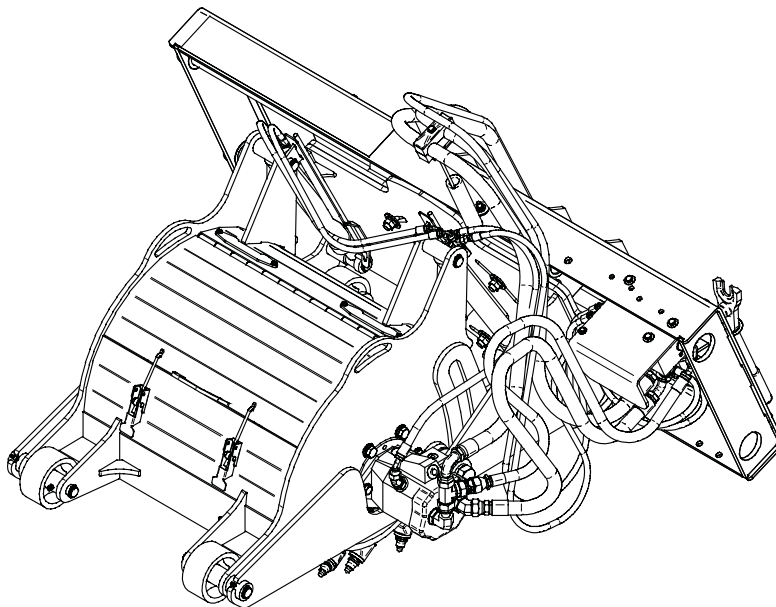




HIGH FLOW COLD PLANER



PALADIN LIGHT CONSTRUCTION



SERIAL NUMBER: _____

MODEL NUMBER: _____

Manual Number: MR25664
Models: LAF5416, LAF5418,
LAF5420, LAF5424,
LAF5430 & LAF5436
Release Date: January 30, 2006

TABLE OF CONTENTS

Introduction, General Information, Serial Number	1
Definitions of Safety Terms and Symbols	2
Accident Prevention, Safety Instructions.....	2-4
Safety Signs.....	5-6
Power Unit Specifications	7
Mounting	7
Wiring Harness & Actuator Installation.....	7
Hydraulic Connection.....	8
Setup	8
Operation	9
Maintenance.....	10-11
Service	12
Parts Illustration & Parts List.....	13-16
Hydraulics Group Illustration & Parts List.....	17-18
Decal Group Illustration & Parts List.....	19
Cylinder Illustrations & Parts Lists.....	20
Specifications & Requirements.....	21
Warranty	i

INTRODUCTION

Congratulations on your purchase of a new **FFC Attachments Cold Planer**. This product has been designed and built for planing & milling asphalt. This product may also be used for roughing concrete. 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] : LAF5416, LAF5418, LAF5420, LAF5424, LAF5430, & LAF5436.

GENERAL INFORMATION

The purpose of this manual is to assist in assembling, mounting, operating, and maintaining your Planer: 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 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 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 upper rear left of your Planer.

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 which 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 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 their combined efforts can be wiped out with a single careless act by the operator of that product.

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 Planer.**

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 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 planer 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 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 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.
- Always block the rear wheels of the Planer in a manner that stabilizes the chassis.
- 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 tractor or 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.
- Never operate your planer with the cover open.

WHEN ADJUSTING, SERVICING OR REPAIRING THIS PRODUCT:

- Make no modifications to your planer.
- 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.
- **The Attachment Part group and the Chassis Part group pivot freely. Do not place any part of your body between these areas or under this product without stabilizing this pivot point. Always block the rear wheels of your Planer in a manner that stabilizes the chassis.**

SAFETY SIGN LOCATIONS

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, 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



