

M-CPSS AS/C

Rev. 10/21/2005

ALITEC™
POWER ATTACHMENTS

COLD PLANER

CP16A

CP18A

CP24A

CP30A

CP36A

WOODS®
Tested. Proven. Unbeatable.

OPERATOR'S MANUAL

TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Woods® dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Operator's Manual are completed before releasing equipment to the owner.

The dealer must complete the Product Registration included with the Operator's Manual. The customer must sign the registration which certifies that all Dealer Check List items have been completed. The dealer is to return the prepaid postage portion to Woods, give one copy to the customer, and retain one copy. **Failure to complete and return this card does not diminish customer's warranty rights.**

TO THE OWNER:

Read this manual before operating your Woods equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer. To locate your nearest dealer, check the Dealer Locator at www.WoodsEquipment.com, or in the United States and Canada call 1-800-319-6637.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

For service, your authorized Woods dealer has trained mechanics, genuine Woods service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine Woods service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

Model: _____ **Date of Purchase:** _____

Serial Number: (see Safety Decal section for location) _____

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING**, and **DANGER** are used in conjunction with the Safety-Alert Symbol (a triangle with an exclamation mark) to indicate the degree of hazard for items of personal safety.



This Safety-Alert Symbol indicates a hazard and means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT

Indicates that failure to observe can cause damage to equipment.

NOTE

Indicates helpful information.

WOODS®

ALITEC™

BMP®

CENTRAL FABRICATORS®

GANNON®

GILL®

WAIN-ROY®

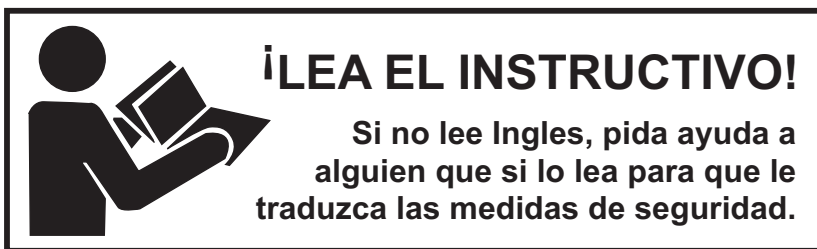
WOODS®

2 Introduction

Gen'1 (Rev. 6/6/2005)

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SPECIFICATIONS

	CP16ATD	CP18ATD	CP20ATD	CP24ATD	CP30ATD	CP36ATD
Planing Width	16"	18"	20"	24"	30"	36"
Planing Depth	0 - 6"	0 - 6"	0 - 6"	0 - 6"	0 - 6"	0 - 6"
Hyd Horsepower	30 - 60 hp	30 - 60 hp	30 - 60 hp	30 - 60 hp	30 - 60 hp	30 - 60 hp
Sideshift Capability	22"	22"	22"	22"	22"	22"
Number of Carbide Picks	50	56	62	70	77	99
Tilt Capability	±15°	±15°	±14°	±13°	±11°	±9°
Hydraulic Flow Required	25 - 40 gpm	25 - 40 gpm	25 - 40 gpm	25 - 40 gpm	30 - 42 gpm	30 - 42 gpm
Hydraulic Pressure Required	2000 - 3500 psi	2000 - 3500 psi	2000 - 3500 psi	2000 - 3500 psi	3000 - 3500 psi	3000 - 3500 psi
Operating Weight	1750 lbs	2000 lbs	2100 lbs	2300 lbs	2450 lbs	2600 lbs
Planetary Gear Oil Capacity	31 oz.	31 oz.	31 oz.	31 oz.	31 oz.	31 oz.
Planitary Lubricant			80 - 90W GL5 Gear Lube			

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your attachment. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive field experience and engineering data. Some information may be general in nature due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

The illustrations and data used in this manual were current at the time of printing but, due to possible inline production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

 **WARNING**

- **Some illustrations in this manual show the cold planer with safety shields removed to provide a better view. The cold planer should never be operated with any safety shielding removed.**

Throughout this manual, references are made to right and left direction. These are determined by standing behind the equipment facing the direction of forward travel.

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by an operator's single careless act.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, judgement, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "The best safety device is an informed, careful operator." We ask you to be that kind of operator.

INSTALLATION

- Hydraulics must be connected as instructed in this manual. Do not substitute parts, modify, or connect in any other way.
- After connecting hoses, check that all control lever positions function as instructed in the Operator's Manual. Do not put into service until control lever and equipment movements are correct.

TRAINING

- Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at www.WoodsEquipment.com, or in the United States and Canada call 1-800-848-3447.) Failure to follow instructions or safety rules can result in serious injury or death.
- If you do not understand any part of this manual and need assistance, see your dealer.
- Know your controls and how to stop engine and attachment quickly in an emergency.
- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.
- Make sure that all operating and service personnel know that if hydraulic fluid penetrates skin, it

must be surgically removed as soon as possible by a doctor familiar with this form of injury or gangrene, serious injury, or death will result. **CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.**

- Never allow children or untrained persons to operate equipment.

PREPARATION

- Check that all hardware is properly installed. Always tighten to torque chart specifications unless instructed otherwise in this manual.
- Counterweight ballast may be required for machine stability. Check your power unit manual or contact your dealer.
- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. When connecting equipment or hoses or performing any hydraulic maintenance, purge any air in hydraulic system by operating all hydraulic functions several times. Do this before putting into service or allowing anyone to approach the equipment.
- After connecting hoses, check that all control lever positions function as instructed in the Operator's Manual. Do not put into service until control lever and equipment movements are correct.
- Protective hose sleeves must cover all hydraulic hoses within 20 inches of the operator and be secured onto metal hose fittings. Replace hoses or sleeves if damaged or if protective sleeve cannot be properly positioned or secured.
- Make sure all hydraulic hoses, fittings, and valves are in good condition and not leaking before starting power unit or using equipment. Check and route hoses carefully to prevent damage. Hoses must not be twisted, bent sharply, kinked, frayed, pinched, or come into contact with any moving parts. Operate moveable components through full operational range to check clearances. Replace any damaged hoses immediately.
- Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



■ Be sure attachment is properly secured, adjusted, and in good operating condition. Coupler lockpins must be fully extended and properly engaged into attachment retaining slots.

■ Power unit must be equipped with ROPS and seat belt/operator restraint. Keep seat belt/operator restraint securely fastened/engaged. Falling off power unit can result in death from being run over or crushed. Keep ROPS systems in place at all times.

■ Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)

■ Make sure shields and guards are properly installed and in good condition. Replace if damaged.

■ Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.

OPERATION

■ Improper operation can cause the machine to tip or roll over and cause injury or death.

- Keep power unit lift arms and attachment as low as possible.
- Do not travel or turn with power unit lift arms and attachment raised.
- Turn only on level ground.
- Go up and down slopes, not across them.
- Keep the heavy end of the machine uphill.
- Do not overload the machine.

■ Never use attachment to carry loads that exceed the rated operating capacity or other specifications of the power unit. Check your power unit manual or see your dealer for rated operating capacity. Exceeding this capacity can cause machine to tip, roll over, or present other hazards that can cause injury or death.

■ Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.

■ Contact with high voltage, overhead power lines, underground cables, gas lines, and other hazards can cause serious injury or death from electrocution, explosion, or fire.

■ Keep bystanders away from equipment.

■ Never direct discharge toward people, animals, or property.

■ Do not operate or transport equipment while under the influence of alcohol or drugs.

■ Operate only in daylight or good artificial light.

■ Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.

■ Always comply with all state and local lighting and marking requirements.

■ Do not allow riders. Do not lift or carry anybody on the power unit or attachments.

■ Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt/operator restraint, place transmission in park or neutral, engage brake and ensure all other controls are disengaged before starting power unit engine.

■ Look down and to the rear and make sure area is clear before operating in reverse.

■ Use extreme care when working close to fences, ditches, other obstructions, or on hillsides.

■ Do not operate or transport on steep slopes.

■ Do not stop, start, or change directions suddenly on slopes.

■ Use extreme care and reduce ground speed on slopes and rough terrain.

■ Watch for hidden hazards on the terrain during operation.

■ Stop power unit and implement immediately upon striking an obstruction. Dismount power unit, using proper procedure. Inspect and repair any damage before resuming operation.

■ **NEVER GO UNDERNEATH EQUIPMENT.** Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Service work does not require going underneath.
- Read Operator's Manual for service instructions or have service performed by a qualified dealer.

■ Leak down or failure of mechanical or hydraulic system can cause equipment to drop.



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



- Before making any adjustments on attachment, stop engine and engage parking brake. Never adjust or work on attachment while the power unit or attachment is running.
- Before leaving operator's seat, lower lift arms and put attachment on the ground. Engage brake, stop engine, remove key, and remove seat belt.

