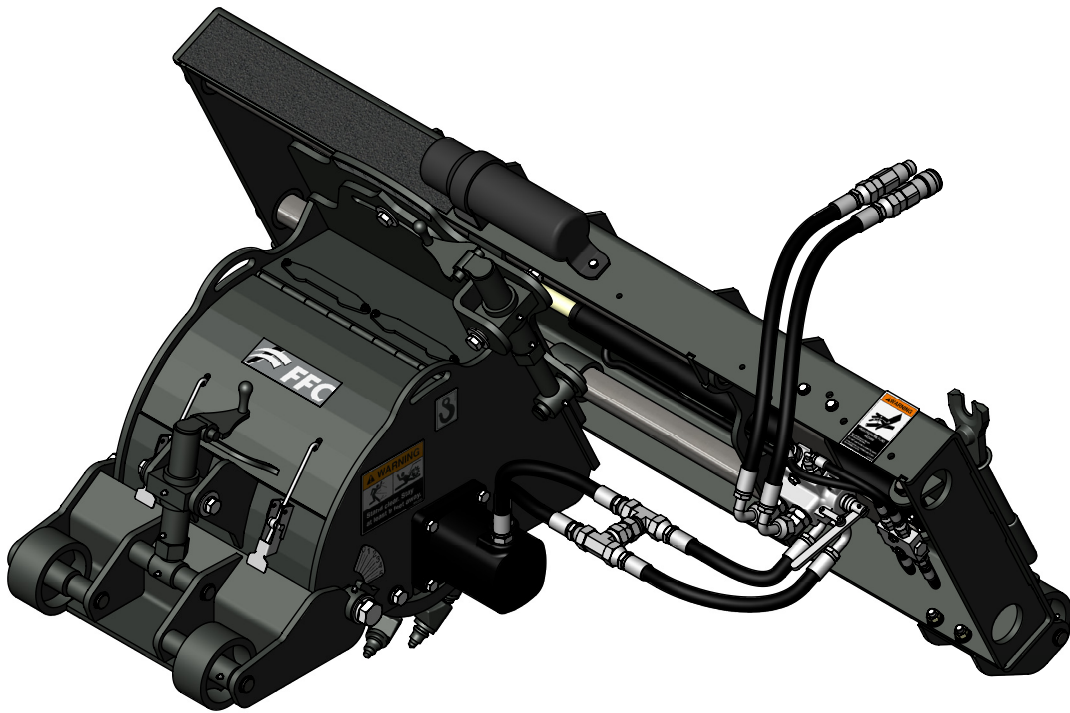




OPERATOR'S AND PARTS MANUAL

STANDARD FLOW COLD PLANER



Serial Number: _____

Model Number: _____

Manual Number: MR05660
Part Number: LAF5412 & LAF5413
Date: September 2013
Rev. 2

Notes


TABLE OF CONTENTS

PREFACE.....	2
OWNER AND OPERATOR SAFETY INFORMATION	
SAFETY STATEMENTS	3
GENERAL SAFETY PRECAUTIONS	3-6
SAFETY SIGNS & DECALS	7-8
INSTALLATION & SET-UP.....	9-11
OPERATION	12
MAINTENANCE	13-15
PARTS.....	16-24
CHASSIS ASSEMBLY.....	16-17
HYDRAULIC ASSEMBLY.....	18-19
ROLLER ASSEMBLY.....	20
SIDE SHIFT ASSEMBLY.....	21
MOUNTING ASSEMBLY.....	22
REAR CASTER ASSEMBLY.....	23
LABELS & DECALS.....	24
SPECIFICATIONS.....	25-26
PRODUCT.....	25
BOLT TORQUE.....	26
WARRANTY	27

PREFACE

GENERAL INFORMATION

This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

WARNING!  **Never let anyone operate this unit without reading the “Safety Precautions” and “Operating Instructions” sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.**

Unless noted otherwise, right and left sides are determined from the operator’s control position when facing the attachment.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer to obtain further assistance. Keep this manual available for reference. Provide this manual to any new owners and/or operator’s

SAFETY ALERT SYMBOL



This is the “Safety Alert Symbol” used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and the safety of others working with you.

SERVICE

Use only manufacturer replacement parts. Substitute parts may not meet the required standards. Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to insure that you receive the correct parts.

SOUND AND VIBRATION

“Sound pressure levels and vibration data for this attachment are influenced by many different parameters; some items are listed below (not inclusive):

- prime mover type, age, condition, with or without cab enclosure and configuration
- operator training, behavior, stress level
- job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is impossible to get precise machine and operator sound pressure levels, or vibration levels for this attachment.”

SAFETY STATEMENTS



THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



DANGER! THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



WARNING! THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.



CAUTION! THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.

NOTICE! NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.

GENERAL SAFETY PRECAUTIONS

WARNING! READ MANUAL PRIOR TO INSTALLATION



Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).**



READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.



KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn and hard to read.

GENERAL SAFETY PRECAUTIONS

WARNING! PROTECT AGAINST FLYING DEBRIS



Always wear proper safety glasses, goggles or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

WARNING! LOWER OR SUPPORT RAISED EQUIPMENT



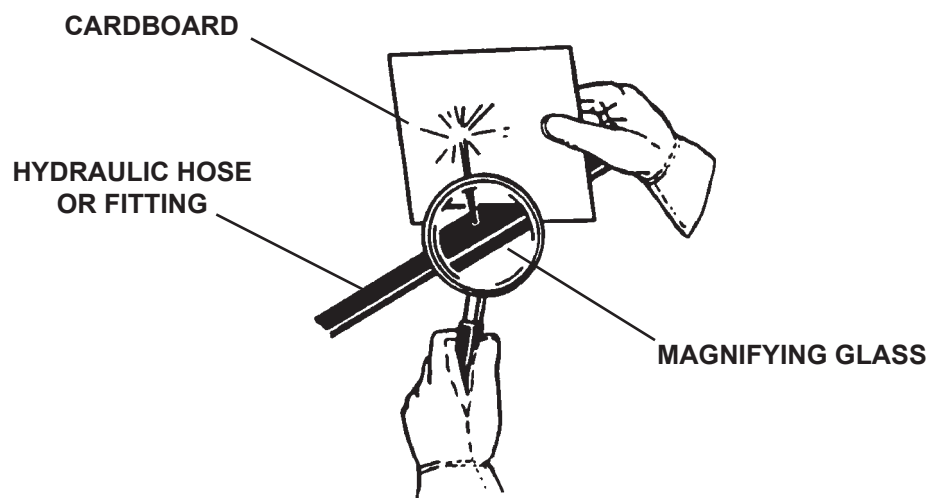
Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or onto blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

WARNING! USE CARE WITH HYDRAULIC FLUID PRESSURE



Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime movers operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research immediately to determine proper treatment.
- Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. **DO NOT USE YOUR HANDS!** **SEE ILLUSTRATION.**



GENERAL SAFETY PRECAUTIONS

WARNING! DO NOT MODIFY MACHINE OR ATTACHMENTS



Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

WARNING! SAFELY MAINTAIN AND REPAIR EQUIPMENT



- Do not wear loose clothing, or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tool for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.

WARNING! SAFELY OPERATE EQUIPMENT



Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operators position.
- Never leave equipment unattended with the engine running or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

WARNING! KNOW WHERE UTILITIES ARE



Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

GENERAL SAFETY PRECAUTIONS

WARNING!



EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.

It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

WARNING!



REMOVE PAINT BEFORE WELDING OR HEATING.

Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

WARNING!

