

PRACTICE EXAM 4: ASE A4 SIMULATION (40 QUESTIONS)

STEERING SYSTEMS DIAGNOSIS AND REPAIR (Questions 1–12)

1. Technician A says the steering wheel must be centered before front toe is set. Technician B says the road wheels must point straight ahead during clockspring installation. Who is correct?

- A. Technician A only
- B. Technician B only
- C. Both Technicians A and B
- D. Neither Technician A nor B

2. A hydraulic rack and pinion is being replaced on a 2015 sedan. After installation, what must be performed before road testing?

- A. Fill the system with specified fluid and bleed trapped air
- B. Replace the high-pressure hose along with the rack assembly
- C. Remove the clockspring to recenter the steering wheel
- D. Reprogram the engine control module for new rack calibration

3. A customer reports heavy steering effort only when making right turns. Left turns feel normal. Scan tool shows no DTCs on the EPS system. What is the most likely cause?

- A. Low power steering fluid level in the reservoir of the vehicle
- B. Internal spool valve issue causing asymmetric hydraulic assist
- C. EPS torque sensor has failed on the driver's side circuit
- D. Pitman arm splines are worn and slipping during right turns

4. A technician uses a tie rod end puller to separate a tapered ball stud from a steering knuckle. During reassembly, which practice is correct?

- A. Install the old castellated nut and cotter pin if undamaged
- B. Torque the nut to spec, then back off to align the cotter pin
- C. Apply grease to the tapered surface for easier future removal
- D. Torque to specification, then tighten further to align cotter pin

5. A pickup truck's recirculating ball gearbox leaks fluid at the pitman shaft seal. The seal has been replaced three times and fails again within weeks. What is the most likely underlying cause?

- A. The replacement seals are defective from the supplier batch
- B. The gearbox mounting bolts are over-torqued beyond specification
- C. The pitman shaft is worn or scored where the seal rides against
- D. The fluid being used is incompatible with the seal material

6. An EPS-equipped vehicle fails to start EPS assist for about 10 seconds after ignition on. After that, assist works normally. What is the most likely cause?

- A. Slow voltage rise to the EPS module after ignition activation
- B. The torque sensor requires a warm-up period before operating
- C. The steering angle sensor needs relearning with every start
- D. The brushless motor windings have excessive resistance cold

7. A power steering hose is being replaced. Which type of hose contains the pressurized fluid from the pump to the gear?

- A. Single-layer rubber return hose with hose clamps at each end
- B. Multi-layer reinforced hose with crimped metal end fittings

- C. Nylon tubing with push-lock fittings used for fuel applications
- D. Convoluted flexible tubing designed for vacuum system use

8. A technician is diagnosing a variable-assist steering system. Live data on the scan tool shows the steering actuator command stays flat at 0% regardless of vehicle speed. What is the most likely cause?

- A. The variable-assist system is operating normally at highway speed
- B. The power steering pump pressure is below specification level
- C. The steering angle sensor has lost communication with the module
- D. The vehicle speed signal input has been lost or reads zero value

9. A new steering column is being installed on a vehicle. After the column is mounted, which practice is correct?

- A. Reference-mark the intermediate shaft position before final connection
- B. Torque the column mounting bolts with the wheels hanging free
- C. Leave the clockspring electrical connector disconnected until road test
- D. Install the steering wheel before connecting the intermediate shaft

10. Which condition causes a "stuck" feeling when the steering wheel is at center, with normal feel away from center?

- A. Worn idler arm pivot with excessive vertical movement
- B. Worn sector teeth at the center position of a recirculating ball gear
- C. Contaminated power steering fluid with internal debris particles
- D. Failed spool valve in a rack and pinion assembly hydraulic circuit

11. A clockspring is installed and the airbag is connected. On starting the vehicle, the SRS warning light illuminates and stays on. The scan tool shows a resistance-out-of-range code for the driver airbag circuit. What is the most likely cause?

- A. The clockspring was not centered before installation
- B. The battery voltage is too low for the SRS module operation
- C. The airbag igniter circuit has an internal open condition
- D. The SRS module itself has failed and requires replacement

12. A vehicle's hydraulic power steering pump is producing 1,100 psi at the pump outlet when the shut-off valve is closed. Specification is 1,200 psi. At full lock at the gear, pressure reads only 700 psi. What does this indicate?

