IRONCRAFT

BROOMS

HYDRAULIC ANGLE, MANUAL ANGLE, PICK UP, & MINI



OPERATION & PARTS MANUAL

Read and understand the manual. This manual provides information and procedures to safely operate and maintain the Brooms.

AUG 2026

REGISTER YOUR PRODUCT

IRONCRAFT

423-405-5150

MODEL		WEIGHT	
PART		HP RANGE	
SERIAL			
HYDRAULIC PRESSURE		HYDRAULIC FLOW	

WWW.IRONCRAFTUSA.COM

Please see the inside of the back cover for instructions of where to find your model and serial number.

⚠WARNING

To prevent personal injury or even death, be sure you read and understand all the instructions in this manual and other related OEM equipment manuals! This attachment if not used and maintained properly, can be dangerous to users unfamiliar with its operation. Do not allow operating, maintaining, adjusting, or cleaning of this attachment until the user has read this manual and has developed a thorough understanding of the safety precautions and functions of the unit. DO NOT modify or use this attachment for any application other than that for which it was designed. Attachments maintained or operated improperly or by untrained personnel can be dangerous, exposing the user and/or bystanders to possible serious injury or death.

Purchase Date:	
Dealer Name:	
Address:	
Phone Number:	

WELCOME

Thank you for choosing IRONCRAFT. This attachment has been designed and manufactured to meet the needs of discerning users. We are committed to providing you with a heavy duty product that will provide years of satisfaction and safe operation.

This manual will provide instructions on how to safely operate and maintain this attachment. All users must read and understand this manual before operating this attachment. Upon reading this manual, all users should sign the “Safety Acknowledgment Form” at the end of this manual.

Please record your model and dealer information on the inside front cover. You will be asked to provide this information when ordering parts or requesting service. If you need more information on this product, contact your local dealer or visit *WWW.IRONCRAFTUSA.COM.*

Sincerely,

ironCraft

Models	Bristle Qty	GPM	Weight	Bristle Type	Broom Angles	Size	Core
XHAB48 XHAB60 XHAB72 XHAB84 XHAB96	32 38 44 50 56	10-15 15-25	785 lbs 833 lbs 912 lbs 1,029 lbs 1,101 lbs	POLY OR WIRE OR MIXED	30 Degrees Left OR Right	48” 60” 72” 84” 96”	8” CORE 26” BRISTLE OR 10” CORE 32” BRISTLE
XMAB48 XMAB60 XMAB72 XMAB84 XMAB96	32 38 44 50 56	10-15 15-25	770 lbs 818 lbs 897 lbs 1,012 lbs 1,055 lbs	POLY OR WIRE OR MIXED	30 Degrees Left OR Right	48” 60” 72” 84” 96”	8” CORE 26” BRISTLE OR 10” CORE 32” BRISTLE
PUBROOM48 PUBROOM72 PUBROOM84	23 37 43	10-15 15-25	875 lbs 1,133 lbs 1,276 lbs	POLY OR WIRE OR MIXED	None	48” 72” 84”	8” CORE 26” BRISTLE

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ICBRMANU-V3M0826 / THIRD EDITION / AUG 2026 Approval: J. Williams

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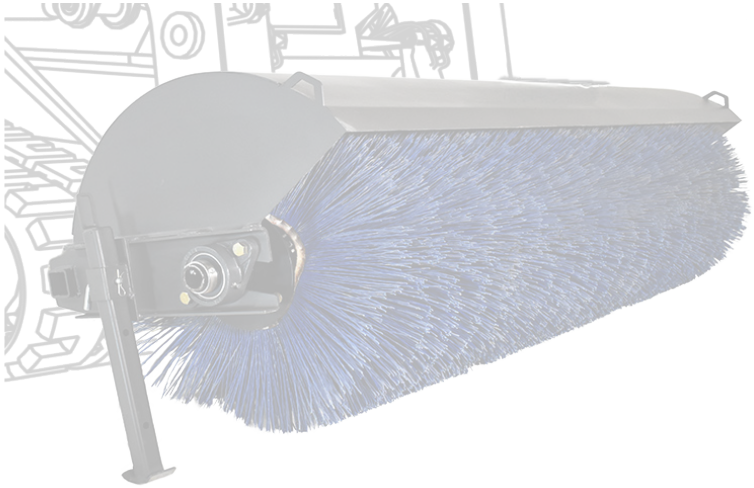
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IMPORTANT WARRANTY DISCLAIMERS

ATTENTION: If your attachment has control valves, cylinders, gearboxes, or motors and they are opened or disassembled, the WARRANTY for that item WILL IMMEDIATELY BE VOIDED!

HYDRAULIC FLUID STATEMENT: Check your machine’s hydraulic level and add hydraulic fluid if necessary before each use. Inspect for leaks, and repair if necessary. **Always use your machine’s manufacturer recommended hydraulic fluid in your machine!** Fluid must be clean and debris free. If damage occurs from debris in hydraulic fluid flowing from your machine to our attachment it will VOID the warranty on any cylinders, motors, couplers, manifolds &/or valves (relief, lock, selector, check and flow control) downline from that flow.

WARNING: This product can expose you to chemicals including benzene and mineral oils, which are known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

SECTION 2

SAFETY INFORMATION

The following terms may be used interchangeably throughout this manual.

Term	Alternate Terms Used
Broom	implement, attachment, product, sweeper
Machine	skid steer loader, skid steer, tractor, loader, host machine
Operator	user, personnel

The **Broom** is designed and manufactured with safety in mind. However, improper use and operator error can result in death or serious injury. It is important that you read and fully understand the safety instructions and operating procedures presented in this manual before operating this broom. Accident prevention is a combination of good judgment, common sense, awareness and proper training!

⚠ BEFORE YOU OPERATE THIS BROOM:

KNOW how to safely operate your machine.

READ and UNDERSTAND the safety instructions and operating procedures contained in this manual.

ACKNOWLEDGE your understanding of all safety instructions presented in this manual by signing the “Safety Acknowledgment Form” at the end of this manual.

Although every effort has been made to ensure a safe product, every possible circumstance that could pose a potential hazard cannot be anticipated. The warnings presented in this manual and on this product, are therefore not all-inclusive.

In addition to the safety messages presented in this section, you must also read and understand the safety messages presented in the other sections of this manual.

This manual and the decals on this machine use safety symbols, hazard labels, pictograms and color coded signal words to alert you to potential hazards that may cause severe injury or death if a safety instruction is ignored.



SAFETY ALERT SYMBOL - This symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

HAZARD CLASSIFICATIONS

Hazards are identified by the “Safety Alert Symbol” and followed by the signal word “DANGER”, “WARNING”, or “CAUTION”.

DANGER

Indicates an imminently hazardous situation which,
if not avoided, will result in death or serious injury.
This signal word is limited to the most extreme situations.

WARNING

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

CAUTION

Indicates a potentially hazardous situation which,
if not avoided, may result in minor or moderate injury.

NOTICE

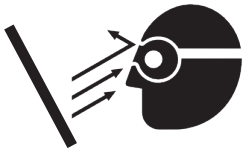
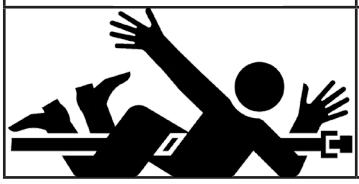
Indicates a situation which may cause damage to equipment or property.
Messages are not related to personal injury.

Safety Instructions

Indicates specific safety-related instructions or procedures.

2.1 SAFETY SYMBOLS

Pictograms are graphic symbols meant to alert you of a potential hazard. Read and understand the hazard description for each of these symbols.

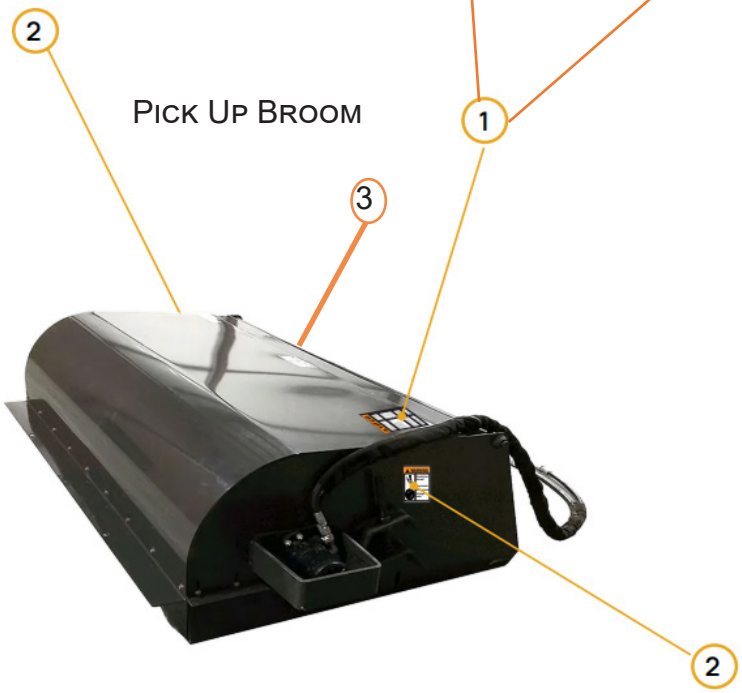
Pictogram	Description
	**PINCH HAZARD**: Keep clear of machine and attachment to prevent death or serious injury from pinching of moving parts.
	**FLYING DEBRIS HAZARD**: ONLY operate this attachment using a machine that has a shatter proof cab to prevent death or serious injury from objects being thrown.
	**OPERATING MANUAL**: Operators must read and understand the safety instructions in the operating manual to prevent death or serious injury.
	**EYE PROTECTION & CARDBOARD**: Operators and Maintenance personnel must wear proper eye protection and use cardboard or wood to investigate hydraulic leaks to prevent death or serious injury from being injected with high pressure hydraulic fluid.
	**HIGH PRESSURE FLUID INJECTION HAZARD**: Operators and Maintenance personnel must not place fingers or hands directly over a hydraulic leak to prevent death or serious injury from being injected with high pressure hydraulic fluid.
	**NO BYSTANDERS**: DO NOT operate this attachment near bystanders. Bystanders must stay back at least 100 feet from the attachment to prevent death or injury from objects being thrown.
	**CRUSH HAZARD**: DO NOT place any part of the body under the machine or attachment to prevent death or serious injury from being crushed .
	**ENTANGLEMENT HAZARD**: STAY BACK from machine while in use. Contact with rotating auger could kill or cause serious injuries.

Safety warning decals are located on this attachment near immediate areas of potential hazards. Operators must learn the meaning of each decal and know where to find the decal on the attachment.

HYDRAULIC ANGLE BROOM

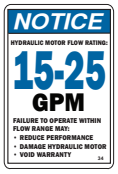


PICK UP BROOM



2.2 SAFETY DECALS

The safety decals affixed to this attachment are to keep you safe. DO NOT ignore these decals.
Read & understand each decal's safety message.
Follow these Safety Decal Instructions:

REF	DESCRIPTION	LABEL	QTY
1	WARNING COMBO		1
2	PINCH WARNING		2
3	AUXILIARY HYDRAULIC FLOW NOT TO EXCEED NOTICE LABEL		1

**WHEN ORDERING, CHOOSE THE PROPER DECAL FOR YOUR MODEL*

CONTACT YOUR LOCAL DEALER TO ORDER REPLACEMENT DECALS

⚠ **Decals must be kept clean and legible at all times.**

⚠ **Operators must inspect the attachment for safety decals.**

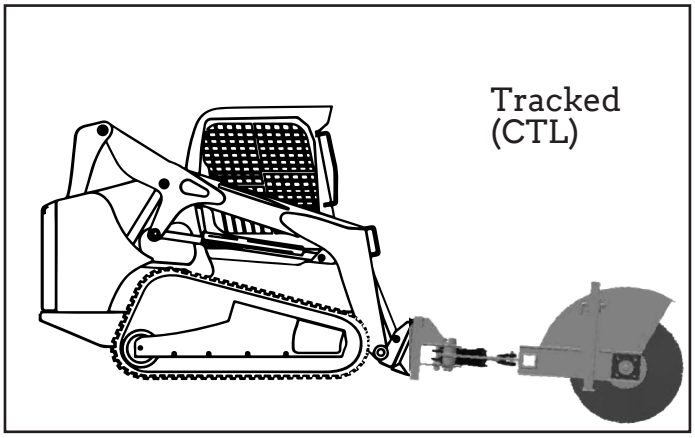
⚠ **Replace missing, worn or damaged decals immediately.**

⚠ **When using a hot pressure washer to clean this attachment make sure water jet is not too close to the decal as this may cause the decal to peel.**

⚠ **When replacing parts, be sure safety decals are in place prior to using the attachment.**

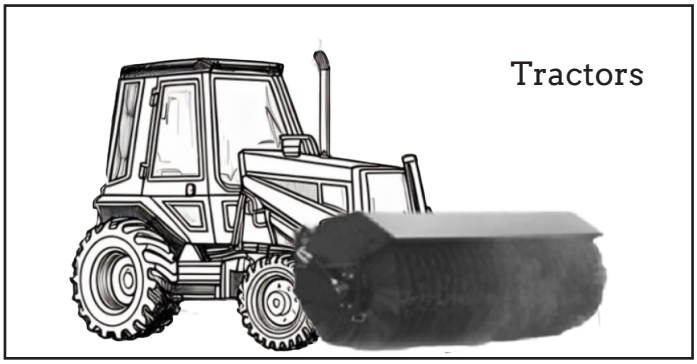
⚠ **Make sure metal surface is dry and free of dirt and grease before affixing decals to this attachment.**

2.3 SKID STEER LOADER REQUIREMENTS



VS.





