PRACTICE EXAM 9: ASE A2 SIMULATION (50 QUESTIONS)

1. A vehicle equipped with a six-speed automatic transmission produces a distinct metallic clicking noise from the transmission area. The clicking rate increases with vehicle speed but does not change when the engine RPM is varied in Park or Neutral. The noise is present in all forward gears and disappears when the vehicle is stationary. Which of the following is the MOST LIKELY source?

A. A chipped tooth on the output shaft gear or parking gear that produces a click once per output shaft revolution

B. A loose torque converter bolt that contacts the bell housing once per engine revolution during driving

C. A worn oil pump gear with a damaged tooth that clicks at a rate proportional to engine speed only

D. A broken TCC damper spring inside the converter that produces a metallic click at all driving speeds

2. A technician performs a stall test on a vehicle with an automatic transmission and records a stall speed of 1,800 RPM. The manufacturer's specification is 2,200 RPM. The engine runs smoothly at idle with no misfires, and the exhaust appears normal. Which of the following is the MOST LIKELY cause of the low stall speed?

A. Severely worn clutch packs inside the transmission that are slipping under load and not resisting engine torque

B. A restricted transmission cooler that is limiting fluid return flow and causing the converter to lose efficiency

C. An engine performance problem such as restricted intake, low fuel pressure, or ignition timing fault

D. A torque converter with a failed stator one-way clutch that has seized in the locked position permanently

3. A customer reports that the transmission "hesitates" for approximately two seconds when accelerating from a cruise at 40 mph to pass another vehicle. During the hesitation, the engine RPM rises but the

vehicle does not accelerate. After the two-second delay, the vehicle accelerates normally. This occurs at all throttle depths during passing attempts. Which of the following BEST describes this condition?

A. A torque converter clutch that is slow to release, creating a momentary bind before the downshift can complete

B. A delayed kickdown downshift where the applying clutch circuit takes too long to build pressure after the TCC releases

C. An engine performance issue where the throttle body hesitates before opening fully during rapid acceleration

D. A worn forward clutch pack that momentarily slips during the torque reversal of the downshift transition event

4. Technician A says that a pressure test reading of zero in all ranges indicates the oil pump has completely failed. Technician B says that a pressure test reading of zero in all ranges could also be caused by a completely clogged filter or empty transmission. Who is correct?

A. Technician A only

B. Neither Technician A nor Technician B

C. Technician B only

D. Both Technician A and Technician B

5. A vehicle with a rear-wheel-drive automatic transmission produces a vibration during acceleration from 0 to 30 mph that disappears above 30 mph. The vibration is not present during steady-speed cruising or deceleration. Placing the transmission in Neutral during the vibration eliminates it immediately. Which of the following is the MOST LIKELY cause?

A. An unbalanced driveshaft that resonates specifically in the 0-30 mph rotational speed range during acceleration

B. A worn wheel bearing that produces vibration only under the torque loading of acceleration in the low-speed range

C. A torque converter with an internal imbalance or damaged bearing that is loaded during acceleration but unloaded in Neutral

D. A worn differential with excessive ring and pinion backlash that produces a vibration during acceleration loading

6. A vehicle's automatic transmission shifts from 1st to 2nd normally but then shifts directly from 2nd to 4th, completely skipping 3rd gear. The 2-4 shift is firm but not harsh. 4th gear operates normally once engaged. There are no DTCs stored. Using the diagnostic hierarchy, what should the technician investigate FIRST?

A. The shift solenoid pattern for the 2-3 and 2-4 transitions to determine if the solenoid state matches 4th gear instead of 3rd

B. The 3rd gear clutch pack for complete failure that prevents any torque capacity in the 3rd gear ratio

C. The valve body for a stuck 2-3 shift valve that blocks the hydraulic path to the 3rd gear apply circuit

D. The transmission control module for a calibration error that has eliminated 3rd gear from the shift schedule

7. A vehicle owner reports that the automatic transmission works perfectly in every respect except that the engine surges mildly at exactly 1,700 RPM during steady-state cruising in 5th gear. The surge is a rhythmic oscillation of approximately 50 RPM. The scan tool shows TCC slip fluctuating between 0 and 40 RPM during the surge. Below 1,600 RPM and above 1,800 RPM in the same gear, there is no surge. Which of the following is the MOST LIKELY cause?

A. A faulty engine idle air control system that produces a resonance specifically at the 1,700 RPM operating point

B. A worn 5th gear clutch pack that cannot hold the ratio at the specific torque loading produced at 1,700 RPM

C. A failing pressure control solenoid that oscillates its output at the specific PWM frequency used at 1,700 RPM

D. A TCC with worn friction material that alternately grabs and slips at the specific load and speed condition of 1,700 RPM

8. A technician connects a pressure gauge to the main line test port and reads the following: Park at idle = 72 psi, Drive at idle = 70 psi, Drive at stall = 168 psi, Reverse at idle = 108 psi, Reverse at stall = 245 psi. All readings are within specification. However, the customer complains of a harsh engagement when shifting from Park to Reverse. What does the pressure data tell the technician?

A. The Reverse idle pressure is too high compared to Drive, confirming excessive pressure is causing the harsh engagement

B. The main hydraulic system is functioning correctly, and the harsh Reverse engagement is caused by a circuit-specific issue such as a failed accumulator

C. The Drive-to-Reverse pressure differential proves the pressure regulator valve is sticking intermittently between ranges

D. The stall pressures are too high in both ranges, indicating the EPC solenoid is commanding excessive line pressure overall

9. A vehicle equipped with an automatic transmission has the following symptoms: normal operation in 1st, 2nd, and 3rd gears, but when the transmission shifts into 4th gear (overdrive), the engine RPM flares briefly and then 4th gear engages. The flare occurs at every throttle position. A pressure test shows normal line pressure in all ranges. What is the MOST LIKELY cause?

A. A worn oil pump that cannot maintain pressure during the additional demand of the 4th gear clutch apply circuit

B. A failing pressure control solenoid that drops pressure specifically during the 3-4 shift transition window

C. A leaking clutch piston seal or a worn clutch pack in the 4th gear apply circuit that delays full engagement

D. An accumulator that absorbs too much pressure during the 3-4 shift, preventing adequate clutch clamping force

10. Technician A says that adding an auxiliary transmission fluid cooler can help prevent overheating during towing. Technician B says that an auxiliary cooler is most effective when installed in series with the existing integral radiator cooler. Who is correct?

