

# PRACTICE EXAM 7: ASE A2 SIMULATION (50 QUESTIONS)

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1. A customer brings in a vehicle that drives normally in all forward gears but produces a loud whining noise and vibration specifically when the vehicle is backing up under load — such as reversing up a driveway incline. The noise is not present when backing on flat ground at low throttle. Which of the following is the MOST LIKELY cause?

- A. A worn oil pump that cannot maintain adequate pressure under the combined load of Reverse and an incline
- B. A torque converter with a failed stator one-way clutch that locks up specifically during reverse fluid flow direction
- C. A damaged component in the reverse gear power flow path that is loaded only during high-torque reverse operation
- D. A failing transmission mount that allows the case to shift and contact the exhaust during reverse torque loading

2. A vehicle equipped with a four-speed automatic transmission has the following symptoms: 1st gear works normally, 2nd gear slips under moderate and heavy throttle, 3rd gear works normally, and 4th gear works normally. The component application chart shows that the following devices are applied in 2nd gear: Forward Clutch, Second Gear Band, and One-Way Clutch 1. The Forward Clutch is also applied in 1st, 3rd, and 4th (all normal). One-Way Clutch 1 is also applied in 1st (normal). Which component is the MOST LIKELY cause of the 2nd gear slippage?

- A. The second gear band, because it is the only device uniquely applied in 2nd gear that is not applied in any working gear
- B. The forward clutch, because it carries the majority of torque load during the 1-2 transition event
- C. One-way clutch 1, because it provides the holding force for 2nd gear during acceleration conditions
- D. The pressure control solenoid, because it reduces line pressure specifically during the 2nd gear operating range

3. A technician is road testing a vehicle and places the transmission in Neutral while coasting at 55 mph. A low-pitched humming noise that was present during cruising in 4th gear disappears completely when Neutral is selected. What does this test result tell the technician about the noise source?

- A. The noise originates from the torque converter, which continues to spin in Neutral but is unloaded
- B. The noise originates from a component inside the transmission that is loaded in 4th gear but unloaded in Neutral
- C. The noise originates from the driveshaft, which stops rotating when the transmission is placed in Neutral
- D. The noise originates from the oil pump, which reduces speed dramatically when Neutral is selected at road speed

4. Technician A says that a restricted transmission cooler can cause delayed engagements because it reduces available fluid volume to the pump. Technician B says that a restricted cooler can cause transmission overheating because it prevents adequate heat dissipation. Who is correct?

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

5. A customer reports that the transmission "jerks" once immediately after a cold start when the vehicle is first shifted into Drive. The jerk does not repeat for the remainder of the drive cycle. There are no DTCs stored and the fluid level is correct. Which of the following is the MOST LIKELY cause?

- A. Air trapped in a clutch circuit that compresses on the first apply but is purged by the initial engagement pressure
- B. A worn forward clutch pack that grabs harshly on the first engagement due to cold friction material stiffness

C. A faulty idle air control that drops RPM momentarily at the instant of the initial Park-to-Drive engagement

D. A torque converter that has completely drained overnight and produces a hydraulic shock during initial fill

6. A vehicle with a six-speed automatic transmission has been brought in for a concern of poor fuel economy. The technician monitors scan tool data during highway cruising and observes that the TCC slip RPM consistently reads 75 RPM with TCC commanded ON at 65 mph in 6th gear. The manufacturer's specification for TCC slip in this condition is 0 RPM (full lockup). All other transmission operations are normal. Which of the following is the MOST LIKELY cause of the poor fuel economy?

A. A worn 6th gear clutch pack that allows minor slippage at the low torque load of highway cruising speeds

B. An incorrect final drive ratio that forces the engine to operate at a higher RPM than designed for this vehicle

C. A slipping torque converter clutch that is wasting energy as heat instead of transmitting it mechanically to the wheels

D. A faulty output speed sensor that over-reports vehicle speed, causing the module to calculate excessive slip

7. A vehicle with an automatic transmission operates normally in all gears when cold. After 45 minutes of city driving, 2nd gear begins to slip progressively until it fails completely, causing the transmission to skip from 1st to 3rd. All other gears continue to work normally even after 2nd gear has failed. What does the temperature-dependent failure of a single gear range MOST LIKELY indicate?

A. A general hydraulic pressure loss from a worn pump that worsens as fluid viscosity drops with temperature

B. A heat-related seal failure in the 2nd gear clutch or band circuit that worsens as the seal softens at operating temperature

C. A thermally sensitive shift solenoid that loses magnetic force as temperature rises above the normal range

D. An adaptive learning fault that progressively reduces 2nd gear apply pressure as the module detects rising temperature

8. A technician connects a pressure gauge to the main line port and measures pressure in Drive at idle. The reading fluctuates rapidly between 50 and 70 psi, with the needle bouncing rhythmically. The manufacturer's specification is a steady 60-75 psi. What does this fluctuating pressure reading indicate?

A. Normal operation caused by the pulse-width modulated pressure control solenoid cycling rapidly at idle

B. A worn oil pump that produces uneven flow as worn gear teeth alternate between good and poor contact

C. An engine idle speed that is fluctuating, causing the pump speed to vary and produce inconsistent output

D. Aerated fluid in the system that alternately compresses and expands, causing the pressure to oscillate

9. A vehicle equipped with a torque converter automatic transmission produces a single, metallic "ting" sound from the bell housing area once every 2-3 seconds while idling in Park with the engine warm. The frequency of the sound does not change when the engine RPM is briefly raised. Shifting to Neutral does not change the sound. What is the MOST LIKELY source?

A. A cracked or warped flexplate that contacts a fixed component once per revolution as it flexes under engine pulses

B. A loose converter bolt that allows the converter to shift and contact the bell housing at random intervals

C. A worn starter drive that intermittently contacts the ring gear teeth due to a weak retraction spring

D. A broken TCC damper spring inside the converter that rattles against the housing at the engine firing frequency

10. A customer reports that the vehicle's automatic transmission "drops out of gear" momentarily during hard cornering. The transmission re-engages immediately when the vehicle straightens. There are no

DTCs stored and the fluid level checks at the minimum of the acceptable range on the dipstick. What is the MOST LIKELY cause?

