

WOODS

1028310

4-POINT SUB-FRAME MOUNTING KIT

for BH90-X Backhoe

on New Holland® Tractors

TT60A, TT75A

includes Hose Kits

1028360, 1029730

and Mount Kit 1029700

MAN0715

(Rev. 10/31/2008)

**SAVE THIS
MANUAL!**

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

WOODS®

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 online at the Woods Dealer Website or complete the mail-in form included with the Operator's Manual. If using the mail-in form, the dealer is to return the prepaid postage portion to Woods, give one copy to the customer, and retain one copy. **Failure to register the product 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 **NOTICE** 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 is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

IMPORTANT
or **NOTICE**

Is used to address practices not related to personal injury.

NOTE

Indicates helpful information.

WOODS®

ALITEC™
BMP®
CENTRAL FABRICATORS®
GANNON®
GILL®
WAIN-ROY®
WOODS®

2 Introduction

SFMK (Rev. 2/20/2008)

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.**

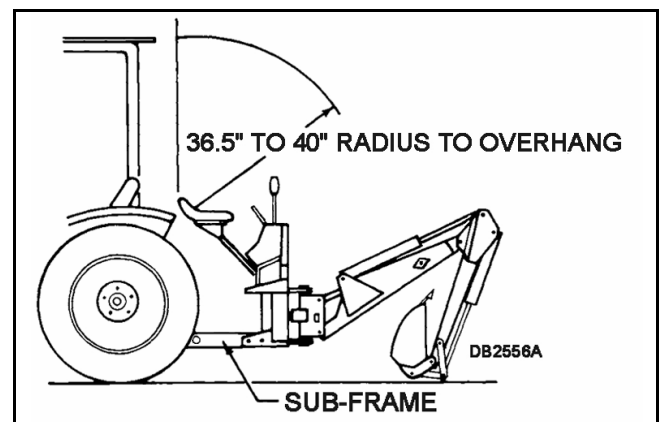
■ **Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.**

■ **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.**

■ **To prevent contamination during maintenance and storage, clean and then cover hose ends, fittings, and hydraulic ports with tape.**

■ **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 for most operators 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 ideal 40-inch clearance. For 36.5-inch radius operation, taller operators may need to wear a hardhat for greater comfort and safety.**



■ **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.**

(Safety Rules continued on next page)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

- 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.
- 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 install backhoe and required counterweights on tractor if the total tractor and equipment weight then exceeds the ROPS weight certification of the tractor. To reduce overall weight of unit, remove liquid from rear tires and remove mid-mount mower, if equipped.

- 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 Parts section for location.)



BACKHOE SUB-FRAME INSTALLATION

Tractor Preparation

WARNING

■ Only use 1028310 4-Point Sub-Frame Mounting Kit for mounting Woods BH90-X backhoe on New Holland® TT60A or TT75A tractors equipped with Woods LU126 loader. Use mount kit 1029700 and 1028310 Sub-Frame Mounting Kit to mount Woods BH90-X backhoe on New Holland® TT60A or TT75A tractors equipped with New Holland 620TL Loader. 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 1028310 4-point sub-frame on a tractor without a Woods or New Holland loader mount attached.

Refer to the WOODS BH90-X Backhoe Operator's Manual for backhoe assembly instructions.

Leave all hardware loose until sub-frame has been fit up or otherwise specified in the instructions.

1. Place jackstands under rear axle and remove both rear tires.
2. Disconnect the tractor anti-sway links from the axle brackets. Secure sway links to the drawbar bracket with sway link pins and safety pins (22) supplied in kit. See Figure 1.
3. Remove top link.
4. Remove the lower ROPS bracket from the bottom of the rear axle (Figure 2). Leave ROPS bolts in place.

NOTE: Only work on one side of the tractor at a time. ROPS may become unstable if both ROPS brackets are removed at the same time.

5. **1028360 Hose Kit Only:** Disconnect the loader valve PBY hose from the tractor steel hydraulic line under the right side of the operator's platform.
6. Disconnect the steel hydraulic line from the hydraulic valve at the rear of the tractor and remove the hydraulic line. See Figure 2.

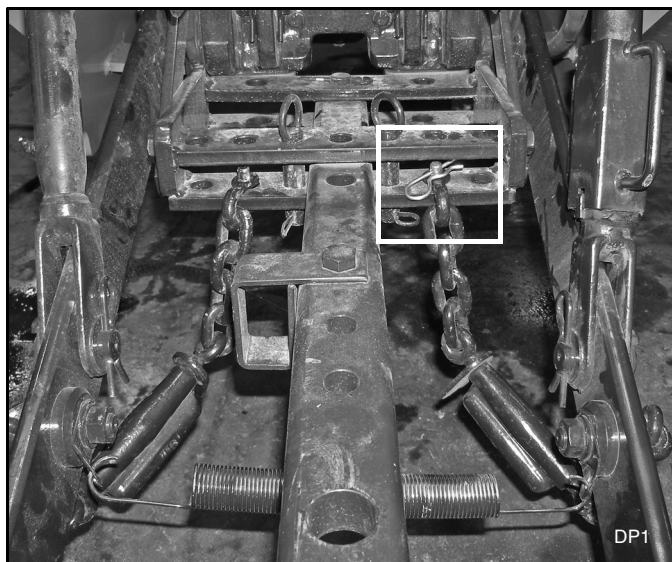


Figure 1. Reposition Anti-Sway Links

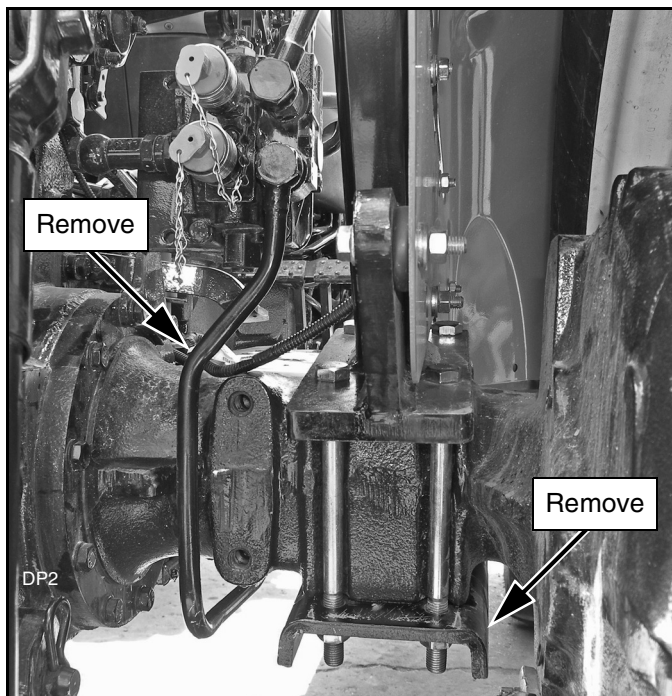


Figure 2. Remove Hydraulic Line & ROPS Bracket (Right Side Shown)

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 1029700 Mount Kit

For New Holland Loader Mount Only

This mount kit is needed to connect sub-frame mounting kit 1028310 to the New Holland 620TL loader mount.

1. Remove toolbox and toolbox bracket from the right loader mount if equipped.
 2. Attach right backhoe bracket (1) to the inside of New Holland loader mount and toolbox bracket (3) to the outside of loader mount.
 3. Secure using two cap screws (4), hardened flat washers (5), one tube support (7) and two flange lock nuts (6).
- NOTE:** Tube support (7) is placed between the two rear holes on the mount.
4. Attach toolbox to toolbox bracket (3) using hardware previously removed.
 5. Repeat steps to install left backhoe bracket (2) to left loader mount. See Figure 5.

