



Steahly Flywheel Weight Installation Instructions TM 250, 300 2021 Part Number 407

U.S. Patent # 10,012,288 update 2/2021

This procedure should be performed by someone good mechanical abilities. Read these instructions all the way through to make sure you have the ability and tools. Improper installation or use of this flywheel weight could cause expensive engine damage and/or a serious crash causing injury or death. Since we have no control over installation or use of this product, and since dirt bikes are often raced, subjected to extreme conditions, and abused, it has no warranty whatsoever. However, if you have problems please call 541-535-4896, we may be able to help.

Procedure Summary: You must remove the rotor (stock flywheel) from the engine using the proper flywheel puller. The weight ring is permanently attached to the rotor by means of an interference (press) fit. A special tool is included which will help you press the weight ring onto the rotor without the use of a hydraulic press.

Additional items you will need to have: Common mechanics hand tools, flywheel puller, a metal hammer, a torque wrench, a flat metal file, and some metal cleaner such as acetone, Isopropyl (rubbing) alcohol, or contact cleaner.



Photo 1 - Weight ring.



Photo 2 - Weight ring mounted to rotor.

Removing the rotor (stock flywheel) from the bike:

1. Clean the engine, especially around the left side ignition cover.
2. Remove the shift lever.
4. Remove the ignition cover carefully so you don't damage the gasket. You may want to have a new gasket on hand. You can set the cover to the side without disconnecting any wires.
5. Remove the rotor retaining nut. There are several methods that may be used to stop the rotor from rotating while you loosen the nut.
 - A. Use an air or electric impact wrench.
 - B. Use the Steahly Engine Lock Up Tool.
 - C. Use an automotive oil filter wrench or strap wrench as a flywheel holding tool.
 - D. Put the bike in 5th gear and hold the rear brake on (doesn't always work and you could do damage if done carelessly). **Never stick anything through the holes in the rotor to jam up the engine; the chance of damage is too great.**
6. Remove the rotor using the correct flywheel puller (Photo 3). Do not use automotive or claw pullers, they will damage your rotor.

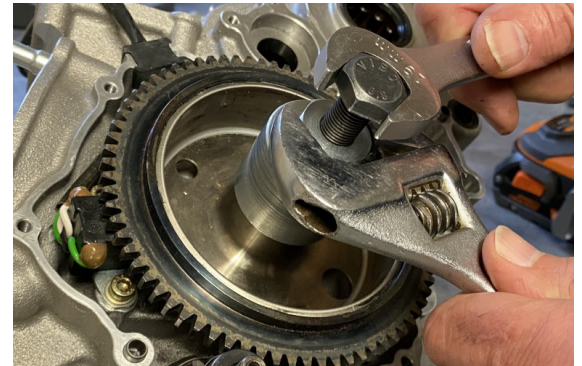


Photo 3 - use only the correct flywheel puller.

Preparing the rotor:

1. Using a flat file, radius the sharp corner as shown in photo 5. Wipe the rotor with paper towels and metal cleaner to remove all oil, dirt and metal filings.
WARNING: alcohol and acetone are flammable; keep away from open flames and only use in a well ventilated area.

Preparing the weight ring:

1. Make sure there are no burrs on the inside of the weight ring that might prevent it from going on properly. Wipe the inside of the weight ring with metal cleaner.

Installing the weight ring onto the rotor:

1. Apply a thin coat of the supplied Loctite 609 to the inside of the weight ring and the outside of the rotor where the ring will be attached. Photo 6 .
2. Place the weight ring on top of the rotor. Install the press tool as shown in photo 7.
3. Using two wrenches, one on the nut and one the bolt head, tighten the nut of the press tool about 1/2 of a turn. Use the metal hammer to tap on the press tool plate to make the weight ring aligned (make the gap even on all sides). Use great care and insure the weight is started straight. Tighten the nut again about a half turn and tap on the press plate again to keep the weight ring going on even. Repeat tightening 1/2 turn and tapping the press plate, always watching and adjusting the alignment gap. Photo 8 and photo 9.
5. Press the weight ring all the way onto the rotor using the tightening-tapping method until the press plate makes contact with the rotor and the weight ring will go no further. Photo 10.
6. Remove the press tool.
7. Clean off any excess Loctite and all metal particles that may be stuck to the magnets on the inside of the rotor.
8. Apply a thin coat of grease to the entire rotor and weight ring assembly to reduce rusting.



Photo 5 - File sharp corner on rotor.

