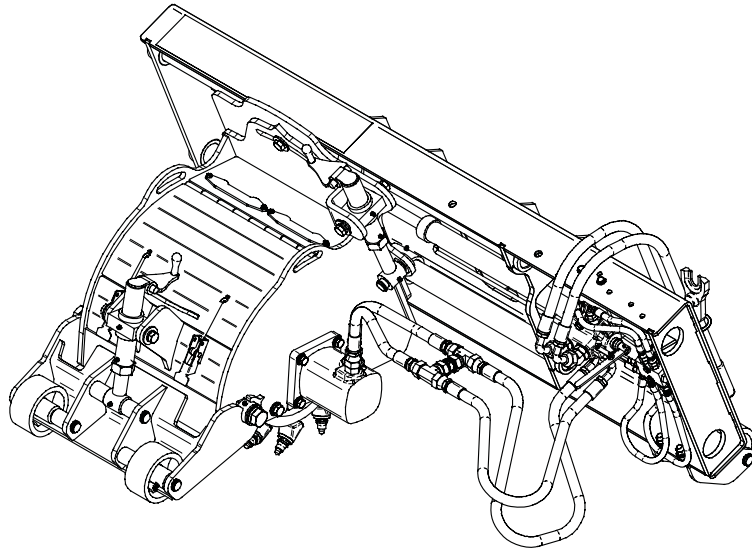




# STANDARD FLOW COLD PLANER



PALADIN LIGHT CONSTRUCTION



SERIAL NUMBER: \_\_\_\_\_

MODEL NUMBER: \_\_\_\_\_

Manual Number: MR15650  
Models: LAF5412 & LAF5413  
Release Date: January 30, 2006



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### 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): LAF5412 & LAF5413

### 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.
<b>IMPORTANT</b>	Precautions that must be followed to prevent damage to equipment.
<b>NOTICE</b>	Precautions that must be followed to prevent substandard performance.


### SERIAL NUMBER LOCATION

Always refer to the model and serial number when ordering parts or requesting information from your dealer. The serial number plate for this product is located on the upper left of your Planer.

Reference Information	
<b>Model Number</b>	Loader Make
<b>Serial Number</b>	Loader Model
<b>Date Purchased</b>	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: <b>ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!</b>
<b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, <b>WILL result in death or serious injury.</b>
<b>WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, <b>could result in death or serious injury.</b>
<b>CAUTION</b>	Indicates a potentially hazardous situation which, if not avoided, <b>may result in minor or moderate injury;</b> <b>OR</b> May also be used to alert against unsafe practices which <b>may result in personal injury.</b>

### 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.
- 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 3-point hitch 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.

## 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.

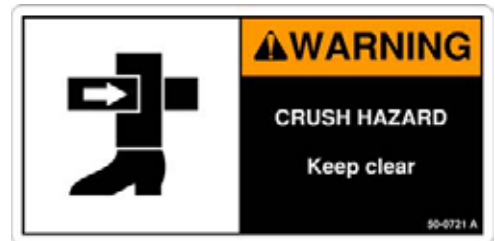
ITEM	QTY.	PART #	DESCRIPTION
1	1	50-0723	READ MANUAL
2	1	50-0724	HYDRAULIC
3	1	50-0721	CRUSH HAZARD
4	2	RDL3159	FLYING DEBRIS
5	2	RDL3100	STAND CLEAR



