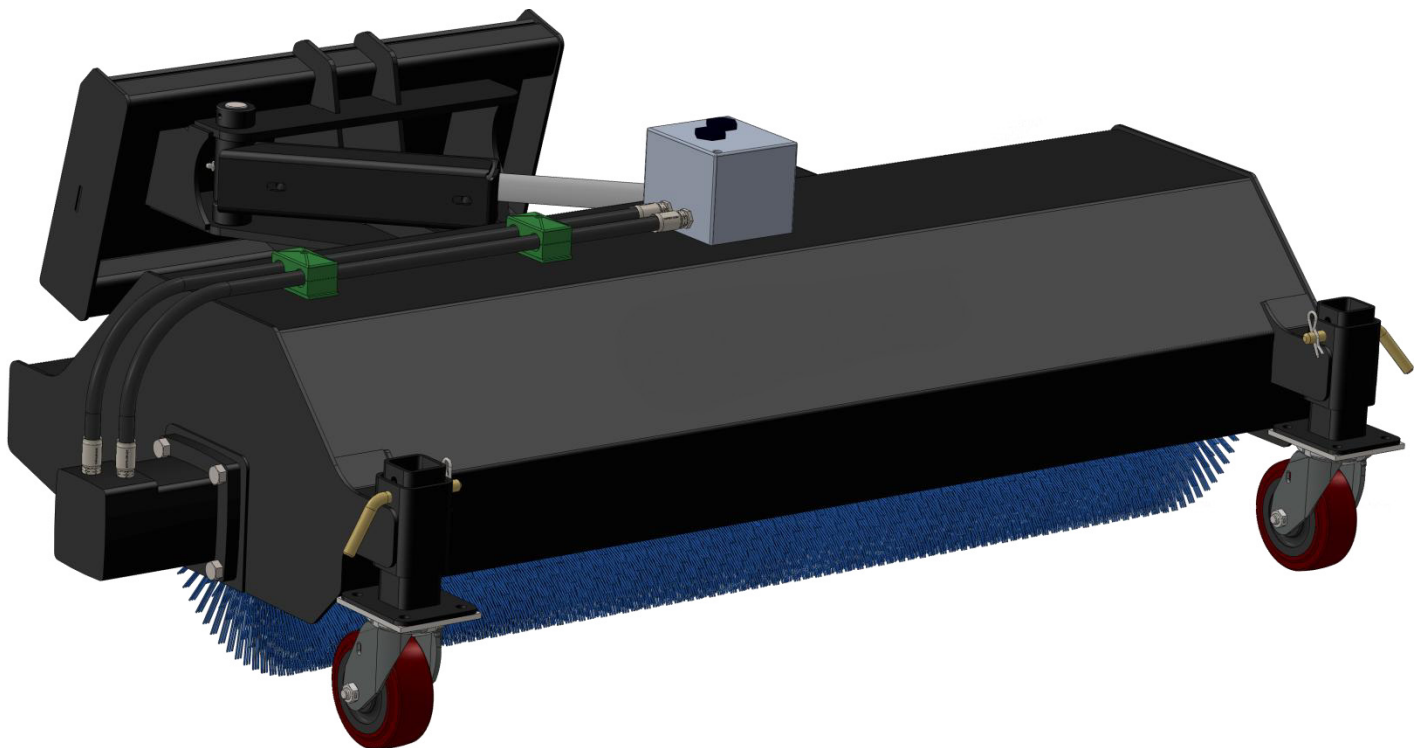




Owner's Manual

MCRS15 Series Rotary Sweepers



WWW.SKIDPRO.COM

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SKID PRO ATTACHMENTS

807 McKay Ave S.
Alexandria, MN 56308
Phone: 877-378-4642
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INTRODUCTION

Congratulations on your purchase of a new Skid Pro Attachments MCRS15 Series Rotary Sweeper. You or any other person, who will be assembling, operating, maintaining, or working with this product are required to read and completely understand the information and instructions contained in this manual. Contact Skid Pro Attachments at 877-378-4642 with any questions about this product. Keep this manual available for reference whenever this product is being handled or used. Provide this manual to any new owners and/or operators. This manual covers model(s):

- All MCRS15 Series Rotary Sweepers

GENERAL INFORMATION

The purpose of this manual is to assist in assembling, mounting, operating, and maintaining your MCRS15 Sweeper. Read this manual carefully to obtain valuable information and instructions that will help you achieve years of safe and dependable service. The illustrations and data used in this manual were current at the time of printing, but due to possible engineering and/or production changes, this product may vary slightly in detail. Skid Pro Attachments reserves the right to redesign and/or change components as may be necessary without notification to anyone.

Throughout this manual, references may be made to:

Power source - The engine-driven machine to which this product is attached.

Right, Left Front, Rear - Directions are determined in relation to the operator of the equipment when seated in the normal operation position.

Important - Precautions that must be followed to prevent substandard performance.

Owner and Operator Safety Information

THINK SAFE, BE SAFE !



This symbol by itself or with a warning word throughout this manual is used to call your attention to instructions involving your personal safety or the safety of others. Failure to follow these instructions can result in injury or death



DANGER - This signal word is used where serious injury or death will result if the instructions are not followed properly.



WARNING - This signal word is used where serious injury or death could result if the instructions are not followed properly.



CAUTION - This signal word is used where minor injury could result if the instructions are not followed properly.



NOTICE - Notice indicates a property damage message

SAFETY PRECAUTIONS



WARNING! Read Manual Prior to Installation

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to the Power Source before beginning installation, operation, or maintenance.



WARNING! Read and Understand All Safety Statements

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all O.S.H.A. regulations, local laws, and other professional guidelines for your operation. Know and follow safe work practices when assembling, maintaining, repairing, mounting, removing, or operating this product.



WARNING! Know Your Equipment

Know your equipment's capabilities, controls and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they are hard to read.



WARNING! Protect Against Flying Debris

Always wear proper safety glasses, goggles or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.



WARNING! Lower or Support Raised Equipment

Lower attachment to the ground before leaving operator's station. Do not work under raised booms without taking the proper action to support them, or lower booms to ground level.



WARNING! Use Care When Working With Hydraulic Fluid Pressure

Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your Power Source operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
- If injured by fluid, see a doctor at once.
- Wear safety glasses, protective clothing when searching for hydraulic leaks. **DO NOT USE YOUR HANDS!**

SAFETY PRECAUTIONS



WARNING! DO NOT MODIFY MACHINE OR ATTACHMENTS

Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Contact Skid Pro Attachments before modifications are made.



WARNING! SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Do not wear loose clothing, or any accessories that can catch in moving parts.
- If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use the correct tool for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer. (i.e. safety glasses, work gloves, protective shoes, hardhat etc.).



WARNING! SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, and all safety requirements. See Power Source manual for these instructions.