1. 1029702 Right backhoe bracket
2. 1029703 Left backhoe bracket
3. 1029704 Toolbox bracket
4. 300469 5/8 NC x 6-1/2 HHCS GR5
5. 57817 5/8 Hardened flat washer
6. 19025 5/8 NC Flange lock nut
7. 1029774 Tube support

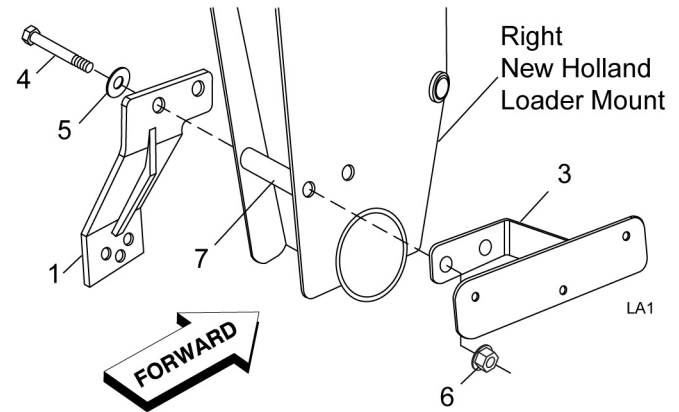


Figure 3. Right Backhoe Bracket Installation

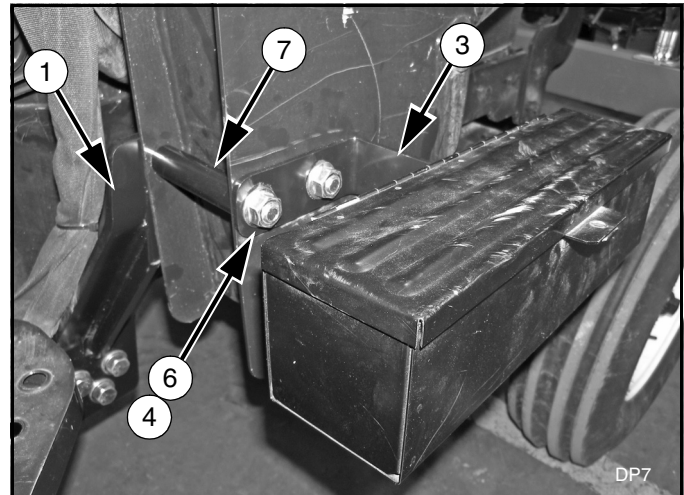


Figure 4. Right Backhoe Bracket Installed

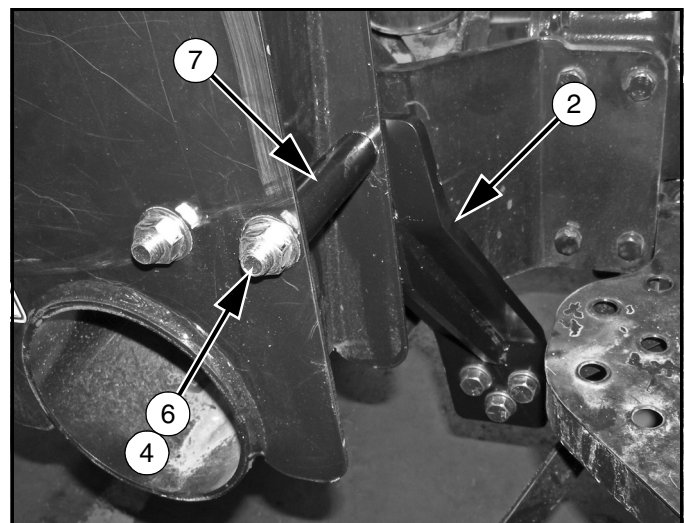


Figure 5. Left Backhoe Bracket Installed

Install Tractor Brackets

1. Place right tractor bracket (1) under right side of tractor. Use a hydraulic floor jack to help raise and hold tractor bracket in position.
2. Attach right tractor bracket (1) to right loader mount or right backhoe bracket (New Holland Mount) using one hex flange screw (11) and hex flange nut (18). See Figure 7.
3. Raise tractor bracket up and attach it to the bottom of the rear axle using ROPS hardware previously removed.
4. Secure tractor bracket to the back of the rear axle using two cap screws (7) and hardened flat washers (14). See Figure 8.
5. Attach tractor bracket to the bottom of the tractor using two cap screws (8) and hardened flat washers (14).
6. Install remaining two hex flange screws (11) and hex flange nuts (18) to the loader mount or backhoe bracket.
7. Repeat steps to install left tractor bracket (2).
8. Torque hardware:

M16 x 1.5P x 45 mm 133 lbs-ft. (181 N-m)
M16 x 1.5P x 40 mm 184 lbs-ft. (250 N-m)
5/8 NC x 1-3/4 HFS 170 lbs-ft. (230 (N-m)

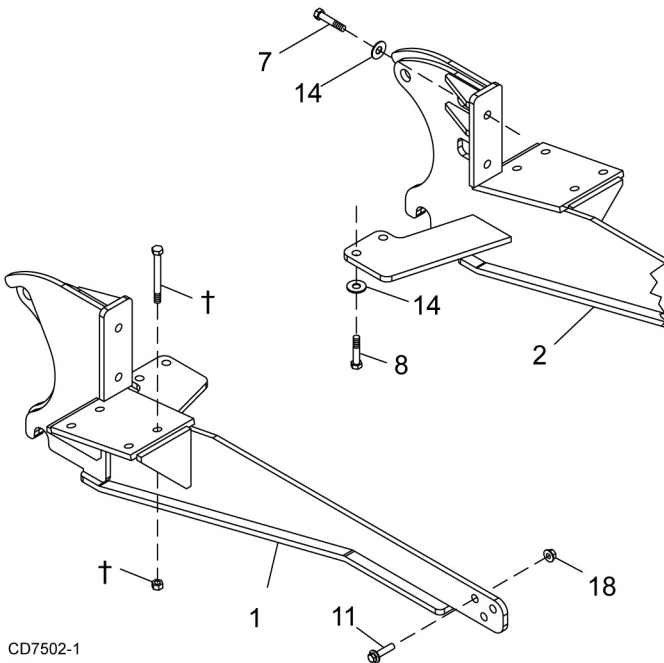


Figure 6. Tractor Bracket Installation

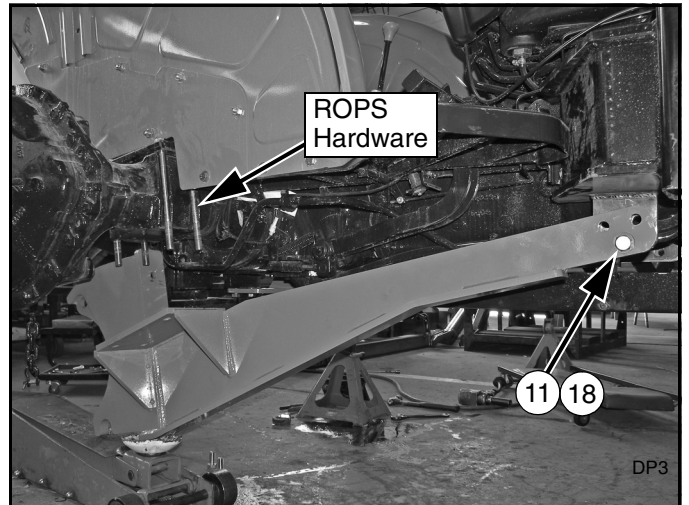


Figure 7. Right Tractor Bracket to Loader Mount

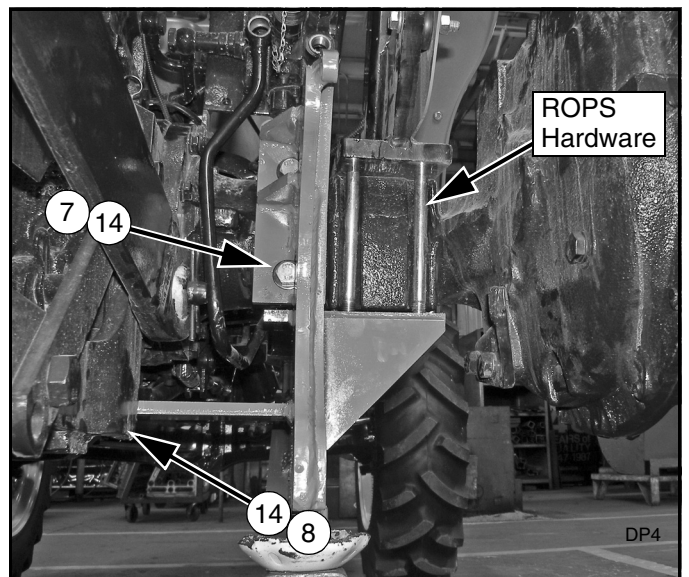


Figure 8. Right Tractor Bracket Installed, Rear Axle

- | | | |
|-----|---------|----------------------------------|
| 1. | 1028308 | Right tractor bracket |
| 2. | 1028309 | Left tractor bracket (not shown) |
| 7. | 307431 | M16 x 1.5P x 45 mm HHCS |
| 8. | 1026337 | M16 x 1.5P x 40 mm HHCS CL10.9 |
| 11. | 19024 | 5/8 NC x 1-3/4 HFS GR5 |
| 14. | 57817 | 5/8 Hardened flat washer |
| 18. | 1028718 | 5/8 NC Flange hex nut |
| †. | | Tractor hardware |

CD7502-1

Attach Backhoe Mounts to Backhoe

NOTE: Leave all hardware loose until backhoe has been mounted to the tractor.