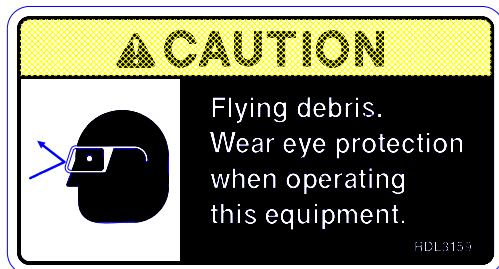
ITEM # 1



ITEM # 2



ITEM # 3

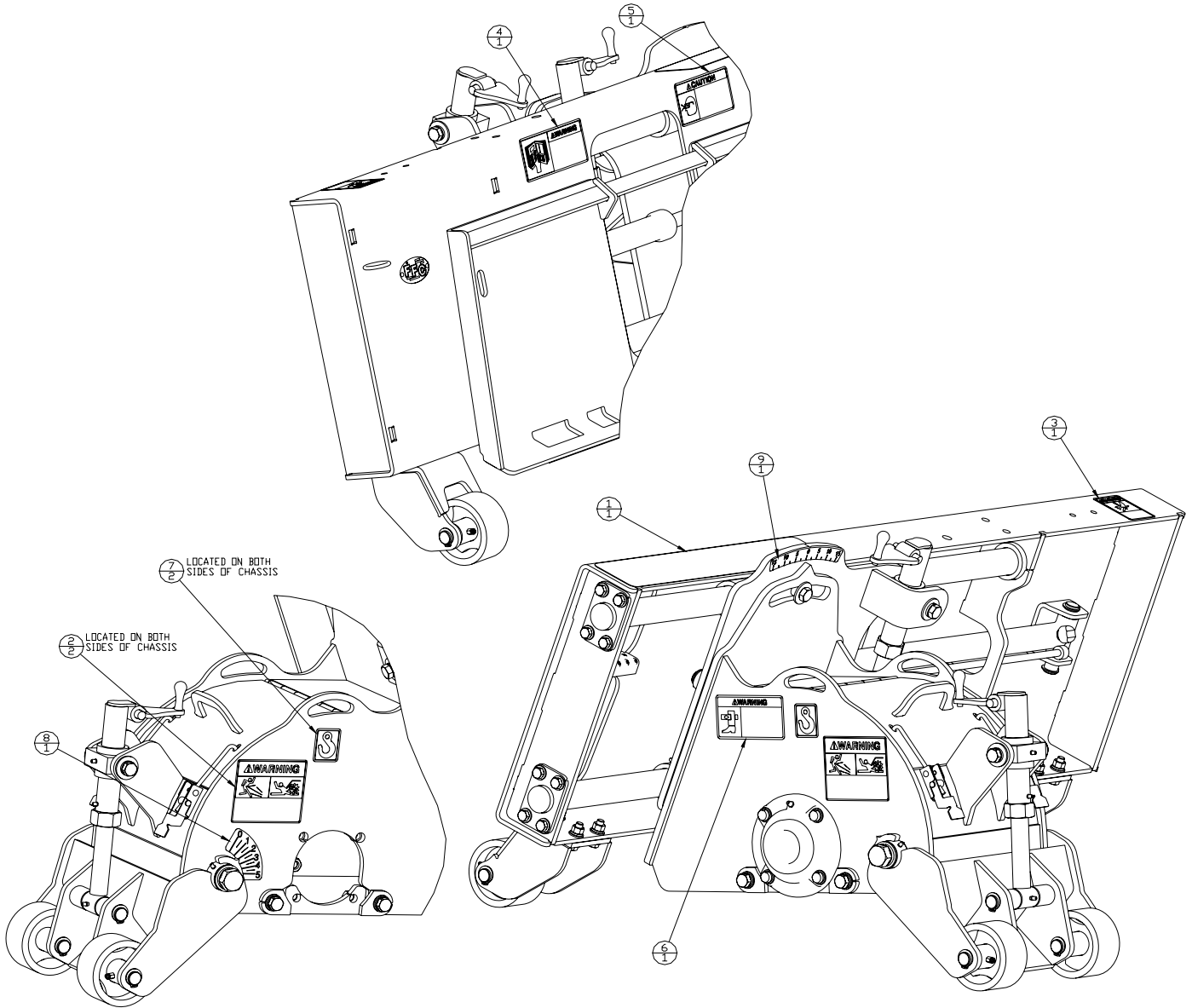


ITEM # 4



ITEM # 5

## SAFETY SIGN LOCATIONS (CONTINUED)



### DECAL PARTS LIST

ITEM	QTY.	PART #	DESCRIPTION
1	1	LAF8231	NON-SKID TAPE
2	2	RDL3100	DECAL, WARNING ROTATING CUTTER
3	1	50-0724	DECAL, WARNING OIL INJ. HAZARD
4	1	50-0723	DECAL, WARNING READ MANUAL
5	1	RDL3159	DECAL, WARNING FLYING OBJECTS
6	1	50-0721	DECAL, WARNING CRUSHING HAZARD
7	2	RDL3179	DECAL, LIFT POINT
8	1	RDL3301	DECAL, DEPTH INDICATOR
9	1	RDL3302	DECAL, TILT INDICATOR