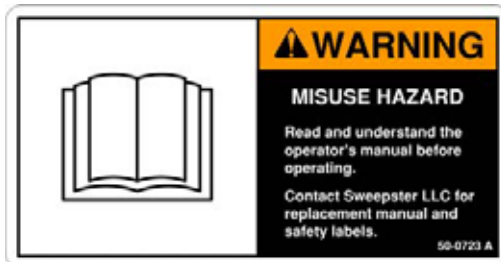
ITEM #2



ITEM #3



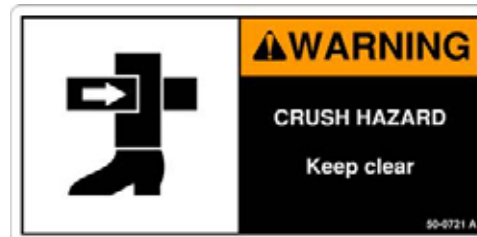
ITEM #4



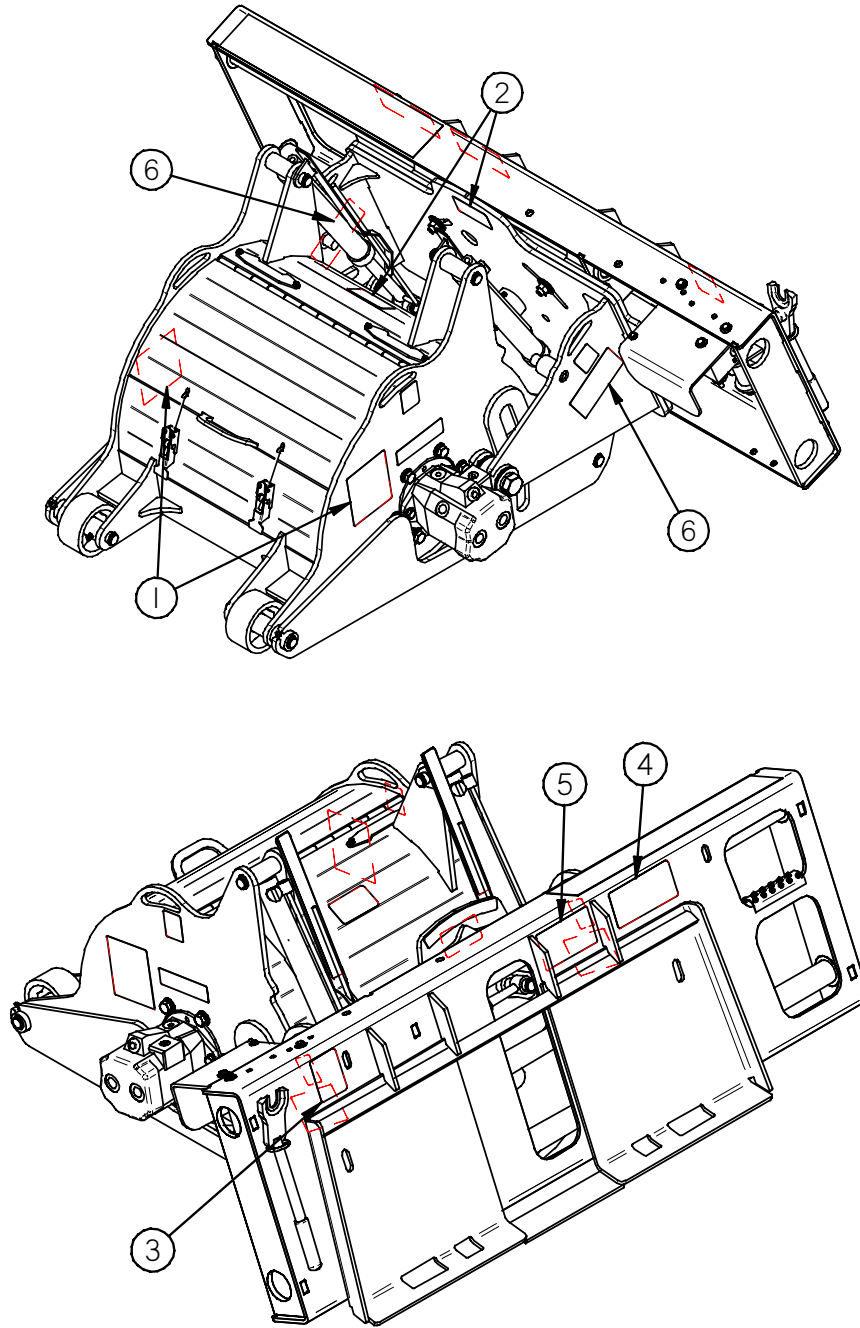
ITEM #5



ITEM #6



SAFETY SIGN LOCATIONS (CONTINUED)



ITEM	QTY.	PART #	DESCRIPTION
1	2	RDL3100	STAND CLEAR
2	2	RDL3127	PINCH POINT
3	1	50-0724	HYDRAULIC
4	1	50-0723	READ MANUAL
5	1	RDL3159	FLYING DEBRIS
6	2	50-0721	CRUSH HAZARD

NOTE: items with quantity (2) are located directly opposite the item shown.

POWER UNIT SPECIFICATIONS

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

DESCRIPTION	SPECIFICATIONS
Weight of Power Unit without Planer	11000 lbs. maximum
Operating Capacity of Power Unit's loader	3750 lbs. maximum
Lift Capacity of Power Unit's loader	7500 lbs. maximum
Hydraulic Pressure Output	5,000 psi. maximum
Front or Rear Ballast	As required to maintain full power unit stability. (see the shipping weight on page 22, then see the operator's manual(s) for you power unit, loader, and quick-attach for your ballasting needs.)

PLANER MOUNTING



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER 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 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 PLANER MAINTENANCE on page 10 and follow the instructions.

ELECTRIC HARNESS AND ACTUATOR INSTALLATION

MATERIALS NEEDED: Nylon cable ties.

1. Attach the control box to a location convenient for the operator to control the planer without hindering operation of the power unit. Use the magnet on the back of the control box to secure the control box with the toggle switches on top.



CAUTION

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

- **To avoid electric shock during the wiring harness installation, remove the ground cable from the battery of your power unit.**

2. Remove the ground cable from the negative (-) post of your power unit's battery.
3. Remove the nut from the **POSITIVE (+)** cable clamp on the battery and slide the **RED** wire ring terminal from the 9' wiring harness cable over the positive (+) cable clamp bolt. Secure the ring terminal with the nut.
4. Remove the nut from the **NEGATIVE (-)** cable clamp on the ground cable and slide the **BLACK** wire ring terminal from the 6' wiring harness cable over the negative (-) cable clamp bolt.
5. Reinstall the ground cable on the negative (-) post of the battery and secure the ring terminal and the ground cable with the nut removed in the previous step.
6. Secure the 9' wiring harness cable from the battery to the control box with your nylon cable ties.
7. Feed the 16' wiring harness cable:
 - a) back to the left-rear area of your power unit,
 - b) past the loader arm's rear hinge point by following the hydraulic hoses where possible, and
 - c) down the loader arm following the hydraulic lines.
8. Use your nylon cable ties to secure the 16' cable's female connector to the hydraulic lines next to the auxiliary hydraulic quick couplers.
9. Straighten the 16' cable and use your nylon cable ties to secure the cable to the hydraulic lines back to the loader arm hinge point.
10. Allow sufficient slack in the cable at the hinge point to provide for a full range of motion of the loader arms. Use your nylon cable ties to secure the cable to the loader frame below the hinge point and back to the control box.
11. Connect the male connector on the actuator cable to the female connector on the loader arm.

PLANER HYDRAULIC CONNECTION



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER 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 tilt cylinders to check hose clearances and to check for any interference.
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.



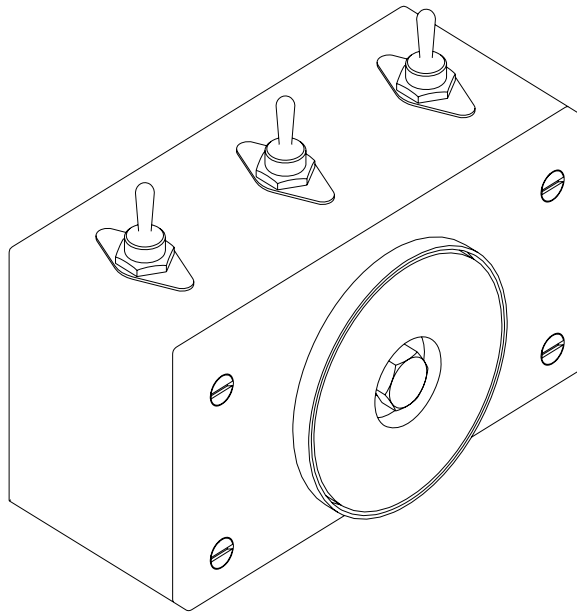
WARNING

**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.**

PLANER SETUP



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER SETUP



From the operator's position:

- The left switch controls the Planer Tilt.
- The middle switch controls the Planer Sideshift.
- The right switch controls the Planer Depth.

