



Spider Puller

User Instructions

The 48975 and 48977 spider pullers are used to separate spider assemblies from the output shafts of **mechanical-drive** MQ Whiteman power trowels. Use of the spider puller for any other purpose is not recommended. Manufacturer does not assume responsibility for any accident or damage as a result of misuse.

The 4-arm spider puller (P/N 48977) is intended for use with all walk-behind trowel models and ride-on trowels equipped with **4-arm** spider assemblies.

The 5-arm spider puller (P/N 48975) is intended for use with all ride-on trowel models equipped with **5-arm** spider assemblies.

These pullers are not compatible with any hydraulic-drive trowel models.

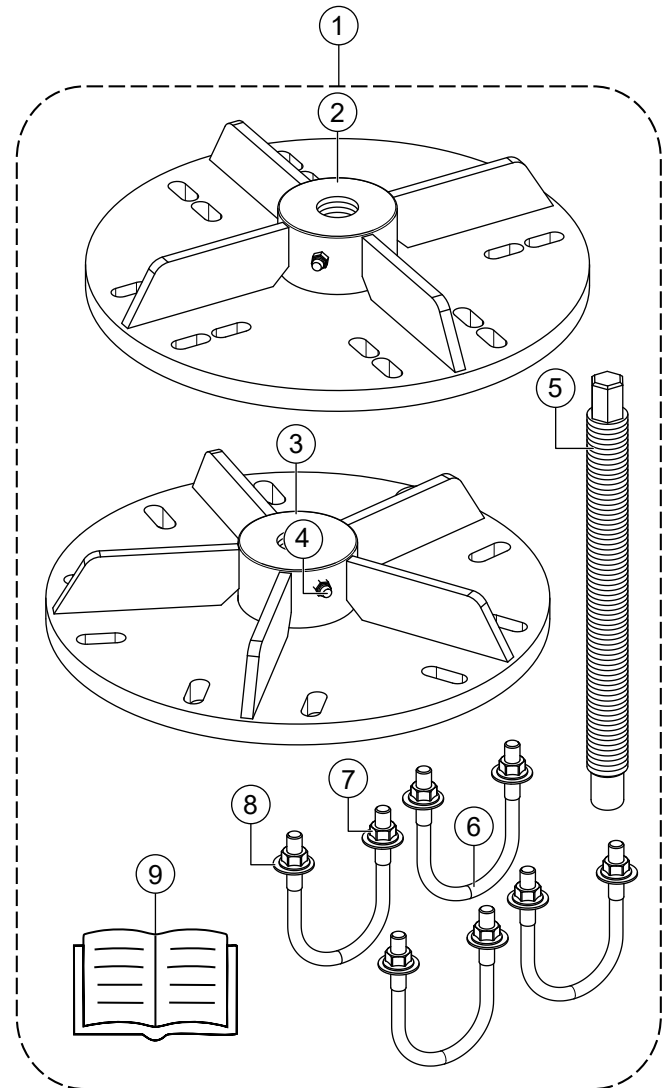


Figure 1. Spider Puller Components

Table 1. Spider Puller Components					
Item No.	Part No.	Description	P/N 48977	P/N 48975	Remarks
1	48977	Assembly, 4-Arm Spider Puller	1	N/A	Includes items 2 & 4–9
1	48975	Assembly, 5-Arm Spider Puller	N/A	1	Includes items 3–9
2	48981	Spider Puller, JWN, W/B, W/A	1	N/A	
3	48973	Spider Puller W/A, HHN, HHX	N/A	1	
4	2621	Fitting, Grease Zerk Str 1/4-28	1	1	
5	48972	Threaded Rod, Spider Puller	1	1	
6	48971	U-Bolt, 3/8-16, Zinc Plated Steel	4	5	Includes item 7
7	N/A	Nut, 3/8"	8	10	
8	48784	Washer, Trowel Steel, 3/8"	8	10	
9	52094	Instructions, Spider Puller	1	1	

WORK SAFELY!

Only a **qualified service technician** with proper training should perform this procedure. Follow all shop safety rules when performing this procedure.

WARNING

ALWAYS wear shatterproof safety glasses or goggles while using this tool.