A. Technician A only

B. Technician B only

C. Neither Technician A nor Technician B

D. Both Technician A and Technician B

11. A vehicle with an automatic transmission produces a growling noise that increases in intensity with vehicle speed. The noise is present in Drive, Neutral, and when coasting with the engine off. Rotating the tires to different positions does not change the noise. Placing the vehicle on a lift and spinning the rear wheels by hand produces a faint version of the same growl from one side. Which of the following is the MOST LIKELY source?

A. A worn driveshaft center support bearing that produces a growl proportional to driveshaft rotational speed

B. A failing rear wheel bearing on the side where the growl was reproduced during the hand-spin test

C. A damaged output shaft bearing inside the transmission that produces noise at any speed above idle

D. A worn ring and pinion gear set in the differential that growls under all loading conditions at all speeds

12. A scan tool shows DTC P0763 — Shift Solenoid C Electrical stored in the TCM. The transmission is stuck in 3rd gear limp mode. The technician disconnects the case connector and measures Shift Solenoid C resistance — the reading is 0.5 ohms. The specification is 12-18 ohms. What does this resistance reading confirm?

A. The solenoid coil has an internal short circuit that has drastically reduced its resistance below the minimum specification

B. The wiring between the case connector and the solenoid has a short to ground that is creating a false low reading

C. The solenoid is functioning normally because hot solenoid coils read lower resistance than the cold specification

D. The measurement is invalid because solenoid resistance must be measured at the solenoid itself, not at the connector

13. A vehicle has DTC P0736 — Reverse Incorrect Ratio. The scan tool data shows that when Reverse is commanded, the actual ratio does not match the expected reverse ratio. The vehicle moves backward but with significantly reduced power. All forward gears show correct ratios. Which of the following is the MOST LIKELY cause?

A. A failed output speed sensor that reads incorrectly only when the shaft rotates in the reverse direction

B. A worn oil pump that cannot maintain adequate pressure specifically under the high-demand reverse circuit

C. A control module fault that misinterprets the reverse speed sensor data due to reverse direction signal processing

D. A slipping reverse clutch or a failing low-reverse holding device that cannot fully hold the reverse gear ratio

14. A technician reviews scan tool data during a road test and observes that the transmission shifts from 2nd to 3rd at 25 mph under light throttle. The manufacturer's specification for this shift point is 35 mph under light throttle. What is the MOST LIKELY cause of the premature 2-3 upshift?

A. A throttle position sensor that reads higher than actual, causing the module to command earlier shifts for fuel economy

B. An output speed sensor that reads slower than actual, making the module think the vehicle is below shift speed

C. An output speed sensor that reads faster than actual, causing the module to believe the vehicle has already reached shift speed

D. A transmission fluid temperature sensor reading extremely high, triggering the module's overheat protection shift schedule

15. A vehicle has a DTC P0740 — Torque Converter Clutch Circuit Malfunction. The technician tests the TCC solenoid and finds resistance at 25 ohms. The specification is 10-15 ohms. What does this high resistance indicate and what is the correct action?

A. The high resistance indicates internal corrosion on the coil windings that is reducing current flow marginally

B. The solenoid coil has developed excessive resistance, likely from an internal partial open or corroded winding, and must be replaced

C. The reading is within acceptable tolerance for a solenoid that has been in service for more than 50,000 miles

D. The measurement is elevated due to the sensor being at operating temperature and will normalize when cold tested

16. A vehicle equipped with a continuously variable transmission (CVT) drives normally at steady speeds but produces a whining noise that increases in pitch during acceleration. The noise pitch increases with engine RPM, not with vehicle speed. The noise is not present in Park or Neutral. What is the MOST LIKELY source?

A. A worn CVT secondary pulley bearing that is loaded only when torque is transmitted through the belt

B. A stretched CVT belt that whines as it slips across the primary pulley surface during acceleration loading

C. The CVT fluid pump cavitating under increased demand during acceleration due to a restricted intake

D. A worn CVT primary pulley bearing or belt/chain that produces noise proportional to engine RPM under torque load

17. A vehicle has DTCs P0711 (TFT Sensor Range/Performance) and P0218 (Transmission Over Temperature) stored simultaneously. The scan tool shows TFT reading stuck at 95°F despite the vehicle being driven for 45 minutes in summer heat. What is the relationship between these two codes?

A. The stuck TFT reading prevents the module from detecting actual overheating, and P0218 was set by a secondary monitoring strategy

B. P0218 confirms the fluid is genuinely overheating, and P0711 was set because the high temperature exceeded the sensor range

C. Both codes are false and were set by a CAN bus communication error that corrupted the temperature data channel

D. P0711 caused the module to disable the cooler thermostat, which in turn caused actual overheating that set P0218

18. A technician is diagnosing a vehicle with an automatic transmission that produces a shudder during the 2-3 upshift only. The shudder lasts approximately one second during the shift transition and is more pronounced at moderate throttle than at light or heavy throttle. The scan tool shows a brief spike in TCC slip RPM during the 2-3 shift event. Which of the following BEST explains these findings?

A. A worn torque converter bearing that loads up specifically during the torsional change of the 2-3 shift event

B. A contaminated 3rd gear clutch friction disc that chatters during the apply event at moderate clutch clamping pressure

C. A clutch-to-clutch overlap timing issue during the 2-3 transition where the releasing and applying devices briefly conflict

D. A failing engine mount that transmits engine vibration specifically at the RPM produced during the 2-3 shift point

19. A vehicle's transmission has been diagnosed with an intermittent harsh 1-2 upshift. The scan tool recording shows that during the harsh events, the shift solenoid duty cycle is normal but the EPC solenoid current spikes to maximum for 0.3 seconds immediately before the shift begins. Between harsh events, the EPC operates normally. What is the MOST LIKELY cause?

A. The 1-2 accumulator piston is intermittently sticking, causing the module to increase EPC pressure to overcome it

B. An intermittent electrical fault in the EPC solenoid circuit that causes momentary maximum current output

C. The adaptive learning system is intermittently commanding maximum pressure based on recent slip detection events

D. A faulty throttle position sensor that intermittently spikes, causing the module to command maximum shift pressure

20. A technician monitors scan tool live data and observes the following at 60 mph in 6th gear with TCC ON: Engine RPM = 1,950, Input Shaft Speed = 1,950, Output Shaft Speed = 1,430. The technician calculates the gear ratio as 1,950 ÷ 1,430 = 1.36:1. The manufacturer's specification for 6th gear is 0.73:1. What is the MOST LIKELY explanation for this significant ratio discrepancy?

