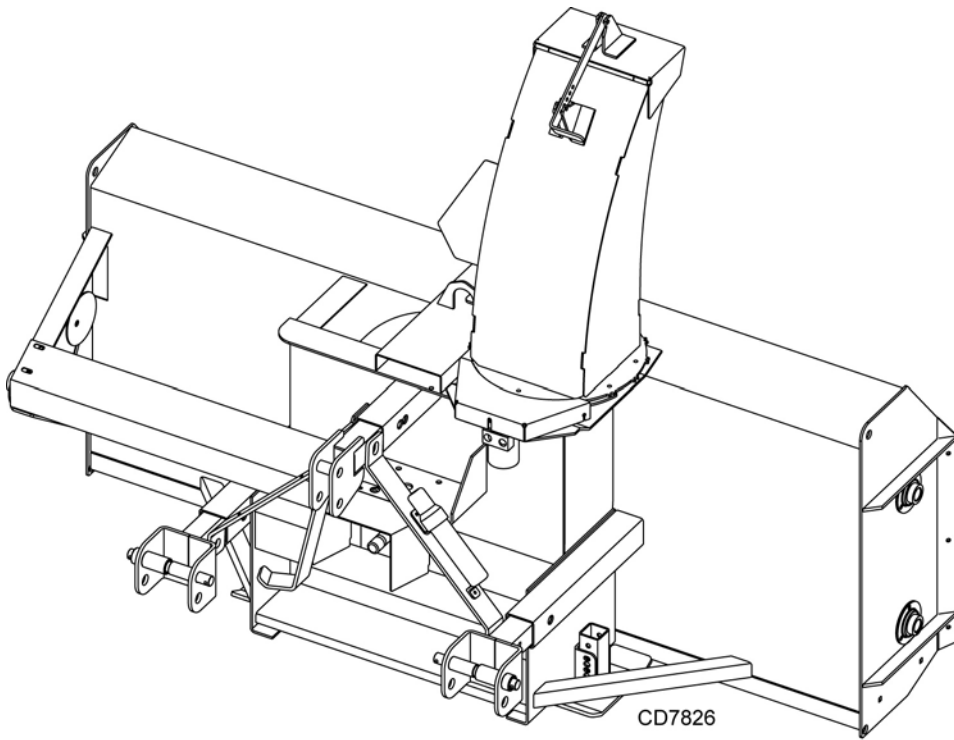


# WOODS SNOWBLOWER

**SS84-2**  
**SS96-2**  
**SS108-2**



**MAN0884**  
(2/20/2012)

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

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

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

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

**Model:** \_\_\_\_\_ **Date of Purchase:** \_\_\_\_\_

**Serial Number: (see Safety Decal section for location)** \_\_\_\_\_

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

Throughout this manual, the term **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.

**ALITEC™**

**BMP®**

**CENTRAL FABRICATORS®**

**GANNON®**

**GILL®**

**WAIN-ROY®**

**WOODS®**


**WOODS®**

## 2 Introduction

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


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**¡LEA EL INSTRUCTIVO!**

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



**This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.**

# SPECIFICATIONS

Width Of Cut:	SS84-2	.84"
	SS96-2	.96"
	SS108-2	1.08"
Cutting Height		.38"
Number of Augers	1 (SS84-2), 2 (SS96-2 & SS108-2)	
Auger Diameter		.15"
Fan Diameter		.34"
Auger Flighting Thickness		.5/16" x 3"
Roller Chain		#60
Chute Rotation		200 Deg.
Chute Length		.34"
Operating Weight	SS84-2	1395lbs
	SS96-2	1482lbs
	SS108-2	1614lbs
PTO Horsepower Requirement:	SS84-2	60 - 80 H.P.
	SS96-2	80 - 125 H.P.
	SS108-2	125 - 200 H.P.
Tractor Hitch		CAT2 & CAT3
PTO Input	SS84-2	540 RPM
	SS96-2 & SS108-2	540 or 1000 RPM
Auger Speed		176 RPM
Gearbox Oil Capacity		1.27 Qt SAE 80W-90

## 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 snowblower. 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, left, forward and rearward directions. These are determined by sitting in the tractor operator's seat facing the direction of forward travel.

# SAFETY RULES



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



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

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

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

## TRAINING

- **Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.) Failure to follow instructions or safety rules can result in serious injury or death.**
- **If you do not understand any part of this manual and need assistance, see your dealer.**
- **Know your controls and how to stop engine and attachment quickly in an emergency.**
- **Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.**
- **Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.**
- **Make sure that all operating and service personnel know that if hydraulic fluid penetrates skin, it must be surgically removed as soon as possible by a doctor familiar with this form of injury or gangrene, serious injury, or death will result. CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.**
- **Never allow children or untrained persons to operate equipment.**

## PREPARATION

- **Check that all hardware is properly installed. Always tighten to torque chart specifications unless instructed otherwise in this manual.**
- **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.**
- **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 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.**
- **Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.**
- **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.**
- **Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.**

## OPERATION

- **Never place hands or body into discharge chute or auger to unclog. Stored energy can cause auger to quickly rotate when unclogging occurs and cause severe injury or amputation. Stop engine, remove key, disconnect driveline, and carefully unclog, using a sturdy piece of wood.**
- **Keep bystanders away from equipment.**
- **Never direct discharge toward people, animals, or property.**

# SAFETY RULES



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



- 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.
- 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 RPM listed on safety decal located on fan housing above gearbox. Do not exceed.
- 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.
- Do not operate PTO during transport.
- 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.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Use extreme care when working close to fences, ditches, other obstructions, or on hillsides.
- Watch for hidden hazards on the terrain during operation.
- Watch for traffic when operating near or crossing roadways.
- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.
- 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 performing any service or maintenance, disconnect driveline from tractor PTO.

## MAINTENANCE

- Before dismounting power unit or performing any service or maintenance, follow these steps: disengage power to equipment, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, set parking brake, stop engine, remove key, and unfasten seat belt.
- Before performing any service or maintenance, disconnect driveline from tractor PTO.
- **NEVER GO UNDERNEATH EQUIPMENT.** Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak-down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
  - Service work does not require going underneath implement.
  - Read Operator's Manual for service instructions or have service performed by a qualified dealer.
- 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.
- 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.
- 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.
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.
- Tighten all bolts, nuts, and screws to torque chart specifications. Check that all cotter pins are

installed securely to ensure equipment is in a safe condition before putting unit into service.

- Make sure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Make sure shields and guards are properly installed and in good condition. Replace if damaged.
- Do not disconnect hydraulic lines until engine is stopped, power unit is properly secured, equipment and all components are lowered to the

ground, and system pressure is released by operating all valve control levers.

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

### **STORAGE**

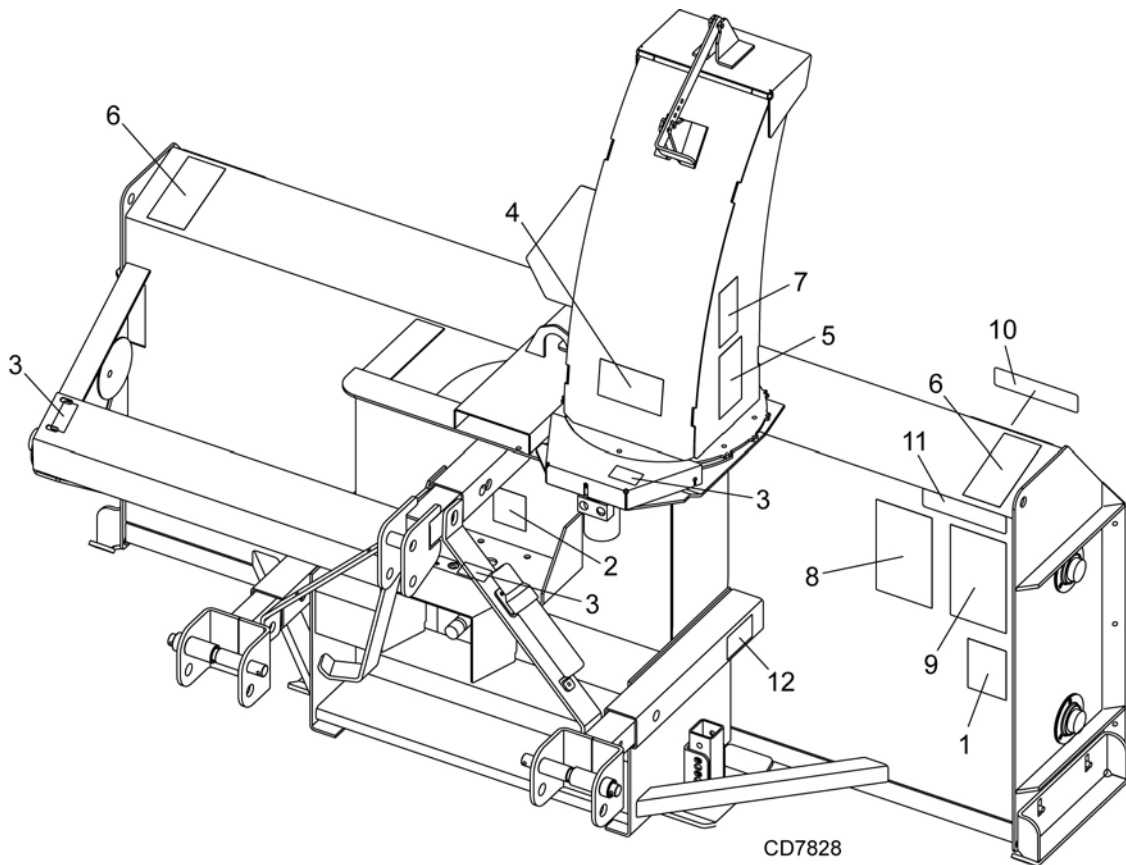
- Block equipment securely for storage.
- Keep children and bystanders away from storage area.



# SAFETY & INSTRUCTIONAL DECALS

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

**Replace Immediately If Damaged!**



CD7828

3 - 1033602

<b>DANGER</b>
<b>SHIELD MISSING</b>
DO NOT OPERATE - PUT SHIELD ON
<b>PROTECTION MANQUANTE</b>
NE PAS UTILISER - REMETTRE LA PROTECTION
1033602

10 - P/N 57123  
REAR REFLECTOR - RED

11 - P/N 1002940  
FRONT REFLECTOR - AMBER

5 - 1033270

<b>DANGER</b>
<ul style="list-style-type: none"> <li>■ Keep hands out of discharge chute while engine is running.</li> <li>■ Shut off engine before unclogging discharge chute.</li> </ul> <p style="text-align: center;"><b>FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</b></p> <ul style="list-style-type: none"> <li>■ Ne pas approcher les mains de la goulotte d'évacuation lorsque le moteur tourne.</li> <li>■ Couper le moteur avant de déboucher la goulotte d'évacuation.</li> </ul> <p style="text-align: center;"><b>LE NON-RESPECT DE CES INSTRUCTIONS PEUT PROVOQUER DES BLESSURES GRAVES VOIRE MORTELLES.</b></p>
1033270

1 - 1033600

<b>DANGER</b>
<b>ROTATING DRIVELINE CONTACT CAN CAUSE DEATH</b> <b>KEEP AWAY!</b> <b>DO NOT OPERATE WITHOUT -</b>
<ul style="list-style-type: none"> <li>■ All driveline guards, tractor and equipment shields in place.</li> <li>■ Drivelines securely attached at both ends.</li> <li>■ Driveline guards that turn freely on driveline.</li> </ul>
<b>ARBRE DE TRANSMISSION EN ROTATION</b> <b>LE CONTACT PEUT CAUSER LA MORT</b> <b>NE PAS S'APPROCHER !</b> <b>NE PAS UTILISER SANS -</b>
<ul style="list-style-type: none"> <li>■ tous les carters d'arbre de transmission ainsi que toutes les protections du tracteur et de l'équipement en place.</li> <li>■ les arbres de transmission fermement fixés aux deux extrémités.</li> <li>■ des carters tournant librement sur l'arbre de transmission.</li> </ul>
1033600

