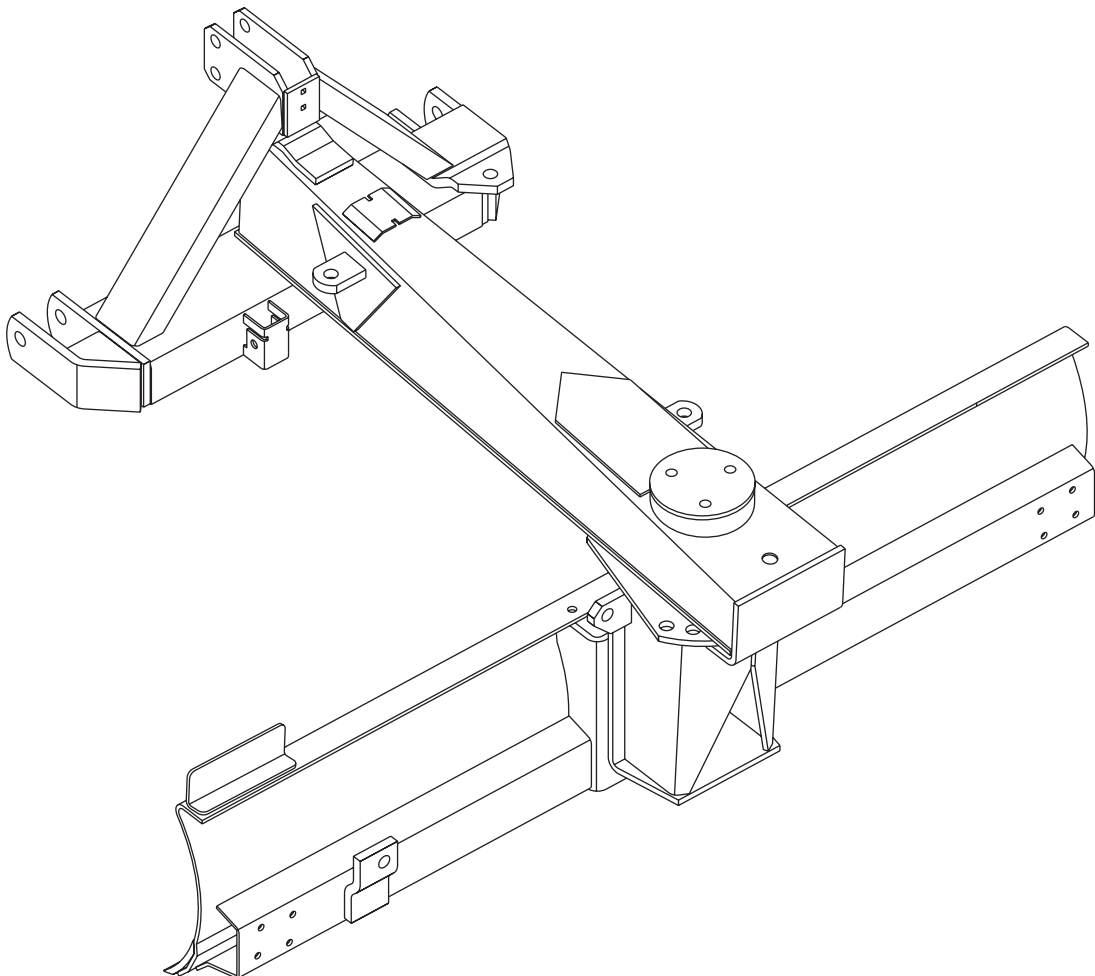


# WOODS REAR BLADES

**RB750-4**

**RB850-4**



**MAN0160**

(Rev. 2/22/2006)

**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](http://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®**

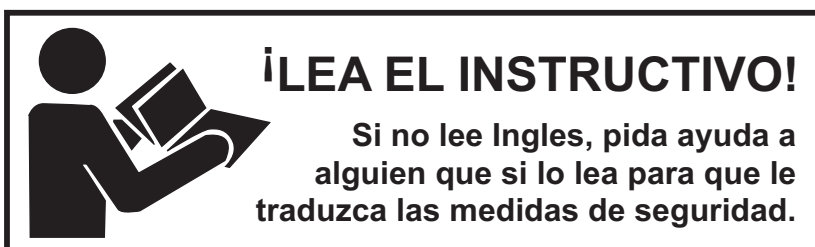
**WOODS®**

## 2 Introduction

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

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## GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Rear Blade. 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. However, 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.

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

# RB750-4 & RB850-4 SPECIFICATIONS

<u>MODEL</u>	<u>RB750-4</u>	<u>RB850-4</u>
Blade Width	7 ft. (2133 mm)	8 ft. (2438 mm)
Tractor HP Requirement	100 HP Maximum (75 kW)	100 HP Maximum (75 kW)
Weight:		
M = Manual	811 lbs. (368 kg)	856 lbs. (388 kg)
H = Hydraulic	1010 lbs. (458 kg)	1050 lbs. (478 kg)

Model Codes:

- M = All Manual: Angle, Tilt & Swing
- MA = Manual Swing & Tilt; Hydraulic Angle for tractors with at least one hydraulic port
- MT = Manual Swing & Angle; Hydraulic Tilt for tractors with at least one hydraulic port
- SA = Manual Tilt; Hydraulic Swing & Angle for tractors with at least two hydraulic ports
- TA = Manual Swing; Hydraulic Tilt & Angle for tractors with at least two ports
- H = All Hydraulic; Angle, Tilt & Swing for tractors with three hydraulic ports

Blade Position - Mechanical . . . . . Straight, forward or reverse;  
 Angle 15, 30, 45 & 60 degrees, right or left in forward;  
 15 & 30 degrees in reverse;  
 Tilt 15 or 30 degrees up or down;  
 Offset 12" or 24" (305 mm or 610 mm) left or right of  
 tractor center line;  
 Pitch adjustment in top link of tractor 3-point hitch

Blade Positions - Hydraulic . . . . . Straight, forward or reverse;  
 Angle 45 degrees right or left forward and reverse;  
 Tilt 22 degrees up or down;  
 Offset 24" (610 mm) right or left of tractor center line;  
 Pitch adjustment in top link of tractor 3-point hitch

Cutting Edge . . . . . 1/2 x 6" (12.7 mm x 152 mm) High carbon steel, reversible

3-Point Hitch Category . . . . . Category 2  
 Category 2 Quick attaching coupler, with bushing kit #18295  
 Category 3, with bushing kit #18295

Structural Strength:

A-Frame . . . . . 8 x 4 (203 mm x 102 mm) Formed channel  
 Boom . . . . . All-welded box section  
 King Pin . . . . . 6-5/8" (168 mm) Tubing  
 Moldboard . . . . . Formed moldboard and all welded box section  
 Pivot Assembly . . . . . All-welded steel box section

# 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.

## 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](http://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.**

■ **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.**

■ **Do not connect a low-pressure hydraulic hose into a high-pressure system—it will burst the hose. Do not use a high-pressure hose in place of a low-pressure hose—it is possible to rupture the valve.**

■ **Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.**

■ **Make sure attachment is properly secured, adjusted, and in good operating condition.**

■ **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 systems in "locked up" position at all times.**

■ **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, front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**

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

■ **Make sure circuit selector lever does not hit tractor cab, etc. throughout operating range of 3-point hitch of tractor. Bend lever, if necessary, to clear cab, but it should still be convenient to operate from the tractor seat.**

## OPERATION

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

■ **Do not operate 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.**

*(Safety Rules continued on next page)*

# SAFETY RULES



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



*(Safety Rules continued from previous page)*

- Never allow riders on power unit or attachment.
- 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 systems in “locked up” position at all times.
- Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in 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.
- Do not operate 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 equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.
- Before changing positions of manual swing, tilt, or angle positions:
  - Park tractor on level ground, apply parking brake, level implement boom, shut off tractor, and remove key.
  - Make manual changes slowly and carefully to prevent hazardous movement of mechanisms.
  - Never stand in positions where you could become entrapped during adjustment changes or if the 3-point hitch suddenly lowers.
- Always secure lock pins with safety pins to prevent lock pins from bumping out of the positioning holes. Failure to do so may result in accidents and/or damage to blade.

## TRANSPORTATION

- Before transporting, pivot the unit so red reflectors face the rear.
- Always comply with all state and local lighting and marking requirements.
- Never allow riders on power unit or attachment.
- Do not operate or transport on steep slopes.

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

## MAINTENANCE

- Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.
- Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.
- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- 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.)
- Do not disconnect hydraulic lines until machine is securely blocked or placed in lowest position and system pressure is released by operating valve levers.

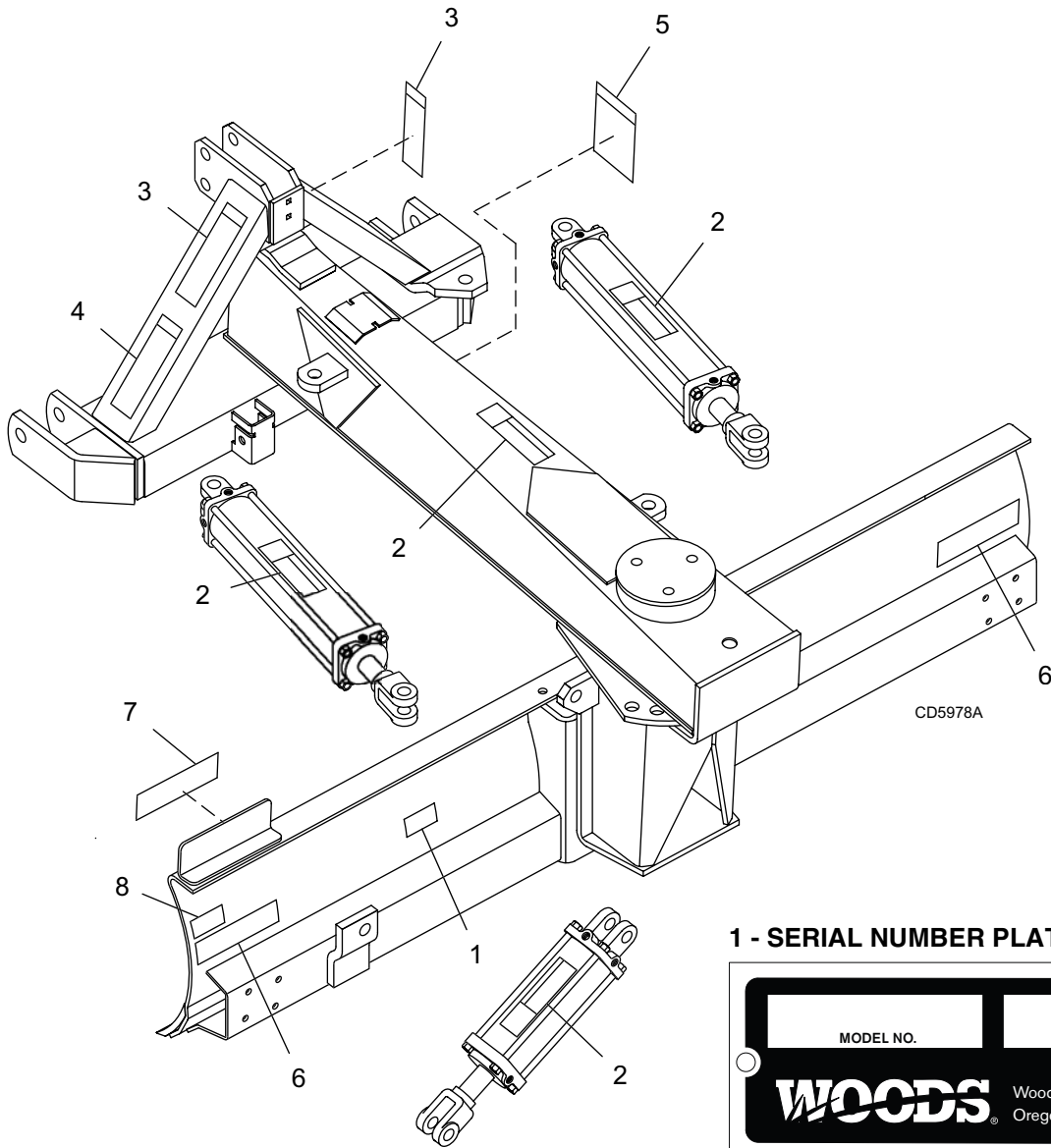
## STORAGE

- Secure equipment parking stand(s) in park position before detaching.
- Keep children and bystanders away from storage area.



# SAFETY & INSTRUCTIONAL DECALS

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



**1 - SERIAL NUMBER PLATE**



**2 - PN 19924**



19924-B

## **WARNING**

**HIGH-PRESSURE HYDRAULIC OIL LEAKS CAN PENETRATE SKIN RESULTING IN SERIOUS INJURY, GANGRENE OR DEATH.**

- Check for leaks with cardboard; never use hand.
- Before loosening fittings: lower load, release pressure, and be sure oil is cool.
- Consult physician immediately if skin penetration occurs.

**6 - PN 57123  
RED REFLECTOR 9"**

**7 - PN 1002940  
YELLOW REFLECTOR 9"**

*(Safety Decals continued on next page)*

# SAFETY & INSTRUCTIONAL DECALS



**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**




**Replace Immediately If Damaged!**

(Safety Decals continued from previous page)

3 - PN 1002941

**⚠ WARNING**



**CRUSHING AND PINCHING HAZARD**

- Be extremely careful handling various parts of the machine. They are heavy and hands, fingers, feet, and other body parts could be crushed or pinched between tractor and implement.
- Operate tractor controls from tractor seat only.
- Do not stand between tractor and implement when tractor is in gear.
- Make sure parking brake is engaged before going between tractor and implement.
- Stand clear of machine while in operation or when it is being raised or lowered.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

1002941-A

4 - PN 1004250

**⚠ WARNING**

**TO AVOID SERIOUS INJURY OR DEATH:**

- Read Operator's Manual before operating, servicing, or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or call 1-800-319-6637.)
- Operate from tractor seat only.
- Lower equipment to ground, stop engine, remove key, and set brake before dismounting tractor.
- Never allow children or untrained persons to operate equipment.
- Never allow riders.
- Keep bystanders away from equipment during operation.
- Keep all shields in place and in good condition.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

1004250

**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](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.

8 - PN 1003193


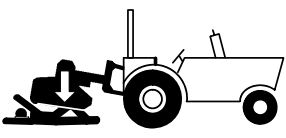
**⚠ WARNING**

Unit must not extend more than 4 feet left of center of the tractor when driving on public roads.

1003193-A

5 - PN 55121

**⚠ WARNING**

**FALLING OFF CAN RESULT IN BEING RUN OVER.**

- Tractor must be equipped with ROPS (or ROPS CAB) and seat belt. Keep foldable ROPS systems in "locked up" position at all times.
- Buckle Up! Keep seat belt securely fastened.
- Allow no riders.

**RAISED IMPLEMENT CAN DROP AND CRUSH.**

- Never go underneath raised implement which can drop from equipment or tractor 3-point hitch hydraulic leak down, hydraulic system failures, movement of control levers or mechanical linkage failures.
- Service work does not require going underneath implement. Read manual instructions.

**FALLING OFF OR GOING UNDERNEATH IMPLEMENT CAN RESULT IN SERIOUS INJURY OR DEATH.**

55121-C



# OPERATION

## WARNING

- Never allow children or untrained persons to operate equipment.
- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.
- Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.
- Never allow riders on power unit or attachment.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- 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.
- 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, front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.

## CAUTION

- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.

## MOUNT BLADE TO TRACTOR

### IMPORTANT

- The RB750-4 & RB850-4 should be mounted on tractors with a maximum horsepower rating of 100 hp (75 kW).

The Rear Blade is a 3-point Category 2 implement. It will attach to ASAE standard Category 2 quick-attaching coupler or on 3-point Category 3 tractor, using a bushing kit.

**NOTE:** Only use on Category 3, 3-point hitch tractor whose lower lift arms adjust to 32" (813 mm) apart.

1. Set the tractor drawbar in short-high position.
2. Attach tractor draft links to the A-frame with 1-1/8" pin (21) and secure with Klik pins (44).
3. Connect the tractor top link to top hole in A-frame, using 1 x 4-29/32" heat-treated pin (20) and cotter pin (31). Use 1 x 1-1/4" bushing (23) and 1-1/8 x 1-7/16" heat-treated bushing (24) with Category 2 quick-attaching coupler and category 3, 3-point hitch tractor.
4. Level the boom by adjusting lift and top link.
5. Position sway blocks to eliminate side sway or install sway braces if required.

**NOTE:** The drawbar may have to be removed on some tractors. Make sure blade is at least 6" (152 mm) from tractor tires throughout operating range of 3-point hitch.

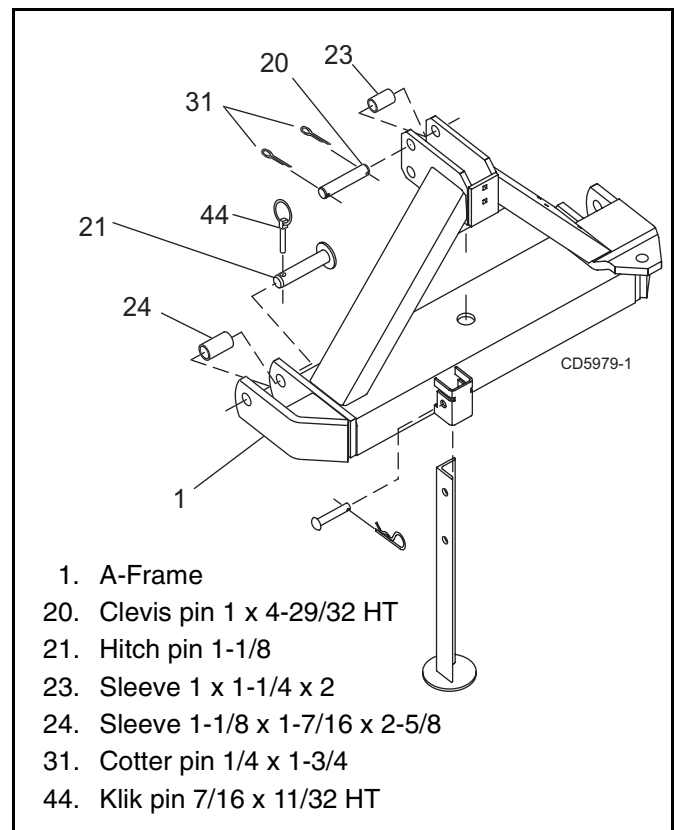


Figure 1. A-Frame Components

## BLADE ANGLE ADJUSTMENT



### ■ Before changing positions of manual swing, tilt, or angle positions:

- Park tractor on level ground, apply parking brake, level implement boom, shut off tractor, and remove key.
- Make manual changes slowly and carefully to prevent hazardous movement of mechanisms.
- Never stand in positions where you could become entrapped during adjustment changes or if the 3-point hitch suddenly lowers.

### ■ Always secure lock pins with safety pins to prevent lock pins from bumping out of the positioning holes. Failure to do so may result in accidents and/or damage to blade.

#### Mechanical

The blade may be angled 15, 30, 45 and 60 degrees for forward grading, and 15 and 30 degrees for backfilling to right or left from center position without unhooking the blade from the tractor.

1. Raise the blade a few inches off the ground by operating the lift control lever of the tractor 3-point hitch.
2. Remove the safety pin (10) and lock pin (2).
3. Set blade at desired position and replace pins.

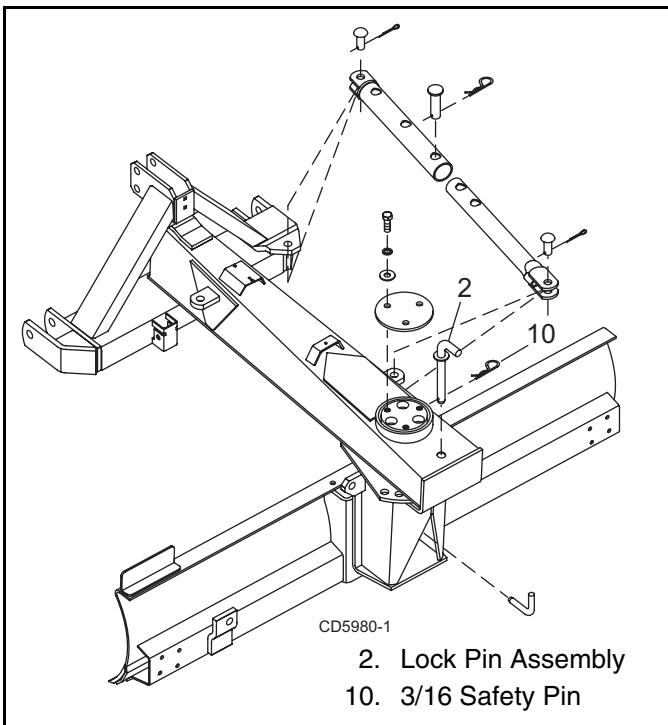


Figure 2. Mechanical Configuration Assembly

#### Hydraulic

The blade may be angled 45 degrees or to any position in between, to the right or left by hydraulic remote control from the tractor seat.

