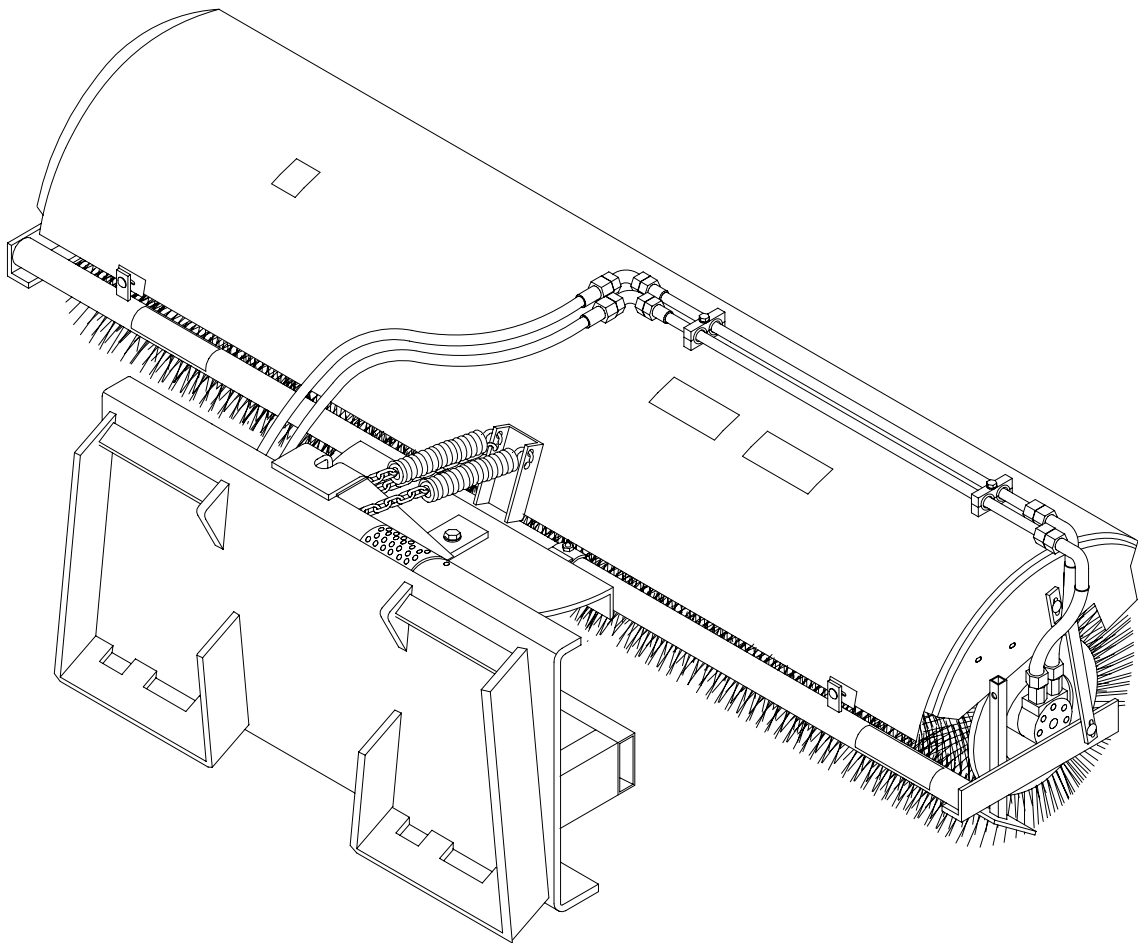




Farmers' Factory Company

ANGLE BROOM

OWNER'S & OPERATOR'S MANUAL



Models covered:
LAF2873 and **LAF2848**

OWNER'S & OPERATOR'S MANUAL
FFC PART # **MR05589**

FARMERS' FACTORY COMPANY
100 EAST LEE ROAD
LEE, IL 60530
1-800-747-2132

09-20-99

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INTRODUCTION

Congratulations on your purchase of a new **Farmers' Factory Company Angle Broom**. This product has been designed and built to sweep dust, dirt, gravel, snow, and other loose debris off of relatively hard, flat surfaces. This product can also be used for sweeping thatch out of grass. 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. If anyone does not fully understand every part of this manual, please obtain further assistance by contacting the dealer from which this product was purchased or by contacting FFC at the telephone number or address listed on the cover of this manual. 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) **LAF2873**, and **LAF2848**. The difference between the models is the width and number of drive motors of the product, details of which are covered on the parts list and specifications page(s).

GENERAL INFORMATION

The purpose of this manual is to assist in assembling, mounting, operating, and maintaining your **Angle Broom**. 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. FFC 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 Unit | The engine-driven machine to which this product must be attached. |
| Right, Left, Front, Rear | Directions that are determined in relation to the operator of the equipment when seated in the normal operating position. |
| | Precautions that must be followed to prevent damage to equipment. |
| | Precautions that must be followed to prevent substandard performance. |

IMPORTANT NOTICE

SERIAL NUMBER LOCATION

Always refer to the model and serial number when ordering parts or requesting information from your dealer. The serial number plate for this product is located **on the top left surface of the loader attachment plate** of your **Angle Broom**.

