

# TECH TIPS

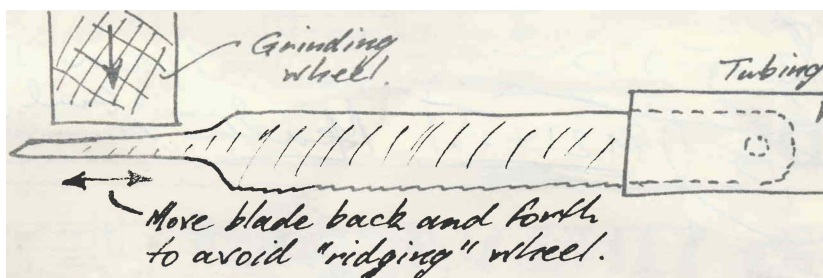
## SPARK PLUG CLEANER

Like many other good ideas, this one is simple and has been around for a long time. This one deals with a very useful little gizmo for removing the carbon, ash and general grot which tends to accumulate around the business end of spark plugs, especially if oil consumption is up and the plugs are a bit "cool" for your kind of motoring.

Break off a piece of old hack-saw blade about 120 mm (5 ins) long by gripping it in the hands and simply bending between both thumbs.

Ram a piece of 10 mm (7/16 ins) I.D. plastic tubing or hose over the rounded end of the blade to form a comfortable and protective grip, and the grind the other end down as shown on a grinding wheel. It is perhaps best to grip the piece of blade firmly with pliers when doing this and of course use protective eyewear.

The narrow section of blade is about 35 mm (1½") long, and tapering from 6 mm (¼") to about 2.5 mm (1/10") near the tip. The very end can be brought to a point as shown. Leave the teeth on further back.



W.G.

This handy little tool can live with your tune-up gear, and will enable you to remove carbon and scale from around the electrodes and down the "pit" around the insulator, quickly and without damage. Remember when setting the plug gap to bend the outside electrode only, by gentle tapping with the back of a pair of pliers or by bending outwards with the narrow tips of the pliers. The little tool from Champion Plugs is useful but seems to have limited life. Never bend the central electrode of the plug as you risk fracturing the ceramic insulation.

The correct electrode gap for many cars is about 25 thou. The specified gap for a Traction is 0.6 - 0.7 mm (0.025 - 0.028 ins). It is better to use gauge of graded wire loops than a flat gauge which can give false readings. Work on the basis of "go at 25 thou, no go at 28".

It is well worth making these little cleaning tools in pairs. Some one is bound to take one on extended loan, and it is nice to be able to give one as a "present" to an up-and-coming member.

## REPLACING A SHEARED EXHAUST-FLANGE STUD

Fellow Tractionist, Ted Cross, was faced with a sheared-off exhaust-flange stud when he set out to get his Big 6 on the road. These are the studs which attach the exhaust pipe to the exhaust manifold. There are three such studs on four-cylinder Tractions and six on the six-cylinder cars (twin-pipe setup).

Ted approached Jack Weaver for assistance. Jack's elegant solution is described below.

The remnant of the original stud (threaded 10 x 1.5 mm ISO metric coarse) was accurately centre-punched and drilled out so that the resulting hole (ca. 10 mm) could be tapped to take a slightly over-sized thread (11 x 1.5 mm ISO metric coarse). A shallow 12.7 mm diameter counter bore was also made\* to accept a 1 mm recessed shoulder with a 60° tapered under-surface.

\*in the flange

The new stud was machined out of half-inch (12.7 mm) heat-resistant stock as illustrated, with its outer end threaded at 10 x 1.5 mm ISO metric coarse (as standard) and the inner end threaded to go into the new tapping in the manifold flange. A 2 mm pilot hole was centre-drilled into the inner end of the stud, extending to just beyond the shoulder, so that in the event of the stud being broken again, the broken remains are already pilot-drilled for any subsequent drilling out and tapping operations.

If drilled out to the minor diameter (ca. 8.8 mm) or tapping size for 10 x 1.5 mm, a standard stud can be fitted into what is in effect an already "helicoiled" hole. This way is preferred to using an "easy out" and putting another modified stud back in.

And Ted's verdict about the success of the operation? "Perfection!".

W.G.