1. Raise the blade a few inches off the ground by operating the lift control lever of the tractor.
2. Actuate the control valve the angling cylinder is connected to.
3. On tractors with two circuit selector valves, select angling circuit and actuate the tractor control valve connected to selector valve.

**NOTE:** Do not operate the selector valve under load.

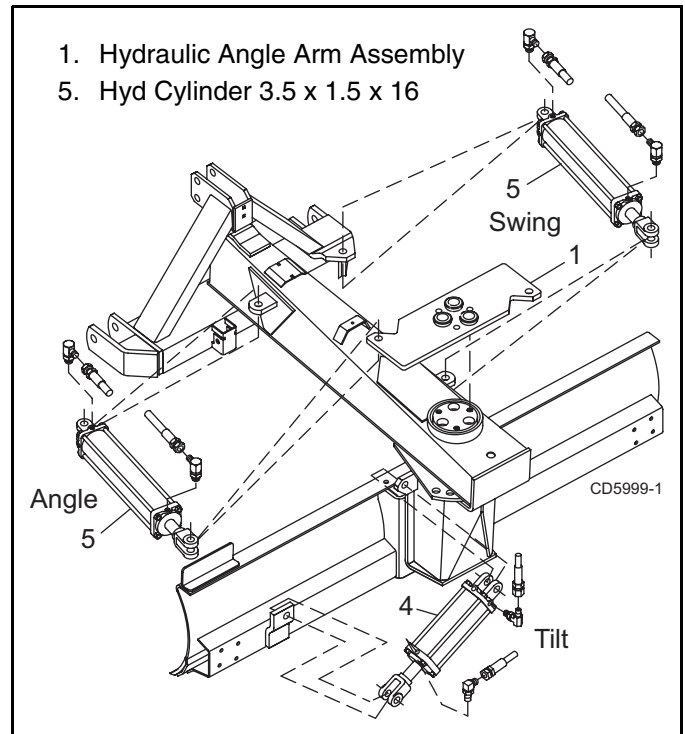


Figure 3. Hydraulic Configuration Assembly

## REVERSE BLADE

The blade is reversible without removing it from the tractor.

1. Raise blade off the ground.
2. **Mechanical** – Remove the lock pin (2), Figure 2, and rotate it counter-clockwise to the desired position and replace pins.
3. **Hydraulic** – Detach the angling cylinder (7) from the hydraulic angle arm (1), Figure 3, and rotate it counter-clockwise to the desired position. Attach angling cylinder (7) to hydraulic angle arm (1).

**NOTE:** In some cases it may be necessary to offset to the right and tip up the right end of the blade to rotate it.

## TILT ADJUSTMENT

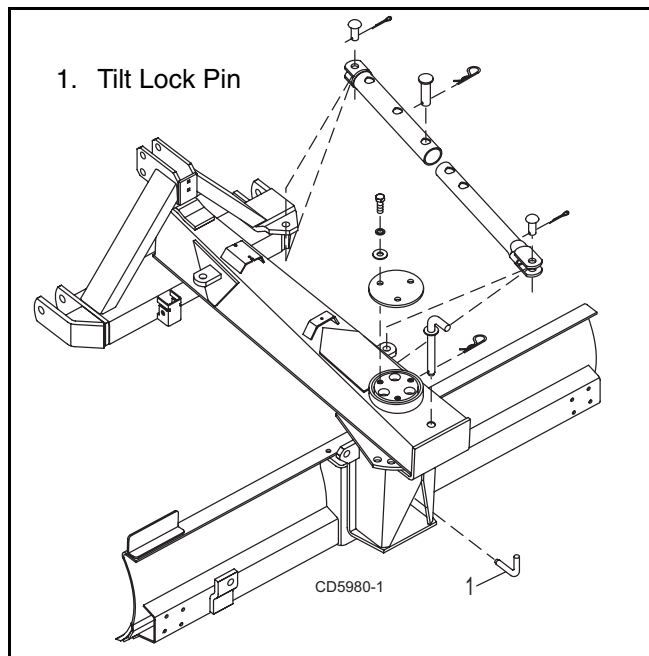


Figure 4. Mechanical Configuration - Tilt

### Mechanical

The blade may be tilted 15 and 30 degrees up and down.

To tilt blade:

1. Remove tilt lock pin (1),
2. Rotate the blade to the desired position, and
3. Replace the pin.

**NOTE:** Additional tilting may be obtained by adjusting the draft links of the 3-point hitch.

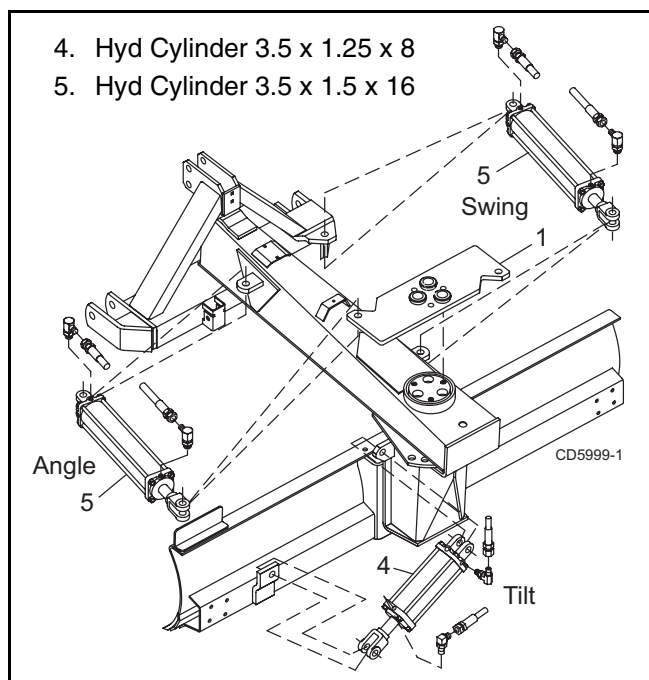


Figure 5. Hydraulic Configuration - Tilt

### Hydraulic

The blade may be tilted 22 degrees up or down and to any position in between.

To prevent damage to the blade and hydraulic cylinder, do not use lock pin (1, Figure 4).

**NOTE:** In some cases it may not be possible to fully tilt and angle and still be able to raise the blade high enough to clear the ground. In this case, use less tilt.

**NOTE:** It is possible for the blade to contact other components if the blade is tilted when angled. Operate blade slowly when angling blade.

## OFFSET (SWING)

### Mechanical Adjustment

The blade may be offset 12" (305 mm) and 24" (610 mm), either side from the center position.

To offset the blade:

1. Park the tractor on level ground.
2. Apply parking brake and raise blade 2" (51 mm) above the ground.
3. Shut off the engine and level the boom.
4. Remove safety pin (10) and lock pin (16), swing the boom to the desired position and replace the pins.

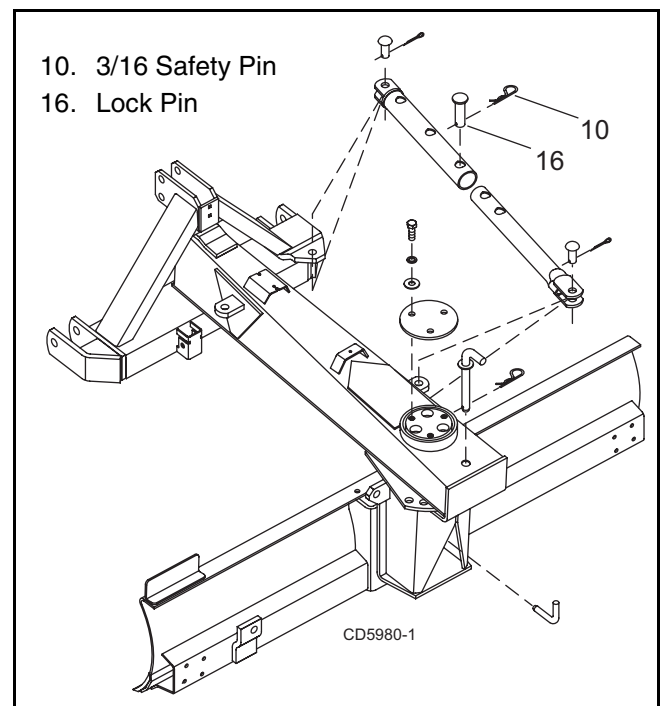


Figure 6. Mechanical Configuration - Offset

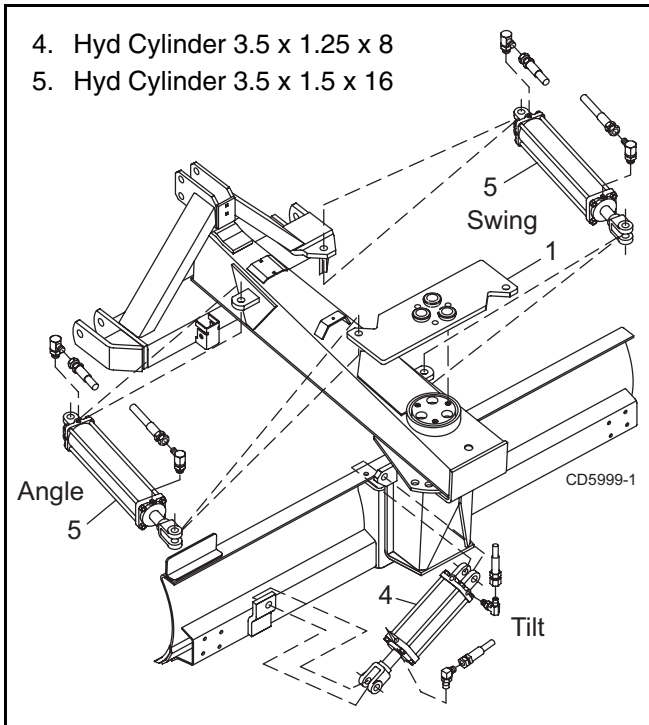
### Adjustment with Hydraulic Swing Cylinder

The swing cylinder rotates the boom 30 degrees right or left or to any position in between, resulting in a maximum of 24" (610 mm) offset to right or left.

To angle the blade:

1. Raise blade a few inches above the ground by operating the lift control lever of the tractor.
2. Actuate the control valve to which the swing cylinder is connected.
3. On tractors having two circuit selector valves, select swing circuit and actuate tractor control valve connected to selector valve.

**NOTE:** Do not operate the selector valve under load.



**Figure 7.** Hydraulic Configuration - Offset

## **OPERATING TIPS**

### **⚠ WARNING**

- Look down and to the rear and make sure area is clear before operating in reverse.
- Do not operate 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.

### **⚠ WARNING**

- Watch for hidden hazards on the terrain during operation.
- Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.

### **⚠ CAUTION**

- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.

## **BACKFILLING**

For backfilling ditches or trenches, reverse the blade by rotating counter-clockwise and back push.

## **LEVELING AND GRADING**

Set the blade to the desired position of offset, angle and tilt for leveling and grading.

## **PRE-OPERATION CHECK LIST**

(OPERATOR'S RESPONSIBILITY)

- \_\_\_ Review and follow all safety rules and safety decal instructions on pages 5 through 8.
- \_\_\_ Check that equipment is properly and securely attached to tractor.
- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged
- \_\_\_ Check that all hardware and cotter pins are properly installed and secured.
- \_\_\_ Check that all lubrication points are greased.
- \_\_\_ Check that blade cutting edge is in good condition.
- \_\_\_ Check that all hydraulic hoses and fittings are in good condition and not leaking before starting tractor. Check that hoses are not twisted, bent sharply, kinked, frayed or pulled tight. Replace any damaged hoses immediately.

# OWNER SERVICE

## **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.**

■ Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.

■ Never perform service or maintenance with engine running.

■ Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.

■ Keep all persons away from operator control area while performing adjustments, service, or maintenance.

## **CAUTION**

■ Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.

### **BLADE CUTTING EDGE**

To reverse the cutting edge

1. Remove the 5/8" plow bolts.
2. Remove the cutting edge from the moldboard and reinstall with the sharp edge down.
3. Replace cutting edge when both edges are worn.

### **LUBRICATION**

#### **Weekly**

Oil the pivot pins with SAE 30 oil.

#### **8 Hours**

Grease optional skid shoes.

### **BOLTS**

1. Check bolts periodically to be sure they are tight.
2. Replace bolts as needed.

**NOTE:** Replacement bolts must have the same strength markings on the heads. Refer to bolt torque on page 47.

### **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.

# ASSEMBLY

## **WARNING**

- Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.
- Before working underneath, read manual instructions, securely block up, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- 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.**

## **CAUTION**

- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head.
- 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.

## **DEALER SET-UP INSTRUCTIONS**

Assembly of this equipment is the responsibility of the Woods dealer. It should be delivered to the owner completely assembled, lubricated, and adjusted for normal operating conditions.

Assembly will be easier if components are aligned and loosely assembled before tightening hardware. Recommended torque values for hardware are located on page 47.

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## MAIN ASSEMBLY - All Models

### Attach Blade to Pivot Assembly

Assemble the main portion of the blade before starting on any of the optional configurations.

1. Place blade assembly (11) on floor with pivot attachment pointing up.
2. Raise the top end approximately 4" (102 mm) above the ground with a wooden block. Place pivot assembly (9) on blade assembly (11).
3. Stack two shim washers (53) on each of the four holes in blade. Place retainer assembly (10) on washers.
4. Place washers (52) and lock washers (51) on bolts (50) and insert through retainer (10), washers (53), and pivot attachment (9).
5. Secure by placing washers (52) and nuts (54) on bolts and torque to 300 lbs.-ft (403 N-m).

- 9. Pivot assembly
- 10. Retainer assembly
- 11. RB750 Molboard assembly
- 11. RB850 Molboard assembly
- 50. Screw, HHCS 3/4 NC x 3 GR5

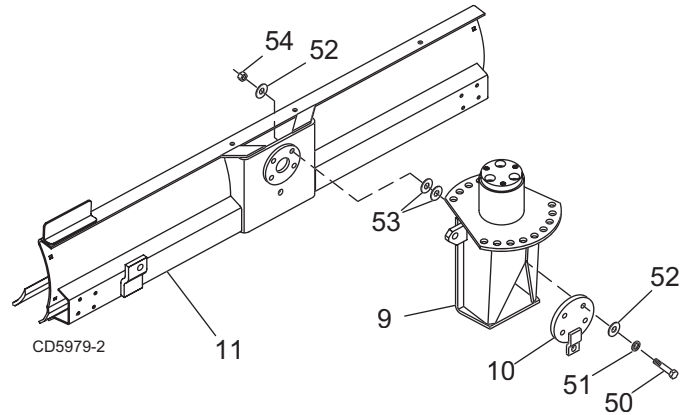


Figure 8. Blade and Pivot Assembly

- 51. Washer, Lock 3/4
- 52. Washer, Flat 3/4 Standard
- 53. Washer, Shim .75 x 1.50 x 18ga
- 54. Nut, Hex 3/4 NC

### Attach Boom to Pivot Assembly

1. Grease inside of tube on rear of boom (4).
2. Set blade assembly upright. Place a block of wood under pivot assembly to secure.
3. Place boom parallel to blade and insert greased tube over post of pivot assembly (9). Rotate boom 90 degrees to lock lip on rear of boom over pivot assembly.
4. Place jack stand under boom so boom is in a horizontal position.

- 4. Boom
- 9. Pivot assembly

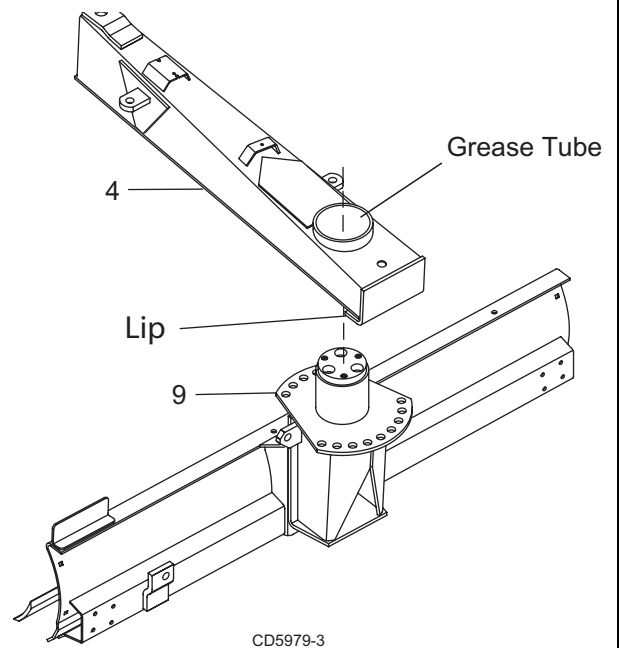


Figure 9. Boom and Blade Assembled

## Attach A-Frame

1. Position A-frame (1) over end of boom and insert pivot pin (22). Secure with cotter pin (40).

2. Attach parking stand (2) in parking position as shown in Figure 10. Secure with clevis pin (45) and safety pin (30).

- 1. A-Frame
- 2. Parking Stand Assembly
- 22. Pin, Pivot
- 30. Pin, Safety 3/16
- 40. Pin, Cotter 3/8 x 2-1/2
- 45. Pin, Clevis 5/8 x 3-3/4

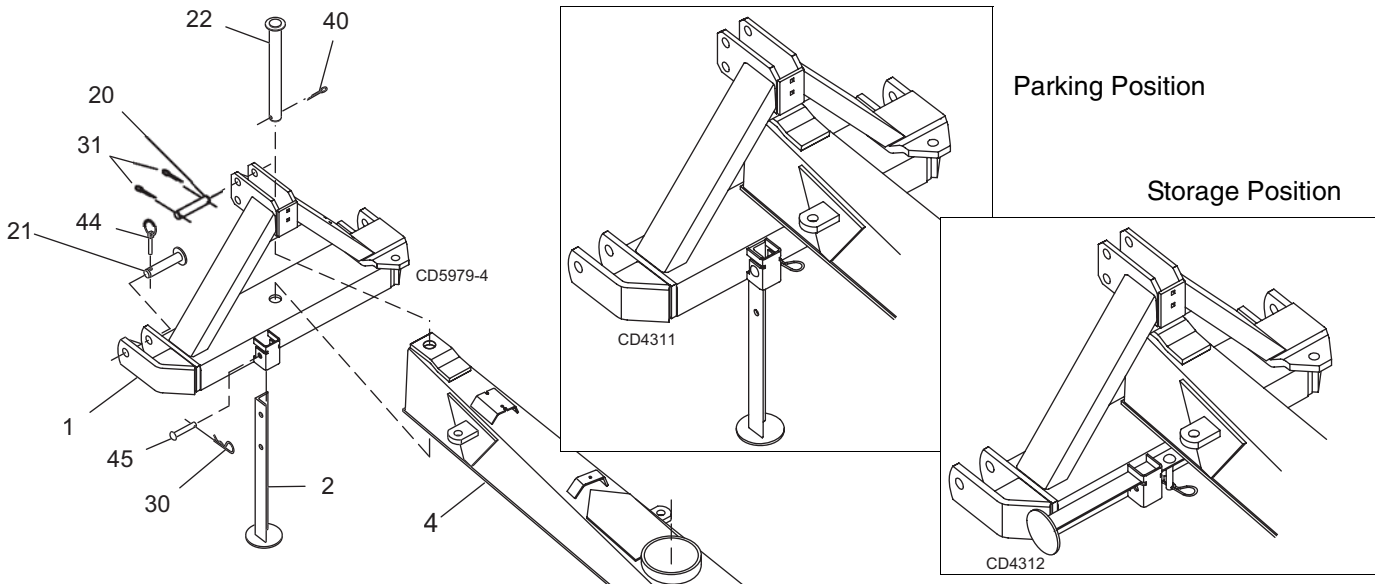


Figure 10. A-Frame to Boom Assembly

## Install Manual Tube

1. Place manual tube (3) over holes on right side of A-Frame as shown in Figure 11.

2. Secure into position using three cap screws (41), six flat washers (42), (one on each side), and lock nuts (43).

- 3. Manual Tube
- 41. Cap Screw, 3/8 NC x 1 GR5
- 42. Washer, Flat 3/8
- 43. Nut, Lock 3/8 NC