4 - 1033603

<b>WARNING</b>
HIGH-PRESSURE HYDRAULIC OIL LEAKS CAN PENETRATE SKIN RESULTING IN SERIOUS INJURY, GANGRENE OR DEATH.
<ul style="list-style-type: none"> <li>■ Check for leaks with cardboard; never use hand.</li> <li>■ Before loosening fittings: lower load, release pressure, and be sure oil is cool.</li> <li>■ Consult physician immediately if skin penetration occurs.</li> </ul>
<b>AVERTISSEMENT</b>
UNE HUILE HYDRAULIQUE SOUS HAUTE PRESSION QUI S'ÉCHAPPE PEUT PÉNÉTRER SOUS LA PEAU ET CAUSER DE GRAVES LÉSIONS, LA GANGRÈNE OU MÊME LA MORT.
<ul style="list-style-type: none"> <li>■ Rechercher les fuites à l'aide d'un morceau de carton et non pas à la main.</li> <li>■ Avant de desserrer les raccords, abaisser la charge, relâcher la pression et s'assurer que l'huile est froide.</li> <li>■ Consulter immédiatement un médecin en cas de pénétration sous-cutanée.</li> </ul>
1033603





# SAFETY & INSTRUCTIONAL DECALS

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

### Replace Immediately If Damaged!



9 - 1033274

<b>⚠ WARNING</b>
<p><b>TO AVOID SERIOUS INJURY OR DEATH:</b></p> <ul style="list-style-type: none"> <li>■ Read Operator's Manual before operating, servicing or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or call 1-800-319-6637.)</li> <li>■ Operate from tractor seat only.</li> <li>■ Lower equipment to ground, stop engine, remove key and set brake before dismounting tractor.</li> <li>■ Never allow children or untrained persons to operate equipment.</li> <li>■ Never allow riders.</li> <li>■ Keep all shields in place and in good condition.</li> <li>■ Never direct discharge towards people, buildings, cars, etc.</li> <li>■ Keep hands, feet, hair and clothing away from moving parts.</li> <li>■ Stop machine and wait for all movement to stop before unclogging or servicing machine.</li> <li>■ Make sure everyone is clear of machine before starting and during operation.</li> <li>■ Watch for hidden hazards on terrain during operation.</li> <li>■ Never go under raised equipment.</li> </ul> <p style="text-align: center;"><b>FAILURE TO FOLLOW THESE INSTRUCTIONS CAN SERIOUS RESULT IN INJURY OR DEATH.</b></p>
<b>⚠ AVERTISSEMENT</b>
<p><b>POUR ÉVITER LES ACCIDENTS GRAVES OU MORTELS :</b></p> <ul style="list-style-type: none"> <li>■ Lire le manuel d'utilisation avant d'utiliser, d'entretenir ou de réparer l'équipement. Respecter toutes les règles et instructions de sécurité. (Les manuels peuvent être obtenus auprès du concessionnaire ou en appelant, aux États-Unis, le -800-319-6637.)</li> <li>■ Ne faire fonctionner qu'à partir du siège du tracteur.</li> <li>■ Abaisser l'équipement au sol, arrêter le moteur, retirer la clé et serrer le frein avant de quitter le siège du tracteur.</li> <li>■ Ne jamais laisser un enfant ou une personne non formée se servir de l'équipement.</li> <li>■ Passagers interdits.</li> <li>■ Maintenir toutes les protections en place et en bon état.</li> <li>■ Ne jamais diriger l'évacuation vers des personnes, des bâtiments, des automobiles, etc.</li> <li>■ Ne pas approcher les mains, les pieds, les cheveux ou les vêtements des pièces en mouvement.</li> <li>■ Arrêter la machine et attendre la cessation complète de tout mouvement avant de procéder au débouchage ou à l'entretien de la machine.</li> <li>■ S'assurer que personne ne se trouve à proximité de la machine avant de la mettre en marche et pendant son utilisation.</li> <li>■ Durant l'utilisation, se méfier des dangers que peut receler un terrain.</li> <li>■ Ne jamais se placer sous un équipement lorsqu'il est relevé.</li> </ul> <p style="text-align: center;"><b>LE NON-RESPECT DE CES INSTRUCTIONS PEUT PROVOQUER DES BLESSURES GRAVES, VOIRE LA MORT.</b></p>

8 - 1033273

<b>⚠ WARNING</b>
<p><b>FALLING OFF CAN RESULT IN BEING RUN OVER.</b></p> <ul style="list-style-type: none"> <li>■ Tractor must be equipped with ROPS (or ROPS CAB) and seat belt. Keep foldable ROPS systems in "locked up" position at all times.</li> <li>■ Buckle Up! Keep seat belt securely fastened.</li> <li>■ Allow no riders.</li> </ul> <p><b>RAISED IMPLEMENT CAN DROP AND CRUSH.</b></p> <ul style="list-style-type: none"> <li>■ Never go underneath raised implement which can drop from equipment or tractor</li> <li>■ 3-point hitch hydraulic leak down, hydraulic system failures, movement of control levers, or mechanical linkage failures.</li> <li>■ Service work does not require going underneath implement. Read manual instructions.</li> </ul> <p style="text-align: center;"><b>FALLING OFF OR GOING UNDERNEATH IMPLEMENT CAN RESULT IN SERIOUS INJURY OR DEATH.</b></p>
<b>⚠ ADVERTISSEMENT</b>
<p><b>UNE PERSONNE QUI TOMBE RISQUE DE SE FAIRE ÉCRASER.</b></p> <ul style="list-style-type: none"> <li>■ Le tracteur doit être équipé d'un cadre de protection (ou d'une cabine de sécurité ROPS) et d'une ceinture de sécurité. Toujours garder les systèmes ROPS pliables en position "verrouillée".</li> <li>■ Boucler la ceinture de sécurité et la garder fermement bouclée.</li> <li>■ Passagers interdits.</li> </ul> <p><b>UN ACCESSOIRE RELEVÉ EST SUSCEPTIBLE DE RETOMBER SUR QUELQU'UN.</b></p> <ul style="list-style-type: none"> <li>■ Ne jamais se placer sous un accessoire relevé susceptible de retomber sous l'effet d'une fuite hydraulique de l'équipement ou de l'attelage 3 points du tracteur, d'une défaillance du circuit hydraulique, du déplacement des leviers de commande ou d'une défaillance de la tringlerie mécanique.</li> <li>■ Il n'est pas nécessaire de se placer sous l'accessoire pour les opérations d'entretien. Consulter les instructions du manuel.</li> </ul> <p style="text-align: center;"><b>UNE PERSONNE QUI TOMBE DE L'ACCESSOIRE OU SE PLACE ESSOUS S'EXPOSE À DES BLESSURES GRAVES VOIRE MORTELLES.</b></p>

6 - 1033271

<b>⚠ DANGER</b>
<p style="text-align: center;"><b>ROTATING AUGER KEEP AWAY!</b></p> <ul style="list-style-type: none"> <li>■ Keep hands, feet and clothing away from rotating auger.</li> <li>■ Lower equipment to ground, stop engine, remove key and set brake before servicing.</li> </ul> <p style="text-align: center;"><b>FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</b></p>
<p style="text-align: center;"><b>VIS SANS FIN EN ROTATION NE PAS S'APPROCHER !</b></p> <ul style="list-style-type: none"> <li>■ Ne pas approcher les mains, les pieds ou les vêtements de la vis sans fin en rotation.</li> <li>■ Abaisser l'équipement au sol, arrêter le moteur, retirer la clé et serrer le frein avant toute opération d'entretien.</li> </ul> <p style="text-align: center;"><b>LE NON-RESPECT DE CES INSTRUCTIONS PEUT PROVOQUER DES BLESSURES GRAVES VOIRE MORTELLES.</b></p>

7 - 1033272

<b>⚠ DANGER</b>
<p style="text-align: center;"><b>KEEP AWAY!</b></p> <ul style="list-style-type: none"> <li>■ Keep hands, feet and face away from opening.</li> </ul> <p style="text-align: center;"><b>FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</b></p>
<p style="text-align: center;"><b>NE PAS S'APPROCHER !</b></p> <ul style="list-style-type: none"> <li>■ Ne pas approcher les mains, les pieds ou le visage de l'ouverture.</li> </ul> <p style="text-align: center;"><b>LE NON-RESPECT DE CES INSTRUCTIONS PEUT PROVOQUER DES BLESSURES GRAVES VOIRE MORTELLES.</b></p>

2 - 1033601

<b>⚠ WARNING</b>
<p><b>DO NOT EXCEED PTO SPEED OF</b></p> <h2 style="margin: 0;">540 RPM</h2> <p>PTO speeds higher than 540 RPM can cause equipment failure and personal injury.</p>
<b>⚠ AVERTISSEMENT</b>
<p><b>NE PAS DÉPASSER LA VITESSE DE PDF DE</b></p> <h2 style="margin: 0;">540 TR/MN</h2> <p>Le fonctionnement de la PDF à plus de 540 tr/mn peut entraîner une panne de l'équipement et des blessures.</p>

**BE CAREFUL!**

2 - 55922

<b>⚠ WARNING</b>
<p><b>DO NOT EXCEED PTO SPEED OF</b></p> <h2 style="margin: 0;">1000 RPM</h2> <p>PTO speeds higher than 1000 RPM can cause equipment failure and personal injury.</p>
<b>⚠ AVERTISSEMENT</b>
<p><b>NE PAS DÉPASSER LA VITESSE DE PDF DE</b></p> <h2 style="margin: 0;">1000 TR/MN</h2> <p>Le fonctionnement de la PDF à plus de 1000 tr/mn peut entraîner une panne de l'équipement et des blessures.</p>

Use a clean, damp cloth to clean safety decals.

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

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

12 - 1033176

<p>Model# Serial#</p> <div style="border: 1px solid black; width: 100%; height: 20px; margin: 5px 0;"></div> <p style="text-align: center;">(BAR CODE)</p>
<h2 style="margin: 0;">WOODS</h2> <p style="font-size: small; margin: 0;">Woods Equipment Company Oregon, Illinois 61061 USA</p>

MAN0884 (08/15/2011)

# Safety 9

# OPERATION

The operator is responsible for the safe operation of the snowblower. The operator must be properly trained. Operators should be familiar with the tractor, snowblower, and all safety practices before starting operation. Read through safety rules and decals on page 5 through page 9.

## WARNING

■ Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals and safety decals are available from your dealer. To locate your nearest dealer, check the Dealer Locator at [www.WoodsEquipment.com](http://www.WoodsEquipment.com), or in the United States and Canada call 1-800-319-6637.) Failure to follow instructions or safety rules can result in serious injury or death.

■ 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.

■ 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.

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

■ Never allow children or untrained persons to operate equipment.

■ 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 bystanders away from equipment.

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

■ Never place hands or body into discharge chute or auger to unclog. Stored energy can cause auger to quickly rotate when unclogging occurs and cause severe injury or amputation. Stop engine,

remove key, disconnect driveline, and carefully unclog, using a sturdy piece of wood.

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

■ Make sure that all operating and service personnel know that if hydraulic fluid penetrates skin, it must be surgically removed as soon as possible by a doctor familiar with this form of injury or gangrene, serious injury, or death will result. CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.

## WARNING

■ Before dismantling 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.

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

■ Operate tractor PTO at the rpm speed stated in “Specifications” section.

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

## 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 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.

## NOTICE

■ Be sure to complete the Pre-Operation Check List on page 16 prior to operating this Snowblower.

## PRINCIPAL COMPONENTS

The snowblower has three main operating components. A 15" diameter auger dislodges the snow and carries it to a central fan. The snow is then discharged by the fan and directed away from the blower through a controllable spout.

The snowblower is mounted on a tractor 3-point hitch and driven by the tractor PTO. A centrally located gearbox directs power to the fan and auger.

## **TRACTOR REQUIREMENTS**

### **3-Point Hitch**

The SS snowblower requires the tractor to be equipped with a Category 2 or 3, three-point hitch.

### **Hydraulic Circuit**

Either closed-center or open-center systems can be used for the hydraulic chute rotator and optional spout control.

### **Tire Configuration**

For best results, the tractor wheels should be set narrower than the cutting width of the snowblower. Wider wheel settings will cause snow to be pulled under the tractor and may require additional passes.

