

WOODS

1002899

SUB-FRAME MOUNTING KIT

**For Backhoe Model
BH6500**

**On Cub Cadet® Tractors:
7000, 7192, 7194
7195, 7200, 7205**

**Or Mahindra® Tractor
2015**

**With Woods 1006 Loader
Cub Cadet 475 Loader
Or Mahindra ML104 Loader**

**Includes Hose Kit
1002898**

MAN0131

(Rev. 12/23/2005)

**SAVE THIS
MANUAL!**

Include it with the
backhoe manual. It
contains safety,
operation, and repair
part information not
found in other
manuals.

WOODS®

Tested. Proven. Unbeatable.

INSTALLATION 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 this 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 Parts 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!**



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



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.



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

SFMK (Rev. 6/6/2005)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



¡LEA EL INSTRUCTIVO!

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

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.

■ **This Sub-Frame Mounting Kit is only for the backhoes and tractors specified in the Sub-Frame Mount Installation section of this manual. Any other use or modification of this mounting kit may result in serious injury or death.**

■ **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.**

■ **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 1-800-319-6637.) Failure to follow instructions or safety rules can result in serious injury or death.**

■ **Know your controls and how to stop engine and attachment quickly in an emergency.**

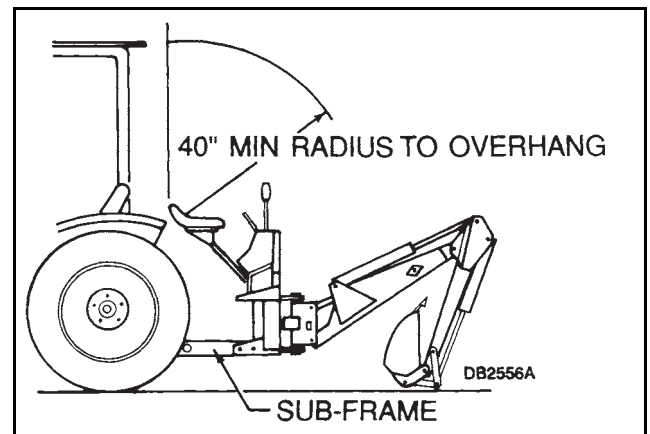
■ **Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.**

■ **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.**

■ **Check that all hardware is properly installed. Always tighten to torque chart specifications unless instructed otherwise in this manual.**

■ **This mounting kit is designed to provide secure mounting and adequate operator clearance when properly installed. Check clearance dimensions shown below to be sure you have installed seat bracket correctly. In some cases it may be necessary to adjust the seat to the lowest position and/or as far forward as possible in order to achieve the 40-inch clearance.**



■ **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.**

■ **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.**

(Safety Rules continued on next page)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

- 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.
- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position at all times.
- Remove seat and upper support assembly before installing or removing backhoe from tractor. Failure to comply may result in equipment failure and/or personal injury.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, tractor could tip over, causing personal injury or death. The weight may be attained with a loader. Weigh the tractor and equipment. Do not estimate.
- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.
- Before operating, make sure stabilizer pads are lowered firmly to the ground. Stabilizer arms provide support for the backhoe and support for the backhoe mounting brackets.

■ The only time the backhoe may be operated from a position other than the operator seat is during backhoe attachment and removal. Operator must:

- Read Mounting Kit Manual instructions on attaching and removing backhoe and use extreme care.
- Always stand between rear tire and backhoe stabilizer arms or along side of tractor to avoid being trapped should the boom swing control be accidentally activated.

■ Never leave equipment unattended with engine running or with bucket in raised position. Always engage swing and boom transport locks, relieve system pressure by operating controls, and remove ignition key before leaving equipment.

■ Refer to backhoe manual and follow all maintenance safety rules and instructions.

■ Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.

■ 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 Mounting Kit Parts section for location.)



BACKHOE SUB-FRAME INSTALLATION

Tractor Preparation

WARNING

■ Only use 1002899 Sub-Frame Mounting Kit for mounting Woods BH6500 Backhoes on Cub Cadet® 7000, 7192, 7194, 7195, 7200, 7205 tractors and Mahindra 2015 tractors equipped with Woods 1006, Cub Cadet 475, or Mahindra ML104 Loaders. Any other use or modification of this mounting kit may result in serious injury or death.

For installing this sub-frame, references to right, left, forward and rearward directions are determined from the operator's position in the tractor seat.

Do not install 1002899 sub-frame on tractor without a Woods, Cub Cadet, or Mahindra loader mount attached.

Refer to the Woods BH6500/7500 Backhoe Operator's Manual for backhoe assembly instructions.

1. Remove the tractor top link, 3-point lower lift arms, and anti-sway links. Store these parts for reinstallation when backhoe and sub-frame are removed and 3-point hitch is required.
2. Disconnect and remove front end loader from tractor, using instructions in the loader manual. Do not remove loader mounting frame.
3. If attached, disconnect and remove mid-mount mower from tractor, using instructions in mower manual.
4. If attached, remove mower rear rockshaft lift mechanism from tractor.
5. Place a jack under the tractor transmission housing and raise just enough to support the tractor. Do not raise tractor off the ground. Supporting the transmission prevents leakage.
6. Remove cap screws (A) and lock washers (B) from both tractor lift arm brackets (C) on rear axle housing (D). Save hardware. See Figure 1.
7. Remove two additional axle housing cap screws (E) above the lift arm brackets as shown.

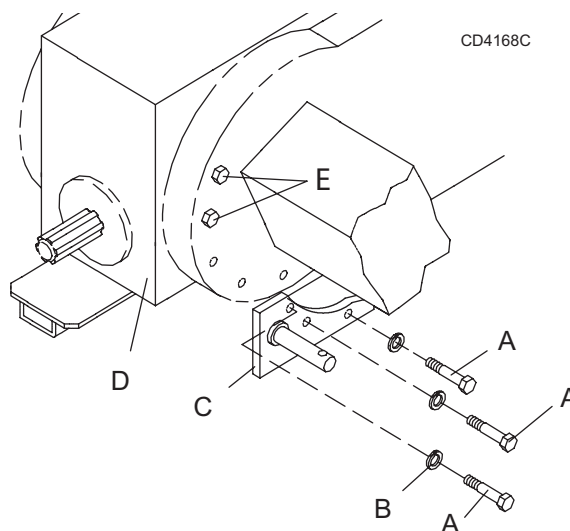


Figure 1. Remove Lift Arm Brackets and Hardware

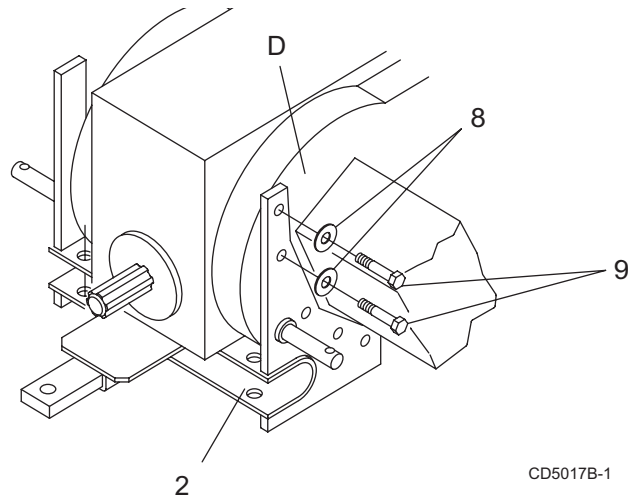
- A. * M10 x 85mm Cap screw
- B. * Lock washer
- C. * Tractor lift arm bracket
- D. * Rear axle housing
- E. * M10 x 50mm Cap screw
- * Tractor Parts

As a valued customer, Woods appreciates your comments. Once sub-frame and hydraulic hoses have been installed, please take a few minutes to complete the Sub-Frame Mount Evaluation sheet that was supplied with your sub-frame. Your comments will help us continue to bring you quality products.

Install Rear Mounting Bracket

Refer to Figure 2.

1. Position rear mounting bracket (2) on tractor axle housings (D).
2. Install cap screws (9) and hardened flat washers (8) in top two holes of mounting bracket (2) as shown.
3. Install cap screws (A) and lock washers (B) previously removed in bottom three holes of mounting bracket (2) as shown.
4. Torque bolts (9 & A) to 30 lbs-ft.
5. Remove jack from under tractor transmission.