## 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	11,000 lbs. maximum
Operating Capacity of Power Unit's loader	4,500 lbs. maximum
Lift Capacity of Power Unit's loader	9,000 lbs. maximum
Hydraulic Pressure Output	3,400 psi. maximum
Front or Rear Ballast	As required to maintain full power unit stability. (Note the shipping weight on page 15, then see the operator's manual(s) for your power unit, loader, and quick-attach for 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.

**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.

## 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.

**NOTICE:** When shipped, the hydraulic cylinder on this product contained air or an air-fluid mixture. Failure to remove all the air from the hydraulic cylinder can cause uneven, jerky cylinder movement when the hydraulic controls are being operated and unwanted cylinder movement when those controls are not being operated.



### WARNING

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

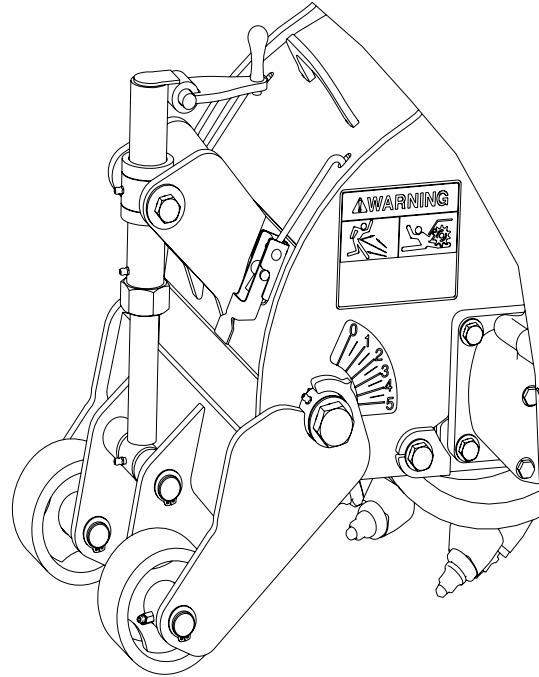
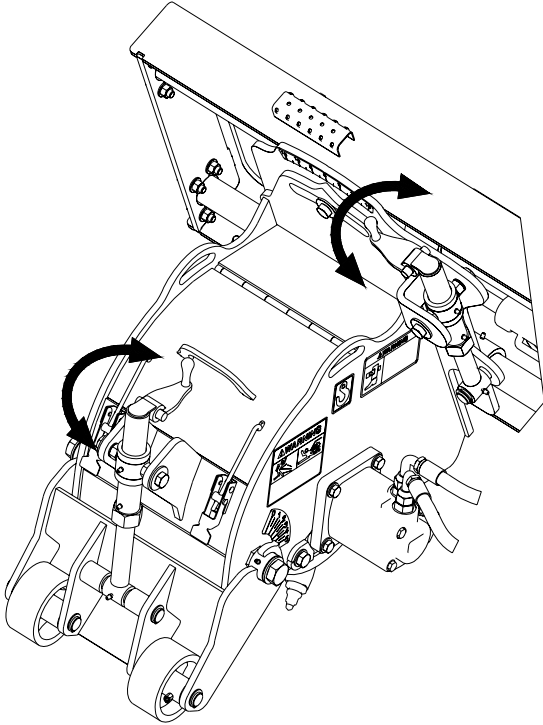
## PLANER SETUP



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

Setting planer depth:

- ◆ Turn the depth jack (located on the front of the planer) to adjust planing depth.
- ◆ A depth indicator decal is located on the left side of the chassis.



Setting planer sideshift:

- ◆ To sideshift the planer, actuate the diverter valve (LAF4699). The diverter valve is bi-directional.
- ◆ Actuate the hydraulic system of the power unit and the planer will sideshift.
- ◆ Return the diverter valve to its original position after sideshift operation is completed.