- A. A worn transmission mount that allows the case to shift during cornering, momentarily misaligning the manual valve
- B. A fluid level that is marginal — during hard cornering the fluid shifts to one side of the pan, uncovering the filter intake
- C. A faulty vehicle speed sensor that loses signal during lateral G-forces from hard cornering maneuvers
- D. A shift solenoid that moves within its bore during cornering, momentarily changing its valve position

11. Technician A says that when diagnosing a noise coming from the drivetrain, shifting between Drive and Neutral while maintaining the same vehicle speed can help isolate whether the noise is from the transmission or from components downstream. Technician B says that comparing the noise in Drive versus Reverse at the same vehicle speed can help identify a component that is loaded differently depending on the direction of torque flow. Who is correct?

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

12. A vehicle stores DTC P0756 — Shift Solenoid B Performance/Stuck Off. The technician tests the solenoid electrically and finds the resistance and circuit integrity are within specification. The technician commands the solenoid on using a bidirectional scan tool test. The solenoid clicks and the scan tool confirms it is receiving current, but no corresponding pressure change is observed at the affected shift valve. What is the MOST LIKELY cause?

- A. A failed transmission control module that sends the command but cannot sustain it long enough to move the valve

- B. A weak scan tool battery that produces a momentary command but insufficient duration for valve movement
- C. A normally open solenoid that clicks audibly but must be tested in the energized-closed state for valve effect
- D. A stuck shift valve in the valve body that the solenoid cannot move due to varnish, debris, or mechanical binding

13. A technician is reviewing freeze frame data for DTC P0732 — Gear 2 Incorrect Ratio. The freeze frame shows: Vehicle Speed = 28 mph, Engine RPM = 3,400, Throttle Position = 65%, Fluid Temperature = 205°F, Commanded Gear = 2nd. What specific information does this freeze frame provide for the diagnostic process?

- A. The high fluid temperature confirms overheating is the root cause of the incorrect ratio condition
- B. The conditions at the time of the fault — moderate speed, heavy throttle, and warm fluid — define when to road test to reproduce it
- C. The high engine RPM confirms the engine is producing too much power for the 2nd gear clutch to hold
- D. The throttle position confirms a throttle sensor error is causing the module to command the wrong gear ratio

14. A scan tool shows that the transmission's EPC solenoid duty cycle is 82% during steady-state 45 mph cruising in 4th gear. The manufacturer's specification for this operating condition is 40-55%. What is the MOST LIKELY explanation for this elevated duty cycle?

- A. The adaptive system has increased EPC duty cycle to command higher line pressure to compensate for internal clutch wear
- B. The EPC solenoid has a partial short circuit that draws more current than the module commands at any given duty cycle
- C. The transmission fluid temperature is below normal, causing the module to increase pressure until the fluid warms

D. The scan tool is reading the duty cycle incorrectly due to a software version mismatch with this transmission model

15. A vehicle equipped with an automatic transmission shifts normally in all gears but intermittently illuminates the MIL with DTC P0700 (Transmission Control System Malfunction) stored in the ECM. The technician accesses the TCM and finds no DTCs stored. The code reappears after clearing and driving 50 miles. What should the technician investigate?

A. The transmission for an internal mechanical fault that sets P0700 directly without generating a TCM-specific code

B. The ECM for a software fault that is generating false P0700 codes without receiving a trigger from the TCM

C. The transmission fluid condition, since degraded fluid can trigger a generic malfunction code in the ECM

D. The CAN bus communication link between the ECM and TCM for an intermittent data transfer interruption

16. A vehicle's transmission produces a DTC P0846 — Transmission Fluid Pressure Sensor B Circuit Range/Performance. The scan tool shows Pressure Sensor B reads 0 psi at all times regardless of engine RPM, gear selection, or driving condition. The sensor is located internally on the valve body. Which of the following should the technician test FIRST?

A. The oil pump output pressure using a mechanical gauge to determine if the pump has failed completely

B. The valve body for a blocked passage that is preventing fluid pressure from reaching the sensor location

C. The sensor's electrical circuit at the case connector for proper reference voltage, ground, and signal return

D. The transmission for low fluid level, since insufficient fluid would produce zero pressure readings at the sensor

17. A technician is diagnosing a vehicle with an automatic transmission that upshifts normally but will not perform any downshifts — the transmission stays in whatever gear it reaches and does not downshift when the throttle is pressed or when the vehicle decelerates to a stop. The transmission eventually returns to 1st gear only after the vehicle comes to a complete stop. Which of the following is the MOST LIKELY cause?

A. A shift solenoid or valve body fault that prevents the downshift hydraulic path from opening when commanded

B. A failed throttle position sensor that is stuck at zero, preventing the module from commanding kickdown shifts

C. A worn governor that cannot reduce its pressure signal as vehicle speed decreases during deceleration

D. A brake pedal switch that is sending a continuous brake-applied signal, inhibiting all downshift commands

18. A technician performs voltage drop testing on the transmission control module's main power supply circuit. The reading is 1.8 volts with the circuit under load. The specification is less than 0.5 volts. What is the consequence of this excessive voltage drop?

A. The TCM will overheat from the excess power being dissipated across the high-resistance connection

B. The TCM receives reduced operating voltage, which can cause incorrect solenoid commands, erratic shifting, and false DTCs

C. The transmission will default to maximum line pressure to compensate for the module's reduced voltage output

D. The solenoids will operate at higher current than designed, causing premature coil burnout from excess power draw

19. A vehicle equipped with a CVT has a DTC P2A00 — Transmission Fluid Pressure Sensor/Switch A Circuit High. The scan tool live data shows the pressure reading stuck at 950 psi — significantly above the maximum expected system pressure. Which of the following is the MOST LIKELY cause?

- A. The CVT system pressure is genuinely at 950 psi due to a severely stuck pressure regulator valve
- B. A contaminated pressure sensor that is producing an amplified signal from debris on its sensing element
- C. The CVT belt has broken and the resulting mechanical shock spiked the system pressure to 950 psi permanently
- D. The pressure sensor circuit has a short to the 5-volt reference supply, producing a fixed high-voltage signal

20. A technician connects a scan tool to a vehicle with a dual-clutch transmission (DCT) and reviews live data. The data shows "Clutch 1 Temperature = 340°F" with a warning indicator. The specification maximum is 300°F. All other parameters appear normal and the vehicle is not currently exhibiting any symptoms. What should the technician advise?

