

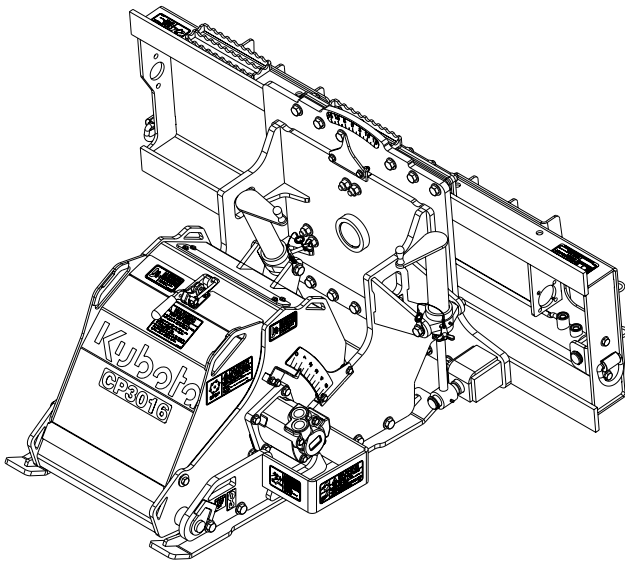
Cold Planer

AP-CP30 Series

Low Flow Models: CP3012LF and CP3016LF,

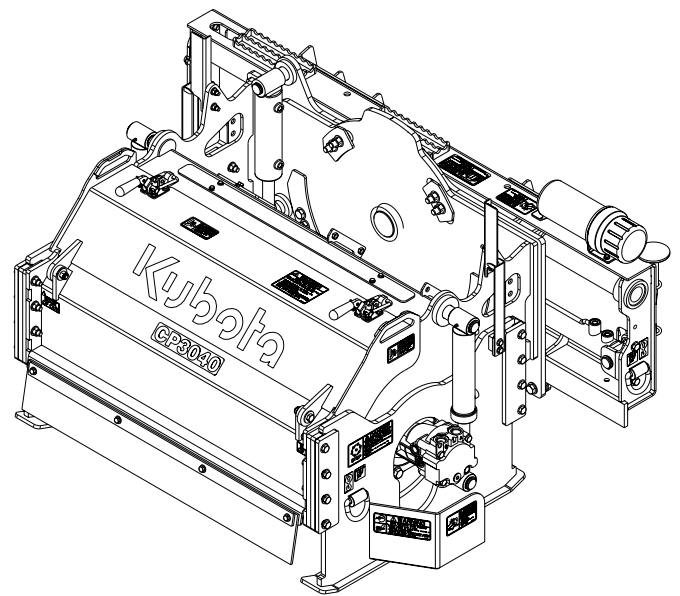
High Flow Models: CP3018, CP3024, CP3030, CP3040, and CP3048

72082



CP30 Series of Low-Flow Cold Planers

72083



CP30 Series of High-Flow Cold Planers

350-376MK Operator's Manual



Read the Operator's Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

Cover photo may show optional equipment not supplied with standard unit.

For an Operator's Manual and Decal Kit in French Language, please see your Kubota dealer.

Kubota®

Machine Identification

Record your machine details in the log below. If you replace this manual, be sure to transfer this information to the new manual.

If you, or the dealer, have added Options not originally ordered with the machine, or removed Options that were originally ordered, the weights and measurements are no longer accurate for your machine. Update the record by adding the machine weight and measurements provided in the Specifications & Capacities Section of this manual with the Option(s) weight and measurements.

Model Number	
Serial Number	
Machine Height	
Machine Length	
Machine Width	
Machine Weight	
Delivery Date	
First Operation	
Accessories	<hr/> <hr/> <hr/>

Dealer Contact Information

Name: _____


Street: _____

City/State: _____

Telephone: _____

Email: _____

California Proposition 65

 **WARNING:** Handling passenger or off-highway motor vehicle parts can expose you to chemicals such as phthalates and lead, which can cause cancer and reproductive harm. To minimize exposure, service the vehicle in a well-ventilated area, wear gloves, and wash your hands. For more information see www.P65Warnings.ca.gov/motor-vehicle-parts.

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Printed in the United States of America.

See previous page for Table of Contents.



Parts Manual QR Locator

The QR (Quick Reference) code on the left will take you to the Parts Manual for this equipment. Download the appropriate app on your smart phone. Scan the QR code and take a picture.



Dealer QR Locator

The QR code on the left will link you to available dealers for Kubota products. Refer to Parts Manual QR Locator on this page for detailed instructions.

Listed below are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

Careful operation is your best assurance against an accident.

All operators, no matter how much experience they may have, should carefully read this manual and other related manuals before operating the power machine and this attachment.

- ▲ Thoroughly read and understand the "Safety Label" section. Read all instructions noted on them.
- ▲ Do not operate the equipment while under the influence of drugs or alcohol, as they impair your ability to safely and properly operate the equipment.
- ▲ Operator should be familiar with all functions of the skid steer / track loader and attachment and be able to handle emergencies quickly.
- ▲ Make sure all guards and shields appropriate for the operation are in place and secured before operating the attachment.
- ▲ Keep all bystanders away from equipment and work area.
- ▲ Start skid steer or track loader from the driver's seat with steering levers and hydraulic controls in neutral.
- ▲ Operate skid steer or track loader and controls from the driver's seat only.
- ▲ Never dismount from a moving skid steer / track loader or leave the machine unattended with the engine running.
- ▲ Do not allow anyone to stand between the attachment and skid steer or track loader while connecting to the attachment.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ While transporting and operating equipment, watch out for objects overhead and along the sides such as fences, trees, buildings, wires, etc.
- ▲ Store attachment in an area where children normally do not play. When needed, secure attachment against falling with support blocks.



Look for the Safety Alert Symbol

The SAFETY ALERT SYMBOL indicates there is a potential hazard to personal safety and extra precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. Hazard control, and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of equipment.

Be Aware of Signal Words

A signal word designates a degree or level of hazard seriousness. They are:

- ▲ **DANGER:** Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
- ▲ **WARNING:** Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
- ▲ **CAUTION:** Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.

Be Aware of Special Notices

Special notices are intended to point out important and helpful information that should be followed. They are usually placed inside a box. They are:

- ▲ **IMPORTANT:** Indicates that equipment or property damage could result if instructions are not followed.
- ▲ **NOTE:** Indicates supplementary explanations that will be helpful when using the equipment.

Safety Precautions for Children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to attachments and their work.

- ▲ Never assume children will remain where you last saw them.
- ▲ Keep children out of the work area and under the watchful eye of a responsible adult.
- ▲ Be alert and shut the attachment and skid steer/track loader down if children enter the work area.
- ▲ Never carry children on the power machine or attachment. There is not a safe place for them to ride. They may fall off and be run over or interfere with the control of the power machine.
- ▲ Never allow children to operate the power machine, even under adult supervision.
- ▲ Never allow children to play on the power machine or attachment.
- ▲ Use extra caution when backing up. Before the power machine starts to move, look down and behind to make sure the area is clear.

Listed below are common practices that may or may not be applicable to the products described in this manual.

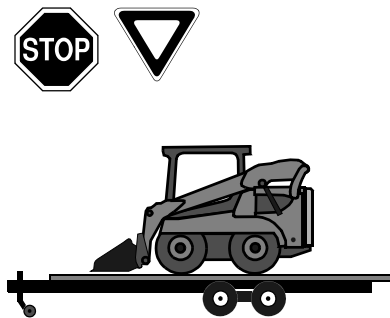
Dig Safe - Avoid Underground Utilities

- ▲ USA: Call 811
CAN:
<http://www.clickbeforeyoudig.com>
- ▲ Always contact your local utility companies (electrical, telephone, gas, water, sewer, and others) before digging so that they may mark the location of any underground services in the area.
- ▲ Be sure to ask how close you can work to the marks they positioned.



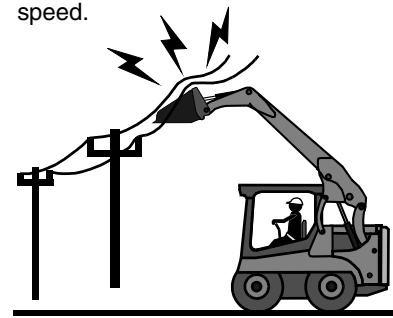
Towing Safely

- ▲ Comply with federal, state, and local laws.
- ▲ Use towing vehicle and trailer of adequate size and capacity. Secure equipment towed on a trailer with chocks, tie downs, and chains.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of the vehicle towing the load.
- ▲ Sudden braking can cause a towed trailer to swerve unexpectedly. Reduce speed if trailer is not equipped with brakes.



Transport Safely

- ▲ Comply with federal, state, and local laws.
- ▲ Avoid contact with any overhead utility lines or electrically charged conductors.
- ▲ Always drive with attachment on the end of the loader arms low to the ground.
- ▲ Follow recommendations in the power machine Operator's Manual when driving uphill or downhill and when parking on an incline.
- ▲ Never travel at a speed which does not allow adequate control of the load, steering, and stopping. Some rough terrains require a slower speed.



Tire Safety

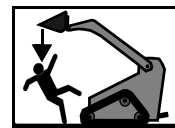
- ▲ Tire changing can be dangerous and must be performed by trained personnel using the correct tools and equipment.
- ▲ Always properly match the wheel size to the properly sized tire.
- ▲ Always maintain correct tire pressure. Do not inflate tires above recommended pressures shown in the Operator's Manual.
- ▲ When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- ▲ Securely support the attachment when changing a wheel.
- ▲ When removing and installing wheels, use wheel handling equipment adequate for the weight involved.
- ▲ Make sure wheel bolts have been tightened to the specified torque.



Practice Safe Maintenance

- ▲ Understand procedure before doing work. Refer to the Operator's Manual for additional information.
- ▲ Work on a level surface in a clean, dry area that is well-lit.
- ▲ Lower attachment to the ground and follow all shutdown procedures before leaving the operator's seat to perform maintenance.
- ▲ Do not work under any hydraulically supported equipment. It can settle, suddenly leak down, or be lowered accidentally. If it is necessary to work under the equipment, securely support it with stands or suitable blocking beforehand.
- ▲ Use properly grounded electrical outlets and tools.
- ▲ Use correct tools and equipment for the job that are in good condition.
- ▲ Allow equipment to cool before working on it.

- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on equipment.
- ▲ Inspect all parts. Make certain that parts are in good condition & installed properly.
- ▲ Replace parts on this attachment with genuine Kubota parts only. Do not alter this attachment in a way which will adversely affect its performance.
- ▲ Do not grease or oil attachment while it is in operation.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Always make sure any material and waste products from the repair and maintenance of the attachment are properly collected and disposed of.
- ▲ Remove all tools and unused parts from the equipment before operation.



These are common practices that may or may not be applicable to the products described in this manual.

Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.

Wear Personal Protective Equipment (PPE)

- ▲ Wear protective clothing and equipment appropriate for the job such as safety shoes, safety glasses, hard hat, dust mask, and ear plugs.
- ▲ Clothing should fit snug without fringes and pull strings to avoid entanglement with moving parts.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating a machine safely requires the operator's full attention. Avoid wearing headphones while operating equipment.

Avoid High Pressure Fluids

- ▲ Escaping fluid under pressure will penetrate the skin or eyes causing serious injury.
- ▲ Relieve all residual pressure before disconnecting hydraulic lines or performing work on the hydraulic system.
- ▲ Make sure all hydraulic fluid connections are properly tightened/torqued and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ Use a piece of cardboard or wood, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ **DO NOT DELAY.** If an accident occurs, seek immediate emergency medical care or gangrene may result.

Use Safety Lights and Devices

- ▲ A slow moving power machine can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.
- ▲ For tractors and other agriculture equipment, a Slow Moving Vehicle (SMV) sign is required when traveling on public roads.

Use Seat Belt and ROPS

- ▲ Land Pride recommends the use of a CAB or roll-over-protective-structures (ROPS) and seat belt in almost all power machines. Combination of a CAB or ROPS and seat belt will reduce the risk of serious injury or death if the power machine should be upset.
- ▲ If ROPS is in the locked-up position, fasten seat belt snugly and securely to help protect the operator against serious injury or death from falling and/or machine overturn.

Keep Riders Off Machinery

- ▲ Never carry riders on the power machine or attachment.
- ▲ Riders obstruct operator's view and interfere with the control of the power machine.
- ▲ Riders can be struck by objects or thrown from the equipment.
- ▲ Never use the power machine or attachment to lift or transport riders.

Listed below are common practices that may or may not be applicable to the products described in this manual.

Avoid Crystalline Silica (Quartz) Dust

Because crystalline silica is a basic component of sand and granite, many activities at construction sites produce dust containing crystalline silica. Trenching, sawing, and boring of material containing crystalline silica can produce dust containing crystalline silica particles. This dust can cause serious injury to the lungs (silicosis).

There are guidelines which should be followed if crystalline silica (quartz) is present in the dust.



- ▲ Be aware of and follow OSHA (or other local, State, or Federal) guidelines for exposure to airborne crystalline silica.
- ▲ Know the work operations where exposure to crystalline silica may occur.
- ▲ Participate in air monitoring or training programs offered by the employer.
- ▲ Be aware of and use optional equipment controls such as water sprays, local exhaust ventilation, and enclosed cabs with positive pressure air conditioning if the machine has such equipment. Otherwise respirators shall be worn.
- ▲ Where respirators are required, wear a respirator approved for protection against crystalline silica containing dust. Do not alter respirator in any way. Workers who use tight-fitting respirators can not have beards/mustaches which interfere with the respirator seal to the face.
- ▲ If possible, change into disposable or washable work clothes at the work site; shower and change into clean clothing before leaving the work site.
- ▲ Do not eat, drink, use tobacco products, or apply cosmetics in areas where there is dust containing crystalline silica.
- ▲ Store food, drink, and personal belongings away from the work area.
- ▲ Wash hands and face before eating, drinking, smoking, or applying cosmetics after leaving the exposure area.

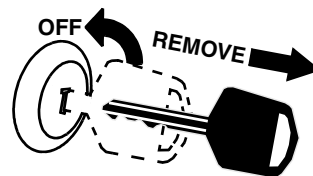
Handle Chemicals Properly

- ▲ Protective clothing should be worn.
- ▲ Handle all chemicals with care.
- ▲ Follow instructions on container label.
- ▲ Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil, and property.
- ▲ Inhaling smoke from any type of chemical fire can be a serious health hazard.
- ▲ Store or dispose of unused chemicals as specified by the chemical manufacturer.



Skid Steer / Track Loader Shutdown And Storage

- ▲ Reduce engine speed and shut-off all power to the attachment.
- ▲ Park on solid, level ground and lower attachment until it is flat on the ground or on non-concrete support blocks.
- ▲ Turn-off engine using the power-off switch or turn ignition key to stop. Do not remove key at this time.
- ▲ Relieve all hydraulic pressures.
 - If using a power-off switch, follow your machine Operator's Manual for instructions on how to release hydraulic pressure in the lines.
 - If using an ignition key, turn key to "RUN" and move joysticks to release hydraulic pressure in the lines. Finish by turning ignition key to off and removing it to prevent unauthorized starting.
- ▲ If included, raise seat bar and move controls until both lock.
- ▲ Wait for all components to stop before leaving operator's seat.
- ▲ Use steps, grab-handles and anti-slip surfaces when stepping on and off the skid steer or track loader.



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Safety Labels

Your Cold Planer comes equipped with all safety labels in place. They are designed to help you safely operate your attachment. Read and follow their directions.

1. Keep all safety labels clean and legible.
2. Refer to this section for proper label placement. Replace all damaged or missing labels. Order new labels from your nearest Kubota dealer. To find your nearest dealer, visit our dealer locator at www.landpride.com.

3. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by Kubota. When ordering new components make sure the correct safety labels are included in the request.
4. Refer to this section for proper label placement. To install new labels:
 - a. Clean surface area where label is to be placed.
 - b. Spray soapy water onto the cleaned area.
 - c. Peel backing from label and press label firmly onto the surface.
 - d. Squeeze out air bubbles with edge of a credit card or a similar type of straight edge.

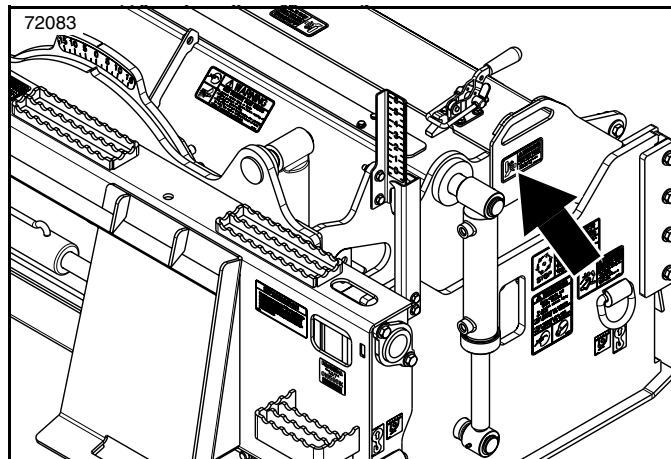
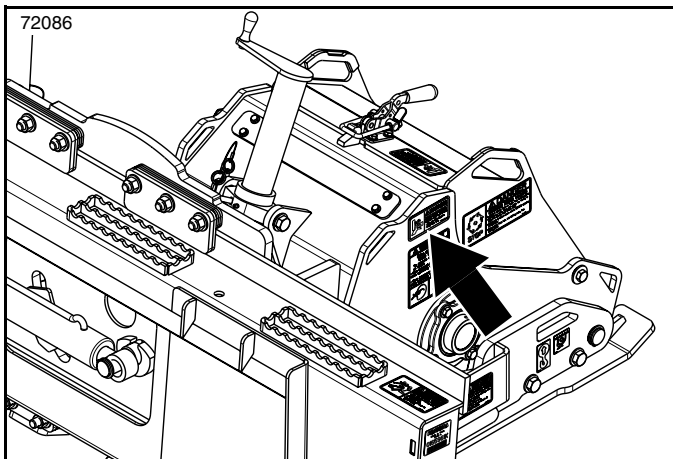
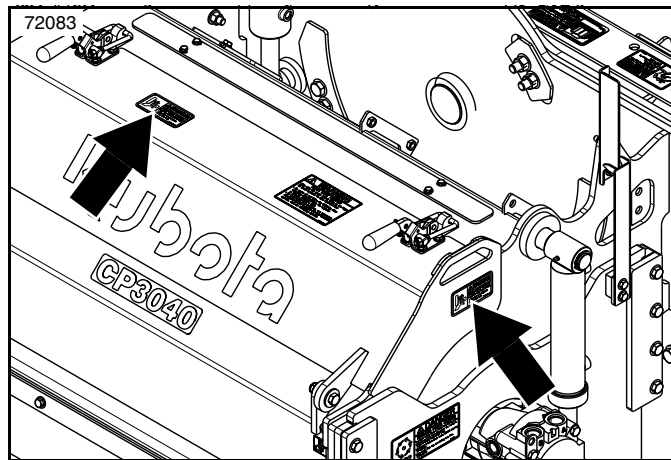
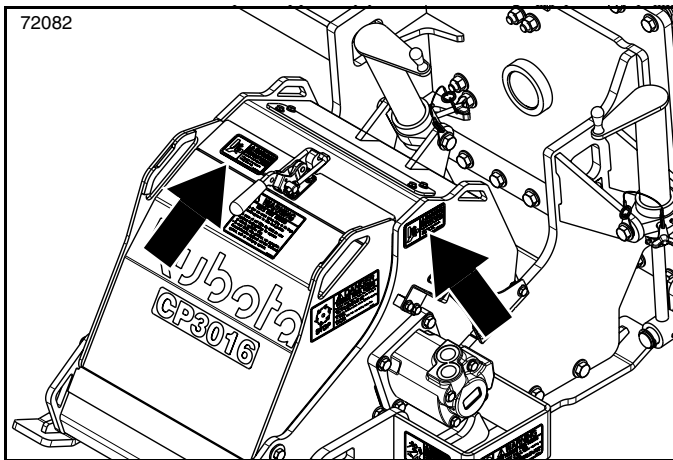