REQUIRED TOOLS

- 9/16" Wrench or Socket
- 3/4" Hand Wrench or Socket (**NOT** an impact)

PREPARATION

1. Disconnect the negative (**BLACK**) battery cable from the negative (–) terminal on the battery (if applicable).
2. Lift the trowel by attaching **lifting slings or chains** to the **lift loops** (for ride-on trowels) or **lifting bail** (for walk-behind trowels) as shown in Figure 2. Attach the other end of the lifting slings or chains to the lifting device (e.g. forklift). Refer to the **Lifting and Transporting** section of the unit's operation manual for more information.

WARNING

MAKE SURE to observe all lifting safety precautions as listed in the operation manual.

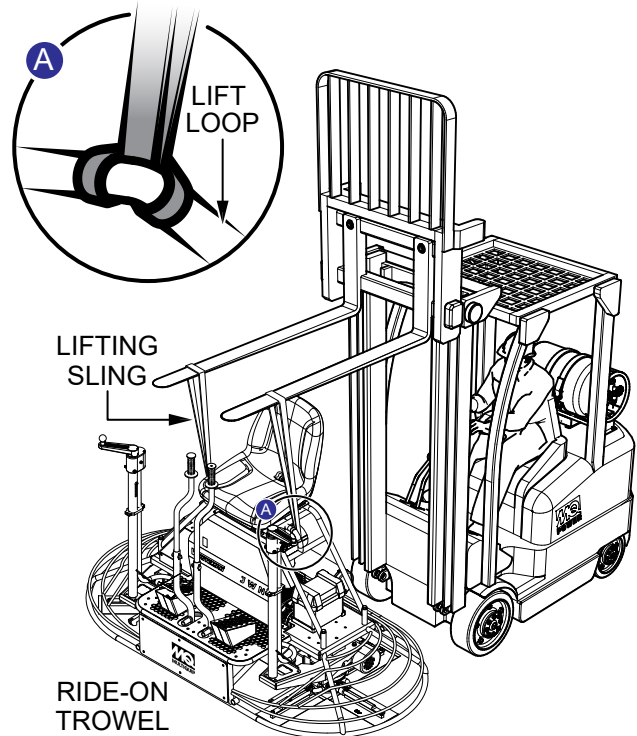
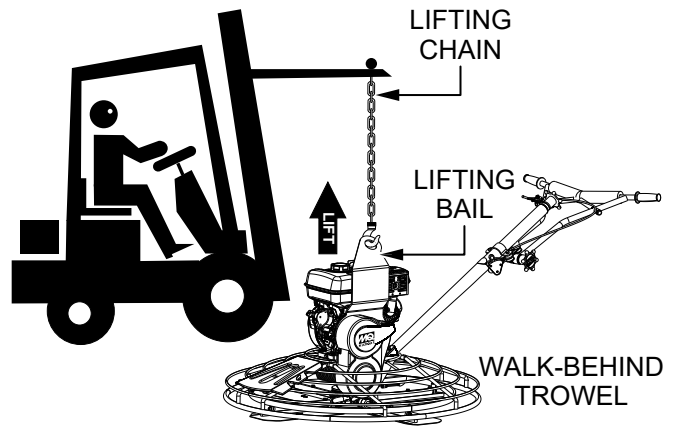


Figure 2. Lifting The Trowel

CAUTION

The spider removal process may result in the sudden separation of the spider assembly from the machine shaft. The use of catch chains is recommended to prevent the spider assembly from falling and striking personnel, causing bodily harm. Refer to the next page for details.

For Spiders With A Stabilizer Ring:

1. Place the trowel on **heavy-duty jack stands** (Figure 3) on secure, level ground in an area that is free of dirt and debris.

NOTICE

Ride-on model shown for illustrative purposes. Follow the same procedure for walk-behind models.