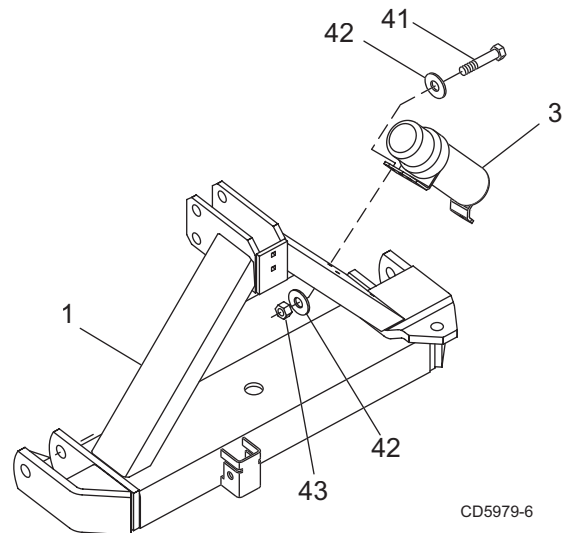


Figure 11. Manual Tube Installation



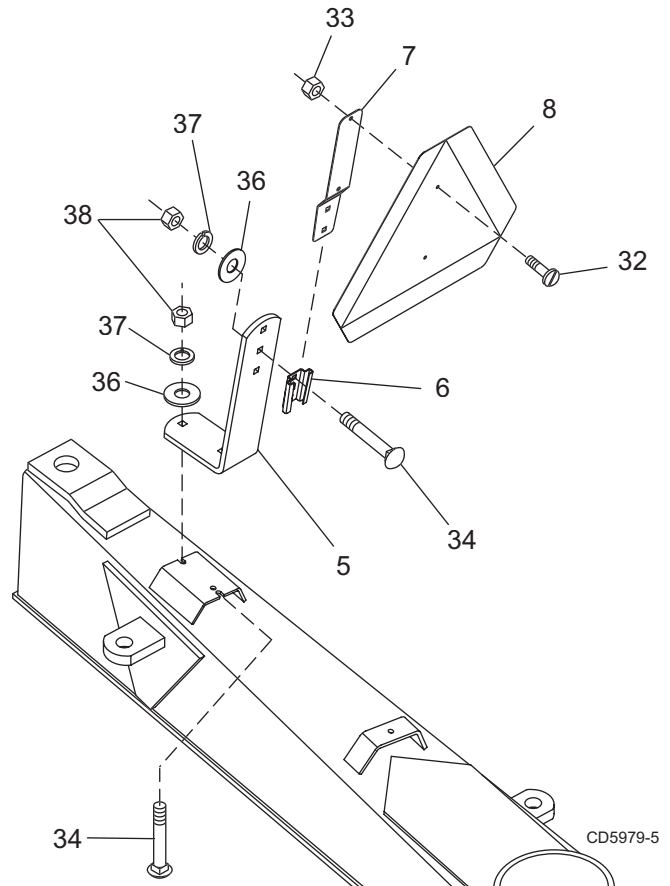
## Install Slow Moving Vehicle Sign

**NOTE:** If installing optional hydraulic kits that include double relief valves on Model SA or the complete hydraulic system for Model H, do not install bracket (5, Step 1) at this time. Begin with Step 2.

**Refer to Figure 12.**

1. Place bracket (5) to top of boom and secure with two carriage bolts (34), flat washers (36), lock washers (37), and hex nut (38).
2. Attach SMV socket (6) to bracket (5) using two carriage bolts (34), flat washers (36), lock washers (37), and hex nuts (38).
3. Attach SMV sign (8) to SMV sign bracket (7) using two round head screws (32) and nuts (33).
4. Insert sign and bracket assembly into socket (6) to display SMV sign.

- 5. Bracket - SMV Sign
- 6. Socket, SMV Emblem
- 7. SMV Bracket
- 8. Slow Moving Vehicle Sign
- 32. Screw, Round Head 1/4 NC x 1/2
- 33. Nut, Hex 1/4 NC
- 34. Bolt, Carriage 5/16 NC x 1-1/4
- 36. Washer, Flat 5/16 Standard
- 37. Washer, Lock 5/16
- 38. Nut, Hex 5/16 NC



**Figure 12.** Slow Moving Vehicle Sign Installation

Proceed to page listed below to complete desired blade assembly.

M	= All Manual: Angle, Tilt & Swing . . . . .	18
MT	= Manual Swing & Angle: Hydraulic Tilt for tractors with at least one hydraulic port . .	18
MA	= Manual Swing & Tilt: Hydraulic Angle for tractors with at least one hydraulic port . .	19
SA	= Manual Tilt: Hydraulic Swing & Angle for tractors with at least two hydraulic ports . .	19
TA	= Manual Swing: Hydraulic Tilt & Angle for tractors with at least two ports. . . . .	19
H	= All Hydraulic: Angle, Tilt & Swing for tractors with three hydraulic ports . . . . .	23

## Models: M & MT

### Install Offset Linkage

1. Model M only - Place boom and pivot assembly to desired position. Align holes at bottom of pivot assembly and insert tilt lock pin (1) as shown. Rotate pin to lock into position.

2. With boom 90 degrees to the blade, place retaining cap (3) on boom as shown in Figure 13.

3. Install three cap screws (12), lock washers (14), and flat washers (13) to secure boom to blade assembly.

**NOTE:** For model MT, do not install front cap screw, (12) at this time.

4. Rotate boom to desired position. Install lock pin assembly (2) through end of boom and pivot assembly. Secure with safety pin (10).

5. Insert inner swing link (4) into outer swing link (5).

6. Attach outer swing link to the A-Frame and insert clevis pin (15). Secure with cotter pin (11).

7. Attach inner swing link (4) to the boom and insert clevis pin (15). Secure with cotter pin (11).

8. Rotate A-Frame to desired position. Align holes in inner and outer swing links and insert lock pin (16). Secure with safety pin (10).

1. Tilt lock Pin
2. Lock Pin Assembly
3. Retaining Cap
4. Link, Inner Swing
5. Link, Outer Swing
10. Pin, Safety 3/16
11. Pin, Cotter 1/4 x 1-3/4
12. Screw, HHCS 3/4 NC x 2-1/4 GR5
13. Washer, Flat 3/4 SAE
14. Washer, Lock 3/4
15. Pin, Clevis 1 x 2-1/2 HT
16. Pin, Swing Lock

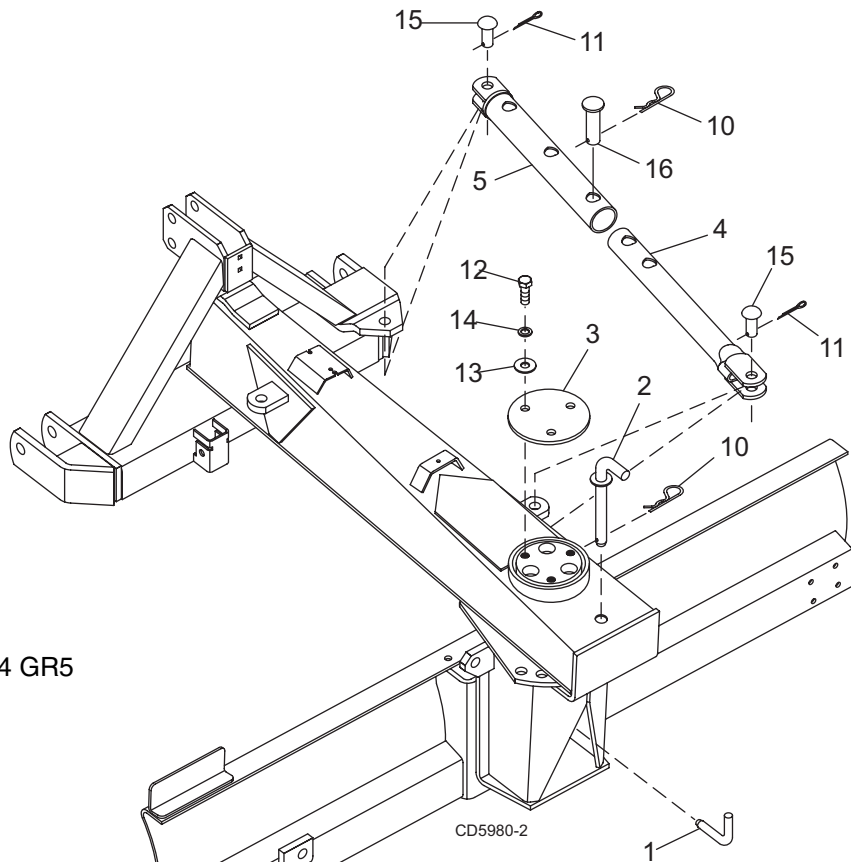


Figure 13. Manual Configuration

**NOTE:** For Model MT, proceed to page 20 for hydraulic tilt cylinder installation instructions.

## Models: MA, SA, & TA or Optional Hydraulic Angle Kit 1004870

### Install Hydraulic Angle Cylinder

Refer to Figure 14.

1. Remove lock pin assembly (2) and safety pin (10) from rear of boom, if previously installed. See Figure 13 on page 18 for lock pin assembly location.

2. Remove hardware and retaining cap (3) from top of boom if previously installed. See Figure 13 on page 18 for retaining cap location.

3. Place hydraulic angle arm assembly (4) on boom as shown Figure 14.

4. Secure into position using three cap screws (27), lock washers (25), and flat washers (26).

5. Attach hydraulic cylinder (6) to boom and hydraulic angle arm assembly as shown. Secure with pins supplied with the cylinder.

6. Attach hose holder (5) to A-Frame using carriage bolt (24), flat washer (23), and lock nut (22).

7. Install adjustable elbows (7) and hoses (8) (Models MA and TA) to cylinder.

**NOTE:** Do not install 84" hoses (8) if Hydraulic Offset cylinder is to be installed.

8. Route hoses as shown in Figure 15.

- 4. Hyd Angle Arm Assembly
- 5. Hyd Hose Holder
- 6. Hyd Cylinder 3-1/2 x 16
- 7. Elbow, 3/4 ORBM 3/4 JICM 90
- 8. Hose, 3/8 84 1/2 NPTM 3/4 JICF
- 9. Strap, Binding 14-1/2
- 22. Nut, Lock 3/8
- 23. Washer, Flat 3/8 Standard
- 24. Bolt, Carriage 3/8 NC x 1-1/4 GR1
- 25. Washer, Lock 3/4
- 26. Washer, Flat 3/4 SAE
- 27. Cap Screw, 3/4 NC x 3 GR5

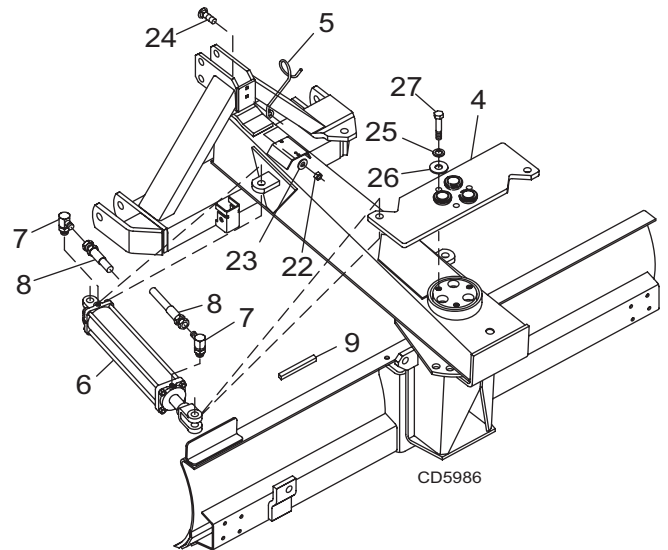


Figure 14. Angle Kit Installation

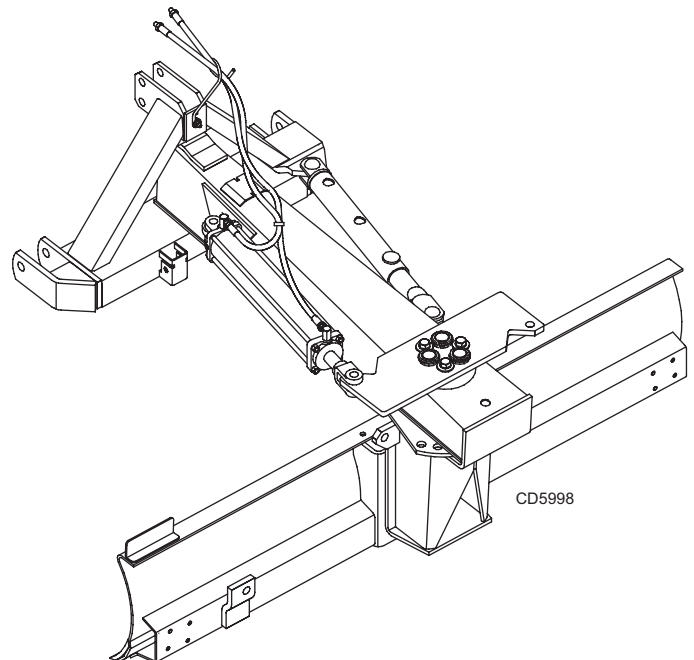


Figure 15. Angle Kit Hose Routing

**NOTE:** For model **SA**, Proceed to page 22 for hydraulic offset cylinder and relief valve installation instructions.

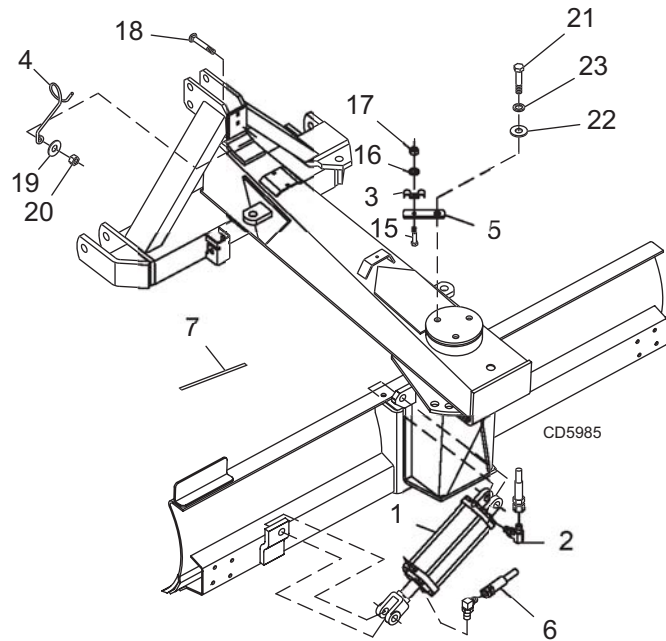
**Models: MT & TA**  
**Install Hydraulic Tilt Kit 1004871**

**Refer to Figure 16**

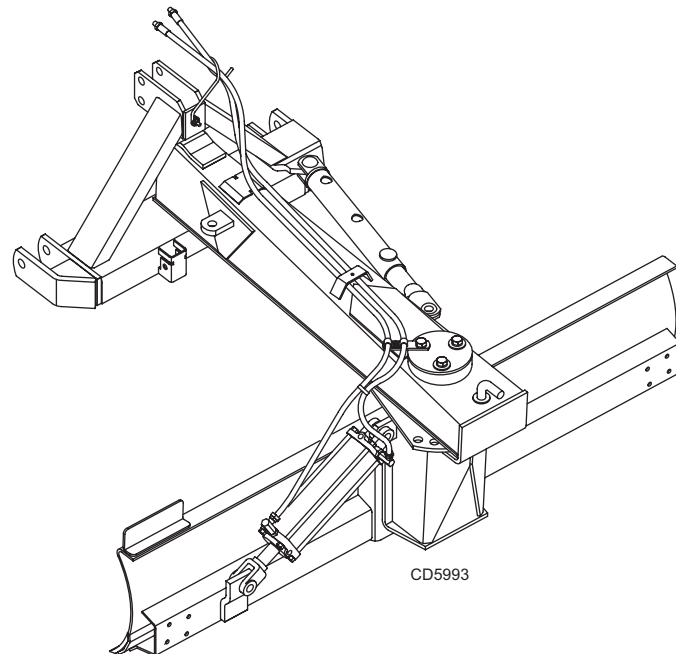
**NOTE:** Remove tilt lock pin (1) before installing hydraulic tilt kit. See Figure 13 on page 18 for lock pin location

1. Attach hydraulic cylinder (1) to blade assembly and pivot assembly as shown. Secure with pins supplied with the cylinder.
2. Install adjustable elbows (2) and hoses (6) to cylinder.
3. Attach hose holder (4) to A-Frame using carriage bolt (18), flat washer (19), and lock nut (20). For models with hydraulic angle (TA) proceed to page 21 for hose routing.
4. Attach hose clamp (3) to hose support (5) using cap screw (15), lock washer (16), and hex nut (17). Do not tighten at this time.
5. Remove cap screw (21), lock washer (23), and flat washer (22) from forward position on retaining cap as shown.
6. Position hose support (5) over hole and reinstall hardware.
7. Route hoses as shown in Figure 17.
8. Position hose support (5) and tighten hardware.
9. Place hoses in hose clamp (3) and tighten hardware. Leave adequate slack in hoses to allow for tilt and angling of blade.

1. Hyd Cylinder 3-1/2 x 8
2. Elbow, 3/4 ORBM 3/4 JICM 90
3. Hose Clamp 5/8
4. Hyd Hose Holder
5. Link, Hose Support
6. Hose, 3/8 138 1/2 NPTM x 3/4 JICF
7. Binding Strap 14-1/2
15. Cap Screw 5/16 NC x 1 GR5
16. Washer, Lock 5/16
17. Nut, Hex 5/16 NC
18. Bolt, Carriage 3/8 NC x 1-1/4 GR5
19. Washer, Flat 3/8 Standard
20. Nut, Lock 3/8
21. Cap Screw 3/4 NC x 2-1/4 GR5
22. Washer, Flat 3/4 SAE
23. Washer, Lock 3/4



**Figure 16.** Tilt Kit Installation with Manual Angle Control

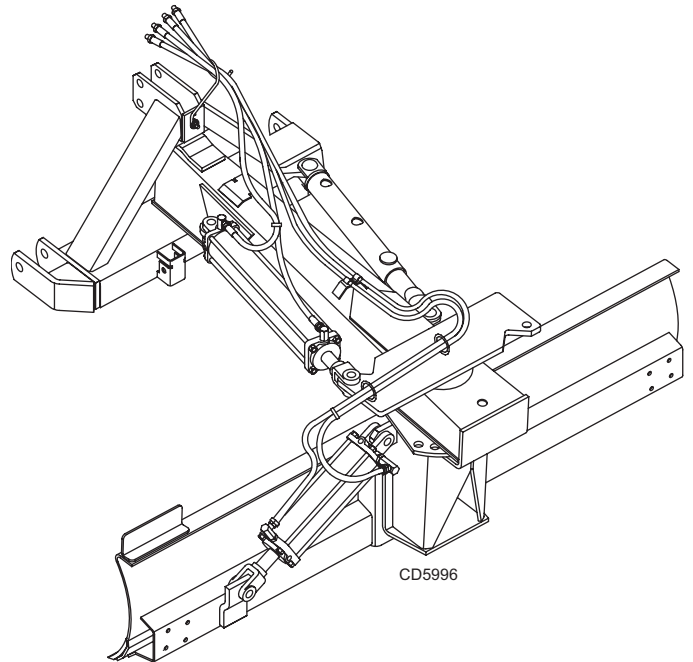


**Figure 17.** Tilt Kit Hose Routing

**Model: TA**

### Install Hydraulic Tilt Kit

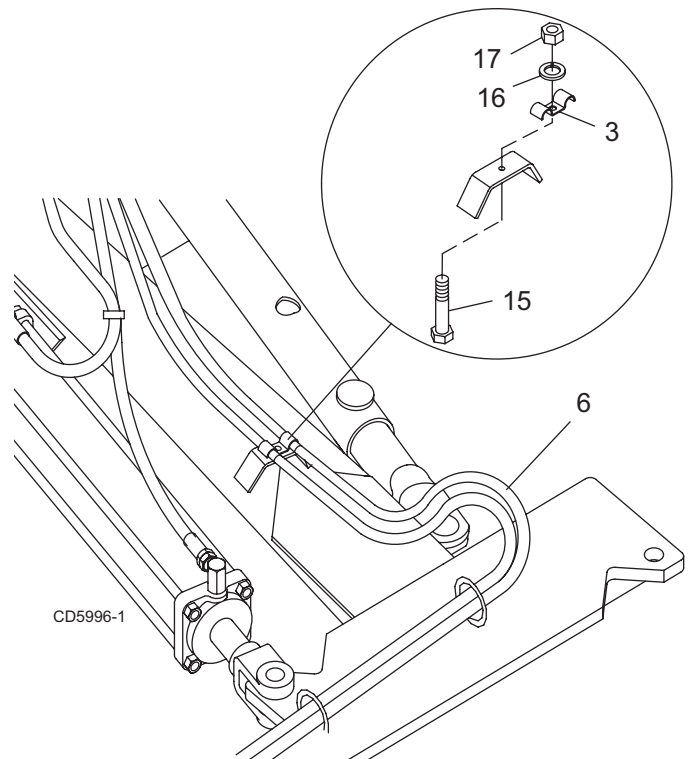
**NOTE:** If Rear Blade is equipped with hydraulic angle cylinder, route tilt kit hydraulic hoses as shown in Figure 18.