1. Attach right backhoe mount (3) and left backhoe mount (4) to backhoe frame.
2. Secure into position using six (three per bracket) cap screws (10), hardened flat washers (13), and hex nuts (17).
3. Secure crossbrace (5) to backhoe brackets using four cap screws (12), hardened flat washers (15), and hex nuts (19).

- | | | |
|-----|---------|--------------------------|
| 3. | 1014450 | Right backhoe mount |
| 4. | 1014451 | Left backhoe mount |
| 5. | 1014467 | Crossbrace |
| 10. | 735 | 3/4 NC x 2 HHCS GR5 |
| 12. | 24576 | 1/2 NC x 1-3/4 HHCS GR5 |
| 13. | 57798 | 3/4 Hardened flat washer |
| 15. | 57816 | 1/2 Hardened flat washer |
| 17. | 1450 | 3/4 NC Hex nut |
| 19. | 1093 | 1/2 NC Hex nut |

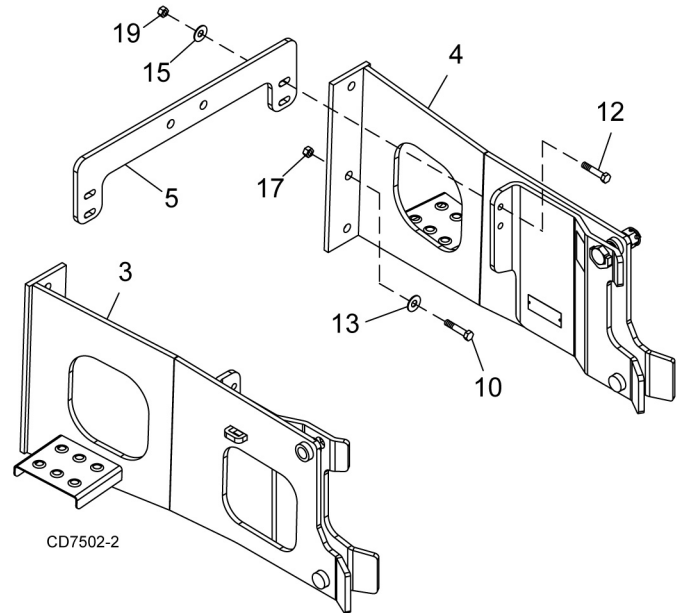


Figure 9. Backhoe Bracket Installation

HOSE KIT 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.

1028360 HOSE KIT

Install Fittings and Hose

1028360 Hose Kit is used to connect backhoe hydraulic hoses to the tractor rear hydraulic valve and the Woods loader control valve.

1. Attach adapter (4), adapter (5) and female quick coupler (6) into the opening on the hydraulic valve at the rear of the axle.
2. Attach male quick coupler (7) to hose (1).
3. Attach opposite end of hose (1) to the PBY hose from the loader control valve.
4. Route hose (1) over rear axle and out the back of the tractor.

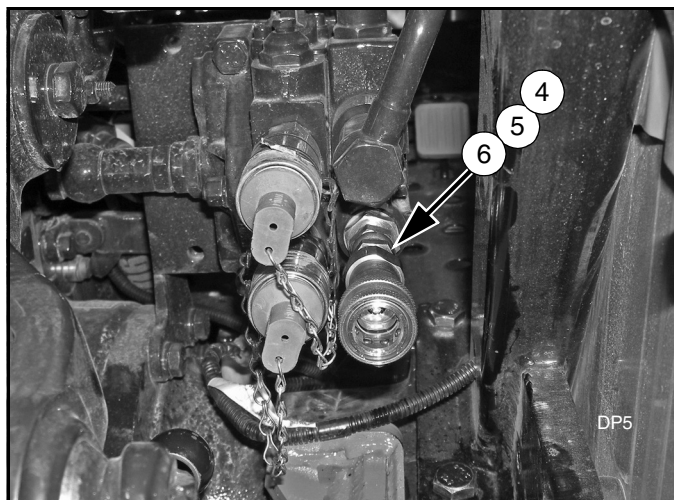


Figure 10. Hydraulic Valve Fittings Installed

1. 1028358 Hose, 60" x 3/8 NPTM x 7/8 JICM
4. 1010920 Adapter, M22 x 3/4 JICM
5. 315036 Adapter, 3/8 NPTM x 3/4 JICF
6. 64299 Quick coupler, female 3/8
7. 64300 Quick coupler, male 3/8

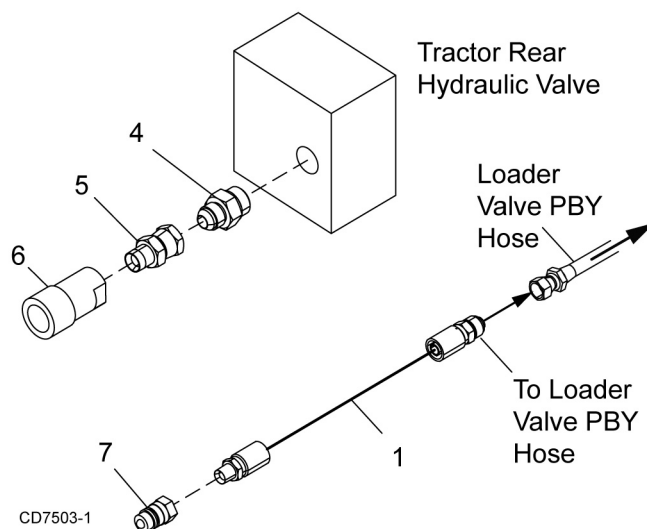


Figure 11. Bulkhead Bracket Installation

Install Hoses to Backhoe Valve

1. Attach adapter (3) to the IN and OUT ports on the backhoe control valve.
2. Attach female quick coupler (6) to hose (2). Attach opposite end of hose to the IN port on the backhoe valve.
3. Attach male quick coupler (7) to second hose (2). Attach opposite end of hose to the OUT port of backhoe valve.

2. 1013325 Hose, 48" x 3/8 NPTM x 3/4 JICF
3. 316016 Adapter, 3/4 JICM x 7/8 ORBM
6. 64299 Quick coupler, female
7. 64300 Quick Coupler, male

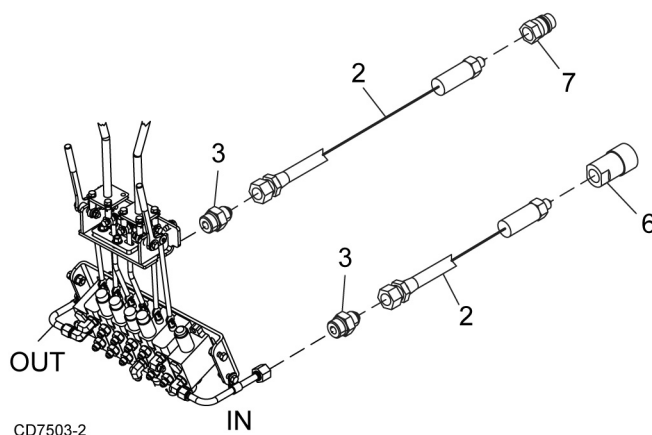


Figure 12. Backhoe Hose Connection

1029730 HOSE KIT

Install Fittings

1029730 Hose Kit is used to connect backhoe hydraulic hoses to the tractor hydraulic line and the New Holland loader control valve.

