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IH: Transmission & Final Drive - Sub-02A

How to Adjust a Dry Clutch

Article by Dr Dick of the XLFORUM ¹⁾

To adjust the dry clutch properly, 2 independent adjustments need to be done correctly and in the correct order. The worm IS NOT supposed to land on the pin when the adjustment is correct. Here's what's supposed to happen:

- Adjustment #1) - The OEM cable adjuster at the lever perch is a one turn per index affair. The cable adjuster at the lever perch gets adjusted to the first index that lifts the worm off the pin.

Then,

- Adjustment #2) - Without disturbing adjustment #1, the screw in the center of the worm sets the actual clutch adjustment.

That's the principal.

- Here's the real world rundown. Anything not conforming to the following must be fixed before moving ahead. Most slipping clutches are from moving ahead without fixing:
- First time out remove sprocket cover from motor.
 - Totally remove the screw, dust shield, and lock nut from the worm. Remove cable from worm.
 - Make sure worm, pin and spring are all in working order. That means they must not be deformed. The spring needs return worm to pin every time.
 - Completely remove the cable from the bike. It also needs to be free of OPERATIONAL defects. check it.
- Assembly starts now. Do not jump ahead:
 - Put the cable into the socket of cam cover. Leave the other end of the cable on the floor.
 - Gently work the 'T' of the cable into the claw of the worm. Turn worm in cover to make the 'T' installation easier.
 - Bolt the cover to the motor.
 - Grab the lever end of the cable and yank on the inner cable. The worm should operate in the cover. The clutch won't operate because the screw, dust cover & locknut isn't installed in the worm yet.
 - WHEN YOU RELEASE THE INNER CABLE, THE SPRING NEEDS TO RETURN THE WORM TO THE PIN. If not, check for clutch rod dragging inside the worm hole and fix. If OK, then it's a cable problem. Fix the cable.

- Route and anchor the cable in the operating position and totally hook the cable up to lever.
- HANDLE BARS STRAIGHT AHEAD FROM THIS POINT ON. this gets overlooked too often. work lever. spring should return worm to pin again. if not fix cable more.
- With the lever against the perch, adjust the perch adjuster one turn at a time until the cable lifts the worm off the pin. Then, work the lever again. The spring should return the lever completely to the perch. If not, fix the cable more.
- Pull & hold lever to the bar. You should be able to lift the adjuster from the perch. If not, it's because the worm is hitting the sprocket nut, lock tab or sprocket. Repair the problem.
- At this point, the worm swings thru an operating arc without contacting anything inside the cover. Pin, nut, locktab and sprocket.
- Adjustment #1 is complete. Do not change it.
- At this point you have a totally freely operating release system correctly adjusted. When this doesn't happen - clutches slip and that usually starts the heavy clutch spring cancer.
 - Install the center screw and dust shield. Screw center in just a few turns (not contacting the clutch rod). Spin the locknut on and hand tight to the worm. Grab the locknut and wiggle the worm. Worm needs have shake in cover (when the screw contacts the rod, this wiggle disappears. That leads to clutch slip too).
 - Adjust the center screw to the desired free play at the lever. Locknut should be HAND TIGHT. Check for worm shake. If the worm doesn't shake, clutch may slip.
 - It's at this point your gonna tighten the locknut. IT'S ALSO NOW THAT YOU CAN WRECK ALL THE PREVIOUS WORK.
 - ALWAYS HOLD THE LEVER TO THE GRIP TO TIGHTEN THE LOCKNUT. AS THE NUT GETS TIGHT, THE LEVER WANTS TO LIFT FROM GRIP. THIS WILL ALLOW YOU TO GAGE HOW MUCH TO TIGHTEN THE LOCKNUT BEFORE YOU BEND THE CLAW!
 - BECAUSE THE WORM ISN'T NEAR THE PIN WHEN THE LEVER IS ON THE GRIP, YOU WON'T BEND THE PIN EITHER.
 - The locknut doesn't need to be too tight. Re-check for shake.
 - Adjustment #2 done.
- What you now have is a 100% clutch adjustment.

Print this out and put it in your manual.

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/127564-sprocket-cover#post2695041>

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