MAINTENANCE

- Before leaving operator's seat, lower lift arms and put attachment on the ground. Engage brake, stop engine, remove key, and remove seat belt.
- **NEVER GO UNDERNEATH EQUIPMENT.** Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
 - Service work does not require going underneath.
 - Read Operator's Manual for service instructions or have service performed by a qualified dealer.
- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.
- When removing front wheel pins, be sure to support the front of the depth skid to prevent hands or feet from being crushed.
- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.
- Be sure attachment is properly secured, adjusted, and in good operating condition. Coupler lockpins must be fully extended and properly engaged into attachment retaining slots.
- Never perform service or maintenance with engine running.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- Tighten all bolts, nuts, and screws to torque chart specifications. Check that all cotter pins are installed securely to ensure equipment is in a safe condition before putting unit into service.
- Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.
- Do not disconnect hydraulic lines until all system pressure is relieved. Lower unit to ground, stop engine, and operate all hydraulic control levers.
- Leak down or failure of mechanical or hydraulic system can cause equipment to drop.

STORAGE

- Follow manual instructions for storage.
- Keep children and bystanders away from storage area.





SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



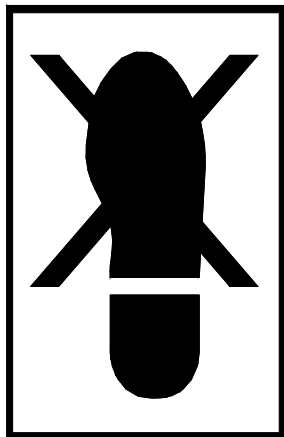
Replace Immediately If Damaged!



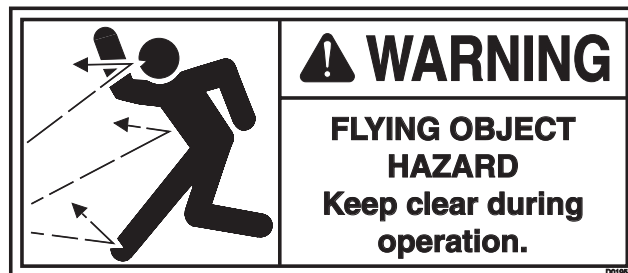
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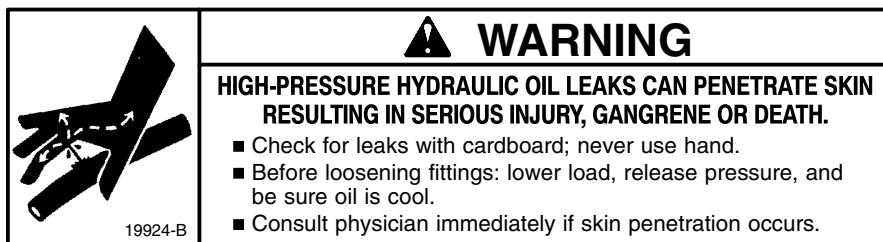
DO209



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DO192



BE CAREFUL!

Use a clean, damp cloth to clean safety decals.

Avoid spraying too close to decals when using a pressure washer; high-pressure water can enter through very small scratches or under edges of decals causing them to peel or come off.

Replacement safety decals can be ordered free from your Woods dealer. To locate your nearest dealer, check the Dealer Locator at www.WoodsEquipment.com, or in the United States and Canada call 1-800-319-6637.



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
Replace Immediately If Damaged!



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 WARNING	
	
<p>FALLING OFF CAN RESULT IN BEING RUN OVER.</p> <ul style="list-style-type: none"> ■ Skid steer must have ROPS and seat belt/operator restraint. Keep seat belt/operator restraint securely fastened. ■ Allow no riders. <p>RAISED EQUIPMENT CAN DROP AND CRUSH.</p> <ul style="list-style-type: none"> ■ Never go underneath raised equipment or raised Skid Steer lift arms, which can drop from hydraulic leak down, hydraulic system failures, movement of control levers or mechanical linkage failures. ■ Service work does not require going underneath equipment. Read manual instructions. <p>FALLING OFF OR GOING UNDERNEATH EQUIPMENT CAN RESULT IN SERIOUS INJURY OR DEATH.</p>	
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DO404

 WARNING	
	<p>TO AVOID SERIOUS INJURY OR DEATH:</p> <ul style="list-style-type: none"> ■ Read operator's manual and power unit manual before operating, servicing, or repairing attachment. Follow all safety rules and instructions. (Manuals are available from dealer or, in the United States and Canada, call 1-800-790-0557.) ■ Only operate from operator's seat with seat belt/operator restraint securely fastened. ■ Before leaving operator's seat: follow power unit manual instructions, lower lift arms and attachment to ground, stop engine, remove key, engage brake, and remove seat belt/operator restraint. ■ Allow no children or untrained persons to operate equipment.
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OPERATION

SAFETY PRECAUTIONS

Accidents are preventable with your help.

WARNING

■ Before operating this equipment, the following safety information should be read and understood. In addition, each individual working with the equipment should be familiar with the safety precautions.

Exercise extreme caution when hitching and removing the attachment, operating with other workers present, and servicing the unit.

Woods always makes operator safety a priority when designing machinery. 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 the safety decals on the machine provide important safety information and observed closely. If safety decals become difficult to read, replace them immediately (see "Safety Decals").

MANDATORY SAFETY SHUTDOWN PROCEDURE

WARNING

■ Failure to follow the procedures before cleaning, adjusting, lubricating, or servicing this unit could lead to serious injury or death.

BEFORE cleaning, adjusting, lubricating, or servicing this unit, **ALWAYS** follow the **MANDATORY SAFETY SHUTDOWN PROCEDURE**:

1. Move the skid steer loader propulsion control lever to the "neutral" position.
2. Shut off the attachment by shutting off the auxiliary hydraulic output.
3. Lower the loader lift arms completely and roll the attachment forward so it is securely resting on firm ground or the shop floor.
4. Engage the loader park brake.
5. Move the loader throttle to the slow idle position, shut the engine off, and remove the ignition key.
6. Keep the key with you at all times when working on the unit so no one can start the engine without your knowledge.

SETUP

WARNING

■ Read the entire manual as well as the decals on the attachment (see safety section) before attempting any maintenance, service, repair or setup of the unit.

Although the Alitec Attachment is supplied fully assembled, some simple checks should be performed before operation begins.

SAFETY DECALS

The safety decals existing on the attachment should be clearly readable and always followed. The location and description of the decals is shown in the exploded diagram. Copies of the decals are shown in "Safety Decals" section.

LUBRICATION

All attachment wheels as well as the sideshift bars and pivot points shown in the exploded diagram should be greased. All bearings should be greased with a high temperature bearing grease, EP-2 or equivalent.

DRUM ASSEMBLY

For proper operation, all picks or teeth must be installed in all holders.

HOSES / FITTINGS

Hydraulic fittings are used to connect all attachment hoses. All fittings should be tight and free of hydraulic leaks. Hoses must be free of crimps or cuts that might result in leakage. Check your attachment before operation to make sure all hose routing are kink-free and allow for maximum movement of all sideshift, lift/lower, and/or swing motion required during normal operation.

RETAINING RINGS

The sideshift cylinder as mounted for operation is retained with three (3) one inch external retaining rings; (6) in each depth cylinder and two (2) on the tilt cylinder.

IMPORTANT

■ The planer should not be operated at any time when any of these rings are damaged or missing.

The planer attachment is hydraulic powered and intended for use in milling asphalt or concrete surfaces. The performance of the attachment can vary greatly

depending upon how it is used and operated. Therefore, the recommended operating procedures contained within this manual should be followed at all times for maximum productivity.

As noted in the Alitec literature, the attachment requires a minimum hydraulic supply of 25 gallons per minute (90 liters per minute) at 2000psi.

IMPORTANT

- **Insufficient hydraulic power will result in poor performance.**

In attaching the planer to the skid steer, ensure that all hydraulic hoses are coupled securely to the quick couplers - 3 hoses (motor pressure, return, and casedrain).

IMPORTANT

- **Casedrain must be attached and hose pressure must not exceed 15psi. Motor seal failure will occur if the casedrain is not attached, if the hose is crimped, or if hose pressure is excessive. All hoses should be free of kinks, cuts, or abrasions for safe operation.**

When using a quick attachment hookup to the skid steer, the locking pins on the loader arms should always be engaged and secured.

WARNING

- **Never open the hinge drum access cover used for drum access during operation. The two klik pins (see exploded diagram) should be checked to make sure they are securely fastened before beginning operation.**

When engaging the hydraulic power to the attachment, the drum should **not** be in contact with the surface to be planed. Free rotation is required to prevent excess pressure spikes upon startup. As is always the case, the operator must always be seated in the host vehicle upon startup.

Engage the hydraulic power and lower the planer slowly. Actuate the bucket cylinder function for rollout until the planer wheels come in contact with the planing surface. Then set to desired depth. Before advancing the host vehicle, allow the planer to operate until it reaches the desired planing depth.

IMPORTANT

- **For proper operation, the majority of the weight of the front of the skid steer should be placed upon the planer with the loader arms fully lowered. The transfer of skidsteer weight to the attachment results in smoother, faster planing. The loader**

arms should never be placed in the float condition; because, excessive vibration will result.

With the rear gauge wheel(s) set for acceptable planing depth, the bucket function should be used for lifting or lowering during operation.

The drum rotation will stall when the load on the planer is too high. This is most likely the result of excessive ground speed. The hydraulic reliefs on board the skid steer are designed to prevent damage to the hydraulic system by diverting all flow from the planer motor. If this occurs, stop or slightly reverse the forward drive of the skid steer and slowly move forward.

