

FORK OVERHA

ONE of the first telescopic front forks to appear on the market some 20 years ago, the AMC Teledraulic version has earned itself a reputation for reliability and long life—provided that an occasional oil change is carried out. Since the design was introduced, a few modifications have been made. For example, from 1955 onward, the diameter of the stanchions was increased. Many thousands of AJS and Matchless models have been fitted with these forks and, after five or six years' service and long mileages, they may need some attention to restore them to first-class order.

Right: The sliders turned so that the mudguard bridge mounting studs are outward, the mudguard is slid free of the fork.

Below: Releasing the grip of the stanchion securing screw before undoing the pinch bolt in the lower yoke



WITH a little care, stripping and refurbishing the fork is fairly easy and need not cost a fortune in spare parts. To get at the job from a practical angle we went to see Reg May, motor-cycle service manager at Comerfords, the Thames Ditton dealers.

This, his step-by-step guide, should help you to tackle the task with a minimum of bother.

Before tearing the fork to pieces to cure an oil leak from one or both legs, try the effect of tightening the slider extensions which sit on the oil seals. In some cases this can cure the leak. We'll tell you how to screw up the slider extensions later.

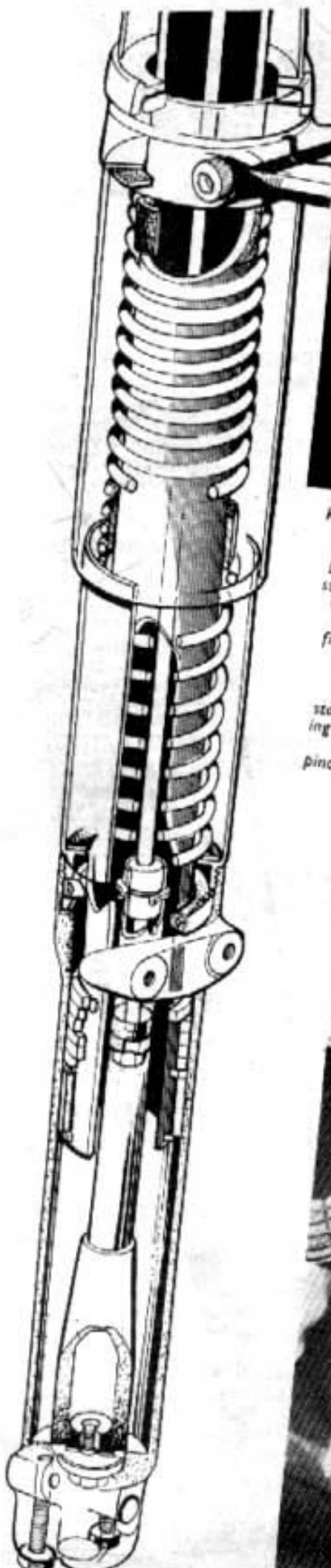
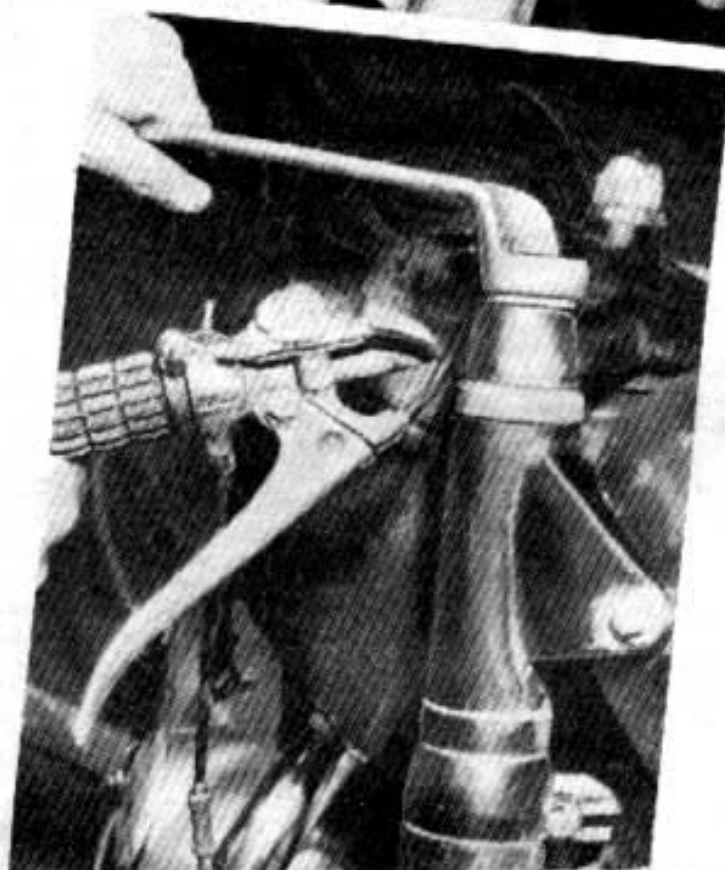
If fork action is stiff and the tubes are not damaged, try slackening off the two nuts which anchor the mudguard bridge on one side of the fork.