CD5017B-1

Figure 2. Rear Mounting Bracket Installation

- | | |
|----|---------------------------------------|
| A. | * M10 x 85 mm Cap screw |
| B. | * Lock washer |
| 2. | 55026 Rear mounting bracket |
| 8. | 44546 3/8 Hardened flat washer, thick |
| 9. | 52540 M10 x 1.25P x 85 mm Cap screw |
| | * Tractor Parts |

Install Front Mount

Refer to Figure 3 and Figure 4.

NOTE: Remove mower mount bracket (if equipped) before installing front mount.

NOTE: When installing front mount, crossmember must be facing the rear.

Woods and Cub Cadet Loader Mounts.

1. Attach front mount bracket (3) between loader mounts using cap screws (12), hardened flat washers (11), and flange lock nuts (10).
2. Do not tighten hardware until sub-frame fit-up is complete.

Mahindra Loader Mount.

1. Attach adapter plate (16) to the outside of loader mounts using cap screws (18) and hardened flat washers (19).
2. Attach front mount bracket (3) between loader mounts using cap screws (20), hardened flat washers (11), spacer washers (17), and flange lock nuts (10).

- | | |
|-----|--------------------------------|
| 3. | 55041 Front mount |
| 10. | 11900 1/2 NC Flange lock nut |
| 11. | 57816 1/2 Hardened flat washer |

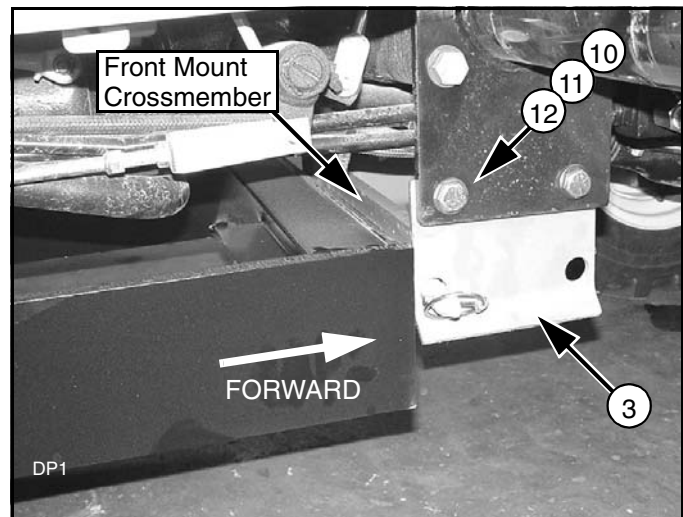


Figure 3. Front Mount Installed, Woods and Cub Cadet Loader Mounts

- | | |
|-----|--|
| 12. | 3379 1/2 NC x 1-1/2 Cap screw GR5 |
| 16. | 1011542 Adapter plate |
| 17. | 23883 Spacer, 1/2 ID x 1-1/2 OD washer |
| 18. | 33125 M14 x 2.0P x 50 mm Cap screw |
| 19. | 46070 9/16 Hardened flat washer |
| 20. | 639 1/2 NC x 2-1/2 Cap screw GR5 |

6 Installation

MAN0131 (Rev. 12/23/2005)

Sub-Frame Fit-Up

Refer to Figure 4.

1. Center sub-frame under tractor.
2. Insert cross tube of sub-frame into channel of rear mount bracket (2).
3. Secure in place with clevis pins (6) and klik pin (7).
4. Pivot front end of sub-frame up into front mount.
5. Secure with lock pin (4) and klik pin (5).
6. Check sub-frame fit-up, adjust as necessary.
7. Torque front mount hardware to 85 lbs-ft.
8. Remove sub-frame (1) from tractor.

1. 55038-1 Sub-frame
2. 55026 Rear mounting bracket
4. 62674 3/4 x 17.75 Lock pin
5. 62043 1/4 x 1-3/4 Klik pin
6. 1002850 .75 x 2.75 Hitch pin
7. 35124 7/16 x 2 Klik pin

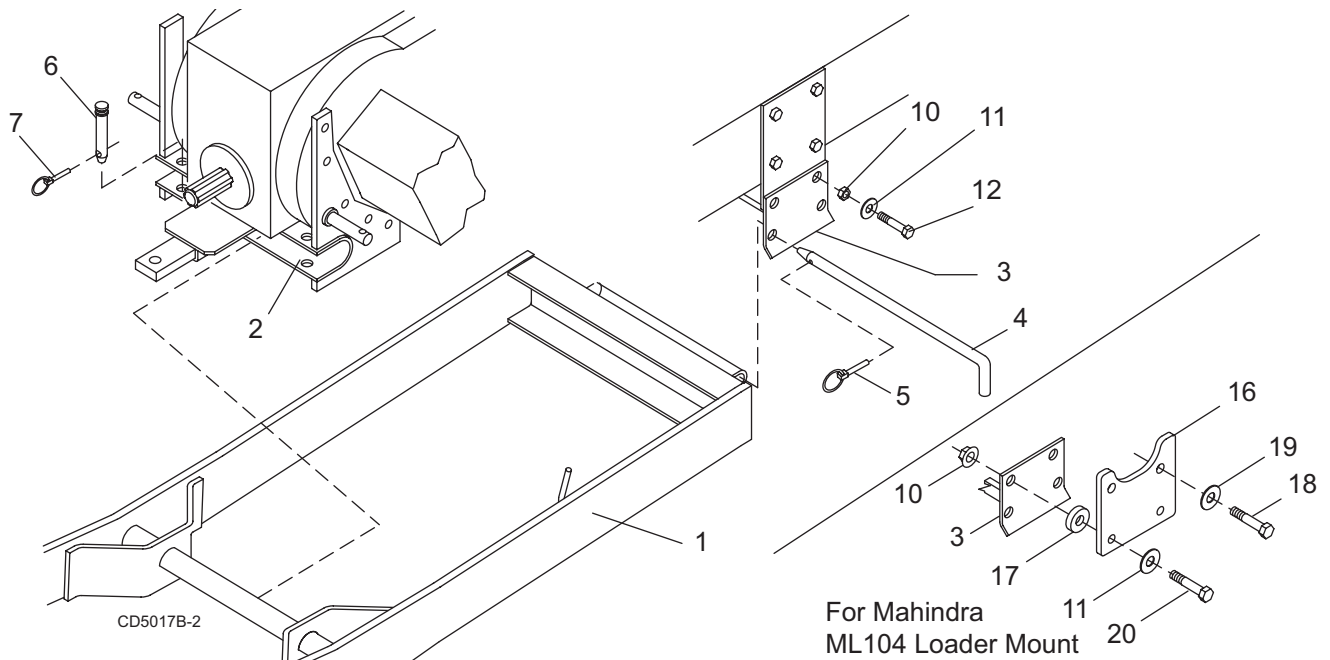


Figure 4. Sub-Frame Fit-Up

Attach Sub-Frame to Backhoe

1. Align six holes on the backhoe with holes on sub-frame.
2. Secure with cap screws (13), lock washers (14), and hex nuts (15) as shown. Tighten according to specifications given below.
3. Torque hardware to 297 lbs-ft.

13. 735 3/4 NC x 2 Cap screw
14. 2522 3/4 Lock washer
15. 1450 3/4 Hex nut

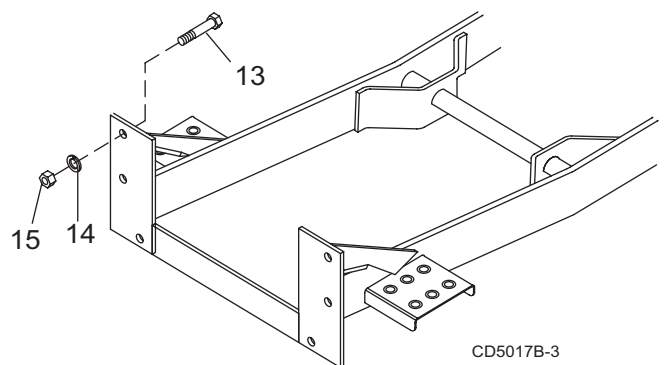


Figure 5. Sub-Frame to Backhoe Installation

HYDRAULIC INSTALLATION

WARNING

■ 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.

WARNING

■ 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.