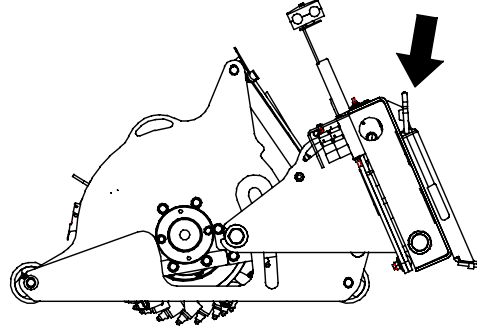
PLANER OPERATION



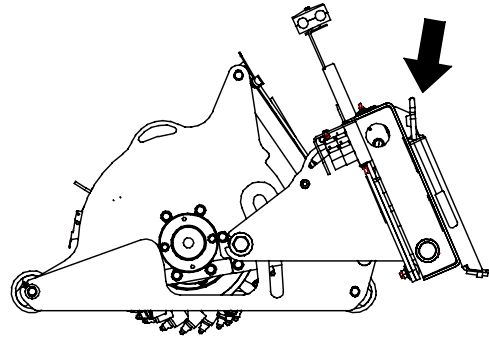
SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER OPERATION

Starting a Cut:

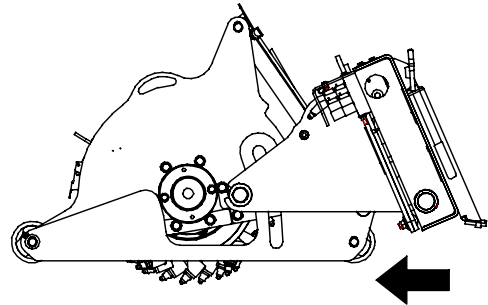
1. To begin a cut, adjust the depth cylinders to the desired depth with the planer slightly above the ground. Engage the hydraulic system to start the drum. Lower the planer bringing the front wheels onto the ground.



2. Continue lowering the planer until the rear wheels are on the ground and the drum is milling the material.



3. Slightly lift the front loader wheels to create a downward force on the planer. Slowly move forward, planing in a straight line.



NOTE: Materials can vary greatly: it is recommended that cutting depth be limited to 1 inch when roughing concrete. Deeper cuts in concrete should be made in multiple passes.



WARNING

- Failure to obey the following procedures could result in death or serious injury:**
- Never lift this product above (a.) the operator's eye level or (b.) to a height where visibility is obstructed, whichever is lower.
 - Never operate your Planer with the Cover open.

PLANER MAINTENANCE



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER MAINTENANCE

WARNING

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

- Never walk under or climb on raised liftarms or a raised attachment.
- 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.
- If the attachment must be raised, block the machine with blocks or jackstands, **NOT** lift jacks or hoists. Always block the rear wheels of the Planer in a manner that stabilizes the chassis.
- Always wear protective equipment including a **HARD HAT** and **EYE PROTECTION** when operating, performing maintenance, or working near this product.
- The Attachment Part group and the Chassis Part group pivot freely. Do not place any part of your body between these areas or under this product without stabilizing this pivot point.



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 8.)
- Make sure that all safety signs are in place, are clean, and are legible (see the safety sign section on pages 5-6).
- Replace any damaged parts and excessively worn parts.

DAILY

- Grease (13) fittings: (1) on the drum bearing / (4) on the wheels / (4) on the slider frame bosses / (2) on the depth skids / and (2) on the pivot bosses (see illustrations on page 13).

NOTE: Lubricate all grease fittings with a NLGI #1 or 2 multipurpose grease.

WEEKLY

IMPORTANT Prior to performing the following operation, make sure the cylinders are positioned as follows:
Tilt cylinder must be centered (head level).
Sideshift cylinder must be fully retracted (left side maximum).
Depth cylinder must be fully extended (shallowest cut position).
Failure to do so **CAN** result in damage to this product and WILL void all FFC Attachments warranties.

PLANER MAINTENANCE (continued)



SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER MAINTENANCE

WARNING

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

- **Never walk under or climb on raised liftarms or a raised attachment.**
- **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.**
- **If the attachment must be raised, block the machine with blocks or jackstands, NOT lift jacks or hoists. Always block the rear wheels of the Planer in a manner that stabilizes the chassis.**
- **Always wear protective equipment including a HARD HAT and EYE PROTECTION when operating, performing maintenance, or working near this product.**
- **The Attachment Part group and the Chassis Part group pivot freely. Do not place any part of your body between these areas or under this product without stabilizing this pivot point.**



ANNUALLY

NOTE: initial oil change should be after 50 hours of operation. Subsequent oil change should be every 1000 hours of operation or annually, whichever comes first.

Planetary gearbox is to be half full of oil when the unit is mounted level and horizontal. Use mild extreme pressure lubricant API-GL-5, No. 80 or 90. The capacity of the gearbox is 30 oz.

Refer to Parts Illustrations to disassemble and reassemble your Planer.

To change the oil in the Planetary Gearbox:

1. Remove motor. NOTE: motor shaft adapter is loose and can fall from planetary.
2. Remove pivot weldment with attach weldment. Keep attach weldment close and do not stretch hoses.
3. Remove depth cylinders. Hydraulic lines can be left attached.
4. Remove two depth skids.
5. Remove the right and left support plates from the chassis.
6. Using the lift point on the chassis, raise the chassis off of the drum.
7. Remove the planetary.
8. Remove drain plug from the planetary.
9. Drain oil from planetary.
10. Fill planetary with oil. The oil level must be at the bottom of the threads with the hole level. Do not tip the planetary, as the oil can run out of the planetary before the motor is installed.
11. Clean any debris from the drain plug and apply pipe thread sealant to the threads.
12. Install the planetary in the drum.
13. Install the drum in the chassis. Install the depth skids, pivot weldment, and depth cylinders.
14. Complete the reassembly of your Planer. (See Parts Illustrations & Parts Lists and Torque Specifications for reference during reassembly.)

PLANER SERVICE



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

WARNING

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



- Never walk under or climb on raised liftarms or a raised attachment.
- 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.
- If the attachment must be raised, block the machine with blocks or jackstands, NOT lift jacks or hoists. Always block the rear wheels of the Planer in a manner that stabilizes the chassis.
- Always wear protective equipment including a HARD HAT and EYE PROTECTION when operating, performing maintenance, or working near this product.
- The Attachment Part group and the Chassis Part group pivot freely. Do not place any part of your body between these areas or under this product without stabilizing this pivot point.

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.
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.

