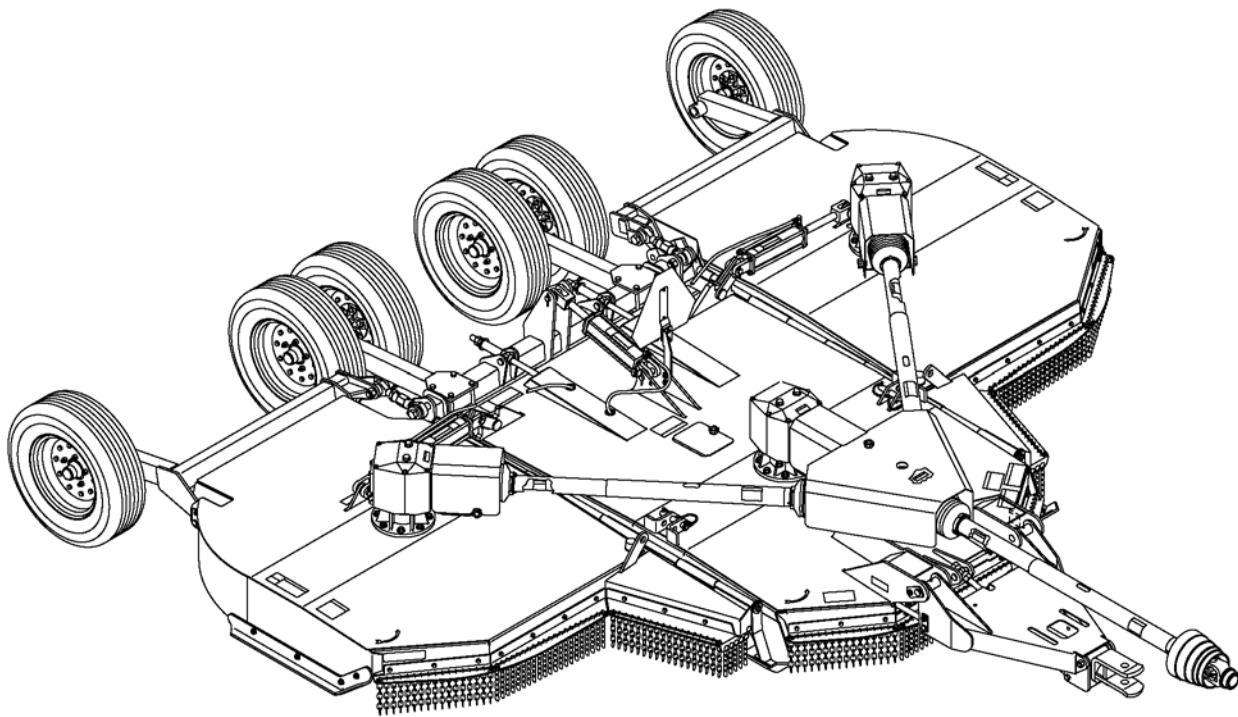


WOODS BATWING®

**BW1800, BW1800Q
BW1260, BW1260Q**



MAN0500
(Rev. 11/13/2012)

WOODS®

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 online Product Registration form at the Woods Dealer Website which certifies that all Dealer Check List items have been completed. Dealers can register all Woods product at dealer.WoodsEquipment.com under Product Registration.

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 Safety Decal 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 physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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



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



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

**IMPORTANT
or NOTICE**

Is used to address practices not related to physical injury.

NOTE Indicates helpful information.

WOODS[®]
Woods Equipment Company

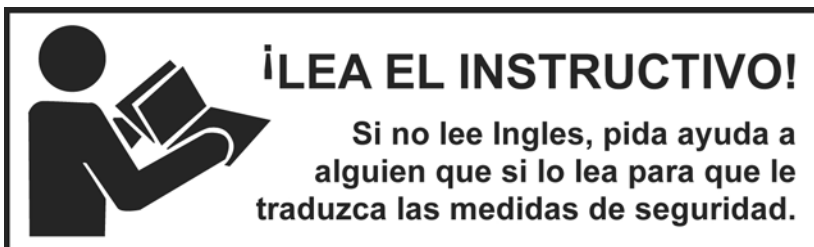
ALITEC[™]
BMP[®]
CENTRAL FABRICATORS[®]
GANNON[®]
GILL[®]
WAIN-ROY[®]
WOODS[®]

2 Introduction

Gen'l (Rev. 12/5/2011)

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**Ce manuel fait partie de la machine. Conserver le
manuel avec la machine lorsqu'elle est vendue.**

SPECIFICATIONS

	BW1800 / BW1800Q	BW1260 / BW1260Q
Cutting Height (Varies with tire selection)	2" - 15"	2" - 15"
Cutting Width	180" (15')	126" (10.5')
Overall Width	189"	137"
Transport Width	96"	91"
Tractor HP	65 - 250	65 - 250
Blade Spindle	3	2
Blade Overlap	6"	6"
Number of Blades	6	4
Blade Rotation	Left Spindle: CW; Right Spindle & Center: CCW	
Input Driveline	Cat 5 Heavy	Cat 5 Heavy
CV	Cat 6	Cat 6
Side Frame Thickness	1/4"	1/4"
Weight (approximate lbs.)	5288	5280
Wheel Size	15" Rims (BW1800/BW1800Q Only) or 21" OD Solid Tires, Airplane	
Torsion Protection	Slip Clutch	Slip Clutch

	BW1800	BW1800Q
	BW1260	BW1260Q
Tractor PTO rpm	540	1000
Blade Speed (Feet per minute)	16,500	17,000

GENERAL INFORMATION

WARNING

■ **Some illustrations in this manual show the equipment with safety shields removed to provide a better view. This equipment should never be operated with any necessary safety shielding removed.**

The purpose of this manual is to assist you in operating and maintaining your cutter. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive field experience and engineering data. Some information may be general in nature due to unknown and varying

operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

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

Throughout this manual, references are made to right and left directions. These are determined by standing behind the equipment facing the direction of forward travel. Blade rotation is clockwise (left wing) and counterclockwise (right wing and center section) as viewed from the top of the cutter.

BE SAFE!

BE ALERT!

BE ALIVE!

BE TRAINED

Before Operating Mowers!



ASSOCIATION OF
EQUIPMENT
MANUFACTURERS

*Safety Training
Does Make a Difference.*

Free Mower Safety Video

Fill out and return the order form and we will send you a FREE VHS or DVD video outlining ***Industrial and Agricultural Mower Safety Practices***. The 22 minute video, developed in cooperation with AEM (Association of Equipment Manufacturers), reinforces the proper procedures to follow while operating your mowing equipment. The video does not replace the information contained in the Operator's Manual, so please review this manual thoroughly before operating your new mowing equipment.

Also, available from the Association of Equipment Manufacturers:

A large variety of training materials (ideal for groups) are available for a nominal charge from AEM. Following is a partial list:

- **Training Package for Rotary Mowers/Cutters-English**
Contains: DVD & VHS (English)
 Guidebook for Rotary Mowers/Cutters (English)
 AEM Industrial/Agricultural Mower Safety Manual (English)
 AEM Agricultural Tractor Safety Manual (English)
- **Training Package for Rotary Mowers/Cutters-English/Spanish**
Contains: DVD & VHS (English/Spanish)
 Guidebook for Rotary Mowers/Cutters (English/Spanish)
 AEM Industrial/Agricultural Mower Safety Manual (English/Spanish)
 AEM Agricultural Tractor Safety Manual (English/Spanish)

AEM training packages are available through:

AEM at: www.aem.org

or

Universal Lithographers, Inc.

Email: aem@ulilitho.com

800-369-2310 tel

866-541-1668 fax



Free Mower/Cutter Safety Video Order Form

- Please send me (Select one)
- VHS** Format - VHS01052 Safety Video
- DVD** Format - DVD01052 Safety Video

Name: _____ Phone: _____

Address: _____

Mower/Cutter Model: _____ Serial #: _____

Send to: ATTENTION: DEALER SERVICES
 WOODS EQUIPMENT COMPANY
 PO BOX 1000
 OREGON IL 61061-1000
 USA

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



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

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

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

INSTALLATION

■ **Hydraulics must be connected as instructed in this manual. Do not substitute parts, modify, or connect in any other way.**

TRAINING

■ **Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at www.WoodsEquipment.com, or in the United States and Canada call 1-800-319-6637.) 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. CON-**

TACT 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.**

■ **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.**

■ **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.**

■ **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.**

■ **Set tractor hydraulic relief valve at 2500 psi (170 bars) (17,000 kPa) to prevent injury and equipment damage due to hydraulic system failure.**

■ **Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.**

■ **Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.**

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

■ **Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.**

(Safety Rules continued on next page)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

■ **Make sure driveline guard tether chains are attached to the tractor and equipment as shown in the pamphlet that accompanies the driveline. Replace if damaged or broken. Check that driveline guards rotate freely on driveline before putting equipment into service.**

■ **Connect PTO driveline directly to power unit PTO shaft. Never use adapter sleeves or adapter shafts. Adapters can cause driveline failures due to incorrect spline or incorrect operating length and can result in personal injury or death.**

■ **Before starting power unit, check all equipment driveline guards for damage. Replace any damaged guards. Make sure all guards rotate freely on all drivelines. If guards do not rotate freely on drivelines, repair and replace bearings before putting equipment into service.**

■ **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 accumulated debris from this equipment, power unit, and engine to avoid fire hazard.**

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

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

■ **Do not put this equipment into service unless all side skids are properly installed and in good condition. Replace if damaged.**

■ **The offset model is unstable without adequate counterweight. Use counterweight box loaded with 1190 lbs (539.8 kg) of steel.**

■ **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, front tractor wheels could raise up resulting in loss of steering. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**

TRANSPORTATION

■ **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.

■ **Always raise unit and install transport locks before transporting. Leak down or failure of mechanical or hydraulic system can cause equipment to drop.**

■ **Always attach safety chain to tractor drawbar when transporting unit.**

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

■ **Never allow riders on power unit or attachment.**

■ **Do not operate PTO during transport.**

■ **Do not operate or transport on steep slopes.**

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

■ **The maximum transport speed for towed and semi-mounted machines is 20 mph (32 km/h). Regardless of the maximum speed capability of the towing tractor, do not exceed the implement’s maximum transport speed. Doing so could result in:**

- Loss of control of the implement and tractor
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement or its components.

■ **Use additional caution and reduce speed when under adverse surface conditions, turning, or on inclines.**

■ **Never tow this implement with a motor vehicle.**

OPERATION

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

■ **Never walk, stand, or place yourself or others under a raised wing or in the path of a lowering wing. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause wings to drop unexpectedly and cause severe injury or death.**

■ **Full chain or rubber shielding must be installed when operating in populated areas or other areas where thrown objects could injure people or damage property.**

- If this machine is not equipped with full chain or rubber shielding, operation must be stopped when anyone comes within 300 feet (92 m).
- This shielding is designed to reduce the risk of thrown objects. The mower deck and protec-

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



tive devices cannot prevent all objects from escaping the blade enclosure in every mowing condition. It is possible for objects to ricochet and escape, traveling as much as 300 feet (92 m).

- Never direct discharge toward people, animals, or property.
- Do not operate or transport equipment while under the influence of alcohol or drugs.
- Operate only in daylight or good artificial light.
- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- 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 system 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.
- Operate tractor PTO at 540 RPM (1000 RPM on Q Series cutters). Do not exceed.
- Raise or lower wings slowly to prevent personal injury or damage to cutter.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Do not operate or transport on steep slopes.
- Do not stop, start, or change directions suddenly on slopes.
- 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.
- Continuous operation while the clutch is slipping could cause heat build-up resulting in fire. Adjust slip clutch pressure by tightening springs to

the dimension shown in the “Owner Service” section. If clutch is set to minimum spring length, replace the friction disks as shown.

- On pull-type or semi-mounted units with optional hydraulic cutting height adjustment, use a single-acting cylinder with a maximum extended length of 28-1/4" (718 mm) from attaching point center to center.

MAINTENANCE

- Before servicing, adjusting, repairing or unplugging, stop tractor engine, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop.
- 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, disconnect drive-line from tractor, lower wings to the ground, raise cutter, and engage transport lock-up in the locked position. Attach parking jack and lower to the ground. Securely block all four corners of the center section and each wing with jackstands. Blocking up prevents the cutter from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.
- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.
- To prevent contamination during maintenance and storage, clean and then cover hose ends, fittings, and hydraulic ports with tape.
- Do not allow bystanders in the area when operating, attaching, removing, assembling, or servicing equipment.

(Safety Rules continued on next page)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

■ Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements or have work done by a qualified dealer.

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

■ Make certain all movement of equipment components has stopped before approaching for service.

■ Frequently check blades. They should be sharp, free of nicks and cracks, and securely fastened.

■ Do not handle blades with bare hands. Careless or improper handling may result in serious injury.

■ Your dealer can supply genuine replacement blades. Substitute blades may not meet original equipment specifications and may be dangerous.

■ Tighten all bolts, nuts, and screws to torque chart specifications. Check that all cotter pins are installed securely to ensure equipment is in a safe condition before putting unit into service.

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

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

■ Never perform service or maintenance with engine running.

■ Do not disconnect hydraulic lines until machine is securely blocked or placed in lowest position and system pressure is released by operating valve levers.

■ Service and maintenance work not covered in OWNER SERVICE must be done by a qualified dealership. Special skills, tools, and safety procedures may be required. Failure to follow these instructions can result in serious injury or death.

■ Explosive separation of tire and rim parts can cause serious injury or death. Release all air pressure before loosening bolts on wheel.

STORAGE

■ Before disconnecting and storing, follow these instructions:

- Store on level, solid ground.
- Disconnect driveline and secure up off the ground.
- Lower wings to ground.
- Raise cutter center section and pin transport bar in raised position.
- Attach parking jack and raise tongue weight off tractor drawbar.
- Place wedge blocks at front and rear of wheels on center section and each wing to prevent wheel rotation.
- Securely block all four corners of center section and each wing with jackstands.
- Remove hydraulic hoses after tractor is turned off and all system pressure is released by operating valve levers several times.
- Remove safety tow chain.
- Remove retainer pin and high strength drawbar pin.

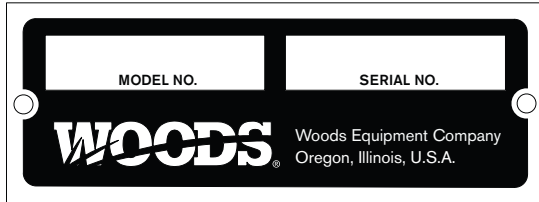
■ Keep children and bystanders away from storage area.



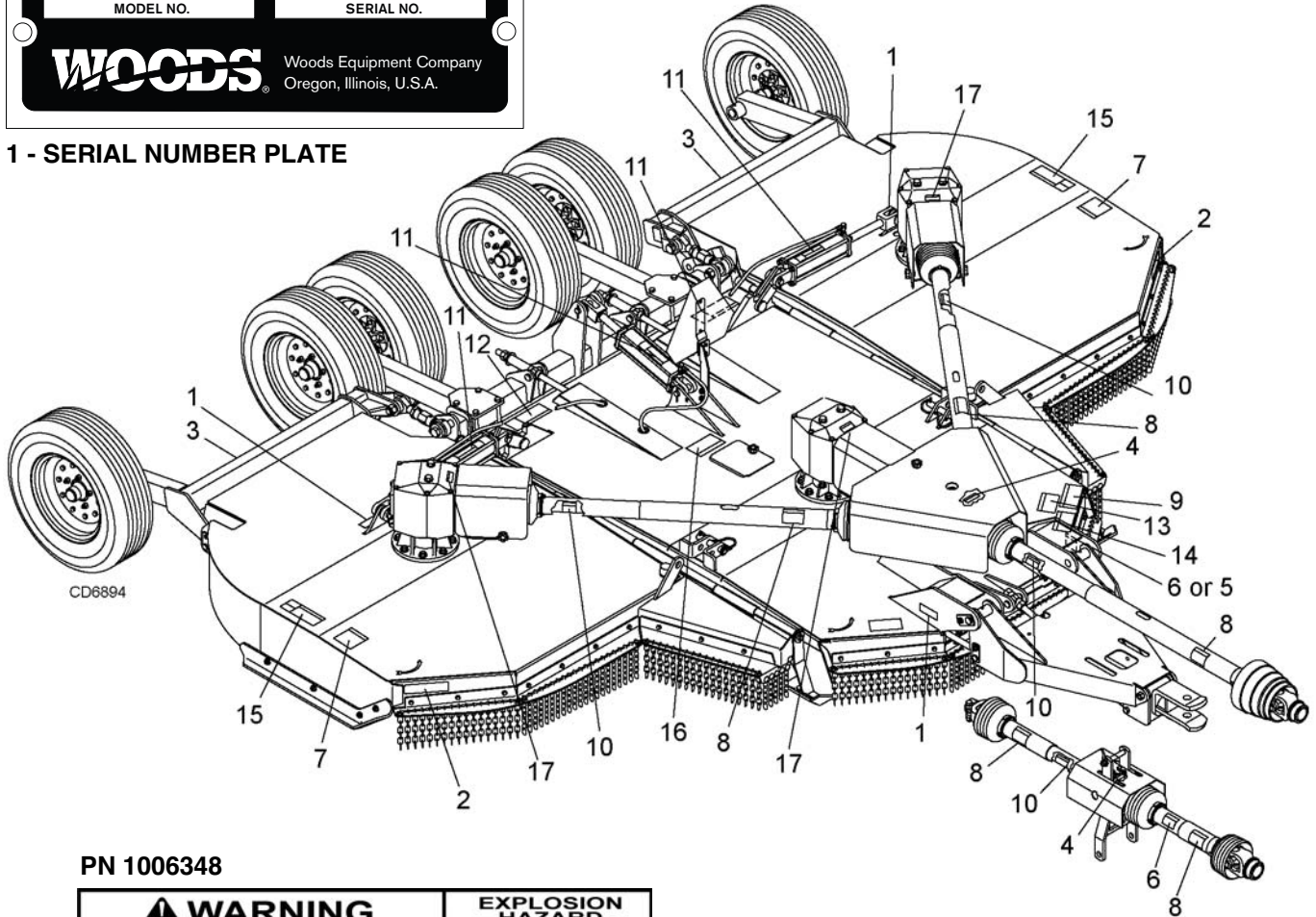


SAFETY & INSTRUCTIONAL DECALS

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



1 - SERIAL NUMBER PLATE



PN 1006348

WARNING	EXPLOSION HAZARD
RELEASE ALL AIR PRESSURE BEFORE LOOSENING BOLTS. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY. MAX. SPEED: 20 MPH, MAX. WEIGHT: 4000 LBS., MAX AIR PRESSURE: 40 PSI	

BE CAREFUL!

Use a clean, damp cloth to clean safety decals.

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

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

2 - FRONT AMBER REFLECTOR (PN 1002940)

3 - REAR RED REFLECTOR (PN 57123)

4 - PN 18869

DANGER
SHIELD MISSING
DO NOT OPERATE - PUT SHIELD ON

18869-B

17 - PN 1004114

DANGER
If shaft connection is visible, shield is missing. Replace shield before operating equipment.

1004114

SAFETY & INSTRUCTIONAL DECALS



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Replace Immediately If Damaged!

WARNING

DO NOT EXCEED PTO SPEED OF
1000 RPM

PTO speeds higher than 1000 RPM can cause equipment failure and personal injury.

15922-C

5 - PN 15922

OR

WARNING

DO NOT EXCEED PTO SPEED OF
540 RPM

PTO speeds higher than 540 RPM can cause equipment failure and personal injury.

18866-D

6 - PN 18866

8 - PN 18864

DANGER

ROTATING DRIVELINE CONTACT CAN CAUSE DEATH

KEEP AWAY!

DO NOT OPERATE WITHOUT -

- All driveline guards, tractor and equipment shields in place
- Drivelines securely attached at both ends
- Driveline guards that turn freely on driveline

18864-C

7 - PN 15503

DANGER

ROTATING BLADES AND THROWN OBJECTS

- Do not put hands or feet under or into mower when engine is running.
- Before mowing, clear area of objects that may be thrown by blade.
- Keep bystanders away.
- Keep guards in place and in good condition.

BLADE CONTACT OR THROWN OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH.

15503-C

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 EQUIPMENT CAN DROP AND CRUSH.

- Before working underneath, follow all instructions and safety rules in operator's manual and securely block up all corners of equipment with jack stands.
- Securely blocking prevents equipment dropping from hydraulic leak-down, hydraulic system failures or mechanical component failures.

FALLING OFF OR FAILING TO BLOCK SECURELY CAN RESULT IN SERIOUS INJURY OR DEATH.

18865-C

9 - PN 18865

WARNING

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

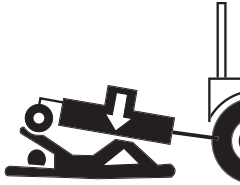
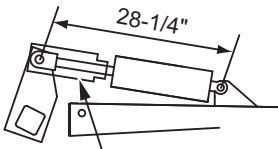
- Check for leaks with cardboard; never use hand.
- Before loosening fittings: lower load, release pressure, and be sure oil is cool.
- Consult physician immediately if skin penetration occurs.

19924-B

11 - PN 19924

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

12 - PN 1004991

 <p style="text-align: center; font-size: small;">1004991</p>	<h2 style="margin: 0;">⚠ WARNING</h2> <h3 style="margin: 5px 0 0 0;">RAISED CUTTER CAN DROP AND CRUSH</h3> <ul style="list-style-type: none"> ■ Cutters must be equipped with transport lock. ■ Before working underneath, transport lock must be in the raised position. All corners of cutter must be securely blocked with jack stands. ■ All transport components must be functional, kept in good condition, and stored on equipment. ■ Blocking up prevents cutter dropping from hydraulic leak down, hydraulic system failures, or mechanical component failures. <p style="text-align: center; font-weight: bold; font-size: small;">FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</p>	<p style="text-align: center; font-weight: bold; font-size: small;">TRANSPORT LOCK AND CYLINDER REQUIREMENTS</p> <p style="text-align: center; font-size: x-small;">SINGLE-ACTING FULL EXTENSION</p>  <p style="text-align: center; font-size: x-small;">TRANSPORT LOCK</p>
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10 - PN 33347

⚠ DANGER

GUARD MISSING. DO NOT OPERATE.
⚠ DANGER

GUARD MISSING. DO NOT OPERATE.
⚠ DANGER

13 - PN 1003751

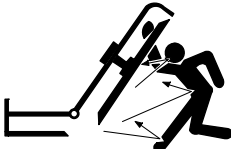

<h2 style="margin: 0;">⚠ WARNING</h2>

<h3 style="margin: 5px 0 0 0;">CRUSHING AND PINCHING HAZARD</h3> <ul style="list-style-type: none"> ■ 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. <p style="text-align: center; font-weight: bold; font-size: small;">FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.</p> <p style="text-align: right; font-size: x-small;">1003751-A</p>

14 - PN 18877

<h2 style="margin: 0;">⚠ WARNING</h2>
<h3 style="margin: 5px 0 0 0;">TO AVOID SERIOUS INJURY OR DEATH:</h3> <ul style="list-style-type: none"> ■ Read Operator's Manual (available from dealer) and follow all safety precautions. ■ Keep all shields in place and in good condition. ■ Operate mower from tractor seat only. ■ Lower mower, stop engine and remove key before dismounting tractor. ■ Allow no children or untrained persons to operate equipment. ■ Do not transport towed or semi-mounted units over 20 mph. <p style="text-align: center; font-weight: bold; font-size: small;">FAILURE TO OPERATE SAFELY CAN RESULT IN INJURY OR DEATH.</p> <p style="text-align: right; font-size: x-small;">18877-C</p>

15 - PN 18964

	<h2 style="margin: 0;">⚠ WARNING</h2>
	<p style="font-weight: bold; font-size: small;">RAISED WING EXPOSES BLADE AND INCREASES THROWN OBJECT HAZARDS.</p> <ul style="list-style-type: none"> ■ Only raise for transport. Stop cutter and lock wing(s) up. <p style="font-weight: bold; font-size: small;">RAISED WING CAN FALL AND CRUSH.</p> <ul style="list-style-type: none"> ■ Keep away. ■ Lock up with wing transport bars. ■ Lower wing(s) after transport and for storage. <p style="font-weight: bold; font-size: small;">FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</p> <p style="text-align: right; font-size: x-small;">18964-A</p>

16 - PN 15502

<h2 style="margin: 0;">⚠ WARNING</h2>
<h3 style="margin: 5px 0 0 0;">ROTATING COMPONENTS</h3> <p style="font-weight: bold; font-size: small;">Do not operate without cover in place. Look and listen for rotation. Do not open cover until all components have stopped.</p> <p style="font-weight: bold; font-size: small;">CONTACT WITH ROTATING PARTS CAN CAUSE SERIOUS INJURY.</p> <p style="text-align: right; font-size: x-small;">15502-B</p>

OPERATION

The designed and tested safety of this machine depends on it being operated within the limitations as explained in this manual. Be familiar with and follow all safety rules in the manual, on the cutter and on the tractor.

The safe operation of this cutter is the responsibility of the operator, who must be properly trained. The operator should be familiar with the equipment and all safety practices before starting operation. Read the safety information on pages 7 through 13.

Recommended tractor ground speed for most conditions is from 1 to 6 mph.

Always operate tractor PTO at 540 rpm on BW1800 and BW1260 units; operate at 1,000 rpm on BW1800Q and BW1260Q units.

DANGER

■ Full chain or rubber shielding must be installed when operating in populated areas or other areas where thrown objects could injure people or damage property.

- If this machine is not equipped with full chain or rubber shielding, operation must be stopped when anyone comes within 300 feet (92 m).
- This shielding is designed to reduce the risk of thrown objects. The mower deck and protective devices cannot prevent all objects from escaping the blade enclosure in every mowing condition. It is possible for objects to ricochet and escape, traveling as much as 300 feet (92 m).

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.

■ Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.

CAUTION

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

■ 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; and respirator or filter mask where appropriate.

CONNECT CUTTER TO TRACTOR

NOTICE

■ For tractors with a 1-3/8" diameter PTO shaft, the horizontal distance from the end of the tractor PTO shaft to the center of drawbar pin should be 14" for the 540 rpm cutter and 16" for the 1000 rpm cutter. Tractors with 1-3/4" 20-spline PTO shaft should be set to 20". This will minimize joint knock and damage to drive components.

1. Check tongue clevis to make sure it is adjusted to match your tractor PTO speed. See Figure 28, page 37.
2. Attach cutter using a 1-1/8" clevis pin (1) and clip.
3. Attach safety tow chain (2) to drawbar support. Leave enough slack for turning.
4. Connect cutter driveline to tractor PTO shaft, making sure the spring-activated lock pin slides freely and is seated in tractor PTO splined groove.
5. Attach driveline shield tether chain to tractor drawbar to prevent rotation.

NOTE: CV driveline does not require a tether chain.

6. Remove parking jack (3) from the tongue and attach it to the storage post on the front of the left wing.

NOTE: Equal Angle Drive Only: With cutting height established, adjust the 3-joint H-frame bearing height so that the front driveline is parallel to the ground.

7. Adjust nuts (4) so tongue clevis (A) is parallel with the tractor drawbar.
8. Place driveline in storage position on the hose holder (5) when not in use.

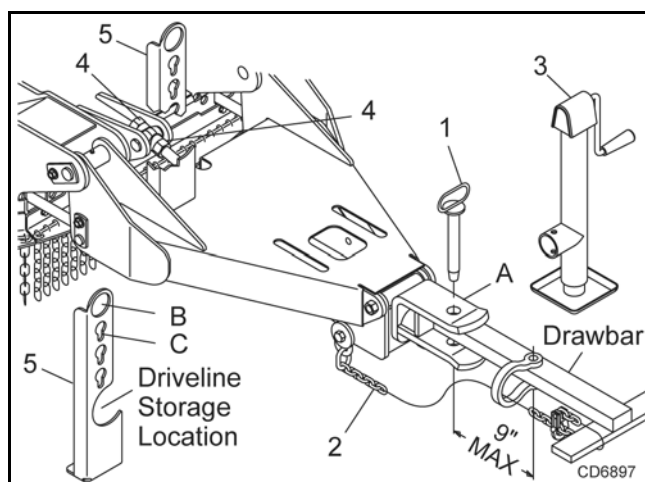


Figure 1. Tongue to Tractor Drawbar Connection

Hydraulic Connection

1. Inspect hydraulic hoses to ensure they are in good condition.
2. Clean the fittings before connecting them to the tractor hydraulic ports.
3. Route the hose through the hose holder opening (B, Figure 1), be sure the hose can slide freely in the holder. Do not allow hose slack to drag on the ground or become caught on tractor protrusions.
4. Attach the hydraulic hose to the tractor.
5. From the operator position, start tractor and raise and lower deck several times to purge trapped air from the hydraulic cylinder.
6. Store hose quick couplers in openings (C, Figure 1) on hose holder (5) when hoses are not in use.

Interference Check

1. Be sure that tractor 3-point lift links do not interfere with hydraulic hoses, cutter driveline, or cutter frame.
2. Check for straight-ahead operation and at full turning angles. If there is any interference, remove the lower lift links.
3. Contact between tractor lift links and cutter parts can cause damage, especially when turning.

CV Driveline Turning Limits

NOTICE

■ **You must not exceed a turning angle of 80 degrees at the head of the Constant Velocity driveline or damage will occur.**

1. To check for potential excessive turn angle, disconnect the driveline from tractor.
2. Start engine and turn as far right or left as possible.
3. Shut engine off and try to connect CV driveline to tractor. If it cannot be connected, the turn angle is too severe.
4. Restart engine and straighten angle slightly, shut off engine and try to connect CV driveline to tractor.
5. Repeat the process until the driveline can be connected. The point at which the driveline can be connected is the maximum turn that should be made.

Cutting Height Adjustment

WARNING

■ **On pull-type or semi-mounted units with optional hydraulic cutting height adjustment, use a**

single-acting cylinder with a maximum extended length of 28-1/4" (718 mm) from attaching point center to center.

Cutting height range is 2" to 15". A hydraulic cylinder is available for cutting height adjustment. When selecting a cutting height, you should consider the area of operation. If the ground is rolling and has mounds the blades could contact, set the cutting height accordingly. The cutting height is approximately the same height as the top of the center skid shoe (C, Figure 2).

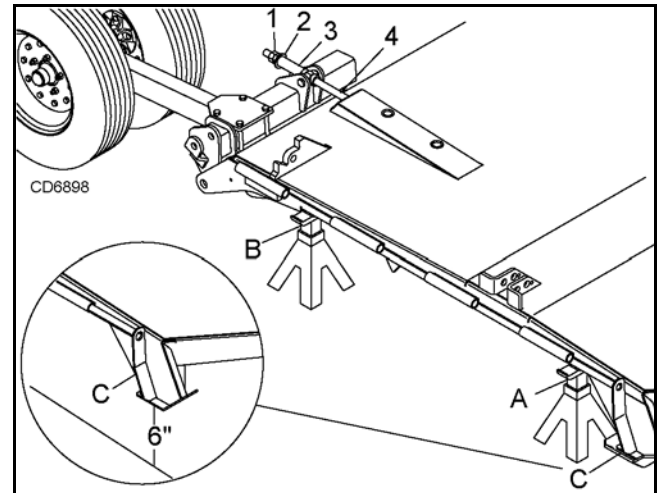


Figure 2. Cutting Height Adjustment

Adjust Cutting Height (Normal Mowing)

1. Position the cutter on a hard level surface and select an approximate cutting height, example 6".
2. Raise wings and lock them in the UP position.
3. Place jackstands (A & B) on each side of center section as show in Figure 2. Set all four jackstands to the same height.
4. Lower center section so it rests on all four jackstands and the rear wheels are on the ground.
5. Loosen the jam nuts (1) on both right and left attitude rods (4).
6. Tighten main nuts (2) hand tight against sleeves (3). Tighten jam nuts (1) against main nuts.
7. Raise the center section and remove the jackstands. The front of the cutter will be approximately 1/2" lower than the rear.

To adjust the cutter for shredding, follow the same procedures for normal mowing, but place a 1" to 1-1/2" block on top of the front jackstands (A). The front of the cutter will be approximately 1/2" to 1" higher than the rear.

To set the wing cutting height, loosen jam nut on the wing adjustment link (turnbuckle). Lengthening the link will raise the wing, shortening the link will lower the

wing. The rear edge of the wing should be parallel to the ground.

NOTE: Equal Angle Drive Only: With cutting height established, adjust the 3-joint H-frame bearing height so that the front driveline is parallel to the ground.

TRACTOR OPERATION

Use care when operating around tree limbs and other low objects. Avoid being knocked off tractor and being injured.

Only use a tractor with a Roll Over Protection Structure (ROPS) and seat belt. Securely fasten seat belt.

The cutter is operated with tractor controls. Engage the PTO at a low rpm to prevent excessive loads on the cutter drive system. Increase throttle to recommended PTO operating rpm.

Be sure operator is familiar with all controls and can stop tractor and cutter quickly in an emergency. The operator should give complete, undivided attention to operating tractor and cutter.

CUTTER OPERATION

When beginning operation of the cutter, make sure that all persons are in a safe location.

Power for operating the cutter is supplied by the tractor PTO. Operate PTO at 540 (1000 rpm for "Q" models).

Know how to stop the tractor and cutter quickly in an emergency.

Engage PTO at a low engine, rpm to minimize stress on the drive system and gearbox.

With PTO engaged, raise PTO speed to 540 or 1000 rpm depending on model and maintain throughout cutting operation.

Gearbox protection is provided by a slip clutch with replacement fiber disc. The slip clutch is designed to slip when excessive torsional loads occur.

Move slowly into material. Adjust tractor ground speed to provide a clean cut without lugging the tractor engine.

Use a slow ground speed for better shredding.

Proper ground speed will depend on the terrain and the material's height, type, and density.

Normally, ground speed will range from 2 to 5 mph. Tall, dense material should be cut at a low speed; thin, medium-height material can be cut at a faster ground speed.

Always operate tractor PTO at proper rpm (540 or 1000 depending on model) to maintain blade speed and to produce a clean cut.

Under certain conditions tractor tires may roll down some grass and prevent cutting at the same height as the surrounding area. When this occurs, reduce your ground speed but maintain PTO at 540 or 1000 rpm. The lower ground speed will permit grass to rebound partially.

MOWING 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.**
- **Watch for hidden hazards on the terrain during operation.**

CAUTION

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

Maximum recommended ground speed for cutting or shredding is 6 miles per hour. Adjust tractor ground speed by using higher or lower gears to provide a clean cut without lugging tractor engine.

Tall material should be cut twice. Cut material higher the first pass. Cut at desired height at 90 degrees the second pass.

Remember, sharp blades produce cleaner cuts and use less power.

Before entering an area, analyze it to determine the best procedure. Consider the height and type of material to be cut and the terrain type (hilly, level or rough, etc.).

SHREDDING

The cutter may be used to shred various crops including green manure, straw, stubble, asparagus residue, corn stalks and similar crops in preparation for tilling. It may also be used to shred pruning in orchards, groves and vineyards.

Each shredding operation may require a different set-up. Start with front edge of cutter high. Adjust up or down as necessary with attitude rod. Experiment until you obtain the results you want.

When shredding attitude is set, check that the distance from the bottom rear edge of the wing to the ground matches the bottom edge of the rear center section to the ground. With the cutting height and attitude established, adjust the driveline carrier bearing in the H-frame to ensure the front driveline is parallel to the ground.

STORAGE

Follow these steps when storing your cutter:

1. Clean cutter before storing. See page 23 for cleaning instructions. Store on level, solid ground.
2. Disconnect driveline and secure up off the ground.
3. Lower wings to ground.
4. Raise cutter center section and pin transport bar in raised position.
5. Attach parking jack and raise tongue weight off tractor drawbar.
6. Place wedge blocks at front and rear of wheels on center section and each wing to prevent wheel rotation.
7. Securely block all four corners of center section and each wing with jackstands.
8. Remove hydraulic hoses after tractor is turned off and all system pressure is released by operating valve levers several times. Store hoses on hose holder.
9. Remove safety tow chain.
10. Remove retainer pin and high strength drawbar pin.
11. Keep children and bystanders away from storage area.

TRANSPORTING

⚠ WARNING

- 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.
- Always raise unit and install transport locks before transporting. Leak down or failure of mechanical or hydraulic system can cause equipment to drop.
- Always attach safety chain to tractor drawbar when transporting unit.
- Never exceed 20 mph (32.2 km/h) during transport.

⚠ WARNING

- Never allow riders on power unit or attachment.
- Do not operate PTO during transport.
- Do not operate or transport on steep slopes.
- Do not operate or transport equipment while under the influence of alcohol or drugs.

⚠ CAUTION

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

Lock-Up

Always transport with wings and center frame in the raised, locked position.

Wing Lock-Up

1. Raise wing to the UP position.
2. Remove lock-up pin from storage position.
3. Place lock-up pin in lock position and secure with safety pin.
4. Repeat steps 1 to 3 for opposite wing.
5. Lower cylinder against lock-up bars (Figure 3).



Figure 3. Transport Lock-Up, Left Wing

Center Section Lock-up

1. Raise cutter with hydraulic cylinder to maximum height.
2. Rotate transport lock into position over cylinder rod (Figure 4).

3. Lower cutter against transport lock.
4. To lower cutter for operation, extend hydraulic cylinder to raise cutter. Rotate transport lock back away from cylinder rod (Figure 5).
5. Lower cutter to desired cutting height.



Figure 4. Transport Lock In Transport Position

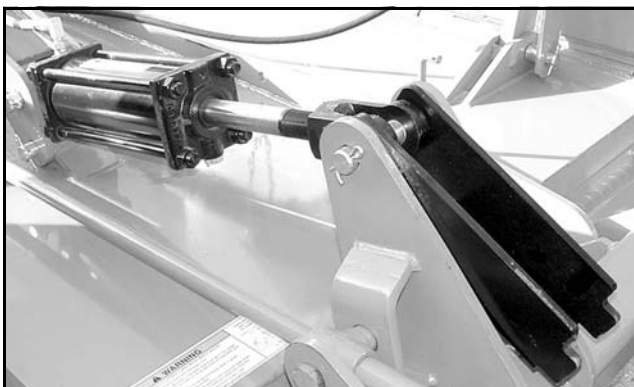


Figure 5. Transport Lock In Operation Position

PRE-OPERATION CHECK LIST

(OWNER'S RESPONSIBILITY)

- ___ Review and follow all safety rules and safety decal instructions on pages 7 through 13.
- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Check that equipment is properly and securely attached to tractor.
- ___ Make sure driveline spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.
- ___ Check all lubrication points and grease as instructed in lubrication information. Make sure the PTO slip joint is lubricated and that the gear-box fluid levels are correct.
- ___ Set tractor PTO at correct rpm for your equipment.
- ___ Lubricate all grease fitting locations. Make sure PTO shaft slip joint is lubricated.
- ___ 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.
- ___ Check that all hardware is properly installed and secured.
- ___ Check cutting height and attitude adjustment.
- ___ Raise and lower equipment to make sure air is purged from hydraulic cylinders and hoses. Raise and lower equipment to make sure air is purged from hydraulic cylinders and hoses.
- ___ Check that blades are sharp and secure and cutting edge is positioned to lead in a counterclockwise rotation for center section and right wing. For left wing cutting edge should be positioned to lead in a clockwise rotation.
- ___ Make sure tractor ROPS or ROPS cab and seat belt are in good condition. Keep seat belt securely fastened during operation.
- ___ Check that shields and guards are properly installed and in good condition. Replace if damaged.
- ___ Before starting engine, operator must be in tractor seat with seat belt fastened. Place transmission in neutral or park, engage brake and disengage tractor PTO.
- ___ Inspect area to be cut and remove stones, branches, or other hard objects that might be thrown and cause injury or damage.
- ___ Inspect rubber or chain shielding and replace any damaged rubber shield or missing links.
- ___ Make sure tractor 3-point lift links do not interfere with hydraulic hoses or driveline throughout full turning range.



OWNER SERVICE

The information in this section is written for operators who possess basic mechanical skills. If you need help, your dealer has trained service technicians available. For your protection, read and follow the safety information in this manual.

WARNING

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

■ Before working underneath, disconnect driveline from tractor, lower wings to ground, raise cutter, and pin transport bar in raised position. Attach parking jack and lower to ground. Securely block all four corners of center section and each wing with jack stands. Blocking up prevents the cutter from dropping due to hydraulic leak down, hydraulic system failure, or mechanical component failure.

■ Service and maintenance work not covered in **OWNER SERVICE** must be done by a qualified dealership. Special skills, tools, and safety procedures may be required. Failure to follow these instructions can result in serious injury or death.

■ Before servicing, adjusting, repairing or unplugging, stop tractor engine, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop.

■ Never perform service or maintenance with engine running.

CAUTION

■ If you do not understand any part of this manual and need assistance, see your dealer.

■ 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; and respirator or filter mask where appropriate.

BLOCKING METHOD

To minimize the potential hazards of working underneath the cutter, follow these procedures.

WARNING

■ Before performing any service or maintenance, lower equipment to ground or block securely, turn off engine, remove key, and disconnect driveline from tractor PTO.

■ Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements or have work done by a qualified dealer.

Do not position jackstands under wheels, axles, or wheel supports. Components can rotate and cause cutter to fall.