### **Tractor Stability**

■ **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.**

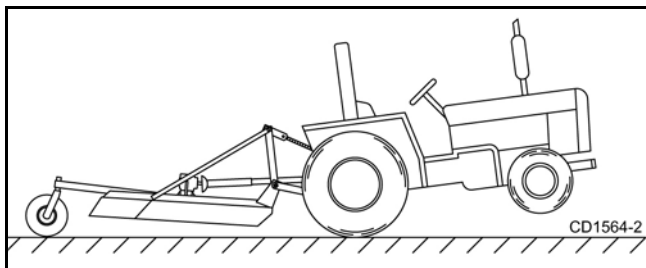


Figure 1. Tractor Stability (Typical)

## **HITCH ADJUSTMENT**

### **⚠ WARNING**

■ **Before putting equipment into service, check and adjust driveline length as instructed in Operator's Manual. Driveline must not bottom out or pull apart throughout the full range of the tractor hitch. Do not operate until driveline length is correct.**

■ **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 unexpect-**

**edly 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.**

**The snowblower has an adjustable hitch for establishing the proper PTO operating geometry. You must perform the following procedure for each tractor or quick hitch used.**

Follow the above safety rules and securely block the snowblower with jackstands when taking measurements. Always stand alongside of hitch and never go underneath any raised components. The tractor must be shut off, parking brake set, and key removed each time the operator leaves the tractor seat during this procedure. Refer to Figure 2.

1. Clear the area of all bystanders.

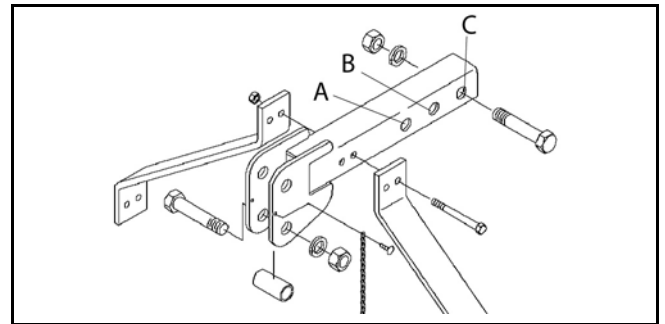


Figure 2. 3-Point Hitch Adjustment Positions

2. The snowblower 3-point hitch arms are adjustable to three operating positions. Assemble the arms in their shortest position (A) and adjust for proper PTO driveline engagement before using. Remove adjustment bolts from snowblower lower arms and top link arm. Slide the arm assembly to the correct mounting hole and install adjustment bolts. Torque bolts to specifications in Bolt Torque Chart on page 32.
3. Attach snowblower to tractor, but do not attach PTO shaft.
4. Move snowblower until tractor PTO and gearbox shafts are the same height. This should be the position requiring the shortest driveline length. Securely block both ends of snowblower housing using jackstands.
5. Measure the distance between the lock groove on tractor PTO shaft and the cross hole in snowblower gearbox shaft. The distance between the groove and cross hole must be greater than 37.5" to provide one inch of compression space in the shaft and prevent bottoming out during use.
6. If the dimension is less than 37.5", the hitch must be extended to mounting hole B. Recheck the

dimension. If it is still less than 37.5", extend the hitch to mounting hole C.

7. Move the snowblower to the highest and lowest points of its operating range. Measure the distance between the lock groove on the tractor PTO shaft and the cross hole in the snowblower gearbox shaft at each point. The distance must not exceed 45.68". This dimension ensures a minimum of five inches of driveline telescoping engagement, which is required to prevent driveline failure and separation.
8. If the snowblower is pitched toward the auger (not level), the cutting edge is likely to dig. If you cannot adjust this out (level the unit) with the top link, you need to assemble the upper hitch to the second hole in the snowblower frame (closest to the fan). This will pitch the top of the hitch toward the snowblower and help level the frame while mounted to the tractor.
9. If you cannot obtain the above dimensions using these adjustment instructions, contact your dealer. Do not operate until the above dimensions are obtained.

### **ATTACHING SNOWBLOWER TO TRACTOR**

1. Move the tractor into position in front of the snowblower. Move back slowly and carefully, not allowing anyone to be between the tractor and the snowblower.
2. Turn off tractor engine.
3. Attach two lower arms of 3-point hitch with the two hitch-pin assemblies.
4. Attach tractor top link to upper hitch point of snowblower. Adjust length of top link until the top edge of the frame ends are parallel to ground.
5. Adjust tractor lower 3-point arm anti-sway devices to prevent snowblower from swinging side to side during transport.
6. Attach front PTO driveline from snowblower to tractor. (Slide front section of PTO driveline into back section. Slide PTO shaft onto rear PTO output of tractor.)
7. Swing PTO driveline holder up and out of the way during operation.

### **NOTICE**

■ **If the PTO driveline is too long, severe driveline and gearbox damage is possible when hooking up**

**the PTO driveline from the snowblower to the tractor. The front PTO driveline is long enough to fit a variety of tractors. It is possible that the front PTO driveline will need to be cut. There will be NO benefit by cutting only one telescoping section. Both sections of the driveline must be cut. DO NOT FORCE THE PTO TO FIT.**

■ **If attaching with quick hitch, the distance between the tractor PTO and gearbox input shaft will increase. Please follow the steps as you would for a 3-point hitch to insure proper engagement.**

■ **When attaching snow blower to multiple tractors consider the drive length needed for each tractor and whether the drive line will work in all combinations.**

■ **WARRANTY IS VOID IF THE PTO DRIVELINE IS TOO LONG, resulting in gearbox, PTO, yoke or cross bearing damage.**

**NOTE:** The PTO driveline, when attached to the tractor and gearbox, must not extend so there is less than 11-3/4" (bilobe) of overlap within the PTO driveline.

### **DRIVELINE ATTACHMENT**

Attach snowblower to tractor 3-point hitch (or quick hitch if available). Do not attach driveline the first time you attach the snow blower to the tractor. Raise and lower snowblower to determine maximum and minimum distance between tractor PTO shaft and gearbox input shaft. If distance is too large, driveline will be too short for proper engagement. If distance is too small, driveline may bottom out in operation and damage snowblower or tractor.

If driveline is too short, please call your Woods dealer for a longer driveline.

If driveline is too long, please follow instructions for shortening driveline.

### **SHORTENING DRIVELINE**

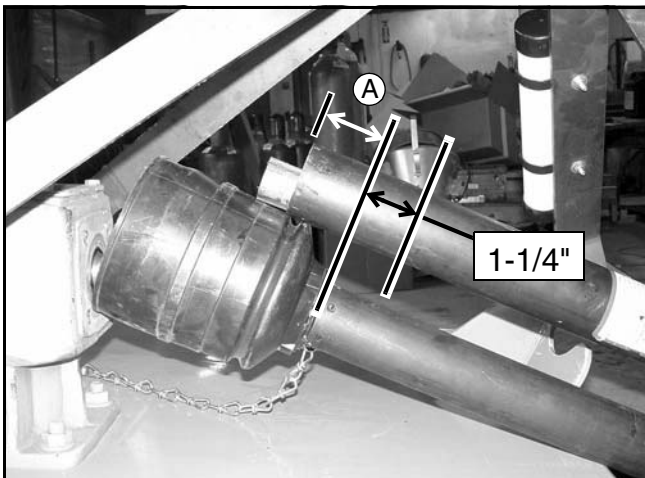
1. Move snowblower up and down to get shortest possible distance between tractor PTO shaft and gearbox input shaft. Leave snowblower in minimum distance position. Install jack stands under snowblower for support.
2. Separate driveline into two halves and connect them to tractor and gearbox.
3. Place driveline halves parallel to one another to determine how much to shorten the driveline.





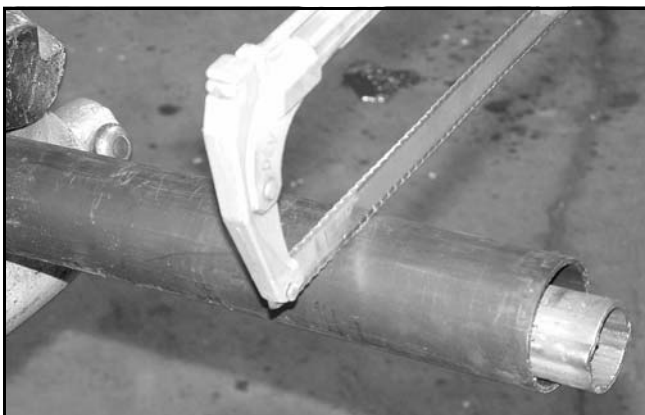
**Figure 3.** Drive Halves Placed Parallel

4. Measure from end of upper shield to base of bell on the lower shield (A). Add 1-1/4" to dimension (A).



**Figure 4.** Determine Shield Length

5. Cut upper shield to this overall dimension



**Figure 5.** Cut Shield

6. Place cut portion of shield against end of shaft and use as a guide. Mark and cut shaft.



**Figure 6.** Cut Shaft to Length

7. Repeat step 4 through 6 for other half of drive.
8. File and clean the cut ends of both drive halves. Ensure the drive halves slide smoothly together.

Do not run tractor if proper driveline engagement cannot be obtained through these methods.

Connect driveline to tractor PTO shaft, making sure spring-activated locking collar slides freely and locks driveline to PTO shaft.

### **MACHINE BREAK-IN**

Although there are no operational restrictions on the snowblower when used for the first time, the following items are to be checked.

#### **A. After operating for 1/2 hour:**

1. Check all nuts, bolts and other fasteners. Tighten to their specified torque level.
2. Check drive chain tension. Adjust as required.
3. Check that auger, fan and spout are in good condition.
4. Check oil level in the gearbox. Add as required.
5. Lubricate all grease points.

#### **B. After operating for 5 to 10 hours:**

1. Repeat items 1 through 4 of Section A.
2. Then go to normal Owner Service Section, page 17.

### **OPERATION**

Each operator should review this section of the manual at the start of the season and as often as required to be familiar with the machine. When using, follow this procedure:

1. Review and follow the "Pre-Operation Check List," page 16.
2. Review "Attaching Snowblower to Tractor" section, page 12.

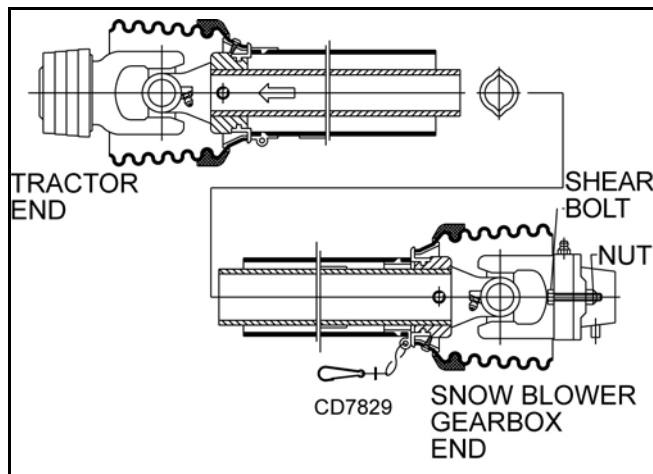
3. Before going to the work site, review "Transporting" section, page 15.
4. Position snowblower in a level area and lower into working position.
5. Starting Snowblower:
  - Be sure area is clear of all bystanders.
  - Run engine at low idle.
  - Slowly engage PTO control to start machine.
  - Slowly bring engine to rated PTO speed. Never exceed rated speed
6. Stopping Machine:
  - Slowly decrease engine speed to low idle.
  - Wait until PTO drive and snowblower have slowed to low engine idle speed before disengaging PTO drive.

### ⚠ WARNING

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

■ Before performing any service or maintenance, disconnect driveline from tractor PTO.

7. Do not operate with bystanders in area. The machine can pick up stones, sticks, wire and other debris and throw it out with enough force to cause severe injury or death to bystanders. Shut down machine and wait for moving parts to stop before approaching machine.
8. Ground Speed: Travel speed can vary between 1.5 and 8 mph depending on material and terrain conditions. It is the responsibility of the operator to note the condition of the job being done and set the speed to obtain proper feeding rate and maintain safe control of machine.
9. The PTO driveline is equipped with a shear bolt, Figure 7, that protects drive system components from shock loads if machine strikes an obstruction. See parts section for bolt size and grade.



**Figure 7. Shear Bolts**

### 10. Operating Requirements:

### ⚠ WARNING

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

**A.** Know where you are operating. Remove all unwanted trash and debris before starting. It can wrap around auger or be thrown out of machine during operation.

**B.** Keep auger and fan in good condition. Do not operate with a damaged fan or auger.

**C.** Do not allow the auger to hit and scalp ground during operation. Hitting ground will pick up soil or rocks that can be thrown out of machine.

**D.** To change direction of snow discharge, rotate the discharge chute. It will rotate 200°. It will not rotate a full 360°.

