failure.
19. A — Reduced maximum pressure during a full-lock dead-head test. Internal damage from contaminated fluid typically produces seal degradation that allows fluid to bypass between

chambers. The first measurable indication is reduced peak pressure during the dead-head test, where the gear cannot retain fluid pressure during full-lock.

20. D — Visually inspect the bushings for cracks, tears, or elongation with the wheels turned. Turning the front wheels exposes the stabilizer bar end links and allows the technician to inspect each bushing for wear. This is the most efficient and reliable inspection technique.
21. D — Worn stabilizer bar end link bushings. A clunking noise during cornering and uneven pavement transitions is the diagnostic signature of worn stabilizer bar end link bushings. The bushings allow the bar to disengage partially, producing the cornering-specific noise.
22. B — Verify the height control valve linkage and inspect for a stuck-closed valve. Chassis ride height below specification points to a control circuit fault. The height control valve linkage may be misadjusted, damaged, or stuck-closed, preventing the valve from inflating the bags to the proper level.
23. A — The air-impermeable inner liner combined with a sealed bead-to-rim contact. Tubeless tires hold air through the tire's own air-impermeable inner liner combined with the airtight seal between the tire bead and the wheel rim. No separate inner tube is required.
24. C — A worn drag link ball stud allowing transient looseness during steering. A pull that occurs only during cornering inputs but disappears at steady tracking is the signature of a worn linkage joint that becomes loose only under transient loads. The looseness allows the wheel to deviate briefly during steering inputs.
25. D — Use a tire cage with a clip-on remote inflation chuck while standing outside the trajectory zone. OSHA 29 CFR 1910.177 requires multi-piece rim inflation inside a restraining device with a clip-on remote inflation chuck specifically to position the technician outside the trajectory zone. Multi-piece rim component failures during inflation can be fatal without these protections.
26. B — Insufficient pump output at idle from belt slip or worn pump. Slow steering response that improves as engine RPM increases indicates the pump is not delivering enough flow at low speeds. Belt slip and internal pump wear both produce this signature where higher RPM compensates for the underlying flow deficiency.
27. C — Worm shaft and recirculating ball mechanism. The worm shaft on the input side rotates as the steering wheel turns, and steel ball bearings circulating between the worm threads and ball nut threads translate the ball nut linearly. This linear motion drives the sector gear that produces pitman arm rotation.
28. A — Inspect for a leaking air bag or air supply line on the lower side. Tilt that resolves at engine start indicates an air supply that holds during operation but cannot maintain pressure during shutdown. The height control valve restores pressure when the engine starts and the air system recharges, masking the underlying leak.

29. D — Verify wheel bearing endplay falls within TMC RP 618 specification. With sensor air gap verified correct, excessive bearing endplay is the next suspect. Endplay outside specification allows the hub to wobble axially, dynamically changing the sensor-to-tone-ring relationship and producing erratic signals.
30. B — Equalizing beam. The equalizing beam pivots at its center, allowing one drive axle to rise while the other drops by an equal amount. This mechanical equalization keeps both axles loaded and in contact with the road regardless of road surface irregularities.
31. D — Identify the speed-dependent resonance from wheel-and-tire imbalance. Vibration that occurs at one specific speed and disappears at slightly higher and lower speeds is the diagnostic signature of an imbalance creating a rotational resonance. The frequency match between the imbalance and a chassis natural frequency produces the speed-specific symptom.
32. A — Thrust bearing. The thrust bearing sits between the lower face of the axle eye and the lower face of the steering knuckle, supporting the vertical load of the front wheel. Without an intact thrust bearing, the knuckle settles directly onto the axle eye, causing severe friction.
33. C — Air ingestion into the suction line producing pump cavitation. Foamy power steering fluid is the diagnostic signature of air being drawn into the pump suction. Cavitation reduces the pump's ability to deliver flow, producing the increased steering effort the driver describes.
34. B — Verify tire pressures and inspect tires for damage and conicity. Tire-related causes are the most common, easiest to verify, and least invasive to address. Beginning with tire inspection prevents unnecessary alignment adjustments when the actual cause is a tire issue.
35. D — 0.001 to 0.005 inch. TMC RP 618 specifies this endplay range as the standard target for manually adjusted heavy-truck wheel bearings. Endplay below 0.001 inch indicates excessive preload causing heat damage; above 0.005 inch produces hub wobble and accelerated wear.
36. C — Steering U-joints and intermediate shaft splines. With external linkage cleared, the next suspect is the rotational path between the column and the steering gear. Worn U-joints accumulate rotational lag that the driver perceives as steering wheel free play.
37. A — Inspect kingpin pivots and steering column U-joints for binding. Memory steer is caused by binding components that prevent the steering system from naturally returning to its centered position. The binding holds the system in the last steering direction even after the driver releases input.
38. D — Severe off-highway service such as concrete mixers and oilfield equipment. Walking-beam suspensions use heavy rigid construction with rubber compliance pads designed to handle the impact loads of severe off-highway operation. They sacrifice ride quality for maximum equalization and durability.