1. Jackstands with a load rating of 1000 lbs. or more are the only approved blocking device for this cutter. Install jackstands (shown by Xs in Figure 6) under the cutter before working underneath unit.
2. Consider the overall stability of the blocked unit. Just placing jackstands underneath will not ensure your safety.

The working surface must be level and solid to support the weight on the jackstands. Make sure jackstands are stable, both top and bottom. Make sure cutter is approximately level.

3. With full cutter weight lowered onto jackstands, test blocking stability before working underneath.
4. If cutter is attached to tractor when blocking, set the brakes, remove key, and block cutter before working underneath.
5. Securely block rear tractor wheels, in front and behind.

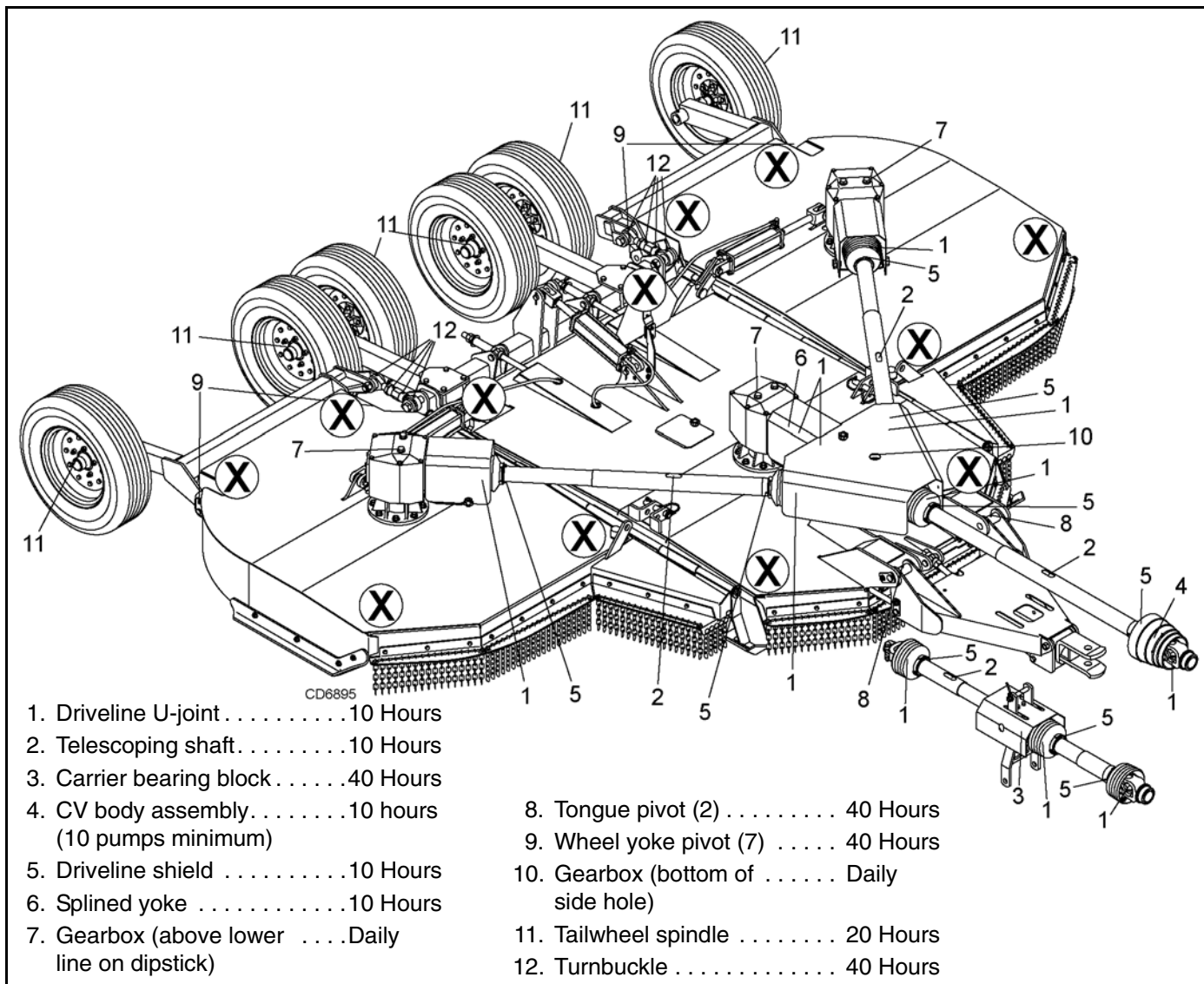


Figure 6. Jackstand Placement and Lubrication Points

LUBRICATION

Do not let excess grease collect on or around parts, particularly when operating in sandy areas.

See Figure 6 for lubrication points and frequency or lubrication based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication.

Use a lithium grease of #2 consistency with a MOLY (molybdenum disulfide) additive for all locations unless otherwise noted. Be sure to clean fittings thoroughly before attaching grease gun. One good pump of most guns is sufficient when the lubrication schedule is followed.

Gearbox Lubrication

For gearbox, use a high quality gear oil with a viscosity index of 80W or 90W and an API service rating of GL-4

or -5 in gearboxes. Fill gearbox until oil runs out the side plug on gearbox. Check gearbox daily for evidence of leakage, and contact your dealer if leakage occurs. Use sealant on vent plug threads during installation. Check vent plug periodically and clean if it does not relieve pressure.

Driveline Lubrication

1. Lubricate the driveline slip joint every eight operating hours. Failure to maintain proper lubrication could result in damage to U-joints, gearbox, and driveline.
2. Lower cutter to ground, disconnect driveline from tractor PTO shaft, and slide halves apart but do not disconnect from each other.
3. Apply a bead of grease completely around male half where it meets female half. Slide drive halves over each other several times to distribute grease.

Seasonal Lubrication

In addition to the daily recommended lubrication, a more extensive application is recommended seasonally or before a new unit is placed into service.

1. Fill CV double yokes with 20 pumps of grease with the joints in a straight line.
2. Articulate CV body to maximum angle several times to ensure full coverage of joints.
3. Place joints in the straight position and add 10 additional pumps of grease to both joints.
4. Wipe telescoping drive clean of all old grease and contaminants.
5. Add a thin layer of new grease over telescoping drive.

BLADE SERVICE

⚠ WARNING

■ 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.

Blade Removal

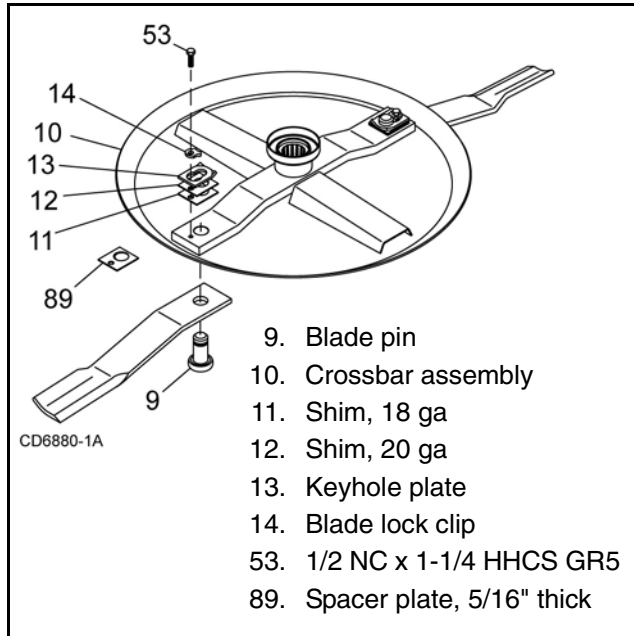


Figure 7. Blade Assembly

NOTICE

■ If blade pin is seized in crossbar and extreme force will be needed to remove it, support crossbar from below to prevent gearbox damage.

1. Disconnect driveline from tractor PTO.

2. Raise cutter and block securely (see Figure 6).
3. Open blade access cover and align crossbar assembly (10) with blade access hole in the cutter frame. Remove cap screw (53), blade pin lock clip (14), keyhole plate (13), and shims (11 & 12). Carefully drive blade pin (9) out of crossbar.

NOTE: During rough mowing conditions the blade pin shims may move and become caught in blade pin groove making the shims difficult to remove. A 5/16" thick space plate (89) and a longer blade pin (#32602) can be used to prevent this from occurring. Place 5/16" spacer directly on crossbar and shim as necessary when replacing blades.

4. Rotate crossbar and repeat for opposite blade.

Blade Installation

⚠ WARNING

■ Your dealer can supply genuine replacement blades. Substitute blades may not meet original equipment specifications and may be dangerous.

NOTICE

■ Crossbar rotation has clockwise rotation on left gearbox and counterclockwise rotation on the right and center gearboxes when looking down on cutter. Be sure to install blade cutting edge to lead in correct rotation.

NOTE: Always replace or sharpen both blades at the same time.

1. Inspect blade pin (9) for nicks or gouges, and if you find any replace the blade pin.
2. Insert blade pin through the blade. Blade should swivel on blade pin; if it doesn't, determine the cause and correct.
3. Align crossbar assembly (10) with blade access hole in cutter frame. Apply a liberal coating of Never-Seez[®] or equivalent to blade pin and crossbar hole. Make sure blade offset is down away from cutter.
4. Insert blade pin through blade. Push blade pin through crossbar.
5. Install shims (11 & 12) over blade pin.

NOTE: Only use enough shims to allow keyhole plate (13) to slide into blade pin groove. See NOTE above for 5/16" spacer plate installation.

6. Install blade clip (14) over keyhole plate and into blade pin groove.
7. Secure into position with cap screw (53). Torque cap screw to 85 lbs-ft.

8. Repeat steps for opposite side.

NOTE: Blade should be snug but should swivel on pin without having to exert excessive force. Blade should not move more than a 1/4 inch up or down at the tip. Keep any spacers not used in the installation as replacements or for future installation.

Blade Sharpening

NOTICE

■ When sharpening blades, grind the same amount on each blade to maintain balance. Replace blades in pairs. Unbalanced blades will cause excessive vibration, which can damage gearbox bearings. Vibration may also cause structural cracks to cutter.

1. Sharpen both blades at the same time to maintain balance. Follow original sharpening pattern.
2. Do not sharpen blade to a razor edge—leave at least a 1/16" blunt edge.
3. Do not sharpen back side of blade.

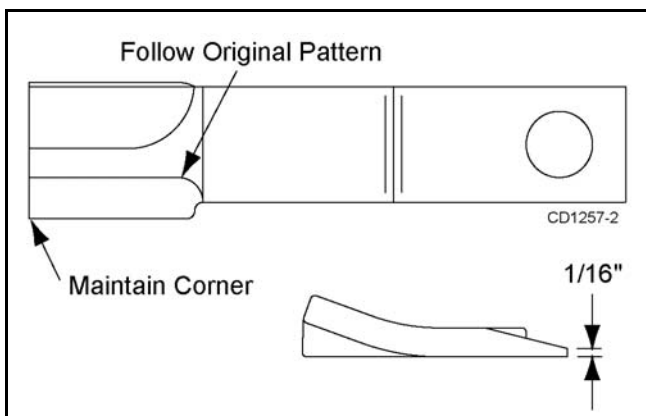


Figure 8. Blade Sharpening

SHIELD REPAIR

⚠ DANGER

■ Full chain or rubber shielding must be installed when operating in populated areas or other areas where thrown objects could injure people or damage property.

- If this machine is not equipped with full chain or rubber shielding, operation must be stopped when anyone comes within 300 feet (92 m).
- This shielding is designed to reduce the risk of thrown objects. The mower deck and protec-

tive devices cannot prevent all objects from escaping the blade enclosure in every mowing condition. It is possible for objects to ricochet and escape, traveling as much as 300 feet (92 m).

Repairing Rubber Shielding

1. Inspect belting and rear bands each day of operation.
2. Replace if bent, cracked, or broken.

Repairing Chain Shielding

Inspect chain shielding each day of operation and replace any broken or missing chains as required.

SLIP CLUTCH ADJUSTMENT

The slip clutch is designed to slip so that the gearbox and driveline are protected if the cutter strikes an obstruction.

A new slip clutch or one that has been in storage over the winter may seize. Before operating the cutter, make sure it will slip by performing the following operation:

1. Turn off tractor engine and remove key.
2. Tighten four nuts (12) to remove pressure from the clutch plates (2). Repeat for all three clutches.
3. Start tractor at low throttle and slowly engage PTO and allow clutches to slip for 5 seconds. Disengage PTO and turn off tractor engine.
4. If clutches slip freely, completely loosen nuts (12).
5. If clutch does not slip freely, disassemble and clean plates (4, 6, & 7), flange yoke (1), and clutch hub (3).
6. Reassemble clutch.
7. Tighten Belleville spring (5) with nuts (11) until it is against the thrust plate (4) of the clutch. Back off each of the four nuts (11) until gap between Belleville spring and thrust plate is 1/8" as shown in Figure 9.
8. If a clutch continues to slip when the spring is compressed to 1/8" gap, check friction discs (2) for excessive wear. Discs are 1/8" when new. Replace discs after 1/16" wear. Minimum disc thickness is 1/16".

NOTE: When storing cutter for long periods of time, relieve the pressure on the clutch discs by tightening the four nuts (12) on each clutch. Completely loosen nuts (12) to return to service.

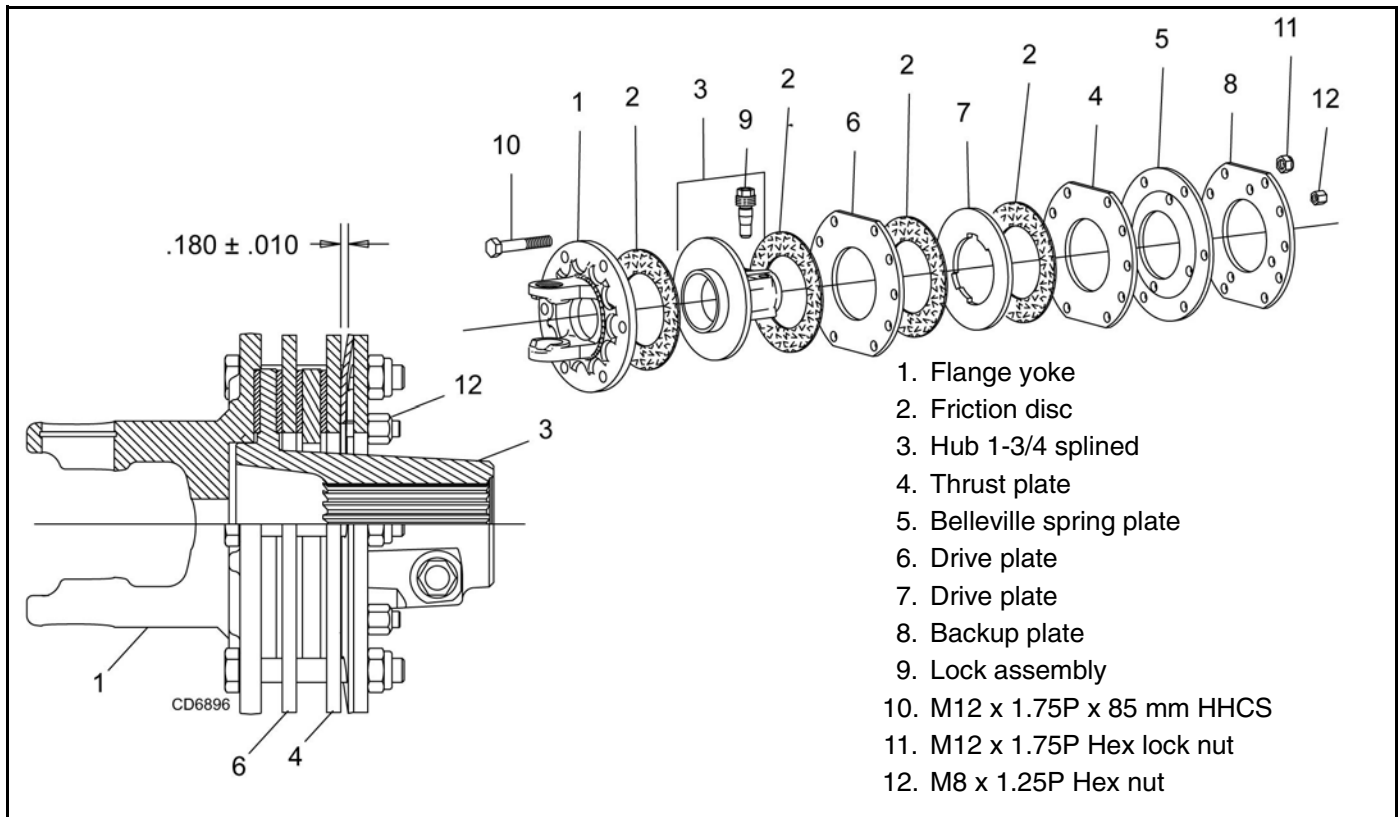


Figure 9. Slip Clutch Assembly

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.

SERVICING TIRES SAFELY

Used Aircraft Tires (Figure 10)



■ Explosive separation of tire and rim parts can cause serious injury or death. Release all air pressure before loosening bolts.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure and result in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and an extension hose long enough to allow you to stand to the side — not in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

Never remove split rim assembly hardware (A) with the tire inflated.

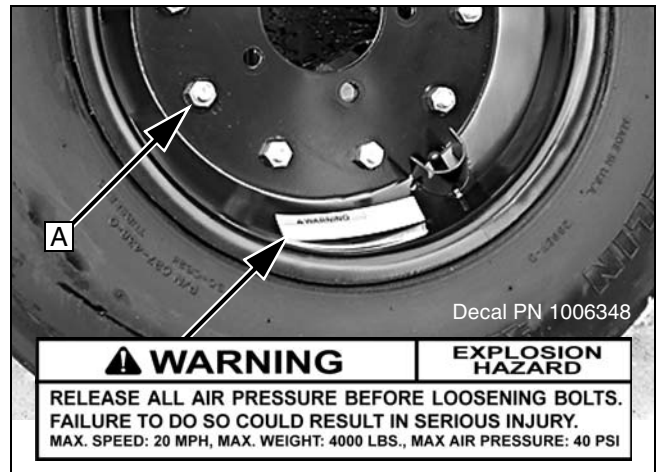


Figure 10. Split Rim Tire Servicing



TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Does not cut	<p>Dull blades</p> <p>Worn or broken blades</p> <p>Incorrect PTO speed</p> <p>Ground speed too fast</p> <p>Drive not functioning (blades do not turn when PTO is running)</p> <p>Gearbox malfunction</p> <p>Excessive clutch slippage</p> <p>Incorrect blade direction</p>	<p>Sharpen blades.</p> <p>Replace blades. (Replace in pairs only.)</p> <p>Set at rated PTO speed.</p> <p>Reduce ground speed.</p> <p>Check drive shaft connection. Check gearbox.</p> <p>Repair gearbox.</p> <p>Adjust clutch.</p> <p>Check to be sure blade edge is correct for direction of rotation.</p>
Streaks or ragged cut	<p>Broken or worn blades</p> <p>Attitude incorrect</p> <p>Ground speed too fast</p> <p>Excessive cutting height</p> <p>Excessive lush and tall vegetation</p>	<p>Replace or sharpen blades.</p> <p>Level machine.</p> <p>Reduce ground speed.</p> <p>Lower cutting height. (Note: Set height so blades do not frequently hit ground.)</p> <p>Recut at 90° to first pass.</p>
Excessive side skid wear	Running with skids continuously on ground	Raise cutting height or adjust.
Excessive clutch slippage	<p>Clutch out of adjustment</p> <p>Clutch discs worn; wear stops contacting opposite plate</p> <p>Blades hitting ground</p>	<p>Adjust clutch.</p> <p>Replace discs.</p> <p>Raise cutting height.</p>
Vibration	<p>Broken blade</p> <p>Bearing failure</p> <p>Hitch length incorrect</p> <p>Universal drive</p>	<p>Replace blades in pairs.</p> <p>Check gearbox shafts for side play.</p> <p>Reset hitch length.</p> <p>Adjust pedestal bearing height to be parallel to ground.</p>
Blades hitting deck	Bent blades or crossbar	Replace bent blades or crossbar.
Unit will not raise	Low oil	Add hydraulic oil.
Unit doesn't cut level	<p>Wing section cuts lower than center</p> <p>Wing section cuts higher than center</p>	<p>Lengthen turnbuckle connecting center yoke to wing wheel yoke.</p> <p>Shorten turnbuckle connecting center yoke to wing wheel yoke.</p>

DEALER SERVICE

The information in this section is written for dealer service personnel. The repair described here requires special skills and tools. If your shop is not properly equipped or your mechanics are not properly trained in this type of repair, you may be time and money ahead to replace complete assemblies.

WARNING

■ 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.

CAUTION

■ 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.

GEARBOX MAINTENANCE

NOTE: Read this entire section before starting any repair. Many steps are dependent on each other.

1. Fill gearbox with SAE 80W or 90W gear lube. Proper oil level is between lowest ring and end of dipstick.

NOTE: Replacing gears, shafts, and housing may not be cost effective. Purchasing a complete gearbox may be more economical.

2. Inspect gearbox for leakage and bad bearings. Leakage is a very serious problem and must be corrected immediately.

NOTE: Bearing failure is indicated by excessive noise and side-to-side or end-play in gear shafts.

Seal Replacement

Recommended sealant for gearbox repair is Permatex® Aviation 3D Form-A-Gasket or equivalent.

Leakage can occur at the vertical or horizontal gaskets and shaft seals.

Leakage at the horizontal gasket or seal can be repaired without removing the gearbox from the cutter.

Seal Installation

NOTE: Proper seal installation is important. An improperly installed seal will leak.

1. Clean area in housing where seal outer diameter (OD) seats. Apply a thin coat of Permatex.
2. Inspect area of shaft where seal seats. Remove any burrs or nicks with an emery cloth.
3. Lubricate gear shaft and seal lips.
4. Place seal squarely on housing, spring-loaded lip toward housing. Select a piece of pipe or tubing with an OD that will sit on the outside edge of the seal but will clear the housing. Tubing with an OD that is too small will bow seal cage and ruin seal.
5. Carefully press seal into housing, avoiding distortion to the metal seal cage.

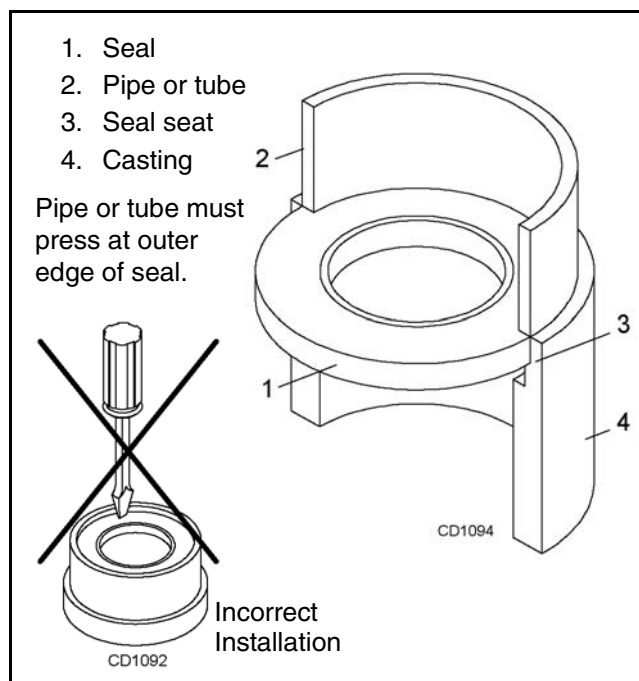


Figure 11. Seal Installation

Vertical Shaft Seal Replacement

Refer to Figure 13, page 29.

1. Disconnect and remove the driveline from the gearbox.
2. Remove dipstick breather assembly (30) and siphon gear lube from housing through this opening.
3. Remove crossbar (see page 31).
4. Remove retaining ring (33) and output oil seal (15). Replace output oil seal (15) with new seal. Install retaining ring (33).

NOTE: Distortion to seal cage or damage to seal lip will cause seal to leak.

5. Fill gearbox with SAE 80W or 90W gear lube to the center of the horizontal shaft.
6. Remove and replace any seal damaged in installation.

Horizontal Shaft Seal Replacement

Refer to Figure 13.

1. Disconnect and remove the driveline from the gearbox.
2. Remove dipstick breather assembly (30) and siphon gear lube from housing through this opening.
3. Remove input oil seal (6). Replace with new one.
4. Fill gearbox with SAE 80W or 90W gear lube to the center of the horizontal shaft.

Gearbox Cap Leak Repair

Refer to Figure 13.

1. Disconnect and remove the driveline from the gearbox.
2. Remove dipstick breather assembly (30) and siphon gear lube from housing through this opening.
3. Remove cap where leak is occurring (4, 21 or 26).
4. Clean mating surfaces with a gasket remover.
5. Replace gaskets (7, 8, 22, 23) as required to meet the following specifications:
 - End float should be less than 0.012".
 - Rotational torque should be less than 2.2 lbs-inch.
 - Gear backlash should be between 0.006" and 0.016".
6. Install cap (4, 21 or 26) using a gasket sealant.
7. Install cap screws (3 or 25) and torque to 29 lbs-ft.

8. Fill gearbox with SAE 80W or 90W gear lube to the center of the horizontal shaft.

SPLITTER GEARBOX REPAIR

Refer to Figure 12.

Splitter Gearbox Removal

1. Disconnect and remove all drivelines from gearbox.
2. Remove the four cap screws and lock washers that secure gearbox to cutter, and remove gearbox.

NOTE: Gearbox is heavy: do not attempt to move it without mechanical assistance.

Splitter Gearbox Disassembly

Refer to Figure 12.

Center Shaft

1. Remove plug from side of gearbox and pour out the gear oil.
2. Remove seal (6, to be replaced) from the front and rear of the center shaft (5).
3. Remove front cap (4) and gaskets (8, 9, 10) from the front and rear of the center shaft (5).
4. Support gearbox in a hand press and push on the rear of the center shaft.
5. Remove bearing cones (7), and gear (18) from center shaft (5).
6. Remove bearing cups (7) from housing and cap using a punch and hammer.

Side Shaft

7. Remove seal (12, to be replaced) from the output shaft (13).
8. Remove 8 cap screws (3) and side shaft assembly.
9. Remove cotter pin (21), bearing adjustment nut (20), and gear (19).
10. Support side shaft assembly in hand press. Press shaft (13) through the cap (11) from the threaded end of the shaft.
11. Repeat steps 10 through 12 for opposite side shaft.

Inspect Components

12. Inspect gears for broken teeth and wear. Some wear is normal and will show on the loaded side of the teeth. Forged gear surfaces are rough when new. Check that wear pattern is smooth.
13. Inspect shafts for grooves, nicks, or bumps in the areas where seals seat. Resurface any damage with emery cloth or replace shaft.
14. Inspect housing and caps for cracks or other damage.

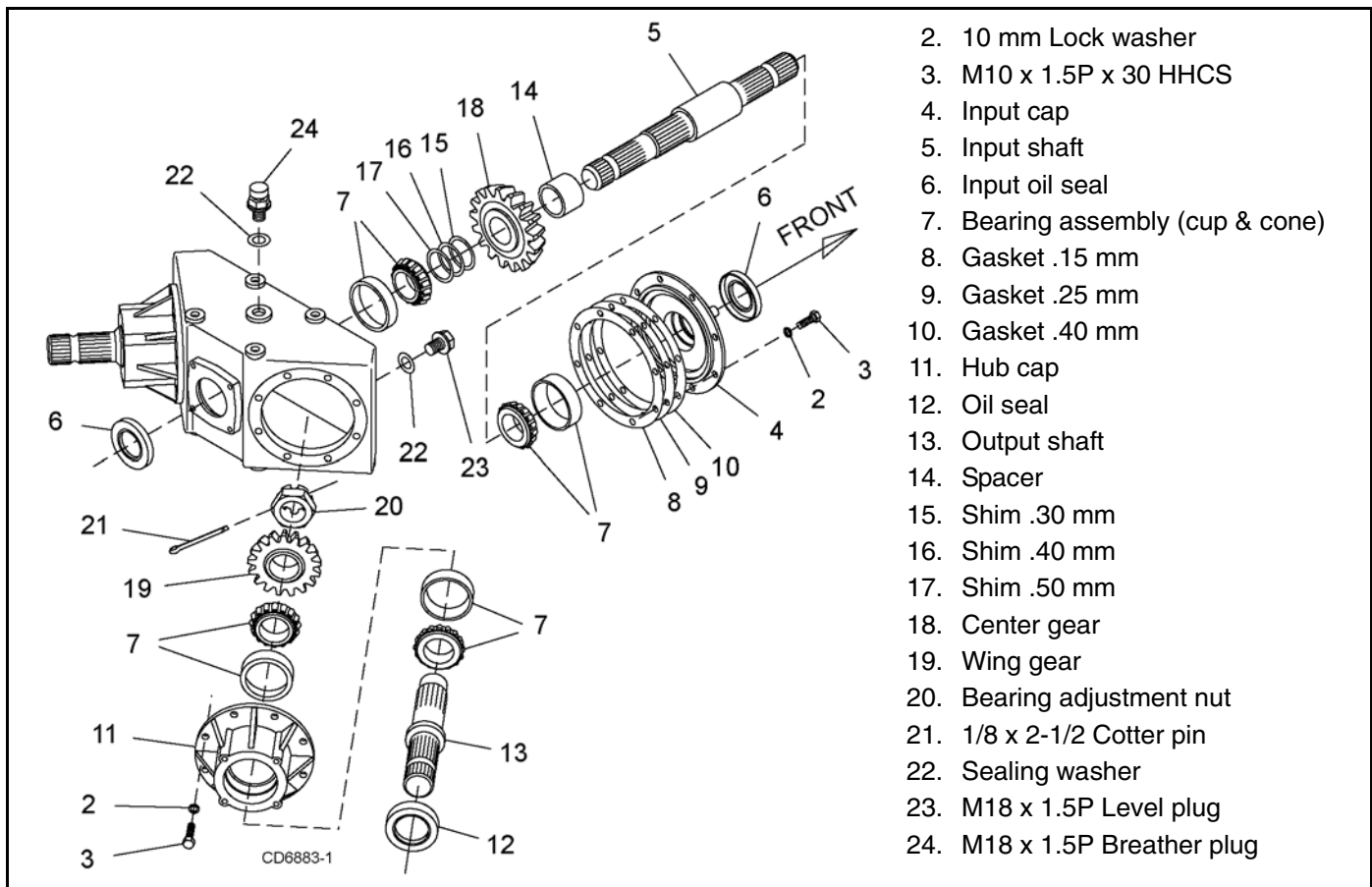


Figure 12. Splitter Gearbox Assembly

Splitter Gearbox Assembly

Refer to Figure 12.

1. Clean housing, pay specific attention to areas where gaskets are installed.
2. Wash housing and all components thoroughly.
3. Select a clean work area to assemble gearbox.
4. Replace all seals, bearings, and gaskets.
5. All parts must be clean and lightly oiled before assembly.

Side Shaft

6. Insert bearing cups (7) in hub cap(11) using a round tube of the same size diameter and a hand press.
7. Press bearing cone (7) on to output shaft (13), slide output shaft (13) through hub cap (11) and press bearing cone (7) on to output shaft (13).
8. Slide gear (19) over output shaft (13) and secure with nut (20) and cotter pin (21).
9. Check end play of shaft by moving it in and out. If end play is more than 0.012", tighten nut (20). Repeat process until end play is less than 0.012".

10. Check rotational torque. Torque should be less than 2.2 lbs-inch gear.
11. Place seal (12) over shaft and press into housing using a tube of the same diameter. Seal should be flush with housing when properly installed.
12. Repeat steps 6 through 10 for opposite side shaft.

Center Shaft

13. Insert bearing cups (7) in housing and front cap (4) using a round tube of the same size diameter and a hand press.
14. Press spacer (14), gear (18), shims (15, 16, 17) and bearing cones (7) on to input shaft (5).
15. Slide input shaft (5) through housing and install gaskets (8, 9, 10) and cap (4).
16. Check end play of shaft by moving it in and out. If end play is more than 0.012", remove a gasket (8, 9, or 10). Repeat process until end play is less than 0.012".
17. Check rotational torque. Torque should be less than 2.2 lbs-inch gear.
18. Check gear backlash, backlash should be between 0.006" and 0.016". Adjust the backlash by adding

or removing shims (15, 16, 17) from the input shaft (5).

- Place seal (6) over shaft and press into housing using a tube of the same diameter. Seal should be flush with housing when properly installed. Repeat process for opposite end shaft.

Splitter Gearbox Inspection

- Check gearbox for leaks by: plugging all holes except one, applying 4 psi of compressed air, and immersing gearbox in water. Verify gearbox does not leak.

NOTE: Excessive air pressure will damage seals.

- Remove gearbox from water and dry off.

- Remove upper plug on right side of housing. Add SAE 80W or 90W EP oil until it runs out side level hole. Replace plug.

- Install breather (24) in top cover.

Splitter Gearbox Installation

NOTE: Gearbox is heavy: do not attempt to move without mechanical assistance.

Use loctite when mounting gearbox. Set gearbox on cutter and fasten with bolts and nuts. Torque bolts to 170 lbs-ft.

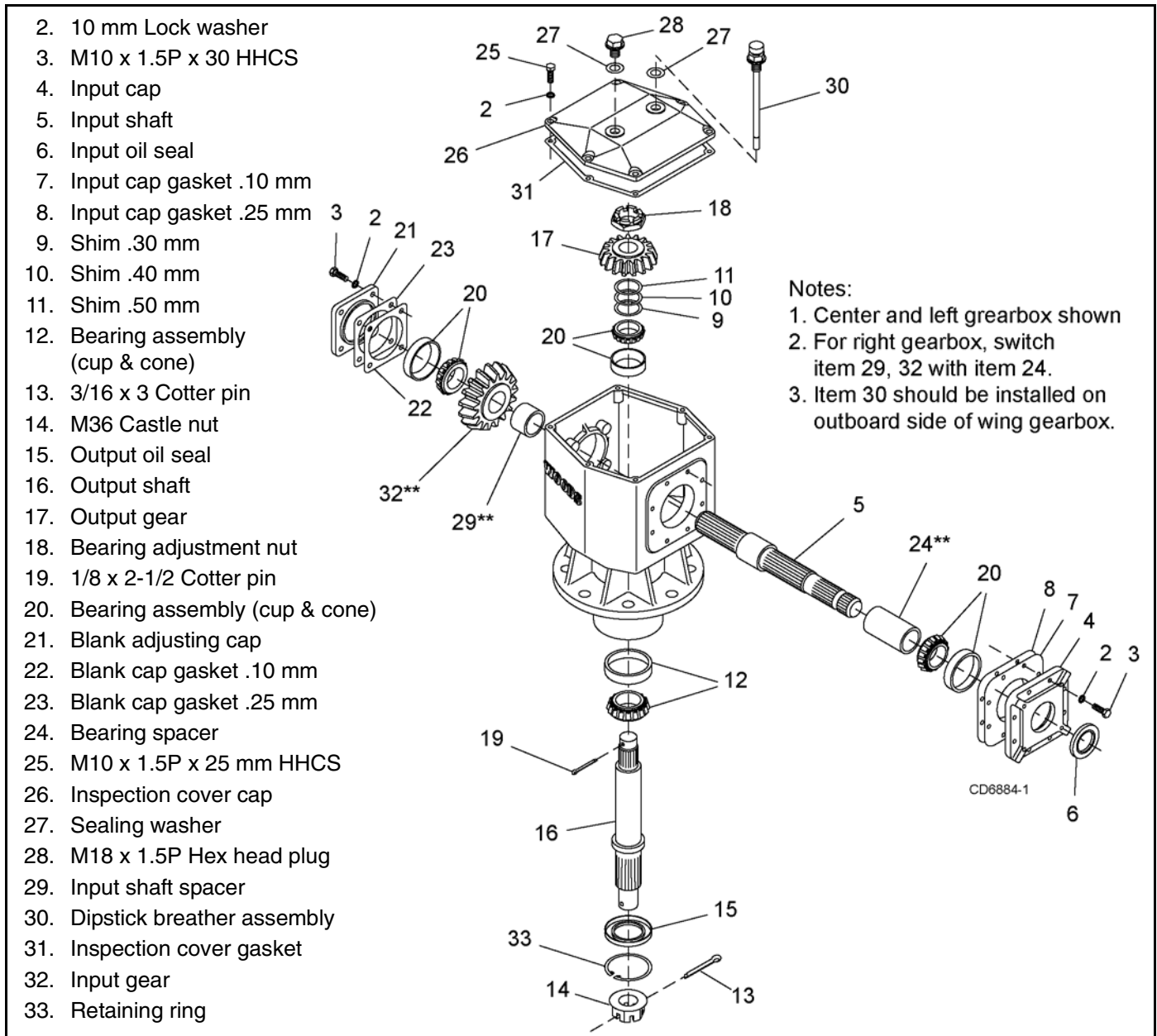


Figure 13. Gearbox

GEARBOX REPAIR

Gearbox Removal

NOTE: Gearbox is heavy: do not attempt to move without mechanical assistance.

1. Disconnect and remove the driveline from the gearbox that is to be removed.
2. Remove cotter pin and nut from vertical shaft and remove crossbar (see page 31).
3. Remove the eight bolts that attach gearbox to cutter and remove gearbox.

Gearbox Disassembly

Refer to Figure 13.

1. Remove six cap screws (25) and cover (26) from gearbox and pour out gear oil.
2. Remove caps (21 and 4).
3. Support gearbox in hand press and push on the gear end of the input shaft (5) to remove bearing (20).
4. Remove gear (32) from inside housing.
5. Remove bearing (20) by using a punch and hammer from outside of housing.
6. Support housing in vise in a horizontal position.
7. The castle nut (14), cotter pin (13), and hub were already removed with the stump jumper/crossbar. Remove the ring (33), and oil seal (15).
8. Remove cotter pin (19), nut (18) from output shaft (16).
9. Remove output shaft (16) by using a punch and hammer and tap on top to drive down. Remove gear (17) and shims (9, 10, 11) from inside housing.
10. Remove bottom bearing (12) by using a punch and hammer from the top, outside the housing.
11. Support housing upside down (top cover surface) and remove bearing (20) by using a punch and hammer from the bottom side of the housing.
12. Inspect gears for broken teeth and wear. Some wear is normal and will show on loaded side. Forged gear surfaces are rough when new. Check that the wear pattern is smooth.
13. Inspect vertical and horizontal shafts for grooves, nicks, or bumps in the areas where the seals seat. Resurface any damage with emery cloth.
14. Inspect housing and caps for cracks or other damage.

Gearbox Assembly

Refer to Figure 13.

1. Clean housing, paying specific attention to areas where gaskets will be installed.
2. Wash housing and all components thoroughly. Select a clean area for gearbox assembly. Replace all seals, bearings, and gaskets. All parts must be clean and lightly oiled before reassembling.
3. Insert both output bearings (12, 20) in the housing, using a round tube of the correct diameter and a hand press.
4. Slide output shaft (16) from the bottom through both bearings (12, 20) until it rests against bottom bearing (12).
5. Slide shims (9, 10, 11) over output shaft (16). Use the same thickness of shims that were removed as a starting point.
6. Place gear (17) onto output shaft (16) and secure with the nut (18) and cotter pin (19). The output shaft must have zero end play and rotational torque of 20 to 30 LBS-IN without the lower seal. Tighten nut (18) as needed.
7. Press bearing cup (20) into end of the housing closest to the gear, using a round tube of the correct diameter and a hand press. Install cap (4 or 21) and gaskets (7, 8 or 22, 23).
8. Place gear (32) and spacers (29, 24) through top of housing and align gear (32) and shaft (5) so that gear spline match the shaft spline.
9. While holding gear (32) in place, slide input shaft (5) through gear (32) and press onto bearing cone (20).
10. Press bearing (20) over input shaft (5).
11. Slide shims (7, 8 or 22, 23) over input shaft. Install cap (4 or 21).
12. Check input shaft end float by moving the input shaft (5) by hand. If end float is higher than 0.004", insert shim between housing and cap that is closest to the gear. Repeat until end float is less than 0.004". Check rotational torque by hand. The torque should be less than 2.2 lbs-inch.
13. Check that the gear backlash is .015/.025 at O.D. of gear. Adjust the backlash by adding or removing shims (9, 10, 11) from the output shaft (16).
14. Apply grease to lower seal lips (15) and press seal (15) over output shaft (16), using a tube of the correct diameter. Be sure not to damage the seal lip.
15. Press in housing so that seal is recessed. Install retaining ring (33).
16. Press in input oil seal (6), using tube of correct diameter. Be careful not to damage seal lip.

17. Place top cover (26) on top of housing and secure with six cap screws (25).
18. Check gearbox housing for leaks by plugging all holes except one. Apply 4 psi compressed air and immerse the gearbox in water to verify that there are no leaks.
19. Remove gearbox from water and dry off with compressed air. Fill gearbox with SAE 80W or 90W gear lube to the center of the horizontal shaft. Tighten all plugs.

Gearbox Installation

NOTE: Gearbox is heavy: do not attempt to move without mechanical assistance.

1. Set gearbox on cutter and fasten with bolts and nuts. Torque bolts to 300 lbs-ft.
2. Attach crossbar (Crossbar Installation, page 32).

CROSSBAR REMOVAL

1. It is necessary to gain access to bottom side of cutter for crossbar removal. See Blocking Method page 19.

NOTE: You will need to use either the puller screw (Item 6, Figure 15) or a small hydraulic jack to remove the crossbar.

