

## Chapter 4 Review Questions -Trans Hydraulics-

**Instructions: Read the questions carefully and choose the most correct answer. Put your answers on a scantron answer sheet. Non-Multiple choice questions should be answered on a separate sheet of paper.**

- Two technicians are discussing the oil pump on an automatic transaxle. Technician A says it can be driven by the torque converter front hub. Technician B says it can be driven by a torque converter drive shaft. Who is right?
  - Technician A only
  - Technician B only
  - Both A and B
  - Neither A nor B
- Fluid from the transmission to the oil cooler in most cases comes from the:
  - oil pan.
  - lubrication circuit.
  - clutch apply circuit
  - torque converter.
  - reverse oil circuit.
- Technician A says the variable displacement pump can waste energy at high speed operations and therefore is very inefficient. Technician B says that it is the positive displacement pump that is inefficient at high speed operation. Who is right?
  - Technician A only
  - Technician B only
  - Both A and B
  - Neither A nor B
- The pressure regulator valve is used to monitor and control system pressure.
  - True
  - False
- Cooled fluid from the oil cooler circuit in most cases goes to the:
  - reverse oil circuit.
  - lubrication circuit.
  - clutch apply circuit
  - torque converter.
- Which automatic transmission oil pumps will always pump the same amount of fluid for every revolution?
  - Vane type pumps.
  - Variable displacement type pumps.
  - Gear type pumps.
  - Positive displacement type pumps.
  - Both c and d are correct.
- Technician A says when the automatic transmission is placed into reverse a boost valve increases the pressure regulator valve spring tension. Therefore reducing line pressure. Technician B says when the throttle (gas) pedal is pushed all the way down in drive, hydraulic pressure is applied to the boost valve, which in turn reduces the pressure regulator valve spring tension. The decreased spring tension increases the line pressure. Who is right?
  - Technician A only
  - Technician B only
  - Both A and B
  - Neither A nor B

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8. Orifices in the hydraulic system:
- A. delay pressure build up on apply devices.
  - B. are a small restriction within the fluid passage.
  - C. reduce the piston apply pressure while the piston is moving.
  - D. All of the above answers are correct.
9. Automatic transmission hydraulic throttle pressure is directly related to \_\_\_\_\_
- A. engine RPM.
  - B. vehicle MPH.
  - C. atmospheric pressure.
  - D. engine load.
10. The accumulator: (Choose the **INCORRECT** answer.)
- A. can causes a firmer more positive shift feel.
  - B. can causes a smoother shift feel.
  - C. piston only moves after the apply device piston has stopped moving.
  - D. is always a piston and spring in a bore.
11. In order for a positive displacement pump to deliver a high volume of fluid:
- A. The pump drive gear or rotor must rotate slower.
  - B. The pump drive gear or rotor must rotate faster.
  - C. The pump drive vanes must rotate faster.
  - D. The pressure regulator valve must be fully open.
  - E. This doesn't apply because the positive displacement pump volume is self regulating.
12. Choose the statement that is **INCORRECT**.
- A. The governor valve is part of a centrifugal mechanism that works off of the output shaft.
  - B. The governor pressure force must overcome the throttle pressure force plus spring force to downshift the transmission.
  - C. Throttle pressure that is higher than it should be for a particular driving condition will cause the transmission to up-shift at a higher than normal road speed.
  - D. Governor pressure that is higher than it should be for a specific road speed will cause the transmission to up-shift at a lower than normal road speed.
  - E. There are no incorrect statements above, therefore even though this statement is correct it is the most logically and correct answer.

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13. PWM can be:
- A. a type of electronic pressure control solenoid.
  - B. an abbreviation and stands for pulse width modulation.
  - C. an electrical signal that is controlled by a control unit.
  - D. All of the above answers are correct.
14. The vanes on a variable displacement vane pump:
- A. ride on the pump body.
  - B. ride against a crescent & outer gear.
  - C. seal against the inside of a slide.
  - D. are centered within the slide.
15. Governor pressure and Throttle pressure are modified from \_\_\_\_\_.
- A. line pressure.
  - B. converter pressure.
  - C. atmospheric pressure.
  - D. engine torque.
16. The hydraulic pressure that is the source for all other pressures is:
- A. Control pressure
  - B. Line pressure
  - C. Throttle pressure
  - D. Governor pressure
  - E. Answers A and B are both correct.
17. Automatic transmission hydraulic governor pressure is directly related to \_\_\_\_\_
- A. engine RPM.
  - B. vehicle MPH.
  - C. atmospheric pressure.
  - D. engine load.
  - E. Arnold Schwarzenegger
18. Automatic transmission throttle pressure works against \_\_\_\_\_
- A. governor pressure.
  - B. main line pressure.
  - C. terminator pressure.
  - D. spring pressure.
19. Clutch and band apply pressure has no effect on shift quality and feel.
- A. True
  - B. False
20. Technician A says that on some automatic transmissions the modulator pressure is adjustable. Technician B says that some automatic transmission vacuum modulators have an adjustment screw that is used to adjust throttle pressure. Who is right?
- A. Technician A only
  - B. Technician B only
  - C. Both A and B
  - D. Neither A nor B

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21. Two technicians are discussing a variable displacement vane pump operation. Technician A says the position of the slide determines the volume of fluid. Technician B says the control pressure applied to the backside of the slide will determine the volume of fluid. Who is right?

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

22. Under what conditions would the transmission need a higher than normal main line pressure?

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23. What is the advantage to increasing the main line pressure to a value higher than normal?

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