**NOTE:** For hydraulic rotator, if chute turns too quickly, adjust flow control on tractor hydraulics.

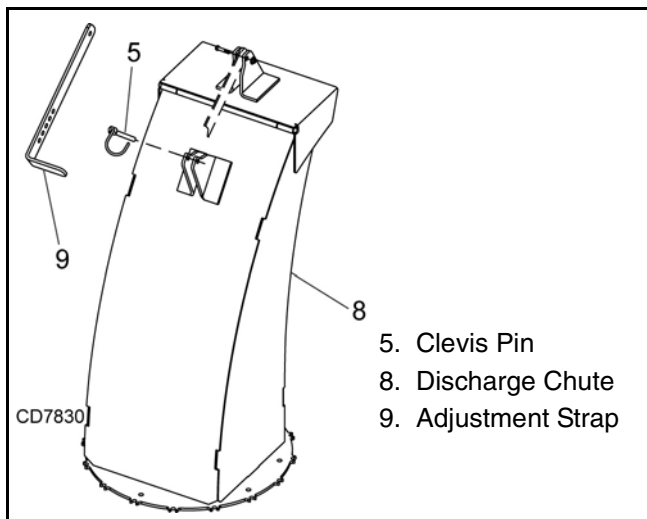
**NOTE:** Operating hydraulic deflector cylinder requires low tractor flow rates. When initially operating cylinder reduce tractor hydraulic flow rate to prevent deflector damage and improve resolution of deflector adjustment.

### Adjusting Discharge Chute Position

■ The height of snow discharge is controlled by position of chute deflector on discharge chute (8), Figure 8. Remove clevis pin (5), and slide adjustment strap (9) to selected discharge height. Reinstall clevis pin (5).

**NOTE:** If possible, blow snow with the wind. Beware of people or buildings in the area.





**Figure 8.** Discharge Chute Position

- Keep bystanders away from equipment.
  - Wear appropriate hearing protection.
5. Depth of cut can be controlled with the skid shoes or by tilting the blower forward or backward. Excessive forward or backward tilt may cause U-joint to flutter resulting in PTO shear bolt failure. Do not run the PTO shaft at more than a 15° angle.
  6. Allow the snowblower to work its way through the snow rather than forcing it.
  7. In deep snow it may be necessary to raise the snowblower for the first pass through and clean up the remainder with a second pass.
  8. Do not feed snow through snowblower when raising or lowering.

## **TRANSPORTING**

### **! WARNING**

- **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.**
- **Never allow riders on power unit or attachment.**
- **Do not operate PTO during transport.**

### **! CAUTION**

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

## **NOTICE**

- **Do not exceed 20 mph (32km/h). Reduce speed on rough roads and surfaces.**

When transporting snowblower, review and follow this procedure:

- **Be sure all bystanders are clear of machine.**
- **Be sure that machine is securely attached to tractor and all retainer pins are installed.**
- **Raise machine.**
- **Do not allow riders.**

## **STORAGE**

### **! WARNING**

- **Block equipment securely for storage.**
- **Keep children and bystanders away from storage area.**

After season's use, machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at start of next season.

To insure a long, trouble free life, this procedure should be followed when preparing unit for storage.

1. Clear area of bystanders.
2. Thoroughly wash machine to remove all dirt, mud, debris or residue.
3. Check auger, fan and drivelines for damage or entangled material. Remove the entangled material. Repair or replace damaged parts.
4. Inspect all hydraulic hoses, fittings, lines and couplers. Tighten any loose fittings. Replace any hose that is cut, nicked or abraded or is separating from crimped end of fitting.
5. Change oil in gearbox.
6. Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from washings.
7. Touch up all paint nicks and scratches to prevent rusting.
8. Move to storage area.
9. Select an area that is dry, level and free of debris.
10. Unhook from tractor.
11. Store machine in an area away from human activity.
12. Do not allow children to play on or around stored machine.

## **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 remaining debris 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.

## **PRE-OPERATION CHECK LIST (OWNER'S RESPONSIBILITY)**

- \_\_\_ Review and follow all safety rules and safety decal instructions on pages page 5 through page 9.
- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Check that all shields and guards are properly installed and in good condition. Replace if damaged.
- \_\_\_ Check that all hardware and cotter pins are properly installed and secured.
- \_\_\_ 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.
- \_\_\_ Inspect area and remove stones, branches or other hard objects that might be thrown, causing injury or damage.
- \_\_\_ Do not allow riders.
- \_\_\_ Check the drive chain for tension. If too loose, adjust the idler sprocket. A 1/4" sag in the bottom span is satisfactory.
- \_\_\_ Check all lubrication points and grease as instructed in "Service, lubrication information". Make sure the PTO slip joint is lubricated and that the gearbox fluid levels are correct.
- \_\_\_ Set tractor PTO at correct rpm for your equipment.
- \_\_\_ 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.
- \_\_\_ Make sure tractor ROPS or ROPS CAB and seat belt are in good condition. Keep seat belt securely fastened during operation.

# OWNER SERVICE

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

## WARNING

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

■ **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.**

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

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

■ **Before performing any service or maintenance, disconnect driveline from tractor PTO.**

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

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

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

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

## 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 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.**

■ **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.**

## SERVICE AND MAINTENANCE INTERVALS

By following a careful service and maintenance program, you will prolong the life of your machine.

The service intervals recommended are based on normal operating conditions. Severe or unusual conditions may require more frequent service.

### Lubrication Information

1. Do not let excess grease collect on or around parts, particularly when operating in sandy areas.
2. Use a hand-held grease gun for all greasing.
3. 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.
4. If grease fitting will not take grease, remove and clean thoroughly. Also clean lubricant passage way. Replace fitting if necessary.
5. Two good pumps of most grease guns is sufficient when the lubrication schedule is followed.

### Driveline Lubrication

1. Lubricate the driveline slip joint every 8 hours of operation. Failure to maintain proper lubrication could result in damage to u-joints, gearbox, and driveline.
2. Lower snow blower to ground, disconnect driveline from tractor PTO shaft, and slide halves apart. Do not disconnect the halves 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.

4. Apply one pump of grease to each driveline u-joint grease fitting.
5. Apply one pump of grease to each of the plastic driveline shield bearings.
6. On the shear pin driveline, lubricate the shear yoke with grease to prevent galling.
7. Periodically check the yokes on the front PTO. Make sure the bolt and nut are tight and the yoke is not moving on the gearbox shaft.

### Driveline Shear Bolt Replacement

PTO drivelines are equipped with shear bolts to protect against overloads.

■ **Always use approved shear bolt as replacement part. Using a hardened bolt or shear pin may result in damage to driveline or gearbox.**

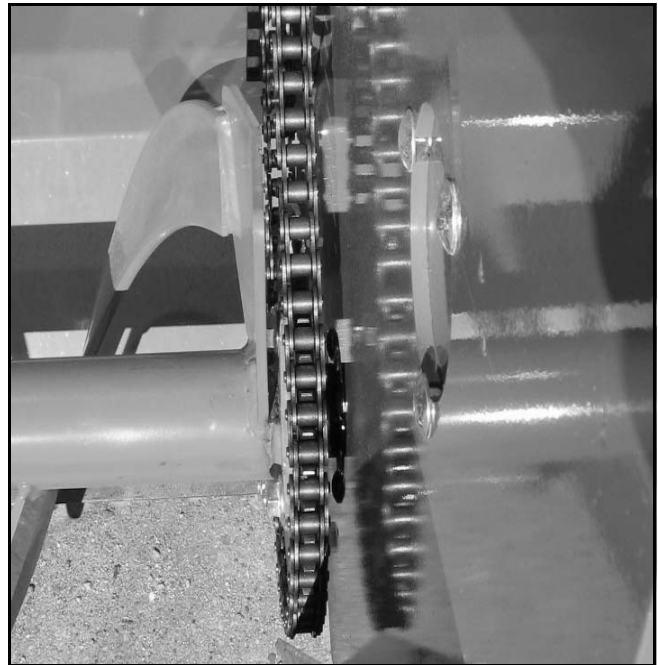

**WARNING**

■ **Before proceeding, read and follow all safety rules.**

1. Disconnect driveline from tractor PTO shaft.
2. Remove gearbox shield by removing thumb screws.
3. Remove damaged bolt from yoke on input shaft of snow blower gearbox.
4. Rotate driveline to align holes in yoke and shaft. Install new shear bolt and secure with lock nut. Tighten to torque specification given on Torque Chart.
5. Reinstall gearbox shield and reconnect driveline to tractor PTO shaft.

### Chain Maintenance

The auger chain should be inspected every 25 hours. New chain has a tendency to stretch, so it is necessary to check the chain tension to prevent flopping around, thus causing potential problems. Chain tension is pre-set at the factory. If chain becomes excessively loose, it may be necessary to readjust the idler sprocket, Figure 10.



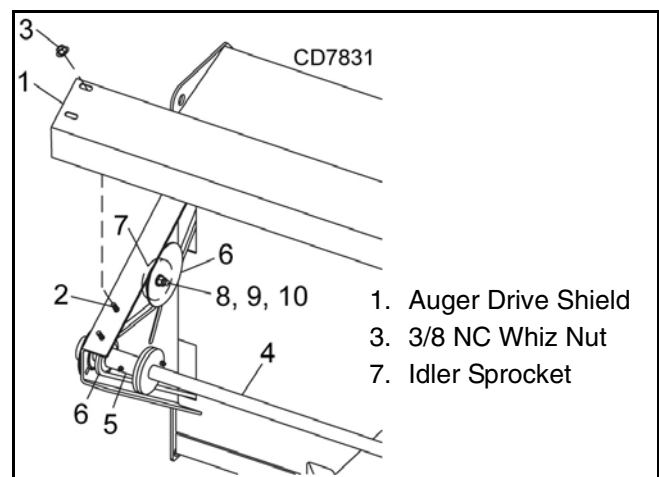
**Figure 9.** Drive Chain Lubrication

1. Apply grease to drive sprocket grease zerk (See Figure 9).
2. Apply grease or oil to the drive chain regularly, especially after using (See Figure 9).

### NOTICE

■ **Replacement chain should be only high quality original equipment chain for longer life.**

1. Remove auger drive shield (1) by removing 3/8 whiz nuts (3).
2. Loosen cap screw and nut on idler sprocket.
3. Move idler sprocket (7) to obtain 1/4 inch sag along bottom span of chain.
4. Re-tighten idler sprocket and reinstall jackshaft shield.



**Figure 10.** Auger Drive Chain Adjustment

## Auger Drive Shear Bolt Replacement

■ Always use approved shear bolt as replacement part. Using a hardened bolt or shear pin may result in damage to driveline or gearbox.

Remove any obstructions from the auger, chain, or drive sprocket.

Remove auger drive shield (1) by removing 3/8 NC Whiz Nuts (3).

Remove damaged bolt from shear plates on auger drive sprocket (5) and/or auger drive shaft (4).

Rotate drive sprocket to align holes in sprocket and shaft. Install new shear bolt and secure with lock nut. Tighten to torque specification given on Torque Chart.

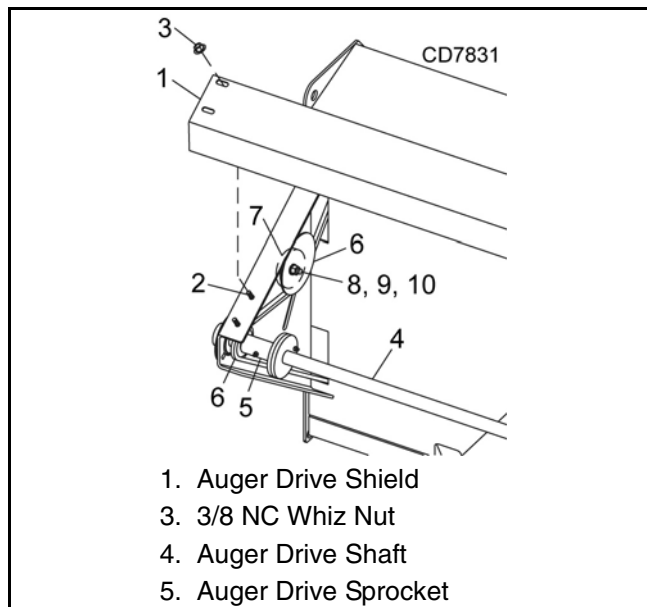


Figure 11. Auger Drive Shear Bolt Replacement

## Discharge Chute Lubrication

1. Apply grease between the discharge chute base and ring on the frame tube, Figure 12, annually.

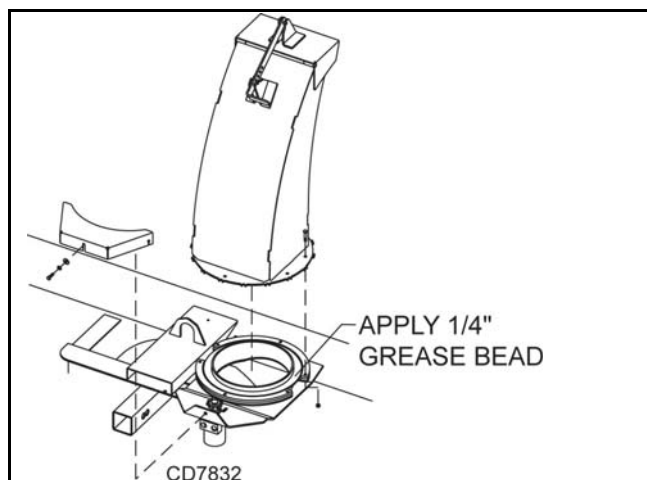


Figure 12. Chute Base and Rotator Ring

## Gearbox

The gearbox is almost maintenance-free, but should be checked quarterly to be sure that the oil level is maintained at half full. A high quality gear oil with a viscosity index of 80W or 90W and an API service rating of GL-4 or -5 is recommended for use in the gearbox. Oil should be changed after the first 30 hours or 30 days of operating. Then, normal change should be adequate. In the case of seasonal usage, it is best to change the oil at the end of the season to remove moisture and corrosive contaminants.