- A. The clutch has been overheated and should be inspected for damage, as repeated overheating degrades friction material prematurely
- B. The temperature reading is normal for a DCT during aggressive city driving and does not require any intervention
- C. The temperature sensor is faulty and should be replaced since 340°F is not physically achievable in a wet clutch design
- D. The DCT fluid needs immediate replacement since high clutch temperature always indicates degraded fluid friction properties

21. A vehicle with an eight-speed automatic transmission stores DTC P0869 — Transmission Fluid Pressure Too High. The scan tool shows line pressure consistently at 280 psi during light-throttle cruising, while the specification for this condition is 100-130 psi. The transmission shifts harshly in every gear. Which of the following would NOT cause this condition?

- A. A pressure control solenoid that has failed in the fully closed position, preventing pressure relief
- B. A stuck-closed pressure regulator valve that cannot open to exhaust excess fluid from the system

C. A leaking forward clutch piston seal that allows pressure to bypass the clutch piston during application

D. A control module operating in default high-pressure mode due to a detected system fault condition

22. A technician is diagnosing a vehicle where the speedometer works correctly but the transmission will not upshift. The scan tool shows the output speed sensor reading matches the speedometer display. However, the input speed sensor shows 0 RPM at all times. What is the MOST LIKELY effect of the zero input speed reading on transmission operation?

A. The module will command all upshifts immediately because it calculates an infinite gear ratio from the zero input speed

B. The module cannot calculate the gear ratio and will likely inhibit upshifts or enter limp mode to protect the drivetrain

C. The module will use the engine RPM signal as a substitute and continue shifting normally without the input sensor

D. The module will command the TCC to engage immediately because zero input speed suggests the TCC is already locked

23. A vehicle has an intermittent harsh 3-4 upshift that occurs approximately once every 20 shift events. The remaining 19 shifts are perfectly smooth. There are no DTCs stored. A scan tool data recording captures the harsh event and shows that at the moment of the harsh shift, the EPC solenoid duty cycle spikes to 100% for 0.2 seconds before returning to its normal value. What does this data indicate?

A. The EPC solenoid is failing and briefly produces maximum output before recovering to normal operation

B. The transmission control module is commanding the spike as part of its normal adaptive pressure strategy

C. The 3-4 accumulator piston is intermittently sticking, and the module spikes pressure to overcome the sticking

D. An intermittent electrical fault — likely a connection issue — is momentarily disrupting the EPC solenoid circuit

24. A technician is testing a transmission fluid temperature sensor using a multimeter. The sensor is removed from the transmission and placed in a container of fluid heated to exactly 200°F. The multimeter reads 1,200 ohms. The manufacturer's specification for 200°F is 300-400 ohms. What does this high resistance at operating temperature indicate?

- A. The sensor is functioning correctly because the high reading accounts for the resistance of the test leads
- B. The sensor lead wires have internal corrosion that adds resistance to the overall circuit measurement
- C. The sensor's thermistor element has degraded and is not changing resistance proportionally with temperature
- D. The fluid temperature is actually much lower than the thermometer indicates, producing an accurately high reading

25. A vehicle with an automatic transmission produces a DTC P0218 — Transmission Fluid Over-Temperature. The customer confirms the vehicle was towing a heavy trailer up a mountain grade in 95°F ambient temperature when the MIL illuminated. The fluid appears dark but not burnt, and the level is correct. What should the technician recommend?

- A. Immediately replace the transmission fluid and internal components because the over-temperature event has caused irreversible clutch damage
- B. Perform a fluid and filter service, check the cooling system for restrictions, and recommend an auxiliary cooler for continued towing
- C. Clear the code and return the vehicle since a single over-temperature event during severe towing does not require any action
- D. Replace the transmission control module since P0218 indicates the module's temperature monitoring circuit has malfunctioned

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26. A technician is performing a fluid service on a transmission that uses a screw-in filter with an integral bypass valve. The replacement filter from the rebuild kit does not include a bypass valve. If the technician installs the replacement filter without a bypass valve, what is the potential consequence?

- A. If the filter becomes restricted, the pump will have no alternate fluid path and pressure will drop, causing slipping or stalling
- B. The pump will draw excess unfiltered fluid through the bypass, increasing contamination levels in the hydraulic system
- C. The transmission will operate normally because the bypass valve only opens during cold-start conditions when flow is limited
- D. The filter will collapse internally from excessive pressure differential since the bypass valve normally prevents overpressure

27. A customer reports that the transmission shifts smoothly most of the time, but occasionally produces a single harsh downshift when the air conditioning compressor clutch engages during city driving. There are no DTCs stored. Which of the following BEST explains this symptom?

- A. The AC compressor engagement reduces engine torque, and the module compensates by downshifting aggressively
- B. The AC compressor clutch produces an electrical spike that interferes with the shift solenoid circuits momentarily
- C. The AC compressor engagement vibration is transmitted through the engine mounts and mimics a transmission downshift
- D. The sudden engine load change from AC engagement causes the module to command a downshift and pressure spike simultaneously

28. A vehicle has a persistent fluid leak from the transmission that increases in volume when the vehicle is driven at highway speed for extended periods but is barely noticeable during city driving. The leak source has been traced to the front pump seal. What condition would explain the speed-dependent leak severity?

- A. The oil pump generates higher pressure at highway RPM, which forces more fluid past the damaged seal
- B. Higher converter hub RPM at highway speed creates greater centrifugal force and heat, worsening a marginal seal condition
- C. The cooler thermostat opens at highway temperature, increasing the volume of fluid circulating past the pump seal
- D. Highway driving causes the transmission mount to compress further, pushing the pump housing against the seal

29. A technician replaces the transmission pan gasket on a vehicle. During the service, the technician notices that one of the eight pan bolt holes in the transmission case has a bolt that is cross-threaded and stuck. The technician extracts the bolt successfully without damaging the case threads. What is the correct next step?

- A. Install a new bolt and tighten to specification since the threads were not damaged during the extraction
- B. Apply thread-locking compound to the new bolt to compensate for any minor thread imperfection from the cross-threading
- C. Chase the threads in the case hole with the correct tap to verify they are clean and undamaged before installing a new bolt
- D. Install a HeliCoil thread insert in the hole as a precaution since cross-threading always damages the female threads

30. A technician discovers that a vehicle's shift cable adjustment requires the cable to be disconnected from the manual shaft lever. The manual shaft lever is rusted to its shaft and will not rotate freely by hand when the cable is disconnected. What is the correct action?