2. Remove blades from crossbar as shown in Figure 14.

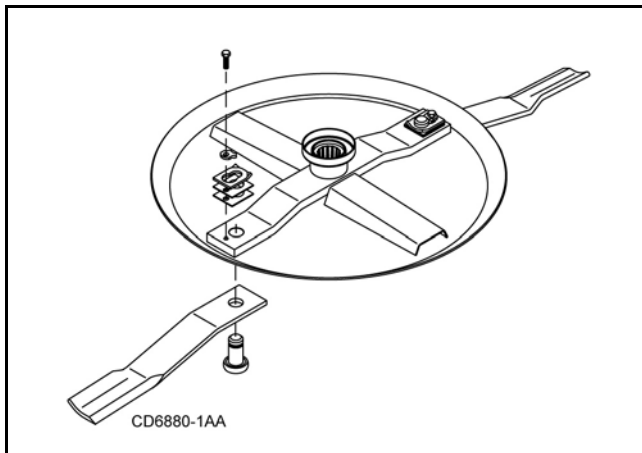


Figure 14. Blade Removal

3. Refer to Figure 15. Remove cotter pin from bottom of crossbar and remove nut and washer.
4. Attach a clevis (1) to each end of crossbar, using blade pins, spacers, keyhole plates, and blade pin clips.
5. Position tube assembly (5) with threaded nut toward crossbar for puller screw removal or down for hydraulic jack removal.

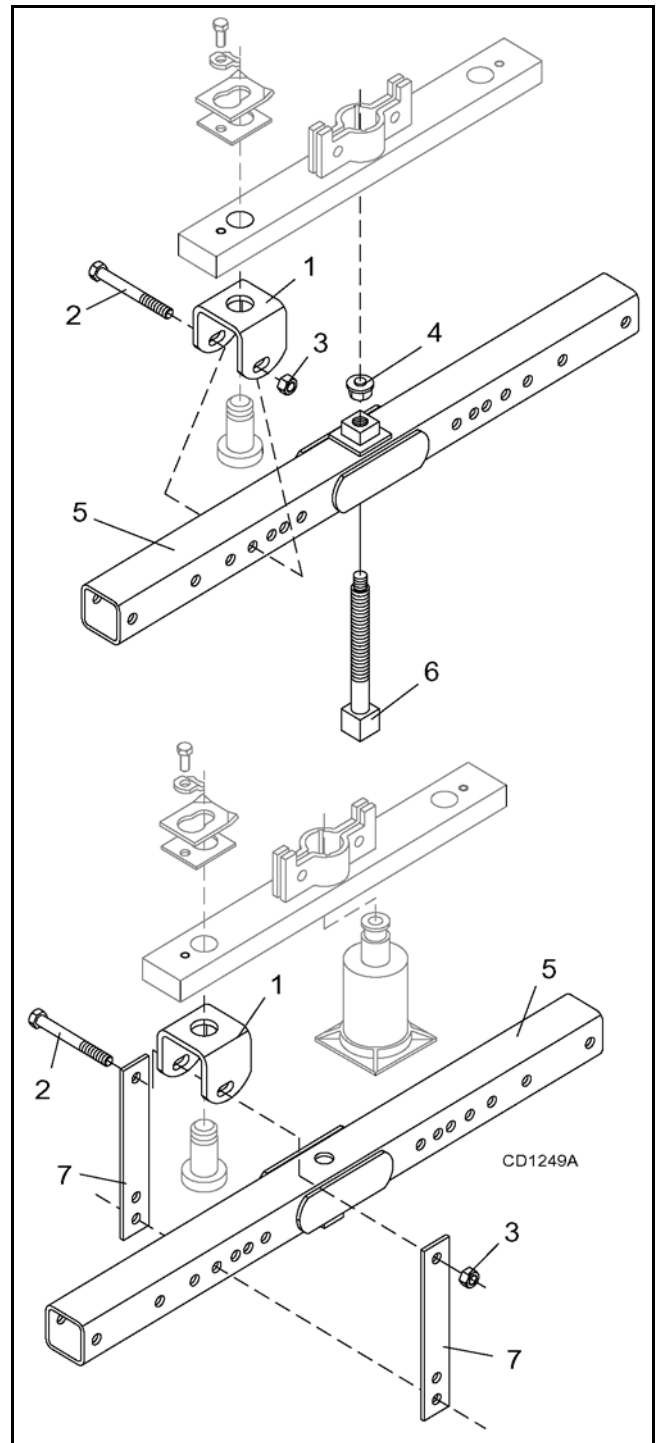


Figure 15. Crossbar Removal

6. **For removal with puller screw**, attach tube (5) to each clevis with bolts (2) and nuts (3). Place pad (4) in nut and thread puller screw (6) into nut from bottom. Tighten until pad is solid against gearbox shaft. For best results, strike head of puller screw with a hammer while tightening with a wrench.

For removal with a jack, attach tube to each clevis with puller links (7), bolts (2), and nuts (3). Place jack on tube with end of jack pressing against gearbox shaft. Slowly apply force with jack.

NOTE: Hydraulic jack will not operate if tipped more than 90°. Use care to prevent bending crossbar during removal.

Crossbar Installation

1. Using emery cloth (220 or finer), remove surface rust, Loctite® and foreign material from hub, splined gearbox vertical shaft, and crossbar.

Refer to Figure 16.

2. Install crossbar assembly (10) on splined shaft. Install nut (54) and align a slot with hole in splined shaft. Torque nut to 450 lbs-ft.
3. Install cotter pin (55) through slot in nut and bend ends over.

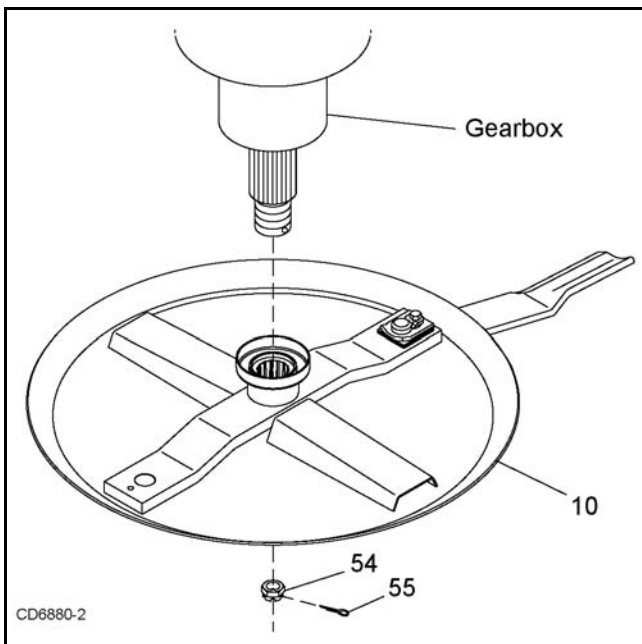


Figure 16. Crossbar Assembly Installation

UNIVERSAL JOINT REPAIR

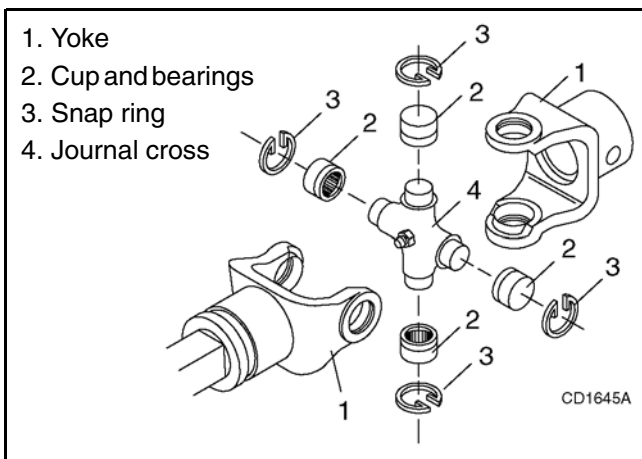


Figure 17. U-Joint Exploded View

U-Joint Disassembly

1. Remove external snap rings from yokes in four locations as shown in Figure 18.

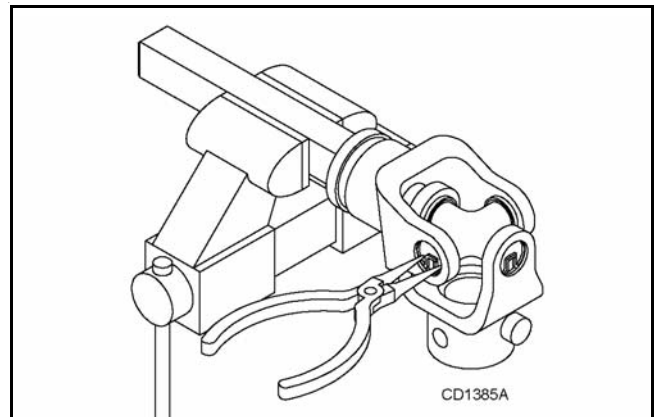


Figure 18.

2. With snap rings removed, support drive in vise, hold yoke in hand and tap on yoke to drive cup up out of yoke. See Figure 19.

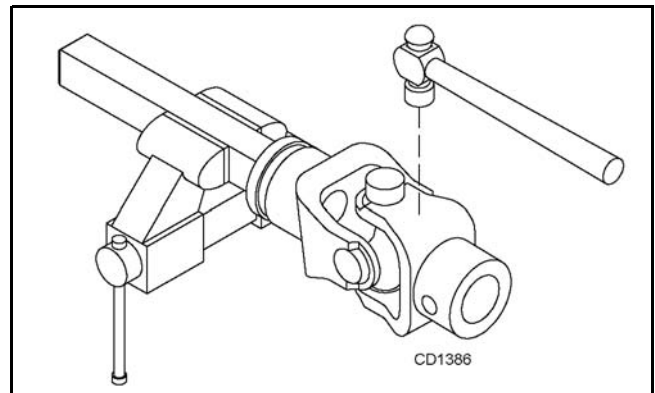


Figure 19.

3. Clamp cup in vise as shown in Figure 20 and tap on yoke to completely remove cup from yoke. Repeat Step 2 and Step 3 for opposite cup.

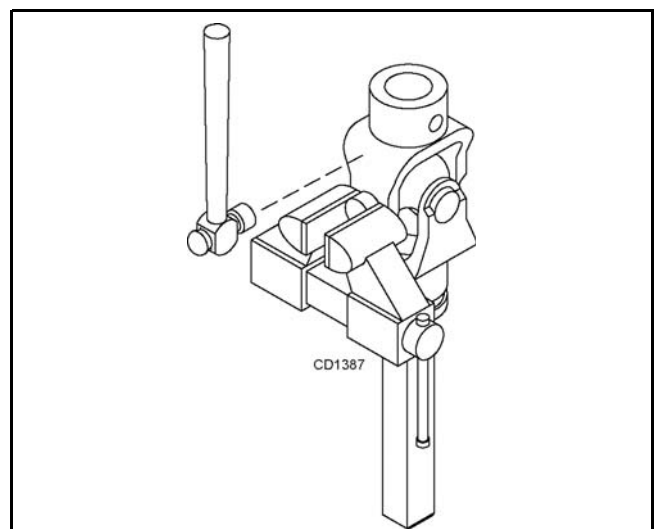


Figure 20.

- Place universal cross in vise as shown in Figure 21 and tap on yoke to remove cup. Repeat Step 3 for final removal. Drive remaining cup out with a drift and hammer.

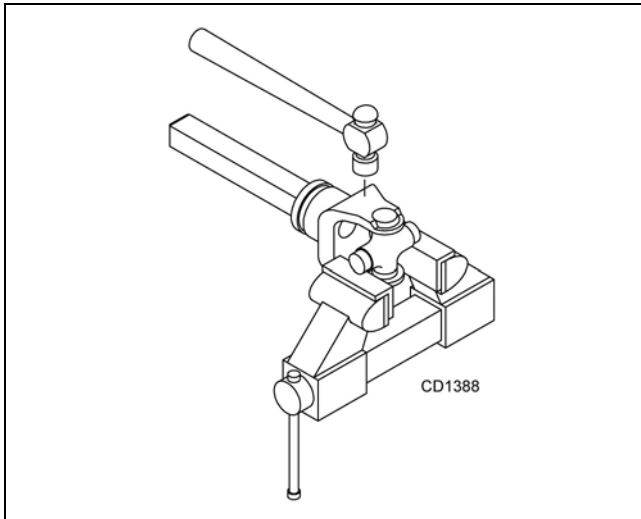


Figure 21.

U-Joint Assembly

- Place seals securely on bearing cups. Insert cup into yoke from outside and press in with hand pressure as far as possible. Insert journal cross into bearing cup with grease fitting away from shaft. Be careful not to disturb needle bearings. Insert another bearing cup directly across from first cup and press in as far as possible with hand pressure.
- Trap cups in vise and apply pressure. Be sure journal cross is started into bearings and continue pressure with vise, squeezing in as far as possible. Tapping the yoke will help.
- Seat cups by placing a drift or socket (slightly smaller than the cup) on cup and rap with a hammer. See Figure 22. Install snap ring and repeat on opposite cup.

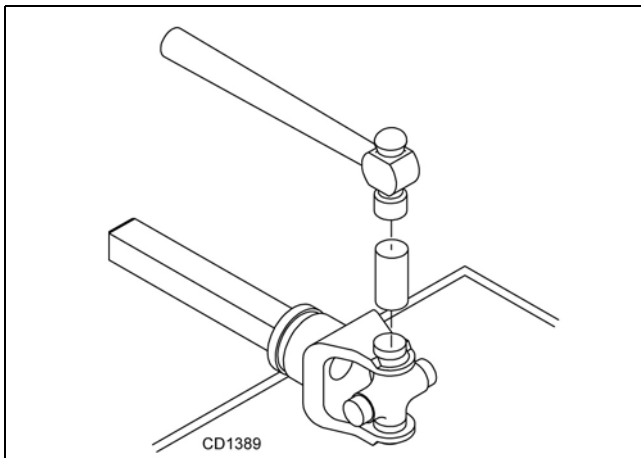


Figure 22.

- Repeat Step 1 and Step 2 to install remaining cups in remaining yoke.
- Move both yokes in all directions to check for free movement. If movement is restricted, rap on yokes sharply with a hammer to relieve any tension. Repeat until both yokes move in all directions without restriction.

SERVICING TIRES SAFELY

Used Aircraft Tires (Figure 23)



Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure and result in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and an extension hose long enough to allow you to stand to the side — not in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

Never remove split rim assembly hardware (A) with the tire inflated.

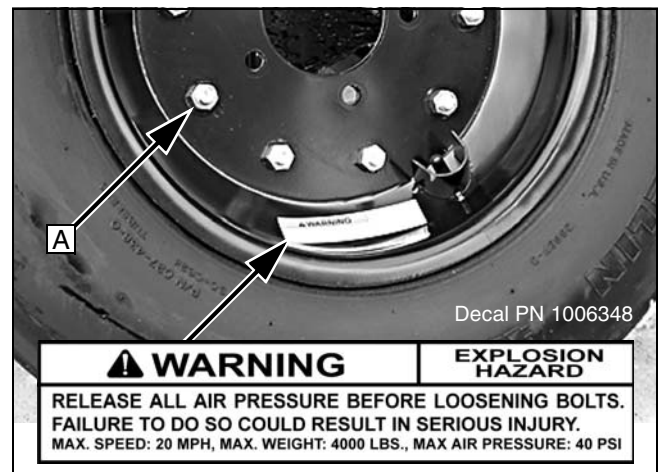


Figure 23. Split Rim Tire Servicing

NOTES

ASSEMBLY INSTRUCTIONS

DEALER SET-UP INSTRUCTIONS

Assembly of this cutter is the responsibility of the WOODS dealer. It should be delivered to the owner completely assembled, lubricated and adjusted for normal cutting conditions.

The cutter is shipped partially assembled. Assembly will be easier if components are aligned and loosely assembled before tightening hardware. Recommended torque values for hardware are located on page 86.

Select a suitable working area. A smooth hard surface, such as concrete, will make assembly much quicker. Open parts boxes and lay out parts and hardware to make location easy. Refer to illustrations, accompanying text, parts lists and exploded view drawings.

Complete the check list on page 49 when assembly is complete and cutter is delivered to the customer.

■ **Before working underneath, carefully read Operator's Manual instructions, disconnect driveline, raise mower, securely block up all corners with jackstands, and check stability. Secure blocking prevents equipment from dropping due to hydraulic leak down, hydraulic system failures, or mechanical component failures.**

■ **Do not disconnect hydraulic lines until machine is securely blocked or placed in lowest position and system pressure is released by operating valve levers.**

CAUTION

■ **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.**

Initial Oil Fill

Fill all gearboxes with SAE 80W or 90W EP oil until it runs out of the side level hole. Install vent plugs.

Install Center Wheel Yoke Arm

NOTE: Install center rear chain shield or rubber belting before installing wheel yoke arm. This will make installation of shielding much easier.

Attach wheel yoke arm (7) to center section using three 1-1/4 pivot pins (4), carriage bolts (58), and flange lock nuts (50).

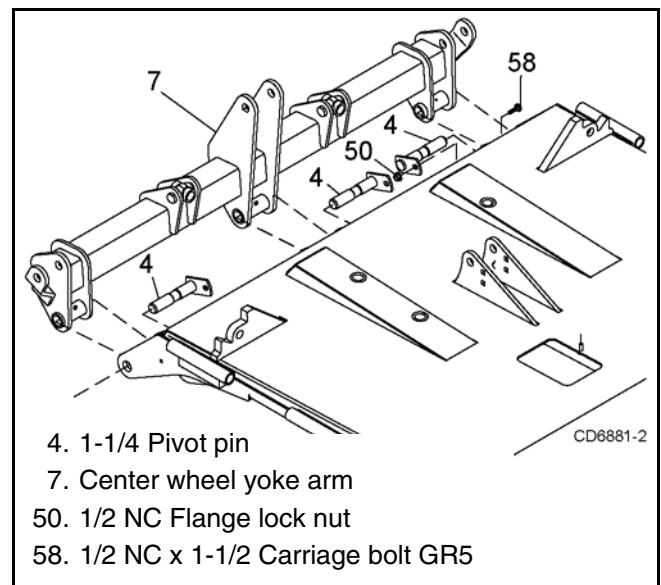


Figure 24. Center Wheel Yoke Arm Installation

Install Attitude Rod

1. Insert each attitude rod (6) through center deck channels and through pivot castings in wheel yoke arm assembly. The rod is a very tight fit; use care to prevent thread damage during installation.
2. Loosely install spacer (43), washer (56) and two nuts (57) on end of each attitude rod.

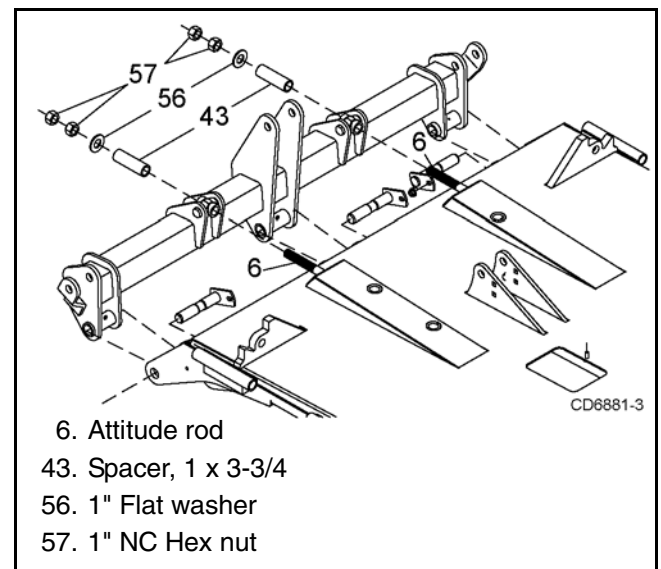


Figure 25. Attitude Rod Installation

Install Height Adjustment Cylinder

1. Attach base end of cylinder (3) to the deck using clevis pin (40) and two cotter pins (42).
2. Extend cylinder rod and place transport lock bracket (9) over cylinder rod clevis.
3. Position cylinder rod and transport lock bracket between lugs on the wheel yoke tube and align holes.
4. Secure cylinder rod and transport lock bracket to the wheel yoke tube using clevis pin (41) and two cotter pins (42).

NOTE: An optional ratchet (12) is available, and replaces the hydraulic cylinder.

5. Install ratchet jack using the same procedure and hardware used for the installation of the hydraulic cylinder.

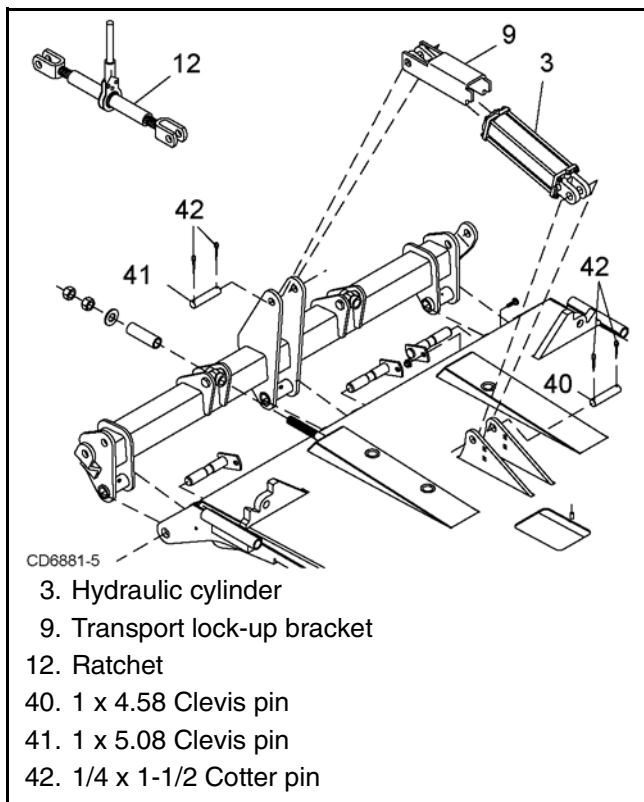


Figure 26. Height Adjustment Cylinder Installation

Install Wheel Yoke Arm and Wheels

1. Attach wheel yoke arms (2) to rear of wheel yoke tube (7) as shown in Figure 27 using four bolts (45) and nuts (55).
2. Insert wheel hubs into each wheel yoke arm (2) and align holes.
3. Secure into position using cap screw (49) and flanged lock nut (50). Repeat for additional hubs.
4. Attach wheel to hub using five lug nuts (61). Install the chamfered side of the lug nut toward the inside

for steel rim for pneumatic tires and rims (shown). Tighten to 75 lbs-ft. Check that tire air pressure is a maximum of 40 psi.

NOTE: Install the flat side of the nut toward the inside for solid tires and aircraft tires.

NOTE: See page 43 for optional walking beam yoke installation.

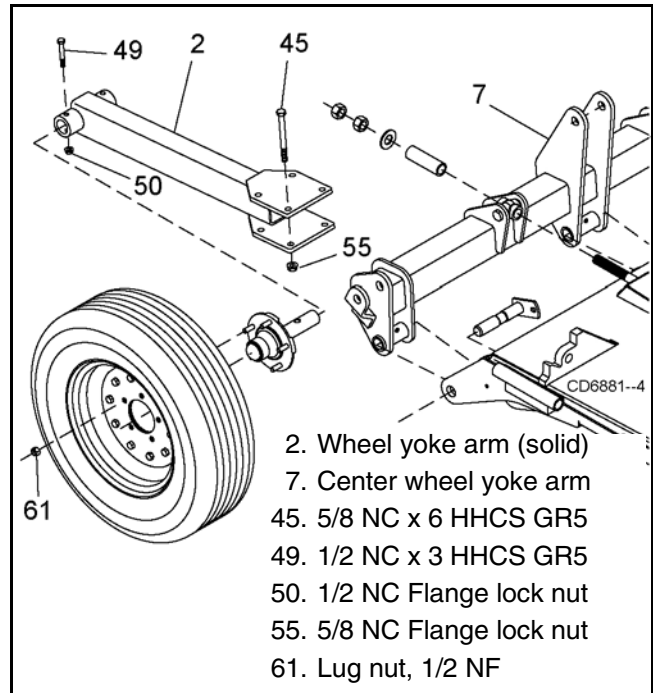


Figure 27. Wheel Yoke Arm & Tire Installation (Right Side Shown)

Install Tongue (Figure 28)

NOTE: Route center and wing cylinder hoses before proceeding. See Install Hose Kit (Figure 36), page 41 for hose routing instructions.

NOTE: Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.

1. Attach tongue (28) to the center section using two 1-1/4 pivot pins (4), carriage screws (75), and hex nuts (50).
2. Thread hex nut (73) onto tongue level link (26). Raise tongue and insert level link through center pivot casting.
3. Attach each attitude rod (6) between the lugs on tongue and secure with spacer (83), clevis pin (5), carriage screw (75), and lock nut (50).
4. Attach parking jack (29) to the side of the tongue.
5. Attach second hex nut (73) to tongue level link (26) on the back side of center pivot casting.
6. Attach hose holder (31) to the top of the tongue using two cap screws (53) and lock nuts (50).

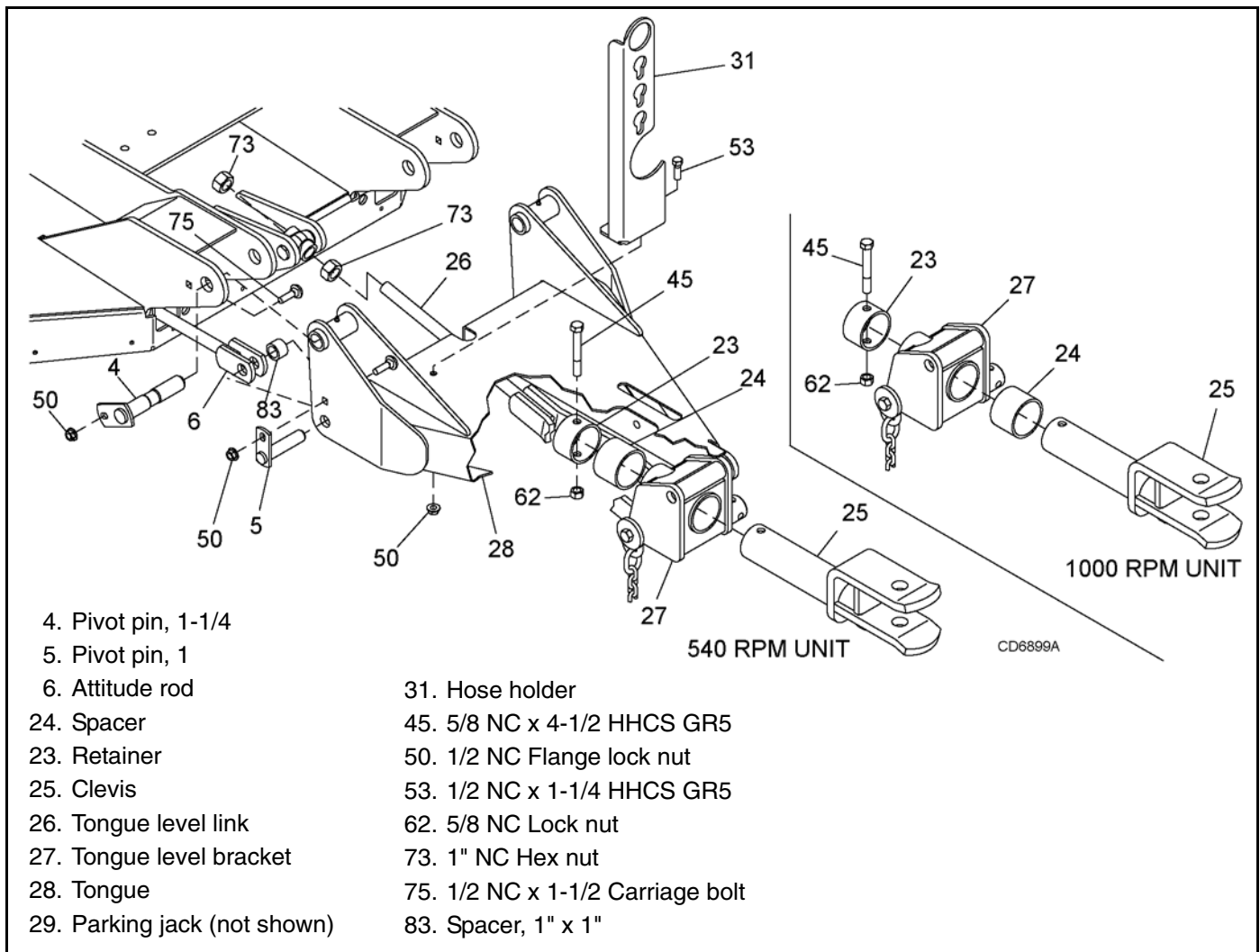


Figure 28. Tongue Installation

Adjust Hitch

NOTE: Tongue clevis (25) comes shipped from the factory configured for 540 RPM units. It is necessary to adjust the hitch for use on 1000 RPM units.

1. Remove cap screw (45) and lock nut (62) from end of clevis (25) and slide clevis out of tongue.
2. Place spacer (24) over shaft of clevis. Insert clevis back into tongue level bracket (27).
3. Secure into position with retainer (23), cap screw (45), and lock nut (62).

Install Three Joint Drive (540 rpm Only)

Refer to Figure 29 on page 38.

Before installing cutter input driveline to gearbox, check the tag wired to the driveline and the tag wired to the input shaft of gearbox. Ensure the tag rpm speeds match the rpm speed decal on front of cutter. After confirming all speeds match, remove and discard tags and then complete driveline assembly.

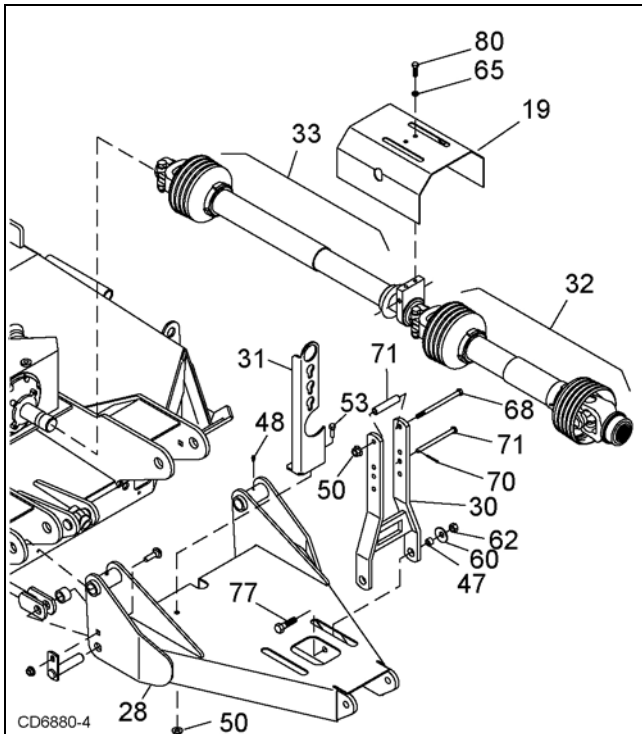
1. Attach H-frame (30) to tongue with two bolts (77), sleeves (47), cup washers (60), and nuts (62).
2. Coat splined end of gearbox input shaft with grease.
3. Slide drive (33) onto shaft and align hole in drive yoke with groove on gearbox input shaft.
4. Secure with bolt and nut supplied with drive.
5. Secure driveline carrier bearing to H-frame with pin (69) and cotter pin (70).
6. Attach front driveline (32) to rear driveline (33) and tighten clamp bolt and nut supplied with drive.

NOTE: With cutting height established, adjust the 3-joint H-frame bearing height so that front driveline is parallel to the ground.

7. Attach shield (19) to driveline carrier bearing with two cap screws (80) and lock washers (65).
8. Attach spacer (71) to the top of the H-frame using cap screw (68) and flange lock nut (50).

- Attach hydraulic hose holder (31) to the top of the tongue using two cap screws (53), and flange lock nuts (50).

NOTE: See page 40 for optional CV drive installation.



- Carrier bearing shield
- H-frame
- Hose holder
- Front 2/3 of 3-joint drive
- Telescoping drive shaft
- 5/8 x 1 x 9/16 Sleeve
- 1/2 NC Flange lock nut
- 1/2 NC x 1-1/4 HHCS GR5
- 5/8 x 1-3/4 x 14 ga Cup washer
- 5/8 NC Lock nut
- 3/8 Lock washer
- 1/2 NC x 5-1/2 HHCS GR5
- 1/2 x 5-3/4 Clevis pin
- 3/16 x 1 Cotter pin
- Spacer, 1/2 x 3.56
- 5/8 NC x 2 HHCS GR5
- 3/8 NC x 1 HHCS GR5

Figure 29. Three Joint Drive Installation

Install Wings

NOTE: Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.

Check rpm tags on wing and center sections to make sure they match before proceeding.

The wing must be installed in the following sequence and will require at least two people. A floor jack or a suitable lifting device will be helpful to align decks when installing the hinge pin.

- Remove hinge pin (15) from center section.
- Place wing assembly adjacent to the center section and align hinge sections.
- Insert hinge pin through the hinge sections and secure with spring pin (76) and washer (72) on both ends.
- Repeat procedure for opposite wing. (**Note:** BW1260 has only the right wing installed. BW1260L has only the left wing installed.)

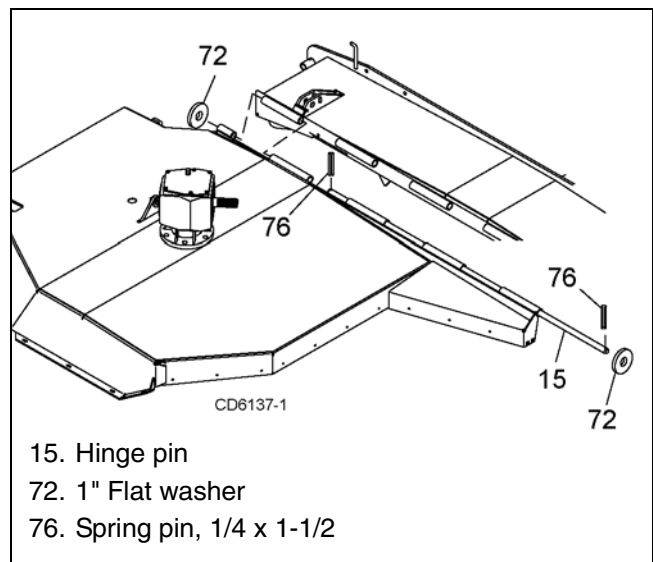


Figure 30. Right Wing Installation

Install Wing Lift Cylinder (Figure 31)

- Place two cylinder links (16 and 17) on either side of cylinder lug on center section as shown, align holes, and insert clevis pin (31). Secure with washer (52) and cotter pin (36).
- Attach base end of wing cylinder (4) to cylinder links (16 and 17) using clevis pin (32). Secure with two cotter pins (36).
- Remove plug from base end of hydraulic cylinder. Extend cylinder and attach rod end to cylinder lug on the wing using clevis pin (32). Secure with two cotter pins (36). Extend cylinder fully and replace plug in base end of cylinder. This trapped air will help push wing down.
- Repeat procedure for opposite wing. (**Note:** BW1260 has only the right wing installed. BW1260L has only the left wing installed.)

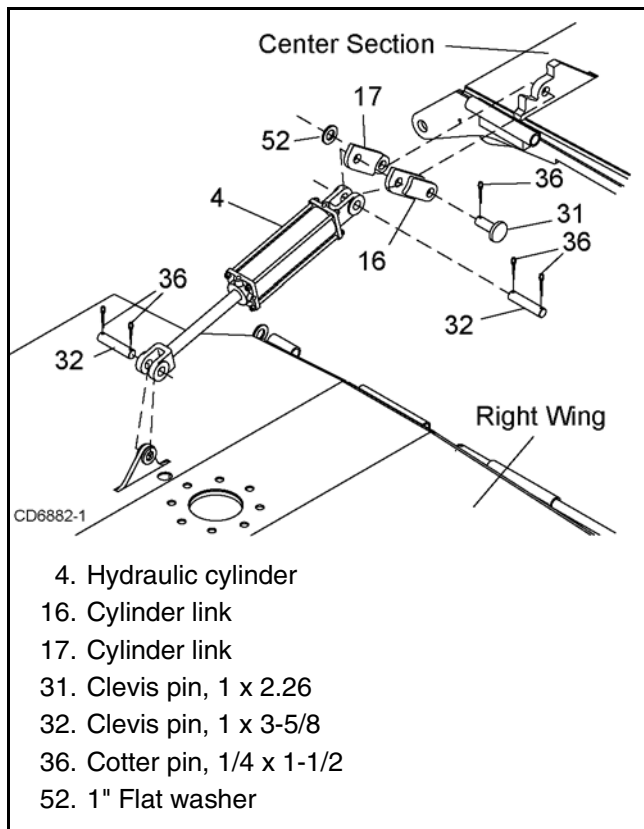


Figure 31. Wing Cylinder Installation

Install Wing Wheel Yoke Arm (Figure 32)

1. Attach wheel yoke arm (6) to wing section using two pivot pins (30), carriage screws (37), and lock nuts (40).
2. Repeat procedure for opposite wing. (**Note:** BW1260 has only the right wing installed. BW1260L has only the left wing installed.)

NOTE: See page 43 for optional walking beam wheel yoke.

Install Wing Wheel and Hub (Figure 32)

1. Insert wheel hub into outside of wheel yoke arm (6) and align holes.
2. Secure into position using cap screw (39) and flanged lock nut (40).
3. Attach wheel to hub using five lug nuts (61). Install the chamfered side of the lug nut toward the inside for steel rim for pneumatic tires and rims (shown). Tighten to 75 lbs-ft. Check that tire air pressure is a maximum of 40 psi.

NOTE: Install the flat side of the nut toward the inside for solid tires and aircraft tires.

4. Install optional dual wheel and hub to inside of wheel yoke arm.

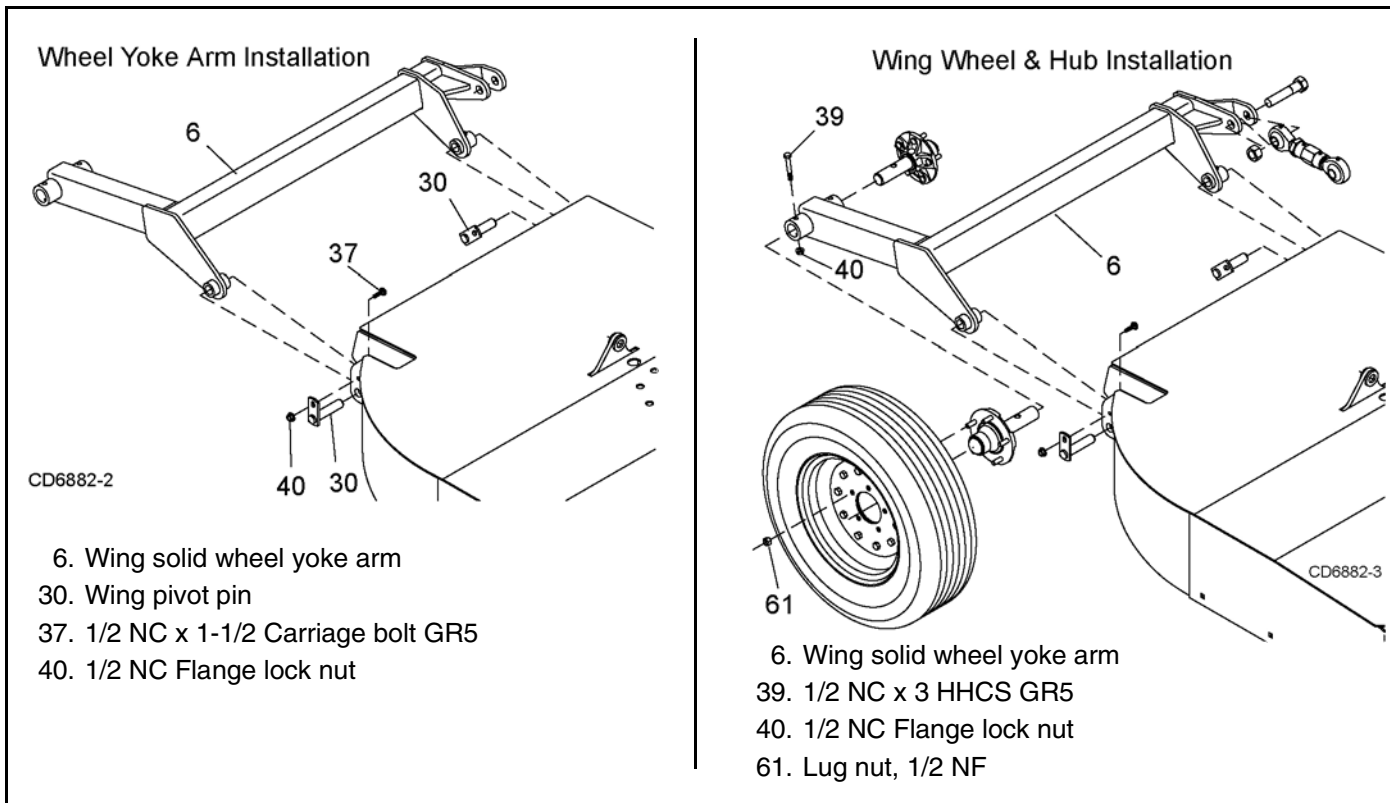


Figure 32. Wing Wheel Yoke Arm & Hub Installation

Install Wing Wheel Yoke Adjustment Link

NOTE: Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.

