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#### INTRODUCTION

Congratulations on your purchase of a new FFC Attachments **Preparator**<sup>®</sup>. This product has been designed and built to separate rocks and other debris from the soil while leveling and smoothing to prepare the soil for seeding or sod. 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) **LAF3554**, **LAF3566**, and **LAF3576**. The difference between the models is the width 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 **Preparator**<sup>®</sup>. 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-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	Precautions that must be followed to prevent damage to the 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 top left side of the bucket portion** of your **Preparator**<sup>®</sup>.

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, <b>could</b> result in death or serious injury.						
CAUTION	Indicates a potentially hazardous situation which, if not avoided, <b>may</b> result in minor or moderate injury; OR may cleable upped to clert against uppefor practices that may result in percendinium.						

## 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 powerdriven 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 <u>YOU</u> be that careful, responsible equipment operator.

YOU ARE THE KEY TO SAFETY BECAUSE:

<u>YOU</u> are responsible for the SAFE operation and maintenance of <u>YOUR</u> Preparator<sup>®</sup>.

<u>YOU</u> 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.

<u>YOU</u> 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 <u>YOU</u> read the manual as written or translate it into another language, <u>YOU</u> 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.

<u>YOU</u> 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:

- <u>READ AND COMPLETELY UNDERSTAND THIS</u> <u>MANUAL.</u>
- 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 Preparator<sup>®</sup> 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 <u>and</u> of the power unit, loader, and quickattach 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 the lowest portion of the attachment plate higher than 5'-0" above the ground.
- 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 !!

# 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.
- 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 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:

• Keep everyone at least nine feet away from the unit when operating.

# WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your Preparator<sup>®</sup>.
- 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.

• Do not use the top of this product as a step. Under certain conditions, this area can be slippery.

#### SAFETY SIGN LOCATIONS



PLACEMENT OR REPLACEMENT OF SAFETY SIGNS

Clean the area of application with non-flammable

3. Remove the backing from the safety sign, exposing

4. Apply the safety sign to the position shown in the

diagram above and smooth out any bubbles.

solvent, and then wash the same area with soap and

ITEM	QTY	PART# - DESCRIPTION
1	1	50-0723 – Read Manual
2	1	50-0724 – Hydraulics
3	2	RDL3100 – Stand Clear
4	1	RDL3101 – Rollover Hazard
5	2	RDL3102 – Shields
6	2	RDL3178 – No Step

#### 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.

#### ITEM 1



ITEM 4



**ITEM 5** 

1.

water.

2. Allow the surface to fully dry.

the adhesive surface.



#### ITEM 3





#### **ITEM 6**



#### POWER UNIT SPECIFICATIONS

### **IMPORTANT**

Exceeding any of the maximum recommended power unit specifications CAN result in damage to this product and <u>WILL</u> void all FFC Attachments warranties.

DESCRIPTION	SPECIFICATIONS
Hydraulic Flow Output	25 gpm. Maximum
Hydraulic Proceuro Output	2,500 psi. maximum (continuous)
	3,500 psi. maximum (intermittent: no more than 6 seconds per minute)
	As required to maintain full power unit stability. (Note the Shipping Weight
Rear or Front Ballast	on Specifications page, then see the operators manual(s) for your power
	unit, loader, and quick-attach for ballasting needs.)

#### **PREPARATOR<sup>®</sup> MOUNTING**



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> MOUNTING

#### Loaders

- 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 PREPARATOR<sup>®</sup> MAINTENANCE page and follow the instructions.