- A. Free the manual shaft by applying penetrating oil and working the lever gently until it rotates smoothly before reconnecting the cable
- B. Reconnect the cable and force the lever through its detents using the gear selector, which provides enough leverage

C. Replace the shift cable with a heavier-duty cable that can overcome the resistance of the rusted manual shaft

D. Adjust the cable at the gear selector end only, bypassing the need to move the manual shaft lever independently

31. A technician replaces the transmission fluid temperature sensor on a vehicle. The new sensor has been installed and the connector reconnected. After clearing codes and starting the engine, the scan tool shows the TFT reading at 75°F, which matches the ambient temperature in the shop. After a 30-minute road test, the TFT reading rises to 190°F. What does this test confirm?

A. The new sensor is reading approximately 15°F higher than actual, indicating it is slightly out of calibration

B. The sensor wiring has a partial short that produces accurate readings at cold temperatures but drifts when warm

C. The transmission cooler thermostat is functioning correctly by allowing the fluid to reach operating temperature

D. The new TFT sensor is functioning correctly, as it accurately tracked the fluid temperature from cold to operating range

32. A vehicle with an automatic transmission has a customer complaint of a "clunk" when the vehicle transitions from acceleration to deceleration during highway driving. The clunk occurs every time the driver lifts off the throttle at highway speed. Placing the transmission in Neutral before lifting the throttle eliminates the clunk. What does the Neutral test result tell the technician?

A. The clunk is from the driveshaft U-joints since they remain loaded even when the transmission is in Neutral

B. The clunk originates from the engine mounts, which shift position regardless of the transmission gear state

C. The clunk is from within the transmission or torque converter, as unloading the drivetrain in Neutral eliminates it

D. The clunk is from the differential, which continues to experience torque reversal even when the transmission is in Neutral

33. A technician is performing an in-vehicle valve body replacement. The service manual states that seven check balls must be placed in the case before installing the valve body. The technician counts the check balls removed during disassembly and finds only six. What is the MOST appropriate action?

A. Obtain the correct number of check balls and place all seven in their mapped positions using the service manual diagram

B. Install the six balls in positions 1 through 6 and leave position 7 empty since the ball may have been lost inside the case

C. Install the valve body with six balls and road test to determine if the missing ball affects shift quality or operation

D. Search inside the transmission case, valve body passages, and pan for the potentially dislodged seventh check ball

34. A technician is replacing the output speed sensor on a transmission. The sensor bore in the case is wet with ATF from the sensor seal. After removing the old sensor, a small but steady stream of ATF begins flowing from the open bore. What should the technician do?

A. Immediately reinstall the old sensor to stop the fluid flow and plan to replace it at a later scheduled service

B. Allow the fluid to drain briefly, install the new sensor with a new O-ring quickly, and top off the fluid level afterward

C. Plug the bore with a clean shop towel while preparing the new sensor to prevent excessive fluid loss from the case

D. Drain the entire transmission pan before proceeding, since the active fluid flow indicates the fluid level is too high

35. A customer reports that the transmission "slips" when making sharp right turns but drives normally on straight roads and left turns. There are no DTCs and the fluid level checks at the full mark. Which of the following is the MOST LIKELY explanation?

A. A worn right-side axle seal on a transaxle that allows the right half-shaft to disengage during right turns

B. A CV joint on the right half-shaft that binds during right turns and momentarily interrupts torque delivery

C. A transmission mount on the right side that allows the case to shift during right turns, misaligning the manual valve

D. The fluid level is at the upper limit and during right turns the fluid shifts enough to briefly uncover the filter intake

36. A technician is inspecting a vehicle's external transmission wiring harness and finds that the case pass-through connector has one pin that is pushed back approximately 2mm from its normal seated position. The pin makes contact intermittently — it connects when the connector halves are pushed together firmly but loses contact under vibration. What type of transmission symptom would this fault MOST LIKELY produce?

A. An intermittent shifting problem that appears and disappears based on road conditions and vehicle vibration

B. A consistent no-shift condition because the pushed-back pin cannot make contact under any circumstances

C. A permanent check engine light with a confirmed DTC for the circuit connected to the affected pin location

D. No symptoms because the connector spring tension maintains adequate contact pressure during all conditions

37. A technician is replacing the cooler lines on a vehicle after identifying severe corrosion. The replacement lines are pre-bent stainless steel with threaded fittings. After installation, the technician notices that one line contacts the exhaust pipe at a point midway along its run. What must the technician do before returning the vehicle to service?

- A. Apply exhaust wrap to the section of exhaust pipe where the cooler line contacts to prevent heat transfer
- B. Leave the contact point as-is since stainless steel cooler lines have a much higher melting point than exhaust temperatures
- C. Reroute or re-bend the cooler line to eliminate contact with the exhaust, and install a protective clamp or heat shield
- D. Replace the cooler line with a flexible rubber hose in the section that contacts the exhaust to allow movement clearance

38. A technician is removing a transmission from a vehicle and discovers that the torque converter will not pull free from the crankshaft — the converter pilot appears to be stuck in the crankshaft bore. What is the MOST LIKELY cause and correct action?

- A. The pilot bore in the crankshaft has rusted and seized to the converter pilot, requiring the crankshaft to be replaced
- B. Corrosion or debris between the pilot and bore is preventing separation — apply penetrating oil and work the converter free gently
- C. The converter is designed to remain in the engine during transmission removal and should be separated from the input shaft
- D. A converter retaining bolt that threads into the crankshaft is preventing separation and must be removed from the front of the engine

39. During a transmission overhaul, a technician finds that the transmission oil pump housing has a hairline crack on its mounting flange that extends approximately 1/2 inch toward a bolt hole. The crack does not pass through any fluid passage. What is the correct action?

- A. Apply industrial-grade epoxy to the crack and allow it to cure before reinstalling the pump in the transmission
- B. Weld the crack with aluminum TIG welding, re-machine the flange surface, and reinstall the pump assembly

C. Monitor the crack by marking its endpoints with a scribe and inspecting at the next service interval for propagation

D. Replace the pump housing because a crack on the mounting flange will propagate under the cyclic stress of engine vibration

40. A technician is inspecting a transmission's internal components during an overhaul. One of the clutch drums has a polished, mirror-finish wear pattern on the area where the band wraps around it. The polished area is smooth with no scoring or grooves. Is this drum serviceable?