1. Disconnect the loader control valve PBY hose from the hydraulic hard line below the tractor seat.
2. Attach adapter (2), adapter (6) and female quick coupler (4) to the hydraulic hard line (Figure 13).
3. Attach adapter (3), adapter (6) and male quick coupler (5) to the PBY hose from the loader control valve.
4. Route PBY hose over rear axle.

2. 1002613 Adapter, M22 x 1.5 x 3/4 JICM
3. 1010920 Adapter, M22 x 1.5 x 3/4 JICM
4. 64299 Quick coupler, female 3/8
5. 64300 Quick coupler, male 3/8
6. 315036 Adapter, 3/8 NPTM x 3/4 JICF
7. 316016 Adapter, 3/4 JICM x 7/8 ORBM

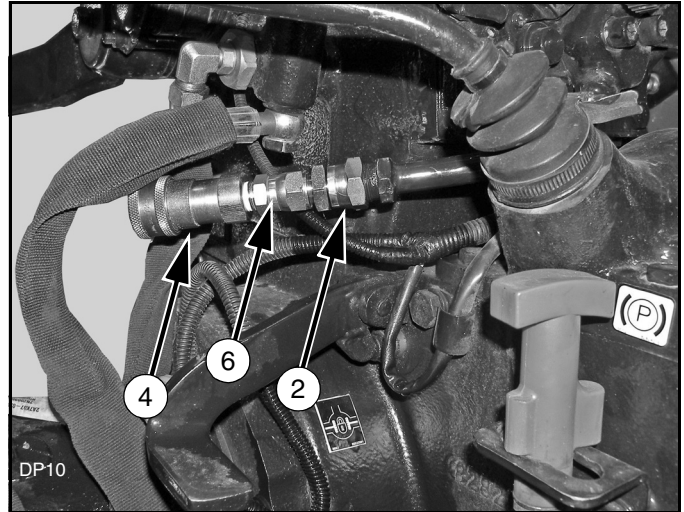


Figure 13. Hydraulic Fitting Installed

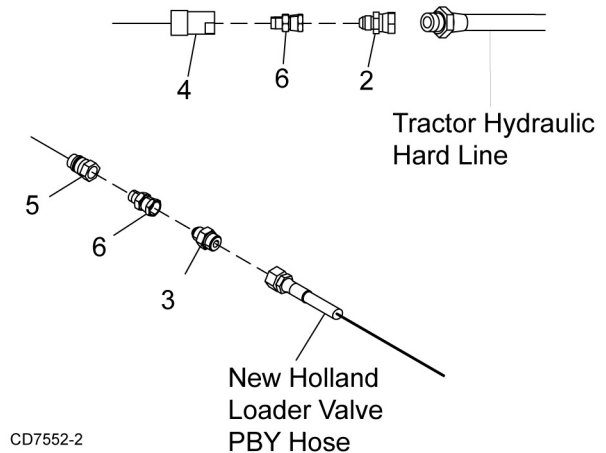


Figure 14. Hydraulic Fitting Installation

Install Hoses to Backhoe Valve

1. Attach adapter (7) to the IN and OUT ports on the backhoe control valve.
2. Attach female quick coupler (4) to hose (1). Attach opposite end of hose to the IN port on the backhoe valve.
3. Attach male quick coupler (5) to second hose (1). Attach opposite end of hose to the OUT port of backhoe valve.

1. 1029729 Hose, 72" x 3/8 NPTM x 3/4 JICF
4. 64299 Quick coupler, female
5. 64300 Quick Coupler, male
7. 316016 Adapter, 3/4 JICM x 7/8 ORBM

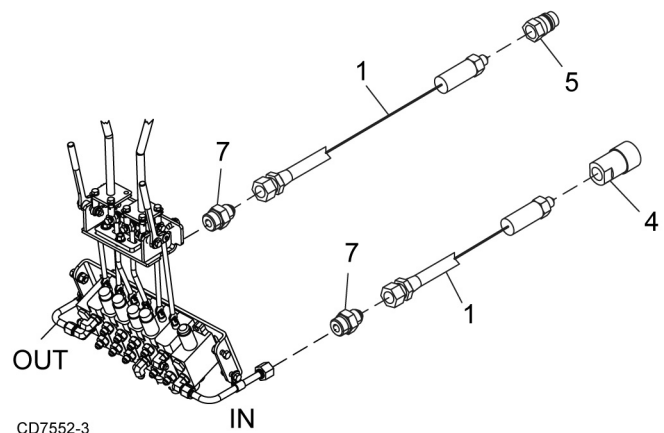


Figure 15. Backhoe Hose Connection

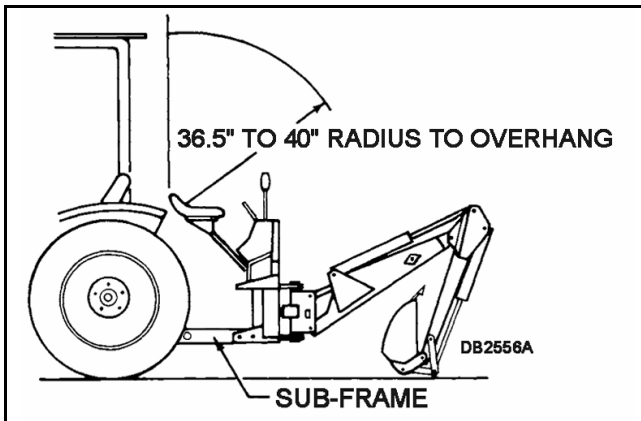
10 Installation

MAN0715 (rev. 10/31/2008)

Mount Backhoe to Tractor

! DANGER

■ This mounting kit is designed to provide secure mounting and adequate operator clearance for most operators 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 ideal 40-inch clearance. For 36.5-inch radius operation, taller operators may need to wear a hardhat for greater comfort and safety.



■ 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 power unit. Failure to comply may result in equipment failure and/or personal injury.

Check Hydraulic System

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

Mount Backhoe

1. Remove the backhoe seat assembly.
2. Back tractor up to backhoe and center mount between the tractor rear tires. Position tractor so that the hydraulic system can be connected. Shut off tractor, set brake, remove key.
3. Attach backhoe hydraulic system.
 - A. Connect male quick coupler on hose from OUT port on the backhoe control valve to the female quick coupler on the tractor rear hydraulic valve or hydraulic hard line below tractor seat.
 - B. Connect female quick coupler on hose from the backhoe valve to the female quick coupler on the end of hose from the loader valve PBY port.
4. With the tractor PTO and transmission in neutral, start the engine and run at low idle. Hydraulic power is provided when the tractor is started.

NOTE: Very little engine power is required to operate the hydraulic system in this mode. Should the engine pull down excessively, check the plumbing hook-up for reversed lines or a control lever stuck in an operating position.

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

(Continued on next page.)

Mount Backhoe to Tractor (Continued)

Refer to Figure 16.

5. Using the backhoe hydraulics position the backhoe brackets at a slight angle, approximately 5 to 10 degrees.
6. Raise backhoe up by lowering stabilizers and boom section until backhoe mounting pins on backhoe brackets are slightly lower than tractor bracket hooks.
7. Slowly move tractor back until backhoe brackets are positioned below the tractor bracket hooks. Set tractor brake.
8. Raise backhoe bracket bottom mounting pins into tractor bracket bottom hooks.
9. Rotate backhoe bracket upper mounting slots over tractor bracket mounting hole and align holes.
10. Install cap screws (9) and slotted hex nuts (16). Tighten with 1-1/2 inch open end wrench provided with kit. Return wrench to storage position (see Figure 16).
11. Secure hex nut into position with klik pin (20).
12. Shut off tractor and remove key.
13. Tighten hardware with backhoe secured to the tractor. This will ensure proper alignment and fit-up for future installation.
 - 1/2 NC x 1-34 85 lbs-ft (115 N-m)
 - 3/4 NC x 2 297 lbs-ft (403 N-m)
14. Reinstall seat.
15. Start tractor and put backhoe into transport position (see backhoe operator's manual).

