

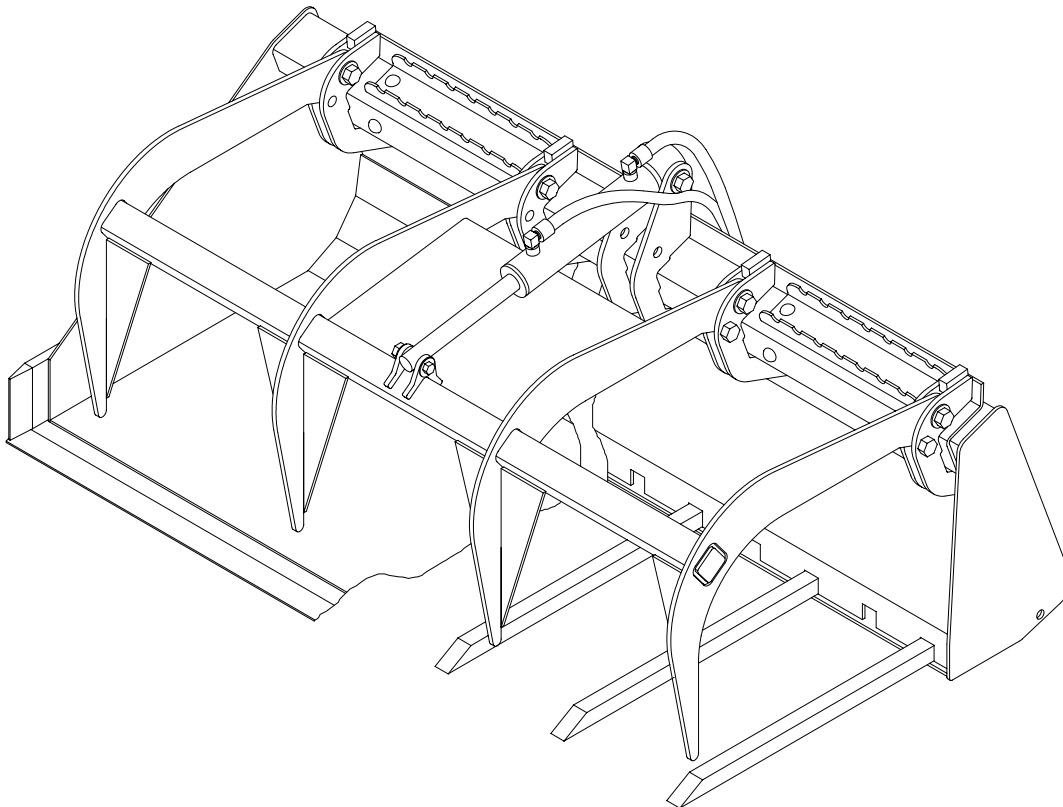


A SWEEPSTER COMPANY

PATENTED

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK

OWNERS & OPERATORS MANUAL



Models covered:

LAF0850

LAF0861, LAF0867, LAF0873, LAF0879

LAF1854, LAF1860, LAF1866, LAF1872

LAF1878

OWNERS & OPERATORS MANUAL

FFC Attachments part # MR35542

FFC Attachments

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09/08/03

TABLE OF CONTENTS

Introduction, General Information, Serial Number.....	1
Owner and Operator Safety Information.....	2-5
Definitions of Safety Terms and Symbols, Accident Prevention.....	2
Safety Instructions.....	3-4
Safety Signs.....	5
Power Unit Specifications, Mounting, Hydraulic Connection.....	6
Setup	7
Operation, Maintenance.....	8
Service	9
Parts Illustration.....	10
Parts List.....	11-12
Specifications	12
Warranty	i

INTRODUCTION

Congratulations on your purchase of a new FFC Attachments **Bolt-On Grapple, Bucket, or Manure Fork**. These products have been designed and built to hold, pickup, and transport manure or similar materials. 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 Attachments 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): grapple **LAF0850**, buckets **LAF0861, LAF0867, LAF0873, LAF0879**, and manure forks **LAF1854, LAF1860, LAF1866, LAF1872, LAF1878**. The difference between the models is the width and function 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 **Bolt-On Grapple, Bucket, or Manure Fork**. 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 Attachments reserves the right to redesign and/or change components as may be necessary without notification to anyone.