1. With a lifting device raise wing and lock in the UP position using the wing lock-up pin. Leave lifting device attached for added support.
2. Attach adjustable link (turnbuckle, 8) to right side of center wheel yoke arm with bolt (46), spacer (60) and secure with lock nut (47). Place spacer on inside of adjustment link.
3. Attach opposite end of adjustable link (8) to wing wheel yoke arm with bolt (34) and secure with lock nut (35).
4. Remove lock-up pin and carefully lower wing using lifting device.
5. Repeat procedure for opposite wing. (**Note:** BW1260 has only the right wing installed. BW1260L has only the left wing installed.)

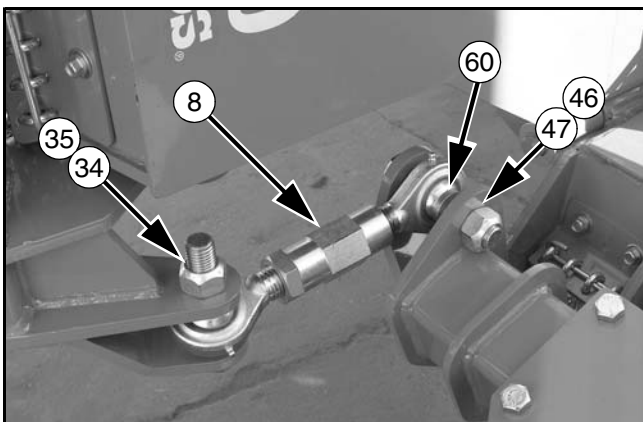


Figure 33. Left Wing Adjustment Link Installed

Install Wing Driveline

1. Remove shipping nuts from gearbox shield (18) and discard.
2. Raise wing shield and center to gain access to the gearbox shafts.
3. Loosen and remove locking assembly from slip clutch end of driveline (3). Slide clutch over wing gearbox shaft and align holes with groove.
4. Secure driveline to shaft using the lock assembly supplied with driveline.
5. Remove nut and bolt from opposite end of driveline. Slide end over splitter gearbox shaft and secure using cap screw and lock nut previously removed.

6. Repeat procedure for opposite wing. (**Note:** BW1260 has only the right wing installed. BW1260L has only the left wing installed.)
7. Lower all shields and secure with plastic knobs (53) supplied in hardware package.

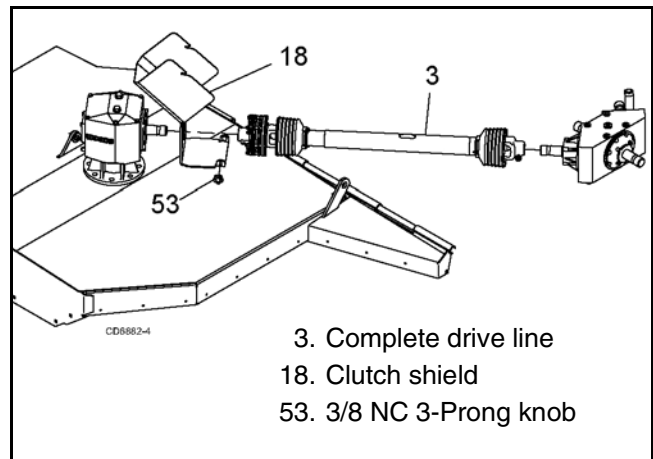


Figure 34. Wing Driveline Installation

CV Drive Installation

Before installing cutter input driveline to gearbox, check the tag wired to the driveline and the tag wired to the input shaft of gearbox. Ensure the tag rpm speeds match the rpm speed decal on front of cutter. After confirming all speeds match, remove and discard tags and then complete driveline assembly.

1. Slide drive (34) onto shaft and align hole in drive yoke with groove on gearbox input shaft.
2. Secure with bolt and nut supplied with drive.

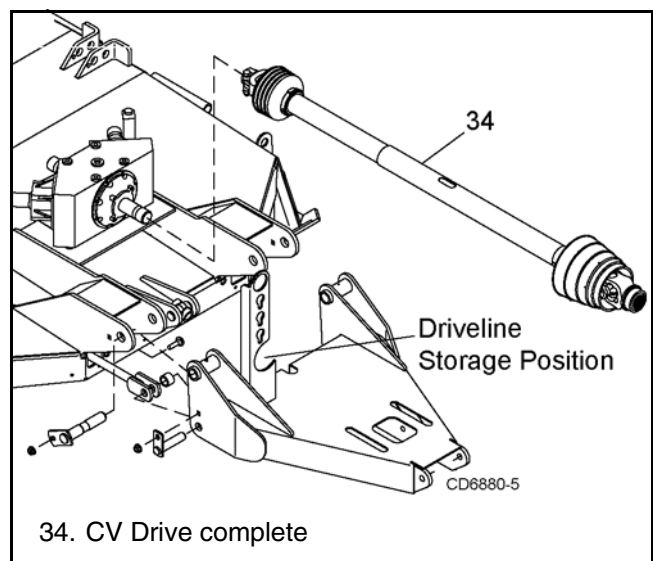


Figure 35. CV Drive Installation

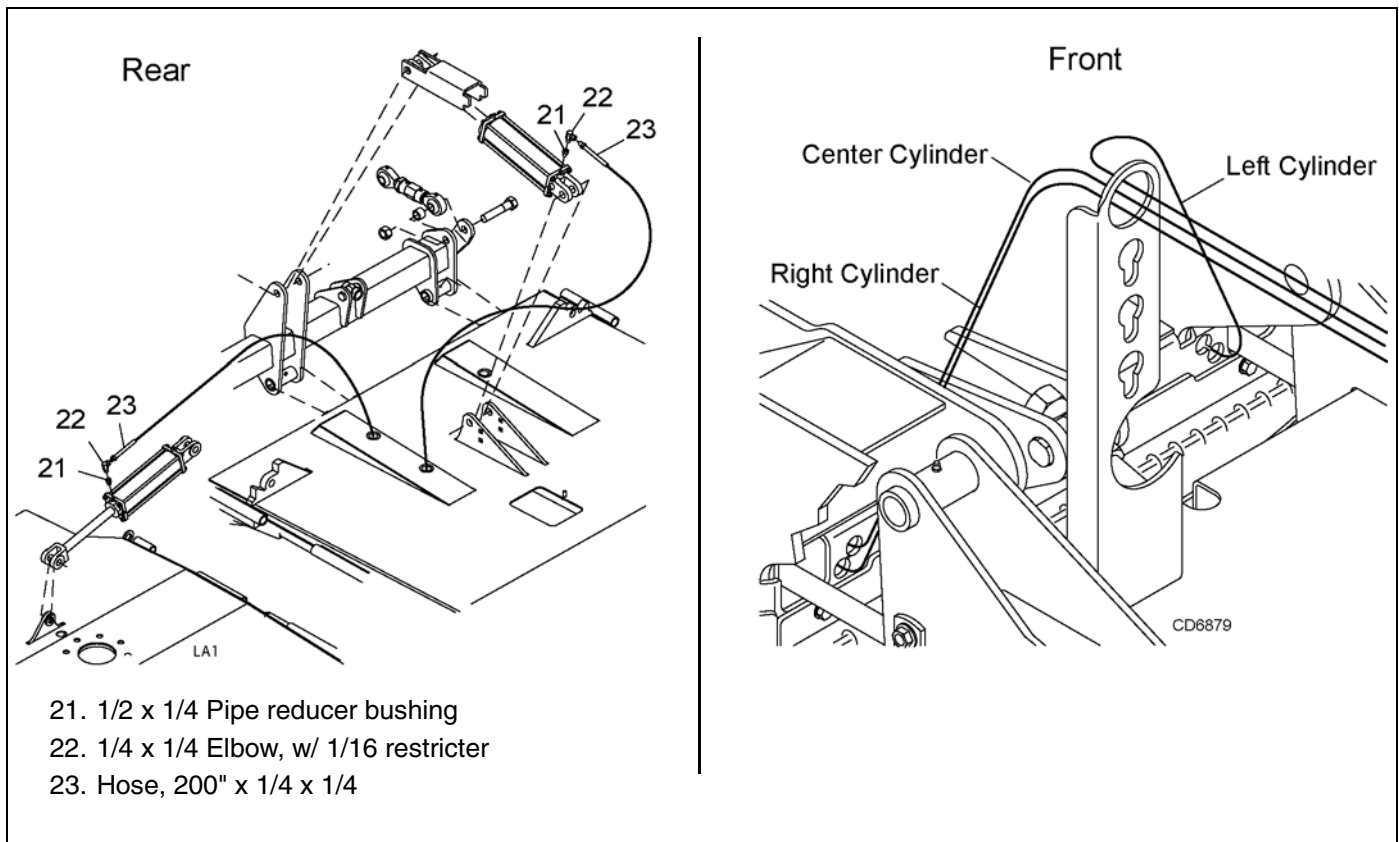


Figure 36. Cylinder Hose Installation, Rear

Install Hose Kit (Figure 36)

1. Remove plug from base end of center cylinder.
2. Remove plug from rod end of each wheel yoke cylinder.
3. Install reducer bushing (21) and restricter elbow (22) into each cylinder. Position elbow on center cylinder toward the front. Position elbows on wing cylinders toward the center.
4. With the wings in the down position and cylinder extended, remove and reinstall the plugs from the base of the wing cylinders. This will trap air behind the piston and help when lowering the wings.
5. Attach hose (23) to each elbow.
6. **Hose Routing:** Feed the wing cylinder hoses through the rear holes in the center deck, through the deck channels and out the front frame.
7. Feed the center cylinder hose through the remaining hole, through the deck channels and out the front frame. Insert the hoses through the hose holder opening, be sure the hose can slide freely in the holder. Do not allow hose slack to drag on the ground or become caught on tractor protrusions.

8. Attach male quick coupler to the end of each hose.

NOTE: Quick couplers are not supplied with this unit.

Install Chain or Rubber Shielding

⚠ DANGER

■ Full chain or rubber shielding must be installed when operating in populated areas or other areas where thrown objects could injure people or damage property.

- If this machine is not equipped with full chain or rubber shielding, operation must be stopped when anyone comes within 300 feet (92 m).
- This shielding is designed to reduce the risk of thrown objects. The mower deck and protective devices cannot prevent all objects from escaping the blade enclosure in every mowing condition. It is possible for objects to ricochet and escape, traveling as much as 300 feet (92 m).

Install chain or rubber shields with hardware provided. Note that flat washers are used over all slots. See parts pages 72 and 75 for diagrams.

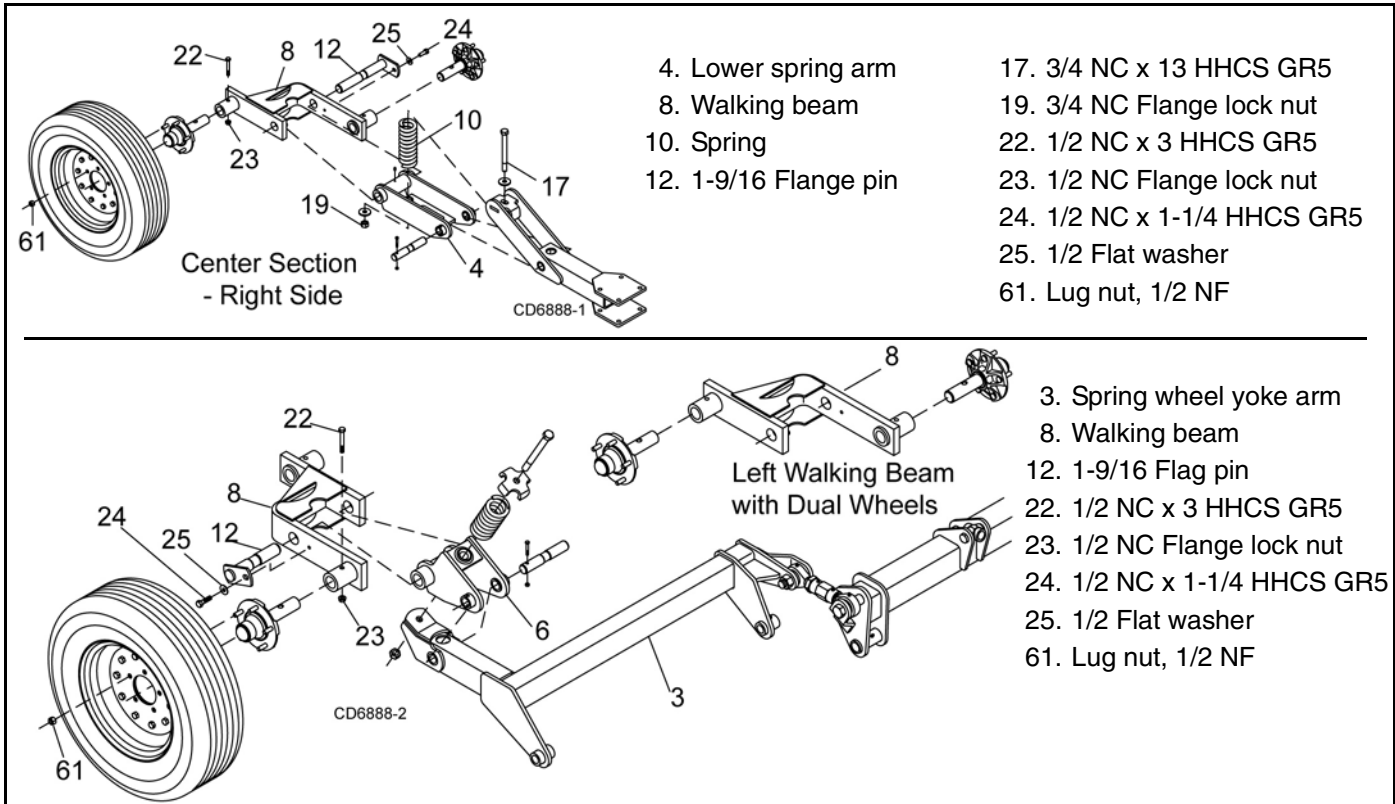


Figure 37. Walking Beam Installation for 3/4" Spring Yoke

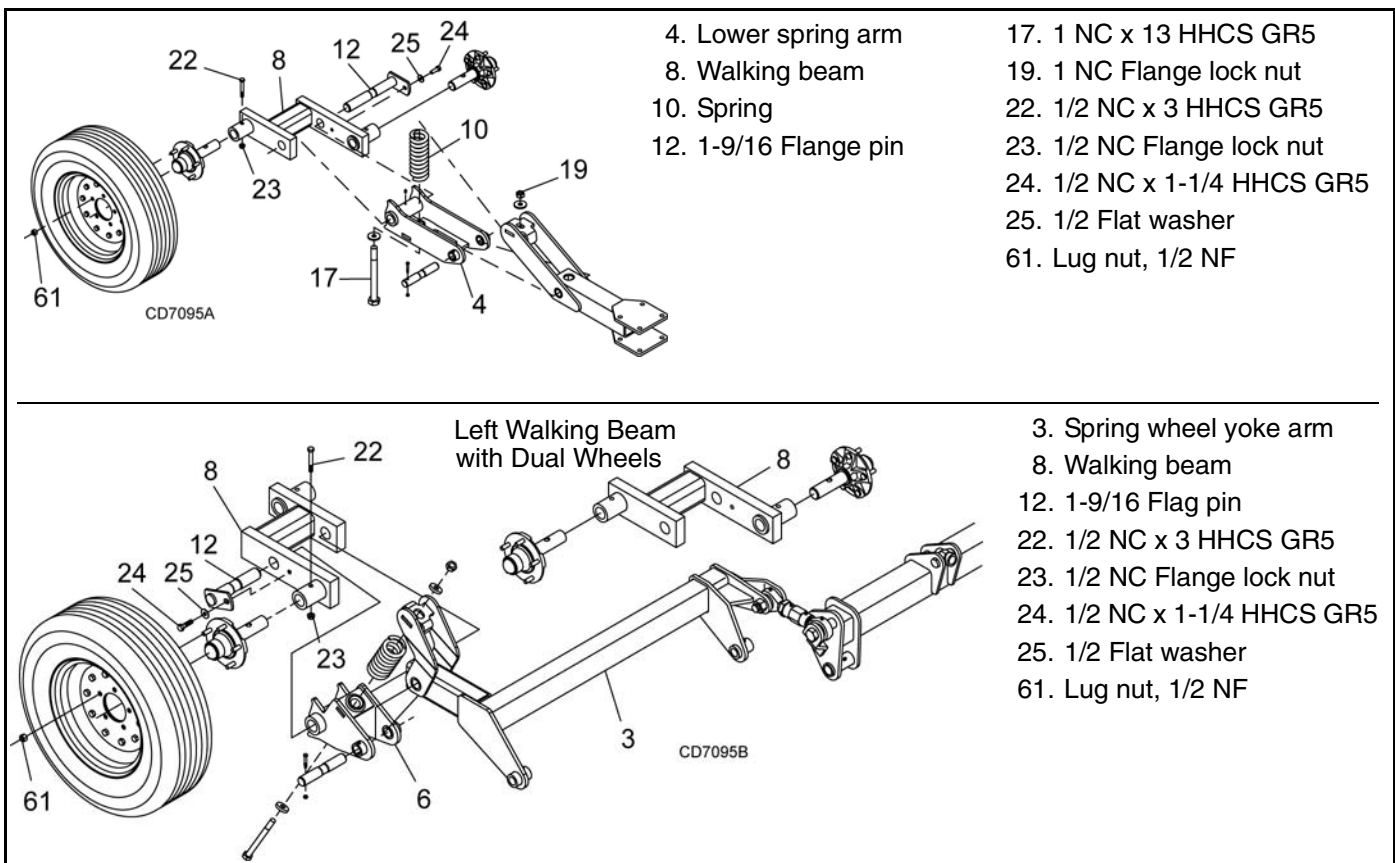


Figure 38. Walking Beam Installation for 1" Spring Yoke

Walking Beam, Hub and Wheel Installation, Center Section (Optional) (Figure 37)

NOTE: Tighten bolt (17) and nut (19) to achieve a spring length of 8-5/16".

1. Attach walking beam (8) to lower spring arm (4) using 1-9/16 pivot pin (12), washers (25), and hex screws (24). Position the walking beams on the center section with the outside tires to the rear.
2. Insert two wheel hubs into each walking beam (8) and align holes.
3. Secure into position using cap screw (22) and flanged lock nut (23).
4. Attach wheel to hub using five lug nuts (61). Install the chamfered side of the lug nut toward the inside for steel rim for pneumatic tires and rims (shown). Tighten to 75 lbs-ft. Check that tire air pressure is a maximum of 40 psi.

NOTE: Install the flat side of the nut toward the inside for solid tires and aircraft tires.

Walking Beam, Hub and Wheel Installation, Wings (Optional)

1. Attach walking beam (8) to lower spring arm (3) using 1-9/16 pivot pin (12), washers (25), and hex screws (24). Position the walking beams on the center section with the outside tires to the front.
2. Insert two wheel hubs into each walking beam (8) and align holes.
3. Secure into position using cap screw (22) and flanged lock nut (23).

OPTIONAL SHREDDER ATTACHMENT INSTALLATION

Crossbar Installation

Right Wing (Figure 39 & Figure 42)

1. Install wing crossbar (1) on splined shaft. Use flanged castle nut and cotter pin previously removed. Torque nut to 450 lbs-ft.
2. Place CCW blade (4) over blade pin (9) and insert blade pin through crossbar. Make sure blade offset is to the bottom.
3. Place blade (5) over blade pin with flat surface on the top.
4. Install bushing (10) over pin and blade and secure with jam nut (11). Torque nut to 664 lbs-ft.

Left Wing

1. Repeat steps for left crossbar and blade installation.
2. Use wing crossbar (1) and offset CW blades (3) and flat blades (5).

Center Section

1. Repeat steps for center crossbar and blade installation.
2. Use crossbar (2) and offset CCW blades (4) and flat blades (5).

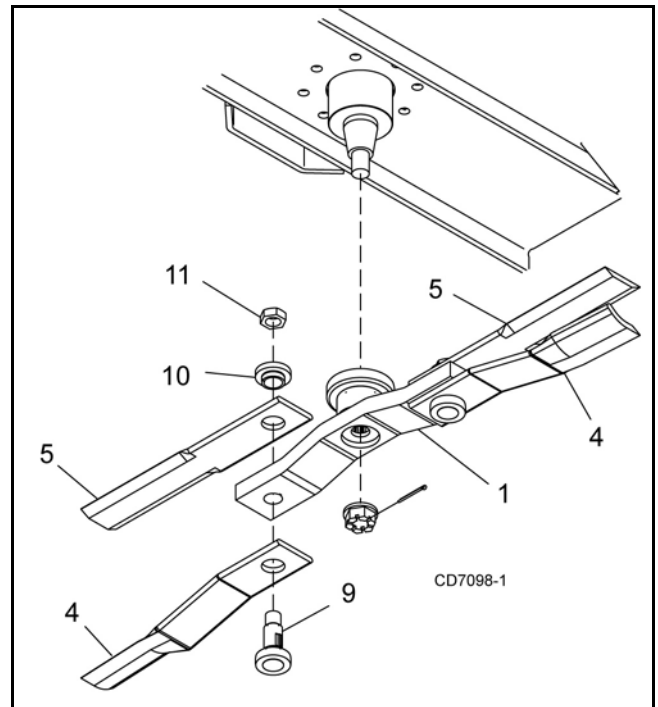


Figure 39. Right Crossbar and Blade Installation

INSTALL STATIONARY BLADES

Center Section

1. Remove left skid shoe.
2. Place stationary blade mounting bracket (8) under the frame at the left front corner and against the backside of the left skid shoe gusset.
3. With mounting bracket in position, mark the two holes in the bottom of the frame and two hole in the shoe gusset. Drill four 17/32" holes.
4. Secure mounting bracket (8) into position using four cap screws (14), eight (four on each side) hardened flat washers (16) and flange lock nuts (15).

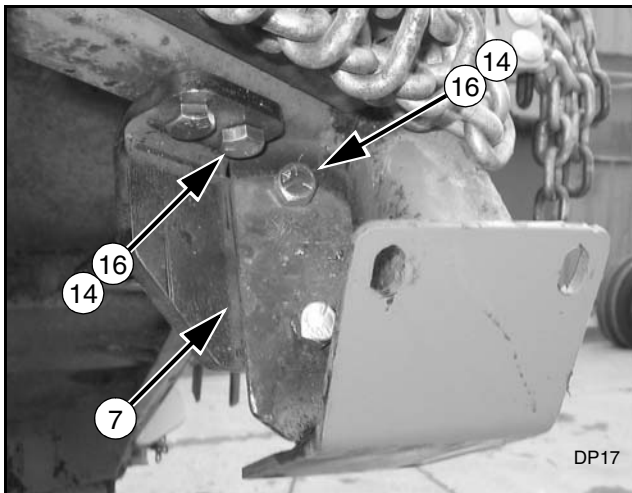


Figure 40. Blade Mounting Bracket Installed

- Attach stationary blade (6) to mounting bracket using two cap screws (12), four (two on each side) hardened flat washers (17) and lock nuts (13).

NOTE: Stationary blade should fit between the two rotating blades on the crossbar.

- Replace skid shoe using existing hardware.

Right and Left Wing

- Attach stationary blade (6) to bent stationary mounting bracket (7) using two cap screws (12), four (two on each side) hardened flat washers (17) and lock nuts (13). Blade should be angled by using the first hole on the left side and the second hole on the right side. Refer to Figure 41.
- Place mounting bracket (7) to the rear side of the front baffle and clamp into position.
- Rotate crossbar and blades so stationary blade fits between the two crossbar blades.
- Adjust mounting bracket so the stationary blade is equally spaced (up and down) between the two crossbar blades.

NOTE: Stationary blade should be parallel to the rotating blades, point towards the center of the gearbox, and overlap rotating blades approximately 4 inches.

- Once mounting bracket is in the proper position mark the four holes. Remove bracket and drill four 17/32" holes.
- Secure mounting bracket to the front side of the baffle using four cap screws (14), eight (four on each side) hardened flat washers (16) and lock nuts (15). See Figure 41.

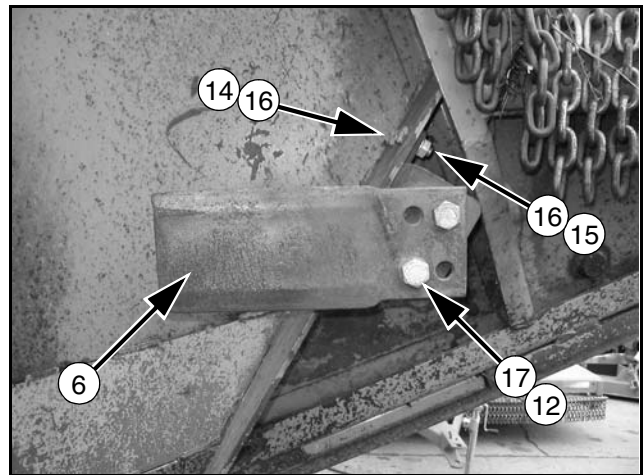


Figure 41. Stationary Blade Installed, Right Wing

- Repeat steps to install stationary mounting (7) and blade (6) to the left wing.

HYDRAULIC VALVE INFORMATION

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

NOTICE

- Check with your tractor dealer or manual to determine if your tractor is equipped with an "OPEN-CENTER" or a "CLOSED-CENTER" hydraulic system.
- Tractor hydraulic system can be seriously damaged if the incorrect optional valve is installed.

Use care to prevent foreign material from entering and damaging the hydraulic system.

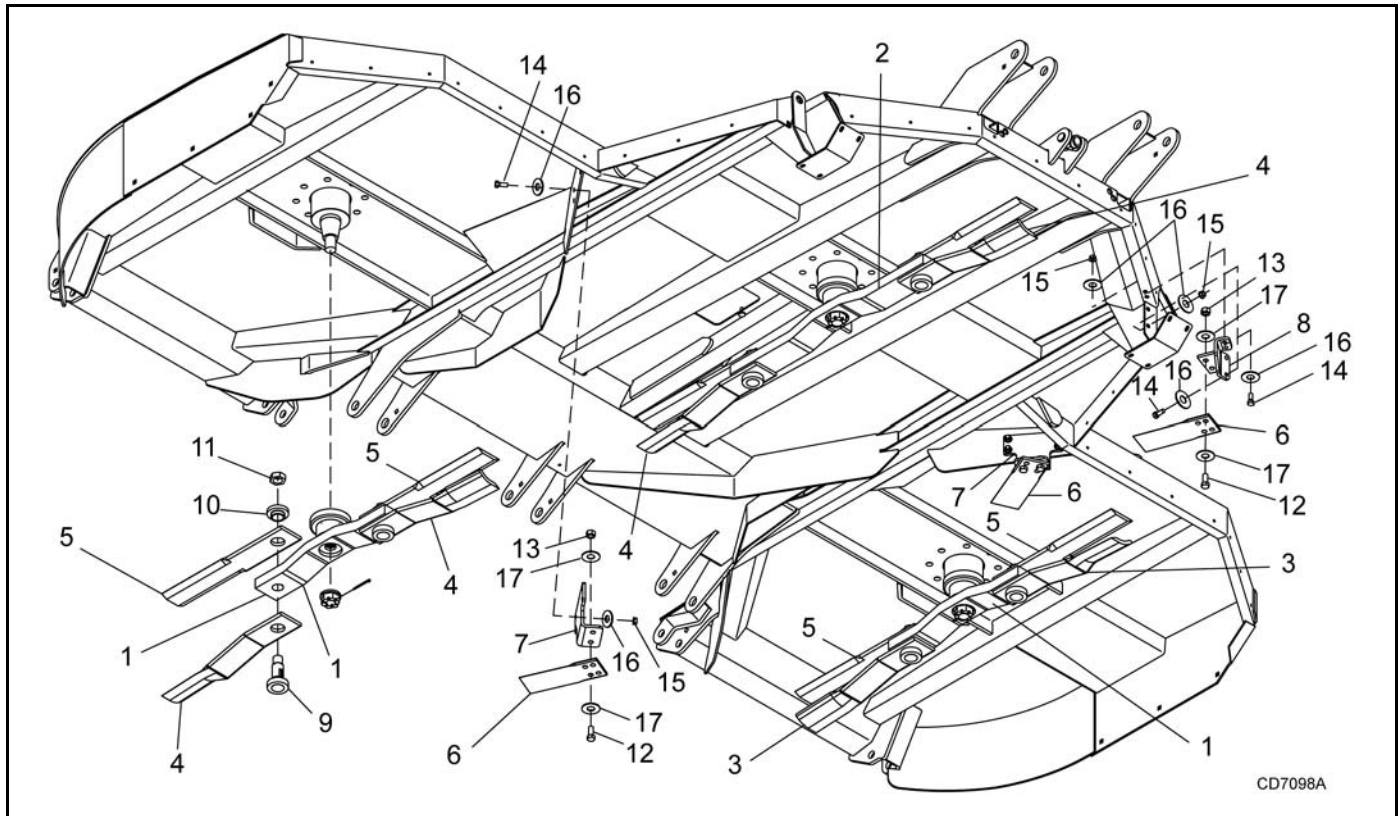


Figure 42. Shredder Kit Installation

In some cases, when installing the three optional cutter hydraulic cylinders, it will be necessary to install the optional 3-spool valve available from Woods.

This installation should be performed by dealer service personnel. It requires special skills and tools.

In preparation to install these hydraulic components, shut off tractor, remove key and make sure that all system hydraulic pressure is relieved before connecting or disconnecting any lines. Make sure system oil is cool and that you clean the work area of anything that could contaminate the hydraulic system.

There are three possible plumbing configurations for the optional Woods valve. Determine the proper configuration for your tractor hydraulic system. In all cases, the low-pressure RETURN hose must be connected directly to the tractor RETURN port to prevent valve damage from back pressure.

The open-center valve without the power-beyond port should only be used on tractors with an OPEN-CENTER system when the pressure hose is connected to a tractor remote valve coupler or a diverter valve.

An open-center valve with the power-beyond port is required for tractors with an OPEN-CENTER system when the pressure hose must be connected directly to a tractor port or hydraulic line and pressurized

RETURN oil is required to operate the tractor 3-point hitch or another accessory valve.

The closed-center valve should only be used on tractors with a CLOSED-CENTER system when the pressure hose is connected to a tractor remote valve coupler or another tractor port.

One valve kit is available and can be converted to your requirement.

Open-Center Valve Assembly

Work Ports

1. Remove plugs from the three work ports on opposite side of control handles.
2. Install 1/2 x 3/8" reducer bushings and 3/8" male x 1/4" female swivel elbows. Point elbows rearward toward cutter to prevent hose interference with handles.

Supply Ports

3. Place valve on work area with control levers on the left. Remove plastic plug from left port and install reducer bushing (3) and swivel elbow (2). Attach low-pressure tank hose (6) and couplers (5) to this elbow.
4. Install reducer bushing (3) and swivel elbow (2) into port in opposite end of valve. Attach pressure hose (4) to this elbow.

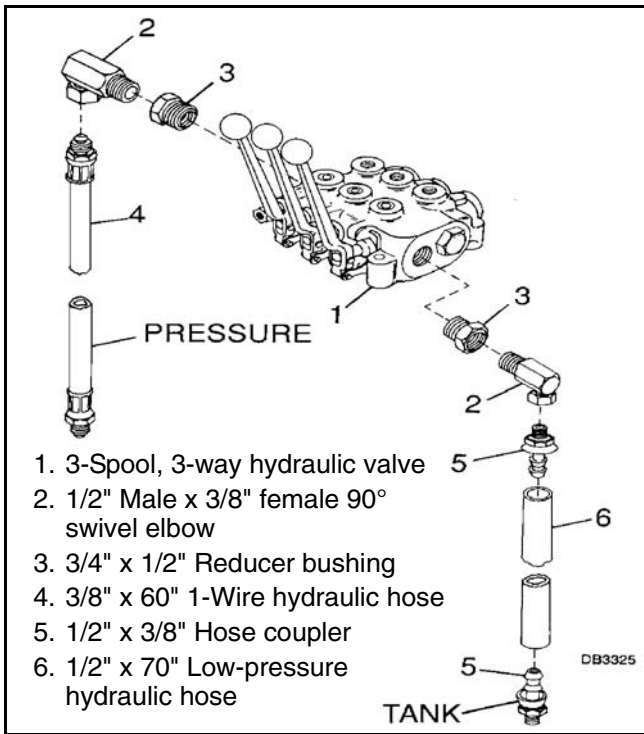


Figure 43. Open-Center Valve without Power-Beyond

Open-Center Valve to Open-Center with Power-Beyond Conversion

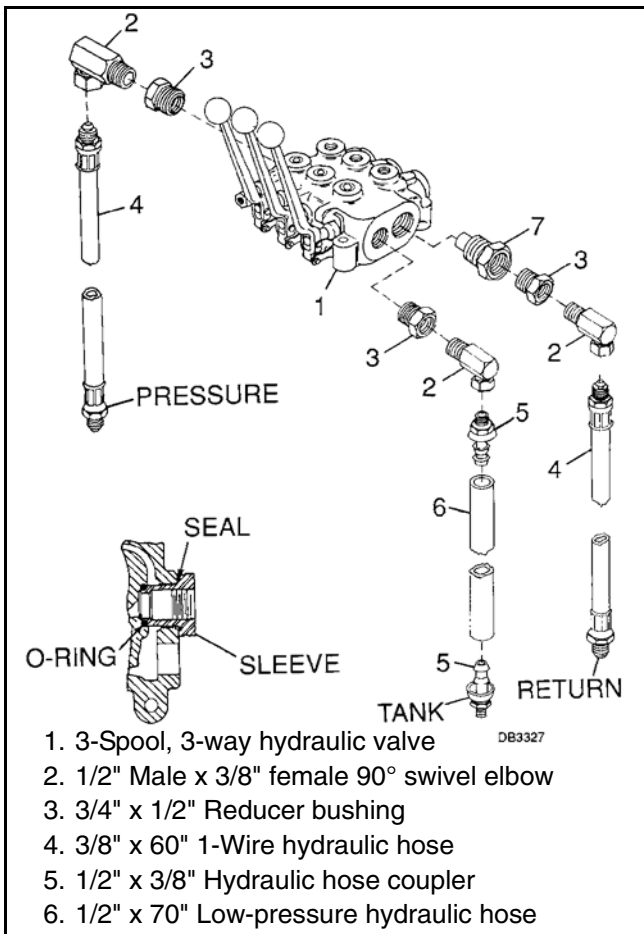


Figure 44. Open-Center Valve with Power-Beyond

NOTE: Install hoses after mounting valve on tractor.

1. Place the valve on work area with the control levers on the left. Remove plastic plug from left port and steel plug from right port.
2. Install power-beyond sleeve (7) in right port. Make sure power-beyond sleeve, O-ring and seal seat properly (see cross section).
3. Install reducer bushing (3) and swivel elbow (2) into power-beyond sleeve. Connect return hose (4) to this elbow.
4. Install reducer bushing (3) and swivel elbow (2) into left port. Attach low-pressure tank hose (6) and couplers (5) to this elbow.
5. Install reducer bushing (3) and swivel elbow (2) into port in opposite end of valve. Attach pressure hose (4) to this elbow.

Open-Center Valve to Closed-Center Valve Conversion

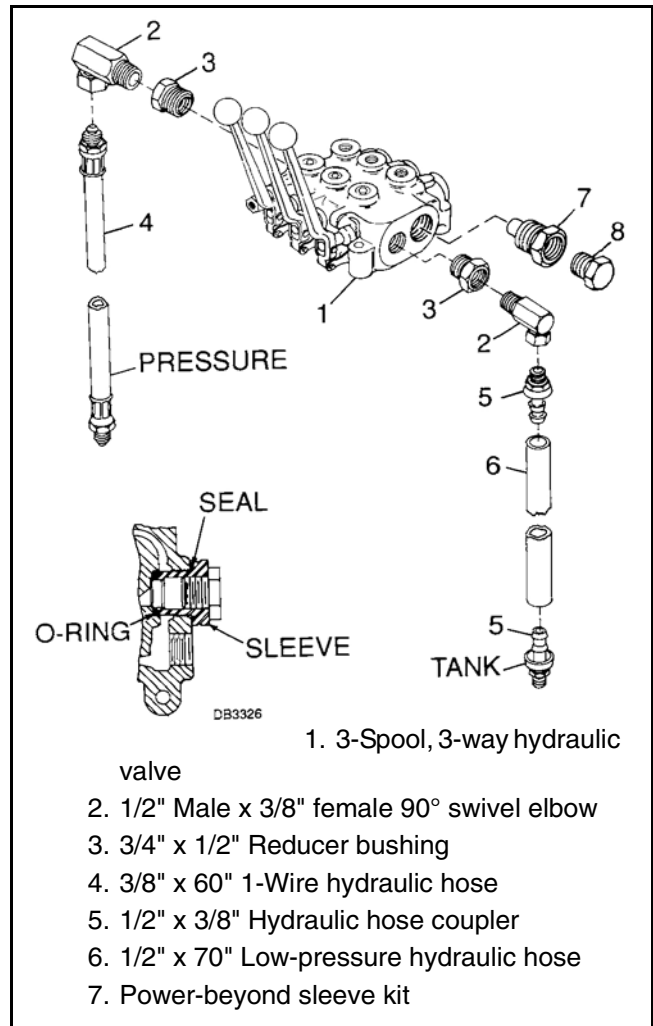


Figure 45. Closed-Center Valve

NOTE: Install hoses after mounting valve on tractor.

6. Place valve on work area with control levers on left. Remove plastic plug from left port and steel plug from right port.
7. Install POWER-BEYOND sleeve (7) and plug (8) in right port. Make sure POWER-BEYOND sleeve, O-ring and seal seat properly (see cross section).
8. Install reducer bushing (3) and swivel elbow (2) into left port. Attach low-pressure tank hose (6) and couplers (5) to this elbow.
9. Install reducer bushing (3) and swivel elbow (2) into port in opposite end of valve. Attach PRESSURE hose (4) to this elbow.

Fender Bracket and 3-Spool Valve Installation

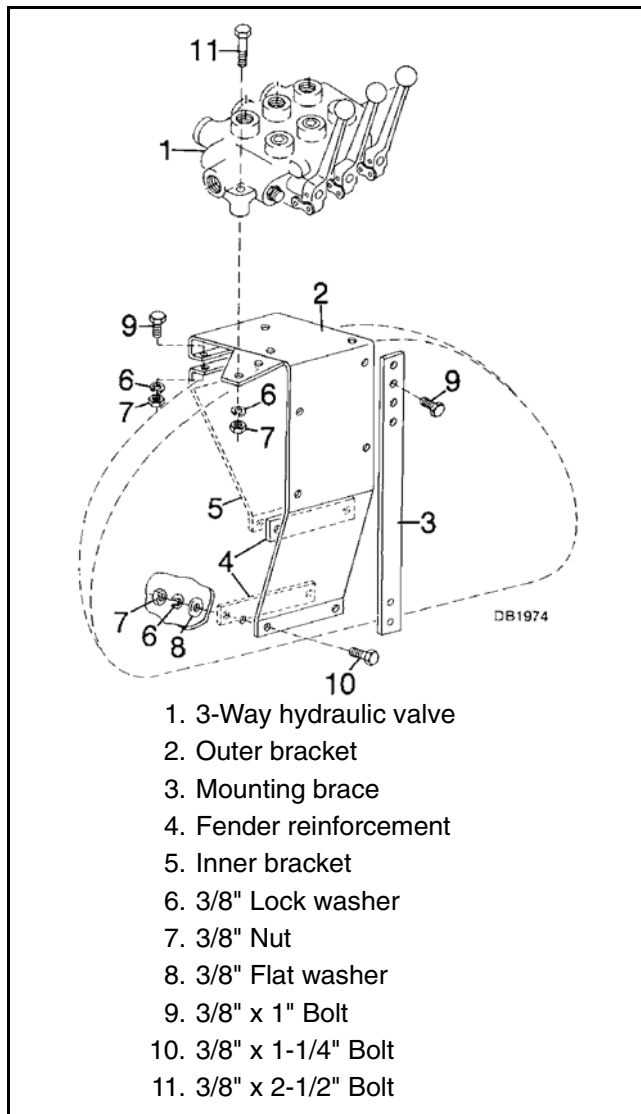


Figure 46. Fender Bracket & Woods 3-Spool Valve Installation

1. Locate outer valve bracket (2) on fender in a position that will place valve control handles convenient to the operator.

2. On a fender with a narrow top, install inner bracket (5) using bolts (9), lock washers (6) and nuts (7).
3. On a fender with a flat top, discard bracket (5) and mount bracket (2) directly on top of fender.
4. Mark and drill the four holes in fender. Install fender reinforcements (4) on underside of fender with bolts (10), washers (8), lock washers (6) and nuts (7).
5. Attach brace (3) if necessary to make bracket rigid. Use any hole in the bracket and any convenient hole on the tractor.
6. Position valve on top of bracket and attach with bolts (11), lock washers (6) and nuts (7). Just snug these bolts; do not over-tighten.
7. Attach control handles with chain connector links and pins. The ports next to control handles are plugged and will not be used.

3-Spool Valve to Tractor Connection

Refer to your tractor manual to determine where to connect the valve hoses to the tractor system.

