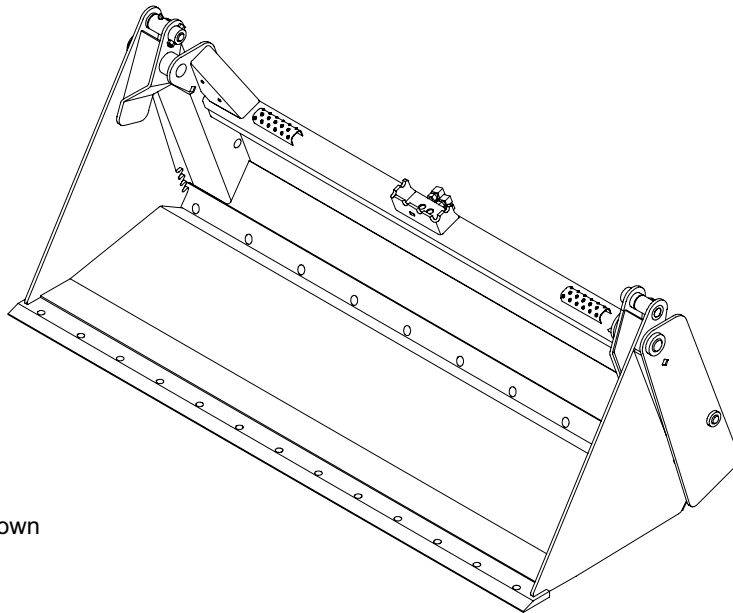




4-IN-1 BUCKET



PALADIN LIGHT CONSTRUCTION



LAF3160 Shown

Manual Number: MR45544

Models covered:

Utility: LAF3160, LAF3166, LAF3172, & LAF3178.
Constr: LAF0975, LAF0976, LAF0980, LAF0977,
LAF0984, LAF0985, LAF0986, LAF0988,
LAF0989, LAF0990, LAF0991 & LAF0992.
HD Constr: LAF3182, LAF3190 & LAF3196.

FFC SERIAL NUMBER: _____

MACHINE SERIAL NUMBER: _____

Release Date: June 3, 2005

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INTRODUCTION

Congratulations on your purchase of a new **FFC Attachments 4-in-1 Bucket**. This product has been designed and built to scoop and lift materials, bulldoze, grapple and lift objects, dig out materials, back-drag a surface, and dump materials at a higher relative elevation than can be done with a standard bucket. This product can also be used for backfilling against a foundation. 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) Utility: **LAF3160, LAF3166, LAF3172, and LAF3178**; Construction: **LAF0975, LAF0976, LAF0980, LAF0977, LAF0984, LAF0985, LAF0986, LAF0988, LAF0989, LAF0990, LAF0991 and LAF0992**; and Heavy Duty Construction: **LAF3182, LAF3190, and LAF3196**. The difference between the models is the width, construction, and angle of the bucket back 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 **4-in-1 Bucket**. 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.
IMPORTANT NOTICE	Precautions that must be followed to prevent damage to equipment.
	Precautions that must be followed to prevent substandard performance.

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 upper left rear portion of the bulldozer weldment** of your **4-in-1 Bucket**.

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 4-in-1 Bucket.**

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 4-in-1 Bucket 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.
- 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.
- 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.

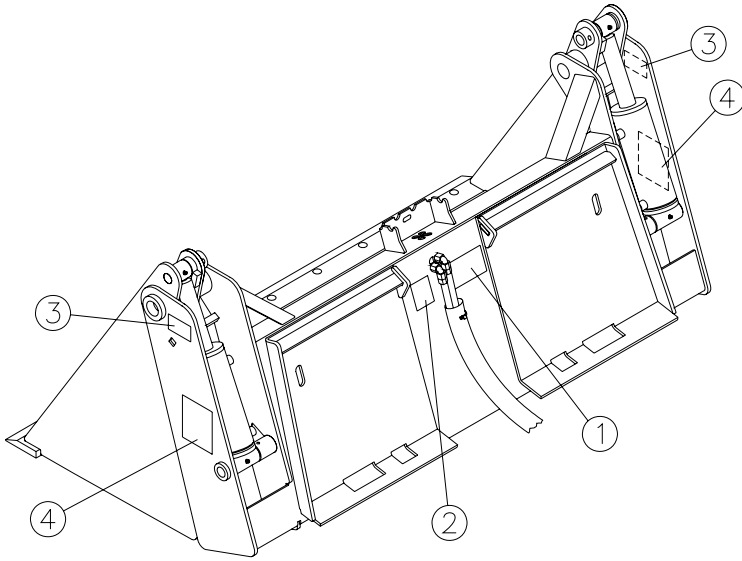
WHEN OPERATING THIS PRODUCT IN ACCORDANCE WITH DESIGN INTENTIONS:

- Never get between the floor and the bulldozer weldment.
- Do not roll back this product so far that materials fall toward the operator.
- Always close the floor securely against the bulldozer weldment before setting the unit down on the ground.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your 4-in-1 Bucket.
- 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



(LAF3160 Shown)

ITEM	QTY.	PART # - DESCRIPTION
1	1	50-0723 -Read Manual
2	1	50-0724 -Hydraulics
3	2	50-0737 -Pinch Point
4	2	RDL3125-Crush Hazard

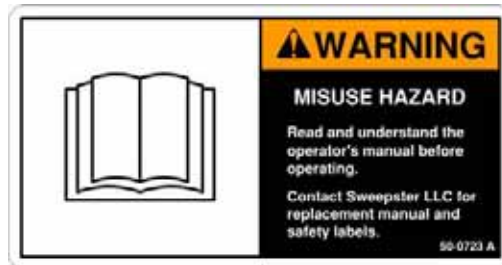
INSTRUCTIONS

- 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

SPECIFICATIONS

	<u>Utility</u>	<u>Construction</u>	<u>H.D. Construction</u>
	LAF3160	LAF0975	LAF3182
	LAF3166	LAF0976	LAF3190
	LAF3172	LAF0980	LAF3196
	LAF3178	LAF0977	
		LAF0984	
		LAF0985	
		LAF0986	
		LAF0988	
		LAF0989	
		LAF0990	
		LAF0991	
		LAF0992	
Weight of Power Unit without 4-in-1 Bucket	8,000 lbs. maximum	11,000 lbs. maximum	20,000 lbs. maximum
Operating Capacity of Power Unit's loader	2,500 lbs. maximum	4,500 lbs. maximum	5,000 lbs. maximum
Lift Capacity of Power Unit's loader	5,000 lbs. maximum	9,000 lbs. maximum	10,000 lbs. maximum
Hydraulic Pressure Output		4,000 psi. maximum for all models	
Rear Ballast		As required to maintain full power unit stability. (Note the Shipping Weight on page 18, then see the operator's manual(s) for your power unit, loader, and quick-attach for ballasting needs.)	