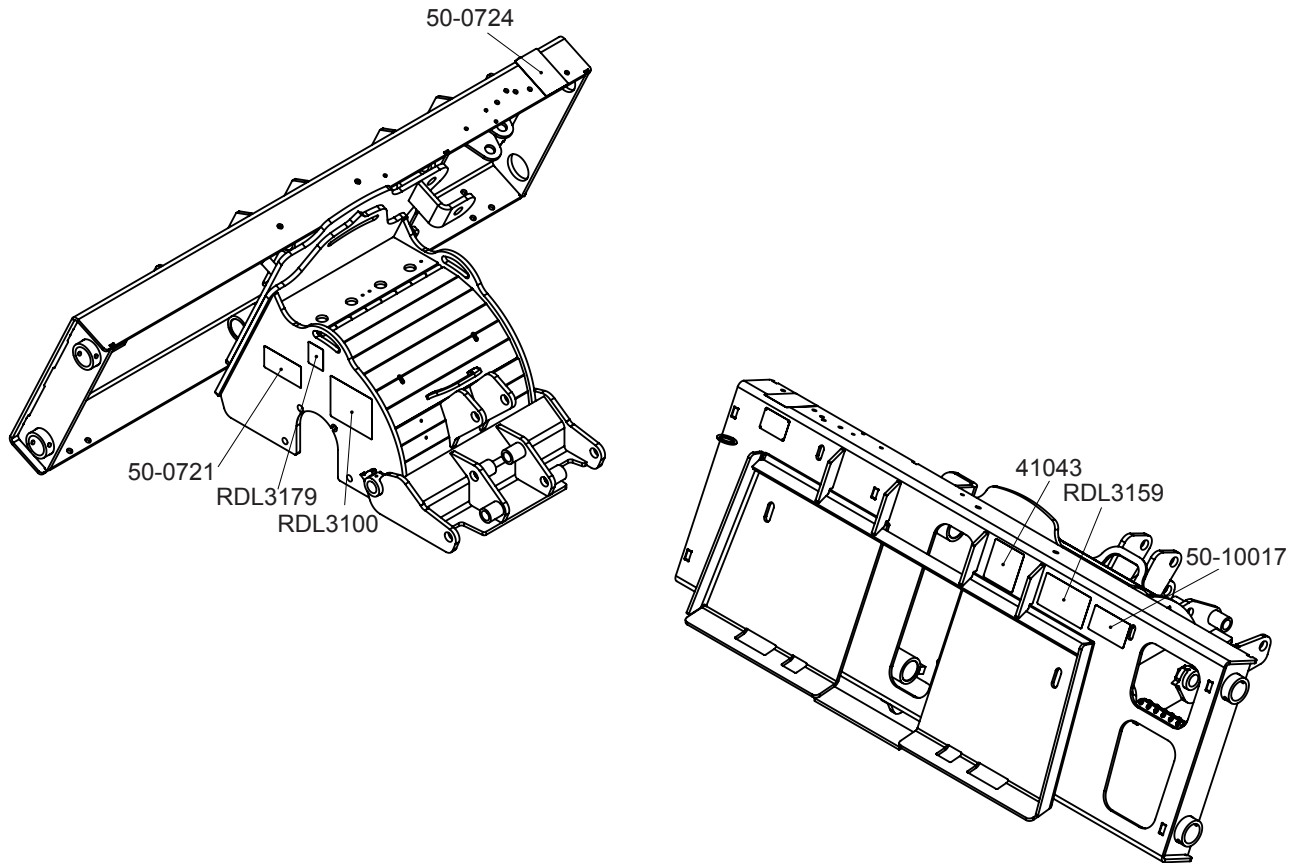


END OF LIFE DISPOSAL.

At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

SAFETY SIGN & DECAL LOCATIONS

The diagram on this page shows the location of the decals used on the FFC Cold Planer. The decals are identified by their part numbers, with reductions of the actual decals located on the following page. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the attachment. They contain information you need to know for both safety and product longevity.



INSTRUCTIONS

- Keep all safety signs clean and legible.
- Replace all missing, illegible, or damaged safety signs.
- Replacement parts for parts with safety signs attached must also have safety signs attached.
- Safety signs are available, free of charge, from your dealer or from FFC.

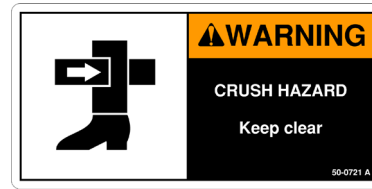
PLACEMENT OR REPLACEMENT OF SAFETY SIGNS

1. Clean the area of application with non-flammable solvent, and then wash the same area with soap and water.
2. Allow the surface to fully dry.
3. Remove the backing from the safety sign, exposing the adhesive surface.
4. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.

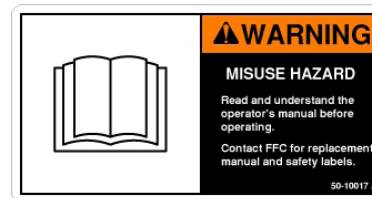
SAFETY SIGNS & DECALS



PART #41043
WARNING! HAZARDOUS DUST



PART #50-0721
WARNING! CRUSH HAZARD



PART #50-10017
WARNING! READ MANUAL



PART #RDL3100
WARNING! STAND CLEAR



PART #50-0724
WARNING! HIGH PRESSURE FLUID



PART #RDL3159
CAUTION! FLYING DEBRIS



PART #RDL3179
LIFT POINT

INSTALLATION & SET-UP

WARNING! READ MANUAL PRIOR TO INSTALLATION



Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).**

1. Place this product on a firm, level surface that is large enough to safely accommodate this product, your prime mover and all workers involved in the mounting process.
2. Refer to the operator's manual(s) for your prime mover, 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 prime mover's hydraulic system. Refer to **COLD PLANER MAINTENANCE** page and follow the instructions.

INSTALLATION & SET-UP

Hydraulic Connection



READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals before beginning any Cold Planer hydraulic connection. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

1. Disconnect the hydraulic hose quick couplers (or purchase locally, if not supplied) from one another and attach the quick couplers to your prime mover as per the instructions in your prime mover'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(s).

NOTICE: When shipped, the hydraulic cylinder on the 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 prime mover in the "ON" position. Failure to obey this warning could result in death or serious injury.



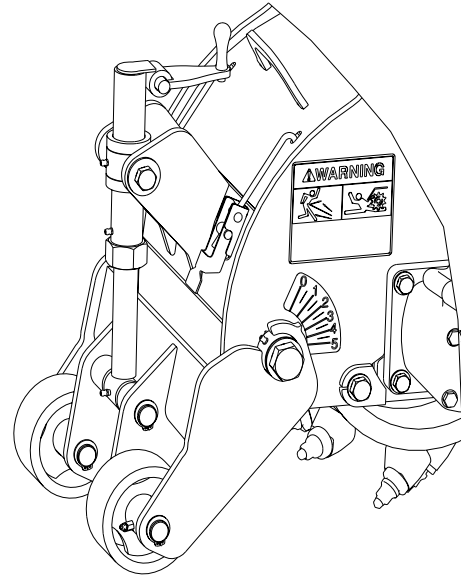
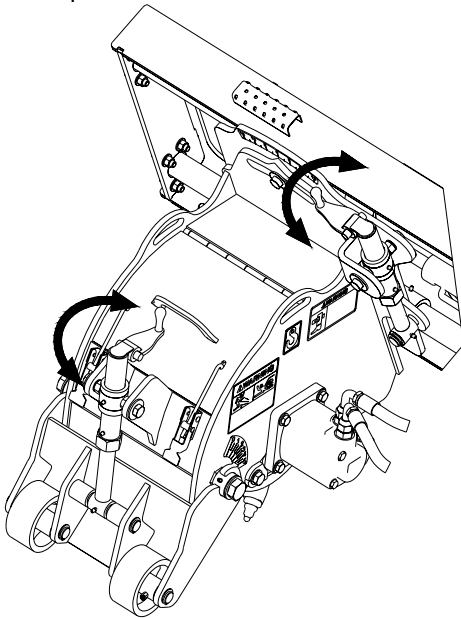
INSTALLATION & SETUP



SAFETY FIRST! READ AND UNDERSTAND THE SAFETY INSTRUCTIONS BEFORE BEGINNING ANY COLD 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 selector valve (LAF4699). The selector valve is bidirectional.
- Actuate the hydraulic system of the prime mover and the planer will sideshift.
- Return the selector valve to its original position after sideshift operation is completed.