#### 3 Point Hitch Category 1 or 2.

- 1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your tractor, and all workers involved in the mounting process. Making sure this product is in the operating position and level will facilitate in selecting the proper mounting holes.
- 2. Read and understand the Operation and Maintenance manual for your tractor before installing this product.
- 3. Remove the top link on your tractors' 3 point and drive the tractor backwards in to position to connect the lower links to the attachment mounting ears. The ears have a combination category 1 & 2 hitch pin installed so you need to make sure the outer pin matches your tractors' category. Select a hole position on the mounting ears that aligns or is a little above the lower link points with the tractor link arms fully lowered and connect the arms.
- 4. The upper link cylinder provided with this product requires a category #2, 1" diameter pin to attach to the tractors' upper link point. If you have a category #1 tractor you will have to bush the pin up to category #2. <u>It is important that when you pin the rod end of the cylinder to the tractors' upper link point there is between 4" and 5" of exposed cylinder rod</u>. If you have less the bucket will not roll back enough and if you have more the bucket will not dump properly. Move the cylinder pin hole position on the mounting ears until you attain the recommended amount of exposed cylinder rod.
- 5. **IMPORTANT** Lubricate all grease fittings before connecting this product to your power unit's hydraulic system. Refer to PREPARATOR<sup>®</sup> MAINTENANCE page and follow the instructions.



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> HYDRAULIC CONNECTION

#### Loaders

- 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 tilt cylinders to check hose clearances and to check for any interference.

#### 3 Point Hitch Category 1 or 2.

- 1. This product requires two sets of auxiliary hydraulics. Purchase proper couplers and hoses for the upper link cylinder locally and attach to the tractor per the instructions in your tractors' operators manual.
- 2. Carefully raise the link arms and cycle the upper link cylinder to check hose clearances, interferences, and acceptable range of motion to roll back and dump the bucket.



#### 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.



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> SETUP

#### SKID SHOE ADJUSTMENT

Before adjusting the skid shoes, determine what the soil conditions are and what type of operation is to be performed. Remember that each time the soil conditions or operation type changes, the skid shoes may need to be repositioned.

Soil Conditions <ul> <li>HARD:</li> </ul>	This is I	nighly compacted soil, usually inorganic (clay). Any soil that has been subject to vehicle
	or cons	truction traffic would also be considered this soil condition.
<ul> <li>MEDIUM:</li> </ul>	This is u	untilled soil that has not been subject to compaction devices or traffic.
LOOSE:	This soi	I that has received a rough tillage pass of some type, but is still lumpy and coarse.
VERY LOOSE:	This soi	I that has been tilled to a fine texture.
Operation Type		
ROCK COLLECTI	ON:	Collecting large rocks and debris that are resting on the soil surface.
• FOLIAGE REMOV	/AL:	Uprooting and collecting foliage that is growing or has been growing on the soil surface.
• SOIL TILLAGE:		Tilling the soil to create a looser soil condition.
• ROUGHING:		Scarifying, raking rocks, debris, & foliage, and filling depressions in tilled or untilled soil.
FLAT MODE ROU	IGHING:	Roughing with the shroud parallel to the ground.
ANGLED MODE     ROUGHING:		Roughing with the shroud at an angle to the ground surface.
<ul> <li>FINISHING PASS</li> </ul>	:	Collecting small rocks and debris that are in or on the soil surface.

Skid Shoe	Rotor Tooth Depth	Operation on	(Initial settings only. Workability, moisture,
Adjustment Slots	Below Skid Shoe	Soil Condition	experience, etc. affect settings.)



Finishing Pass on Very Loose soil. Foliage Collection

Flat Mode Roughing on Medium or Loose soil. Finishing Pass on Loose soil.

Rock Collection on Hard or Medium soil. Soil Tillage on Medium soil. Flat Mode Roughing on Hard soil. Finishing Pass on Medium soil.

Foliage Uprooting on Hard or Medium soil. Angled Mode Roughing on Hard, Medium, or Loose soil. Soil Tillage on Hard soil.



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> SETUP

#### Adjust the skid shoes as follows:

- 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 preplaced blocking.



#### 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.

- 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. Loosen the two 1/2" hex nuts that secure the shoe.
- 6. Move the shoe to the proper slot for the appropriate soil conditions and for the operation being preformed. See the chart above for recommended starting points for various soil and operating combinations.

# **NOTICE** If, after conducting test passes, the operator determines that the best skid shoe setting for the conditions being encountered is between two of those listed, then the rear of the skid shoe may be set one slot above the front of the skid shoe.