The hoses and fittings supplied in the kit may not fit all tractors. If you are required to substitute any parts, make sure all fittings are of an approved type for the application. Only substitute high-pressure hoses for the high-pressure applications and low-pressure hoses for the low-pressure applications.

For open-center and closed-center systems, connect tank and pressure hoses to tractor tank and pressure fittings.

For open-center with power-beyond systems, connect the tank and pressure hoses to tractor tank and pressure fittings and the return hose to rockshaft or loader valve inlet.

BW1260 and BW1260L Counterweight Installation (Figure 47)

WARNING

■ The offset model is unstable without adequate counterweight. Use counterweight box loaded with 1190 lbs (539.8 kg) of steel.

■ Use a suitable lifting device of sufficient capacity. Use adequate personnel to handle heavy components.

This unit may be operated with only one wing - either right or left. With only one wing, the unit is unshielded and unstable. When electing to operate with one wing, you must install a counterweight box, available from your dealer. This box has a dual purpose: it substitutes

for the shielding and for the weight of the removed wing.

The counterweight must be installed in the following sequence and will require at least two people. A floor jack or a suitable lifting device will be helpful to align the hinges when installing the hinge pin.

1. Remove hinge pin (2) from center section.
2. Place brace (3) inside the front corner of the weight box (1) and secure with two cap screws (12), two flat washers (13), and two lock nuts (14).
3. Align mounting plate (5) with top two slots at rear of weight box. Secure with two cap screws (12), two flat washers (13), and two lock nuts (14). Do not tighten hardware at this point.
4. Align skid shoe (4) with holes on bottom and inside of weight box. Secure bottom with the hardware provided with skid shoe. Secure top with two cap screws (12), two flat washers (13) and two lock nuts (14).

5. Place weight box assembly adjacent to the center section and align hinge sections.
6. Insert hinge pin through the hinge sections. Install sleeve (6) on hinge pin behind deck hinge section to prevent weight box from sliding rearward. Secure hinge pin with two washers (10) and two spring pins (9).
7. Insert clevis pin (7) through lock-up lug on center section and lug on center of weight box. Secure with two cotter pins (8).
8. Insert self-tapping screw (16), lock washer (15), and flat washer (13) through upper rear hole in mounting plate and hole in side of center section. Tighten hardware from step 3.
9. Attach chain shield (17) to mounting plate with two cap screws (12), two flat washers (13), and two lock nuts (14).

Winch Kit Installation (Optional)

See page 85 for installation and operation instructions.

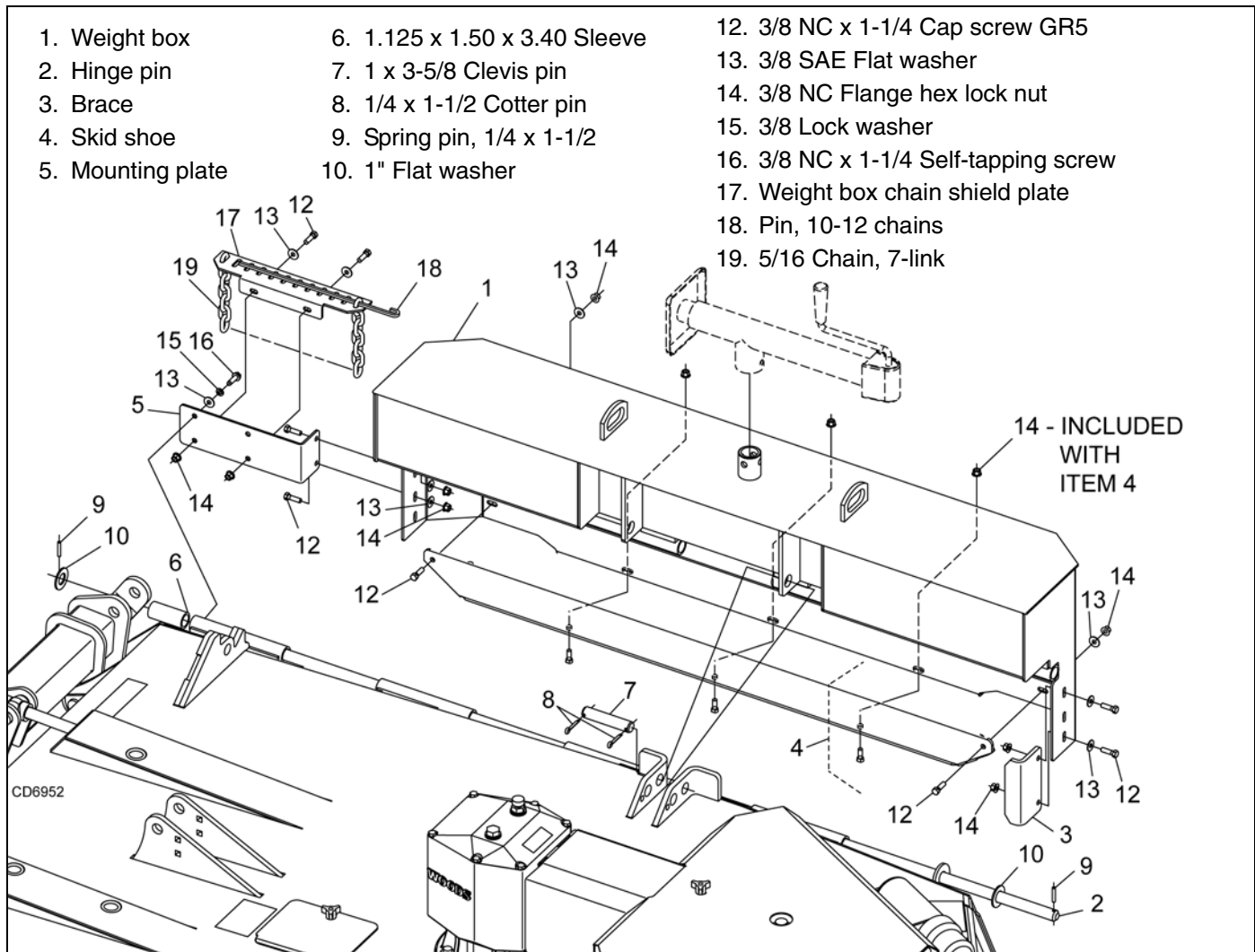


Figure 47. Counterweight Installation

DEALER CHECK LISTS

PRE-DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

NOTICE

■ **Gearbox was not filled at the factory. It must be serviced before operating cutter. (See Initial Oil Fill, page 35). Failure to service will result in damage to gearbox.**

Inspect cutter thoroughly after assembly to make sure it is set up properly before delivering it to the customer. The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory, corrections are made, or services are performed.

- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Check that shields and guards are properly installed and in good condition. Replace if damaged.
- ___ Check all bolts to be sure they are properly torqued.
- ___ Check wheel bolts for proper torque.
- ___ Check that all cotter pins are properly installed and secured.
- ___ Check that blades have been properly installed.
- ___ Check the level of gearbox fluids before delivery. Service, if required. Apply sealant to vent plug threads.
- ___ Check and grease all lubrication points as identified in **LUBRICATION, page 20**.

DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

- ___ Show customer how to make adjustments and select proper PTO speed.
- ___ Show customer how to make sure driveline is properly installed and that spring-activated locking pin or collar slides freely and is seated in groove on tractor PTO shaft.

- ___ Show customer how to determine the turning limits of the CV PTO driveline.
- ___ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- ___ Make customer aware of optional equipment available so that customer can make proper choices as required.
- ___ Instruct customer how to lubricate and explain importance of lubrication.
- ___ 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.
- ___ Explain to customer that when transporting the cutter, the wing and center sections should be raised and their respective transport bars installed and pinned in place.
- ___ 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 the potential crushing hazards of going underneath raised equipment. Instruct that before going underneath to disconnect the driveline, securely block up all corners with jackstands and to follow all instructions in the **BLOCKING METHOD, page 19** of the operator's manual. Explain that blocking up prevents equipment dropping from hydraulic leak down, hydraulic system failures or mechanical component failures.
- ___ Point out all guards and shields. Explain their importance and the safety hazards that exist when not kept in place and in good condition.
- ___ Explain to customer that when towing on a public road to comply with all state and local lighting/marking laws and to use a safety tow chain.

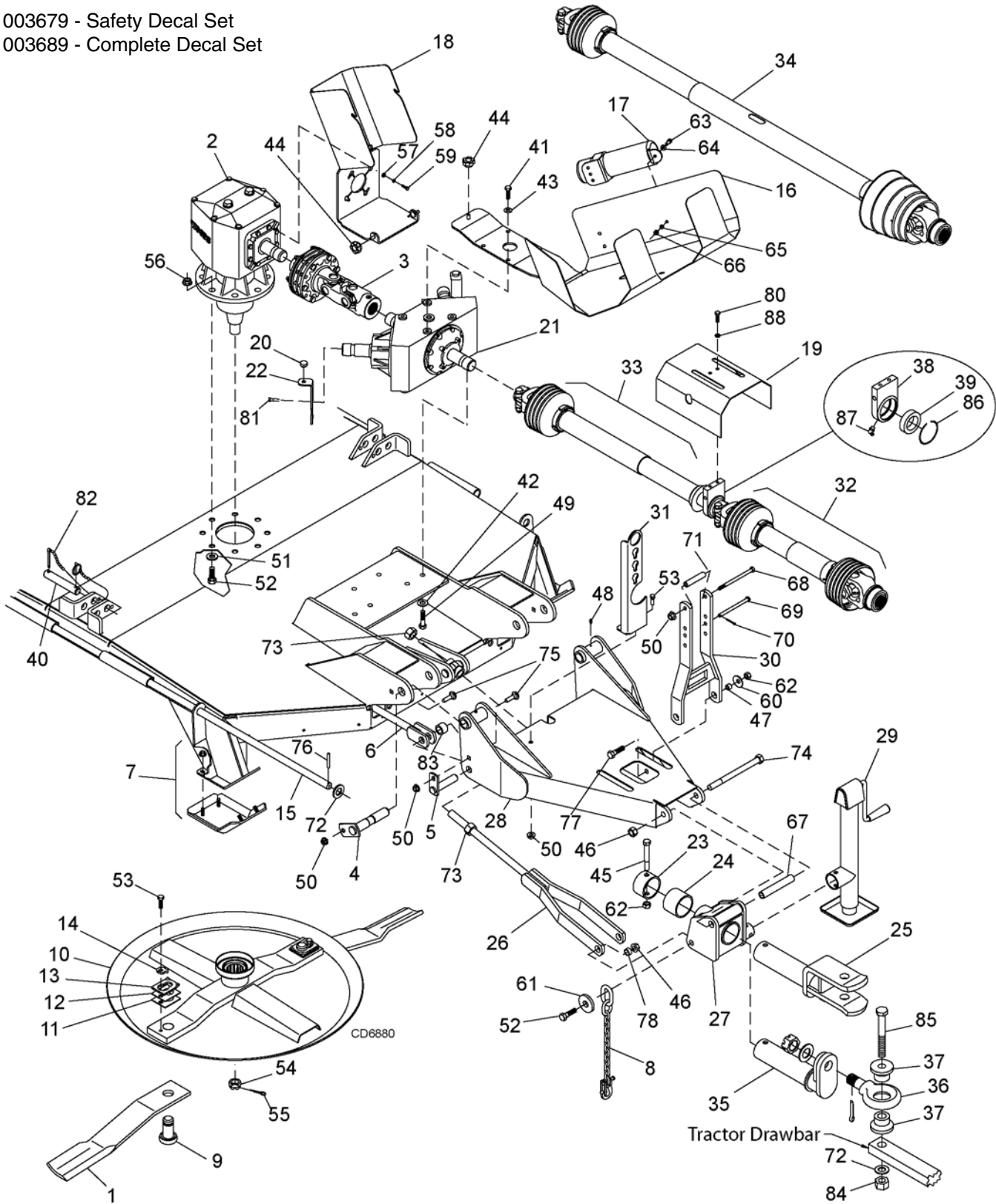
NOTES

BATWING **BW1800, BW1800Q** **BW1260, BW1260Q**

CENTER ASSEMBLY (FRONT SECTION)	52 - 53
CENTER ASSEMBLY (REAR SECTION)	54
SPLITTER GEARBOX ASSEMBLY	55
WING ASSEMBLY	56 - 57
WING & CENTER GEARBOX ASSEMBLY	58 - 59
SPRING WHEEL YOKE ASSEMBLY 3/4" (OPTIONAL)	60
SPRING WHEEL YOKE ASSEMBLY 1" (OPTIONAL)	61
WHEEL & TIRE ASSEMBLY	62
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CENTER ASSEMBLY (FRONT SECTION)

1003679 - Safety Decal Set
1003689 - Complete Decal Set



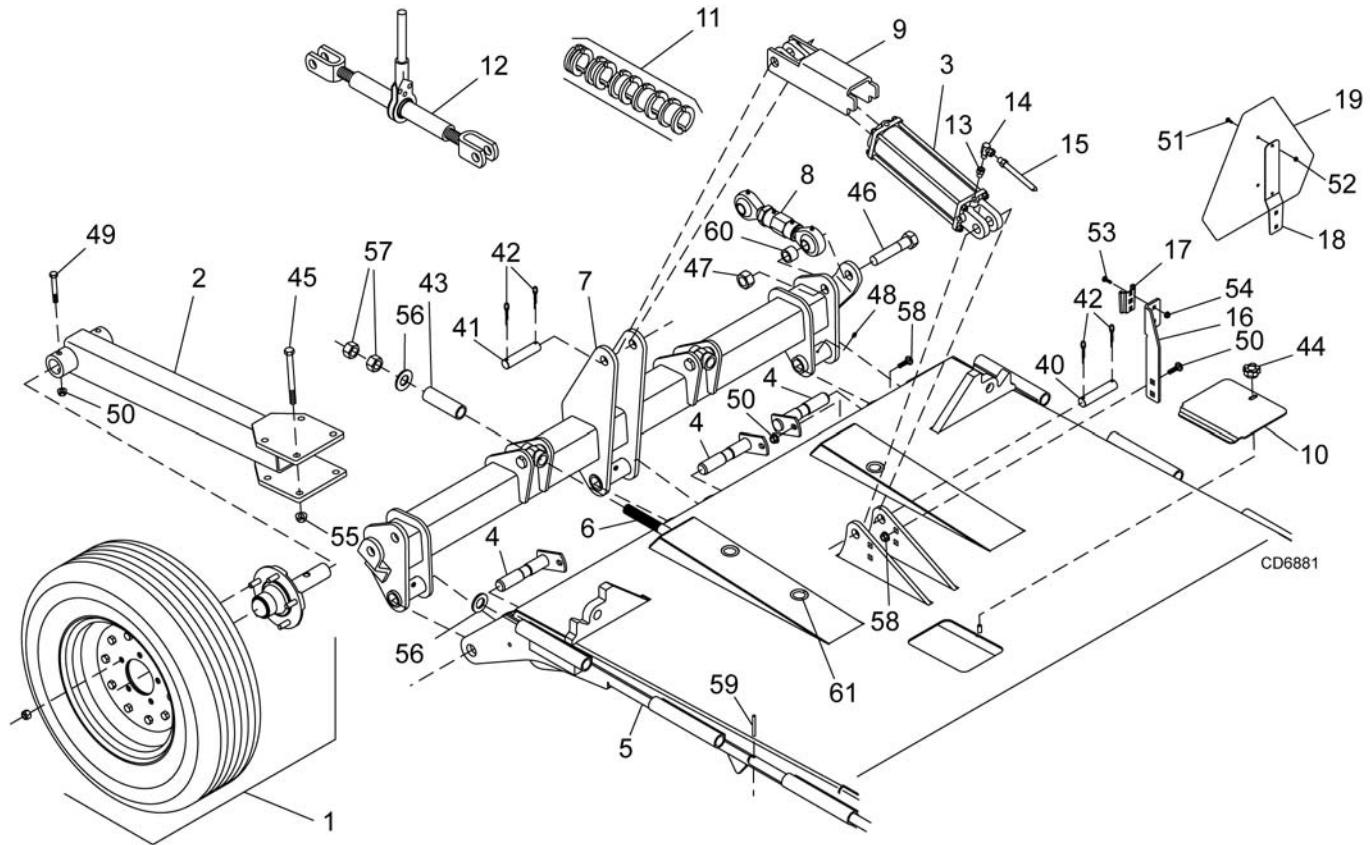
52 Parts

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CENTER FRAME ASSEMBLY PARTS LIST (FRONT SECTION)

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	19160KT	2	Blade CCW (for Center & Right wing)	40	8345		1 x 4.08 Clevis pin
2	----	1	Gearbox (see page 58)	41	25475	*	1/2 NC x 1 Hex head cap screw GR5
3	1019106	1	Driveline complete 2400, 1.75-20 6.0 w/ clutch (see page 65)	42	57817		5/8 SAE Flat washer, hardened
4	1017055	1	Pivot pin 1-1/4	43	3598	*	1/2 Flat washer
5	1017045	1	Pivot pin 1	44	66840		3/8 NC 3-Prong knob
6	1017099	2	Attitude rod	45	3097	*	5/8 NC x 4-1/2 HHCS GR5
7	1017138	2	Front skid with hardware	46	302207		3/4 NC Flange lock nut
8	19407	1	Safety chain	47	1791		5/8 x 1 x 9/16 HT Sleeve
9	1008190	2	1-1/2 Blade pin kit (includes 13 & 14)	48	12296	*	1/4-28 Grease fitting
10	1017070	1	Crossbar assembly	49	300451	*	5/8 NC x 1-1/4 HHCS GR5 ZP
11	10520	2	Shim, 18 GA 1-1/2 blade pin	50	11900	*	1/2 NC Flange lock nut
12	13946	2	Shim, 20 GA 1-1/2 blade pin	51	57798		3/4 Flat hardened washer
13	32603	2	Keyhole plate - special	52	30068	*	3/4 NC x 2-1/2 HHCS GR5
14	32604	2	Blade pin lock clip - special	53	6100	*	1/2 NC x 1-1/4 HHCS GR5
15	1003495	2	Hinge pin	54	1019606	1	M36 Hex flange castle nut
16	1017190	1	Front shield with hinge	55	-----	*	3/16 x 3 Cotter pin
17	1003828	1	Manual tube	56	2371	*	3/4 NC Lock nut
18	1017180	1	Rear shield with hinge	57	35155	*	5/16 SAE Flat washer
19	1011760	1	Carrier bearing shield	58	2472	*	5/16 Lock washer
20	38436	2	Rubber bumper	59	24801	*	M8 x 1.25 x 20 mm HHCS
21	----	1	Splitter gearbox (see page 55)	60	10635		5/8 x 1-3/4 x 14 GA Cup washer
22	1017141	2	Shield standoff	61	8424		3/4 x 2 x 3/8 Flat washer
23	1017218	1	Retainer	62	6239	*	5/8 NC Hex lock nut
24	1017217	1	Spacer	63	14562	*	5/16 NC x 1 HHCS GR5
25	1017240	1	Clevis	64	4378	*	5/16 SAE Flat washer
26	1017230	1	Tongue level link	65	2472	*	5/16 Lock washer
27	1017220	1	Tongue level bracket	66	4529	*	5/16 NC Hex nut
28	1017210	1	Tongue	67	1017232		3/4 x 1 x 6-1/16 HT Sleeve
29	52232	1	Parking jack	68	12305	*	1/2 NC x 5-1/2 HHCS GR5
30	51618	1	H-Frame	69	404		1/2 x 5-3/4 Clevis pin
31	52442	1	Hydraulic hose holder	70	1256	*	3/16 x 1 Cotter pin
32	57282	1	Front 2/3 of 3-joint drive (see page 63) 540 RPM only - or -	71	7035		Pipe, 1/2 schedule 40 x 3.56
32	1003480	1	Front 2/3 of 3-joint drive (see page 63) 1000 RPM 1-3/8 21-spline only	72	1863	*	1" Flat washer
33	1004932	1	Telescoping shaft (see page 64)	73	3132	*	1" NC Hex nut
34	1004935	1	CV Drive (see page 67) 540 RPM 1-3/8 6-spline only - or -	74	301014		3/4 NC x 9 HHCS GR5
34	1004936	1	CV Drive (see page 67) 1000 RPM 1-3/8 21-spline only - or -	75	29893	*	1/2 NC x 1-1/2 Carriage screw GR5
34	1019100	1	CV Drive (see page 67) 1000 RPM 1-3/4 20-spline only (before S/N 1050540) - or -	76	66016	*	Spring pin, 1/4 x 1-1/2
34	1021105	1	CV Drive (see page 63) 1000 RPM 1-3/4 20-spline only (after S/N 1050541)	77	902	*	5/8 NC x 2 Hex head cap screw GR5
35	1017250	1	Pintle hitch (optional)	78	13087		3/4 x 1 x 9/16 HT Sleeve
36	11267	1	Pintle ring (includes washer, nut, and cotter pin)	79	11854	*	5/8 NC x 2-1/2 HHCS GR8
37	1016969	2	Pintle bushing	80	839	*	3/8 NC x 1 HHCS GR5
38	13132		3-Joint bearing housing (includes 39, 86, 87)	81	14562		5/16 NC x 1 HHCS GR5
39	13133		Bearing	82	30695		Klik pin, chain & cotter assembly
				83	65130		Pipe, 1 schedule 40 x 1
				84	34279		1" NC Hex lock nut
				85	15278		1 NC x 7-1/2 HHCS GR5
				86	12128		Snap ring
				87	2985		Grease fitting
				88	838	*	3/8 Lock washer
				89	1028824	NS	Spacer, 5/16 blade pin (must use with blade pin #32602)
						NS	Not Shown
						*	Standard hardware, obtain locally

CENTER FRAME ASSEMBLY (REAR SECTION)



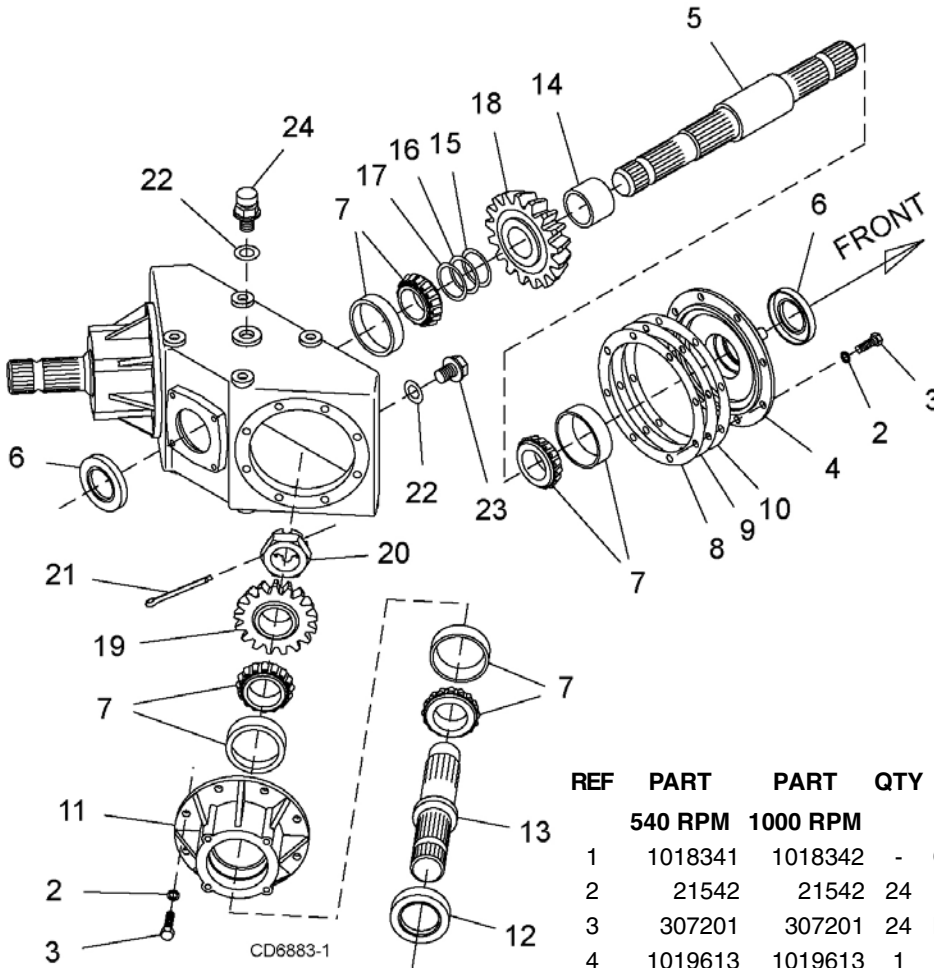
REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	----	2	Tire & hub (see page 62)	41	8347	1	1 x 5.08 Clevis pin
2	1017150	2	Solid wheel arm - or -	42	1285	*	1/4 x 1-1/2 Cotter pin
2	----	2	Spring wheel arm (see page 60)	43	27267		Pipe, 1" schedule 40 x 3.75
3	10475	1	Hydraulic cylinder 3-1/2 (see page 80)	44	66840		3/8 NC 3-Prong knob
4	1017055	3	Pivot pin 1-1/4	45	2377		3/4 NC x 6 HHCS GR5
5	1003495	2	Hinge pin	46	34278		1 NC x 5 HHCS GR5
6	1017099	2	Attitude rod	47	34279		1 NC Lock nut
7	1017140	1	Center wheel yoke arm	48	12296	*	1/4-28 Grease fitting
8	1003690	1	Adjustable link	49	3489	*	1/2 NC x 3 HHCS GR5
9	1004814	1	Transport lock-up	50	11900	*	1/2 NC Flange locknut
10	57050	1	Access hole cover	51	1282	*	1/4 NC x 1/2 Round head screw
11	24098	1	1-1/4 Cylinder stroke control kit (optional)	52	5288	*	1/4 NC Nut
12	23650	1	Ratchet adjustment link bundle - (optional)	53	62532	*	5/16 NC x 1/2 Carriage screw GR5
13	11893	1	1/2 x 1/4 Pipe reducer bushing	54	14139	*	5/16 NC Flange lock nut
14	10290	1	1/4 x 1/4 Elbow w/ 1/16 restricter	55	2371	*	3/4 NC Lock nut
15	14552	1	1/4 x 1/4 x 200 Hose	56	1863	*	1" Flat washer
16	1017143	1	SMV Bracket	57	3132	*	1" NC Hex nut
17	62484	1	SMV Socket	58	29893	*	1/2 NC x 1-1/2 Carriage screw GR5
18	1004251	1	SMV Bracket	59	66016	*	Spring pin, 1/4 x 1-1/2
19	24611	1	SMV Sign	60	33647		Sleeve 1.0 x 1.5 x .75
40	8346		1 x 4.58 Clevis pin	61	1017133	6	Grommet, .25 x .625 x .875

* Standard hardware, obtain locally

54 Parts

(Rev. 12/5/2008)
MAN0500 (Rev. 5/11/2007)

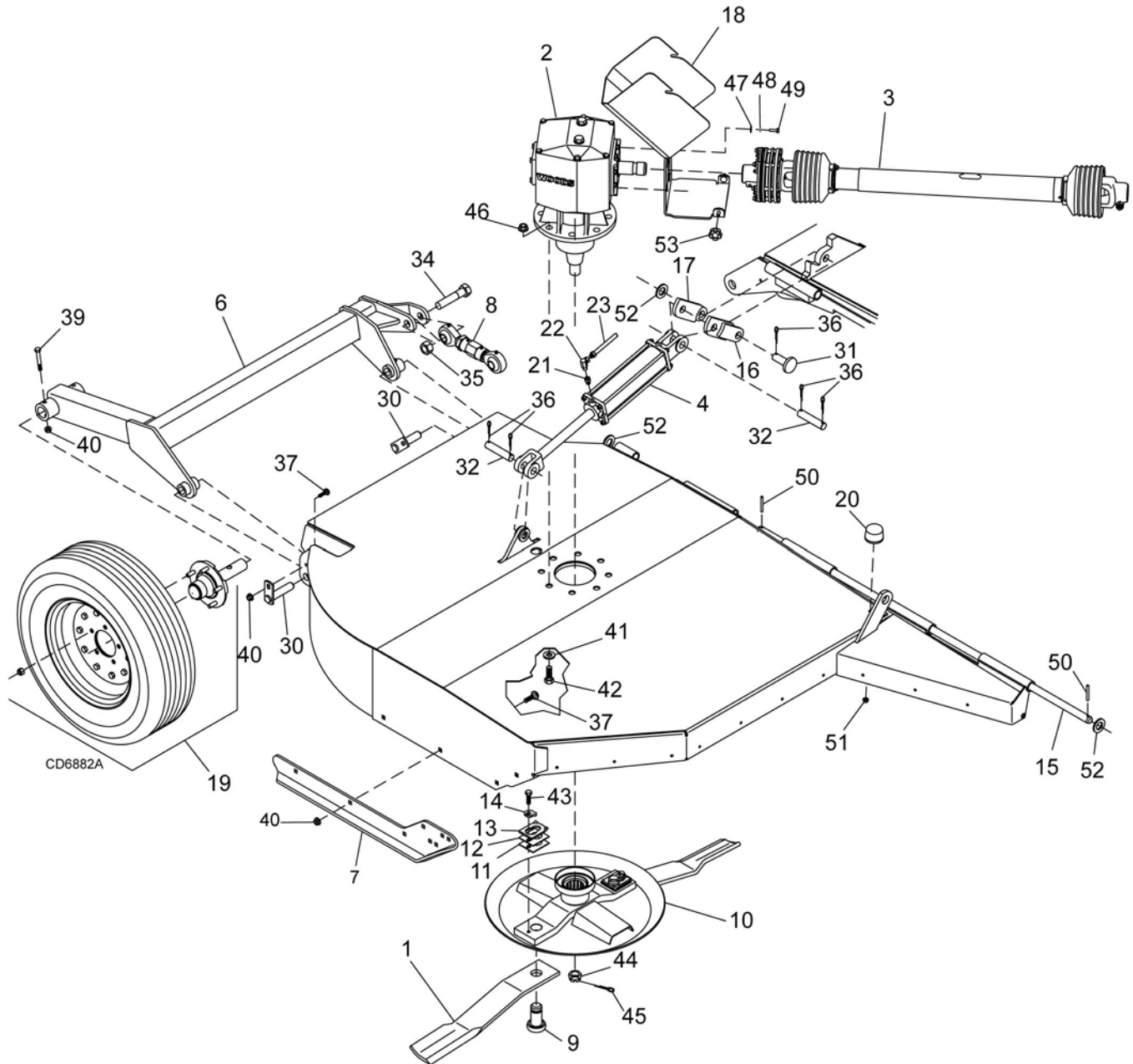
SPLITTER GEARBOX ASSEMBLY



REF	PART	PART	QTY	DESCRIPTION
	540 RPM 1000 RPM			
1	1018341	1018342	-	Complete splitter gearbox
2	21542	21542	24	10 mm Lock washer
3	307201	307201	24	M10-1.5 x 30 HHCS
4	1019613	1019613	1	Input cap
5	1019575	1019575	1	Input shaft
6	1019589	1019589	2	Input oil seal
7	1019587	1019587	6	Bearing assembly (cup and cone)
8	1019592	1019592	A/S	Gasket .15 mm
9	1019593	1019593	A/S	Gasket .25 mm
10	1019594	1019594	A/S	Gasket .45 mm
11	1019612	1019612	2	Hub cap
12	1019590	1019590	2	Oil seal
13	1019576	1019576	2	Output shaft
14	1019603	1019603	1	Spacer
15	1019609	1019609		Shim .30 mm
16	1019608	1019608		Shim .40 mm
17	1019610	1019610		Shim .50 mm
18	1019580	1019579	1	Center gear
19	1019579	1019580	2	Wing gear
20	1019605	1019605	2	Bearing adjustment nut
21	-----	-----	2	1/8 x 2-1/2 Cotter pin
22	1009081	1009081	2	Sealing washer
23	1019602	1019602	1	M18 x 1.5 Level plug
24	1019600	1019600	1	M18 x 1.5 Breather plug

A/S As required

WING ASSEMBLY



56 Parts

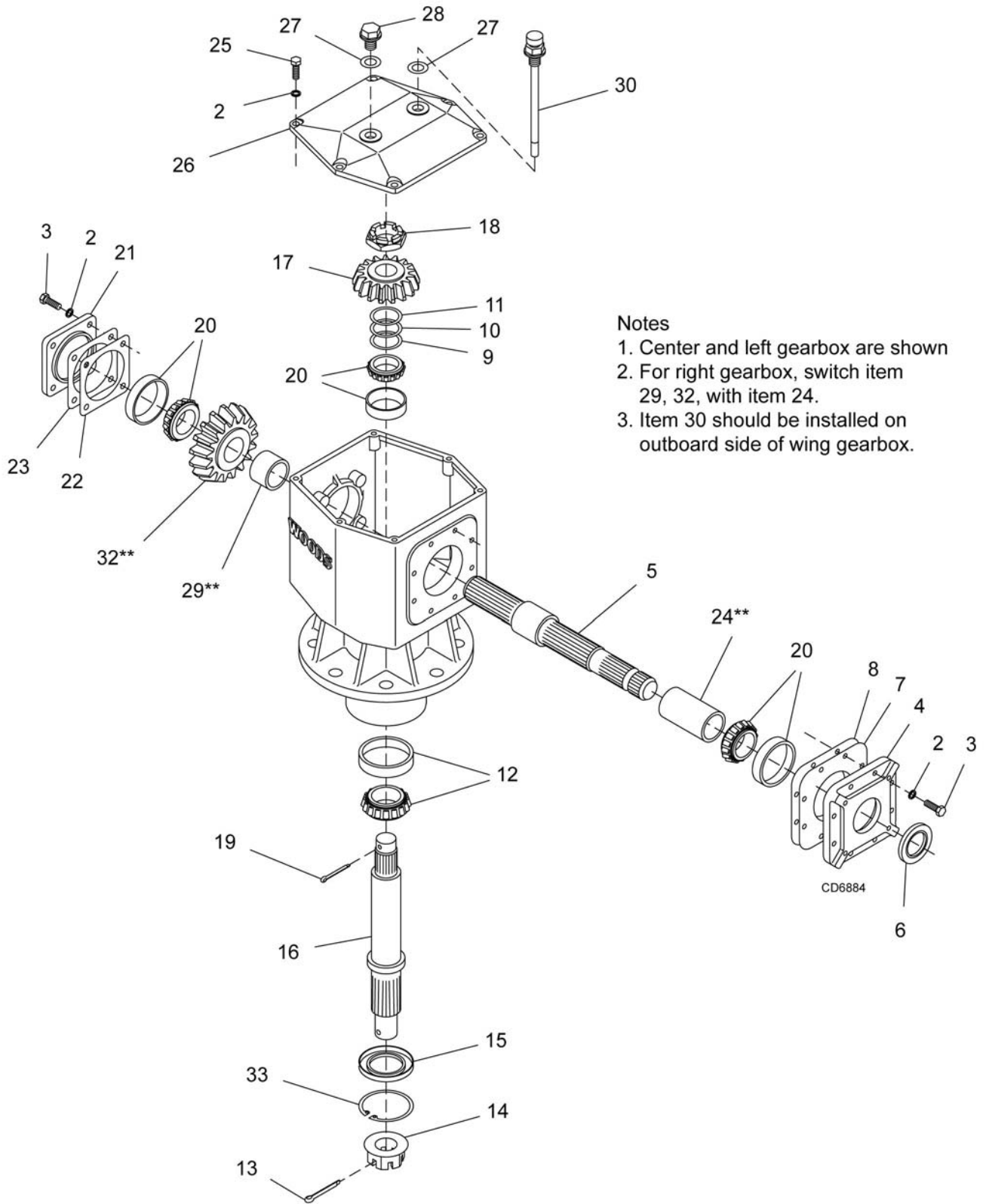
(Rev. 5/1/2009)
MAN0500 (Rev. 5/11/2007)

WING ASSEMBLY PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	19160KT	2	Blade CCW (for Right wing)	19	-----	1	Tire & hub (see page 62)
1	19161KT	2	Blade CW (for Left wing) (not shown)	20	62440	1	Rubber bumper
2	----	1	Gearbox (see page 58)	21	11893	1	1/2 x 1/4 Pipe reducer bushing
3	1017209	1	Driveline complete 2500, 45.7 x 64.4 (see page 66)	22	10290	1	1/4 x 1/4 Elbow w/ 1/16 restricter
4	26131	1	Hydraulic cylinder 3-1/2 x 10 (see page 80) - or -	23	11817	1	1/4 x 1/4 x 230 Hose
4	1031166	1	Hydraulic cylinder 3 x 10 (see page 80)	30	1017045		Wing pivot pin
5	----	1	Tire & hub (see page 62)	31	46605		Clevis pin 1 x 2.26
6	1017270	1	Wing solid wheel yoke arm (for Right wing) - or -	32	1631		1 x 3-5/8 Clevis pin
6	1017170	1	Wing solid wheel yoke arm (for Left wing) (not shown) - or -	33	8347		1 x 5.08 Clevis pin
6	-----	1	Wing spring wheel yoke arm (for Right wing) (not shown) (see page 60) - or -	34	34278		1 NC x 5 HHCS GR5
6	-----	1	Wing spring wheel yoke arm (for Left wing) (not shown) (see page 60)	35	34279		1 NC Lock nut
7	1026996	1	Side skid (for Right wing) - or -	36	1285	*	1/4 x 1-1/2 Cotter pin
7	1026997	1	Side skid (for Left wing) (not shown)	37	29893	*	1/2 NC x 1-1/2 Carriage screw GR5
8	1003690	1	Adjustable link	38	12296	*	1/4-28 Grease fitting
9	1008190	2	1-1/2 Blade pin kit (includes 13 & 14)	39	3489	*	1/2 NC x 3 HHCS GR5
10	1017060	1	Crossbar assembly	40	11900	*	1/2 NC Flange locknut
11	10520	2	Shim, 18 GA 1-1/2 blade pin	41	57798		3/4 Flat hardened washer
12	13946	2	Shim, 20 GA 1-1/2 blade pin	42	30068	*	3/4 NC x 2-1/2 HHCS GR5
13	32603	2	Keyhole plate - special	43	6100	*	1/2 NC x 1-1/4 HHCS GR5
14	32604	2	Blade pin lock clip - special	44	1019606	1	M36 Hex flange castle nut
15	1003495	1	Hinge pin	45	-----	*	3/16 x 3 Cotter pin
16	1017075	1	Cylinder link	46	2371	*	3/4 NC Lock nut
17	1017095	1	Cylinder link	47	35155	*	5/16 SAE Flat washer
18	1017180	1	Clutch shield with hinge	48	2472	*	5/16 Lock washer
				49	24801	*	M8 x 1.25 x 20 mm HHCS
				50	66016	*	Spring pin, 1/4 x 1-1/2
				51	14350	*	3/8 NC Flange locknut
				52	1863	*	1" Flat washer
				53	66840		3/8 NC 3-Prong knob
				54	1028824		Spacer, 5/16 blade pin (must use with blade pin #32602)

* Standard hardware, obtain locally

WING & CENTER GEARBOX ASSEMBLY



Notes

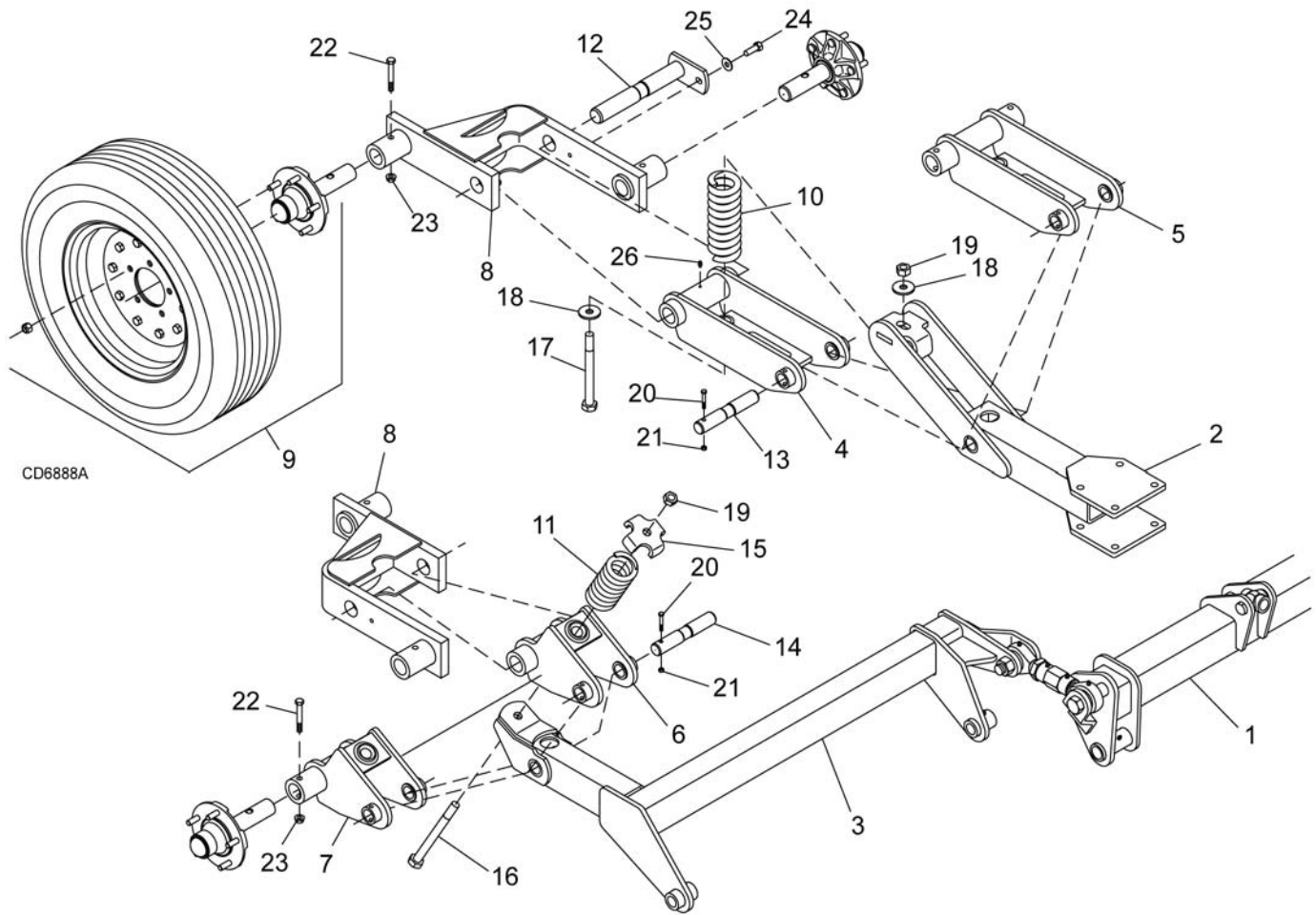
1. Center and left gearbox are shown
2. For right gearbox, switch item 29, 32, with item 24.
3. Item 30 should be installed on outboard side of wing gearbox.