A 4WD Tractor and/or using additional counterweights, a Tracked Skid Steer or Compact Track Loader (CTL) will provide superior stability in this application.

⚠ CAUTION

Make sure your machine is in good operating condition. Follow the operating instructions found in the operator's manual. Failure to do so could result in minor or serious injury.

Consult the host machine's rated operating capacity to ensure you have the proper lift capacity for optimal operation of this attachment.

Flow range MUST support the appropriate range.

2.4 PERSONAL PROTECTIVE EQUIPMENT (PPE)

All operators should wear hearing protection, safety glasses, hand protection and dust mask while operating this machine.



2.5 GENERAL SAFETY INSTRUCTIONS

MAKE SURE YOU FOLLOW THE GENERAL SAFETY INSTRUCTIONS THAT RELATE TO THE OVERALL OPERATION AND MAINTENANCE OF THIS ATTACHMENT. IT IS IMPORTANT THAT YOU READ AND UNDERSTAND EACH OF THESE MESSAGES TO PREVENT SERIOUS INJURY OR DEATH.

- **NEVER use drugs or alcoholic beverages while operating or servicing this attachment.**
- **ALWAYS operate this attachment during daylight or well-lit areas.**
- **We recommend using a high strength clear protective door panel when using with this attachment.**
- **To prevent the machine and attachment from rolling forward, stop the engine and set the parking brake when exiting the machine.**
- **Inspect attachment for loose or missing hardware prior to using.**
- **ALWAYS watch for overhead power lines.**
- **DO NOT place hands or feet under attachment while bristles are spinning.**
- **NEVER operate this attachment when bystanders are within 100 feet of your work area. Flying debris could cause serious injury or death.**
- **NEVER position your body or limbs under an unsupported broom.**
- **DO NOT allow children to play on or around this attachment at any time. Store this attachment in an area not frequented by children.**
- **ALWAYS wear the proper personal protection equipment while operating or servicing this attachment. NEVER operate or service this attachment with bare feet, sandals, or other light footwear.**
- **ALWAYS wear work gloves when handling this attachment to protect your hands.**
- **ALWAYS use eye protection while operating or servicing this attachment.**
- **DO NOT allow this attachment to contact buildings, utilities, large rocks or tree stumps or you may loose control of the machine.**
- **DO NOT operate this attachment during lightning or severe weather conditions.**
- **DO NOT allow riders on the machine or on this attachment.**

IMPORTANT FEDERAL LAWS AND REGULATIONS CONCERNING EMPLOYERS, EMPLOYEES, AND OPERATORS

This section is intended to explain in broad terms the concept and effect of the following federal laws and regulations. It is not intended as a legal interpretation of the laws and should not be considered as such.

U.S. PUBLIC LAW 91-596 (The Williams-Steiger Occupational Safety and Health Act of 1970) OSHA

This Act Seeks:

" ... to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources... "

Sec. S(a) Each Employer – **DUTIES**

(1) shall furnish to each of its employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to its employees.

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his or her own actions and conduct.

OSHA Regulations

Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved." These will include (but are not limited to) instructions to:

Keep all guards in place when the machine is in operation;

Permit no riders on equipment;

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain equipment.

Make sure no one is within 300 feet of machinery before starting the engine, engaging power, or operating the machine.

EMPLOYEE MACHINE OPERATING INSTRUCTIONS:

1. Securely fasten your seat belt if the machine has a ROPS.
2. Where possible, avoid operating the machine near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the machine smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by machine manufacturers.
9. When machine is stopped, set brakes securely and use park lock if available.

Child Labor Under 16 Years Old

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin # 102).

SECTION 3

OPERATING PROCEDURES

Your attachment may arrive from the factory strapped to a wood pallet and requires no final assembly. Use a steel band cutting tool to remove the steel straps.

⚠ CAUTION

Shipping straps are under great tension, and could lash out uncontrollably when cut causing injuries to your body or bystanders. Keep bystanders away and wear safety glasses and gloves while removing the steel straps.

3.1 PRE-OPERATING CHECKLIST

	Pre-Operating Checklist
☐	Broom is securely attached to the machine and pins are locked.
☐	Hydraulic hoses are connected and locked to the machine's hydraulic couplers with no signs of hydraulic fluid leaks present.
☐	Broom is in working condition and securely attached to the frame and all bolts and nuts are tight.
☐	Safety labels are present and legible.
☐	No material, rope, wire, etc. is obstructing or entangling the broom and frame.
☐	The area of operation is clear of bystanders and any obstacles that could damage the equipment or injury to the operator.
☐	The operator is of good health and not under the influence of any mind altering substances or alcohol.
☐	Lubricate all pivot joints with #2 lithium grease.
☐	Electrical Harness is connected to the machine from attachment. (if applicable)

3.2 HOW TO CONNECT BROOM ATTACHMENT

GENERAL ATTACHMENT METHOD

Refer to your machine operator's manual for specific instructions on how to connect and disconnect your attachment.

This attachment method refers specifically to skid steers. For all other attachment instructions, refer to the Original Equipment Manufacturer (OEM) for instructions.

1. Make sure the hydraulic lines are clear from the front side of the broom's attachment plate and that the locking pins on the skid steer quick attach coupler are in the unlocked position.
2. Drive the skid steer to the attachment plate and hook the top edge of the skid steer quick attach coupler under the lip of the broom's attachment plate. See figure 3.2a below.
3. Slowly raise and tilt back the skid steer quick attach coupler, moving upward until the broom's attachment plate is flat against the skid steer quick attach coupler. See figure 3.2a below.

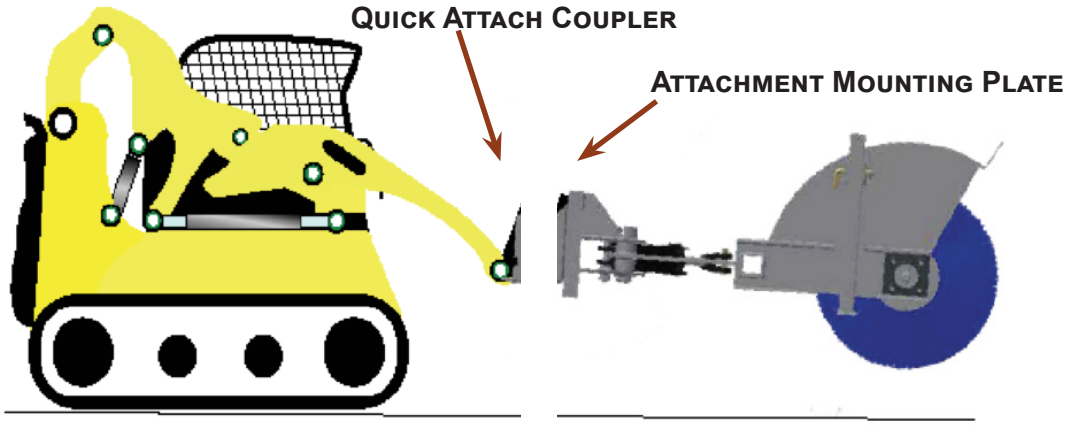


FIGURE 3.2A – SKID STEER QUICK ATTACH COUPLER TO MOUNTING PLATE

4. Activate your skid steer's lever lock switch to engage and lock the pins into the flange slots of the broom's attachment plate. If your skid steer does not have this switch, push the latch handles down until you can see the lock pins extend into the attachment flange as shown in Figure 3.2b below.

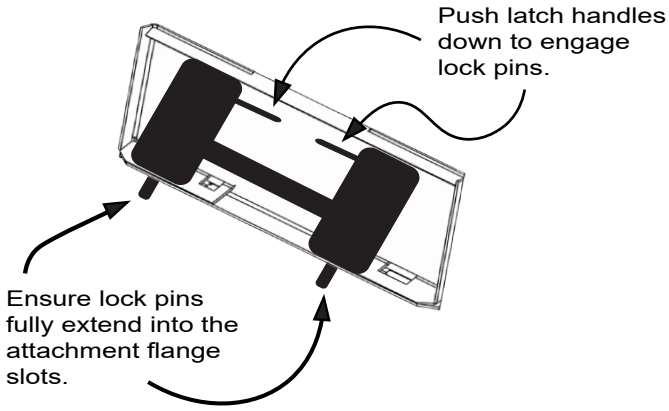


FIGURE 3.2B QUICK ATTACH COUPLER LOCKED TO ATTACHMENT PLATE



FIGURE 3.2C TRACTOR PIN ON HOOKUP

3.2 HOW TO CONNECT BROOM ATTACHMENT CONT.

⚠WARNING

To avoid serious injury or death, ensure coupler pins fully extend through the slots on the attachment bracket and that levers are down in the locked position to prevent broom from detaching from machine.

NOTICE

Check that hydraulic hoses are locked into the machine's couplers with the preferred output auxiliary port corresponding to the correct input line on the attachment before use.

Check the hose routing through the full range of intended motion before operating attachment. It is the responsibility of the owner/operator to make sure the hoses are routed correctly and are not pinched.

5. Connect the attachment hydraulic hoses to the auxiliary supply couplers located on your skid steer loader lift arm.

NOTICE

To keep contaminants from entering the hydraulic system, use a clean cloth to wipe away dirt and grease from the hydraulic couplers and cover with plastic or metal caps when not in use.

3.3 CONNECTING ELECTRICAL HARNESS

HYDRAULIC ANGLE BROOM ONLY

Connect the 2-wire control harness from the broom attachment using the A or B Method as shown below. A ***universal, 7, 8, or 14 pin*** pigtail harness adapter *(see example C)* is available to make this connection. When using the optional switch controller, make sure the ground wire is securely attached to the machine frame. Contact your local dealer for more information on how to connect the harness and controller.



A OPTIONAL UNIVERSAL SWITCH CONTROLLER

B WIRING HARNESS ADAPTER



C 8 OR 14 PIN WIRING HARNESS

3.4 UNIVERSAL CONTROLLER INSTALLATION

TO INSTALL UNIVERSAL CONTROLLER:

1. Place the universal controller in the location where it will be operated and route the power source cable where the red wire with fuse can be connected to a 12V power source and the black wire connected to the ground. (12V socket adapters can be used as well.)

2. Route the pin connector from the controller to a point near the hydraulic couplers and connect to the attachment via the 2 pin or 5 pin connector. *Note: Secure this cable using plastic cable ties where appropriate to keep cable from being snagged by tree branches or other debris.*

3. Check that the cable is free of tension when raising and lowering the machine arms.

4. Appropriately secure universal control box so that damage does not occur.

⚠WARNING

To avoid unwanted attachment movement that may result in serious injury, shut the machine off and avoid contact with the controller to prevent unexpected movement when exiting the machine.

3.5 BROOM CONTROLS



HYDRAULIC FLOW

To operate the hydraulic angle broom controls, the machine's auxiliary hydraulic system must be activated. To change between sweeping and cylinder angle functions, you will use the machine's auxiliary controls or the universal controller. Once the sweeping or cylinder angle function is selected, use the machine's flow controls to angle cylinder left or right or change sweeping rotation to forward or reverse.

The hydraulic angle broom is designed to run off the machine's auxiliary hydraulic system, and is activated and deactivated by a control in the operator's cab. The height and tilt functions of the hydraulic angle broom are operated with the control handles or pedals in the cab. Consult the machine's operator's manual for instructions regarding these functions.

3.6 CHANGING BROOM ANGLES

BROOM CONTROLS

Your broom is designed to run off the machine's auxiliary hydraulic system, and is activated and deactivated by a control in the operator's cab. The height and tilt functions of your broom are operated with the control handles or pedals in the cab.

Consult your machine operator's manual for instructions regarding these functions.

Changing the Broom Angle (Angle Broom Models Only)



Manual Angle Broom:

1. Raise the broom 8" off the ground, then shut off the machine engine and exit the cab.
2. Remove the angle-lock pin located in the center of the broom manual adjusting arm.
3. When the lock pin has been pulled, pivot the broom head to the desired angle.
4. Re-insert pin and secure pin keeper to lock the broom head in place.



Hydraulic Angle Broom

1. Raise the broom 8" off the ground.
2. With the machine's engine RPM just above idle, activate the auxiliary hydraulic circuit to spin the bristles.
3. Use the toggle switch to change to angle cylinder function and use hydraulic flow controls to swing the broom head to the desired angle.