4-IN-1 BUCKET MOUNTING

	<p>SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET MOUNTING</p>
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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 tilt 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 4-IN-1 BUCKET MAINTENANCE on page 9 and follow the instructions.

4-IN-1 BUCKET HYDRAULIC CONNECTION



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET HYDRAULIC CONNECTION

1. You must purchase and install two hydraulic hoses that have fittings permanently attached to each end. These hoses and fittings must meet the following specifications: (NOTE: If your 4-in-1 Bucket was supplied with hoses, skip to step 4.)
 - Inside Diameter:..... 0.375" (3/8")
 - Minimum Operating Pressure:..... 4,000 psi.
 - Hose End Fittings:..... One hose end must be a #6 (#8 for H.D. Construction Models) female JIC fitting. The fitting for the other end can be whatever you determine to be the most beneficial to making the connection to your power unit.
 - Length:..... You must make this determination based upon recommendations provided in your power unit's operator's manual. The hoses must be long enough to avoid applying any tension to them (i.e. stretching) in all operating positions of this product. The hoses must not be excessively long either, because this could cause the hoses to drag on the ground, be pinched in the equipment, become entangled in moving parts, etc., any of which will shorten the life of the hose and could cause injury to the operator or others near the equipment.
2. Remove all the protective plastic caps from the hose ends and this product's connection fittings.
3. Make certain that the male and female threads, as well as the inside of the hoses, are clean, then place the #6 (or #8) hose ends on/in to the fittings on this product and tighten to 27 ft. lbs., + or - 2.0 ft. lbs. (#6 is 9/16" dia. with 18 tpi.) or 48 ft. lbs., + or - 2.0 ft. lbs. (#8 is 3/4" dia. with 16 tpi.).
4. Make the connection to your power unit using the appropriate method below for your power unit:
 - If your power unit has male or female threads for connecting the hydraulic hoses to the auxiliary hydraulic lines, make certain that the threads, as well as the inside of the fittings and hoses, are clean, then secure the hoses to the fittings using the torque specified in your power unit's operator's manual.
 - If your power unit has quick-couplers for connecting the hydraulic hoses to the auxiliary hydraulic lines, you may need to purchase the proper quick-coupler fittings that you must install on the free ends of the two hoses. In most cases, the owner's manual for your power unit will describe the exact type of fitting that is needed for your hydraulic coupling system, but in no case should any fitting have an allowable operating pressure of less than 4,000 psi. Once all the quick-coupler fittings are properly installed, then the hoses can be coupled to the power unit's hydraulic valve body or auxiliary hydraulic lines as per the instructions found in your power unit's operator's manual.
5. Carefully raise the loader and cycle the tilt cylinders to check hose clearances and to check for any interference. Operate the hydraulic cylinder(s) on this product to make the same checks.
6. Cycle the hydraulic cylinder(s) on this product several times from fully retracted to fully extended until all air has been completely removed from the cylinder(s).

NOTICE: When shipped, the hydraulic cylinder(s) on this product contained air or an air-fluid mixture. Also, there are orifices beneath the port(s) in the hydraulic cylinder barrel(s) that will restrict the exit of that air. Failure to remove all the air from the hydraulic cylinder(s) can cause uneven, jerky cylinder movement when the hydraulic controls are being operated and unwanted cylinder movement when those controls are not being operated.



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET OPERATION



WARNING

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

- Never get between the floor and the bulldozer weldment.
- Do not roll back this product so far that materials fall toward the operator.
- Always close the floor securely against the bulldozer weldment before setting the unit down on the ground.

IMPORTANT

Back-dragging material or pushing or scooping with the floor partially open CAN result in damage to this product and WILL void all FFC warranties.

Standard Bucket Operations:

Fully close the floor against the bulldozer weldment and this product can be used as a standard bucket. However, the movable floor does offer some helpful options:

- When picking up small quantities of material, the floor should be opened. Then this product can be lowered to the ground so the material is between the bulldozer weldment and the back cutting edge of the floor. The floor can then be closed to pick up nearly all of the material.
- When dumping into a truck or similar application, this product can dump at a greater height than a standard bucket by opening the floor to release the material.

Bulldozing Operations:

With the floor fully open, tilt the bulldozer weldment forward so that the bottom of the cutting edge of the bulldozer weldment penetrates the desired depth into the soil or other materials being moved or leveled.

Back-Drugging Operations:

With the floor fully open, tilt the bulldozer weldment forward so that the back cutting edge of the floor is on the ground and the bulldozer weldment is off the ground. The angle of the back cutting edge of the floor permits the operator to cut sod or other vegetation off of the ground surface.

Grapple Operations:

Open the floor sufficiently to clear the object being lifted. Lower this product so that the object is between the bulldozer weldment and the back cutting edge of the floor. Close the floor as completely as practical for the object being lifted and slowly begin lifting. If the object appears to be unstable or not balanced, lower the object back to the ground and repeat this process until the object remains stable during the entire lifting and moving process. Always lower the object to a stable position on the ground before opening the floor.

4-IN-1 BUCKET MAINTENANCE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET 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 to specifications and that there are no leaks in any fittings or hoses. (SEE THE HYDRAULIC CONNECTION SECTION ON PAGE 7.)
- 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.

AFTER EVERY 10 HOURS OF USE

- Grease 6 fittings: one on each of the two pivot points for the floor and one on each end of the two hydraulic cylinders. (NOTE: Some of the hydraulic cylinders have two grease fittings on the cross tube end of the barrel section of the cylinder. Only one of these two fitting must be greased.)

4-IN-1 BUCKET SERVICE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET SERVICE

REPLACING THE BOLT-ON CUTTING EDGE: FRONT OF THE FLOOR (For models with bolt-on edges only)

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

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

- 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.

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	One block, the full width of the bucket, or two blocks, at least 1'-6" under each end of the bucket, all placed immediately behind the front cutting edge of the floor.
Direction of Placement	The length direction should be parallel to that edge.
Length of Each Blocking Unit	2'-0" minimum (greater than the bucket width preferred)
Height of Each Blocking Unit	1-1/2"
Base Width of Each Blocking Unit	3-1/2"

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.
5. Remove all nuts from the bolts that secure the cutting edge to the floor. Begin in the center and remove the end nuts last. Use of a pipe wrench or hand grinder may be necessary to remove extremely worn or damaged nuts.
6. Remove the cutting edge and either turn the cutting edge end-for-end or, if this process has already occurred, properly dispose of the cutting edge. Properly dispose of all bolts and nuts.
7. Install the new or reversed cutting edge by loosely securing each end of the cutting edge with a new bolt and nut.
8. Install all the remaining new nuts and bolts and tighten all the new nuts to 380 ft. lbs., + or - 40 ft. lbs.



