



# BROOKS AG PARTS

SM YOUR SINGLE SOURCE FOR AG PARTS

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## Slip Clutch Adjustment Settings

The protection point of the slip clutch is adjusted by changing the overall length of the slip clutch tension springs. The correct measurement point is from the bottom of the adjusting nut to the top surface of the clutch yoke or basically the overall length of the spring. All springs should be adjusted to the same length.

Desired HP Rating	Overall Spring Length	LBS. Torque
20hp	33.50mm	2339
25hp	33.00mm	2905
30hp	32.50mm	3512
35hp	32.00mm	4086
40hp	31.50mm	4672
45hp	31.00mm	5255
50hp	30.50mm	5839
55hp	30.00mm	6423

Annually you should disassemble and inspect your slip clutch for any signs of rust or wear. Rust will prevent the clutch from slipping at the proper torque setting and could cause damage to your equipment. Remove all rust or replace the clutch part if you are unable to remove the rust. All parts should also be inspected for any signs of wear, replace any worn components like friction disc, clutch plates and splined hubs. Make sure to grease the plain bearing on the cast hub of your clutch. Please make sure to clean excess grease from any areas that the friction disc will come in contact with. Should you have any questions or concerns regarding the repair of your slip clutch please feel free to contact your Brooks Ag Parts representative, they will be happy to answer your questions or offer technical advice for your repair.



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Desired HP Rating	Overall Spring Length	LBS. Torque
20hp	28.50mm	2335
25hp	28.25mm	2919
30hp	28.00mm	3501
35hp	27.50mm	4085
40hp	27.00mm	4668
45hp	26.50mm	5252
50hp	26.00mm	5835
55hp	25.50mm	6419

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Desired HP Rating	Overall Spring Length	LBS. Torque
20hp	31.00mm	2335
25hp	30.75mm	2919
30hp	30.50mm	3501
35hp	30.25mm	4085
40hp	30.00mm	4668
45hp	29.75mm	5252
50hp	29.50mm	5835
55hp	29.25mm	6419

Annually you should disassemble and inspect your slip clutch for any signs of rust or wear. Rust will prevent the clutch from slipping at the proper torque setting and could cause damage to your equipment. Remove all rust or replace the clutch part if you are unable to remove the rust. All parts should also be inspected for any signs of wear, replace any worn components like friction disc, clutch plates and splined hubs. Make sure to grease the plain bearing on the cast hub of your clutch. Please make sure to clean excess grease from any areas that the friction disc will come in contact with. Should you have any questions or concerns regarding the repair of your slip clutch please feel free to contact your Brooks Ag Parts representative, they will be happy to answer your questions or offer technical advice for your repair.

## **SLIP CLUTCH**

A slip clutch is incorporated in the PTO driveline. It is designed to slip, absorb the shock load, and protect the driveline.

After the first hour of operation, the slip clutch should be checked for overheating. After this first check, the slip clutch should be checked weekly or anytime there is overheating. To adjust the slip clutch, tighten the spring nuts 1/8 (maximum) turn at a time. Bolts should NEVER be adjusted to the point where the springs are compressed solid. Minimum spring compression length can be found in the Slip Clutch Adjustment Chart included with your slip clutch.

The slip clutch should be checked periodically and adjusted to compensate for wear. The lining plates are 1/8" thick when new. Replace after 1/32" wear. If the mower has been idle for an extended period of time, or in wet weather, before operating check to make sure the friction lining plates are not frozen or rusted together. Should this freezing occur, refer to the procedure described in "Seasonal Clutch Maintenance".

There are two friction lining plates in the slip clutch. These should be checked weekly for oil or grease, wear, and moisture which could cause corrosion on the drive plates.

All Safety Shields, Guards and Safety devices including (but not limited to) - the Deflectors, Chain Guards, Steel Guards, Gearbox Shields, PTO integral shields, and Retractable Door Shields should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact.

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order.

## **SEASONAL CLUTCH MAINTENANCE**

It is important that the clutch lining plates slip when an obstacle or load heavier than the clutch setting is encountered. Therefore, if the machine sits outside longer than 30 days and is exposed to rain and/or humid air it is important to make sure that the clutch lining plates are not rusted/corroded together. Before operating the mower use the following procedure to make sure the clutch will slip and give the overload protection required.