Reference Information

Model Number _____	Loader Make _____
Serial Number _____	Loader Model _____
Date Purchased _____	Loader Serial # _____

DEFINITION OF SAFETY TERMS AND SYMBOLS

Throughout this manual, the terms **DANGER**, **WARNING**, and **CAUTION** are used to indicate the degree of hazard to personnel if proper safety procedures are not followed. These words will be used in conjunction with the Safety Alert Symbol: a dark triangle containing a white exclamation mark.



The Safety Alert Symbol means:
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

DANGER Indicates an imminently hazardous situation which, if not avoided,
WILL result in death or serious injury.

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;

OR

may also be used to alert against unsafe practices that may result in personal injury.

ACCIDENTS CAN BE PREVENTED WITH **YOUR HELP !**

No accident prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

To read equipment accident reports from all over the country is to be convinced that a large number of accidents can be prevented only by operators who consistently anticipate the results of their actions and thus prevent accidents from ever occurring. No power-driven equipment, whether it is on the highway, in a farm field, or in an industrial plant, can be any safer than is allowed by the person who is at the controls.

If accidents are to be prevented (and accidents can be prevented), that prevention will come from equipment operators who accept their complete responsibility.

The designer, the manufacturer, and the safety engineer all help create a safe product, but the operator of that product can wipe out their combined efforts with a single careless act.

The best safety device is a careful operator. FFC and your dealer ask that **YOU** be that careful, responsible equipment operator.

YOU ARE THE KEY TO SAFETY BECAUSE:

YOU are responsible for the SAFE operation and maintenance of **YOUR** Angle Broom.

YOU are responsible to familiarize yourself, and anyone else who will assemble, operate, maintain, or work around this product, with the SAFETY information contained in this manual.

YOU are responsible to read ALL information contained in this manual to any operators or maintenance personnel who are not fully able to read the written English language. Whether **YOU** read the manual as written or translate it into another language, **YOU** must make certain that all operators and maintenance personnel have a complete understanding of the full and exact contents of this manual. Translations of this manual into other languages are available by submitting an order to FFC.

YOU can reduce the risk of injury or death by following all safety precautions and by using good safety practices.

SAFETY INSTRUCTIONS

WORK SAFELY - A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST ACCIDENTS !!

WARNING SECTION



WARNING

Obey all the safety instructions listed in this section and throughout this manual. Failure to obey instructions in this section could result in death or serious injury.

BEFORE ATTEMPTING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE, OR OTHER WORK ON OR NEAR THIS PRODUCT:

- **READ AND COMPLETELY UNDERSTAND THIS MANUAL.**
- **READ AND COMPLETELY UNDERSTAND THE MANUALS PROVIDED WITH YOUR *power unit, loader, and quick-attach.***
- Read and understand all safety signs on this product and on your power unit, loader, and quick-attach.
- Know all your controls and know how to quickly stop all power unit movement, the Angle Broom movement, and the engine in case of an emergency.
- Know and obey all applicable government rules, O.S.H.A. regulations, local laws and other professional guidelines for your operation.
- Make sure that anyone who will be assembling, mounting, maintaining, repairing, removing, and/or storing this product:
 - has been instructed in the safe operation of this product and of the power unit, loader, and quick-attach to which this product is attached.
 - is physically and mentally capable of the safe operation of this type of equipment.
 - is not under the influence of drugs or alcohol.
 - is carefully supervised from a safe distance, especially if such person is inexperienced.
 - wears appropriate protective equipment (i.e. hardhat, safety glasses, work gloves, protective shoes, respirator, ear protection, etc.).
 - does not wear loose fitting clothing, loose or uncovered hair, or any accessories (jewelry, necktie, scarf, wrist watch, etc.) that can catch in moving parts.
 - has annually reviewed all safety instructions.
- Know and follow good work practices when assembling, mounting, maintaining, repairing, removing, and storing this product:
 - Work on a level surface in a well-lit area.
 - Keep the area clean and dry.
 - Use properly grounded electrical outlets & tools.

- Use the right tool for the job at hand.
- Make sure that your tools are in good condition for performing the desired function.
- When using tools, wear the protective equipment specified by the tool manufacturer. (i.e. hardhat, safety glasses, work gloves, protective shoes, etc.)

WHEN YOUR POWER UNIT IS USED DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE, OR OTHER WORK ON OR NEAR THIS PRODUCT:

- Before leaving the operator's station or before beginning any type of work on this product, lower this product to the ground, apply your power unit's parking brake, stop the engine, remove the starter key, wait for all moving parts to stop, and then relieve all pressure in the hydraulic lines. Refer to your power unit's operator's manual for instructions on how to relieve hydraulic pressure in lines.
- Know your loader's safe lifting and operating capacity and the weight of this product. See the specifications in this manual for the weight of this product and refer to your power unit's and your loader's operator's manuals for safe operating limits. Lift capacity may be reduced if using a quick-attach.
- Never allow anyone, except the operator, to be around the power unit or this product when either is in motion. Do not startup unless others are clear of the work area.
- Do not allow riders on this product or the power unit.
- Do not stand or climb on this product when raised.
- Never lift this product above (a.) the operator's eye level or (b.) to a height where visibility is obstructed, whichever is lower.
- Do not place any part of your body under any part of this product unless this product is securely resting on specified blocking or on the ground.
- Do not use blocking made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Do not use wood or steel blocking that shows any signs of material decay. Do not use blocking that is warped, twisted, or tapered.
- Never operate controls from the ground. Operate the controls only from the operator's station.
- Never leave equipment unattended with the engine running or with this product raised on the loader.
- Be aware of the added weight and width of this product. Reduce travel speeds accordingly, especially when traveling over rough ground.
- Keep this product close to the ground and under control when transporting.

