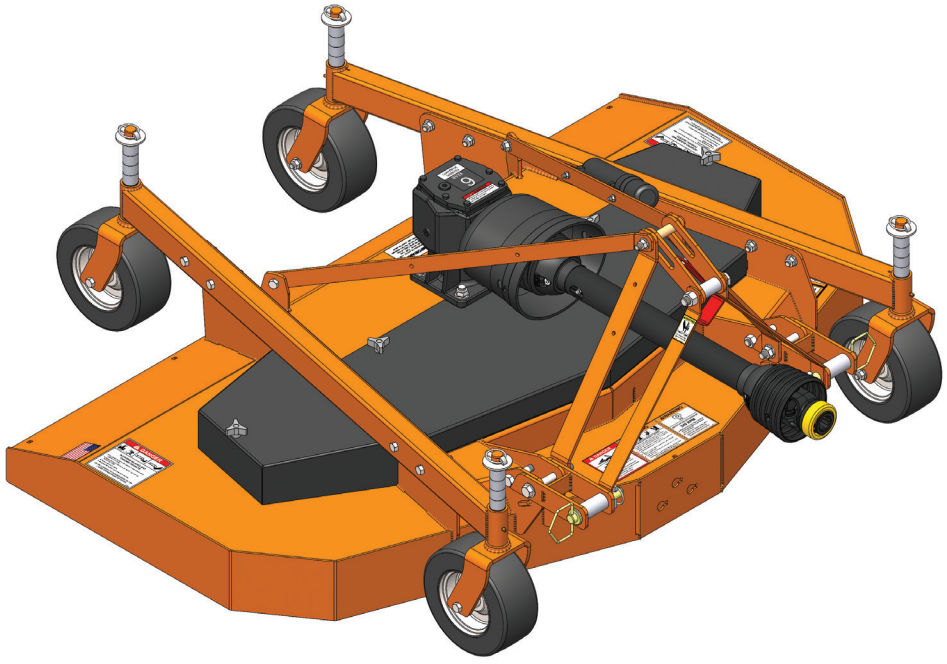
WOODS

TURFKEEPER PRO™ FINISH MOWER

TKP60.40
TKP72.40
TKP84.40



OPERATOR'S MANUAL

MAN1313
(Rev 11/01/2022)

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.

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

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

CAUTION 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.

WAIN-ROY ®

WOODS ®

TABLE OF CONTENTS

¡LEA EL INSTRUCTIVO!

Si no lee Ingles, pida ayuda a alguien que si lo lee 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

	TKP60.40	TKP72.40	TKP84.40
3-Point Hitch	Cat.1 & Lim Cat.1	Cat. 1	Cat. 1
Quick Hitch Compatible	Factory Ready	Factory Ready	Factory Ready
Cutting Width	60"	72"	84"
Cutting Height Range	1-1/2" - 5"	1-1/2" - 5"	1-1/2" - 5"
Operating Weight with Chain Shielding	636 lbs	709 lbs	817 lbs
Deck Plate Thickness	7 GA	7 GA	7 GA
Blade Speed (feet per minute)	18,000	18,100	18,100
Blade Spindles	Ductile Iron	Ductile Iron	Ductile Iron
Number of Blades	3	3	3
Blade Overlap	1-1/2"	1-1/2"	1-1/2"
Blade Options	Standard: High Lift Option: Low Lift	Standard: High Lift Option: Low Lift	Standard: High Lift Option: Low Lift
Universal Drive Series	ASAE Cat. 3	ASAE Cat. 3	ASAE Cat. 3
Caster Wheels	4.0 x 10.0 Solid Rubber	4.0 x 10.0 Solid Rubber	4.0 x 10.0 Solid Rubber
Tractor PTO Speed RPM	540	540	540
Recommended Maximum Tractor PTO Horsepower	50 max.	50 max.	50 max.
Chain Shielding	Optional	Optional	Optional
Front Roller	Optional	Optional	Optional
Rear Roller	Optional	Optional	Optional

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your mower. 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.