**Figure 18.** Hydraulic Tilt and Angle Kit Hose Routing

1. Attach hose clamp (3) to boom as shown in Figure 19.
2. Position tape marked on hoses (6) at hose clamp (3).
3. Secure hose clamp (3) with cap screw (15), lock washer (16), and hex nut (17).

- 3. Hose Clamp 5/8
- 6. Hose, 3/8 138 1/2 NPTM 3/4 JICF (from Tilt cylinder)
- 15. Cap Screw 5/16 NC x 1 GR5
- 16. Washer, Lock 5/16
- 17. Nut, Hex 5/16 NC



**Figure 19.** Hose Clamp Installation

## Model: SA or Optional Offset Kit 1004872

### Install Hydraulic Offset Cylinder

Refer to Figure 20.

**NOTE:** Hydraulic angle cylinder must be installed with this offset kit.

1. Install hydraulic angle kit as instructed on page 19. Remove 84" hoses from angle cylinder if previously installed.
2. Attach hydraulic cylinder (3) between A-Frame and boom as shown in Figure 20. Secure with pins supplied with the cylinder.
3. Install adjustable elbows (4) to cylinder (3).
4. Remove bracket (1) and hardware if previously installed.
5. Install 45-degree elbows (5) into relief valves (2). Position elbows outward as shown.
6. Attach both valve blocks (2) and bracket (1) to boom using two cap screws (21), four flat washers (22), two lock washers (23), and hex nuts (24).
7. Attach hoses (10) to elbows (5) as shown.
8. Attach hoses (8 & 9) to back side of relief valves (2) and offset cylinder (3) as shown in Figure 21.
9. Attach hoses (6 & 7) to back of relief valves (2) and angle cylinder as shown in Figure 21.

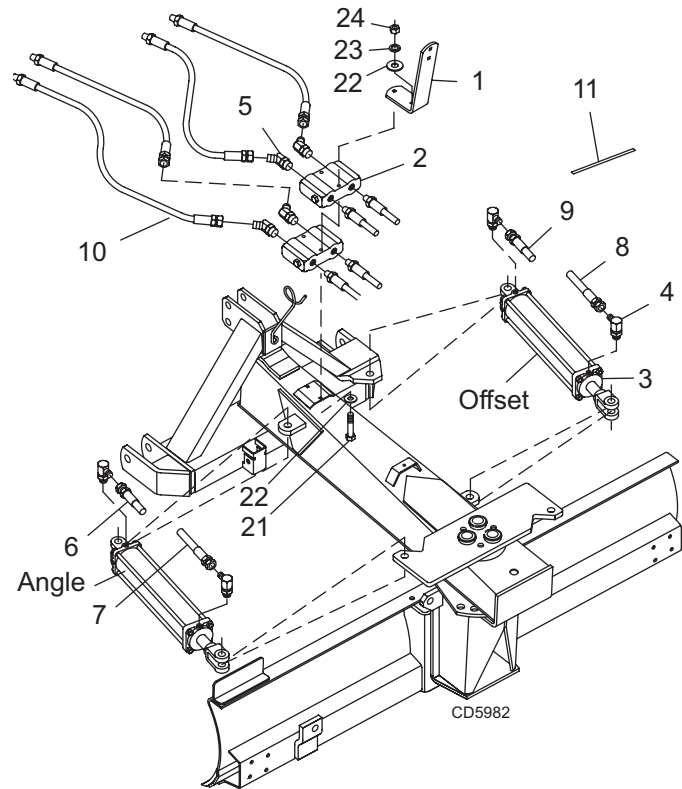


Figure 20. Offset Kit Installation

1. Bracket - SMV Sign
2. Valve Double Relief 1600 psi
3. Hyd Cylinder 3-1/2 x 16
4. Elbow, 3/4 ORBM 3/4 JICM 90
5. Elbow, 3/4 JICM x 3/4 ORMB 45
6. Hose, 3/8 18 3/4 ORBM 3/4 JICF
7. Hose, 3/8 24 3/4 ORBM 3/4 JICF
8. Hose, 3/8 28 3/4 ORBM 3/4 JICF
9. Hose, 3/8 34 3/4 ORBM 3/4 JICF
10. Hose, 3/8 66 1/2 NPTM 3/4 JICF
11. Binding Strap, 14-1/2
21. Cap Screw, 5/16 NC x 5-1/2 GR5
22. Washer, Flat 5/16 Standard
23. Washer, Lock 5/16
24. Nut, Hex 5/16 NC

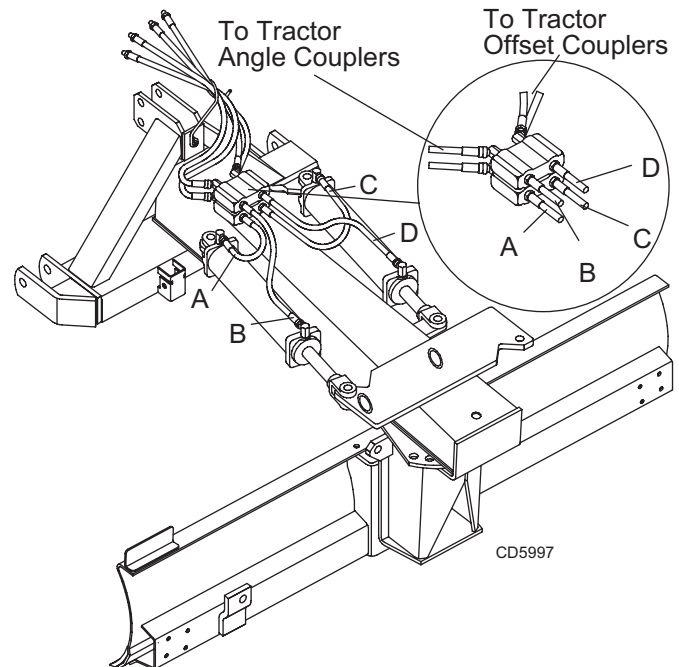


Figure 21. Hose Connection

## Model: H

### Install Hydraulic Cylinders

Refer to Figure 22.

1. Place hydraulic angle arm (1) on boom as shown.
  2. Secure into position using three cap screws (33), lock washers (35), and flat washers (34).
  3. Attach hydraulic angle cylinder (5) to boom and hydraulic angle arm assembly as shown. Secure with pins supplied with the cylinder.
  4. Attach hydraulic offset cylinder (5) to A-Frame and boom as shown. Secure with pins supplied with the cylinder.
  5. Attach hydraulic tilt cylinder (4) to pivot assembly and blade as shown. Secure with pins supplied with the cylinder.
  6. Install two adjustable elbows (6) to each of the hydraulic cylinders as shown.
  7. Install two hoses (15) to the hydraulic tilt cylinder.
- NOTE:** Do not install angle and offset cylinders hoses at this time.
8. Attach hose holder (9) to back side of A-Frame as shown. Secure using one carriage bolt (28), flat washer (29), and lock nut (30).

1. Hyd Angle Arm Assembly
4. Cylinder, Hyd 3-1/2 x 8
5. Cylinder, Hyd 3-1/2 x 16
6. Elbow, 3/4 ORBM 3/4 JICM 90
9. Hyd Hose Holder
15. Hose, 3/8 138 1/2 NPTM 3/4 JICF
28. Bolt, Carriage 3/8 NC x 1-1/4 GR1
29. Washer, 3/8 Flat
30. Nut, Lock 3/8 NC
33. Screw, HHCS 3/4 NC x 3 GR5
34. Washer, Flat 3/4 SAE
35. Washer, Lock 3/4

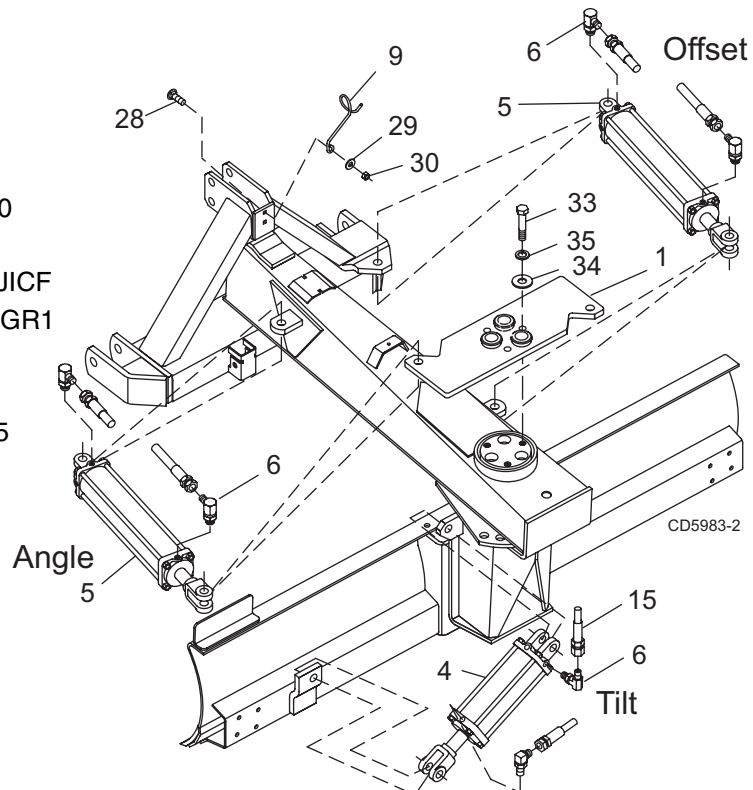
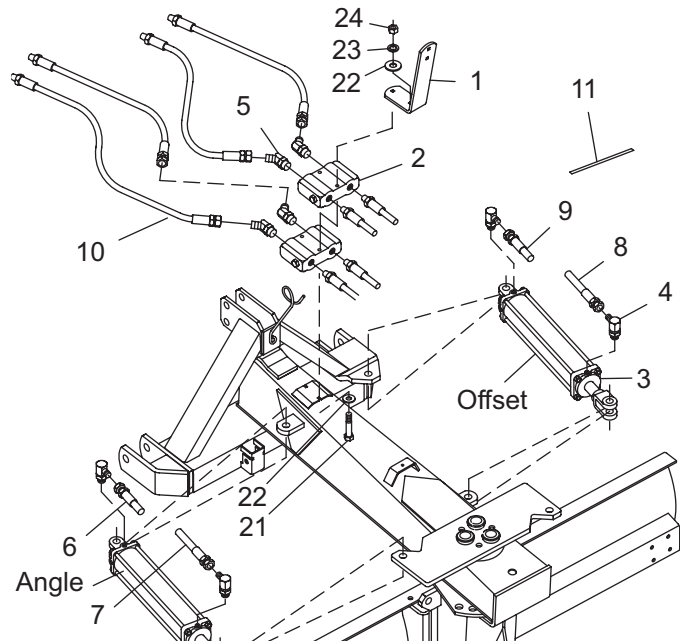


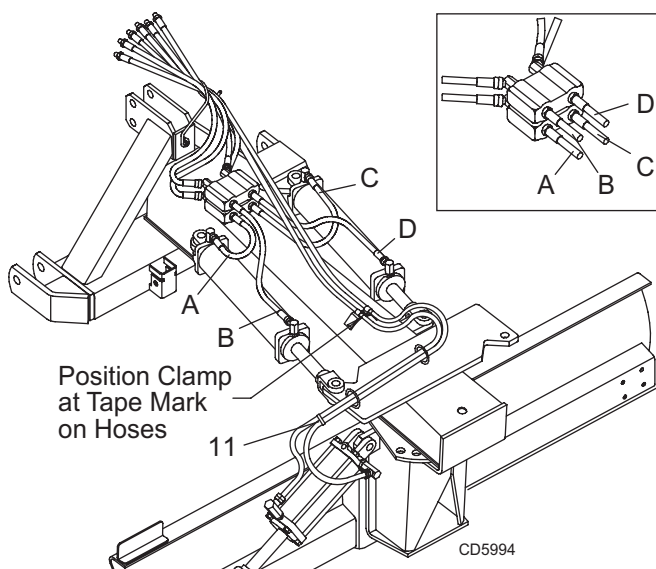
Figure 22. Hydraulic Cylinder Installation

## Install Relief Valves and Hoses

1. Install 45-degree elbows (5) into relief valves (2). Position elbows outward as shown in Figure 23.
2. Attach both valve blocks (2) and SMV bracket (1) to boom using two cap screws (21), four flat washers (22), two lock washers (23), and hex nuts (24).
3. Attach hoses (10) to elbows (5) as shown.
4. Attach hoses (8 & 9) to back side of relief valves (2) and offset cylinder (3) as shown.
5. Attach hoses (6 & 7) to back of relief valves (2) and angle cylinder as shown in Figure 23.
6. Attach hose clamp (12) to boom as shown in Figure 25.
7. Position tape marked on hoses (20) at hose clamp (12).
8. Secure hose clamp (12) with cap screw (30), lock washer (23), and hex nut (24).
9. Route hoses as shown in Figure 24.

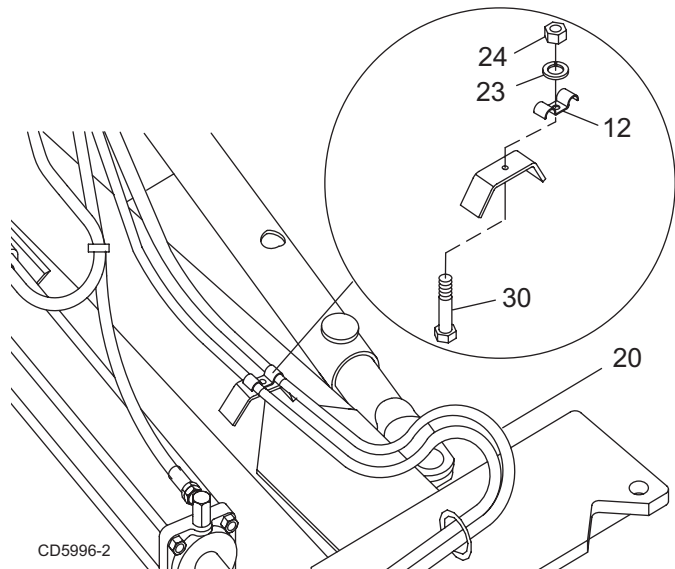


**Figure 23.** Relief Valve and Hose Installation



**Figure 24.** RB750H/RB850H Hose Routing

1. Bracket SMV Sign
2. Valve Double Relief 1600 psi
5. Elbow, Hyd 3/4 JICM x 3/4 ORMB 45°
6. Hose, 3/8 18 3/4ORBM 3/4 JICF
7. Hose, 3/8 24 3/4ORBM 3/4 JICF
8. Hose, 3/8 28 3/4ORBM 3/4 JICF
9. Hose, 3/8 34 3/4ORBM 3/4 JICF
10. Hose, 3/8 66 1/2 NPTM 3/4 JICF
11. Binding Strap, 14-1/2



**Figure 25.** Hose Clamp Installation

12. Clamp, Feedline Hose 5/8
20. Hose, 3/8 138 1/2 NPTM 3/4JICF (from Tilt cylinder)
21. Cap Screw, 5/16 NC x 5-1/2 GR5
22. Washer, Flat 5/16 Standard
23. Washer, Lock 5/16
24. Nut, Hex 5/16 NC
30. Cap Screw, 5/16 NC x 1 GR5



## Install Selector Valve Kit 1004873 (Optional)

Refer to Figure 26.

**NOTE:** Double relief valves must be installed for use with this option.

1. Remove hoses on the tractor side of double relief valves. Two of these hoses will be reused to complete the selector valve installation.

2. Remove hose holder (13) and hardware from the A-Frame if previously installed during angle kit assembly.

3. Attach double selector valve (2) to valve mounting bracket (1). Secure with cap screw (26), cap screw (27), four flat washers (28), and lock nuts (29).

**NOTE:** Cap screw (27) is 3-1/2 inches long and used for attaching hose holder (13) to the top of the selector valve as shown in Figure 26.

Hose holder can be positioned on either side of the selector valve, depending on the location of the tractor remote couplers.

4. Attach selector valve and bracket assembly to the A-Frame. Secure in place using two carriage bolts (25), flat washers (28), and lock nuts (29).

5. Install four adapter fittings (3) in the side ports of the selector valve (2).

6. Install four 26" hoses (5) between adapter fittings (3) in side ports of the selector valve (2) and the relief valve (11). See Figure 27 for hose connections.