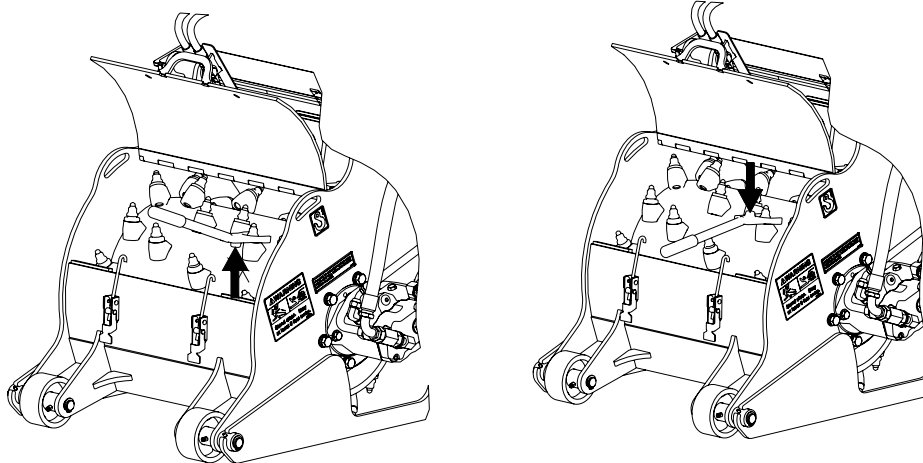
CAUTION



Picks become hot during operation: Wait for picks to cool before replacing. Do not hammer on carbide point when replacing picks. The carbide can break and cause injury.

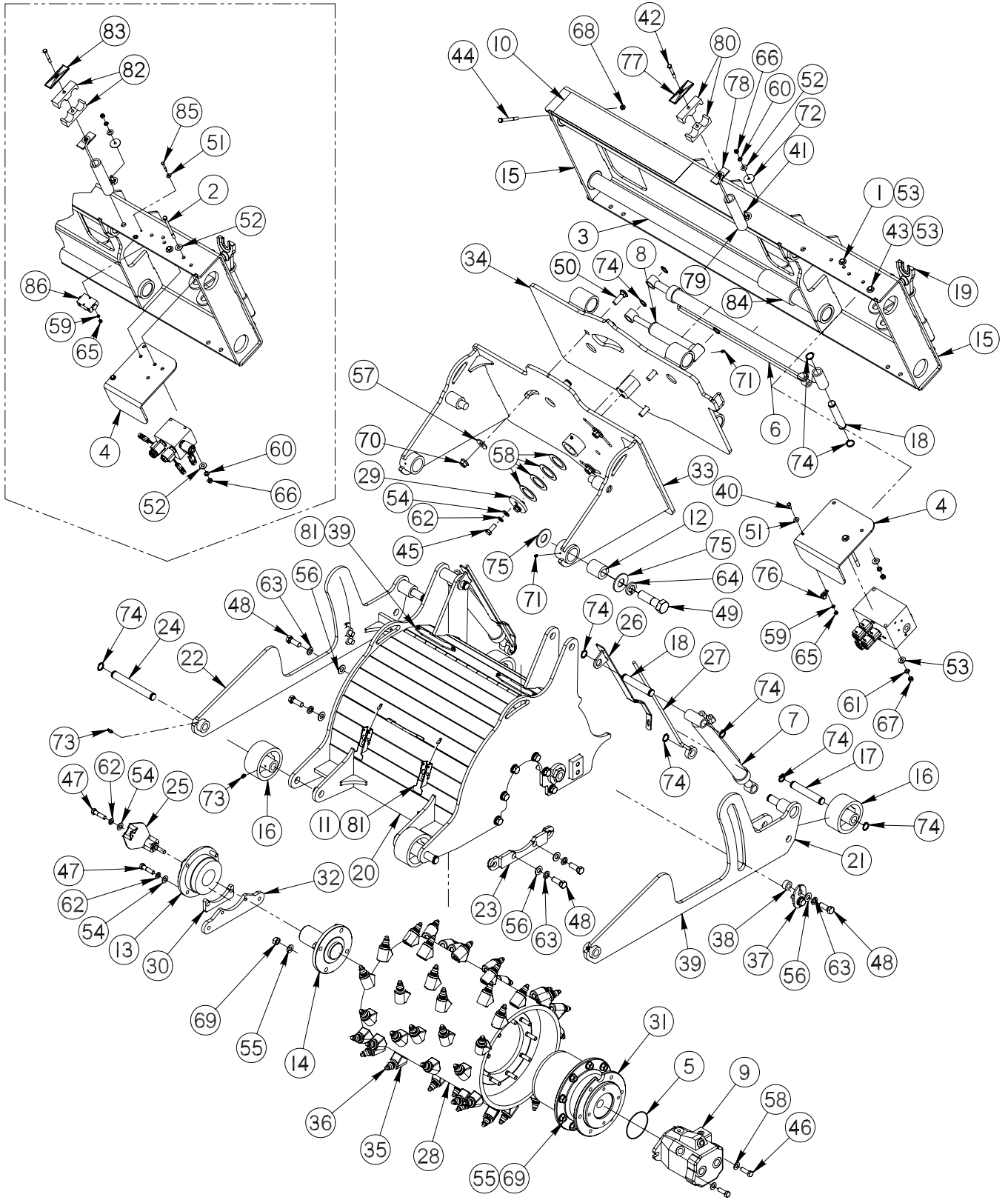
Pick Removal/Replacement:

- Proper pick maintenance is essential to the productive use of your Planer. Failure to perform regular pick maintenance can result in severely decreased performance and expensive repairs to your Planer drum.
- A missing pick must be replaced immediately, as a missing pick will cause the surrounding picks to wear faster.
- Picks must be replaced when their carbide tips become excessively blunt. NOTE: the edge picks wear faster and require more frequent replacement.
- Picks must rotate freely in their holders. If picks do not rotate freely, they will develop flat spots. Picks should be removed and retaining rings cleaned as necessary.
- Remove and replace picks using the pick removal tool (LAF9326) and a hammer as shown below.