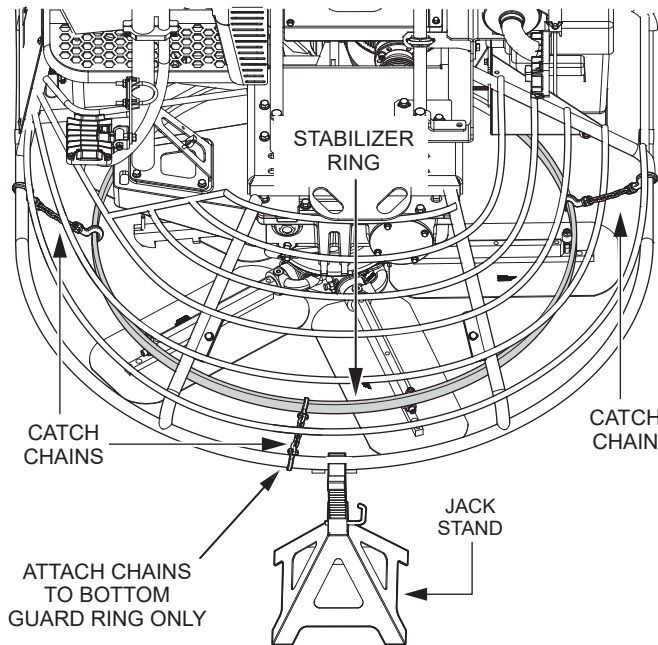


Figure 3. Preparing For Spider Removal — Machines With A Stabilizer Ring

2. Attach one end of three equally spaced straps or **catch chains** to the **stabilizer ring** (Figure 3). Attach the other end of these straps or chains to the **bottom guard ring** in a manner that would prevent the spider assembly from falling.

CAUTION

DO NOT attach chains or straps to the intermediate guard rings. Use the bottom guard ring only.

NOTICE

Make sure the catch chains are positioned so that they are equally spaced, with **no more than 3 to 4 inches of slack**.

3. Remove the spider hub cap plug (if applicable).
4. Remove all spider retaining hardware.

For Spiders Without A Stabilizer Ring:

1. Place the trowel on **heavy-duty jack stands** (Figure 4) on secure, level ground in an area that is free of dirt and debris.

NOTICE

Ride-on model shown for illustrative purposes. Follow the same procedure for walk-behind models.

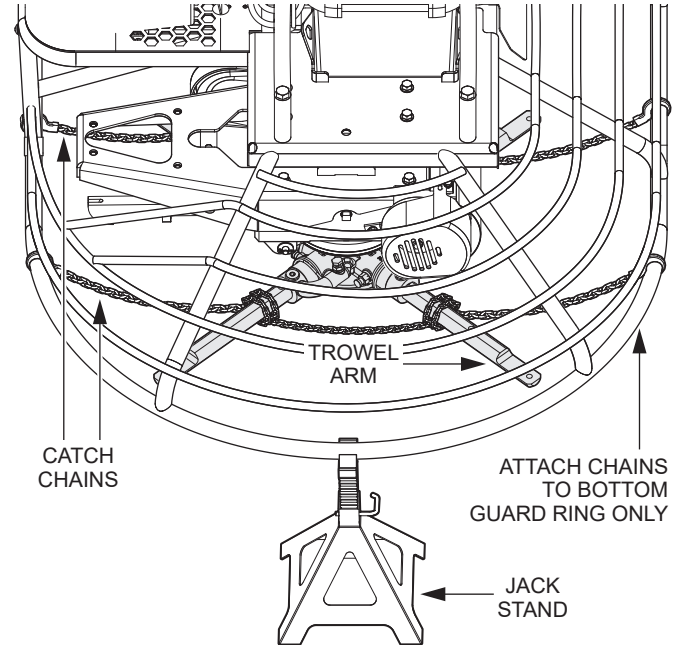


Figure 4. Preparing For Spider Removal — Machines Without A Stabilizer Ring

2. Remove the trowel blades and wrap **catch chains** or straps around the **trowel arms** (Figure 4). To prevent the spider assembly from swinging when it falls, **MAKE SURE** each catch chain wraps around **two** trowel arms as shown.

CAUTION

DO NOT attach chains or straps to the intermediate guard rings. Use the bottom guard ring only.

NOTICE

Make sure the catch chains are positioned so that they are equally spaced, with **no more than 3 to 4 inches of slack**.

3. Remove the spider hub cap plug (if applicable).
4. Remove all spider retaining hardware.

NOTICE

RECOMMENDED: Apply a **penetrating lube oil** to the top of the **spider hub** and the **set screw holes** as shown in Figure 5, and allow the oil to work its way down the **machine shaft** as much as possible. This is particularly helpful when removing an older spider assembly with rust buildup in the bore of the spider.