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY 4-IN-1 BUCKET SERVICE

REPLACING THE BOLT-ON CUTTING EDGE: REAR OF THE FLOOR AND BULLDOZER (For models w/ bolt-on edges)

1. Horizontally place a 4 x 4 x 2'-0" (minimum) block of wood on blocking or on another type of stand so that the 4x4 is at least 8" above the ground and so that one end of the 4x4 has no support under at least the first 10" of that end.
2. Start your power unit, raise the bucket, and open the floor of the bucket.
3. Position the bucket so that the unsupported end of the 4x4 is between one end of the bulldozer weldment and that same end of the floor. The 4x4 should be above the floor tooth area.
4. Close the floor to grasp the 4x4 between the bulldozer weldment and the floor. Having the floor teeth below the 4x4 will prevent the 4x4 from slipping down out of the grasp of the floor.
5. Park your power unit on a level surface with this product properly attached. (Allow ample open area around this product.)
6. Place your power unit's transmission in "Park" and engage the parking brake.
7. Lower this product onto preplaced blocking as specified below:



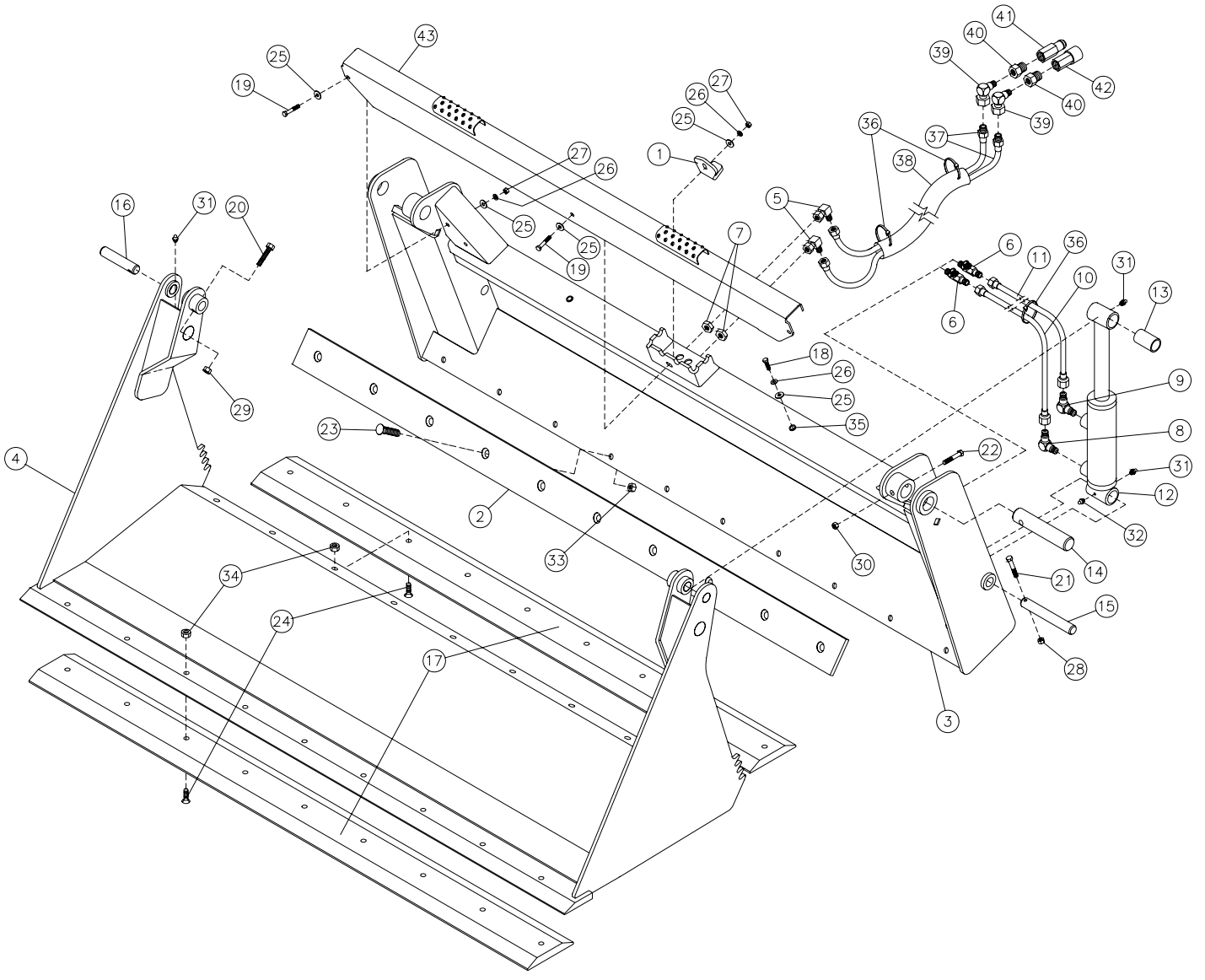
WARNING

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	One block, the full width of the bucket, or two blocks, at least 1'-6" under each end of the bucket, all placed immediately in front of the rear cutting edge of the floor.
Direction of Placement	The length direction should be parallel to that edge.
Length of Each Blocking Unit	2'-0" minimum (greater than the bucket width preferred)
Height of Each Blocking Unit	1-1/2"
Base Width of Each Blocking Unit	3-1/2"

8. 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.
9. Disconnect the two hydraulic lines from this product to your power unit.
10. Refer to the operator's manual(s) for your power unit, loader, quick-attach and follow the instructions contained therein for disconnecting this product from the loader.
11. Restart your power unit and move your power unit in front of this product while staying to one side of this product.
12. Move at an angle toward this product so that one of the two front tires of your power unit rolls up onto the front cutting edge of the floor.
13. When that tire is completely supported by the floor, place your power unit's transmission in "Park" and engage the parking brake. This weight on the front cutting edge of the floor should hold the rear cutting edge of the floor and the bulldozer weldment cutting edge up off of the level surface.
14. 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.
15. Remove all nuts from the bolts that secure the cutting edge to the floor or the bulldozer weldment. Begin in the center and remove the end nuts last. Use of a pipe wrench or hand grinder may be necessary to remove extremely worn or damaged nuts.
16. Remove and properly dispose of the cutting edge. The cutting edge on the rear of the floor may be turned end-for-end if only one side of the cutting edge is worn out. Properly dispose of all bolts and nuts.
17. Install the new or reversed cutting edge by loosely securing each end of the cutting edge with a new bolt and nut.
18. Install all the remaining new nuts and bolts and tighten all the new nuts on rear of the floor to 380 ft. lbs., + or - 40 ft. lbs. or all the new nuts on the bulldozer weldment to 245 ft. lbs., + or - 25 ft. lbs. for 5/8" dia. bolts and 110 ft. lbs., + or - 10 ft. lbs. for 1/2" dia. bolts.

PARTS ILLUSTRATION



(This illustration is a combination of models.)