818-798C

Warning: Pinch Point Hazard (3 places)
Models CP3012LF & CP3016LF

818-798C

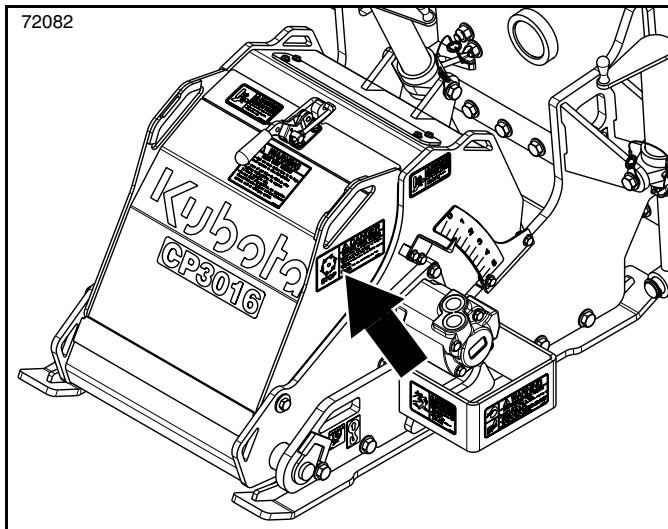
Warning: Pinch Point Hazard (3 - places)
Models CP3018, CP3024, CP3030, CP3040, & CP3048





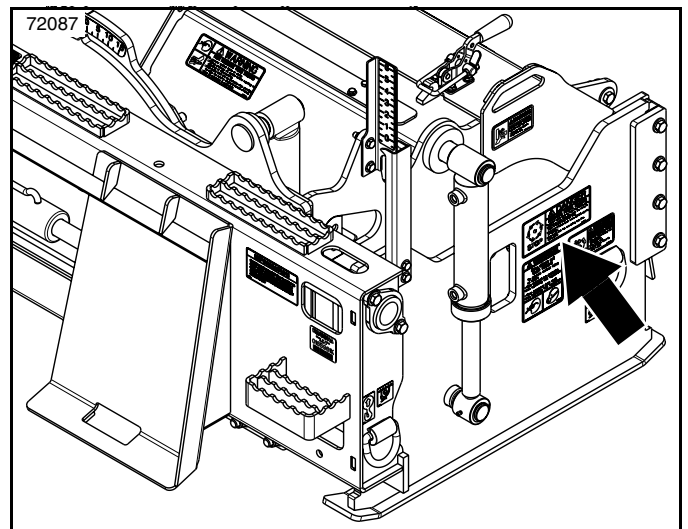
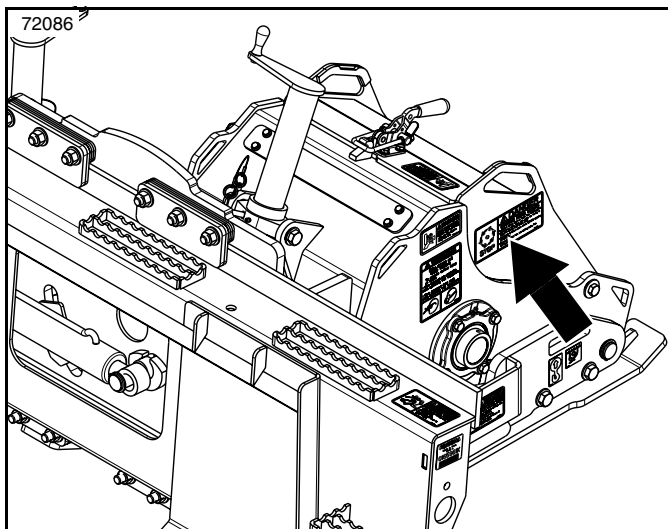
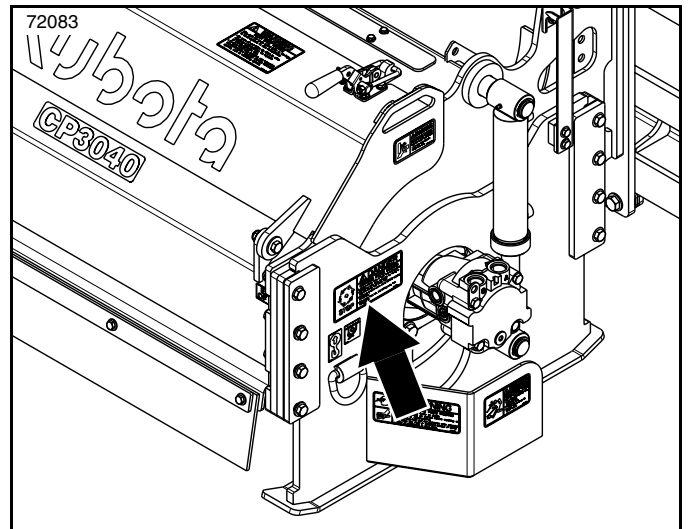
858-772C

Danger: Rotating Parts Hazard (2 places)
Models CP3012LF & CP3016LF



858-772C

Danger: Rotating Parts Hazard (2 places)
Models CP3018, CP3024, CP3030, CP3040, & CP3048



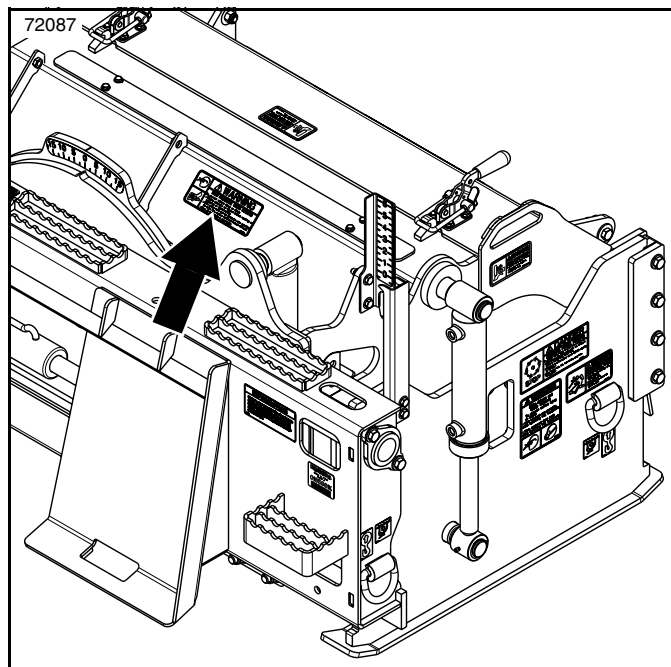
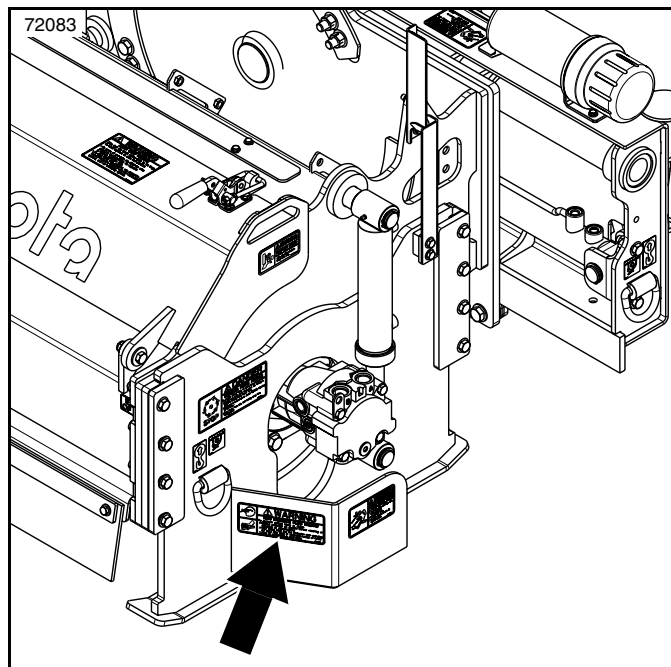
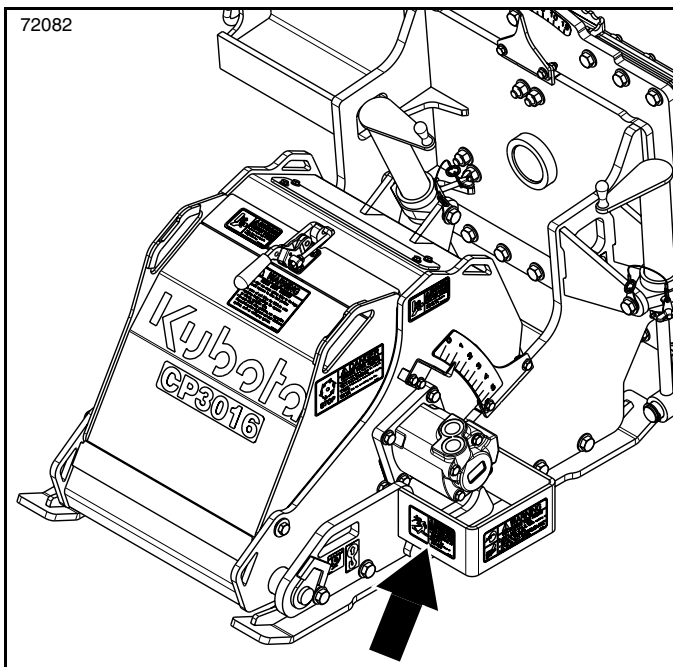
	WARNING
	<p style="text-align: center;">HIGH PRESSURE FLUID HAZARD</p> <p>To prevent serious injury or death:</p> <ul style="list-style-type: none"> • Relieve pressure on system before repairing or adjusting or disconnecting. • Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands. • Keep all components in good repair. <p style="text-align: right; font-size: small;">838-094C</p>

838-094C

Warning: High Pressure Fluid Hazard (1 place)
Models CP3012LF & CP3016LF

838-094C

Warning: High Pressure Fluid Hazard (2 places)
Models CP3018, CP3024, CP3030, CP3040, & CP3048



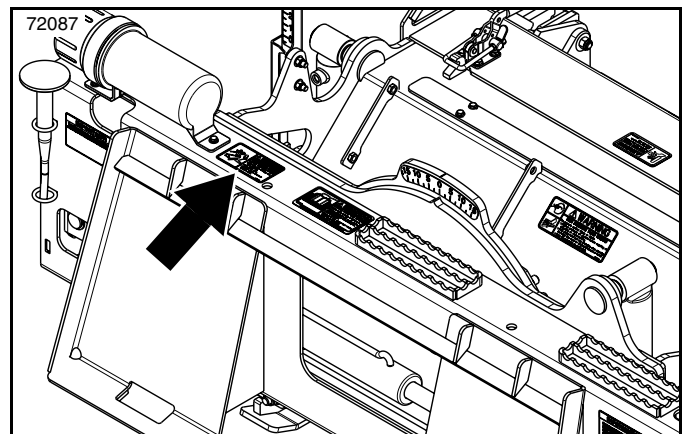
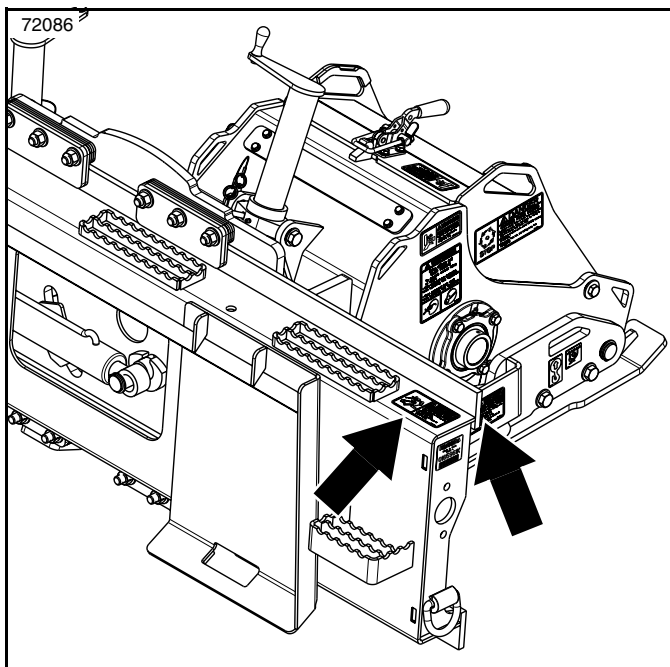
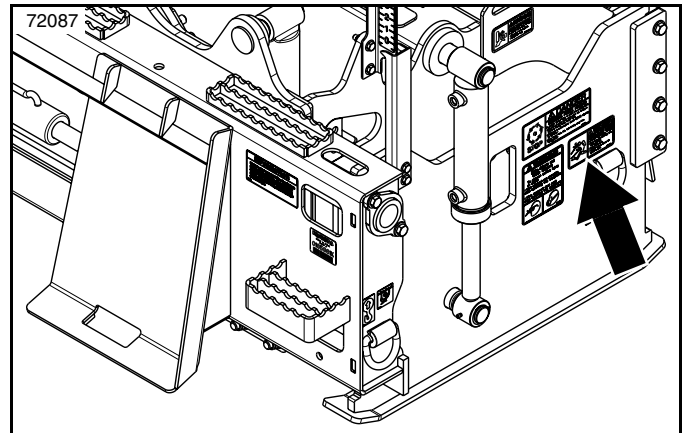
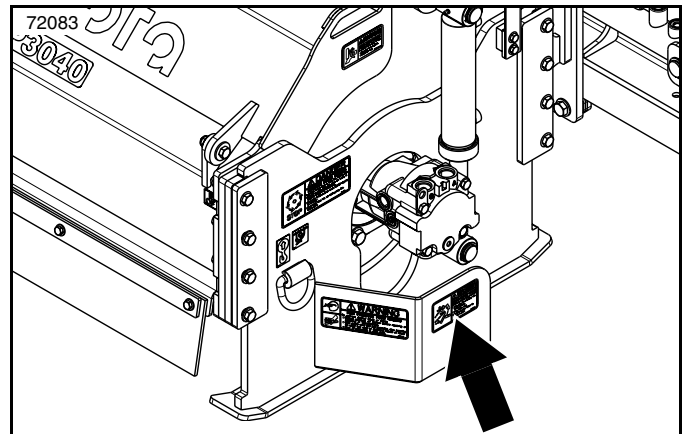
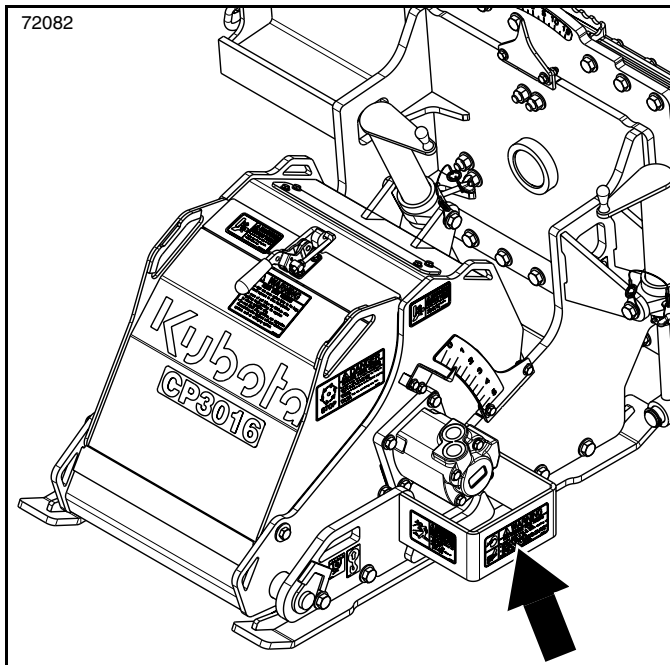


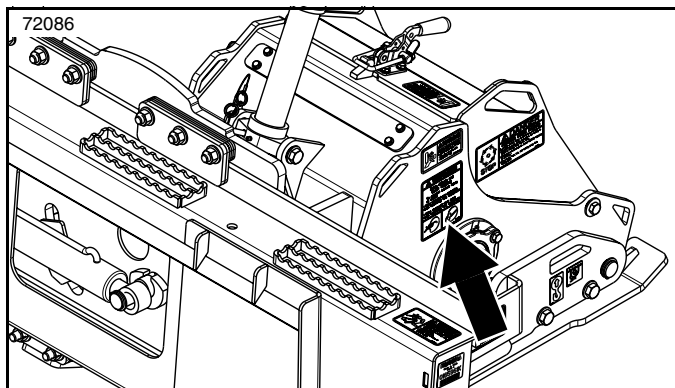
844-046C

Warning: Thrown Object Hazard (3 places)
Models CP3012LF & CP3016LF

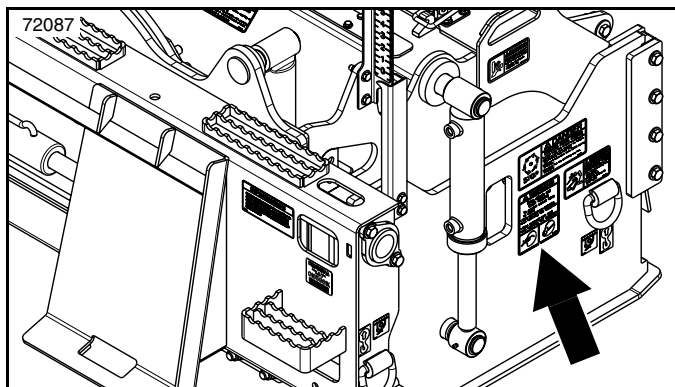
844-046C

Warning: Thrown Object Hazard (3 places)
Models CP3018, CP3024, CP3030, CP3040, & CP3048