IMPORTANT

- **The bucket cylinder function should never be used to stop operation due to the existence of secondary reliefs on some skid steer bucket cylinders.**

For maximum productivity, the planer should always be operated at full engine throttle to ensure that full hydraulic horsepower is available to the cutting drum.

Side Shift Operation

The two sideshift hoses, when connected to the auxiliary hydraulics of the skid steer, provide hydraulic power necessary for sideshift operation. By actuating the auxiliary circuit, the planer will shift on sideshift rod.

Hydraulic Tilt

To operate the hydraulic tilt, set the options toggle switch located at the operator's control panel to 'tilt', and actuate the auxiliary circuit.

Hydraulic Depth Control

To operate the hydraulic depth control, set the options toggle switch to 'depth' and actuate the auxiliary circuit to achieve the desired depth.

IMPORTANT

- **All function adjustments must be done with high flow hydraulics engaged.**

Transporting

Roll the skid steer arms fully back and raise the planer 12 to 15" off the ground. Avoid excessive ground speed and sudden maneuvers.

IMPORTANT

- **When transporting attachment make sure the drum does not contact the ground as this may cause the drum to turn resulting in damage to the motor.**

MAINTENANCE

Proper maintenance of the attachment will result in longer life and the most productive and cost effective operation. There are two basic categories of maintenance required, pick/holder replacement and component lubrication. For proper operation, the picks should be checked every four (4) hours and lubricated daily to ensure that they can freely rotate in their holders.

Pick/Holder Replacement

As regular use takes place, normal wear of the carbide picks will occur with the outer most picks wearing first. The pick tool included with the planer should be used to remove the picks from the cast holders. In the event the pick tool is not available, any hardened punch or tool allowing access to the bottom of the holders can be used.

IMPORTANT

- **Welder must be grounded directly to drum during pick holder replacement or SEVERE BEARING DAMAGE WILL RESULT.**



- **Never drive the pick in by striking it directly on the end as this can cause the pick to chip and cause injury or create small stress fractures in the pick resulting in premature wear.**

A length of pipe with a 3/4-1 inch inside diameter can be placed over the pick to protect it from a direct hit. Striking a small piece of wood placed on the pick to absorb the shock will prevent damage.



- **Always wear safety glasses when performing this operation. Hardened tools and picks can shatter causing injury.**

The factory installed carbide pick chosen for use is a general purpose asphalt/concrete pick as the Cold Planer is designed for both asphalt and concrete planing applications. For replacement of multi-purpose picks always specify Alitec B1050S picks from your local dealer. If the planer is to be used specifically for concrete, a special concrete pick is available. Specify B1050C.

IMPORTANT

- **To prevent the picks from seizing in the holders, the picks should be sprayed with diesel fuel at the end of each day. This will break down the asphalt build-up in the holders and prevent premature wear by allowing the picks to rotate in the holders. Excess diesel fuel should be caught in a collection pan and properly disposed.**

Lubrication

Lubricate the grease points daily on all planer wheels as well as the drum bearings. All bearings should be greased with a high temperature bearing grease, EP-2 or equivalent.

The lubricant in the gear case of the planetary must be changed within the first 50 hours of operation. After that, the lubricant need only be changed once per year or every 1000 hours whichever occurs first.

IMPORTANT

- **Type of lubricant should be 80-90W gear lube, with an EP (extreme pressure) rating of GL-5 minimum. Thirty-one (31) ounces is required for each change.**

The lubricant can be changed by removing the drain plug located on the planetary gear box flange between the chassis and the drum. Rotate the drum until the plug is at its lowest position and remove the plug (it may be necessary to temporarily remove the drive motor to allow the drum to rotate). Allow lubricant to drain. Rotate drum until the drain hole is aligned with the inspection hole in the side of the chassis. Refill gear case with thirty-one (31) ounces EP-90 gear lubricant. Reinstall drain plug. Reinstall drive motor if it was removed.

CLEANING

After Each Use

- Remove large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Inspect machine and replace worn or damaged parts.
- Replace any safety decals that are missing or not readable.

Periodically or Before Extended Storage

- Clean large debris such as clumps of dirt, grass, crop residue, etc. from machine.

- Remove the remainder using a low-pressure water spray.
 1. Be careful when spraying near scratched or torn safety decals or near edges of decals as water spray can peel decal off surface.
 2. Be careful when spraying near chipped or scratched paint as water spray can lift paint.
 3. If a pressure washer is used, follow the advice of the pressure washer manufacturer.
- Inspect machine and replace worn or damaged parts.
- Sand down scratches and the edges of areas of missing paint and coat with Woods spray paint of matching color (purchase from your Woods dealer).
- Replace any safety decals that are missing or not readable (supplied free by your Woods dealer). See Safety Decals section for location drawing.

SERVICE

WARNING

- **BEFORE SERVICING THIS UNIT, THE MANDATORY SAFETY SHUTDOWN PROCEDURE MUST BE COMPLETED. SEE "SAFETY" SECTION.**

DRUM REMOVAL

1. With the attachment resting on a hard, flat surface, loosen the two set screws which fix the inner bearing race to the dead shaft.
2. Remove the dead shaft by removing the three bolts and nuts and pulling the dead shaft from the bearing and out of the planer head.
3. Remove the drive motor assembly by removing the two mounting bolts.
4. Remove the planetary mounting bolts.
5. Return to the skid steer operator's seat and check to see that all personnel are clear of the work area. Insert the key in the ignition and start the skid steer.
6. Sideshift the planer head slightly to the left (from the operator's viewpoint) to remove the planetary pilot from the planer head.
7. Raise the attachment with the host vehicle and the drum should remain on the floor.
8. Shut the engine off and remove the ignition key.

WARNING

- **If drum does not remain on floor, lower the planer, shut the engine off, remove the ignition key and review steps 1 through 4. Do not attempt to dislodge the drum while the planer frame is in the raised position. Never place hands or any part of your body in, around, or under the drum as it may fall causing serious injury.**

WARNING

- **Use extreme caution during this operation to prevent planetary from tipping and falling.**

PLANETARY REMOVAL

1. Remove the drum from the attachment as described on the previous page.
2. Fully support the planetary with hoist and remove the planetary flange mounting nuts.
3. Slide the planetary from the drum with a hoist or similar device rated for more than 250 lbs. capacity (550 kg.).

SIDESHIFT CYLINDER REMOVAL

1. Complete the Mandatory Safety Shutdown Procedure.
2. With the attachment on a level surface, remove all three one inch retaining rings from cylinder mounting pins.
3. Pull the cylinder evenly from both mounting pins. Remove the pin on the left-hand side and slide the rod end off the backplate.

IMPORTANT

- **Remove any residual pressure in the cylinder by cycling the loader auxiliary control from side to side with the skid steer engine off.**

SIDESHIFT FRAME REMOVAL

1. Disconnect the drive motor hoses.
2. Remove sideshift cylinder as described above.
3. Remove three backplate clamp nuts and bolts and main pivot retaining ring.
4. Attach the planer to the skid steer and slowly separate the sideshift frame from the chassis.