Setting planer Tilt:

- ◆ The planer tilt can be adjusted using the tilt jack located on the left side of the chassis.
- ◆ An indicator decal is provided to set the tilt at an approximate angle.

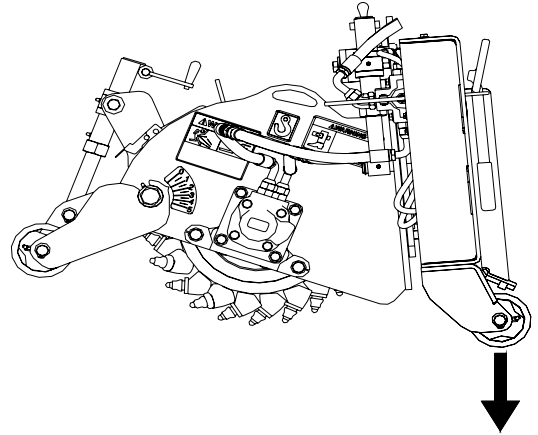
## PLANER OPERATION



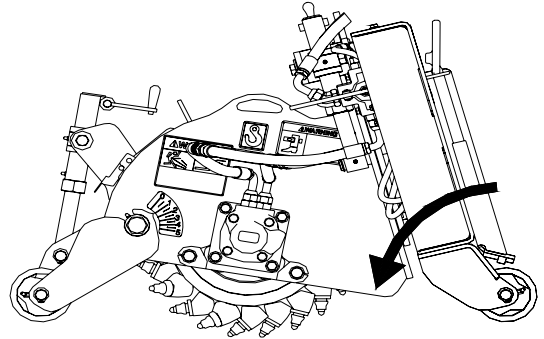
**SAFETY FIRST!! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS (pages 2-4 of this manual) BEFORE BEGINNING ANY PLANER OPERATION**

### Starting a Cut:

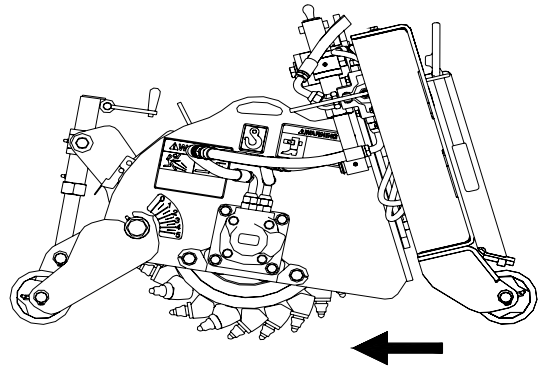
1. To begin a cut, adjust the tilt and depth jacks to the desired tilt depth with the planer slightly above the ground. Engage the hydraulic system to start the drum.
2. Lower the planer, bringing the rear planer wheels onto the ground



3. Roll the planer into the cut, until the front wheels of the planer are on the ground.



4. 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.

### 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.
- If the attachment must be raised, block the machine with blocks or jackstands, **NOT** lift jacks or hoists.



### WARNING

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

- Always wear protective equipment including a **HARD HAT** and **EYE PROTECTION** when operating, performing maintenance, or working near this product.

### BEFORE EACH USE

- Make sure that all nuts and bolts are in place and properly tightened.
- Make sure that all other fasteners are in place and are performing their specified function.
- Make sure that all hydraulic fittings are tightened to specifications and that there are no leaks in any fittings or hoses. (see the hydraulic connection section on page 7.)
- Make sure that all safety signs are in place, are clean, and are legible. (see the safety sign section on pages 5-6)
- Replace any damaged parts and excessively worn parts.

### DAILY

- Grease [9] fittings: [1] on the drum shaft bearing / [4] on the wheels / and [4] on the slider bar bosses (see parts illustration on page 12).

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

### WEEKLY

- Grease [8] fittings: [2] on the depth jack / [1] on the depth pin / [2] on the depth weldment / [2] on the tilt jack / and [1] on the tilt pin (see parts illustration on page 12).