3.7 LEARNING YOUR ATTACHMENT

1. Before using this attachment, make sure you are knowledgeable and comfortable with the operation of the auxiliary hydraulic control as outlined in previous sections of this manual and in the machine's operator's manual.
2. When operating this attachment, set the machine throttle at a speed that will produce the required flow. If the machine is equipped with a foot throttle, use it to control engine speed and power being delivered to the attachment. Refer to your machine manual or call your local machine dealer for additional help if necessary.
3. Learn what the attachment looks like in a level position when you are seated in the machine. This will help you when operating the attachment.
4. The correct ground speed while using this attachment depends on the application and ground condition and can be monitored by sight, sound, and feel.
5. Note that if the machine engine is bogging down or the bristles are being crushed because of the load on the attachment, it will be necessary to decrease the load until the machine's power can overcome the material load on the attachment and the bristles are not being crushed..

DANGER

ALWAYS contact 811, the “Digger’s Hotline” to identify underground utilities to avoid an accident that could result in Death or Serious Injury!

WARNING

EXPOSURE to crystalline silica dust along with other hazardous dusts may cause serious or fatal respiratory disease. It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause a high level of dust.

1. Inspect the area to be worked and make sure it is free of any utilities, rocks, fence posts, or any other objects that you do not want to move.
2. Determine a safe and efficient pattern before the start of the job.



3.9 BROOM SUPPORT LEGS

All Angle Brooms come with support legs that are designed to prevent the bristles from being crushed and support the broom when not in use.

To Raise the Legs:
1. Lift the broom to take the weight off the support legs, then remove the keeper and lock pin.

2. Raise the tube fully, align holes and insert lock pin and secure with keeper.



FIGURE 3.9A - BROOM SUPPORT LEGS

3.10 How to Start Broom

Starting the Broom



Please refer to our "Hydraulic Fluid and Oil Statement" on Page 5 for gear oil or hydraulic fluid instructions.



1. Complete steps in Section 3.2.

2. Check the machine's hydraulic fluid level and add hydraulic fluid if necessary. Never check for hydraulic fluid leaks with your hand. *Use only the manufacturers recommended hydraulic fluid in machine.*

3. Start the machine engine and increase the engine RPM to slightly above idle.

4. Tilt or raise the broom off the support legs and raise broom support legs. NEVER operate broom with support legs lowered.

5. For Manual Angle Brooms: Set the desired angle for sweeping. NEVER adjust while bristles are rotating.

6. Activate machine auxiliary hydraulic circuit to spin the broom bristles.

7. Switch the auxiliary hydraulic flow in opposite directions to reverse broom rotation. Make sure to pause between each toggle to allow time for the broom rotation to come to a stop. Repeat 3 times. If you are operating a hydraulic angle broom, you also need to toggle the swing direction, pausing between changing directions to allow time for the broom to come to a stop.

8. Once attachment ramps up to speed, increase machine engine to full throttle. Ensure broom is running smoothly.

9. When testing and using attachment, make sure to keep the broom at a proper height to prevent crushing and damaging the bristles.

10. Deactivate the auxiliary hydraulic circuit, lower the broom to the ground, set the parking brake, turn off machine motor and exit the operator's cab.

11. Check the machine's hydraulic level and add fluid if necessary. Inspect for leaks, repair as necessary.

Stopping The Broom

If the broom vibrates while increasing RPM's, switch off the auxiliary hydraulic circuit and investigate the cause. Refer to the Troubleshooting Chart on page 29.

1. Raise the broom slightly and set machine engine RPM to idle.
2. Switch off the auxiliary hydraulic circuit.
3. Allow the broom to slow down before lowering the broom support legs and lowering to the ground.
4. Set the parking brake.
5. Turn off the machine and exit the operator's cab.

⚠ WARNING

After switching off the auxiliary hydraulic circuit, keep hands and feet clear of the broom head-

until broom rotation has come to a complete stop.

3.12 SWEEPING OPERATIONS

Verify that hydraulic hoses are securely locked to the machine's hydraulic couplers before starting the broom.

⚠ DANGER

To avoid serious injury or death from thrown objects and flying debris, ensure no bystanders are

within 100 feet of the work area before starting this broom.

1. Complete all steps in Section 3.2 and 3.7. Inspect your work area before use. NEVER assume the work area is safe.
2. ENSURE the work area is clear of bystanders and pets.
3. Operate this attachment at a safe speed that will allow you to watch the area around the broom and machine.
4. Never use the attachment to push, pull, lift or move any type of object or vehicle.
5. Do not use the attachment as a dozer to move large piles of material.
6. Remove debris, including twine, rope and tree limbs that may accumulate around the broom's bristles.

3.12 SWEEPING OPERATIONS CONT.

7. Lower the broom completely before exiting the cab or damage will occur to your machine, yourself, or the attachment.

8. Do Not exceed 6 mph or a safe speed while operating this attachment.

3.13 PICKUP BROOM INSTRUCTIONS

1. POSITION: Start the machine engine and slightly raise the broom off the ground.

2. TURN BROOM ON: Set the engine RPM to just above idle and activate the auxiliary hydraulic circuit to spin the broom bristles. Ensure the broom bristles are rotating clockwise (as seen from the motor side) with forward travel and counterclockwise with reverse travel.

3. SWEEP: Increase engine RPM and lower the broom until the bristles slightly contact the ground and travel forward. Do not exceed 6 MPH or safe speed while operating this attachment.

4. FILL BUCKET: When the bucket is full, deactivate the auxiliary hydraulic circuit, raise the sweeper above the ground and drive to the dumping area.

5. DUMP BUCKET: Raise the loader lift arms and tilt the attachment forward to empty the bucket.



FIGURE 3.13A - PICK UP BROOM

6. RESUME SWEEPING: Repeat steps 3-5 until sweeping is complete.

7. Use side adjustments to appropriately space bristle to bucket edge. As bristles wear, adjust rods accordingly. See Section 4.4 for more detailed instructions.

3.14 ANGLE BROOM INSTRUCTIONS

1. ENSURE support legs are raised and locked. Start machine engine and slightly raise broom off the ground.

2. Set the desired broom angle per instructions on pages 17 and 18.

3. TO SWEEP: Increase engine RPM and lower the broom until the bristles contact the ground and travel forward. Do not exceed a safe speed while operating this attachment.



FIGURE 3.14A - ANGLE BROOM

3.15 SWEEPING TIPS

DANGER

To prevent death from electrocution, NEVER operate this attachment near electrical wires or cables.

⚠ CAUTION

Tilting a spinning broom too far forward in an elevated position could result in serious injury if debris from the broom is thrown towards the operator.

- When sweeping parking lots, begin sweeping in the middle of the area, and sweep to both sides if possible.
- When sweeping debris, make sure you adjust the rotation speed of the bristles to prevent throwing excessive debris. The amount of debris thrown depends on the type of material and density.
- Dust can be minimized by using a lower brush speed.
- Sweeping is most efficient if dirt/dust is slightly moist.
- Sweep dirt/dust when the wind is calm.
- Sweep in the direction of the wind.
- Do not exceed 3 mph when sweeping heavy debris.
- Increase the engine RPM when sweeping heavy debris.
- Consider multiple passes when sweeping heavy debris.
- When sweeping heavy or wet snow, use a higher RPM setting and a reduced travel speed.

NOTICE

Excessive downward pressure on the broom will accelerate bristle wear and will not result in better sweeping efficiency.

NOTICE

Keep angle brooms level when angled and sweeping to prevent bristles excessively wearing on one side.

WHEN SWEEPING BACKWARDS, USE CAUTION WHEN TILTING YOUR BROOM AS TOO MUCH TILT COULD CAUSE DEBRIS TO HIT THE OPERATOR AND CAUSE SERIOUS INJURY OR DEATH.

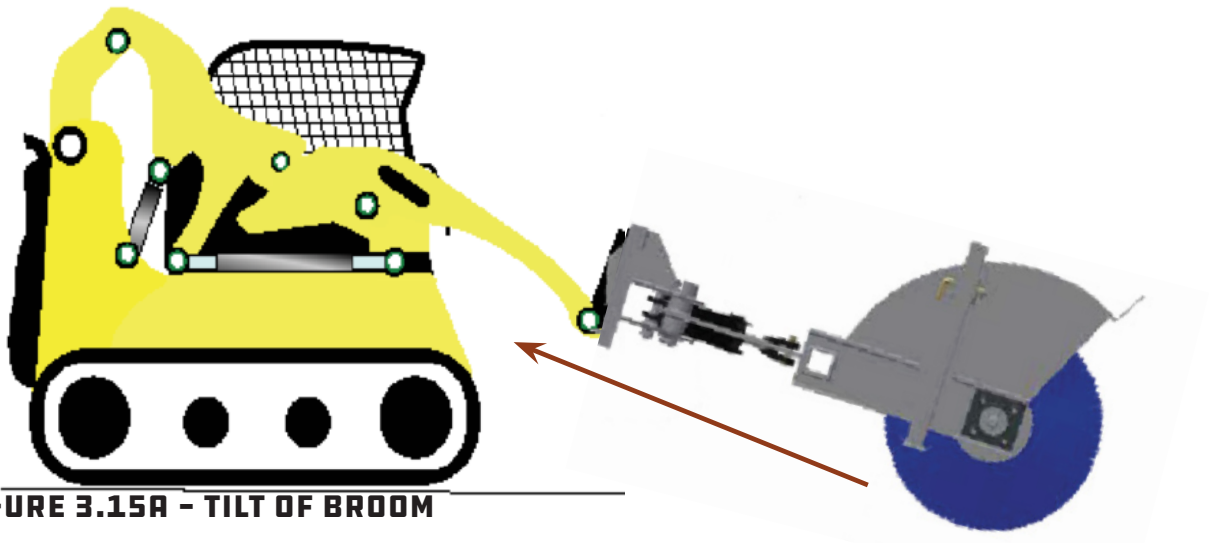


FIGURE 3.15A - TILT OF BROOM

3.16 HOW TO DISCONNECT ATTACHMENT

1. Turn off auxiliary hydraulic circuit; relieve hydraulic pressure by moving the control levers back and forth or using hydraulic relief valve (if applicable).

2. Park machine on a flat and level surface then lower the attachment to the ground.

3. Set parking brake and disengage lock pins using the lock lever switch (if installed skip #6).

4. Turn off machine engine.

5. Disconnect hydraulic hoses and connect together or install dust caps to prevent contaminants from entering the hydraulic system. Store hydraulic hoses off the ground.

6. Pull latch handles to disengage lock pins.

7. Re-enter cab and start machine engine.

8. Tilt mounting coupler forward until Quick Attach Coupler is free from mounting bracket.

9. Drive machine backward to clear attachment.



SECTION 4

MAINTENANCE PROCEDURES

The maintenance procedures described in this manual should only be carried out by qualified mechanics who have been trained to repair this attachment.

Some procedures require special tools and skills to complete. DO NOT attempt to repair or perform service work on this attachment unless you have the skills and tools to do so. Contact your local dealer for maintenance and repair services.

WARNING **Only use genuine Original Equipment Manufacturer (OEM) replacement parts on this attachment. We will not be liable for any damages or injuries caused by the use of after market use parts on this attachment.**

NOTICE

Improper maintenance or modifications to the design or performance of this attachment will void the warranty. **ONLY use genuine replacement parts on this attachment.**

Safety Instructions

Obey the following safety instructions when servicing or repairing this attachment.

- **Wear proper Personal Protective Equipment (PPE) while working on this attachment, which may include safety glasses, hard hats, steel toe boots, gloves, etc.**
- **If servicing is performed while the broom is attached to the machine, turn engine off, set parking brake and chock wheels to prevent machine from moving.**
- **Ensure all jack stands, lifts and hoists are in good working condition and have the rated load capacity to support the load.**
- **Only perform service work in a well-lit area.**
- **Allow the attachment to cool down before servicing this attachment.**
- **NEVER work under an unsupported broom.**

4.1 MAINTENANCE SCHEDULE

This broom will provide years of dependable service if routine maintenance procedures are performed. The maintenance tasks listed below are based on normal operating conditions. More frequent maintenance may be necessary with intense use or when operating in adverse environmental conditions.