NOTE: Install swing lock before transporting.

- 9. 1006860 1" NC x 4 Cap screw GR5
- 16. 1006861 1" NC Slotted hex nut
- 20. 62043 1/4 x 1-3/4 Klik pin

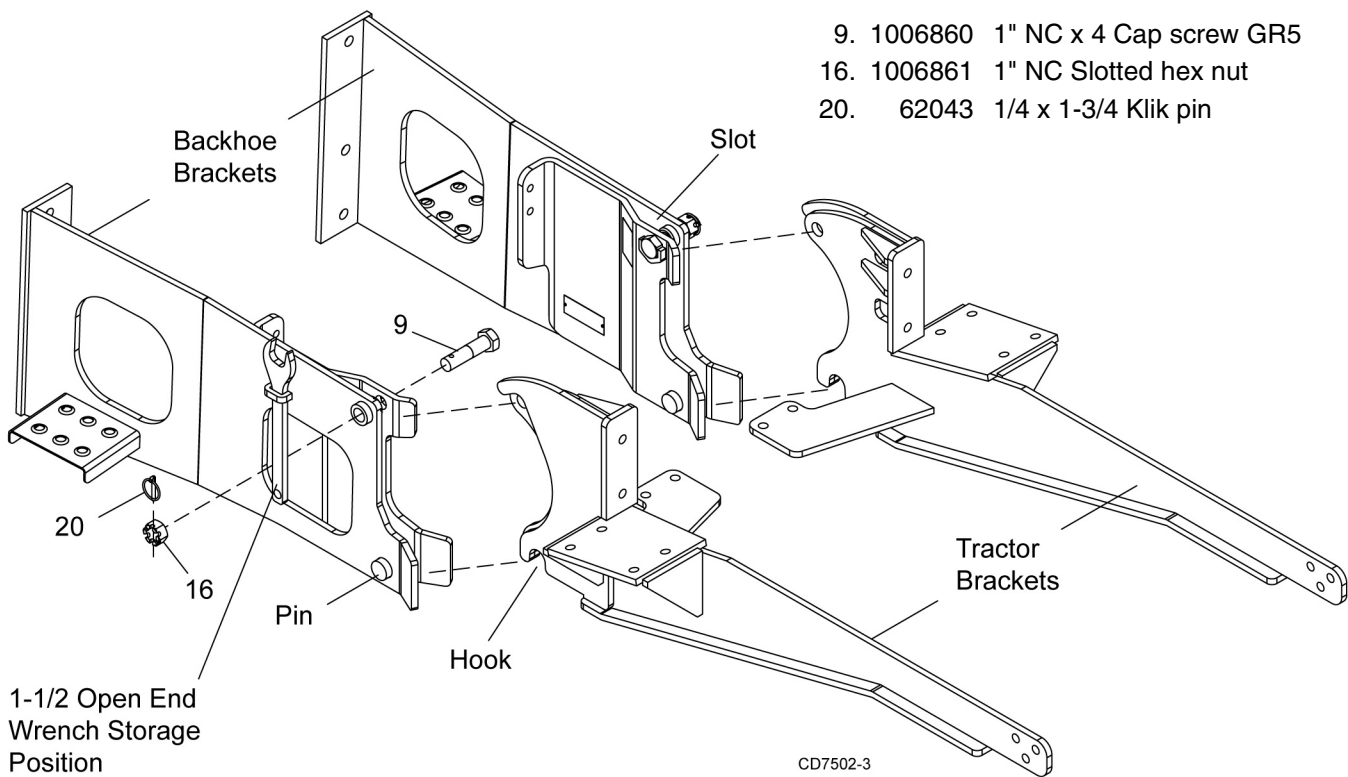


Figure 16. Backhoe to Tractor Installation

Remove Backhoe from Tractor

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 power unit. Failure to comply may result in equipment failure and/or personal injury.

1. Position tractor on a hard, level surface and center the backhoe boom.
2. Lower stabilizers and take backhoe weight off tractor.
3. Lower boom and dipper to form 90-degree angle and rest bucket on the ground.
4. Remove the seat assembly.
5. Remove klik pins from bolt and nut assemblies.
6. Use 1-1/2 inch open end wrench supplied with the mounting kit to remove hex nuts. Return wrench to storage position (see Figure 16).

7. Use the boom to relieve excess pressure on 1 inch bolts and remove bolts.
8. Tilt backhoe main frame to separate slots on the backhoe brackets from the tractor brackets.
9. Raise stabilizers until backhoe brackets slide out of hooks on the bottom of the tractor brackets.
10. Move tractor forward to clear backhoe brackets.
11. Lower backhoe until backhoe main frame is firmly on the ground. Retract boom and dipper and place bucket cutting edge flat on the ground. See Figure 17. Connect transport lock and insert swing lock pin.

NOTE: It may be necessary to place backhoe main frame on 6" blocks if backhoe hose lengths are not long enough to achieve proper clearance when separating backhoe from tractor.

12. Turn off engine, set brakes, and remove key.
13. Disconnect backhoe hydraulic system. See "STORAGE" on page 14.
13. Reinstall seat assembly.

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

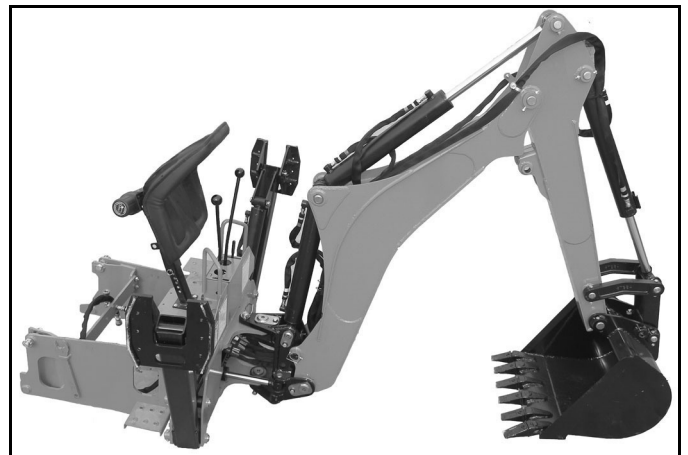


Figure 17. Backhoe Storage Position

STORAGE

Connect Hydraulic Hoses

NOTICE

■ Failure to connect hoses together will result in damage to tractor hydraulic system.

Tractor & Woods Loader: Connect male quick coupler on end of hose from loader control valve to female quick coupler in rear hydraulic valve when backhoe is removed from tractor. See Figure 18. Make sure 3-point lift arms do not interfere with hose. Adjust hose as necessary to prevent interference.

Tractor & New Holland Loader: Connect male quick coupler on end of hose from loader control valve to female quick coupler in the hydraulic hard line below the tractor seat when backhoe is removed from tractor. See Figure 19

BACKHOE: Connect IN and OUT quick couplers together to prevent dirt and debris from accumulating in quick couplers. See Figure 20.

