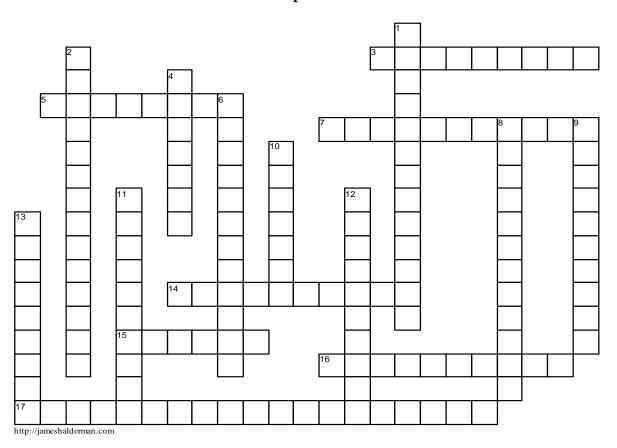
# EV and HEV HVAC System

## Chapter 16



#### **ACROSS**

### \_\_\_ is part of the high-pressure section of the air-conditioning system and is another type of heat exchanger. \_, the A/C compressor is turned off and the evaporator operates at ambient temperature. 7 The fresh air coming into the vehicle is sent through a 14 Some of the waste heat absorbed by the ICE cooling system can also be dissipated by the \_ passenger compartment heating system. \_\_ compressor is a highly efficient and durable design, with very good noise, vibration, and harshness (NVH) characteristics 16 One approach is to use \_\_\_\_\_ \_\_\_ built into the heater core itself. Positive temperature coefficient (PTC) refers to the tendency of a conductor to increase its electrical resistance as its temperature increases. 17 One approach is to use PTC heaters built into the heater (PTC) refers to the tendency of a conductor to increase its

#### DOWN

1	The purpose of the ICE (internal combustion engine)
	is to bring the ICE up to an optimum
	temperature as quickly as possible and then to maintain that
	temperature under all operating conditions.
2	material (TSM), also called phase
	change material (PCM), evaporator has a wax chamber in
	the tank end or between the tubes.
4	The amount of heat generated by the heating system is
	dependent on the temperature of the that is
	circulated through the heater core.
6	An powered A/C compressor is used in all
	electric vehicle and many hybrid electric vehicles.
8	condensers (LCC) exchange heat by
	removing heat from one fluid and transferring it to another
	fluid.
9	Some EVs use heating for cabin temperature
	control.
10	is a climate control feature in Tesla and some
	other electric vehicles that leaves the air conditioning or
	heater on when owners leave their pets in their vehicle.
11	When the first starts to open, some coolant
	will flow to the radiator and some will continue to circulate in $% \left\{ 1\right\} =\left\{ 1\right\} =\left$
	the ICE water jacket.
12	The is located after the expansion device
	on the low-pressure side of the A/C refrigerant system.
13	The is the "heart" of the ICE cooling system.



electrical resistance as its temperature increases.