

Norton Roadholder forks strip

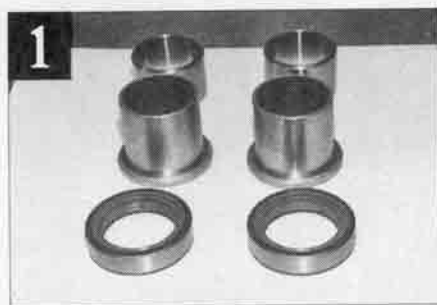
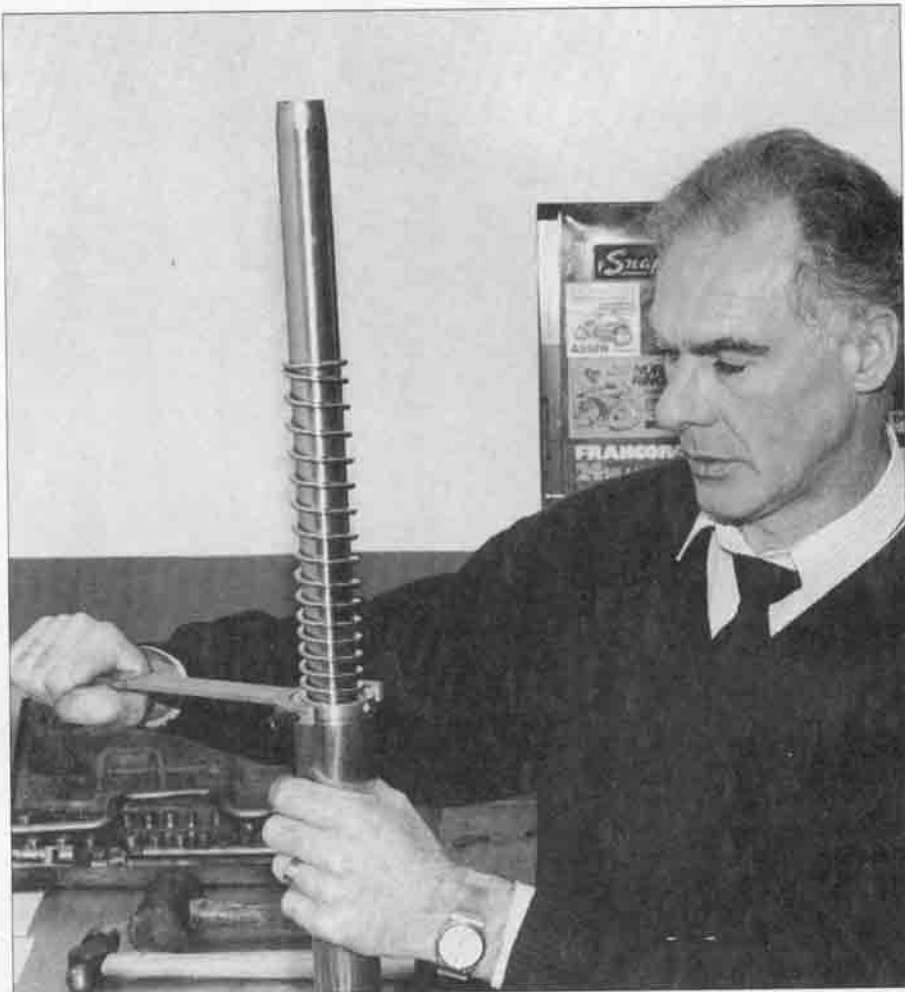
Norton specialist Mick Hemmings shows Brian Crichton how to strip and rebuild the famous Roadholder forks.

THE reason for stripping these forks is to replace fork bushes and seals which cost £23.50 inclusive for a complete set from Mick Hemmings. The forks illustrated here are shortened Manx style, the two other types being for the Dominator (88, 99, 650cc and Atlas) and Commando. The stripdown procedure covers all post 1954 Roadholders.

To check whether the bushes require renewal, put the bike on its mainstand with the front wheel clear of the ground. Grip the forks at the bottom of the sliders (lower section of the forks) and try to rock them backwards and forwards. Do not confuse head bearing wear with fork bush wear. Check the head bearings first.