### ⚠ WARNING

■ Before proceeding, read and follow all safety rules.

To change the oil, follow this procedure, Figure 13:

1. Suction out oil in gearbox through side plug using a hand pump.  
**NOTE:** It is best to drain the oil when the gearbox is warm to remove the most contaminants.
2. Add 1.27 quart SAE 85W90 gear oil through side plug. Use level hole (halfway up the backside of gearbox) to check oil level. Add oil accordingly.
3. Install and tighten plug.

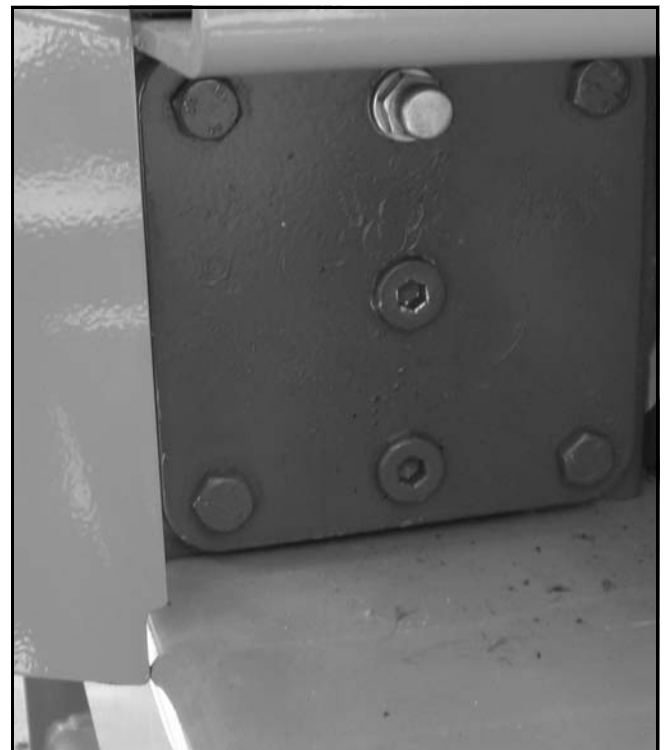


Figure 13. Gearbox Oil



## Skid Shoes

The machine is equipped with skid shoes on the back side of housing under the hitch frame to prevent wearing the frame and provide depth control. They should be checked occasionally for wear and replaced if required.

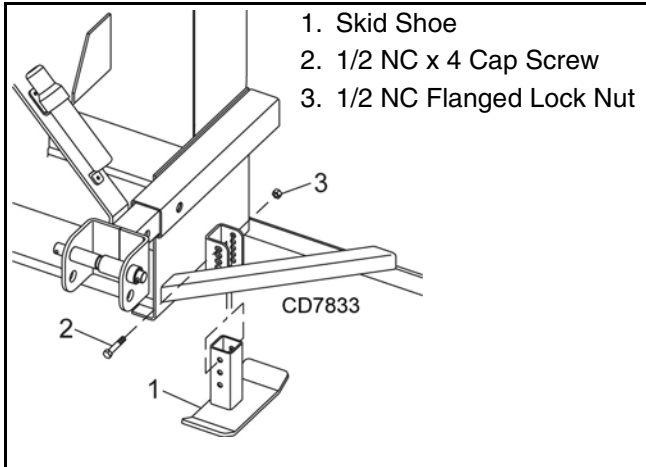
### **WARNING**

#### ■ Before proceeding, read and follow all safety rules.

1. Place a 4" x 4" block under each end of snowblower frame.

**NOTE:** Block only high enough for the skid shoes to clear ground.

2. Lower snowblower to sit securely on blocks.
3. Properly secure tractor and release all hydraulic pressure.
4. Loosen and remove skid shoe mounting bolts (2) and nuts (3).
5. Remove and inspect skid shoe (1).
6. Adjust skid shoe (1) to provide correct depth of cut.
7. Tighten mounting bolts (2) and nuts (3). Tighten to specifications given on torque chart.



**Figure 14.** Skid Shoe Adjustment

## PTO Driveline Guard

The shield must turn freely on PTO shaft. Daily lubrication of both shield bearings and periodic cleaning will ensure safe operation of the shield.

If shield is damaged or worn, replace components with genuine Woods service parts.

## Walterscheid Driveline

1. Remove Phillips screw on driveline bell shield.
2. Rotate bell shield until three reliefs align with white plastic collar.
3. Remove bell housing and shaft.
4. Replace components as needed. Follow steps 1 through 3 in reverse.

**NOTE:** In order to slide new bell over shaft guard, place bell in water at 180° F or in sun to expand bell temporarily.



**Figure 15.** Walterscheid Driveline



# TROUBLE SHOOTING

PROBLEM	PROBLEM CAUSES	SUGGESTED SOLUTION
PTO Shaft shear bolt continues to shear	PTO shaft at too great an angle.	Do not exceed a 15 degree angle at PTO shaft.
	PTO shear bolt is too soft.	Use a grade 5 shear bolt. (GKN)
	Tilt on the snowblower is too great causing an excessive knuckle angle.	Reduce tilt on snowblower by adjusting top link or upper 3-point arm.
Snowblower augers continue to plug	Tractor ground speed is too fast.	Reduce ground speed to allow augers to clear better.
	Insufficient fan speed.	Maintain a PTO speed of 540 or 1000 RPM depending on model rating.
Snow does not discharge properly	Insufficient fan speed.	Maintain a PTO speed of 540 or 1000 RPM depending on model rating.
	Augers are overloaded with snow.	Reduce ground speed or raise snowblower.
	Snow is wet and sticky.	Reduce ground speed to allow for better aeration of snow.
Snowblower tends to dig or float on snow	Tilt on snowblower not adjusted properly.	Adjust upper link on 3-point to level the blower.
	Skid Shoes not adjusted properly.	Adjust skid shoes to be even with or below cutting edge.
Chute will not turn	Insufficient lubrication. Insufficient oil flow. Broken rotator chain.	Lubricate chute base and rotator ring. Check oil flow from tractor. Repair/Replace chain or sprocket.
Auger fails to turn	Auger drive shear bolt has sheared.	Replace auger drive shear bolt.

# ASSEMBLY INSTRUCTIONS

## DEALER SET-UP INSTRUCTIONS

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

The snowblower 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 33.

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.

### All Models

1. Remove parts from skid in a suitable work area. Check packing list to ensure all parts are present.

**NOTE:** Leave all hardware loose until all components are completely assembled.

2. Remove driveshaft from snowblower. Slide implement PTO shaft on gearbox shaft. Pull back spring actuated collar as driveline is installed on gearbox shaft, releasing collar when driveline is installed.

**NOTE:** Check that drive shaft is fully engaged in gearbox shaft groove.

3. Apply grease to discharge tube ring and frame.

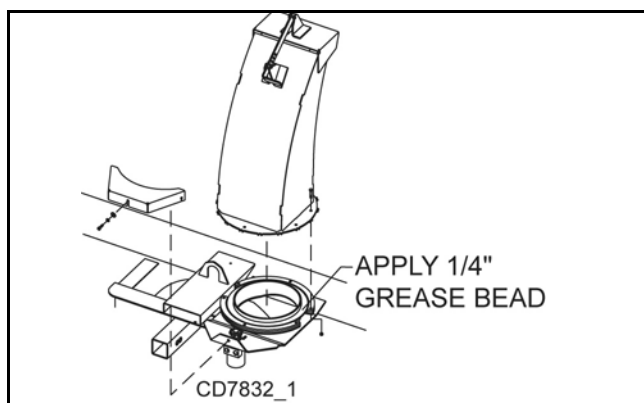
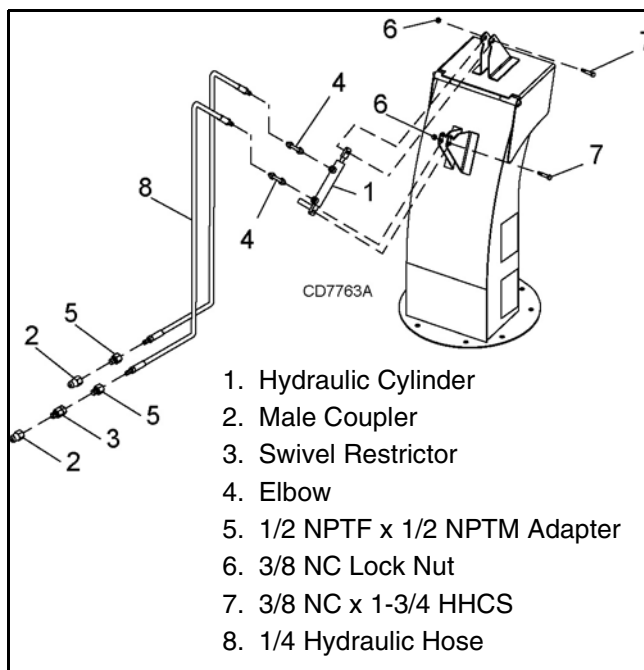
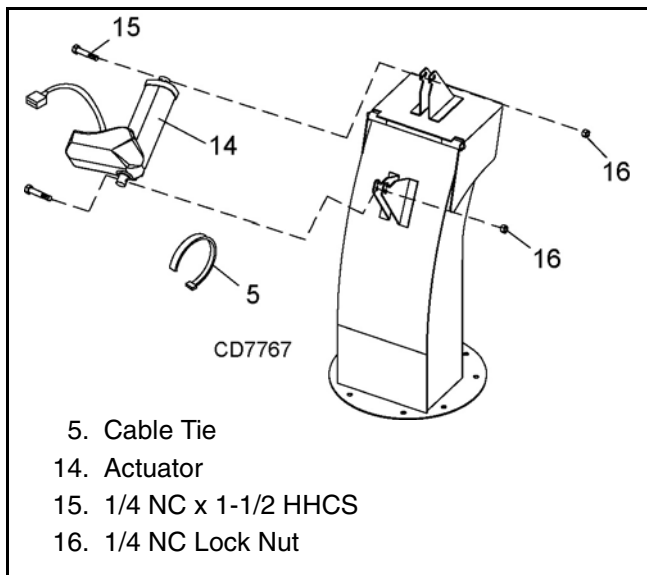


Figure 16. Apply Grease to Discharge Chute Ring

## MOUNTING HYDRAULIC CHUTE DEFLECTOR (FIGURE 17)

1. Fasten cylinder (1) to discharge chute (8) using hardware (6) and (7). Do not over tighten.
2. Fasten elbows (4) to cylinder (1).
3. Fasten hoses (8) to elbows (4).
4. Fasten adapters (5) to hoses (8).
5. Fasten restrictor (3) to adapter (5).
6. Fasten couplers (2) to adapter (5) and restrictor (3).





**Figure 18.** Electric Chute Deflector Installation

2. Attach control box in tractor operator area. Attach end to a power source and ground on the tractor, (see tractors operator's manual).

# DEALER CHECK LISTS

## PRE-DELIVERY CHECK LIST

### (Dealer Responsibility)

Inspect the equipment thoroughly after assembly to ensure it is set up properly before delivering it to the customer.