7. Install two elbows (4) into the top ports of the selector valve.

8. Install two 66" hoses (9) into elbows (4) on the top of the selector valve.

1. Bracket, Valve Mounting
2. Valve, Double Selector
3. Adapter, 3/4 JICF 1-1/16 ORBM
4. Elbow, 3/4 JICM 1-1/16 ORBM x 90
5. Hose, 3/8 26 3/4 JICF 3/4 JICF
9. Hose, 3/8 66 1/2 NPTM 3/4 JICF  
(from Hydraulic Offset Configuration)
11. Valve, Double Relief 1600 psi
13. Hyd Hose Holder  
(from Hydraulic Angle Kit)
25. Bolt, Carriage 3/8 NC x 1 GR5

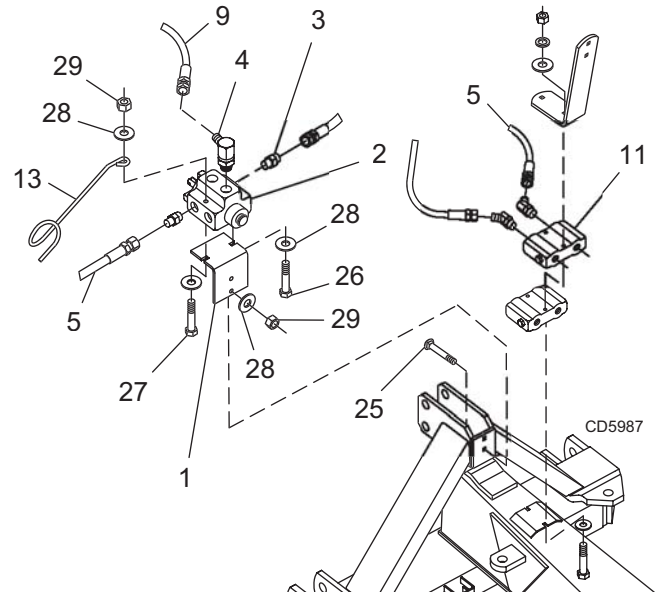


Figure 26. Selector Valve Kit Installation

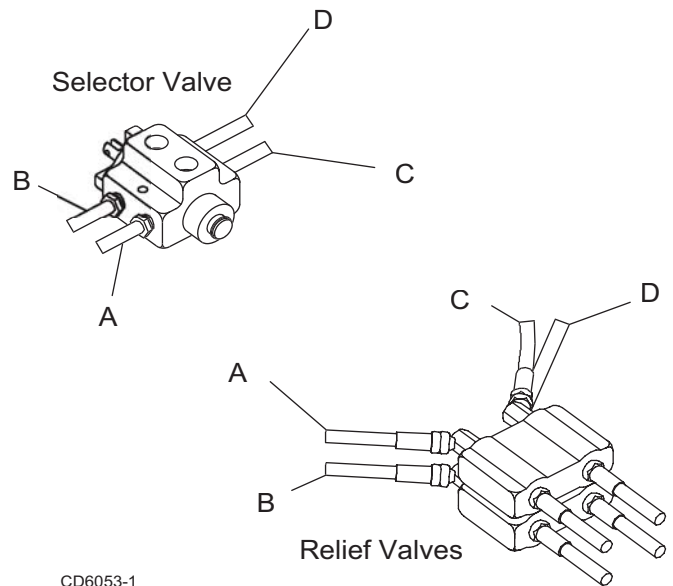
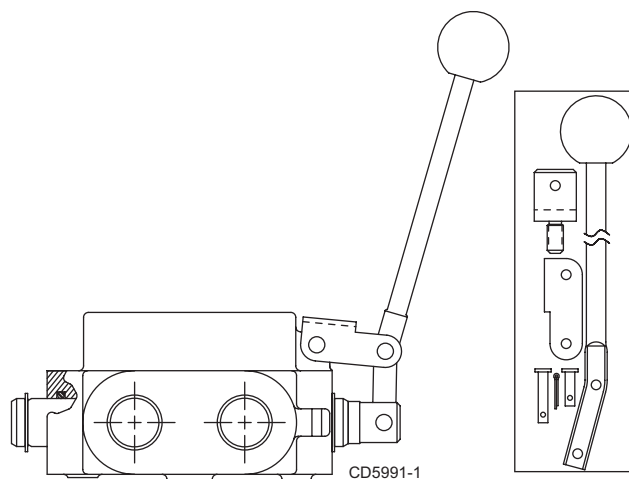


Figure 27. Selector Valve Hose Connections

26. Cap Screw, 3/8 NC x 3 GR5
27. Cap Screw, 3/8 NC x 3-1/2 GR5
28. Washer, Flat 3/8 Standard
29. Nut, Lock 3/8 NC

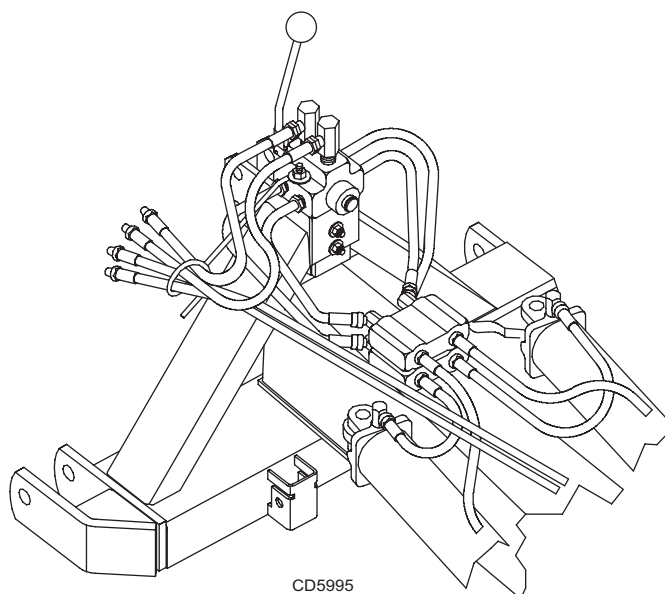
## Install Selector Valve Kit 1004873 (Optional) Cont'd

9. Attach handle kit (1004296) to selector valve.



**Figure 28.** 1004296 Handle Kit Installed

10. Route hoses as shown in Figure 29.



**Figure 29.** Selector Valve Hose Routing

## OPTIONAL EQUIPMENT - ALL MODELS

### Install Pneumatic Tailwheel 28775 (Optional)

#### IMPORTANT

■ When grading with tailwheel attached, do not attach upper link of tractor 3-point hitch to blade without using floating links (2 & 3). Without floating links, equipment damage may result and void warranty.

Refer to Figure 30.

The tailwheel is very helpful for finish grading and leveling work. The ratchet controls the approximate cutting height.

1. Remove top link of tractor 3-point hitch.
2. Attach float links (2 & 3) and sleeve (4) to inside of the top holes of A-Frame. 3/4 dia. welded pin on side of float links must face outward and be located on the bottom end.

**NOTE:** Do not use with Category 2 quick-attach couplers.

3. Secure into position with top link pin.
4. Attach bracket (9) to boom assembly with clevis pin (10), two flat washers (12) and two cotter pins (13). Secure together with cap screw (14).
5. Attach tailwheel arm (15) and yoke (24) to bracket (9) with clevis pin (11), washers (26), and cotter pin (13).
6. Attach ratchet (8) between bracket (9) and tailwheel arm (15). Secure with pins supplied with ratchet.
7. Attach top link to float links (2 & 3) using clevis pin (5), two SAE flat washers (6), and cotter pins (7).

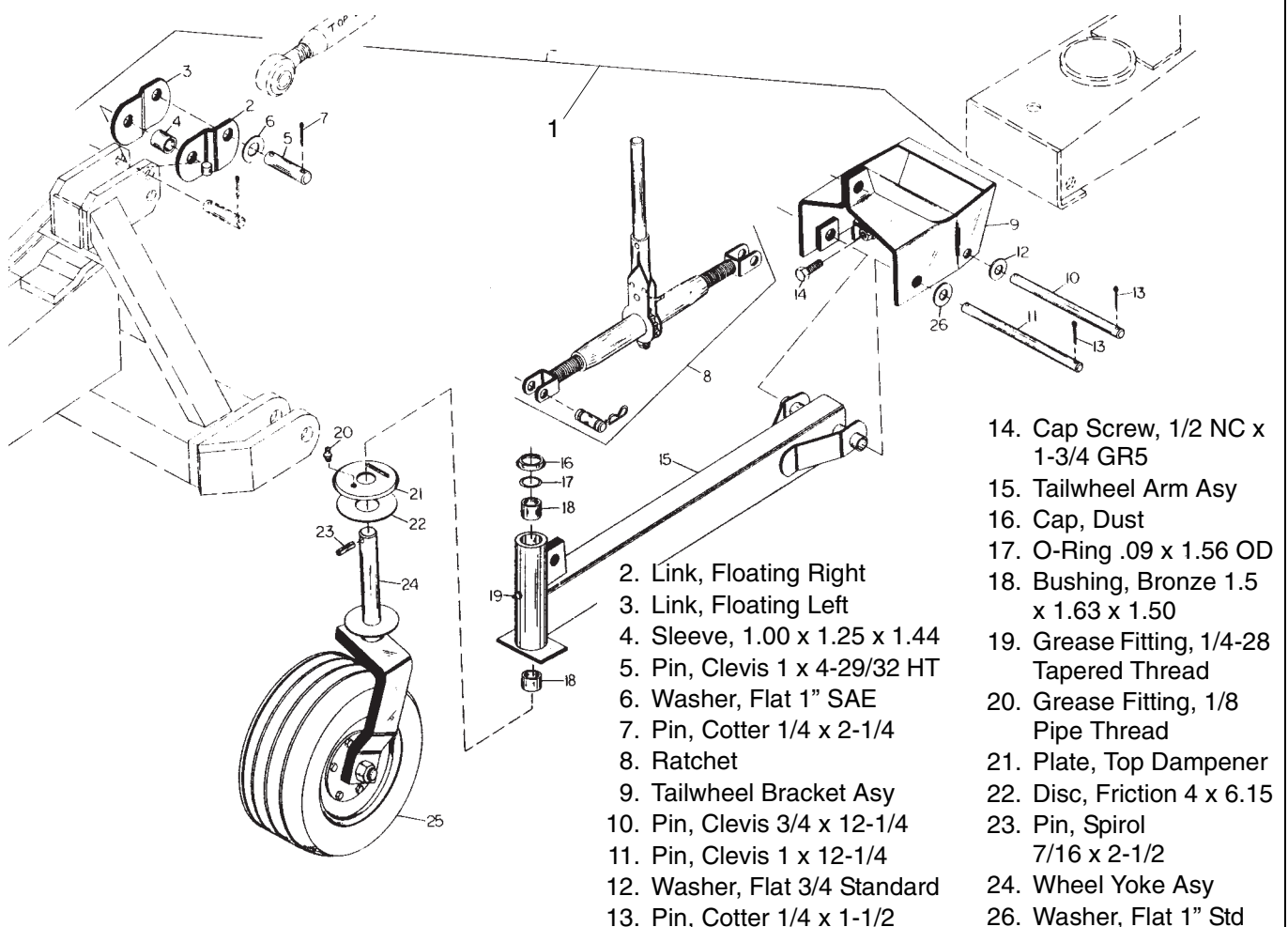


Figure 30. Pneumatic Tailwheel Installation

## Install Skid Shoe Kit 18296 (Optional)

1. Attach the bracket (1) to the blade with four cap screws (8) and lock nuts (9) as shown in Figure 31. Torque hardware to 85 lbs.-ft (115 N-m).

2. Insert skid assembly (3) into tube of bracket (1) and secure with klik pin (4).

3. The cutting edge height is controlled by adjusting the skid shoes with a combination of spacers (2) and washers (10).

4. To raise the cutting edge, place spacer(s) (2) and washer(s) (10) under skid shoe bracket (1).

To lower the cutting edge, place spacer(s) (2) and washer(s) (10) on top of skid shoe bracket (1).

**NOTE:** Before using, make sure that skid shoes rotate freely. If not, work them loose to avoid premature wear. Rotating shoes will last longer.

Grease at assembly and after every eight hours of use.

- A. Skid Shoe Kit
1. Bracket, Skid Shoe (includes item 11)
  2. Sleeve, 1.26 x 1.66 x .75
  3. Skid
  4. Pin, Klik 7/16 x 2
  8. Cap Screw, 1/2 x 1-1/4 GR5
  9. Nut, Flanged Lock 1/2 NC
  10. Washer, Flat 1-1/4 Standard

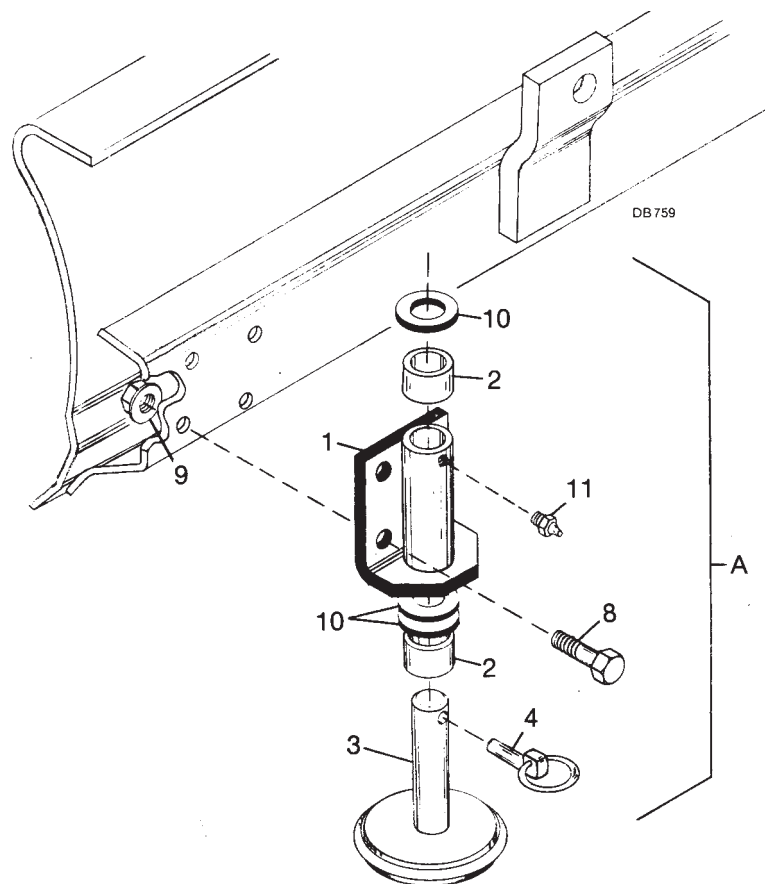


Figure 31. Skid Shoe Installation

## Install End Plate Kit 22658 (Optional)

1. Attach end plates (3) to each end of blade assembly. Use two carriage bolts (4) and flanged lock nuts (5) to each plate.

2. Torque to 85 lbs.-ft (115 N-m).

- 3. Plate, End
- 4. Bolt, Carriage 1/2 NC x 1-1/4 GR5
- 5. Nut, Flanged Lock 1/2 NC

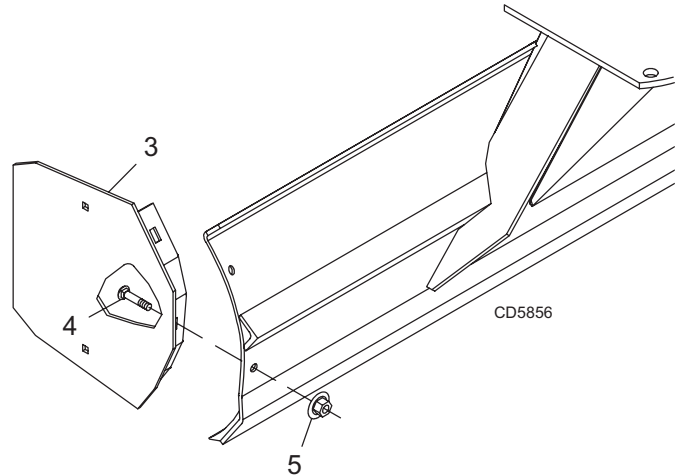


Figure 32. End Plate Installation

### PRE-DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

Inspect the equipment thoroughly after assembly 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 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.
- Explain to customer that when equipment is transported on a road or highway, a Slow Moving Vehicle (SMV) sign should be used to provide adequate warning to operators of other vehicles.

# NOTES

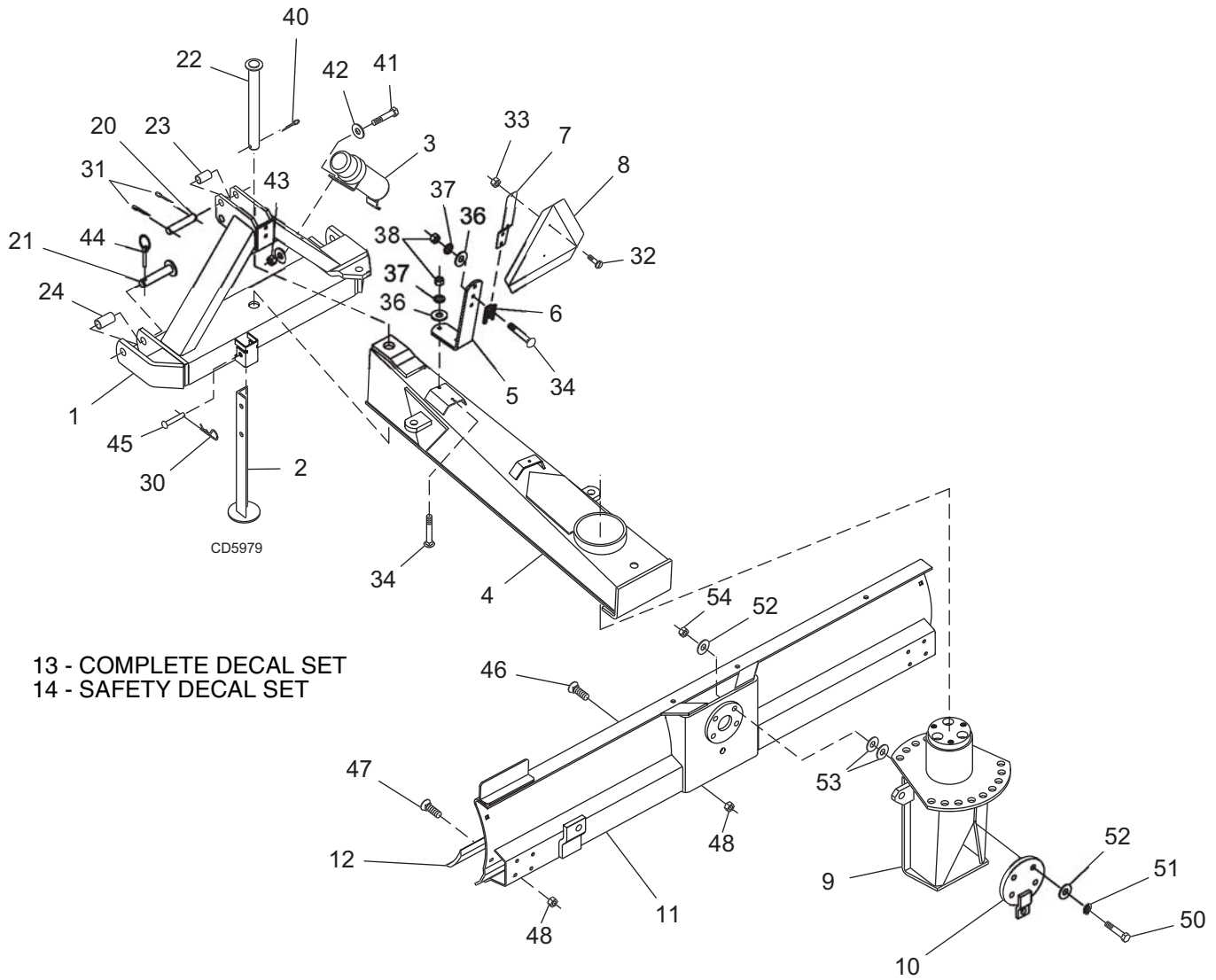
### REAR BLADES

**RB750-4      RB750-4H**

**RB850-4      RB850-4H**

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# RB750-4 RB850-4 MAIN ASSEMBLY