9261 PUMP KIT INSTALLATION

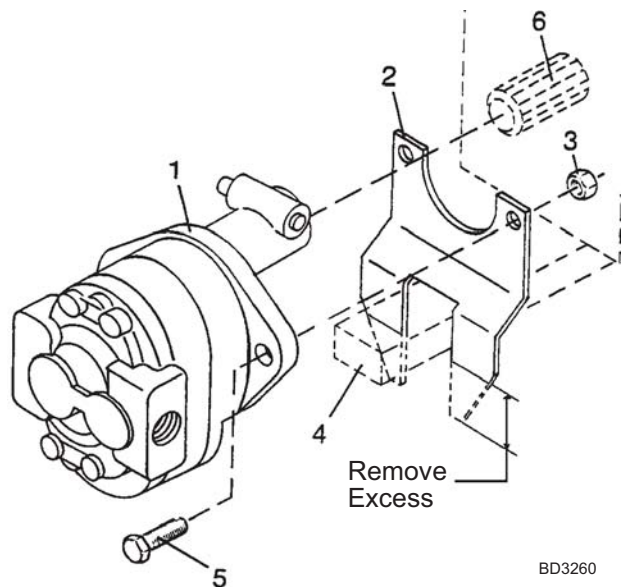
Install Pump Kit

NOTE: For complete information on pump kit installation, consult the Woods BH6500/7500 backhoe operators manual.

1. Attach pump mounting bracket (2) to pump assembly with the offset toward the pump as shown in Figure 6.
2. Secure with cap screw (5) and lock nut (3) as shown.
3. Torque hardware to 85 lbs-ft.

NOTE: The pump mounting bracket is designed to slip over the tractor drawbar and prevent the pump from rotating. Trim the bracket flush with the bottom of the tractor drawbar if desired.

1. 37909 Pump
2. 31234 Pump mounting bracket
3. 765 1/2 NC Hex lock nut
4. ——— Tractor drawbar bracket
5. 3379 1/2 NC x 1-1/2 Cap screw
6. ——— Tractor PTO shaft



BD3260

Figure 6. Pump Bracket Installation

1002898 HOSE KIT INSTALLATION

Completion of this hose kit requires connection to the tractor hydraulic manifold and loader control valve.

Shut off engine and lock parking brake before installing hose kit. Check all parts in hose kit against packing list. Not all parts are required for each application.

100289 Hose kit installation instructions are compatible with the following loaders:

Woods 1006 Loader page 10

Mahindra ML104 Loader page 11

Cub Cadet 475 Loader page 12

Install Hoses to Backhoe Valve

NOTE: Some hydraulic fittings supplied in this hose kit may not be required for this application.

1. Attach male quick coupler (3) to hose (1).
2. Attach opposite end of hose (1) to the IN port of backhoe valve.
3. Attach female quick coupler (2) to second hose (1).
4. Attach opposite end of hose (1) to the OUT port of backhoe valve

1. 38656 Hose, 112" x 3/8 NPTM x 3/4 ORBM
2. 64299 Quick coupler, female
3. 64300 Quick coupler, male

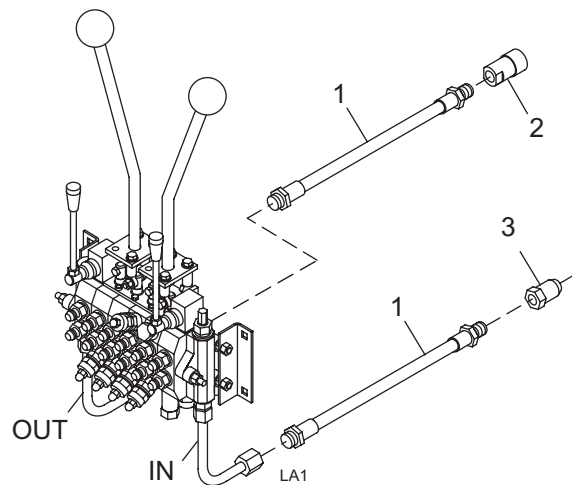


Figure 7. Backhoe Hose Connection

WOODS 1006 LOADER

Install Hydraulic Fittings

Use thread sealant on pipe threads. Be careful not to use excess sealant that could enter hydraulic system.

NOTE: Some fittings in hose kit will not be used for this installation.

1. Remove male quick coupler (C) and elbow (B) from the PBY port (N) on the hydraulic manifold. See Figure 8.
2. Attach tee (5) to adapter (A) and point it to the rear. See Figure 9.
3. Attach adapter (14) and male quick coupler (3) to the center portion tee (5).
4. Attach elbow (B) and male quick coupler (C) to the end of tee (5). Point elbow and quick coupler to the front.
5. Attach female quick coupler (2) to the end of the loader valve PBY hose.

Loader Fittings

- A. 315045 Adapter, 3/8 BSPTM x 3/8 NPTM
- B. 313010 Elbow, 3/8 NPTM x 3/8 NPTM
- C. ----- Quick coupler, male 3/8

Hose Kit Fitting

- 5. 66368 Tee, 3/8 NPT
- 3. 64300 Quick coupler, male 3/8
- 14. 315030 Adapter, 3/8 NPTM x 3/8 NPTM

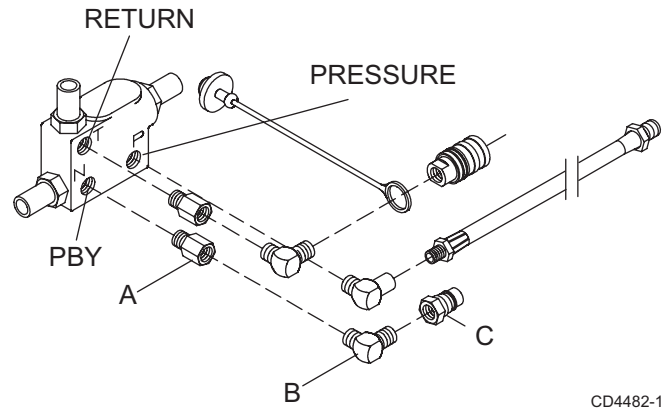


Figure 8. 1006 Loader Hydraulic Fitting

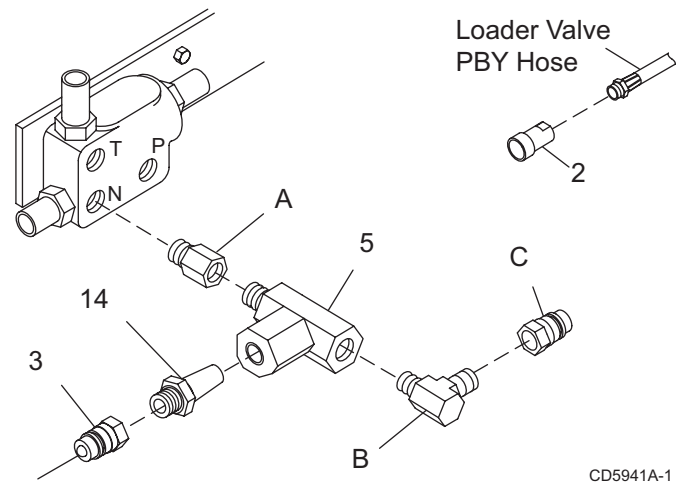


Figure 9. Hydraulic Fitting Installation

Backhoe Hose Connection

1. Attach hose (1) with female quick coupler (2) from the backhoe valve OUT port to the male quick coupler in the center of tee (5).
2. Attach hose (1) with male quick coupler (3) from the backhoe valve to female quick coupler (2) on the end of the loader valve PBY hose.