- 7. Retighten the two 1/2" hex nuts to 84 ft. lbs. + or 6.0 ft. lbs. of torque.
- 8. Repeat SKID SHOE ADJUSTMENT steps 5 through 7 for the other skid shoe.

#### TRACK SCRATCHER SPRING ADJUSTMENT

- 1. With this product positioned as directed by steps 1 through 4 for SKID SHOE ADJUSTMENT, loosen the two 3/8" hex nuts that secure the track scratcher to the skid shoe.
- 2. Slide the track scratcher down until the tips of the lowest spring are 1/4" below the lowest surface of the skid shoe when the skid shoe is at the selected operating angle.

# IMPORTANT Operating this product with the spring tips extending more than ¼" into the soil CAN result in damage to this product and <u>WILL</u> void all FFC Attachments warranties.

- 3. Retighten the two 3/8" hex nuts to 34 ft. lbs. + or 2.0 ft. lbs. of torque.
- 4. Loosen the single 3/8" hex nut that secures the front spring to the track scratcher.
- 5. Slide the spring outward until the outer tine of the spring is 1/2" beyond the outer edge of the skid shoe. (Specific soil conditions may require an increase or a decrease in that distance.)
- 6. Retighten the 3/8" hex nut to 34 ft. lbs. + or 2.0 ft. lbs. of torque.
- 7. Repeat TRACK SCRATCHER SPRING ADJUSTMENT steps 1 through 6 for the other track scratcher.



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

### WARNING

Failure to obey this warning could result in death or serious injury.

- Never lift the lowest portion of the attachment plate higher than 5' above the ground.
- Do not lock the auxiliary hydraulics of your power unit in the "ON" position.
- Keep everyone at least nine feet away from this product when operating.



#### CAUTION

Failure to obey this warning MAY result in personal injury.

• Do not use the top of this product as a step. Under certain conditions, this area can be slippery.

#### IMPORTANT Operating this product continuously at hydraulic pressures greater than 2,500 psi CAN result in damage to this product and <u>WILL</u> void all FFC Attachments warranties.

NOTICE

On certain power units equipped with counter weights, the use of the "float" position on the loader arm lift control can affect overall performance.

The descriptions on the next page are for different operations that can be performed with this product. Please keep in mind that:

- Before using this product, the application area must be free of all boulders larger than 20" in diameter, all logs and branches, all wire, all lumber, and any other item that is too large for the bucket or could get wrapped around the rotor.
- Other equipment must be used to obtain a <u>reasonable</u> starting grade. That means removing any large mounds of soil and filling in any large or deep holes.
- Multiple passes requiring different skid shoe settings, different rotor speeds and rotation directions, and different
  ground speeds and directions may be needed to achieve the desired results depending on what those results are and
  what the initial conditions are.
- The wide variety of soil types, moisture conditions, compaction levels, foliage densities, and rock and debris quantities that can be encountered mean that the operator may need to make adjustments from the descriptions on the next page based upon the operator's experience.

#### To operate this product:

- 1. Make sure that the skid shoes are in the correct position. (see **PREPARATOR**<sup>®</sup> **SETUP** for the recommended settings.)
- 2. Make sure that the track scratchers are in the correct position. (see **PREPARATOR**<sup>®</sup> **SETUP** for the recommended settings.)
- 3. Use the hydraulics on your power unit to properly position the rotor and bucket. (see the next page for the recommended positions and the float/non-float loader arm settings.)
- 4. Activate the auxiliary hydraulics on your power unit to rotate the rotor in the correct direction. (see the next page for the recommended direction.)
- 5. Increase your engine speed to the desired level and slowly move your power unit in the correct direction. (see the next page for the recommended direction.)
- 6. Gradually increase the ground speed until the desired balance between operating results and efficiency is achieved.



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> OPERATION

#### ROCK COLLECTION (Fig. 1)

This operation is where surface rocks (5" to 20" dia.) are collected in the bucket.The teeth should move toward the bucket when contacting the soil.

- The power unit should move in a forward direction when mounting the attachment in front of the power unit and backward for 3 point mountings.
- The larger the rocks, the slower the ground speed.
- The loader should be in the float position. (Dumping of the bucket is required.)