4-IN-1 BUCKET PARTS LIST

		LAF3160	LAF3166	LAF3172	LAF3178	
ITEM	QTY.	60" - 70°	66" - 70°	72" - 70°	78" - 70°	DESCRIPTION
1	1				LAF0915*	Cloverleaf Hole Cover
2	1	LAF0944 (4'-11")	LAF0945 (5'-5")	LAF0954 (5'-11")	LAF0955 (6'-5")	Cutting Edge: ½" x 4" x Length Noted, Single
3	1	LAF0949	LAF0948	LAF0947	LAF0946	Bulldozer Weldment
4	1	LAF0953	LAF0952	LAF0951	LAF0950	Bucket Floor
5	2				LAF4093*	Hydraulic Elbow: 90° #6 Male JIC x #6 Female JIC Swivel
6	2				LAF4097	Bulkhead Branch Tee: (3) #6 Male JIC
7	2				LAF4098	Jam Nut: For #6 Fitting (9/16" Dia. x 18 TPI)
8	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
9	2				LAF4406	Hydraulic Adapter: #6 Male JIC x #6 Male O-Ring Boss
10	2	LAF4669 2' - 7½"	LAF4638 2'-10½"	LAF4666 3'-1½"	LAF4465 4½"	3'- Hydraulic Hose: 1/4" I.D. x Length Noted with (2) #6 Female JIC Fittings
11	2	LAF4670 2'-1½"	LAF4388 2'-4½"	LAF4669 2'-7½"	LAF4638 10½"	2'- Hydraulic Hose: 1/4" I.D. x Length Noted with (2) #6 Female JIC Fittings
12	2				LAF4639	Hydraulic Cylinder: 3" Dia. Piston x 6" Stroke x 1-3/4" Dia. Rod W/ (2) #6 Female O-Ring
13	2				LAF9401	Cylinder Bushing: 1" I.D. x 1-1/4" O.D. x 2" L.
14	2				LAF9813	Floor Pivot Pin
15	2				LAF9814	Cylinder Bulldozer Pin
16	2				LAF9815	Cylinder Floor Pin
17					Not Used	
18	2				RHW1105	Hex Head Cap Screw: 5/16" Dia. x 1" Grd. 5
19	1				RHW1107*	Hex Head Cap Screw: 5/16" Dia. x 1-1/4" G5
20	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
21	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
22	2				RHW1411	Hex Head Cap Screw: 1/2" Dia. x 3" L., Gr.5
23	Varies	(8)	(8)	(9)	(10) RHW2465	Plow Bolt: 1/2" Dia. x 1-1/2" Grade 8
24					Not Used	
25	4				RHW5162*	Flat Washer: 5/16" Dia. USS Grade 5
26	3				RHW6102*	Lock Washer: 5/16" Dia. Medium Split
27	1				RHW7101*	Hex Nut: 5/16" Dia. x 18 TPI, Grade 5
28	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
29	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
30	2				RHW7403	Locknut: 1/2" Dia. Center Dent, Grade 5
31	6				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
32	2				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
33	Varies	(8)	(8)	(9)	(10) RHW8601	Locknut: 1/2" Dia. Top Lock, Flanged, Grd.8
34					Not Used	
35	2				RHW8642	Rivet Nut: 5/16" Dia.
36	4				RMR5002	Nylon Cable Ties: 1/4" x 11" L, Black, Outdr.
37	2	Contact FFC to obtain the correct item.				Hydraulic Hose
38	1	Contact FFC to obtain the correct item.				Hydraulic Hose Protector: 1-7/8" Dia.
39	2	Contact FFC to obtain the correct item.				Hydraulic Elbow (Not required for all models)
40	2	Contact FFC to obtain the correct item.				Hydraulic Adapter (Not req'd. for all models)
41	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Male Connection
42	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Female Connection

NOTE: All parts are the same as the LAF3178 except for those parts numbered under the other models.

* A portion of or all of the quantities listed for these part numbers may not be supplied, depending upon the loader.

4-IN-1 BUCKET PARTS LIST (Continued)

		LAF3159	LAF3165	LAF3171	LAF3177	(Spill Guard Kits)
	QTY.	60" - 70°	66" - 70°	72" - 70°	78" - 70°	DESCRIPTION
ITEM						
43	1	LAF0916	LAF0917	LAF0918	LAF0943	Spill Guard Weldment
19	3				RHW1107	Hex Head Cap Screw: 5/16" Dia. x 1-1/4" G5
25	6				RHW5162	Flat Washer: 5/16" Dia. USS Grade 5
26	3				RHW6102	Lock Washer: 5/16" Dia. Medium Split
27	3				RHW7101	Hex Nut: 5/16" Dia. x 18 TPI, Grade 5

NOTE: All parts are the same as those listed under LAF3177.

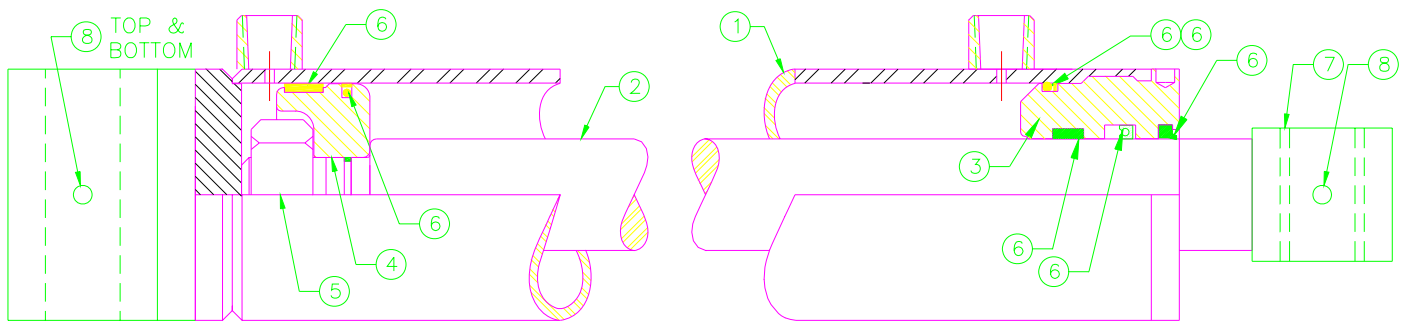
		LAF3160	LAF3166	LAF3172	LAF3178	(Page 12)
		60" - 70°	66" - 70°	72" - 70°	78" - 70°	
		LAF0975	LAF0976	LAF0980	LAF0977	(Page 14)
		73" - 60°	73" - 75°	78" - 60°	78" - 75°	
		LAF0984	LAF0985	LAF0989	LAF0990	(Page 15)
ITEM	QTY.	82" - 60°	82" - 75°	87" - 60°	87" - 75°	DESCRIPTION

NUMBERS FROM HYDRAULIC CYLINDER ILLUSTRATION (LAF4639 below)

1	1				LAF4644	Barrel: 3" I.D. x 6" Stroke W/ Cross Tube End
2	1				LAF4645	Shaft: 1-3/4" Dia. With Cross Tube End
3	1				LAF4610	Head: 1-3/4" I.D., Nominal
4	1				LAF4646	Piston: 3" O.D. x 1-1/8" I.D., Nominal
5	1				LAF4608	Nut: 1-1/8" Dia., 12 TPI, Grade 8
6	1				LAF4607	Seal Kit (Includes All Seals, Etc.)
7	1				LAF9401	Cylinder Bushing: 1" I.D. x 1-1/4" O.D. x 2" L.
8	3 (Quantity Also Included In Items 31 & 32 on				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tappg.