A. The transmission is not in 6th gear — the actual ratio of 1.36:1 corresponds to a lower gear such as 3rd or 4th

B. The output speed sensor is reading lower than actual vehicle speed, producing an artificially high ratio calculation

C. The input speed sensor is reading higher than actual turbine speed, inflating the ratio calculation significantly

D. The TCC is slipping severely and the fluid coupling effect is distorting the ratio calculation between input and output

21. A vehicle has DTC P0962 — Pressure Control Solenoid A Control Circuit Low. The scan tool shows PCS-A duty cycle commanded at 45% but measured voltage at the solenoid connector is 0.3V. Solenoid resistance at the connector reads 5.2 ohms (specification: 4-7 ohms). What is the MOST LIKELY cause?

A. A failed solenoid coil with a partial short that has reduced its internal resistance below functional level

B. The solenoid plunger is mechanically stuck and is creating back-EMF that reduces the effective circuit voltage

C. A failing TCM driver circuit that cannot sustain output voltage despite commanding the correct duty cycle

D. A high-resistance fault in the power supply or ground circuit feeding the solenoid that is limiting voltage delivery

22. A vehicle equipped with a dual-clutch transmission (DCT) exhibits a pronounced shudder when the vehicle creeps forward in stop-and-go traffic. The shudder disappears above 5 mph and is not present during normal acceleration. The scan tool shows Clutch 1 temperature at 280°F (specification max: 300°F). Which of the following is the MOST LIKELY cause?

A. Worn Clutch 1 friction material or degraded DCT fluid that cannot maintain smooth, controlled slip at creep speed

B. A failing Clutch 1 hydraulic actuator that cannot modulate clamping pressure precisely at very low slip speeds

C. A defective dual-mass flywheel that transmits engine torsional vibrations into the DCT at very low vehicle speeds

D. A control module calibration error that commands excessive clamping force on Clutch 1 during creep operation

23. A technician is diagnosing a vehicle where the transmission operates normally in all gears, but the stop/start system has been disabled. The scan tool shows a message: "Auxiliary Pump Pressure Below Threshold." There are no other transmission DTCs. What does this message indicate?

A. The main oil pump is producing low pressure that is being misattributed to the auxiliary pump circuit reading

B. The auxiliary electric pump cannot maintain adequate holding pressure during engine-off events, so the system disabled stop/start

C. The stop/start battery is too weak to power the auxiliary pump at its required output during engine-off periods

D. The transmission control module has a software fault that is falsely reporting auxiliary pump pressure as below threshold

24. A technician performs a voltage drop test on the transmission control module's ground circuit. With the circuit loaded (engine running, transmission in Drive), the reading is 2.1 volts. The specification is less than 0.5 volts. All of the following symptoms could result from this excessive ground circuit voltage drop EXCEPT:

A. False DTCs for multiple sensors and solenoids due to incorrect reference voltage levels within the module

B. Erratic shifting caused by the module miscalculating sensor inputs from corrupted ground reference values

C. Consistent maximum line pressure in all ranges because the module defaults to a high-pressure protection mode

D. Inconsistent solenoid operation because the module's driver circuits cannot deliver accurate current to the solenoids

25. A vehicle has a persistent DTC P0894 — Transmission Component Slipping. The scan tool data shows that during the 4-5 upshift, the shift takes 0.8 seconds to complete instead of the target 0.3 seconds. The EPC solenoid and its circuit test within specification. Adaptive learning values for the 4-5 shift are at their maximum positive correction. What do these combined findings indicate?

A. The EPC solenoid is commanding excessive pressure for the 4-5 shift, causing the extended shift time

B. The adaptive learning system has a software error that is preventing it from correctly adjusting the 4-5 shift timing

C. The shift solenoid controlling the 4-5 transition is slow to respond, delaying the hydraulic path opening

D. The 5th gear clutch has worn beyond the adaptive system's compensation range and requires mechanical repair

26. A technician is performing a transmission fluid service on a vehicle. After draining the pan and replacing the filter, the technician refills with the manufacturer-specified fluid. The dipstick reading is at the correct level at operating temperature. Two days later, the customer returns reporting that the dipstick now shows the fluid level one inch above the full mark, even though no fluid was added. What is the MOST LIKELY explanation?

A. The transmission filter has collapsed internally, reducing its volume and pushing excess fluid into the pan area

B. Thermal expansion of the fluid from sustained driving has permanently increased the fluid volume beyond the pan capacity

C. The customer checked the level under different conditions than the technician — engine off, cold fluid, or on an incline

D. The pan gasket is leaking inward, drawing engine oil into the transmission pan and raising the apparent fluid level

27. A customer reports that the transmission "pops out" of Drive into Neutral while driving over large bumps or potholes. The engine does not stall — the RPM simply rises as the transmission disengages. Shifting back into Drive re-engages the gear immediately. There are no DTCs. Which of the following is the MOST LIKELY cause?

A. A failing transmission mount that allows the case to shift position under road shock and momentarily misalign the manual valve

B. A worn shift cable, bracket, or linkage that moves out of the Drive detent when subjected to the jolt of a large bump

C. A worn transmission range sensor that momentarily produces a Neutral signal when the case vibrates from a road impact

D. A faulty solenoid that de-energizes momentarily from the electrical shock of the vehicle hitting a large bump or pothole

28. A vehicle's transmission pan has been removed for a fluid and filter service. The technician finds a thin, flat, washer-shaped metallic object stuck to the pan magnet. The object is brass-colored,

approximately the diameter of a quarter, and very thin. What does this object MOST LIKELY represent?

A. A foreign object such as a coin or washer that entered the transmission through the fill tube during a previous service

B. A broken check ball retainer that has come loose from the valve body and been carried to the pan by fluid circulation

C. A manufacturing defect — a brass stamping burr that was left inside the case during original factory assembly

D. A thrust washer or thrust washer fragment that has worn through and separated from its position between rotating components

29. A technician replaces the transmission range sensor on a vehicle. After installation and adjustment, the engine starts in Park and Neutral correctly. All forward gears engage properly and the dashboard indicator matches the selector position. However, the backup lights do not illuminate when Reverse is selected, even though Reverse engages normally. What is the MOST LIKELY cause?