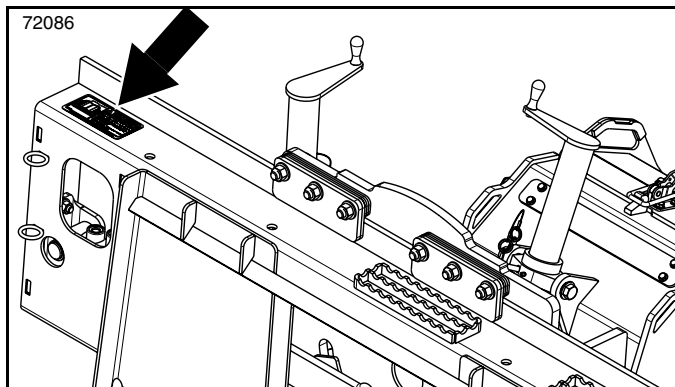




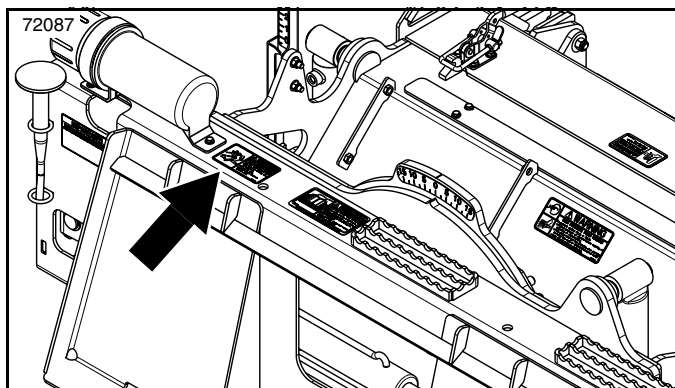
Models CP3012LF & CP3016LF



Models CP3018, CP3024, CP3030, CP3040, & CP3048



Models CP3012LF & CP3016LF

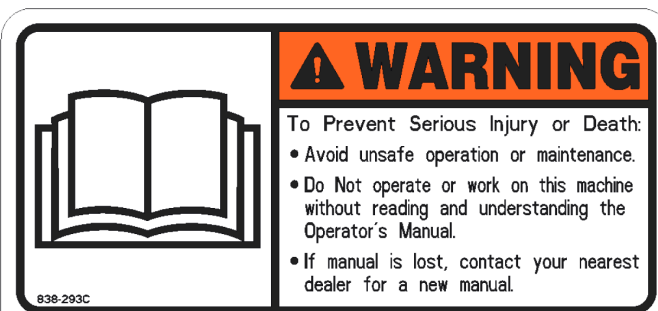


Models CP3018, CP3024, CP3030, CP3040, & CP3048



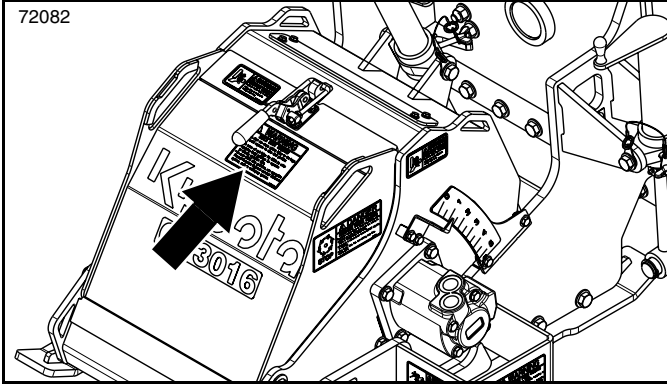
848-392C

Warning: Flying Objects and Dust Hazard (1 place)

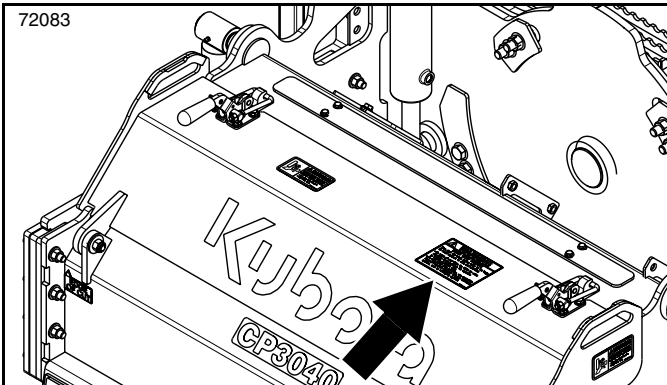


838-293C

Warning: Read Operator's Manual (1 place)



Models CP3012LF & CP3016LF



Models CP3018, CP3024, CP3030, CP3040, & CP3048

	WARNING
SILICA DUST HAZARD	
<p>Silica dust can cause serious injury to the lungs. To avoid exposure to silica dust particles:</p> <ul style="list-style-type: none"> • Be aware of and follow the OSHA (or other regulatory body) guidelines for exposure to airborne crystalline silica. • To meet OSHA silica guidelines, use appropriate Personal Protective Equipment and dust abatement systems, such as waterspray systems. 	
044-124C Rev.A	

844-124C

Warning: Silica Dust Hazard (1 Place)

Introduction

Kubota welcomes you to the growing family of new product owners. This Cold Planer has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from this product.

Application

Kubota's CP30 Series Cold Planers are hydraulically powered attachments intended for milling asphalt or light grinding of concrete surfaces with uses and applications around streets, parking lots, driveways, construction sites, municipalities, parks, and universities.

The Low-Flow Cold Planer Models are offered in 12" (31 cm) and 16" (41 cm) widths and are powered by a hydraulic motor capable of handling up to 25 gpm (94.6 Lpm). They can cut up to 5" (13 cm) deep, tilt \pm 15 degrees, and sideshift 26" (66 cm). Depth and tilt control are manually operated, while sideshift is hydraulically controlled.

The High-Flow Cold Planer Models are available in widths of 18", 24", 30", 40", and 48" (46, 61, 76, 102, and 122 cm) with a hydraulic-driven planetary gearbox drive that provides maximum cutting torque while under load. The High-Flow Cold Planers can cut up to 6" deep and sideshift 26" (66 cm) and can handle up to 42 gpm (159 Lpm). Tilt varies from planer to planer (see page 36 for amount of tilt your model is capable of producing). Included with the high-flow models is an electro-hydraulic control harness for controlling depth of cut. Tilt and sideshift are also electro-hydraulic controlled. However, the operator will need to dismount to switch the function between tilt and sideshift at the solenoid valve.

See "**Specifications & Capacities**" on page 36 and "**Features & Benefits**" on page 37 for additional information and performance enhancing options.

Using This Manual

- This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
- To order a new Operator's or Parts Manual, contact your authorized dealer. Manuals can also be downloaded, free-of-charge, from our website at www.landpride.com

Terminology

"Right" or "Left" as used in this manual is determined by the direction the operator faces while sitting in the operator's seat looking forward unless otherwise stated.

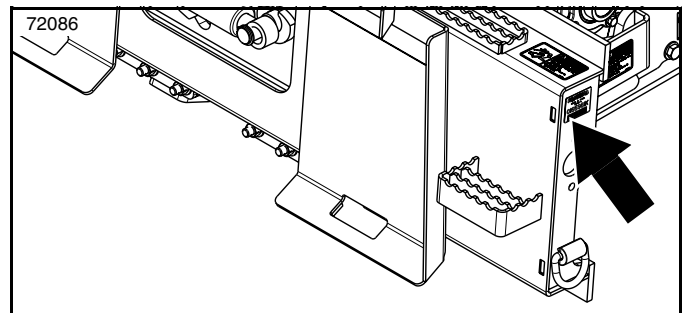
Owner Assistance

The dealer should complete the Online Warranty Registration at the time of purchase. This information is necessary to provide you with quality customer service.

The parts on your Cold Planer have been specially designed by Kubota/Land Pride and should only be replaced with genuine Kubota parts. Contact a Kubota dealer if customer service or repair parts are required. Your Kubota dealer has trained personnel, repair parts, and equipment needed to service this attachment.

Serial Number

For quick reference and prompt service, record model and serial number on the inside cover page and again on the warranty page. Always provide model number and serial number when ordering parts and in all correspondence with your Kubota dealer. For location of your serial number plate, see Figure 1.



CP30 Series Serial Number Plate

Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new attachment. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss any problems you have with your attachment with your dealership service personnel so they can address the problem.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the question/problem, and request assistance.
3. For further assistance write to:

**Kubota by Land Pride
Service Department**

1525 East North Street
P.O. Box 5060
Salina, Ks. 67402-5060

E-mail address
lpSERVICE@landpride.com

Section 1: Assembly & Set-up

Skid Steer Requirements

The Cold Planer is designed to attach to Kubota skid steers and track loaders within the following requirements:

- Hitch type Skid steer quick attach, ISO 24410
- Horsepower requirements Max 100 hp
- Hydraulic flow rates
 - 3012LF & 3016LF 15-25 gpm (57-95 Lpm)
 - 3018 24-42 gpm (91-159 Lpm)
 - 3024 27-42 gpm (102-159 Lpm)
 - 3030, 3040, & 3048. 30-42 gpm (114-159 Lpm)
- Min. hydraulic pressure
 - 3012LF, 3016LF, 3018, & 3024. 2000 psi (13.8 MPa)
 - 3040 3000 psi (20.7 MPa)
 - 3048 3500 psi (24.1 MPa)
- Max. hydraulic pressure
 - 3012LF & 3016LF 3500 psi (24.1 MPa)
 - 3018/24/30/40/48 5000 psi (34.5 MPa)
- Case Drain
 - 3012LF & 3016LF Not Required
 - 3018/24/30/40/48 Required
- Skid steer weight See Warning below

WARNING

To avoid serious injury or death:

- Consult your power machine Operator’s Manual for operating capacity, lifting capacity, and operating specifications. Exceeding rated capacities and specifications can result in loss of control, roll-over or other serious hazard.
- Power machines outside the listed horsepower range must not be used. Higher horsepower machines can damage the attachment. Under horsepower machines make the job more difficult.
- Lightweight power machines may need weight added to the rear to maintain steering control and prevent forward and/or side tipping. Consult your power machine Operator’s Manual to determine proper weight requirements and maximum limitations.

Torque Requirements

Refer to “**Torque Values Chart**” on page 39 to determine correct torque values when tightening hardware.

Before You Start

WARNING

To avoid serious injury or death:

- Allow only persons to operate this attachment who have fully read and comprehended this manual, and who have been properly trained in the safe operation of this attachment. Serious injury or death can result from the inability to read, understand, and follow instructions provided in this manual.

Make sure the intended skid steer conforms to the “**Skid Steer Requirements**” stated above. Read and understand the operator’s manual for your Cold Planer. An understanding of how it works will aid in the assembly and setup of your planer.

Go through the “**Pre-Assembly Checklist**” below before assembling the Cold Planer. Speed up your assembly task and make the job safer by having all needed parts and equipment readily at hand.

Pre-Assembly Checklist

✓	Check	Reference
<input type="checkbox"/>	Have a fork lift or loader with properly sized chains and safety stands capable of lifting and supporting the equipment on hand.	
<input type="checkbox"/>	Have a minimum of two people available during assembly.	
<input type="checkbox"/>	Make sure all major components and loose parts are shipped with the attachment.	Operator’s Manual
<input type="checkbox"/>	Double check to make sure all parts, fasteners and pins are installed in the correct location to lessen the chance of using a bolt incorrectly. Refer to the Parts Manual if unsure. NOTE: Remember location of a part or fastener if removed. Keep parts separated.	Operator’s Manual 350-376MK Parts Manual 350-376PK
<input type="checkbox"/>	Make sure working parts move freely, bolts are tight & cotter pins are spread.	Operator’s Manual
<input type="checkbox"/>	Make sure all safety labels are correctly located and legible. Replace if damaged.	Page 6
<input type="checkbox"/>	Make sure all grease fittings are in place and lubricated.	Page 32
<input type="checkbox"/>	Check fluid level in the planetary gearbox. Refer to Maintenance & Lubrication.	Page 35

Skid Steer Shutdown Procedure

The following are basic skid steer shutdown procedures. Follow these procedures and any additional shutdown procedures provided in your skid steer Operator’s Manual before leaving the operator’s seat.

1. Reduce engine speed and shut-off all power to the attachment.
2. Park on solid, level ground and lower attachment until it is flat on the ground or on non-concrete support blocks.
3. Turn off engine. Do not remove ignition key at this time.
4. Turn ignition key to the “RUN” position and relieve all hydraulic pressure by moving both joysticks.
5. Turn ignition key off and remove to prevent unauthorized starting.
6. If included, raise seat bar and move controls until both lock.
7. Wait for all components to come to a complete stop before leaving the operator’s seat.
8. Use steps, grab-handles and anti-slip surfaces when stepping on and off the skid steer or attachment.

Dealer Set-up

Refer to **Figure 1-1** & **Figure 1-2**:

The Cold Planer is shipped from the factory fully assembled. Use a hoist or other suitable lift device to lift the unit off the pallet and set it on the ground. Make sure the Cold Planer is secured before lifting it.

Use lift holes on both sides of the planer shown in **Figure 1-1** to pick up the Low Flow Cold Planers (Models CP3012LF or CP3016LF).

Use lift lugs on both sides of the planer shown in **Figure 1-2** to pick up the High-Flow Cold Planers (Models CP3018, CP3024, CP3030, CP3040, or CP3048).

Perform the following simple checks before operation begins.

Safety Decals

Refer to **pages 6-11**:

The safety decals should be clearly readable and always followed. Replace any decal that is missing or not readable. Refer to “**Safety Labels**” on page 6.

Low-Flow Cold Planer Set-up

The following checks are for Models CP3012LF and CP3016LF. If the Cold Planer is not one of these two models, skip to “**High-Flow Cold Planer Set-up**” on page 15.

Hydraulic Couplers

The hydraulic hoses on the Low-Flow Cold Planer are shipped with couplers. If the couplers do not fit the skid steer couplers, the customer will need to obtain the correct style and size to match the skid steer couplers and planer hydraulic hoses.

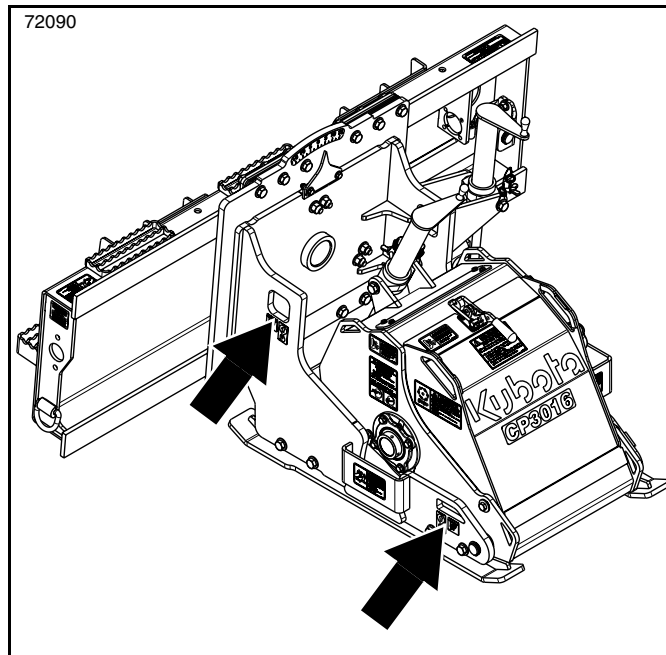
The planers operate on the skid steer auxiliary hydraulic flow. Since the auxiliary flow is reversible, be sure to operate the unit so the drum is spinning in the direction the teeth are pointing.

Hydraulic Hoses and Fittings

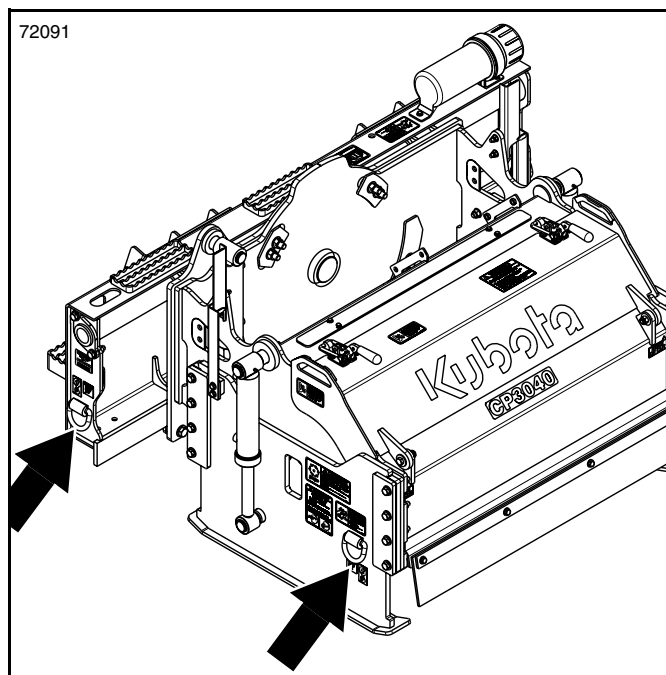
All fittings should be tight and free of hydraulic leaks. Hoses must be free of abrasion or cuts that might result in leakage. Check your attachment before operation to make sure all hose routings are kink-free and allow for maximum movement of loader arms and tilt motion required during normal operation.

Drum Assembly

For proper drum operation, picks must be installed in every pick holder on the drum.



Low-Flow Planer Lift Points (Typical on Both Sides)
Figure 1-1



High-Flow Planer Lift Points (Typical on Both Sides)
Figure 1-2

High-Flow Cold Planer Set-up

The following checks are for Models CP3018, CP3024, CP3030, CP3040, and CP3048. If the Cold Planer is not one of these five models, Refer to “**Low-Flow Cold Planer Set-up**” on page 14.

Hydraulic Couplers

The hydraulic hoses on the High-Flow Cold Planer are shipped with couplers. If the couplers do not fit the skid steer couplers, the customer will need to obtain the correct style and size to match the skid steer couplers and planer hydraulic hoses.

The pressure “in” port on the diverter valve is marked LP for motor pressure. Return flow to the loader is marked LR for motor return. The small hose is for the drive motor case drain and is connected directly to the skid steer case drain coupler.

The case drain hose should be connected directly to the case drain coupler on the skid steer.

Hoses and Fittings

All fittings should be tight and free of hydraulic leaks. Hoses must be free of abrasion or cuts that might result in leakage. Check your attachment before operation to make sure all hose routings are kink-free and allow for maximum movement of loader arm and tilt motion required during normal operation.

Wire Harness

The wiring harness to the electro-hydraulic valve block should be routed to prevent catching or pinching when sideshifting, tilting, or lowering the drum fully into the cut.

Drum Assembly

For proper drum operation, picks must be installed in every pick holder on the drum.

Motor Case Drain

IMPORTANT: Do not operate the Cold Planer without connecting the case drain hose to the skid steer’s case drain coupler. Not connecting case drain coupler may cause severe damage to the hydraulic motor.

IMPORTANT: Unobstructed case drain flow is critical to proper motor operation. Blocked case drain flow will damage the hydraulic motor.

NOTE: Unless a defect in the motor is found, damage to the motor shaft seal and end cap gasket are not covered under the warranty.

The High-Flow Cold Planers have a planetary gearbox mounted with the drum which is driven by a hydraulic piston motor.

During motor operation, some oil bypasses the motor and must be allowed an unobstructed path back to the skid steer hydraulic tank. If this flow is restricted, pressure will build up inside the motor and will damage the motor shaft seals and/or end cap gasket.

Several cases can lead to this damage:

- Pinched or crushed case drain hose can restrict flow.
- Disconnected case drain quick coupler will stop flow.
- Picks on the cutting drum can come in contact with the pavement or trailer ramps while the skid steer is in motion, forcing the drum to rotate with the high-flow hydraulic circuit “off”. This drum rotation forces the motor to turn, which pressurizes the motor’s case because the pressure and return oil’s path have been blocked.

If the above issues are not addressed, severe motor damage may result. All of these issues can be attributed to the operator and are preventable with proper operation. Never operate Cold Planer without ensuring the case drain hose is in good working order and properly connected.

Section 2: Operating Procedures

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the operation, transport, storage, and maintenance of the Cold Planer. Therefore, it is absolutely essential that no one operates the Cold Planer unless they have read, fully understood, and are totally familiar with the Operator's Manual and equipment work site.