#### SOIL TILLAGE & FOLIAGE UPROOTING (Fig. 2)

This operation is for loosening undisturbed soil and uprooting foliage.

- The teeth should move away from the bucket when contacting the soil.
- The power unit should move in a reverse direction when mounting the attachment in front of the power unit and forward for 3 point mountings.
- The loader should not float. (Dumping of the bucket is not required.)

#### FLAT MODE ROUGHING (Fig. 3) or ANGLED MODE ROUGHING (Fig. 4)

- These operations scarify, rake materials into piles or windrows and fill depressions.
- The teeth should move toward the bucket when contacting the soil.
- The power unit should move in a reverse direction when mounting the attachment in front of the power unit and forward for 3 point mountings.
- The loader should not float. (Dumping of the bucket is not required.)

(If the bucket is closed at the end of a Flat Mode pass, then dumping is required.)

#### FOLIAGE COLLECTION (Fig. 5)

This operation is where foliage is uprooted and collected in the bucket.

- The teeth should move toward the bucket when contacting the soil.
- The power unit should move in a reverse direction when mounting the attachment in front of the power unit and forward for 3 point mountings.
- The loader should be in the float position. (Dumping of the bucket is required.)

#### FINISHING PASS (Fig.5)

This operation is for the collection of rocks (less than 5" dia.) and debris in the soil.

- The teeth should move toward the bucket when contacting the soil.
- The power unit should move in a reverse direction when mounting the attachment in front of the power unit and forward for 3 point mountings.
- The loader should be in the float position. (Dumping of the bucket is required.)

#### DUMPING OF THE BUCKET (Fig.6)

- 1. Shut off the auxiliary hydraulics.
- 2. Raise the unit about four feet above the ground.
- 3. Dump the bucket.
- 4. If some materials do not slide out, engage the auxiliary hydraulics so that the teeth on the bottom of the rotor move away from the bucket.



#### ADDITIONAL OPERATING TIPS

- In certain conditions, if the rotor carries rocks past the brush and drops them back on the ground, reducing the rotor speed will correct this situation.
- The bucket will hold more material if,
   when the bucket starts to get full, the
   bucket is rolled back to shift the material further back into the bucket.
   Some unwanted soil can also be removed at this time if the roll-back/dump cylinder(s) on the loader are used to "shake" the unit.













# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> 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.

#### AFTER EVERY 10 HOURS OF USE

- Grease 6 fittings: one on each of the two bearings at the ends of the drum shaft, one on each of the two bearings at the ends of the brush shaft, and one on each of the two parallel link bars where the shroud pivots on the bucket.
- Make sure that the roller chains are tight as per the method described on page 13. This is necessary only after the first 10 hours and should be done every 40 hours thereafter.

#### AFTER EVERY 40 HOURS OF USE

- 1. Remove the brush drive shield and the side and lower rotor drive shields.
- 2. Make sure that the four taper lock adapter assemblies are tight by turning the bearing locknut by hand.
  - If a bearing locknut moves when turned by hand, then that taper lock adapter assembly must be retightened. (SEE THE BEARING LOCK ADJUSTMENT INSTRUCTIONS BELOW.)
- 3. Make sure that the two roller chains are tight as per the method described on page 13.
- 4. Replace and properly secure all drive shields.



### WARNING

Make certain that all protective guards, canopies, doors, etc. are in place and secure. Failure to obey this warning could result in death or serious injury.



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> SERVICE

#### BEARING LOCK ADJUSTMENT

If a taper lock adapter assembly is found to be in need of tightening after checking the bearing locknut by performing steps 1 and 2 of the 40 hour maintenance schedule above, then the following action must be taken:

- 1. Bend the locking tang of each bearing lock washer out to free the bearing locknut.
- 2. Loosen the bearing locknut with the spanner wrench included with this product.
- 3. Retighten the bearing locknut until finger tight.
- 4. Use the spanner wrench to tighten the locknuts an additional 1-1/4 turns and, if necessary, continue tightening until the first time when one tang of the bearing lock washer is aligned with a notch on the locknut.
- 5. Bend that tang of the bearing lock washer back into the notch on the locknut.
- 6. Replace and properly secure the appropriate drive shield(s).