A. The replacement range sensor does not include the backup light switch function that was integrated into the original sensor

B. The backup light circuit fuse blew during the sensor replacement procedure when a momentary short occurred

C. The range sensor adjustment is slightly off in the Reverse position, preventing the backup light contact from closing

D. The vehicle's body control module requires a re-initialization procedure after any range sensor replacement

30. A technician discovers that the transmission shift cable bracket on the engine side has two missing retaining clips. The cable housing is not securely held in the bracket and can slide approximately 1/4 inch in either direction. What symptom would this condition MOST LIKELY produce?

A. A harsh engagement in all gears because the cable play introduces sudden mechanical snap when the detent catches

B. Inconsistent gear engagement — sometimes the correct gear, sometimes an adjacent gear — depending on cable position

C. A complete loss of all gear engagement because the manual valve cannot reach any detent with the cable slack

D. A no-start condition because the cable slack prevents the range sensor from indicating Park or Neutral accurately

31. A technician is replacing a leaking axle seal on a front-wheel-drive transaxle. After removing the left half-shaft and prying out the old seal, the technician inspects the half-shaft sealing surface and finds a polished wear groove approximately 0.010 inches deep where the old seal lip rode. What must be done before installing the new seal?

A. Install a wear sleeve or repair sleeve over the grooved area on the half-shaft to provide a smooth sealing surface for the new seal

B. Apply a thin coat of RTV sealant to the grooved area before reinstalling the shaft to fill the groove and prevent future leakage

C. Position the new seal slightly inboard or outboard of the groove so the lip rides on a fresh, unworn section of the shaft

D. Replace the entire half-shaft assembly because a wear groove indicates the shaft's hardened surface layer has been penetrated

32. A customer reports that the transmission shifts normally most of the time, but once or twice per week, the transmission produces a harsh downshift when the vehicle comes to a complete stop. The event feels like the transmission "bangs" into 1st gear during the final deceleration. There are no DTCs. What should the technician investigate FIRST?

A. The 1st gear one-way clutch for intermittent binding that causes a harsh load transfer during the coastdown to stop

B. The engine idle speed for intermittent drops that cause the converter to load the drivetrain harshly during the final stop

C. The brake pedal position switch for an intermittent fault that delays the coast-down downshift commands until the final moment

D. The transmission fluid level for a marginal condition that intermittently aerates during specific driving patterns before the stop

33. A technician has completed a transmission fluid service and properly torqued all pan bolts. During the post-service road test, the technician hears a faint scraping noise from the pan area that was not present before the service. The noise occurs at all vehicle speeds and engine RPMs. What is the MOST LIKELY cause?

A. The new filter is too long for the pan depth and is contacting the pan bottom during engine vibration and vehicle motion

B. A pan bolt that was installed in the wrong location is protruding past the case and contacting the filter housing

C. Residual gasket material left on the case mating surface is creating a gap that allows the pan to vibrate against the case

D. The replacement filter is slightly longer than the original and is making contact with the inside of the pan during operation

34. A vehicle's automatic transmission has a customer complaint that the shift from Neutral to Drive produces a delay of approximately three seconds, but only when the vehicle has been idling in Neutral for more than two minutes. Engaging Drive immediately after starting the engine produces a normal, prompt engagement. What is the MOST LIKELY cause?

A. A worn oil pump that loses prime after two minutes of idle in Neutral due to internal seal deterioration

B. The forward clutch piston circuit drains back through the valve body when the manual valve is in the Neutral position for an extended period

C. A faulty idle air control system that reduces engine RPM after two minutes, lowering pump output below engagement threshold

D. The torque converter empties partially after two minutes in Neutral, requiring time to refill before it can transmit torque

35. A technician discovers that a transmission cooler line has a small external leak at a rubber hose section near the radiator. The hose is soft and slightly swollen. What is the correct repair?

A. Replace the rubber hose section with new hose of the correct specification and install new clamps at both ends

B. Apply a high-pressure hose clamp over the leaking area to compress the swollen rubber and stop the leak

C. Wrap the swollen area with self-fusing silicone tape to seal the leak and provide reinforcement against further swelling

D. Remove the rubber section entirely and replace it with a rigid steel line to eliminate the vulnerability of rubber to ATF exposure

36. A technician is replacing the valve body on a transmission. The service information indicates that four check balls must be placed in the case before installing the new valve body. The technician places all four balls in their mapped positions. When lowering the valve body into place, one check ball rolls out of its seat and drops into the pan. What is the correct action?

A. Install the valve body and add a replacement check ball through the pan before reinstalling the pan and filter

B. Continue with the installation since three of four check balls will provide adequate fluid control for normal operation

C. Leave the valve body in position and attempt to retrieve the ball by tilting the transmission case to roll it toward an opening

D. Lift the valve body back out, retrieve the check ball, reposition it in its mapped seat, and carefully reinstall the valve body

37. A customer states that the transmission operates normally except when towing a trailer. During towing, the transmission produces a shudder during the 3-4 upshift that is not present during unloaded driving. There are no DTCs. What is the MOST LIKELY cause?

A. The 4th gear clutch pack is fully worn and cannot hold any torque, causing complete slippage during towing loads

B. The torque converter stator is freewheeling, reducing torque multiplication and causing a shudder during loaded upshifts

C. The 4th gear clutch friction material is marginally worn and slips only under the increased torque demand of towing

D. The pressure control solenoid reduces line pressure during the 3-4 shift to protect the clutch from shock loading during towing

38. A technician is removing a transmission from a front-wheel-drive vehicle. All connections have been disconnected and the transaxle is supported on a transmission jack. When the technician attempts to separate the transaxle from the engine, it will not move. The technician has confirmed that all bell housing bolts, the starter bolts, and the converter-to-flexplate bolts have been removed. What commonly overlooked item could be preventing separation?

A. A dowel pin between the engine block and the bell housing that has corroded and seized, requiring gentle prying to break free

B. The half-shafts are still partially engaged in the differential side gears and are preventing the transaxle from sliding away

C. The transmission mount crossmember is still in contact with the case and is blocking rearward movement of the transaxle

D. The shift cable is still attached to the manual shaft lever and is preventing the transaxle from moving far enough to separate

39. During a transmission overhaul, a technician finds that the band drum has deep scoring on approximately one-third of its circumference. The remaining two-thirds of the drum surface is smooth and shows normal wear. What does this uneven scoring pattern indicate?

A. The band friction material had a manufacturing defect that caused uneven contact across the drum surface

B. The drum was installed incorrectly during a previous repair, causing it to orbit eccentrically within the case

C. The band servo apply pin was bent or the band anchor was loose, concentrating the band's clamping force on one area of the drum

D. A previous fluid contamination event deposited debris on one section of the drum that abraded the surface during band application

40. A technician is inspecting clutch pack components during a transmission overhaul. The steel separator plates are flat and within thickness specification. However, when the technician runs a fingernail across the surface of each plate, two of the five plates have a distinctly rough, sandpaper-like texture. The other three plates are smooth. What does the rough texture indicate?