Better still, with the forks removed, put the fork slider in the vice between soft jaws and rock the stanchion (upper section of fork leg) backwards and forwards. There will be some play, even on new forks, but excessive play means new bushes are needed.

When stripping the forks, the seals should be replaced as a matter of course. If the seals are leaking, oil will be seen on the stanchions and possibly the sliders.



STRIPDOWN

Pic one shows seals, top bronze bushes and bottom steel bushes.

- Remove the fork top nut (5/16" Whit

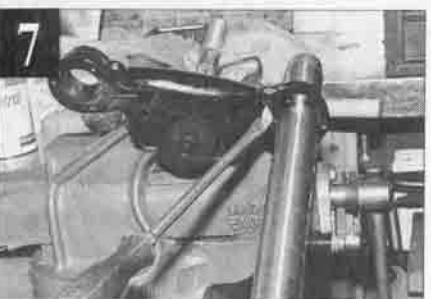
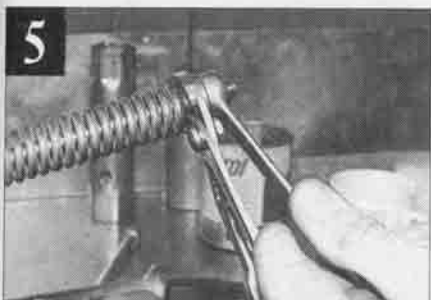


spanner) (**pic two**). Push the slider up until internal spring and damper rods are exposed.

- Remove fork top nut holding damper rod at the same time (**pic three**). Spanner size for the damper rod nut is 5/16" Whit on pre-Commandos, 9/16" AF on Commandos.

- Most Dominator threads are BSF and Whitworth whereas Commando are UNF and UNC. Identification marks can be found on the slider (**pic four**). Three circles indicate UNF/UNC. Both sliders for the Commando are interchangeable with the Dominator. The only difference is the oval section of the Commando is stronger. Commando

STRIPDOWN

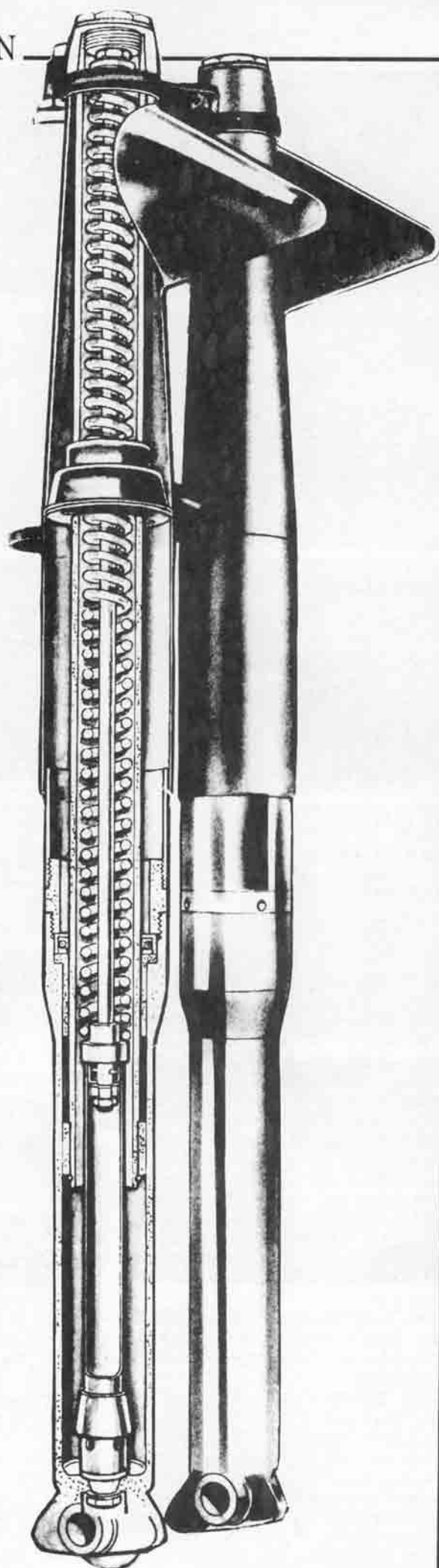
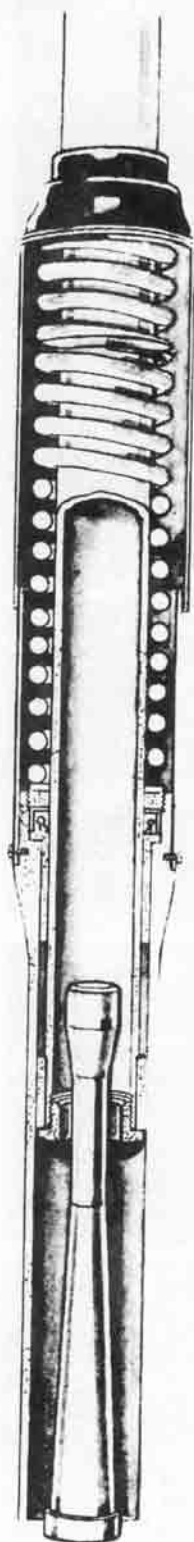