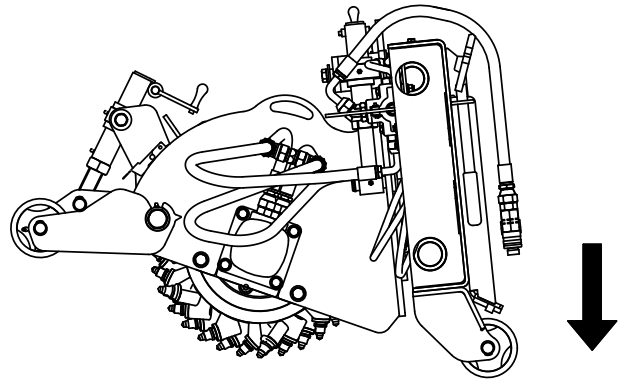
Setting the planer tilt:

- 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.

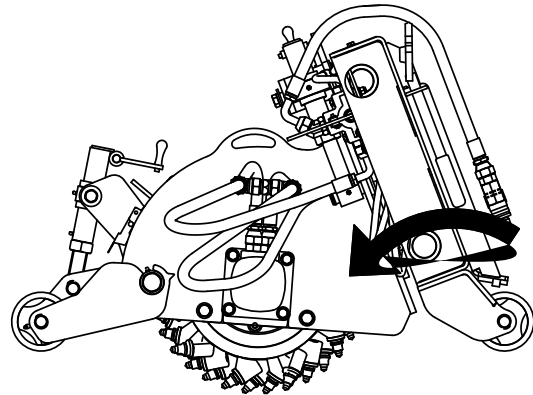
OPERATION

Starting a Cut:

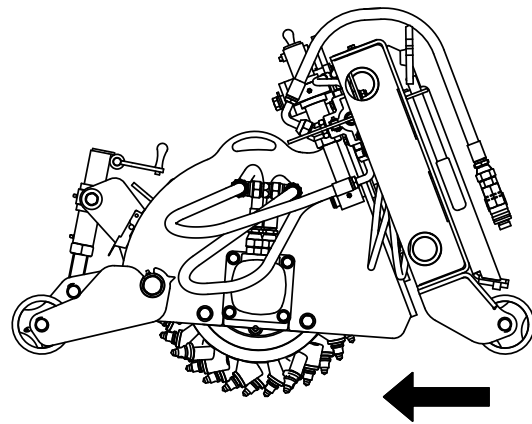
1. To begin a cut, adjust the tilt and depth jacks to the desired tilt depth with the planer slightly above the ground. Engage the hydraulic system to start the drum.
2. Lower the planer bringing the rear planer wheels onto the ground.



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.

MAINTENANCE

GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to the absolute minimum. However, it is very important that these maintenance functions be performed as described below.

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



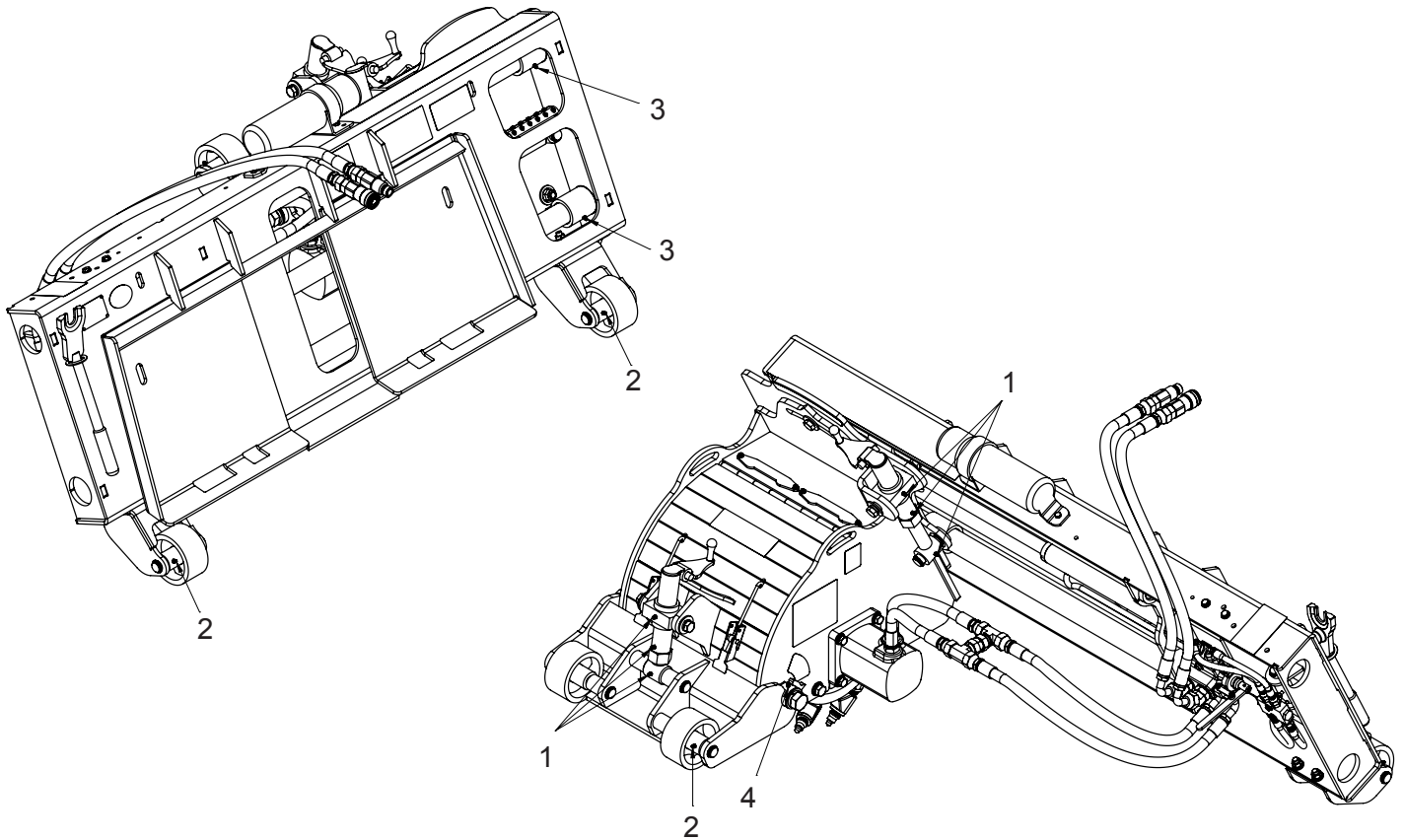
- **Never walk under or climb on raised liftarms or a raised attachment.**
- **If the attachment must be raised, block the machine with blocks or jack stands, NOT lift jacks or hoists.**
- **Always wear protective equipment including a HARD HAT and EYE PROTECTION when operating, performing maintenance, or working near this product.**

MAINTENANCE SCHEDULE

Procedure	Before Each Use	After Each Use	Prime Mover
Cylinders - Retract Rods		✓	
- Grease threaded & ball ends to prevent rust		✓	
Filter, Air, Prime Mover - Clean			✓
Fittings/Hoses, Hydraulic - Check for leaks, Damage	✓		
Fittings, Zerk - Grease (See Lubrication Points)	✓		
Oil, Hydraulic - Check Level			✓
Hardware - Check for Tightness	✓		
Picks - Check for rotation, flat spots & wear	✓		
Safety/Warning Decals - Check for missing or illegible	✓		

MAINTENANCE

Lubrication Points



Grease Fittings:

1. Cylinder, 3 each, 6 Total
2. Caster, 1 each, 4 Total
3. Mounting, 4 Total (2 hidden behind mounting plate)
4. Depth Arm, 2 Total

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

IMPORTANT! Avoid excessive greasing. Dirt collects on exposed grease and greatly increases wear. After greasing, wipe off excessive grease from fittings.