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

## PLANER SERVICE



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

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.



### 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.**

#### 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.

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.

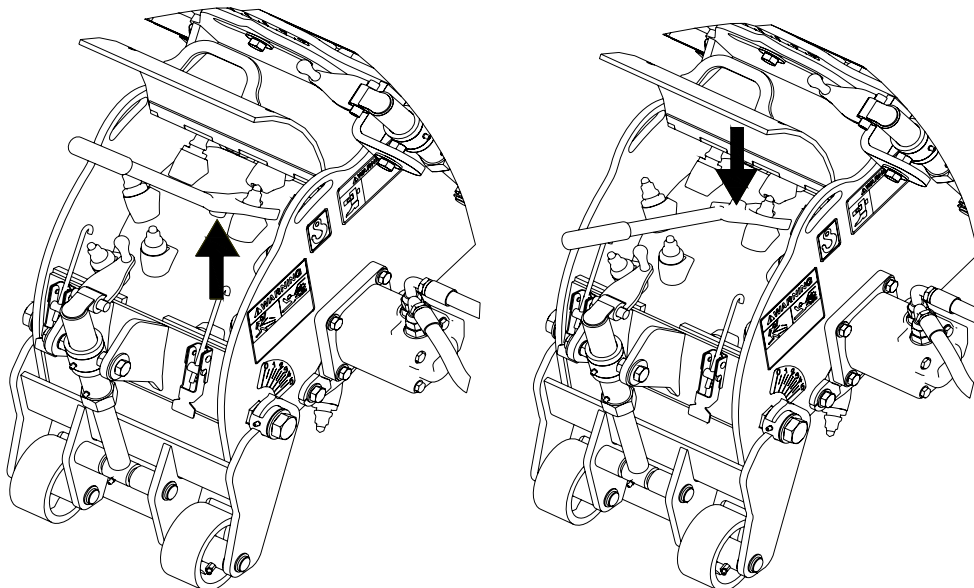
NOTE: the edge picks wear faster and require more frequent replacement.



### 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.**

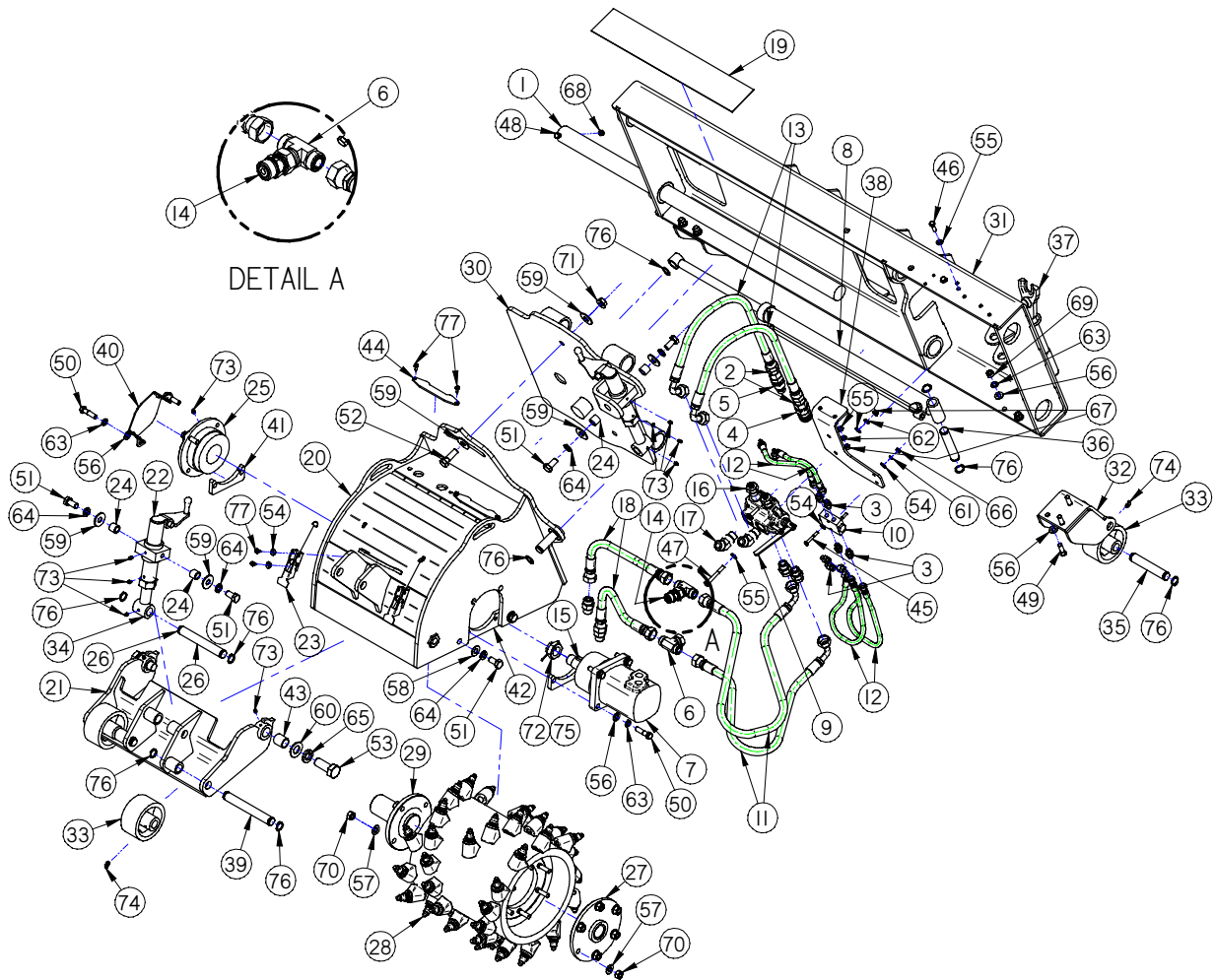
Remove and replace picks using the pick removal tool (LAF9326) and a hammer as shown below.