SAFETY INSTRUCTIONS

WORK SAFELY - A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST ACCIDENTS !!

WARNING SECTION (CONTINUED)



WARNING

Obey all the safety instructions listed in this section and throughout this manual. Failure to obey instructions in this section could result in death or serious

injury.

WHEN DEALING WITH HYDRAULICS DURING ANY TYPE OF ASSEMBLY, OPERATION, MAINTENANCE, OR OTHER WORK ON OR NEAR THIS PRODUCT:

- Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible!
- If any fluid penetrates the skin, GET IMMEDIATE MEDICAL ATTENTION!!
- Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS!
- Before connecting or disconnecting hydraulic hoses, read your power unit's operator's manual for detailed instructions on connecting and disconnecting hydraulic attachments.
- Make certain that all parts meet the specifications for this product when installing or replacing hydraulic hoses or fittings.
- After connecting hydraulic lines:
 - Slowly and carefully raise the loader and cycle the rollback / dump cylinders to check hose clearances and to check for any interference.
 - Operate the hydraulics on this product to check hose clearances and to check for any interference.
 - Make certain that the hoses cannot interfere with or actuate the quick-attach mechanism.
 - Make certain that hoses will not be pinched, or get tangled, in any equipment.
- Do not lock the auxiliary hydraulics of your power unit in the "ON" position.
- Refer to your power unit's operator's manual and this manual for procedures and intervals, then inspect and maintain the entire hydraulic system to insure that the fluid remains clean, that all devices function properly, and that there are no fluid leaks.

WHEN MOUNTING THIS PRODUCT TO YOUR POWER UNIT:

- Refer to the operator's manuals of your power unit, your loader, and your quick-attach for special or detailed mounting instructions.
- This product should fit onto the quick-attach or loader arms of your power unit the same as the original products that were designed by your loader / quick-attach manufacturer.
- If this product does not fit properly, contact FFC before operating.
- Never place your finger into the mounting plate or loader holes. A slight movement of the power unit or this product could cause serious injury.

BEFORE EACH USE, THOROUGHLY INSPECT THIS PRODUCT AND:

- Make certain that all safety signs are in place and legible. Refer to the safety sign page in this manual for the placement of safety signs for this product.
- Replace all damaged or excessively worn parts and hardware only with genuine FFC parts or with properly rated fasteners, hydraulic hoses, or fittings.
- Make certain that all locking pins, latches, and connection devices are properly installed and secured.
- Make certain that all protective guards, canopies, doors, etc. are in place and secure.

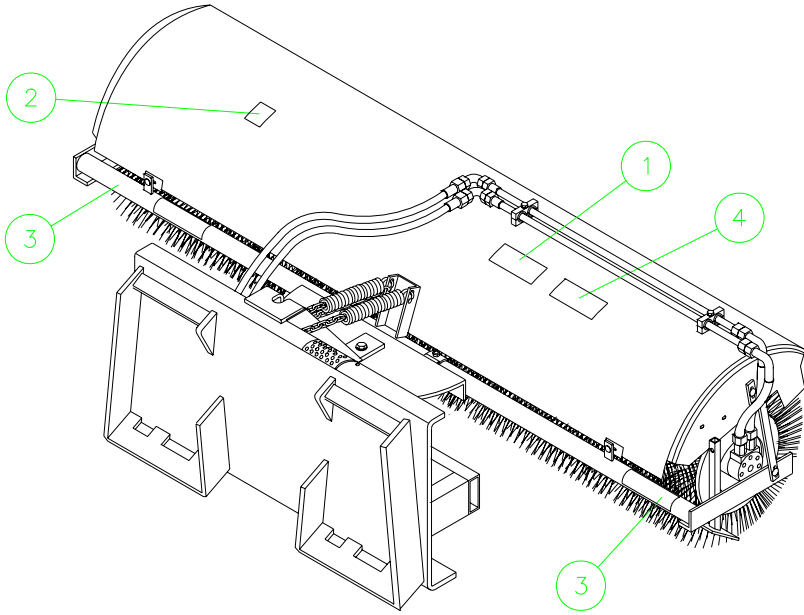
WHEN OPERATING THIS PRODUCT IN ACCORDANCE WITH DESIGN INTENTIONS:

- Operate at the slowest brush speed that will do the job so that flying debris will be minimized. Debris can be thrown up to 50 feet.
- Reduce your speed to avoid "bouncing" the broom assembly over rough terrain.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your Angle Broom.
- When making repairs, use only genuine FFC parts or, for fasteners, hydraulic hoses, or hydraulic fittings, use only properly rated parts.
- Replacement parts, for parts with safety signs attached, must also have safety signs attached.