Throughout this manual, references may be made to:

Power Unit	The engine drive machine to which this product must be attached
Left, Right, Front, Rear	Directions that are determined in relation to the operator of the equipment when seated in the normal operating position.
IMPORTANT	Precautions that must be followed to prevent damage to equipment
NOTICE	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 left end** of your **Bolt-On Grapple, Bucket, or Manure Fork**.

Reference Information	
Model Number	Loader Make
Serial Number	Loader Model
Date Purchased	Loader Serial Number

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 Attachments 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 Bolt-On Grapple, Bucket, or Manure Fork.**

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 a written request to FFC Attachments.

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 !!

SECTION 1



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 Bolt-On Grapple, Bucket, or Manure Fork 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 adequate 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 !!

SECTION 1 (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 Attachments 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 Attachments 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:

- THE GRAPPLE MOVES QUICKLY! Do not allow anyone near the grapple.
- Never get between the grapple and the bucket or manure fork.
- Do not lift any material stacked taller than the height of the fully opened grapple.
- Do not roll back this product so far that the material falls toward the operator.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your Bolt-On Grapple, Bucket, or Manure Fork.
- When making repairs, use only genuine FFC Attachments 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.

SECTION 2

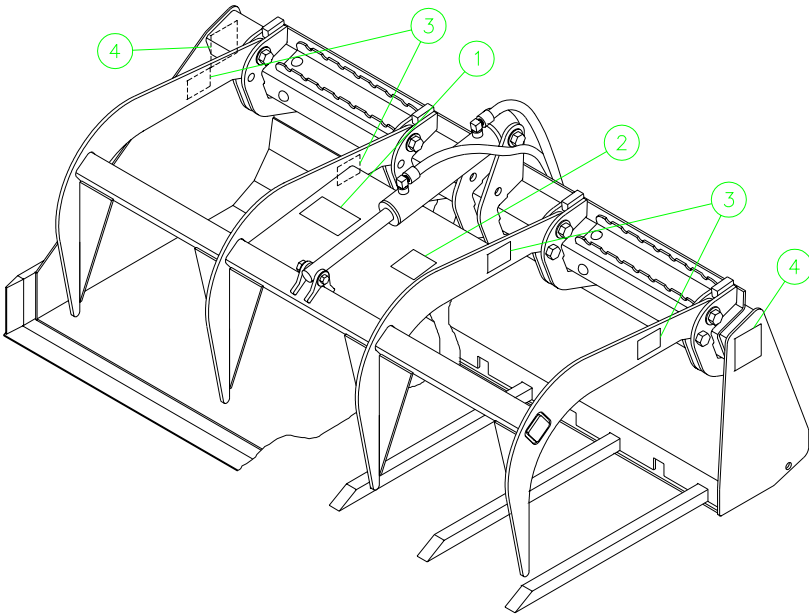
CAUTION



Obey all the safety instructions listed in this section and throughout this manual. Failure to obey instructions in this section may result in personal injury.

- Never leave the grapple open when this product is not in use.
- Do not attempt to straighten a bent fork or grapple tine. Straightening can cause a localized reduction in strength and the potential for sudden failure.

SAFETY SIGN LOCATIONS



ITEM	QTY.	PART # - DESCRIPTION
1	1	RDL3141 – Read Manual
2	1	RDL3129 – Hydraulics
3	4	RDL3127 – Pinch Point
4	2	RDL3125 – Crush Hazard

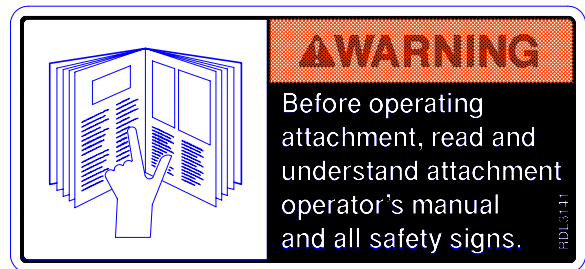
INSTRUCTIONS

- 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 Attachments.

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 Attachments warranties

DESCRIPTION	SPECIFICATIONS
Weight of Power Unit without Bolt-on Grapple, Bucket, or Manure Fork	8,000 lbs. maximum
Operating Capacity of Power Unit's Loader	2,500 lbs. maximum
Lift Capacity of Power Unit's Loader	5,000 lbs. maximum
Hydraulic Pressure Output	4,000 psi. maximum
Rear Ballast	As required to maintain full power unit stability. (Note the shipping weight on specifications page, then see the operator's manual(s) for your power unit, loader, and quick attach for ballasting needs)

BUCKET or MANURE FORK MOUNTING



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK 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.