MAINTENANCE

IMPORTANT! When replacing parts use only factory approved replacement parts. Manufacturer will not claim responsibility for use of unapproved parts or accessories and/or other damages as a result of their use.

1. Park your prime mover on a level surface with this product properly attached.
2. Place your prime mover's transmission in "Park" and engage the parking brake.
3. Lower this product onto preplaced blocking.
4. Shut off your prime mover'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 is warped, twisted, or tapered. Failure to obey this warning could result in death or serious injury.



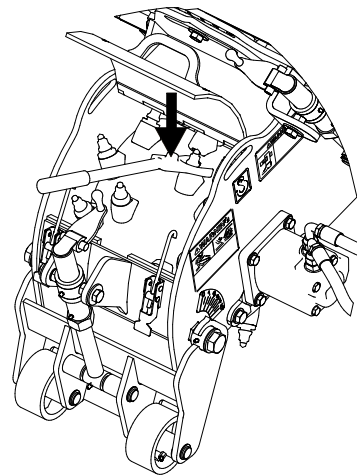
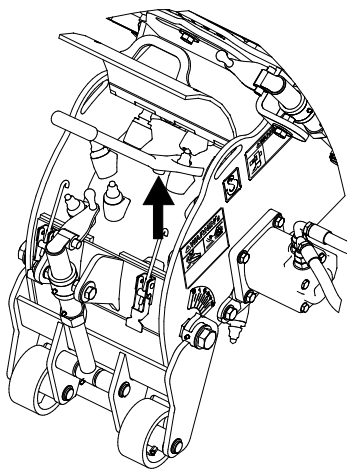
Pick Removal/Replacement:

- 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.

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.



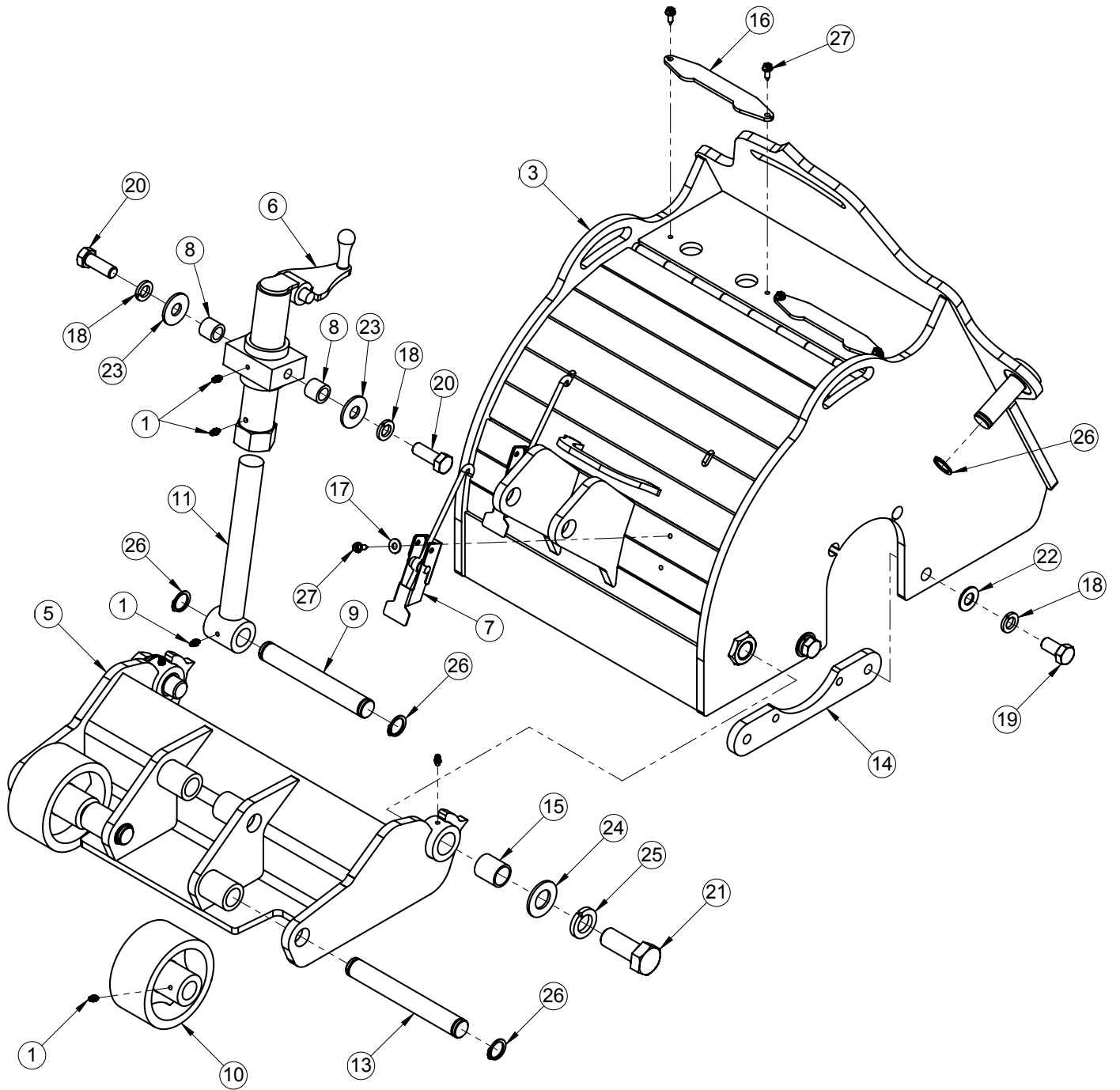
- Remove and replace picks using the pick removal tool (LAF9326) and a hammer as shown below.



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.