WING & CENTER GEARBOX ASSEMBLY PARTS LIST

REF	540 RPM			1000 RPM			QTY	DESCRIPTION
	Left Wing	Center	Right Wing	Left Wing	Center	Right Wing		
1	1018347	1018347	1018346	1018345	1018344	1018343	-	Complete gearbox
2	21542	21542	21542	21542	21542	21542	18	10 mm Lock washer
3	307201	307201	307201	307201	307201	307201	12	M10 x 1.5P x 30 mm HHCS
4	1019614	1019614	1019614	1019614	1019614	1019614	1	Input cap
5	1019577	1019577	1019577	1019577	1019577	1019577	1	Input shaft
6	1019589	1019589	1019589	1019589	1019589	1019589	1	Input seal
7	1019595	1019595	1019595	1019595	1019595	1019595	A/S	Input gasket .10 mm
8	1019596	1019596	1019596	1019596	1019596	1019596	A/S	Input gasket .25 mm
9	1019609	1019609	1019609	1019609	1019609	1019609	A/S	Shim .30 mm
10	1019608	1019608	1019608	1019608	1019608	1019608	A/S	Shim .40 mm
11	1019610	1019610	1019610	1019610	1019610	1019610	A/S	Shim .50 mm
12	1019588	1019588	1019588	1019588	1019588	1019588	1	Bearing assembly (cup & cone)
13	-----	-----	-----	-----	-----	-----	1	3/16 x 3 Cotter pin
14	1019606	1019606	1019606	1019606	1019606	1019606	1	M36 Hex flange castle nut
15	1019591	1019591	1019591	1019591	1019591	1019591	1	Output oil seal
16	1019578	1019578	1019578	1019578	1019578	1019578	1	Output shaft
17	1019581	1019581	1019581	1019585	1019584	1019585	1	Output gear
18	1019605	1019605	1019605	1019605	1019605	1019605	1	Bearing adjustment nut
19	-----	-----	-----	-----	-----	-----	1	1/8 x 2-1/2 Cotter pin
20	1019587	1019587	1019587	1019587	1019587	1019587	3	Bearing assembly (cup & cone)
21	1019615	1019615	1019615	1019615	1019615	1019615	1	Blank adjustment cap
22	1019598	1019598	1019598	1019598	1019598	1019598	A/S	Blank cap gasket .10 mm
23	1019599	1019599	1019599	1019599	1019599	1019599	A/S	Blank cap gasket .25
24	1019604	1019604	**1019604	1019604	1019604	**1019604	1	Bearing spacer
25	307205	307205	307205	307205	307205	307205	6	M10 x 1.5P x 25 mm HHCS
26	1019616	1019616	1019616	1019616	1019616	1019616	1	Inspection cover cap
27	1009081	1009081	1009081	1009081	1009081	1009081	2	Sealing washer
28	1019601	1019601	1019601	1019601	1019601	1019601	2	M18 x 1.5P Head plug
29	1019603	1019603	**1019603	1019603	1019603	**1019603	1	Input shaft spacer
30	1019607	1019607	1019607	1019607	1019607	1019607	1	Dipstick breather assembly
32	1019582	1019582	**1019582	1019586	1019583	**1019586	1	Input gear
33	1019617	1019617	1019617	1019617	1019617	1019617	1	Retaining ring

** Input gear (32) with input shaft spacer (29) is placed on opposite end of input shaft from bearing spacer (24)

3/4" SPRING WHEEL YOKE ASSEMBLY (OPTIONAL)



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1017140	1	Center wheel yoke arm	12	1017065	4	1-9/16 Flag pin
2	1017280	2	Center spring wheel yoke arm	13	1017149	2	1.25 x 8.85 Pivot pin
3	1017260	1	Wing spring wheel yoke arm (for Right wing) - or -	14	52087	2	1.25 x 7.56 Pivot pin
3	1017160	1	Wing spring wheel yoke arm (for Left wing) (not shown)	15	39097	2	Square washer
4	1017267	2	Lower spring arm - tandem - or -	16	39160	2	3/4 NC x 8 HHCS GR5
5	1017266	2	Lower spring arm	17	52196	2	3/4 NC x 13 HHCS GR5
6	1017269	2	Lower spring arm, wing - tandem - or -	18	8424	4	3/4 x 2 x 3/8 Washer
7	1017268	2	Lower spring arm, wing	19	302207	4	3/4 NC Flange locknut
8	1017265	4	Walking beam	20	10509	*	5/16 NC x 2-1/2 HHCS GR5
9	----		Tire & hub (see page 62)	21	14139	*	5/16 NC Flange locknut
10	19710	2	Compression spring 3.25 x .69 x 9.5	22	3489	*	1/2 NC x 3 HHCS GR5
11	13316	2	Compression spring 3.0 x .50 x 6.2	23	11900	*	1/2 NC Flange locknut
				24	6100	*	1/2 NC x 1-1/4 HHCS GR5
				25	854	*	1/2 SAE Flat washer
				26	12296	*	1/4-28 Grease fitting

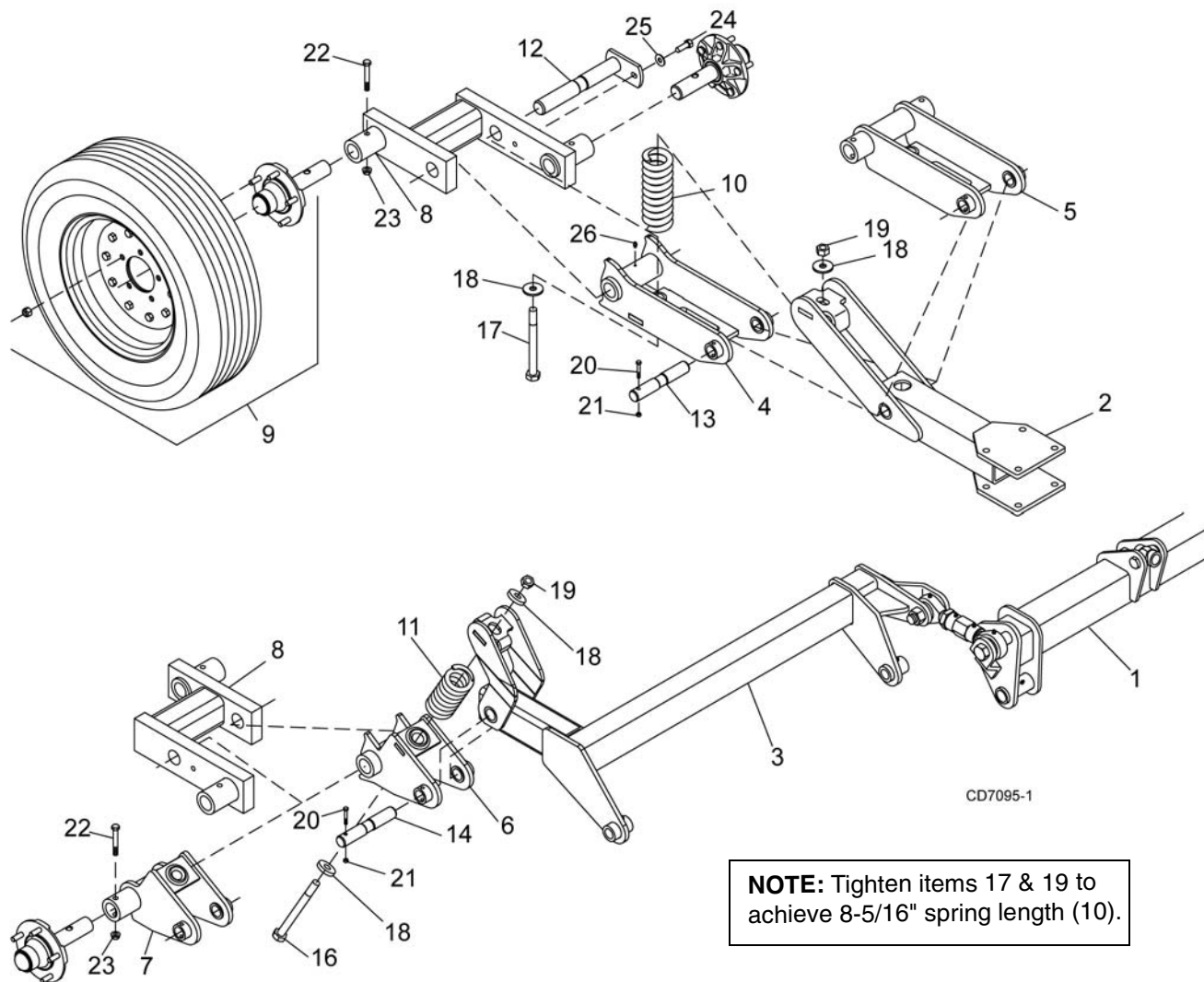
NOTE: Tighten items 17 & 19 to achieve 8-5/16" spring length (10).

* Standard hardware, obtain locally

60 Parts

MAN0500 (Rev. 5/11/2007)

1" SPRING WHEEL YOKE ASSEMBLY (OPTIONAL)



CD7095-1

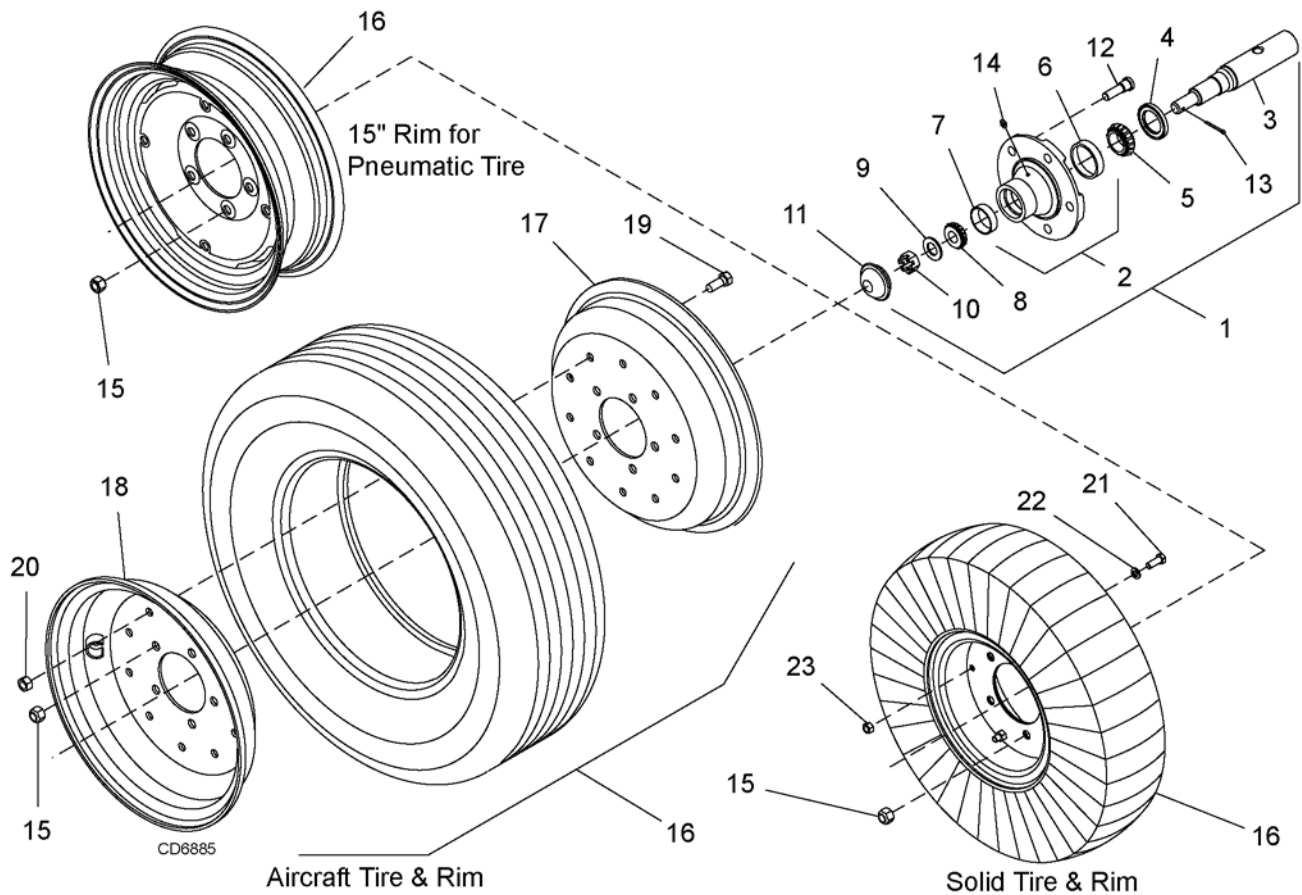
NOTE: Tighten items 17 & 19 to achieve 8-5/16" spring length (10).

REF	PART	QTY	DESCRIPTION
1	1017140	1	Center wheel yoke arm
2	1024109	2	Center spring wheel yoke arm
3	1023174	1	Wing spring wheel yoke arm (for Right wing) - or -
3	1024101	1	Wing spring wheel yoke arm (for Left wing) (not shown)
4	1023170	2	Lower spring arm - tandem - or -
5	1017266	2	Lower spring arm
6A	1024102	1	Lower spring arm, wing - tandem, right - or -
6B	1024640	1	Lower spring arm, wing - tandem, left (not shown)
7	1024108	2	Lower spring arm, wing
8	1023166	4	Walking beam
9	----		Tire & hub (see page 62)
10	19710	2	Compression spring 3.25 x .69 x 9.5
11	1032100	2	Spring, cmp 3.25x.56x7.3x1113

REF	PART	QTY	DESCRIPTION
12	1017065	4	1-9/16 Flag pin
13	1017149	2	1.25 x 8.85 Pivot pin
14	52087	2	1.25 x 7.56 Pivot pin
16	15087	2	1 NC x 9 HHCS GR5
17	1024122	2	1 NC x 13 HHCS GR5
18	11920	8	1 x 1-7/8 x 1/4 Washer
19	34279	4	1 NC Nut lock
20	10509	*	5/16 NC x 2-1/2 HHCS GR5
21	14139	*	5/16 NC Flange locknut
22	3489	*	1/2 NC x 3 HHCS GR5
23	11900	*	1/2 NC Flange locknut
24	6100	*	1/2 NC x 1-1/4 HHCS GR5
25	854	*	1/2 SAE Flat washer
26	12296	*	1/4-28 Grease fitting

* Standard hardware, obtain locally

WHEEL AND TIRE ASSEMBLY

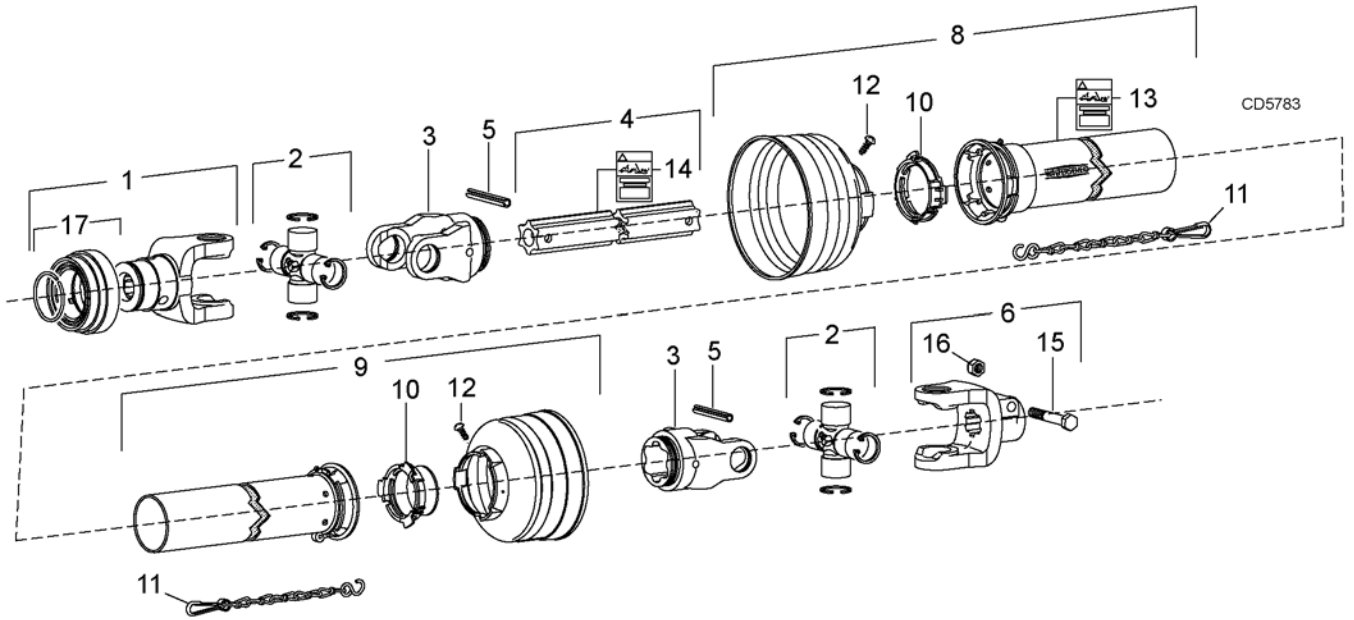


REF	PART	QTY	DESCRIPTION
1	1017050	1	Heavy hub assembly (includes items 1 through 15)
2	1017034	1	Heavy wheel hub with cups (includes items 6,7,14)
3	1017033	1	Axle
4	1017027	1	Seal
5	1017028	1	Bearing cone
6	1017036	1	Bearing cup
7	1017037	1	Bearing cup
8	1017029	1	Bearing cone
9	1017031	1	Washer
10	1017032	1	Castle nut
11	1017035	1	Hub cap
12	1017038	5	Stud
13	1017069	1	Cotter pin
14	1017067	1	Grease fitting
15	35317	5	Nut, lug 1/2 NF
16	1017088	1	15" Rim for pneumatic tire - 5 bolt -or-
16	1017040	1	6.00 x 9 Solid tire, rim & hardware - 5 bolt -or-
16	1017080	1	22 x 6.6 x 10 Aircraft tire, rim & hardware - 5 bolt -or-
16	1017080F	1	22 x 6.6 x 10 Aircraft tire, rim & hardware, foam filled - 5 bolt -or-

REF	PART	QTY	DESCRIPTION
16	1017030	1	29 x 9 x 15 Aircraft tire, rim & hardware - 5 bolt -or-
16	1028820F	1	24 x 7.25 x 12 Wheel asy foam - 5 bolt
17	1017081	1	10.0 x 5.5 Rim half (for 22" aircraft wheel only) -or-
17	1017026	1	15.0 x 6.0 Rim half (for 29" aircraft wheel only) -or-
17	1028821	1	12.0 x 6.0 Rim half (for 24" aircraft wheel only)
18	1017082	1	10.0 x 5.5 Rim half w/ valve hole (for 22" aircraft wheel only) -or-
18	1017025	1	15.0 x 6.0 Rim half w/ valve hole (for 29" aircraft wheel only) -or-
18	1028822	1	12.0 x 6.0 Rim half w/valve hole (for 24" aircraft wheel only)
19	6100	*	1/2 NC x 1-1/4 HHCS GR5
20	765	*	1/2 NC Locknut
21	19887	*	3/8 NC x 1 HHCS GR8
22	838	*	3/8 Standard lock washer
23	835	*	3/8 NC Hex nut
-	1015834	1	22 x 6.6 x 10 Inner tube (for 22" aircraft wheel only)
-	1015833	1	29 x 9 x 15 Inner tube (for 29" aircraft wheel only)
-	1017042	2	Rim half for 6 x 9 solid tire

* Standard hardware, obtain locally

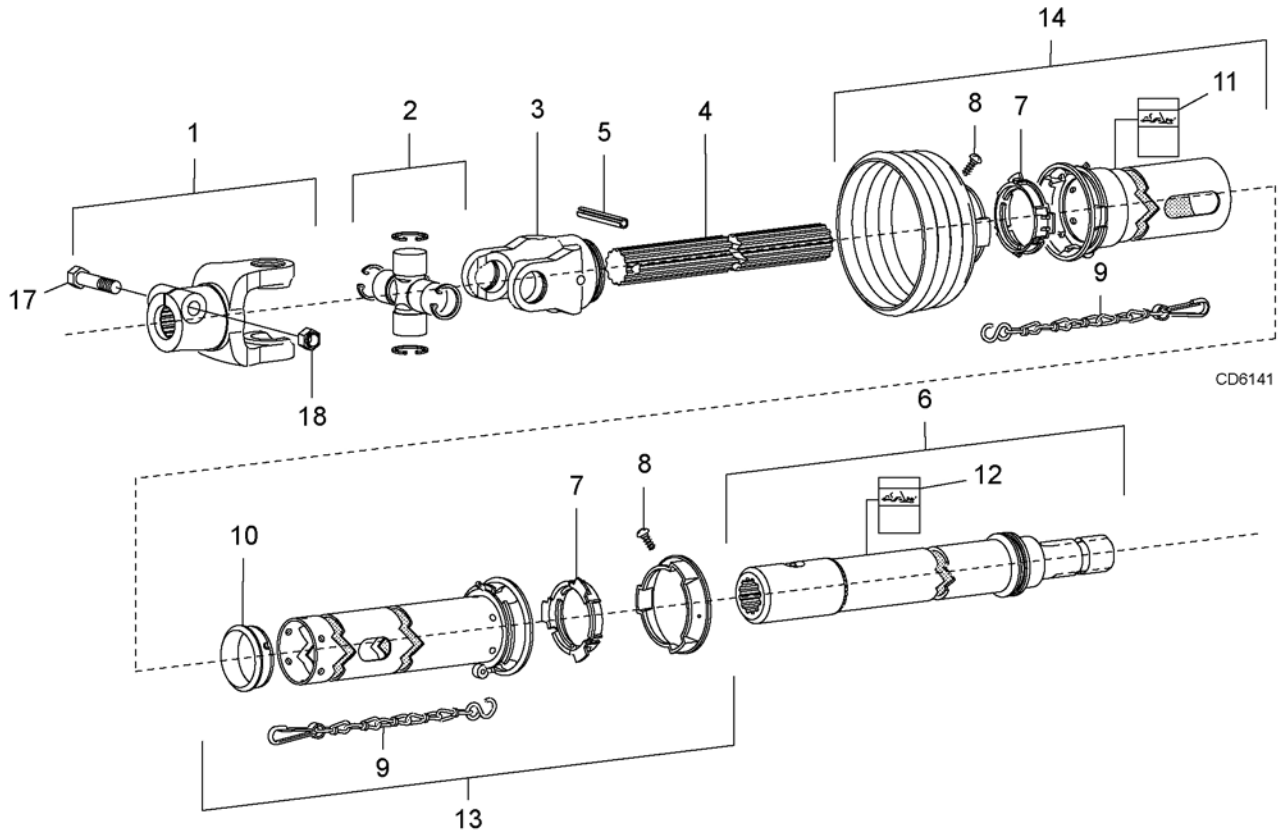
FRONT 3-JOINT DRIVE ASSEMBLY



REF	PART	QTY	DESCRIPTION
A	1003480	1	Complete 1000 RPM (21 spline)
A	57282	1	Complete 540 RPM (6 spline)
1	40563	1	Yoke 1-3/8 - 6 spline (540 RPM)
1	40757	1	Yoke 1-3/8 - 21 spline (1000 RPM)
2	40566	2	Cross & bearing
3	40751	2	Inboard yoke
4	40753	1	Outer profile
5	40765	2	Spring pin 10 x 90
6	57299	1	Yoke 1-1/2 - 23 spline I.C.
8	40727	1	Outer shield

REF	PART	QTY	DESCRIPTION
9	40728	1	Inner shield
10	40766	2	Bearing ring SC25
11	40777	2	Anti-rotation chain
12	40778	2	Screw
13	18864	1	Danger decal, rotating driveline
14	33347	1	Danger decal, shield missing
15	19811	1	1/2 x 2 HHCS GR8
16	765	1	1/2 NC Lock nut
17	40758	1	Lock collar kit (540 RPM 6 spline 1-3/8) and (1000 RPM 21 spline 1-3/8)

REAR 3-JOINT DRIVE ASSEMBLY

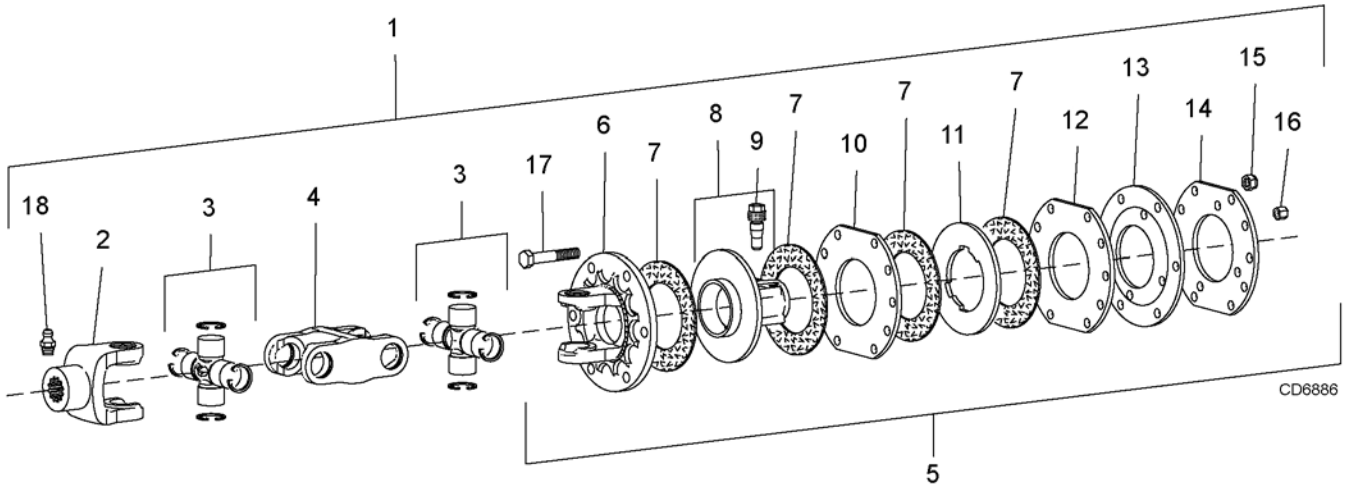


REF	STANDARD DRIVE	HEAVY DUTY DRIVE	QTY	DESCRIPTION
A	1004932	1019121	1	Complete rear drive assembly
1	1004957	1004957	1	Yoke, 1-3/4, 20 spline
2	40566	40566	1	Cross and bearing
3	1003471	1019124	1	Inboard yoke
4	1004958	1029925	1	Inner profile
5	40765	40765	1	Spring pin 10 x 90
6	1029936	-----	1	Stub shaft
7	40766	40766	2	Bearing ring SC25
8	40778	40778	2	Screw (package of 10)
9	40777	-----	2	Anti-rotation chain
10	40767	-----	1	Support bearing
11	18864	18864	1	Decal, danger rotating driveline
12	33347	33347	1	Decal, danger guard missing
13	1004960	1029927	1	Inner guard half
14	1004959	1029926	1	Outer guard half
17	1001042	1001042	1	M16 x 2.0P x 90 mm Cap screw 8.8
18	1005522	1005522	1	M16 x 2.0P Hex lock nut

64 Parts

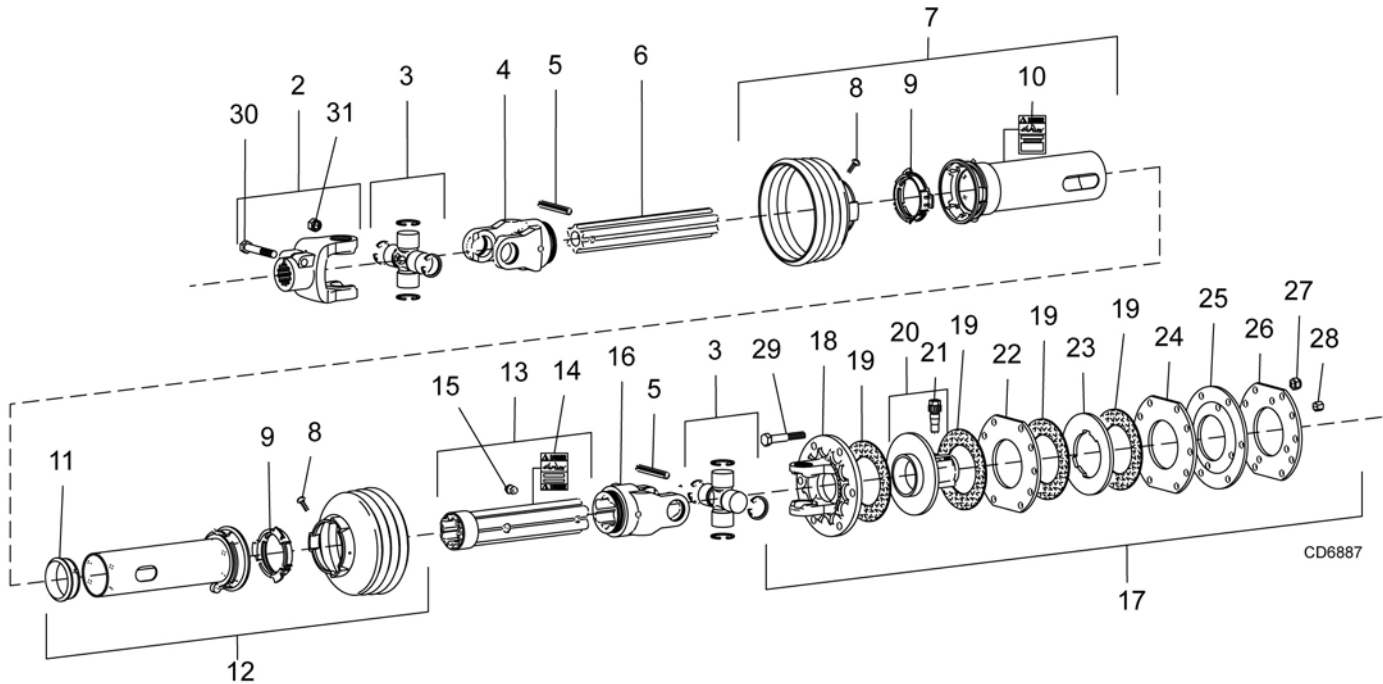
(Rev. 11/9/2009)
MAN0500 (Rev. 5/11/2007)

CENTER DECK DRIVE ASSEMBLY



REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1019106	-	Complete center drive assembly	10	57443	1	Drive plate
2	1019107	1	Yoke, 1-3/4, 20 spline	11	1016491	1	Drive plate
3	38352	2	Cross & bearing kit	12	1016494	1	Thrust plate
4	1019108	1	Double yoke	13	1016492	1	Belleville spring
5	1016484	1	Friction clutch 2400 1-3/4, 20 spline (includes items 6 through 17)	14	1016493	1	Backup plate
6	1016489	1	Flange yoke	15	57261	6	M12 x 1.75 Hex lock nut w/ nylon insert
7	57432	4	Friction disc	16	1016495	4	M8 x 1.25 Hex nut GR10
8	1016490	1	Hub, 1-3/4, 20 spline (includes item 9)	17	1016496	6	M12 x 1.75 x 85 mm HHCS PC 8.8
9	1016498	1	Lock assembly	18	1005521	1	Grease fitting

WING DRIVE ASSEMBLY



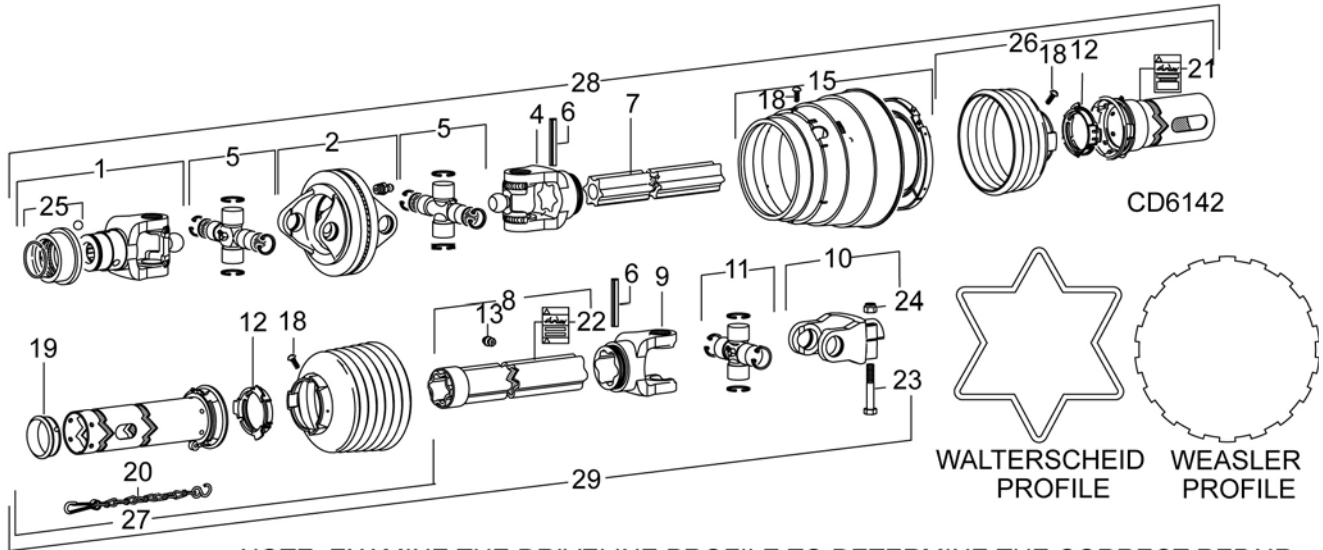
REF	PART	QTY	DESCRIPTION
1	1017209	--	Complete wing drive assembly
2	1004957	1	Yoke, 1-3/4, 20 spline (includes items 30, 31)
3	40566	2	Cross & bearing kit
4	40750	1	Inboard yoke
5	40765	2	Spring pin 10 x 90
6	40752	1	Inner profile
7	1016488	1	Outer guard half (includes items 8, 9, 10)
8	40778	2	Screw
9	40766	2	Bearing ring SC25
11	40767	1	Support bearing
12	1016487	1	Inner guard half (includes items 8, 9, 11)
13	1016485	1	Outer profile & sleeve (includes items 14, 15)
14	33347	1	Decal, danger guard missing
15	40779	1	Grease fitting

REF	PART	QTY	DESCRIPTION
16	40751	1	Inboard yoke
17	1019109	1	Friction clutch 2500 1-3/4, 20 spline (includes items 18 through 29)
18	57441	1	Flange yoke
19	57432	4	Friction disc
20	1016490	1	Hub, 1-3/4, 20 spline (includes item 21)
21	1016498	1	Lock assembly
22	57443	1	Drive plate
23	1016491	1	Drive plate
24	1016494	1	Thrust plate
25	1016492	1	Belleville spring
26	1016493	1	Backup plate
27	57261	6	M12 x 1.75 Hex lock nut w/ nylon insert
28	1016495	4	M8 x 1.25 Hex nut GR10
29	1016496	6	M12 x 1.75 x 85 mm HHCS PC 8.8
30	1001042	1	M16 x 2.0 x 90 mm HHCS PC 8.8
31	1005522	1	M16 x 2.0 Hex lock nut

66 Parts

(Rev. 9/6/2011)
MAN0500 (Rev. 5/11/2007)

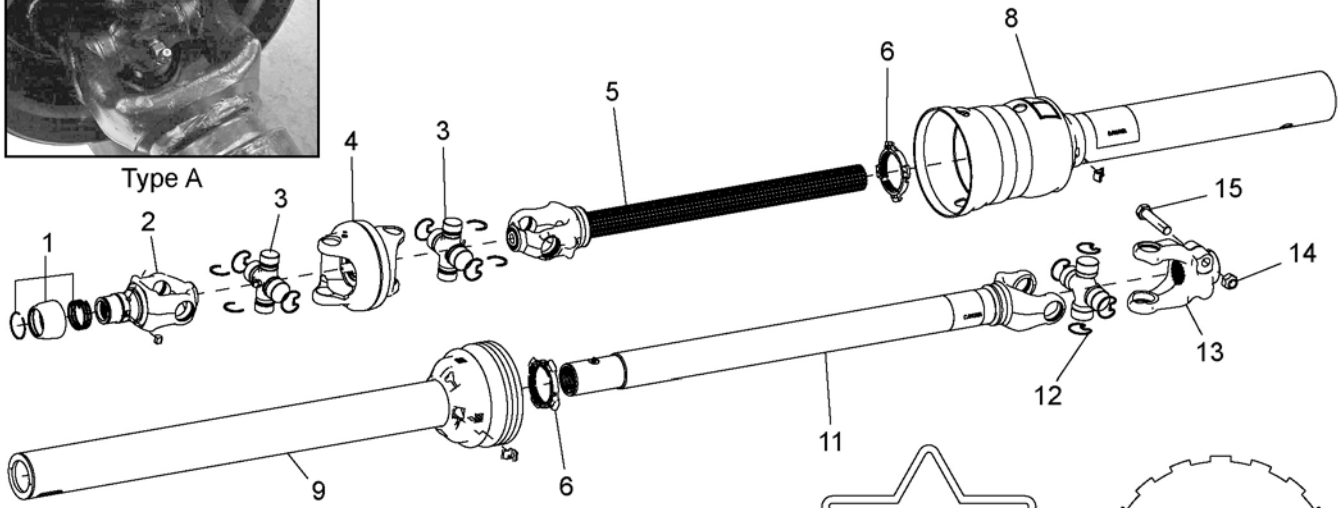
CV DRIVE ASSEMBLY (WALTERSCHEID)



NOTE: EXAMINE THE DRIVELINE PROFILE TO DETERMINE THE CORRECT REPAIR PARTS FOR THE UNIT. ITEMS 7 & 10 NOT SHOWN.

REF	540 1-3/8 6-Splined PART	1000 1-3/8 21-Splined PART	1000 1-3/4 20-Splined PART	QTY	DESCRIPTION
A	1004935 (before S/N 1050540) (See page 68 after S/N 1050541)	1004936 (before S/N 1050540) (see page 70 after S/N 1050541)	1019100 (before S/N 1050540) (see page 70 after S/N 1050541)	1	Complete CV drive
1	57293	-----	-----	1	Yoke, 1-3/8, 6 Spline
1	-----	1003459	-----	1	Yoke, 1-3/8, 21 Spline
1	-----	-----	1003463	1	Yoke, 1-3/4, 20 Spline
2	57294	57294	57294	1	Double yoke
4	1004967	1004967	1004967	1	Inner yoke
5	57296	57296	57296	2	Cross & bearing kit
6	40765	40765	40765	2	Spring pin 10 x 90 mm
7	1004968	1005775	1019102	1	Inner profile
8	1010841	1004972	1019103	1	Outer profile
9	40751	40751	40751	1	Inboard yoke
10	1004957	1004957	1004957	1	Yoke, 1-3/4, 20 Spline
11	40566	40566	40566	1	Cross & bearing kit
12	40766	40766	40766	2	Bearing ring
13	40779	40779	40779	1	Grease fitting
15	1003450	1003450	1003450	1	Cone & bearing assembly
18	40778	40778	40778	2	Screw
19	40767	40767	40767	1	Support bearing
20	40777	40777	40777	2	Anti-rotation chain
21	18864	18864	18864	1	Decal, danger rotating driveline
22	33347	33347	33347	1	Decal, danger guard missing
23	1001042	1001042	1001042	1	M16 x 2.0P x 90 mm HHCS PC8.8
24	1005522	1005522	1005522	1	M16 x 2.0P Hex lock nut w/nylon insert
25	40758	40758	1003465	1	Slide collar repair kit
26	1004970	1004973	1019104	1	Outer guard half
27	1004971	1004974	1019105	1	Inner guard half
28	1004953	1004955	-----	1	Shaft asy, male (complete with guard)
29	1004954	1004956	-----	1	Shaft asy, female (complete with guard)

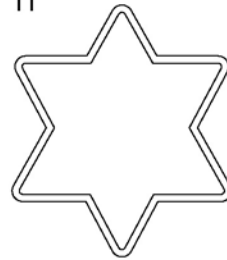
**TYPE A - 540 RPM FRONT CV DRIVE
AFTER S/N 1050541 (WEASLER)**



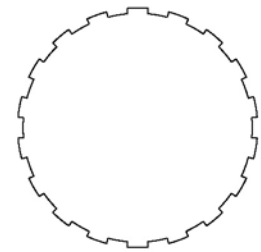
Note 1: Examine the driveline profile to determine the correct repair parts for the unit.