NOTE: All parts are the same as those listed under LAF3178, LAF0977, and LAF0990.

HYDRAULIC CYLINDER ILLUSTRATION (LAF4639)



4-IN-1 BUCKET PARTS LIST (Continued)

ITEM	QTY.	LAF0975 73" - 60°	LAF0976 73" - 75°	LAF0980 78" - 60°	LAF0977 78" - 75°	DESCRIPTION
1					Not used	
2	1	LAF9946 (72-7/8)	LAF9946 (72-7/8)	LAF9934 (77-7/8)	LAF9934 (77-7/8)	Cutting Edge: ½" x 4" x Length Noted, Single
3	1	LAF0938	LAF0934	LAF0940	LAF0907	Bulldozer Weldment
4	1	LAF0937	LAF0933	LAF0939	LAF0908	Bucket Floor
5					Not used	
6	2				LAF4097	Bulkhead Branch Tee: (3) #6 Male JIC
7	2				LAF4098	Jam Nut: For #6 Fitting (9/16" Dia. x 18 TPI)
8	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
9	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
10	2	LAF4458 3'-5½"	LAF4458 3'-5½"	LAF4463 3'-8"	LAF4463 3'-8"	Hydraulic Hose: 1/4" I.D. x Length Noted with (2) #6 Female JIC Fittings
11	2	LAF4457 2'-8½"	LAF4457 2'-8½"	LAF4462 2'-11"	LAF4462 2'-11"	Hydraulic Hose: 1/4" I.D. x Length Noted with (1) #6 and (1) 90° #6 Female JIC Fittings
12	2				LAF4639	Hydraulic Cylinder: 3" Dia. Piston x 6" Stroke x 1-3/4" Dia. Rod with (2) #6 Female O-Ring Boss
13	2				LAF9401	Cylinder Bushing: 1" I.D. x 1-1/4" O.D. x 2" L.
14	2				LAF9813	Floor Pivot Pin
15	2				LAF9814	Cylinder Bulldozer Pin
16	2				LAF9815	Cylinder Floor Pin
17	2	LAF9944 (73")	LAF9944 (73")	LAF9935 (78")	LAF9935 (78")	Cutting Edge: ¾" x 6" x Length Noted, Dble.
18					Not used	
19					Not used	
20	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
21	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
22	2				RHW1413	Hex Head Cap Screw: 1/2" Dia. x 3-1/2" Gr.5
23	Varies	(9)	(9)	(10)	(10) RHW2664	Plow Bolt: 5/8" Dia. x 2" Long, Grade 8
24	Varies	(18)	(18)	(20)	(20) RHW2765	Plow Bolt: 3/4" Dia. x 2" Long, Grade 8
25					Not used	
26					Not used	
27					Not used	
28	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
29	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
30	2				RHW7403	Locknut: 1/2" Dia. Center Dent
31	6				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapp.
32	2				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapp.
33	Varies	(9)	(9)	(10)	(10) RHW7651	Hex Nut: 5/8" Dia. With 11 TPI, Grade 8
34	Varies	(18)	(18)	(20)	(20) RHW7751	Hex Nut: 3/4" Dia. With 10 TPI, Grade 8
35					Not used	
36	2				RMR5002	Nylon Cable Ties: 1/4" x 11" L, Black, Outdr.
37	2	Contact FFC to obtain the correct item.				Hydraulic Hose
38	1	Contact FFC to obtain the correct item.				Hydraulic Hose Protector: 1-7/8" Dia.
39	2	Contact FFC to obtain the correct item.				Hydraulic Elbow (Not required for all models)
40	2	Contact FFC to obtain the correct item.				Hydraulic Adapter (Not req'd. for all models)
41	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Male Connection
42	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Female Connection

NOTE: All parts are the same as the LAF0977 except for those parts numbered under the other models.

4-IN-1 BUCKET PARTS LIST (Continued)

		LAF0984	LAF0985	LAF0989	LAF0990	
ITEM	QTY.	82" - 60°	82" - 75°	87" - 60°	87" - 75°	DESCRIPTION
1					Not used	
2	1	LAF9953 81-7/8"	LAF9953 81-7/8"	LAF9945 86-7/8"	LAF9945 86-7/8"	Cutting Edge: 1/2" x 4" x Length Noted, Single
3	1	LAF0930	LAF0932	LAF0942	LAF0936	Bulldozer Weldment
4	1	LAF0929	LAF0931	LAF0941	LAF0935	Bucket Floor
5					Not used	
6	2				LAF4097	Bulkhead Branch Tee: (3) #6 Male JIC
7	2				LAF4098	Jam Nut: For #6 Fitting (9/16" Dia. x 18 TPI)
8	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
9	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
10	2	LAF4396 3'-10"	LAF4396 3'-10"	LAF4460 4'-1/2"	LAF4460 4'-1/2"	Hydraulic Hose: 1/4" I.D. x Length Noted With (2) #6 Female JIC Fittings
11	2	LAF4395 3'-1"	LAF4395 3'-1"	LAF4459 3'-3 1/2"	LAF4459 3'-3 1/2"	Hydraulic Hose: 1/4" I.D. x Length Noted with (1) #6 and (1) 90° #6 Female JIC Fittings
12	2				LAF4639	Hydraulic Cylinder: 3" Dia. Piston x 6" Stroke x 1-3/4" Dia. Rod W/ (2) #6 Female O-Ring Boss
13	2				LAF9401	Cylinder Bushing: 1" I.D. x 1-1/4" O.D. x 2" L.
14	2				LAF9813	Floor Pivot Pin
15	2				LAF9814	Cylinder Bulldozer Pin
16	2				LAF9815	Cylinder Floor Pin
17	2	LAF9954 (82")	LAF9954 (82")	LAF9943 (87")	LAF9943 (87")	Cutting Edge: 3/4" x 6" x Length Noted, Dble.
18					Not used	
19					Not used	
20	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
21	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
22	2				RHW1413	Hex Head Cap Screw: 1/2" Dia. x 3-1/2" Gr.5
23	Varies	(10)	(10)	(11)	(11) RHW2664	Plow Bolt: 5/8" Dia. x 2" Long, Grade 8
24	20				RHW2765	Plow Bolt: 3/4" Dia. x 2" Long, Grade 8
25					Not used	
26					Not used	
27					Not used	
28	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
29	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
30	2				RHW7403	Locknut: 1/2" Dia. Center Dent
31	6				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
32	2				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
33	Varies	(10)	(10)	(11)	(11) RHW7651	Hex Nut: 5/8" Dia. With 11 TPI, Grade 8
34	20				RHW7751	Hex Nut: 3/4" Dia. With 10 TPI, Grade 8
35					Not used	
36	2				RMR5002	Nylon Cable Ties: 1/4" x 11" L, Black, Outdr.
37	2	Contact FFC to obtain the correct item.				Hydraulic Hose
38	1	Contact FFC to obtain the correct item.				Hydraulic Hose Protector: 1-7/8" Dia.
39	2	Contact FFC to obtain the correct item.				Hydraulic Elbow (Not required for all models)
40	2	Contact FFC to obtain the correct item.				Hydraulic Adapter (Not req'd. for all models)
41	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Male Connection
42	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Female Connection

NOTE: All parts are the same as the LAF0990 except for those parts numbered under the other models.