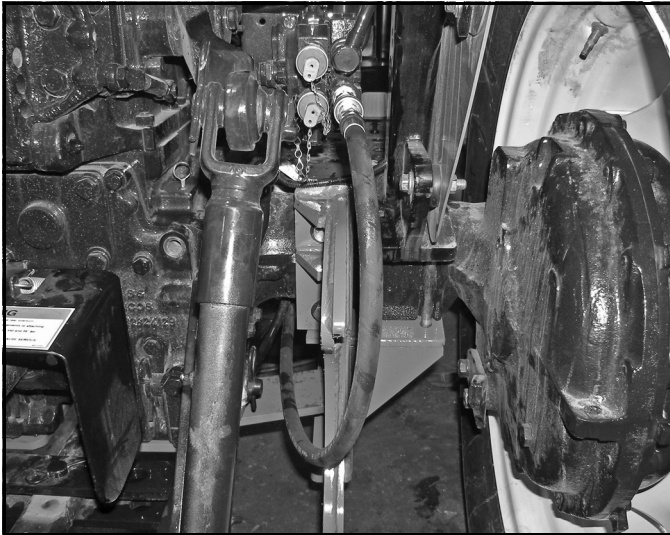


Figure 18. Hose Connection - Backhoe Removed Woods Loader

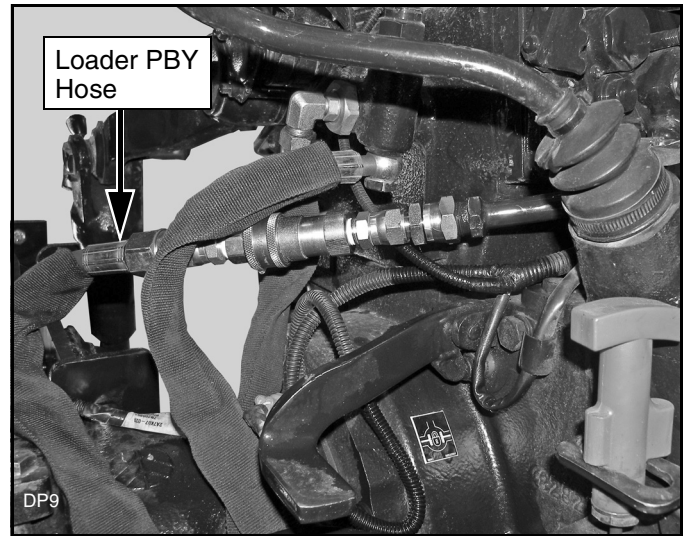


Figure 19. Hose Connection - Backhoe Removed New Holland Loader

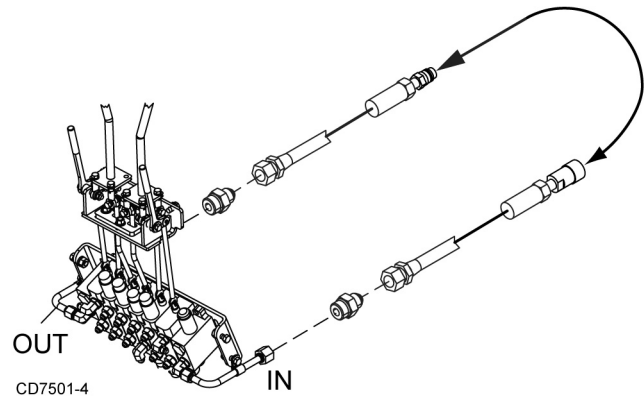


Figure 20. Backhoe Hose Connection

Attach 3-Point Arms

Lower 3-point lift arms and anti-sway links can be used on tractor when backhoe is removed.

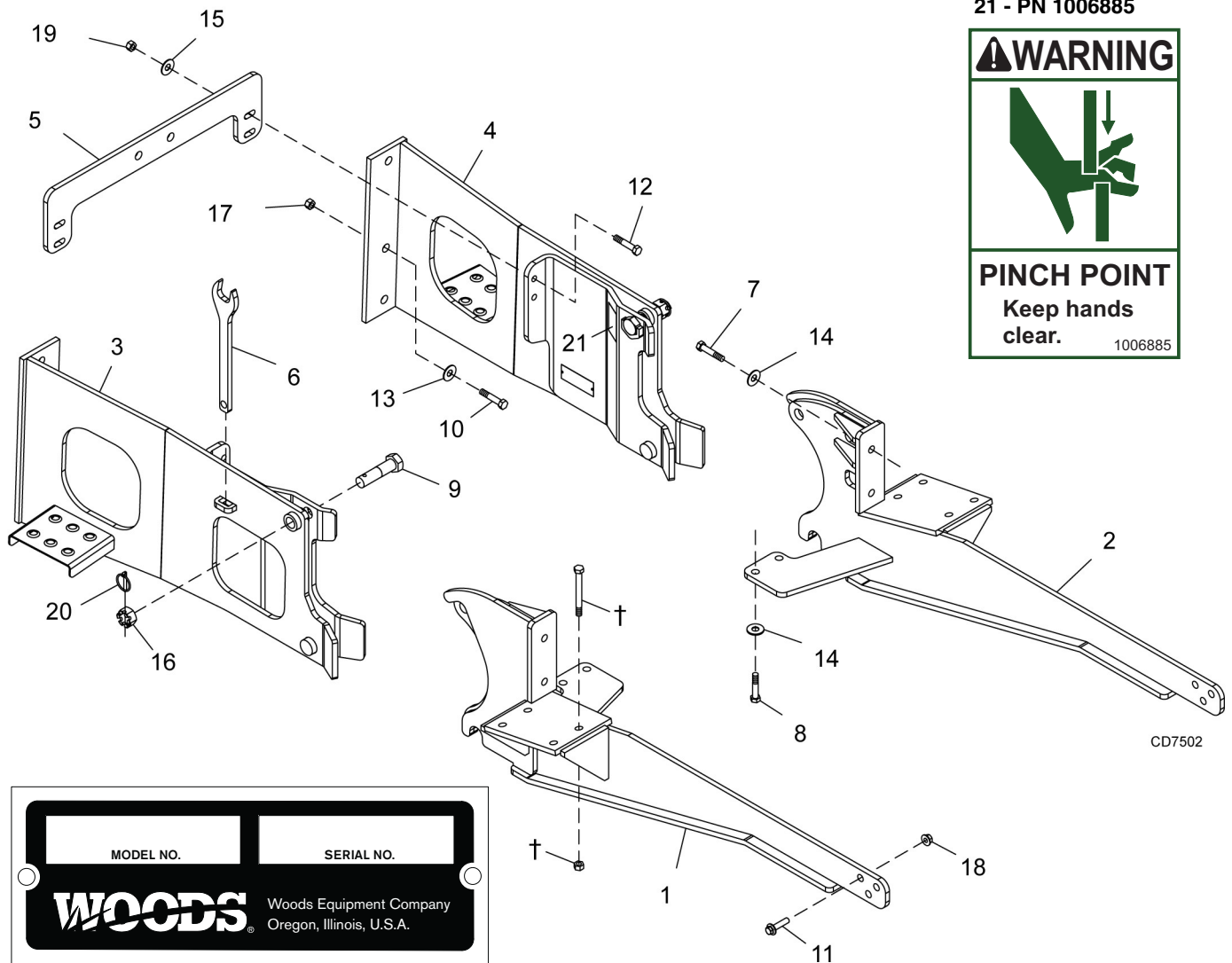
Attach 3-point lift arms anti-sway links using the normal tractor connection.

Secure anti-sway links to tractor using sway link pins and safety pins (22) provided in kit.

22. 15036 Safety pin, 3/16

1028310 4-POINT SUB-FRAME MOUNTING KIT

21 - PN 1006885



REF	PART	QTY	DESCRIPTION
1	1028308	1	Right tractor bracket
2	1028309	1	Left tractor bracket
3	1014450	1	Right backhoe bracket
4	1014451	1	Left backhoe bracket
5	1014467	1	Cross brace
6	1006883	1	1-1/2 Open end wrench
7	307431	6	M16 x 1.5P x 45 mm HHCS
8	1026337	4	M16 x 1.5P x 40 mm HHCS CL10.9
9	1006860	2	1" NC x 4.0 HHCS GR5
10	735 *	6	3/4 NC x 2 HHCS GR5
11	19024	6	5/8 NC x 1-3/4 HFS GR5
12	24576 *	4	1/2 NC x 1-3/4 HHCS GR5
13	57798	6	3/4 Hardened flat washer

REF	PART	QTY	DESCRIPTION
14	57817	8	5/8 Hardened flat washer
15	57816	4	1/2 Hardened flat washer
16	1006861	2	1" NC Slotted hex nut
17	1450 *	6	3/4 NC Hex nut
18	1028718	6	5/8 NC Hex flange nut
19	1093 *	4	1/2 NC Hex nut
20	62043	2	1/4 x 1-3/4 Klik pin
21	1006885	2	Decal, Warning - pinch point
22	15036 *	2	Safety pin, 3/16 (not shown)

