

# REBUILD THOSE LEAKY JAMPOTS

Interesting fact! Did you know that the first recorded usage of the word "jampot" to describe AMC's suspension units came in *The Motor Cycle* for September 28 1950? Nor did JOHN DOUST, but he does know how to fix them.

□ AJS/MATCHLESS Teledraulic rear legs, or "Jampots" have been dubbed infamous and leaky, but at least they can be rebuilt, unlike some modern suspension units.

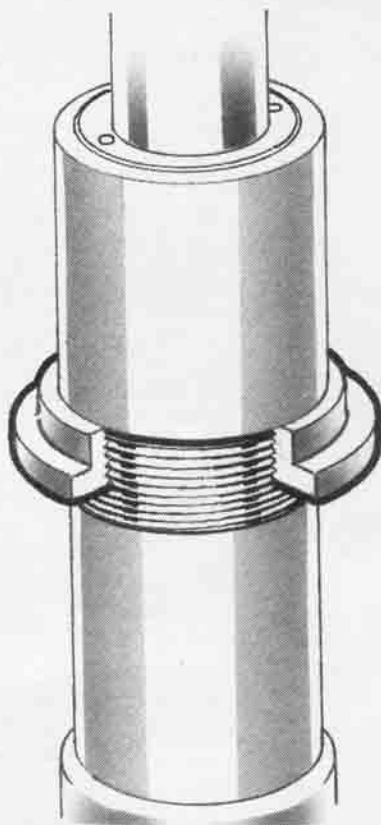
The first step in stripping a Jampot is to remove the bottom pivot and drain the oil. It is not a bad idea to apply a little heat to the pivot before attempting to loosen it; both pivot and outer tube are alloy and easily marked. Various clever methods of gripping the outer tube may occur to you: I clamped the bottom pivot in the vice using alloy jaw liners, wrapped a strip of sheet lead around the outer tube and applied a pipe wrench.

Once the bottom pivot is loosened, remove it from the vice and invert the unit before removing the pivot completely and pouring out the oil. Sometimes – surprise, surprise! – there is no oil. Perhaps that accusation of leakiness is not unfounded.

The next step is to compress the spring to expose the circlip which retains the collar under the lower (chromed) spring cover. A number of methods of spring compression may occur to you – my very simple tool consists of two lengths of round steel rod, 1/2in by about 18in long, inserted into a small block of hardwood. The bars are spaced 2in apart, so that the exposed part of the outer tube of the Jampot just fits between them.

Rather than grip the outer tube itself in the vice the bottom pivot can be temporarily replaced, then clamped in the vice with the body of the Jampot projecting horizontally to one side. The two round bars of the compression tool are fitted on either side of the outer tube with the wood block abutting against the body of the vice.

Lateral pressure on the two bars presses the collar against the spring cover, exposing the circlip. Using the side of one's body against the rods leaves both hands free to deal with the circlip, which can be picked out of its groove with a small screwdriver. Remove the bottom pivot again and the circlip,

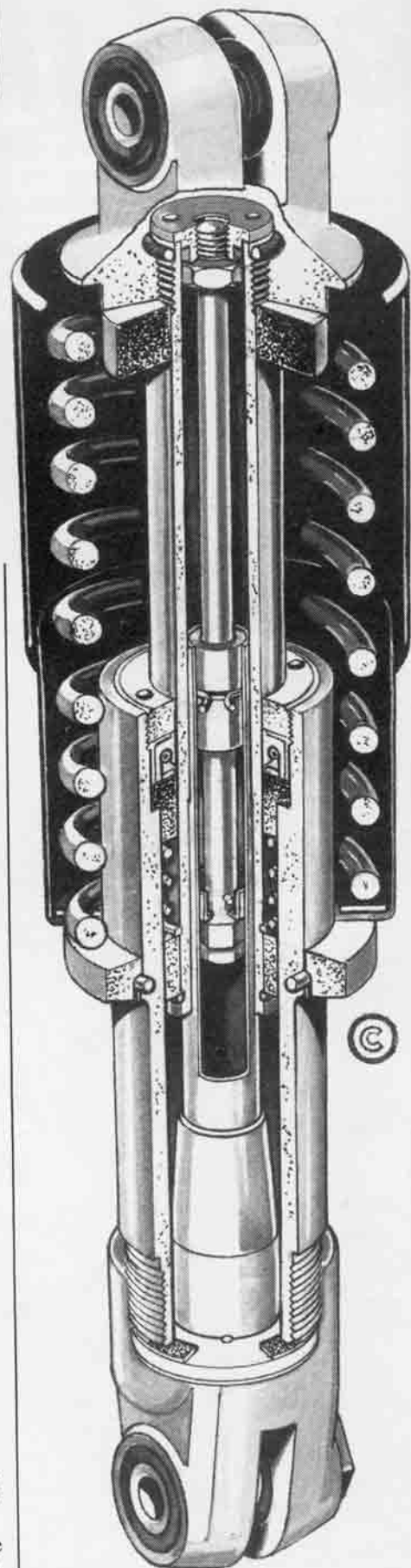


collar, spring and two covers can all be slid off.

Application of heat will facilitate the next step, which is to remove the top pivot from the inner tube. Clamp the pivot in the vice, slide the rubber buffer away from the pivot and grip the tube close to the pivot. If the tube is difficult to loosen and it becomes necessary to use the pipe wrench without liner, this is the area where slight marking of the tube will be of no consequence. It is of course important not to mark the section where the oil seal operates.