PARTS ILLUSTRATION

5-LINE MANIFOLD



PLANER: PARTS LIST

ITEM No.	QTY.	LAF5416 16"	LAF5418 18"	LAF5420 20"	LAF5424 24"	LAF5430 30"	LAF5436 36"	Description
1	2						07-10017	Grade 5 Hex Head Cap Screw 3/8"-16tpi x 6-1/2" f/ 3-Line
2	2						07-10050	Grade 5 Hex Head Cap Screw 5/16"-18tpi x 4-1/2" f/ 5-Line
3	2						13-50392	Rod 2" x 47-1/4" w/ 13/32" Cross Hole
4	1						13-50811	Manifold Guard Plate
5	1						LAF4537	O-Ring, #155 3/32" x 4" ID x 4-3/16" OD
6	1						LAF4698	Sideshift Cylinder
7	2						LAF4704	Depth Cylinder
8	1						LAF4705	Tilt Cylinder
9	1						LAF4706	Motor
10	1						LAF8231	Non-Skid Tape 4" x 24"
11	2						LAF9307	Latch Lid
12	2						LAF9308	Pivot Bushing
13	1						LAF9310	Deadshaft Bearing
14	1						LAF9316	Deadshaft
15	1	LAF9319	LAF9319	LAF9319	LAF9319	13-50434	13-50434	Mainframe Weldment
16	4						LAF9322	Planer Wheel Weldment
17	2						LAF9324	Dual Snap Ring Pin, 1" x 5-29/32"
18	3						LAF9325	Dual Snap Ring Pin, 1" x 5-17/32"
19	1						LAF9326	Pick Removal Tool
20	1	LAF9336	LAF9337	LAF9338	LAF9339	LAF9340	LAF9341	Chassis Weldment
21	1						LAF9342	Planetary Side Depth Skid
22	1						LAF9343	Deadshaft Side Depth Skid
23	1						LAF9344	Planetary Support
24	2						LAF9347	Dual Snap Ring Pin, 1" x 7-3/8"
25	1						LAF9348	Bearing Guard
26	2						LAF9350	Depth Indicator Receiver
27	2						LAF9351	Depth Indicator Weldment
28	1	LAF9352	LAF9353	LAF9354	LAF9355	LAF9356	LAF9357	Drum Assembly
29	1						LAF9358	Tilt Retainer
30	1						LAF9362	Bearing Mount Spacer
31	1						LAF9364	Planetary Gearbox
32	1						LAF9365	Deadshaft Support
33	1	LAF9366	LAF9367	LAF9368	LAF9369	LAF9370	LAF9371	Pivot Weldment
34	1	LAF9377	LAF9378	LAF9379	LAF9380	LAF9381	LAF9382	Sideshift Weldment
35	varies	(48)	(52)	(56)	(64)	(76)	LAF9389 (88)	Pick Holder (quantity noted)
36	varies	(48)	(52)	(56)	(64)	(76)	LAF9390 (88)	Asphalt Pick (quantity noted)
37	2						LAF9396	Depth Skid Retainer Plate
38	4						LAF9397	Depth Skid Retainer Boss
39	2						LAF9399	Water Nozzle Hole Cover

NOTE 1: All parts are the same as LAF5436 unless otherwise noted.

PLANER: PARTS LIST (Continued)

ITEM No.	QTY.	LAF5416 16"	LAF5418 18"	LAF5420 20"	LAF5424 24"	LAF5430 30"	LAF5436 36"	Description
40	1						RHW1004	Grade 5 Hex Head Cap Screw 1/4"-20tpi x 3/4"
41	1 2	f/ 3-Line f/ 5-Line					RHW1108	Grade 5 Hex Head Cap Screw 5/16"-18tpi x 1-1/2"
42	1 2	f/ 3-Line f/ 5-Line					RHW1112	Grade 5 Hex Head Cap Screw 5/16"-18tpi x 2-1/2"
43	1 0	f/ 3-Line f/ 5-Line					RHW1207	Grade 5 Hex Head Cap Screw 3/8"-16tpi x 1-1/4"
44	2						RHW1217	Grade 5 Hex Head Cap Screw 3/8" -16tpi x 3-1/2"
45	2						RHW1404	Grade 5 Hex Head Cap Screw 1/2" -13tpi x 1-1/4"
46	2						RHW1405	Grade 5 Hex Head Cap Screw 1/2" -13tpi x 1-1/2"
47	4						RHW1407	Grade 5 Hex Head Cap Screw 1/2" -13tpi x 2"
48	14						RHW1603	Grade 5 Hex Head Cap Screw 5/8"-11tpi x 1-3/4"
49	2						RHW1971	Grade 5 Hex Head Cap Screw 1-1/8" -7tpi x 4"
50	3						RHW2601	Grade 8 Carriage Bolt 5/8"-11tpi x 2"
51	1 5	f/ 3-Line f/ 5-Line					RHW5062	Grade 5 Flat Washer USS 1/4"
52	1 6	f/ 3-Line f/ 5-Line					RHW5162	Grade 5 Flat Washer USS 5/16"
53	6 4	f/ 3-Line f/ 5-Line					RHW5262	Grade 5 Flat Washer USS 3/8"
54	8						RHW5432	Grade 5 Flat Washer SAE 1/2"
55	13						RHW5532	Grade 5 Flat Washer SAE 9/16"
56	14						RHW5632	Grade 5 Flat Washer SAE 5/8"
57	3						RHW5662	Grade 5 Flat Washer USS 5/8"
58	4						RHW5971	Machine Bushing 2" ID x 3" OD
59	1 3	f/ 3-Line f/ 5-Line					RHW6002	Grade 5 Split Lock Washer 1/4"
60	1 4	f/ 3-Line f/ 5-Line					RHW6102	Grade 5 Lock Washer 5/16"
61	3 0	f/ 3-Line f/ 5-Line					RHW6202	Grade 5 Lock Washer 3/8"
62	6						RHW6402	Grade 5 Lock Washer 1/2"
63	14						RHW6602	Grade 5 Lock Washer 5/8"
64	2						RHW6903	Grade 5 Lock Washer 1-1/8"

NOTE 1: All parts are the same as LAF5436 unless otherwise noted.

NOTE 2: Quantity of item 58 may vary. Use as required to minimize gap.