IMPORTANT

Lubricate all grease fittings before connecting this product to your power unit's hydraulic system. Refer to BOLT-ON GRAPPLE, BUCKET, or MANURE FORK MAINTENANCE and follow the instructions.

BOLT-ON GRAPPLE HYDRAULIC CONNECTION



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK 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. Operate the hydraulic cylinder(s) on this product to make the same checks.
3. 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 air. Failure to remove all 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.

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK SETUP



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK SETUP

If your Bolt-On Grapple was purchased separately from your bucket or manure fork, follow the instructions below for installation. (NOTE: Bolt-On Grapple CANNOT be mounted on the **LAF1854** Manure Fork.)

1. Loosen the two nuts that secure each of the two steps to the bucket or manure fork. Remove and properly store or dispose of all four nuts, washers, and bolts. Set the two steps aside.
2. On the bucket only, remove and properly store or dispose of the five nuts, washers, and bolts that are filling the five holes in the upper rear of the bucket.
3. Place the bolt-on grapple support on the top channel of the bucket or manure fork.
4. Secure the support in place with:
 - (5) 1/2" x 1-1/4" carriage bolts inserted through the rear of the bucket or manure fork and then through the bottom flange of the support,
 - (5) 1/2" x 1-1/4" carriage bolts through the front of the support and the front of the top channel,
 - (1) 1/2" x 1-1/4" carriage bolt through the top center of the support and the top center of the top channel, and
 - (4) 1/2" x 1-1/2" carriage bolts, one through each of the two holes in each of the two steps. Position the steps so the bolts pass through the top of the support and the top of the channel.
5. Place a lock washer and nut on each bolt and tighten the nuts to 75 ft. lbs.
6. On the bucket only, loosen the nuts that secure each of the four 3/4" x 3" stop bolts that are beneath each of the four grapple teeth on the bolt-on grapple support. Remove and properly store or dispose of all four sets of nuts, washers, and bolts.

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK OPERATION



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK OPERATION



WARNING

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

- **THE GRAPPLE MOVES QUICKLY!** Do not allow anyone near the grapple.
- Never get between the grapple and the bucket or manure fork.
- Do not lift any material stacked taller than the height of the fully opened grapple.
- Do not roll back this product so far that the material falls toward the operator.

IMPORTANT

Using the partially open grapple as a rake **CAN** result in damage to this product and **WILL** void all FFC Attachments warranties.

If the grapple is ever used as a rake to drag materials into a position for being picked up, **the grapple must be completely open**. Applying a raking-type force to the partially open grapple will greatly magnify the fluid pressure in the hydraulic hoses, fittings, and cylinder and may cause those components to fail.



CAUTION

Failure to obey the following procedures may result in personal injury.

- Never leave the grapple open when this product is not in use.

When transporting material, be sure that:

- the grapple is closed to the fullest extent possible,
- the load always remains level,
- accelerating, turning, and breaking are done very gradually, and
- any obstacles, bumps, or holes in the intended path are avoided.

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK MAINTENANCE



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK MAINTENANCE

BEFORE EACH USE

1. Make sure that all nuts and bolts are in place and properly tightened.
2. Make sure that all other fasteners are in place and are performing their specified function.
3. Make sure that all hydraulic fittings are tightened and that there are no leaks in any fittings or hoses.
4. Make sure that all safety signs are in place, are clean, and are legible.
(SEE THE SAFETY SIGN SECTION ON PAGE 5.)
5. Replace any damaged parts and excessively worn parts.

AFTER EVERY 10 HOURS OF USE

1. Grease 1 fitting on the barrel end of the hydraulic cylinder of the Bolt-on Grapple.

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK SERVICE



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY BOLT-ON GRAPPLE, BUCKET, or MANURE FORK SERVICE

MANURE FORK TINE REPLACEMENT

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 two 4 x 4's 24" long (minimum) placed perpendicular the fork back plate. Note that the blocking should not apply pressure to any fork tine.