Perform the following inspections before using your Cold Planer.

Operating Checklist

✓	Check	Page
	Read & follow all safety rules & safety decals. Refer to this manual and the attachment's decals.	
	Make sure all guards and shields are in place.	
	Read & follow preparation & setup instructions. Refer to "Section 1: Assembly & Set-up".	13
	Read and follow all operating procedures. Refer to "Section 2: Operating Procedures".	16
	Read & follow all maintenance Instructions. Refer to "Section 4: Maintenance & Lubrication".	29
	Read & follow all lubrication instructions. Refer to "Lubrication Points".	32
	Check initially and periodically for loose bolts and pins. Refer to "Torque Values Chart".	39

General Safety Information

Exposed moving parts are guarded whenever possible for safety. However, not all moving parts can be shielded in order to ensure proper operation. This Operator's Manual and safety decals on the machine provide important safety information. Read and follow their directions. If a safety decal becomes difficult to read, replace it immediately.



DANGER

To avoid serious injury or death:

- Never crawl under raised loader arms unless properly secured. Fully lower loader arms or have the loader arms secured in the raised position with an approved lift-arm support before leaving the skid steer seat. Crawling under unsupported loader arms can cause a crushing hazard.
- Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to the hydraulics is off.
- Keep body, body extremities, clothing, pull strings, etc. away from rotating/moving parts. Always shut off hydraulics to the attachment and shutdown the power machine before adjusting or servicing the equipment.
- All guards and shields must be installed and in good working condition while operating the attachment. Never operate planer with drum door open.

- Do not let children play on or around the attachment including when stored. Children and/or attachment can fall.
- Do not allow bystanders or animals to be near the attachment, loader arms, or power machine during operation. Stop operation if bystanders are too close. They can be hit by thrown or falling objects, become entangled, crushed, ran over, etc.
- Do not drive close to ditches, retaining walls, drop-offs, water, etc. Rollover due to a cave-in or mishap could result.
- Know weight limitations of operating surfaces and clearances.



WARNING

To avoid serious injury or death:

- Make sure safety labels are installed in their proper location and are in good condition before operating the attachment. Read and obey all instructions on the labels.
- Refer to the safety section of your skid steer Operator's Manual and observe all safety recommendations set forth in the manual.
- Use steps, grab-handles, and anti-slip surfaces on the power machine and attachment to get on and off the power machine. Using unapproved stepping surfaces and/or handholds can result in a falling hazard.
- Allow only persons to operate this attachment who have fully read and comprehended this manual, and who have been properly trained in the safe operation of this attachment. Serious injury or death can result from the inability to read, understand, and follow instructions provided in this manual.
- Operate only power machines equipped with a certified Roll-Over Protective Structure (ROPS) and seat belt. Fasten seat belt snugly and securely to help protect against serious injury or death from machine overturn.
- Operate attachment from inside an enclosed cab or wear a dust mask and eye protection. Flying dust and debris can enter the lungs causing respiratory problems, enter the eyes causing eye injury and /or cause bodily injury to the body of people or animals.
- Avoid exposure to dust containing crystalline silica particles. This dust can cause serious injury to the lungs (silicosis). Because crystalline silica is a basic component of sand and granite, many activities at construction sites produce dust containing crystalline silica. Trenching, sawing, and boring of material containing crystalline silica can produce dust containing crystalline silica.
- Make sure controls are all in neutral position or park before starting the power machine.
- Always operate attachment while seated with seat belt properly fastened around the operator. When equipped, always lower seat/lap bar(s). This will help protect the operator against rollovers and sudden stops.

Section 2: Operating Procedures

- *Never carry riders on the attachment or power machine. Riders can obstruct the operator's view, interfere with controls, be pinched by moving components, become entangled in rotating components, struck by objects, thrown about, fall off and be run over, etc.*
- *Always shut power machine down using the "Shutdown Procedure" provided in this manual before servicing, adjusting, cleaning, or maintaining the attachment.*
- *Never allow hands or feet near any working part of the attachment unless the mandatory power machine shutdown procedure has been completed.*
- *Check hitch fit-up frequently. An improper fit-up can result in the attachment falling from the loader hitch plate.*
- *Do not grind anything other than asphalt or light concrete. Doing so can cause a thrown object hazard or damage the Cold Planer.*
- *Never make contact with underground utilities such as electrical power lines, gas lines, phone lines, etc. They can cause serious injury or death from electrocution, explosion, or fire. Always call 811 (USA) or local utility companies before digging so that they can mark the location of underground services in the area. For contact information, see Dig Safe in the "Important Safety Information" starting on page 1.*
- *Always exercise safety, courtesy, and common sense. Be aware of pedestrian and vehicle traffic. Check blind spots before moving. Use Cold Planer during low-traffic hours.*
- *Do not use this attachment to lift, carry, push or tow other equipment or objects. It is not properly designed or guarded for this use. The operator could lose control resulting in equipment damage and/or tipping hazard.*
- *Keep body, body extremities, loose clothing, pull strings, etc. away from pinch points such as rotating, extending, and/or retracting components. Secure pinch point areas to ensure they will not move before working on or near them.*
- *Do not alter attachment or replace parts on the attachment with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the attachment. Replace parts only with genuine OEM parts.*
- *Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting the attachment back into service.*
- *Hydraulic fluid under high pressure will penetrate the skin or eyes causing serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulics. Use a piece of cardboard or wood, rather than hands, when searching for leaks. If an accident occurs, seek immediate emergency medical care or gangrene may result. DO NOT DELAY.*

Connect to the Cold Planer



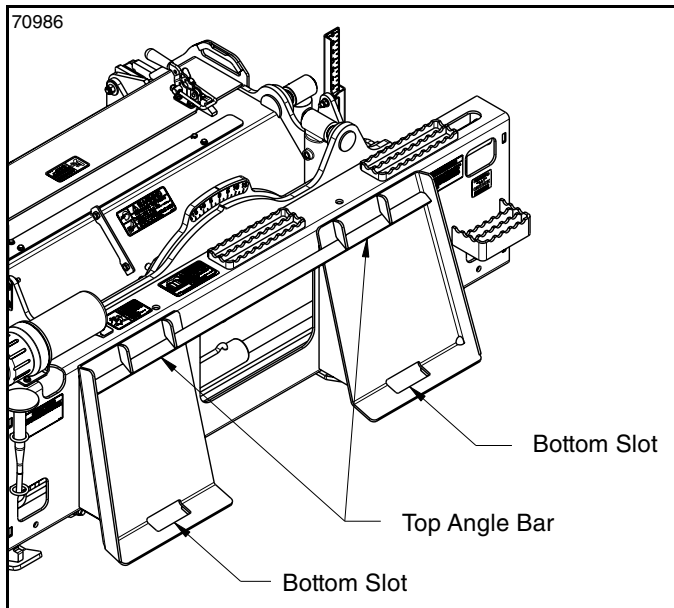
To avoid serious injury or death:

A crushing hazard exists when connecting and disconnecting the attachment. Do not allow anyone to stand between attachment and power machine while approaching or backing away from the attachment. Do not operate hydraulic controls while someone is near the power machine and/or attachment.



To avoid serious injury or death:

- *Check hitch fit-up frequently. An improper fit-up can result in the attachment falling from the loader hitch plate.*
 - *Use steps, grab-handles, and anti-slip surfaces on the power machine and attachment to get on and off the power machine. Using unapproved stepping surfaces and/or handholds can result in a falling hazard.*
1. Check skid steer and Cold Planer hitch plates before hooking-up the planer. Make sure all hitch components are in good working condition:
 - a. Check for and remove any debris in the loader and planer hitch plates.
 - b. Check hitch plates for structural cracks and bent or broken pieces. They can weaken a hitch plate and prevent full and complete connection. Repair or replace damaged hitch plates before putting the Cold Planer into service.
 - c. Check operation of lock pins in the loader hitch plate. Lock pins must move freely and extend fully into the bottom slots in the planer hitch plate.
 - d. Check hydraulic hoses for pinch points and clearances. Make sure hydraulic hoses will not interfere with hitch connections.
 2. If lock mechanism is mechanical, raise lock handles on the loader hitch plate fully up to raise lock pins.
 3. Start skid steer.
 4. If lock mechanism is hydraulic, use auxiliary hydraulic controls to raise lock pins fully up.
 5. Continue onto the next page.



Connect Cold Planer
Figure 2-1

Refer to Figure 2-1:

6. Drive slowly to the planer hitch plate while making sure the loader hitch is parallel with the top angle bar on the cold Planer hitch plate.
7. Tilt top of loader hitch plate slightly forward.
8. Place top of loader hitch plate under the Cold Planer top angled bar and slowly raise loader arms up until loader hitch plate is seated under the top angle bar.
9. Tilt top of loader hitch plate back until planer hitch plate makes full contact with loader hitch plate and the Cold Planer is slightly off the ground.
10. Engage lock mechanism:
 - Hydraulic Lock Mechanism:**
 - a. Engage quick hitch locking mechanism hydraulically.
 - Mechanical Lock Mechanism:**
 - a. Shut skid steer down before dismounting. Refer to “**Skid Steer Shutdown Procedure**” on page 13.
 - b. Push lock handles down to drive lock pins through bottom slots in the planer hitch plate. Make sure handles are locked down.
 - c. Return to skid steer and start.
11. Raise loader arms enough to visually ensure lock pins are through the bottom slots on the Cold Planer.
12. Shut skid steer down before dismounting. Refer to “**Skid Steer Shutdown Procedure**” on page 13.

Hydraulic Hose Connections

WARNING

To avoid serious injury or death:

- Hydraulic fluid under high pressure will penetrate the skin or eyes causing serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulics. Use a piece of cardboard or wood, rather than hands, when searching for leaks. If an accident occurs, seek immediate emergency medical care or gangrene may result. **DO NOT DELAY.**
- Shutdown power machine and release all hydraulic pressure to the equipment before connecting or disconnecting hydraulic hoses to or from the power machine.
- Make sure hydraulic flow to the Cold Planer does not exceed maximum rated flow listed in the specifications on page 36. Exceeding maximum flow will increase rotor speed and result in a thrown object hazard.

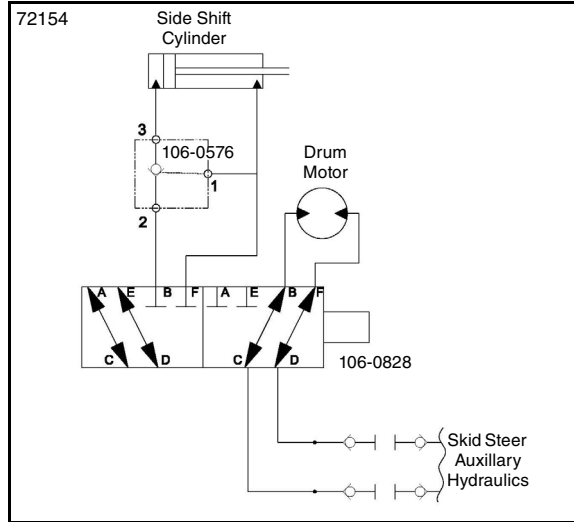
IMPORTANT: Make sure coupler fittings are clean before making connections. Dirt can quickly damage the hydraulic system. Inspect couplers for corrosion, cracks and excessive wear. Replace couplers if any of these conditions exist.

IMPORTANT: All hoses should be free of kinks, cuts, or abrasions for safe operation. Do not operate if hoses are worn or damaged.

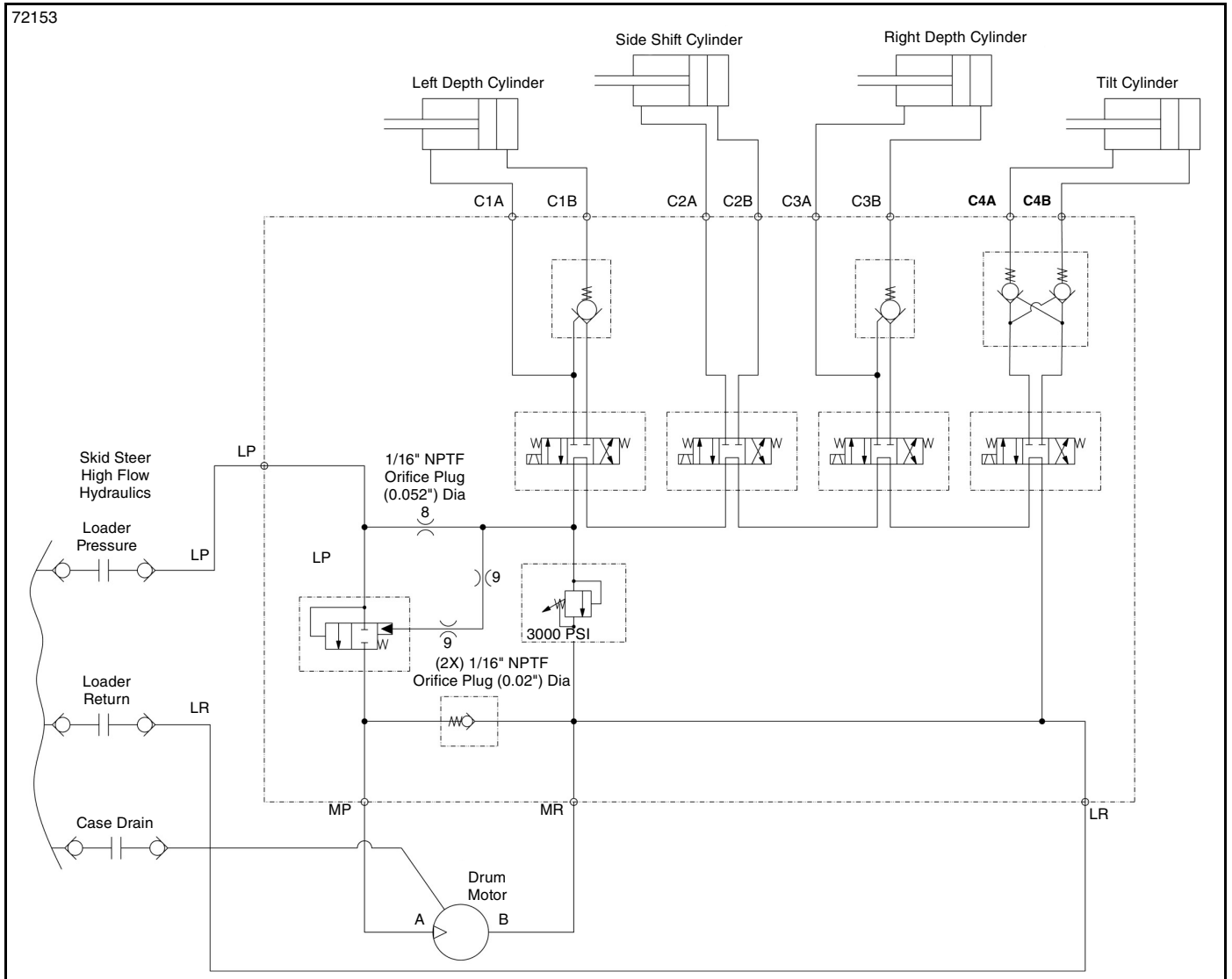
1. Clean quick connect couplers of dirt and then connect female and male coupler to the skid steer’s auxiliary outlets. Make sure quick connect couplers have fully engaged. If they have not, check the following to make sure:
 - a. Couplers are same size and type.
 - b. Auxiliary hydraulic pressure to the loader couplers has been released.

NOTE: A case drain line with coupler is included only for High-Flow Cold Planers with a planetary gearbox.

2. If connecting a High-Flow Cold Planer, attach case drain hydraulic hose coupler to the skid steer’s case drain coupler.
3. Refer to Figure 2-2 on page 19 for the low-flow hydraulic schematic and Figure 2-3 on page 19 for the high-flow hydraulic schematic.
4. For additional help, refer to Hydraulic Hook-up in your skid steer Operator’s Manual.

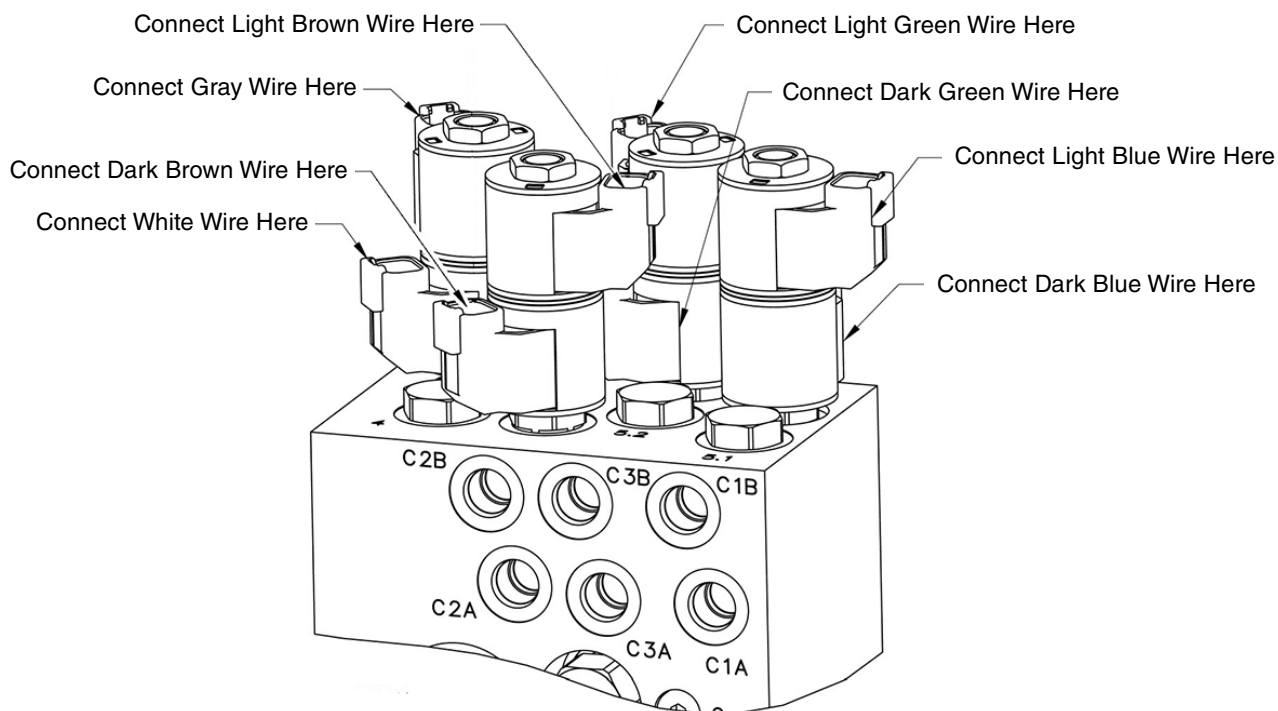


Low-Flow Hydraulic Schematic
Figure 2-2

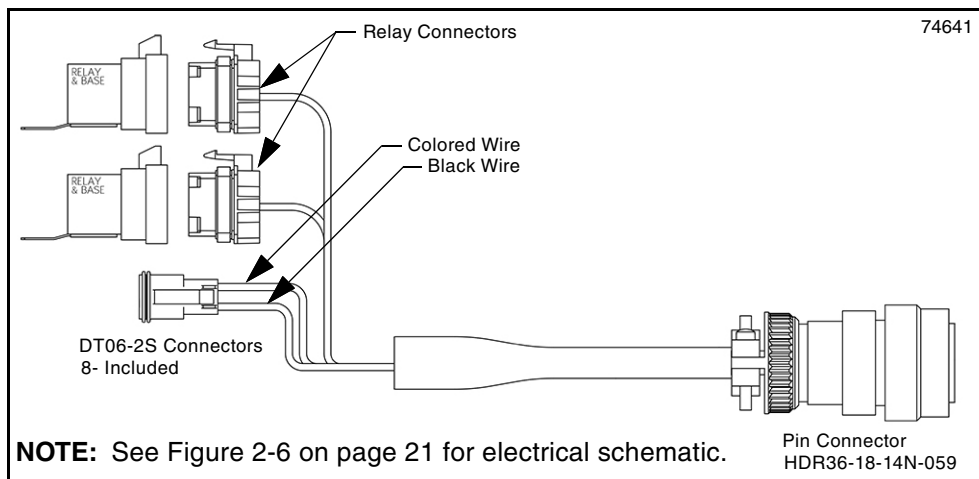


High-Flow Hydraulic Schematic
Figure 2-3

74640



High-Flow Diverter Valve #106-6540
Figure 2-4



NOTE: See Figure 2-6 on page 21 for electrical schematic.