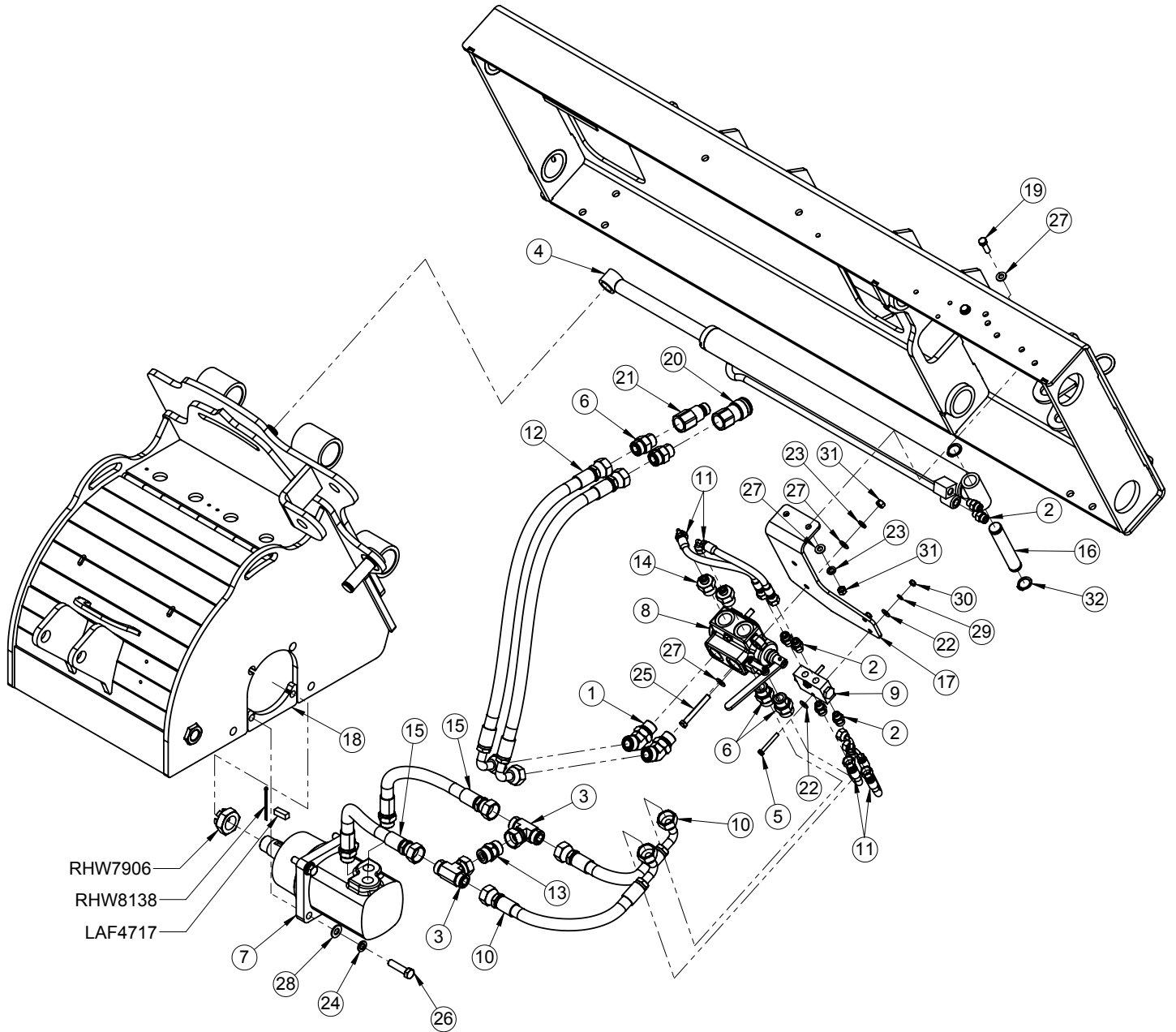
CHASSIS ASSEMBLY



CHASSIS ASSEMBLY

Item	Part	Qty	Description
1.	07-3112	7	Fitting, Zerk, 1/4-28, Self-Tap
3.	LAF9300	1	Weld, Chassis (12 inch)
	LAF9301	1	Weld, Chassis (16 inch)
5.	LAF9302	1	Weld, Depth Arm (12 inch)
	LAF9302	1	Weld, Depth Arm (16 inch)
6.	LAF9304	1	Weld, Jack Body
7.	LAF9307	2	Latch, Lid
8.	LAF9309	2	Tube, Round, 1 x .687 x .85
9.	LAF9311	1	Pin, Dual, Snap Ring, 1-7.407
10.	LAF9322	2	Weld, Wheel
11.	LAF9323	1	Weld, Jack Screw
13.	LAF9324	2	Pin, Dual, Snap Ring, 1-5.907 (12 inch)
	LAF9347	2	Pin, Dual, Snap Ring, 1-7.907 (16 inch)
14.	LAF9363	2	Bearing, Mount, Plate
15.	LAF9386	2	Tube, Round, 1.25 x 1.031 x 1.38
16.	LAF9399	1	Cover, Water Kit Hole
17.	P850104	4	Washer, Flat, Gr5, 1/4
18.	P851110	6	Washer, Lock, 5/8
19.	RHW1601	4	Screw, HHC, Gr5, 5/8-11 x 1 1/4
20.	RHW1603	2	Screw, HHC, Gr5, 5/8-11 x 1 3/4
21.	RHW1908	2	Screw, HHC, Gr5, 1-8 x 2 1/2
22.	RHW5632	4	Washer, Flat, Gr5, 5/8 SAE
23.	RHW5662	2	Washer, Flat, Gr5, 5/8
24.	RHW5932	2	Washer, Flat, Gr5, 1
25.	RHW6902	2	Washer, Lock, 1
26.	RHW8146	7	Retaining Ring, Heavy Duty
27.	RHW9004	6	Washer, .25-20 x .75