FULL WIDTH SIDESHIFT FRAME

Motor Removal

1. Remove and cap the motor hoses (1) shown in Figure 1.

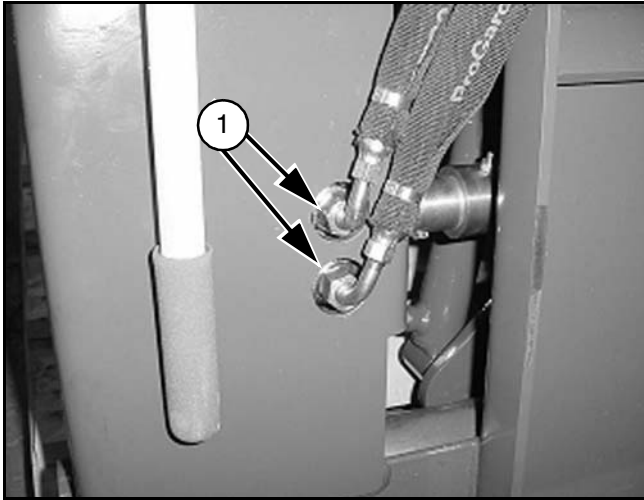


Figure 1

2. Remove 1/4" cross bolt (2) as shown in Figure 2.

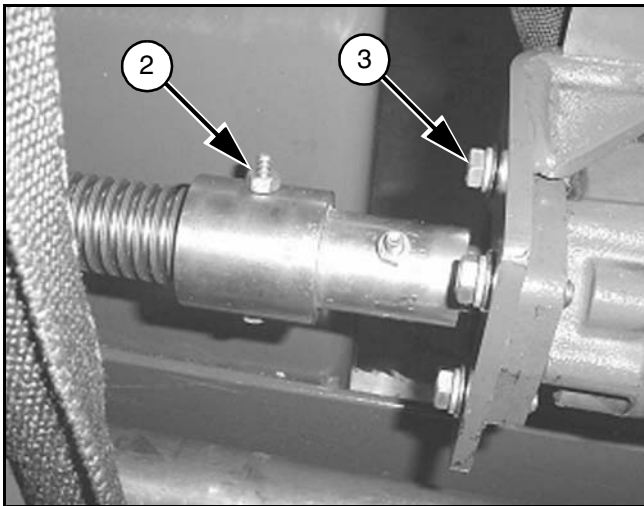


Figure 2

3. Remove four 3/8" motor bolts (3).
4. Remove the motor.

Bearing Removal

1. Perform steps 1 through 4 of **Motor Removal**.
2. Loosen the setscrews (1) as shown in Figure 3.

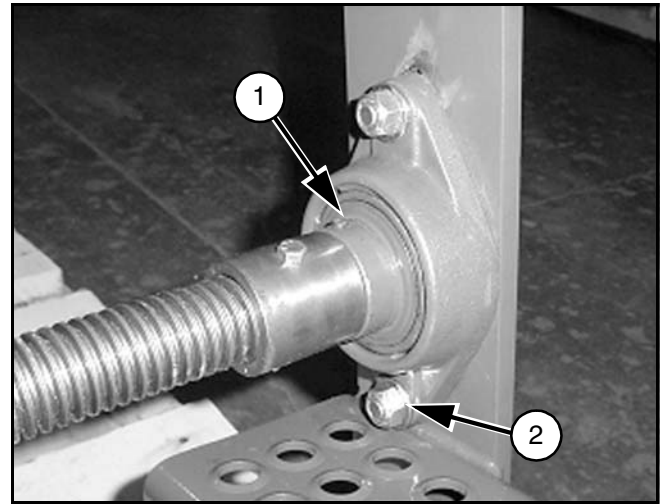


Figure 3

3. Slide shaft towards the motor side of the attach frame until the bearing side coupler clears the bearing.
4. Remove two 1/2" bolts (2).

ACME SCREW REPLACEMENT

1. Perform steps 1 through 4 of **Motor Removal** and steps 2 through 4 of **Bearing Removal**.
2. Remove 1/4" bolts (1) and (2) as shown in Figures 4 and 5.

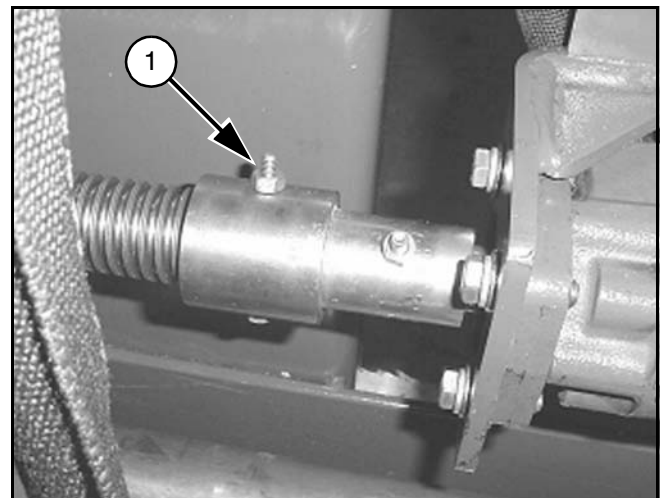


Figure 4

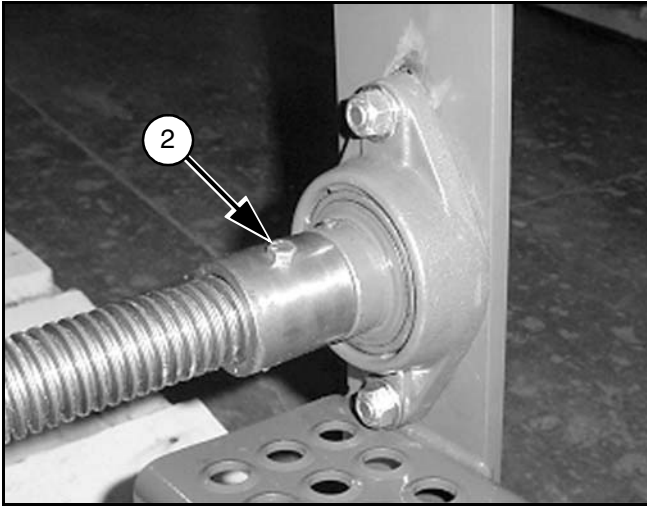


Figure 5

3. Slide couplers off the acme screw.
4. Manually turn the acme screw to back it out of the bearing side of the sideshift frame.

ACME NUT REPLACEMENT

1. Perform steps 1 through 3 of **Acme Screw Replacement**.
2. Remove three 3/8" bolts (1) as shown in Figure 6.

3. Place the nut flange in a vice and use a pipe wrench to remove the nut from the flange.

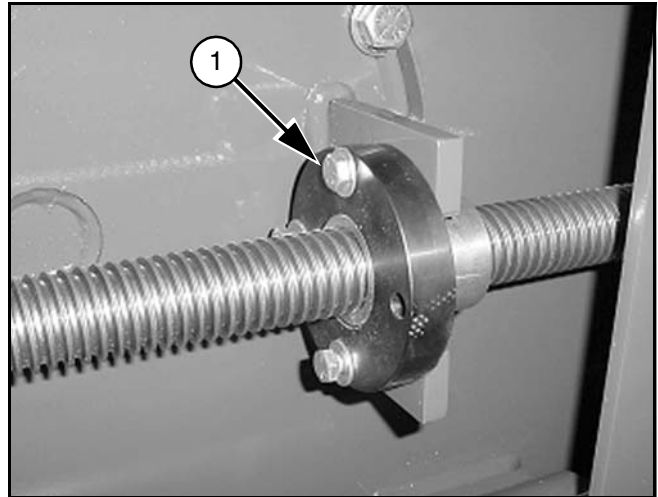


Figure 6

STORAGE

IMPORTANT

- The cold planer is shipped with hoses. Unconnected hose ends should either be capped or have quick disconnect fittings installed to prevent loss of fluids or contamination.
- Keep children and bystanders away from storage area.

DEALER CHECK LISTS

PRE-DELIVERY CHECK LIST

(Dealer's Responsibility)

Inspect the equipment thoroughly prior to delivery to ensure it is set up properly before delivering it to the customer.

The following check lists are a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Check all bolts to be sure they are properly torqued.
- ___ Check that all cotter pins and safety pins are properly installed. Replace if damaged.
- ___ Check and grease all lubrication points.

DELIVERY CHECK LIST

(Dealer's Responsibility)

- ___ Show customer how to make adjustments.
- ___ Point out the safety decals. Explain their meaning and the need to keep them in place and in good condition. Emphasize the increased safety hazards when instructions are not followed.
- ___ Instruct customer how to lubricate and explain the importance of lubrication.
- ___ Present Operator's Manual and request that customer and all operators read it before operating equipment. Point out the manual safety rules, explain their meanings and emphasize the increased safety hazards that exist when safety rules are not followed.

