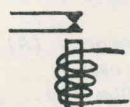




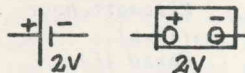
Contacts.



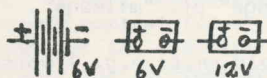
Relay.



Light bulbs.



Electric cell
(e.g. lead/acid, 2V).



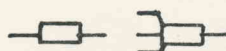
Batteries.



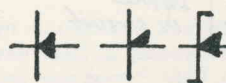
Simple coil (e.g. electric choke with iron core).



Capacitors (condensers).



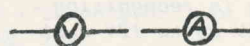
Connectors.



Diodes.



Transformer (iron cored).



Meters (volt, amp.).

These symbols are a kind of convenient shorthand (Table 2). Often though, there is no "standard" symbol for a component, and it is then simply put in the circuit diagram as a "labelled box".

(To be continued).

Bill Graham.

TECH TIPS

BRASSO FOR BAKELITE, PLASTICS AND PAINT

The comments on the miraculous effects of "Handy Andy" on bakelite products prompts me to reveal another closely-guarded secret in the restoration of bakelite and hard plastics.

"Brasso" (Reckitt's Household Products, Sydney) is a marvelous restorer/polish for all those bakelite bits, plus plastic tail-lights, head-lamp covers, sunglasses, even acrylic and nitro-cellulose lacquers! It restores a natural sheen to bakelite, which, to my eyes, is preferable to a sprayed-on gloss.

I have tried other polishing compounds, such as lacquer rubbing compounds, "White Lily", etc. and all are quite ineffective (and hard work) compared with good old Brasso. The hardest part is sneaking the bottle out to the workshop past the watchful eye of "she who must be obeyed"!

Kym Harding.

[Good one, Kym, old son! Now that we've gone back to the subject of restoring bakelite, I've since come across an old UK reference in which a gentleman was extolling the virtues of turps (turpentine) for the purpose. His method was simple. Wipe on the turps and polish it off with a soft cloth. Nothing more!

I haven't checked it out myself yet, but I wonder if it was among the many things that Kym tested? Anyway, it seems that with all this info about, any member who now confronts a concours judge will get a "not amused" look and lose a few points for his lack of effort if he hasn't got real shiny bakelite!—Is this what getting "on the turps" really means?
Ed.]

A ROPE TRICK TO FIX YOUR VALVES

Another technical tip from the seemingly inexhaustable Jack Weaver - how to use some rope to stop your valves dropping (which all sounds potentially very painful!).

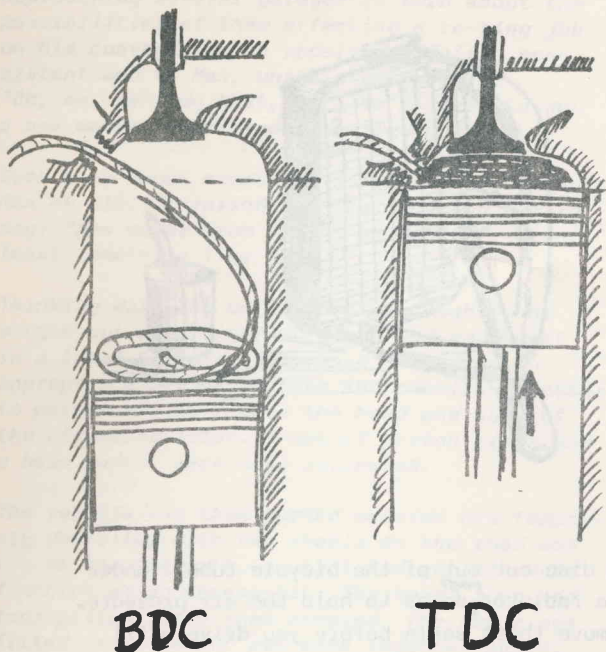
From time-to-time, you may want to work on the overhead valves of your car without going to the trouble of removing the cylinder head - as well as the extra effort involved in removing the head, you may also be up for a new head gasket (\$\$\$) or may allow the liners to move and cause unwanted leaks. For example, you may simply want to replace the valve stem seals, examine the valve springs or guides etc.

If the valves are not held up during these operations, there is a strong possibility that the valves will fall through into the cylinder space once the valve springs are released - and then you'll have to remove the head to recover them (not funny).

The "standard" method for holding the valves up is to use an adapter screwed into the spark plug hole so that compressed air can be introduced to push against the valve heads. However such a method is far from foolproof and again you can end up with valves falling into the cylinder - and of course you need the extra gear.

Jack's method is to remove the spark-plug(s), drop the piston in question to BDC (bottom dead centre) at the start of the compression stroke (both valves closing), pass in some light rope through the plug hole to fill the space, and then to raise the piston so as to lock the valves in the closed position via the pressure exerted on their heads by the trapped rope.