**32 Parts**

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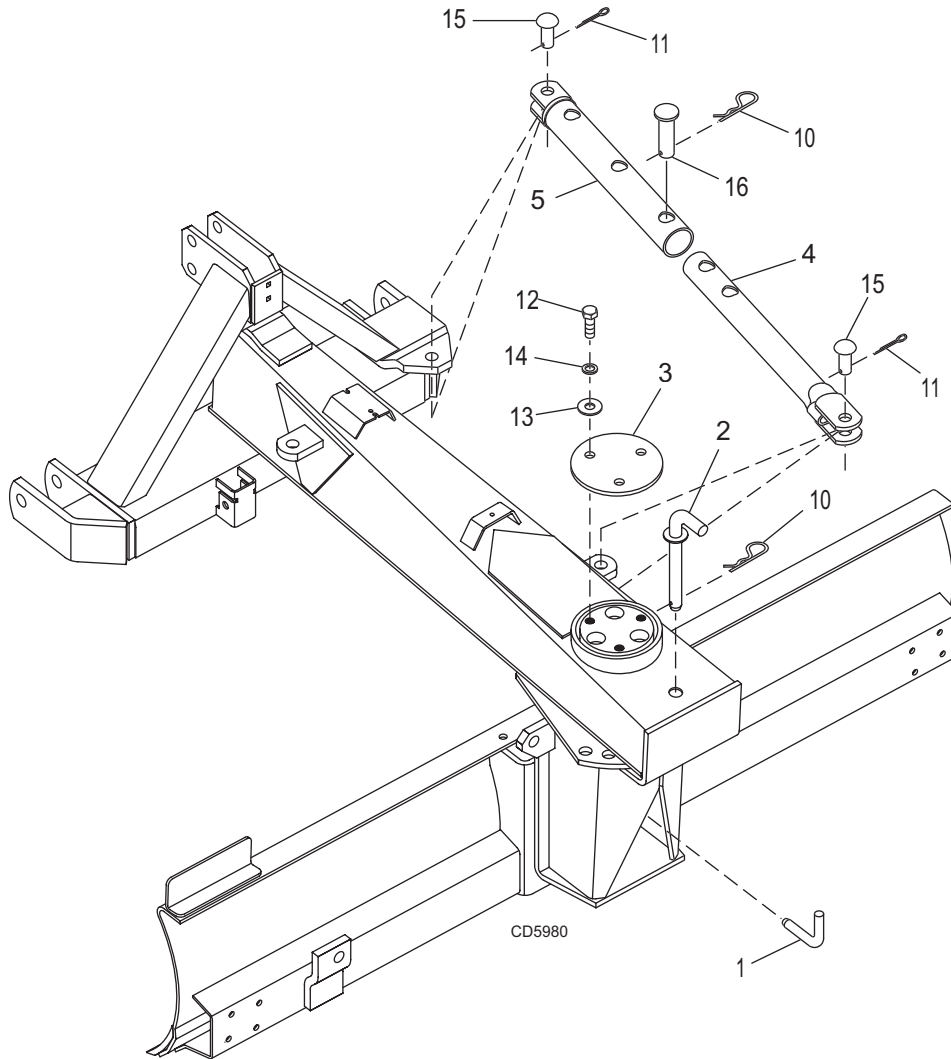
## RB750-4 RB850-4 MAIN ASSEMBLY PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1005001	1	A-Frame with Decals	30	18270	1	* 3/16 Safety Pin
2	28418	1	Parking Stand Assembly	31	923	4	* 1/4 x 1-3/4 Cotter Pin
3	1003828	1	Manual Tube	32	1282	2	* Screw, 1/4 NC x 1/2
4	1005002	1	Boom with Decals	33	5288	2	* Nut, 1/4 NC
5	1004262	1	Bracket - SMV Sign	34	14458	4	* Bolt, Carriage 5/16 NC x 1-1/4
6	62484	1	Socket SMV Emblem	36	4378	4	* Washer, 5/16 Flat
7	1004251	1	SMV Bracket	37	2472	4	* Washer, 5/16 Lock
8	24611	1	Slow Moving Vehicle Sign	38	4529	4	* Nut, Hex 5/16 NC GR5
9	28363	1	Pivot Assembly	40	744	1	* 3/8 x 2-1/2 Cotter Pin
10	27549	1	Retainer Assembly	41	839	3	* Cap screw, 3/8 NC x 1 GR5
11	1004857	1	RB750-4 Moldboard Assembly	42	565	6	* Washer, 3/8 Flat
			<b>or</b>	43	6698	3	* Nut, Lock 3/8 NC
11	1004858	1	RB850-4 Moldboard Assembly	44	27542	2	7/16 x 11/32 Klik Pin HT
12	25263	1	Edge, Cutting .50 x 6.0 x 83	45	8099	1	Pin, Clevis 5/8 x 3-3/4 HT
			<b>or</b>	46	26920	2	Bolt, Plow 5/8 NC x 1-3/4 GR5
12	25270	1	Edge, Cutting .50 x 6.0 x 95	47	21261	6	Bolt, 5/8 NC x 2.0 Plow GR8
13	1004298	1	Decal Set - Complete	48	6239	8	* Nut, Lock 5/8 NC
14	1005003	1	Decal Set - Safety	50	14334	4	* Cap screw, 3/4 NC x 3 GR5
20	26148	1	Pin, Clevis 1 x 4-29/32 HT	51	2522	4	* Washer, 3/4 Lock
21	27573	2	Hitch Pin 1-1/8	52	1257	8	* Washer, 3/4 Flat
22	27546	1	Pivot Pin	53	11036	8	Washer, 3/4 x 1-1/2 x 18 ga
23†	14695	1	Sleeve, 1 x 1-1/4 x 2	54	1450	4	* Nut, Hex 3/4 NC
24†	26100	2	Sleeve, 1-1/8 x 1-7/16 x 2-5/8				

\* Standard Hardware, Obtain Locally

† Optional sleeves for Category 2 Quick Hitch and Category 3 three point hitch; order bushing kit 18295

**RB750-4 RB850-4 - MODELS: M & MT**

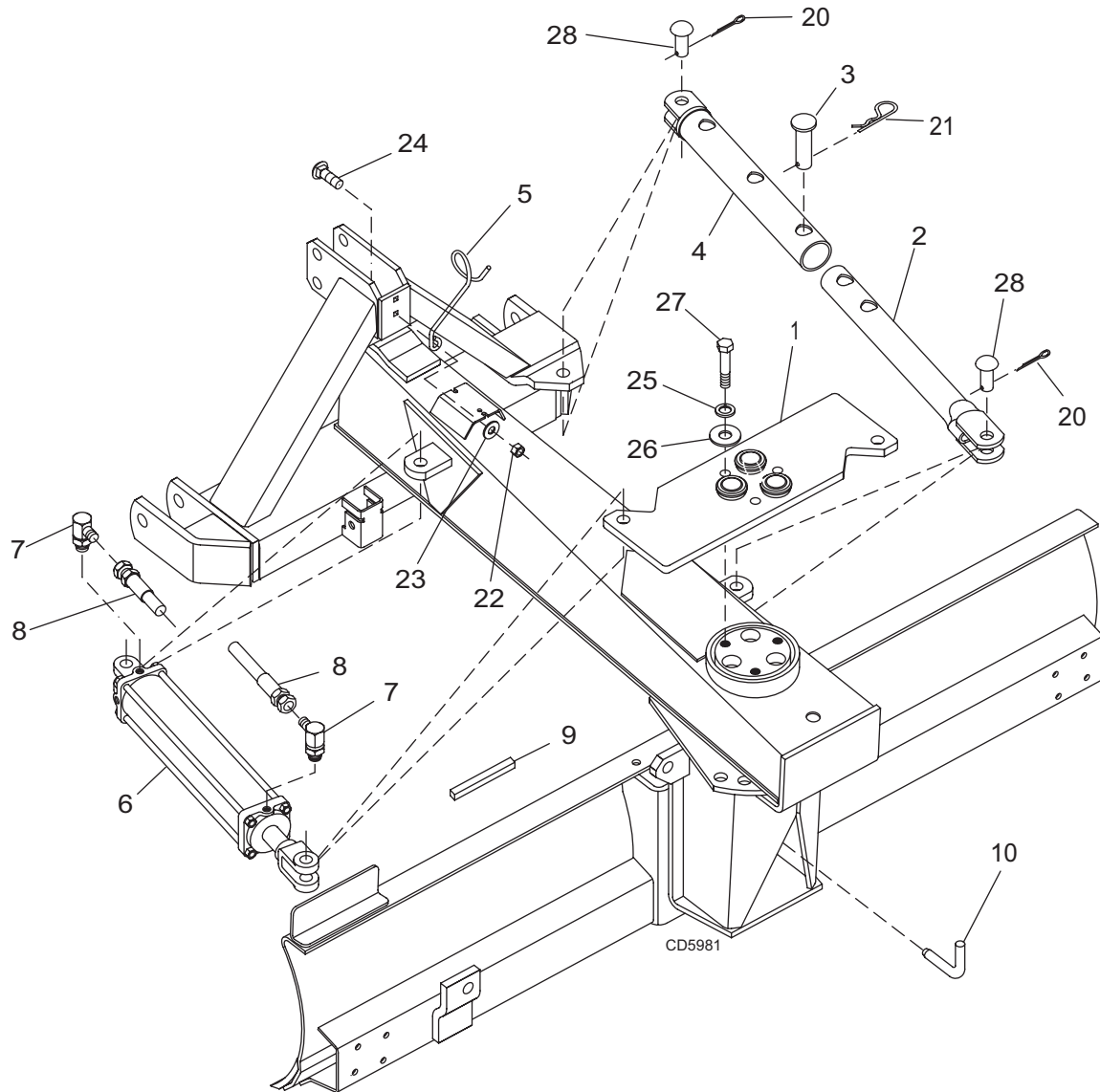


REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	27543	1	Tilt Lock Pin	11	923	2	* 1/4 x 1-3/4 Cotter Pin
2	27544	1	Lock Pin Assembly	12	13759	3	* Cap Screw, 3/4 NC x 2-1/4 GR5
3	28360	1	Retaining Cap	13	2864	3	* Washer, 3/4 SAE Flat
4	27552	1	Swing Link Inner	14	2522	3	* Washer, 3/4 Lock
5	27555	1	Swing Link Outer	15	8341	2	Pin, Clevis 1 x 2-1/2 HT
10	18270	2	* 3/16 Safety Pin	16	26446	1	Lock Pin

\* Standard Hardware, Obtain Locally

For Model **MT** proceed to page 38 for Hydraulic Tilt Kit Parts List.

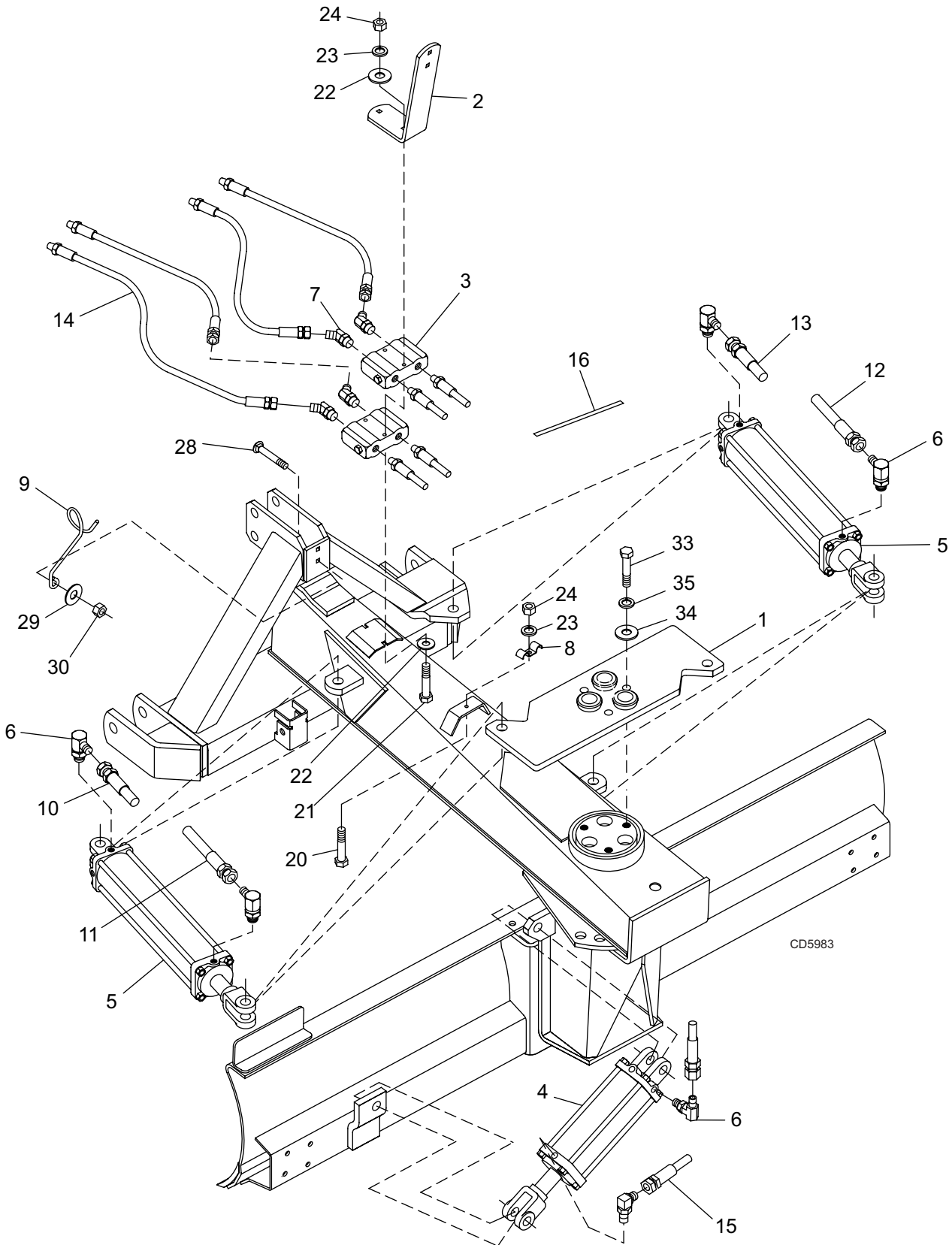
## RB750-4 RB850-4 MODELS: MA, SA, & TA



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	27599	1	Hydraulic Angle Arm Assembly	20	923	4	* 1/4 x 1-3/4 Cotter Pin
2	27552	1	Swing Link, Inner	21	18270	2	* 3/16 Safety Pin
3	26446	1	Lock Pin	22	6698	1	* Nut, Lock 3/8 NC
4	27555	1	Swing Link, Outer	23	565	1	* Washer, 3/8 Flat
5	3443	1	Hyd Hose Holder	24	24890	1	* Bolt, Carriage 3/8 NC x 1-1/4 GR1
6	1003198	1	Hyd Cylinder 3.5 x 1.50 x 16.0	25	2522	3	* Washer, 3/4 Lock
7	316004	2	Elbow, 3/4 ORBM 3/4 JICM 90°	26	2864	3	* Washer, 3/4 SAE Flat
8	1004284	2	Hose, 3/8 84 1/2 NPTM 3/4 JICF	27	14334	3	* Cap Screw, 3/4 NC x 3 GR5
9	8641	3	* Binding Strap, 14-1/2	28	8341	2	Pin Clevis, 1 x 2-1/2 HT
10	27543	1	Tilt Lock Pin			*	Standard Hardware, Obtain Locally

For Model **TA** proceed to page 38 for Hydraulic Tilt Kit Parts list.  
 For Model **SA** proceed To page 39 For Hydraulic Offset Parts List.

# RB750-4 RB850-4 MODEL: H



**36 Parts**

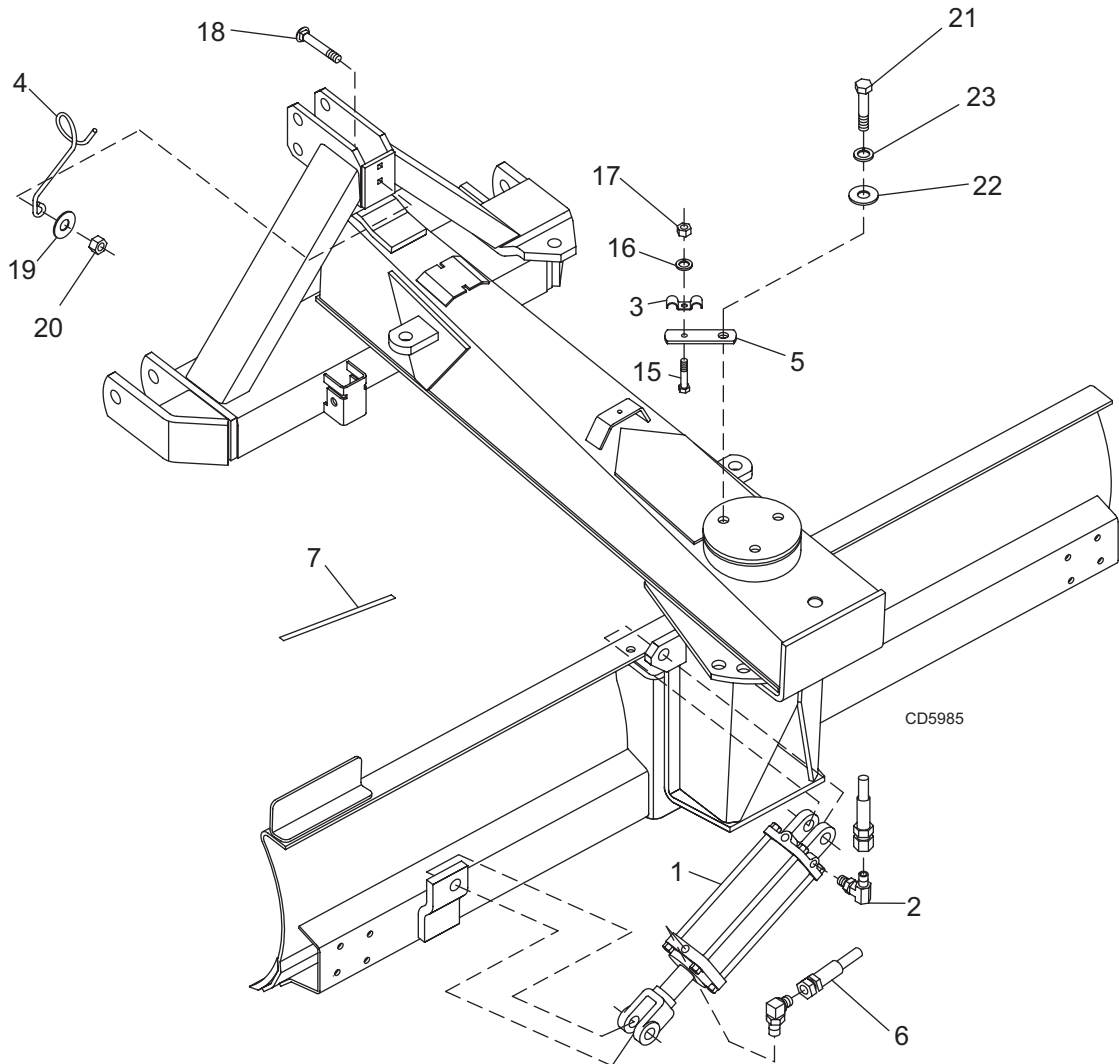
MAN0160 (Rev. 2/22/2006)

## RB750-4 RB850-4 MODEL: H - PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	27599	1	Hyd Angle Arm Assembly	14	1004283	4	Hose, 3/8 66 1/2 NPTM 3/4 JICF
2	1004262	1	Bracket - SMV Sign (From Main Asy)	15	1004285	2	Hose, 3/8 138 1/2 NPTM 3/4 JICF
3	1004260	2	Valve Double Relief 1600psi	16	8641	6	* Binding Strap, 14-1/2
4	1003196	1	Hyd Cylinder 3.5 x 1.25 x 8.0	20	14562	1	* Cap Screw, 5/16 NC x 1 GR5
5	1003198	2	Hyd Cylinder 3.5 x 1.50 x 16.0	21	300107	2	* Cap Screw, 5/16 NC x 5-1/2 GR5
6	316004	6	Elbow, 3/4 ORBM 3/4 JICM 90°	22	4378	4	* Washer, 5/16 Flat
7	1004288	4	Elbow, 3/4 ORBM 3/4 JICM 45°	23	2472	5	* Washer, 5/16 Lock
8	56	1	Hose Clamp 5/8	24	4529	5	* Nut, Hex 5/16 NC GR5
9	3443	1	Hyd Hose Holder	28	24890	1	* Bolt, Carriage 3/8 NC x 1-1/4 GR1
10	360181	1	Hose, 3/8 18 3/4 ORBM 3/4 JICF	29	565	1	* Washer, 3/8 Flat
11	360203	1	Hose, 3/8 24 3/4 ORBM 3/4 JICF	30	6698	1	* Nut, Lock 3/8 NC
12	1004286	1	Hose, 3/8 28 3/4 ORBM 3/4 JICF	33	14334	3	* Cap Screw, 3/4 NC x 3 GR5
13	1004287	1	Hose, 3/8 34 3/4 ORBM 3/4 JICF	34	2864	3	* Washer, 3/4 SAE Flat
				35	2522	3	* Washer, 3/4 Lock

\* Standard Hardware, Obtain Locally

**RB750-4 RB850-4 HYDRAULIC TILT KIT 1004871  
FOR MODELS: MT & TA**



REF	PART	QTY	DESCRIPTION
1	1003196	1	Hyd Cylinder 3.5 x 1.25 x 8.0
2	316004	2	Elbow, 3/4 ORBM 3/4 JICM 90°
3	56	1	Hose Clamp 5/8
4	3443	1	Hyd Hose Holder
5†	1004832	1	Link - Hose Support
6	1004285	2	Hose, 3/8 138 1/2 NPTM 3/4 JICF
7	8641	3	* Binding Strap, 14-1/2
15	14562	1	* Cap Screw, 5/16 NC x 1 GR5
16	2472	5	* Washer, 5/16 Lock
17	4529	5	* Nut, Hex 5/16 NC GR5

REF	PART	QTY	DESCRIPTION
18	24890	1	* Bolt, Carriage 3/8 NC x 1-1/4 GR1
19	565	1	* Washer, 3/8 Flat
20	6698	1	* Nut, Lock 3/8 NC
21#	13759	3	* Cap Screw, 3/4 NC x 2-1/4 GR5
22#	2864	3	* Washer, 3/4 SAE Flat
23#	2522	3	* Washer, 3/4 Lock