- 1. 38656 Hose, 112" x 3/8 NPTM x 3/4 ORBM
- 2. 64299 Quick coupler, female
- 3. 64300 Quick coupler, male
- 5. 66368 Tee, 3/8 NPT

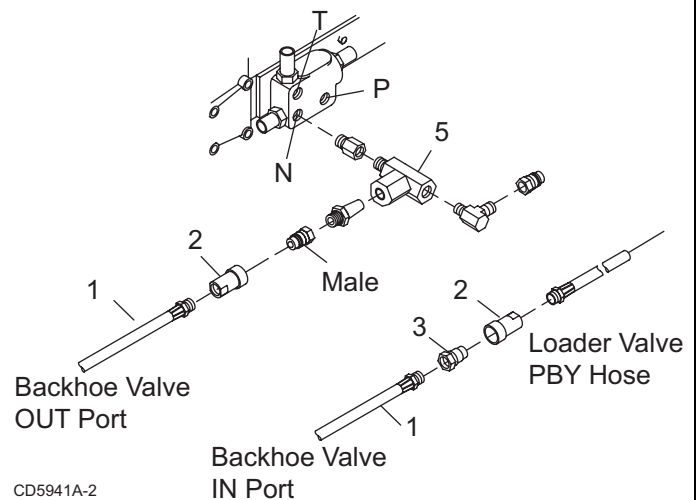


Figure 10. Backhoe Hose Connection

MAHINDRA ML104 LOADER

Install Hydraulic Fittings

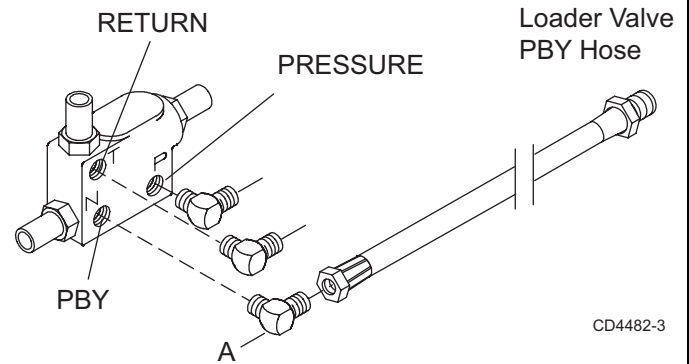
Use thread sealant on pipe threads. Be careful not to use excess sealant that could enter hydraulic system.

NOTE: Some fittings in hose kit will not be used for this installation.

1. Disconnect loader valve PBY hose from elbow (A) in the tractor hydraulic manifold and remove elbow (A). See Figure 11.
2. Attach adapter (6) and tee (5) to the PBY port (N) on the tractor hydraulic manifold. Position tee to point to the rear. See Figure 12.
3. Attach adapter (14) and male quick coupler (3) to the center port of tee (5).
4. Attach elbow (4) and male quick coupler (3) to the end of tee (5). Point elbow and quick coupler 45° up and to the front.
5. Attach female quick coupler (2) and adapter (13) to the end of the loader valve PBY hose.

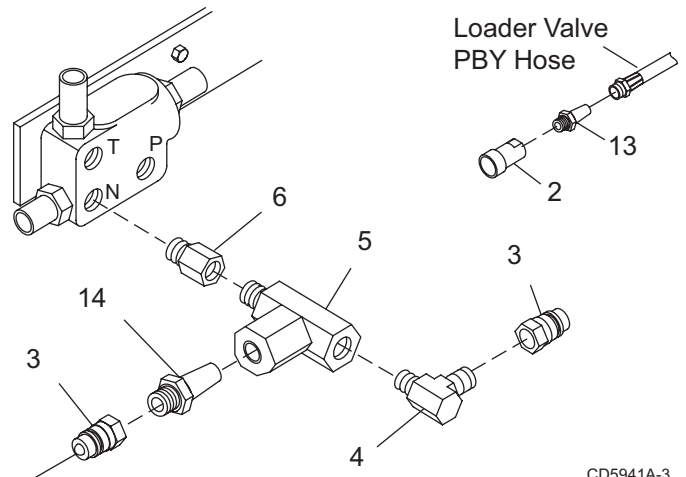
Hose Kit Fitting

- | | | |
|-----|--------|--------------------------------|
| 2. | 64299 | Quick coupler, female |
| 3. | 64300 | Quick coupler, male 3/8 |
| 4. | 66367 | Elbow, 3/8 NPTM x 3/8 NPTM 90° |
| 5. | 66368 | Tee, 3/8 NPT |
| 6. | 66369 | Adapter, 3/8 BSTPM x 3/8 NPTF |
| 13. | 63480 | Adapter, 3/8 NPTM x 9/16 JICM |
| 14. | 315030 | Adapter, 3/8 NPTM x 3/8 NPTM |
| A. | ----- | Mahindra part |



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Figure 11. Mahindra ML104 Loader Hydraulic Fitting



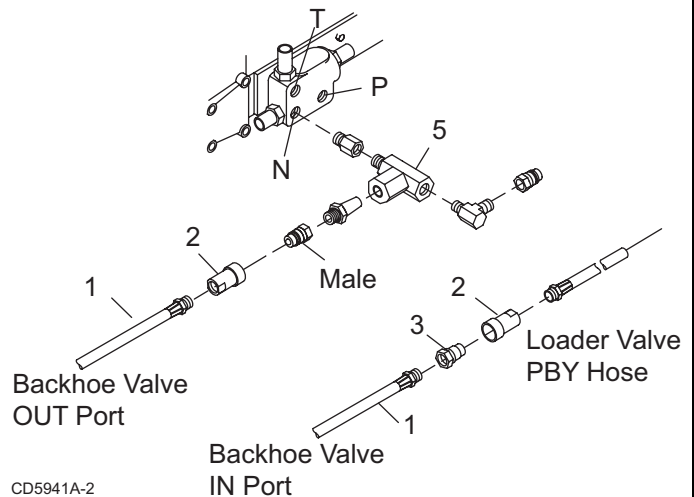
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Figure 12. Hydraulic Fitting Installation

Backhoe Hose Connection

1. Attach hose (1) with female quick coupler (2) from the backhoe valve OUT port to the male quick coupler in the center of tee (5).
2. Attach hose (1) with male quick coupler (3) from the backhoe valve to female quick coupler (2) on the end of the loader valve PBY hose.

- | | | |
|----|-------|----------------------------------|
| 1. | 38656 | Hose, 112" x 3/8 NPTM x 3/4 ORBM |
| 2. | 64299 | Quick coupler, female |
| 3. | 64300 | Quick coupler, male |
| 5. | 66368 | Tee, 3/8 NPT |



CD5941A-2

Figure 13. Backhoe Hose Connection

CUB CADET 475 LOADER

Remove Hydraulic Fittings

Use thread sealant on pipe threads. Be careful not to use excess sealant that could enter hydraulic system.

NOTE: Some fittings in hose kit will not be used for this installation.

1. Remove female quick coupler (C), dust plug, and elbow (B) from the RETURN port (T) on the hydraulic manifold. Leave adapter (E) in place. See Figure 14.
2. Remove hose (A) from elbow in the PRESSURE port (P) on the hydraulic manifold.
3. Disconnect hose (D) from PBYP port on the hydraulic manifold.

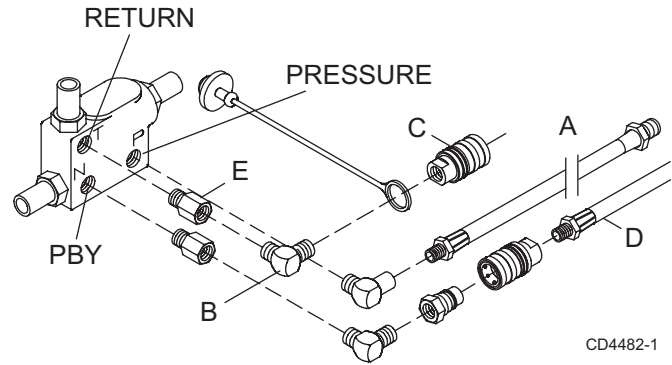


Figure 14. 475 Loader Hydraulic Fitting

Loader Fittings

- A. ----- Hose, 28" x 3/8 NPTM x 3/8 NPTM
- B. ----- Elbow, 3/8 NPTM x 3/8 NPTM
- C. ----- Quick coupler, male 3/8
- D. ----- Hose, 40" x 3/8 NPTM x 1/2 NPTM
- E. ----- Adapter, 3/8 BSPTM x 3/8 NPTF

Install Hydraulic Fittings

1. Rotate elbow (B) and male quick coupler (C) in the PBYP port (N) to point to the rear. See Figure 15.
2. Attach tee (5) to adapter (E) and point center port to the front.
3. Attach elbow (4) and male quick coupler (3) to the end of tee (5). Point elbow and quick coupler to the rear.
4. Attach elbow (4) and female quick coupler (2) to the center port of tee (5). Point quick coupler upward.
5. Rotate elbow (F) in the PRESSURE port (P) to point to the rear.
6. Attach female quick coupler (2) to hose (8). Attach hose (8) to elbow (F).