SAFETY SIGN LOCATIONS



ITEM	QTY.	PART # - DESCRIPTION
1	1	RDL3141-Read Manual
2	1	RDL3129-Hydraulics
3	2	RDL3160-Crush Hazard
4	1	RDL3159-Flying Debris

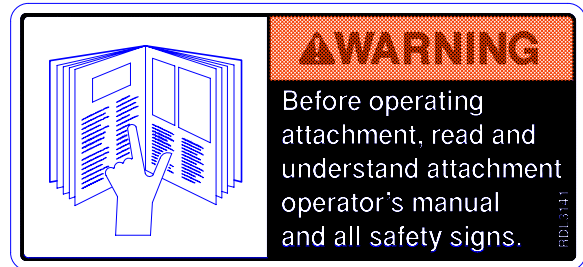
INSTRUCTIONS

- Keep all safety signs clean and legible.
- Replace all missing, illegible, or damaged safety signs.
- Replacement parts for parts with safety signs attached must also have safety signs attached.
- Safety signs are available, free of charge, from your dealer or from FFC.

PLACEMENT OR REPLACEMENT OF SAFETY SIGNS

1. Clean the area of application with non-flammable solvent, and then wash the same area with soap and water.
2. Allow the surface to fully dry.
3. Remove the backing from the safety sign, exposing the adhesive surface.
4. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.

ITEM 1



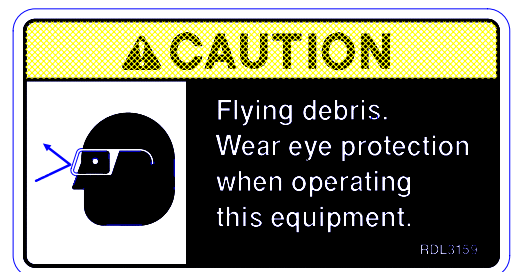
ITEM 2



ITEM 3



ITEM 4



POWER UNIT SPECIFICATIONS

IMPORTANT

Exceeding any of the maximum recommended power unit specifications **CAN** result in damage to this product and **WILL** void all FFC warranties.

DESCRIPTION

Hydraulic Pressure Output
Rear Ballast

SPECIFICATIONS

3,000 psi. maximum continuous, 3,500 psi. max. intermittent
As required to maintain full power unit stability.
(Note the Shipping Weight on page 14, then see the operator's manual(s) for your power unit, loader, and quick-attach for ballasting needs.)

ANGLE BROOM MOUNTING



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM MOUNTING

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your power unit and all workers involved in the mounting process.
2. Refer to the operator's manual(s) for your power unit, loader, and quick-attach and follow the mounting instructions contained therein.
3. Carefully raise the loader and cycle the rollback/dump cylinders to check clearances and to verify that all mounting procedures have been successfully completed.
4. **IMPORTANT** Lubricate all grease fittings before connecting this product to your power unit's hydraulic system. Refer to **ANGLE BROOM MAINTENANCE** on page 9 and follow the instructions.

ANGLE BROOM HYDRAULIC CONNECTION



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM HYDRAULIC CONNECTION

1. Disconnect the hydraulic hose quick couplers from one another and attach the quick couplers to your power unit as per the instructions in your power unit's operator's manual.
2. Carefully raise the loader and cycle the rollback/dump cylinders to check hose clearances and to check for any interference.



WARNING

Do not lock the auxiliary hydraulics of your power unit in the "ON" position. Failure to obey this warning could result in death or serious injury.

ANGLE BROOM SETUP



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM SETUP

LEVELING THE BRUSH HEAD

1. Place this product on a firm, level surface that is large enough to safely accommodate the Angle Broom, your power unit, and all workers involved in the mounting process.
2. Rotate the brush head until the brush is perpendicular to the line of travel of the power unit.
3. Lower the brush head until the bristles are approximately 2" above the level surface.
4. Apply your power unit's parking brake, stop the engine, remove the starter key, and wait for all moving parts to stop before leaving the operator's position.
5. Measure from the frame down to the level surface on one end of the brush and check that same measurement on the other end of the brush.
 - If the two measurements are equal, continue with step 6
 - If the two measurements are not equal, loosen, but do not remove, the bolts on the mounting assembly, adjust the height of one end of the brush until the two measurements are equal, and retighten the bolts.
6. Repeat step 5 two more times with the brush angled fully left, then with the brush angled fully right.
 - If all four measurements are equal, then the brush head is level. NOTE: This should result in the top surface of the crescent weldment being parallel to the level surface.
 - If all four measurements are not equal, then please contact FFC for assistance in attaining the level position.

ADJUSTING THE BRUSH HEIGHT

1. Place this product on a dusty, smooth surface that is large enough to safely accommodate the Angle Broom, your power unit, and all workers involved in the mounting process. The brush head should be fully angled.
2. Apply your power unit's parking brake, but leave the engine running.
3. Start the sweeper at a slow speed.
4. Lower the brush head into sweeping position.
5. Run the sweeper for approximately 10 seconds, then raise the sweeper, release the parking brake, and back the power unit away.
6. Stop the sweeper, fully lower the sweeper, apply your power unit's parking brake, stop the engine, remove the starter key, wait for all moving parts to stop, and relieve all pressure in the hydraulic lines before leaving the operator's position.
7. Measure the brush pattern in the dust. The desired pattern should be a consistent 2" to 3" (51 to 76 mm) wide for the full length of the brush.
 - If the actual pattern matches the desired pattern, the brush height is correct.
 - If the actual pattern is tapered, then
 - a. restart your power unit and use the loader's dump cylinders to tilt the brush head forward (away from the operator) until there is no tension on the spring-chain assemblies;
 - b. apply your power unit's parking brake, stop the engine, remove the starter key, wait for all moving parts to stop, and relieve all pressure in the hydraulic lines before leaving the operator's position.
 - c. move the spring-chain assemblies forward in the mounting assembly upright to lower the brush head or backward in the mounting assembly upright to raise the brush head; and
 - d. restart your power unit and use the loader's dump cylinders to tilt the brush head back toward the operator until the brush head is in the normal operating position.