- A. The pump is functioning above specification requirements
- B. The high-pressure hose is restricted from internal collapse
- C. The flow control valve is sticking partially open when hot
- D. Internal rack bypass is present; the rack has failed internally

SUSPENSION SYSTEMS DIAGNOSIS AND REPAIR (Questions 13–24)

13. A vehicle with SLA front suspension has the coil spring mounted on the upper control arm (not the lower). In this configuration, which ball joint carries the vehicle's weight?

- A. The lower ball joint carries weight when the spring sits on upper arm
- B. The upper ball joint carries the vehicle's weight through the spring
- C. Both joints equally share the load regardless of spring location
- D. Neither joint carries weight because the knuckle is unloaded

14. A MacPherson strut vehicle has developed a clunk over bumps on the passenger side only. Visual inspection shows the strut mount rubber has torn and separated. The strut itself appears functional. What is the correct repair?

- A. Replace only the torn strut mount and reuse the existing strut
- B. Replace the complete strut assembly with mount and bearing on one side

- C. Replace strut mounts on both sides of the vehicle as a pair
- D. Tighten the strut mount retaining nut to eliminate the noise

15. A customer complains of a squeak from the front suspension when backing out of the driveway. The noise goes away at higher speeds. Which component is the most likely cause?

- A. Dry control arm bushings or stabilizer bar bushings
- B. Worn outer CV joint on the driver's side half-shaft
- C. Worn upper strut bearing on the passenger side wheel
- D. Failed wheel bearing on the front driver's side of vehicle

16. A truck equipped with leaf spring rear suspension shows the rear axle offset from straight — the right rear wheel sits forward of the left rear wheel. What is the most likely cause?

- A. The right rear shock absorber has failed and needs replacement
- B. The rear stabilizer bar has shifted in its mounting brackets
- C. The center bolt in the right rear leaf spring has sheared
- D. The right rear tire is underinflated causing the axle to shift

17. Before replacing a sealed cartridge wheel bearing (Gen 2), what is the most important preparatory step?

- A. Replace the brake rotor along with the bearing as a set
- B. Drain the transmission fluid to reduce driveline drag
- C. Verify the axle nut torque specification against service information
- D. Press only on the outer race during bearing removal and installation

18. An air suspension vehicle has one air spring that has deflated completely and will not reinflate. The compressor runs when commanded. What is the most likely cause?

- A. The suspension control module has failed and needs replacement

- B. The air spring has a major leak or ruptured rolling lobe bladder
- C. The ride height sensor at that corner has broken its linkage arm
- D. The accumulator pressure is below minimum threshold for operation

19. A vehicle with adaptive damping shows a DTC for "right rear damper circuit open." What is the correct repair approach?

- A. Replace the right rear damper only and recalibrate via scan tool
- B. Replace all four dampers to ensure matched characteristics across axles
- C. Reset the control module and clear the fault, then road test the vehicle
- D. Replace both rear dampers as a pair for matched damping characteristics

20. A stabilizer bar end link is being replaced. Which practice is correct?

- A. Replace both left and right end links at the same time
- B. Replace only the failed side to minimize customer repair cost
- C. Tighten end link fasteners to a "snug" fit without torquing
- D. Install the new link without lubricating any threaded components

21. A pickup truck's leaf spring U-bolts are being retorqued during a routine service. Which statement about U-bolts is correct?

- A. U-bolts can be loosened slightly to align cotter pin holes as needed
- B. U-bolts should be greased to prevent corrosion before installation
- C. The original U-bolts can be reused indefinitely across service cycles
- D. U-bolts are often torque-to-yield and should be replaced when disturbed

22. A vehicle sits visibly lower at the right front corner after a hard pothole hit. Ride height measurement confirms the right front is 1.5 inches below specification while other corners are within spec. What is the most likely cause?

- A. The right front shock absorber has failed from the pothole impact
- B. A broken or collapsed coil spring at the right front corner
- C. The right front strut mount has torn and displaced from the impact
- D. The right front lower control arm bushing has crushed from the hit

23. A multi-link rear suspension has four separate links controlling wheel motion. After rear toe link replacement, the rear toe cannot be brought within specification. What is the most likely cause?

- A. The wrong part was installed or the new link is incorrect length
- B. The rear subframe needs to be centered with the manufacturer procedure
- C. The suspension control module needs a calibration after service
- D. The rear shock absorbers need replacement before setting toe angle

24. A customer describes the vehicle as "floating" over highway bumps. The vehicle bounces several times before settling. What is the best diagnostic test to confirm the cause?