PLANER: PARTS LIST (Continued)

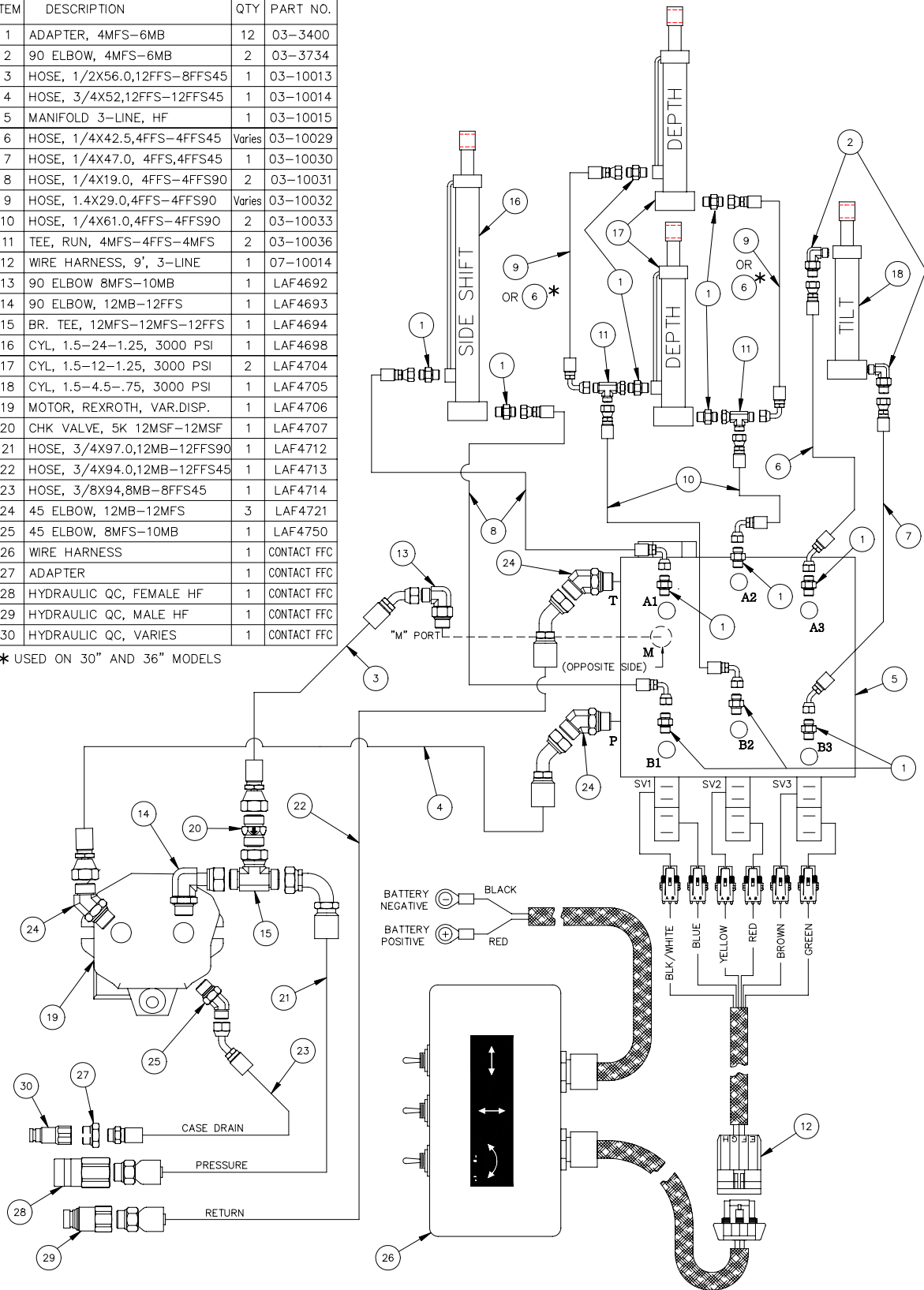
ITEM No.	QTY.	LAF5416 16"	LAF5418 18"	LAF5420 20"	LAF5424 24"	LAF5430 30"	LAF5436 36"	Description
65	1 3	f/ 3-Line f/ 5-Line					RHW7001	Grade 5 Hex Nut 1/4"
66	1 4	f/ 3-Line f/ 5-Line					RHW7101	Grade 5 Hex Nut 5/16"
67	3 0	f/ 3-Line f/ 5-Line					RHW7201	Grade 5 Hex Nut 3/8"
68	2						RHW7203	Grade 5 Lock Nut 3/8"
69	13						RHW7502	Grade 8 Hex Nut 9/16"
70	3						RHW7607	Grade 8 Top Lock Flange Nut 5/8"
71	7						RHW8090	Grease Zerk, 1/4"-28tpi, Straight
72	1 2	f/ 3-Line f/ 5-Line					RHW8098	Grade 2 Fender Washer 5/64" x 5/16" x 1-1/2"
73	6						RHW8107	Grease Zerk, 1/4"-28tpi, 45°
74	19						RHW8146	Retaining Ring, 1", Heavy Duty
75	4						RHW8181	Grade 5 USS Flat Washer 1-1/8" YDC
76	1						RHW8314	Loop Clamp 1/2" Rubber/Steel Combo
77	1						RHW8610	Cover Plate f/ 1-21/64" Cradle
78	1 2	f/ 3-Line f/ 5-Line					RHW8613	Weld Plate f/ 7/8" OD
79	1 2	f/ 3-Line f/ 5-Line					RHW8618	Hose Spring
80	1						RHW8619	Hose Cradle f/ 1-21/64" Pipe
81	8						RHW9004	Self Tapping Screw, 1/4" x 3/4"
82	1	f/ 5-Line only					RHW8616	Hose Cradle f/ 7/8" Clamp
83	1	f/ 5-Line only					RHW8614	Cover Plate f/ 7/8" Cradle
84	2	not used	not used	not used	not used	not used	13-50445	Spacer Tube
85	2	f/ 5-Line only					RHW1011	Grade 5 Hex Head Cap Screw 1/4"-20tpi x 2"
86	1	f/ 5-Line only					LAF4700	Cylinder Lock Valve

NOTE 1: All parts are the same as LAF5436 unless otherwise noted.