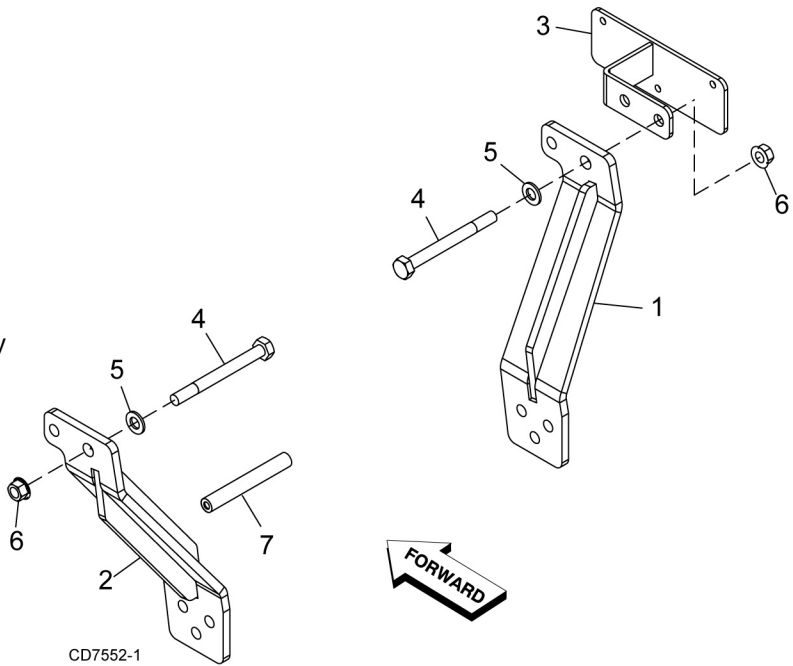
† Tractor Hardware
HFS Hex Flange Screw
HHCS Hex Head Cap Screw

* Standard hardware, obtain locally

1029700 MOUNTING KIT

REF	PART	QTY	DESCRIPTION
1	1029702	1	Right backhoe bracket
2	1029703	1	Left backhoe bracket
3	1029704	1	Toolbox bracket
4	300469 *	4	5/8 NC x 6-1/2 HHCS GR5
5	57817	4	5/8 Hardened flat washer
6	19025 *	4	5/8 NC flange lock nut
7	1029774	2	Tube support

* Standard hardware, obtain locally

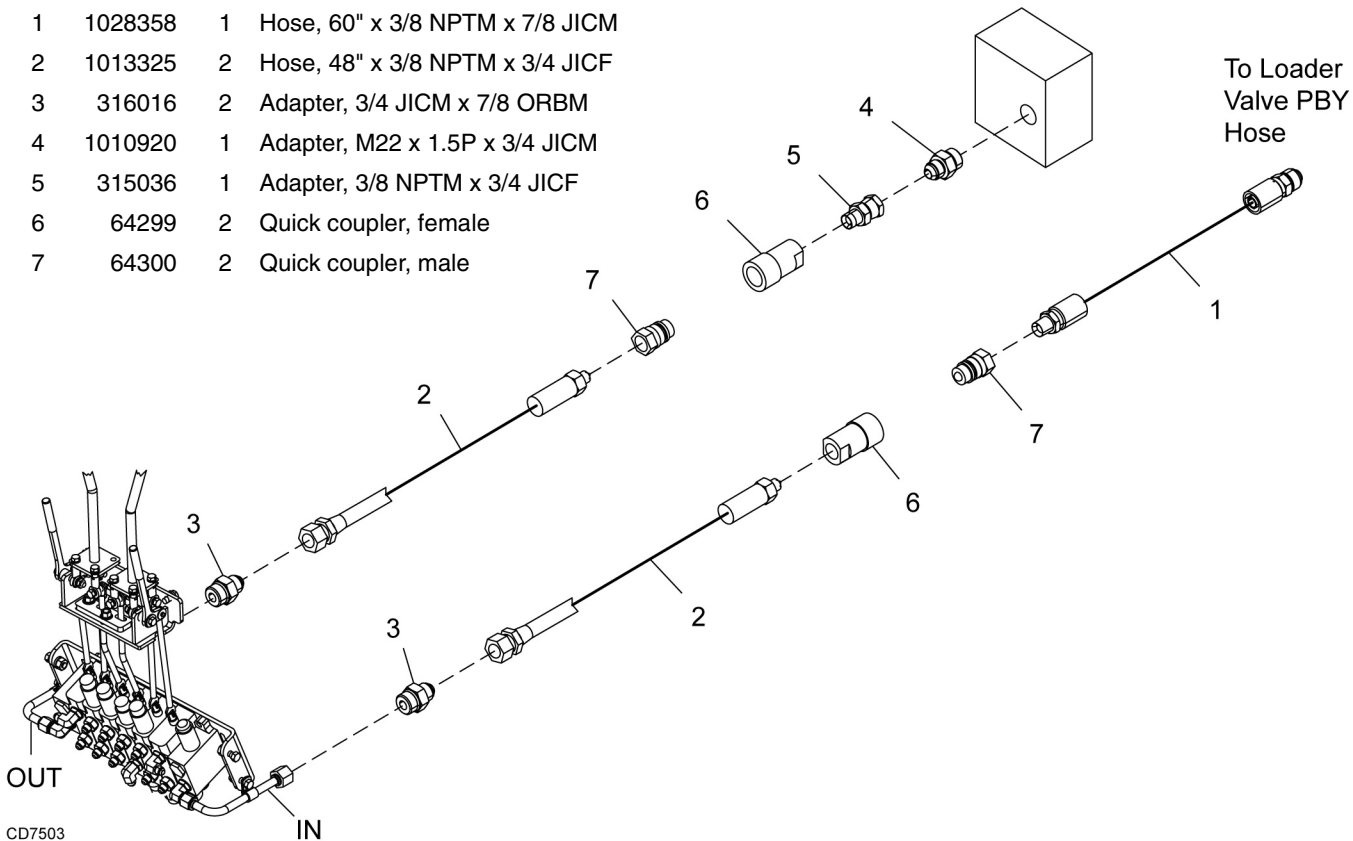


1028360 HOSE KIT

REF	PART	QTY	DESCRIPTION
1	1028358	1	Hose, 60" x 3/8 NPTM x 7/8 JICM
2	1013325	2	Hose, 48" x 3/8 NPTM x 3/4 JICF
3	316016	2	Adapter, 3/4 JICM x 7/8 ORBM
4	1010920	1	Adapter, M22 x 1.5P x 3/4 JICM
5	315036	1	Adapter, 3/8 NPTM x 3/4 JICF
6	64299	2	Quick coupler, female
7	64300	2	Quick coupler, male