Loader Fittings

- B. ----- Elbow, 3/8 NPTM x 3/8 NPTM
- C. ----- Quick coupler, male 3/8
- E. ----- Adapter, 3/8 BSPTM x 3/8 NPTF
- F. ----- Elbow, 3/8 BSPTM x 3/8 NPTM

Hose Kit Fittings

- 2. 64299 Quick coupler, female
- 3. 64300 Quick coupler, male 3/8
- 4. 66367 Elbow, 3/8 NPTM x 3/8 NPTM 90°
- 5. 66368 Tee, 3/8 NPT
- 8. 360001 Hose, 28" x 3/8 NPTM x 3/8 NPTM

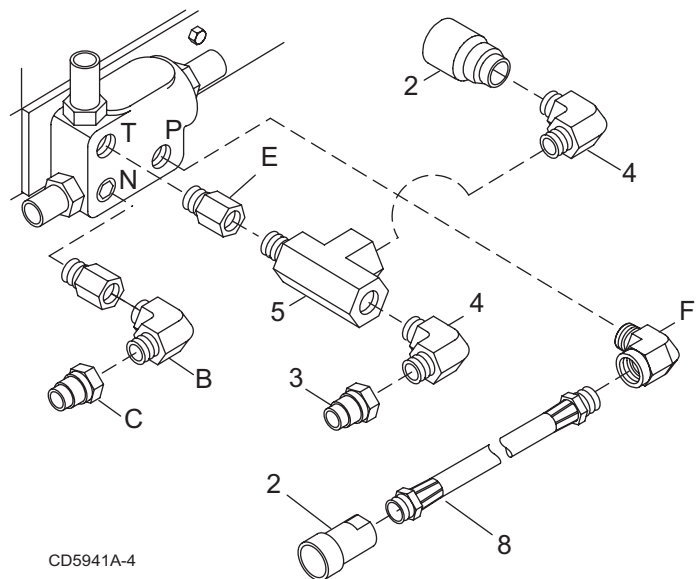


Figure 15. Hydraulic Fitting Installation

Install PBY Tube Assembly

1. Remove slug on right side of backhoe console.
2. Remove plug from PBY port on right side of backhoe valve.
3. Install Power Beyond sleeve (10), straight connector (12), and tube assembly (11) on the side of the backhoe valve PBY port. See Figure 16.
4. Attach female quick coupler (2) to third hose (1).
5. Connected to the PBY tube assembly (11).

- | | | |
|-----|-------|----------------------------------|
| 1. | 38656 | Hose, 112" x 3/8 NPTM x 3/4 ORBM |
| 2. | 64299 | Quick coupler, female 3/8 NPT |
| 10. | 37409 | Power-Beyond sleeve |
| 11. | 55046 | Tube assembly |
| 12. | 61 | Straight connector |

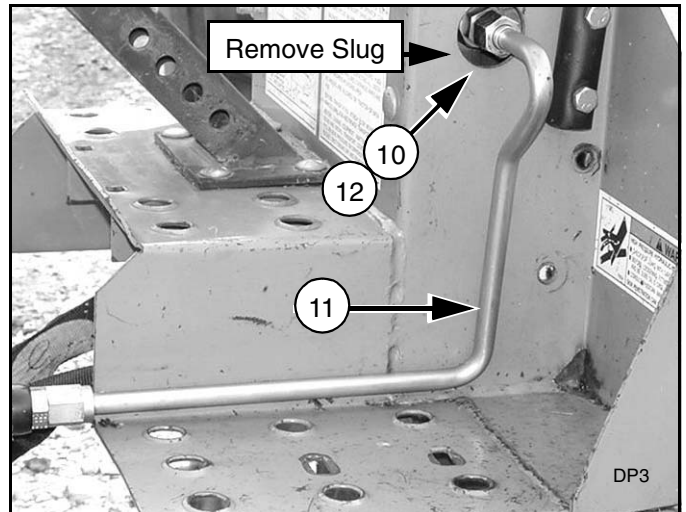


Figure 16. PBY Tube Assembly Installed

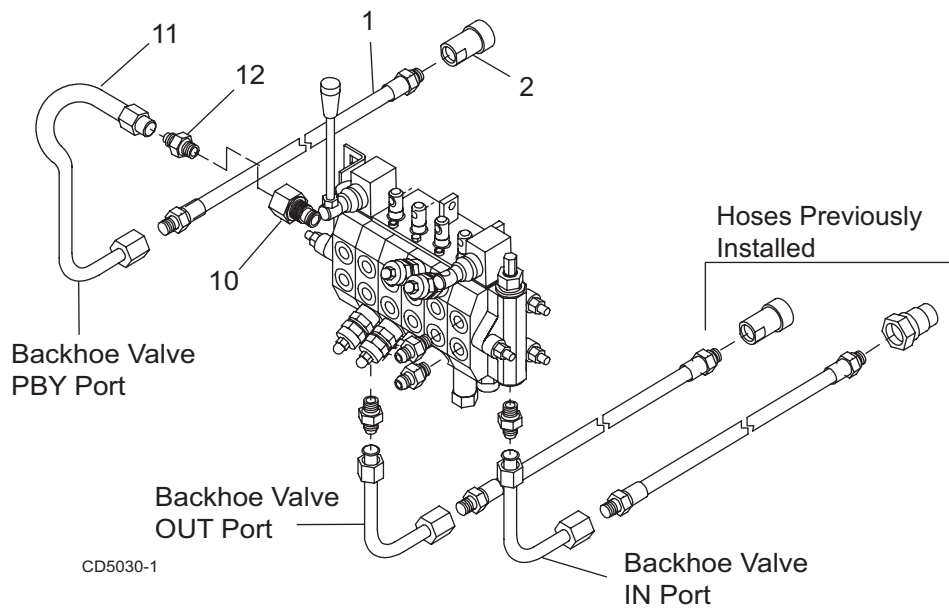


Figure 17. Backhoe PBY Hose Installation

Backhoe and Loader Hose Connections

1. Attach hose (A) from the loader valve OUT port to female quick coupler (2) in the front of tee (5).
2. Connect hose (B) from the loader valve PBY port to male quick coupler in the PBY port (N) on the hydraulic manifold.
3. Connect hose (C) From the loader valve IN port to hose (1) from the backhoe valve PBY tube.
4. Connect (1) from the backhoe valve OUT port to the male quick coupler in the end of tee (5).
5. Connect hose (1) from the backhoe IN port to hose (8) in the hydraulic manifold PRESSURE port (P).

Loader Hoses

- A. ----- Hose, 42" x 3/8 NPTM x 9/16 JICF
- B. ----- Hose, 42" x 3/8 NPTM x 9/16 JICF
- C. ----- Hose, 14" x 3/8 NPTM x 9/16 JICF

Hose Kit Fittings and Hoses

- 1. 38656 Hose, 112" x 3/8 NPTM x 3/4 ORBM
- 5. 66368 Tee, 3/8 NPT
- 8. 360001 Hose, 28" x 3/8 NPTM x 3/8 NPTM