#### CHAIN TENSION ADJUSTMENT

If the chain is found to be in need of tightening after checking the chain tension by performing steps 1 and 3 of the 40 hour maintenance schedule on the maintenance page, then the following action must be taken:

- 1. 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.
- 2. Remove cover over rotor drive chain.
- 3. Check chain to see if adjustment is needed: Remove (1) link if possible (It may be necessary to add back in 1/2 link). There should be at least 1/4" of movement in the chain. The height of the motor mount weldment may also be adjusted to change chain tension.
- 4. Replace and properly secure the appropriate drive shield(s).

#### **Brush Drive Side**

- 1. 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.
- 2. Remove cover over brush drive chain and completely remove the snap idler.
- 3. Check chain to see if adjustment is needed: Remove (1) link if possible (It may be necessary to add back in 1/2 link).
- 4. Adjust the brush leaving a 1/4" of movement in the chain and a maximum of 5/16" between the brush and the drum. If the is more than 5/16" between the brush and the drum, then remove a 1/2 link from the chain. Be sure to adjust both ends of the brush so it remains parallel to the drum.
- 5. Replace and properly secure the appropriate drive shield(s).



# SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-5 of this manual) BEFORE BEGINNING ANY PREPARATOR<sup>®</sup> TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Rotor does not turn.	Rotor drive chain is loose.	Adjust the chain tension.
	Rotor drive chain is broken.	Repair or replace the drive chain.
	Rotor drive sprocket is off the shaft.	Reinstall the drive sprocket.
	Rotor idler sprocket is off the shaft.	Reinstall the idler sprocket.
	Rotor bearing is seized.	Replace the bearing.
	Obstruction (i.e. rock, etc.) is lodged against the rotor.	Remove the obstruction. Make sure that all safety procedures are followed.
	Low level of hydraulic fluid in the power unit.	Add hydraulic fluid to the power unit.
	Defective hydraulic valve on the power unit.	Repair or replace the hydraulic valve on the power unit.
	Defective hydraulic pump on the power unit.	Repair or replace the hydraulic pump on the power unit.
Loss of power to rotor.	Hydraulic fitting is leaking.	Tighten or replace the hydraulic fitting.
	Hydraulic motor seal is leaking.	Replace the hydraulic motor seal.
	Low level of hydraulic fluid in the power unit.	Add hydraulic fluid to power unit.
	Air in the power unit's hydraulic system.	Bleed the power unit's hydraulic system.
Rotor turns erratically.	Air in the power unit's hydraulic system.	Bleed the power unit's hydraulic system.
	Rotor drive chain is slipping on the sprocket.	Adjust the chain tension.
Brush does not sweep	Brush drive chain is loose.	Adjust the chain tension.
	Brush drive chain is broken.	Repair or replace the drive chain.
	Sprocket square key is missing or broken.	Replace the sprocket square key.
Skid shoes dig in or slide with excessive resistance on the ground.	Float circuit on the power unit is not activated or is not properly operating.	Activate or repair, as needed, the power unit's hydraulic controls.

#### PARTS ILLUSTRATION



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### PREPARATOR<sup>®</sup> PARTS LIST