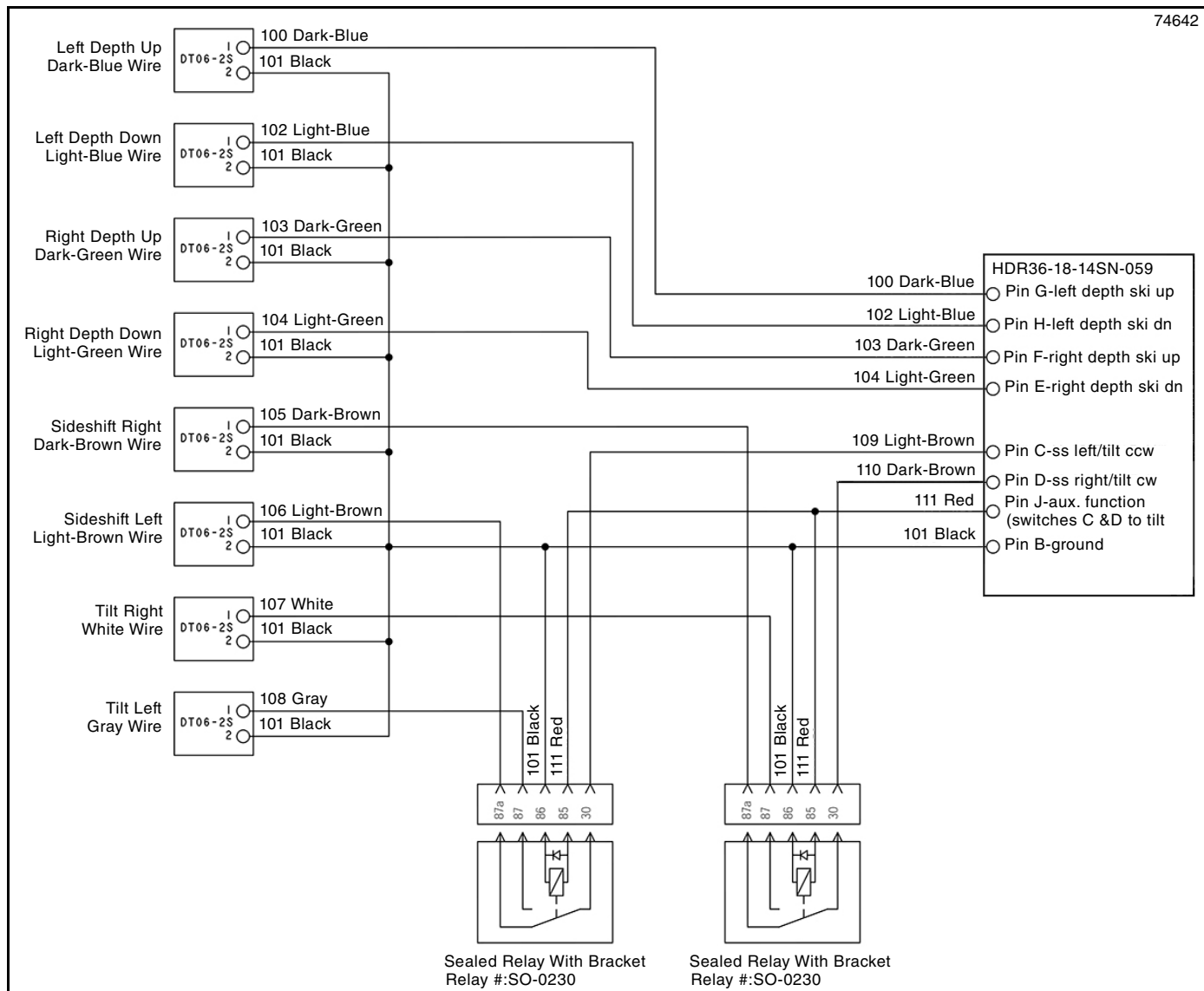
Main Wire Harness #106-6498
Figure 2-5

Electrical Connects

Refer to Figure 2-4 & Figure 2-5:

1. Attach Main wire harness #106-6498 to the high flow diverter valve #106-6540. Make sure wire colors are matched with the stated color for each connector on the valve.
2. Attach relay connectors to sealed relays #S0-0230 shown in Figure 2-6 on page 21.
3. Rout main wire harness #106-6498 through the spring hose loop and connect it to the skid steer auxiliary switch.
4. Make sure main wire harness #106-6498 is routed to prevent it from catching or pinching while sideshifting, tilting the drum, tilting the hitch plate, or lowering the drum fully into the cut.

74642



High Flow Electrical Schematic For Main Wire Harness #106-6498
Figure 2-6

Section 2: Operating Procedures

Pre-Operation Inspection

1. Shut skid steer and Cold Planer down. Follow “**Skid Steer Shutdown Procedure**” on page 13.
2. Complete “**Operating Checklist**” on page 16.
3. Inspect attachment’s safety equipment to make sure it is in good working condition and that all safety alert decals are visible and legible. Replace all missing and/or illegible safety alert decals. See “**Safety Labels**” on page 6.
4. Check skid steer and Cold Planer hitch plates. Make sure all hitch components are in good working condition:
 - a. Check for and remove any debris in the loader and Cold Planer hitch plates.
 - b. Check hitch plates for structural cracks that can weaken the hitch plates and result in dropping the attachment. Check for bent plates that will prevent full and complete connection. Repair or replace damaged hitch plates before putting the Cold Planer into service.
 - c. Check operation of lock pins in the loader hitch plate. Lock pins must move freely and extend fully into the bottom slots in the Cold Planer hitch plate.
 - d. Check hydraulic hoses for pinch points and clearances. Make sure hydraulic hoses will not interfere with hitch hook-up.
5. If attachment is to be operated in reverse, make sure visibility to the rear of the power unit is appropriate for the attachment.
6. Consult your skid steer Operator’s Manual to determine if rear ballast is required. Add ballast if necessary.
7. Visually check for excessive wear, worn, damaged, cracked, or loose parts. Replace parts with genuine Kubota parts.
8. Inspect condition of hydraulic hoses, fittings, and valves before starting the skid steer. Make sure hoses are not twisted or frayed and will not get pinched, kinked, or stretched.
9. Start skid steer and check hydraulic oil leaks with a piece of paper or cardboard. **Do not** use your hands as invisible thin streams of high pressure oil can be injected into your skin. See “Avoid High Pressure Fluids Hazard” on page 3.
10. Check all controls and operating functions of the skid steer.
11. Operate the Cold Planer through its full range of movements to check for clearances. Refer to “**Check Equipment Clearances**” on this page.

Check Equipment Clearances

It is important to check equipment clearances and hydraulic hose routing before putting the Cold Planer into operation. Carefully go through the planer’s full range of motions to make sure the planer does not make contact with the skid steer frame, tires, and hydraulic hoses. Check hydraulic hoses to make sure they do not stretch, kink, or pinch.

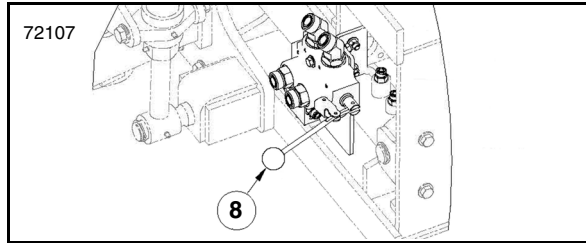


WARNING

To avoid serious injury or death:

- Use steps, grab-handles, and anti-slip surfaces on the power machine and attachment to get on and off the power machine. Using unapproved stepping surfaces and/or handholds can result in a falling hazard.
 - Check hitch fit-up frequently. An improper fit-up can result in the attachment falling from the loader hitch plate.
1. Before starting the skid steer, check hitch hook-up. The attachment can fall from the loader hitch plate if not properly connected.
 - a. Make sure loader hitch is fully seated under the Cold Planer’s top angle bar.
 - b. Make sure loader hitch plate is against the Cold Planer hitch plate.
 - c. Make sure lock handles or hydraulic locks are locked with lock pins fully seated in the bottom slots.
 2. If necessary, have someone stand nearby but at a safe distance that can motion for the operator to stop if a problem develops.
 3. With the Cold Planer on the ground, start skid steer and carefully rotate the top of the loader hitch plate fully back while watching hydraulic hoses to make sure they do not become pinched or kinked.
 4. Carefully raise loader arms up while tilting the top of the hitch fully forward to rotate the front of the Cold Planer down. Watch hydraulic hoses to make sure they do not stretch, pinch, or kink.
 5. Continue to raise loader arms fully up and tilt the loader hitch fully forward while watching to make sure the attachment does not make contact with the skid steer or skid tires. Watch hydraulic hoses to make sure they do not stretch, pinch, or kink.
 6. Rotate top of hitch plate back and lower loader arms until Cold Planer is resting on the ground.
 7. Shut skid steer down before dismounting. Refer to “**Skid Steer Shutdown Procedure**” on page 13.
 8. Recheck hydraulic hoses. If needed, add zip ties to the hoses to protect them from possible damage.

Section 2: Operating Procedures



Sideshift/Drum Toggle Lever
Figure 2-7

Basic Operation

IMPORTANT: Insufficient hydraulic power will result in poor performance. Check pressure and flow per factory skid steer specifications.

NOTE: Milling speed will depend on pick condition, age and density of the material, aggregate size, and ambient temperature.

Before operating the attachment, read this entire manual. Follow all safety guidelines in this manual and safety decals on the unit. Make sure that all guards, shields, and decals are in place and in good condition prior to operation.

See specifications in this manual for minimum and maximum pressures and flow requirements for your machine. Make sure the skid steer hydraulic pressure ratings fall within the specified range.

The Cold Planer is a hydraulically powered attachment intended for milling asphalt or light concrete surfaces. The performance of the attachment can vary greatly depending upon how it is used and operated. The recommended operation procedures in this manual should be followed at all times for maximum productivity.

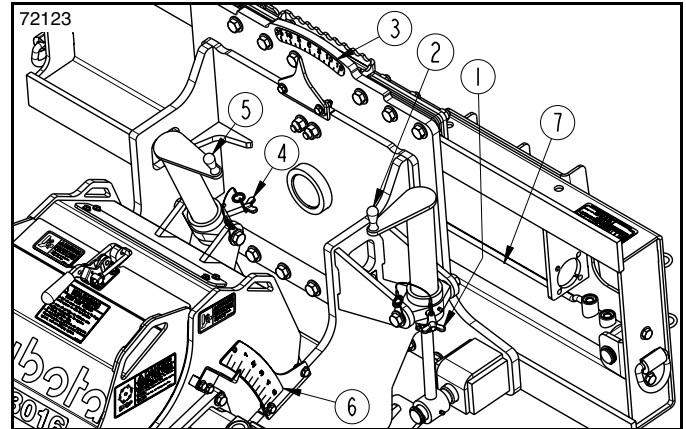
Productivity can vary greatly depending on milling depth, type of aggregate in the mix, ambient temperature, and condition of the picks.

Picks should be inspected every 30 minutes for wear and to make sure they are rotating freely in their holders. Replace worn picks immediately. To promote pick rotation, spray picks daily with a water based asphalt emulsifier to break down asphalt emulsion. (Example: Zep's part #AR6690) See the maintenance section for more information.

Optional picks for milling concrete and Water Spray Kits are available. Water Spray Kits increase productivity by suppression dust and help picks rotate properly.

If attachment is to be operated in reverse, make sure visibility to the rear of the power unit is appropriate for the attachment.

Do not turn while milling. Cut straight lines only. Cutting curves will quickly wear the picks located along the edge of the drum and decrease productivity. Milling a radius or curve can also damage the drum.



Low-Flow Cold Planers
Figure 2-8

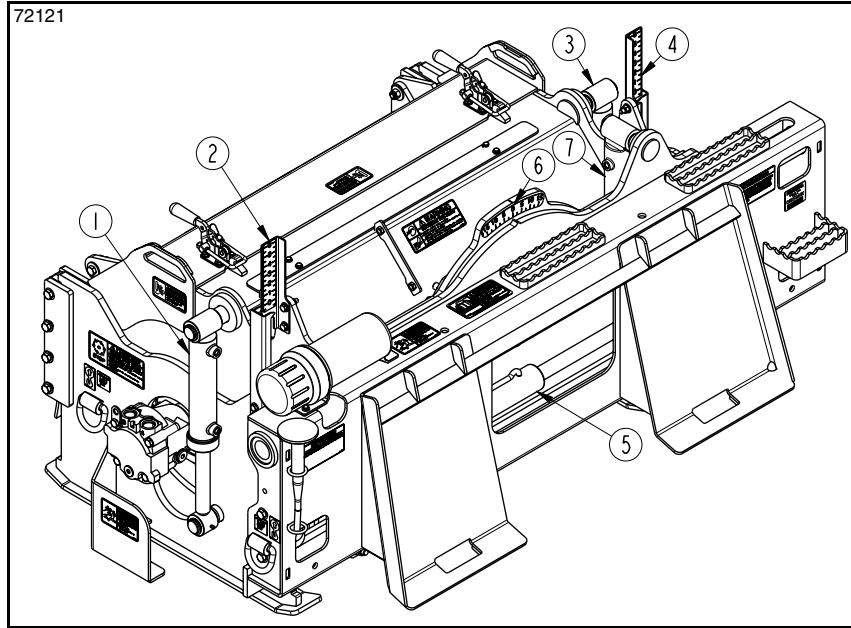
Operating Low-Flow Cold Planer

Refer to Figure 2-8:

1. Enter skid steer and fasten seat belt.
2. Make sure the area is clear of all bystanders, start skid steer, and set engine at an idle.
3. Lower loader arms fully down, tilt top of hitch plate fully back, shut skid steer down without changing hitch plate tilt. Refer to “**Skid Steer Shutdown Procedure**” on page 13.
4. Dismount skid steer to make the following adjustments:
 - a. Loosen wing screw (#1) and manually adjust tilt jack (#2) to the preferred angle using angle gauge (#3) as a guide. Tighten wing screw (#1).
 - b. Loosen wing screw (#4) and manually adjust depth jack (#5) to the preferred depth using depth gauge (#6) as a guide. Tighten wing screw (#4).
 - c. **Refer to Figure 2-7:** If sideshifting the planer, move toggle lever (#8) to sideshift position.
5. Repeat steps 1-2 above.

IMPORTANT: To prevent damaging the Cold Planer, raise the unit off the ground before sideshifting.

6. Raise Cold Planer fully off the ground and then engage hydraulic cylinder (#7) to start sideshifting.
7. Once at the desired side sift position, disengage hydraulics and shut skid steer down. See “**Skid Steer Shutdown Procedure**” on page 13.
8. **Refer to Figure 2-7:** Return toggle lever (#8) to drum operating position and repeat steps 1-2 above.
9. Raise loader arms until planer drum is off the surface. Engage hydraulics to the planer and move throttle to full rpm. Keep throttle at full rpm during milling operations.
10. Lower drum into the cut.
11. Move forward at a speed that will allow the drum to cut efficiently without stalling.



High-Flow Cold Planers
Figure 2-9

Operating High-Flow Cold Planer

Refer to Figure 2-9:

1. Enter skid steer and fasten the seat belt.
2. Make sure the area is clear of bystanders, start skid steer, and set engine at an idle.
3. Raise planer off the ground just high enough to allow for adjustments.
4. With skid steer operating at an idle, make the following adjustments using the electrical and hydraulic controls.

NOTE: It is best to begin operation by setting the depth cylinders to zero depth.

- a. Adjust planer depth on the left with cylinder (#1) while using depth gauge (#2) as a guide.
- b. Adjust planer depth on the right with cylinder (#3) while using depth gauge (#4) as a guide.
- c. Engage hydraulic cylinder (#5) to sideshift the planer.
- d. Engage hydraulics to tilt cylinder (#7). Adjust planer tilt to the preferred angle using angle gauge (#6) as a guide.

5. Raise loader arms until the Cold Planer is off the road surface.
6. Engage electrical and hydraulic controls to the drum motor.
7. Fully lower the loader arms and then roll out the bucket function until the planer is level with the pavement.
8. Move throttle to the full rpm position and keep it there during milling operations. Begin operation with the depth cylinders set to zero and then lower the drum into the cut to the desired depth.
9. Keep throttle at full rpm and move forward at a speed that will allow the drum to cut efficiently without stalling.

Transporting



WARNING

To avoid serious injury or death:

When traveling on roadways, transport in such a way that other vehicles may pass you safely. Use accessory lights, clean reflectors, and a slow moving vehicle sign that is visible from the back to warn operators in other vehicles of your presence. Always comply with all federal, state, and local laws.

1. Be sure to reduce ground speed when turning. Leave enough clearance to keep the attachment from making contact with obstacles such as buildings, trees or fences.
2. Select a safe ground speed when transporting from one area to another.
3. When traveling on public roadways, transport in such a way that faster moving vehicles may pass you safely. A slow moving vehicle sign should always be properly displayed when traveling on public roads or right-of ways.
4. Decrease transport speed when traveling over rough or hilly terrain.
5. When transporting skid steer on a trailer:
 - Use towing vehicle and trailer of adequate capacity.
 - Always drive up a ramp with heavy end uphill.
 - Shut skid steer down before dismounting. Follow “**Skid Steer Shutdown Procedure**” on page 13.
 - Secure skid steer loader and attachment using tie downs and chains.

Unhook Cold Planer

Refer to “Figure 2-1” on page 18:

1. Park skid steer with Cold Planer on a flat, level surface. Lower loader arms until Cold Planer is resting on the ground.
2. Shut skid steer down before dismounting. Follow “**Skid Steer Shutdown Procedure**” on page 13.
3. Disconnect hydraulic hoses. It will be necessary to release hydraulic pressure in the lines before hoses will disconnect from the skid steer. Coil hydraulic hoses and store them on the planer with hose ends out of the dirt.
4. Disconnect wire harness from the skid steer. Coil wire harness up and store on the planer with the plug end hanging down to keep moisture and dirt out.
5. If lock handles are mechanical, pull lock handles up on the loader hitch plate to remove lock pins from the bottom slots in the attachment’s hitch plate.
6. Return to the skid steer seat and fasten seat belt.
7. Start skid steer.
8. If lock handles are hydraulic, raise lock pins hydraulically to remove them from the hitch plate slots.
9. Tilt loader hitch plate slightly forward until the bottom of the loader hitch plate has separated away from the bottom of the Cold Planer hitch plate.
10. Slowly lower loader arms until the loader hitch plate has separated from the attachment’s top angle bars.
11. Back skid steer slowly away from the planer making sure the skid steer does not interfere with the attachment’s hitch plate, hydraulic hoses, or wire harness.

