

TECHNICAL

GEARCHANGE SELECTOR TUNE UP FOR V-TWINS

By J. C. Woodward

My '77 900 SS came through with terribly stiff shifting. Since it shares the same selector parts with my '74 GT, my first inclination was to blame the cross-over linkage. To my disappointment, a side conversion failed to cure the problem. The real culprit was in the selector mechanism inside the right side primary sprocket cover.

The selector cover contains two shafts, both of which must have perceptible end play when installed with all springs removed. On my bike, the rear shaft was incorrectly shimmed. Also the scissor centering spring was too wide and it caused the front shaft to bind against the case when the cover screws were tightened. Metal was ground from the spring until clearance was restored.

Having eliminated all friction, then adjust spring tension to suit your preference. With the rear shaft removed, test pedal return pressure and bend the extensions on the scissor spring to adjust. Reinstall the rear shaft. A fraction of a turn may be ground off the coil spring behind the selector fork if it overpowers the scissor spring while returning the pedal after a shift. Finally, small amounts of the ball detent spring can be ground away if there remains any stiffness in initiating a shift.

Make changes in small steps and road test frequently or you may make the box so loose it will not return smartly between quick shifts. The procedure is really quite easy to do since the entire mechanism comes off with four screws.

All V-twins have the same gear selector mechanism and there is no reason why each shouldn't have the kind of smooth, easy shifting that Ducatis are famous for.

LOOSE SPROCKET SCREWS

The twentieth issue carried Ian Faloon's comments about loose screws in the Speedline Wheel. The older wire wheels have a similar problem. The sprocket mounting screws on my '77 900SS would loosen after just a few hundred miles, even when safety wired. The problem is that the screws are too small in diameter and they pull the threads out of the aluminum hub. I drilled out the hub and installed helicoil inserts. Now the screws thread into hardened steel and the problem is permanently solved.

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CLUTCH CURES

by Ducati Meccanica SPA

RE: Ducati 860 GT Motorcycle (1975)

Working of your clutch can be improved, checking the wear and parallelism of clutch plates. You can carry

out this inspection by placing the driving disc on a plane surface: It must perfectly adhere to it; on the contrary, replace the driving disc.

Another suggestion is to check the clutch springs to be all of the same height. Even small differences make working defective.

You could eventually add another driving disc (7 to 8) to increase clutch travel. During this operation, the hex. nut of 20 X 1 mm must be locked at the correct torque of 10-11 kgm.

Note: If you have any of your own cures for certain clutch and transmission problems that you may have encountered, jot it down and mail it in. We are always on the lookout for any technical oriented tips that may help a fellow member avoid expensive repairs or just make an enjoyable bike even more enjoyable by eliminating annoying problems. Remember don't be a self-fish share what you know with others.

ADVANCED TECH TIPS V-TWINS INTAKE MANIFOLDS

My 750 Sport will be complete this spring. I've made some changes, to wit: adapted the 200 watt alternator from an 860, manufactured a new breaker plate (Mazda points) and larger breaker cam, added "Cook Neilson" external lubrication (the filter is Fram PH 3387 or AC PF40 from a baby Buick V-6), turned and sleeved the o.d. of the intake manifolds to be concentric with the i.d.

The sketch below is the expanding mandrel for holding in the manifolds by the i.d. whilst turning the o.d. concentric. This device expands to the average centre since the manifolds is not a perfect column internally.

Legend for sketch below

- 1, 2: alternate threaded expanders
- 3: main body
- 4: expander, drilled

Notes:

- expanders $\frac{1}{2}$, 4 to be snug sliding fit in 3. The small expander to enter main body beyond it's shoulder before full expansion.
- balls - from old ball bearings to be of sufficient diameter to project into main body bore when touching manifold i.d.
- use long $\frac{1}{8}$ " UNF drawbolt with TRUE threads to pull expanders together.
- all dimensions are in inches, and worked for my 750 Sport. Modify for intended use.

Use: Assemble device, insert into carb end of manifold and lock in place by tightening drawbolt. Chuck extended portion of mandrel in lathe and turn manifold true. sleeve to size.