- A. Measure ride height at each corner to check spring condition
- B. Inspect stabilizer bar bushings and end links for wear and damage
- C. Perform a bounce test by pushing down hard and observing rebound
- D. Drive the vehicle over progressively larger bumps to test suspension

WHEEL ALIGNMENT DIAGNOSIS, ADJUSTMENT, AND REPAIR (Questions 25–35)

25. A vehicle pulls to the right at constant highway speed. The technician swaps the front tires left-to-right. Road test shows the vehicle now tracks straight. What is the cause?

- A. The alignment is out of specification and needs adjustment
- B. A dragging brake caliper on the right side was masking the true condition
- C. The right steering knuckle is bent from an impact to the wheel

D. A tire on one side has conicity causing it to lead in one direction

26. During caster adjustment on a truck with dual cam bolts, the technician rotates both cams in the same direction by the same amount. What is the effect?

A. Only the caster angle changes while camber remains unchanged

B. The camber changes while caster remains approximately unchanged

C. Both caster and camber change equally in the same direction

D. The toe adjustment shifts without affecting camber or caster

27. Excessive negative camber on both front wheels causes which tire wear pattern?

A. Inside-edge wear with a smooth feel across the tread

B. Outside-edge wear with feathered sawtooth pattern blocks

C. Center tread wear with both shoulders showing less wear

D. Cupped or scalloped pattern around the tire circumference

28. Technician A says included angle is calculated as camber plus caster. Technician B says matching included angles side-to-side indicate a straight knuckle. Who is correct?

A. Technician A only

B. Neither Technician A nor B

C. Technician B only

D. Both Technicians A and B

29. A vehicle with multi-link rear suspension shows rear camber 1.2° more negative than specification on the left rear only. The rest of the alignment is within specification. What is the most likely cause?

A. The rear tires are mismatched in size between left and right

- B. A worn rear lateral link bushing on the affected side of vehicle
- C. Low tire pressure on the left rear tire causing apparent lean
- D. The rear subframe has shifted and requires centering procedure

30. A vehicle's front alignment has been completed with all angles in spec. During road test, the vehicle tracks straight but the steering wheel sits 5° off-center. What should the technician do?

- A. Remove the steering wheel and reindex it on the shaft splines
- B. Adjust the caster setting on one side to re-center the wheel
- C. Accept the condition and inform the customer of the tolerance
- D. Split the front toe adjustment unequally to re-center the wheel

31. Which alignment measurement is determined by the steering axis between the upper and lower ball joints (or equivalent pivots)?

- A. Toe-in at the front wheels during steering straight ahead
- B. Camber angle of each wheel viewed from the front position
- C. Steering axis inclination (SAI) viewed from the front of vehicle
- D. Thrust angle calculated from rear wheel toe-out readings

32. Before performing an alignment, ride height measurement is taken. The left front reads 1/2 inch below specification while the right front is within spec. What is the correct action?

- A. Investigate and correct the cause of the low ride height before aligning
- B. Proceed with alignment and use the machine to compensate for the difference
- C. Reduce tire pressure on the right front to match the left front height
- D. Swap front tires left-to-right to equalize ride height readings before alignment

33. A vehicle has front camber readings of left $+1.0^\circ$ and right -1.0° . What is the cross-camber value and effect?

- A. Cross-camber of 0.0° with the vehicle tracking straight
- B. Cross-camber of 0.5° with no significant pull direction
- C. Cross-camber of 1.0° with a pull toward the negative side
- D. Cross-camber of 2.0° with a strong pull toward the left side

34. Positive caster provides which of the following benefits?

- A. Lighter steering effort at parking-lot speeds and low speeds
- B. Self-centering effect and improved high-speed directional stability
- C. Reduced tire wear on the outside edges during cornering maneuvers
- D. Better ride quality over rough road surfaces at highway speed

35. A technician uses a scan tool to calibrate the steering angle sensor after alignment. During the procedure, the scan tool reports "calibration failed — steering wheel not centered." What is the correct action?