Picks (Accessory)

The factory installed carbide picks are a general purpose pick and are designed for milling both asphalt and concrete. Picks designed for extended periods of concrete milling are available from your dealer.

Water Spray Kit (Accessory)

Use Water Spray Kit provided by Kubota to increase pick life by 20% to 40% and to suppress milling dust. Water Spray Kits are available from your dealer. Order 1 Cold Planer Control Box, 1 Water Tank Kit, and 1 Spray Bar Kit that matches the Cold Planer model.

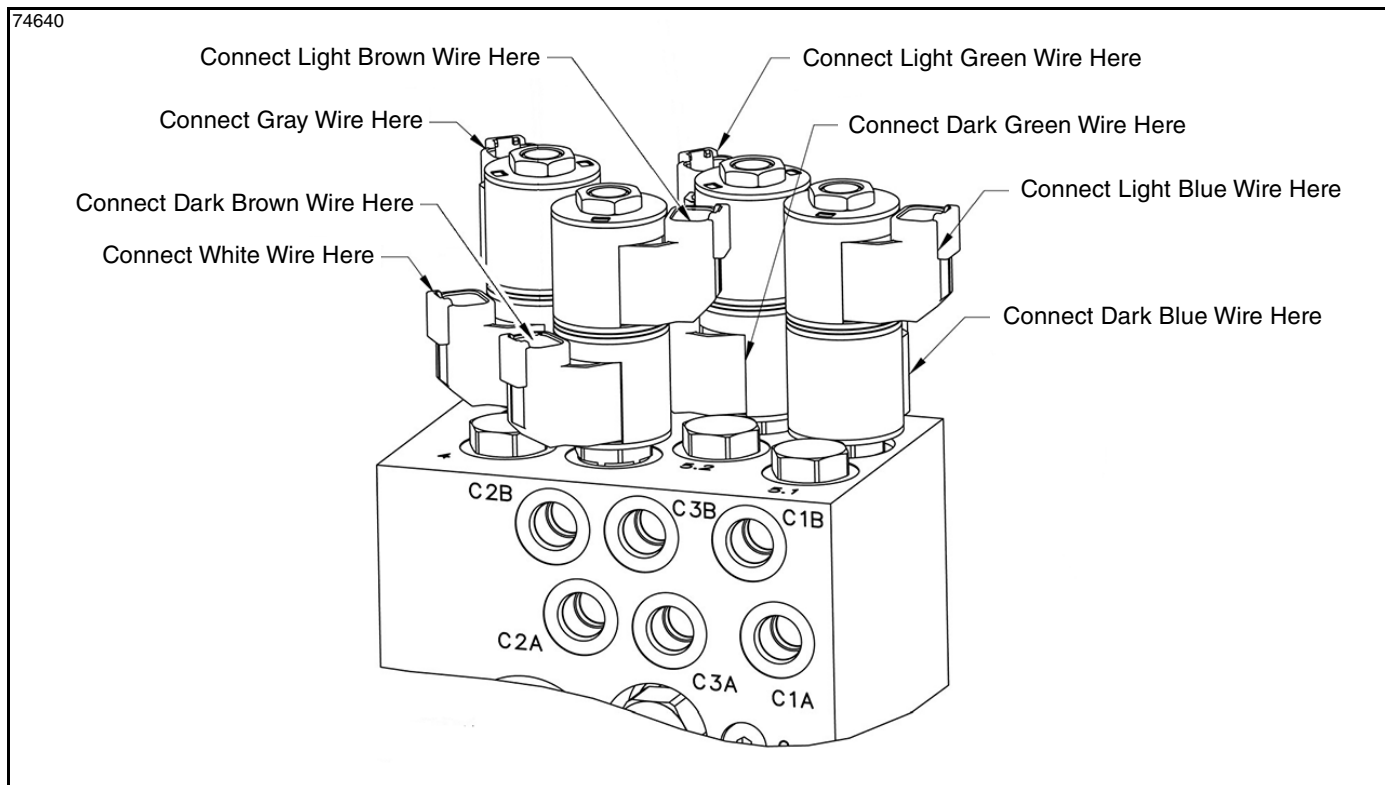
Part No.	Description	Qty
106-0831	Pick, CP30, Asphalt (See Notes 1 & 2)	
106-0832	Pick, Concrete (Accessory) See Note 1	

Note 1: Factory Installed.

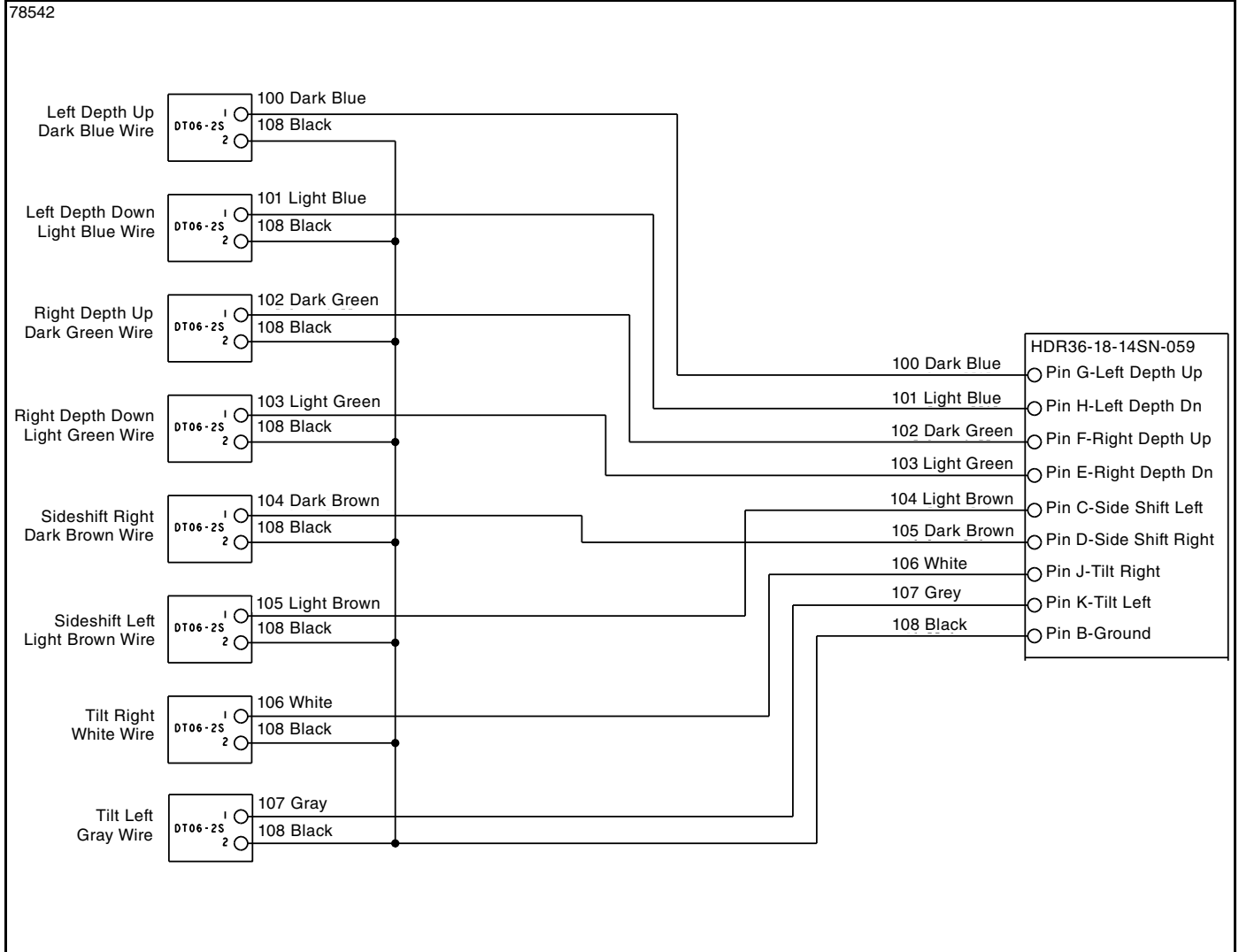
Note 2: Total quantity of picks required per drum varies from model to model. Refer to Model number and quantities listed below. See also "Specifications & Capacities" on page 36 for quantities.

- CP3012LF . . . 30 ea.
- CP3016LF . . . 38 ea.
- CP3018 46 ea.
- CP3024 56 ea.
- CP3030 66 ea.
- CP3040 82 ea.
- CP3048 94 ea.

Part No.	Description
350-438A	Cold Planer Control Box
350-378A	Water Tank Kit, CP30
350-379A	Spray Bar Kit, CP3012LF
350-380A	Spray Bar Kit, CP3016LF
350-381A	Spray Bar Kit, CP3018
350-382A	Spray Bar Kit, CP3024
350-383A	Spray Bar Kit, CP3030
350-384A	Spray Bar Kit, CP3040
350-385A	Spray Bar Kit, CP3048



High-Flow Diverter Valve #106-6540
Figure 3-1



Wire Harness #106-7096
Figure 3-2

Universal Control Box (Accessory) 350-494A

The Universal Control Box Kit is an accessory for high-flow Cold Planer models. It consists of a 4-switch control box, 12V power plug, and wire harness.

Connect Wire Harness to Diverter Valve

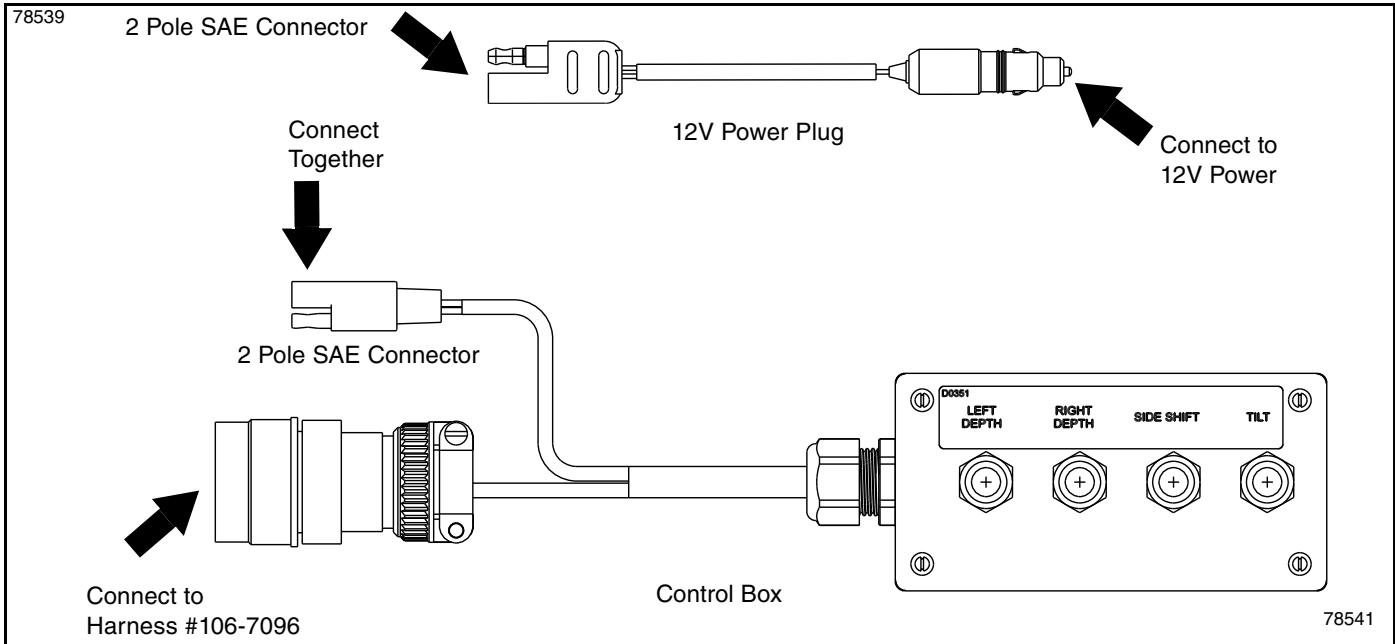
Refer to Figure 3-1 on page 26 & Figure 3-2:

1. Attach wire harness #106-7096 to the high-flow diverter valve #106-6540. Ensure the wire colors are matched with the stated color for each connector on the valve.
2. Route harness through the spring hose loop and connect it to the harness on the 4 switch control box part #106-7095.
3. Make sure harness is routed to prevent it from catching or pinching while sideshifting, tilting the drum, tilting the hitch plate, or lowering the drum fully into the cut.

Connect Control Box to 12V Power Supply

Refer to Figure 3-3 on page 28:

1. Connect the 2 Pole SAE connector on the control box to the 2 Pole SAE connector on the 12V power plug.
2. Attach the control box inside the power unit where it can be easily reached from the operator seat.
3. Connect the 12V power plug to the 12V power source.
4. Tie up any loose wires to prevent them from being pinched or caught while operating.
5. You are now ready to begin the **“Pre-Operation Inspection”** on page 22.

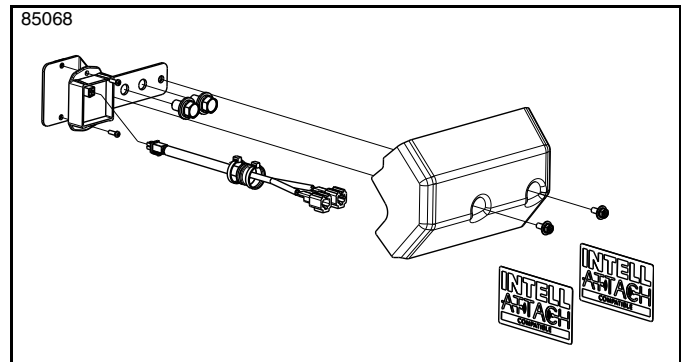


Control Box & 12V Power Plug
Figure 3-3

Intell-Attach System™

The Intell-Attach System allows the Kubota power unit with a closed cab, hydraulic hitch, high-flow, and Telematics to intelligently recognize a Kubota by Land Pride Attachment when equipped with an Intell-Attach receiver and tag. Real time feedback between the attachment and SVL 97-3 helps the operator maximize performance and speed machine set-up.

The Intell-Attach System automatically adjusts the AUX flow. This auto adjust feature prohibits high-flow when connecting to an attachment requiring standard flow.



Receiver/Cover Assembly
Figure 3-4

Receiver/Cover Assembly

Refer to Figure 3-4:

The receiver is mounted on the track loader and once programmed, the communication between the receiver and tag automatically recognizes the capabilities of the attachment and adjusts the power unit to match.

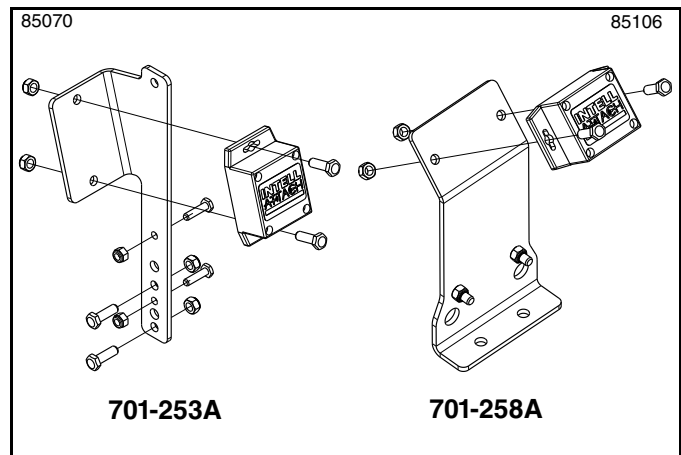
RECEIVER/COVER ASM 701-256A

Tag/Bracket Assembly

Refer to Figure 3-5:

The tag is mounted on the attachment and communicates using Bluetooth® wireless technology to communicate with the receiver on the track loader.

TAG/BACKET ASM #1 (NON LF MODELS) 701-253A
TAG/BACKET ASM #4 (LF MODELS) 701-258A



Tag/Bracket Assembly
Figure 3-5

Section 4: Maintenance & Lubrication

Maintenance

Proper servicing and adjustment are key to the long life of any attachment. With careful and systematic inspection, you can avoid costly maintenance, time, and repair.

Check all bolts after using the unit for several hours to be sure they are tight. Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Kubota dealer.



DANGER

To avoid serious injury or death:

- Do not go near or under raised loader arms without first securing loader arms in the raised position with an approved lift-arm support.
- Keep body, body extremities, clothing, pull strings, etc. away from rotating/moving parts. Always shut off hydraulics to the attachment and shutdown the power machine before adjusting or servicing the equipment.
- Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to the hydraulics is off.



WARNING

To avoid serious injury or death:

- Make sure controls are all in the neutral position or park before starting the power machine.
- Always shut power machine down using the “Shutdown Procedure” provided in this manual before servicing, adjusting, cleaning, or maintaining the attachment.
- Allow only persons to perform maintenance on this attachment who have been properly trained in the safe operation of this attachment.
- Perform scheduled maintenance. Check for loose hardware, missing parts, broken parts, structural cracks, and excessive wear. Make repairs before putting the implement back into service.
- Do not alter attachment or replace parts on the attachment with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the attachment. Replace parts only with genuine OEM parts.
- Check hydraulic hoses and fittings frequently for leaks or damage. Fluid escaping under pressure can penetrate skin. Large leaks can drop the attachment.
- Lubricate, make adjustments and repairs in a safe area away from traffic and other hazards.

- Check hitch fit-up frequently. An improper fit-up can result in the attachment falling from the loader hitch plate.
- Hydraulic fluid under high pressure will penetrate the skin or eyes causing serious injury. Wear protective gloves and safety glasses or goggles when working with hydraulics. Use a piece of cardboard or wood, rather than hands, when searching for leaks. If an accident occurs, seek immediate emergency medical care or gangrene may result. DO NOT DELAY.

Servicing Drivetrain Components

Detailed repair of the drivetrain components such as the hydraulic motor and gearbox are not covered in this manual. Contact your Kubota dealer for information about repairing these components during the warranty period.

Any unauthorized work performed on these components during the warranty period may void your warranty.

Cutting Drum Maintenance

Cutting drum maintenance is critical to extending the life of the pick, pick holder, and overall productivity of the planer.

IMPORTANT: Inspect cutting drum picks and pick holders every 30 minutes of operation.

The factory installed carbide picks are a general purpose pick and are designed for milling both asphalt and light concrete. Picks designed for extended periods of concrete cutting are available from your dealer. Refer to “**Picks (Accessory)**” on page 26.

Pick life varies with depth, density, material, aggregate, and maintenance. To maximize pick life, the picks must be free to rotate in the holder.

The pick has two functions:

- Serve as a consumable cutting tool.
- Protect the holder.