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 sign of material decay. Do not use blocking that is warped, twisted, or tapered.**

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. From the rear of the manure fork back plate, remove the roll pin that secures the fork tine being replaced.
6. Slide the tine forward until the tine is clear of the main frame. Properly dispose of any bent, damaged, or excessively worn fork tines and of the roll pin.



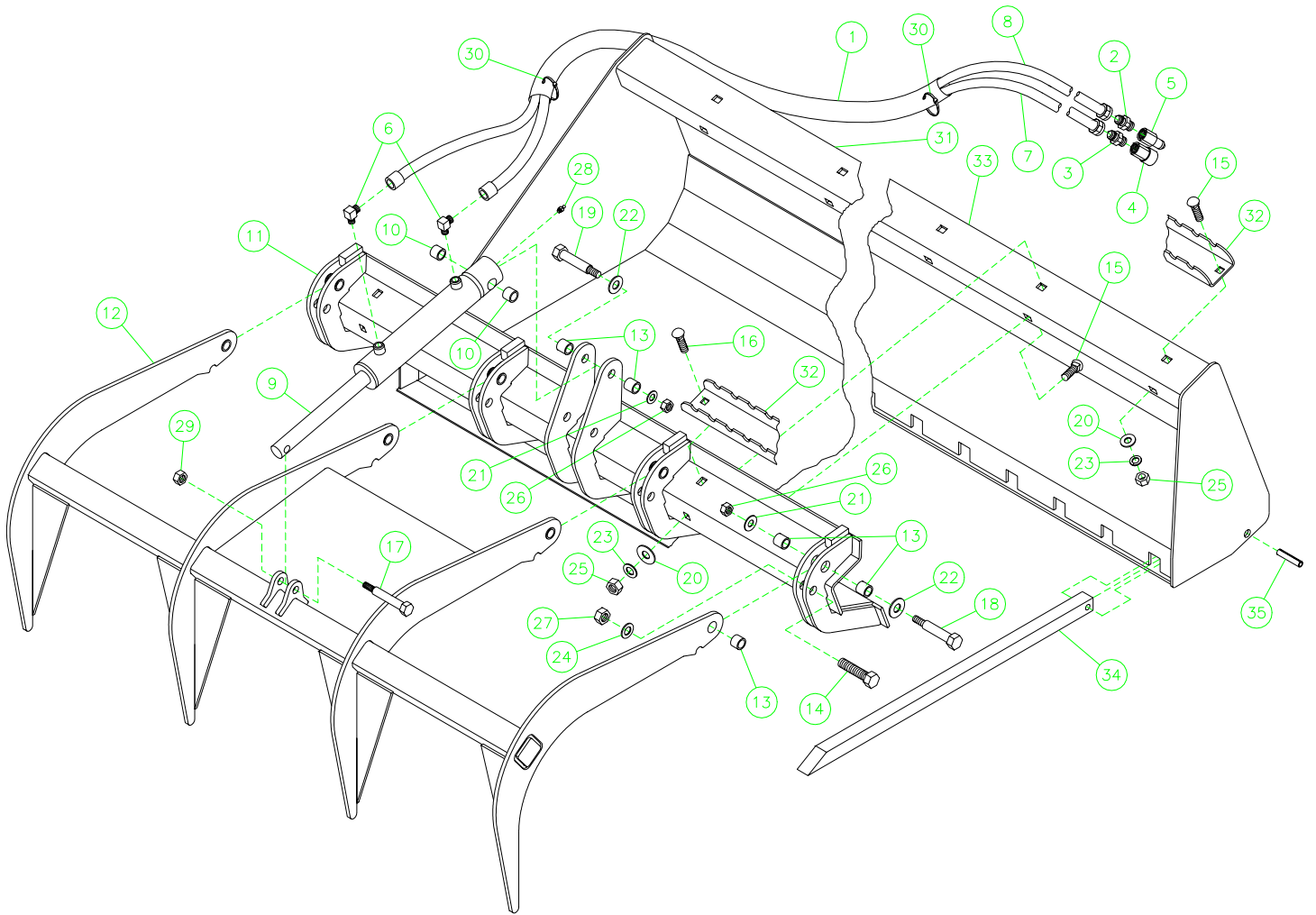
CAUTION

Failure to obey the following procedures may result in personal injury.

- **Do not attempt to straighten a bent fork or grapple tine. Straightening can cause a localized reduction in strength and the potential for sudden failure.**

7. Slide a new tine back into the main frame and install a new roll pin.
8. Repeat for other manure fork tines as necessary.