		LAF3554	LAF3566	LAF3576	
ITEM	QTY.	54"	66"	76"	DESCRIPTION
1	1	LAF3590	LAF3501	LAF3502	Bucket
2	1	LAF3586	LAF3503	LAF3504	Shroud
3	1	LAF3591	LAF3505	LAF3506	Drum
4	1			LAF3507	Parallel Linkage Bar: Left
5	1			LAF3509	Rotor Drive Shaft (on left end of Drum)
6	1			LAF3510	Rotor Idler Shaft (on right end of Drum)
7	2			LAF3512	Taper Lock Adapter Assembly – Includes:
					7A – Bearing Locknut: 1-3/4"
					7B – Bearing Lock Washer: 1-3/4"
					7C – Bearing Taper (male): 1-7/8" O.D.
8	2			LAF3513	Flange Mount Bearing: 1-3/4"/1-7/8" Taper Bore w/ Grease Zerk
9	1			LAF3514	Motor Shaft Spacer
10	1			LAF3516	Roller Chain: #80H x 59 Links
11	1			LAF3517	Connecting Link: #80H
12	1			LAF3518	Offset Connecting Link: #80H
13	1			LAF3530	Motor Mount
14	1			LAF3520	Roller Chain: #50H x 65 Links
15	1			LAF3521	Connecting Link: #50H
16	2			LAF3522	Offset Connecting Link: #50H
17	1			RHW1209	Grade 5 Hex Head Cap Screw: 3/8" x 1-1/2"
18	1			LAF3524	Rotor Drive Shield: Lower Cover
19	2			LAF3525	Brace Angle
20	1			LAF3526	Rotor Drive Shield: Lower Cover
21	1			LAF3532	Sprocket Bushing: 1-1/2" Quick Disconnect – Includes:
					(1) Bushing: 1-1/2" I.D.
					(3) Hex Head Cap Screws: ¼" x 1-3/8"
					(3) Lock Washers: 1-4"
					(1) Socket Set Screw: ¼" x 3/8"
22	2			LAF3533	Taper Lock Adapter Assembly – Includes:
					22A – Bearing Locknut: 1-1/8"
					22B – Bearing Lock Washer: 1-1/8"
					22C – Bearing Taper (male): 1-1/4" O.D.
23	2			LAF3534	Flange Mount Bearing: 1-1/8"/1-1/4" Taper Bore w/ Grease Zerk
24	1			LAF3536	Sprocket: 17 Tooth #50 w/ 1" Bore and ¼" Key
25	1			LAF3537	Brush Drive Shield Gasket
26	1			LAF3540	Drive Sprocket Retainer: 13/32" I.D.
27	1	LAF3583	LAF3542	LAF3543	Brush: 13" Diameter
28	1			LAF3544	Sprocket: 26 Tooth #50 w/ 1-1/2" Bore and 3/8" Key
29	1			LAF3546	Sprocket: 12 Tooth #80 w/ 17 Tooth SAE Spline
31	1			LAF3549	Sprocket: 20 Tooth #80 w/ 17 Tooth SAE Spline
32	1			LAF3550	Brush Baffle Plate: Right
33	1			LAF3564	Brush Drive Shaft (on right end of Brush)
34	1			LAF3565	Brush Idler Shaft (on left end of Brush)
35	1			LAF3567	Sprocket Bushing: 1" Quick Disconnect – Includes:
					(1) Bushing: 1" I.D.
					(3) Hex Head Cap Screws: ¼" x 1-3/8"
					(3) Lock Washers: ¼"
					(1) Socket Set Screw: ¼" x 3/8"
37	1			RHW5970	Sprocket Spacer (use only as required to keep sprocket tight)
39	1			LAF3584	Brush Drive Shield
40	2			LAF3585	Rotor Mounting Plate
42	1			LAF3588	Brush Baffle Plate: Left
43	4			LAF3597	Skid Shoe Retainer

NOTE: All parts are the same as the LAF3576 except for those parts numbered under the other models.