A. No — the polished surface indicates the drum has been hardened by heat and will crack under band application pressure

B. No — the polished surface must be roughened with 80-grit sandpaper to restore adequate friction for the band lining

C. Yes — a smooth, polished wear surface without scoring or grooves indicates normal wear and provides adequate friction contact

D. Yes — but only if the drum diameter is measured and confirmed to be within the manufacturer's specification tolerance

41. A technician is assembling a compound planetary gear set during a transmission rebuild. Two thrust washers of different thicknesses and materials — one bronze and one nylon — must be installed between specific components. The service manual indicates which washer goes where, but the technician accidentally reverses their positions. What is the MOST LIKELY consequence?

A. Incorrect endplay measurement and potentially accelerated wear, since each washer thickness was selected for a specific clearance

B. No consequence, since both washers serve the same function and interchanging them does not affect operation

C. Immediate gear noise because the nylon washer will melt from heat generated at the position designed for the bronze washer

D. The transmission will lock up when shifted into gear because the reversed washers create interference between the gear elements

42. A technician measures oil pump gear mesh clearance during an overhaul and reads 0.008 inches. The manufacturer's specification maximum is 0.006 inches. The pump gears show no visible scoring or damage. What is the correct interpretation and action?

- A. The pump is serviceable since the gears are undamaged, and the clearance will improve once the pump is primed with fluid
- B. The pump housing bore is worn and needs to be honed to a larger diameter, then fitted with oversized replacement gears
- C. The pump gears have excessive backlash but the clearance will tighten when the pump heats up during normal operation
- D. The pump gear mesh clearance exceeds specification and the pump must be replaced, as excessive mesh allows internal fluid leakback

43. A technician is installing a new one-way roller clutch during a transmission overhaul. The clutch assembly includes loose rollers, springs, and a cage. During installation, one roller falls out of the cage and lands inside the transmission case. What is the correct action?

- A. Install the clutch with the remaining rollers since one-way clutches are designed with redundant rollers for this purpose
- B. Retrieve the fallen roller, reinstall it in the cage, and verify all rollers and springs are properly seated before continuing
- C. Replace the entire one-way clutch assembly with a new unit since the dropped roller may have sustained damage from the fall
- D. Continue with assembly and add a supplemental thrust washer to compensate for the load capacity lost from the missing roller

44. During reassembly of a transmission, a technician installs the valve body and torques all mounting bolts to the specified 10 ft-lbs using a 3/8-inch drive torque wrench. After torquing the final bolt, the technician realizes that three of the 12 bolts were started but not torqued during the initial tightening sequence — they were finger-tight while the remaining nine were fully torqued. What should the technician do?

- A. Torque the three remaining bolts to specification since the other nine are already properly tightened in their positions
- B. Apply an additional 2 ft-lbs to all 12 bolts to compensate for any loss of clamping force from the incorrect sequence
- C. Loosen all 12 bolts and re-torque the entire set in the correct manufacturer-specified crisscross sequence from the start
- D. Leave the bolts as-is since finger-tight bolts will self-seat under hydraulic pressure when the transmission is operated

45. A technician has completed a transmission rebuild and is preparing to install the unit. The original flexplate was removed for inspection and found to have slight surface rust on its converter mounting pad surfaces but no cracks, warping, or tooth damage. What is the correct action regarding the flexplate?

- A. Clean the rust from the mounting surfaces, verify flatness, and reinstall the original flexplate since it is structurally sound
- B. Replace the flexplate because any surface rust indicates moisture exposure that weakens the metal's fatigue resistance
- C. Install the flexplate with rust intact since the converter bolt clamping force will crush through the surface corrosion
- D. Resurface the mounting pads on a lathe to remove the rust and restore a clean, flat surface for converter bolt contact

46. A technician installs a rebuilt transmission and connects all cooler lines, electrical connectors, and the shift cable. Before filling with fluid and starting the engine, the technician rotates the engine by hand. The engine turns freely for one full revolution but binds at a specific point during the second revolution. What should the technician check?

- A. The pump gears for misalignment, since binding during hand rotation indicates the gears are jammed against the housing
- B. The flexplate for a crack that causes it to flex at one point per revolution and contact the inspection cover

C. The shift cable for binding that transmits resistance through the manual valve to the internal gear train assembly

D. The converter-to-flexplate bolts for a bolt that may be too long and contacting the pump housing or case at one position

47. After completing a transmission overhaul and installation, a technician starts the engine and the transmission immediately engages Drive with a harsh jolt — even though the shift lever is in Park. What is the MOST LIKELY cause?

A. The oil pump is producing excessive pressure due to an incorrectly installed pump cover gasket that blocks the exhaust port

B. The shift cable or linkage was not properly reconnected, so the manual valve is positioned in Drive instead of Park

C. The forward clutch piston was installed upside down during reassembly, causing the clutch to apply without hydraulic command

D. The transmission control module lost its calibration during the battery disconnect and is commanding Drive as a default gear

48. A technician is performing a cooler flow test after flushing the cooler system. The test produces one quart in 22 seconds. The manufacturer's specification minimum is one quart in 25 seconds. Does this flow rate pass the test?

A. Yes — the flow rate exceeds the minimum specification, indicating the cooler is clean and has adequate flow capacity

B. No — the flow rate is too close to the minimum threshold and the cooler should be replaced as a precaution

C. No — a passing flow rate must be at least 50 percent faster than the minimum specification to account for degradation

D. The test is inconclusive because the flow rate must be measured at the exact operating temperature specified by the manufacturer

49. A technician completes a transmission overhaul and performs the initial startup and fluid fill. All shifts are normal and the transmission performs well during the first 10 minutes of road testing. After 15 minutes, the transmission begins to slip in 3rd and 5th gears. The slipping worsens over the next five minutes. What is the MOST LIKELY cause of this progressive failure?

A. The 3rd and 5th gear clutch packs were assembled with the wrong number of friction discs during the rebuild

B. The transmission was filled with the wrong fluid type, and the friction modifier incompatibility worsens as temperature rises

C. A shared internal seal or passage that feeds both the 3rd and 5th gear circuits is leaking and worsening as the seal heats up

D. The adaptive values were not reset, and the module is progressively reducing pressure to these circuits as it re-learns

50. A technician has finished rebuilding a transmission and is documenting the work performed. The customer asks why the technician replaced the torque converter even though the shop's diagnosis indicated the failure was limited to the 2nd gear band. Which of the following is the BEST explanation for replacing the converter?