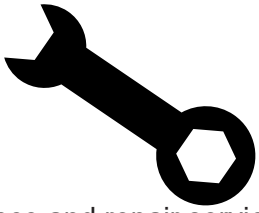
MAINTENANCE TASK	BEFORE EACH USE	WEEKLY	YEARLY
Check host machine's hydraulic fluid level. Add manufacturer recommended fluid as necessary. *Please refer to our "Hydraulic Fluid and Oil Statement" on Page 5 for gear oil or hydraulic fluid instructions.*	X		
Check that all fasteners (nuts, bolts, washers, pins, keepers) are in place. Tighten as necessary.	X		
Inspect and replace any worn, torn, or missing safety decals.	X		
Inspect hydraulic hoses and connectors for damage or leakage. Repair or replace hydraulic items as necessary.	X		
Lubricate all pivot joints and bearings using #2 lithium grease.	X		
Wash broom attachment		X	
Check the condition of the bolt-on-edge (if applicable), bristles/core, and ensure bristles are secure on hub(s) with set screws tight.		X	
Check broom for major scratches & dings. Sand and repaint these areas to prevent rust damage. *Contact the manufacturer for approved OEM paint for your attachment.			X

⚠ DANGER

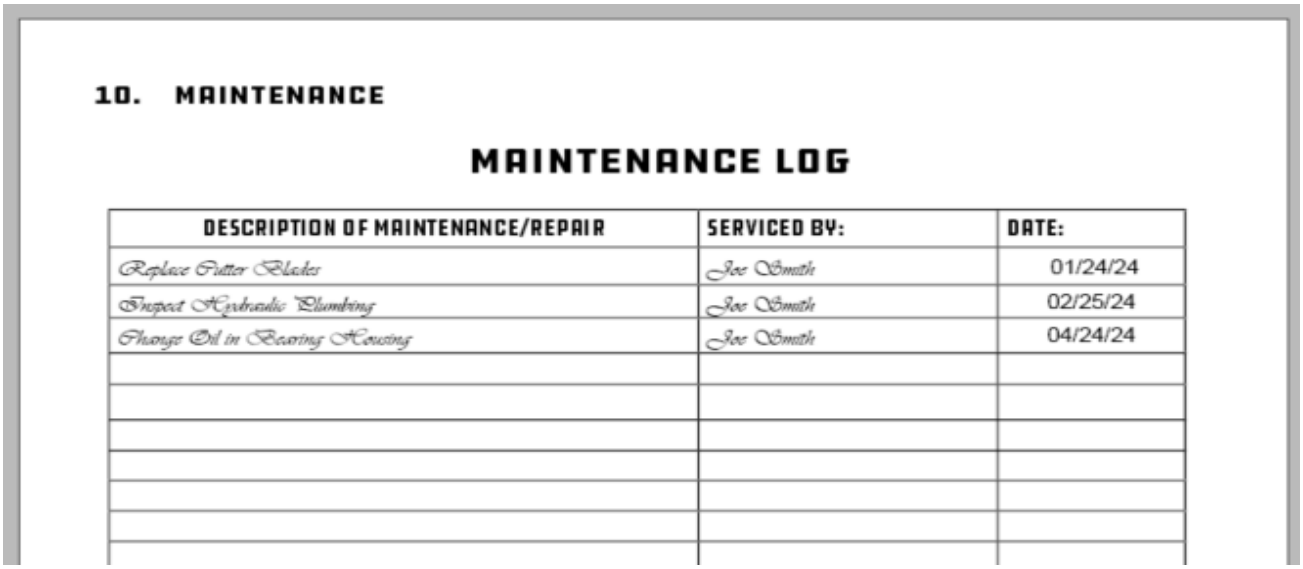
ONLY service the broom on stable, even terrain. NEVER park on sloped terrain to avoid being struck & killed or seriously injured by the unexpected rolling or movement of the machine.



MAINTENANCE LOG



Use the log sheets at the back of the manual to document all routine maintenance and repair services performed on this attachment.



10. MAINTENANCE

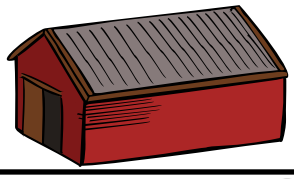
MAINTENANCE LOG

DESCRIPTION OF MAINTENANCE/REPAIR	SERVICED BY:	DATE:
Replace Cutter Blades	Joe Smith	01/24/24
Inspect Hydraulic Plumbing	Joe Smith	02/25/24
Change Oil in Bearing Housing	Joe Smith	04/24/24

NOTICE

DO NOT store your broom while it is resting on the bristles as over time, the weight of the attachment will warp or distort the shape of the bristles.

Support legs are mounted on each side of the broom and are designed to take the weight of the broom when not in use. The brackets can be extended and locked in place with a locking pin.

	Ensure broom is free of water, debris, dirt and grease.
	Store your broom in a dry shed or garage. Avoid storing in direct sunlight to prevent fading and damage to bristles.
	When storing your broom for the season, cover with a weather proof tarp to protect it from the elements.

4.4 ADJUSTING PICKUP BROOM PATTERN

To get the best performance out of your pickup broom, adjust the brush so that it contacts the ground and is about 2-4” wide. See *Figure 4.4A*

Inspect Brush Pattern:

1. Move the machine and broom attachment to a flat and dusty surface.
2. Start the sweeper then lower to the operating position. (Bottom of bolt-on-edge should be 1” off the ground.)
3. After 3-5 seconds, raise the sweeper, deactivate the auxiliary hydraulic circuit, set parking brake, shut down machine engine, and exit the cab.
4. Inspect the brush pattern left on the dusty surface. A properly adjusted brush will leave a brush pattern that is 2-4 “ wide and runs the length of the brush.

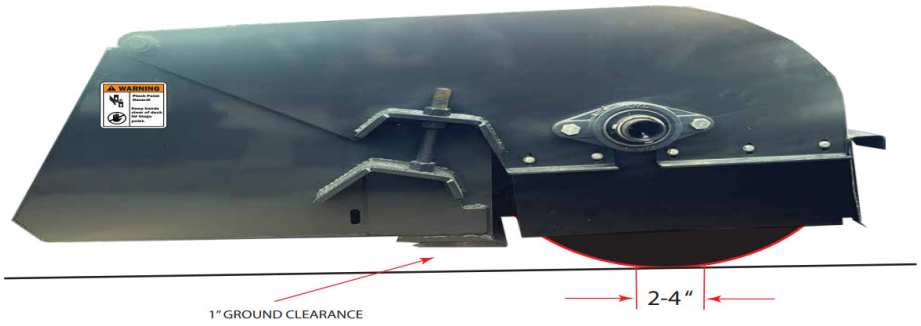


FIGURE 4.4A - RECOMMENDED BRUSH GROUND CONTACT

Adjusting Brush Pattern:

1. Loosen the bottom nuts of the brush adjustment bolts.
2. If the pattern was wider than 4”, loosen the top nuts to decrease the pattern. If the pattern was less than 2” wide, tighten the top nuts to increase the pattern.
3. After pattern is set, tighten the bottom nuts of the brush adjustment bolts.
4. Adjust the flaps so they slightly touch the ground.

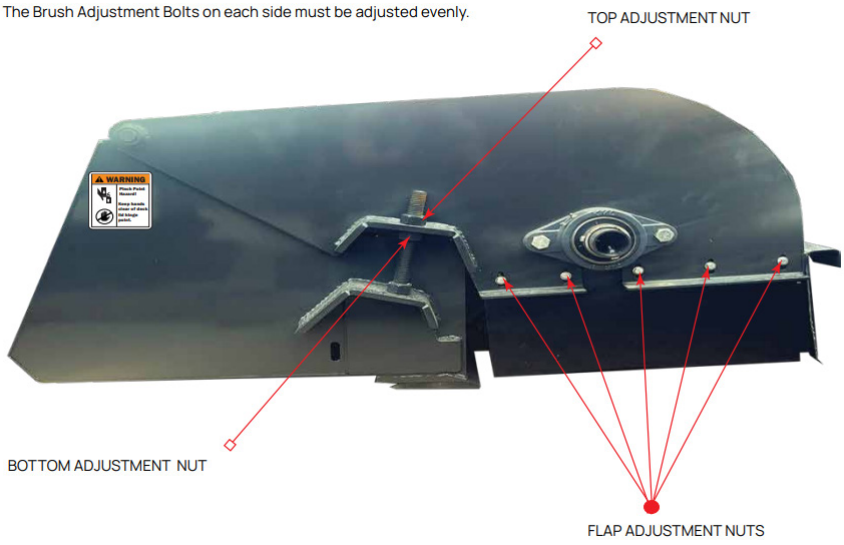


FIGURE 4.4B - ADJUSTING BRUSH HEIGHT

4.5 CHANGING PICKUP BROOM BOLT-ON-EDGE

DANGER

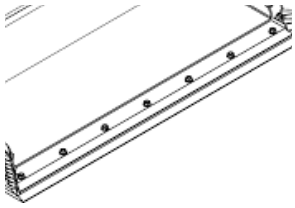
NEVER enter the area underneath the coupler or any part of the attachment when it is in the raised position to avoid an accident that will result in Death or Serious Injury!

WARNING

Hazardous dust can be generated if painted surfaces are heated or welded and could result in Death or Serious Injury. Remove paint before welding and always make repairs in a well-ventilated area and wear an approved respirator.

Bolt-on cutting edge replacement can be completed safely with proper torque values applied.

Replacement cutting edges are available from the manufacturer.



Attaching the Cutting Edge to your existing broom is a simple process that requires the use of the appropriate bolts and nuts, then torquing to the correct specifications. Contact your dealer for help with specific problems.

CAUTION

Cutting edges can be very heavy and could cause Minor or Serious Injury if mishandled. ALWAYS wear protective gloves and footwear.

WELDING REPAIRS

Welding on attachments must be performed by certified welders who have requested and obtained written approval from an authorized representative of the manufacturer before welding begins.

All authorized welding repairs must be performed by qualified welders in accordance to the American Welding Society (AWS) standards. Welding procedures performed by unqualified welders may deem this bucket unsafe to operate and **VOID THE WARRANTY**!.

4.6 REMOVE AND INSTALL BROOM WAFERS ON SLIDE ON CORE

DANGER

When replacing bristles and/or hub, a two (2) person team is REQUIRED along with SAFETY HOISTS or SUPPORTS.

Removing Broom Wafers On Slide On Core:



1. Position the broom on a flat hard surface and disconnect the hydraulic hoses.
2. Remove the rubber flaps on each side of the sweeper.(if applicable)
3. Loosen set screw, remove the motor mount hardware and bearing retaining bolts then remove motor and bearing(s).
4. Ensure sweeper body is disconnected from broom core, then using an overhead hoist, raise body off of the broom core and roll the broom core away from broom.
5. Stand the core on end and remove end retainer from one side of the broom core and remove wafers.

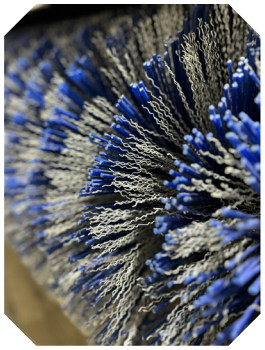
CAUTION

The sweeper body is very heavy. To prevent a serious injury, use an overhead hoist with the proper lifting rig to raise and support the deck lid.

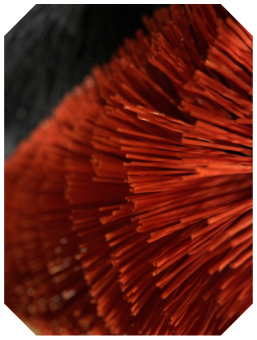
DANGER

Do not place any part of your body under an unsupported attachment deck to prevent serious injury or death.

Installing Broom Wafers On Slide On Core:



1. Stand the broom core on end with a retaining plate in place toward the ground.
2. Install wafers making sure retention pins are locked on broom core sliding bars.
3. Continue installing wafers alternating bristle types (if applicable). Each bristles's retention pins will need to be rotated 120 degrees from the previous installed bristle.
4. Install the retaining plate after the last wafer (the wafers should be packed tightly together not loose) and lower the broom core with wafers to the ground.



5. Install the bearing plate on shaft and lower broom body over core and wafers.
6. Reinstall the motor and tighten bearing, motor bolts, and set screw.
7. Reinstall the side rubber flaps. (If applicable and adjust as necessary.)
8. PICK UP BROOM: After replacing the broom bristles, adjust the broom height to make sure bristles are not being mashed or damaged to prevent excessive wear.

DANGER

When replacing bristles and/or hub, a two (2) person team is REQUIRED along with SAFETY HOISTS or SUPPORTS.

Removing One-Piece Bristles (Wafers Welded To Core):

1. Position the broom on a flat hard surface and disconnect the hydraulic hoses.
2. Remove the rubber flaps on each side of the sweeper.(if applicable)
3. Loosen set screws on motor and bearing hubs, then slide hubs to the sides of the broom allowing space for the bristle to be removed.
4. Ensure sweeper body is disconnected from broom core, then using an overhead hoist, raise body off of the broom core and roll the broom core away from broom.

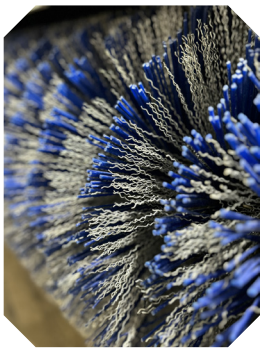
CAUTION

The sweeper body is very heavy. To prevent a serious injury, use an overhead hoist with the proper lifting rig to raise and support the deck lid.

DANGER

Do not place any part of your body under an unsupported attachment deck to prevent serious injury or death.

Installing One-Piece Bristles (Wafers Welded To Core):



1. Place new one-piece bristle under broom body and lower the broom body until hubs align with the bristle core.
2. Place motor hub into broom core aligning tab with notch. Tighten set screw on motor hub once in place.
3. Place bearing hub into core aligning tab with notch. Tighten set screws on bearings.
4. PICK UP BROOM ONLY: After replacing the broom bristles, adjust the broom height to make sure bristles are not being mashed or damaged to prevent excessive wear.