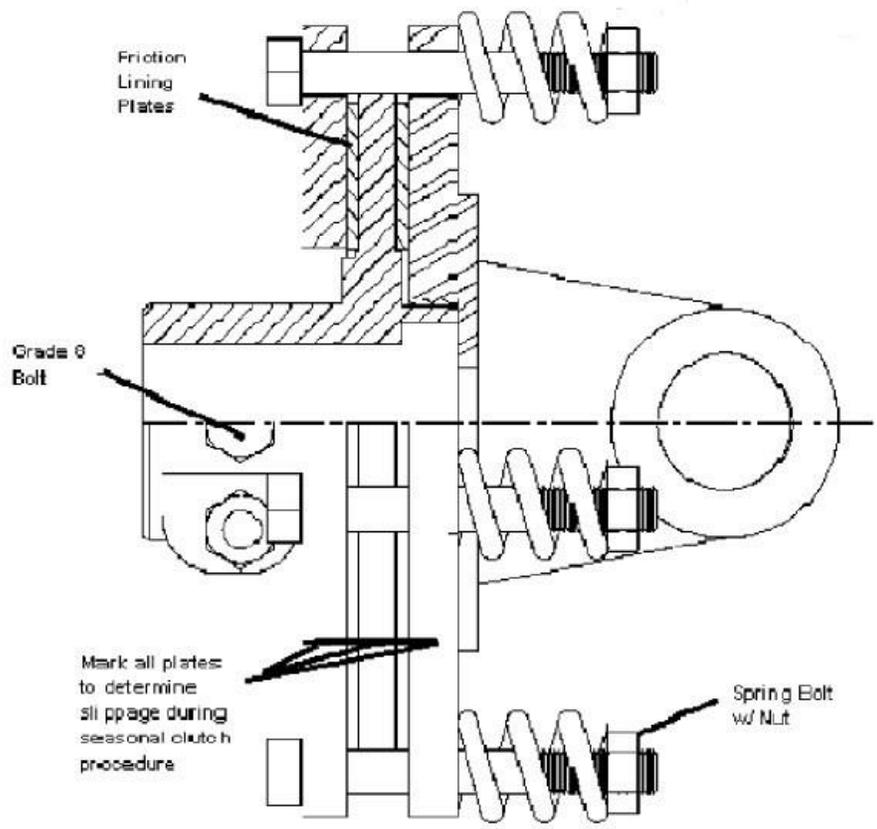
1. Loosen nuts on springs until the springs can freely rotate, yet remain secure on bolts.
2. Mark outer plates as shown below
3. Attach mower to tractor and start the tractor. Set the engine speed at 1200 RPM.
4. Engage the PTO (approximately one second) and then quickly disengage it. The friction lining plates should break loose (check the mark they should no longer line up).
5. Turn tractor off and tighten the nuts on the springs to their desired compressed length.

Note: The clutch is equipped with either 31 mm or 35 mm length uncompressed springs. Determine the equipped springs for your slip clutch and determine the correct compressed length for proper clutch adjustment.

## **Clutch Mounting**

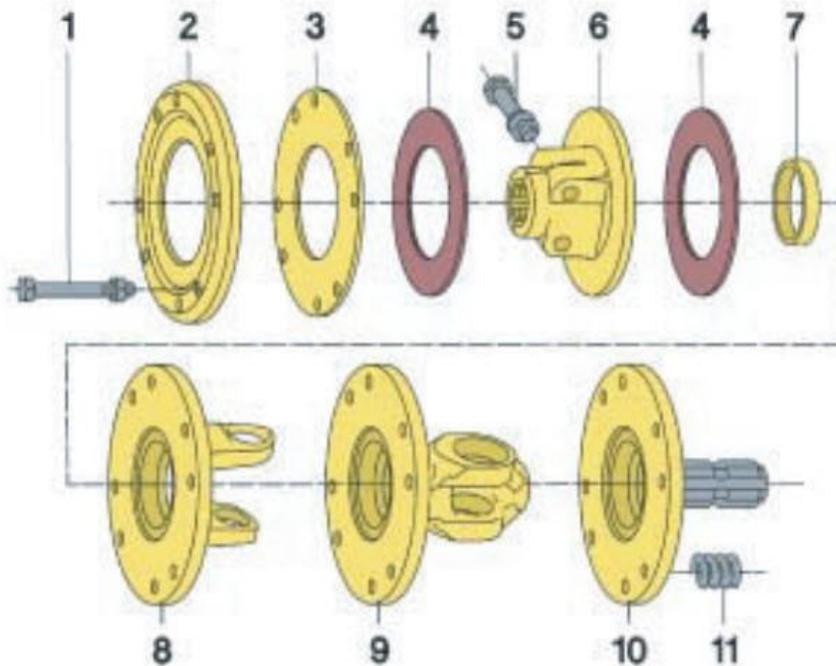
The clutch is equipped with grade 8 mounting hardware that should be used to mount the slip clutch to your mower. You will notice the two included bolts are different lengths. The 3" long bolt should be used to mount the clutch to your gearbox and the 3-1/2" bolt should be used to mount the PTO shaft to the slip clutch.

The addition of the slip clutch may require shortening of your PTO shaft to accommodate the increased length of the combined assembly. Check for correct PTO length per your mowers assembly and operation manual to insure enough room for the shaft to collapse without bottoming out!



## Slip Clutch Spare Parts

For Independent Slip Clutch and Series 4 PTO Slip Clutches



Position	Description	Code	Quantity
1	Complete Bolt	6691085	8
2	Pressure Plate	1135007	1
3	Internal Clutch Plate	1135008	1
4	Friction Disc	1805010	2
5	Hub Bolt (2 Bolt Mounting) 1-3/8" X 6 Spline	6761270	2
	Hub Bolt (2 Bolt Mounting) 1-3/4" X 20 Spline	6761480	2
	Conical Mounting Pin 1-3/8" X 6 Spine	6821483	1
	Grade 8 Hex Bolt 1/2-13 X 3" for 1-3/8" Smooth	136319	1
6	Clutch Hub 1-3/8" X 6 Spline	1705005	1
	Clutch Hub 1-3/8" X 21 Spline	1705047	1
	Clutch Hub 1-3/4" X 20 Spline	1705046	1
	Clutch Hub 1-3/8" Smooth	74945	1
7	Bearing	1705009	1
8	Flange 1-3/8" X 6 Spline Series 4	1704006	1
9	Flange	N/A	N/A
10	Flange 1-3/8" X 6 Spline	1706100	1
	Flange 1-3/8" Smooth	1706100-S	1
11	Spring	1215012	8