39. B — Install a new seal regardless of apparent condition of the old one. Wheel seals must always be replaced when a hub is opened because the lip is easily disturbed during disassembly and rarely reseats properly. Even an apparently undamaged seal will frequently begin weeping within hundreds of miles after disturbance.
40. C — Excessive kingpin lock-up clearance in the fifth wheel. A thumping sound during acceleration and braking transitions is the classic signature of excessive lock-up clearance, where the trailer kingpin has play within the locked jaws. The clearance must be checked with a 2-inch kingpin gauge and adjusted or jaws replaced if it exceeds 1/8 inch.
41. A — Calibrated alignment equipment with the truck on a level rack at curb weight. Thrust angle measurement requires a calibrated alignment system with the truck at curb weight on a level rack. Other approaches do not provide the geometric reference needed for accurate measurement.
42. D — Reduced power assist during turns despite normal pump output. Internal seal failure between the two pressure chambers allows fluid to bypass from the pressurized side to the unpressurized side during turns. The pump produces normal output, but the gear cannot retain pressure to push the ball nut, reducing assist felt by the driver.
43. B — Verify equal brake function on both sides before checking other systems. Brake-related pull is a brake system fault, not an alignment or suspension fault. The diagnostic priority is to confirm equal brake performance side-to-side before considering other potential causes.
44. C — Pump cavitation from low fluid level or air ingestion in the suction line. A whining pump that intensifies with engine RPM is the classic signature of cavitation, where vapor bubbles form in the suction side because fluid is insufficient or air is being drawn in. The whine intensifies because cavitation worsens at higher pump speeds.
45. A — Steering axis inclination (SAI/KPI). Caster causes the wheels to climb against the self-centering force during a turn, and SAI/KPI causes the wheels to follow a slight upward arc. Together they produce the wheel-return-to-center behavior on heavy trucks.
46. D — Inspect the new tire for internal conicity defect by swapping the front tires side-to-side. A pull that begins suddenly after a tire change points strongly to the new tire as the cause. Swapping the front tires side-to-side will reverse the pull direction if conicity is the cause, providing rapid diagnostic confirmation.
47. B — Verify the locking jaws are in the open position before backing under the trailer. The fifth wheel locking jaws must be open before the kingpin enters the throat for proper engagement. Backing into a closed-jaw fifth wheel can damage both the jaws and the kingpin.
48. C — Stabilizer bar. The stabilizer bar is a torsion bar that connects the left and right sides of the suspension. When body roll occurs, the bar twists and resists differential motion between the two sides, transferring load to reduce roll angle.

49. A — Verify fluid level, condition, and inspect for leaks before further inspection. Steering effort changes during low-speed maneuvering with low fluid level point directly to a fluid system fault. Verifying level, condition, and identifying any leak source is the most diagnostic and least invasive first step.
50. B — Drag link. The drag link transmits steering motion from the pitman arm (driven by the steering gear) to the steering arm on the left front knuckle. This connection is what converts the gear's output into steering motion at the front wheels.