4.8 TORQUE SPECIFICATION TABLE AND INSTRUCTIONS

BOLT TORQUE INSTRUCTIONS

1. Apply and maintain proper torque on all bolts.
2. Use lubricated torque values when applying Loctite. **Do not grease or oil bolts.**
3. Wipe bolts clean and use Loctite 635 or equivalent before tightening bolts. May need curing activator.
4. Use a torque wrench to assure the proper amount of torque is being applied to the bolt.
5. **MUST CURE 72 HOURS BEFORE USE TO PREVENT LOOSENING OF BOLTS.**

TORQUE VALUES

SAE GRADE 8

	DRY lb.-ft.	LUBRICATED lb.-ft.
1/4”	12	9
5/16”	24	18
3/8”	45	35
1/2”	110	80
3/4”	380	280
7/8”	600	450
1”	910	680
1 1/4”	1820	1360
1 1/2”	3162	2688

4.9 TORQUE EQUIPMENT REQUIREMENTS

TOOLS & EQUIPMENT REQUIREMENTS

To complete the maintenance procedures described in this section, you may need the following tools:

- 1/2 inch drive breaker bar
- 3/4 inch impact socket
- 1/2 inch impact socket
- Tapping Hammer
- 1/2 inch drive torque wrench
- Nylon pry bar set
- Safety stands
- **Loctite 635 or Equivalent-MUST CURE 72 HRS**
- Lifting device (overhead crane hoist, forklift)



NOTE:

When removing bolts with Loctite, it will be necessary to apply localized heat of at least 250 degrees Celsius or to 482 degrees Fahrenheit to loosen bolts.

LOCTITE 635 TECHNICAL SPECIFICATIONS FOR BONDING, CURING, REMOVAL AND INSTALLATION CAN BE FOUND HERE:
https://next.henkel-adhesives.com/

SECTION 5

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Broom bogs down or loses power.	1. Foreign material is “balling” under broom.	1. Remove excess foreign material from under the broom deck.
	2. Bearing failure-(To diagnose, shut off hydraulic flow to broom then slowly rotate & listen for bearing noise.)	2. Repair or replace bearings.
	3. Broom speed too slow or ground speed to fast.	3. Increase RPMs and reduce ground speed.
	4. Hydraulic fluid flow too slow or machine RPM’s not high enough.	4. Look for hydraulic leaks & repair.. Ensure proper hydraulic flow setting & RPM for host machine.
Broom becomes uneven or bristles wear unevenly.	1. Broom receiving excessive shock loads from contacting solid objects (rocks, steel pipes, etc.)	1. Clear the sweeping area of solid objects, raise broom height to clear exposed solid objects.
	2. When broom is angled, main frame is not level with ground.	2. Always keep broom level with ground when sweeping at an angle
Hydraulic fluid level goes down during operation.	1. Hydraulic motor leak, or leaks in host machine’s hydraulic system.	1. Investigate and repair leaks.
Bristles turn but do not angle.	1. No electrical power to controller or solenoid valves.	1. A. Check in-line circuit fuse if using universal harness or check machine fuses & replace if necessary. B. Check connections at solenoid valves.
	2.Solenoid valve stuck or not working.	2. Repair or replace the solenoid valve.
	3. Pivot joint is damaged or seized.	3. Repair or replace if damaged and ensure joint is greased.

6.0 TROUBLESHOOTING

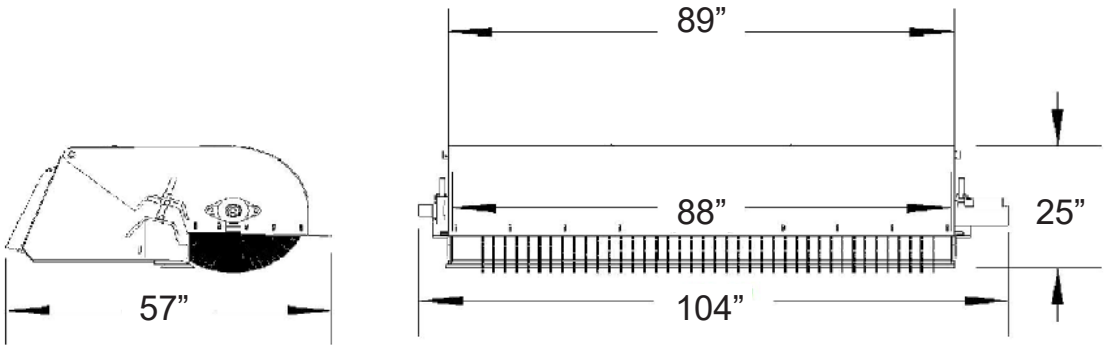
PROBLEM	POSSIBLE CAUSE	SOLUTION
Bristles do not rotate, rotates slowly, or stalls easily when contacting the ground.	1. Auxiliary hydraulic hoses not connected or quick disconnects not fully or properly connected. 2. Auxiliary hydraulics not engaged. 3. Air in hydraulic lines. 4. Obstructed or damaged hydraulic lines. 5. Relief valve setting on machine not properly adjusted. 6. Worn or damaged machine hydraulic pump or attachment motor. 7. Low hydraulic fluid in machine. 8. Motor shaft and/or splined hub(s) on bristle/core damaged.	1.Ensure all hydraulic connections are secured. 2. Turn on Auxiliary Hydraulics 3. Cycle machine auxiliary system several times to remove air from line. 4. Replace obstructed or damaged line. 5. Have machine dealer set relief valve at correct pressure. 6. Repair or replace machine hydraulic pump or attachment motor. 7. Check the machine hydraulic fluid level and add fluid. Check for leaks and repair. 8. Disassemble bristle/core from attachment and inspect motor shaft and splined hub(s). Repair or replace damaged components.
Excessive vibration and/or attachment jumps over ground.	1. Excessive debris wrapped on bristle/core. 2. Bristle/core RPM or travel speed too fast. 3. Worn, damaged or bent bristle/core. 4. Missing, loose, damaged or unbalanced bristles and/or core. 5. Bearing or bristle hub failure.	1. Remove debris and clean bristle/core. Increase bristle/core speed if turning slow. 2. Decrease bristle/core RPM if turning too fast and/or decrease travel speed. 3. Replace bristle/core. 4. Replace bristle(s) and/or core. 5. Repair or replace bearing &/or bristle hub.
Cylinder will not extend, retract, or moves very slowly.	1. Restricted hose. 2. Auxiliary hydraulic system not operating properly or flow setting too low on host machine 3. Cylinder seals by-passing. 4. Electrical failure such as a broken wire or connections not fully secured. 5. Hydraulic system not activated. 6. Pivot joint is damaged or seized.	1. Check for damaged hydraulic hose between machine & cylinders. If damaged, replace. 2. Investigate and ensure flow is correct. 3. Replace cylinder and/or seals. 4. Repair or replace broken wire(s) and ensure electrical connections are fully secured and making contact. 5. Activate auxiliary hydraulic flow. 6. Repair or replace if damaged and ensure joint is greased.

⚠ DANGER

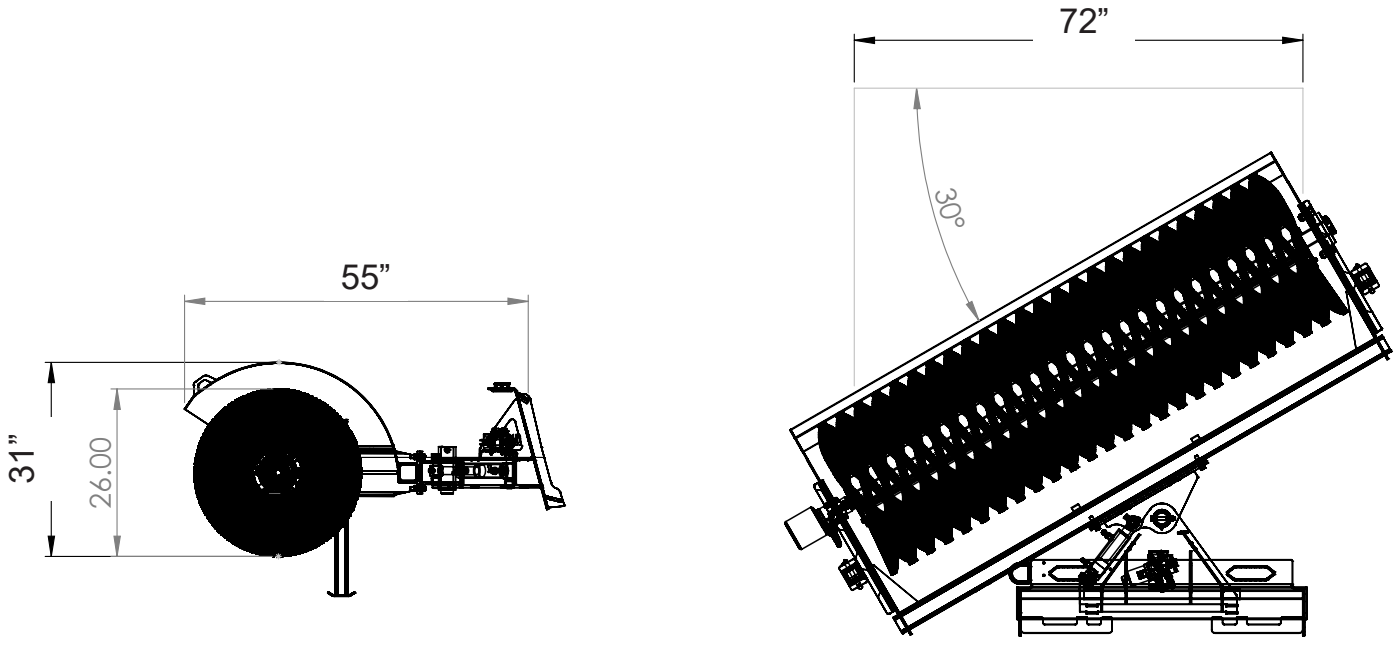
ONLY service the power rake on stable, even terrain. NEVER park on sloped terrain to avoid being struck & killed or seriously injured by the unexpected rolling or movement of the skid steer.

SECTION 6

SPECIFICATIONS



Pickup Broom



84” Hydraulic Angle Broom

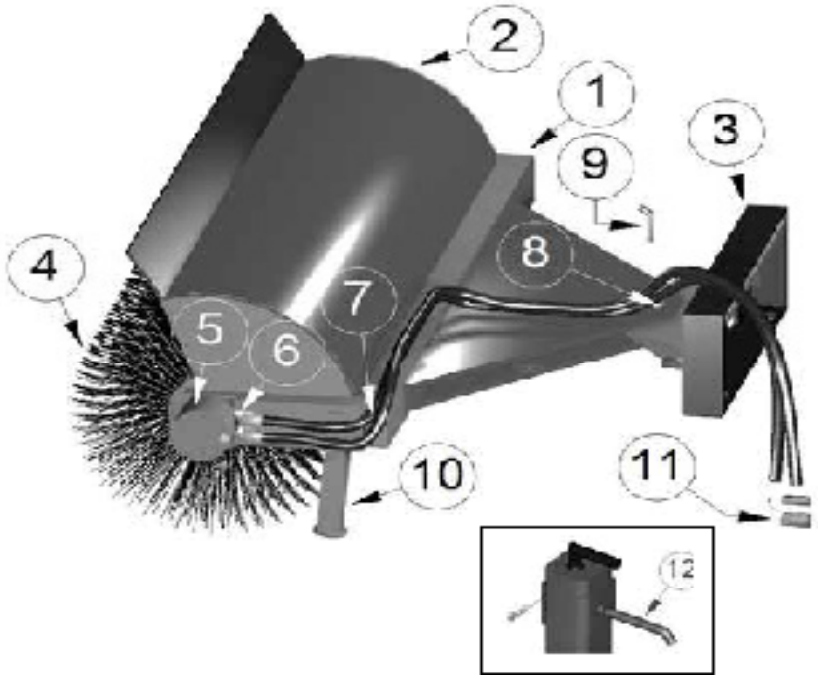
SECTION 7

PARTS INFORMATION

Factory OEM parts specifically designed for your attachment are readily available.