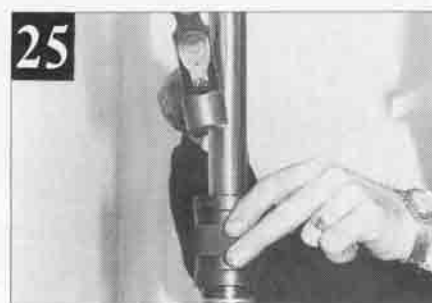
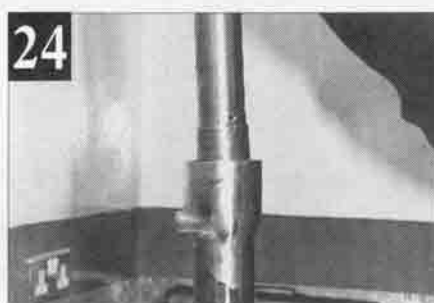
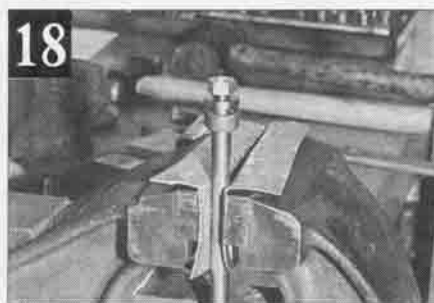
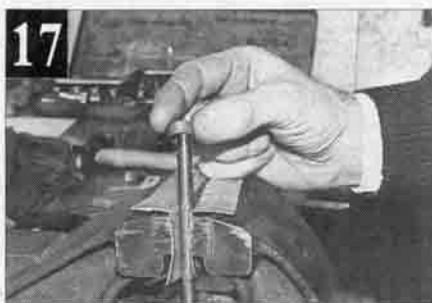
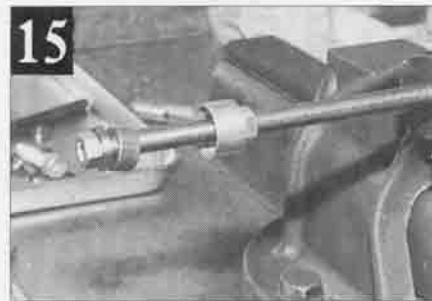
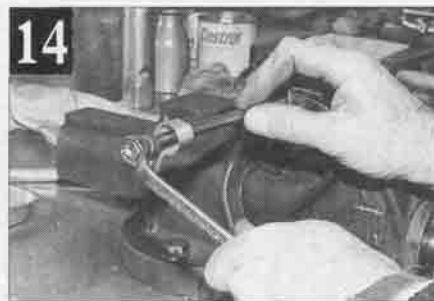
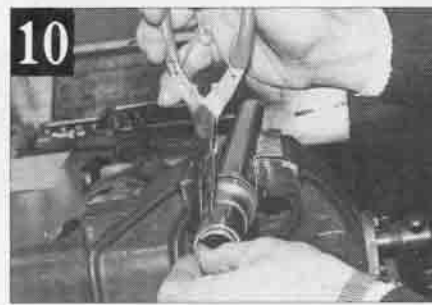
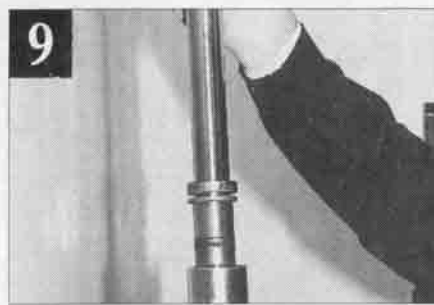
sliders are strengthened around the pinch bolt area at the bottom.