A. Normal surface conditioning from the factory that improves initial friction disc grip during the break-in period

B. Surface corrosion from moisture exposure that occurred while the transmission was stored before installation

C. Contamination from abrasive particles that were embedded in the friction disc material and transferred to the steel surface

D. Heat-induced surface transformation where the steel has developed a microscopic rough texture from sustained overheating

41. A technician measures oil pump gear side clearance during an overhaul and obtains a reading of 0.004 inches. The manufacturer's maximum specification is 0.003 inches. What is the consequence of reassembling the pump with this excessive clearance?

A. The pump will produce normal pressure at high RPM but may have reduced efficiency at idle, causing low idle pressure

B. The pump will produce excessive pressure because the enlarged side gap creates a venturi effect that accelerates fluid

C. The pump will leak pressurized fluid across the gear faces from the outlet side to the inlet side, reducing net pressure output

D. The pump will produce a whining noise from the excess clearance but will otherwise function within acceptable parameters

42. A technician is assembling a compound planetary gear set during a transmission rebuild. The set consists of a front and rear planetary connected by a shared sun gear. The technician installs the sun gear and then attempts to install the rear planetary ring gear. The ring gear slides on but feels very tight and does not rotate freely. What should the technician check?

A. The sun gear's alignment and the planet gear mesh — one or more planet gears may be misaligned or a thrust washer is missing

B. The ring gear's internal teeth for debris, a manufacturing burr, or damage that is interfering with the planet gear mesh

C. The snap ring retaining the sun gear for incorrect thickness that is pushing the sun gear too far into the ring gear mesh area

D. The case bore for residual gasket material that is preventing the ring gear from seating at the correct axial position

43. A technician has completed a transmission overhaul and is preparing to measure endplay. The service information states that the selective thrust washer used for endplay adjustment is located between the oil pump and the front clutch drum. The technician forgot to install this washer. What would be the consequence on the endplay measurement?

A. The endplay reading would be excessively high because the missing washer leaves a gap in the thrust stack

B. The endplay reading would be excessively low because the components would stack tighter without the washer

C. The endplay reading would be unaffected because other thrust washers in the assembly compensate automatically

D. The endplay measurement would be invalid because the dial indicator cannot be zeroed without the washer in place

44. A technician installs a rebuilt transmission and connects the cooler lines. After starting the engine and allowing it to idle for two minutes, the technician checks the cooler line connections for leaks. No leaks are visible. The technician declares the connections leak-free. Is this verification adequate?

A. Yes — two minutes of idle is sufficient for any leak to manifest at the cooler line connections under normal pressure

B. Yes — if no leaks are visible at idle, the connections will also hold under the higher pressures of driving conditions

C. No — the technician should also pressure-test the connections with a hydraulic pump to simulate maximum system pressure

D. No — the connections must also be checked at full operating temperature after a road test, since heat and pressure may reveal leaks

45. A technician discovers during a transmission overhaul that the pump housing has a wear groove on its flat surface where the pump gears ride. The groove is approximately 0.004 inches deep and extends across the entire gear contact area. What is the correct action?

A. Fill the groove with bearing compound and lap the pump gears against the surface to restore a sealed contact

B. Replace the pump housing or have it resurfaced on a flat surface grinder to restore the precision-flat sealing surface

C. Install thicker pump gears to compensate for the 0.004-inch material loss on the housing sealing surface

D. Reassemble the pump with the existing housing since 0.004 inches of wear is within normal service tolerance

46. A technician performs a cooler flow test after a transmission overhaul. The flow test produces one quart in 40 seconds. The manufacturer's minimum specification is one quart in 25 seconds. The technician performs a second flush cycle in both directions and retests. The flow is now one quart in 35 seconds. What should the technician do?

A. Accept the improved flow rate since it is trending in the right direction and will continue to improve during normal operation

B. Perform a third flush cycle and retest, continuing the pattern until the flow either meets specification or plateaus

C. Replace the cooler because despite improvement, the flow rate still does not meet the minimum specification

D. Install an auxiliary cooler in parallel to supplement the restricted integral cooler and bring total flow above specification

47. A technician is installing a rebuilt transmission and preparing to add the initial fluid charge. The service information states that the correct fluid is MERCON LV. The technician has MERCON ULV on the shelf. Are these fluids interchangeable?

A. No — MERCON LV and MERCON ULV are different specifications with different viscosities and must not be interchanged

B. Yes — MERCON ULV is the updated replacement for MERCON LV and is backwards-compatible in all applications

C. No — but MERCON ULV can be used as a temporary fill if MERCON LV is unavailable, followed by a flush with correct fluid

D. Yes — both are Ford-specification synthetic fluids and differ only in cold-pour performance, not in operating characteristics

48. After installing a rebuilt transmission and performing the initial startup, the technician shifts from Park to Drive. The engagement takes approximately four seconds — significantly longer than the expected one second. After the initial engagement, all subsequent Park-to-Drive shifts during the same drive cycle engage within one second. What is the MOST LIKELY cause?

A. The oil pump has excessive clearances from the rebuild and requires several seconds to build initial system pressure

B. The rebuilt torque converter has a higher stall speed than the original, which delays the initial engagement timing

C. The pressure regulator valve is sticking after the rebuild and takes several seconds to seat properly during the first apply

D. The clutch apply circuits were empty after assembly and required the first engagement to fill them with fluid from the pump

49. A technician has completed a transmission overhaul on a vehicle that experienced a catastrophic forward clutch failure. The cooler was flushed, flow-tested, and passed. A new converter was installed. After 300 miles, the customer returns complaining that the transmission is shifting harshly in all gears. The scan tool shows the adaptive values have reached maximum positive correction across all clutch circuits. What is the MOST LIKELY cause?

A. The new converter has an incorrect stall speed that is generating excessive torque transfer and triggering adaptive increases

B. Contamination from the original failure has reached the new valve body through a passage that bypasses the cooler circuit

C. The cooler thermostat is stuck in bypass, causing overheating that degrades the new friction material within 300 miles

D. The adaptive values were not reset after the rebuild, and the stored corrections from the failed transmission are being applied to the new components

50. A technician completes a transmission rebuild and installation. During the initial road test, the transmission operates perfectly through all gears with smooth shifts, correct TCC operation, and normal fluid temperature. The technician performs a final check by placing the transmission in Park on a moderate incline and releasing the brake. The vehicle holds. The technician then shuts off the engine and releases the brake again. The vehicle rolls freely. What is the MOST LIKELY cause?