If this effects a cure, pack the gap between the bridge and the fork boss to relieve side strain on the tubes.

Perished rubber washers in the top cover housing rings will allow the covers—and the headlamp—to move sideways.

At first sight this means removing the fork legs to put in new washers.

A quick, get-out-of-trouble dodge is to get a couple of leather washers which normally fit at either end of the main springs. Cut each one, radially, on one side.



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by
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Loosen the top yoke enough to allow the split washers to be slipped into place under the covers.

Tighten up the yoke and the covers will be firmly gripped.

You have probably decided that attention is necessary because of certain symptoms. Juddering under braking can indicate wear in the bushes. Lack of damping (which cannot be cured by tightening the slider extensions) indicates that the oil seals need replacing.

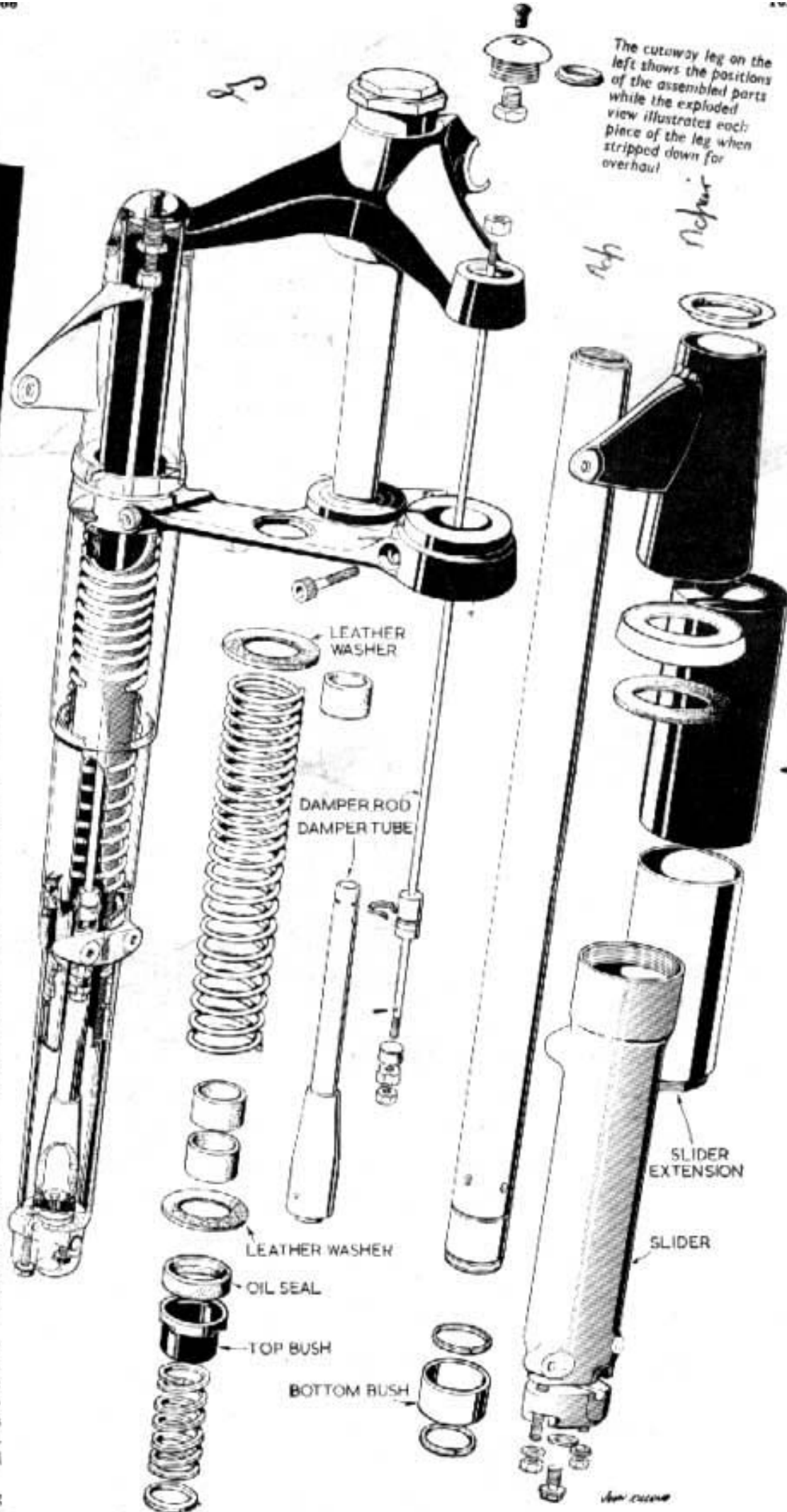
Stiff movement can be due to the black plastic bushes swelling and gripping the stanchion. The remedy is to ease the bores of the bushes with fine emery cloth until they are a nice sliding fit on the stanchions.