- Remove top nut and rod nut, holding damper rod with grips (**pic five**). Remove spring and check free length. This varies but the official length is 18.687". For solo machines the spring is usually identified by a dab of red paint. Sidecar springs are identified by a dab of green.

- Remove stanchion from the yokes. To do this, slacken pinch bolt on bottom yoke. Screw top nut into stanchion fully home, then back about $\frac{1}{8}$ ". Gently tap top nut to release stanchion from top yoke (**pic six**). Be careful, it is possible to damage threads on the top nut and stanchion if stanchion is gripped by the yoke too tightly. Penetrating oil may be necessary to help free the tapered top of the stanchion from the top yoke.

- Remove fork leg. If it is tight in the bottom yoke wedge open the bottom yoke clamp using a screwdriver to ease dismantling (**pic seven**). Drain oil from fork leg by turning it upside down.





● Remove oil seal lock ring. **Pic eight** shows this being done with a special tool on the Manx style. With the standard chrome oil seal lock ring, fit a Jubilee clip around the outside and tap the Jubilee clip, or use a pipe wrench on the top of the clip — not the chrome or you may damage it.

● To remove bushes and stanchion from slider, simply jerk stanchion sharply upwards (**pic nine**). If the stanchion is extremely tight carefully heat the top of the slider around the oil seal area to expand it.

● Clamp stanchion in vice using soft jaws. Remove circlip (**pic 10**) and slide off bottom steel bush, top bronze bush and oil seal.

● Check stanchion for signs of pitting. Mick argues that if the stanchion is badly pitted it is better to replace it with a new one rather than have it hard chromed and reground. A pair of new pattern stanchions from Mick are £57 including VAT or £76 for genuine Norton parts.

● To remove the damper tube

assembly place 3/16" Whit (Commando 1/2" AF) socket on the damper tube bolt (**pic 11**). Undo the bolt and hope the damper tube assembly does not turn — there's no tool available for holding the damper tube assembly. If it does use a 1/4" Whit spanner to hold the damper tube cap (**pic 12**).

● The damper tube assembly shown in the pictures is made up of lightweight alloy racing parts. Standard parts are usually steel with alloy caps but some very early Dominators have alloy tubes.

● To undo the damper tube cap, put a punch or piece of bar in the vice (**pic 13**) to stop the tube from turning and remove the cap (1/4" Whit open end spanner).

● Pull out the damper rod. Secure it carefully in the vice and remove the bottom nut (Dominator 3/16" Whit, Commando 1/2" AF) (**pic 14**).

● When removing the damper valve from the rod be careful not to lose the tiny locating pin. **Pic 15** shows components in order on the rod. The pin is hidden. **Pic 16** shows the pin being

removed.

● Mick advocates renewing the damper valve as a matter of course. The other important check is play of the cap on the damper rod. It is difficult to advise on limits of play but there *must* be some since oil has to pass. Often it is best to fit a new cap.

● Wash all components in readiness for reassembly.