4-IN-1 BUCKET PARTS LIST (Continued)

		LAF0986	LAF0988	LAF0991	LAF0992	
ITEM	QTY.	84" - 60°	84" - 75°	90" - 60°	90" - 75°	DESCRIPTION
1					Not used	
2	1	13-51700 83-7/8"	13-51700 83-7/8"	13-51750 89-7/8"	13-51750 89-7/8"	Cutting Edge: 1/2" x 4" x Length Noted, Single
3	1	LAF0959	LAF0958	LAF0964	LAF0962	Bulldozer Weldment
4	1	LAF0957	LAF0956	LAF0960	LAF0961	Bucket Floor
5					Not used	
6	2				LAF4097	Bulkhead Branch Tee: (3) #6 Male JIC
7	2				LAF4098	Jam Nut: For #6 Fitting (9/16" Dia. x 18 TPI)
8	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
9	2				LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
10	2	LAF4396 3'-10"	LAF4396 3'-10"	LAF4460 4'-1/2"	LAF4460 4'-1/2"	Hydraulic Hose: 1/4" I.D. x Length Noted With (2) #6 Female JIC Fittings
11	2	LAF4395 3'-1"	LAF4395 3'-1"	LAF4459 3'-3 1/2"	LAF4459 3'-3 1/2"	Hydraulic Hose: 1/4" I.D. x Length Noted with (1) #6 and (1) 90° #6 Female JIC Fittings
12	2				LAF4639	Hydraulic Cylinder: 3" Dia. Piston x 6" Stroke x 1-3/4" Dia. Rod W/ (2) #6 Female O-Ring Boss
13	2				LAF9401	Cylinder Bushing: 1" I.D. x 1-1/4" O.D. x 2" L.
14	2				LAF9813	Floor Pivot Pin
15	2				LAF9814	Cylinder Bulldozer Pin
16	2				LAF9815	Cylinder Floor Pin
17	2	13-51699 (84")	13-51699 (84")	13-51749 (90")	13-51749 (90")	Cutting Edge: 3/4" x 6" x Length Noted, Dble.
18					Not used	
19					Not used	
20	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
21	2				RHW1212	Hex Head Cap Screw: 3/8" Dia. x 2-1/4" Gr.5
22	2				RHW1413	Hex Head Cap Screw: 1/2" Dia. x 3-1/2" Gr.5
23	11				RHW2664	Plow Bolt: 5/8" Dia. x 2" Long, Grade 8
24	20				RHW2765	Plow Bolt: 3/4" Dia. x 2" Long, Grade 8
25					Not used	
26					Not used	
27					Not used	
28	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
29	2				RHW7203	Locknut: 3/8" Dia. Center Dent, Grade 5
30	2				RHW7403	Locknut: 1/2" Dia. Center Dent
31	6				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
32	2				RHW8090	Grease Zerk: 1/4" Dia. W/ 28 TPI, Self-Tapg.
33	11				RHW7651	Hex Nut: 5/8" Dia. With 11 TPI, Grade 8
34	20				RHW7751	Hex Nut: 3/4" Dia. With 10 TPI, Grade 8
35					Not used	
36	2				RMR5002	Nylon Cable Ties: 1/4" x 11" L, Black, Outdr.
37	2	Contact FFC to obtain the correct item.				Hydraulic Hose
38	1	Contact FFC to obtain the correct item.				Hydraulic Hose Protector: 1-7/8" Dia.
39	2	Contact FFC to obtain the correct item.				Hydraulic Elbow (Not required for all models)
40	2	Contact FFC to obtain the correct item.				Hydraulic Adapter (Not req'd. for all models)
41	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Male Connection
42	1	Contact FFC to obtain the correct item.				Hydraulic Coupler: Female Connection

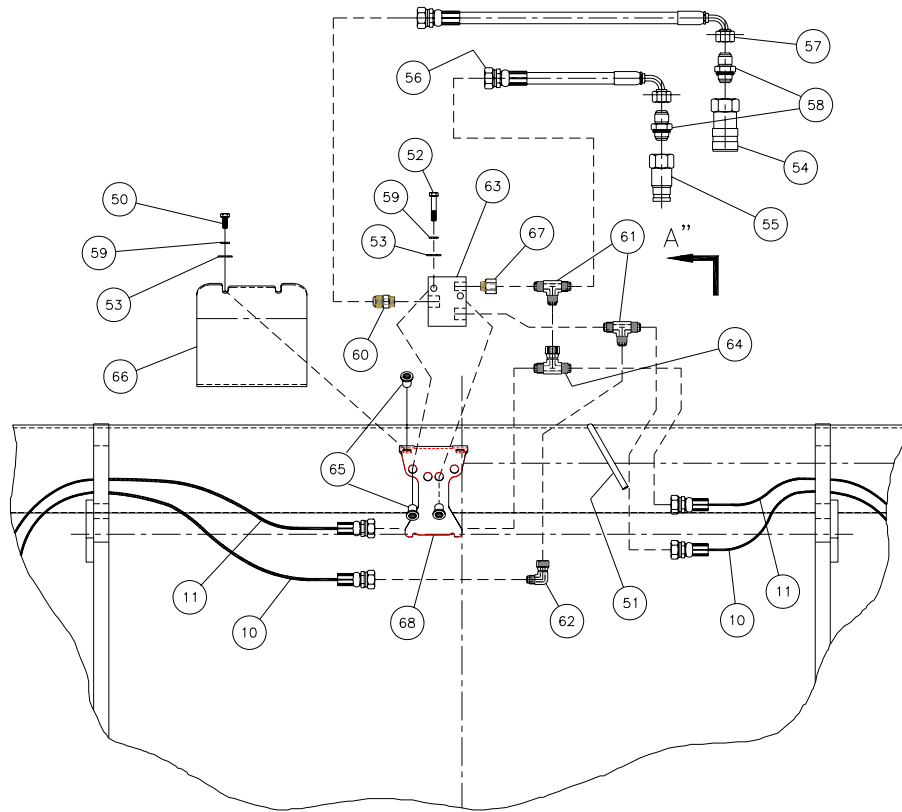
NOTE: All parts are the same as the LAF0992 except for those parts numbered under the other models.