Note 2: Two types of Weasler drives are used on BW1800's. See photo to determine type.

Note 3: Lube fitting in center of cross and bearing.



**WALTERSCHEID
PROFILE**

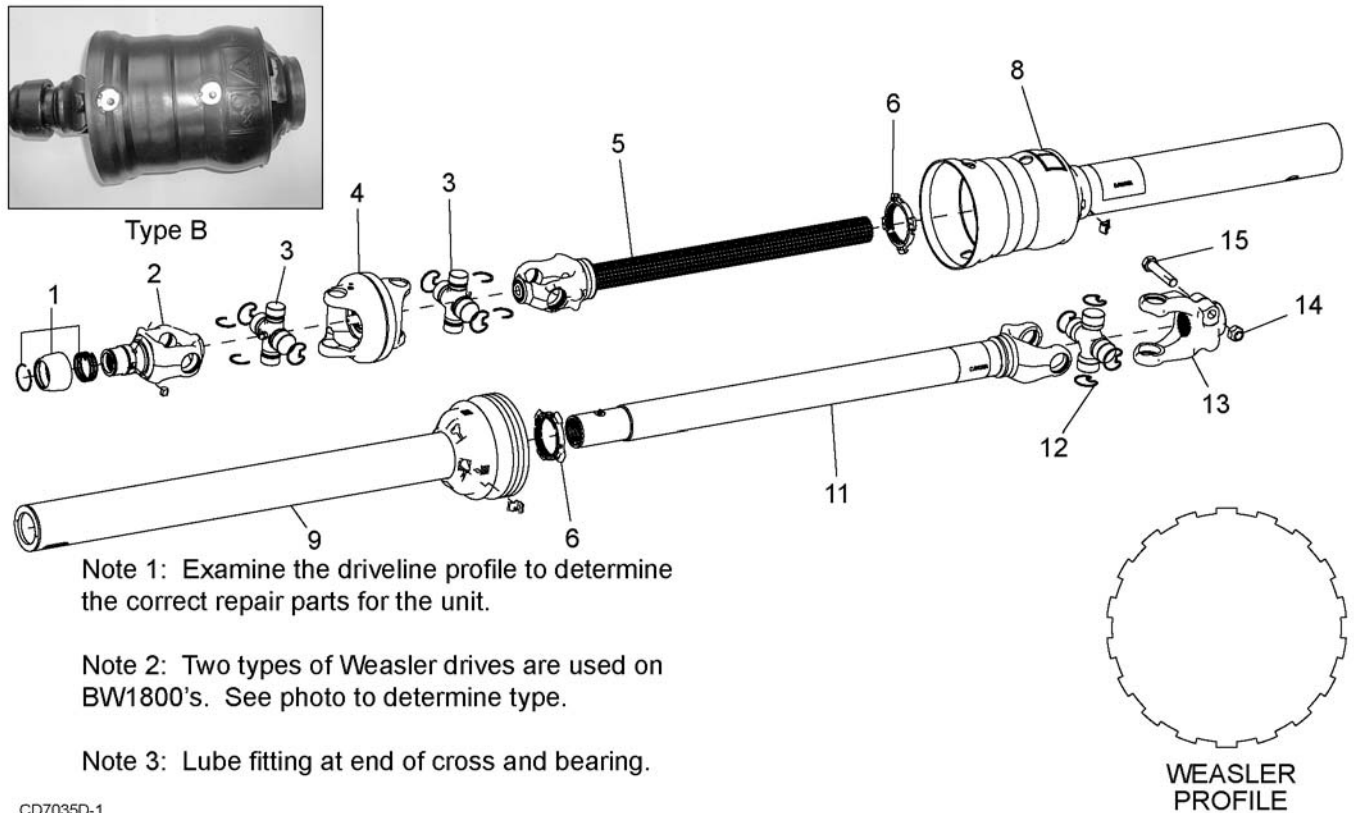


**WEASLER
PROFILE**

CD7035D

REF	PART	QTY	DESCRIPTION
A	1021103	1	Complete CV drive assembly (after S/N 1050541)
1	19851	1	Slide lock repair kit
2	58774	1	Yoke QD CV 1.375 - 6
3	58759	2	CV U-Joint repair kit Cat 6 55E
4	58760	1	CV Body with fitting
5	1021313	1	Yoke and shaft CV splined 25.9
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (Not Shown)
8	1021314	1	CV shield outer
9	1021315	1	CV shield inner
10	33347	1	Decal, danger guard missing (Not Shown)
11	1021316	1	Yoke, tube and sleeve 55R x 36.4 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

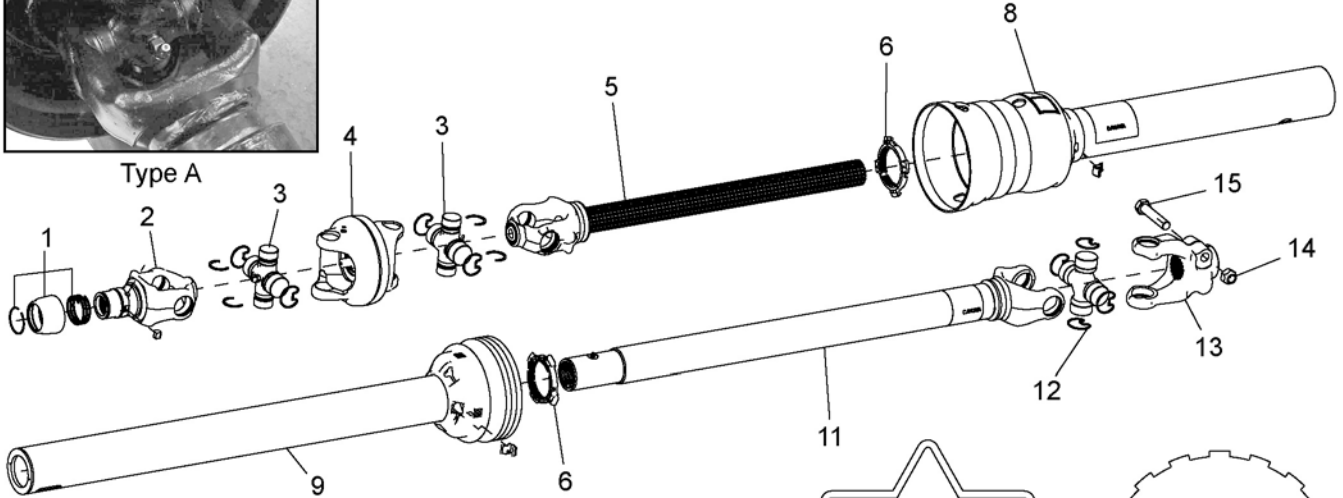
TYPE B - 540 RPM FRONT CV DRIVE (WEASLER)



CD7035D-1

REF	PART	QTY	DESCRIPTION
A	1021103	1	Complete CV drive assembly
1	19851	1	Slide lock repair kit
2	1033103	1	Yoke QD CV 1.375 - 6
3	1033107	2	CV U-Joint repair kit Cat 6 55E
4	1033106	1	CV Body with fitting
5	1033113	1	Yoke and shaft CV splined 25.9
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (Not Shown)
8	1021314	1	CV shield outer
9	1021315	1	CV shield inner
10	33347	1	Decal, danger guard missing (Not Shown)
11	1021316	1	Yoke, tube and sleeve 55R x 36.4 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

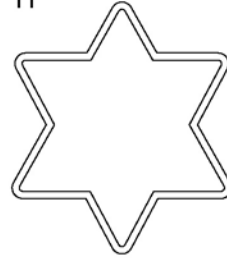
TYPE A - 1000 RPM CV DRIVE ASSEMBLY (WEASLER)



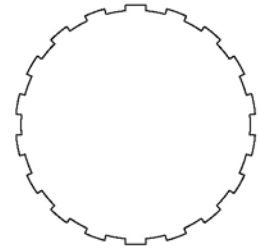
Note 1: Examine the driveline profile to determine the correct repair parts for the unit.

Note 2: Two types of Weasler drives are used on BW1800's. See photo to determine type.

Note 3: Lube fitting in center of cross and bearing.



WALTERSCHEID
PROFILE



WEASLER
PROFILE

CD7035D

1000 RPM 1-3/8 21-Splined

REF	PART	QTY	DESCRIPTION
A	1021104	1	Complete CV drive assembly (after S/N 1050541)
1	19851	1	Slide lock repair kit
2	58770	1	Yoke QD CV 1.375 - 21
3	58759	2	CV U-Joint repair kit, cat 6 55E
4	58760	1	CV body with fitting
5	1021317	1	Yoke and shaft - CV splined 26.6
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (N/S)
8	1021318	1	CV shield outer
9	1021319	1	CV shield inner
10	33347	1	Decal, danger guard missing (N/S)
11	1021320	1	Yoke, tube & sleeve 55R x 38.4 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit 55E
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

(N/S) Not Shown

1000 RPM 1-3/4 20-Splined

REF	PART	QTY	DESCRIPTION
A	1021105	1	Complete CV drive assembly (after S/N 1050541)
1	19837	1	Slide lock repair kit
2	58758	1	Yoke QD CV 1.75 - 20
3	58759	2	CV U-Joint repair kit, cat 6 55E
4	58760	1	CV body with fitting
5	1023154	1	Yoke and shaft - CV splined 30.9
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (N/S)
8	1023155	1	CV shield outer
9	1023156	1	CV shield inner
10	33347	1	Decal, danger guard missing (N/S)
11	1023157	1	Yoke, tube & sleeve 55R x 39.8 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit 55E
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

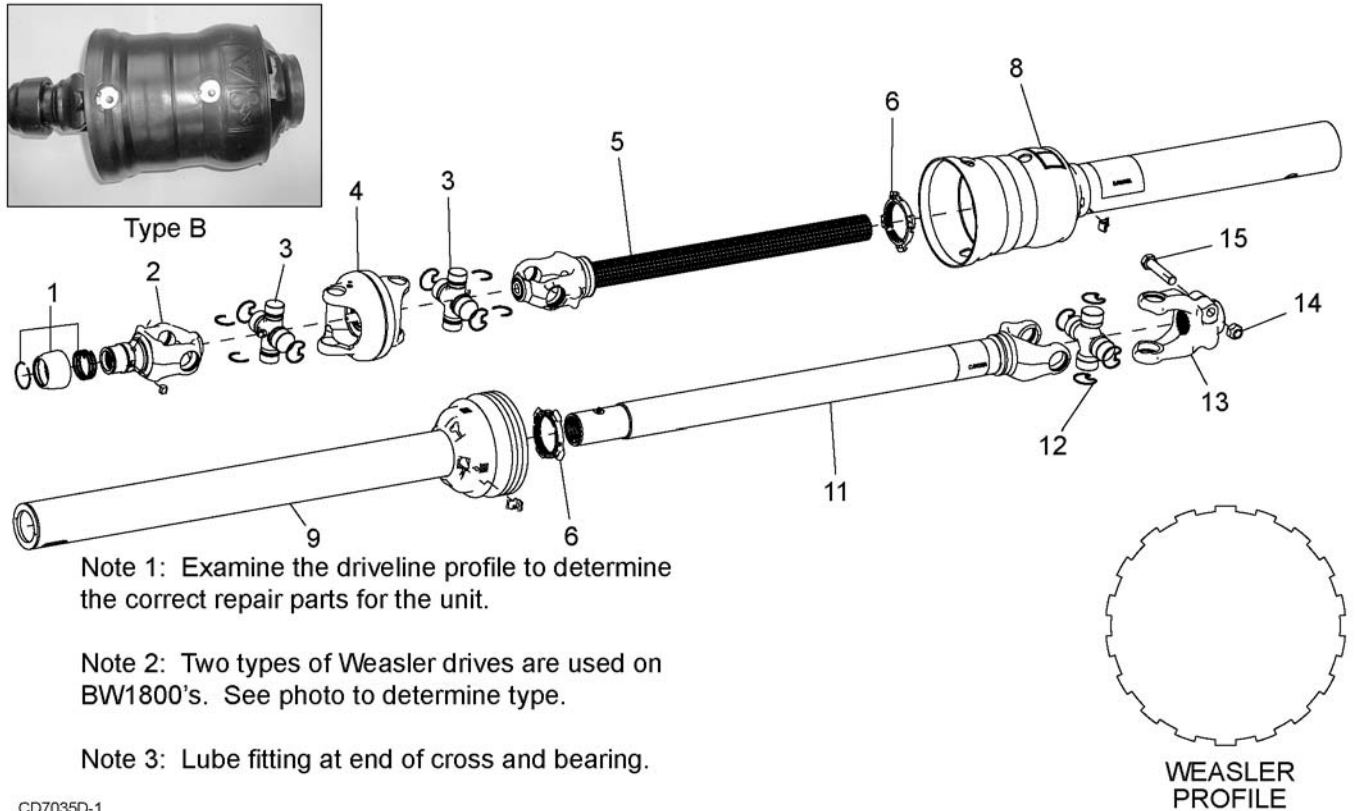
(N/S) Not Shown

70 Parts

(Rev. 10/13/2010)

MAN0500 (Rev. 5/11/2007)

TYPE B - 1000 RPM CV DRIVE ASSEMBLY (WEASLER)



CD7035D-1

1000 RPM 1-3/8 21-Splined

REF	PART	QTY	DESCRIPTION
A	1021104	1	Complete CV drive assembly (after S/N 1050541)
1	19851	1	Slide lock repair kit
2	1033104	1	Yoke QD CV 1.375 - 21
3	1033107	2	CV U-Joint repair kit, cat 6 55E
4	1033106	1	CV body with fitting
5	1033111	1	Yoke and shaft - CV splined 26.6
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (N/S)
8	1021318	1	CV shield outer
9	1021319	1	CV shield inner
10	33347	1	Decal, danger guard missing (N/S)
11	1021320	1	Yoke, tube & sleeve 55R x 38.4 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit 55E
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

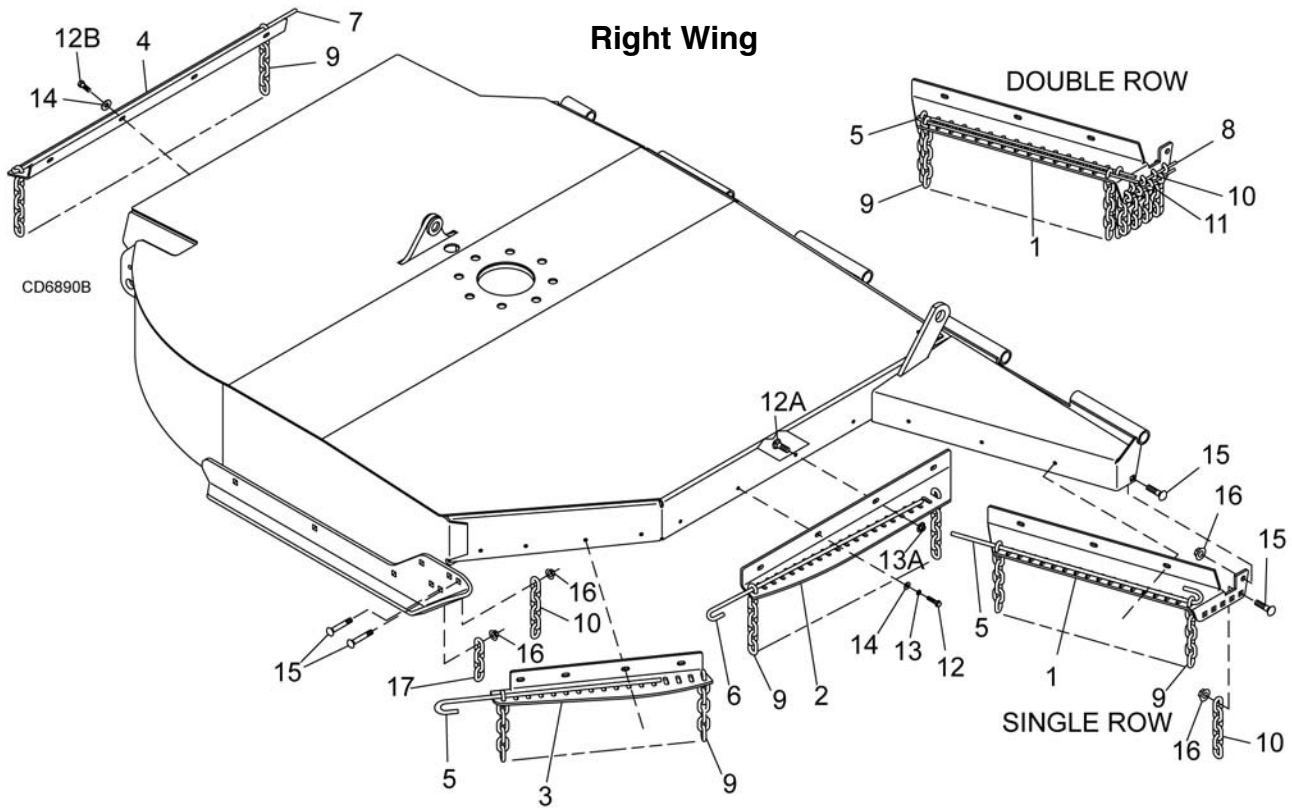
(N/S) Not Shown

1000 RPM 1-3/4 20-Splined

REF	PART	QTY	DESCRIPTION
A	1021105	1	Complete CV drive assembly (after S/N 1050541)
1	19837	1	Slide lock repair kit
2	1033105	1	Yoke QD CV 1.75 - 20
3	1033107	2	CV U-Joint repair kit, cat 6 55E
4	1033106	1	CV body with fitting
5	1033116	1	Yoke and shaft - CV splined 30.9
6	1009065	2	Drive shield bearing kit
7	18864	1	Decal, danger rotating driveline (N/S)
8	1023155	1	CV shield outer
9	1023156	1	CV shield inner
10	33347	1	Decal, danger guard missing (N/S)
11	1023157	1	Yoke, tube & sleeve 55R x 39.8 x 1.69 - 20
12	58765	1	U-Joint cross and bearing kit 55E
13	1023058	1	Yoke, 55R x 5.06 x SP 1.75 - 20
14	6239	1	Nut, lock 5/8 NC
15	34473	1	HHCS 5/8 NC x 3 GR5

(N/S) Not Shown

CHAIN SHIELDING RIGHT & LEFT WING (OPTIONAL)



SN 1139580 & Prior

REF	Single Row		Double Row		DESCRIPTION
	PART	QTY	PART	QTY	
1	1003658	1	1017317	1	Front inside chain shield plate - Right
1	1003659	1	1017313	1	Front inside chain shield plate - Left
2	1003656	1	1017318	1	Front middle chain shield plate - Right
2	1003657	1	1017312	1	Front middle chain shield plate - Left
3	1003654	1	1017319	1	Front outside chain shield plate - Right
3	1003655	1	1017311	1	Front outside chain shield plate - Left
4	1017306	1	1017321	1	Rear chain shield plate - Right
4	1017306	1	1017321	1	Rear chain shield plate - Left
5	1003642	2 †	1003642	4 †	Pin, 16 to 18 chains
6	1003643	1 †	1003643	2 †	Pin, 19 to 21 chains
7	1003646	1 †	1003646	2 †	Pin, 28 to 30 chains
8	-----		1017309	4	Pin, 4 to 6 chains
9	5496	84 †	5496	148 †	5/16 Chain - 7 link
10	5498	7 †	5498	6 †	5/16 Chain - 6 link

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(Rev. 7/7/2010)
MAN0500 (Rev. 5/11/2007)

CHAIN SHIELDING RIGHT & LEFT WING PARTS LIST

SN 1139580 & Prior

REF	Single Row		Double Row		DESCRIPTION
	PART	QTY	PART	QTY	
11	-----		3994	4	5/16 Chain - 5 link
12	19446	-- *	19446	-- *	Screw, 3/8 NC x 1-1/4 Type T self-tapping -or-
12A	6697	-- *	6697	-- *	Carriage bolt, 3/8 NC x 1 GR5
12B	62153	4	62153	4	Screw, 3/8 NC x 1 hex flanged srtd
13	838	-- *	838	-- *	3/8 Standard lock washer -or-
13A	14350	-- *	14350	-- *	Lock nut, 3/8 NC flanged
14	565	-- *	565	-- *	3/8 Standard flat washer
15	14406	-- *	14406	-- *	1/2 NC x 1 Carriage bolt
16	11900	-- *	11900	-- *	1/2 NC Hex flange locknut
17	4069	2 †	4069	2 †	5/16 Chain - 4 link

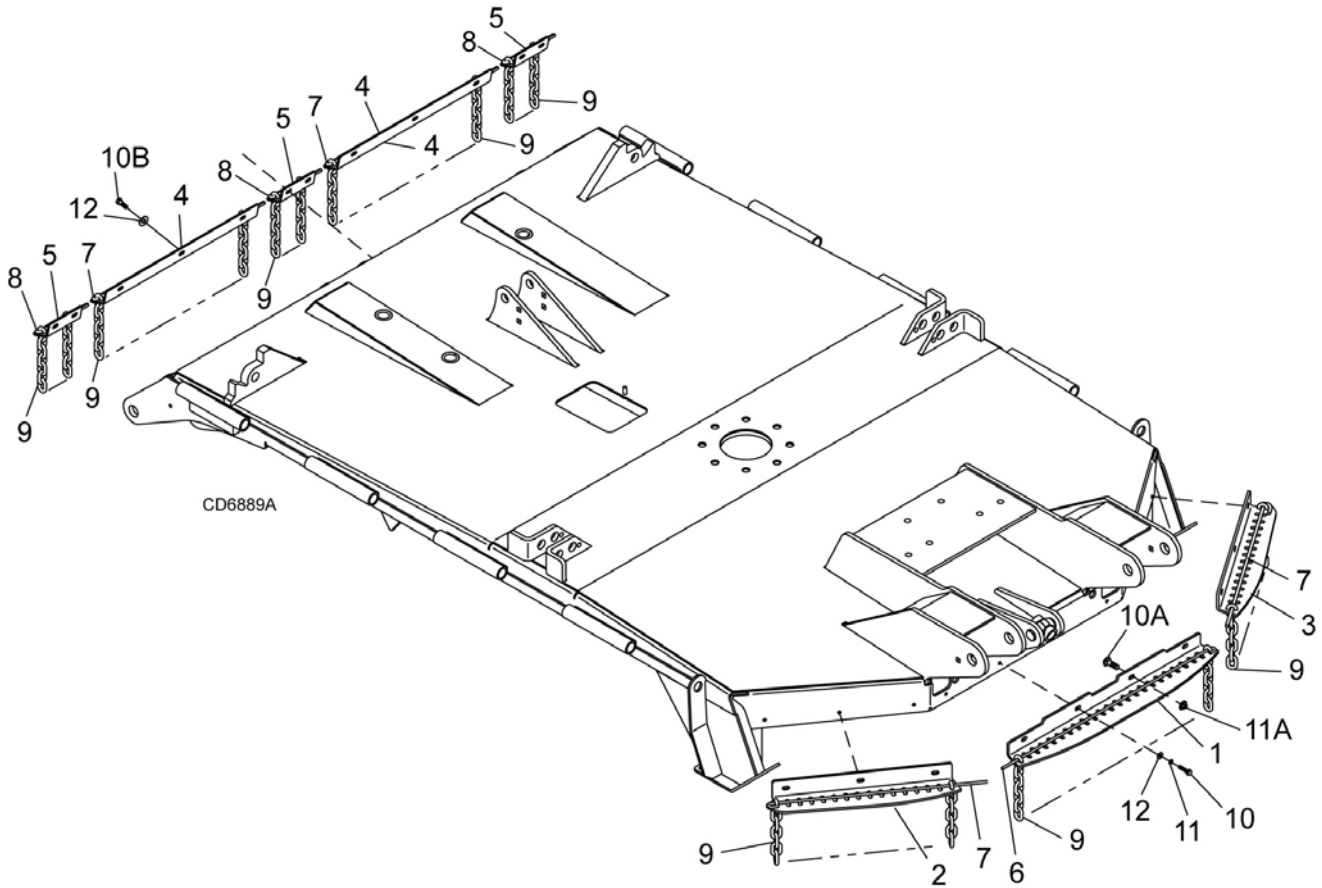
† Indicates quantity for one wing
* Standard hardware, obtain locally

SN 1139581 & Above

REF	Single Row		Double Row		DESCRIPTION
	PART	QTY	PART	QTY	
1	1028598	1	1017317	1	Front right wing chain plate, inner -or-
1	1028599	1	1017313	1	Front left wing chain plate, inner
2	1028500	1	1017318	1	Front right wing chain plate, middle -or-
2	1028501	1	1017312	1	Front left wing chain plate, middle
3	1028502	1	1031150	1	Front right wing chain plate, outer - or-
3	1028503	1	1031151	1	Front left wing chain plate, outer
4	1017306	2	1017321	2	Rear wing chain plate
5	1003644	4	1003644	8	Pin, 22 to 24 chains
6	1003643	2	1003643	4	Pin, 19 to 21 chains
7	1003646	2	1003646	4	Pin, 28 to 30 chains
8	-----	--	1017309	4	Pin, 4 to 6 chains
9	5496	170	5496	276	5/16 Chain - 7 link
10	5498	12	5498	8	5/16 Chain - 6 link
11	-----	--	3994	8	5/16 Chain - 5 link
12A	6697	-- *	6697	-- *	Carriage bolt, 3/8 NC x 1 GR5
13A	14350	-- *	14350	-- *	Lock nut, 3/8 NC flanged
15	14406	-- *	14406	-- *	1/2 NC x 1 Carriage bolt
16	11900	-- *	11900	-- *	1/2 NC Hex flange locknut
17	4069	4	4069	4	5/16 Chain - 4 link

* Standard hardware, obtain locally

CHAIN SHIELDING CENTER SECTION
(SINGLE ROW STANDARD ON BW1260 MODELS)
(SINGLE ROW OPTIONAL ON BW1800 MODELS)
(DOUBLE ROW OPTIONAL ON BW1260 & BW1800 MODELS)



Center Section

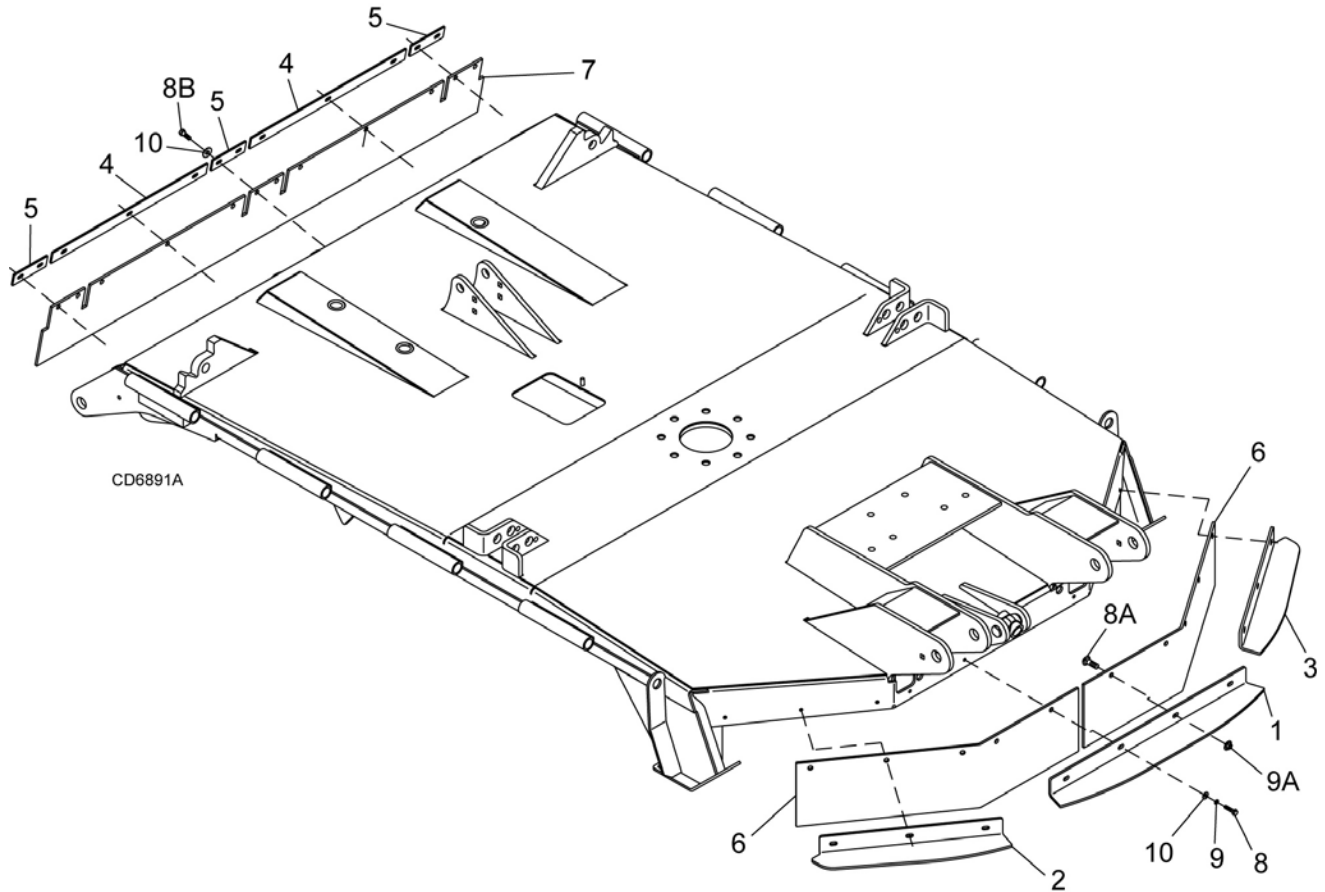
REF	Single Row		Double Row		DESCRIPTION
	PART	QTY	PART	QTY	
1	1017124	1	1017315	1	Front center chain shield plate
2	1017125	1	1017316	1	Front right chain shield plate
3	1017126	1	1017314	1	Front left chain shield plate
4	1017227	2	1017322	2	Rear chain shield plate - long
5	1017226	3	1017323	3	Rear chain shield plate - short
6	1003644	1	1003644	2	Pin, 22 to 24 chains
7	1003642	4	1003642	8	Pin, 16 to 18 chains
8	1017309	3	1017309	6	Pin, 4 to 6 chains
9	5496	104	5496	177	5/16 Chain - 7 link
10	19446	22 *	19446	22 *	Screw, 3/8 NC x 1-1/4 Type T self-tapping -or-
10A	6697	10 *	6697	10 *	Carriage bolt, 3/8 NC x 1 GR5
10B	62153	12	62153	12	Screw, 3/8 NC x 1 hex flanged srted
11	838	22 *	838	22 *	3/8 Standard lock washer -or-
11A	14350	10 *	14350	10 *	Lock nut, 3/8 NC flanged
12	565	22 *	565	22 *	3/8 Standard flat washer

* Standard hardware, obtain locally

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(Rev. 5/1/2009)
 MAN0500 (Rev. 5/11/2007)

**RUBBER BELT SHIELDING CENTER SECTION
(STANDARD ON BW1800 MODELS)**



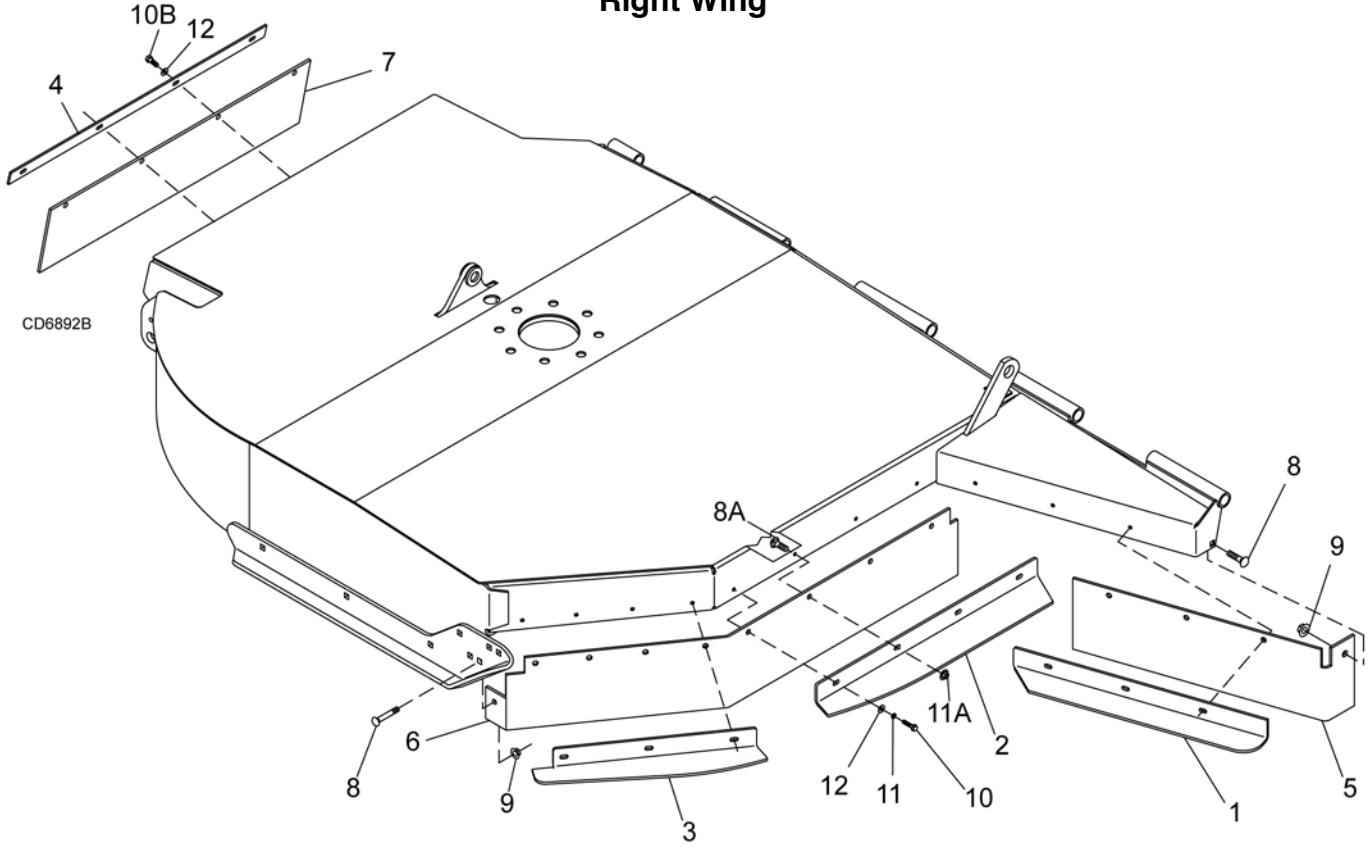
Center Section

REF	PART	QTY	DESCRIPTION
1	1017057	1	Front center belt shield plate
2	1017056	1	Front right belt shield plate
3	1017058	1	Front left belt shield plate
4	1017054	2	Link .25 x 1.0 x 22.06
5	1017053	3	Link .25 x 1.0 x 4.12
6	1003667	2	Shield rubber .25 x 8.0 x 33.64
7	1017052	2	Shield rubber .25 x 8.0 x 63.3
8	19446 *	22	Screw, 3/8 NC x 1-1/4 Type T self-tapping
8A	6697 *	10	Carriage bolt, 3/8 NC x 1 GR5
8B	62153	12	Screw, 3/8 NC x 1 hex flanged strtd
9	838 *		3/8 Standard lock washer
9A	14350 *	10	Lock nut, 3/8 NC flanged
10	565 *		3/8 Standard flat washer

* Standard hardware, obtain locally

RUBBER BELT SHIELDING RIGHT & LEFT WING

Right Wing



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(Rev. 5/1/2009)
MAN0500 (Rev. 5/11/2007)

RUBBER BELT SHIELDING RIGHT & LEFT WING PARTS LIST

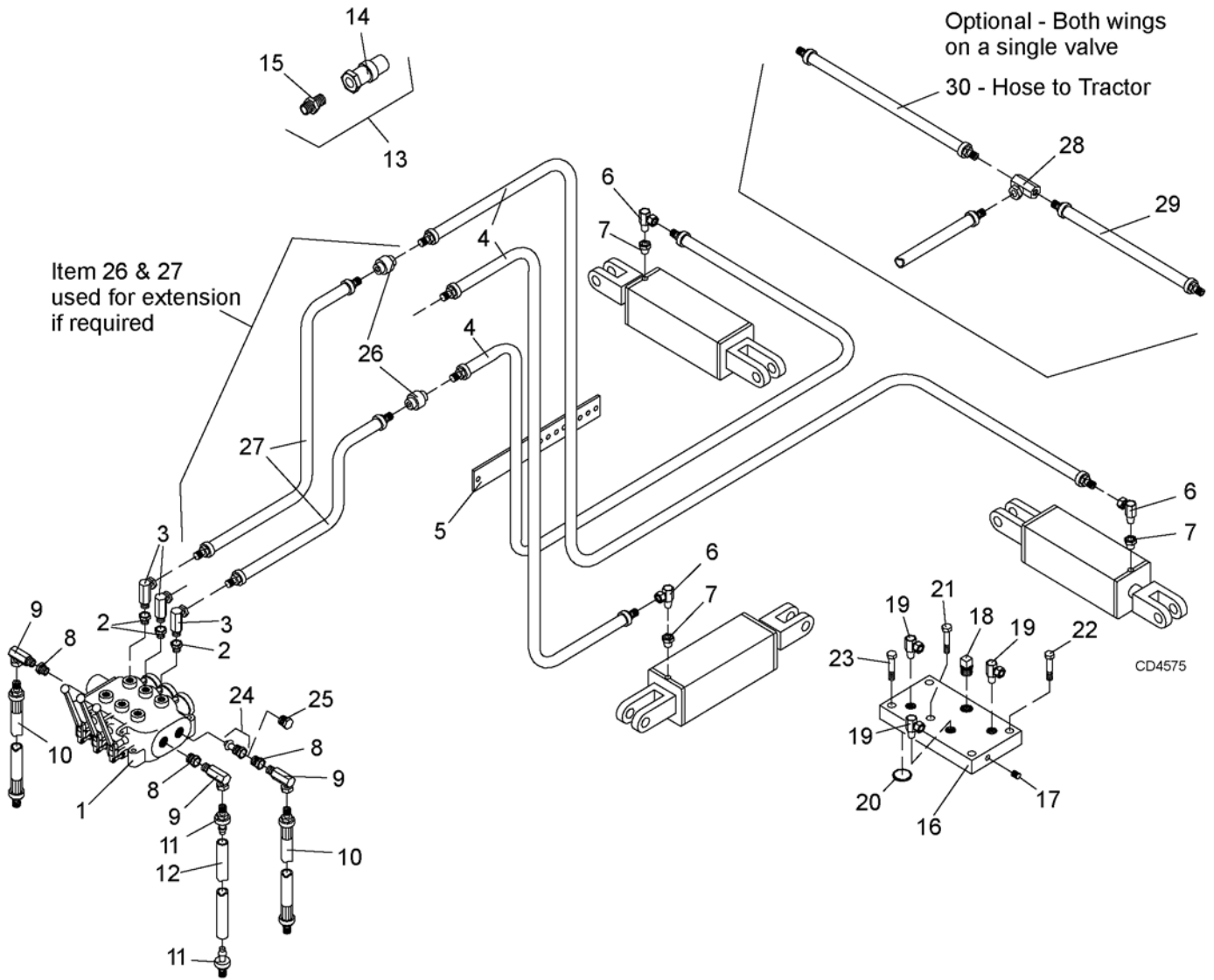
SN 1139580 & Prior

Right Wing			Left Wing		DESCRIPTION
REF	PART	QTY	PART	QTY	
1	1003628	1	1003629	1	Front wing belt shield plate - inside
2	1003626	1	1003627	1	Front wing belt shield plate - middle
3	1003624	1	1003625	1	Front wing belt shield plate - outside
4	1017051	1	1017051	1	Link .25 x 1.0 x 35.25
5	1003666	1	1003666	1	Shield rubber .25 x 8.0 x 29.6
6	1003668	1	1003668	1	Shield rubber .25 x 8.0 x 50.87
7	1017049	1	1017049	1	Shield rubber .25 x 8.0 x 35.8
8	14406	--	* 14406	--	* 1/2 NC x 1 Carriage bolt
9	11900	--	* 11900	--	* 1/2 NC Hex flange lock nut
10	19446	--	* 19446	--	* Screw, 3/8 NC x 1-1/4 Type T self-tapping
10A	6697	--	* 6697	--	* Carriage bolt, 3/8 NC x 1 GR5
10B	62153	4	62153	4	Screw, 3/8 NC x 1 hex flanged srtd
11	838	--	* 838	--	* 3/8 Standard lock washer
11A	14350	--	* 14350	--	* Lock nut, 3/8 NC flanged
12	565	--	* 565	--	* 3/8 Standard flat washer
					* Standard hardware, obtain locally