⚠ WARNING

- **Some illustrations in this manual show the mower with safety shields removed to provide a better view. The mower should never be operated with any safety shielding removed.**

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

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

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

- **This machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.**
- **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 responsible, trained, familiar with the instructions and be physically capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.**
- **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.**
- **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.**
- **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.**
- **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 systems 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.**
- **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, tractor could tip over, causing personal injury or death. The weight may be attained with 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.**
- **Keep the area of operation clear of all bystanders, particularly small children [within 300 ft (92 m)]. Stop the machine and attachment(s) if anyone enters the area.**

SAFETY RULES

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

OPERATION

- **Full chain shielding is recommended 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 shielding, operation is recommended to 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).**
  - **Check that chain shielding is in good condition and replace any damaged chain links.**
- **Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.**
- **To avoid damage to mower or driveline, make sure driveline holder is properly stored before operation.**
- **Never direct discharge toward people, animals, or property.**
- **Avoid discharging material against a wall or obstruction. It is possible for objects to ricochet and escape, traveling as much as 300 feet (92 m).**
- **Keep bystanders away from equipment.**
- **Stop the blade(s) when crossing gravel surfaces.**
- **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 operate machine when shields or guards are removed.**
- **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 540 RPM. Do not exceed.**
- **Look down and to the rear and make sure area is clear before operating in reverse.**
- **Do not operate or transport on steep slopes. Refer to tractor manual for proper ballasting and slope recommendations.**
- **Use caution while operating near dropoffs.**
- **Power unit must be equipped with Roll Over Protection System (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 stop, start, or change directions suddenly on slopes. Make turns slowly and gradually.**
- **Use extreme care and reduce ground speed on slopes and rough terrain.**
- **Watch for hidden hazards on the terrain during operation.**
- **Do not operate machine under any condition where traction, steering, or stability is in question. Tires could slide even if the wheels are stopped.**
- **Stop power unit and implement immediately upon striking an obstruction. Dismount power unit, using proper procedure. Inspect and repair any damage before resuming operation.**
- **Do not leave a running machine unattended. Always park on level ground, disengage tractor PTO, set parking brake, and stop engine.**
- **Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.**
- **Keep children out of the operating area and under the watchful care of a responsible adult other than the operator.**

SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

- **Do not carry children, even with the blade(s) shut off. Children could fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past could suddenly appear in the mowing area for another ride and be run over or backed over by the machine.**

TRANSPORTATION

- **Use additional caution and reduce speed when under adverse surface conditions, turning, or on inclines.**
- **Do not operate PTO during transport.**
- **A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, tractor could tip over, causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**
- **Do not operate or transport on steep slopes. Refer to tractor manual for proper ballasting and slope recommendations.**
- **Do not operate or transport equipment while under the influence of alcohol or drugs.**
- **Always comply with all state and local lighting and marking requirements. Turn on flashing warning lights whenever traveling on a public roadway.**
- **Never allow riders on power unit or attachment.**
- **Never exceed 25 mph (40 kph) during transport.**

MAINTENANCE

- **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 modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.**
- **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.**
- **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.**
- **Make certain all movement of equipment components has stopped before approaching for service.**
- **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.**
- **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.**
- **Keep machine in good working order. Replace worn or damaged parts.**
- **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.**
- **Wear gloves when installing belt. Be careful to prevent fingers from being caught between belt and pulley.**
- **Use care when installing or removing belt from spring-loaded idler. Springs store energy when extended and, if released suddenly, can cause personal injury.**