TROUBLESHOOTING CHART

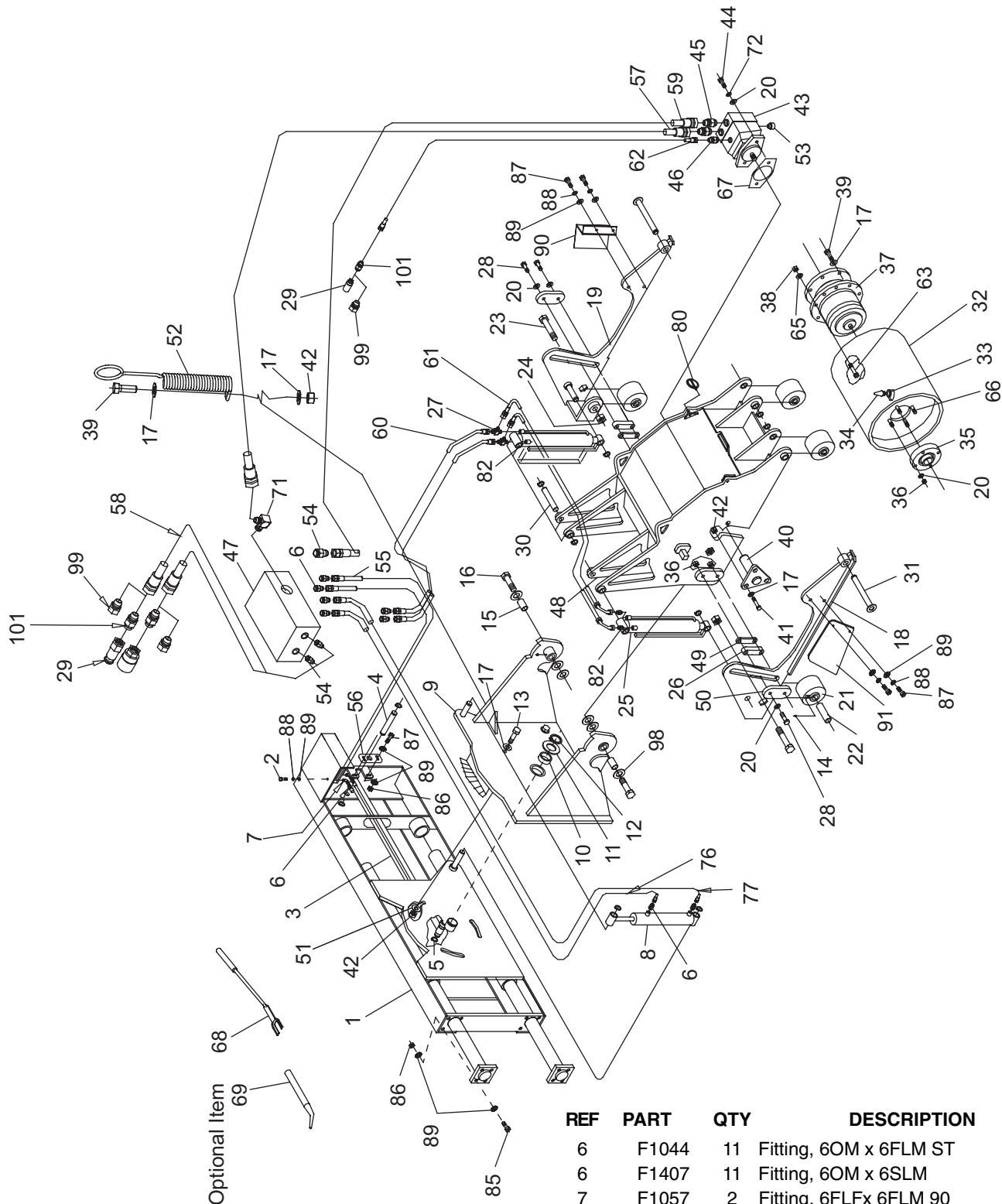
PROBLEM	POSSIBLE CAUSE	SOLUTION
Planer loses power	Relief setting in auxiliary system lower than standard 2400 psi or Loader circuit pump or auxiliary pump failure	Remove/clean, or replace solenoid cartridge or replace O-rings. Check reliefs in the following sequence- loader valve, standard auxiliary valve. Reset or replace any relief below 2200psi. The flow should be no less than 25 gpm. If pump output is 20% less than rated pump specification, the pump may require repair. Consult loader service manual.
Tilt function is jumpy and erratic.	Tilt clamp bolts set too tight or rusted plate.	Loosen tilt clamp bolts to provide .015 clearance or grease between plates.
Planer drive motor leaks at shaft seal	Excess motor case drain pressure	The maximum case drain pressure allowed is 25 psi at full engine throttle. Replace shaft seal.
No functions work	No power to controller	Check fuse and power lead connections.
One function doesn't work	Check power to coil	If coil has power and pulls, cartridge is defective; replace cartridge. If coil doesn't pull, check for power to coil or replace coil.
Bearing failure of motor or output bearing.	Improper lubrication of bearing. Pick holder replacement-welder not grounded through drum.	Re-grease outboard bearing each 4-8 hours. During holder replacement, ground welder directly to drum (see Maintenance section).

PARTS INDEX

Cold Planer for Single Circuit Valve "A" Series Skid Steer

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CPA SINGLE CIRCUIT PLANER



REF	PART	QTY	DESCRIPTION
1	----	1	Attach frame
2	839	2	3/8 NC x 1 HHCS GR5 ZP
3	C2201	1	Cylinder, hyd 2 x 22 without depth
4	104027	1	Pin, 1 x 6 x 5.25
5	M0003	13	Retaining ring, 1" external HD

REF	PART	QTY	DESCRIPTION
6	F1044	11	Fitting, 6OM x 6FLM ST
6	F1407	11	Fitting, 6OM x 6SLM
7	F1057	2	Fitting, 6FLFx 6FLM 90
7	F1387	2	Fitting, 6SLF x 6SLM 90
8	C0801	1	Cylinder, hydraulic 1.5 x 8
9	101699	1	Backplate weld, CP16A
9	101700-1	1	Backplate weld, CP18A
9	101702	1	Backplate weld, CP24A
9	102978	1	Backplate weld, CP30A
9	105575	1	Backplate weld, CP36A