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

- \_\_\_ Check that all safety decals are installed and in good condition. Replace if damaged.
- \_\_\_ Check that shields and guards are properly installed and in good condition. Replace if damaged.
- \_\_\_ Check all bolts to be sure they are tight.
- \_\_\_ Check that all cotter pins and safety pins are properly installed. Replace if damaged.
- \_\_\_ Check and grease all lubrication points as identified in "Service, lubrication information".
- \_\_\_ Check the level of gearbox fluids before delivery. Service, if required, as specified in the "Service, lubrication information."

## DELIVERY CHECK LIST

### (Dealer Responsibility)

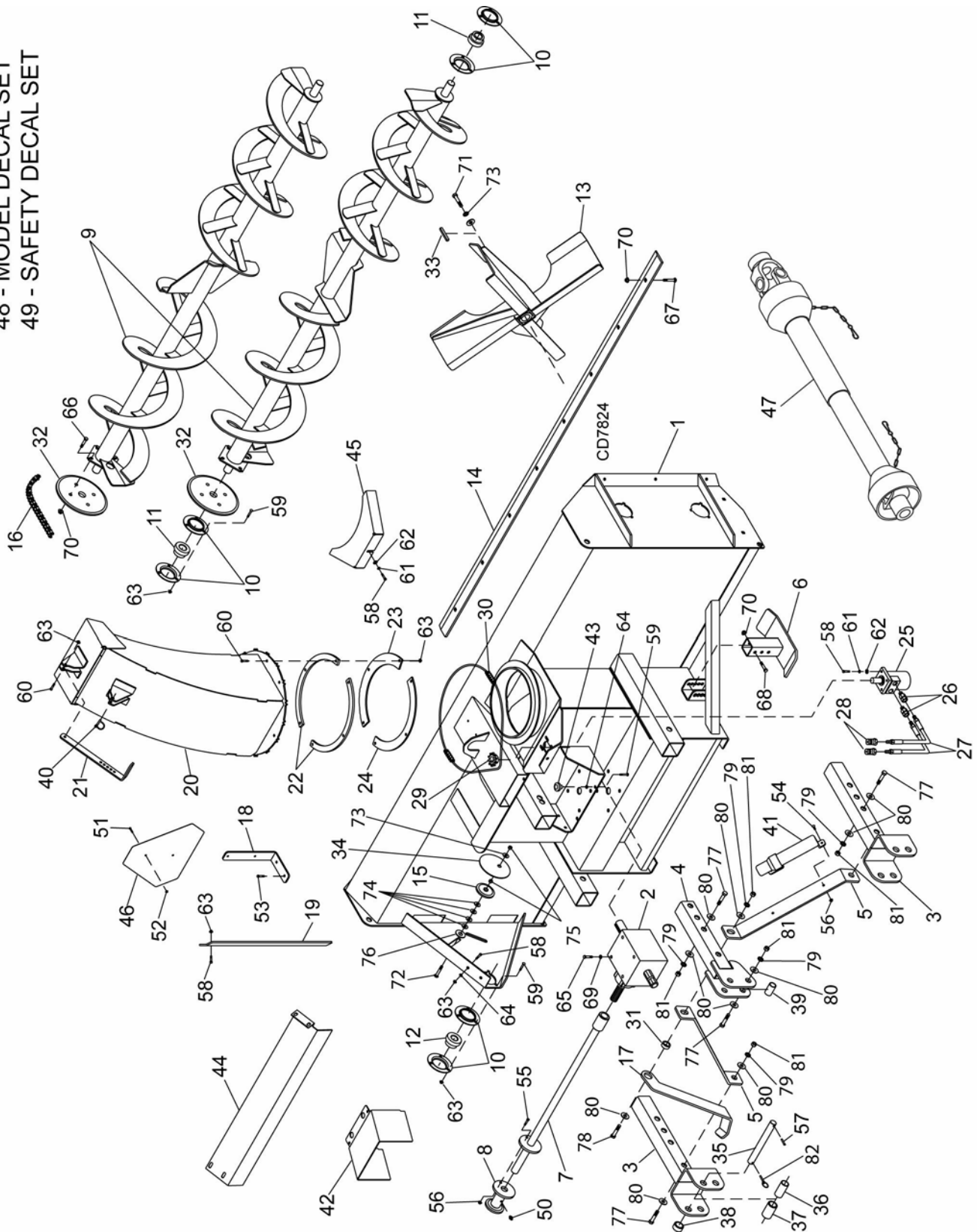
- \_\_\_ Show customer how to make adjustments and select proper PTO speed.
- \_\_\_ Instruct customer how to lubricate and explain importance of lubrication.
- \_\_\_ Point out the safety decals. Explain their meaning and the need to keep them in place and in good condition. Emphasize the increased safety hazards when instructions are not followed.
- \_\_\_ 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.
- \_\_\_ 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.
- \_\_\_ Explain to customer the potential crushing hazards of going underneath raised equipment. Instruct customer that service work does not require going underneath unit and never to do so.
- \_\_\_ Point out the correct mounting and routing of hydraulic hoses. Explain that during operation, mounting, dismounting and storage, care must be taken to prevent hose damage from pulling, twisting and kinking.
- \_\_\_ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- \_\_\_ For mounted units, add wheel weights, ballast in front tires, and/or front tractor weight to enhance front end stability. A minimum 20% of tractor and equipment gross weight must be on front tractor wheels. When adding weight to attain 20% of tractor and equipment weight on front tractor wheels, you must not exceed the ROPS weight certification. Weigh the tractor and equipment. Do not estimate!
- \_\_\_ Make customer aware of optional equipment available so that customer can make proper choices as required.
- \_\_\_ Point out all guards and shields. Explain their importance and the safety hazards that exist when not kept in place and in good condition.

## SS84-2, SS96-2 & SS108-2 SNOWBLOWER

SS84-2, SS96-2 & SS108-2 ASSEMBLY . . . . .	26 - 27
GEARBOX ASSEMBLY . . . . .	28
DRIVE ASSEMBLY (BI-LOBE PROFILE) . . . . .	29
DRIVE ASSEMBLY (STAR PROFILE) . . . . .	30
HYDRAULIC CHUTE DEFLECTOR (OPTIONAL) . . . . .	31
SKID SHOE (OPTIONAL) . . . . .	31
ELECTRIC REMOTE CHUTE DEFLECTOR (OPTIONAL) . . . . .	32

**SS84-2, SS96-2, SS108-2 SNOWBLOWER ASSEMBLY  
(MODEL SS96-2 SHOWN)**

48 - MODEL DECAL SET  
49 - SAFETY DECAL SET



**26 Parts**

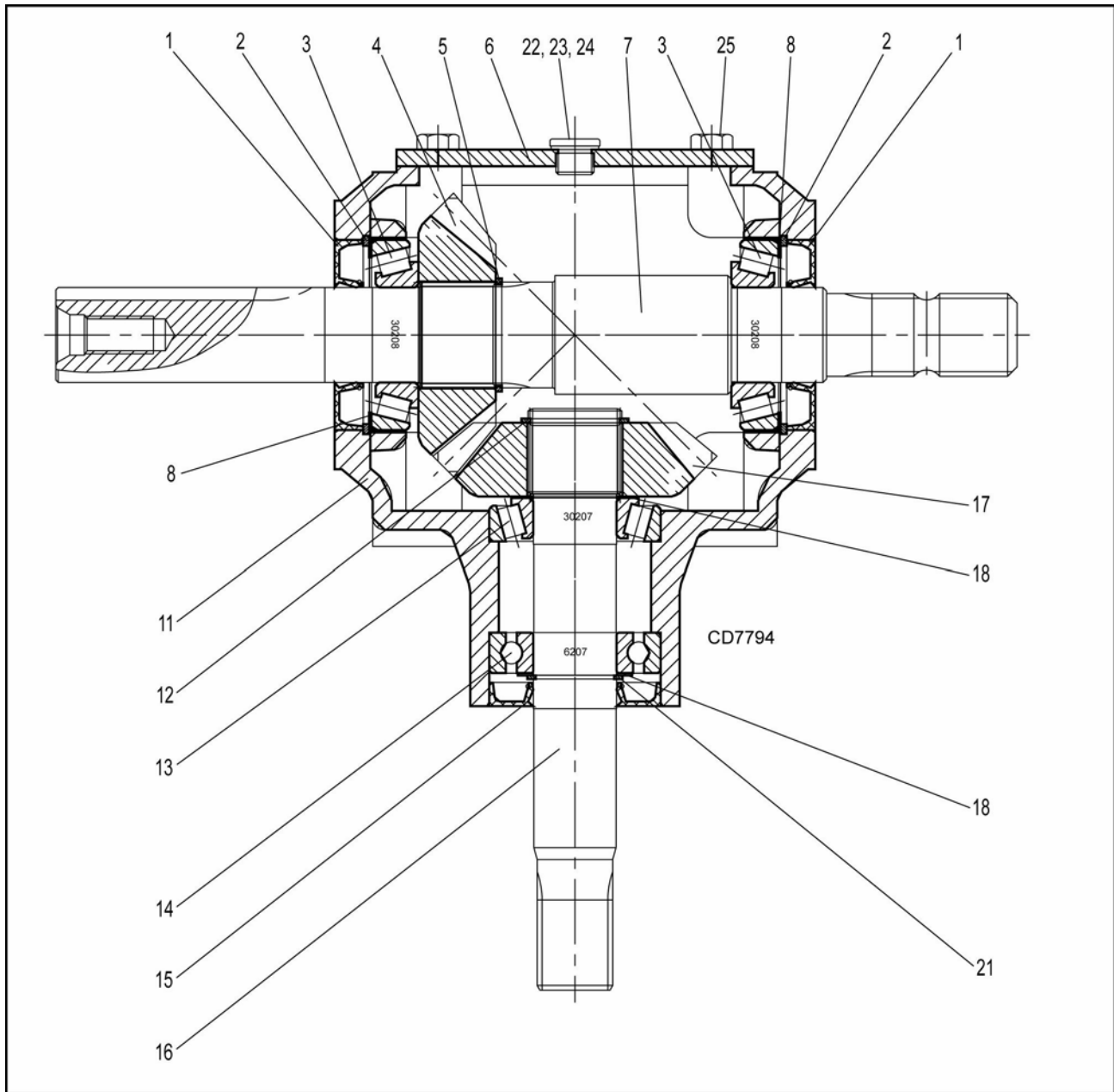
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## SS84-2, SS96-2, SS108-2 SNOWBLOWER PARTS LIST

REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	NSS	1	Snowblower Housing	40	90025028	1	Pin, 3/8 x 1-3/4
2	1033225	1	Gearbox <b>(See Page 28)</b>	41	1026530	1	Manual Tube
3	1033720	2	WA, Lower Hitch	42	1033709	1	Shield, PTO
4	1033717	1	WA, Upper Hitch	43	66840	2	Knob, 3-Prong 3/8 NC
5	1033723	2	A-Frame Brace	44	1033622	1	Shield, Drive Shaft <b>(SS84-2)</b>
6	1033646	2	WA, Skid Shoe	44	12030834	1	Shield, Drive Shaft <b>(SS96-2)</b>
7	12020143	1	WA, Auger Drive Shaft <b>(SS84-2)</b>	44	12030833	1	Shield, Drive Shaft <b>(SS108-2)</b>
7	12020057	1	WA, Auger Drive Shaft <b>(SS96-2)</b>	45	12030783	1	Shield, Chute Rotator
7	12020227	1	WA, Auger Drive Shaft <b>(SS108-2)</b>	46	24611	1	Sign, (SMV) Slow Moving Vehicle
8	12020013	1	WA, Auger Drive Sprocket	47	-----	1	Driveline Assembly <b>(See Page 29-30)</b>
9	103370084	1	WA, Auger <b>(SS84-2)</b>	48	1033978	1	Model Decal Set
9	103370096	2	WA, Auger <b>(SS96-2)</b>	49	1033977	1	Safety Decal Set
9	1033700108	2	WA, Auger <b>(SS108-2)</b>	50	12296 *	1	1/4-28 Straight Grease Fitting
10	90101085	10	3 Hole Flange	51	2457 *	2	HHCS, 1/4 NC x 3/4 GR5
11	90101104	4	1-3/8 Insert Bearing	52	70065 *	2	Nut, Whiz 1/4 NC
12	90101111	1	1-1/4 Insert Bearing	53	30036 *	2	5/16 NC x 3/4 Self Tap Screw
13	1033710	1	WA, Fan 540 RPM <b>(SS84-2)</b>	54	51243 *	2	Bolt, Carriage 5/16 NC x 1 GR5
13	1033604	1	WA, Fan 540 RPM <b>(SS96-2, SS108-2)</b>	55	6250 *	1	HHCS, 5/16 NC x 1-1/4 GR5
13	1033710	1	WA, Fan 1000 RPM <b>(SS84-2, SS96-2, SS108-2)</b>	56	73163 *	3	Nut, Whiz 5/16 NC Flange
14	12030676	1	Scrapers Blade 84"	57	90029204 *	2	Pin, Roll 5/16 x 1-5/8
14	12030677	1	Scrapers Blade 96"	58	839 *	12	HHCS, 3/8 NC x 1 GR5
14	12030678	1	Scrapers Blade 108"	59	6697 *	17	Bolt, Carriage 3/8 NC x 1 GR5
15	90311030	1	Idler Sprocket, 13T, #60	60	12169 *	7	HHCS, 3/8 NC x 1-1/4 GR5
16	1033991	1	Chain, #60 x 96 w/Connctr <b>(SS84-2)</b>	61	838 *	5	Washer, 3/8 Lock
16	12030005	1	Chain, #60 x 121w/Connctr <b>(SS96-2, SS108-2)</b>	62	565 *	5	Washer, 3/8 Flat
17	1033633	1	Drive Holder	63	70069 *	29	Nut, Whiz 3/8 NC Flange
18	1033263	1	Angle, SMV Bracket	64	1028375	4	Nut, 3/8 Push-On Bolt Retainer
19	12030037	1	Chain Shield	65	25475 *	8	HHCS, 1/2 NC x 1 GR5
20	1033713	1	WA, Discharge Chute	66	6100 *	8	HHCS, 1/2 NC x 1-1/4 GR5
21	1033239	1	Angle, Deflector Handle	67	7152	A/R	Bolt, Plow 1/2 NC x 1-1/2
22	12030774	2	Ring, Spacer	68	10380 *	4	HHCS, 1/2 NC x 4 GR5
23	12030775	1	Ring, Retainer	69	855 *	16	Washer, Lock 1/2
24	12030777	1	Plate, Retainer	70	11900 *	20	Nut, Lock 1/2 NC Flange
25	90405236	1	Hydraulic Motor	71	902 *	1	HHCS, 5/8 NC x 2 GR5
26	90519159	2	Restrictor, .031 x 6MJIC 10MORB	72	5655 *	1	Bolt, Carriage 5/8 NC x 3-1/2
27	90519160	2	Hose, 3/8 x 54" 6FJIC 8MORB	73	1286 *	2	Washer, 5/8 Lock
28	64332	2	Quick Coupler Male	74	692 *	5	Washer, 5/8 Flat
29	12030827	1	Sprocket, 10T, #50	75	230 *	2	Nut, Hex 5/8 NC
30	12030826	1	Chain, Rotator	76	4258	1	Washer, 7/8 Flat
31	1033632	1	Sleeve, 1.03 x 1.50 x .56	77	34278	6	HHCS, 1 NC x 5 GR5
32	12030682	A/R	Sprocket, 40T, #60	78	1003606	1	HHCS, 1 NC x 6 GR5
33	1033617	1	Key, 3/8 x 3/8 x 3-1/4	79	3689	7	Washer, 1" Lock
34	12030039	1	Idler Sprocket Shield	80	1863	14	Washer, 1" Flat
35	20030962	2	Pin, Lower 3-Point Hitch	81	3132	7	Nut, Hex 1 NC
36	20030959	2	Spacer, 1-3/4 OD Lower	82	43627 *	2	Pin, Lynch
37	20030961	2	Spacer, 1-7/16 OD Lower		HHCS		Hex Head Cap Screw
38	20030960	2	Spacer, 1-3/4 OD Short		*		Standard Hardware - Obtain Locally
39	20030151	1	Mast Spacer Bushing, 1"ID		A/R		As Required
					NSS		Not Serviced Separately

## GEARBOX ASSEMBLY

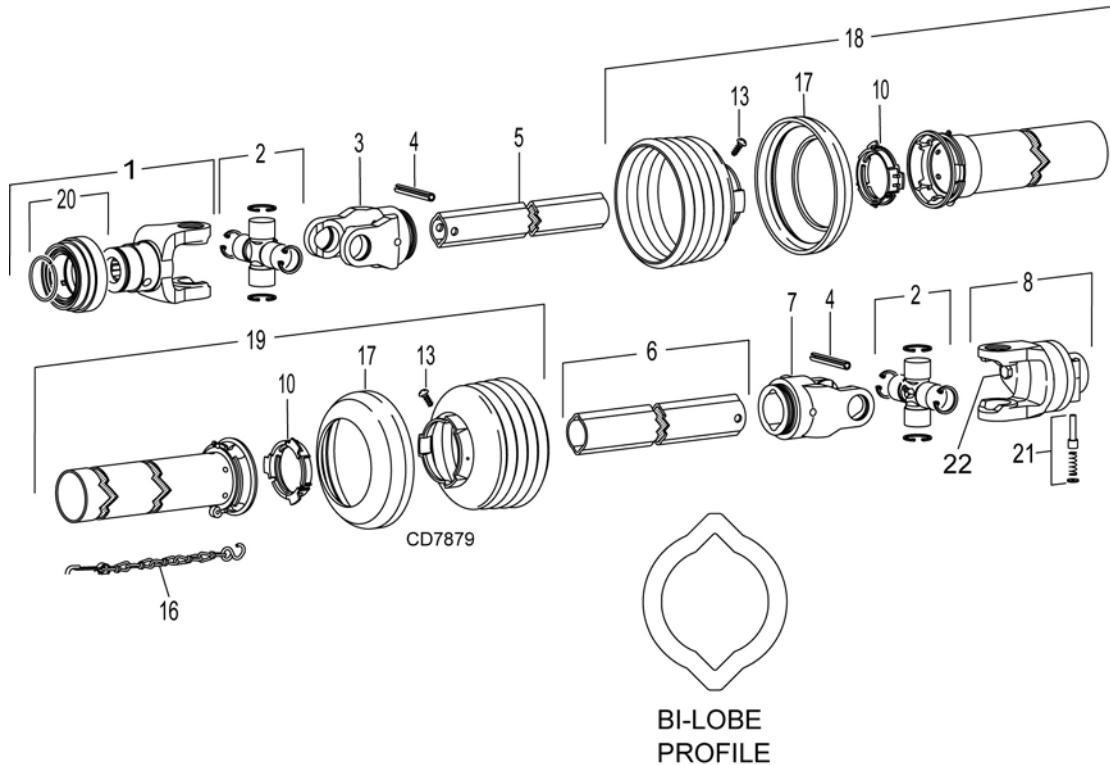


REF	PART	QTY	DESCRIPTION	REF	PART	QTY	DESCRIPTION
1	1033767	2	Seal, Shaft 40 x 80 x 10	15	57463	1	Seal, 35 x 72 x 10
2	1033768	2	Snap Ring, Internal 80 x 2.5	18	1007866	1	Shim Kit, 35.3
3	57478	2	Bearing, Tapered Roller	21	1007859	1	Snap Ring, External 35 x 1.5
5	1033770	1	Snap Ring, External 45 x 2.5	22	1033766	1	Plug, M16 x 1.5 & Ring
6	1033771	1	Cover	23	1033769	1	Breather, M16 x 1.5
8	1033772	1	Shim Kit, 65.3	24	1033762	1	Gasket, Copper A16 x 20
12	603-1	1	Snap Ring, External 40 x 1.75	25	1033773	4	HHCS, M10 -1.5 x 16
13	1032448	1	Bearing Tapered Roller				
14	438	1	Bearing, Ball (6207)				

**28 Parts**

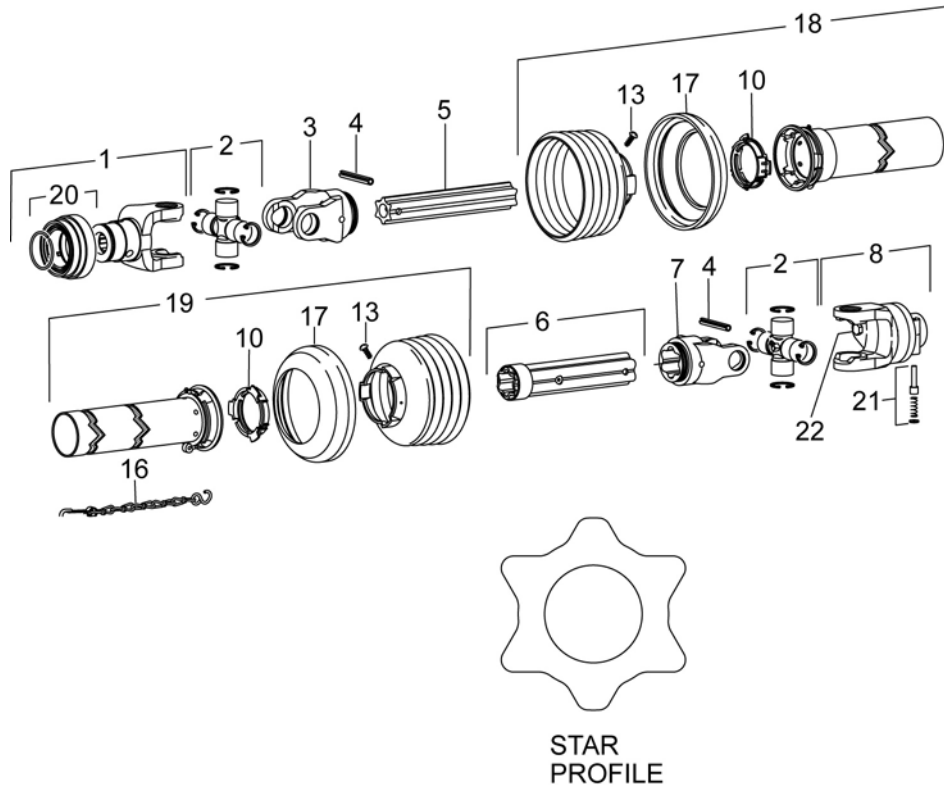
(Rev. 12/6/2011)  
MAN0884 (08/15/2011)

**WALTERSCHEID BI-LOBE DRIVE ASSEMBLY**  
**SS84-2, SS96-2 & SS108-2**



REF	PART	QTY	DESCRIPTION
A	-----	1	Complete 540, 1-3/8 6-Spline Driveline Assembly
B	-----	1	Complete 1000, 1-3/8 21 Spline Driveline Assembly
C	-----	1	Complete 1000, 1-3/4 20 Spline Driveline Assembly
1	38351	1	Yoke Assembly 1-3/8 6 Spline
1	90317348	1	Yoke Assembly 1-3/8 21 Spline
1	1029950	1	Yoke Assembly 1-3/4 20 Spline
2	38352	2	Cross Bearing Kit
3	90317916	1	Yoke, Inner Profile, Bi-Lobe
4	40764	2	Spring Pin
5	1034768	1	Inner Profile Tube, Heat Treated, Bi-Lobe
6	40588	1	Outer Profile Tube, Bi-Lobe
7	38353	1	Yoke, Outer Profile, Bi-Lobe
8	1029949	1	Yoke, Shearbolt Clutch
10	40766	2	Bearing Ring
13	40778	2	Screw, M3.5 x 10 mm
16	40777	1	Chain
17	1029932	2	Collar
18	1029947	1	Kit - Outer Guard Complete (includes items 10, 13 & 17)
19	1029948	1	Kit - Inner Guard Complete (includes items 10, 13, 16 & 17)
20	40589	1	Collar Repair Kit (1-3/8 Yokes)
20	1003465	1	Collar Repair Kit (1-3/4 Yoke)
21	1005784	1	Quick Disconnect Pin Kit
22	1033990	1	M8 x 55 CL 8.8, Shear Bolt & Nut
22	1034769	3	M8 x 60 CL 12.9, Shear Bolt & Nut (requires item 5 to be heat treated inner profile)