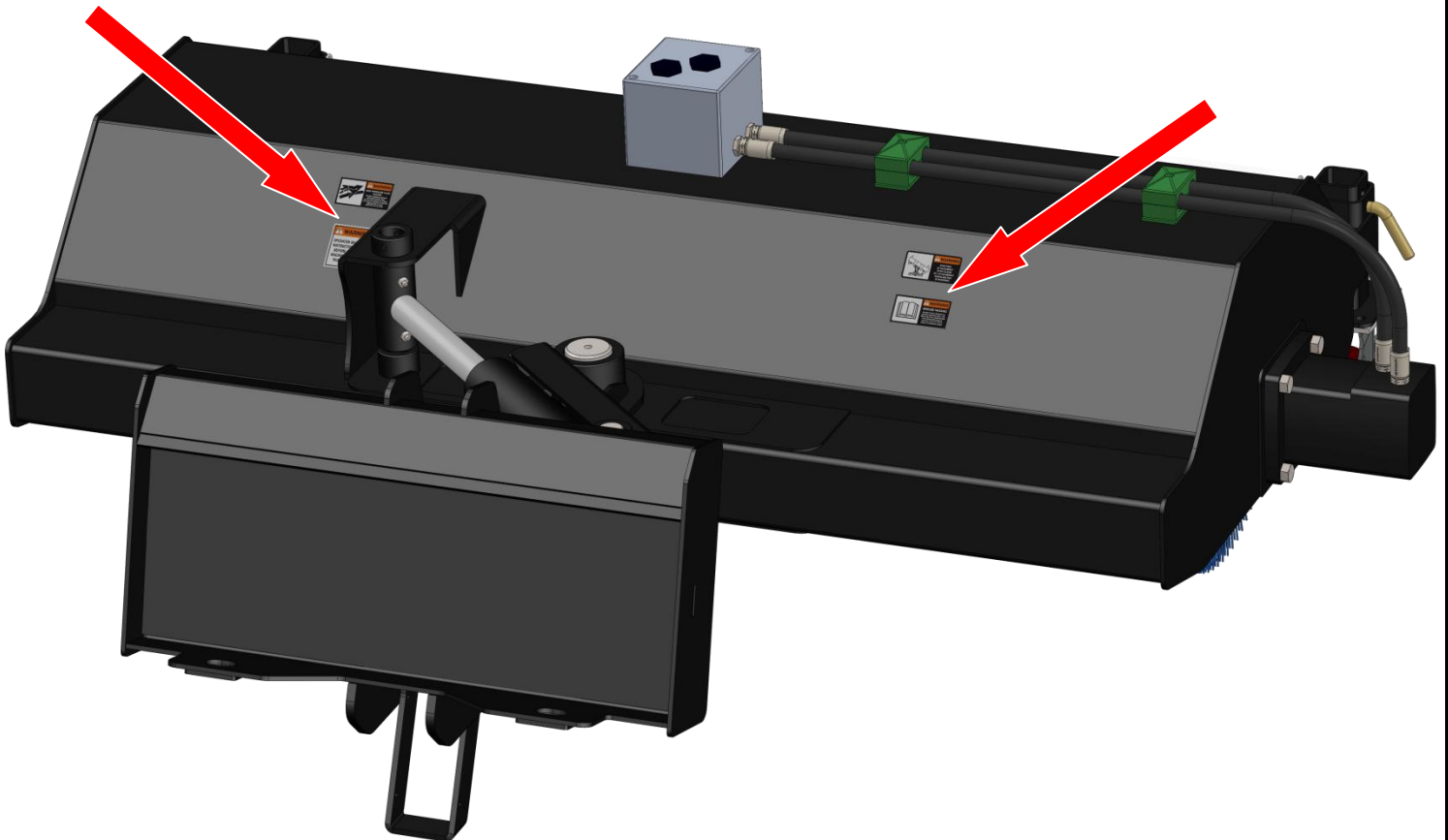
- Keep all step plates, grab bars, pedals, controls, etc. free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating..
- Do not allow riders on the attachment or the Power Source.
- Do not operate the equipment from anywhere other than the correct operators position.
- Never leave equipment unattended with the engine running or with attachment in a raised position.
- Do not alter or remove any safety feature from the Power Source or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

SAFETY DECALS AND LOCATION

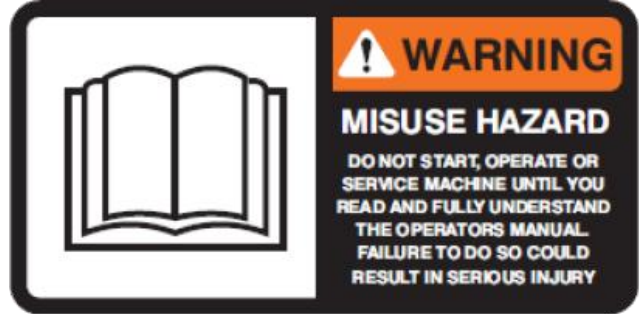
The diagram on this page shows the location of the decals. The decals are identified by their part numbers, with reductions of the actual decals located on the next page. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the attachment. They contain information you need to know for both safety and product longevity.

INSTRUCTIONS

- Keep all safety decals clean and legible.
- Replace all missing or damaged safety decals.
- When replacing parts with safety decals attached, new parts must also have safety decals attached.
- Safety decals are available from Skid Pro Attachments.



MCRS15 SERIES - SAFETY DECALS



*Some of these decals may not appear on your specific attachment

POWER SOURCE SPECIFICATIONS



IMPORTANT - Exceeding any of the maximum recommended power source specifications can result in damage to this product and void all warranties.

Recommended HP on Power Source

- MCRS15-Series Rotary Sweepers are recommended for use with 30 - 75 HP Machines

Hydraulic specifications

- Hydraulic Flow Rating of Motor 12 to 22 GPM
- **Maximum** Hydraulic Pressure 4,000 psi

Electrical specifications

- 12Volt power supply for relay switch

To maintain required Power Source stability add Rear Counterweights.
Note: - See Power Source manuals for correct weight needed.
DO NOT EXCEED MAXIMUM WEIGHT LIMIT.

MCRS15 ROTARY SWEEPER SPECIFICATIONS

Model	Overall Width	Overall Height	Replacement Wafers (Qty.)	Angle/Full Angled Width	Shipping Weight	Recommended HP Rating
MCRS1548-MSS100	60 3/4"	29"	42 Wafers + 41 Spacers	0-32 Deg./61" (Bi-directional)	415Lbs	30 - 75
MCRS1548-BO463	60 3/4"	29"	42 Wafers + 41 Spacers	0-32 Deg./61" (Bi-directional)	446Lbs	30 - 75
MCRS1554-MSS100	66 3/4"	29"	48 Wafers + 47 Spacers	0-32 Deg./66" (Bi-directional)	429Lbs.	30 - 75
MCRS1554-BO463	66 3/4"	29"	48 Wafers + 47 Spacers	0-32 Deg./66" (Bi-directional)	461Lbs.	30 - 75
MCRS1560-MSS100	72 3/4"	29"	52 Wafers + 51 Spacers	0-32 Deg./71" (Bi-directional)	444Lbs.	30 - 75
MCRS1560-BO463	72 3/4"	29"	52 Wafers + 51 Spacers	0-32 Deg./71" (Bi-directional)	475Lbs.	30 - 75

* MSS100 = Standard Mini Skid Steer mount plate
 BO463 = Mini Bobcat Style Mount plate

BOLT TORQUE SPECIFICATIONS

Diameter (Inches)	Wrench Size	MARKING ON BOLT HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383

Diameter & Thread Pitch (Inches)	Wrench Size	FINE THREAD MARKING ON HEAD			
		Metric 8.8		Metric 10.9	
		N-m	lbs-ft	N-m	lbs-ft
		6 x 1.00	10 mm	8	9
8 x 1.00	13 mm	21	16	29	22
10 x 1.25	16 mm	41	30	57	42
12 x 1.25	18 mm	75	55	103	76
14 x 1.50	21 mm	118	87	163	120
16 x 1.50	24 mm	181	133	250	184
18 x 1.50	27 mm	263	194	363	268
20 x 1.50	30 mm	367	270	507	374
22 x 1.50	34 mm	495	365	684	505
24 x 2.00	36 mm	623	459	861	635
30 x 2.00	46 mm	1258	928	1740	1285

Diameter & Thread Pitch (Inches)	Wrench Size	COARSE THREAD MARKING ON HEAD			
		Metric 8.8		Metric 10.9	
		N-m	lbs-ft	N-m	lbs-ft
		6 x 1.00	10 mm	8	9
8 x 1.25	13 mm	20	15	27	20
10 x 1.50	16 mm	39	29	54	40
12 x 1.75	18 mm	68	50	94	70
14 x 2.00	21 mm	109	80	151	111
16 x 2.00	24 mm	169	125	234	173
18 x 2.50	27 mm	234	172	323	239
20 x 2.50	30 mm	330	244	457	337
22 x 2.50	34 mm	451	332	623	460
24 x 3.00	36 mm	571	421	790	583
30 x 3.00	46 mm	1175	867	162	1199

MOUNTING & SET UP



WARNING! - READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the Power Source thoroughly before beginning installation, operation, or maintenance. FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE POWER SOURCE MANUAL(S).