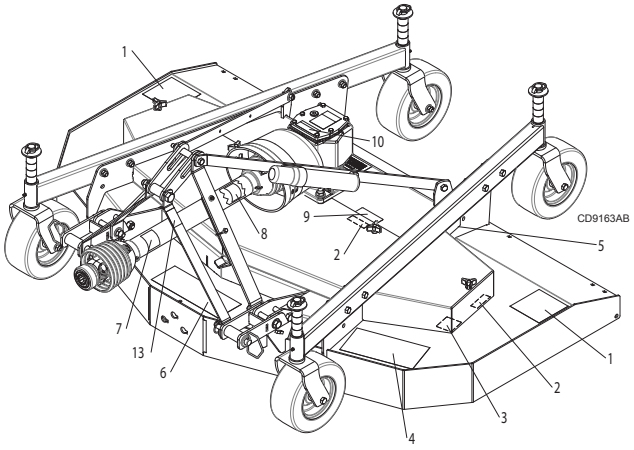
STORAGE

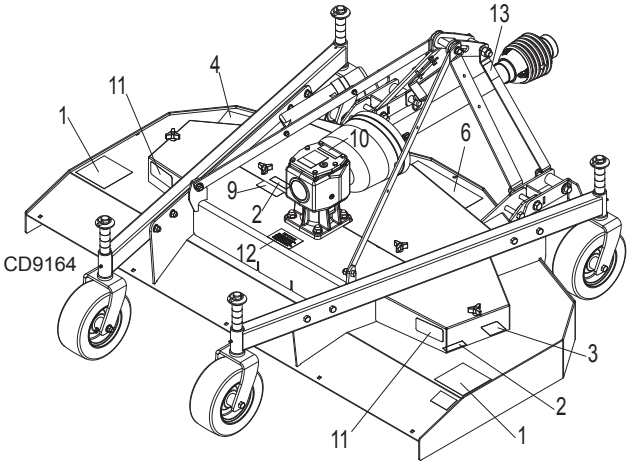
- **Follow manual instructions for storage.**
- **Keep children and bystanders away from storage area.**

SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



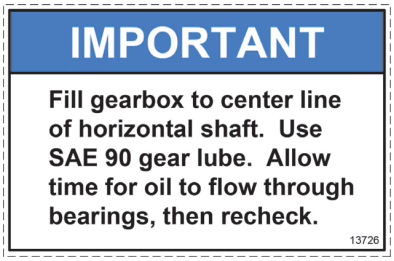


11 - 20106 - Rear Reflector

2 - 18869

5 - Serial Number Plate

12 - 13726



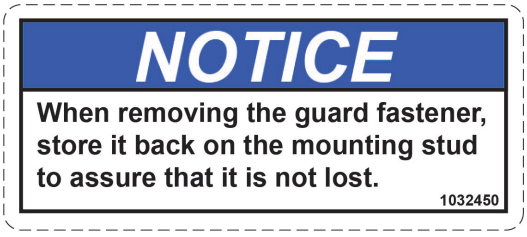
1 - 15503

3 - 626798

8 - 33347

10 - 1004114

9 - 1032450



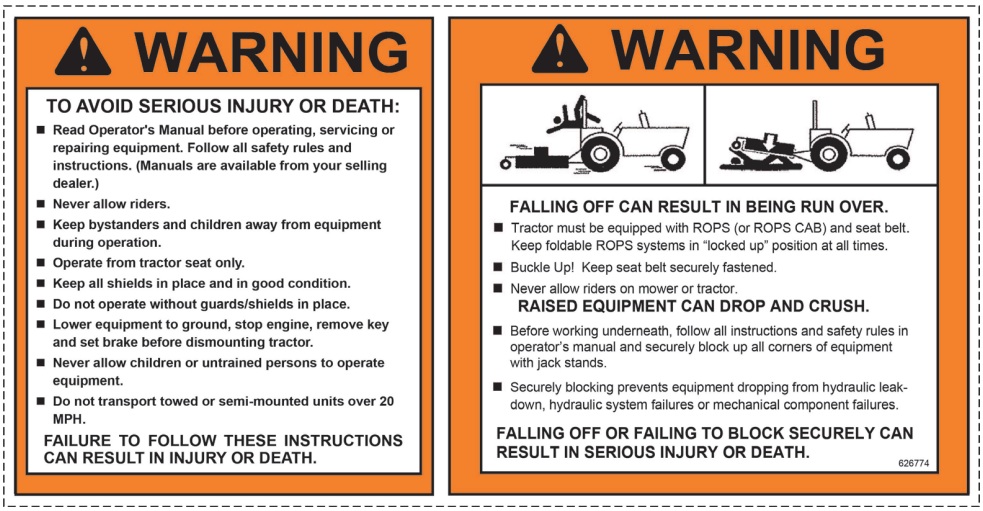
SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!

6 - 626776

4 - 626774



13 - 603626

7 - 18864

BE CAREFUL!

Keep safety decals clean and visible.

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.

Replace safety decals if they are missing or illegible.

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.

OPERATION

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

This mower is intended for lawn and grass mowing. It is not designed for rough conditions or heavy weed mowing. It is equipped with suction type blades for best results in lawn mowing.

