P.T.O. SLIP CLUTCH
Model 65517
INSTALLATION INSTRUCTIONS

Distributed exclusively by Harbor Freight Tools®.
3491 Mission Oaks Blvd., Camarillo, CA 93011
Visit our website at: http://www.harborfreight.com

Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.

For technical questions or replacement parts, please call 1-800-444-3353.
SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product’s serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INSTRUCTIONS

In this manual, on the labeling, and all other information provided with this product:

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

WARNING

When using Mowers, basic safety precautions should always be followed to reduce the risk of fire and personal injury, including the following:

READ ALL INSTRUCTIONS

Safety Equipment

1. Dress Properly - Do not wear loose clothing or jewelry. They can be caught in moving parts. Wear protective hair covering to contain long hair.

2. Wear ANSI-approved safety goggles and heavy-duty work gloves. Use NIOSH approved face or dust mask if operation is dusty.

3. Use ear protection during operation; sound levels over 85 dB can cause permanent hearing damage.

4. Wear thick jeans and steel-toed work boots to help prevent injury caused by flying debris.

Use Precautions

1. Use the Slip Clutch only on the equipment side of the PTO shaft. Never use the Slip Clutch on the
tractor side; the exposed springs pose a danger to the operator.

2. Use with right equipment - Do not use the Slip Clutch for any job except that for which it is intended.

3. Do not overreach - Keep proper footing and balance at all times.

4. Before use, check for alignment, binding, or damaged parts and any other condition that may affect its operation. A guard that is damaged must be properly repaired or replaced by a qualified technician.

5. **Keep guards in place and in working order.**

6. Read and follow all instructions in the tractor and equipment manuals that the Slip Clutch will be connected to.

7. Do not install on a tractor over 40 HP. Do not exceed 540 RPM at the drive shaft.

8. **Do not stand between the tractor and the equipment when it is running.** The P.T.O. shaft spins rapidly and can grab loose clothing or equipment causing serious personal injury or death. **Do not operate a product if the P.T.O. guard is damaged.**

9. Professional applications must meet OSHA standards.

10. Maintain labels and nameplates on the Mower. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

11. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur.

It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

**Service and Storage**

1. When servicing use only identical replacement parts.

2. Store Indoors - When not in use, Slip Clutch should be stored indoors in a dry, locked-up place - out of reach of children.

3. Maintain With Care - Keep clean for best performance and to reduce the risk of injury. Keep surfaces dry, clean, and free from oil and grease.

4. **Disconnect from equipment before servicing, and when changing accessories.**

⚠️ **SAVE THESE INSTRUCTIONS.**
**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Tractor Requirements</th>
<th>Minimum 20 HP</th>
<th>Maximum 40 HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.T.O. Shaft Type</td>
<td>1-3/8&quot; Diameter 6-spline Shaft</td>
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</tr>
<tr>
<td>P.T.O. Speed</td>
<td>Maximum 540 RPM</td>
<td></td>
</tr>
<tr>
<td>Driveline Size</td>
<td>ASAE Category 3</td>
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**UNPACKING**

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

**INSTALLATION AND MODIFICATION INSTRUCTIONS**

Read the ENTIRE IMPORTANT SAFETY INSTRUCTIONS section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

1. Read the instruction manual for the tractor and equipment.

2. Attach the Slip Clutch to the equipment side of the PTO shaft. Never use the Slip Clutch on the tractor side; the exposed springs pose a danger to the operator.

3. Remove the connector on the equipment side of the PTO shaft.

4. Connect the equipment to the tractor.

5. Loosen the Lock Nuts (11) on the Clutch Body (1).

6. Slide the Clutch Body over the end of the PTO shaft, and tighten the Lock Nuts to secure it in place.

7. Slide the Spline Shaft (2) into the drive of the implement.

8. Loosen all six bolts on the clutch until the springs are “free”, make sure the clutch slips, then tighten all the nuts by hand until the nuts push the springs up against the flange. Tighten 1-1/2 turns more.