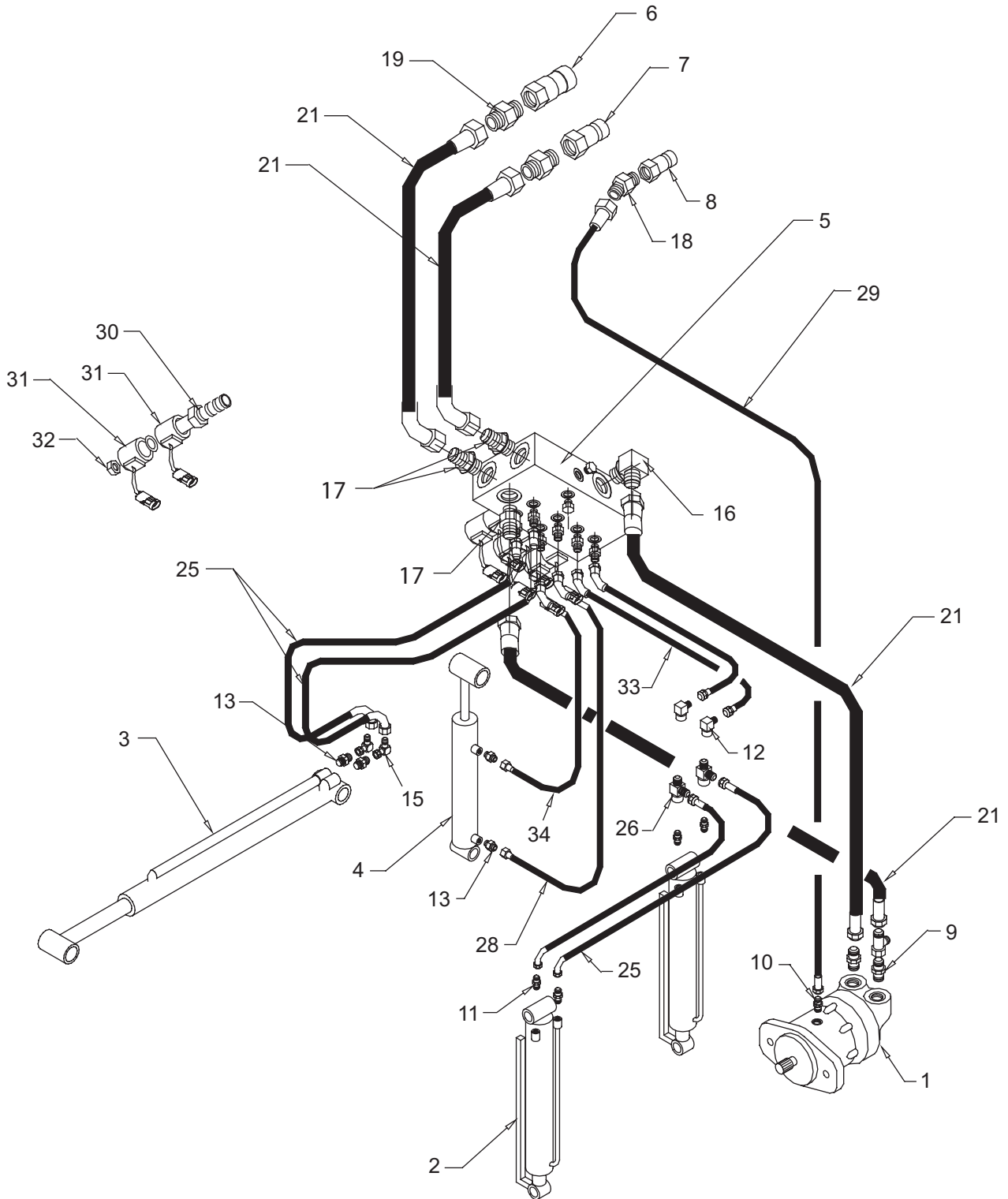
20 Parts

CPA SINGLE CIRCUIT PLANER PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
10	100601	1	2 x 2.5 x 5/8 Bushing	50	101479	2	Plate, retainer skid CPA/MP
11	B3221	1	Washer, 2 flat GR8 plated	51	B1020	3	Washer, 5/8 flat uss plt hrd
12	M0042	1	Retaining ring, 2" ext plt	52	100913	1	Spring,hose support
13	11854	3	5/8 NC x 2-1/2 HHCS GR8 ZP	53	F1139	1	Plug, 6OM fitting sockethead
14	M0114	2	Zerk, grease 1/4 - 28 ST	54	F1006	3	Fitting, 12OM x 12FLM ST
15	BB044	2	Bushing, 1.00 x 1.25 x 2.44	54	F1289	3	Fitting, 12OM x 12SLM ST
16	21594	2	1 NC x 4 HHCS GR8 ZP	55	H1159	2	Hose #4 x 20" 6FLF x 6FLF 90
17	B1021	14	Washer, 5/8 flat SAE plt hrd	55	H1398	2	Hose #4 x 22.5" 6SLF 90 x 6SLF
18	100708	1	Skid assembly, deadshaft side	56	105697	1	Plate, SS cylinder adapter
19	100712	1	Skid assembly, motor side cpa	57	H1233	1	Hose #12 x 61" 12FLF 90 x 12FLF 3000P
20	57816	10	Washer, 1/2 SAE flat hardened	57	H1605	1	Hose #12 x 54" 12SLF 90 x 12SLF 2400P
21	100604	4	Wheel assembly, cast new design	58	H1233	2	Hose #12 x 61" 12FLF 90 x 12FLF 3000P
22	101218	4	Bushing, wheel 1.03 x 1.25 x 3.7	58	H1464	2	Hose #12 x 61" 12SLF 90 x 12SLF 2400P
23	B1609	2	Bolt, 1 x 7 - 8 GR5 plated	59	H1233	1	Hose #12 x 61" 12FLF 90 x 12FLF 3000P
24	34279	2	Lock nut 1 NC	60	H1222	2	Hose #4 x 67" 6FLF x 6FLF 90 R1
25	101053	2	Depth cyl weld hyd 15 x 12	60	H1461	2	Hose #4 x 67" 6SLF 90 x 6SLF R1
26	101747	2	Plate, spacer skid cpa/mp 5/16	61	H1159	2	Hose #4 x 20" 6FLF x 6FLF 90 R1
27	F1158	2	Fitting, 6FLM x 6FLF x 6FLM	61	H1398	2	Hose #4 x 22.5" 6SLF 90 x 6SLF R1
27	F1506	2	Fitting, 6SLM x 6SLF x 6SLM	61	H1229	2	Hose #4 x 27" 6FLF 90 x 6FLF R1
28	B0819	4	Bolt, 1/2 x 2-1/4 - 20 plt GR8	61	H1601	2	Hose #4 x 28" 6SLF 90 x 6SLF R1
29	-----	5	QD Fitting	61	H1183	2	Hose #4 x 36" 6FLF x 6 FLF 90 R1
30	T1018-1	2	Pin, 1 x 5.62 x SR 5.00	62	H1224	1	Hose #6 x 80" 6FLF x 6FLF R1
31	100709	2	Pin weld 1 x 8.31 SR 7.8	62	H1414	1	Hose #6 x 76" 6 SLF x 6SLF R1
32	P0276	1	Drum weld, CP16A 50 holders	63	M0005	9	Stud, 9/16 x 2 9/16 - 18 plntry
32	P0277	1	Drum weld, CP18A 56 holders	65	B0920		Washer, 9/16 flat SAE plt hrd
32	P0279	1	Drum weld, CP24A 70 holders	66	M0006		Stud, 1/2 x 2 3/16 UNF
32	102984	1	Drum weld, CP30A 85 holders	67	M0009		Gasket, 2 bolt B flange SAE
32	105581	1	Drum weld, CP36A 99 holders	68	M0007		Pick tool, standard
33	P0313	-	Pick holder	69	M0048		Pick tool, KHP-2
34	B1050A	-	Pick, asphalt kennamental RS01	71	F1001		Fitting, 12OM x 12FLM 90
34	B1050C	-	Pick, concrete	72	F1293		Fitting, 12OM x 12SLM 90
35	BB001	1	Bearing, 2.5" FYRP	76	855		Hose #4 x 60" 6FLF 90 x 6FLF R1
36	B0816	8	Nut, 1/2 - 20 stover plt GR5	76	H1097		Hose #4 x 60" 6SLF 90 x 6SLF R1
37	HC422	1	Planetary, auburn 24.85:1	77	H1459		Hose #4 x 65" 6FLF 90 x 6FLF R1
38	B0915	9	Nut, 9/16 - 18 GR5 stover plt	77	H1237		Hose #4 x 65" 6SLF 90 x 6SLF R1
39	59019	5	5/8 NC x 1-1/2 HHCS GR8 ZP	80	35124		7/16 x 2 Kliik pins
40	101979	1	Deadshaft weld, triangle CP	82	F1135		Fitting, 6OM x 6FLM ext
41	59001	3	5/8 NC x 2.00 HHCS GR8 ZP	82	F1440		Fitting, 6OM x 6SLM ext
42	B1015	6	Nut, 5/8 - 11 Stover UNS GR5	85	976		HHCS 3/8 NC x 1-1/2 GR5 ZP
43	HC412	1	Motor, Eaton 35 CC	86	B0618		Nut, 3/8 - 16 GR8 stover lock
43	HC321	1	Motor, Sundstrand M35-3004	87	31982		HHCS 3/8 NC x 1-1/4 GR8 ZP
44	21666	2	1/2 NC x 1-1/2 HHCS GR8 ZP	88	B0620		Washer, 3/8 split lock GR2
45	F1051	2	Fitting, 16OM x 12FLM ST	89	21757		Washer, 3/8 std SAE flat
45	F1293	2	Fitting, 12OM x 12SLM 90	90	106471		Guard, debris motor CPA
45	F1501	2	Fitting, 16OM x 12SLM 90	90	106472		Guard, debris motor CPA
46	F1070	1	Fitting, 8OM x 6FLM ST	91	106470		Guard, debris DS CPA
46	F1465	1	Fitting, 10OM x 6SLM ST	98	F1169		Washer, 1 flat SAE plt hrd
46	F1466	1	Fitting, 8OM x 6SLM 90	99	F1469		Plug, 6FLM fitting
47	HC548	1	Valve assembly, 3 stage s/c	99	D0411		Fitting, plug 6SLM
48	106465	1	Chassis weld, CP16A				
48	106466	1	Chassis weld, CP18A				
48	106467	1	Chassis weld, CP24A				
48	106468	1	Chassis weld, CP30A				
48	106469	1	Chassis weld, CP36A				
49	101478	2	Plate, spacer skid CPA/MP 1/2				

SINGLE CIRCUIT VALVE

Effective with Serial Number CP24ATDS/C
39023301202



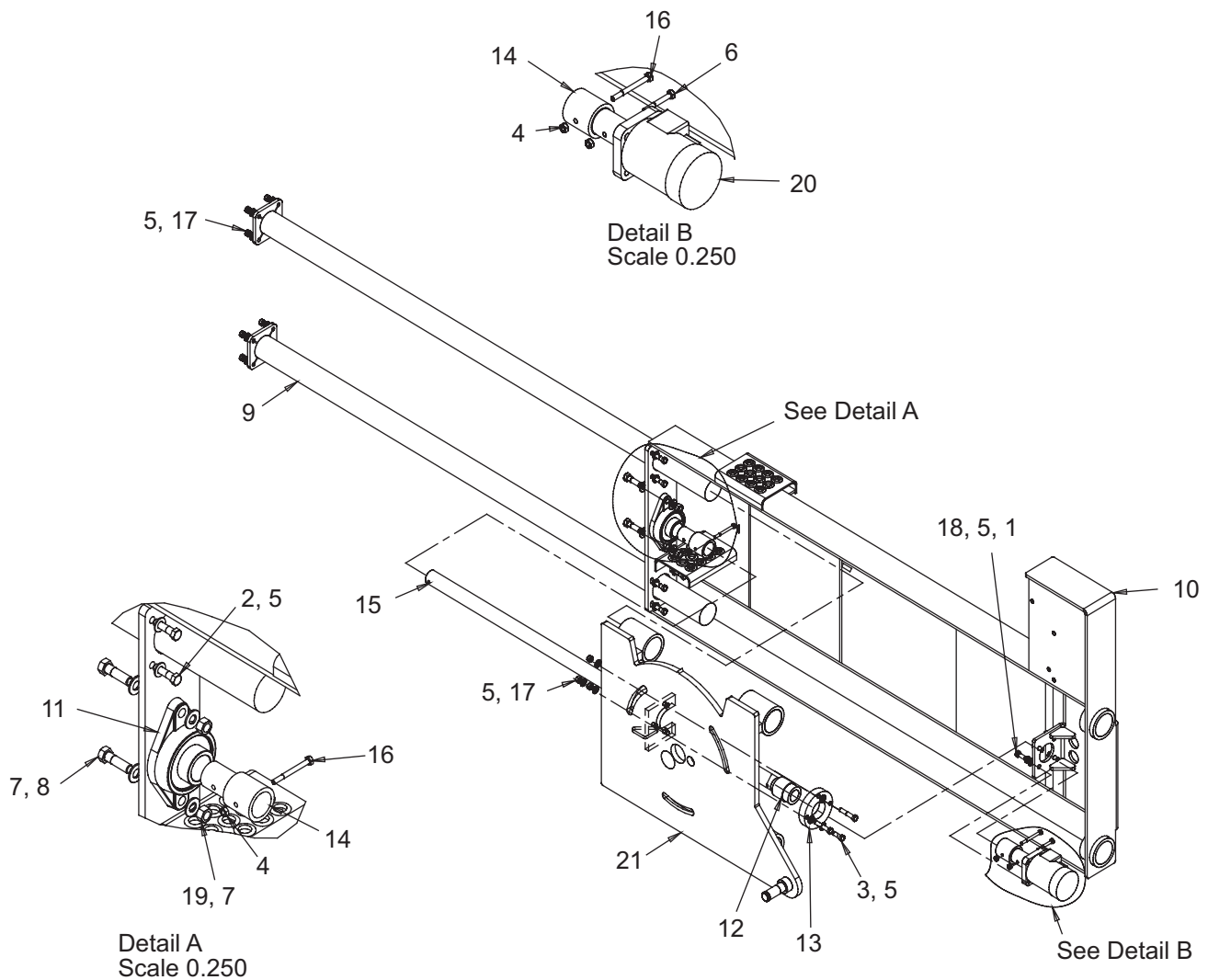
22 Parts

M-CPSS AS/C (Rev. 10/21/2005)