1. Inspect the attachment for shipping damage. If damage does exist, do not operate until the damaged parts have been replaced or repaired.
2. Place this product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.
3. Refer to the Power Source operator's manual(s) for your loader and quick-attach and follow the mounting instructions contained therein.
4. When shipped the hydraulic cylinder(s) on this product may contain air, or an air-fluid mixture. Failure to remove all the air from the hydraulic cylinder(s) can cause uneven, jerky cylinder movement when the hydraulic controls are being operated and unwanted cylinder movement when the controls are not being operated.

*See Maintenance section for annual maintenance and Wafer replacement.

MOUNTING & SET UP (CONT.)



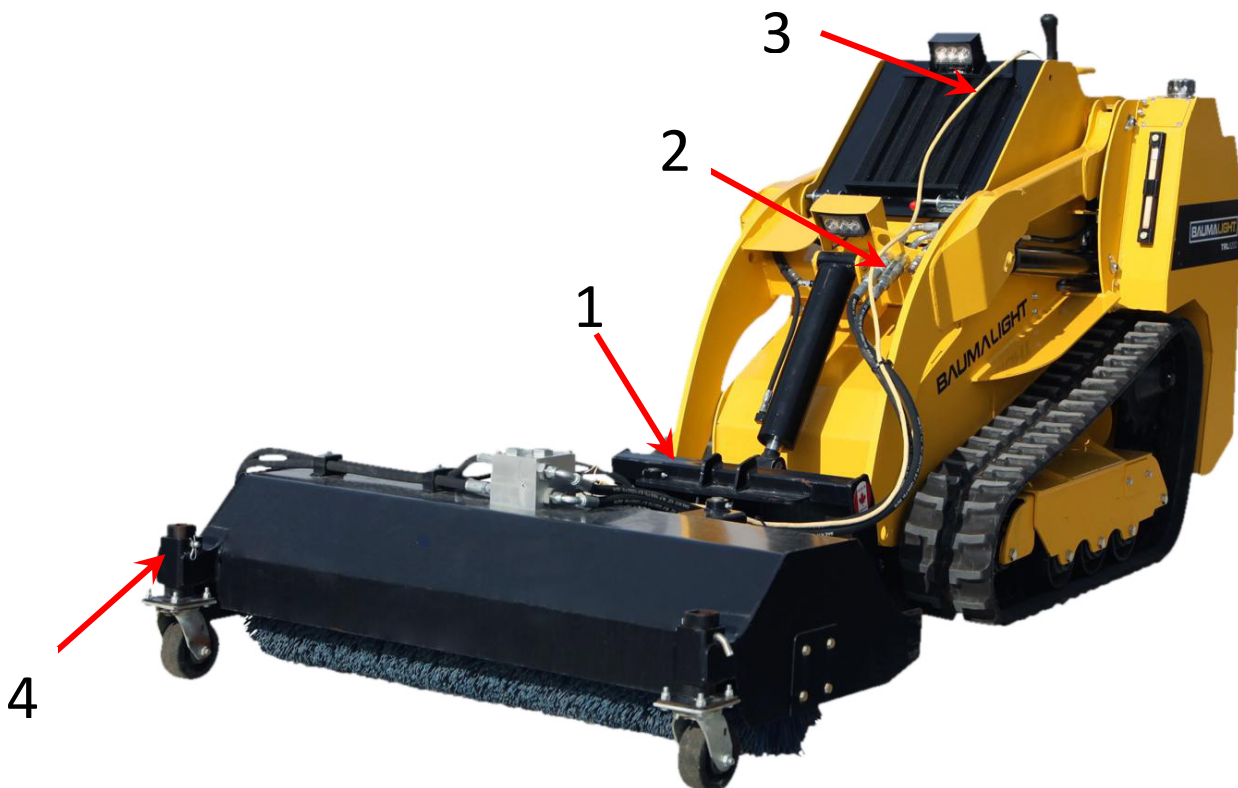
READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals before beginning any setup. Know and obey all O.S.H.A. regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

- **WARNING!** Failure to obey the following procedures could result in death or serious injury.
- Never operate this product where visibility is obstructed the operated view.
- Always operate at a safe operating speed for the surrounding conditions.
- **IMPORTANT** - Striking objects or sweeping materials other than aggregate can result in damage to this product and may void warranties.

Set up

1. Complete mounting procedure as specified on previous page.
2. Connect hydraulic hoses with quick couplers to available ports.
3. Connect 12v plug to power source.
4. Adjust casters to desired sweeping aggressiveness.



ROTARY SWEEPER OPERATION

Basic operation

With the mounting and set up done, you are ready to use your sweeper.

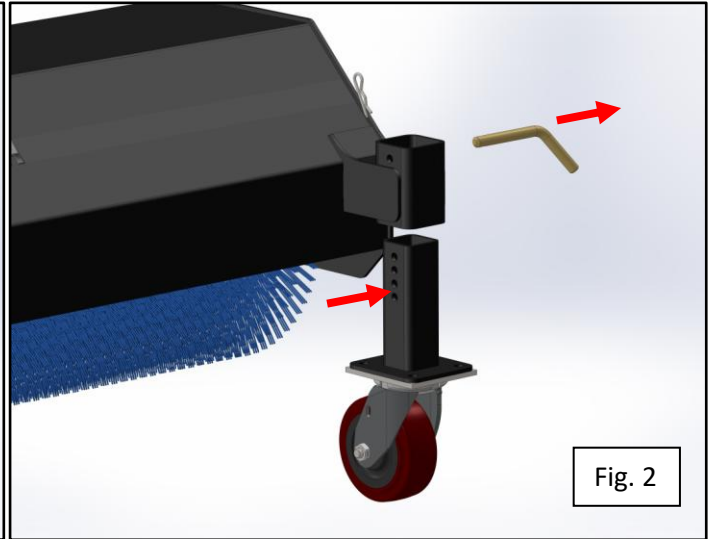
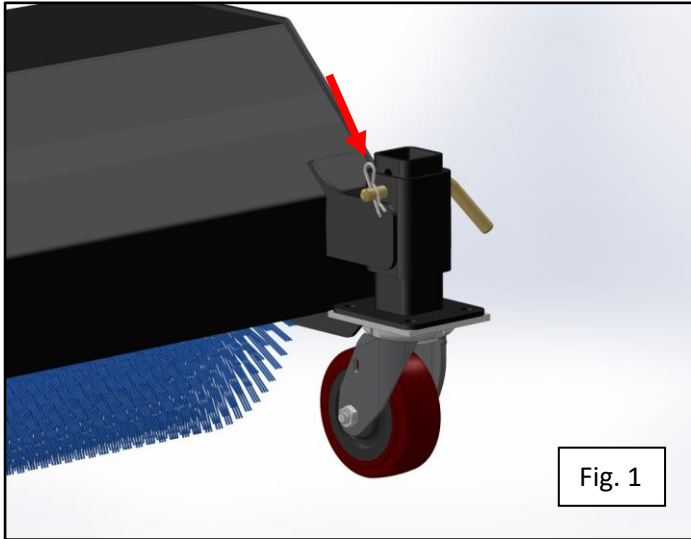
1. Begin with sweeper slightly above the ground before engaging sweeper brush.
2. Engage sweeper brush and lower slowly onto desired surface.
3. The 12v switch (located in the cab) will allow you to angle left and right while brush is in motion. This will allow you to angle your brush without having to stop the rotation - **See Fig. 1**