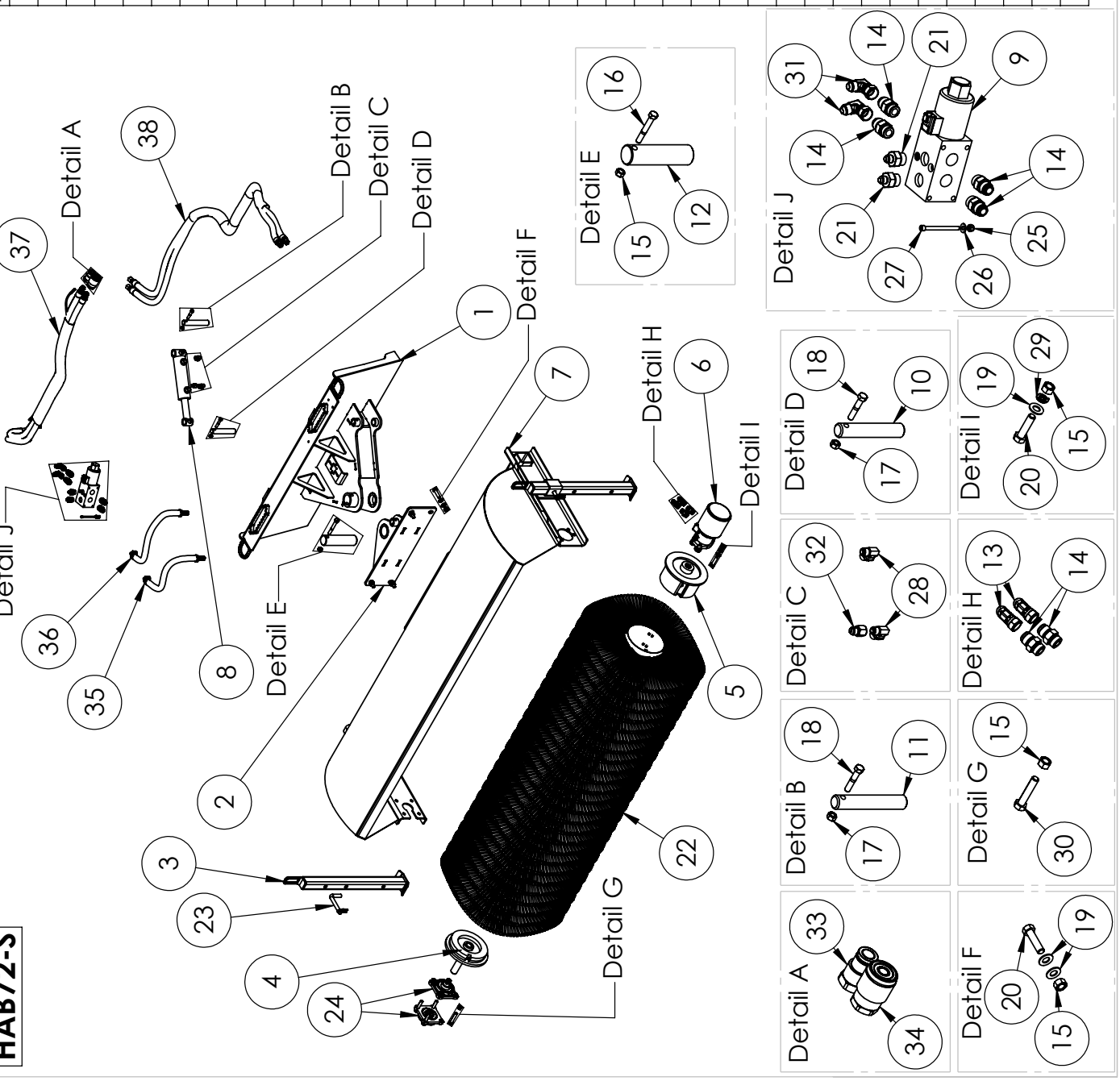
For hassle free service and to ensure you receive the correct parts for your attachment, please provide your dealer with the following information:

Model Number	
Serial Number	
GPM Requirements	
Date of Owners Manual (Bottom Left Corner of Cover Page)	
Parts Diagram Page Number	
Part Description	
Reference #	
Quantity Desired	
Ship To Information	
Bill To / Payment Information	

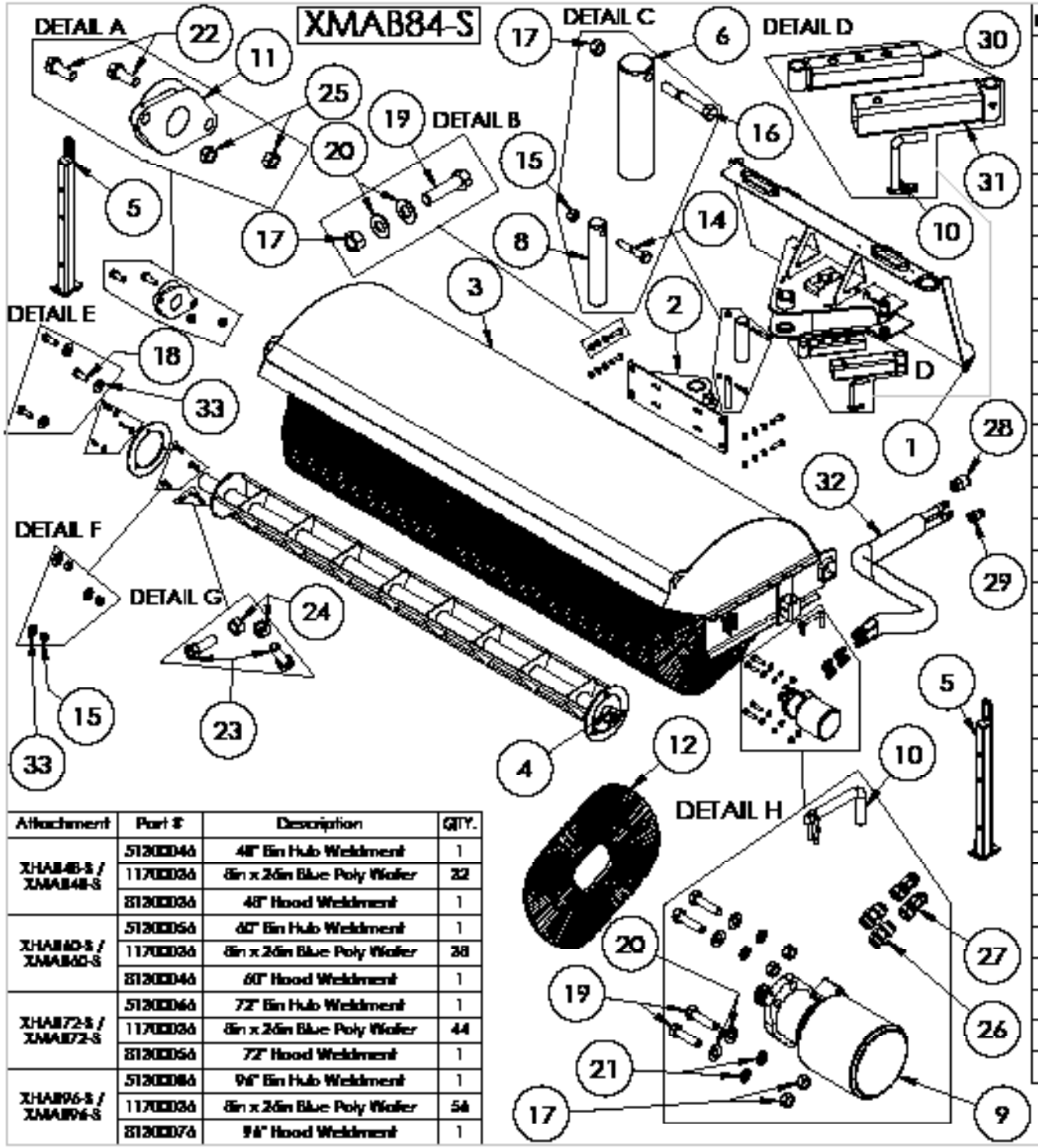


Ref. No	Part Description	Qty
1	Main Frame	1
2	Hood	1
3	Attachment Plate	1
4	Bristle Assembly (specify steel, poly, or mixed)	1
5	Motor	1
6	Hydraulic 45 deg fittings	2
7	Hose	2
8	Pin, Angle Pivot	1
9	Pin, Angle Lock	1
10	Support Assembly	2
11	Couplers, Hyd. Flat-Face (set)	1
12	Pin & Keeper (rest support)	2
NS	Hose Protector Sleeve (not shown)	1
NS	Manual Angle Adj Brackets-inner & outer (set)	1

7.2 72" HYDRAULIC ANGLE BROOM DIAGRAM

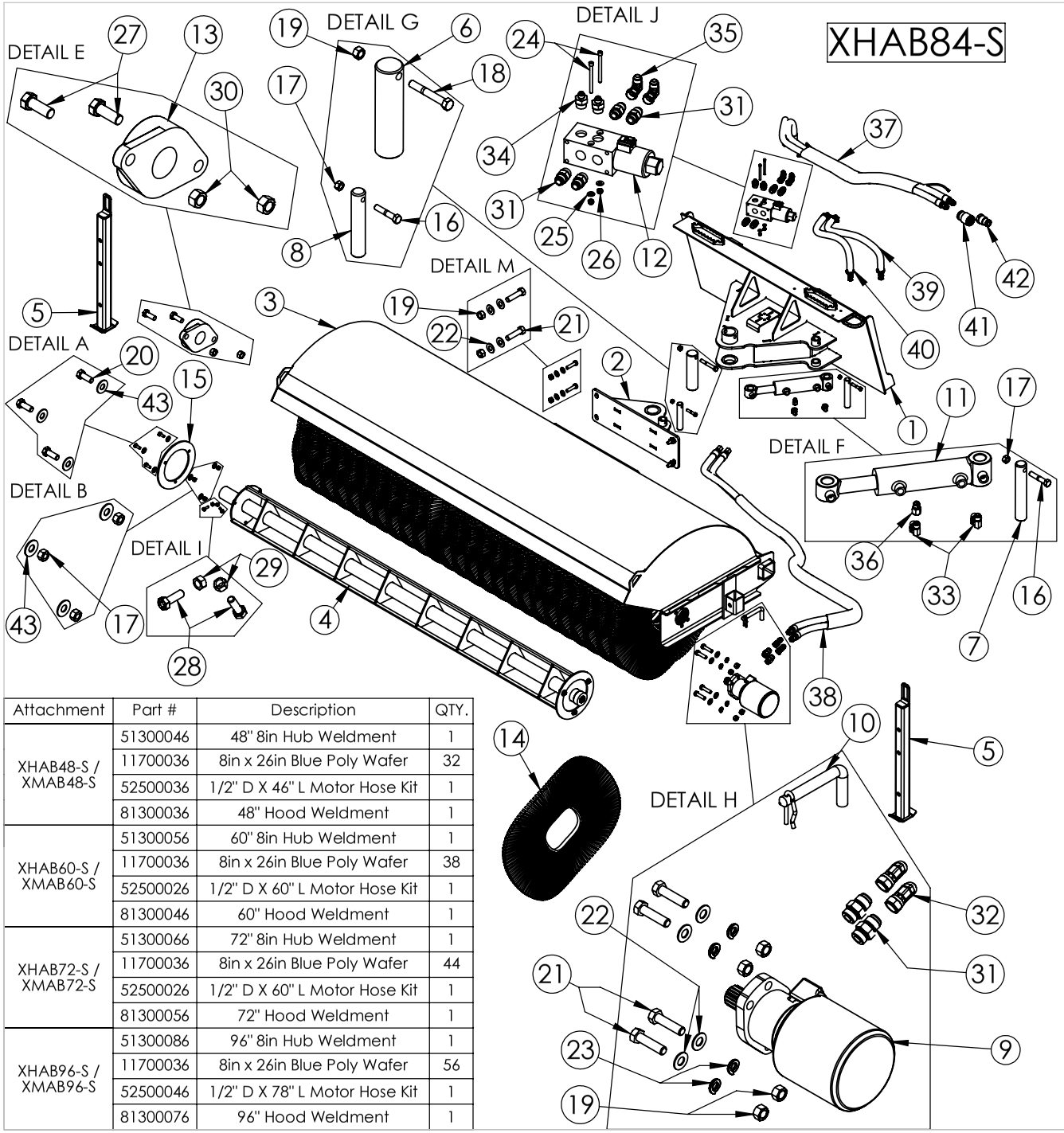


ITEM	Part #	DESCRIPTION	QTY.
1	81300016	Back Frame Weldment	1
2	81300026	Pivot Triangle Weldment	1
3	51300146	Broom Leg Weldment	2
4	51300156	Bearing Hub Weldment	1
5	51300166	Motor Hub Weldment	1
6	40100036	Motor	1
7	81300136	Hood Weldment	1
8	40000076	2" B X 4.5" Cylinder	1
9	40600076	Selector Valve	1
10	10300046	1" D X 5.5" L Pin	1
11	20200186	1" D X 6" L Pin	1
12	20200176	2" D X 7.5" L Pin	1
13	41000286	45° 1/2" Motor Fitting	2
14	41000196	1/2" - 5/8" Motor Fitting	6
15	11200446	1/2"-13 Lock Nut GR C	13
16	11200476	1/2"-13 X 3 1/2" Hex Bolt GR 8	1
17	11200136	3/8"-16 Lock Nut GR C	2
18	11200436	3/8"-16 X 2" Hex Bolt GR 8	2
19	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	12
20	11200156	1/2"-13 X 2" Hex Bolt GR 8	8
21	41000296	3/8" to 5/8" Straight Fitting	2
22	51300236	72" Blue Bristle Weldment	1
23	41200016	Bent Hitch Pin	2
24	41100076	Bearing	2
25	11200076	1/4"-20 Lock Nut GR C	2
26	11200066	1/4" SAE Flat Washer GR 8	2
27	11200826	1/4"-20 X 3" Socket Bolt	2
28	41000016	3/8" 90° Fitting	2
29	11200176	1/2" Split Lock Washer GR 8	4
30	11201256	1/2"-13 X 2 1/2" Hex Bolt GR 8	4
31	41000306	1/2" 90° Fitting	2
32	41000056	3/8" - .031" Restrictor Fitting	1
33	41000106	1/2" Flat Coupler M - Changeable	1
34	41000116	1/2" Flat Coupler FE - Changeable	1
35	52400026	3/8" D X 18" L Hose	1
36	52400016	3/8" D X 21" L Hose	1
37	53000056	1/2" D X 6' L Machine Hose Kit	1
38	52500026	1/2"X 60" L Motor Hose Kit	1