Recommended mowing speed for most conditions is from 2 to 5 mph.

⚠ DANGER

- **Full chain shielding is recommended 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 shielding, operation is recommended to 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).**
  - **Check that chain shielding is in good condition and replace any damaged chain links.**

⚠ WARNING

- **Do not operate machine when shields or guards are removed.**
- **Never allow children or untrained persons to operate equipment.**
- **Keep bystanders away from equipment.**
- **Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.**
- **Operate tractor PTO at 540 RPM. Do not exceed.**
- **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.**
- **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**

⚠ CAUTION

- **Stop power unit and implement immediately upon striking an obstruction. Dismount power unit, using proper procedure. 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.**

TRACTOR STABILITY

⚠ 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, tractor could tip over, causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.**

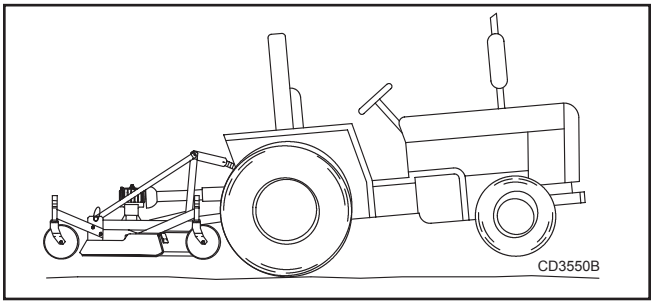


Figure 1. Tractor Stability

ATTACHING MOWER TO TRACTOR

⚠ WARNING

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

⚠ CAUTION

- **Make sure driveline will not bottom out at the shortest length and that is has at least 4" overlap at the longest length.**
- **If driveline is too short, please call your Woods dealer for a longer driveline.**
- **If driveline is too long, follow the instructions for shortening the driveline.**

Category 1 Hitch (Figure 2 & 3)

1. Align tractor lower lift arms with mower clevis hitch pins.
2. Connect tractor lower lift arms to mower lower hitch links (7) using clevis pin (13) and retain with klik pin. (See Figure 2)
3. Connect tractor top link to mower top hitch links (70) using tractor top link pin. Retain with cotter or klik pin.
4. Adjust tractor top link until mower top hitch links point downward until it is between 30 and 45 degrees below horizontal. This will allow the mower to follow the ground contours when mowing. Secure tractor top link jam nut. (See Figure 3. Additional information in Figure 13).
5. Remove the mower driveline (37) from the holder (64) and connect to the tractor PTO shaft. Be sure the driveline QD is seated firmly in the tractor PTO spline groove.
6. If your driveline was equipped with tether chains, be sure to connect the tractor end chain to the tractor PTO master shield.
7. Remove the safety pin (63) from the left a-frame bar (69) and swing the drive holder (64) up into the storage position. Reinsert safety pin thru a-frame bar and drive holder to secure in place. (See Figure 2).