With the top pivot removed the collar at the top of the damper rod is exposed. Grip the collar in the vice and loosen the locknut, remove both collar and locknut and slide the complete damper assembly out through the lower end of the tube.

The rubber buffer can now be removed from the inner tube, and the



collar that retains the oil seal unscrewed from the top of the outer tube, using either a suitable peg spanner or a punch and hammer. Once again, heating the alloy outer tube will reduce the amount of force required.

With the retaining ring removed, pull the inner tube sharply upwards to



Using the "parallel bars" spring compressor.

remove the oil seal, together with the plastic upper bush. If repeated tugs fail to loosen the oil seal, remove the inner tube from the opposite end of the outer tube then use a tube or rod of suitable diameter to drift out the oil seal and bush. A box spanner or a socket on a long extension will serve, and again, heat will help.

The inner tube carries the buffer spring and the lower steel bush, which is retained by a circlip. If the inner tube and its steel bush are both in good condition there is no need to separate them.

Returning to the damper assembly, it is probably unnecessary to strip this any further, but if the damper tube and damper valve are badly sludged they can be dismantled quite easily for better cleaning. The plunger sleeve can be pulled out with the damper rod after its circlip has been removed.

New oil seals, and new O rings for the top pivot joint will be needed. (The old O ring is probably stuck inside the top pivot and will have to be picked out.) I believe that practically all parts for Jampots are obtainable; certainly oil seals and O rings, black top and chrome bottom spring covers, and nuts, bolts and bushes for the mounting pivots are available from the AJS/Matchless specialists.

It may be necessary to fabricate the leather washers fitted in each spring cover. I salvaged two original washers and used two suitably sized Viton pipe fitting washers. Time will tell as to how good they are for this application.

The condition of the inner tube where it passes through the oil seal is important if leaks are to be avoided. Tubes can be ground and hard chromed if need be. On the cosmetic side, the outer tube and the top and bottom pivots, being alloy, will

respond to beadblasting and Autosol chrome cleaner. The collar retaining the spring at the bottom cover can be rechromed.

Having cleaned, refurbished and replaced parts as needed, you are now ready to rebuild the Jampots. First fit the plastic upper bush into the top of the alloy outer tube, tapping it home till it rests on the shoulder within the tube. I feel it is a good idea to measure the distance between the shoulder and the top of the tube and the width of the shoulder on the bush, so as to be sure when the bush is fully seated. A  $\frac{3}{4}$ in Whitworth socket is an ideal size for drifting the bush home.

Refit the steel bush and circlip (if removed) to the inner tube; fit the buffer spring and insert the inner tube into the outer tube from the lower end, up through the plastic top bush. Now wrap plastic electrical tape around the threaded upper end of the inner tube to protect the oil seal; oil the taped tube well and gently pass the oil seal over the tube, using a twisting movement.

The seal must be fitted with the closed metal side up, away from the plastic top bush. A suitable tube or box spanner may be used to tap the oil seal home against the bush, and the retaining collar screwed into place. Ideally the collar should be tightened with a peg spanner, but the traditional substitute – a punch and hammer used carefully – will do the job.

If the damper assembly has been completely stripped it can now be re-assembled; the damper rod is fed up through the damper tube and plunger tube, then the whole assembly is passed up through the lower end of the inner tube before fitting the locknut and collar to the damper rod. Don't forget the fibre sealing washer which goes on the bottom flange of the damper tube. The top collar can be gripped in the lined vice jaws while the locknut is tightened.

Next, fit a new O ring into the upper pivot, place the rubber buffer on to the inner tube and screw the tube into the upper pivot. Final tightening is probably best done by clamping the upper pivot in the vice and using the pipe wrench on the inner tube close to the pivot, where the rubber buffer will normally be located.

With the upper pivot held in the vice, alloy outer tube uppermost, you can now fit first the black upper cover, then a leather washer followed by the spring



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*Fitting inner tube to upper pivot, gripping part of tube normally covered by rubber buffer. "Parallel bars" tool on bench, extreme right.*

and the other leather washer, and finally the chromed lower cover. As rainwater can find its way to the spring, it is as well to coat it with grease or engine oil before fitting. Now drop the retaining collar over the outer tube and slide the circlip up to it.

At this stage I find it convenient to fit the lower pivot temporarily. I then clamp the lower pivot in the vice with the Jampot body projecting horizontally to one side in order to apply the "parallel bars" spring compressor, described earlier, against the retaining collar. Compress the spring until the circlip groove is exposed and pop the clip into place.

Invert the unit and again clamp the upper pivot in the vice; remove the lower pivot, raise the damper flange slightly and add 85cc of SAE20 oil. SAE20/50 oil will probably serve; one of the special fork oils might be better still.

Fit the other fibre sealing washer (there will now be one on either side of the damper flange) then refit and tighten the bottom pivot. Press new rubber bushes and spacer into the pivots – a little Swarfega is a useful lubricant to aid fitting – and the job is done.

As I said before, Jampots have been branded leaky, so what can we do to minimise this fault? There are three places where leaks could occur: at the top and bottom pivots, and at the oil seal. It may be worthwhile to smear the threads of the pivots with a non-



*Fitting spring and covers.*

hardening sealant such as Blue Hylomar when assembling. As to the oil seal, we can ensure that the inner tube is without nicks or pitting, and that the oil seal is not damaged during fitting.

Finally, I must emphasise that this is

only an account of how I rebuilt my Jampots and *not* an official procedure. If someone now comes forward to tell us how it should really be done, I can only say – where were you when I needed you?