# Engine Performance Unit 3 Lesson 2

**Fill in the following key terms pertaining to fuels.**

The quality of fuel used in any motor vehicle engine is very important to its \_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Auto manufacturers today are recommending \_\_\_\_\_\_\_\_\_\_\_\_\_\_ gasoline for the vehicles they sell.
   1. A survey revealed that \_\_\_\_\_\_\_\_\_ out of ten auto dealers use ethanol blended gasoline in their personal vehicles.
   2. Customers surveyed reported benefits including: reduced \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, improved \_\_\_\_\_\_\_\_\_\_\_, better \_\_\_\_\_\_\_\_\_\_\_\_, and improved \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.
   3. Independent automotive technicians also trust their family cars to \_\_\_\_\_\_\_\_\_\_\_\_.
2. If the fuel is not right for the \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ or if fuel changes to a \_\_\_\_\_\_\_\_\_ incorrectly, drivability will suffer.
3. Gasoline is most commonly rated based on their ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** (AKI), a measure of octane quality. The AKI is a measure of a fuel's ability to \_\_\_\_\_\_\_\_ engine knock (ping).
   1. A typical average octane number of \_\_\_\_\_\_\_\_\_ would contain a research octane of \_\_\_\_\_\_\_\_\_ and a motor octane of \_\_\_\_\_\_\_\_\_\_\_.
   2. Different blends can affect engines differently, depending on the octane requirement of that particular engine, and explains why engines can perform differently with a \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.
   3. Ethanol is believed to reduce \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ at the E10 blend.