4-IN-1 BUCKET PARTS LIST (Continued)

		LAF3182	LAF3190	LAF3196	
ITEM	QTY.	82"	90"	96"	DESCRIPTION
1				Not Used	
2				Not Used	
3	1	LAF3187	LAF3191	LAF3197	Bulldozer Weldment
4	1	LAF3186	LAF3192	LAF3198	Bucket Floor
5				Not Used	
6	2			LAF4009	Bulkhead Run Tee: (3) #8 Male JIC
7	2			LAF4010	Jam Nut: For #8 Fitting (3/4" Dia. x 16 TPI)
8	2			LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
9	2			LAF4298	Hydraulic Elbow: 90° #6 Male JIC x #6 Male O-Ring Boss
10	2	LAF4327 - 2-3/4"	4' LAF4303 4'-6"	LAF4373 4'-10"	Hydraulic Hose: 3/8" I.D. x Length Noted with (1) #6 and (1) #8 Female JIC Fittings
11	2	LAF4326 - 7-1/4"	3' LAF4355 3'-11"	LAF4327 4' - 2-3/4"	Hydraulic Hose: 3/8" I.D. x Length Noted with (1) #6 and (1) #8 Female JIC Fittings
12	2			LAF4665	Hydraulic Cylinder: 3" Dia. Piston x 10" Stroke x 1-3/4" Dia Rod With (2) #6 Female O-Ring Boss Ports
13				Not Used	
14	2			LAF3183	Floor Pivot Pin
15	2			LAF3098	Cylinder Bulldozer Pin
16	2			LAF3185	Cylinder Floor Pin
17				Not Used	
18				Not Used	
19				Not Used	
20	2			RHW8020	Spring Pin: Coiled 5/16 " Dia. x 2" Long
21	2			RHW1213	Hex Head Cap Screw: 3/8" Dia. x 2-1/2" Long, Grade 5
22	2			RHW1413	Hex Head Cap Screw: 1/2" Dia. x 3-1/2" Long, Grade 5
23				Not Used	
24				Not Used	
25				Not Used	
26				Not Used	
27				Not Used	
28				Not Used	
29	2			RHW7203	Locknut: 3/8" Dia. Center Dent
30	2			RHW7403	Locknut: 1/2" Dia. Center Dent
31	6			RHW8090	Grease Zerk: 1/4" Dia. With 28 TPI, Self-Tapping
32				Not Used	
33				Not Used	
34				Not Used	
35				Not Used	
36	2	Not supplied by FFC.			Nylon Cable Ties: 1/4" x 11" Long, Black, Outdoor Use
37	2	Not supplied by FFC.			Hydraulic Hose
38	1	Not supplied by FFC.			Hydraulic Hose Protector: 1-7/8" Dia.
39	2	Not supplied by FFC.			Hydraulic Elbow (Not required for all models)
40	2	Not supplied by FFC.			Hydraulic Adapter (Not required for all models)
41	1	Not supplied by FFC.			Hydraulic Coupler: Male Connection
42	1	Not supplied by FFC.			Hydraulic Coupler: Female Connection

NOTE: All parts are the same as the LAF3196 except for those parts numbered under the other models.

PO CHECK VALVE ILLUSTRATION



4-IN-1 BUCKET PARTS LIST (Continued)

ITEM	QTY.	LAF3182 82"	LAF3190 90"	LAF3196 96"	DESCRIPTION
50	2			RHW1103	Hex Head Cap Screw: 5/16" Dia. x 3/4" Gr. 5
51	1			ILA8232	Quick Coupler Support
52	2			RHW1111	Hex Head Cap Screw: 5/16" Dia. x 2-1/4" Gr. 5
53	4			RHW5162	Flat Washer: 5/16" Dia. USS Gr. 5
54	1	Contact FFC to obtain the correct item.			Hydraulic Coupler: Female
55	1	Contact FFC to obtain the correct item.			Hydraulic Coupler: Male
56	1	Contact FFC to obtain the correct item.			Hydraulic Hose
57	1	Contact FFC to obtain the correct item.			Hydraulic Hose
58	2	Contact FFC to obtain the correct item.			Hydraulic Adapter
59	4			RHW6102	Lock Washer: 5/16" Dia. Medium Split
60	1			LAF4401	Hydraulic Adapter: #8 Male JIC x #8 Male O-Ring Boss
61	2			LAF4408	Hydraulic Run Tee: #8 Male JIC x #8 Male O-Ring Boss x #8 Male JIC
62	1			LAF4560	Hydraulic Elbow: 90° #8 Male JIC x #8 Female JIC Swivel
63	1			LAF4769	PO Check Valve
64	1			LAF4770	Hydraulic Branch Tee: #8 Male JIC x #8 Male JIC x #8 Female JIC
65	4			RHW8645	Rivet Nut: 5/16" (.027-.150 Grip Range)
66	1			LAF8999	Hydraulic Block Cover
67	1			LAF4203	Hydraulic Adapter: #6 Male O-Ring Boss x #8 Female O-Ring Boss
68	1			13-50438	Block Mounting Plate

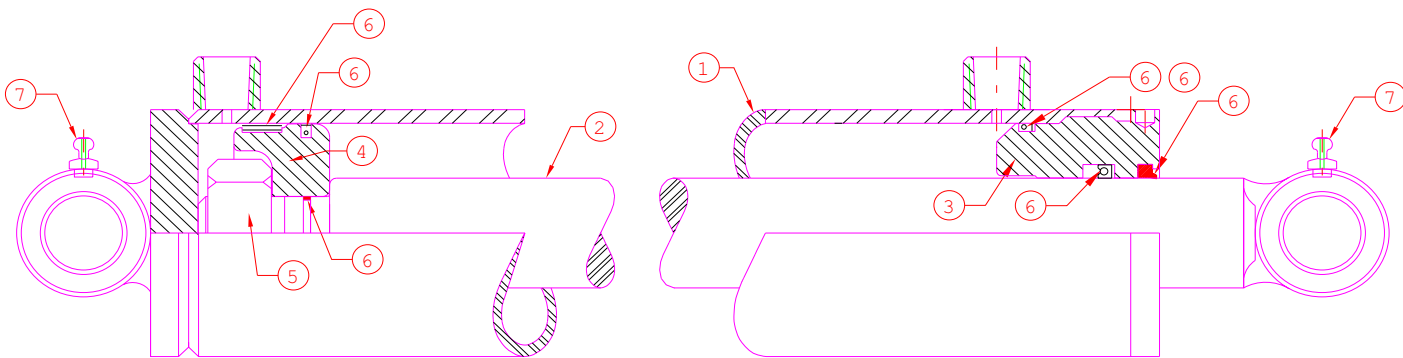
NOTE: All parts are the same as the LAF3196 except for those parts numbered under the other models.