NOTE: the edge picks wear faster and require more frequent replacement.

NOTE: do not hammer on carbide point of the pick. The carbide can break and cause injury.

# STANDARD FLOW COLD PLANER PARTS ILLUSTRATION



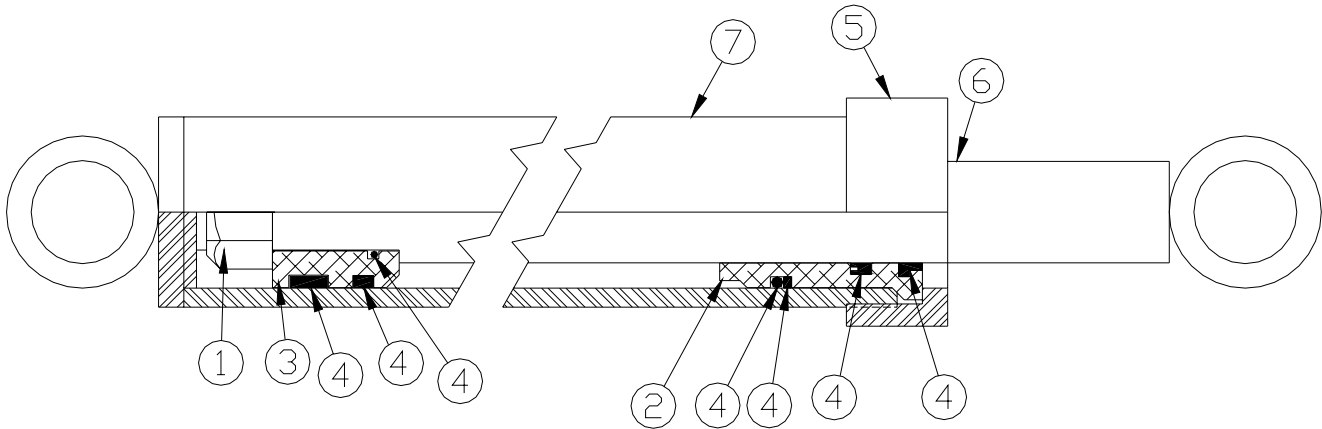
## STANDARD FLOW COLD PLANER PARTS LIST

STANDARD FLOW COLD PLANER PARTS LIST				
ITEM No.	QTY.	LAF5412 12"	LAF5413 16"	DESCRIPTION
1	2	13-50392	13-50392	Rod, 2 x 47.25" w/ 0.406 Cross Hole
2	6	LAF4076	LAF4076	Hydraulic Fitting 12MFS 12MB Straight
3	6	LAF4229	LAF4229	Hydraulic Fitting 6MFS 6MB Straight
4	1	Contact FFC to obtain the correct item		Hydraulic Quick Coupler, Female
5	1	Contact FFC to obtain the correct item		Hydraulic Quick Coupler, Male
6	2	LAF4694	LAF4694	Hydraulic Tee 12MFS 12FFS 12MFS
7	1	LAF4697	LAF4697	Motor, 24 Cu. In.
8	1	LAF4698	LAF4698	Sideshift Cylinder
9	1	LAF4699	LAF4699	Two Position Diverter Valve
10	1	LAF4700	LAF4700	Cylinder Lock Valve
11	2	LAF4701	LAF4701	Hydraulic Hose, 5/8" dia., 12FFS-12FFS90, 36" Length
12	4	LAF4702	LAF4702	Hydraulic Hose, 1/4" dia., 6FFS-6FFS90, 22" Length
13	2	LAF4703	LAF4703	Hydraulic Hose, 5/8" dia., 12FFS-12FFS90, 60" Length
14	1	LAF4707	LAF4707	Check Valve
15	1	LAF4717	LAF4717	Key, Char Lynn 4K Motor
16	2	LAF4720	LAF4720	Hydraulic Fitting 12MB 6MFS Straight
17	2	LAF4721	LAF4721	Hydraulic Fitting 12MB 12MFS 45°
18	2	LAF4722	LAF4722	Hydraulic Hose, 5/8" dia., 12FFS-12FFS, 12" Length
19	1	LAF8231	LAF8231	Non-Skid Tape 4" x 24"
20	1	LAF9300	LAF9301	Chassis Weldment