A. The converter must always be replaced during any overhaul to maintain the manufacturer's warranty on the rebuilt unit

B. The converter housing distorts after extended use and will not mate properly with a rebuilt pump housing surface

C. The old converter's stall speed may have drifted from specification and replacing it ensures the correct stall characteristic

D. Debris from the band failure circulated through the converter, and the welded housing cannot be opened for reliable cleaning

## Practice Exam 7: Answer Key and Explanations

1. C — The noise and vibration occur only in Reverse under high-torque loading (backing up an incline) but not during low-load reverse operation on flat ground. This load-dependent, gear-specific symptom points to a damaged hard part in the reverse power flow path — a chipped planetary gear tooth, worn thrust surface, or damaged bearing — that only produces noise when subjected to the high torque demand of reversing uphill. The component is unloaded in forward gears, explaining the absence of symptoms in Drive.

2. A — The component application chart shows three devices applied in 2nd gear. The forward clutch is also applied in 1st, 3rd, and 4th — all of which work normally — so it is not the cause. One-way clutch 1 is also applied in 1st, which works normally. The second gear band is the only device uniquely applied in 2nd gear and not applied in any other working gear, making it the most likely failed component by process of elimination.

3. B — The noise disappears when the transmission is shifted to Neutral at speed. In Neutral, the planetary gear sets and clutch packs are unloaded — no torque flows through them — but the driveshaft, wheel bearings, and output shaft continue spinning at road speed. Since the noise stops in Neutral, it must originate from a component that is loaded in 4th gear but unloaded in Neutral — an internal transmission component in the gear train, not an external drivetrain part.

4. D — Technician B is correct. A restricted cooler limits the volume of fluid that can pass through the heat exchanger, reducing the system's ability to dissipate heat and causing the fluid temperature to rise. Technician A is incorrect because the cooler is on the return side of the circuit — fluid flows from the transmission to the cooler and back. A cooler restriction does not starve the pump intake; the pump draws from the pan through the filter, not from the cooler.

5. A — A single jerk on the first Park-to-Drive shift after cold start that never repeats during the drive cycle is consistent with a small air pocket trapped in a clutch apply circuit. The air bubble compresses on the first apply, producing a momentary delay followed by a harsh grab as the air is expelled and fluid fills the void. Once the air is purged by the initial pressure event, all subsequent engagements are smooth because the circuit is fully charged with incompressible fluid.

6. C — The TCC is commanded on but has 75 RPM of continuous slip instead of the specified 0 RPM full lockup. This slip represents wasted energy — the engine is spinning the impeller faster than the turbine, and the difference is converted to heat rather than being transmitted mechanically to the wheels.

This continuous energy loss during every highway mile reduces fuel economy. A fully locked TCC transmits 100% of engine power mechanically with zero slip loss.

7. B — A single gear range that works when cold but fails progressively as temperature increases points to a heat-sensitive component in that specific circuit. Elastomeric piston seals in the 2nd gear clutch or band servo soften and expand with heat. A seal that is marginal when cold maintains just enough sealing to hold the gear, but as it softens at operating temperature, it allows increasing pressure bypass until the clutch can no longer hold at all.

8. D — A rapidly fluctuating pressure gauge reading — bouncing rhythmically rather than holding steady — is the characteristic signature of aerated fluid in the hydraulic system. Air bubbles mixed with the fluid alternately compress (allowing pressure to drop) and are pushed through (allowing pressure to rise), creating the oscillating pattern. Normal PWM solenoid cycling occurs at a frequency too high for a mechanical gauge needle to follow, so it would not produce visible needle bounce.

9. A — The "ting" sound occurs once every 2-3 seconds, which does not correspond to engine RPM — at typical idle speed of 600-700 RPM, a once-per-revolution sound would occur approximately 10-12 times per second, not once every 2-3 seconds. However, a cracked or warped flexplate may flex differently under varying cylinder firing pulses, and the contact with a fixed component may occur only when a specific combination of flexing and engine position aligns. The sound does not change with RPM because the contact depends on flex amplitude rather than rotational speed.

10. B — A fluid level at the minimum acceptable mark means the fluid volume in the pan is barely adequate under normal conditions. During hard cornering, centrifugal and lateral forces push the fluid to one side of the pan, potentially exposing the filter intake on the opposite side. When the filter intake draws air instead of fluid, the pump cavitates momentarily, hydraulic pressure drops, and the engaged clutch loses its holding force. When the vehicle straightens, the fluid settles back over the filter and normal operation resumes immediately.

11. C — Both technicians describe valid diagnostic techniques. Shifting to Neutral at speed disconnects the engine from the gear train, unloading all internal transmission components while allowing the driveshaft and downstream components to continue spinning. If the noise disappears, it is internal to the transmission. Comparing Drive and Reverse at the same speed loads the gear train in opposite directions, which changes the loading on specific bearings, thrust surfaces, and gear teeth, helping identify directionally sensitive components.

12. D — The solenoid is electrically functional — it has correct resistance, clicks audibly, and draws current when commanded. However, no pressure change occurs at the shift valve. This means the solenoid is moving its plunger, but the shift valve downstream is not responding. The most likely cause is a stuck shift valve — varnish, debris, or mechanical binding is preventing the valve from moving in its bore even though the solenoid is applying force to it.

13. B — Freeze frame data records the exact operating conditions present at the moment the DTC was set. The recorded values — 28 mph, 3,400 RPM, 65% throttle, and 205°F fluid temperature — define the specific driving condition the technician needs to replicate during a diagnostic road test to reproduce the fault. This is the primary value of freeze frame data: it tells you when and how to reproduce an intermittent or difficult-to-find problem.

14. A — An EPC duty cycle of 82% when the specification for this condition is 40-55% means the module is commanding significantly more pressure than the baseline calibration calls for. The most common reason the module increases EPC duty cycle beyond the baseline is adaptive learning — the module has gradually increased pressure over the transmission's life to compensate for reduced clutch holding capacity from friction material wear. This elevated adaptation value is a leading indicator of clutch wear.

15. D — P0700 in the ECM with no corresponding DTCs in the TCM suggests the ECM received a momentary communication indicating a TCM fault, but the TCM itself either did not store the code or the condition resolved before the TCM's diagnostic monitor confirmed it. An intermittent CAN bus communication disruption between the ECM and TCM would cause the ECM to log a communication fault (P0700) even if the TCM itself did not experience an internal fault worthy of storing its own code.

16. C — Before testing the pump or fluid level, the technician should verify that the sensor's electrical circuit is providing the basics needed for the sensor to produce a reading: a 5-volt reference voltage supply, a clean ground, and a functional signal return path. A sensor reading stuck at 0 psi at all times is most commonly caused by a circuit issue — an open ground wire, missing reference voltage, or disconnected signal wire — rather than a complete system-wide pressure failure.