4-IN-1 BUCKET PARTS LIST (Continued)

		LAF3182	LAF3190	LAF3196	
ITEM	QTY.	82"	90"	96"	DESCRIPTION
NUMBERS FROM HYDRAULIC CYLINDER ILLUSTRATION (LAF4665 below)					
1	1			LAF4672	Barrel: 3" I.D. x 10" Stroke With Cross Tube End
2	1			LAF4673	Shaft: 1-3/4" Dia. With Cross Tube End
3	1			LAF4610	Head: 1-3/4" I.D., Nominal
4	1			LAF4646	Piston: 3" O.D. x 1.125" I.D., Nominal
5	1			LAF4608	Nut: 1.125" Dia., 12 TPI, Grade 8
6	1			LAF4607	Seal Kit (Includes All Seals, Etc.)
7	2 (Quantity Also Incl. In Item 31 Above.)			RHW8090	Grease Zerk: 1/4" Dia. With 28 TPI, Self-Tapping

NOTE: All parts are the same as those listed under LAF3196.

HYDRAULIC CYLINDER ILLUSTRATION (LAF4665)



4-IN-1 BUCKET SPECIFICATIONS

Model Number	Overall Width	Overall Height	Overall Depth	Shipping Weight
Utility Grade				
LAF3160	61"	21"	32-1/2"	773 lbs.
LAF3166	67"	21"	32-1/2"	824 lbs.
LAF3172	73"	21"	32-1/2"	875 lbs.
LAF3178	79"	21"	32-1/2"	926 lbs.
Spill Guard Kit				
LAF3159	46-5/8"	6-3/4"	2-1/2"	30 lbs.
LAF3165	52-5/8"	6-3/4"	2-1/2"	33 lbs.
LAF3171	58-5/8"	6-3/4"	2-1/2"	37 lbs.
LAF3177	64-5/8"	6-3/4"	2-1/2"	40 lbs.
Construction Grade				
LAF0975	73-7/8"	25-3/4"	36-7/8"	1,170 lbs.
LAF0976	73-7/8"	28-1/2"	36-3/16"	1,170 lbs.
LAF0980	78-7/8"	25-3/4"	36-7/8"	1,255 lbs.
LAF0977	78-7/8"	28-1/2"	36-3/16"	1,255 lbs.
LAF0984	82-7/8"	25-3/4"	36-7/8"	1,320 lbs.
LAF0985	82-7/8"	28-1/2"	36-3/16"	1,320 lbs.
LAF0989	87-7/8"	25-3/4"	36-7/8"	1,400 lbs.
LAF0990	87-7/8"	28-1/2"	36-3/16"	1,400 lbs.
Heavy Duty Construction Grade				
LAF3182	82-1/4"	36-7/16"	34-7/8"	1,100 lbs.
LAF3190	90-1/4"	36-7/16"	34-7/8"	1,275 lbs.
LAF3196	96-1/4"	36-7/16"	34-7/8"	1,450 lbs.

All replacement hydraulic hoses and fittings must have a minimum rated working pressure of 4,000 psi.



PALADIN LIGHT CONSTRUCTION

Warranty Registration Form and Delivery Inspection Report

IMPORTANT! Warranty **Void** if card is not returned with 10 days.
All Applicable sections **must** be filled in.

This section to be filled out and signed by Dealer at time of delivery.

Warranty Registration

Customer's Name _____	Dealer's Name _____
Address _____	Address _____
City _____ State _____ Zip _____	City _____ State _____ Zip _____
Phone _____	CHECK ONE:
Loader / Tractor Model _____	Construction Use _____
Delivery Date _____	Agricultural Use _____
Model or Part # _____	Landscape Use _____
Serial # _____	Other: _____

Dealer Inspection (check items applicable)

- | | |
|---|---|
| <input type="checkbox"/> All Decals installed (see operator's manual) | <input type="checkbox"/> Review Operating and Safety Instructions |
| <input type="checkbox"/> Hydraulic fittings tight and free of leaks | <input type="checkbox"/> Guards and covers in place and secure |
| <input type="checkbox"/> Fasteners tight | <input type="checkbox"/> Does Product Function Properly |

I have thoroughly instructed the buyer on the above described equipment. This review included: The Operator's manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____ Dealer's Rep. signature _____

This section to be completed and signed by the customer

	1 Excellent	2 Good	3 Average	4 Unsatisfactory	5 Poor
QUALITY ASSURANCE RATING					
Question:		FFC		Local Dealer	
Quality of Product: Appearance		_____		_____	
Construction		_____		_____	
Quality of Service		_____		_____	
Value (Priced Fairly)		_____		_____	
Does it perform as claimed		_____		_____	

The above described equipment and Operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date: _____ Owner's signature _____

NOTE! Make one copy each for the dealer's and owner's records. Mail original to FFC Attachments.



PALADIN LIGHT CONSTRUCTION

FFC LIMITED 12 MONTH WARRANTY

Thank you for purchasing a FFC product. Warranty protection is valid only when this Warranty Registration is completed and signed by the customer and dealer, and mailed to FFC. I hereby acknowledge that I have received a copy of the owners Limited Warranty and I accept the terms therein.

For a period of 12 months from date of delivery of product to the original user, FFC, warrants each product to be free from manufacturing defects, subject to the limitations contained in this policy.

This warranty does not apply to defect caused, in whole or in part, by unreasonable use while in the possession of the user, including, but not limited to: failure to properly set up product; failure to provide reasonable and necessary maintenance; normal wear; routine tune ups or adjustments; improper handling or accidents; operation at speed or load conditions contrary to published specification; improper or insufficient lubrication; improper storage. This warranty is also not a guarantee that the performance of each product will meet the expectations of the purchaser.

FFC shall not be liable for consequential damages of any kind, including, but not limited to: consequential labor costs or transportation charges in connection with the replacement or repair of defective parts; lost time or expense which may have accrued because of said defects. In no event shall FFC, Inc.'s total liability hereunder exceed the product purchase price.

FFC makes no warranty with respect to trade accessories or any component or accessory of the product which was not manufactured by FFC, including any purchased components on any kind. These are subject to the warranties of their respective manufacturers. The warranty will be considered void if the product or any part of the product is modified or repaired in any way not expressly authorized by FFC, or if closed components are disassembled prior to return. Closed components include, but are not limited to: gearboxes, hydraulic pumps, motors, cylinders, and actuators.

Our obligation under the warranty is expressly limited, at our option, to the replacement or repair at FFC, of Lee, Illinois, or at a service facility designated by us, or such part or parts as inspection shall disclosed to have been defective. We are not responsible for unauthorized repairs or replacements. Any implied or statutory warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. We make no other express or implied warranty, nor is anyone authorized to make any in our behalf. This warranty cannot be extended, broadened, or changed except in writing by an authorized officer of FFC.