\* Standard Hardware, Obtain Locally

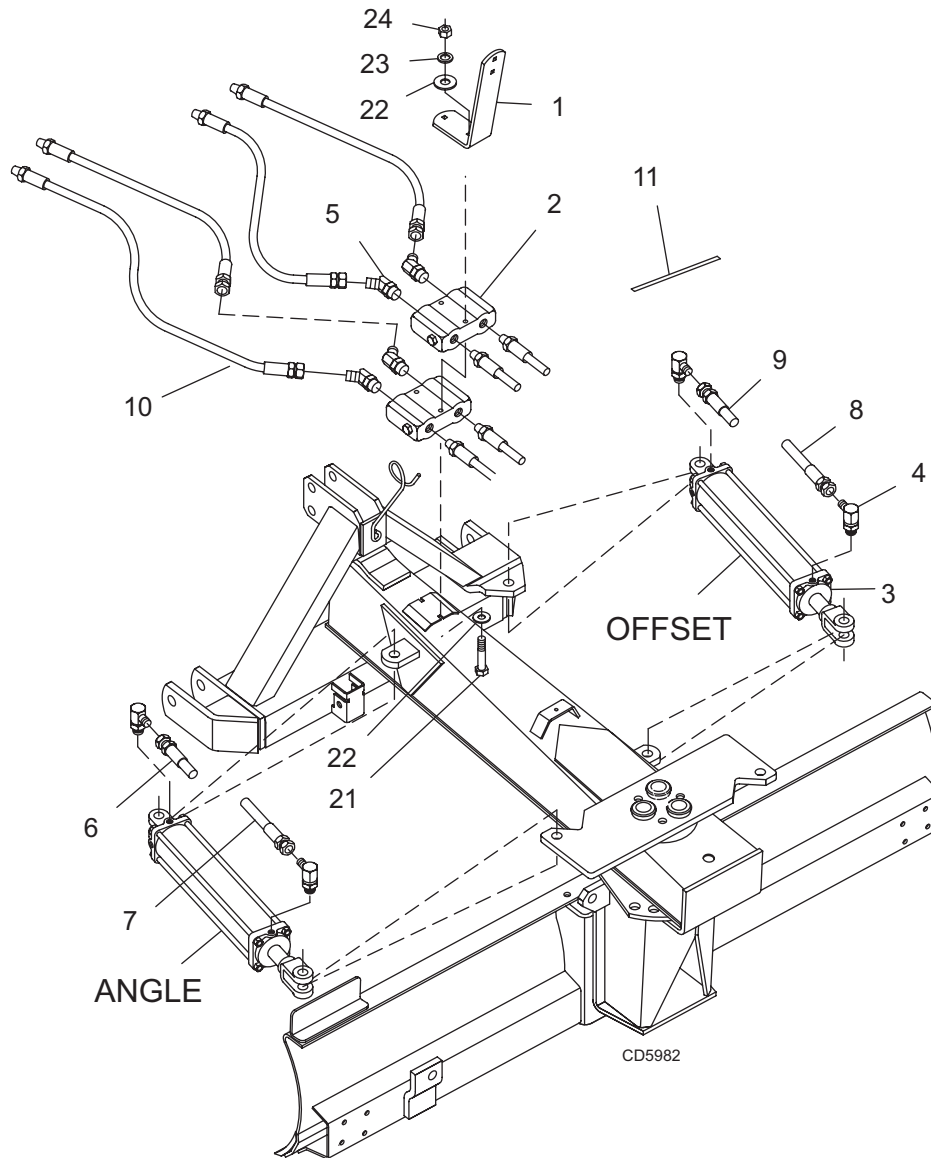
† Not used if blade has hydraulic angle option.

# Not included in this kit; from blade with mechanical angle adjustment configuration.

**38 Parts**

MAN0160 (Rev. 2/22/2006)

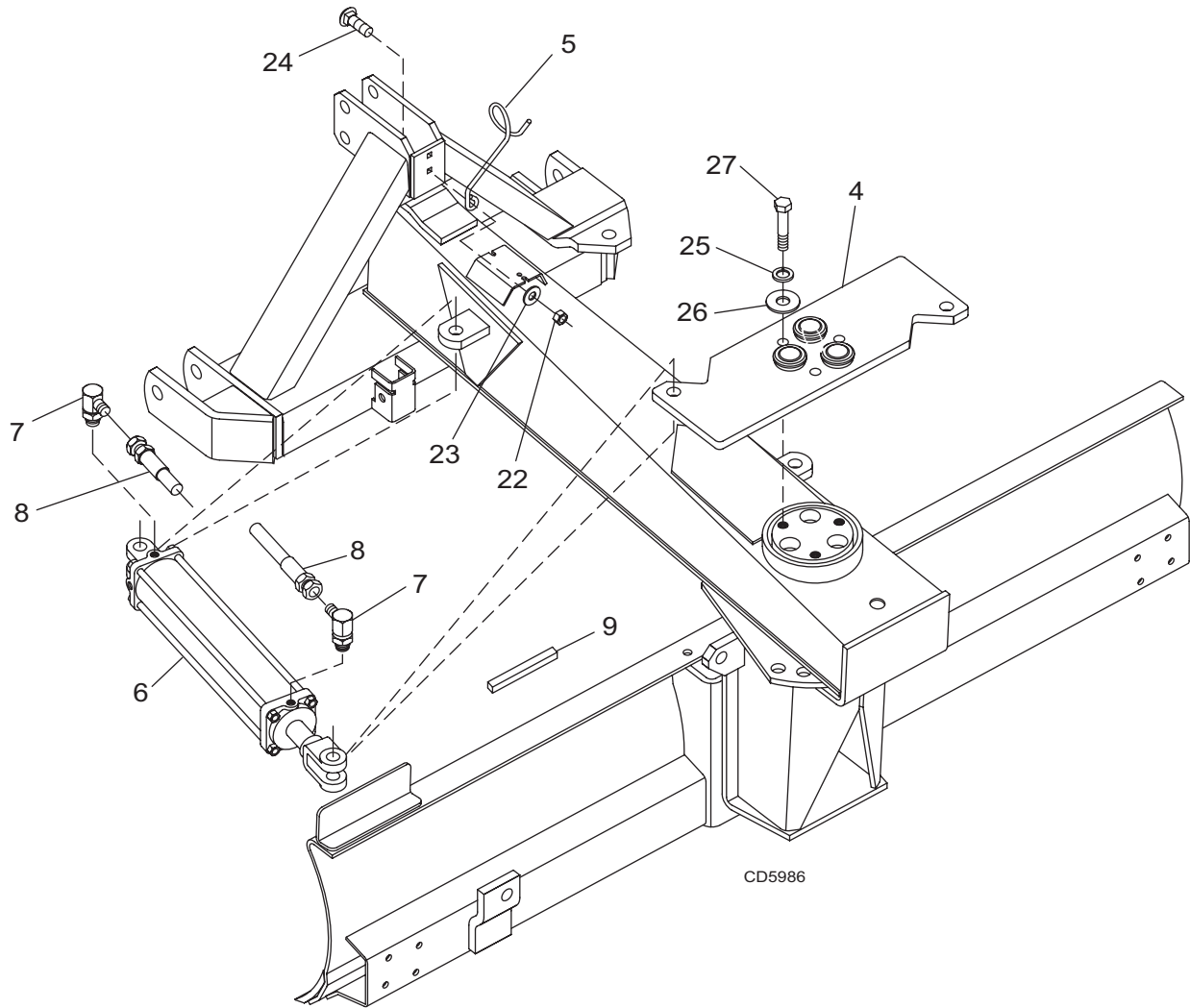
**RB750-4 RB850-4 HYDRAULIC OFFSET KIT 1004872  
FOR MODEL: SA**



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1004262	1	Bracket - SMV Sign (From Main Asy)	10	1004283	4	Hose, 3/8 66 1/2 NPTM 3/4 JICF
2	1004260	2	Valve Double Relief 1600psi	11	8641	6	* Binding Strap, 14-1/2
3#	1003198	1	Hyd Cylinder 3.5 x 1.50 x 16.0	21	300107	2	* Cap Screw, 5/16 NC x 5-1/2 GR5
4#	316004	6	Elbow, 3/4 ORBM 3/4 JICM 90°	22#	4378	2	* Washer, 5/16 Flat
5	1004288	4	Elbow, 3/4 ORBM 3/4 JICM 45°	23#	2472	2	* Washer, 5/16 Lock
6	360181	1	Hose, 3/8 18 3/4 ORBM 3/4 JICF	24#	4529	2	* Nut, Hex 5/16 NC GR5
7	360203	1	Hose, 3/8 24 3/4 ORBM 3/4 JICF				
8	1004286	1	Hose, 3/8 28 3/4 ORBM 3/4 JICF			*	Standard Hardware, Obtain Locally
9	1004287	1	Hose, 3/8 34 3/4 ORBM 3/4 JICF				

# Quantity shown is for this kit. Additional items come from Model MA or Hydraulic Angle Kit 1004870.

## HYDRAULIC ANGLE KIT 1004870



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
4	27599	1	Hyd Angle Arm Assembly	22	6698	1	* Nut, Lock 3/8 NC
5	3443	1	Hyd Hose Holder	23	565	1	* Washer, 3/8 Flat
6	1003198	1	Hyd Cylinder 3.5 x 1.50 x 16.0	24	24890	1	* Bolt, Carriage 3/8 NC x 1-1/4 GR1
7	316004	2	Elbow, 3/4 ORBM 3/4 JICM 90°	25	2522	3	* Washer, 3/4 Lock
8	1004284	2	Hose 3/8 84 1/2 NPTM 3/4 JICF	26	2864	3	* Washer, 3/4 SAE Flat
9	8641	3	* Binding Strap, 14-1/2	27	14334	3	* Cap Screw, 3/4 NC x 3 GR5

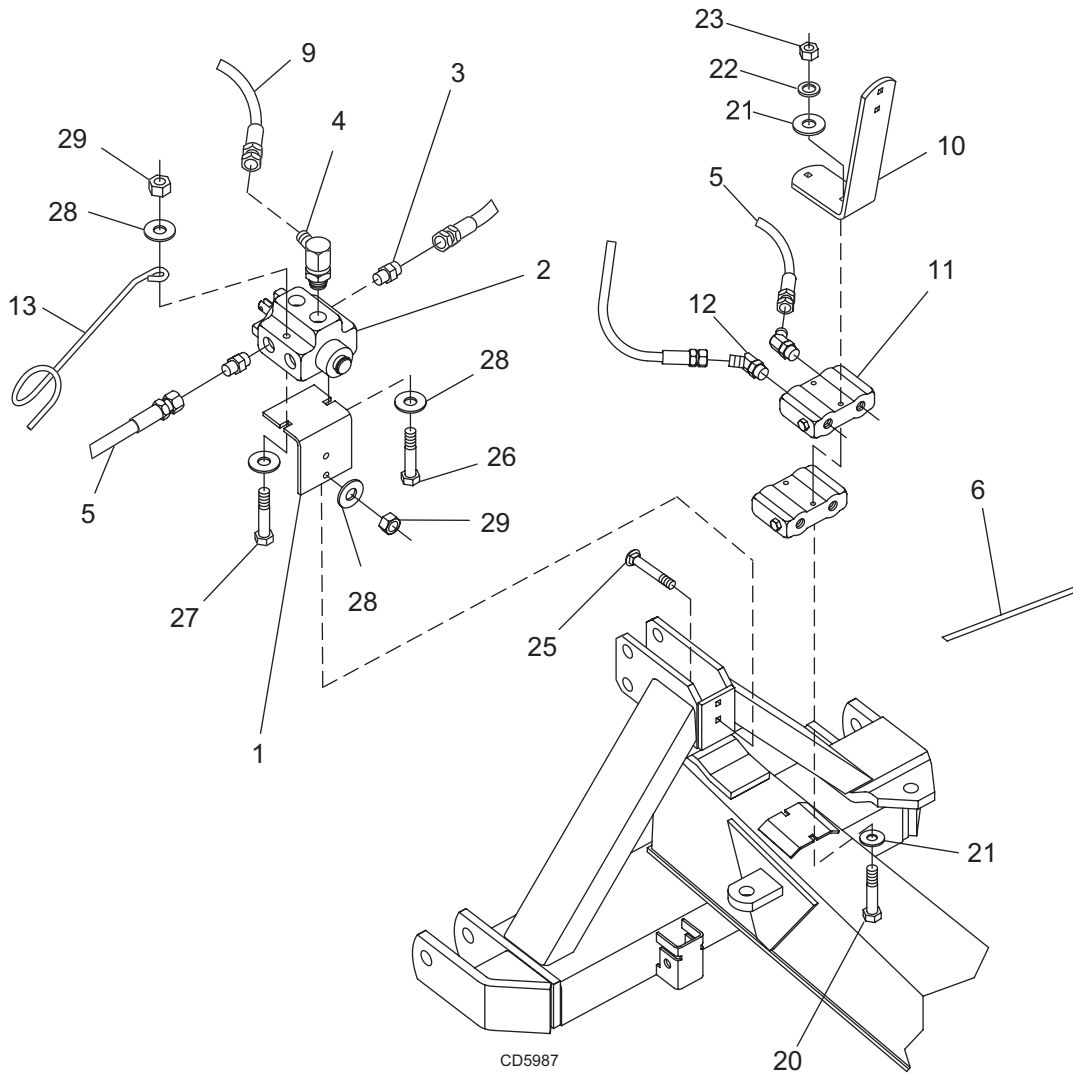
\* Standard Hardware, Obtain Locally

**40 Parts**

MAN0160 (Rev. 2/22/2006)



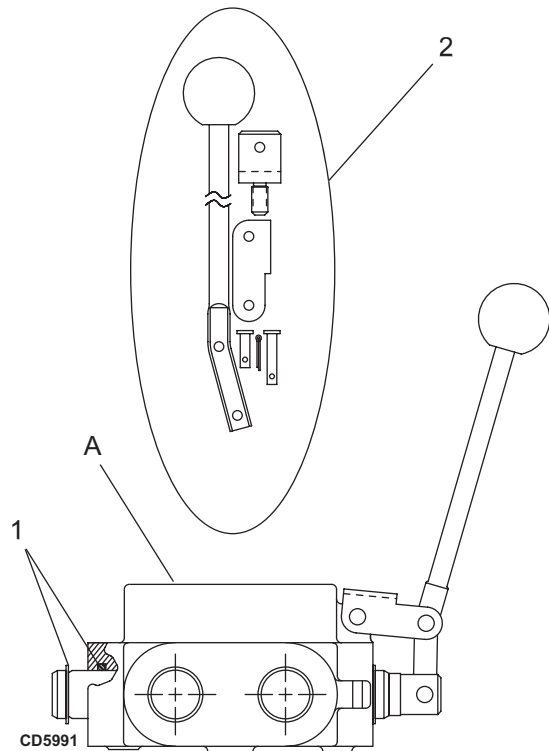
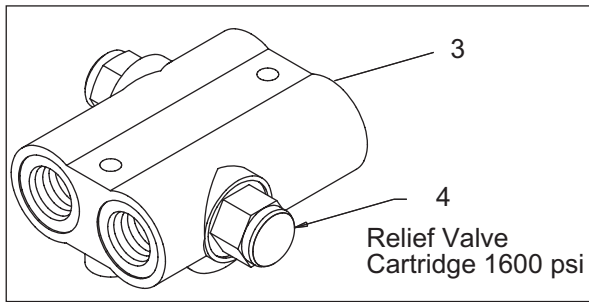
## SELECTOR VALVE KIT 1004873



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	27598	1	Valve, Mounting Bracket	20#	300107	2	* Cap Screw, 5/16 NC x 5-1/2 GR5
2	1004261	1	Valve, Double Selector	21#	4378	4	* Washer, 5/16 Flat
3	316017	4	Adapter, 3/4 JICM 1-1/16 ORBM	22#	2472	5	* Washer, 5/16 Lock
4	37501	2	Elbow, 3/4 JICM 1-1/16 ORBM x 90°	23#	4529	5	* Nut, Hex 5/16 NC GR5
5	1004281	4	Hose, 3/8 26 3/4 JICF 3/4 JICF	25	6697	2	* Bolt, Carriage 3/8 NC x 1 GR5
6	8641	3	* Binding Strap, 14-1/2	26	7747	1	* Cap Screw, 3/8 NC x 3 GR5
9#	1004283	2	Hose, 3/8 66 1/2 NPTM 3/4 JICF	27	31138	1	* Cap Screw, 3/8 NC x 3-1/2 GR5
10#	1004262	1	Bracket - SMV Sign	28	565	1	* Washer, 3/8 Flat
11#	1004260	2	Valve, Double Relief 1600psi	29	6698	1	* Nut, Lock 3/8 NC
12#	1004288	4	Elbow, 3/4 ORBM 3/4 JICM 45°				
13#	3443	1	Hyd Hose Holder				* Standard Hardware, Obtain Locally

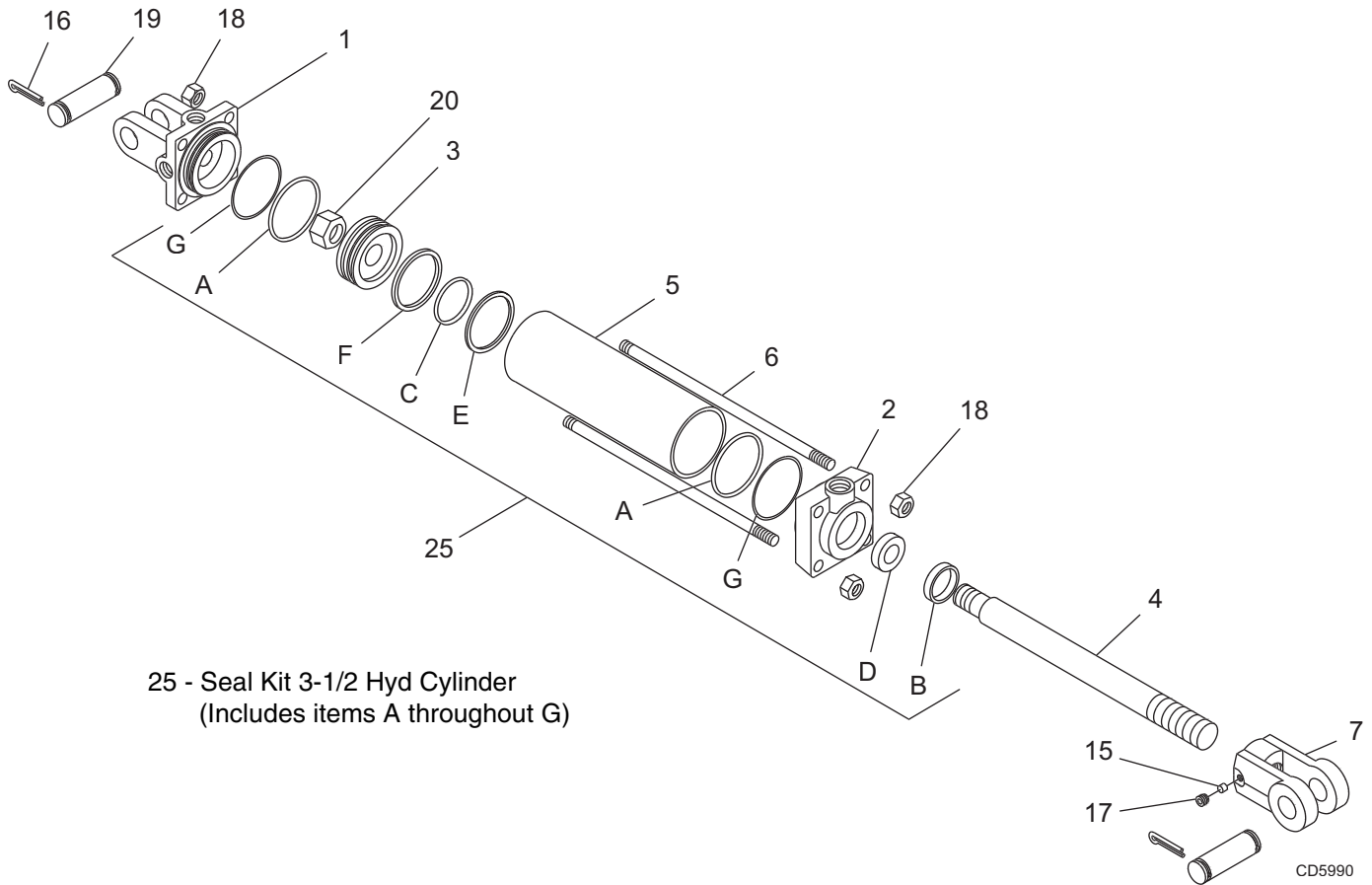
# Not included in this kit. Included in Hydraulic Angle and Offset configuration.