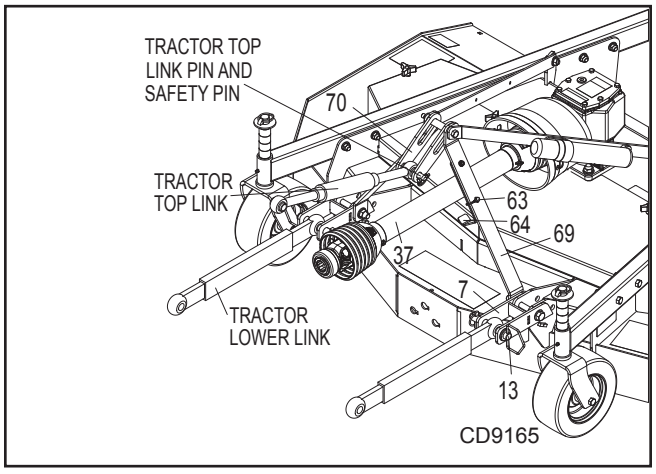


Figure 2. Attachment Points

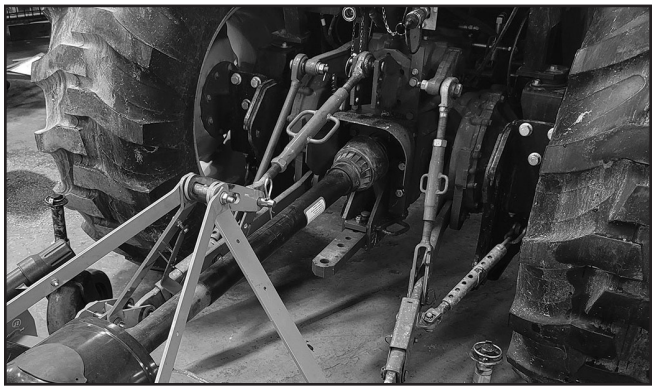


Figure 3. Attach Mower to Tractor

Category 1 Quick Hitch (Figure 4 & 5)

1. Install Category 1 quick hitch on tractor 3-point hitch arms.
2. The quick hitch must be oriented vertical relative to the ground. Shorten or lengthen the tractor top link until the quick hitch is vertical.
3. Install 5/8NC x 3-1/2 cap screws (5) through deck hitch plates behind mower lower hitch links (7) to keep hitch links level. Retain with 5/8NC lock nuts (6).
4. Install quick hitch sleeves (14) over clevis pins (13) in mower lower hitch links (7). Install mower quick hitch a-frame bars (68) over the clevis pins on the inside face of the mower lower hitch links. Retain with klik pin. (See Figure 4).
5. Position top quick hitch sleeve (66) between mower top hitch links (70). Align mower quick hitch a-frame bars (68) on outside of top hitch links. Ensure alignment of assembly using 3/4NC x 4-1/2 cap screw (65). Retain with 3/4NC lock nut (67). Tighten then back off 1/4 1/2 turn to ensure assembly moves up and down freely. (See Figure 4).
6. The mower driveline (not shown) should be resting on the drive holder (64).
7. Ascend the tractor, sit in the seat, start the engine, and release the parking brake.
8. Center the tractor relative to the mower, aligning the 3-point quick hitch hooks with the mower hitch points. Back the tractor up until the quick hitch contacts the mower hitch, raise the tractor 3-point until the mower rests firmly in the bottom of all the quick hitch hooks.
9. Swing the quick hitch lock levers inward to lock the lower hooks onto the mower clevis hitch pins and sleeves. Lower the tractor 3-point control to set the mower on the ground.
10. Put the tractor transmission in neutral, set the parking brake, and turn off the engine. Descend the tractor and move to the mower.
11. Remove the mower driveline (not shown) from the holder (64) and connect to the tractor PTO shaft. Be sure the driveline QD is seated firmly in the tractor PTO spline groove.
12. If your driveline was equipped with tether chains, be sure to connect the tractor end chain to the tractor PTO master shield.
13. Remove the safety pin (63) from the left a-frame bar (69) and swing the drive holder (64) up into the storage position. Reinsert safety pin through a-frame bar and drive holder to secure in place. (See Figure 6)

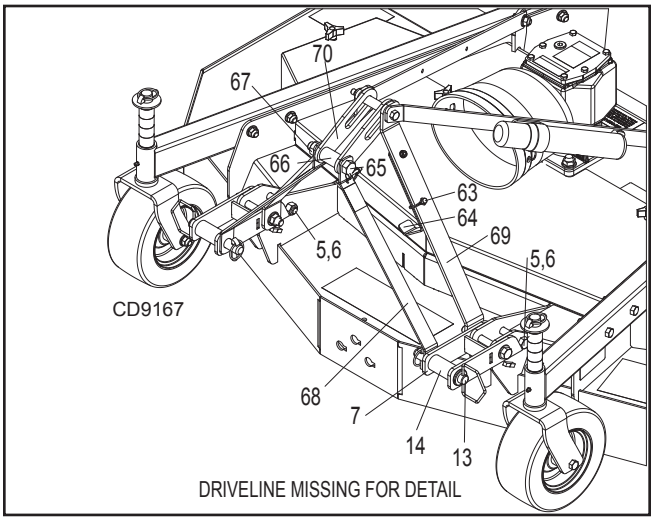


Figure 4. Hitch Assembly

Figure 5. Quick Hitch Attachment

INSTALLATION AND REMOVAL OF DRIVELINE (TRACTOR PTO)

⚠ WARNING

- **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.**

⚠ CAUTION

- **To avoid damage to cutter or driveline, make sure driveline holder is properly stored before operation.**