PARTS ILLUSTRATION



BOLT-ON GRAPPLE, BUCKET, or MANURE FORK PARTS LIST

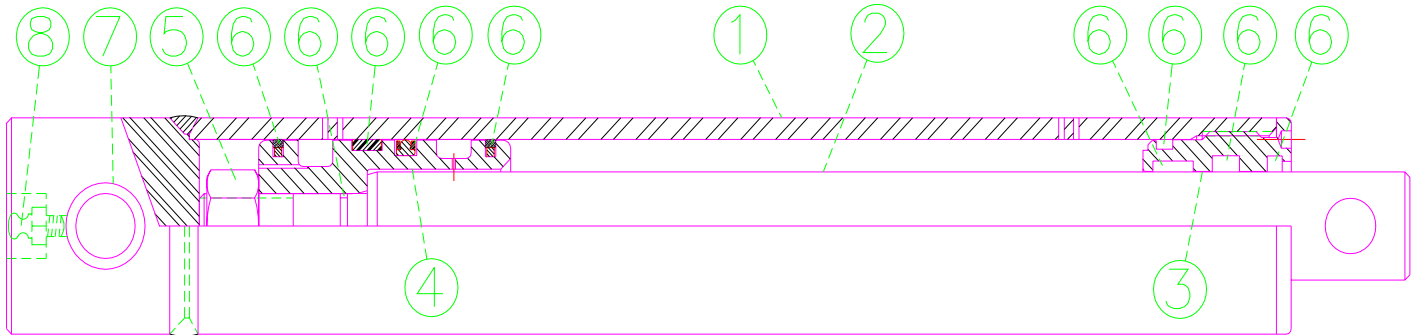
ITEM	QTY.	LAF0850			DESCRIPTION (Bolt-on Grapple)	
1	1	Contact FFC to obtain the correct item			Hydraulic Hose Protector	
2	1	Contact FFC to obtain the correct item			Hydraulic Adapter (not required for all models)	
3	1	Contact FFC to obtain the correct item			Hydraulic Adapter (not required for all models)	
4	1	Contact FFC to obtain the correct item			Hydraulic Quick Coupler: Female	
5	1	Contact FFC to obtain the correct item			Hydraulic Quick Coupler: Male	
6	2	LAF4298			Hydraulic Elbow: 90°, 6MB-6MJ	
7	1	Contact FFC to obtain the correct item			Hydraulic Hose: 3/8" ID	
8	1	Contact FFC to obtain the correct item			Hydraulic Hose: 3/8" ID	
9	1	LAF4637			Hydraulic Cylinder: 2" x 1-1/4" x 8, double cushioned	
10	2	LAF9402			Cylinder Bushing: 3/4" x 1" x 1"	
11	1	LAF9479			Bolt-on Grapple Support	
12	1	LAF9480			Grapple	
13	14	LAF9481			Spring Bushing: 3/4" x 1" x 1/2"	
14	4	RHW1709			Grade 5 Hex Head Cap Screw: 3/4" x 3" (NOT used on bucket)	
15	7	RHW2404			Grade 5 Carriage Bolt: 1/2" x 1-1/4"	
16	4	RHW2405			Grade 5 Carriage Bolt: 1/2" x 1-1/2"	
17	1	RHW4102			Allen Head Shoulder Screw: 5/8" x 2-1/4" (1/2" dia.x 3/4" threads)	
18	4	RHW4103			Allen Head Shoulder Screw: 3/4" x 1-3/4" (5/8" dia.x 7/8" threads)	
19	1	RHW4104			Allen Head Shoulder Screw: 3/4" x 3-3/4" (5/8" dia.x 7/8" threads)	
20	11	RHW5432			Grade 5 Flat Washer: 1/2", SAE	
21	5	RHW5632			Grade 5 Flat Washer: 5/8", SAE	
22	5	RHW5732			Grade 5 Flat Washer: 3/4", SAE	
23	11	RHW6402			Grade 5 Lock Washer: 1/2"	
24	4	RHW6702			Grade 5 Lock Washer: 3/4" (NOT used on Bucket)	
25	11	RHW7401			Grade 5 Hex Nut: 1/2", 13 tpi.	
26	5	RHW7603			Grade 5 Locknut: 5/8", 11 tpi.	
27	4	RHW7701			Grade 5 Hex Nut: 3/4", 10 tpi. (NOT used on Bucket)	
28	1	RHW8090			Grease Zerk: 1/4", 28tpi., self-tapping	
29	1	RHW8601			Grade 8 Locknut: 1/2", flanged top	
30	2	RMR5002			Nylon Cable ties: 1/4" x 11"	
ITEM	QTY.	LAF0861	LAF0867	LAF0873	LAF0879	DESCRIPTION (Buckets)
31	1	LAF9468 (60")	LAF9469 (66")	LAF9471 (72")	LAF9470 (78")	Bucket: 70° x Width noted
32	2				LAF9477	Step
15	9				RHW2404	Grade 5 Carriage Bolt: 1/2" x 1-1/4"
20	9				RHW5432	Grade 5 Flat Washer: 1/2", SAE
23	9				RHW6402	Grade 5 Lock Washer: 1/2"
25	9				RHW7401	Grade 5 Hex Nut: 1/2", 13 tpi.
ITEM	QTY.	LAF1854 or LAF1860	LAF1866 or LAF1872	LAF1878	DESCRIPTION (Manure Forks)	
33	1	LAF9453 (54") LAF9460 (60")	LAF9466 (66") LAF9472 (72")	LAF9478 (78")	Mainframe (width noted)	
34	varies	(6)	(7)	(8) LAF9473	Manure Fork Tine (hardened)	
32	2			LAF9477	Step	
15	4			RHW2404	Grade 5 Carriage Bolt: 1/2" x 1-3/4"	
20	4			RHW5432	Grade 5 Flat Washer: 1/2", SAE	
23	4			RHW6402	Grade 5 Lock Washer: 1/2"	
25	4			RHW7401	Grade 5 Hex Nut: 1/2", 13 tpi.	
35	varies	(6)	(7)	(8)RHW8035	Roll Pin: 1/2" x 2-1/2"	