17. A — The transmission upshifts normally but will not downshift under any condition — neither throttle-induced kickdown nor deceleration-induced coastdown shifts occur. This indicates the upshift hydraulic pathways are functional but the downshift pathways are blocked. A stuck shift valve or a failed solenoid controlling the downshift fluid path prevents the valve body from redirecting fluid to the lower gear circuits when the module commands a downshift.

18. B — A 1.8-volt drop on the power supply circuit means the TCM receives 1.8 volts less than battery voltage. At a nominal 14 volts, the TCM operates on only 12.2 volts — and at lower battery voltage the deficit is even worse. Reduced voltage to the TCM affects its internal processing, solenoid driver output, and sensor reference signals. Solenoids receive less current than commanded, sensors receive incorrect reference voltages, and the module may misinterpret signals and generate false DTCs.

19. D — A pressure reading stuck at 950 psi — far above the maximum possible system pressure — is not a genuine pressure reading. The pressure sensor produces a voltage signal proportional to pressure, and the module converts that voltage to a pressure value using a lookup table. A short to the 5-volt reference supply forces the sensor circuit to output maximum voltage, which the module interprets as maximum pressure. The actual system pressure is unknown and must be checked with a mechanical gauge.

20. A — A DCT clutch temperature of 340°F with a maximum specification of 300°F indicates the clutch has been overheated, likely from extended low-speed modulation or aggressive driving. Even though no symptoms are present now, repeated overheating events degrade the friction material's coefficient of friction and heat resistance, reducing its service life. The clutch should be inspected for signs of heat damage, and the customer should be advised about driving habits that contribute to overheating.

21. C — The question asks which option would NOT cause high pressure in all ranges. A leaking forward clutch piston seal causes low pressure in the forward clutch circuit — it is a pressure loss, not a pressure increase. All other options — a failed PCS, a stuck regulator valve, and a default high-pressure mode — would produce elevated system-wide pressure. A leaking seal is a circuit-specific pressure reduction, not a system-wide pressure elevation.

22. B — The control module calculates gear ratio by dividing input speed by output speed. With the input speed sensor reading 0 RPM, the module calculates a ratio of  $0 \div \text{output speed} = 0$ , which does not match any expected gear ratio. The module cannot verify that any gear is correctly engaged and will inhibit further upshifts or enter limp mode to prevent damage from operating in an unverified gear state.

23. D — A momentary spike to 100% duty cycle that occurs only once every approximately 20 events and lasts only 0.2 seconds is consistent with an intermittent electrical disruption in the EPC solenoid circuit. A brief open circuit or high-resistance event causes the module to momentarily lose control of the solenoid, and the system defaults to maximum pressure for that instant. When the connection restores 0.2 seconds later, normal duty cycle resumes. This pattern matches a loose connector pin or intermittent wire break.

24. C — At 200°F, the sensor should read 300-400 ohms per the manufacturer's specification, but it reads 1,200 ohms — approximately three to four times the expected value. An NTC thermistor that reads excessively high resistance at a known temperature has a degraded sensing element that is not changing resistance proportionally with temperature. The module would interpret this high resistance as a much colder temperature than actual, causing incorrect shift adaptations and TCC control.

25. B — A single over-temperature event during severe towing does not necessarily mean catastrophic internal damage has occurred, but the fluid has been stressed and its remaining service life is reduced. A fluid and filter service replaces the degraded fluid with fresh fluid. Inspecting the cooling system identifies why the temperature exceeded limits — and recommending an auxiliary cooler for continued towing prevents recurrence under similar severe-duty conditions.

26. A — A filter bypass valve provides an alternate fluid path for the pump when the filter becomes restricted — such as from debris accumulation or cold-start high-viscosity conditions. Without the bypass valve, a restricted filter starves the pump of fluid, causing pressure to drop and clutches to slip or disengage. The bypass valve is a critical safety feature that ensures the pump always has access to fluid, even if the fluid bypasses the filter element temporarily.

27. D — When the AC compressor engages, it applies a sudden load to the engine, which reduces engine output torque momentarily. The control module detects the load change through engine RPM drop and throttle position relative to vehicle speed, and may command a downshift to maintain adequate power. If the module's response to the AC engagement is calibrated too aggressively — commanding both a downshift and a pressure increase simultaneously — the result is a single harsh shift event.

28. B — The front pump seal rides on the torque converter hub, which rotates at engine speed. At highway RPM, the hub spins significantly faster than at city driving speeds. Higher rotational speed generates more centrifugal force on the fluid at the seal interface, more friction heat between the seal lip and the hub, and more dynamic stress on a seal that is already compromised. All of these factors worsen the seal's leak rate proportionally with speed.

29. C — Even though the bolt was extracted successfully without visible thread damage, the cross-threading event may have displaced or slightly deformed thread crests in the case hole. Chasing the threads with the correct-size tap verifies the threads are clean, properly formed, and can accept a new bolt without binding. Installing a new bolt without verifying the threads risks a second cross-threading event or insufficient clamping from damaged threads.

30. A — A rusted manual shaft must rotate freely before the cable can be accurately adjusted. If the shaft is forced through its positions using the cable, the cable may not be adjusted correctly because the resistance of the rusted shaft interferes with the alignment process. Penetrating oil and gentle working of the lever dissolve the corrosion and restore free movement, allowing accurate cable adjustment.

31. D — The TFT sensor started at 75°F (matching shop ambient — confirming accurate cold reading) and progressively rose to 190°F during a 30-minute road test (reaching normal operating temperature). This smooth, logical temperature progression from cold to hot confirms the new sensor's thermistor element is responding correctly to temperature changes across the full operating range. Both the cold reading and the hot reading are within expected values.

32. C — The clunk occurs during the throttle-lift torque reversal at highway speed. Placing the transmission in Neutral before lifting the throttle eliminates the clunk because Neutral disconnects the engine from the drivetrain, preventing the torque reversal from traveling through the transmission's internal components. Since the clunk only occurs when the drivetrain is loaded and disappears when unloaded through Neutral, the source is within the transmission or torque converter — not downstream.

33. A — The service manual specifies seven check balls. Only six were found during disassembly — one may have been lost, fallen into a passage, or may have been missing from a previous service. Regardless of the reason for the discrepancy, all seven balls must be present in their correct mapped positions for the valve body to route fluid correctly. The technician must obtain the missing ball and install all seven per the diagram.