21	1	LAF9302	LAF9303	Depth Arm Weldment
22	2	LAF9304	LAF9304	Jack Body Weldment
23	2	LAF9307	LAF9307	Lid Latch
24	4	LAF9309	LAF9309	Boss Pivot Bolt Spacer
25	1	LAF9310	LAF9310	Deadshaft Bearing
26	1	LAF9311	LAF9311	1" x 7.4" Dual Snap Ring Pin
27	1	LAF9313	LAF9313	Hub Weldment
28	1	LAF9314	LAF9315	Drum Assembly
29	1	LAF9316	LAF9316	Deadshaft Weldment
30	1	LAF9317	LAF9318	Sideshift Weldment
31	1	LAF9319	LAF9319	Mainframe Weldment
32	2	LAF9321	LAF9321	Wheel Bracket Weldment
33	4	LAF9322	LAF9322	Planer Wheel Weldment
34	2	LAF9323	LAF9323	Jack Screw Weldment
35	2	LAF9324	LAF9324	Dual Snap Ring Pin 1" x 5-29/32"
36	1	LAF9325	LAF9325	Dual Snap Ring Pin 1" x 5-17/32"
37	1	LAF9326	LAF9326	Pick Removal Tool
38	1	LAF9335	LAF9335	Valve Mounting Bracket
39	2	LAF9324 (5-29/32")	LAF9347 (7-29/32")	Dual Snap Ring Pin 1" x Length Noted
40	1	LAF9348	LAF9348	Bearing Guard
41	2	LAF9362	LAF9362	Bearing Mount Spacer
42	2	LAF9363	LAF9363	Bearing Mount Plate
43	2	LAF9386	LAF9386	Pivot Bushing
44	2	LAF9399	LAF9399	Water Kit Hole Cover
45	2	RHW1011	RHW1011	Grade 5 Hex Head Cap Screw, 1/4" x 2"
46	2	RHW1207	RHW1207	Grade 5 Hex Head Cap Screw, 3/8" x 1-1/4"
47	2	RHW1215	RHW1215	Grade 5 Hex Head Cap Screw, 3/8" x 3"
48	2	RHW1217	RHW1217	Grade 5 Hex Head Cap Screw, 3/8" x 3-1/2"
49	6	RHW1406	RHW1406	Grade 5 Hex Head Cap Screw, 1/2" x 1-3/4"
50	8	RHW1407	RHW1407	Grade 5 Hex Head Cap Screw, 1/2" x 2"
51	8	RHW1601	RHW1601	Grade 5 Hex Head Cap Screw, 5/8" x 1-1/4"