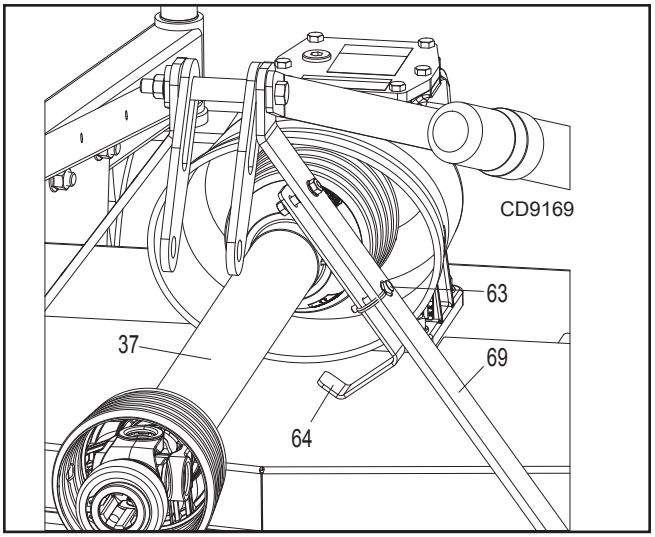


Figure 6. Driveline Holder Storage Position

To Install

Pull locking collar back, and at the same time, push driveline onto tractor PTO shaft until locking device engages.

To Remove

Hold driveline into position, pull locking collar back, and slide driveline off tractor PTO shaft.

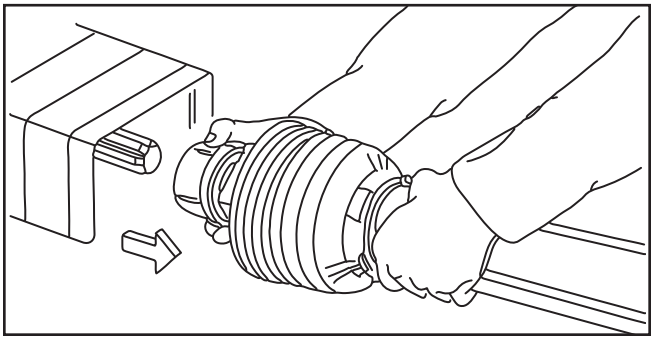


Figure 7. Lock Collar

Front Caster Wheel Interference Check

***NOTICE*: Do not operate tractor and mower until this interference check has been performed. If you change tractors, you must perform the check for that mounting.**

Perform this check with all the spacers above the tubular wheel arm. This will place the caster wheels in their highest position and provide the lowest cutting height for the mower.

1. Raise the mower slowly with the tractor hydraulics to 16" at dimension C, Figure 8, or maximum height of tractor lift, whichever is less.
2. Pivot both front caster wheels forward and check that there is clearance between caster wheels and tractor tires.

3. If there is interference, see tractor operator's manual and adjust tractor wheels accordingly. Or adjust tractor 3-point lift arm stop to prevent contact between tractor tires and mower.

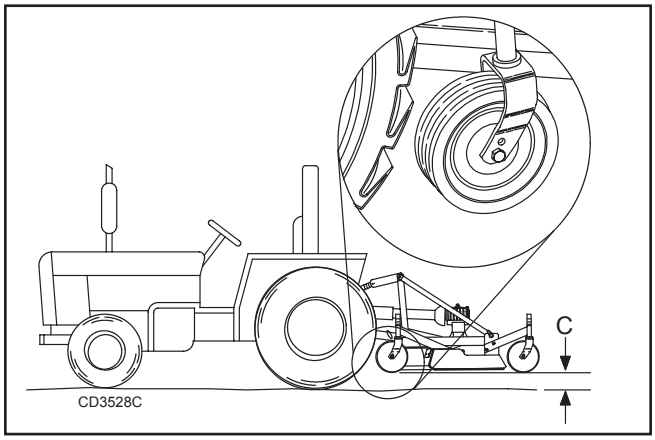


Figure 8. Front Caster Wheel Interference Check

SHORTENING DRIVELINE

1. Move mower up and down to measure the shortest possible distance between tractor PTO shaft and gearbox input shaft.
2. Separate driveline into two halves. The driveline female profile tube is covered by the smaller profile shield. Connect this half to the mower gearbox.
3. Connect the other half of the driveline to the tractor PTO shaft. This half contains the male profile tube which is covered by the larger profile shield.
4. Place driveline halves parallel to one another to determine how much to shorten the driveline.

