Production Racer Headsteady

General Remarks

The Norton Commando Production Racers that were assembled in the Thruxton Race shop had some special parts. The special PR headsteady, forming a third isolastic mounting between cylinder head and top frame tube, prevents the engine from moving laterally under that tube. This movement can be seen with the Commando on the centre stand by putting one's weight on one footrest at a time. The standard production arrangement with two rubber "bobbins" (the same as used at the silencer mountings) offers little resistance and this can be noted going through a bend at high speed, or in a bumpy bend at any speed- the rear wheel kicks out laterally against the frame.

The PR headsteady puts an end to that, and the bike feels infinitely more "together" with a totally new, confidence-inspiring report from the rear end of the motorcycle. As opposed to other offerings in the market we use two rubber elements, as per the original drawing made by Peter Williams in 1969 and which we have in our possession.

In the re-development of this assembly we have found that the cylinder head-to-frame relationship is never the same from one Commando to another after thirty years of modifications and mix-and-match assemblies. The standard production arrangement is much more forgiving in this respect and the bobbins "give" as much as necessary, but it is most important that the new headsteady is mounted unstressed. We have therefore added adjustment slots and also included shims to permit installation in the ideal position horizontally and vertically.

Installation Instructions (image overleaf for reference)

1) Remove seat. Close fuel taps, disconnect fuel pipes and remove petrol tank. Disconnect the rocker oil feed pipe from both sides of the cylinder head.

2) Remove all standard headsteady parts including the rubber bobbins that are screwed into the frame tube, and (on Mk3 850 models) the spring support arrangement to the front.

3) Remove the frame clamp from the side plates and slacken the isolastic locknuts enough to enable the side plates to rotate freely. Do not remove the isolastic bolt as the spacer shims inside may be misplaced. Offer up the new headsteady assembly into position and loosely secure to the cylinder head using three (BSF thread) allen screws with washers. DO NOT FULLY TIGHTEN AT THIS STAGE.

4) Fit the clamp around the lower, small-diameter frame tube with the clip uppermost and assemble loosely using the two UNF thread allen screws. DO NOT FULLY TIGHTEN. (you will need a cut down 7/32" hex key for these screws)

5) Fit the longer of the two hexagon screws with washers through the rear holes in the triangular side plates, Fit the spacers which take the place of the original bobbins and attach the plates to the threaded boss in the frame tube. DO NOT FULLY TIGHTEN.

6) Fit the two short screws with washers through the front holes of the triangular plates and into the threaded sides of the clamp. DO NOT FULLY TIGHTEN.

7) Both parts of the new headsteady are now loosely in position – the clamp and side plates around the frame tube and the main assembly on the cylinder head.

Now stand back and have a look - where do you find gaps, sideways or in height, that need to be closed with shims? Insert shims so that the whole assembly is correctly positioned without using force. Adjust lateral position by moving shims from one side of the mounting point on the frame to the other so that the assembly is central below the frame.

8) Tighten the isolastic bolt; torque the first (inner) nut to 25lbs./ft, then tighten the outer (lock) nut to 25lbs./ft ensuring that the torque of the inner nut is not altered.

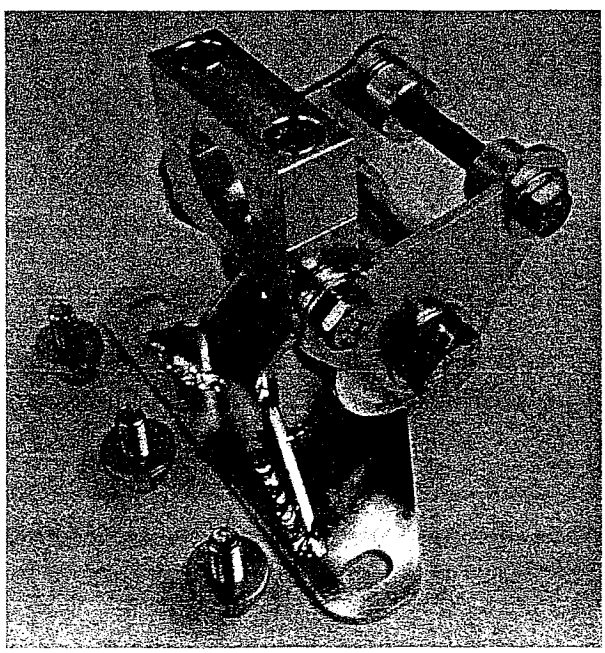
If you are satisfied that everything is in the correct position and no part is bent or stressed fully tighten all fixings.

9) The side play of the headsteady is factory pre-set with spacer shims on the central bushes of the isolastics, with the side play set to the same clearance as the existing front and rear isolastic mountings. Ideal clearance (**total** clearance, measured at one side only) between the end cap and PTFE thrust washer is 0.010"/0.25mm. This can be adjusted when necessary with shims fitted inside the end-caps (between the main body of the unit and the end cap) but in new condition these shims are not required. As wear develops (principally in the PTFE washers) shims should be installed and these are available in thicknesses .005", .010", .020" and .030". Part numbers are 06.0775 – 06.0779 respectively and are those used on pre-Mk3 rear isolastics.

10) Refit the rocker oil feed pipe.

11) Refit petrol tank, carefully ensuring that there is adequate clearance around the new headsteady on both sides. Roadster tanks are most critical in this respect. Reconnect the fuel pipes and refit the seat.

Set off for your first test ride. Be careful- the ride is different and depending on the condition of the front and rear isolastics it can be radically different. It is a good idea to check these mountings now, replacing any worn parts and ensuring correct adjustment, now that you have improved the chassis anyway. Vibrations will be probably be more noticeable as the assembly is now more "rigid" than before.



Other accessories from Andover Norton

- Brake improvement kit 13-1600 and (Mk3) 13-1620;
- Electronic ignition kit (Pazon) 13-1500;
- Luggage carrier system 06-7270 & 06-7271;
- Panniers 06-7272 & 06-7273, top box 06-7274;
- Isolastic conversion kit to Mk3 "vernier adjustment" condition; front 06-7116, rear 06-7117;
- Commando tool kit 06-7268