ITEM	Part #	DESCRIPTION	QTY.
1	81300016	Back Frame Weldment	1
2	81300026	Pivot Triangle Weldment	1
3	81300066	Hood Weldment	1
4	51300076	Hub Weldment	1
5	51300136	Broom Leg Weldment	2
6	20200176	2" D X 7.5" L Pin	1
7	20200186	1" D X 6" L Pin	1
8	10300046	1" D X 5.5" L Pin	1
9	40100036	Motor	1
10	41200016	Bent Hitch Pin	3
11	41100036	Bearing	1
12	11700036	Blue Poly Wafer	50
13	91200016	Wafer Retainer Plate	2
14	11200436	3/8"-16 X 2" Hex Bolt GR 8	2
15	11200136	3/8"-16 Lock Nut GR C	8
16	11200476	1/2"-13 X 3 1/2" Hex Bolt GR 2	1
17	11200446	1/2"-13 Lock Nut GR C	9
18	11200116	3/8"-16 X 1" Hex Bolt GR 8	6
19	11200156	1/2"-13 X 2" Hex Bolt GR 8	8
20	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	12
21	11200176	1/2" Split Lock Washer GR 8	4
22	11200656	3/4"-16 X 2" Hex Bolt GR 8	2
23	11200586	5/16"-18 X 1" Hex Bolt GR 8	2
24	11200106	5/16"-18 Lock Nut GR C	2
25	11200216	3/4"-10 Lock Nut GR C	2
26	41000196	1/2" - 5/8" Motor Fitting	2
27	41000286	45° 1/2" Motor Fitting	2
28	41000116	1/2" Flat Coupler FE - Changeable	1
29	41000106	1/2" Flat Coupler M - Changeable	1
30	20900016	Front End of Manual Arm	1
31	20900026	Rear End of Manual Arm	1
32	53000016	1/2" D X 8' L Machine Hose	1
33	11200146	3/8" USS Flat Washer GR 8	12

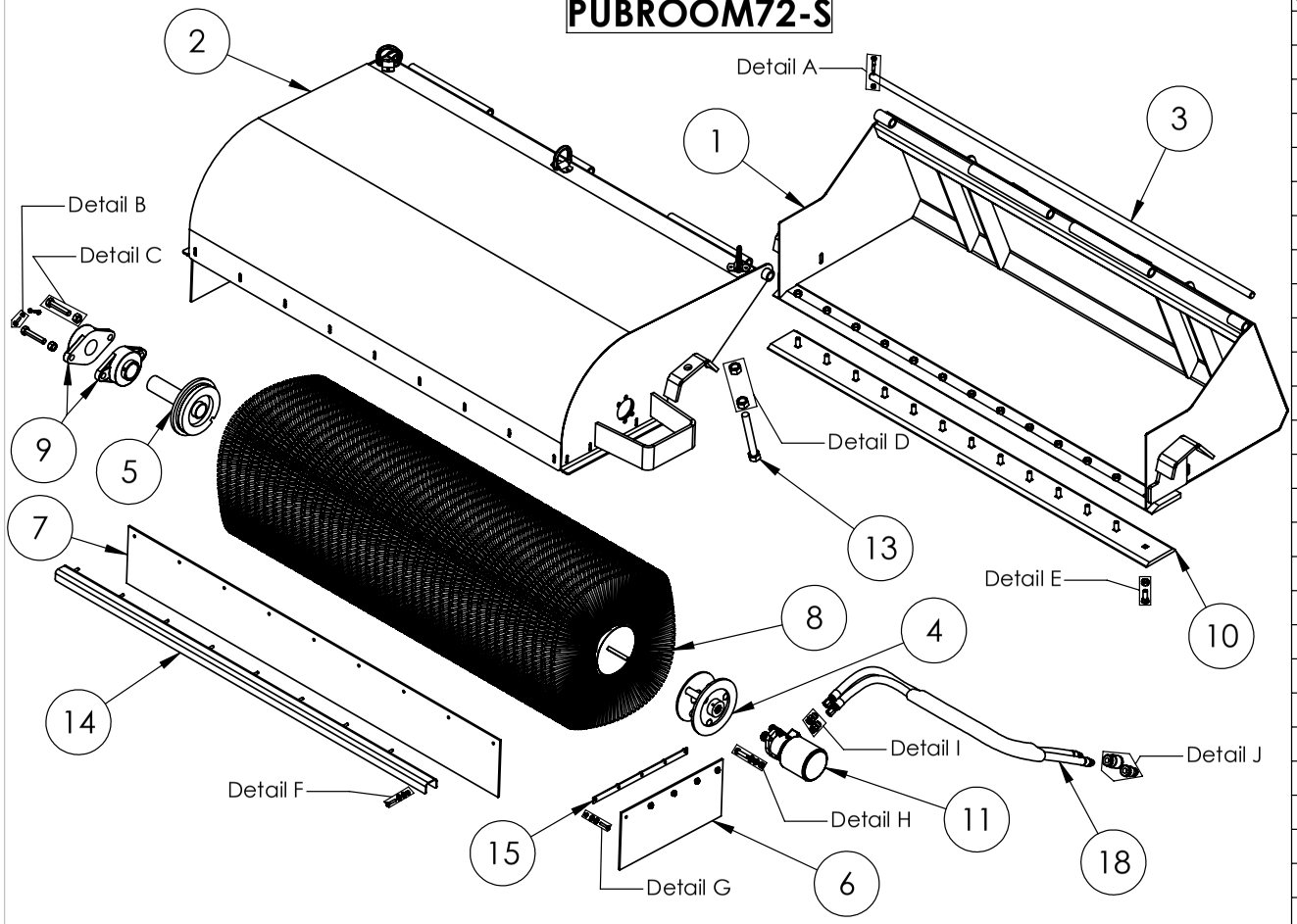
Attachment	Part #	Description	QTY.
XHAB48-S / XMAB48-S	51300046	48" Bin Hub Weldment	1
	11700036	6in x 26in Blue Poly Wafer	32
	81300026	48" Hood Weldment	1
XHAB60-S / XMAB60-S	51300056	60" Bin Hub Weldment	1
	11700036	6in x 26in Blue Poly Wafer	38
	81300046	60" Hood Weldment	1
XHAB72-S / XMAB72-S	51300066	72" Bin Hub Weldment	1
	11700036	6in x 26in Blue Poly Wafer	44
	81300056	72" Hood Weldment	1
XHAB96-S / XMAB96-S	51300086	96" Bin Hub Weldment	1
	11700036	6in x 26in Blue Poly Wafer	56
	81300076	96" Hood Weldment	1

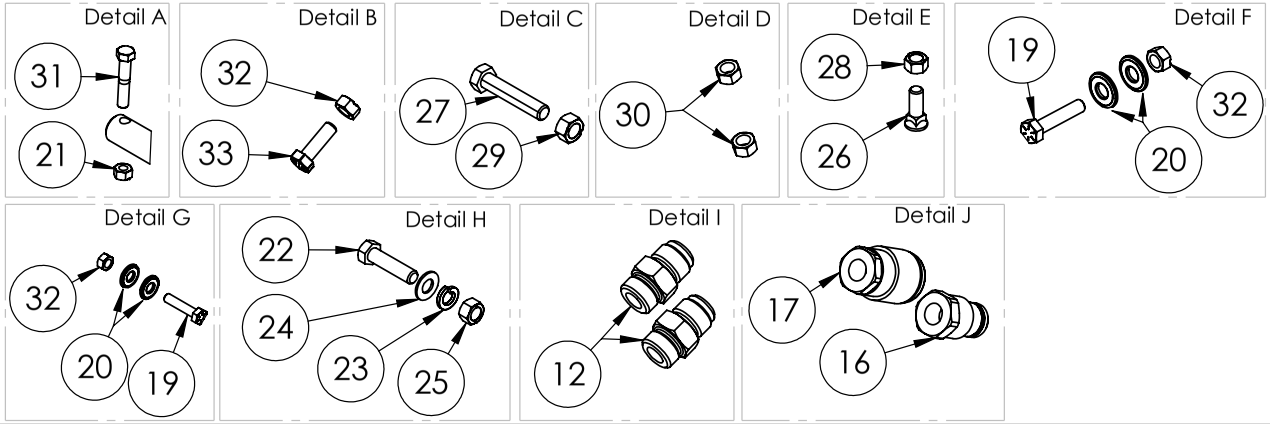


Attachment	Part #	Description	QTY.
XHAB48-S / XMAB48-S	51300046	48" 8in Hub Weldment	1
	11700036	8in x 26in Blue Poly Wafer	32
	52500036	1/2" D X 46" L Motor Hose Kit	1
	81300036	48" Hood Weldment	1
XHAB60-S / XMAB60-S	51300056	60" 8in Hub Weldment	1
	11700036	8in x 26in Blue Poly Wafer	38
	52500026	1/2" D X 60" L Motor Hose Kit	1
	81300046	60" Hood Weldment	1
XHAB72-S / XMAB72-S	51300066	72" 8in Hub Weldment	1
	11700036	8in x 26in Blue Poly Wafer	44
	52500026	1/2" D X 60" L Motor Hose Kit	1
	81300056	72" Hood Weldment	1
XHAB96-S / XMAB96-S	51300086	96" 8in Hub Weldment	1
	11700036	8in x 26in Blue Poly Wafer	56
	52500046	1/2" D X 78" L Motor Hose Kit	1
	81300076	96" Hood Weldment	1

ITEM	Part #	DESCRIPTION	QTY.
1	81300016	Back Frame Weldment	1
2	81300026	Pivot Triangle Weldment	1
3	81300066	Hood Weldment	1
4	51300076	Hub Weldment	1
5	51300136	Broom Leg Weldment	2
6	20200176	2" D X 7.5" L Pin	1
7	20200186	1" D X 6" L Pin	1
8	10300046	1" D X 5.5" L Pin	1
9	40100036	Motor	1
10	41200016	Bent Hitch Pin	2
11	40000076	2" B X 4.5" Cylinder	1
12	40600076	Selector Valve	1
13	41100036	Bearing	1
14	11700036	Blue Poly Wafer	50
15	90200016	Wafer Retainer Plate	2
16	11200436	3/8"-16 X 2" Hex Bolt GR 8	2
17	11200136	3/8"-16 Lock Nut GR C	8
18	11200476	1/2"-13 X 3 1/2" Hex Bolt GR 2	1
19	11200446	1/2"-13 Lock Nut GR C	9
20	11200116	3/8"-16 X 1" Hex Bolt GR 8	6
21	11200156	1/2"-13 X 2" Hex Bolt GR 8	8
22	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	12
23	11200176	1/2" Split Lock Washer GR 8	4
24	11200826	1/4"-20 X 3" Socket Bolt	2
25	11200066	1/4" SAE Lock Washer GR 8	2
26	11200076	1/4"-20 Lock Nut GR C	2
27	11200656	3/4"-16 X 2" Hex Bolt GR 8	2
28	11200586	5/16"-18 X 1" Hex Bolt GR 8	2
29	11200106	5/16"-18 Lock Nut GR C	2
30	11200216	3/4"-10 Lock Nut GR C	2
31	41000196	1/2" - 5/8" Motor Fitting	6
32	41000286	45° 1/2" Motor Fitting	2
33	41000016	3/8" 90° Fitting	2
34	41000296	9/16" Straight Fitting	2
35	41000306	3/4" 90° Fitting	2
36	41000056	3/8" - .031" Restrictor Fitting	1
37	53000056	1/2" D X 6' L Machine Hose	1
38	52500016	1/2" D X 66" L Motor Hose Kit	1
39	52400016	3/8" D X 21" L Hose Kit	1
40	52400026	3/8" D X 18" L Hose Kit	1
41	41000116	1/2" Flat Coupler FE - Changeable	1
42	41000106	1/2" Flat Coupler M - Changeable	1
43	11200146	3/8" USS Flat Washer GR 8	12