If the actual pattern is too wide or too narrow, raise or lower the loader arms to obtain the correct width. If the loader cannot be lowered any further, the broom head may need to be lowered by means of the dump cylinders which may result in the need to repeat the LEVELING THE BRUSH HEAD process.



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM OPERATION



WARNING

Failure to obey the following procedures could result in death or serious injury.

- Never lift this product above (a.) the operator's eye level or (b.) to a height where visibility is obstructed, whichever is lower.
- Do not lock the auxiliary hydraulics of your power unit in the "ON" position.
- Operate at the slowest brush speed that will do the job so that flying debris will be minimized. Debris can be thrown up to 50 feet.
- Reduce your speed to avoid "bouncing" the broom assembly over rough terrain.

IMPORTANT

Failure to ease into piles of material when attempting to move those piles **CAN** result in damage to this product and **WILL** void all FFC warranties.

IMPORTANT

Increasing your throttle setting to override a "stall out" of the brush (rather than raising the brush out of the material that is causing the "stall out") **CAN** result in damage to this product and **WILL** void all FFC warranties.

GENERAL

- The bristles should be no more than 2" above the ground when changing the angle of the brush head.
- Sweep with the wind blowing on the operator's back or in the same direction that the swept material is moving.

DIRT, DEBRIS, AND GRAVEL

- To keep dust at a minimum, plan your sweeping for days when it is overcast and humid or after a rain.
- Low brush speeds and moderate ground speeds work best for cleaning dirt and debris from hard surfaces.
- In some cases, reducing the brush speed will reduce the amount of dust generated.
- When sweeping debris or gravel, use just enough brush speed to "roll" the materials. Do not throw the debris or gravel.

SNOW

- High brush speeds and slow ground speeds are needed to sweep snow effectively.
- Wet and/or deep snow will require the engine rpm to be increased to minimize the chances of having snow pack inside the hood.
- Deep snow may require multiple passes because of the need to remove the snow in layers.

THATCH

- Low brush speeds and slow ground speeds are needed to do the best thatching job.
- Use a combination of brush speeds and ground speeds that roll up a neat windrow.
- To prevent the brush from pulling itself into the ground, adjust the transport and spring-chain assemblies so that the bristle tips barely touch the grass.

ANGLE BROOM MAINTENANCE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM MAINTENANCE

BEFORE EACH USE

- Make sure that all nuts and bolts are in place and properly tightened.
- 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 signs are in place, are clean, and are legible.
(SEE THE SAFETY SIGN SECTION ON PAGE 5.)
- Replace any damaged parts and excessively worn parts.
- Make sure that the brush head is level, the brush height is correct, the spring-chain assemblies are adjusted, and the transport chain is in the correct position.
(SEE THE SETUP SECTION ON PAGE 7)

IF DEBRIS (Wire, Banding, etc.) BECOMES WRAPPED AROUND THE BRUSH

1. Park your power unit on a level surface with this product properly attached.
2. Place your power unit's transmission in "Park" and engage the parking brake.
3. Lower this product onto replaced blocking as specified below:



WARNING

Do not use blocking made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Do not use wood or steel blocking that shows any signs of material decay. Do not use blocking that is warped, twisted, or tapered. Failure to obey this warning could result in death or serious injury.

Compressive Strength of Each Blocking Unit	1,000 psi or the capability to support 1,000 lbs. without crushing or collapsing when the load is applied
Quantity and Location of Blocking Units	Two: (1) under the rear of the angle at each end of the Brush Head Frame.
Direction of Placement	The long direction of the blocking should run perpendicular to the Brush Head Frame angle and be parallel to the Brush Head Frame pipe. The end of the blocking should extend at least 6" past the outer face of the angle.
Length of Each Blocking Unit	24" minimum
Height of Each Blocking Unit	16-½" maximum
Base Width of Each Blocking Unit	Equal to or greater than that Blocking Unit's Height

If blocking units are made up of smaller pieces:

these pieces must be stacked in a pyramid that must adhere to all the blocking unit specifications above, the width of each piece, 3-1/2" minimum, must be equal to or greater than the height of that same piece, there should never be a larger piece stacked on top of a smaller piece, every piece in a given layer must be the same height, and each piece should be centered over the line where two pieces in the layer below are in contact.