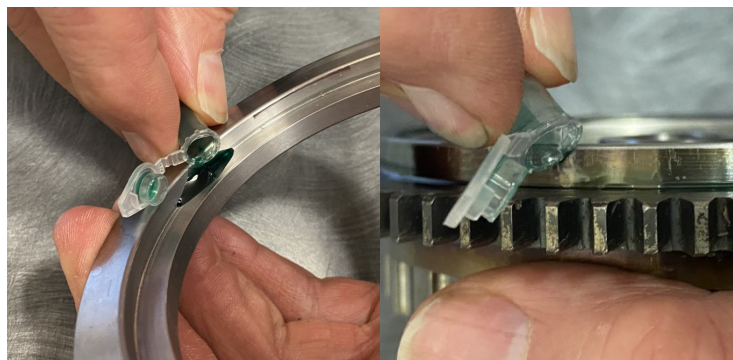


Photo 6 - Apply Loctite 609 to front edge of rotor and to inside of weight ring.

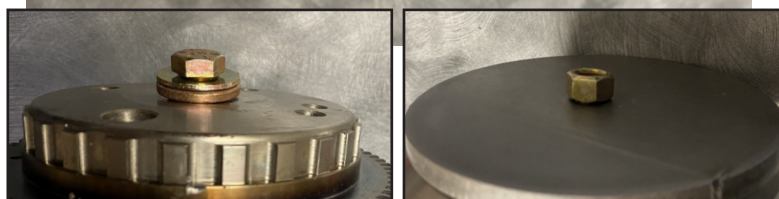
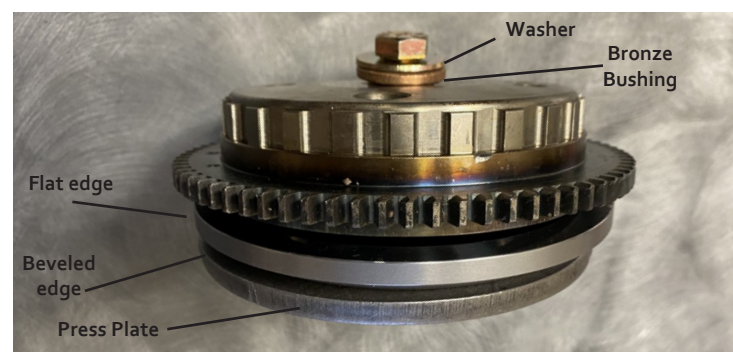


Photo 7- Assemble weight ring and press tool as shown.



Photo 8



Photo 9 - Tap press plate every 1/2 turn to help aid alignment.



Photo 10 - Snug down and begin to tighten press tool. Tighten 1/2 turn. Tap press plate to help align the gap. Weight ring stops moving when pressed all the way on.

Install the rotor back in the engine:

1. Modify the wire holding bracket as shown. By spreading the 90 degree tab to follow the contour of the case and allow for enough clearance. Check this fit with the flywheel on the crank before running the bike. If there is interference remove the wire holding bracket and bend the tab again.
2. Place the rotor over the end of the crankshaft with the key ways lined up.

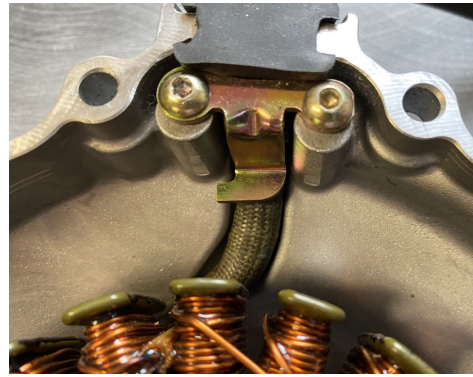
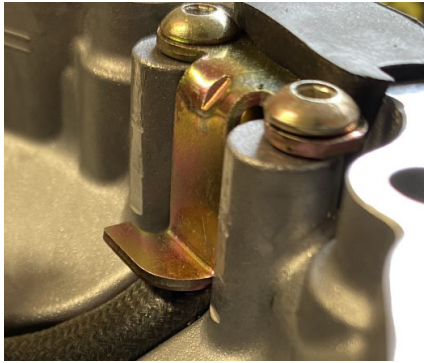


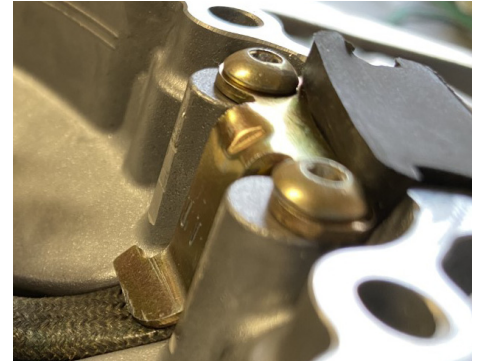
Photo 9 - Remove wire retaining clip



Before



Photo 10 - Bend wire retaining clip to add more tension to wire



After

3. Install the rotor nut and washer and torque to factory spec.
Important: incorrect torque may cause clearance problems.
4. Install the ignition cover with a new gasket if necessary.
Make sure the two cover alignment pins are in place.
5. Install the shift lever.

**Use caution while riding until you become acquainted with the new power characteristics of the engine. If you are uncomfortable doing this installation yourself please send us the parts and we will install it for only the cost of shipping.
Steahly Off Road - 3850 Pioneer Rd. Medford, OR 97501**