**WALTERSCHEID STAR DRIVE ASSEMBLY**  
**SB30.84, SB40.96 & SB40.108**

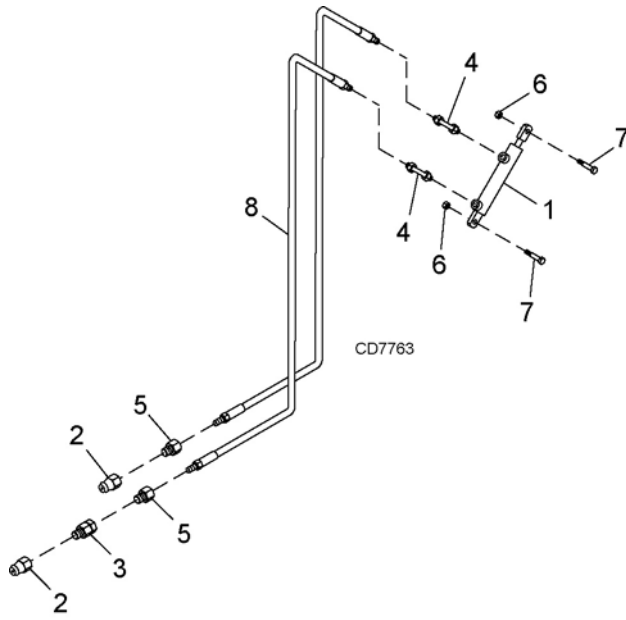


REF	PART	QTY	DESCRIPTION
A	1029951	1	Complete 540, 1-3/8 6 Spline Driveline Assembly - Star Profile
B	1029952	1	Complete 1000, 1-3/8 21 Spline Driveline Assembly - Star Profile
C	1029953	1	Complete 1000, 1-3/4 20 Spline Driveline Assembly - Star Profile
1	38351	1	Yoke Assembly 1-3/8 6 Spline
1	90317348	1	Yoke Assembly 1-3/8 21 Spline
1	1029950	1	Yoke Assembly 1-3/4 20 Spline
2	38352	2	Cross and Bearing Kit
3	90317352	1	Yoke, Inner Profile, Star
4	40764	2	Spring Pin
5	40752	1	Inner Profile Tube, Star
6	40753	1	Outer Profile Tube, Star
7	44677	1	Yoke, Outer Profile, Star
8	1029954	1	Yoke, Shearbolt Clutch - M10 Shear Bolt
10	40766	2	Bearing Ring
13	40778	2	Screw, M3.5 x 10 mm
16	40777	1	Chain
17	1029932	2	Collar
18	1029947	1	Kit - Outer Guard Complete (includes items 10, 13 & 17)
19	1029948	1	Kit - Inner Guard Complete (includes items 10, 13, 16 & 17)
20	40589	1	Collar Repair Kit (1-3/8 Yokes)
20	1003465	1	Collar Repair Kit (1-3/4 Yoke)
21	1005784	1	Quick Disconnect Pin Kit
22	1034766	1	M10 x 60 CL 8.8, Shear Bolt & Nut

**30 Parts**

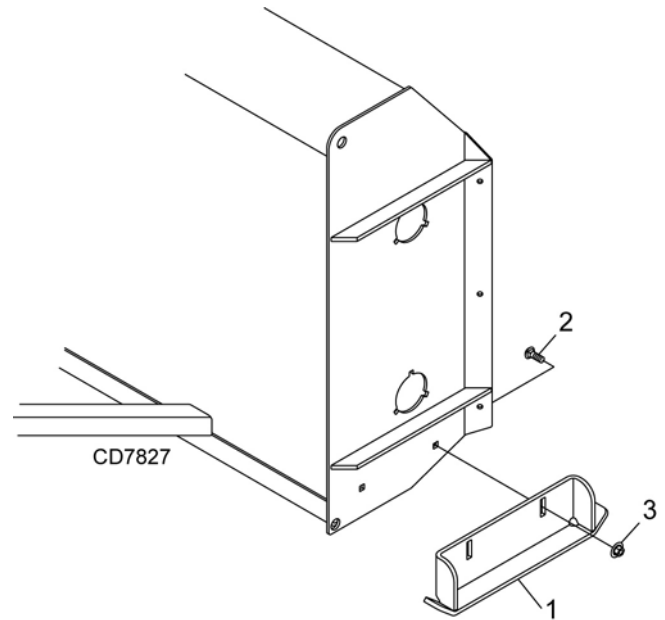
(Rev. 2/20/2012)  
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## HYDRAULIC CHUTE DEFLECTOR (OPTIONAL))



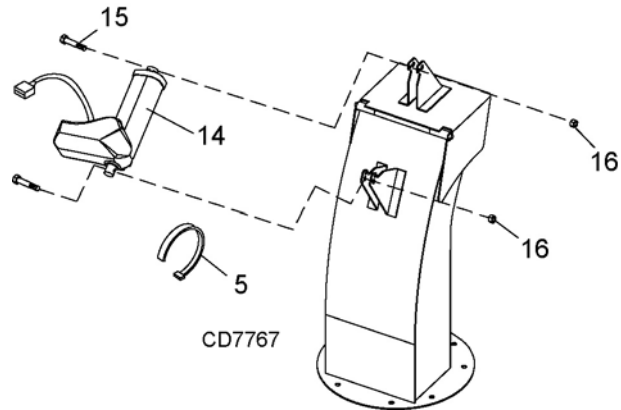
REF	PART	QTY	DESCRIPTION
1	1033300	1	Hydraulic Cylinder 1 x 3 x 7.75
2	66511	2	1/2 NPT Male Coupler
3	90501531	1	1/2" Swivel Restrictor
4	8572	2	1/4 Elbow
5	11893	2	1/4 NPTF x 1/2 NPTM Adapter
6	6698 *	2	3/8 NC Lock Nut
7	920 *	2	3/8 NC x 1-3/4 HHCS GR5
8	21020219	2	1/4 Hose, 1/4MP x 1/4MP, 101"L
	HHCS		Hex Head Cap Screw
	*		Standard Hardware, Obtain Locally

## SKID SHOE ASSEMBLY (OPTIONAL)



REF	PART	QTY	DESCRIPTION
1	1033648	2	Skid Shoe
2	14406 *	2	Bolt, Carriage 1/2 NC x 1
3	11900 *	2	Nut, 1/2 NC Flanged Lock
	*		Standard Hardware, Obtain Locally

## ELECTRIC CHUTE DEFLECTOR (OPTIONAL)



REF	PART	QTY	DESCRIPTION
5	88	1	Plastic Tie (Ty-Rap) 3/16 x 14-1/4
14	1033727	1	Linear Actuator
15	62788 *	1	1/4 NC x 1-1/2 HHCS GR5
16	6128 *	2	1/4 NC Lock Nut
	HHCS		Hex Head Cap Screw
	*		Standard Hardware, Obtain Locally



# BOLT TORQUE CHART

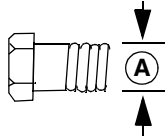
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

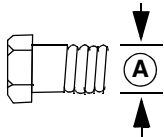


SAE Grade 5  
(3 Radial Dashes)



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



8.8  
Metric  
Grade 8.8

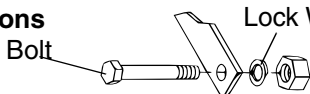
Metric Bolt Head Identification



10.9  
Metric  
Grade 10.9

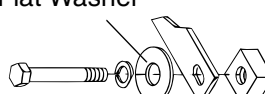
Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				Ⓐ Diameter & Thread Pitch (Millimeters)
		MARKING ON HEAD								
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 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



Lock Washer

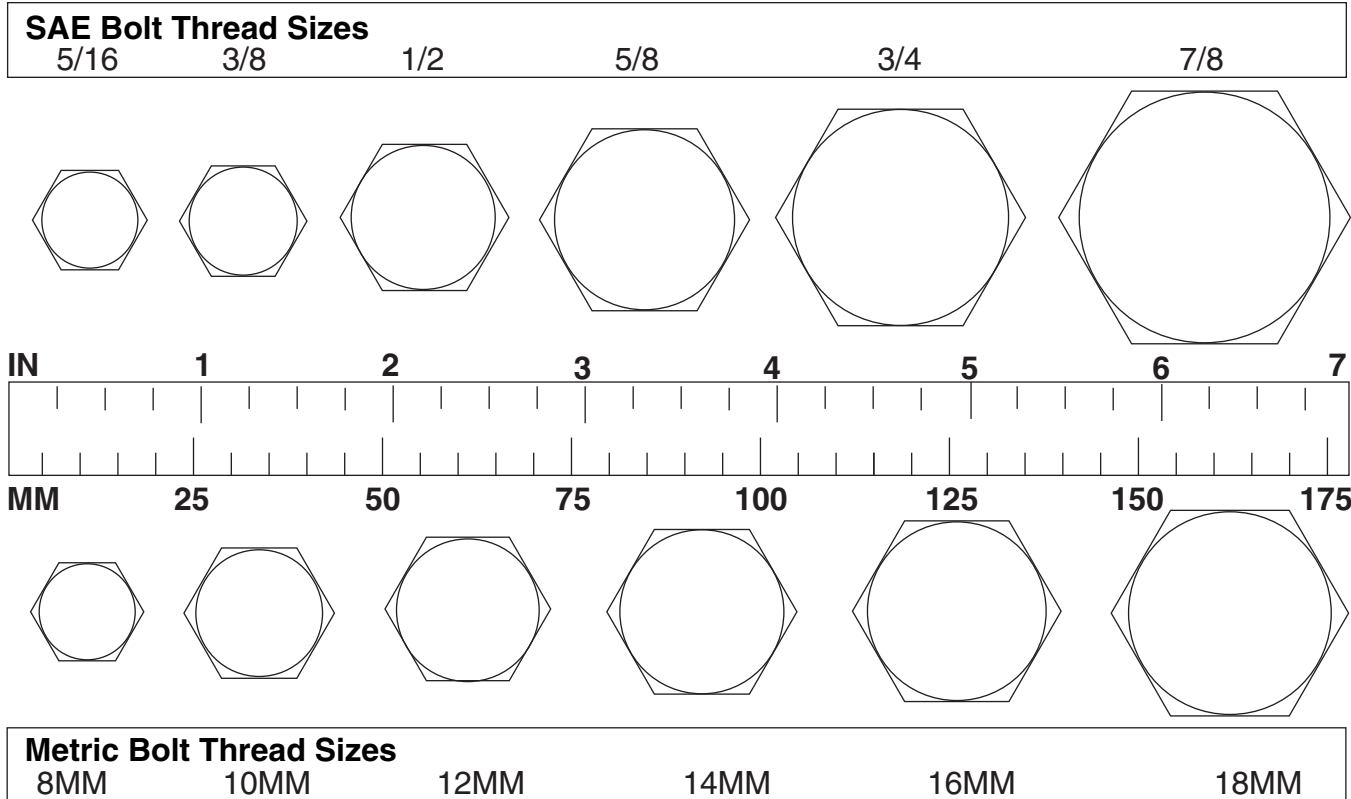
Flat Washer



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  
 ASABE ..... American Society of Agricultural & Biological Engineers (formerly ASAE)  
 ASAE..... American Society of Agricultural Engineers  
 ATF.....Automatic Transmission Fluid  
 BSPP..... British Standard Pipe Parallel  
 BSPTM..... British Standard Pipe Tapered Male  
 CV ..... Constant Velocity  
 CCW..... Counter-Clockwise  
 CW ..... Clockwise  
 F ..... Female  
 FT..... Full Thread  
 GA ..... Gauge  
 GR (5, etc.)..... Grade (5, etc.)  
 HHCS ..... Hex Head Cap Screw  
 HT ..... Heat-Treated  
 JIC..... Joint Industry Council 37° Degree Flare  
 LH..... Left Hand  
 LT ..... Left  
 m ..... Meter  
 mm ..... Millimeter  
 M ..... Male

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



# WARRANTY

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

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)
Gearbox Seals	All units listed below	2 years
Gearbox components	BB1260, BW1620, BW1800, BW2400	8 years
	BW240HD, BW180HD, BW180HB, BW126HB	7 years
	BB48X, BB60X, BB72X, BB84X, BB600X, BB720X, BB840X, BB6000X, BB7200X, BB8400X, DS1260, DSO1260, DS1440, TS1680, BW126-3, BW180-3, BW240	6 years
	PHD25, PHD35, PHD65, PHD95, DS96, DS120, RCC42, RD990X, PRD6000, PRD7200, PRD8400, S15CD, S20CD, S22CD, S25CD, S27CD, S30CD BW15LH, TC/R74, TC/R68, TC/R60, TBW144, TBW180, TBW204, HC48, HC54, HC60, HC72	5 years
	RDC54, RD60, RD72, TBW150C, TS/R60, TS/R52, TS/R44	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:

## 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



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**WOODS®**



## WARRANTY

(Replacement Parts For All Models Except Mow'n Machine™  
Zero-Turn Mowers)

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

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

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

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

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