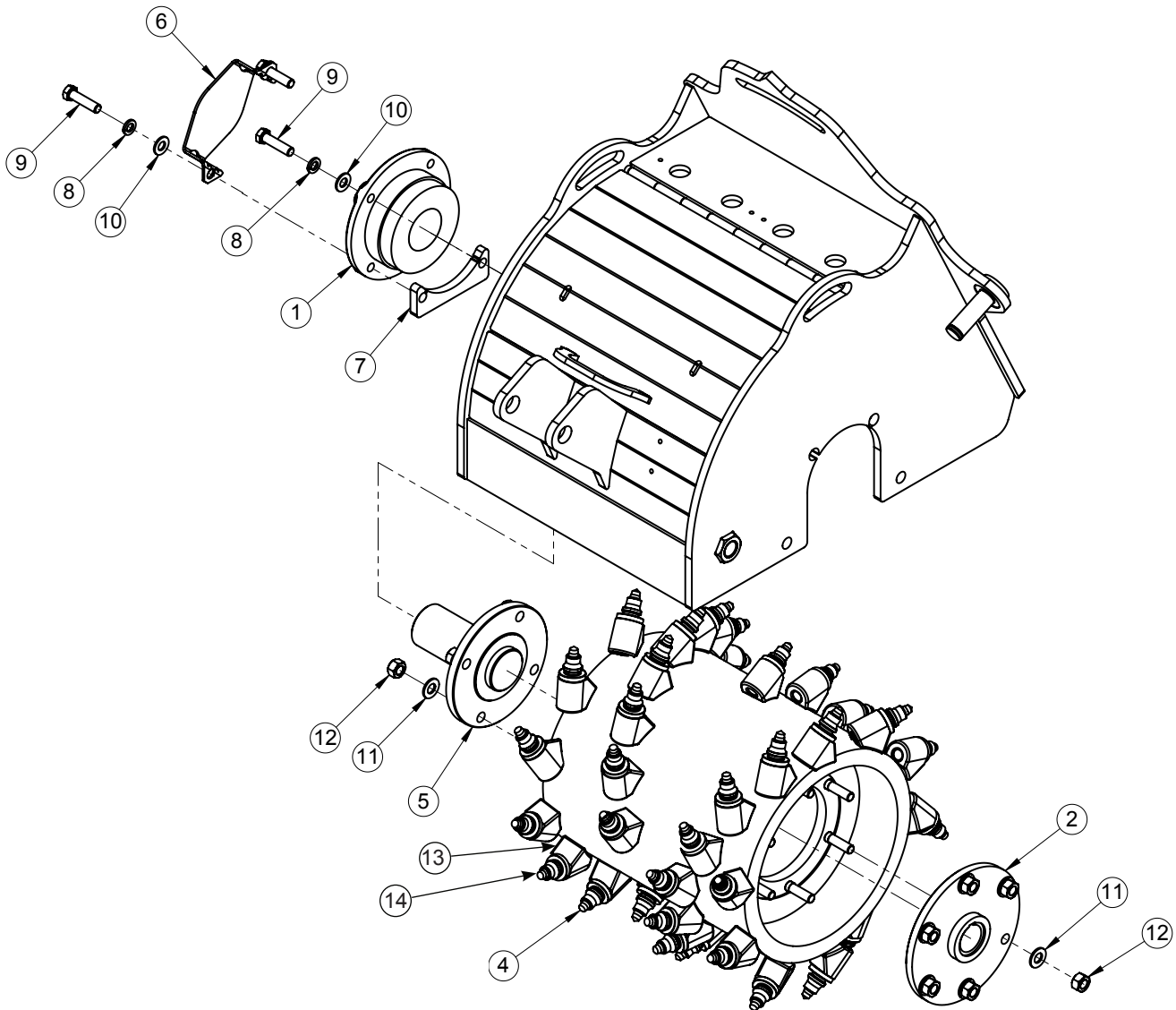
HYDRAULIC ASSEMBLY



HYDRAULIC ASSEMBLY

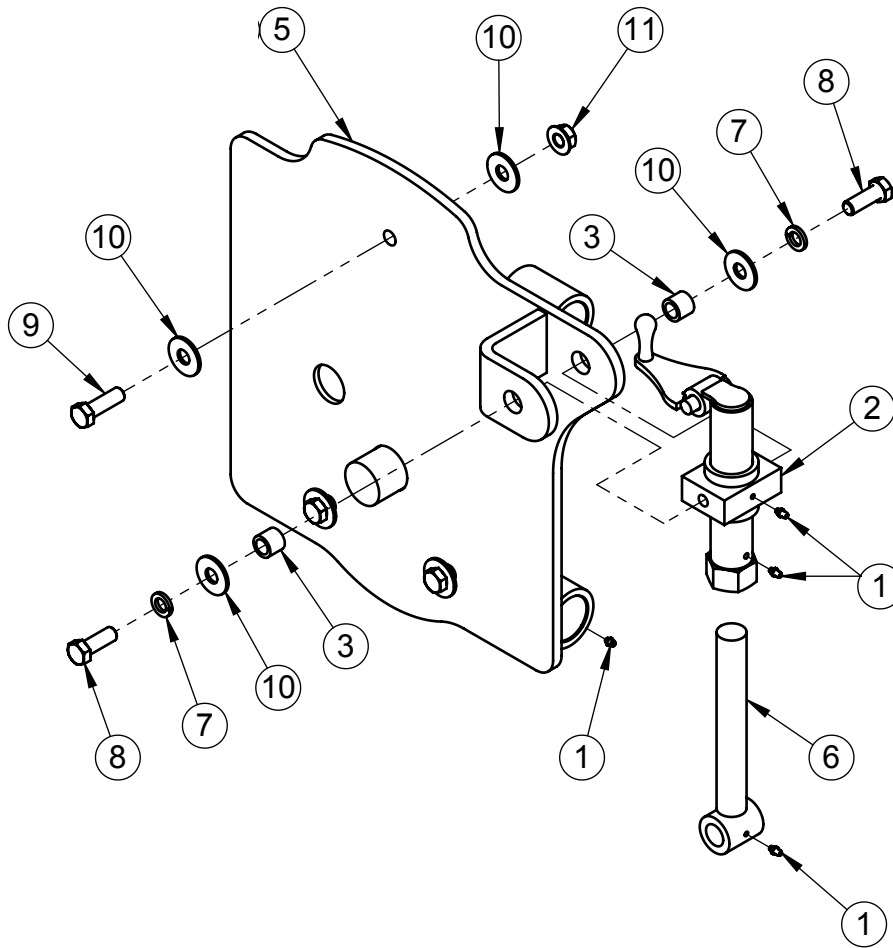
Item	Part	Qty	Description
1.	03-2182	2	Elbow, 45°, 12MB-12MF
2.	03-2291	6	Fitting, 6MB-6MF
3.	03-4368	2	Tee, 12MF-12MF-12FF
4.	03-5736	1	Cylinder, 1.5 x 1 x 24, 3.5K
5.	07-3022	2	Screw, HHC, Gr8, 1/4-20 x 2
6.	LAF4076	4	Fitting, 12MB-12MF
7.	LAF4697	1	Motor, Char-Lynn, 24 CC
8.	LAF4699	1	Valve, 2 Position Selector
9.	LAF4700	1	Valve, Cylinder, Lock
10.	LAF4701	2	Hose, .63 x 36, 12FF-12FF90
11.	LAF4702	4	Hose, .25 x 22, 6FF-6FF90
12.	LAF4703	2	Hose, .63 x 60, 12FF-12FF90
13.	LAF4707	1	Valve, Check Fitting, 5K, 12MF-12MF
14.	LAF4720	2	Fitting, 6MF-12MB
15.	LAF4722	2	Hose, .63 x 13, 12MB-12FF
16.	LAF9325	1	Pin, Dual, Snap Ring, 1-5.532
17.	LAF9335	1	Plate, Valve Mount
18.	LAF9362	1	Bearing, Mount, Spacer
19.	P100605	2	Bolt, Hex, Gr5, 3/8 x 1 1/4
20.	P272670	1	Quick Disconnect, 8FF, Female, 12FB
21.	P272671	1	Quick Disconnect, 8FF, Male, 12FB
22.	P850104	4	Washer, Flat, Gr5, 1/4
23.	P851106	4	Washer, Lock, 3/8
24.	P851108	4	Washer, Lock, 1/2
25.	RHW1215	2	Screw, Gr5, 3/8 x 3
26.	RHW1407	4	Screw, HHC, Gr5, 1/2 x 2
27.	RHW5232	8	Washer, Flat, Gr5, 3/8
28.	RHW5432	4	Washer, Flat, Gr5, 1/2 SAE
29.	RHW6002	2	Washer, Split, Lock, Gr5, 1/4
30.	RHW7001	2	Nut, Hex, Gr5, 1/4
31.	RHW7201	4	Nut, Hex, Gr5, 3/8
32.	RHW8146	2	Retaining Ring, Heavy Duty

ROLLER ASSEMBLY

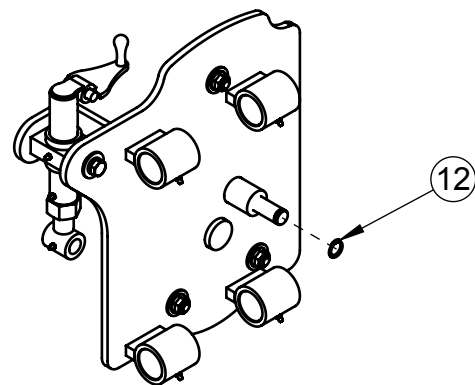


Item	Part	Qty	Description	Item	Part	Qty	Description
1.	LAF9310	1	Bearing, Deadshaft	13.	LAF9389	48	Pick Holder (16 inch)
2.	LAF9313	1	Hub, Weldment	52		52	Pick Holder (18 inch)
4.	LAF9314	1	Weld, Pick Pattern (12 inch)	56		56	Pick Holder (20 inch)
	LAF9315	1	Weld, Pick Pattern (16 inch)	64		64	Pick Holder (24 inch)
5.	LAF9316	1	Weld, Deadshaft	76		76	Pick Holder (30 inch)
6.	LAF9348	1	Bearing, Guard	88		88	Pick Holder (36 inch)
7.	LAF9362	1	Bearing, Mount, Spacer	14.	LAF9390	48	Asphalt Pick (16 inch)
8.	P851108	4	Washer, Lock, 1/2	52		52	Asphalt Pick (18 inch)
9.	RHW1407	4	Screw, HHC, Gr5, 1/2 x 2	56		56	Asphalt Pick (20 inch)
10.	RHW5432	4	Washer, Flat, Gr5, 1/2 SAE	64		64	Asphalt Pick (24 inch)
11.	RHW5532	10	Washer, Flat, Gr5, 9/16 SAE	76		76	Asphalt Pick (30 inch)
12.	RHW7502	10	Nut, Hex, Gr8, 9/16-18	88		88	Asphalt Pick (36 inch)