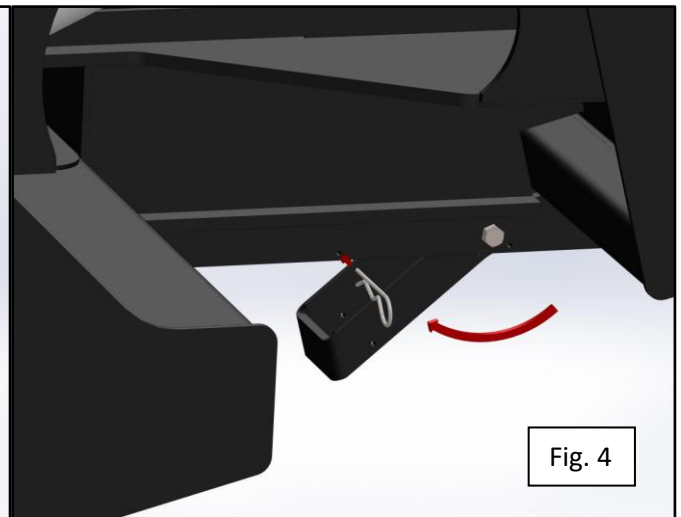
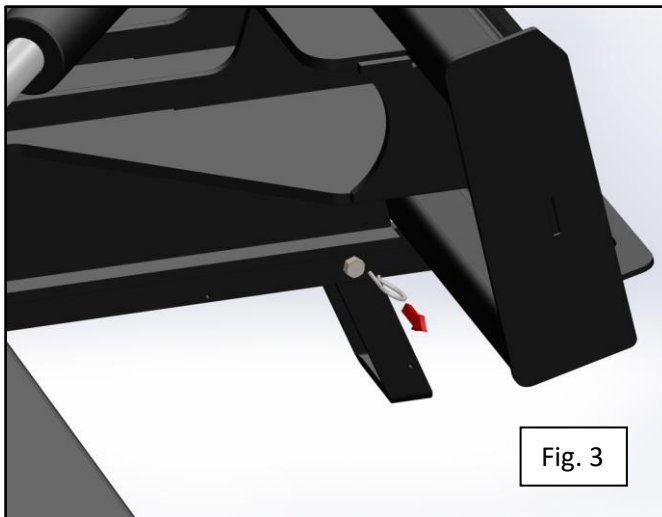
Fig. 1

Basic operation (con't.)

Caster Adjustment & Kick Stand



As you use your MCRS15, you may want to adjust the casters to increase or decrease the height of the brush head. With the sweeper lifted above the ground. Remove the retainer pin shown in **Fig. 1**. While holding the caster assembly. Pull the adjustment pin (**Fig. 2**). Raise or lower the caster assembly until it lines up with the desired holes. Replace the adjustment & retainer pin.



The MCRS15 is equipped with a Kick Stand to level the unit and keep it off of the ground when not in use. Pull the retainer pin shown in **Fig. 3**. Raise the kick stand & replace the retainer pin when the corresponding hole lines up to stow it away during use. (**Fig. 4**)

MAINTENANCE

This section covers regular maintenance. Regular maintenance is required to insure that your rotary sweeper performs as it should and stays in good operating condition.

BEFORE EACH USE

- Make sure that all other fasteners are in place and are performing their specified function.
- Make sure that all hydraulic fittings are tightened and that there are no leaks in any fittings or hoses.
- Make sure that all safety decals are in place, are clean, and are legible. (See the safety decals and location)
- Check all wear parts, replace any damaged or excessively worn parts.
- Apply grease at grease points if necessary (See below)

GREASE POINTS

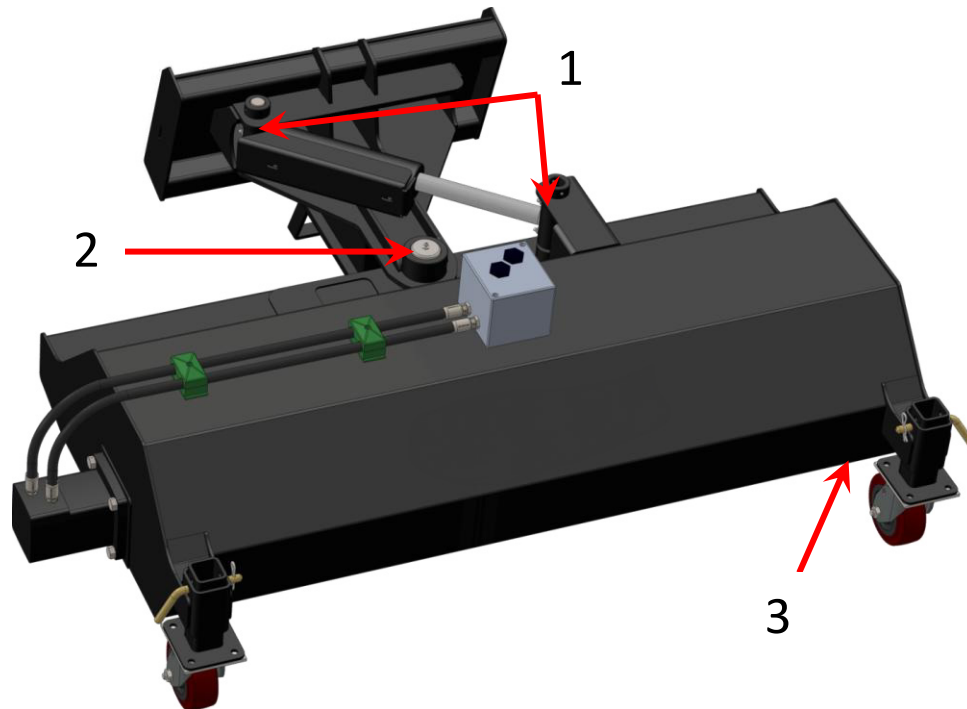
Grease points are usually equipped with a grease nipple; via a greaseable pin or Bushing. Grease should be applied to the grease points after every 20 hours of use. Always check to make sure that all components at grease points are moving with ease and there is no friction or visible rust forming.

Grease points will be found in the following locations.

(As shown in the diagram on the next page)

- 1. At each hydraulic cylinder end**
- 2. Center pivot pin**
- 3. Sealed bearing, opposite the motor**

GREASE POINT DIAGRAM



WAFER REPLACEMENT

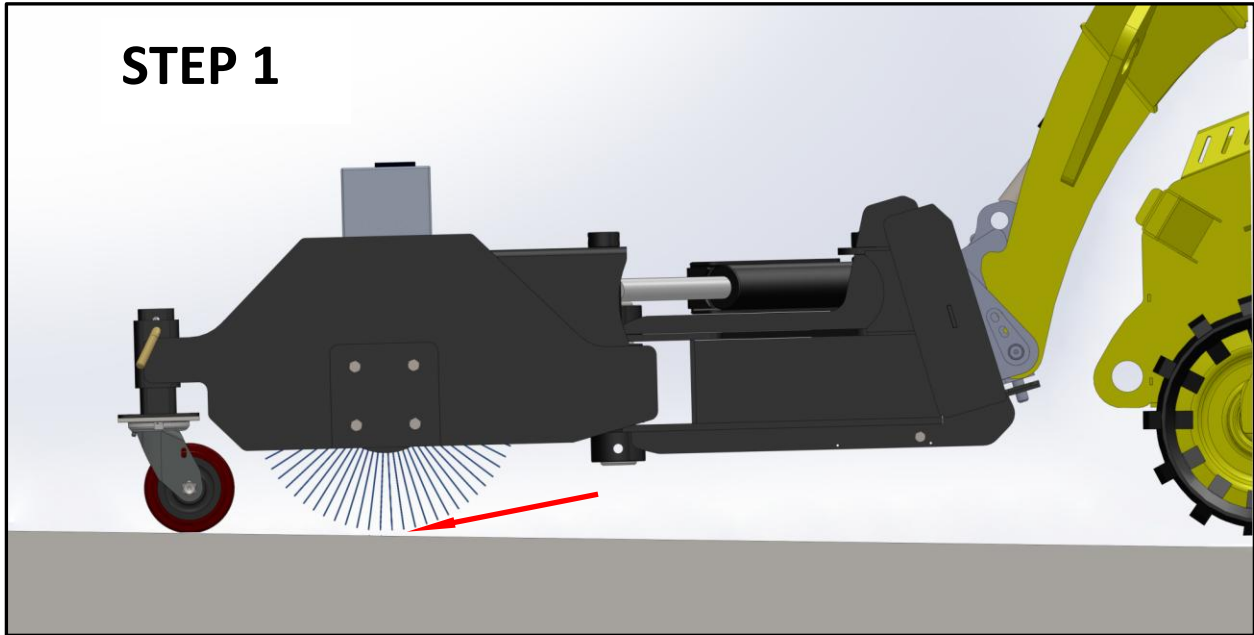
After some time, the brushes on your MCRS15 will get worn. At which point it is time to replace them. This is normal and expected after significant use. The brushes on the brush head are made up of wafers. The total of replacement wafers is noted in the specification section (Pg. 10) of this manual for specific model lengths. The following steps will guide you through the wafer replacement process.

