

Recommended Procedure for Noram GE20 Clutch Installation on the Animal Motor

PRE-INSTALLATION PREPARATION

Before you install the clutch two important steps are recommended:

Step #1 :

Briggs and Stratton recommend that clutches when fitted are fitted 'inboard'; this means that the drum of the clutch is closest to the crankcase and that the sprocket is farthest away from the engine. Fitting the clutch inboard keeps the key and bulk mass close to the engine crankcase thus reducing the likelihood of crankshaft damage, also it must have a radius washer fitted on the end of the crankshaft so that the clutch hub is flush with end of the crankshaft .The clutch MUST have a radius washer fitted between the clutch and the crankshaft step to prevent the clutch 'biting in' to the crankshaft step and creating a stress point causing crank breakage at the radius. The correct radius washer (same radius as crankshaft step radius) MUST be used or crankshaft breakage at the step may occur.

Step #2 :

It is recommended that the woodruff key used fits the full length of the crankshaft groove and that the key is partly filed down so that the drive hub of the clutch goes all the way onto the crankshaft and this is done irrespective of whether the clutch is fitted inboard or outboard.

The clutch should be a snug slide fit onto the crankshaft but if this is not the case you can use medium strength Loc-tite to overcome small amounts of backlash.

INSTALLATION

Inboard

1. Install radius washer with chamfered side toward engine.
2. Insert woodruff key into crankshaft.
3. Slide drive hub assembly onto crankshaft. Be sure the keyway in the drive hub is aligned with the woodruff key in the crankshaft. .
4. Put Loc-Tite on threads and install sleeve bolt (a bolt of 25mm in thread length is recommended so as to take up the full length of the crankshaft thread) using 1 flat washer then a spring washer or fit washer kit supplied from Briggs and Stratton. Torque to 300 inch pounds.
5. Check side clearance of clutch drum should be between .010" (.25mm) to .020" (.5mm).Clutch end float is adjusted by washers on the end of the clutch drive hub between the hub and the clutch drum(more washers reduces end float less washers increases end float); see Note 1.
6. Spin clutch by hand. If binding repeat step 5.

Or

Outboard

1. Install beveled washer with chamfered side toward engine. .
2. Slide drive hub assembly onto crankshaft. Be sure the keyway in the drive hub is aligned with the woodruff key in the crankshaft. .
3. Insert woodruff key into crankshaft
4. Put Loc-Tite on threads and install sleeve bolt using 1 flat washer then a spring washer or fit washer kit supplied from Briggs and Stratton. Torque to 300 inch pounds.
5. Check side clearance of clutch drum should be between .010"(.25mm) to .020"(.5mm).Clutch end float is adjusted by washers on the end of the clutch drive hub between the hub and the clutch drum(more washers reduces end float less washers increases end float); see Note 1.
6. Spin clutch by hand. If binding repeat step 5

Note 1

As shown above, check that the side clearance of clutch drum is between .010" (.25mm) to .020" (.5mm).If not, the clutch end float is adjusted by washers on the end of the clutch drive hub between the hub and the clutch drum (more washers reduces end float; less washers increases end float)*

**These washers are inside the clutch; to get to these washers you have to remove the circlip from the drive hub and separate from the drum.*

*There should be **zero End Float** from the clutch to the crank.*

GE SERIES CLUTCH SET UP FOR THE BRIGGS AND STRATTON.

For smooth operation and less load shock on crankshaft it is recommended using 'white' springs; if you use softer springs such as 'red', testing has shown that the spring breaks after about 2 hours use.

The shoe setting recommended are on the number 1 or the softest setting; this setting not only reduces the shock load on the crankshaft but has also proven to be faster.

MAINTENANCE

Remove clutch and inspect after every race day.

When clutch is removed, remove circlip from drive hub and separate from drum check the following items and replace if necessary:.

Check for broken springs.

Check for cracks in the drive hub or weight support.

Check for wear on the sprocket and bushing on drums..

Check for wear on woodruff key and crankshaft key way

Clean all parts with degreaser and rinse with water lightly oil bearing on clutch with engine oil and reassemble clutch.