# PREPARATOR<sup>®</sup> PARTS LIST (Continued)

		LAF3554	LAF3566	LAF3576	
ITEM	QTY.	54"	66"	76"	DESCRIPTION
44	1			LAF4033	Hydraulic Hose Protector: 1-7/8" x 72"
45	2			LAF4278	Hydraulic Elbow: 90°, 10MB – 10MJ
46	2			LAF4321	Hydraulic Hose: 1/2" x 104", 10MB – 10FJ
47	1			LAF4772	Hydraulic Motor
48	1			LAF9965	Drive Sprocket Retainer: 41/64" I.D.
49	1			LAF9982	Skid Shoe: Right
50	1			LAF9983	Skid Shoe: Left
51	1			LAF9990	Parallel Linkage Bar: Right
52	1			RHW1101	Grade 5 Hex Head Cap Screw: 5/16" x 1/2"
53	1			RHW1112	Grade 5 Hex Head Cap Screw: 5/16" x 2-1/2"
54	6			RHW1205	Grade 5 Hex Head Cap Screw: 3/8" x 1"
55	1			RHW1235	Grade 8 Hex Head Cap Screw: 3/8" x 1"
56	4			RHW1405	Grade 5 Hex Head Cap Screw: 1/2" x 1-1/2"
57	12			RHW1406	Grade 5 Hex Head Cap Screw: 1/2" x 1-3/4"
58	12			RHW1603	Grade 5 Hex Head Cap Screw: 5/8" x 1-3/4"
59	2			RHW1912	Grade 5 Hex Head Cap Screw: 1" x 4-1/2"
60	16			RHW2205	Grade 5 Carriage Bolt: 3/8" x 1"
61	4			RHW2406	Grade 5 Carriage Bolt: 1/2" x 1-3/4"
62	4			RHW4025	Grade 5 Flange Head Bolt: 3/8" x 1"
65	1			RHW6102	Grade 5 Lock Washer: 5/16"
66	22			RHW6202	Grade 5 Lock Washer: 3/8"
67	24			RHW6402	Grade 5 Lock Washer: 1/2"
68	12			RHW6602	Grade 5 Lock Washer: 5/8"
69	17			RHW7201	Grade 5 Hex Nut: 3/8"
70	4			RHW7401	Grade 5 Hex Nut: 1/2"
71	2			RHW7902	Grade 5 Locknut: 1"
73	2			RHW8061	Lynch Pin: 5/16" x 1-3/8" (useable)
74	1			RHW8071	Square Key: 3/8" x 3/8" x 1-1/2"
75	1			RHW8072	Square Key: ¼" x ¼" x 1-1/2"
76	6			RHW8090	Grease Zerk: ¼", 28 tpi. Self-tapping
77	1			RHW8098	Grade 2 Fender Washer: 5/16" I.D. x 1-1/2" O.D. (0.08" thick)
78	1			RHW8113	Grade 5 Hex Head Cap Screw: 5/8" x 1-1/4"
81	8			RHW7403	Grade 5 Locknut: 1/2"
82	2			RHW8602	Machinery Bushing: 1-1/4" I.D. x 1-3/4" O.D. (1/16" thick)
83	1			RHW8613	Weld Plate f/ 7/8" O.D.
84	1			RHW8614	Cover Plate f/ 7/8" O.D.
85	2			RHW8616	Hose Cradle f/ 7/8" O.D. (2 hoses)
86	1			RHW8618	Hose Spring
87	2			RMR5002	Wiretie
		Contact F	FC to obtain t	he correct	Hydraulic Hose Quick Coupler:
88	1	coupler	s for your Pov	wer Unit	Male Connection
89	1				Female Connection

NOTE: All parts are the same as the LAF3576 except for those parts numbered under the other models.

# PREPARATOR<sup>®</sup> PARTS LIST (Continued)

ITEM	QTY.	LAF3554 54"	LAF3566 66"	LAF3576 76"	DESCRIPTION
3 Point	Hitch N	lountings			
90	1			RHW8048	Clevis Pin: 1" x 6"
91	1			RHW8042	Lynch Pin: 3/16" x 1-9/16" (1-1/2" useable)
92	2			ILA1032	Bushing: 1-1/2" O.D. x 1-1/4" I.D.
93	1			LAF4515	Hydraulic Cylinder
94	2			RHW8401	Draw Pin Category 1 & 2
95	4			RHW2404	Grade 5 Carriage Bolt: ½" x 1-1/4"
96	4			RHW5492	Grade 8 Flat Washer: 1/2", SAE (hardened)

NOTE: All parts are the same as the LAF3576 except for those parts numbered under the other models.