Tools Required -

- **Cordless drill or equivalent**
- **Socket(s) & driver adapter**
- **Combination wrenches or adjustable wrench**

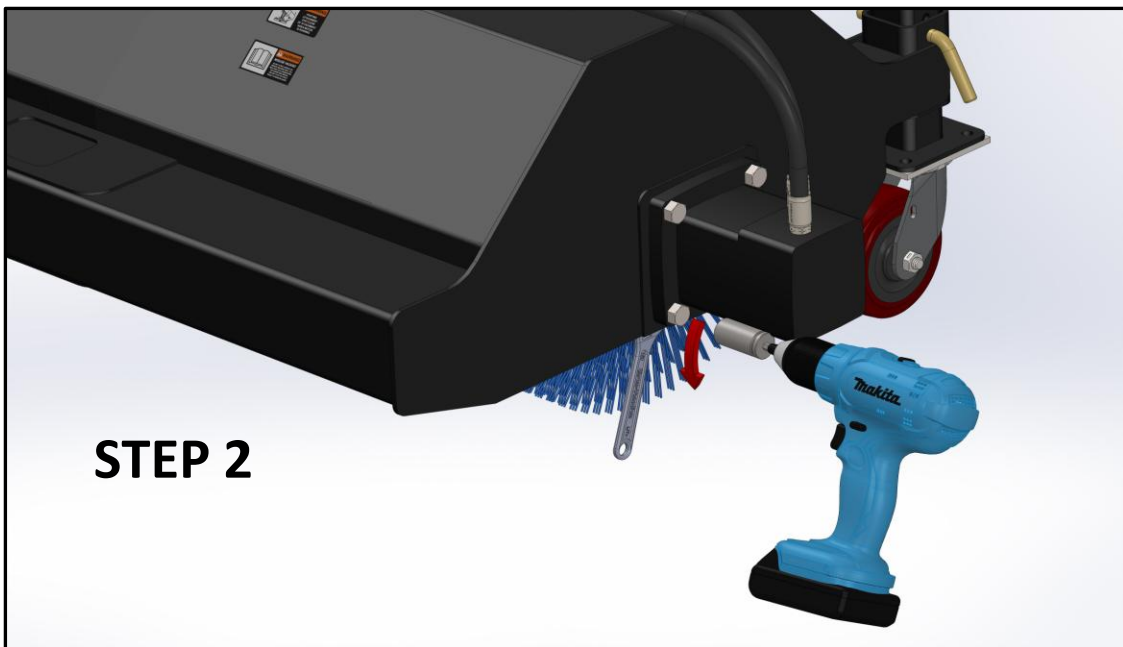
WAFER REPLACEMENT (Cont.)

STEP 1



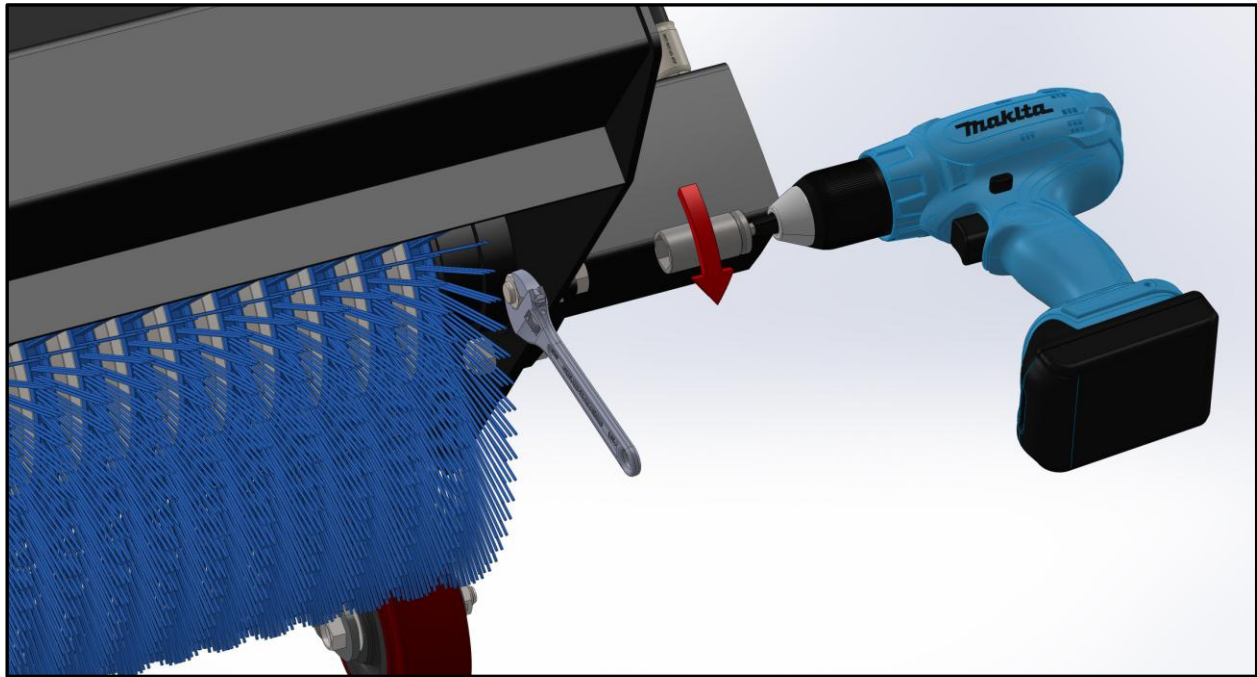
Mount sweeper as detailed on Pg. 12-13 leaving the hydraulic hoses disconnected to prevent accidental engagement. Position the sweeper on an even surface so that it is resting on the casters and the brush head is elevated slightly above the ground. Allowing a little space will prevent any tension during the removal of the brush head. Shut off machine, leaving the attachment in this position.

STEP 2

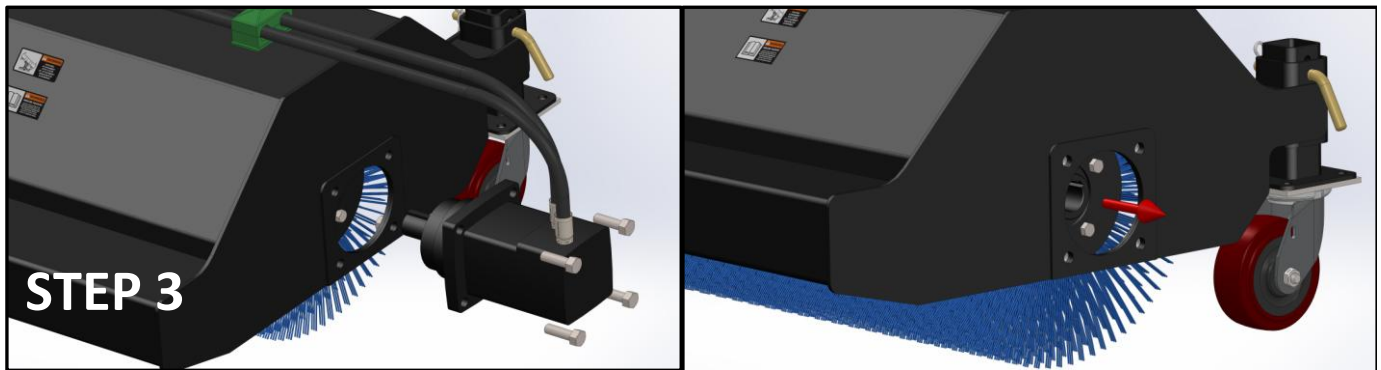


On the motor side; Locate the 4 hex bolts attaching the brush head to the motor. Set up your drill or equivalent with an appropriately sized socket and driver adapter.