Tractor Rear hydraulic Valve

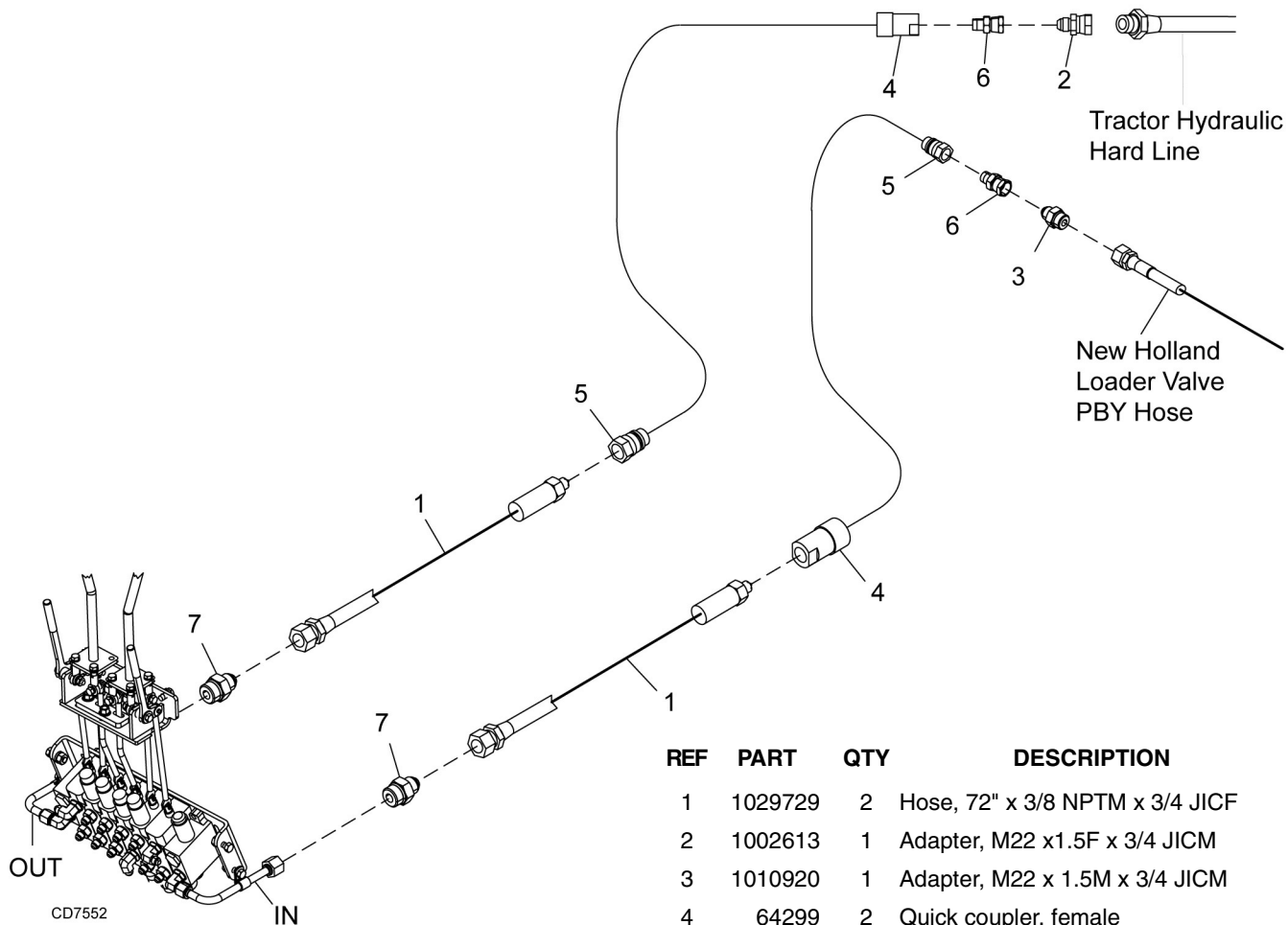
To Loader Valve PBY Hose



16 Parts

MAN0715 (Rev. 10/31/2008)

1029730 HOSE KIT



REF	PART	QTY	DESCRIPTION
1	1029729	2	Hose, 72" x 3/8 NPTM x 3/4 JICF
2	1002613	1	Adapter, M22 x1.5F x 3/4 JICM
3	1010920	1	Adapter, M22 x 1.5M x 3/4 JICM
4	64299	2	Quick coupler, female
5	64300	2	Quick coupler, male
6	315036	2	Adapter, 3/8 NPTM x 3/4 JICF
7	316016	2	Adapter, 3/4 JICM x 7/8 ORBM

BOLT TORQUE CHART

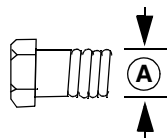
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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 Grade 2
(No Dashes)

SAE Bolt Head Identification

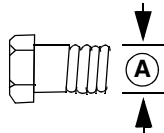


SAE Grade 5
(3 Radial Dashes)



SAE Grade 8
(6 Radial Dashes)

Ⓐ 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
Grade 8.8

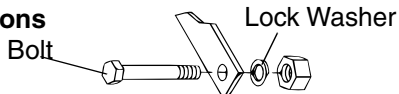
Metric Bolt Head Identification



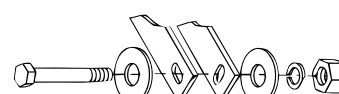
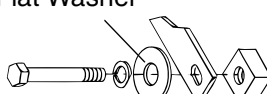
Metric
Grade 10.9

Ⓐ 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



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.

SAE Bolt Thread Sizes

5/16

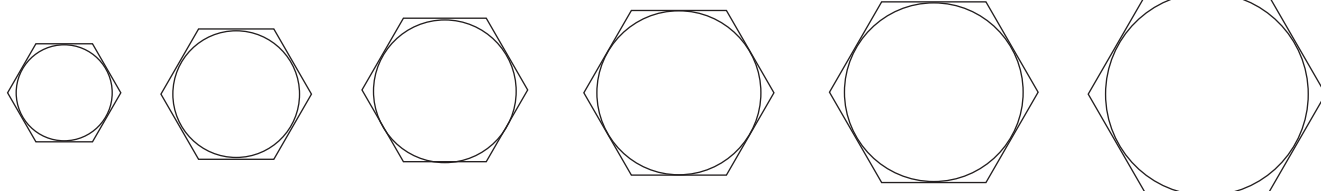
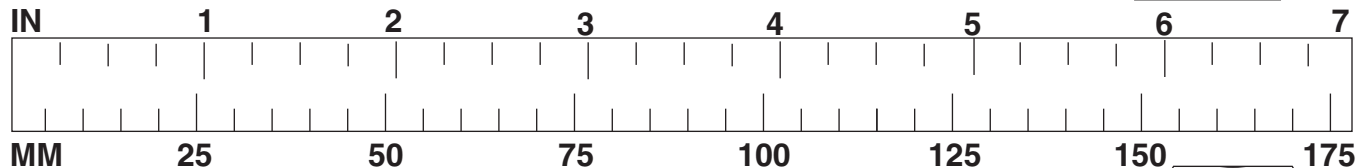
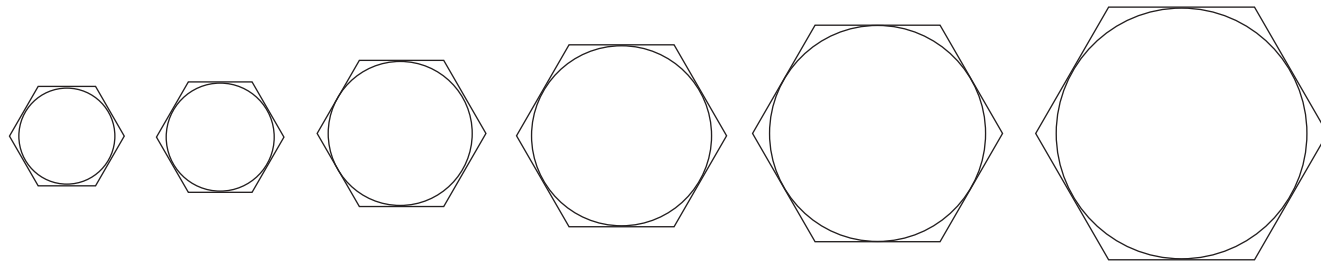
3/8

1/2

5/8

3/4

7/8



Metric Bolt Thread Sizes

8MM

10MM

12MM

14MM

16MM

18MM

ABBREVIATIONS

AG Agriculture
 ASABE..... American Society of Agricultural & Biological Engineers (formerly ASAE)
 ASAE American Society of Agricultural Engineers
 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
 FT Full Thread
 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
 PBW 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.

Woods backhoe models BH70-X, BH80-X, and BH90-X are warranted for two (2) years from the date of delivery to the original purchaser.

The warranty periods for specific parts or conditions are listed below:

Part or Condition Warranted	Model Number	Duration (from date of delivery to the original purchaser)
Gearbox components	BW1260, BW1620, BW1800, BW2400	8 years
	BW240HD	7 years
	BB48X, BB60X, BB72X, BB84X, BB600X, BB720X, BB840X, BB6000X, BB7200X, BB8400X, DS1260, DSO1260, DS1440, TS1680, BW126-3, BW180-3, BW240	6 years
	PHD25, PHD35, PHD65, PHD95, 2162, 3240, DS96, DS120, RCC42, RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400, 7144RD-2, 9180RD-2, 9204RD-2, S15CD, S20CD, S22CD, S25CD, S27CD	5 years
	RDC54, RD60, RD72	3 years (1 year if used in rental or commercial applications)
Blade spindles	RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400, 7144RD-2, 9180RD-2, 9204RD-2	3 years
Rust-through	BB600, BB720, BB840, BB6000, BB7200, BB8400, BW126-3, BW180-3, BW1260, BW1800, BW240, BW240HD, 2162, 3240, DS1260, DSO1260, DS1440, TS1680	10 years

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.

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WARRANTY

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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.

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