I decided to try the method recently when renewing the valve stem seals on a Mini. The method worked beautifully. On the Mini, the



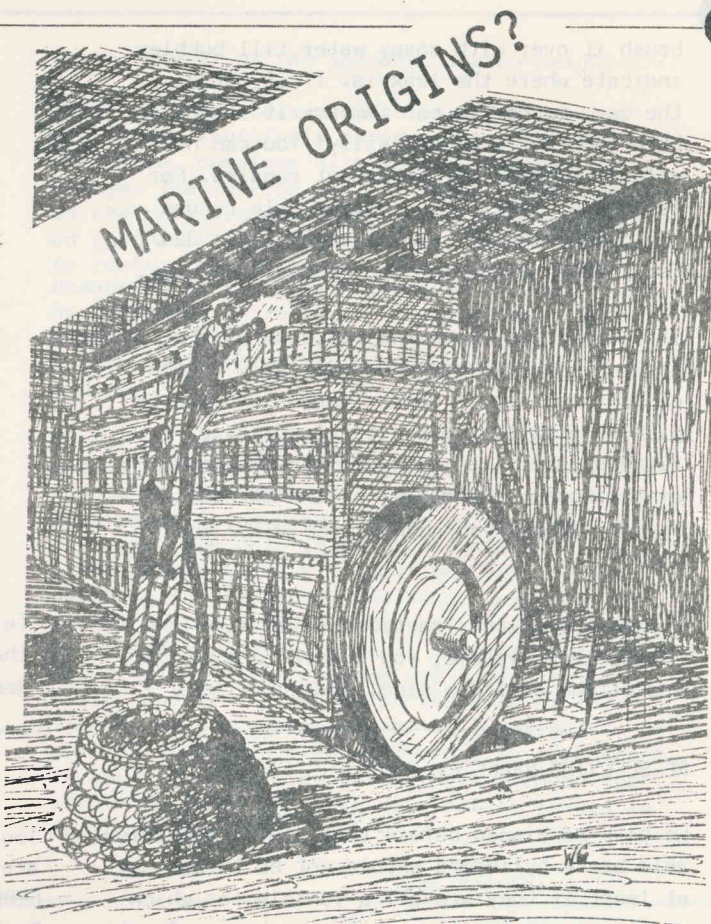
rocker shaft is held down partly by some of the head retaining nuts and seemed to be getting in the way of my home-made valve spring compressor. Therefore, I removed the rocker shaft and pushrods (keeping them in their original numbered order), turned the rocker shaft end-for-end, and re-installed it over the head studs. The head nuts were then re-tightened to prevent the head lifting. The piston was dropped to BDC (feeling through the plug hole with a screwdriver) by raising one of the driven wheels and carefully rotating it (assistant?) with top gear engaged. Six mm polypropylene rope was fed in to fill the cylinder - rope diameter is not critical; six mm is about the thickest which can be easily handled. Note: If the pushrods have been removed as above, or the camshaft drive disconnected (e.g. in OHC motor), it becomes irrelevant to consider whether the piston is starting a compression or exhaust stroke. The piston was then raised as far as possible to trap the valves in the closed position via the compressed rope, and the works locked in this position by lowering the raised wheel to the floor.

The valve springs were then compressed, the collets, washers and springs were removed, and the seals replaced. The operation was reversed, and the rope was removed after the springs etc were replaced. Repeat on the other cylinders,

CHECKING FOR LEAKS IN COOLING SYSTEM

Many of the best ideas are simple ones. Here's another, again from an English source.

There are smart commercial gizmos for pumping up your cooling system and checking it for leaks. However, according to Murphy's Law, leaks only occur when you're a long way from town (where your gizmo is) or on a Sunday afternoon when you can't lay hands on one anyway. Here's the answer.



replace the rocker gear and push rods, tighten the head nuts/bolts in correct order to appropriate tension, and check and reset tappet clearances.

It took about three metres of six mm rope to "fill" each Mini cylinder (about 320 cc). Hence it would take about 4.5 m to fill a Traction cylinder.

On a Traction, head studs are not used to hold the rockershaft posts, but it may still be necessary to slacken their bolts and lift or remove the rocker shaft to get access over the valve stem ends.

Jack says the rope trick has a marine origin. For some reason, I have this persistent image of a team of ship's engine-room greasers stuffing vast lengths of massive hauser into a 15 foot high Sulzer. Pretty understandable when you think what might be involved in removing the head from one of those brutes.

Bill Graham.

Disconnect the radiator hoses from the radiator (assuming as is most likely) that the leak is there somewhere. Take an old bicycle tube from your junk-pile (sorry -"in-house resource centre"), cut it opposite the valve, and fit the ends over the hose spigots from the top and bottom tanks of the radiator. Roll the hose back on itself to provide more thickness, and clamp it on, using the original hose clamps. You can now "pump up" the radiator. If it is still in the car,