WAFER REPLACEMENT (Cont.)

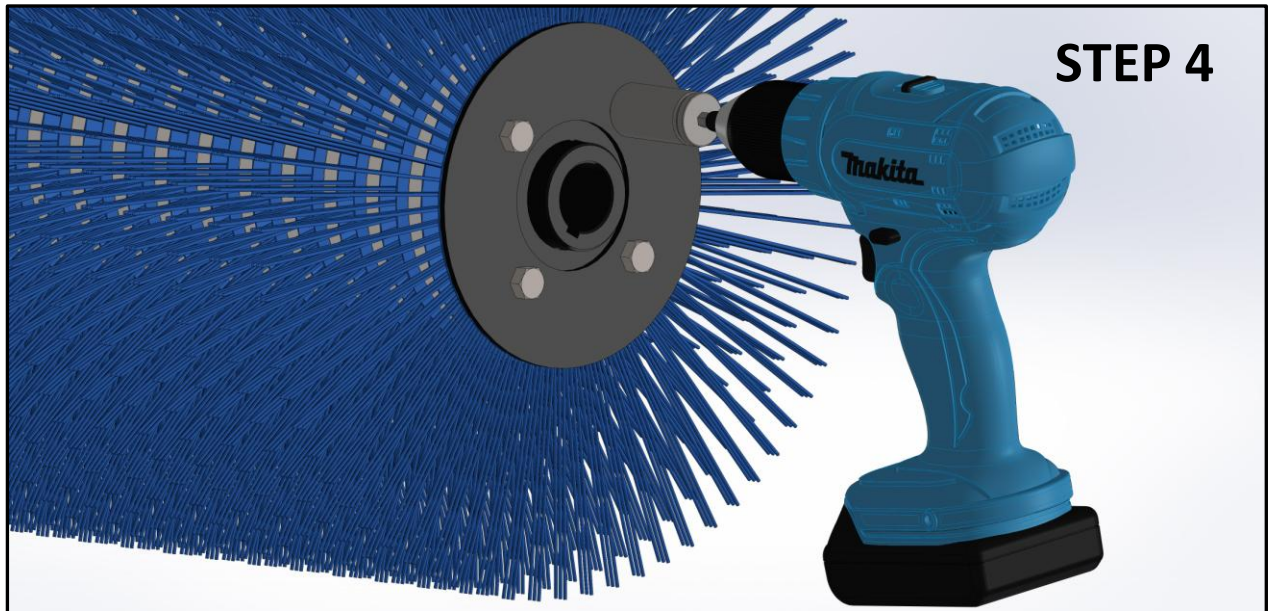


Undo each 4 outside bolts on endplate while using a box end or adjustable wrench to prevent corresponding nut from spinning in place.

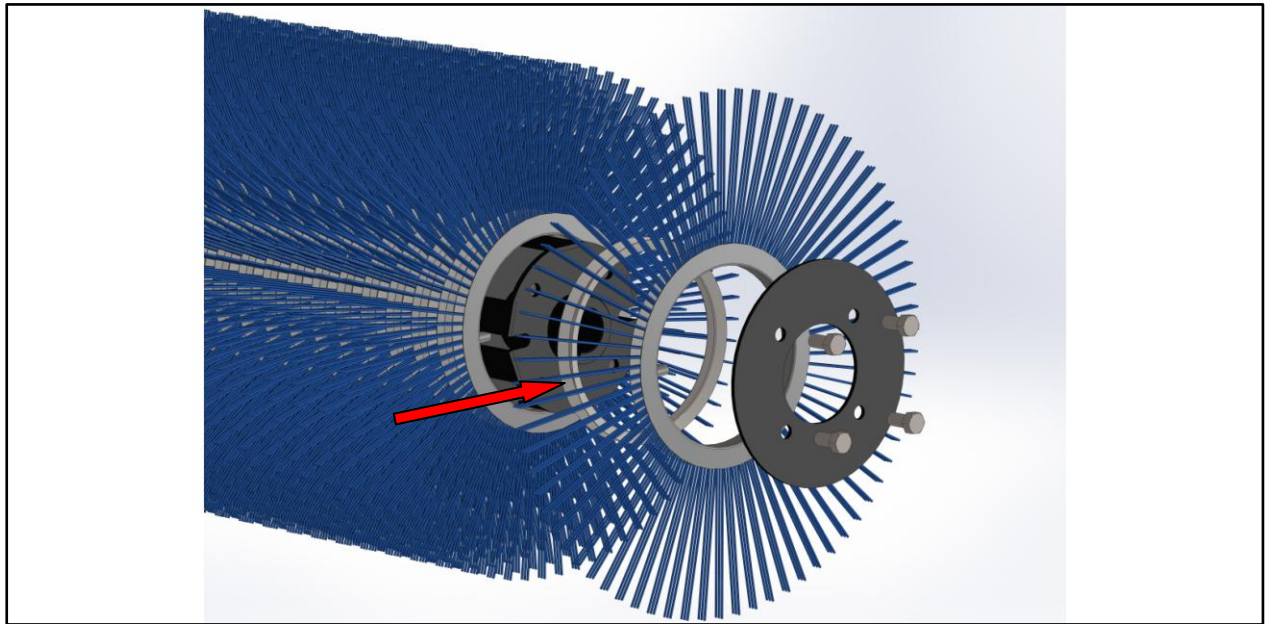


Once you get to the last remaining bolts, pull the motor outwards. With the hoses attached, rest the motor out of the way, being careful not to damage the hoses. With your hands. Reach under and pull the Brush head towards you. The other end of the brush head should give way, allowing it to drop. At this point, the main frame can be lifted or moved out of the way. Leaving the brush head free to work on without any obstructions

WAFER REPLACEMENT (Cont.)