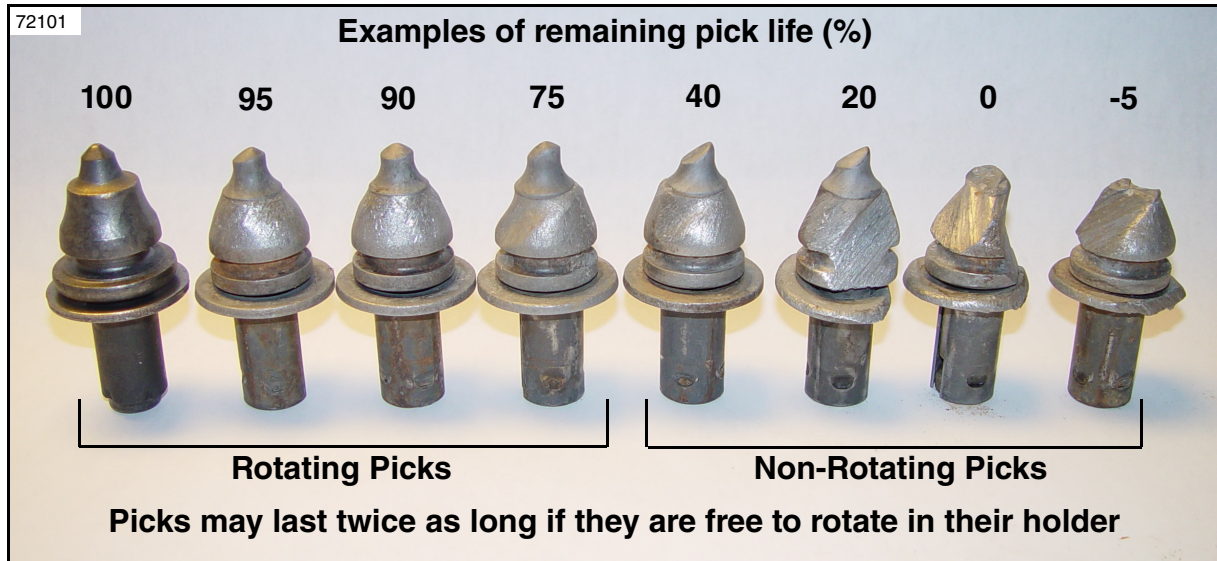
If the pick is not free to rotate in the holder or if the pick locks up in the holder, pick and pick holder wear is greatly accelerated.

Edge picks wear faster than center picks due to side loading of the drum during the power unit’s steering corrections.

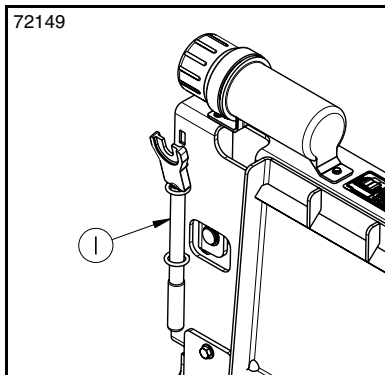
To promote pick rotation in the holder, spray picks daily with a water based asphalt emulsifier to break down asphalt emulsion. (Example: Zep’s part #AR6690)

If the pick remains in the holder beyond the intended replacement point, it reduces the cutting performance and will not protect the holder. If the picks are worn enough to indicate slight holder wear, replace pick immediately.

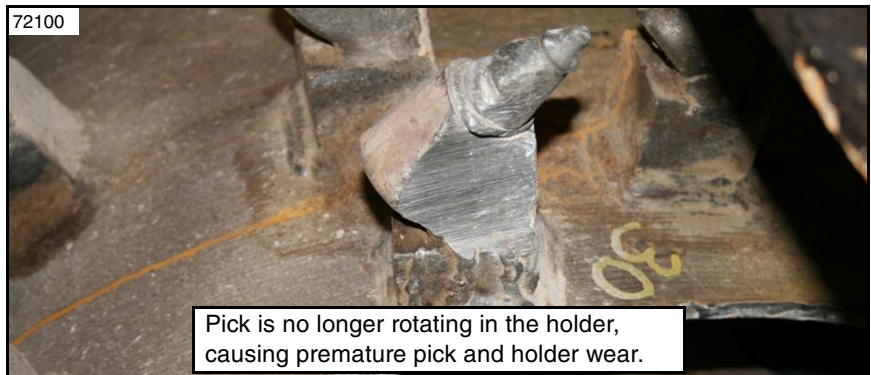
Use Water Spray Kit provided by Kubota to increase pick life by 20% to 40% and to suppress milling dust. Refer to “**Water Spray Kit (Accessory)**” on page 26.



Varying Degrees of Pick Wear
Figure 4-1



Fork Pick Tool
Figure 4-2



Results of a Non-Rotating Pick
Figure 4-3

Figure 4-1 and Figure 4-3 on page 30 show examples of excessively worn picks.

Remove & Install Picks

Refer to Figure 4-2:

WARNING

To avoid serious injury or death:

- Never strike a pick on the carbide tip. The carbide can break or chip and cause injury.
- Always wear eye protection when removing and installing picks. Carbide picks can shatter causing injury.

A fork type pick tool (#1) is included with the Cold Planer and should be used to remove picks from the holders. Insert the fork into the groove on the pick and strike the tool with a hammer. In the event the pick tool is not available, a punch can be inserted into the bottom of the pick holders and tapped on the underside of the pick to dislodge it.

For installation, the fork type tool should be inserted into

the groove on the pick and struck with a hammer. If the tool is not available, a length of pipe with a 3/4 to 1 inch inside diameter can be placed over the pick to protect the carbide pick from a direct hit. Striking a small piece of wood placed on top the pipe to absorb the shock will also help prevent damage to the pick and pick holder.

Pick Holder Repair

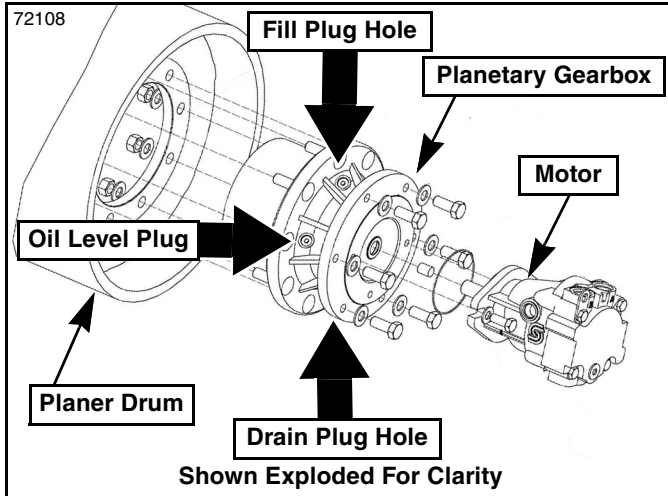
Refer to Figure 4-3:

IMPORTANT: To avoid bearing damage, always ground directly to the drum before welding.

IMPORTANT: Kubota does not warrant any ground engaging parts (drum, picks, holders, or bases) against wear, unless the wear is determined by Kubota to have been caused by a manufacturing defect.

If a pick holder becomes worn, note the position and

Section 4: Maintenance & Lubrication



angle of the holder. Cut the pick holder from the drum using a torch or air-arc. Weld the new holder to the drum in the noted position.

Change Oil In Planetary Gearbox
Figure 4-4

Planetary Gearbox Oil Change

Refer to Figure 4-4:

The planetary gearbox oil should be drained and refilled at 100 hours of operation and every 250 hours or yearly, whichever comes first, after initial oil change.

The planetary gearbox contains synthetic EP90 gear oil and should be half full during operation.

Oil drain and fill procedure:

1. Clean area around plug holes on gearbox.
2. Remove the two drain plugs on the gearbox. Rotate drum so that a plug hole is on the bottom to drain the gearbox of oil.
3. Drain oil into an approved container.
4. Rotate planer drum and gearbox until one plug hole is horizontal and the other plug hole is on top.
5. Slowly fill gearbox through the top fill hole until oil reaches the horizontal oil level hole.
6. The gearbox should be half full of AGMA EP90 synthetic gear lubricant or SAE 75W90 synthetic gear lubricant. (Chevron RPM Synthetic 75W90 for example). The approximate volume of the gearbox is 30 oz.
7. Replace the two gearbox plugs and tighten.

Long-Term Storage

Clean, inspect, service, and make necessary repairs to the Cold Planer when parking it for long periods and when parking it at the end of a working season. This will help ensure that the planer is ready for field use the next time you hook-up to it.

DANGER

To avoid serious injury or death:

Always secure equipment with solid, non-concrete supports before working under it. Never go under equipment supported by concrete blocks or hydraulics. Concrete can break, hydraulic lines can burst, and/or hydraulic controls can be actuated even when power to the hydraulics is off.

WARNING

To avoid serious injury or death:

- Always shut power machine down following the “Shutdown Procedure” provided in this manual before leaving the operator’s station.
- Do not alter attachment or replace parts on the attachment with other brands. Other brands may not fit properly or meet OEM (Original Equipment Manufacturer) specifications. They can weaken the integrity and impair the safety, function, performance, and life of the attachment. Replace parts only with genuine OEM parts.

1. Clean off any dirt and grease that may have accumulated on the Cold Planer and moving parts. Scrape compacted dirt from the drum and then wash surface thoroughly with a garden hose.
2. Check picks and pick holders for wear and replace if necessary. Check picks to make sure they rotate in the pick holders.
3. Spray picks with a water based asphalt emulsifier to break down asphalt emulsion and to promote pick rotation. (Example: Zep’s part #AR6690).
4. Inspect planer for parts out of adjustment, loose, damaged, or worn. Make required adjustments. Tighten all loose hardware. Replace damaged and worn parts as needed.
5. Repaint parts where paint is worn or scratched to prevent rust. Ask your Kubota dealer for touch-up paint. Paint is available in aerosol can, quarts, and gallon sizes. See chart below.

Touch-Up Paint	
Part No.	Part Description
821-070C	Gloss black enamel spray can
821-070CTU	Gloss black enamel bottle with brush
821-070CQT	Gloss black enamel quart
821-070CGL	Gloss black enamel gallon

6. Replace all damaged or missing decals.
7. Lubricate as noted under “**Lubrication Points**” on page 32.
8. A light coat of oil or grease may be applied to exposed cylinder rods to minimize oxidation.
9. Store Cold Planer on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer planer life.

Lubrication Legend



Multi-purpose spray lube



Multi-purpose grease lube



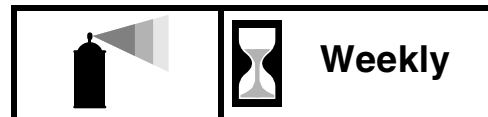
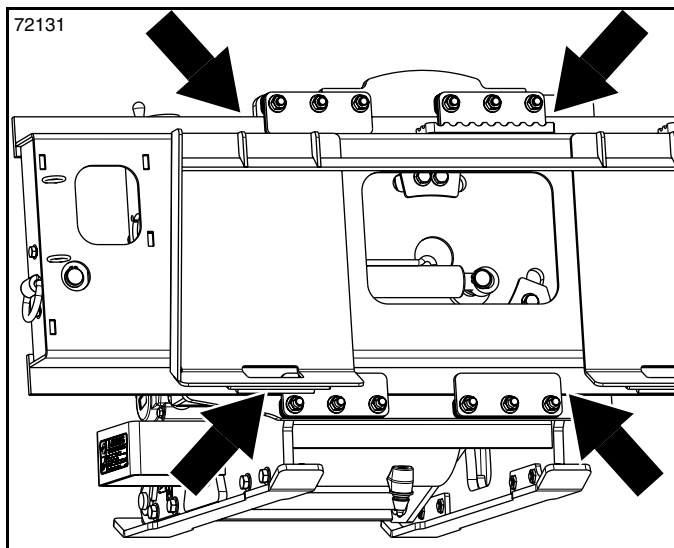
Multi-purpose oil lube



Intervals in hours at which lubrication is required

Lubrication Points

Low-Flow Cold Planer Lubrication



Sideshift Bars, Low-Flow

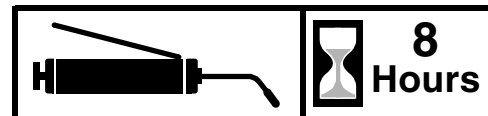
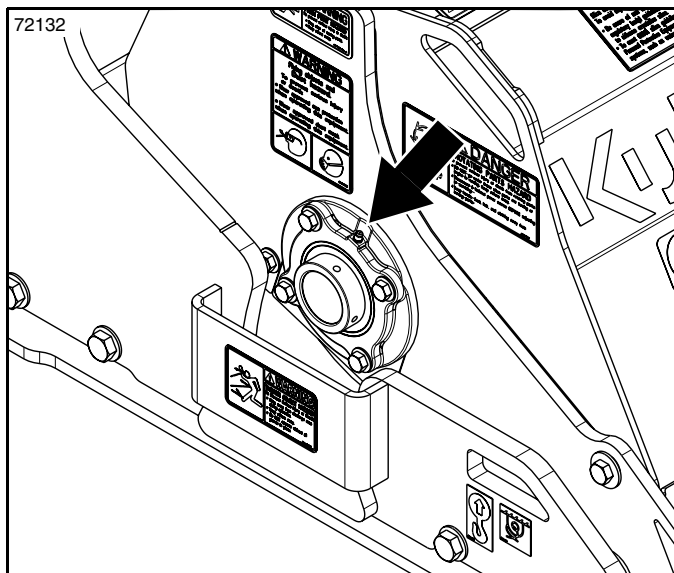
2 - Sideshift Bars (Upper and Lower)

Type of Lubrication:

Graphite lube spray such as CRC 30094

Quantity: Clean and spray sideshift bars once a week.

IMPORTANT: Do not apply grease to the sideshift bars. Grease catches milling dust and causes the sideshift mechanism to bind and wear quickly.



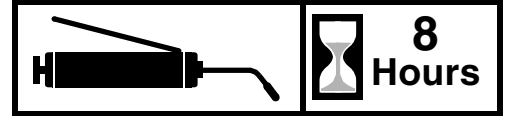
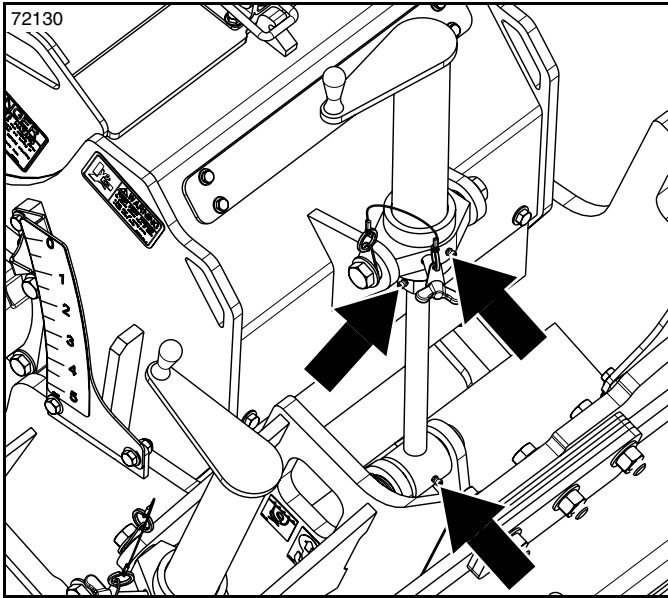
Dead Shaft Bearing, Low-Flow

1 - Zerk

Type of Lubrication:

EP Lithium NLGL No. 2 grade Grease

Quantity: Add grease until grease begins to emerge.



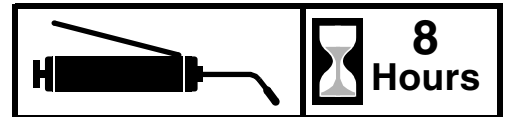
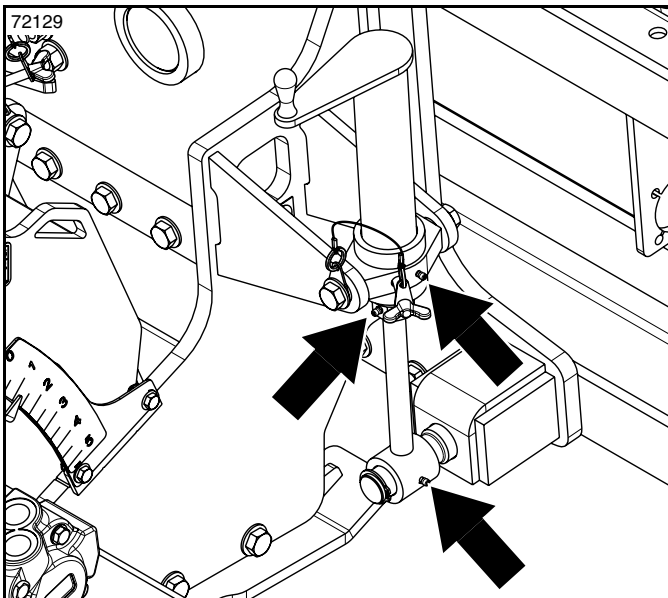
Depth Jack, Low-Flow

3- Zerks

Type of Lubrication:

EP Lithium NLGL No. 2 grade Grease

Quantity: Add grease until grease begins to emerge.



Tilt Jack, Low-Flow

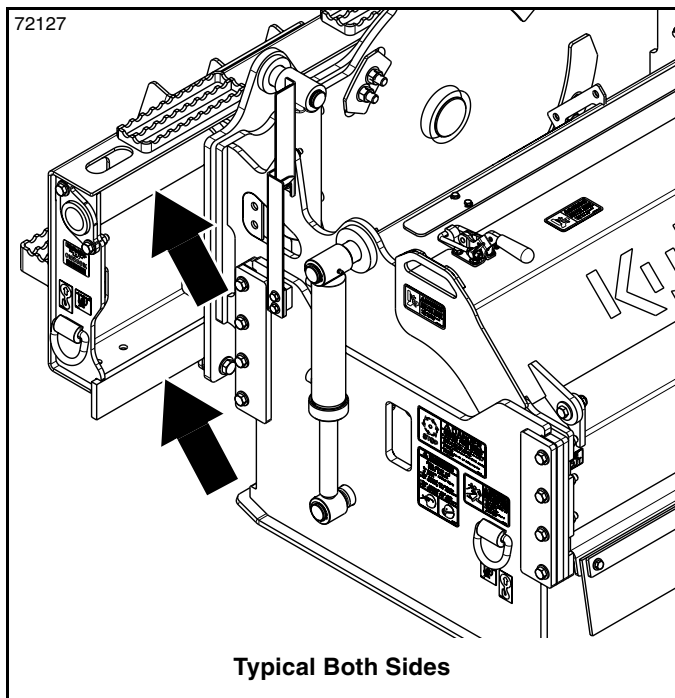
3- Zerks

Type of Lubrication:

EP Lithium NLGL No. 2 grade Grease

Quantity: Add grease until grease begins to emerge.