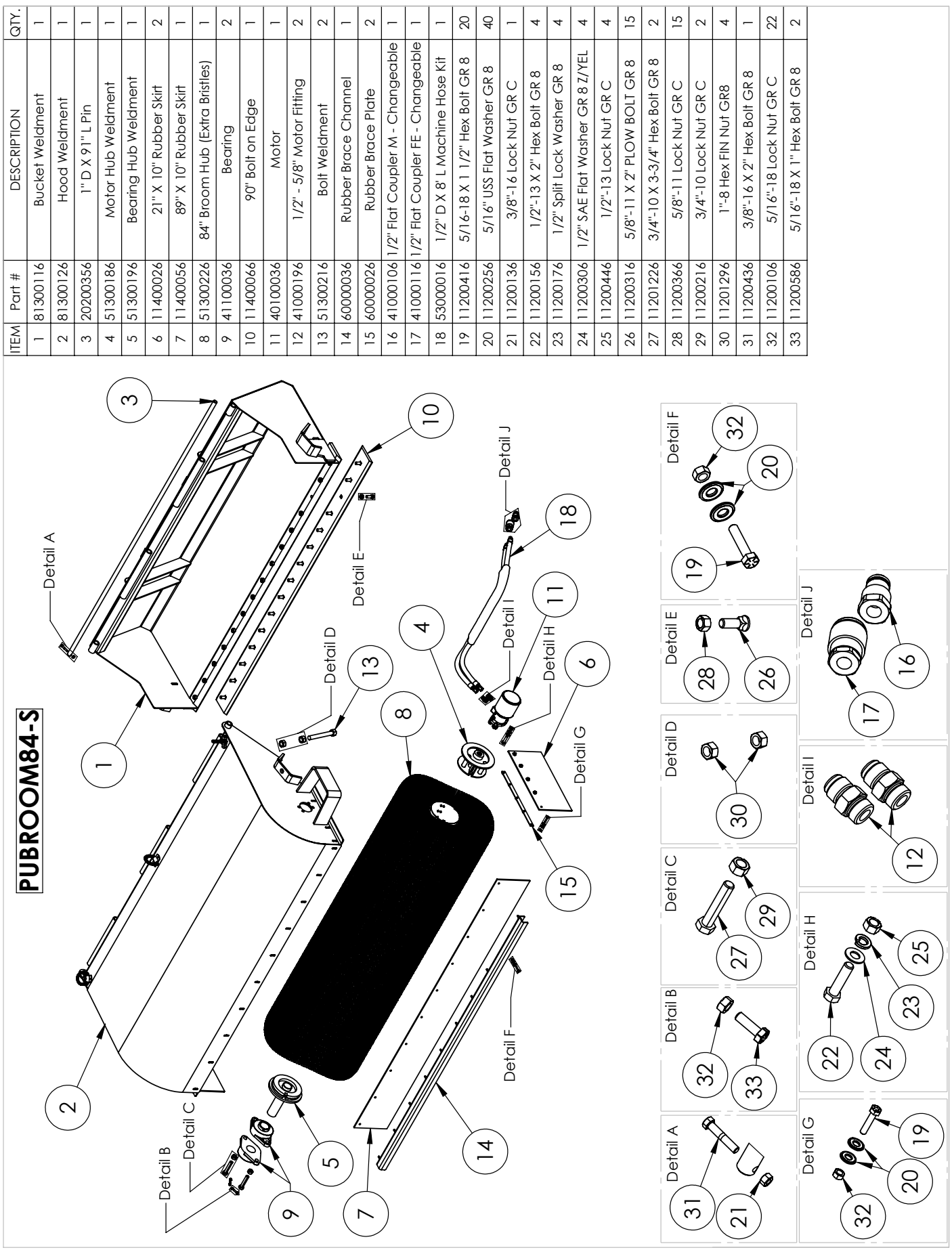
PUBROOM72-S





ITEM	Part #	DESCRIPTION	QTY.
1	81300096	Bucket Weldment	1
2	81300106	Hood Weldment	1
3	20200346	1" D X 79" L Pin	1
4	51300186	Motor Hub Weldment	1
5	51300196	Bearing Hub Weldment	1
6	11400026	21" X 10" Rubber Skirt	2
7	11400036	77" X 10" Rubber Skirt	1
8	51300206	72" Broom Hub (Extra Bristles)	1
9	41100036	Bearing	2
10	11400046	78" Bolt on Edge	1
11	40100036	Motor	1
12	41000196	1/2" - 5/8" Motor Fitting	2
13	51300216	Bolt Weldment	2
14	60000016	Rubber Brace Channel	1
15	60000026	Rubber Brace Plate	2
16	41000106	1/2" Flat Coupler M - Changeable	1
17	41000116	1/2" Flat Coupler FE - Changeable	1
18	53000016	1/2" D X 8' L Machine Hose Kit	1
19	11200416	5/16-18 X 1 1/2" Hex Bolt GR 8	19
20	11200256	5/16" USS Flat Washer GR 8	38
21	11200136	3/8"-16 Lock Nut GR C	1
22	11200156	1/2"-13 X 2" Hex Bolt GR 8	4
23	11200176	1/2" Split Lock Washer GR 8	4
24	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
25	11200446	1/2"-13 Lock Nut GR C	4
26	11200316	5/8"-11 X 2" PLOW BOLT GR 8	13
27	11201226	3/4"-10 X 3-3/4" Hex Bolt GR 8	2
28	11200366	5/8"-11 Lock Nut GR C	13
29	11200216	3/4"-10 Lock Nut GR C	2
30	11201296	1"-8 Hex FIN Nut GR8	4
31	11200436	3/8"-16 X 2" Hex Bolt GR 8	1
32	11200106	5/16"-18 Lock Nut GR C	21
33	11200586	5/16"-18 X 1" Hex Bolt GR 8	2

7.6 84" PICK UP BROOM DIAGRAM



ITEM	Part #	DESCRIPTION	QTY.
1	81300116	Bucket Weldment	1
2	81300126	Hood Weldment	1
3	20200356	1" D X 91" L Pin	1
4	51300186	Motor Hub Weldment	1
5	51300196	Bearing Hub Weldment	1
6	11400026	21" X 10" Rubber Skirt	2
7	11400056	89" X 10" Rubber Skirt	1
8	51300226	84" Broom Hub (Extra Bristles)	1
9	41100036	Bearing	2
10	11400066	90° Bolt on Edge	1
11	40100036	Motor	1
12	41000196	1/2" - 5/8" Motor Fitting	2
13	51300216	Bolt Weldment	2
14	60000036	Rubber Brace Channel	1
15	60000026	Rubber Brace Plate	2
16	41000106	1/2" Flat Coupler M - Changeable	1
17	41000116	1/2" Flat Coupler FE - Changeable	1
18	53000016	1/2" D X 8' L Machine Hose Kit	1
19	11200416	5/16-18 X 1 1/2" Hex Bolt GR 8	20
20	11200256	5/16" USS Flat Washer GR 8	40
21	11200136	3/8"-16 Lock Nut GR C	1
22	11200156	1/2"-13 X 2" Hex Bolt GR 8	4
23	11200176	1/2" Split Lock Washer GR 8	4
24	11200306	1/2" SAE Flat Washer GR 8 Z/YEL	4
25	11200446	1/2"-13 Lock Nut GR C	4
26	11200316	5/8"-11 X 2" PLOW BOLT GR 8	15
27	11201226	3/4"-10 X 3-3/4" Hex Bolt GR 8	2
28	11200366	5/8"-11 Lock Nut GR C	15
29	11200216	3/4"-10 Lock Nut GR C	2
30	11201296	1"-8 Hex FIN Nut GR8	4
31	11200436	3/8"-16 X 2" Hex Bolt GR 8	1
32	11200106	5/16"-18 Lock Nut GR C	22
33	11200586	5/16"-18 X 1" Hex Bolt GR 8	2

SECTION 8

LIMITED WARRANTY

IronCraft (the Manufacturer) warrants, only to the original Purchaser, this equipment will be free from defects in material and workmanship, under normal use and service, for one (1) year from the date of purchase providing this equipment is purchased for individual use only. Commercial use of this equipment is not covered under any warranty. This warranty does not apply to any equipment which has been damaged or which has been subjected to change, misuse, negligence, abnormal wear and tear, alterations, tampering, or failure to follow operating instructions. This warranty does not cover any product or parts not manufactured by IronCraft.

Under this warranty, the Manufacturer will repair or replace any part which the Manufacturer determines has failed during the period of the warranty due to defects in material or workmanship. After written approval by the manufacturer, the equipment or defective part must be returned to IronCraft.

Warranty coverage and performance is expressly conditioned upon the return of the completed registration form to:

IronCraft, 7 Rocky Mt Rd, Athens, Tennessee 37303. Registration can be found on our website www.ironcraftusa.com

IronCraft reserves the right to make improvements and changes in specifications without notice or obligation to modify previously sold units. The Owner's Manual describes the proper assembly procedures for your implement and furnishes operating and maintenance recommendations to help you obtain long and satisfactory service.

PURCHASER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY, OTHER DEFECT, OR CONDUCT GIVING RISE TO LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT SOLD, AND THE MANUFACTURER UNDER NO CIRCUMSTANCES SHALL BE LIABLE FOR ECONOMIC LOSS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES. THE MANUFACTURER DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR PURPOSE.

Purchaser and IronCraft hereby (a) submit to the non-exclusive jurisdiction of the courts of competent jurisdiction in Meigs County, Tennessee, and the United State District Court for the Eastern District of Tennessee for resolution of any dispute concerning this Limited Warranty or the rights or obligations of Purchaser and/or IronCraft; (b) agree that any litigation commenced in Tennessee in connection with this Limited Warranty shall be venued in either the Meigs County, Tennessee District Court, or the United States District Court, Eastern District of Tennessee, Southern Division, and (c) waive any objection it may have as to any such action or proceeding brought in such court that such court is an inconvenient forum. Nothing herein shall limit the right of Purchaser or IronCraft (or the right of any permitted successor or assign of either) to bring proceedings against the other in the courts of any other jurisdiction wherein any assets of such other party may be located.

REGISTER

This registration form must be filled out within 30 days of delivery to the purchaser or future warranty claims will not be honored.

www.ironcraftusa.com/warranty/register-warranty/

www.ironcraftusa.com/warranty/claim-warranty/

SECTION 9

SAFETY ACKNOWLEDGMENT & MAINTENANCE LOG

ATTENTION ALL OPERATORS: Print your name, sign and date in the boxes below to acknowledge that you have read and fully understand the safety instructions presented in this manual, and have been trained on how to safely operate this attachment.

OPERATOR NAME	SIGNATURE	DATE

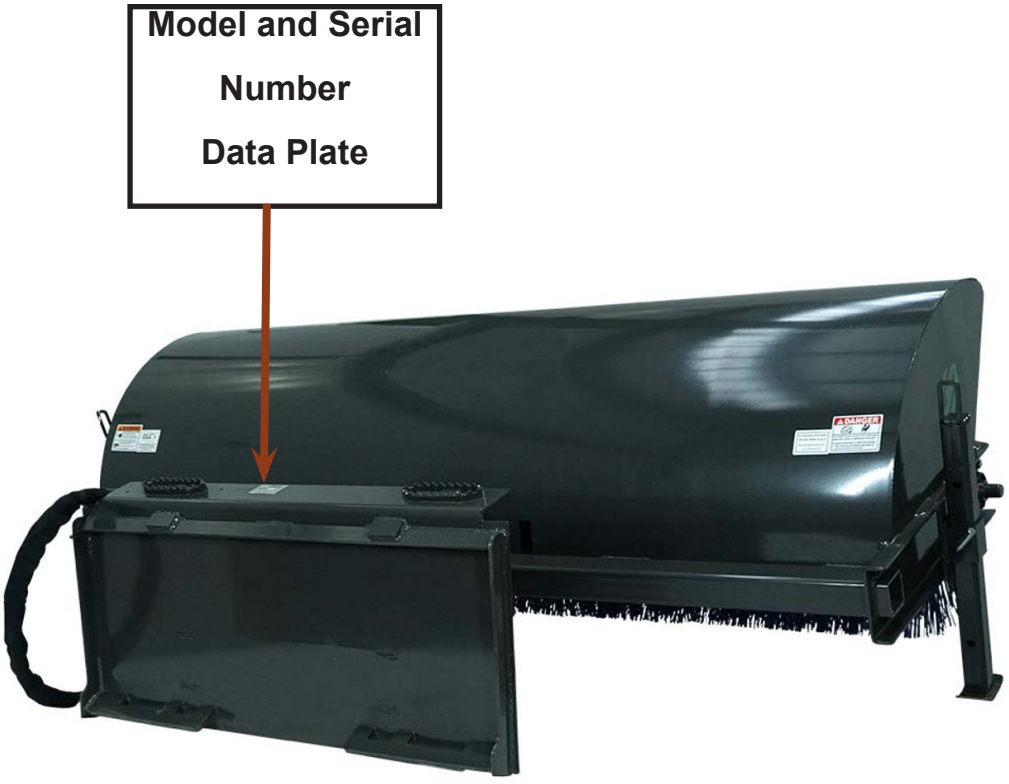
Document all routine maintenance and repair services performed on this attachment.

DESCRIPTION OF MAINTENANCE/REPAIR	SERVICED BY:	DATE:

The Model and Serial numbers will be in one of (2) places and will either be etched into the attachment or on a Data Plate.

Instructions: Stand at the back of the attachment facing the attachment mounting bracket and look in the following locations:

1) Back- left or right



PLEASE NOTE: The Model and Serial number may be etched or on a Data Plate.

Disclaimer: Any critical changes made to this manual by individuals outside the manufacturer's authorized personnel are doing so at their own risk. The manufacturer cannot be held legally responsible for any consequences, damages, or liabilities resulting from such modifications. It is advised to adhere strictly to the original manual provided by the manufacturer for optimal performance, safety, and reliability.

IRONCRAFT

7 ROCKY MT RD

Athens, Tennessee 37303

(P) 423-405-5150

(F) 423-405-5904

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FARM EQUIPMENT MANUFACTURERS ASSOCIATION
FEMA

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