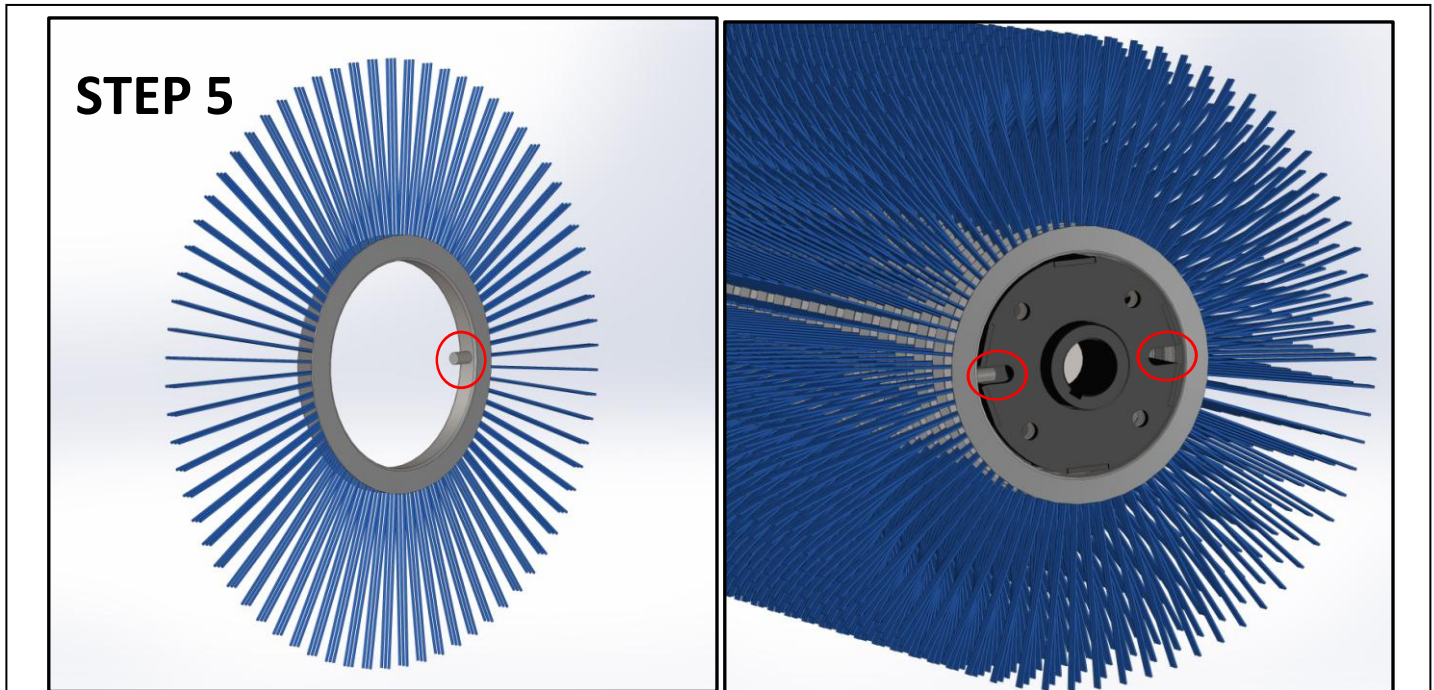


Undo each 4 nuts shown and remove the endplate.



With the endplate removed. Slide used wafers & spacing collars off of the end. Discard old wafers & set the spacing collars aside for re-use. (Shown with arrow above)

WAFER REPLACEMENT (Cont.)



With all of the old wafers removed and discarded. You can now begin to install your new wafers, making sure to line up the studs on the wafers with 1 of the 2 channels on the Brush Head. Begin with 1 wafer and then one spacer collar (set aside from last step) continue this alternating pattern until you reach the last wafer in your replacement kit.

Finishing up

Once you've finished installing all of your wafers as instructed, you can close off the brush head and re-attach the end plate with the 4 nuts as before. Some compression of the wafers may be required during this step.

***See specifications section for bolt torque specification.**

Repeat Steps 1 through 3 in reverse succession to reinstall the brush head making sure to properly align the keyway on the motor shaft with the slotted bushing on the brush head.

Once all your bolts have been tightened as per specification; Your sweeper is ready to get back to work.

Wafer replacement kits

Model	50/50 poly wire kit	Poly Only kit	Wire Only kit	Replacement Wafers (Amount)
MCRS1548	MWK1548PW	MWK1548PO	MWK1548WO	42 Flat wafers
MCRS1554	MWK1554PW	MWK1554PO	MWK1554WO	48 Flat wafers
MCRS1560	MWK1560PW	MWK1560PO	MWK1560WO	52 Flat wafers

*Above are Wafer kit Part Codes for the corresponding sized Units
Spacer collars are sold separately – MWK15SC

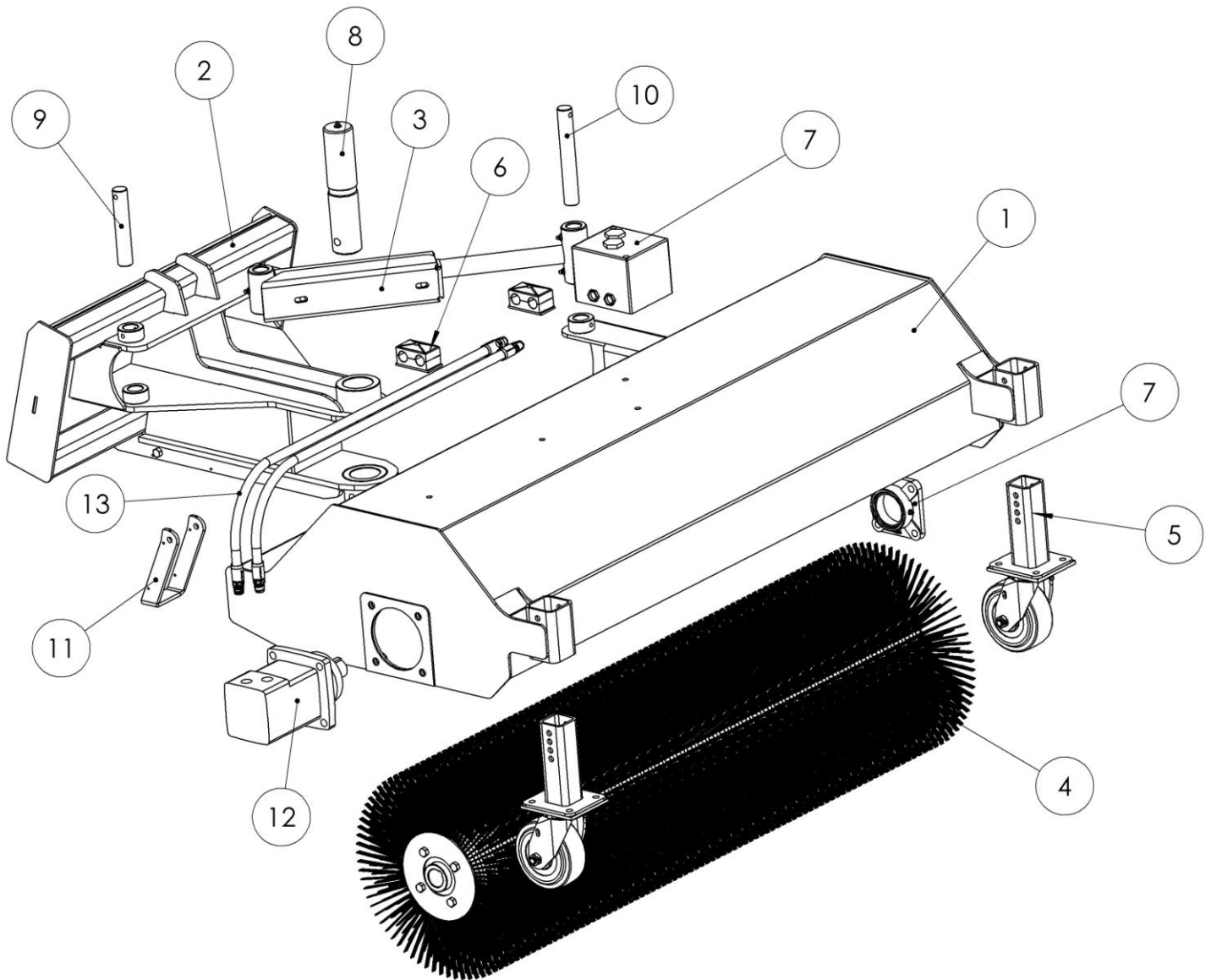
For Wafer replacement kits, please contact **Skid Pro Attachments** at:

877-378-4642 or **sales@skidpro.com**

PARTS ILLUSTRATIONS

The following diagrams are a breakdown of all major components & parts for the MCRS15 Series Rotary Sweepers

Weldments & Sub-Assemblies



(Bill of Materials on next Page)