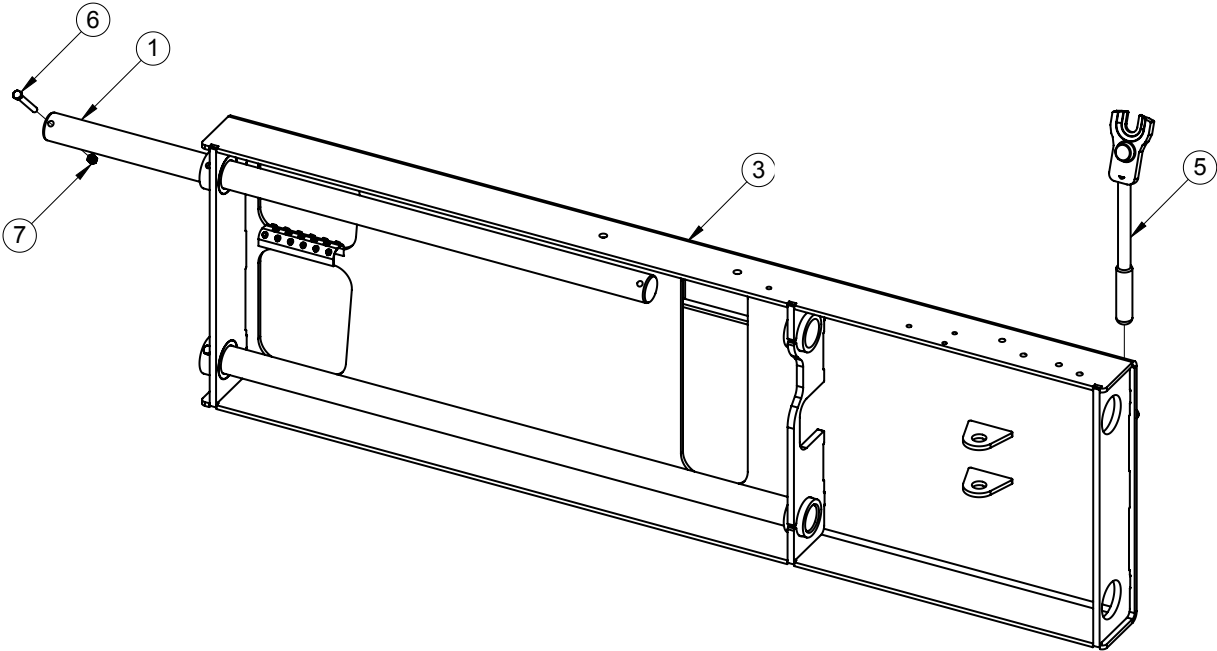
SIDE SHIFT ASSEMBLY



Item	Part	Qty	Description
1.	07-3112	7	Fitting, Zerk, 1/4-28, Self-Tap
2.	LAF9304	1	Weld, Jack Body
3.	LAF9309	2	Tube, Round, 1 x .687 x .85
5.	LAF9317	1	Weld, Side Shift (12 inch)
	LAF9318	1	Weld, Side Shift (16 inch)
6.	LAF9323	1	Weld, Jack Screw
7.	P851110	2	Washer, Lock, 5/8
8.	RHW1603	2	Screw, HHC, Gr5, 5/8-11 x 1 3/4
9.	RHW1604	3	Screw, Gr5, 5/8-11 x 2
10.	RHW5662	8	Washer, Flat, Gr5, 5/8
11.	RHW7607	3	Nut, Top Lock Flange, Gr8, .63-11
12.	RHW8146	1	Retaining Ring, Heavy Duty

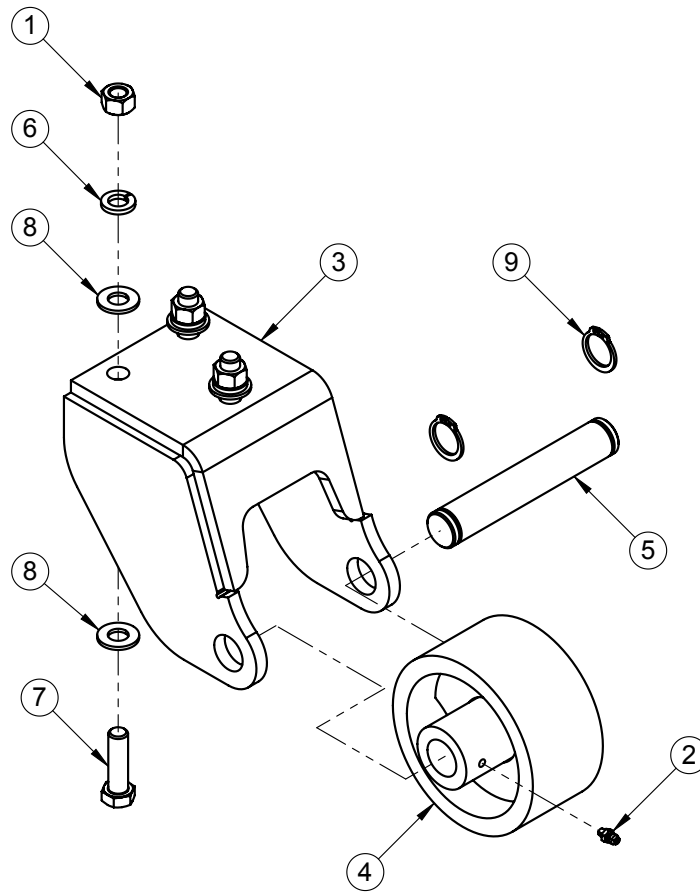


MOUNTING ASSEMBLY



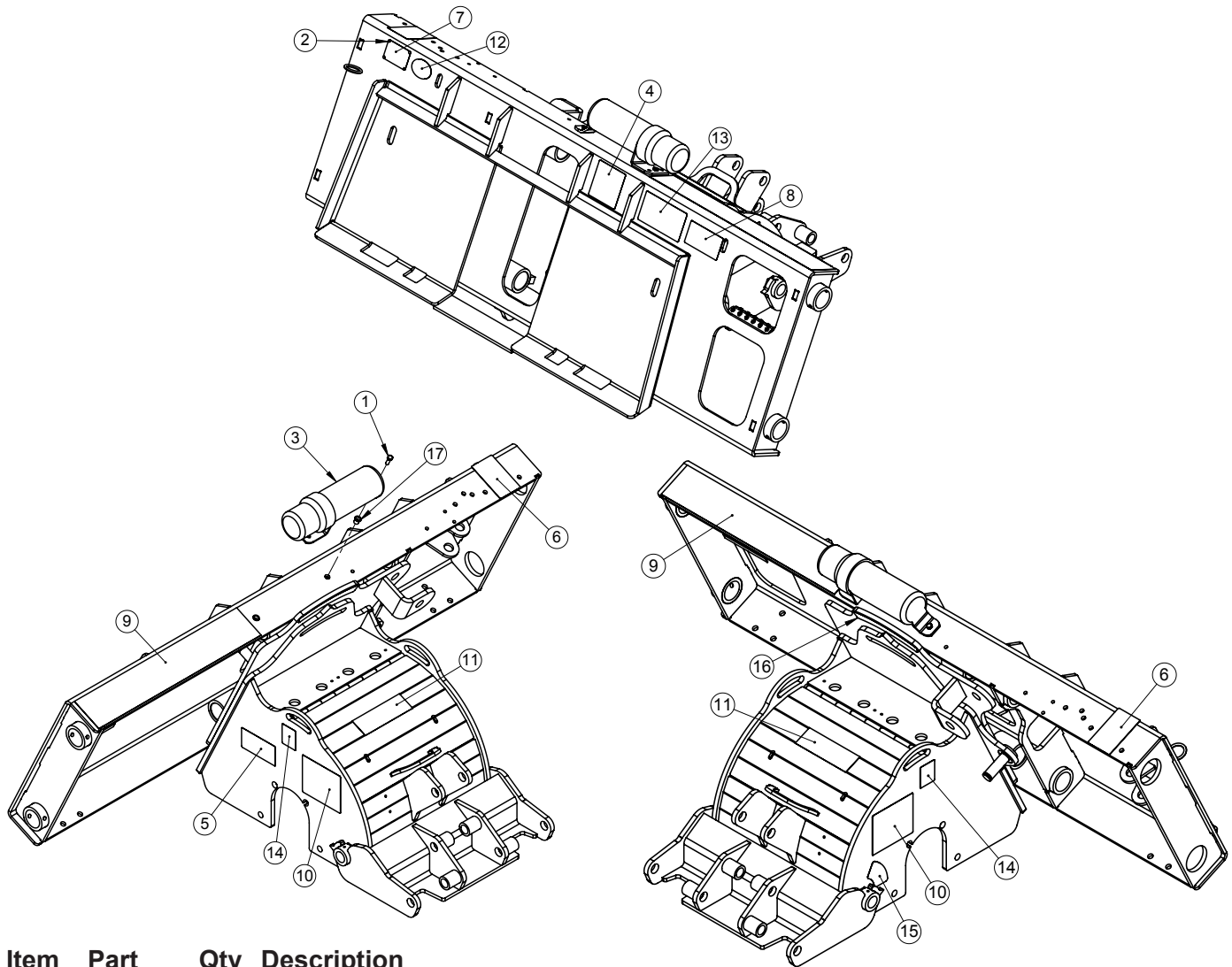
Item	Part	Qty	Description
1.	13-50392	2	Rod, 2 X 47.25
3.	LAF9319-0022	1	Weld, Plate, Universal (12 to 24 inches)
	13-50434	1	Weld, Plate, Universal (30 to 36 inches)
5.	LAF9326	1	Tool, Pick Removal
6.	P100614	2	Bolt, Hex, 3/8 x 3 1/2, Gr5
7.	RHW7203	2	Nut, Lock, Gr5, .38-16