A. The parking pawl mechanism was not properly reassembled during the overhaul — the pawl, actuating rod, or return spring is incorrectly installed

B. The shift cable has stretched during the road test and no longer positions the manual shaft fully into the Park detent

C. The parking gear on the output shaft was installed backward during reassembly, preventing the pawl from engaging

D. The engine must be running for the parking pawl to engage because it is hydraulically actuated through the manual valve

Practice Exam 9: Answer Key and Explanations

1. A — The clicking rate increases with vehicle speed but does not change when engine RPM is varied in Park or Neutral. This eliminates all engine-speed-dependent components (converter, pump). The noise is present in all forward gears and absent when stationary, confirming it originates from a component rotating at output shaft speed. A chipped tooth on the output shaft gear or parking gear produces a single click once per output shaft revolution, with frequency increasing proportionally to vehicle speed.

2. C — A stall speed 400 RPM below specification means the engine cannot reach its expected RPM against the converter's load. If the clutches were slipping, stall speed would be higher than specification, not lower. A seized stator would cause highway performance problems but would not necessarily lower stall speed by this amount with otherwise normal idle. An engine performance issue — restricted intake, low fuel pressure, or ignition fault — directly limits the RPM the engine can achieve under the stall load.

3. B — The two-second delay between the throttle input and actual acceleration, with RPM rising but no vehicle speed increase, indicates the TCC releases promptly (RPM rises) but the downshift clutch takes too long to apply. The kickdown gear's clutch circuit is slow to build pressure, creating a gap between the TCC release and the lower gear engagement. Once the clutch finally fills and applies, normal acceleration resumes.

4. D — Both technicians are correct. A completely failed pump produces zero output — no flow means no pressure. However, a severely clogged filter can starve the pump of fluid, also producing zero pressure at the gauge, and an empty transmission (from a catastrophic leak or drain without refill) provides no fluid for the pump to pressurize. All three conditions — failed pump, clogged filter, and empty system — can produce identical zero-pressure readings.

5. C — The vibration occurs only during acceleration (when the converter is transmitting torque under load), disappears above 30 mph (when driving conditions change), and is eliminated by shifting to Neutral (which unloads the converter). This pattern points to a component that is loaded during acceleration through the converter but unloaded in Neutral. A converter with an internal imbalance or damaged bearing produces vibration under torque loading that disappears when the converter is unloaded.

6. A — Before assuming a mechanical failure or valve body fault, the technician should verify what the electronic control system is actually commanding. If the shift solenoid combination being commanded during the 2-3 transition actually corresponds to the 4th gear state instead of the 3rd gear state — due to a solenoid fault or incorrect solenoid operation — the transmission will skip directly to 4th. This is the quickest, least invasive diagnostic step.

7. D — The surge occurs at exactly 1,700 RPM in 5th gear with TCC slip oscillating between 0 and 40 RPM. This RPM-specific, TCC-dependent symptom indicates the converter clutch is alternately grabbing and releasing at the specific torque and speed conditions present at 1,700 RPM. The worn TCC friction material cannot maintain consistent grip at this particular operating point — it holds at adjacent RPMs where the load balance is slightly different.

8. B — All four pressure readings — Park idle, Drive idle, Drive stall, and Reverse idle — are within manufacturer specification. This confirms the pump, pressure regulator, and EPC solenoid are functioning correctly and delivering appropriate pressure to all circuits. Since the main hydraulic system is verified as correct, the harsh Reverse engagement must originate in the Reverse-specific circuit — most likely a failed accumulator, blocked orifice, or damaged cushioning mechanism.

9. C — The flare occurs at every throttle position during the 3-4 upshift, and line pressure is normal in all ranges. Normal line pressure eliminates system-wide pressure deficiency as the cause. A flare at every throttle level indicates the 4th gear clutch circuit cannot build apply pressure quickly enough regardless of the commanded pressure. A leaking clutch piston seal or worn friction material in the 4th gear circuit allows pressure to bypass or delays engagement.

10. D — Both technicians are correct. An auxiliary cooler provides additional cooling capacity that prevents overheating during high-demand conditions like towing. Installing it in series with the existing integral radiator cooler is most effective because the fluid first passes through the radiator cooler (where it transfers heat to the engine coolant), then through the auxiliary air-to-fluid cooler (where it transfers additional heat to ambient air), maximizing total heat dissipation.

11. B — The noise increases with vehicle speed, persists in all driving conditions including engine-off coasting, and is unaffected by tire rotation. This eliminates engine-speed components and tires. The critical diagnostic step was reproducing the noise by hand-spinning the rear wheels on a lift — the faint growl from one specific side pinpoints the source to a wheel bearing on that side. Wheel bearings produce speed-dependent growling that worsens with bearing wear.

12. A — The solenoid specification is 12-18 ohms, but the reading is 0.5 ohms — dramatically below the minimum. This extreme reduction in resistance is caused by an internal short circuit between the coil windings. Shorted windings create a very low-resistance path through the coil, drawing excessive current and preventing the solenoid from generating the correct magnetic field strength. The solenoid must be replaced.

13. D — A P0736 (Reverse Incorrect Ratio) code with reduced power in Reverse but correct forward gear ratios points to a mechanical failure specific to the reverse power flow path. The reverse clutch or the low-reverse holding device is not fully engaging, allowing partial slippage that produces a ratio discrepancy and reduced drive force. Forward circuits are unaffected because they use different apply devices.

14. C — The transmission upshifts at 25 mph instead of the specified 35 mph. If the output speed sensor reads faster than actual vehicle speed, the module believes the vehicle has reached 35 mph when it is actually at 25 mph, commanding the upshift prematurely. A sensor reading higher than actual causes all upshifts to occur at lower actual vehicle speeds because the module's perceived speed exceeds the real speed.

15. B — The solenoid resistance of 25 ohms significantly exceeds the 10-15 ohm specification. High resistance in a solenoid coil indicates the windings have degraded — typically from internal corrosion, a partial open in the winding, or heat damage that has increased the conductor's resistance. The high resistance limits current flow through the coil, reducing the magnetic force and preventing the solenoid from operating the TCC apply circuit effectively.