SN 1139581 & Above

Right Wing			Left Wing		DESCRIPTION
REF	PART	QTY	PART	QTY	
1	1028590	1	-----		Front right wing belt shield plate, inside
1	-----		1028591	1	Front left wing belt shield plate, inside
2	1027496	1	-----		Front right wing belt shield plate, middle
2	-----		1027497	1	Front left wing belt shield plate, middle
3	1028504	1	-----		Front right wing belt shield plate, outer
3	-----		1028505	1	Front left wing belt shield plate, outer
4	1017051	1	1017051	1	Link .25 x 1.0 x 35.25
5	1028593	1	1028593	1	Rubber belt .25 x 8.75 x 31.11
6	1028594	1	1028594	1	Rubber belt .25 x 8.75 x 53.87
7	1017049	1	1017049	1	Rubber belt .25 x 8.0 x 35.8
8	14406	--	* 14406	--	* 1/2 Nc x 1 Carriage bolt GR5
9	11900	--	* 11900	--	* 1/2 NC Flanged lock nut
10A	6697	--	* 6697	--	* Carriage bolt, 3/8 NC x 1 GR5
11A	14350	--	* 14350	--	* 3/8 NC Flanged lock nut
					* Standard hardware, obtain locally

HYDRAULIC PLUMBING (OPTIONAL)



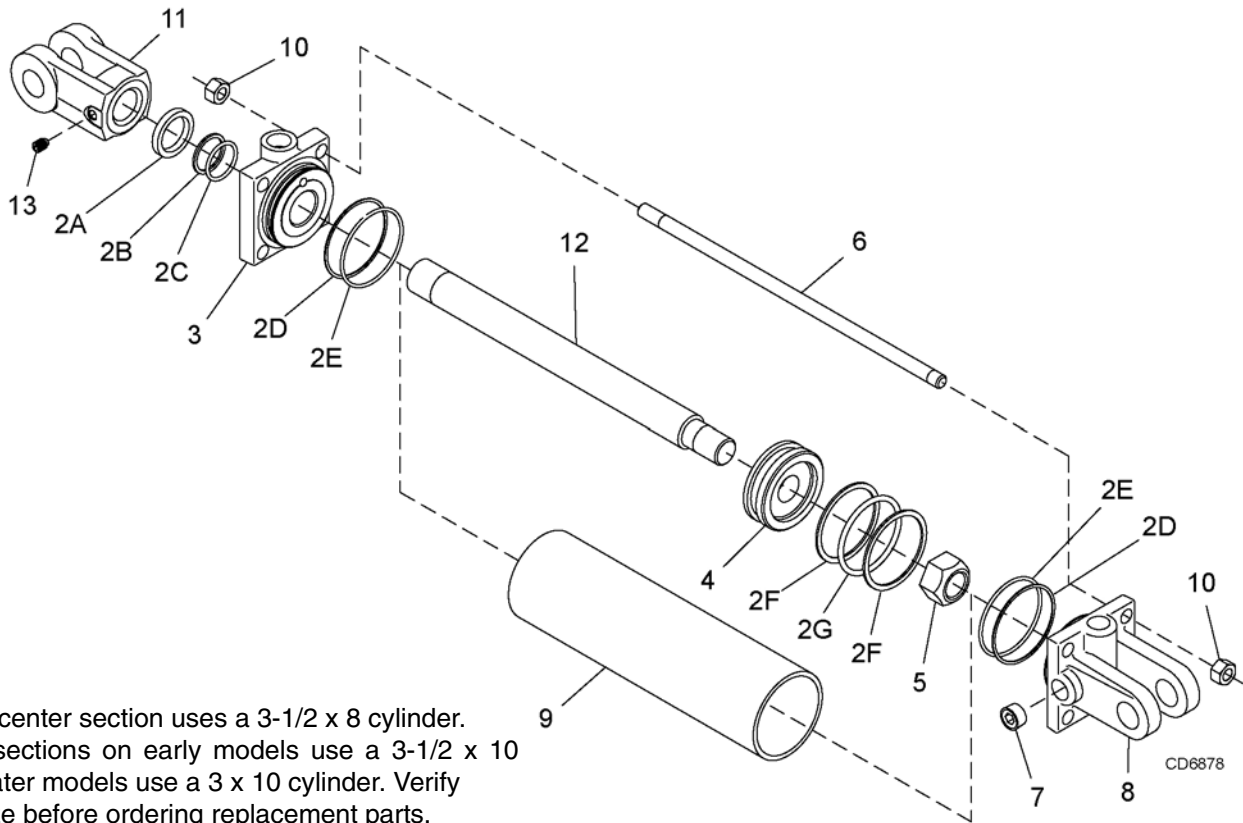
78 Parts

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HYDRAULIC PLUMBING (OPTIONAL)

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	8326	1	3-Spool, 3-way hydraulic valve, open-center or closed-center	20	12889 ◇*	1	3/32 x 1-9/16 OD O-Ring
2	10802 *	3	3/8 x 1/2 Pipe reducer bushing, straight	21	24408 ◇*	1	5/16 NC x 1-1/2 Cap screw GR5
3	8151	3	Swivel street elbow, 3/8 x 1/4 x 90°	22	10978 ◇*	2	7/16 NC x 1-3/4 Cap screw GR5
4	14552 †	3	1/4 NPT x 200 High-pressure hose assembly	23	13920 ◇*	2	7/16 NC x 2-3/4 Cap screw GR5
5	8641	3	14-1/2 Binding strap	24	27455	1	Sleeve for power-beyond kit
6	10290 ◆	3	1/4 x 1/4 90° Elbow with 1/6 restricter	25	20578	1	3/4 NPT Outside hex pipe plug (closed-center only)
7	11893 *◆	3	1/2 x 1/4 Pipe reducer bushing	26	19669	1	Fitting, .25 NPT F x .25 NPT F
8	11815 *	3	3/4 x 1/2 Pipe reducer bushing	27	26116	1	33" Hose assembly -or-
9	11814	3	1/2 M x 3/8 F 90° Swivel elbow	27	31237	1	47" Hose assembly -or-
10	11825	2	3/8 NPT x 60 High-pressure hose assembly	27	34221	1	65" Hose assembly
11	11816	2	1/2 x 3/8 Hydraulic hose coupler	28	31239	1	1/4 Female swivel tee
12	11826	1	1/2 x 70 Low-pressure hydraulic hose	29	34221	1	65" Hose assembly
13	23724	1	Set of 3 Hydraulic QD couplers (Includes items 14 & 15)	30	8669	1	156" Hose assembly (or use 200" supplied)
14	8575	3	1/4 Quick disconnect coupler		NS		Not serviced separately
15	23725	3	1/4 Male NPT nipple		*		Obtain Locally
16	NS ◇	1	Valve cover outlet		◇		Only used on Ford Tractor models: 2000, 3000, 4000, & 5000 which do not have control valve.
17	29562 ◇	1	1/8 NPT Hex socket pipe plug		†		Hydraulic hoses (item 4) may be run directly to tractor ports, eliminating the need for items 1-3, 8-12, 24 & 25.
18	4510 ◇*	1	1/2 Pipe plug		◆		For double-acting wing cylinders, use two each of items 4, 6 & 7 per wing.
19	8472 ◇	3	3/8 x 3/8 90° Swivel street elbow				

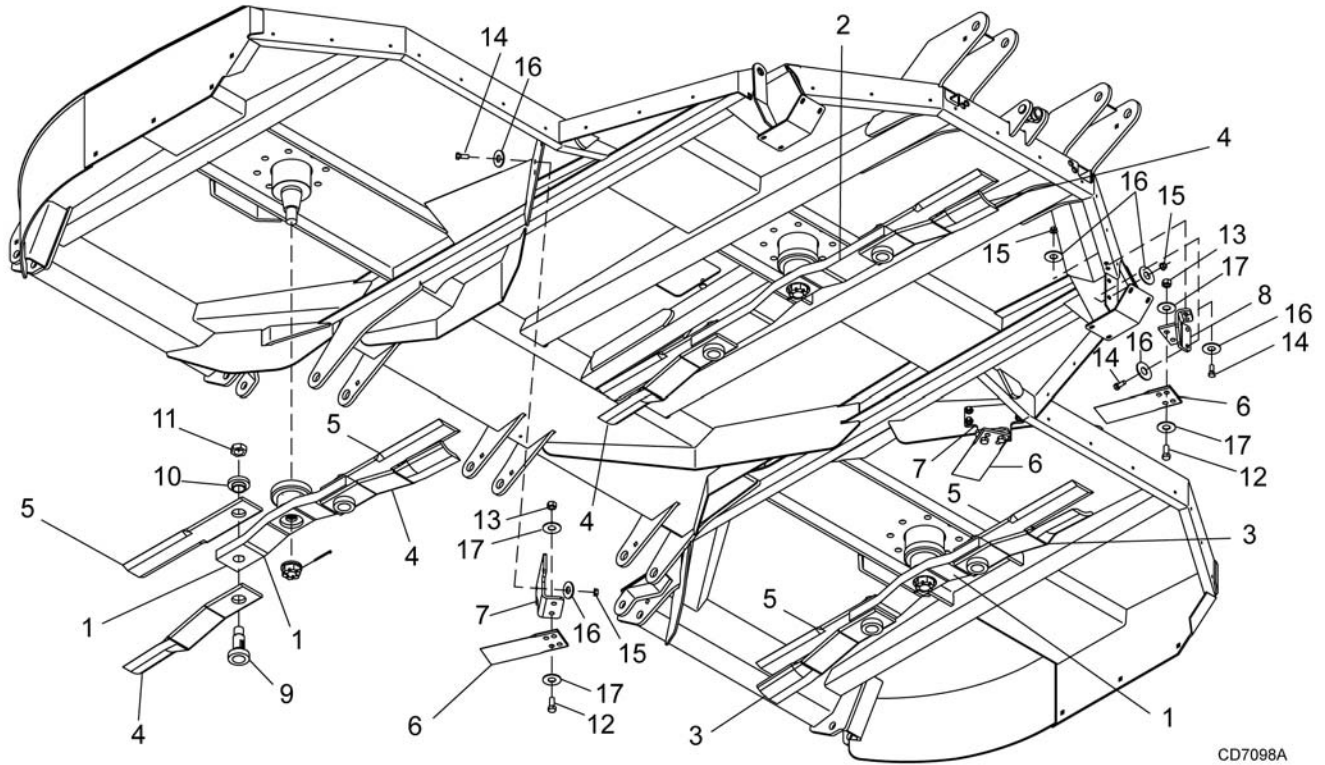
HYDRAULIC CYLINDERS



Note: The center section uses a 3-1/2 x 8 cylinder. The wing sections on early models use a 3-1/2 x 10 cylinder. Later models use a 3 x 10 cylinder. Verify cylinder size before ordering replacement parts.

REF	3-1/2 x 8 PART	3 x 10 PART	3-1/2 x 10 PART	QTY	DESCRIPTION
1	10475	1031166	26131		Complete cylinder
2	23540	19810	23540	1	Seal repair kit (includes items 2A - 2G)
	-----	- or -	-----	1	Seal repair kit w/ heavy duty piston seal (includes items 2A - 2G)
		19810HD		1	Seal repair kit w/ heavy duty piston seal (includes items 2A - 2G)
2A	†	†	†	1	Wiper seal
2B	†	†	†	1	Rod seal
2C	†	†	†	1	Rod O-ring
2D	†	†	†	2	Cap seal
2E	†	†	†	2	Cap O-ring
2F	†	†	†	2	Piston seal
2G	†	†	†	1	Piston O-ring
3	N/S	N/S	N/S	1	Cylinder housing - rod end
4	N/S	N/S	N/S	1	Piston
5	N/S	N/S	N/S	1	Jam nut
6	N/S	N/S	N/S	4	Cylinder tie rod
7	*	*	*	3	1/2 Pipe plug
8	N/S	N/S	N/S	1	Cylinder housing - butt end
9	N/S	N/S	N/S	2	Cylinder barrel
10	N/S	N/S	N/S	8	Tie rod nut
11	N/S	N/S	N/S	1	Cylinder clevis
12	N/S	N/S	N/S	1	Cylinder rod
13	*	*	*	1	Set screw 3/8 x 3/4 dog point
			†		Included in seal kit
			*		Standard hardware, obtain locally
			N/S		Not serviced

BW1800 SHREDDER KIT (OPTIONAL)

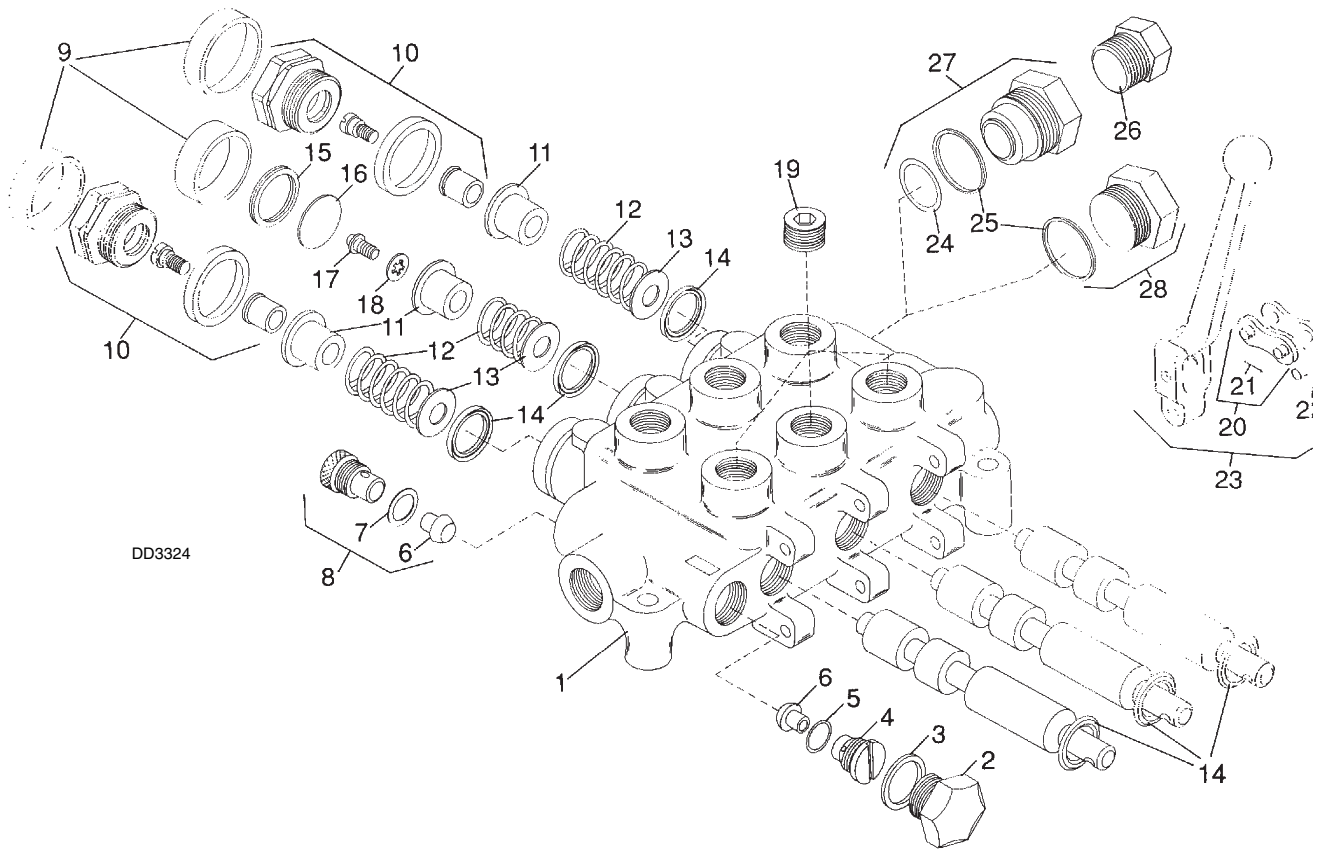


CD7098A

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
A	1017320	1	BW1800 Shredder kit, complete	9	39069	6	Blade pin
1	1014161	2	Crossbar (wing)	10	39127	6	Bushing
2	1014171	1	Crossbar (Center section)	11	39128	6	Jam nut, 1-1/4
3	39002KT	2	Blade, .5 x 4 x 22.5 CW formed	12	4548 *	6	5/8 NC x 1-3/4 HHCS GR5
4	39003KT	4	Blade, .5 x 4 x 22.5 CCW formed	13	6239 *	6	5/8 NC Lock nut
5	1017128KT	6	Blade, .5 x 4 x 22.5 flat	14	3379 *	12	1/2 NC x 1-1/2 HHCS GR5
6	39089	3	Blade, .38 x 4 x 11.13 double edge	15	11900 *	12	1/2 NC Flange lock nut
7	1014164	2	Mounting bracket, bent	16	57816	24	1/2 Hardened flat washer
8	1014173	1	Center blade bracket	17	57817	12	5/8 Hardened flat washer

* Standard hardware, obtain locally

3-WAY VALVE (OPTIONAL)



REF	PART	QTY	DESCRIPTION
1	8326	1	3-Spool, 3-way valve with open center, complete
2	31085	1	Lift check cap
3	31077	1	Copper gasket
4	31104	1	Lift check guide
5	31095	1	O-ring
6	NS	2	Lift check poppet (included in item 8)
7	31087	1	O-ring
8	31098	1	Lift check kit
9	11853	3	Rubber cap for valve
10	23115	2	Valve detent kit
11	31072	3	Hat washer
12	31074	3	Spool center spring
13	31088	3	Flat washer
14	11852	6	U-Cup seal
15	31075	1	Snap ring
16	31073	1	Back-up washer

REF	PART	QTY	DESCRIPTION
17	31071	1	Machine screw
18	31092	1	Shack proof washer
19	27326	*	3/8 NPT Pipe plug
20	3144	3	Link kit
21	35405	*	9 3/32 x 3/4 Cotter pin
22	11851	3	1/4 x 1-1/4 Clevis pin
23	11850	3	Valve handle kit
24	-----	†	O-ring
25	-----	†	Copper gasket
26	20578	1	3/4 Hex head pipe plug
27	27455	1	Power-beyond sleeve kit
28	31102	1	Conversion plug kit

NS Not serviced separately
 * Obtain Locally
 † These parts not sold separately; order complete kit

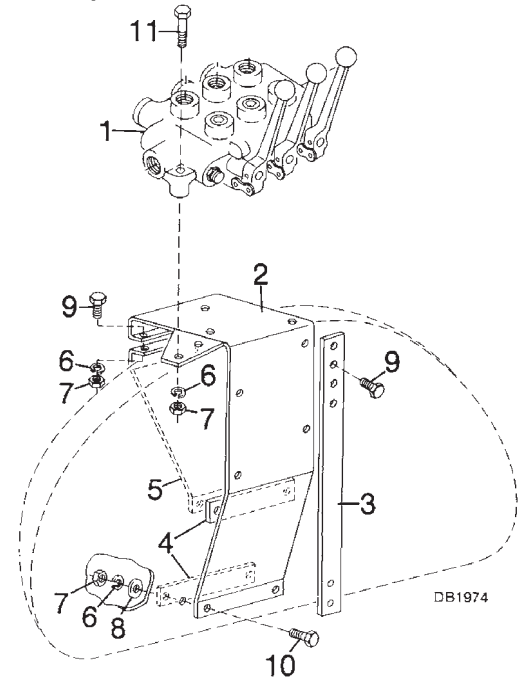
NOTE: When storing valve, fill with oil and plug ports to keep it clean and free from rust or dirt.

Spools are selectively fitted and are not sold separately.

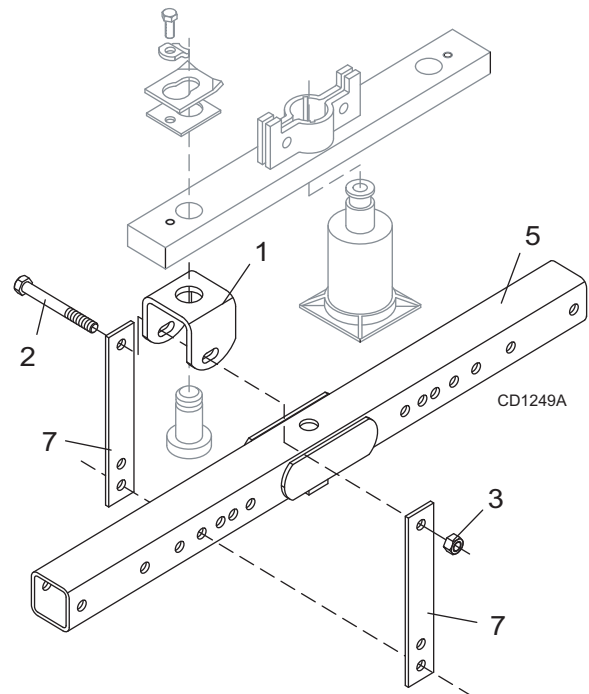
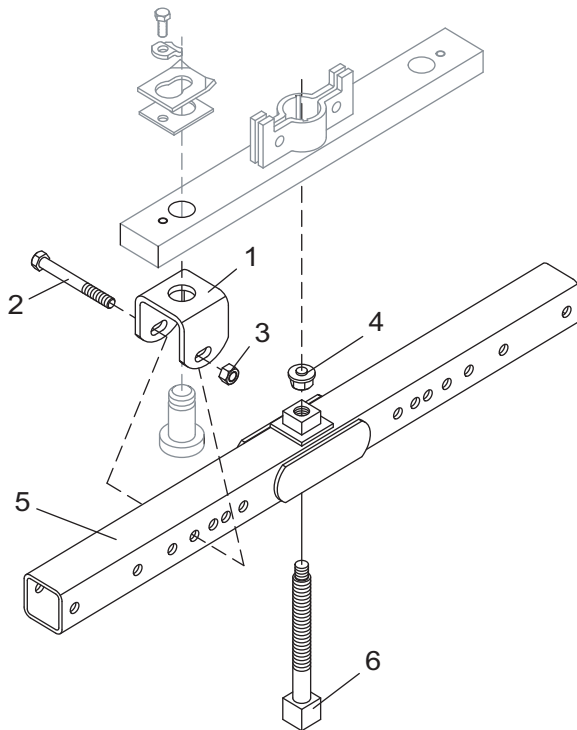
FENDER BRACKET (OPTIONAL)

REF	PART	QTY	DESCRIPTION
1	8326	1	3-Spool, 3-way hydraulic valve, open-center
2	11820	1	Fender valve bracket assembly
3	11823	1	Fender valve mounting brace
4	11824	2	Valve bracket reinforcement
5	11819	1	Bottom fender valve bracket
6	838 *	10	3/8 Lock washer, standard
7	835 *	10	3/8 NC Hex nut, plated
8	565 *	4	3/8 Flat washer, standard
9	839 *	3	3/8 NC x 1 Cap screw GR5
10	12169 *	4	3/8 NC x 1-1/4 Cap screw GR5
11	2290 *	3	3/8 NC x 2-1/2 Cap screw GR5

* Obtain Locally



CROSSBAR PULLER (OPTIONAL)

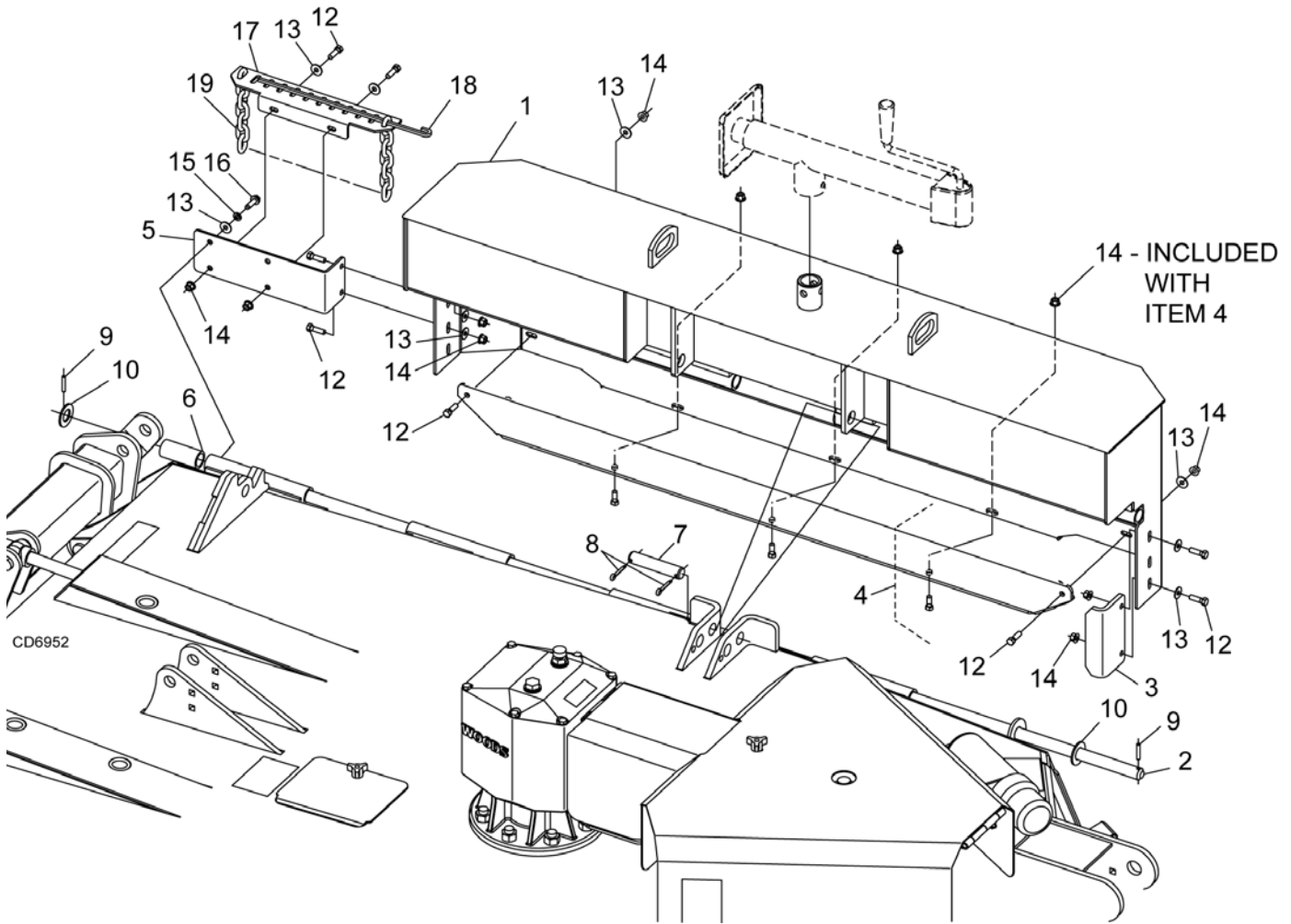


REF	PART	QTY	DESCRIPTION
A	8811	1	Crossbar puller, complete
1	19914	2	Crossbar puller clevis
2	3097	4*	5/8 NC x 4-1/2 Cap screw GR5
3	230	4*	5/8 NC Hex nut

REF	PART	QTY	DESCRIPTION
4	24879	1	Crossbar puller pad assembly
5	24876	1	Crossbar puller tube assembly
6	24881	1	Crossbar puller screw assembly
7	24885	4	Crossbar puller link

* Standard hardware - obtain locally

BW1260 / BW1260Q COUNTERWEIGHT BOX ASSEMBLY (OPTIONAL)



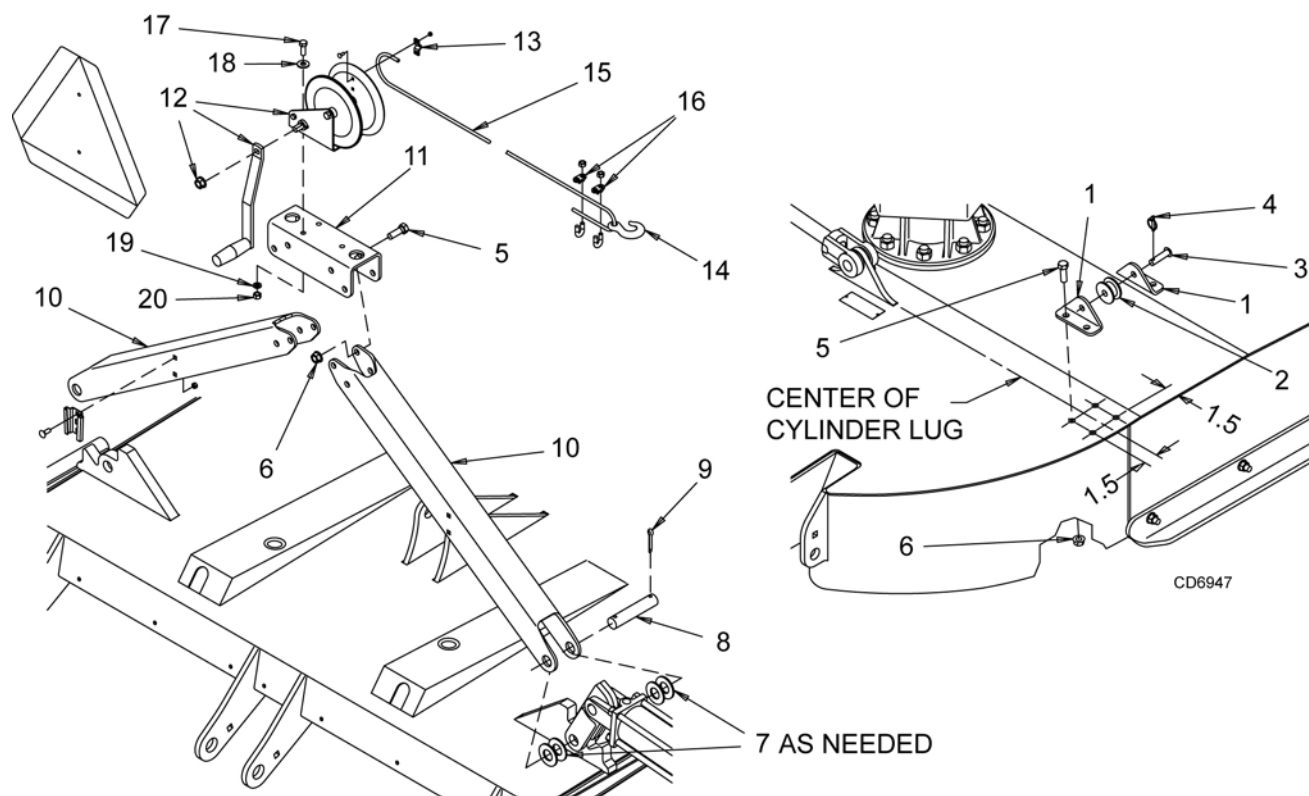
REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1014150	1	Weight box 1190 lbs	10	1863 *	2	1" Flat washer
2	1003495	1	Hinge pin	12	12169 *	8	3/8 NC x 1-1/4 Cap screw GR5
3	1010987	1	Brace	13	565 *	9	3/8 SAE Flat washer
4	1010985	1	Skid shoe	14	14350 *	8	3/8 NC Flange hex lock nut
5	1010986	1	Mounting plate	15	838 *	1	3/8 Lock washer
6	1003559	1	1.125 x 1.500 x 3.40 Sleeve	16	19446 *	1	3/8 NC x 1-1/4 Self tapping screw
7	1631	1	1 x 3-5/8 Clevis pin	17	1010988	1	Weight box chain shield plate
8	1285 *	2	1/4 x 1-1/2 Cotter pin	18	1003638	1	Pin, 10 to 12 chains
9	66016 *	2	Spring pin, 1/4 x 1-1/2	19	5496	12	5/16 Chain - 7 link (single row)

* Standard hardware, obtain locally

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MAN0500 (Rev. 5/11/2007)

WINCH KIT (OPTIONAL)



REF	PART	QTY	DESCRIPTION
A	1019456	-	Winch kit, complete
1	52478	4	Idler bracket
2	6696	2	Chain idler casting
3	409	2	Clevis pin, 1/2 x 2
4	22411	2	Klik pin, 3/16 x 1
5	3379 *	-	HHCS, 1/2 NC x 1-1/2 GR5
6	11900 *	-	Lock nut, 1/2 NC flanged
7	1863 *	-	Washer, 1" SAE flat
8	1008325	2	Headless pin, 1 x 4 drilled
9	1266 *	-	Cotter pin, 3/16 x 1-1/2
10	1019454	2	Channel, 2.56 x 2.75 x 32.88
11	1019455	1	Channel, 3.12 x 3.25 x 10.00
12	12612	1	Gear winch 5.1 to 1
13	12642	1	Winch cable clamp kit
14	11790	1	C-Hook, 1/4 cable
15	52479	1	Cable, 1/4" x 24-ft
16	11789	2	Clip, 1/4 cable
17	839 *	-	HHCS, NC x 1 GR5
18	565 *	-	Washer, 3/8 flat
19	838 *	-	Washer, 3/8 lock
20	835 *	-	Hex nut, 3/8 NC plated

* Standard hardware; obtain locally

Winch Kit Installation

1. Locate and drill one 9/16" hole in each wing as shown. Assemble items 1, 2, 3 and 4 and use to locate and drill remaining holes.
2. Secure idler brackets (1) and rollers (2) to deck with bolts (5) and nuts (6).
3. Assemble channels (10) to cylinder lugs using pins (8), washers (7), and cotter pins (9) as shown.
4. Assemble winch assembly to channels (10) using bolts (5) and lock nuts (6).
5. Move SMV sign and hardware to channel as shown.
6. Tighten all hardware.

Winch Kit Operation

1. Move cutter so wing is on the up slope of a ditch to aid in wing lift with the winch.
2. Unwind cable and remove roller (2).
3. Place cable around roller (2) and reinstall using pin (3) and Klik pin (4).
4. Remove cylinder pin from clevis end and raise slowly.
5. Install transport lock before moving unit.

BOLT TORQUE CHART

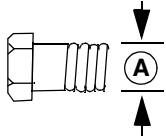
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

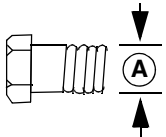


SAE Grade 5
(3 Radial Dashes)



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

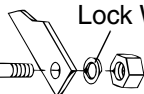


Metric
Grade 10.9

Ⓐ 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

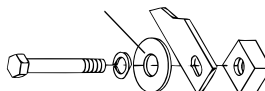
Typical Washer Installations

Bolt



Lock Washer

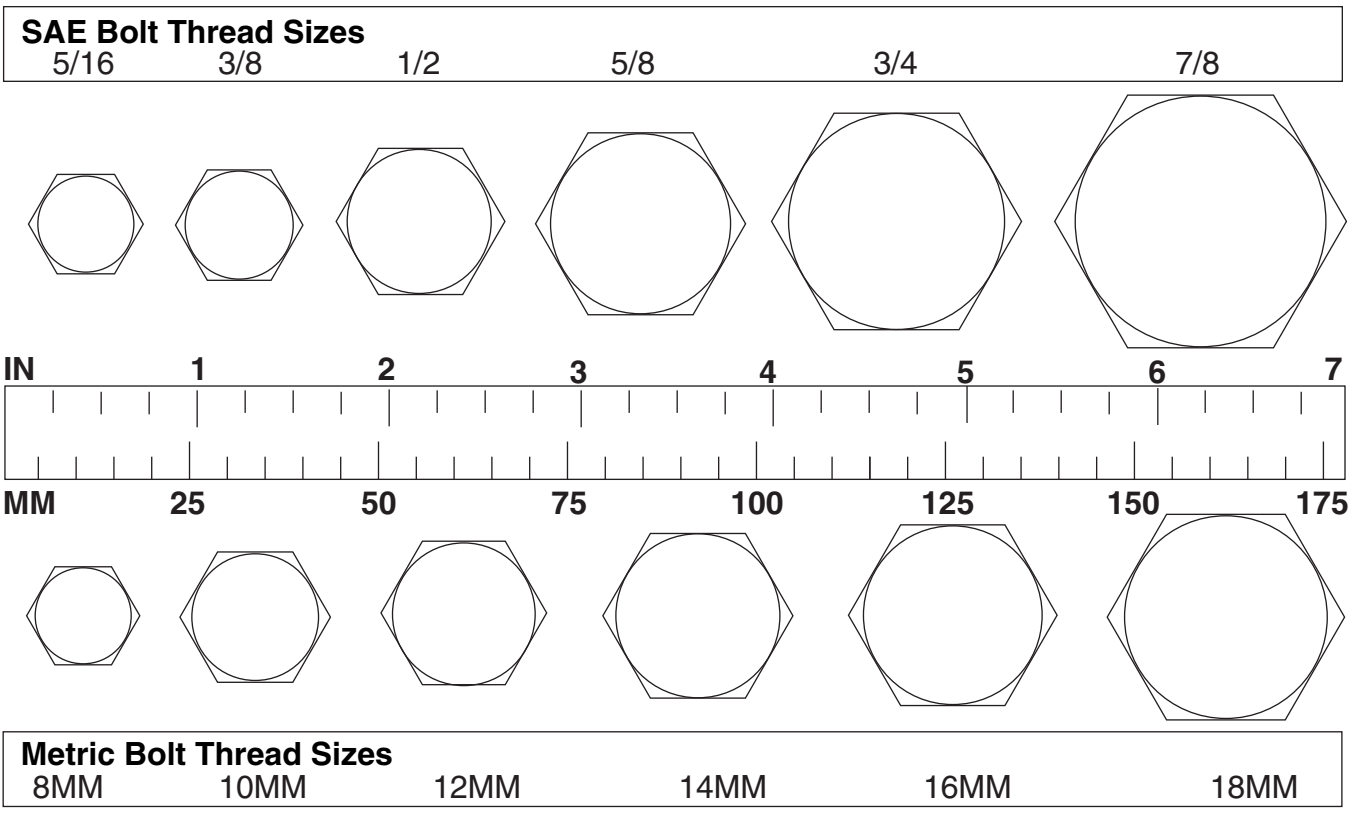
Flat Washer



8/9/00

BOLT SIZE CHART

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



ABBREVIATIONS

AG	Agriculture	MPa.....	Mega Pascal
ASABE.....	American Society of Agricultural & Biological Engineers (formerly ASAE)	N.....	Newton
ASAE	American Society of Agricultural Engineers	NC	National Coarse
ATF	Automatic Transmission Fluid	NF	National Fine
BSPP	British Standard Pipe Parallel	NPSM.....	National Pipe Straight Mechanical
BSPTM	British Standard Pipe Tapered Male	NPT	National Pipe Tapered
CV.....	Constant Velocity	NPT SWF	National Pipe Tapered Swivel Female
CCW	Counter-Clockwise	ORB.....	O-Ring Boss - Male
CW.....	Clockwise	P.....	Pitch
F	Female	PBY	Power-Beyond
FT	Full Thread	psi.....	Pounds per Square Inch
GA	Gauge	PTO	Power Take Off
GR (5, etc.)	Grade (5, etc.)	QD.....	Quick Disconnect
HHCS	Hex Head Cap Screw	RH.....	Right Hand
HT.....	Heat-Treated	ROPS	Roll-Over Protective Structure
JIC	Joint Industry Council 37° Degree Flare	RPM	Revolutions Per Minute
LH.....	Left Hand	RT	Right
LT.....	Left	SAE	Society of Automotive Engineers
m.....	Meter	UNC	Unified Coarse
mm.....	Millimeter	UNF	Unified Fine
M.....	Male	UNS.....	Unified Special

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WARRANTY

All Models Except Mow'n Machine™ Zero-Turn Mowers

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.

All current model loaders and backhoes 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)
	All units invoiced after 4/30/2012	
Gearbox components	BW1260, BW1620, BW1800, BW1260X, BW1800X, BW2400 BW240HD, BW180HD, BW180HB, BW126HB, BW126XHD, BW180XHD BB48X, BB60X, BB72X, BB84X, BB600X, BB720X, BB840X, BB6000X, BB7200X, BB8400X, DS1260, DSO1260, DS1440, TS1680, BW126-3, BW180-3, BW240, BW126X, BW180X	6 years
	PHD25, PHD35, PHD65, PHD95, DS96, DS120, RCC42, RD990X, PRD6000, PRD7200, PRD8400, S15CD, S20CD, S22CD, S25CD, S27CD, S30CD BW15LH, TC/R74, TC/R68, TC/R60, TBW144, TBW180, TBW204	
	RDC54, RD60, RD72, TBW150C, TS/R60, TS/R52, TS/R44, HC48, HC54, HC60, HC72	3 years (1 year if used in rental or commercial applications)
Blade spindles	RD990X, PRD6000, PRD7200, PRD8400, TBW144, TBW180, TBW204	3 years
Rust-through	BB600, BB720, BB840, BB6000, BB7200, BB8400, BW126-3, BW126HB, BW180-3, BW180HB, BW180HD, BW1260, BW1800, BW240, BW240HD, 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.

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.**

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. WOODS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND WOODS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the generality of the foregoing, Woods specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

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:

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



Woods Equipment Company
2606 South Illinois Route 2
Post Office Box 1000
Oregon, Illinois 61061 USA
800-319-6637 tel
800-399-6637 fax
www.WoodsEquipment.com



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.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. WOODS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND WOODS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

WOODS shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the generality of the foregoing, Woods specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

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, service person, salesperson, or employee of any company, including without limitation, WOODS, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

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

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