4. Shut off your power unit's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all pressure in the hydraulic lines.

IMPORTANT **Allowing dirt or other foreign material into the motor or hydraulic hoses CAN result in damage to this product and WILL void all FFC warranties.**

5. Disconnect the hydraulic hoses from your power unit and connect the couplers together.
6. With proper safety equipment on (i.e. eye protection, gloves, protective clothing, etc.), rotate the brush in the reverse direction while pulling on the debris. In some cases, a wrench or bar can be used to assist in rotating the brush.

ANGLE BROOM MAINTENANCE (Continued)



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM MAINTENANCE

AFTER EVERY 10 HOURS OF USE

- Grease two fittings: one each on the two brush head pivot tubes immediately behind the brush.
- Grease one fitting (Model LAF2873 Only): one on the brush core bearing at the right end of the brush.

ANGLE BROOM SERVICE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM SERVICE

REPLACING BRUSH SECTIONS

Repeat steps 1 - 5 from page 9.

6. Prepare to support the brush core:
 - If the core will be lifted from below (i.e. with a floor jack, etc.), skip to step 7.
 - If the core will be lifted from above (i.e. with an overhead hoist, etc.), remove the screws from the side brackets and hood, then lift off the hood.
7. Remove the motor mounting bolts and bearing bolts.
8. Remove the core from the brush frame by means of a floor jack, overhead hoist, etc.
9. Slide the bearing off the core and remove the retainer plate.
10. Stand the core vertically with the motor down on blocks so that the motor does not touch the ground.
11. Remove all of the old brush sections.
12. Install a polypropylene section first on the core so that the drive pins on the section straddle a tube on the core. When correctly installed, the drive pins will prevent the section from being able to rotate on the core.

IMPORTANT Failure to install a polypropylene section on each end of the core (first and last) **CAN result in damage to this product and WILL void all FFC warranties.**

13. Rotate a second section 180 degrees and then install that section with the drive pins straddling the tube that is on the opposite side of the core from the tube straddled by the drive pins of the first section.
14. Continue installing sections, rotating each section 180 degrees until the core is full. If the last section will take more space than what remains and there is more than ½" (13 mm) of the core yet to be filled, set the last section in without rotating 180 degrees so that the drive pins are on the same tube as the previous section. This last section will then nest into the next-to-last section.
15. Replace the retainer plate.
16. Lay the core down in a horizontal position and then slide the bearing onto the core.

IMPORTANT Failure to pull the motor flange tight against the housing on the brush frame **CAN result in damage to this product and WILL void all FFC warranties.**

17. Place the core into the brush frame by means of a floor jack, overhead hoist, etc.
18. Replace and finger tighten the bolts on the motor housing and the bearing.
19. Align the brush core by measuring from the brush frame tube to the center of the core on the bearing end, then from the brush frame tube to the center of the motor on the motor end.
 - If the two measurements are equal, then tighten all bolts.
 - If the two measurements are not equal, adjust the position of the bearing end until the measurements are equal, then tighten all bolts.
20. If removed during Step 6 above, replace the hood and brackets.
21. Thoroughly clean the hose fittings and motor ports and then connect the hydraulic hoses to the motor.

ANGLE BROOM STORAGE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY ANGLE BROOM STORAGE

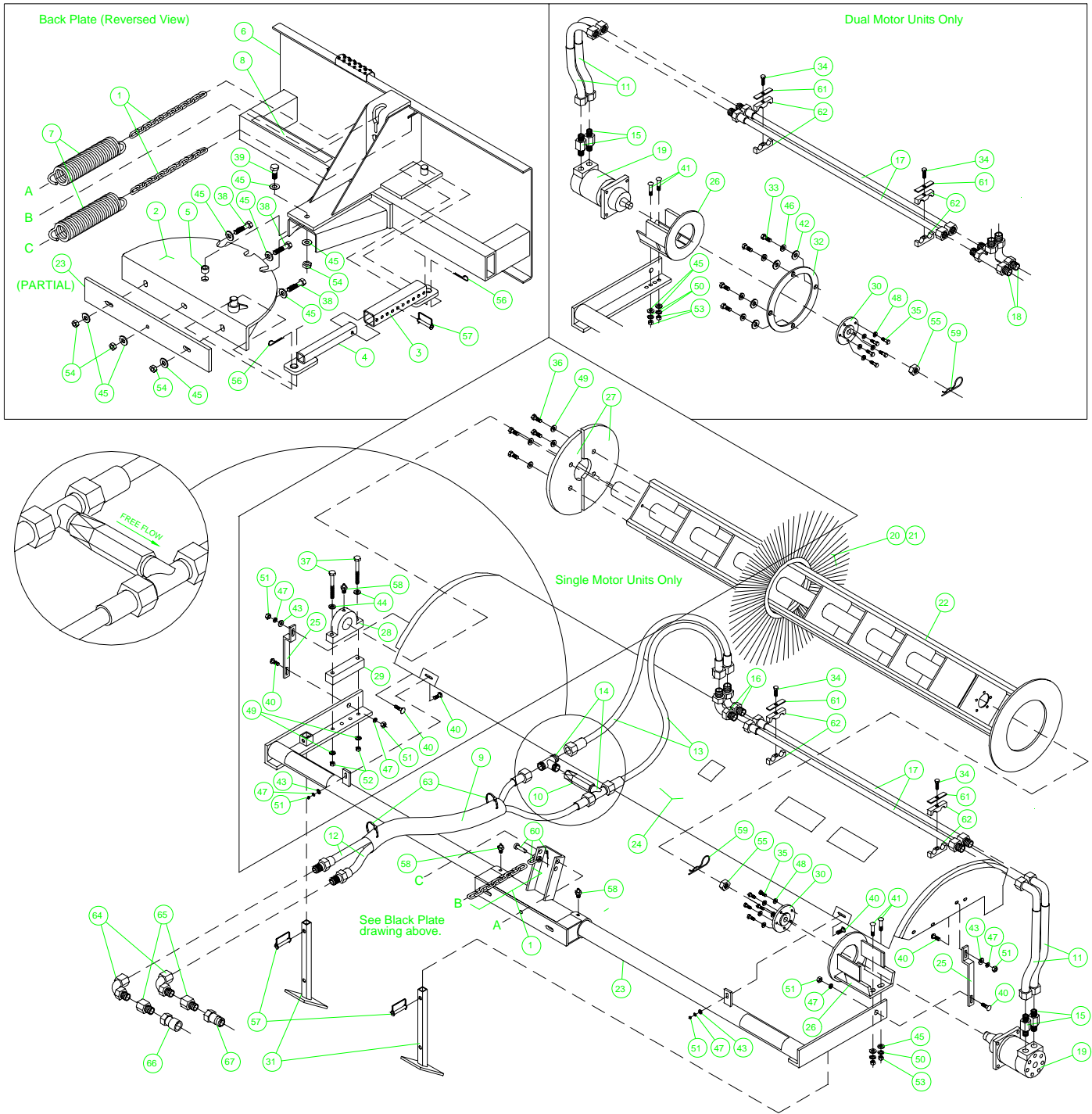
When removing this product from your power unit for the purpose of placing your Angle Broom into storage:

1. Park your power unit on a level surface with this product properly attached.
2. Place your power unit's transmission in "Park" and engage the parking brake.
3. Lower this product until the brush just touches the level surface.
4. Shut off your power unit's engine, remove the starter key, wait for all moving parts to come to a stop.
5. Remove the snapper pin that secures the right jack stand, allow the jack stand to slide down, and reinsert the snapper pin through the keeper tube and the top hole of the jack stand. Repeat for the left jack stand.
6. Restart your power unit and proceed with the detachment instructions found in your power unit's operator's manual(s). If the detachment instructions are properly followed, the weight of the loader attachment plate and crescent assembly should allow the unit to pivot back, permitting the jack stands to hold the brush head off the level surface.

IMPORTANT

Storing this product with the brush touching the ground or floor CAN result in damage to this product and WILL void all FFC warranties.

PARTS ILLUSTRATION



ANGLE BROOM PARTS LIST

ITEM	QTY.	LAF2873 72"	LAF2848 84"	DESCRIPTION
1	3		DHF2021	Chain: ¼" Dia. x 18 Links
2	1		LAF2815	Crescent Weldment
3	1		LAF2817	Position Tube: Female
4	1		LAF2818	Position Tube: Male
5	1		LAF2822	Pivot Bushing: 1" O.D. x 21/32" I.D. x 9/16" Long
6	1		LAF2877	Loader Attachment Plate Weldment
7	2		LAF2897	Spring: Extension, 2-13/16" O.D. x 10" Long
8	1		LAF3595	Anti-Slip Abrasive Tape: 2" x 15" Black
9	1		LAF4248	Hydraulic Hose Protector: 1-7/8" Dia. x 5'-0" Long
10	1		LAF4266	Hydraulic Check Valve: 16 GPM Flow Nominal With (2) #8 Female O-Ring Boss Ports; 3,500 Maximum Rated PSI
11	Varies	(2)	(4) LAF4384	Hydraulic Hose: 5/8" I.D. x 1' – 4-1/8" Long W/ (1) 90° & (1) Straight #10 Female Face Seal Fitting, All Rated To 3,625 PSI
12	2		LAF4385	Hydraulic Hose: 1/2" I.D. x 6'-6" Long W/ (1) #8 Female JIC Fitting and (1) #10 Male O-Ring Boss Fitting
13	2		LAF4386	Hydraulic Hose: 1/2" I.D. x 4'-0" Long With (1) #8 Female JIC Fitting and (1) #12 Female Face Seal Fitting
14	2		LAF4403	Hydraulic Tee: #8 Male JIC x #8 Male JIC x #8 Male O-Ring Boss
15	Varies	(2)	(4) LAF4443	Hydraulic Adapter: #10 Male Face Seal to #10 Male O-Ring Boss
16	2	LAF4444	Not Used	Hydraulic Elbow: 90° With (2) #12 Male Face Seal Fittings
17	Varies	(2)	(4) LAF4445	Hydraulic Pipe: 7/8" O.D. #10 Male Face Seal to #12 Female F. Seal
18	2	Not Used	LAF4447	Hydraulic Tee: (3) #12 Male Face Seal Fittings
19	Varies	(1)	(2) LAF4587	Hydraulic Motor
20	Varies	(2)(17)(33)	(2)(20)(39) LAF8232	Brush Section: Poly
21	Varies	(31)(16)(0)	(37)(19)(0) LAF8233	Brush Section: Wire
22	1	LAF8234	LAF8293	Core Weldment
23	1	LAF8235	LAF8295	Brush Head Frame Weldment
24	1	LAF8236	LAF8297	Shroud
25	2		LAF8237	Shroud Bracket
26	Varies	(1)	(2) LAF8238	Motor Housing
27	2	LAF8240	Not Used	Retainer Plate (1 or 2 pieces)
28	1	LAF8241	Not Used	Bearing: 1-1/4" I.D. Pillow Block
29	1	LAF8242	Not Used	Bearing Spacer Block
30	Varies	(1)	(2) LAF8243	Hub
31	2		LAF8300	Jack Stand
32	1	Not Used	LAF9888	Core End Ring
33	4	Not Used	RHW1105	Hex Head Cap Screw: 5/16" Dia. x 1" Long, Grade 5
34	Varies	(2)	(4) RHW1112	Hex Head Cap Screw: 5/16" Dia. x 2-1/2" Long, Grade 5
35	Varies	(5)	(10) RHW1333	Hex Head Cap Screw: 7/16" Dia. x 1" Long With 20 TPI, Grade 5
36	4	RHW1403	Not Used	Hex Head Cap Screw: 1/2" Dia. x 1" Long, Grade 5
37	2	RHW1413	Not Used	Hex Head Cap Screw: 1/2" Dia. x 3-1/2" Long, Grade 5
38	3		RHW1603	Hex Head Cap Screw: 5/8" Dia. x 1-3/4" Long, Grade 5
39	1		RHW1608	Hex Head Cap Screw: 5/8" Dia. x 3" Long, Grade 5
40	6		RHW2207	Carriage Bolt: 3/8" Dia. x 1-1/4" Long, Grade 5
41	Varies	(2)	(4) RHW2603	Carriage Bolt: 5/8" Dia. x 1-3/4" Long, Grade 5

