

Fig. 7. Sparking plugs in position

**SPARKING PLUGS**

**Examination and cleaning**

Fig. 7 shows the sparking plugs in position in the cylinder head and Figs. 8 to 12 illustrate the various conditions in which sparking plugs are found on removal. These are as follows:—

**NORMAL CONDITION**—look for powdery deposits ranging from brown to greyish tan. Electrodes may be slightly worn. These are signs of sparking plugs used under normal conditions of mixed period of high speed and low speed driving. Cleaning and regapping of the sparking plugs is all that is required (See Fig. 8). White to yellowish powdery deposits usually indicate long periods of constant speed service. These deposits have no effect on performance if the sparking plugs are cleaned thoroughly, and the gaps reset at the recommended intervals. More frequent cleaning may be needed if the car is only used for short runs.

**WORN CONDITION**—This is illustrated in Fig. 9. Any spark plugs found in this condition should be replaced by the correct type given in the Data Section under IGNITION. A complete set should be fitted.

**OIL FOULING**—is usually identified by wet sludge deposits traceable to excessive oil entering the combustion chamber through worn rings and pistons, excessive clearances between intake valve guides and stems or worn bearings, etc. (See Fig. 10). Hotter sparking plugs may alleviate oil fouling temporarily, but in severe cases engine overhaul is called for.

**PETROL FOULING**—is usually identified by dry black fluffy deposits which result from incomplete combustion (See Fig. 11). Too rich an air-fuel mixture or faulty action of the automatic choke can cause incomplete burning.

In addition defective contact breaker points or H.T. cables can reduce voltage supplied to the sparking plug and cause misfiring. If fouling is evident in only a few cylinders, sticking valves may be the cause. Excessive idling, slow speeds or stop-and-go driving can also keep plug temperatures so low that normal combustion deposits are not burned off.

**BURNED OR OVERHEATED** sparking plugs are usually identified by a white, burnt or blistered insulator nose and badly eroded electrodes (See Fig. 12). Inefficient engine cooling and improper ignition timing can cause general overheating. If only a few sparking plugs are overheated, the cause may be uneven distribution of the coolant. Severe service, such as sustained high speed and heavy loads, can also produce abnormally high temperatures in the combustion chamber, which necessitates use of colder sparking plugs.

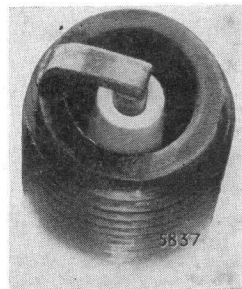


Fig. 8. Normal condition

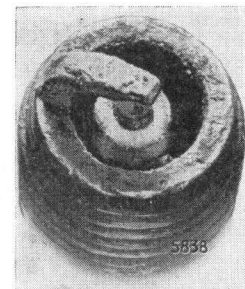


Fig. 9. Worn condition



Fig. 10. Oil fouling



Fig. 11. Petrol fouling



Fig. 12. Burnt or overheated