High-Flow Cold Planer Lubrication



		Weekly
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Sideshift Bars, High-Flow

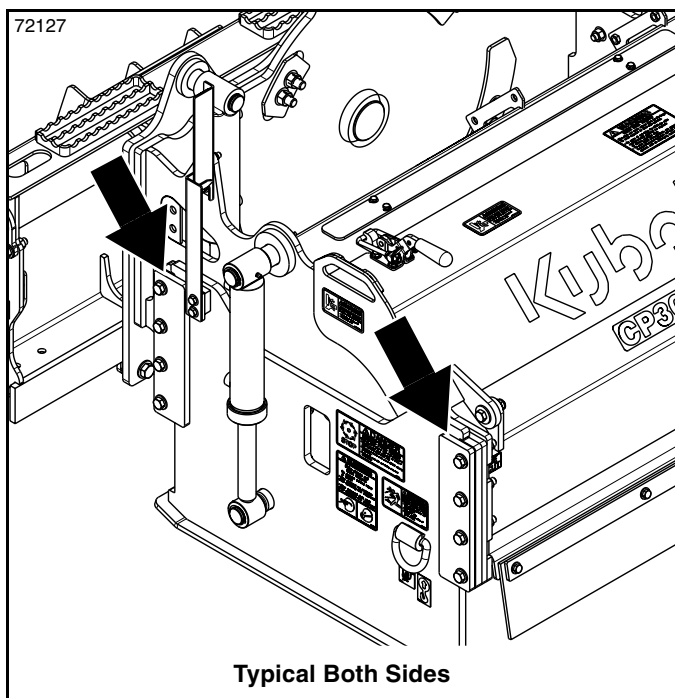
2 - Sideshift Bars (Upper and Lower)

Type of Lubrication:

Graphite lube spray such as CRC 30094

Quantity: Clean and spray sideshift bars once a week.

IMPORTANT: Do not apply grease to the sideshift bars. Grease catches milling dust and causes the sideshift mechanism to bind and wear quickly.



		Weekly
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Left & Right Depth Skids, High-Flow

4 - Retained Skid Locations

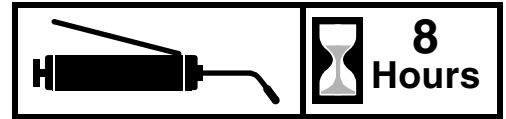
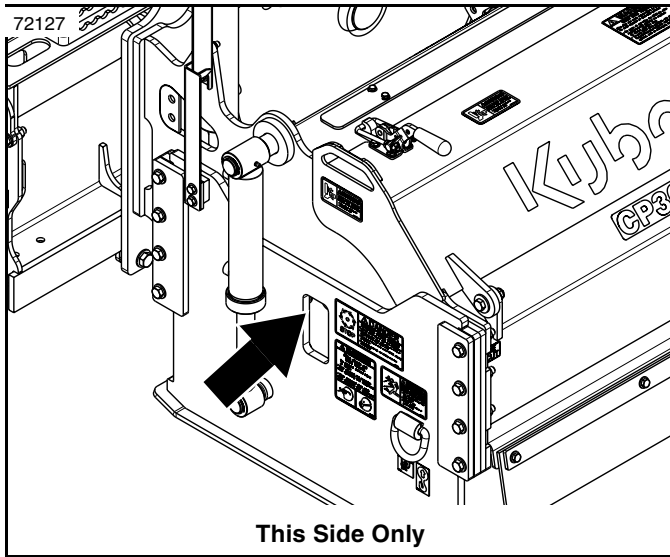
Type of Lubrication:

Graphite lube spray such as CRC 30094

Quantity: Spray deft skid bars once a week.

IMPORTANT: Do not apply grease to the depth skids. Grease catches milling dust and causes the deft skid mechanism to bind and wear quickly.

Section 4: Maintenance & Lubrication



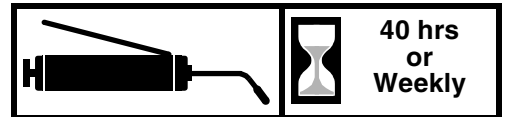
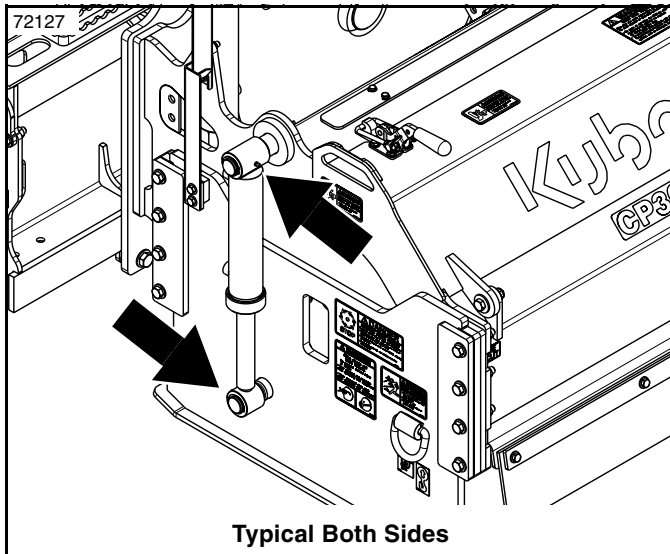
Dead Shaft Bearing, High-Flow

1 - Zerk

Type of Lubrication:

EP Lithium NLGL No. 2 Grade Grease

Quantity: Add grease until grease begins to emerge.



Depth Cylinder Pivot Pins, High-Flow

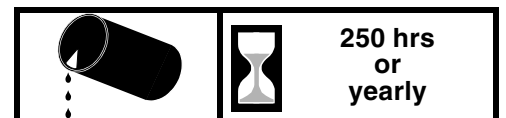
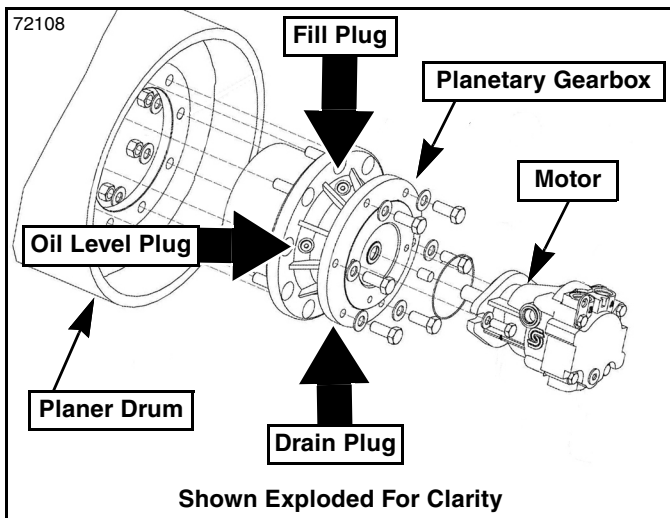
4 - Zerk

Lubricate every 40 hours of use or weekly, whichever comes first.

Type of Lubrication:

EP Lithium NLGL No. 2 Grade Grease

Quantity: Add grease until grease begins to emerge.



Planetary Gearbox, High-Flow

Type of Lubrication: Synthetic EP90 Gear Oil

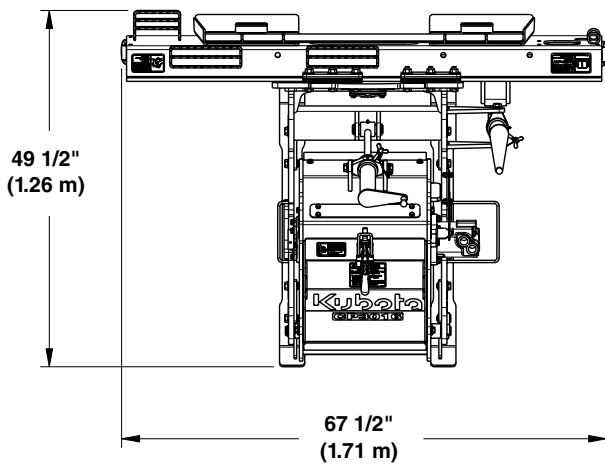
Change oil at the first 100 hours of use. Thereafter, change every 250 hours or yearly, whichever comes first.

Quantity: Fill until oil reaches oil level plug hole which is rotated to be horizontal, approximately 30 oz.

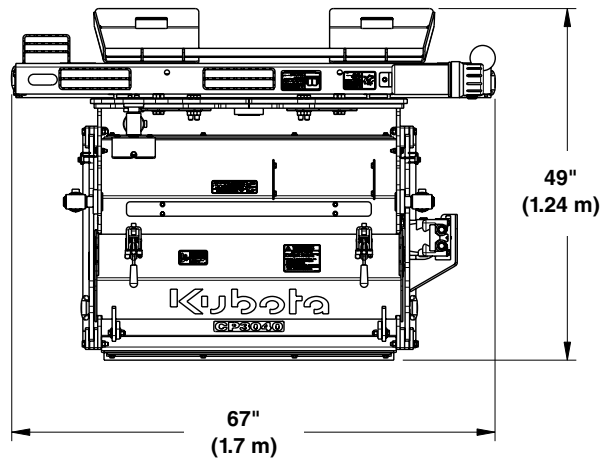
Refer to "Planetary Gearbox Oil Change" on page 31.

CP30 Series Cold Planers

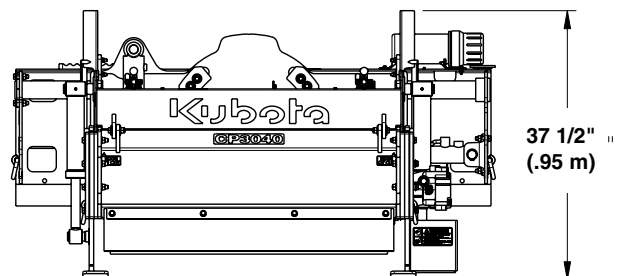
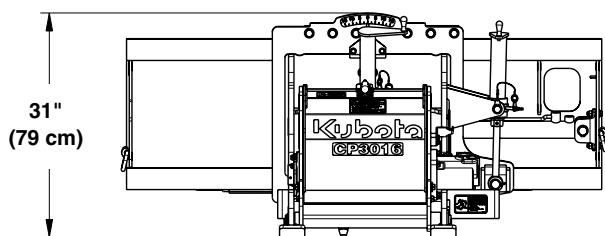
Specifications & Capacities								
Model Numbers	CP3012LF	CP3016LF	CP3018	CP3024	CP3030	CP3040	CP3048	
Cutting width	inches (cm)	12 (31)	16 (41)	18 (46)	24 (61)	30 (76)	40 (102)	48 (122)
Cutting depth	inches (cm)	0 to 5 (0 to 13)			0 to 6 (0 to 15)			
Number of picks		30	38	46	56	66	82	94
Min. hydraulic flow	gpm (Lpm)	15 (56.8)		24 (91)	27 (102)	30 (114)		
Max. hydraulic flow	gpm (Lpm)	25 (94.6)			42 (159)			
Minimum pressure	psi (MPa)	2,000 (13.8)		2,000 (13.8)	2,000 (13.8)	2,500 (17.2)	3,000 (20.7)	3,500 (24.1)
Maximum pressure	psi (MPa)	3,500 (24.1)			5,000 (34.4)			
Tilt capability	degrees	±15		±15	±13	±10	±8	±6
Sideshift travel	inches (cm)	26 (66)						
Wall clearance	inches (cm)	Not available			4 (10 cm)			
Planetary gearbox oil type		Not applicable			EP90 or SAE75W90 Synthetic Gear lubricant			
Planetary gearbox oil capacity		Not applicable			Approximately 30 oz (1 L)			
Approx. machine weight	lbs (kg)	1190 (540)	1360 (617)	1635 (742)	1805 (819)	1895 (860)	2215 (1005)	2410 (1093)



CP3012LF & CP3016LF



CP301818, CP3024, CP3030, CP3040, & CP3048



CP3012LF & CP3016LF Low-Flow Cold Planers

Features	Benefits
Removable carbide picks	Uses rocket fin technology that is built into the picks for longer life. Easy to replace.
Hydraulic sideshift	Drum engagement and sideshift are integrated into the multi-function grips of the SSV/SVL.
Manual tilt and depth adjustment	Economical and easy to adjust.

CP3018, CP3024, CP3030, CP3040, & CP3048 High-Flow Cold Planers

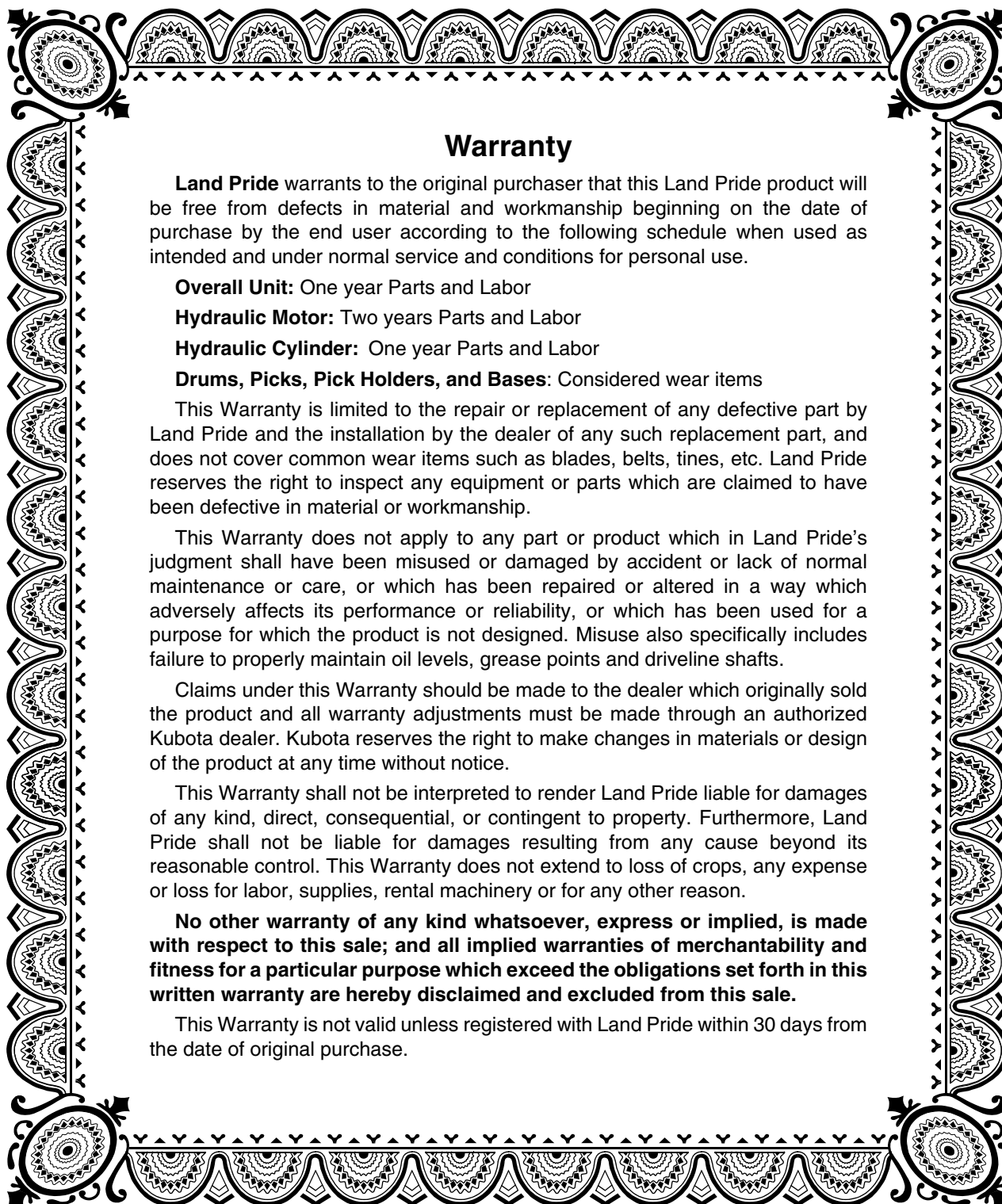
Features	Benefits
Removable carbide picks	Uses rocket fin technology that is built into the picks for longer life. Easy to replace.
Skid shoes adjust independently with hydraulic cylinders	Allows the planer to follow curb and gutter as well as the contour of the road or street.
Tilt, depth, and sideshift adjust hydraulically	All functions are integrated into the multi-function grips of the SSV/SVL.
Case drain	Protects hydraulic motor and seals.

Troubleshooting Chart

Problem	Cause	Solution
Drum does not rotate.	Auxiliary hydraulics switch for continuous operation is not engaged.	Engage auxiliary hydraulics switch for continuous operation.
	One or both of the hydraulic couplers are not fully connected.	Reconnect couplers to skid steer auxiliary hydraulic outlets.
Drum rotates backward.	Male and female hydraulic couplers are connected in reverse order.	Switch male and female couplers on hydraulic hoses and then reconnect hoses to the auxiliary hydraulic outlets.
Motor oil seal is leaking.	Return line from motor has been pinched or is collapsed.	Replace motor seal. Check motor return hose for kinks.
	Case drain line is not properly connected.	Connect case drain line to the hydraulic motor and skid steer reservoir.
Pick is wearing unevenly.	Pick is not rotating in the holder.	Spray picks daily with a water based asphalt emulsifier to break down asphalt emulsion. Example: Zep's part # AR6690
Picks do not last long.	Not inspecting picks frequently.	Inspect picks every 30 minutes of operation for sign of pick rotation and wear. Replace picks as needed. Refer to " Remove & Install Picks " on page 30.
	Picks are not kept clean.	Recommend adding a Water Spray Kit. This kit can increase tooth life by 20 to 40% and suppress milling dust.
	Picks are cutting concrete most of the time.	Replace standard asphalt picks with concrete picks.
Edge picks are wearing faster than the center picks.	Side loading on the drum during steering corrections.	Make straight cuts. Keep steering corrections to a minimum.
Pick holders are wearing.	Not inspecting pick holders frequently.	Inspect pick holders every 30 minutes of operation for wear. Replace pick holders as needed. Refer to " Pick Holder Repair " on page 30.
	Pick is not rotating in the holder.	Spray picks daily with a water based asphalt emulsifier to break down asphalt emulsion. Example: Zep's part # AR6690
	Pick is worn beyond its intended replacement point.	Replace pick if pick is worn enough to indicate slight holder wear. Replace pick holder if worn excessively.

Torque Values Chart for Common Bolt Sizes													
Bolt Size (inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi ¹	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb	mm x pitch ⁴	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	38	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 1.25	35	26	53	39	76	56
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1-1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1-1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1-1/4" - 12	750	555	1680	1240	2730	2010	¹ in-tpi = nominal thread diameter in inches-threads per inch ² N · m = newton-meters ³ ft-lb= foot pounds ⁴ mm x pitch = nominal thread diameter in millimeters x thread pitch						
1-3/8" - 6	890	655	1990	1470	3230	2380							
1-3/8" - 12	1010	745	2270	1670	3680	2710							
1-1/2" - 6	1180	870	2640	1950	4290	3160							
1-1/2" - 12	1330	980	2970	2190	4820	3560							

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.
 All locknuts or lubricated fasteners: Use 75% of torque value. (i.e. 1/2"-13 GR5 = 76 ft-lb; 75% of 76 or .75 x 76 = 57 ft-lb)



Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship beginning on the date of purchase by the end user according to the following schedule when used as intended and under normal service and conditions for personal use.

Overall Unit: One year Parts and Labor

Hydraulic Motor: Two years Parts and Labor

Hydraulic Cylinder: One year Parts and Labor

Drums, Picks, Pick Holders, and Bases: Considered wear items

This Warranty is limited to the repair or replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points and driveline shafts.

Claims under this Warranty should be made to the dealer which originally sold the product and all warranty adjustments must be made through an authorized Kubota dealer. Kubota reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Land Pride within 30 days from the date of original purchase.

IMPORTANT: The Online Warranty Registration should be completed by the dealer at the time of purchase. This information is necessary to provide you with quality customer service.

Model Number _____ **Serial Number** _____

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