Automotive Heating and Air Conditioning, 9th Edition

Chapter 8 Antifreeze and Coolant NAME SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question. 1. What types of coolant are used in vehicles? 2. Why is a 50/50 mixture of antifreeze and water commonly used as a coolant? 3. What are the differences among IAT, OAT, HOAT and PHOAT coolants? 4. What are some of the heavy metals that can be present in used coolant? 5. What is the difference between galvanic activity and electrolysis?

Answer Key

Testname: AHAC9SHORT08

1. All factory installed coolant is ethylene-glycol based and currently includes: OAT, HOAT, and PHOAT formulations.

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- 2. A 50/50 mixture provides the best combination of freezing protection and heat transfer ability of the coolant. Page Ref: 105
- 3. IAT contains silicate and phosphates and is used in vehicles older than 1996. OAT, HOAT, and PHOAT are used in many vehicles and include their own additive package.

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4. Used coolant may contain aluminum, lead and iron which are absorbed into the coolant during engine operation.

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5. Galvanic activity is voltage production without an outside source of voltage, whereas electrolysis is created when the vehicle has a poor ground connection.

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