SINGLE CIRCUIT VALVE PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	HC412	1	Motor, Eaton 35 CC	18	F1123	1	Fitting, #8 OM X 6FLM 45°
1	HC321	1	Motor, Sundstrand M35 (CP36ATD only)	19	F1306	2	Fitting, #12 OM X 12 FLM 45° (CP16-30ATD)
2	101053	2	Cylinder, Depth	19	F1006	2	Fitting #12 OM X 12FLM ST (CP36ATD only)
3	C2201	1	Cylinder, Sideshift	21	H1233	4	Hose, #12 x 61" 12FLF 90° x 12flf 3000 psi
4	C0801	1	Cylinder, Tilt	25	H1159	2	Hose, #4 x 20" 6FLF x 6FLF 90° R1
5	HC548	1	Valve Assembly		H1183	2	Hose, #4 x 36" 6FLF x 6 FLF 90° R1 (CP30ATD Only)
6	HC416	1	Q.D. FFF 3/4" (NH)	26	F1158	2	Fitting, tee
7	HC417	1	Q.D. FFM 3/4" (NH)	28	H1237	1	Hose, tilt right
8	HC418	1	Q.D. FFM 1/4" (NH)	29	H1224	1	Hose, casedrain
9	F1051	4	Fitting, #16 OM X 12FLM	30	S01-00163	1	Valve, cartridge
9	F1006	2	Fitting, #12 OM X 12FLM (CP36ATD only)	31	S01-00089	1	Coil, 12v
10	F1070	1	Fitting, #8 OM X 6FLM	32	S01-00136	1	Nut, solenoid retainer
10	F1137	1	Fitting, #10 OM X 6FLM ST (CP36ATD only)	33	H1222	2	Hose, valve to depth
11	F1135	4	Fitting, #6 OM X 6FLM ST EXT	34	H1097	1	Hose, tilt left
12	F1057	2	Fitting, #6 OM X 6FLM 90°				
13	F1044	10	Fitting, #6 OM X 6FLM ST				
15	F1057	2	Fitting, #6 FLF X 6FLM 90°				
16	F1001	1	Fitting, #12 OM X 12FLM 90°				
17	F1006	5	Fitting, #12 OM X 12FLM ST				

FULL WIDTH SIDESHIFT

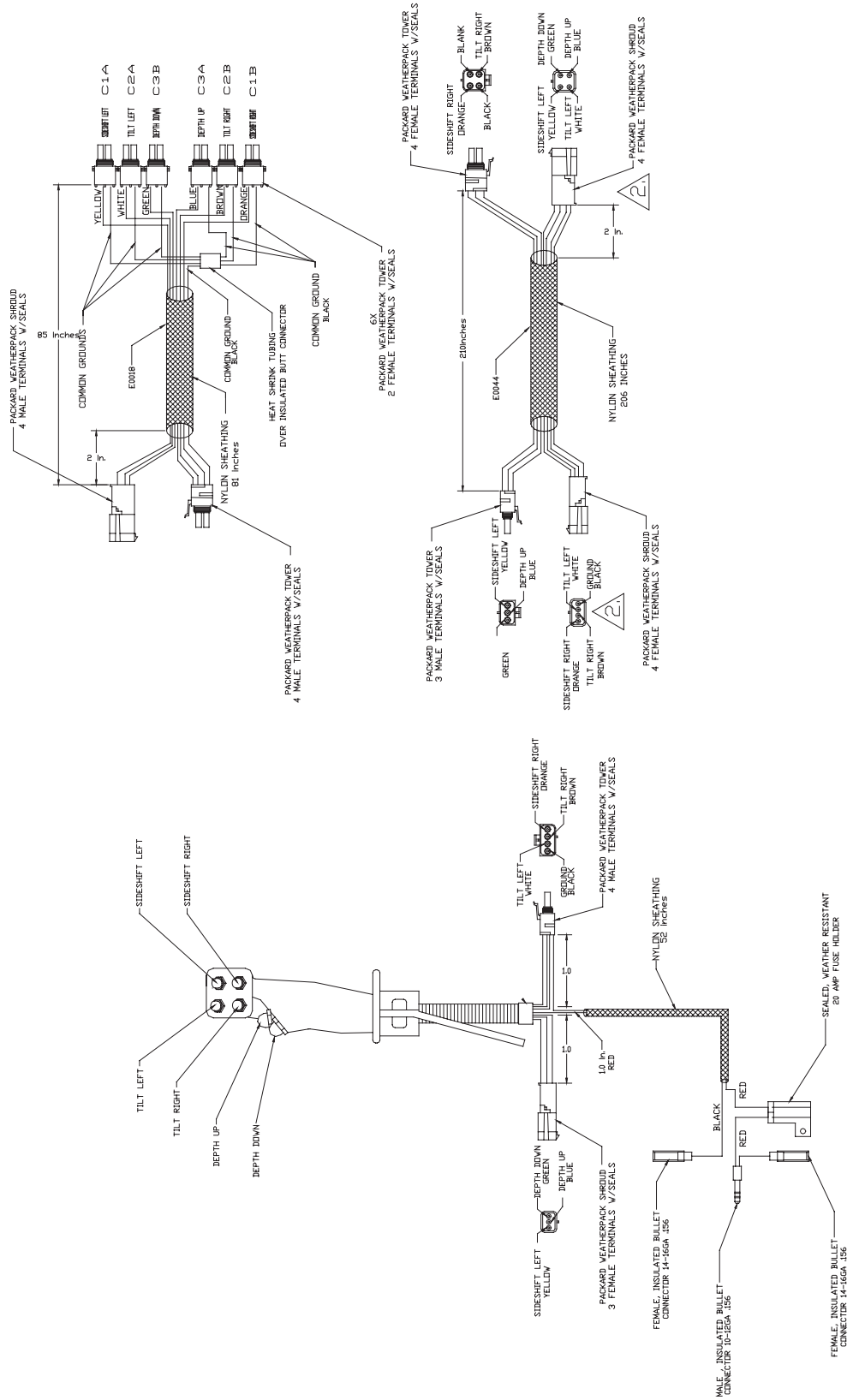


REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	839	4	Bolt, 3/8" NC x 1 GR5 ZP	15	106425	1	Screw, acme
2	976	8	Bolt, 3/8" NC 1-1/2" GR5 ZP	16	300064	2	Bolt, 1/4" NC X 2-3/4" GR5 ZP
3	3231	3	Bolt, 3/8" NC X 2 GR5	17	B0618	11	Nut, 3/8" - 16 GR8 stover lock
4	5288	3	Nut, 1/4" - 20 GR2 plt	18	B0620	4	Washer, 3/8" split lock GR2
5	21757	26	Washer, 3/8" SAE STD flat	19	B0815	2	Nut, 1/2" 13 stover GR5
6	22348	1	Bolt, 1/4" NC X 2 GR5	20	HC502	1	Motor, sideshift Char-Lynn A
7	57816	4	Washer, 1/2" SAE flat hrdn	21		1	Backplate:
8	59009	2	Bolt, 1/2" NC X 1 3/4" GR8 ZP	106400			CP16ATDFW
9	106406	2	Slider bar	106401			CP18ATDFW
10	106412	1	Attach frame full width sideshift	106402			CP20ATDFW
11	106414	1	Bearing, flange	106403			CP24ATDFW
12	106415	1	Nut, acme flange bronze	106404			CP30ATDFW
13	106416	1	Flange, acme nut	106405			CP36ATDFW
14	106417	3	Coupler, drive screw				

24 Parts

M-CPSS AS/C (Rev. 10/21/2005)

ELECTRICAL SCHEMATIC

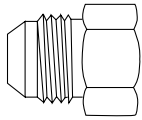
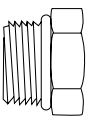
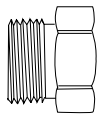


FITTING TORQUE CHART

Always tighten fittings to these values unless a different torque value is listed for a specific service procedure.

Make sure fastener threads are clean and threads are engaged properly.

All torque values are adopted from SAE J514 and SAE J1453.