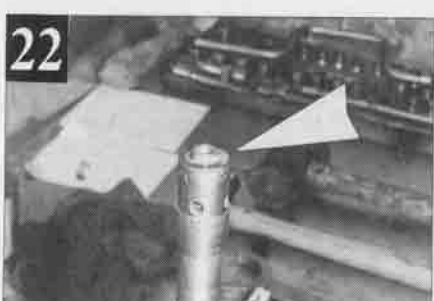
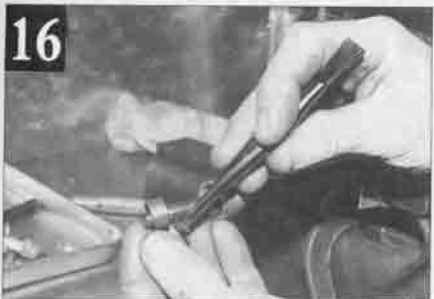
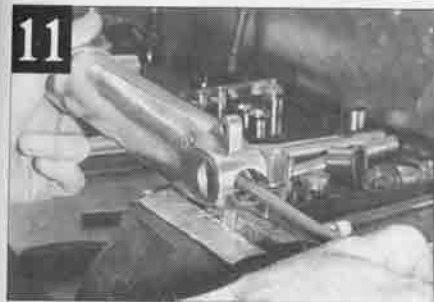
REASSEMBLY

● Place the damper rod in the soft jaws of a vice. Install the pin in the damper rod and place the valve over the rod and pin. The cap will rest loosely on the pin (**pic 17**).

● Fit damper rod seat and nut (**pic 18**). Secure nut with a spot of Loctite and tighten. Oil the damper valve assembly and fit inside damper tube (**pic 19**) and tighten cap.

● Check free play in the tube (**pic 20**). If excessive it may be necessary to change the damper tubes although this

STRIPDOWN



is unlikely.

- Hold the stanchion in the vice and fit a new steel bush. Refit circlip (pic 21).

- Hold the damper rod in the vice and fit the fibre washer to the top of the damper tube. Secure this with a smear of instant gasket (pic 22).

- Place slider over damper tube, secure with bolt and washer and tighten (pic 23). You may need to hold damper tube with 1/4" Whit spanner as shown during stripdown.

- Oil the bottom bush on the stanchion and fit into slider over damper rod (pic 24). Push stanchion down into slider then smear stanchion with oil and slide on top bush.

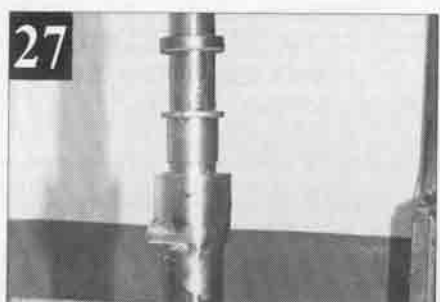
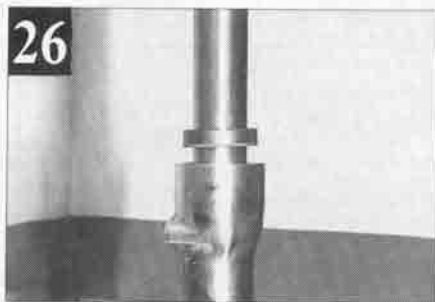
- Using a drift, tap top bush down into slider until fully home (pic 25).

- Fit oil seal (pic 26) with integral spring downwards and tap down seal with drift, being careful not to damage the threads inside slider. Pic 27 shows the top bush on the stanchion with oil seal above it.

- Refit locking ring. Note that pic 28 shows a Manx type fork which needs to be tightened with a special tool. For the standard forks use a Jubilee clip and pipe wrench as explained during stripdown.

- Fit inner rod spring over damper rod. Pull this down then fit washer and nut (pic 29). Tighten by holding the damper tube with grips as shown in picture five during stripdown.

- Refit the forks into their yokes and at this stage nip up the lower yoke pinchbolts. Fully extend the forks and fill



each leg with Castrol 15/30 fork oil or other proprietary fork oil (pic 30). Mick also recommends Bel-Ray 20 grade fork oil. Fill with 150cc per leg for Commando, 142cc for Dominator.

- Refit the top cap and washer to the damper rod and screw into stanchion. Fully tighten and then fully tighten bottom yoke pinch bolts.

- **FOR all Norton parts and service contact Mick Hemmings Motorcycles at 72/74 Overstone Road, Northampton, NN1 3JS. Tel: 0604 38505.**