34. B — A small steady stream of ATF from an open sensor bore is normal — the bore accesses an internal fluid passage, and with the engine off, residual fluid drains out by gravity. The technician should allow a brief drain, install the new sensor with a fresh O-ring promptly to stop the flow, and then check and top off the fluid level. Plugging with a towel risks fiber contamination inside the case, and draining the entire pan is unnecessary for a brief sensor replacement.

35. D — The fluid level is at the full mark — the upper limit of the acceptable range. During a sharp right turn, lateral forces push the fluid to the left side of the pan. With the fluid already at the maximum level, even a slight lateral shift can expose the filter intake on the right side of the pan, causing the pump to briefly draw air. This momentary aeration causes a loss of hydraulic pressure that feels like slippage. Left turns push the fluid toward the filter, maintaining intake coverage.

36. A — A pushed-back pin that makes contact when the connector is firmly pressed together but loses contact under vibration will produce an intermittent fault. When road conditions are smooth, the

connection holds and the circuit functions normally. When the vehicle encounters bumps, rough pavement, or vibration from engine operation, the pin loses contact momentarily, disrupting the signal. The symptom appears and disappears based on road conditions — the classic intermittent electrical fault pattern.

37. C — A transmission cooler line contacting the exhaust pipe will rapidly overheat the ATF flowing through that section, degrading the fluid and potentially softening or damaging the line itself. Even stainless steel lines will transmit exhaust heat into the fluid, raising its temperature well above normal. The line must be rerouted to eliminate contact, and a protective clamp or heat shield should be installed to prevent future contact from vibration or road conditions.

38. B — A converter pilot stuck in the crankshaft bore is most commonly caused by corrosion or debris buildup between the pilot and the bore from moisture, dissimilar metal corrosion, or road contamination that entered through the bell housing. Applying penetrating oil and gently rocking the converter while pulling it rearward breaks the corrosion bond. Excessive force risks damaging the crankshaft bore or bending the converter pilot.

39. D — A hairline crack on the pump housing mounting flange — even if it does not currently pass through a fluid passage — will propagate under the cyclic stress of engine vibration and the clamping force of the pump mounting bolts. The crack will eventually extend into a fluid passage or through the flange completely, causing either a pressure leak or a structural failure. Pump housings with any crack should be replaced regardless of the crack's current extent.

40. C — A smooth, polished wear surface on a band drum without scoring, grooves, or heat discoloration indicates normal wear from the band's friction lining contacting the drum over the service life of the transmission. This polished surface still provides adequate friction contact for a new band lining. Scoring or grooving would require drum replacement, but a uniform polish is a normal wear pattern that does not compromise function.

41. A — Thrust washers of different thicknesses are positioned specifically to control the axial spacing between particular components. Reversing two washers of different thicknesses changes the spacing at both locations — one gap becomes too large and the other too small. This produces an incorrect endplay measurement and can cause accelerated wear at the tighter location from insufficient clearance and pressure leakage at the wider location from excessive clearance.

42. D — A gear mesh clearance of 0.008 inches exceeds the manufacturer's maximum specification of 0.006 inches. Excessive mesh clearance between the drive and driven pump gears allows pressurized

fluid to leak backward between the meshing teeth from the high-pressure outlet side to the low-pressure inlet side. This internal leakback reduces the pump's net output flow and pressure. Despite no visible scoring, the dimensional wear requires pump replacement.

43. B — One-way clutches require all rollers (or sprags) to be present and properly seated for correct operation. Each roller shares the torque load equally, and a missing roller concentrates the load on the remaining rollers, reducing the clutch's total holding capacity and potentially causing immediate failure under load. The fallen roller must be retrieved, inspected for damage from the fall, reinstalled in its cage, and all components verified before continuing.

44. C — Valve body bolt torque must be applied in the manufacturer's specified crisscross sequence to distribute clamping force evenly across the valve body and prevent warping. Torquing nine bolts in sequence while leaving three finger-tight means the valve body was drawn down unevenly — potentially warping the casting and misaligning internal passages. All 12 bolts must be loosened and the entire set re-torqued from the beginning in the correct sequence.

45. A — Slight surface rust on the converter mounting pads — without cracks, warping, or ring gear tooth damage — does not compromise the flexplate's structural integrity or fatigue life. Surface rust is cosmetic and can be cleaned with a wire wheel or emery cloth to provide a clean mating surface for the converter bolts. The flexplate should be checked for flatness with a straightedge after cleaning to confirm no warping before reinstallation.

46. D — The engine turned freely through the first revolution but binds at a specific point during the second revolution. This pattern — binding at one rotational position only — is the classic symptom of a converter-to-flexplate bolt that is too long. At one specific angular position, the bolt head or shank protrudes past the flexplate far enough to contact the pump housing or transmission case. The bolt must be identified, removed, and replaced with the correct length.

47. B — The transmission immediately engages Drive even though the shift lever is in Park. This means the manual valve inside the transmission is positioned in the Drive detent, not the Park detent. If the shift cable or linkage was not properly reconnected or adjusted after the overhaul, the manual valve position does not correspond to the shift lever position. The cable must be reconnected and properly adjusted so Park, Reverse, Neutral, and Drive all align correctly.

48. A — A flow rate of one quart in 22 seconds is faster than the minimum specification of one quart in 25 seconds. The specification defines the minimum acceptable flow — any flow rate faster than the minimum confirms the cooler passages are adequately open and unobstructed. The cooler passes the test

and is suitable for service. A flow rate does not need to exceed the minimum by a specific margin; meeting or exceeding the specification is the only requirement.

49. C — Normal operation for the first 10-15 minutes followed by progressive slippage in two specific gears that share a common hydraulic circuit points to a shared seal or passage that holds when cold but fails as temperature increases. As the transmission heats up, an elastomeric seal in the shared feed passage softens and expands, allowing progressively increasing pressure bypass. The slipping worsens as the seal deteriorates further with continued heat exposure.

50. D — When a transmission fails internally, debris from the failed component — in this case, friction material from the 2nd gear band — circulates throughout the entire hydraulic system, including through the torque converter. The converter is a sealed, welded unit that cannot be opened for reliable internal cleaning. Debris trapped inside the converter's vanes, bearing surfaces, and fluid passages will contaminate the rebuilt transmission if the old converter is reused.