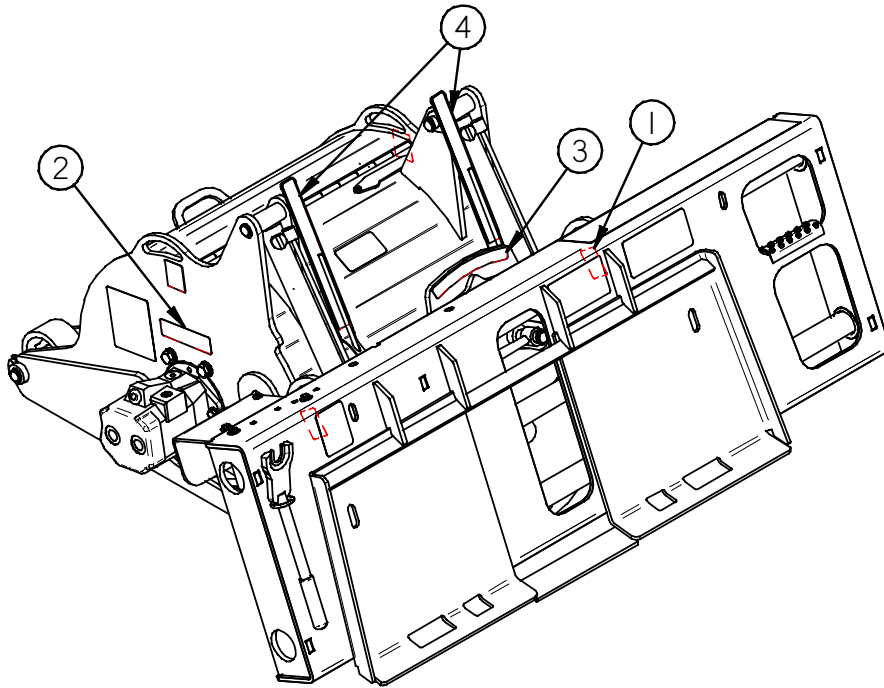
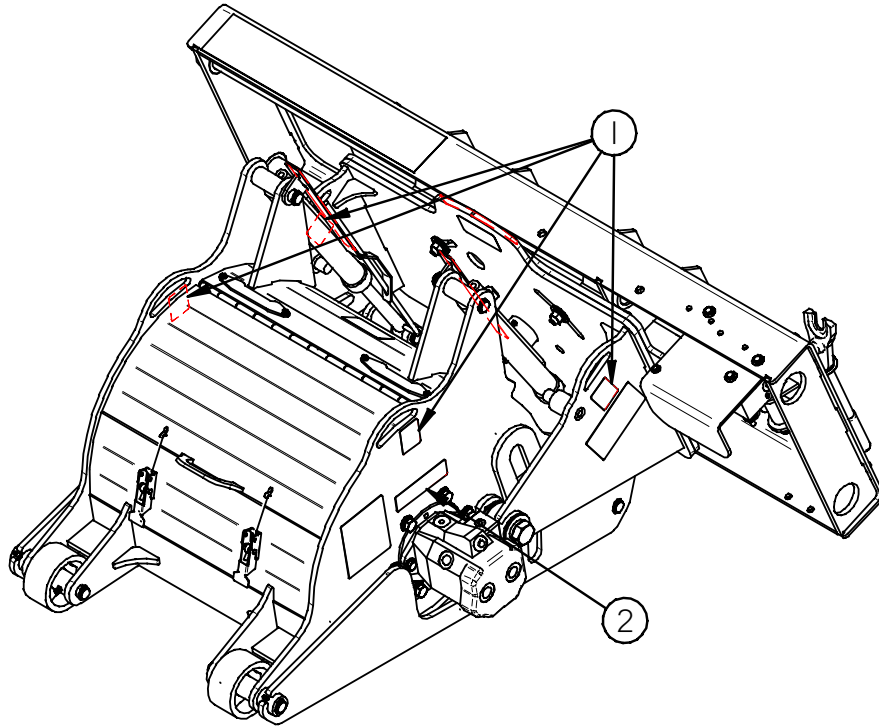
HYDRAULIC & ELECTRICAL GROUP ILLUSTRATION 3-LINE

ITEM	DESCRIPTION	QTY	PART NO.
1	ADAPTER, 4MFS-6MB	12	03-3400
2	90 ELBOW, 4MFS-6MB	2	03-3734
3	HOSE, 1/2X56.0,12FFS-8FFS45	1	03-10013
4	HOSE, 3/4X52,12FFS-12FFS45	1	03-10014
5	MANIFOLD 3-LINE, HF	1	03-10015
6	HOSE, 1/4X42.5,4FFS-4FFS45	Varies	03-10029
7	HOSE, 1/4X47.0, 4FFS,4FFS45	1	03-10030
8	HOSE, 1/4X19.0, 4FFS-4FFS90	2	03-10031
9	HOSE, 1.4X29.0,4FFS-4FFS90	Varies	03-10032
10	HOSE, 1/4X61.0,4FFS-4FFS90	2	03-10033
11	TEE, RUN, 4MFS-4FFS-4MFS	2	03-10036
12	WIRE HARNESS, 9', 3-LINE	1	07-10014
13	90 ELBOW 8MFS-10MB	1	LAF4692
14	90 ELBOW, 12MB-12FFS	1	LAF4693
15	BR. TEE, 12MFS-12MFS-12FFS	1	LAF4694
16	CYL, 1.5-24-1.25, 3000 PSI	1	LAF4698
17	CYL, 1.5-12-1.25, 3000 PSI	2	LAF4704
18	CYL, 1.5-4.5-.75, 3000 PSI	1	LAF4705
19	MOTOR, REXROTH, VAR.DISP.	1	LAF4706
20	CHK VALVE, 5K 12MSF-12MSF	1	LAF4707
21	HOSE, 3/4X97.0,12MB-12FFS90	1	LAF4712
22	HOSE, 3/4X94.0,12MB-12FFS45	1	LAF4713
23	HOSE, 3/8X94,8MB-8FFS45	1	LAF4714
24	45 ELBOW, 12MB-12MFS	3	LAF4721
25	45 ELBOW, 8MFS-10MB	1	LAF4750
26	WIRE HARNESS	1	CONTACT FFC
27	ADAPTER	1	CONTACT FFC
28	HYDRAULIC QC, FEMALE HF	1	CONTACT FFC
29	HYDRAULIC QC, MALE HF	1	CONTACT FFC
30	HYDRAULIC QC, VARIES	1	CONTACT FFC

* USED ON 30" AND 36" MODELS



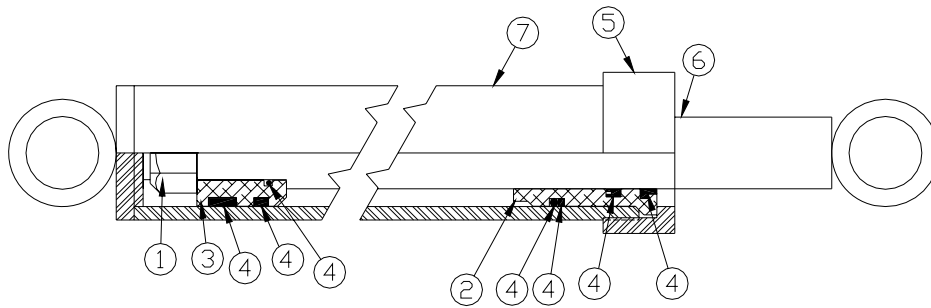
DECAL GROUP ILLUSTRATION



Item	Part No.	Qty	Title
1	RDL3179	4	LABEL, DECAL, LIFT POINT
2	RDL3300	1	LABEL, DECAL, CASE DRAIN
3	RDL3302	1	LABEL, DECAL, TILT INDICATOR
4	RDL3303	2	LABEL, DECAL, DEPTH INDICATOR