NOTE: All parts are the same as the LAF0879 or LAF1872 except for those parts numbered under the other models.

BOLT-ON GRAPPLE, BUCKET, or MANURE FORK PARTS LIST (Continued)

ITEM	QTY.	LAF0850	DESCRIPTION (Bolt-on Grapple)
NUMBERS FROM HYDRAULIC CYLINDER ILLUSTRATION (LAF4637)			
1	1	LAF4649	Barrel: 2" x 8"
2	1	LAF4650	Shaft: 1-1/4"
3	1	LAF4619	Head: 1-1/4" ID, nominal
4	1	LAF4651	Piston: 2" x 3/4" ID, nominal
5	1	LAF4129	Grade 8 Nut: 3/4", 16 tpi
6	1	LAF4617	Seal Kit (includes all seals, O-rings, etc.)
7	2	LAF9402	Cylinder Bushing: 3/4" x 1" x 1"
8	1	RHW8090	Grease Zerk: 1/4", 28 tpi., self tapping

HYDRAULIC CYLINDER ILLUSTRATION (LAF4637)



BOLT-ON GRAPPLE, BUCKET, or MANURE FORK SPECIFICATIONS

Model Number	Overall Width	Overall Height	Overall Depth	Shipping Weight
Bolt-On Grapple				
LAF0850	58-1/2"	19"	34-1/2"	227 lbs.
Buckets				
LAF0861	61"	23-1/2"	37-3/8"	447 lbs.
LAF0867	67"	23-1/2"	37-3/8"	541 lbs.
LAF0873	73"	23-1/2"	37-3/8"	572 lbs.
LAF0879	79"	23-1/2"	37-3/8"	603 lbs.
Manure Forks				
LAF1854	54"	21-1/2"	37-1/2"	361 lbs
LAF1860	60"	21-1/2"	37-1/2"	383 lbs.
LAF1866	66"	21-1/2"	37-1/2"	419 lbs.
LAF1872	72"	21-1/2"	37-1/2"	441 lbs.
LAF1878	78"	21-1/2"	37-1/2"	477 lbs.
All replacement hydraulic hoses and fittings must have a minimum rated working pressure of 4,000 psi.				

**TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE
(FOR REFERENCE ONLY)**

Bolt Size	SAE Grade Bolt	Torque Ft./Lbs
1/2" - 13	5	75
3/4" - 10	5	260