- A. Reset the scan tool and attempt the calibration procedure again
- B. Disconnect the SAS connector and reconnect to clear any fault codes
- C. Verify the steering wheel is physically centered, then restart calibration
- D. Replace the steering angle sensor because it has an internal fault

WHEEL AND TIRE DIAGNOSIS AND SERVICE (Questions 36–40)

36. The outside shoulder of both front tires shows rapid wear. Pressure is at specification. Alignment shows toe is within spec but camber is $+1.5^\circ$ on both sides (spec is $0^\circ \pm 0.5^\circ$). What is the cause?

- A. Excessive positive camber causing outside-edge tire wear
- B. Excessive toe-in causing outside-edge tire wear with feathering
- C. Under-inflation causing outside edges to ride harder on pavement

D. Cupped tire wear from worn shock absorbers requiring replacement

37. A vehicle with indirect TPMS shows a low-pressure warning, but all four tire pressures measured with a gauge are at specification. What is the most likely cause?

- A. The TPMS sensors need battery replacement in all four wheels
- B. The ABS wheel speed sensors have failed on the affected wheel
- C. A TPMS sensor was disturbed during recent tire service
- D. The TPMS reset (set pressure) procedure has not been performed

38. A wheel-and-tire assembly shows radial runout of 0.085 inches measured at the tread surface. Specification is 0.060 inches maximum. What is the correct action?

- A. Balance the assembly with additional weights to compensate for runout
- B. Match-mount the tire to the wheel to reduce combined runout if possible
- C. Replace the wheel because runout exceeds specification significantly
- D. Drive the vehicle 500 miles to allow the tire to break in and round

39. A tire reads "225/45ZR18 95Y" on the sidewall. What does the Y rating indicate?

- A. Maximum sustained speed rating of 186 mph for the tire
- B. Maximum sustained speed rating of 168 mph for the tire
- C. Maximum sustained speed rating of 149 mph for the tire
- D. Maximum sustained speed rating of 130 mph for the tire

40. A technician is balancing a wheel assembly. The balancer indicates 1.5 oz inner and 0.75 oz outer weight required at opposite positions. What does this measurement indicate?

- A. Static imbalance only in one plane of the wheel assembly
- B. The wheel assembly is within acceptable residual balance specification

- C. Dynamic imbalance requiring weights at both inner and outer rim edges
- D. The balancer requires recalibration before completing the balance

Practice Exam 4: Answer Key And Explanations

1. C — Both statements are correct best practices. The steering wheel must be centered (and locked with a wheel holder) before setting front toe — otherwise the "baked-in" offset becomes permanent. And the road wheels must point straight during clockspring installation so the ribbon cable is centered in its travel range.

2. A — After any hydraulic component replacement, the system must be filled with the specified fluid and thoroughly bled to remove trapped air. Air in the system causes whining, foaming, and erratic assist — the classic "new rack feels wrong" complaint. Bleeding is mandatory before any road test can validate the repair.

3. B — Asymmetric steering effort (heavy in one direction only) on a hydraulic system points to an internal spool valve issue at the rack. The valve directs fluid to one side of the piston or the other; when it's worn or stuck, assist favors one direction. No DTCs are expected because hydraulic valve issues don't set electronic codes.

4. D — Correct procedure: torque the castellated nut to specification, then tighten further (never loosen) to align the cotter pin hole. Backing off a torqued suspension/steering nut is never acceptable because it loses designed clamping force. A new cotter pin is always used on a reassembled ball stud connection.

5. C — When a pitman shaft seal fails repeatedly despite replacement, the shaft itself is worn or scored where the seal lip rides. No new seal can seal against a damaged surface. The repair is pitman shaft replacement (or complete gearbox replacement), not another seal — this is a common A4 pattern for "repeat failure" questions.

6. A — EPS systems require stable supply voltage to function. During and immediately after ignition on, voltage rises as the alternator loads up, and EPS assist may be briefly delayed while the module confirms acceptable supply. A 10-second delay suggests marginal voltage rise, often from a weak battery or corroded connections.

7. B — High-pressure power steering hoses use multi-layer reinforced construction with crimped metal end fittings to contain pressures up to 1,500+ psi. Single-layer return hoses with clamps cannot contain pressure-side fluid. Substituting a return hose for a pressure hose causes sudden hose rupture — a fire and injury hazard.

8. D — Variable-assist systems command zero actuator activity when they interpret the vehicle as stationary. If the speed signal reads zero, the system defaults to a fixed assist mode and the actuator command stays flat. Verify the VSS signal before condemning the actuator — this is a common diagnostic trap.