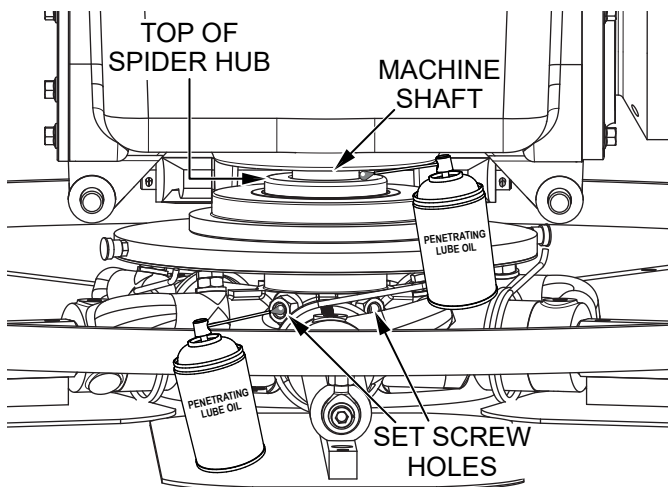


Figure 5. Apply Penetrating Lube Oil

USING THE SPIDER PULLER

NOTICE

Regular greasing of the threads through the **Zerk grease fitting** (Figure 6) is necessary to prevent damage to the tool. Lubricate the Zerk grease fitting with a multipurpose grade grease before each use and every three 360-degree rotations during use.

NOTICE

You will need a 3/4-inch hand wrench or socket to use in conjunction with the spider puller. **DO NOT** use an impact wrench, which can quickly cause damage to the tool. Use of a cheater/breaker bar is acceptable.

1. Wipe the **Zerk grease fitting** (P/N 2621) clean to prevent abrasive material from entering the fitting during lubrication. See Figure 6.

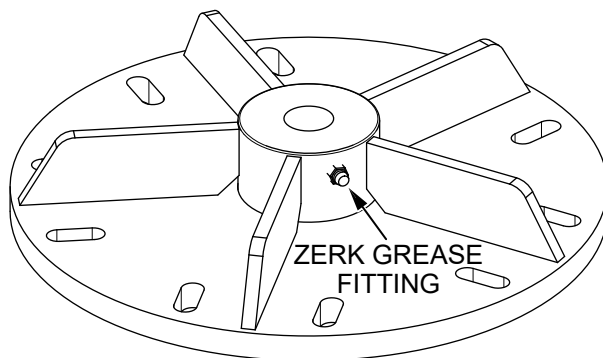
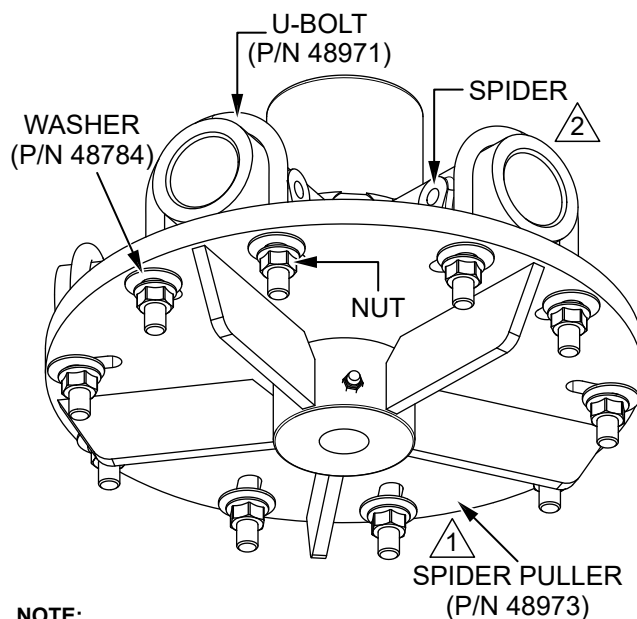


Figure 6. Zerk Grease Fitting

2. Lubricate the Zerk grease fitting with plenty of multipurpose grade grease. More is better!
3. Secure the **spider puller** (P/N 48973 or P/N 48981) to the **spider** using the **3/8-inch U-bolts** (P/N 48971), **nuts**, and **washers** (P/N 48784) as shown in Figure 7.