NOTE: All parts are the same as the LAF2848 except for those parts numbered under the other models.

ANGLE BROOM PARTS LIST (Continued)

ITEM	QTY.	LAF2873 72"	LAF2848 84"	DESCRIPTION
42	4	Not Used	RHW5162	Flat Washer: 5/16" Dia. USS
43	4		RHW5262	Flat Washer: 3/8" Dia. USS
44	2	RHW5462	Not Used	Flat Washer: 1/2" Dia. USS
45	Varies	(10)	(12) RHW5662	Flat Washer: 5/8" Dia. USS
46	4	Not Used	RHW6102	Lock Washer: 5/16" Dia. Medium Split
47	6		RHW6202	Lock Washer: 3/8" Dia. Medium Split
48	Varies	(5)	(10) RHW6302	Lock Washer: 7/16" Dia. Medium Split
49	6	RHW6402	Not Used	Lock Washer: 1/2" Dia. Medium Split
50	Varies	(2)	(4) RHW6602	Lock Washer: 5/8" Dia. Medium Split
51	6		RHW7201	Hex Nut: 3/8" Dia. With 16 Threads Per Inch, Grade 5
52	2	RHW7401	Not Used	Hex Nut: 1/2" Dia. With 13 Threads Per Inch, Grade 5
53	Varies	(2)	(4) RHW7601	Hex Nut: 5/8" Dia. With 11 Threads Per Inch, Grade 5
54	4		RHW7603	Locknut: 5/8" Dia. Center Dent
55	Varies	(1)	(2) RHW7708	Hex Nut: 1" Dia. With 20 Threads Per Inch, Grade 5
56	2		RHW8017	Cotter Pin: 3/16" Dia. x 2" Long
57	3		RHW8079	Snapper (Safety Latch) Pin: 3/8" Dia. x 2-1/4" Lg. (Useable), Sqr. Ret.
58	Varies	(3)	(2) RHW8090	Grease Zerk: 1/4" Dia. W/ 28 Threads / Inch Self-Tapping
59	Varies	(1)	(2) RHW8108	Hairpin Cotter: 14 Ga. x 1-3/4"
60	1		RHW8317	5/16 D-Shackle With Round Pin, Galvanized
61	Varies	(2)	(4) RHW8614	Cover Plate
62	Varies	(4)	(8) RHW8615	Hose Cradle: for (2) 7/8" O.D. Hoses
63	2		RMR5002	Nylon Cable Ties: 1/4" x 11" Long, Black, Outdoor Use
64	2	Contact FFC to obtain the correct item.		Hydraulic Elbow (Not required on some models.)
65	2	Contact FFC to obtain the correct item.		Hydraulic Adapter (Not required on some models.)
66	1	Contact FFC to obtain the correct item.		Hydraulic Hose Quick Coupler: With Female End
67	1	Contact FFC to obtain the correct item.		Hydraulic Hose Quick Coupler: With Male End

NOTE: All parts are the same as the LAF2848 except for those parts numbered under the other models.

ANGLE BROOM SPECIFICATIONS

Model Number	Overall Width	Overall Height	Overall Depth	Shipping Weight	Actual Sweeping Width	
					Straight	Angled 30°
LAF2873	80-1/16"	35-1/4"	64"	972 lbs.	70"	59"
LAF2848	92-1/16"	35-1/4"	64"	1,103 lbs.	82"	70"
All replacement hydraulic hoses and fittings must have a minimum rated working pressure of 3,000 psi.						