**STANDARD FLOW COLD PLANER PARTS LIST (cont.)**

ITEM No.	QTY.	LAF5412 12"	LAF5413 16"	DESCRIPTION
52	3	RHW1604	RHW1604	Grade 5 Hex Head Cap Screw, 5/8" x 2"
53	2	RHW1908	RHW1908	Grade 5 Hex Head Cap Screw, 1" x 2-1/2"
54	8	RHW5062	RHW5062	Grade 5 Flat Washer USS, 1/4"
55	8	RHW5232	RHW5232	Grade 5 Flat Washer SAE, 3/8"
56	20	RHW5432	RHW5432	Grade 5 Flat Washer SAE, 1/2"
57	10	RHW5532	RHW5532	Grade 5 Flat Washer SAE, 9/16"
58	4	RHW5632	RHW5632	Grade 5 Flat Washer SAE, 5/8"
59	10	RHW5662	RHW5662	Grade 5 Flat Washer USS, 5/8"
60	2	RHW5932	RHW5932	Grade 5 Flat Washer SAE, 1"
61	2	RHW6002	RHW6002	Grade 5 Lockwasher, 1/4"
62	4	RHW6202	RHW6202	Grade 5 Lockwasher, 3/8"
63	14	RHW6402	RHW6402	Grade 5 Lockwasher, 1/2"
64	8	RHW6602	RHW6602	Grade 5 Lockwasher, 5/8"
65	2	RHW6902	RHW6902	Grade 5 Lockwasher, 1"
66	2	RHW7001	RHW7001	Grade 5 Hex Nut, 1/4"
67	4	RHW7201	RHW7201	Grade 5 Hex Nut, 3/8"
68	2	RHW7203	RHW7203	Grade 5 Lock Nut Center Dent, 3/8"
69	6	RHW7451	RHW7451	Grade 8 Hex Nut, 1/2"
70	10	RHW7502	RHW7502	Grade 8 Hex Nut, 9/16"
71	3	RHW7607	RHW7607	Grade 8 Top Lock Flange Nut, 5/8"
72	1	RHW7906	RHW7906	Castle Nut, 1-1/4" 18 tpi
73	13	RHW8090	RHW8090	Grease Zerk, 1/4"-28 tpi, Straight
74	4	RHW8107	RHW8107	Grease Zerk, 1/4"-28 tpi, 45 °
75	1	RHW8138	RHW8138	Cotter Pin, 5/32" x 2-3/4"
76	14	RHW8146	RHW8146	Retaining Ring, 1", Heavy Duty
77	8	RHW9004	RHW9004	Self Tapping Screw, 1/4" x 3/4"

## CYLINDER ILLUSTRATION & PARTS LIST



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

### PLANER SPECIFICATIONS

Model Number	Cutting Width	Cutting Depth	Tilt	Sideshift	Overall Width	Overall Height	Overall Depth	Shipping Weight
LAF5412 SSP12 LF	12"	0 – 5"	± 15°	24"	66"	33"	60"	1033 lbs
LAF5413 SSP16 LF	16	0 – 5"	± 15°	24"	66"	33"	60"	1116 lbs

### PLANER REQUIREMENTS

Model Number	Required Pressure	Required Flow
LAF5412 SSP12 LF	2200 psi	13 gpm
LAF5413 SSP16 LF	2200 psi	16 gpm

### TORQUE SPECIFICATIONS FOR STANDARD MACHINE HARDWARE

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



**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 _____	<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)*

- |   |   |
|---|---|
| <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
<b>QUALITY ASSURANCE RATING</b>					
<b>Question:</b>					
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.