NOTE:

- 1 5-ARM SPIDER PULLER P/N 48973 SHOWN. 4-ARM SPIDER PULLER COMPONENT IS P/N 48981.
- 2 SPIDER ARMS NOT SHOWN FOR CLARITY.

Figure 7. Attach Spider Puller To Spider Assembly

NOTICE

To accommodate larger or smaller spiders, the 4-arm spider puller has two sets of slots for the U-bolts (Figure 8).

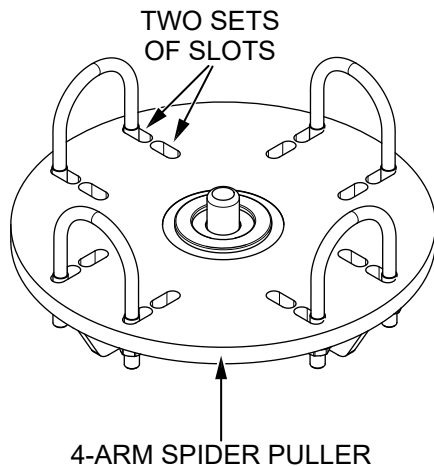


Figure 8. 4-Arm Spider Puller

4. Insert the **threaded rod** (P/N 48972) into the spider puller as shown in Figure 9.

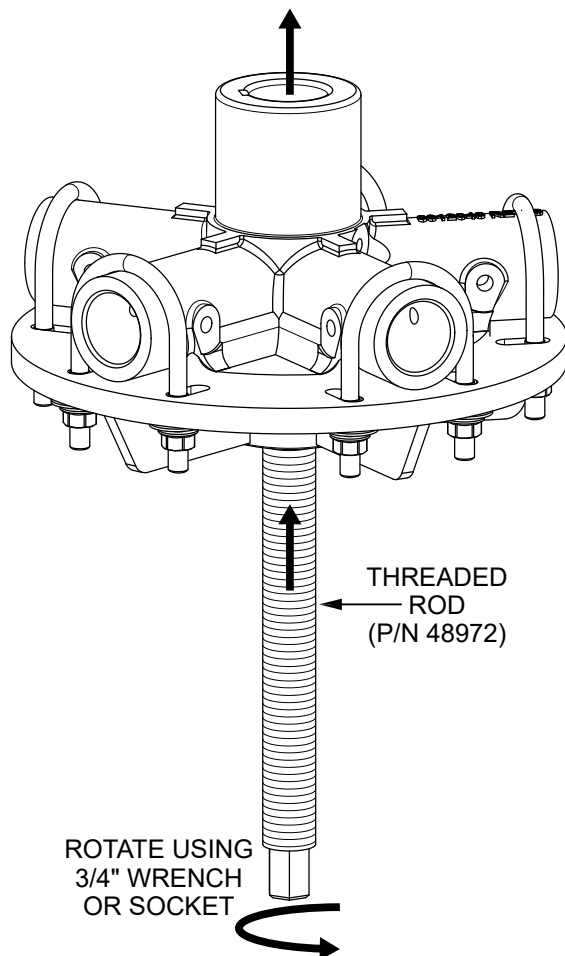


Figure 9. Rotate Threaded Rod To Remove Spider Assembly

5. Use a 3/4-inch hand wrench or socket to rotate the threaded rod (Figure 9), driving it up through the spider base plate. Remember to **lubricate the Zerk grease fitting** with a multipurpose grade grease **every three 360-degree rotations** of the threaded rod.

NOTICE

DO NOT use an impact tool to rotate the threaded rod. Damage to the spider puller will result. Use of a cheater/breaker bar is acceptable.

6. Continue rotating the threaded rod until the spider assembly has been fully removed from the machine shaft.

SPIDER PULLER MAINTENANCE

Lubrication

Remember to perform lubrication through the Zerk grease fitting often to ensure smooth operation of the puller and to prolong the life of the mechanism.

Hardware

The U-bolts (P/N 48971) are semi-consumable items that will eventually start to stretch. Replace as needed.

HERE'S HOW TO GET HELP

UNITED STATES

Multiquip Inc.
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