REAR CASTER ASSEMBLY



Item	Part	Qty	Description
1.	07-1764	3	Nut, Hex, Gr8, 1/2-13
2.	07-3112	1	Fitting, Zerk, 1/4-28, Self Tap
3.	LAF9321	1	Weld, Wheel Bracket
4.	LAF9322	1	Weld, Wheel
5.	LAF9324	1	Pin, Dual, Snap Ring, 1-5.907
6.	P851108	3	Washer, Lock, 1/2
7.	RHW1406	3	Screw, HHC, 1/2-13 x 1 3/4, Gr5, Nylock
8.	RHW5432	6	Washer, Flat, 1/2 SAE, Gr5
9.	RHW8146	2	Retaining Ring, Heavy Duty

LABELS & DECALS



Item	Part	Qty	Description
1.	07-1714	2	Screw, HHC, Gr8, 5/16-18 x 1
2.	07-3624	4	Tack, Metal
3.	07-6869	1	Holder, Manual
4.	41043	1	Decal, Warning, Hazardous Dust
5.	50-0721	1	Label, Warning, Crush Hazard
6.	50-0724	1	Label, Warning, High Pressure Fluid
7.	50-0856	1	Label, Serial Number
8.	50-10017	1	Label, Warning, Avoid Serious Injury
9.	LAF8231	1	Non-Skid Tape, 4 x 24
10.	RDL3100	2	Label, Warning Flying Objects
11.	RDL3118	1	Label, Logo, FFC, Medium
12.	RDL3137	1	Label, Made In USA
13.	RDL3159	1	Label, Caution, Eye Protection
14.	RDL3179	2	Label, Lift Point
15.	RDL3301	1	Label, Depth Scale
16.	RDL3302	1	Label, Tilt Indicator
17.	RHW8642	2	Nut, Rivet, 5/16-18, .15-.312 Grip

PRIME MOVER SPECIFICATIONS

IMPORTANT Exceeding any of the maximum recommended prime mover specifications **CAN** result in damage to this product and **WILL** void all FFC warranties.

DESCRIPTION	SPECIFICATIONS
Weight of Prime Mover without Cold Planer	11,000 lbs. maximum
Operating Capacity of Prime Mover's Loader	4,500 lbs. maximum
Lift Capacity of Prime Mover's Loader	9,000 lbs. maximum
Hydraulic Pressure Output	3,400 psi maximum
Rear Ballast	As required to maintain full prime mover stability. (Note the Shipping Weight on the specifications page, then see the operator's manual(s) for your prime mover, loader, and quick-attach for ballasting needs.)

COLD PLANER SPECIFICATIONS

Model Number	Cutting Width	Cutting Depth	Tilt	Sideshift	Overall Width	Overall Height	Overall Depth	Shipping Weight
LAF5412 SSP12LF	12"	0 - 5"	± 15°	24"	66"	33"	60"	1033 lbs.
LAF5413 SSP16LF	16"	0 - 5"	± 15°	24"	66"	33"	60"	1116 lbs.

COLD PLANER REQUIREMENTS

Model Number	Required Pressure	Required Flow
LAF5412 SSP12LF	2200 psi	13 gpm
LAF5413 SSP16LF	2200 psi	16 gpm




BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.




SAE BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with extreme pressure lubricants, plating or hard washer applications. Increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	<p>GRADE 2</p>  <p>GRADE 5</p>  <p>GRADE 8</p> 
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	

METRIC BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

Bolt head identification marks as per grade.		
		

Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.5-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

Limited Warranty

Except for the Excluded Products as described below, all new products are warranted to be free from defects in material and/or workmanship during the Warranty Period, in accordance with and subject to the terms and conditions of this Limited Warranty.

1. Excluded Products. The following products are excluded from this Limited Warranty:

(a) Any cable, part that engages with the ground (i.e. sprockets), digging chain, bearing, teeth, tamping and/or demolition head, blade cutting edge, pilot bit, auger teeth and broom brush that either constitutes or is part of a product.

(b) Any product, merchandise or component that, in the opinion of Paladin Light Construction¹, has been (i) misused; (ii) modified in any unauthorized manner; (iii) altered; (iv) damaged; (v) involved in an accident; or (vi) repaired using parts not obtained through Paladin Light Construction.

2. Warranty Period. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Paladin Light Construction as evidenced by the invoiced shipment date (the "Commencement Date") and ends on the date that is twelve (12) months after the Commencement Date.

3. Terms and Conditions of Limited Warranty. The following terms and conditions apply to the Limited Warranty hereby provided:

(a) Option to Repair or Replace. Paladin Light Construction shall have the option to repair or replace the product.

(b) Timely Repair and Notice. In order to obtain the Limited Warranty, (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Paladin Light Construction in writing within thirty (30) days from the date of repair.

(c) Return of Defective Part or Product. If requested by Paladin Light Construction, the alleged defective part or product shall be shipped to Paladin Light Construction at its manufacturing facility or other location specified by Paladin Light Construction, with freight PRE-PAID by the claimant, to allow Paladin Light Construction to inspect the part or product.

Claims that fail to comply with any of the above terms and conditions shall be denied.

LIMITATIONS AND EXCLUSIONS.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING OR USAGE OF TRADE.

IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.

IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR ANY LOSS OR CLAIM IN AN AMOUNT IN EXCESS OF THE PURCHASE PRICE, OR, AT THE OPTION OF PALADIN LIGHT CONSTRUCTION, THE REPAIR OR REPLACEMENT, OF THE PARTICULAR PRODUCT ON WHICH ANY CLAIM OF LOSS OR DAMAGE IS BASED. THIS LIMITATION OF LIABILITY APPLIES IRRESPECTIVE OF WHETHER THE CLAIM IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER CAUSE AND WHETHER THE ALLEGED DEFECT IS DISCOVERABLE OR LATENT.

¹Attachment Technologies Inc., a subsidiary of Paladin Brands Holding, Inc. (PBHI) is referred to herein as Paladin Light Construction.

February 10, 2010