#### **OPTIONAL KITS:**

#### LUG WRENCH KIT



#### TRACK SCRATCHER KIT

#### SPANNER WRENCH





LUG WRENCH KIT				
ITEM	QTY.	LAF3581	DESCRIPTION	
1	1	LAF3578	Foam Rubber: 1" x 2-1/2" x 3"	
2	1	LAF3580	Folding Lug Wrench	
3	1	LAF3582	Wrench Holder	
4	2	RHW5332	Grade 5 Flat Washer: 7/16", SAE	
5	1	RHW8037	Roll Pin: 5/32" x 1-1/4"	
6	1	RHW8219	Clevis Pin: 7/16" x 2-1/4" (useable)	
7	1	RHW8502	Spring: 5/8" x 2-1/4" (.055" wire)	
8	3	RHW1004	Grade 5 Hex Head Cap Screw: 1/4" x 3/4"	
9	3	RHW6002	Grade 5 Split Lock Washer:1/4"	
10	3	RHW7001	Grade 5 Hex Nut: 1/4"	

TRACK SCRATCHER KIT					
ITEM	QTY.	LAF3531	DESCRIPTION		
1	2	LAF3547	Rubber Mount Track Scratcher		
2	4	RHW1205	Grade 5 Hex Head Cap Screw: 3/8" x 1"		
3	8	RHW5262	Grade 5 Flat Washer: 3/8", USS		
4	4	RHW6202	Grade 5 Lock Washer: 3/8"		
5	4	RHW7201	Grade 5 Hex Nut: 3/8"		

	1	1	LAF3587	Spanner Wrench	
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		PART	NUMBERS FROM HYDRAULIC CYLINDER ILLUSTRATION (LAF4515)
ITEM	QTY.	PART #	DESCRIPTION
1	1	LAF4688	Barrel: 3" I.D. x 13" Stroke w/ ball end
2	1	LAF4687	Shaft: 1-3/4" Diameter
3	1	LAF4610	Head: 1-3/4" I.D., Nominal
4	1	LAF4609	Piston: 3" O.D. x 1-1/8" I.D., Nominal
5	1	LAF4608	Nut: 1-1/8", 12 tpi., top lock
6	1	LAF4607	Seal Kit (includes all seals, O-rings, etc.)

#### HYDRAULIC CYLINDER LAF4515 ILLUSTRATION



### **PREPARATOR<sup>®</sup> SPECIFICATIONS**

Model Overall Overall Overall Working Number of Bucket Shipping										
Number Width Height Depth Width Teeth Capacity* Weight										
LAF3554 63-1/4" 34-7/8" 53" 54" 250 8.86 cu. ft. 1,031 lbs.										
LAF3566 75-1/4" 34-7/8" 53" 66" 300 10.32 cu. ft. 1,340 lbs.										
LAF3576 85-1/4" 34-7/8" 53" 76" 340 12.50 cu. ft. 1,520 lbs.										
All replacement hydraulic hoses and fittings must have a minimum rated working pressure of 4,000 psi.										

\* Struck capacity.

#### TORQUE SPECIFICATION FOR STANDARD MACHINE HARDWARE (FOR REFERENCE ONLY)

Bolt Size	SAE Grade Bolt	Torque Ft./Lbs.	Bolt Size	SAE Grade Bolt	Bolt Size
1⁄4" – 20	5	8	1⁄2" – 13	5	75
5/16" – 18	5	17	5/8" – 11	5	150
3/8" – 16	5	30	5/8" – 18	5	180
3/8" - 16	8	45	1" - 8	5	50

PLEASE TRI-FOLD AND AFFIX TAPE HERE



## 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 Zi	p	_ City	State	Zip
Phone	_		<b>CHECK ONE:</b>		
Loader / Tractor Model			_ Construction Use		
Delivery Date			_ Agricultural Use		
Model or Part #			Landscape Use		
Serial #			Other:		

#### **Dealer Inspection** (check items applicable)

All Decals installed (see operator's manual)	Review Operating and Safety Instructions
Hydraulic fittings tight and free of leaks	Guards and covers in place and secure
Fasteners tight	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.

Form MR00000-000 Rev. 09/04

FFC Attachments • 100 E. Lee Road • PO Box 122 • Lee, IL 60530 • 800-747-2132 • Fax 815-824-2071 www.ffcattachments.com



## 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.