

Automotive Heating and Air Conditioning, 9th Edition

Quiz 13B

NAME _____

1. The fresh air coming in to the vehicle is sent through a/an _____. 1. _____
 - A) cabin filter
 - B) squirrel cage blower
 - C) evaporator
 - D) condenser

2. Electrically powered A/C compressors should use what type of refrigerant oil? 2. _____
 - A) PAO
 - B) PAG
 - C) POE
 - D) Polyalkylene glycol

3. Dog mode, also called pet mode, is used to _____. 3. _____
 - A) heat the rear seats to keep dogs or pets warm
 - B) cool the seats to keep dogs or pets cool
 - C) keep the interior temperature comfortable for pets when they are left in a locked vehicle while the driver is gone for a long period of time
 - D) All of the above

4. The type of compressor most likely to be used in an EV or HEV is a _____ design. 4. _____
 - A) piston
 - B) scroll
 - C) variable displacement
 - D) Both A and C

5. Technician A says that HEV refrigerant service uses the same RRR machine as any other vehicle. Technician B says that a hybrid-specific RRR machine should be used to service HEV systems. Which technician is correct? 5. _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

6. Technician A says that HEV compressors may be both electrically and belt driven. Technician B says that scroll type A/C compressors contain rotating scrolls to pressurize the refrigerant. Which technician is correct? 6. _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

7. Technician A says that because of hybrid/ electric technology, the internal combustion engine used on these vehicles runs colder than peak operating temperatures. Technician B says that PTC coolers located in the A/C system are used to overcome this excessive engine heat. Which technician is correct? 7. _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
8. Technician A says that PTC heaters can be built into a conventional heater core assembly. Technician B says that a PTC heater's electrical resistance will decrease as its temperature increases. Which technician is correct? 8. _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B
9. Many automakers use a _____ to maximize the range that an electric vehicle can travel by scavenging waste heat to warm the cabin. 9. _____
- A) heat pump
 - B) scroll compressor
 - C) variable compressor
 - D) PTC
10. A electric water pump uses a _____ to power the impeller and is used on most hybrid electric vehicles and some internal combustion engines. 10. _____
- A) stepper motor
 - B) AC synchronous motor
 - C) DC motor
 - D) Any of the above

Answer Key

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5. B
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6. A
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