9. A — Reference-marking the intermediate shaft before disconnection (or verifying its indexed position before connection) is critical. Most intermediate shafts will physically install in two orientations 180° apart; installing out of phase leaves the steering wheel six o'clock when the road wheels are straight. This is a mandatory habit during column service.

10. B — Worn sector teeth specifically at the center position create a "stuck on center" feeling because the gear operates at center 95% of driving time and wears there first. Away from center, the teeth are still good and the steering feels normal. This wear pattern requires gearbox replacement or rebuild — not adjustment.

11. A — Resistance-out-of-range codes on the airbag circuit commonly result from an uncentered clockspring — the ribbon cable has been strained or partially broken, changing its resistance. Always recenter and reinstall the clockspring mechanically before replacing other components. A low battery or module would produce different codes.

12. D — When the pump builds spec pressure against a closed valve but the gear cannot reach the same pressure at full lock, the rack has internal bypass — fluid is leaking past the rack seal inside the unit. This symptom isolates the failure to the rack, not the pump. Pump replacement would not fix this; rack replacement is required.

13. B — In SLA designs, the load-carrying ball joint is on the same side of the knuckle as the spring. When the spring rests on the upper control arm, the upper ball joint carries the vehicle's weight through the spring load path. This is less common than lower-spring designs but appears on some vehicles and is regularly tested.

14. C — Strut mounts must be replaced as a pair on the same axle. Asymmetric mount condition (one new, one worn) causes asymmetric handling, different dynamic alignment between sides, and unpredictable behavior in emergency maneuvers. Always replace in pairs — this is standard industry practice and an exam-common rule.

15. A — Squeaking on slow-speed suspension articulation that disappears at highway speed is the classic signature of dry control arm or stabilizer bar bushings. The rubber dries, cracks, or loses lubrication and rubs against metal surfaces. The symptom is specific to slow articulation — CV joints click, bearings growl, struts rarely squeak.

16. C — The leaf spring center bolt locates the axle on the spring and prevents fore-aft shift. A sheared center bolt allows the axle to walk forward or rearward on the spring pack, producing visible wheelbase asymmetry. Shock failure, bar shifts, and tire pressure do not cause axle longitudinal offset.

17. D — Pressing a bearing cartridge requires correct force application: press only on the outer race during installation to avoid transmitting load through the bearing elements. Pressing on the inner race during install or outer race during removal damages the bearing before it's even in service. This is non-negotiable bearing service practice.

18. B — Complete deflation that won't reinflate despite a running compressor indicates the air spring cannot hold air — a major leak or ruptured rolling lobe. If the sensor was broken or the module was failed, the compressor wouldn't run on command; if the accumulator were low, other corners would also be affected.

19. D — Adaptive dampers must be replaced in pairs on the same axle. Asymmetric damping from one new and one worn damper cannot be compensated by the control module and produces unpredictable handling. Replacing both rear dampers maintains matched characteristics and is standard practice for electronically controlled damping systems.

20. A — Stabilizer end links should always be replaced in pairs because they wear at similar rates. Replacing only one guarantees the other will fail within months, requiring a return visit. The labor cost of the second link is trivial compared to the cost of re-diagnosis and repeat service.

21. D — Leaf spring U-bolts are torque-to-yield on many modern applications and should be replaced whenever disturbed. Even on applications that technically allow reuse, the safety-critical nature of these fasteners (a loose or broken U-bolt can cause catastrophic axle shift) makes replacement the professional standard. Never loosen to align cotter pins.

22. B — A single corner sitting 1.5 inches below spec after a pothole impact is the signature of a broken or collapsed coil spring. The spring's reduced free length drops the vehicle at that corner. Shocks, mounts, and bushings can affect height slightly but not by 1.5 inches — that magnitude of drop is a spring failure.

23. A — When a replacement toe link cannot bring toe within spec, the most common cause is the wrong part — either incorrect length, incorrect part number, or aftermarket substitute with different geometry. Subframe centering, module calibration, and shock replacement are unrelated to the toe link's adjustment range.

24. C — The bounce test is the definitive diagnostic for shock/strut condition. Push down hard on the corner and release; a healthy vehicle rebounds once and settles. Multiple cycles of bounce confirm worn dampers that have lost their ability to control spring oscillation — the direct cause of the "floating" complaint.