**SELECTOR VALVE 1004261  
RELIEF VALVE 1004260**



REF	PART	QTY	DESCRIPTION
A	1004261		Valve, Double Selector
1	1004295	1	Seal kit, Double Selector Valve
2	1004296	1	Kit, Selector Valve Handle
3	1004260	1	Valve, Hyd Double Relief 1600 psi
4	1004297	1	Relief Valve Cartridge, 1600 psi

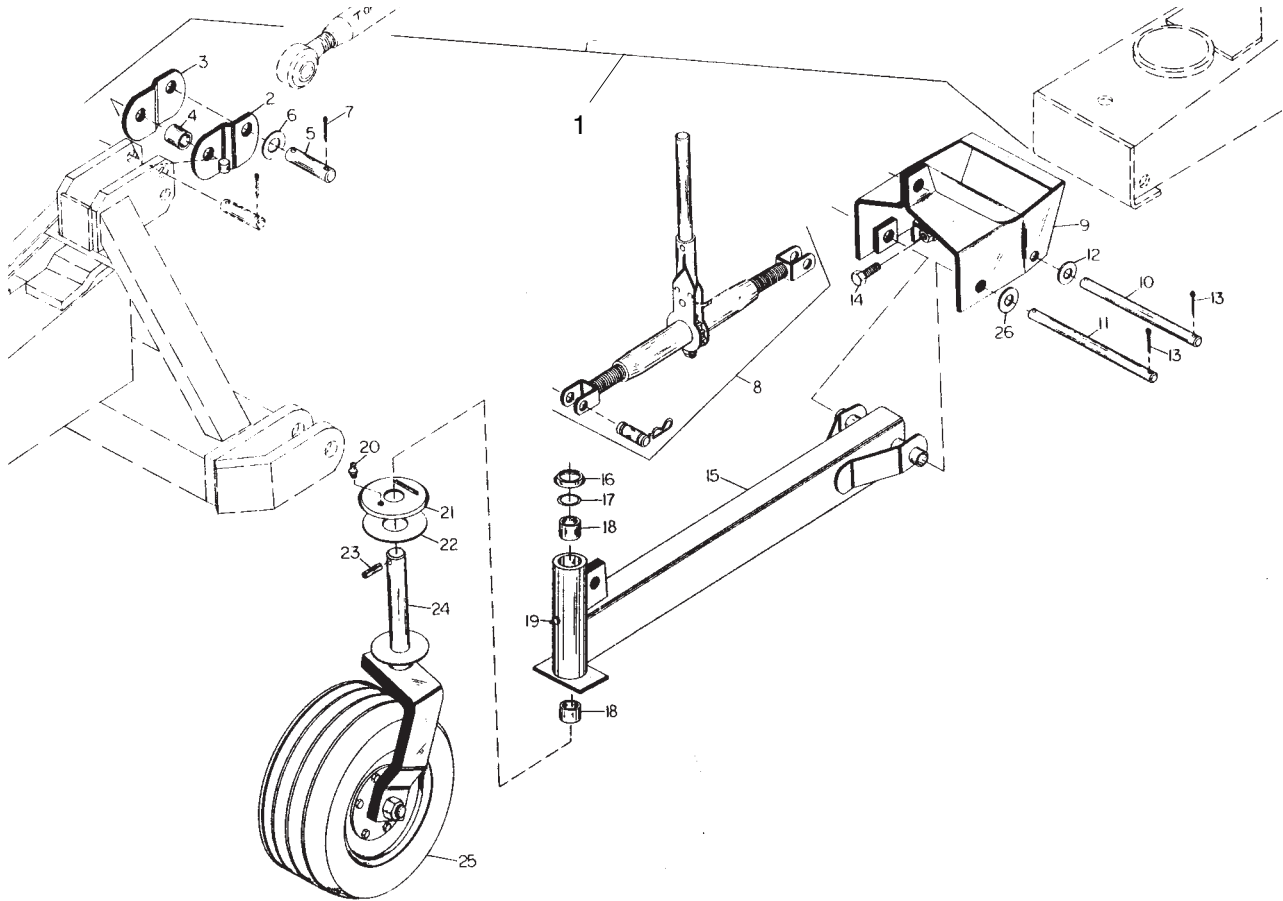
## HYDRAULIC CYLINDER ASSEMBLY & PARTS LIST



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
	1003196		Cylinder, Hyd 3-1/2 x 8 (Tilt)	18	302176	8	Nut, Hex 5/8 UNF (Torque to 160 lbs.-ft.)
	1003198		Cylinder, Hyd 3-1/2 x 16 (Angle - Offset)	19	1631	2	Pin, Clevis
1	N/S	1	Clevis Cap	20	34323	1	Nut, Lock 1-14 UNS (Torque to 300 lbs.-ft.)
2	N/S	1	Rod Cap	25	1005000		Seal Kit (Includes items A - G)
3	1004826	1	Piston, 3.50 OD	A		2	O-Ring
4	1004829	1	Rod, 1.25 OD (for 1003196)	B		1	Rod Wiper
			or	C		1	O-Ring (Piston Seal Expander)
4	1004830	1	Rod, 1.50 OD (for 1003198)	D		1	Rod Seal
5	N/S	1	Tube	E		1	Piston Seal
6	N/S	4	Tie Rod	F		2	Piston Wear Ring
7	1004827	1	Rod, Clevis	G		2	Backup Washer
15	N/S	1	Nylon Thread Patch				
17		1	* Screw, Set 3/8 NC x 1/2 (Torque to 20 lbs.-ft.)				

\* Standard Hardware, Obtain Locally  
N/S Not Serviced Separately

## PNEUMATIC TAILWHEEL ASSEMBLY

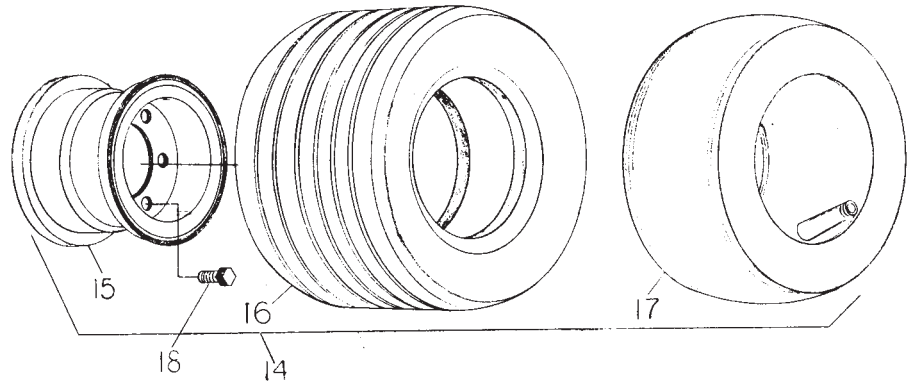
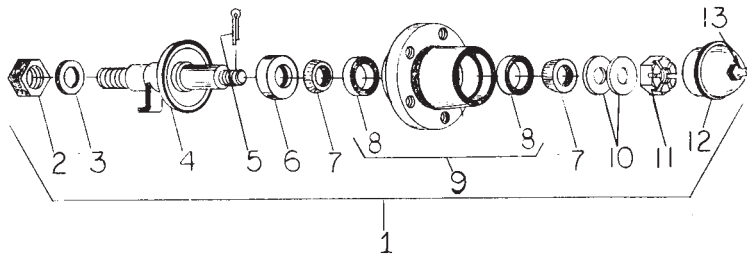


REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	28775	1	Tailwheel, Pneumatic Complete	15	28776	1	Tailwheel Arm Assembly
2	29030	1	Link, Floating Right	16	12881	1	Cap, Dust
3	29031	1	Link, Floating Left	17	12889	1	O-Ring .09 x 1.56 OD
4	29034	1	Sleeve, 1.00 x1.25 x 1.44	18	11011	2	Bushing, Bronze 1.5 x 1.63 x 1.50
5	26148	1	Pin, Clevis 1 x 4-29/32 HT	19	1972	1	* Grease Fitting, 1/4-28 Tapered Thread
6	1863	2	* Washer, Flat 1" SAE	20	195	1	* Grease Fitting, 1/8 Pipe Thread
7	6185	2	* Pin, Cotter 1/4 x 2-1/4	21	14135	1	Plate, Top Dampener
8	1005020	1	Ratchet	22	19459	1	Disc, Friction 4 x 6.15
9	28781	1	Tailwheel Bracket Assembly	23	7276	1	* Pin, Spirol 7/16 x 2-1/2
10	28788	1	Pin, Clevis 3/4 x12-1/4	24	14125	1	Wheel Yoke Assembly
11	28789	1	Pin, Clevis 1 x 12-1/4	25	—	1	Tire, Wheel & Hub
12	1257	2	* Washer, Flat 3/4 Standard	26	832	2	* Washer, Flat 1" Standard
13	1285	4	* Pin, Cotter 1/4 x 1-1/2				
14	24576	1	* Cap Screw, 1/2 NC x 1-3/4 GR5				
							* Standard Hardware, Obtain Locally

**44 Parts**

MAN0160 (Rev. 2/22/2006)

## WHEEL HUB, TIRE & WHEEL ASSEMBLY



DB-418

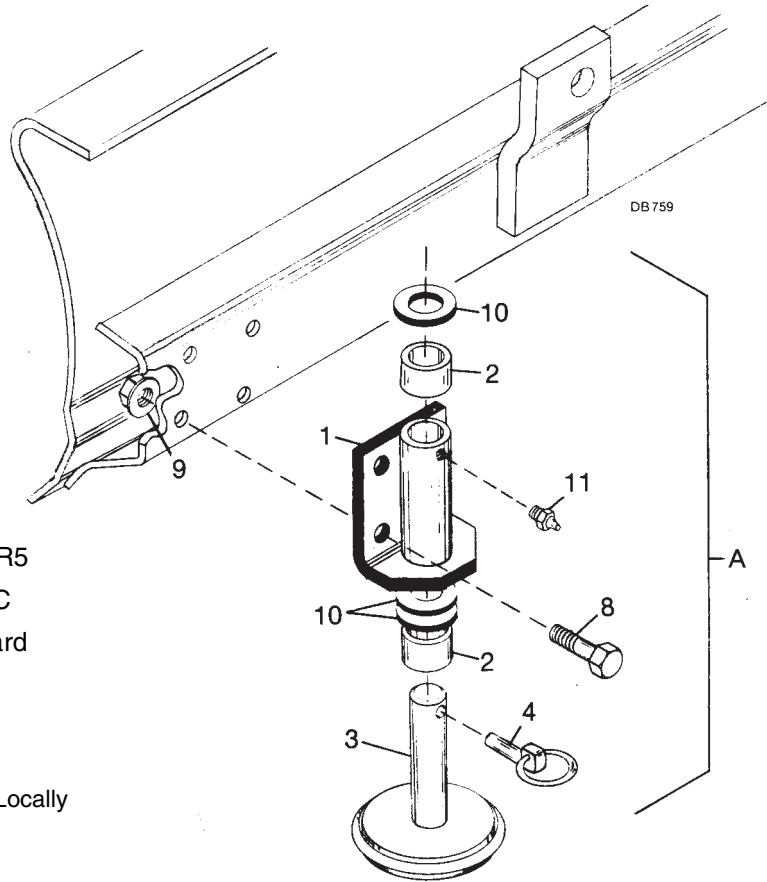
TIRE INFLATION: 45 LBS.

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	14130	1	Wheel Hub & Axle Assembly	10	1257	2	* Washer, Flat 3/4 Standard
2	3626	1	Nut, Hex 1-14 UNS	11	5849	1	Nut, Slotted Hex 3/4 NF
3	1863	1	* Washer, Flat 1" SAE	12	14133	1	Hub Cap Assembly w/fitting
4	14131	1	Axle Assembly	13	N/S	1	* Grease Fitting, 1/4 Tapered Thread
5	1266	1	* Pin, Cotter 3/16 x 1-1/2	14	14255	1	Wheel & Tire 18 x 9.5 - 8
6	314	1	Seal, 1.50 x 2.44 x .31 (Note: Point spring-loaded lip outward in assembly of seal to housing)	15	N/S	1	Rim 18 x 9.5 x 8
7	2303	2	Bearing Cone	16	N/S	1	Tire, Rib 18 x 9.5 x 8 6-ply
8	2305	2	Bearing Cup	17	N/S	1	Inner Tube, 18 x 9.50 x 8
9	14132	1	Wheel Hub, Housing w/cups	18	1258	5	Bolt, Wheel 1/2 NF x 1-1/8
					N/S		Not Serviced Separately
					*		Standard Hardware, Obtain Locally

## SKID SHOE KIT 18296

REF	PART	QTY	DESCRIPTION
A	18296	-	Skid Shoe Kit (includes items 1 thru 11)
1	27587	2	Bracket, Skid Shoe
2	52854	4	Sleeve, 1.26 x 1.66 x .75
3	27586	2	Skid & shaft assembly
4	27542	2	Pin, Klik 7/16 x 2
8	6100	*	Cap Screw, 1/2 x 1-1/4 GR5
9	11900	-	Nut, Flanged Lock 1/2 NC
10	7163	*	Washer, Flat 1-1/4 Standard
11	1972	*	Grease Fitting, 1/4-28 Tapered Thread

\* Standard Hardware, Obtain Locally

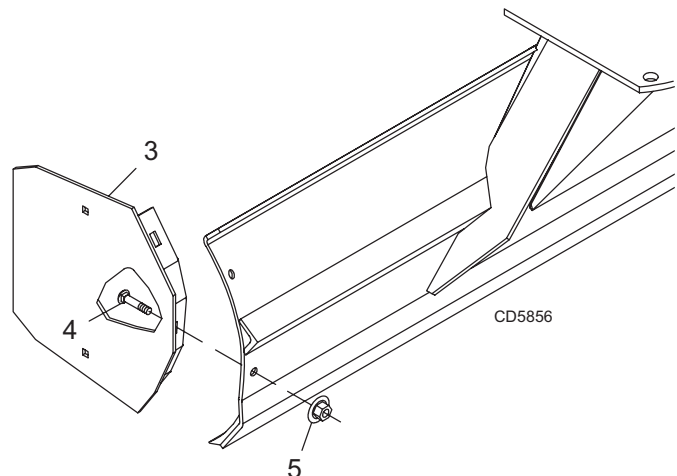


## END PLATE KIT 22658

REF	PART	QTY	DESCRIPTION
3	N/S		Plate, End
4	2615	*	Bolt, Carriage 1/2 NC x 1-1/4 GR5
5	11900		Nut, Flanged Lock 1/2 NC

N/S Not Serviced Separately

\* Standard Hardware, Obtain Locally



# 46 Parts

MAN0160 (Rev. 2/22/2006)

# BOLT TORQUE CHART

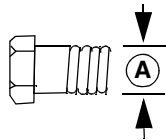
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

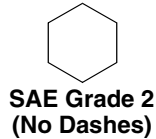
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware.

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 MAR99 & J1701M JUL96.



## SAE SERIES TORQUE CHART



SAE Bolt Head Identification

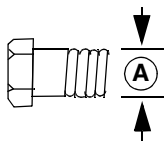


SAE Grade 5  
(3 Radial Dashes)

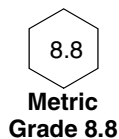


SAE Grade 8  
(6 Radial Dashes)

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



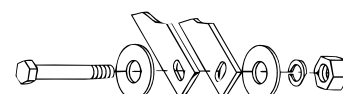
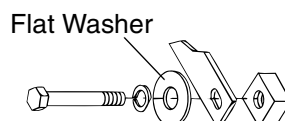
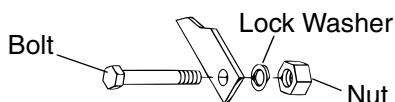
Metric Bolt Head Identification



10.9  
Metric  
Grade 10.9

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

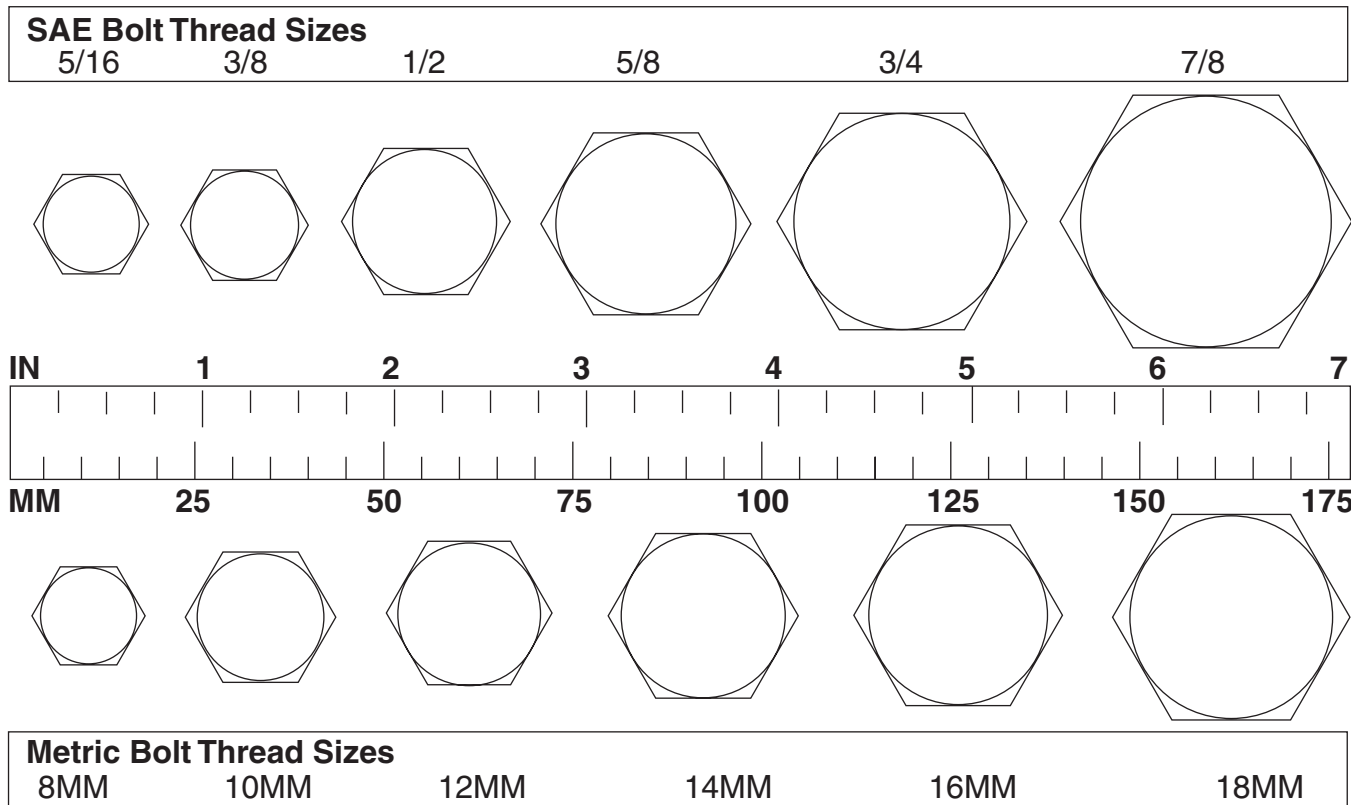
### Typical Washer Installations



8/9/00

# BOLT SIZE CHART

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



## ABBREVIATIONS

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 and blade spindles are listed below:

Model No.	Part Warranted	Duration
PHD25, PHD35, PHD65, PHD95, 1260, 2162, 3240, BB48, BB60, BB72, BB84, BB600, BB720, BB840, BB6000, BB7200, BB8400, BW180-2, BW1800, 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.
RDC54, RD60, RD72	Gearbox components	1 year from the date of delivery to the original purchaser if used in rental or commercial applications.
RM550-2, RM660-2, RM990-3, PRD6000, PRD7200, PRD8400	Blade spindles	3 years from the date of delivery 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 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 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 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:

### Woods Equipment Company

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Oregon, Illinois 61061

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## 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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