With the bike on its centre stand and a block under the crankcase, wear in the bushes can be detected by grasping the legs and attempting to move them fore and aft.

Make sure you are not misled by play in the steering-head bearings—check and eliminate this possible red herring first.

Having decided that the fork needs stripping the first move is to clean the whole front end thoroughly for, besides being unpleasant, it is bad practice to work on a component which has a liberal covering of oil or road dirt.

Drain the oil from each leg by removing the screw at the





Above left: Loosening the pinch bolts in the fork lower yoke. Above right: Using a soft-face mallet to tap the stanchion retaining screw and free the grip of the lower yoke on the stanchion. Right: With the stanchion free, the damper rod is detached from the top securing screw

bottom of the slider and moving the fork up and down in a pumping action.

Make sure that the block under the engine is firmly in place and that the machine is not going to fall over when you start work on it.

Remove the front wheel and mudguard. A useful dodge to remember here is to rotate the fork sliders so that the mudguard mounting studs face outwards.

The guard can then be slipped straight off without any need for juggling.

It is not necessary to disturb the headlamp assembly or steering head.

A further check on wear in the legs can be made on each one separately now that the mudguard and wheel are out.

Thing to remember is that wear occurs fore and aft, so this is the way to test.

When checking, the legs should be fully extended. This means that the bushes will be closer together and any wear will be more evident.

From now on, we will deal with one leg. A similar procedure applies to the other.

Loosen the large-diameter screw securing the stanchion to the fork upper yoke. Next loosen the pinch bolt in the lower yoke.

It is essential to use this order because if the pinch bolt is slackened first, turning the top screw might turn the stanchion instead of loosening the screw.

With the top screw loose you can now give it a sharp tap with a hide mallet or an ordinary hammer and wood drift. This will loosen the stanchion in the lower yoke.

Undo the top screw completely. Attached to its underside is the damping rod which should now be detached.

Now, by grasping the end of the slider firmly, the stanchion can be eased clear of the lower yoke.

Corrosion can occur on the stanchion under the top cover which carries one of the headlamp mounting points. This might make it necessary to twist and pull the stanchion a little to ease it free.

It is easier to continue work on the detached half-leg if it is clamped in a vice. The jaws should grip the two studs provided for the slider cap as close as possible to the light-alloy slider.

Lift off the bottom cover and main spring. Check the leather washers which fit at each end of the spring and make a note to replace them if they are damaged.

FEW COPPERS

Remove the three rubber buffers which fit over the stanchion to stop spring chatter. Renew if necessary.

In fact, such items cost just a few coppers and if the fork is stripped it is the best plan to replace them as a matter of course.

Undo the chromium-plated slider extension. A strap wrench (or a pipe wrench well padded to prevent scratching) is needed for this job.

This achieved, take the slider out of the vice and grip the stanchion at its upper end where no sliding action takes place.

In any case, it is wisest to

use soft vice clamps to obviate any risk of marking the parts held.

With the stanchion held firmly in a horizontal plane, grip the light-alloy slider and move it smartly along its travel to the fully extended position.

A few sharp tugs like this will probably serve to move the oil seal.

If it proves difficult, heat the area at the upper end of the slider by wrapping with rags soaked in boiling water. Repeat the tugs on the slider.

With the slider removed from the stanchion a further check can be made on the damping. Pour a small quantity of oil into the slider and move the damping rod up and down.

If the damping effect is negligible, the assembly can be replaced quite simply as a unit at a cost of just over £1 per damper.

Hold the slider lightly in the vice by the front mudguard fixing lug—never by holding the slider itself between the jaws, or you could cause serious distortion or fracture.

The damping unit is retained by a securing bolt through the base of the slider. To undo this, a jin-Whitworth box spanner can be obtained cheaply and the outside filed to make it fit into the limited space.

After removing the bolt the damping rod and valve assembly lift out.

The fork bushes can now

be removed from the stanchion. A circlip above and below retains the hardened-steel bottom bush, then follows the buffer spring, upper plastic bush and the oil seal.

At this stage the surface of the stanchion on which the plastic bush and oil seal slide should be examined for wear. If there is any deep scoring or pronounced ridges there is no alternative but to replace the stanchion.

Cleaning up the surface in any way would merely make it even more undersize and a special plastic bush would be necessary.

Any corrosion on the upper part of the stanchion should be cleaned off at this stage. It will make reassembly in the lower yoke easier.

Assembly of the fork can now be tackled; lightly smear the parts with oil as they are fitted. The oil seal goes on the stanchion with the closed side uppermost, lip downward.