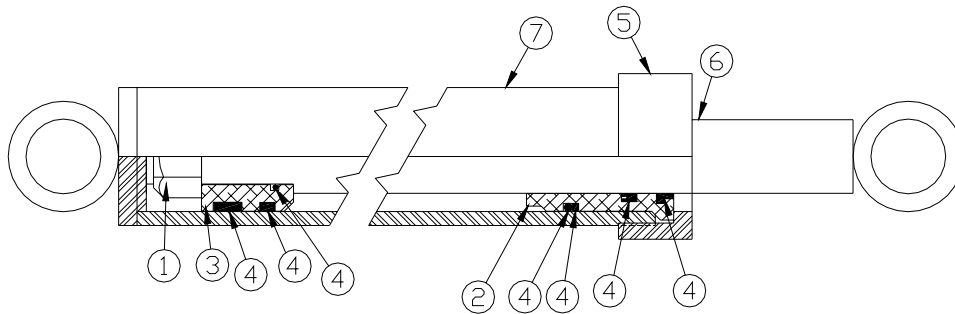
NOTE: items with a quantity of (2) or (4) are located directly opposite the item shown.

CYLINDER ILLUSTRATION(S) & PARTS LIST



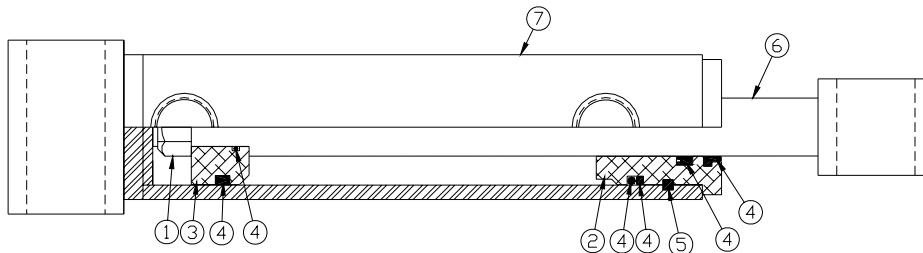
Sideshift Cylinder (LAF4698)

Item #	Qty	Part #	Description
1	1	LAF4723	NUT, 3/4-16 GRADE C ANTIVIBRATION
2	1	LAF4724	HEAD, 1.0" I.D. NOMINAL
3	1	LAF4725	PISTON 1.5" O.D. X 1" I.D. NOMINAL
4	1	LAF4726	SEAL KIT 1.5" BORE 1.0" ROD
5	1	LAF4727	COLLAR, 1.0 I.D. NOMINAL
6	1	LAF4728	SHAFT, 1" DIAMETER 24" STROKE
7	1	LAF4729	BARREL, 1.5" I.D. 24" STROKE



Depth Cylinder (LAF4704)

Item #	Qty	Part #	Description
1	1	LAF4723	NUT, 3/4-16 GRADE C ANTIVIBRATION
2	1	LAF4724	HEAD, 1.0" I.D. NOMINAL
3	1	LAF4725	PISTON 1.5" O.D. X 1" I.D. NOMINAL
4	1	LAF4726	SEAL KIT 1.5" BORE 1.0" ROD
5	1	LAF4727	COLLAR, 1.0 I.D. NOMINAL
6	1	LAF4730	SHAFT, 1" DIAMETER 12" STROKE
7	1	LAF4731	BARREL, 1.5" I.D. 12" STROKE



Tilt Cylinder (LAF4705)

Item #	Qty	Part #	Description
1	1	LAF4732	NUT, 1/2-20 GRADE C ANTIVIBRATION
2	1	LAF4733	HEAD, 3/4" I.D. NOMINAL
3	1	LAF4734	PISTON 1.5" O.D. X 3/4" I.D. NOMINAL
4	1	LAF4735	SEAL KIT 1.5" BORE 3/4" ROD
5	1	LAF4736	KEY STOCK, .125" X 1.5"
6	1	LAF4737	SHAFT, 3/4" DIAMETER 4.5" STROKE
7	1	LAF4738	BARREL, 3/4" I.D. 4.5" STROKE

PLANER SPECIFICATIONS

Model Number	Cutting Width	Cutting Depth	Tilt	Sideshift	Overall Width	Overall Height	Overall Depth	Shipping Weight
LAF5416 SSP16 HF	16"	0 – 6"	± 15°	24"	66"	33"	60"	1708 lbs
LAF5418 SSP18 HF	18"	0 – 6"	± 15°	24"	66"	33"	60"	1763 lbs
LAF5420 SSP20 HF	20"	0 – 6"	± 15°	24"	66"	33"	60"	1844 lbs
LAF5424 SSP24 HF	24"	0 – 6"	± 15°	24"	66"	33"	60"	1925 lbs
LAF5430 SSP30 HF	30"	0 – 6"	± 12.5°	24"	66"	33"	60"	2134 lbs
LAF5436 SSP36 HF	36"	0 – 6"	± 10°	24"	66"	33"	60"	2235 lbs

PLANER REQUIREMENTS

Model Number	Required Pressure	Required Flow
LAF5416 SSP16 HF	2200 psi	24 gpm
LAF5418 SSP18 HF	2200 psi	28 gpm
LAF5420 SSP20 HF	2200 psi	28 gpm
LAF5424 SSP24 HF	2200 psi	28 gpm
LAF5430 SSP30 HF	2200 psi	28 gpm
LAF5436 SSP36 HF	2200 psi	31 gpm

TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE (FOR REFERENCE ONLY)

Bolt Size	SAE Grade Bolt	Torque Ft./Lbs	Bolt Size	SAE Grade Bolt	Torque Ft./Lbs
0.31 - 18	5	17	0.63 - 11	5	150
0.38 - 16	5	30	1.00 - 8	5	580
0.50 - 13	5	75	1.12 - 7	5	794
0.56 - 11	5	120			



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.