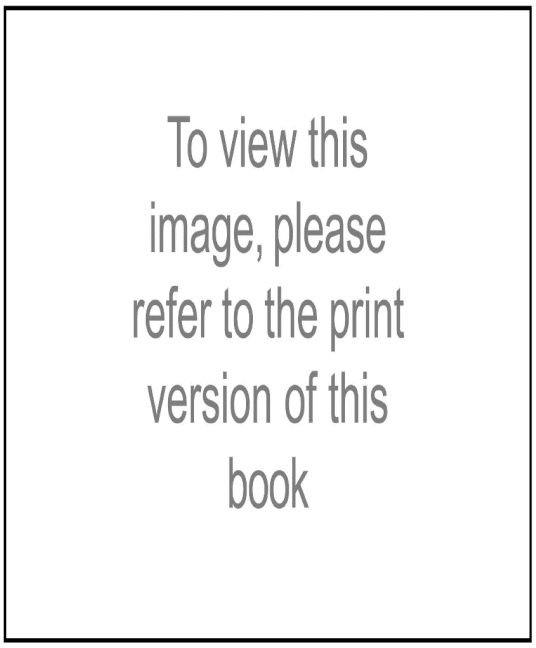

Fig. 4-10. *Spark plug reach.*

the thickness of a new gasket under proper torque. On plugs where thermocouples are used (the sensing device for some types of engine temperature gauges), no gasket is added because the thermocouple itself acts as the gasket.

Spark Plug Maintenance

Routine spark plug maintenance should be conducted every 100 hours unless otherwise stated. The plugs should be removed and checked for proper gap, fouling deposits, and general condition. Cracked porcelain usually indicates preignition. Spark plug electrodes are one of the major indicators of engine health. A good mechanic can read an electrode like an open book. Typically a brownish gray color, the electrodes readily identify problems associated with ignition, fuel mixture, and piston ring wear.

As the electrode gap widens due to erosion from normal service, there is a loss of approximately half the voltage margin between the potential available from the magneto and the voltage required by the spark plug to fire. At some point, the magneto will be unable to supply sufficient voltage to jump the ever-increasing gap. When that happens, the engine begins to misfire. Gap erosion is a normal consequence of operation, but excessive erosion can be an indication of improper fuel metering timing, magneto timing, or plug heat range.

Other causes of excessive spark plug electrode gap include capacitance after-firing and constant magneto polarity, which occur because there is an even number of cylinders. What happens is any given plug will always fire with the same polarity. Plugs that fire with a positive polarity result in excessive ground electrode wear, while negative

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http://site.ebrary.com/lib/modarres/Doc?id=5001849&page=108