16. D — The whining noise increases with engine RPM (not vehicle speed), is present only when torque is transmitted through the CVT (not in Park or Neutral), and appears during acceleration. This pattern points to a component that rotates at engine speed and is loaded during torque transmission. The primary pulley bearing or the belt/chain at the primary pulley is the most likely source — it is loaded during acceleration and spins at engine speed.

17. A — The TFT sensor is stuck at 95°F after 45 minutes of summer driving — clearly a false reading. However, the transmission also set P0218 (Over Temperature), which means the module detected overheating through a secondary method despite the primary TFT sensor being stuck cold. Some modules use an alternate temperature estimation strategy based on operating time, ambient conditions, and calculated heat generation to detect overheating when the primary sensor fails.

18. C — A one-second shudder during the 2-3 shift that is most pronounced at moderate throttle, combined with a TCC slip spike during the shift event, indicates a timing overlap issue between the releasing and applying devices. At moderate throttle, the transition timing is most critical — both devices are briefly engaged simultaneously, creating a momentary bind that produces the shudder and transmits torsional oscillation that appears as a TCC slip spike on the scan tool.

19. B — The shift solenoid operates normally, but the EPC current spikes to maximum for 0.3 seconds immediately before the shift. This brief, intermittent spike in the EPC circuit — not commanded by the module — points to an electrical fault that momentarily drives the solenoid to full output. A loose connector pin, corroded terminal, or intermittent wire contact in the EPC circuit can produce momentary short-to-voltage or ground conditions that spike the current.

20. A — The calculated ratio of 1.36:1 is dramatically different from the 6th gear specification of 0.73:1 (overdrive). A ratio of 1.36:1 is a gear reduction — the input turns faster than the output — which is consistent with a lower gear such as 3rd or 4th. Despite the module possibly commanding 6th gear, the transmission is physically in a different gear. The technician should compare the 1.36:1 ratio to the specification chart to identify which gear the transmission is actually in.

21. D — The solenoid coil resistance is within specification (5.2 ohms within 4-7), confirming the coil itself is intact. The module commands 45% duty cycle, but only 0.3V reaches the solenoid. This large voltage deficit between the module output and the solenoid terminal indicates a high-resistance fault in the power supply or ground circuit feeding the solenoid — a corroded connector, damaged wire, or poor ground connection is consuming the voltage before it reaches the coil.

22. A — DCTs do not have a torque converter to absorb the imprecise clutch modulation required at very low creep speeds. The clutch must slip in a precisely controlled manner, and worn friction material or degraded DCT fluid cannot maintain smooth, consistent slip at creep speed. The result is a grab-slip-grab shudder that disappears above 5 mph where the clutch transitions to full engagement. The elevated clutch temperature of 280°F confirms excessive heat from the repeated slipping.

23. B — The message specifically identifies the auxiliary pump pressure as below threshold. The stop/start system requires the auxiliary pump to maintain hydraulic holding pressure during engine-off periods. If the pump cannot maintain adequate pressure — due to internal wear, a failing motor, or a circuit fault — the module disables stop/start as a protective measure to prevent harsh engagement or a no-drive condition during restart events.

24. C — The question asks which symptom would NOT result from a 2.1-volt ground circuit voltage drop. False DTCs, erratic shifting, and inconsistent solenoid operation are all direct consequences of a corrupted ground reference. However, consistent maximum line pressure in all ranges is a specific, deliberate response to a detected fault — a high-pressure default mode. A poor ground produces erratic, unpredictable behavior, not a consistent, stable maximum-pressure condition.

25. D — The 4-5 shift takes 0.8 seconds instead of the target 0.3 seconds, the EPC and its circuit test normal, and adaptive values have maxed out their positive correction. This combination tells a clear story: the module has been progressively increasing apply pressure to compensate for declining clutch performance, and it has now reached its maximum correction capability. The clutch has worn beyond the adaptive system's compensation range and requires physical repair.

26. C — The fluid level did not physically change — no fluid was added or lost. The most likely explanation is that the customer checked the level under different conditions than the technician. Checking with the engine off leaves more fluid in the pan (fluid from the converter and circuits drains back), producing a higher reading. Checking on a slight incline can also shift the fluid toward the dipstick side. The technician should verify the level using the manufacturer's exact procedure.

27. B — The transmission pops from Drive to Neutral when hitting large bumps or potholes, then re-engages immediately when shifted back. This impact-sensitive, mechanical disengagement points to a shift cable, bracket, or linkage component that moves out of the Drive detent when subjected to road shock. The jolt physically moves the cable enough to pull the manual valve out of the Drive position momentarily, then the driver shifts it back.

28. D — A thin, flat, brass-colored metallic disc approximately the diameter of a quarter found on the pan magnet is consistent with a thrust washer or a fragment of one. Thrust washers are made of brass, bronze, or copper-alloy materials and are thin, flat, disc-shaped components positioned between rotating elements. A worn-through thrust washer that has separated from its position will circulate with the fluid and collect on the pan magnet.

29. A — On some vehicles, the backup light switch is integrated into the transmission range sensor as a separate internal contact. If the replacement range sensor does not include this integrated backup light function — perhaps it is a different design or from a different supplier — the backup light circuit has no switch to close when Reverse is selected. The transmission engages Reverse normally because the hydraulic function is separate from the backup light circuit.

30. B — With the cable housing able to slide 1/4 inch in either direction within the bracket, the manual valve's position becomes inconsistent. Sometimes the cable positions the valve correctly in the intended detent, and other times the cable slack allows the valve to land between detents or in an adjacent detent. The result is inconsistent gear engagement — the driver may select Drive but get Neutral, or select Reverse but get Park, depending on the cable's position at that moment.

31. A — A wear groove 0.010 inches deep on the half-shaft sealing surface means the new seal lip will sit in the same groove as the old seal. The groove prevents the seal lip from maintaining uniform contact pressure against the shaft, allowing fluid to leak through the valley of the groove. A wear sleeve or repair sleeve pressed over the shaft provides a fresh, smooth, precision-diameter surface for the new seal to ride on.

32. C — An intermittent harsh downshift to 1st gear during the final deceleration to a stop — occurring only once or twice per week — suggests an intermittent signal fault that affects the timing of the coastdown downshift commands. The brake pedal position switch sends the signal that triggers TCC release and coastdown shift scheduling. An intermittent switch fault that delays this signal causes the module to hold a higher gear longer than intended, then command a rapid multi-gear downshift at the last moment.