9. Without the PTO attached, raise and lower the equipment to determine the point at which the equipment is closest to the tractor. Turn off the tractor and brace the equipment at the closest position.

⚠️ **WARNING! To prevent death or serious injury:** If the equipment is closest to the tractor in a raised position the equipment must be secured in that position with jack stands or similar products. Hydraulic systems can fail, causing the equipment to fall on the operator.

**Note:** Due to the large variety of tractors and equipment that can be powered by Power Take-Off (PTO) shafts; it may be necessary to modify the PTO shaft to work with your tractor and equipment.

10. Pull the PTO shaft apart.

11. Attach the Tractor End Yoke to the tractor PTO connection and make sure it is secure.
12. Hold Inner Tube section next to Outer Tube and check if PTO shaft is too long. Each section should end approximately three inches short of reaching u-joint shield on the opposite section. If the shaft is too long measure three inches back from each u-joint shield and mark the other shaft section. Do this to both PTO shaft halves. Do not cut yet.

13. Raise equipment and remove blocking. Raise and lower equipment to find the longest distance between equipment input shaft and the tractor PTO output shaft. With the equipment in the longest distance position, turn off the tractor and secure the equipment.

14. Hold PTO shaft sections together and check for a minimum of 6 inches of overlap. If PTO shaft has been marked for cutting the overlap is the distance measured between the two marks. If the PTO shaft has less than a 6 inch overlap, do not use it.

**Note:** When cutting the PTO shaft the same length must be cut from BOTH SIDES of the two shaft pieces.

15. Secure the PTO shaft in a vise and cut both the Guard and shaft off at the marked area for both parts of the shaft. Repeat for the other half of the PTO shaft.

16. Use a file to deburr the ends of both shafts, coat the Inner Tube with white lithium grease and put back together.

17. A modified PTO shaft may not work with other pieces of equipment. Repeat the process above to determine that it will work with other equipment before operation.

18. Test the torque on the Clutch for slipping. If the Clutch slips too easy, turn all six Bolts 1/2 turn clockwise, before testing again. Repeat until the Clutch does not slip during normal operation.

19. **Warning!** The Slip Clutch will get very hot when it is slipping. Wait until the clutch cools down, before adjusting it further.

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**OPERATION**

1. Follow directions in the manufacturer's manuals of the equipment being used to connect the tractor and equipment.

2. When the PTO powered equipment meets an obstruction or otherwise exceeds the torque setting for the Slip Clutch, the Clutch will make a loud, squealing sound. The PTO drive will stop powering the equipment.

3. Stop the tractor immediately, power down the equipment, and turn the tractor off.

4. Move the tractor and equipment away from the area where the Slip Clutch engaged and remove any obstructions. If there are no obstructions, then it might be necessary to operate the tractor and equipment more slowly (for example, when using a mower to cut especially thick grass).

5. Allow the Slip Clutch and PTO drive to cool before inspecting it for damage.

6. When the job is finished, turn the tractor off, disconnect the PTO drive, and store the equipment in a cool, dry storage area.
MAINTENANCE AND SERVICING

Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the tractor “OFF” and disconnect the PTO shaft before performing any inspection, maintenance, or cleaning procedures.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:
Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the appliance. Check misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation.

2. **TWICE PER YEAR**, remove the Slip Clutch, disassemble it, lubricate parts (do not lubricate friction surfaces), and reassemble.

3. **AFTER USE**, clean external surfaces of the appliance with clean cloth.
PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

### PARTS LIST

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<thead>
<tr>
<th>Part</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Clutch Body</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Spline Shaft</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Baffle Plate</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Clutch Disc</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Flat Washer</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Bushing</td>
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<thead>
<tr>
<th>Part</th>
<th>Description</th>
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<tr>
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<td>8</td>
<td>Spring</td>
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<td>9</td>
<td>Lock Nut</td>
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<td>11</td>
<td>Hex Nut M12</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Lock Washer</td>
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</tr>
</tbody>
</table>

Record Product’s Serial Number Here: ________________________________

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.
LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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