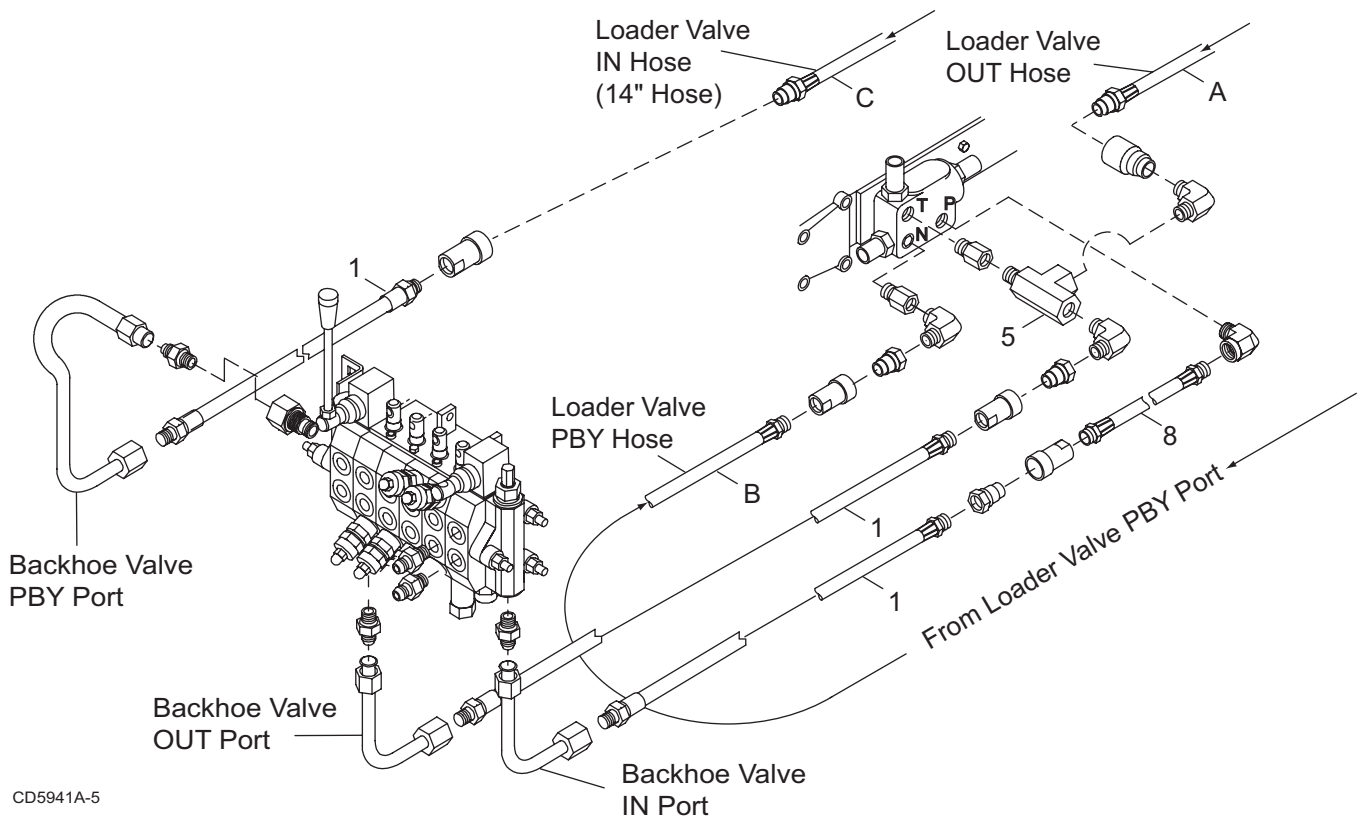
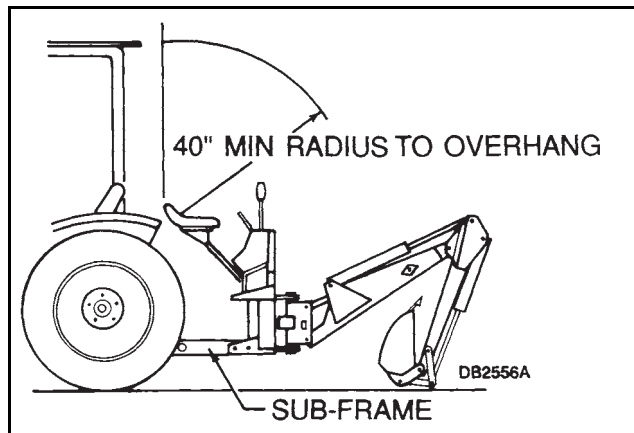


Figure 18. Backhoe and Loader Hose Connections

Mount Sub-Frame & Backhoe to Tractor

DANGER

■ This mounting kit is designed to provide secure mounting and adequate operator clearance when properly installed. Check clearance dimensions shown below to be sure you have installed seat bracket correctly. In some cases it may be necessary to adjust the seat to the lowest position and/or as far forward as possible in order to achieve the 40-inch clearance.



■ The only time the backhoe may be operated from a position other than the operator seat is during backhoe attachment and removal. Operator must:

- Read Mounting Kit Manual instructions on attaching and removing backhoe and use extreme care.
- Always stand between rear tire and backhoe stabilizer arms or along side of tractor to avoid being trapped should the boom swing control be accidentally activated.

WARNING

■ Remove seat and upper support assembly before installing or removing backhoe from tractor. Failure to comply may result in equipment failure and/or personal injury.

Hydraulic System Check List

Complete check list prior to backhoe operation.

___ Check that backhoe hydraulic pump is secured to the tractor PTO, if equipped.

___ Check the backhoe hydraulic reservoir to make sure backhoe PTO driven hydraulic system is full (approximately 5 - 7 US gallons). Service if necessary.

___ Check all hydraulic fittings and lines to be sure they are tight and free of kinks or twists.

NOTE: See the BH6500/7500 backhoe operator manual for hydraulic oil recommendations. Do not mix hydraulic fluid types.

Mount Backhoe

1. Remove the backhoe seat assembly.
2. Place sub-frame flat on a hard level surface.
3. Back tractor over the sub-frame and center between the tractor rear tires. Position tractor so that the hydraulic system can be connected. Shut off tractor, set brake, remove key.
4. Connect hydraulics.
5. Start tractor.

NOTE: You will use the backhoe hydraulics to maneuver the sub-frame into position. Use care in this procedure to avoid being trapped between tractor and backhoe or between backhoe parts.

6. Raise rear of sub-frame up by lowering stabilizers and boom section until even with channels of rear mount OR hooks are even with 3-point lift arm pins. Keep front of sub-frame low enough to clear tractor.
7. Drive tractor back so that crosstube slides into channel OR sub-frame hooks attach to 3-point lift arm pins. Shut off tractor, set brake, remove key.
8. Fasten sub-frame in place by placing clevis pins into channel holes and secure with safety pins OR attach lock bars, clevis pins, and klik pins.
9. With the tractor engine off, relieve pressure in the backhoe boom and stabilizers to raise sub-frame into front hanger.
10. Install bent pin and klik pin in front hanger mount.
11. Start tractor and put backhoe into transport position (see backhoe operator's manual).

NOTE: Install swing lock before transporting.

Remove Backhoe With Sub-Frame

DANGER

■ The only time the backhoe may be operated from a position other than the operator seat is during backhoe attachment and removal. Operator must:

- Read Mounting Kit Manual instructions on attaching and removing backhoe and use extreme care.
- Always stand between rear tire and backhoe stabilizer arms or along side of tractor to avoid being trapped should the boom swing control be accidentally activated.

WARNING

■ Remove seat and upper support assembly before installing or removing backhoe from tractor. Failure to comply may result in equipment failure and/or personal injury.

1. On a hard level surface, center the backhoe boom.
2. Remove the seat assembly.
3. Remove retaining pins from front sub-frame bracket and clevis pins from rear hanger bracket OR from sub-frame hooks.
4. Start the tractor. Engage PTO pump, if equipped, at slow idle speed. Curl the bucket all the way towards the operator.
5. Remove transport lock.
6. Extend boom and dipperstick so that dipperstick is vertical.
7. Rest bucket on the ground and lower stabilizers to take backhoe weight off tractor. Extend boom and stabilizers to release sub-frame.

8. Keeping the bucket and stabilizers in contact with the ground, raise the rear of the backhoe to pivot the front of the sub-frame down.

NOTE: For removal, the front of the sub-frame must be low enough to clear the lowest point of the tractor. Maintain clearance throughout this procedure.