The plastic bush follows with the shoulder on it to the oil seal. Then the buffer spring, circlip and collar, hardened-steel bush and another circlip.

Care should be taken to ensure that the circlips are correctly seated in their grooves.

Now the stanchion is inserted into the slider and the oil seal lightly tapped into place so that there are sufficient threads for the slider extension to get a start.

As this is tightened, it will



push the seal into position. A light smear of jointing compound on this thread will stop any chance of oil weeping.

Slip the three rubber spring buffers on to the stanchion, lightly grease the main spring and slip it on. Now check the action of the fork by moving the stanchion in the slider.

Place the stanchion in the yokes and tighten the top retaining screw. Then tighten the pinch bolt.

Remove the top retaining screw and, with a piece of wire or a spoke, fish up the damping rod and attach it to the retaining screw.

Now charge the fork with the correct grade and quantity of oil and, when both legs have been dealt with, replace the front mudguard and wheel.

Cost of the operation? Apart from the damping units mentioned earlier, you will need a pair of plastic bushes at about 5s each, a pair of hardened-

steel bushes costing a little over 8s each, two oil seals at about 5s 6d each, four leather washers for under 2s and the oil for replenishing each leg.

SPRING WRINKLES

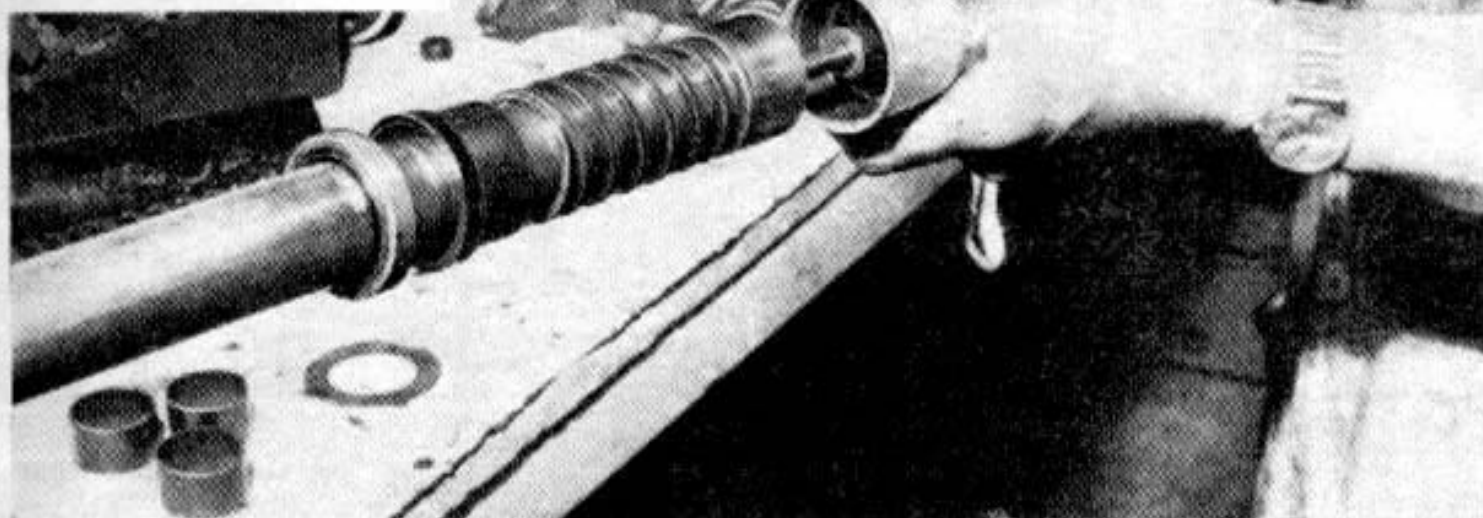
POINT to watch with the two-rate main spring is that the closely wound coils should be at the top. There are springs for solo or sidecar use. Slightly heavier gauge wire is used for the sidecar pattern but the way to distinguish between the types is by measuring the free length.

As with all spares for the fork, it is essential to distinguish between the pre- and post-1955 types.

For the earlier fork the solo main spring length is 11in. On the later pattern it is 11.9in. Sidecar springs are all 12.1in long.

The leg removed from the yokes, off comes the dust cover, main spring, leather seating washers at either end of the spring and the rubber spring buffers

Left: The fork slider extension unscrewed and ready to come off. When replacing this item, it's a good plan to smear the threads with jointing compound to guard against oil leaks. Below: Jerking the oil seal free of the slider. After the seal comes the top bush, rebound spring and bottom bush



Right: With soft vice clamps in position, the leg is held in the vice by the mudguard stay securing lug while the damper unit holding bolt is removed. Far right: With the securing bolt removed, the damper unit is withdrawn from the slider