33. D — A faint scraping noise from the pan area that was not present before the service and occurs at all speeds points to a physical contact between a new component and the pan. The replacement filter may be slightly longer than the original — either a different part number or a manufacturing variation — and its bottom surface contacts the inside of the pan during engine vibration and vehicle movement, producing the scraping noise.

34. B — When the transmission sits in Neutral at idle for more than two minutes, the manual valve is positioned to block the forward clutch feed passage. During this extended Neutral dwell, the forward clutch circuit slowly drains back through the valve body passages under the return spring pressure. When Drive is selected, the pump must refill the empty clutch circuit before the clutch can engage, creating the three-second delay. Immediate post-startup engagement works because the circuit has not had time to drain.

35. A — A soft, swollen rubber hose section with an active leak requires replacement — not patching, wrapping, or clamping. The rubber has been chemically degraded by exposure to ATF (which is petroleum-based and attacks certain rubber compounds over time), causing the material to swell and lose its structural integrity. A clamp over swollen rubber will simply displace the weakened material and the leak will recur or worsen.

36. D — Every check ball must be in its exact mapped position for the valve body to route fluid correctly. A missing check ball will cause fluid to flow through an unintended passage, potentially causing pressure loss, cross-circuit leakage, or engagement failure in a specific gear. The valve body must be lifted out, the displaced ball retrieved from the pan, repositioned in its correct seat, and the valve body carefully reinstalled.

37. C — The shudder occurs during the 3-4 upshift only when towing — not during unloaded driving. Towing significantly increases the torque that the 4th gear clutch must hold during the upshift. A clutch pack with marginally worn friction material can hold adequately under normal driving torque but slips briefly under the higher torque demand of towing. The grab-slip-grab cycle during the heavy-load apply produces the shudder.

38. A — With all bolts, connections, and the converter physically disconnected, the most common reason a transaxle will not separate from the engine is a seized dowel pin. The engine block and bell housing are aligned by two or more dowel pins that can corrode and seize from moisture intrusion over years of service. Gentle prying with a large pry bar between the case and block at the dowel pin locations breaks the corrosion bond and allows separation.

39. C — Deep scoring on one-third of the drum circumference with the remaining two-thirds showing normal wear indicates the band's clamping force was concentrated on one area instead of being distributed evenly around the entire drum surface. A bent servo apply pin or a loose band anchor causes the band to tighten unevenly, pressing harder on one side than the other. The heavily loaded area scores deeply while the lightly loaded area shows only normal polishing.

40. D — Steel separator plates that develop a rough, sandpaper-like texture have experienced heat-induced surface transformation — the sustained high temperatures from clutch slippage or overheating have altered the steel's surface microstructure. Smooth plates are required for even, consistent friction contact with the clutch discs. Rough plates will accelerate friction disc wear and produce inconsistent clutch engagement. The rough plates should be replaced.

41. C — A gear side clearance of 0.004 inches exceeds the maximum specification of 0.003 inches. Excessive side clearance creates a gap between the gear faces and the pump housing/cover surfaces. Pressurized fluid on the outlet side of the pump leaks across the gear faces to the low-pressure inlet side through this gap, reducing the pump's net pressure output. The pump cannot seal efficiently enough to maintain specification pressure, particularly at idle.

42. B — If the ring gear slides on but feels very tight and does not rotate freely, something is interfering with the mesh between the ring gear's internal teeth and the planet gears. The most likely causes are debris lodged between teeth, a manufacturing burr on the ring gear's tooth surface, or damage to a tooth that is creating interference. The ring gear internal teeth and the meshing planet gear teeth should be inspected and cleaned before attempting to force the assembly together.

43. A — The selective thrust washer between the pump and the front clutch drum occupies a specific amount of axial space in the assembly. Without this washer, the components stack closer together, leaving a gap where the washer should be. This gap increases the total axial free play — the endplay measurement will read excessively high because the missing washer's thickness is added to the normal clearance.

44. D — A leak check at cold idle does not verify seal integrity under full operating conditions. Transmission fluid expands when hot, system pressure increases under driving load, and thermal expansion of metal components can change fitting seating. A connection that appears dry at cold idle may leak when the fluid reaches operating temperature (typically 175-200°F) and the system pressure increases during driving. A road test followed by a hot inspection is required.

45. B — A 0.004-inch wear groove across the entire gear contact area on the pump housing surface creates a channel that allows pressurized fluid to leak from the high-pressure outlet side back to the low-pressure inlet side across the gear face. This reduces pump efficiency and net pressure output. The housing must be replaced or resurfaced on a precision flat surface grinder to restore the smooth, flat sealing surface the pump gears require.

46. C — The flow rate improved from 40 seconds to 35 seconds per quart after additional flushing, but it still does not meet the minimum specification of 25 seconds per quart. Despite the improvement, the cooler core remains significantly restricted — it is flowing at only 71% of the minimum acceptable rate. A restricted cooler will cause the rebuilt transmission to overheat during normal driving. The cooler must be replaced.

47. A — MERCON LV and MERCON ULV are distinct Ford ATF specifications with different viscosity grades, additive packages, and friction modifier formulations. MERCON ULV is designed specifically for the 10R80 ten-speed transmission and is significantly thinner than MERCON LV. Using MERCON ULV in a transmission that requires MERCON LV can cause shift quality problems, seal incompatibility, and potential damage from incorrect lubrication film thickness.

48. D — The four-second delay on the first Park-to-Drive engagement after installation — with all subsequent engagements being normal — is caused by the clutch apply circuits being empty after assembly. During the rebuild, no fluid remains in the clutch piston bores, feed passages, or apply circuits. The first engagement requires the pump to fill these empty circuits completely before the forward clutch piston can be pressurized. Once filled, the circuits remain charged for subsequent shifts.

49. D — The adaptive values have reached maximum positive correction across all clutch circuits after only 300 miles — far too quickly for actual clutch wear on new components. The most likely cause is that the adaptive values from the old, failed transmission were never reset. The module is applying the extreme correction values learned from the worn-out original clutches to the new, unworn friction material, commanding excessive pressure that produces harsh shifts. Resetting the adaptations will resolve the concern.

50. A — The vehicle holds in Park with the engine running but rolls when the engine is shut off. The parking pawl is a purely mechanical device — it does not require hydraulic pressure or engine operation to engage. If the pawl mechanism was incorrectly assembled during the overhaul — the pawl installed upside down, the actuating rod not connected to the manual shaft, or the return spring installed incorrectly — the pawl may physically move into position but not engage the parking gear teeth. The mechanism must be inspected and corrected.