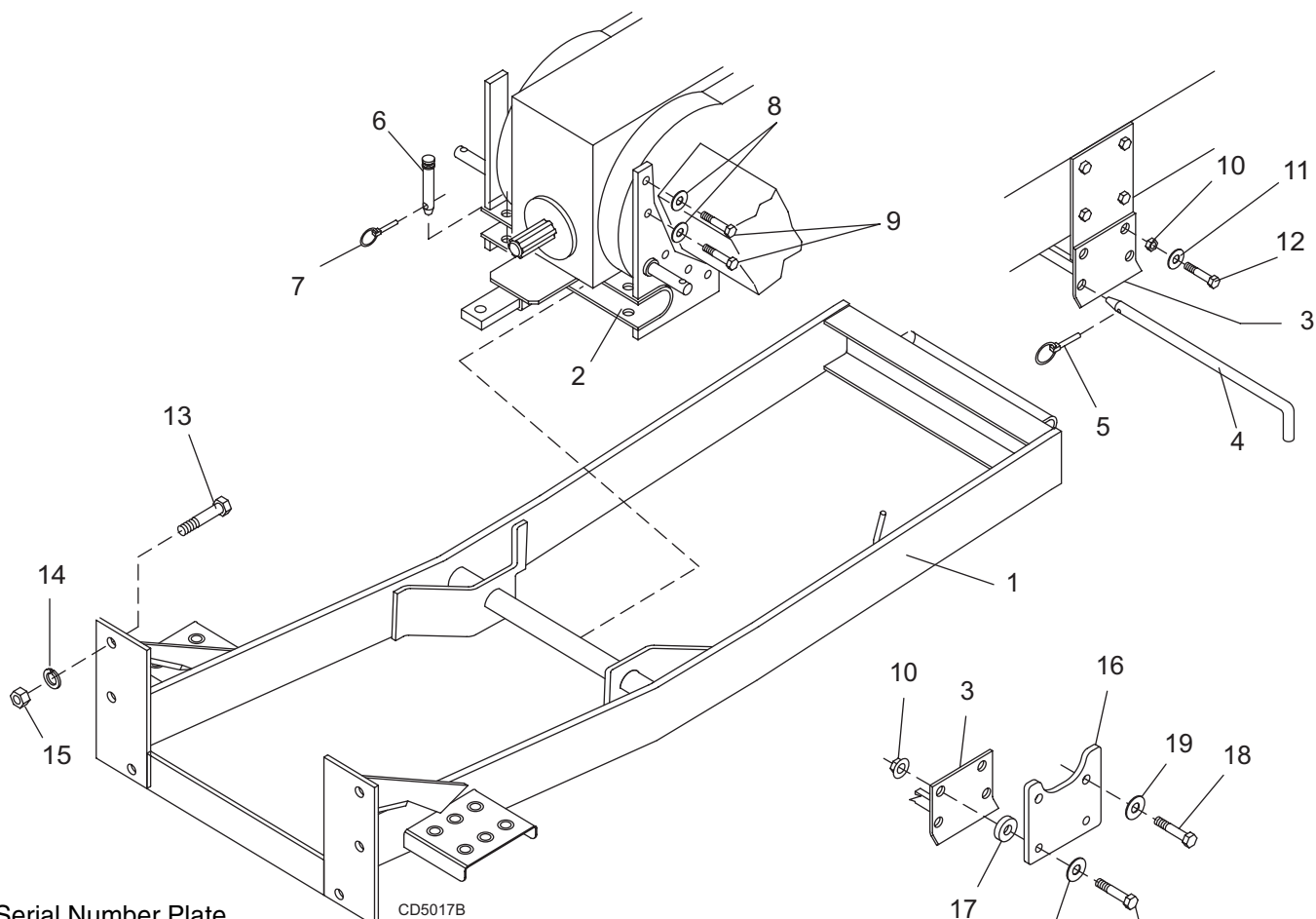
9. Move the tractor far enough to release the sub-frame from the brackets OR from the 3-point lift pins.
10. Place blocks under backhoe mainframe and raise stabilizers to lower backhoe onto the blocks.
11. Disengage PTO, turn off engine, set brakes, and remove key before leaving tractor seat.
12. Remove the backhoe hydraulic pump, if equipped, from the PTO shaft (see Store Hydraulic Pump section), or disengage the tractor hydraulic circuit and disconnect the hydraulic quick couplers.
13. If equipped connect PBY hose from loader valve to PBY port on tractor hydraulic manifold
14. Reinstall seat assembly.
15. Make sure backhoe and sub-frame clear the tractor chassis. Start tractor and drive the tractor away.

NOTE: For instructions on extended storage, see backhoe operator's manual.

Store Hydraulic Pump if Equipped

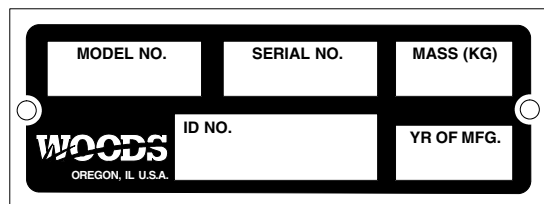
1. Disconnect pump from tractor PTO.
2. Store pump on back side of backhoe to prevent dirt and debris from accumulating in pump adapter.

1002899 SUB-FRAME MOUNTING KIT



Serial Number Plate

Located inside sub-frame side rail, rear of cross tube



For Mahindra
ML104 Loader Mount

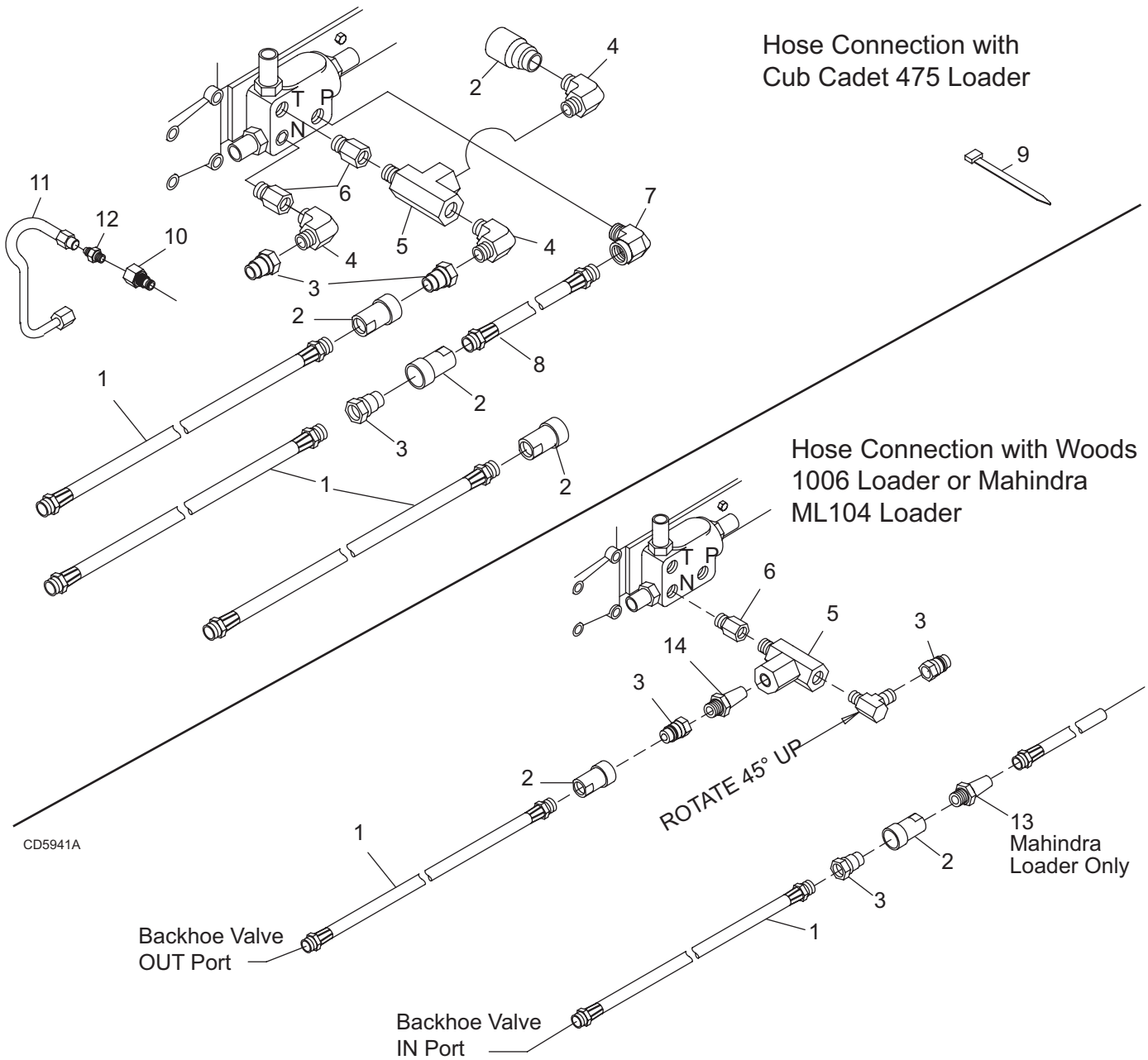
REF	PART	QTY	DESCRIPTION
1	55038-1	1	Sub-frame
2	55026	1	Rear mounting bracket
3	55041	1	Front mount
4	62674	1	3/4 x 17.75 Lock pin
5	62043	1	1/4 x 1-3/4 Klik pin
6	1002850	2	.75 x 2.75 Hitch pin
7	35124	2	7/16 x 2 Klik pin
8	44546	4	3/8 Hardened flat washer, thick
9	52540	4	M10 x 1.25P x 85mm Cap screw
10	11900 *	4	1/2 NC Flange lock nut
11	57816	4	1/2 Hardened flat washer