			
Size	SAE (JIC) 37° Flare Thread Size	O-Ring Style Straight Thread Size	Seal-Lok Thread
2	5/16 - 24	5/16 - 24	---
3	3/8 - 24	3/8 - 24	---
4	7/16 - 20	7/16 - 20	9/16 - 18
5	1/2 - 20	1/2 - 20	---
6	9/16 - 18	9/16 - 18	11/16 - 16
8	3/4 - 16	3/4 - 16	13/16 - 16
10	7/8 - 14	7/8 - 14	1 - 14
12	1-1/16 - 12	1-1/16 - 12	1-3/16 - 12
14	1-3/16 - 12	1-3/16 - 12	---
16	1-5/16 - 12	1-5/16 - 12	1-7/16 - 12
20	1-5/8 - 12	1-5/8 - 12	1-11/16 - 12
24	1-7/8 - 12	1-7/8 - 12	2 - 12
32	2-1/2 - 12	2-1/2 - 12	---

SAE Dash Size	TORQUE					
	SAE 37° Flare		O-Ring Straight Thread		Seal-Lok	
	Lbs.-Ft.	N-m	Lbs.-Ft.	N-m	Lbs.-Ft.	N-m
2	4	5	4	5	---	---
3	8	11	9	12	---	---
4	12	16	16	22	18	25
5	15	20	22	30	---	---
6	18	25	35	48	27	37
8	37	50	60	82	40	54
10	48	65	105	143	63	86
12	74	100	140	190	92	125
14	88	120	184	250	---	---
16	100	135	221	300	122	165
20	133	180	258	350	147	200
24	166	225	317	430	166	225
32	236	320	---	---	---	---

BOLT TORQUE CHART

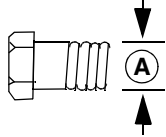
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

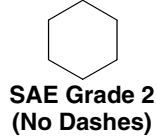
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

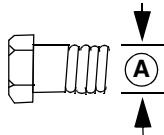
All torque values are given to specifications used on hardware defined by SAE J1701 MAR 99 & J1701M JUL 96.



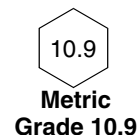
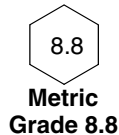
SAE SERIES TORQUE CHART



A Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	110	149	170	230	240	325
3/4"	1-1/8"	192	261	297	403	420	569
7/8"	1-5/16"	306	416	474	642	669	907
1"	1-1/2"	467	634	722	979	1020	1383

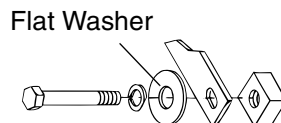
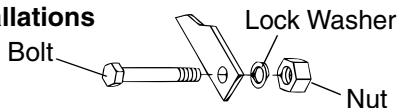


METRIC SERIES TORQUE CHART



A Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				A Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD								
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

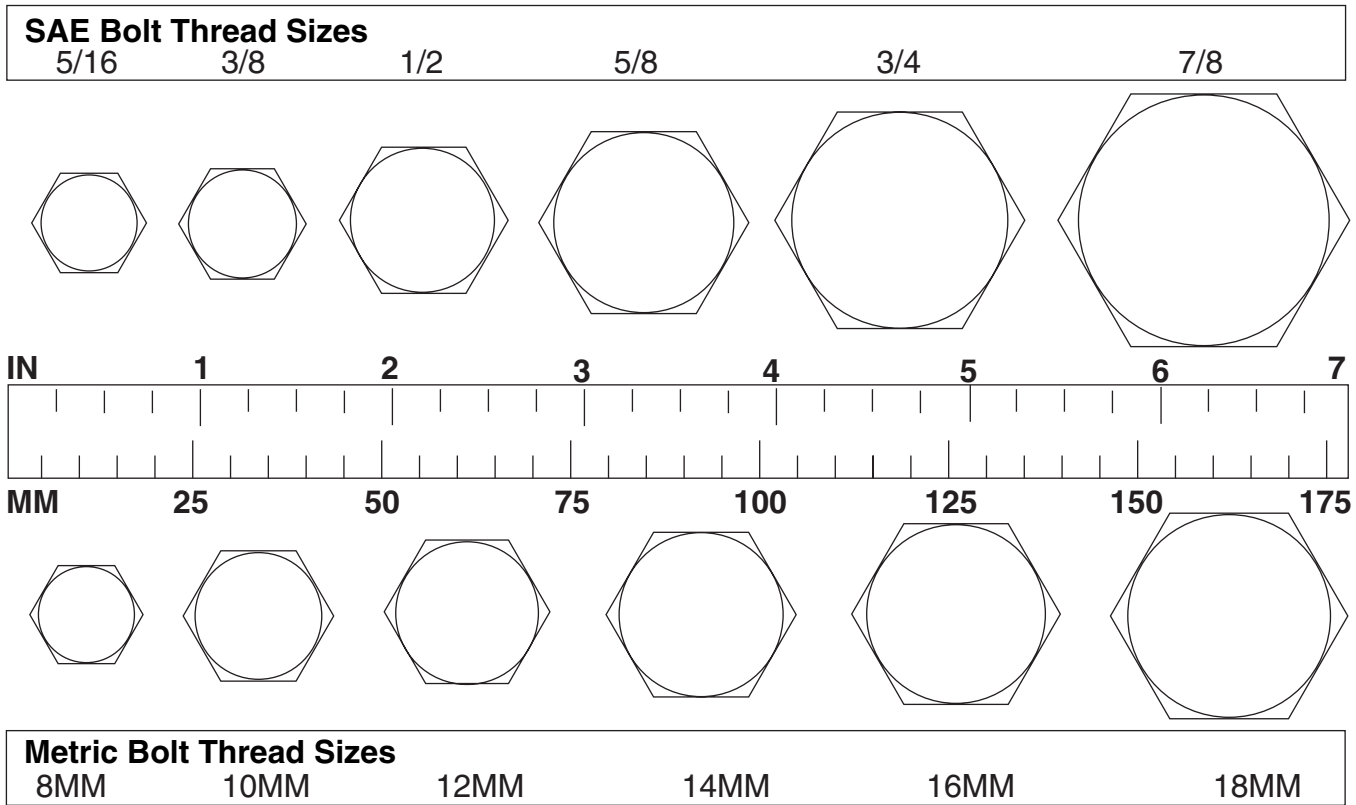
Typical Washer Installations



8/9/00

BOLT SIZE CHART

NOTE: Chart shows bolt thread sizes and corresponding head (wrench) sizes for standard SAE and metric bolts.



ABBREVIATIONS

AGAgriculture
 ATF Automatic Transmission Fluid
 BSPP British Standard Pipe Parallel
 BSPTM British Standard Pipe Tapered Male
 CV Constant Velocity
 CCW Counter-Clockwise
 CW Clockwise
 F Female
 GA Gauge
 GR (5, etc.) Grade (5, etc.)
 HHCS Hex Head Cap Screw
 HT Heat-Treated
 JIC Joint Industry Council 37° Degree Flare
 LH Left Hand
 LT Left
 m Meter
 mm Millimeter
 M Male
 MPa Mega Pascal
 N Newton

NC National Coarse
 NF National Fine
 NPSM National Pipe Straight Mechanical
 NPT National Pipe Tapered
 NPT SWF National Pipe Tapered Swivel Female
 ORBM O-Ring Boss - Male
 P Pitch
 PBY Power-Beyond
 psi Pounds per Square Inch
 PTO Power Take Off
 QD Quick Disconnect
 RH Right Hand
 ROPS Roll-Over Protective Structure
 RPM Revolutions Per Minute
 RT Right
 SAE Society of Automotive Engineers
 UNC Unified Coarse
 UNF Unified Fine
 UNS Unified Special



WARRANTY

(Replacement Parts For All Models Except Mow'n Machine™
Zero-Turn Mowers and Woods Boundary™ Utility Vehicles)

Woods Equipment Company ("WOODS") warrants this product to be free from defect in material and workmanship for a period of ninety (90) days from the date of delivery of the product to the original purchaser with the exception of V-belts, which will be free of defect in material and workmanship for a period of 12 months.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of WOODS, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not cover normal wear or tear, or normal maintenance items.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

WOODS' obligation under this Warranty is limited to, at WOODS' option, the repair or replacement, free of charge, of the product if WOODS, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. **The product must be returned to WOODS with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** WOODS shall complete such repair or replacement within a reasonable time after WOODS receives the product. THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.

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Answers to any questions regarding warranty service and locations may be obtained by contacting:

Woods Equipment Company

2606 South Illinois Route 2
Post Office Box 1000
Oregon, Illinois 61061

815-732-2141 tel
815-732-7580 fax
www.WoodsEquipment.com

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WARRANTY

Please Enter Information Below and Save For Future Reference.

Date of Purchase: _____

From (Dealer): _____

Model Number: _____

Serial Number: _____

Woods Equipment Company ("WOODS") warrants this product to be free from defect in material and workmanship. Except as otherwise set forth below, the duration of this Warranty shall be for TWELVE (12) MONTHS COMMENCING ON THE DATE OF SHIPMENT OF THE PRODUCTS TO THE ORIGINAL PURCHASER.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of WOODS, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not apply in the event that the product has been materially modified or repaired by someone other than WOODS, a WOODS authorized dealer or distributor, and/or a WOODS authorized service center. This Warranty does not cover normal wear or tear, or normal maintenance items. This Warranty also does not cover repairs made with parts other than those obtainable through WOODS.

This Warranty is extended solely to the original purchaser of the product. Should such original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

WOODS makes no warranty, express or implied, with respect to engines, batteries, tires or other parts or accessories not manufactured by WOODS. Warranties for these items, if any, are provided separately by their respective manufacturers.

WOODS' obligation under this Warranty is limited to, at WOODS' option, the repair or replacement, free of charge, of the product if WOODS, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. **The product must be returned to WOODS with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** WOODS shall complete such repair or replacement within a reasonable time after WOODS receives the product. THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.

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This Warranty is subject to any existing conditions of supply, which may directly affect WOODS' ability to obtain materials or manufacturer replacement parts.

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