25. D — When tire swap changes the pull direction (or reverses it), the pull is caused by a tire — specifically conicity, an inherent lead direction from manufacturing. Alignment and mechanical problems stay the same direction regardless of tire position. The swap test is the definitive tire-vs-alignment diagnostic.

26. B — On a dual-cam bolt setup, rotating both cams in the same direction by the same amount primarily changes camber while keeping caster approximately unchanged. Rotating them in opposite directions changes caster while preserving camber. Understanding this relationship is essential for efficient alignment work on SLA suspensions.

27. A — Excessive negative camber causes the inside edge of the tire to carry more load than the outside edge, producing inside-edge wear with a smooth (flat) feel across the tread. Feathering is a toe issue, not a camber issue. Distinguishing camber wear (smooth edge) from toe wear (feathered edge) is a core A4 skill.

28. C — Only Technician B is correct. Included Angle is SAI plus Camber (not caster). Matching included angles side-to-side indicate a straight knuckle — this is the fastest way to identify a bent knuckle during alignment. Technician A confuses the calculation; caster is never part of the included angle formula.

29. B — A single corner out-of-spec camber with other alignment angles correct points to a worn component on that corner — typically a lateral link bushing on a multi-link suspension. Worn bushings allow dynamic geometry shift under load. Tire size, pressure, and subframe issues would affect multiple readings, not just one corner's camber.

30. D — Splitting front toe unequally between left and right tie rods recenters the steering wheel while maintaining correct total toe. This is standard alignment procedure, not a shortcut. Reindexing the steering wheel on its splines is a last resort for a misinstalled wheel — not for correcting normal alignment outcomes.

31. C — Steering axis inclination (SAI) is the angle between the steering axis (the line through the upper and lower ball joints or equivalent pivots) and true vertical, viewed from the front. Toe is a wheel-pointing angle, camber is wheel-tilt, and thrust angle is a rear-axle direction — none involve the steering axis directly.

32. A — Ride height below spec on any corner must be investigated and corrected before alignment. The underlying cause (sagged spring, broken component, collision damage) makes the alignment invalid if not addressed. Tire pressure and swapping tires cannot correct a ride height problem — they mask it at best.

33. D — Cross-camber is the side-to-side camber difference: $+1.0^\circ$ minus (-1.0°) equals 2.0° . A 2° cross-camber produces a strong pull toward the side with more positive camber (the left side in this case). This magnitude of cross-camber would produce an unmistakable leftward pull at any vehicle speed.

34. B — Positive caster creates self-centering torque (the contact patch trails the steering axis, similar to a shopping cart wheel) and provides high-speed directional stability. Heavier steering effort is the trade-off. Caster does not directly affect tire wear or ride quality — those are camber/toe and shock/spring functions.

35. C — "Calibration failed — not centered" means the scan tool detected the steering wheel position is not actually at the vehicle's straight-ahead reference. The physical wheel must be centered before calibration can complete. Restarting blindly or replacing the sensor without addressing the underlying positioning issue won't resolve the fault.

36. A — Excessive positive camber tilts the tire so the outside edge contacts the road hardest, producing outside-edge wear without feathering. Toe causes feathered (sawtooth) wear, not smooth edge wear. The distinction — smooth edge wear = camber; feathered edge wear = toe — is one of the most tested wear-pattern questions on A4.

37. D — Indirect TPMS uses ABS wheel speed sensors and infers pressure from rotation rate differences. After any tire service, rotation, or new tires, the system needs a "set pressure" reset that tells it the current (correct) pressures are the new reference. Without the reset, the system reports a false warning.

38. B — When assembly runout exceeds spec, match-mounting the tire to the wheel (aligning the tire's high spot with the wheel's low spot) is the first correction — it can reduce combined runout by 25–40%. Balancing cannot correct runout (mass vs. dimensional issue). Replacing the wheel or tire is the next step only if match-mounting doesn't resolve it.

39. A — The Y speed rating indicates 186 mph maximum sustained speed. This rating appears on high-performance tires and indicates compound and construction capable of handling sustained high-speed operation. Never replace a Y-rated tire with a lower-rated tire — the compound and heat resistance are not interchangeable.

40. C — Weights specified at both inner and outer rim edges indicate dynamic (two-plane) imbalance that requires correction in both planes to eliminate both vertical bounce and lateral wobble. Static imbalance would require only one-plane correction. Modern balancers identify both forms and correct them simultaneously with weights at each rim edge.