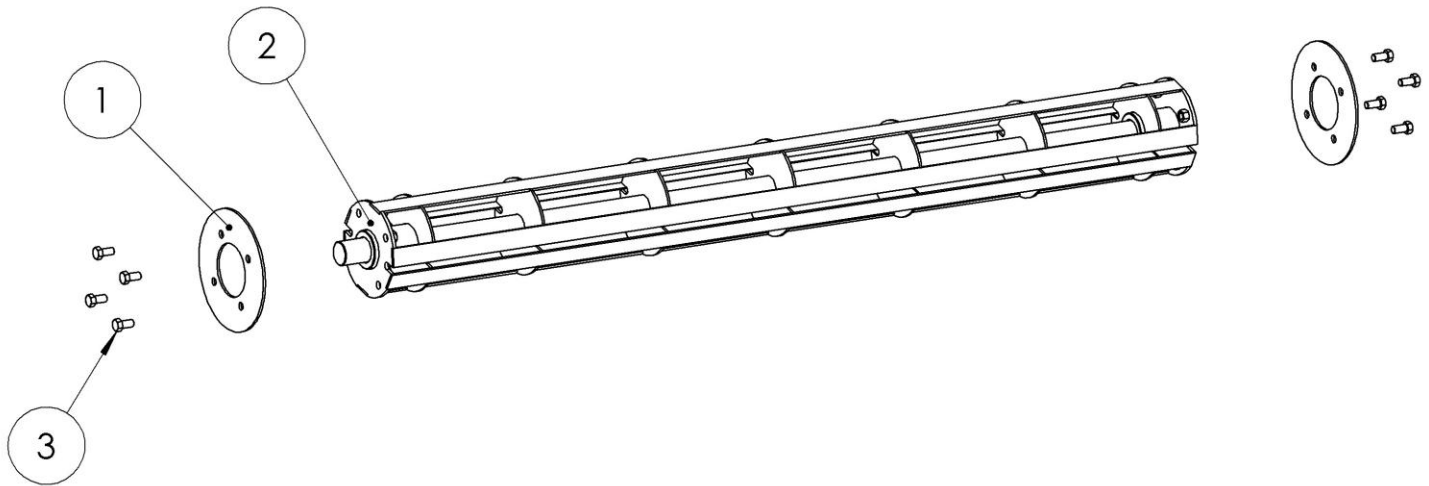
Weldments & Sub-Assemblies (Cont.)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MRS15-FE	Sweeper Front end Housing	1
2	MURS15-BE	Sweeper Back End	1
3	ABM-28	Hyd. Cylinder	1
4	MCRS15-BH	Sweeper Brush Head	1
5	MCRS15-CA	Sweeper Caster Assembly	2
6	MWOHB	Hose Mount	2
7	F206	Sealed Bearing	1
8	MCRS15-BE-011	Center Pivot Pin	1
9	MCRS15-BE-019	Rear Cyl. Pin	1
10	MCRS15-FE-016	Front Cyl. Pin	1
11	MCRS15-BE-020	Kick Stand	1
12	MCRS15-HM	Hyd. Motor - 350160Y8120AAAAA	1
13	MCRS15-HK-1	Hyd. hose kit - Motor to Valve	1
14	MCRS15-HK-2	Hyd. hose kit - Valve To Cylinder (Not Shown)	1
15	MCRS15-HK-3	Hyd. Hose Kit - Valve to Skid Steer - (Not Shown)	1
16	MCRS15-12VK	12 Volt Contoller wiring kit - (Not Shown)	1

*Breakdown for MCRS15-BH & MCRS15-CA (Item #'s 4 & 5) on the following pages

MCRS15-BH

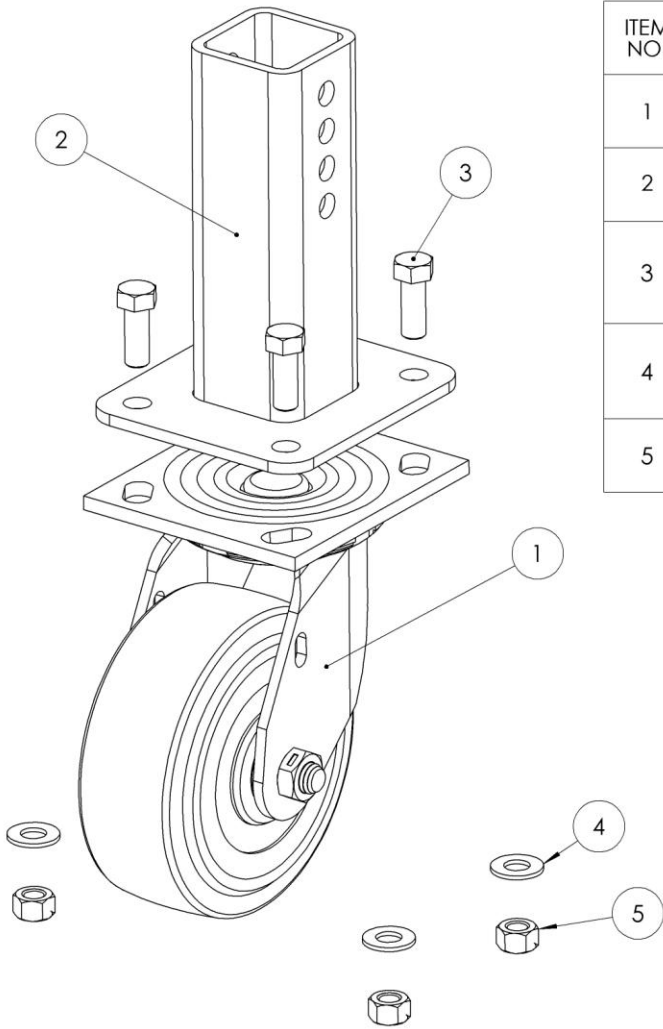
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MCRS15-BH-003	Brush Head End Plates	2
2	MRS15-BH-001	Brush Head Shaft Assembly	1
3	HBOLT 0.3750-24x0.75x0.75-N	Hex Bolt	8



*MCRS15-BH Shown without wafers or Spacers

For information on Wafer Kits See Page. 22

MCRS15-CA



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Colson-4.05109.929	Caster	1
2	MRS15-CA-001	Caster tubing Assembly	1
3	HBOLT 0.3750-24x1x1-N	Hex Bolt	4
4	Preferred Narrow FW 0.375	Washer	4
5	HNUT 0.3750-16-D-N	Hex Nut	4

TROUBLESHOOTING

Problem	Possible Cause	Solution
Hydraulic Malfunction	Low fluid level	Check/Add hydraulic fluid
	Improper hose hook-up	Check and correct line connection
	Broken or damage hydraulic line	Replace damaged line
	Cylinder leaking	Replace cylinder seals
	Fluid heating	Check for restricted fluid flow
	Cold hydraulic fluid	Allow fluid to warm up to operated temperature
Wafers/Brushes Wear Prematurely	Too much pressure on sweeper/Brush head	Tip sweeper back to ride on casters
Not angling	Damaged, disconnected wire/Line	Check and correct line/wire connection

If you have problems not listed here please contact Skid Pro Attachments.

SKID PRO ATTACHMENTS

807 McKay Ave S.
 Alexandria, MN 56308
 Phone: 877-378-4642
 Email: sales@skidpro.com
 Website: www.skidpro.com

Skid Pro Attachments **Warranty Policy**

All equipment sold by Skid Pro Attachments is warranted to be free from defects of material and workmanship. The company will not be liable for indirect or consequential damages. The company's liability will be limited exclusively to replacing or repairing without charge, at its factory or elsewhere, at its discretion. Any material or workmanship defects that becomes apparent within one year from the date which the equipment was purchased. The buyer by the acceptance of the equipment will assume all liability for any damages that may result from the use or misuse by his employees or others.

All claims must be reported to a Skid Pro Attachments representative prior to any repairs or modification.

All claims are subject to a Skid Pro Attachments representative approval.

All claims must be accompanied by pictures of the faulty product.

Skid Pro Attachments warranty will not cover product that has been misused or modified in an unauthorized manner.

Skid Pro Attachments warranty will not cover normal wear on attachments.

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