REF	PART	QTY	DESCRIPTION
12	3379 *	4	1/2 NC x 1-1/2 Cap screw GR5
13	735 *	6	3/4 NC x 2 Cap screw
14	2522 *	6	3/4 Lock washer
15	1450 *	6	3/4 NC Hex nut
16	1011542	2	Adapter plate (Mahindra loader mount)
17	23883	4	Spacer, 1/2 ID x 1-1/2 OD washer
18	33125	4	M14 x 2.0P x 50 mm Cap screw
19	46070	4	9/16 Hardened flat washer
20	639 *	4	1/2 NC x 2-1/2 Cap screw GR5

* Standard hardware, obtain locally

1002898 HOSE KIT

Hose Connection with
Cub Cadet 475 Loader



CD5941A

REF	PART	QTY	DESCRIPTION
1	38656	3	Hose, 112" x 3/4 SAEM x 3/8 NPTM
2	64299 *	3	Quick coupler, 3/8 Female
3	64300 *	3	Quick coupler, 3/8 Male
4	66367 *	2	Elbow, 3/8 NPTM x 3/8 NPTM 90°
5	66368	1	Tee, 3/8NPT
6	66369 *	1	Adapter, 3/8 BSTP-M x 3/8 NPTM
7	316029 *		Elbow, 3/8 BSPTM x 3/8 NPTF 90°

REF	PART	QTY	DESCRIPTION
8	360001	1	Hose, 28" x 3/8 NPTM x 3/8 NPTM
9	31407	1	Hose tie, 7" Long
10	37409	1	Power-Beyond sleeve
11	55046	1	Hydraulic tube assembly
12	61	1	Straight connector
13	63480	1	Adapter, 3/8 NPTM x 9/16 JICM
14	315030	1	Adapter, 3/8 NPTM x 3/8 NPTM

* Some fittings are included in loader hydraulic hose kit

18 Parts

MAN0131 (Rev.12/23/2005)

BOLT TORQUE CHART

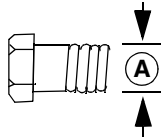
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

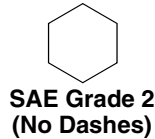
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

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.



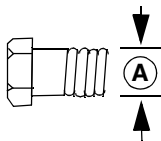
SAE SERIES TORQUE CHART



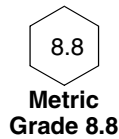
SAE Bolt Head Identification



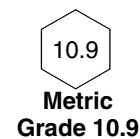
Ⓐ Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
1/4"	7/16"	6	8	10	13	14	18
5/16"	1/2"	12	17	19	26	27	37
3/8"	9/16"	23	31	35	47	49	67
7/16"	5/8"	36	48	55	75	78	106
1/2"	3/4"	55	75	85	115	120	163
9/16"	13/16"	78	106	121	164	171	232
5/8"	15/16"	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



Metric Bolt Head Identification



Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ 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

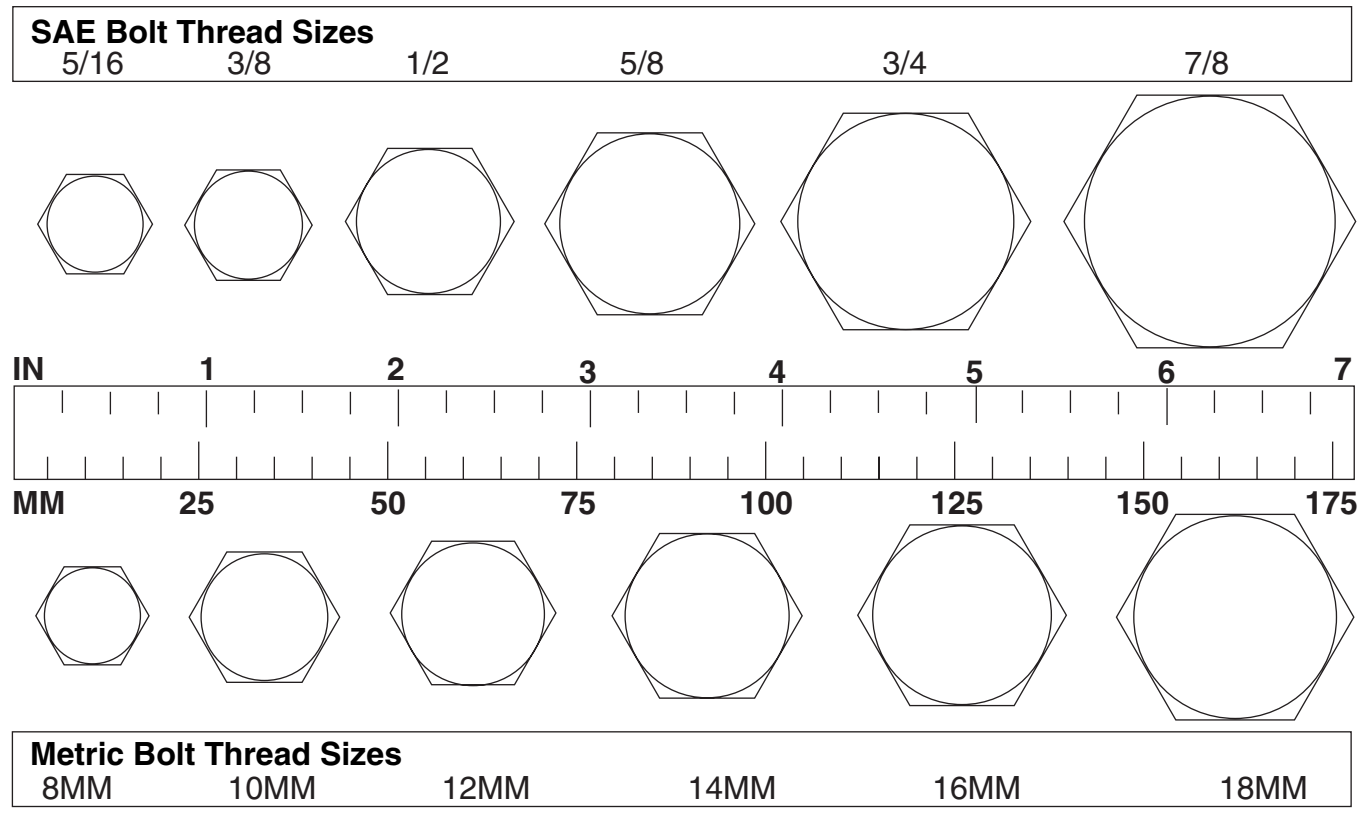
Typical Washer Installations

Bolt Lock Washer Flat Washer

8/9/00

BOLT SIZE CHART

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



ABBREVIATIONS

AG Agriculture
 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

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

Please Enter Information Below and Save for Future Reference.

Date Purchased: _____

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 DELIVERY OF THE PRODUCT TO THE ORIGINAL PURCHASER.

The warranty periods for certain gearboxes are listed below:

Model No.	Part Warranted	Duration
PHD25, PHD35, PHD65, PHD95, 1260, 2120, 2162, 3180, 3240, BB48, BB60, BB72, BB84, BB600, BB720, BB840, BB6000, BB7200, BB8400, BW180, DS96, DS120, RCC42, RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400, 7144RD-2, 9180RD-2, 9204RD-2	Gearbox components	5 years from the date of delivery to the original purchaser.
RDC54, RD60, RD72	Gearbox components	3 years from the date of delivery to the original purchaser.
BW180, DS96, DS120, RDC54, RD60, RD72	Gearbox components	1 year from the date of delivery to the original purchaser if used in rental or commercial applications.

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 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.

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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 manufacture replacement parts.

No agent, representative, dealer, distributor, serviceperson, salesperson, or employee of any company, including without limitation, WOODS, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

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

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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.

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