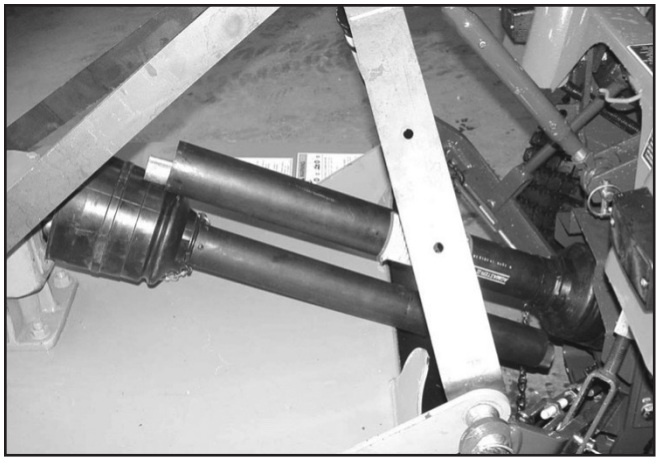


Figure 9. Drive Halves Placed Parallel

5. Measure from end of the upper shield to the base of the bell on the lower shield (A). Add 1-9/16" to dimension (A). See Figure 10.

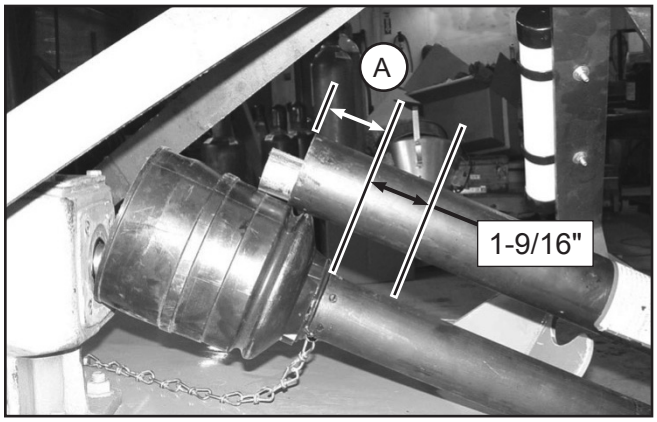


Figure 10. Determine Shield Length

6. Cut the shield to the overall dimension.

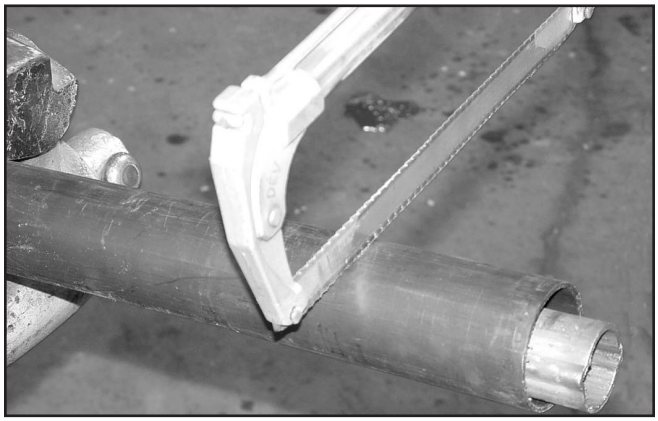


Figure 11. Cut Shield

7. Place the cut-off portion of the shield against the end of the shaft and use as a guide. Mark and cut the shaft.

Figure 12. Cut Shaft to Length

8. Repeat step 6 for the other half of the drive.
9. File and clean cut ends of both drive halves. Do not use tractor if proper driveline engagement cannot be attained through these methods. Connect driveline to tractor PTO shaft, making sure the spring-activated locking collar slides freely and locks driveline to PTO shaft.

IMPORTANT: If attaching with quick hitch, the distance between the tractor PTO and gearbox input shaft will increase. Follow the steps as you would for a 3-point hitch to ensure proper engagement.

DRIVELINE INTERFERENCE CHECK

1. Check for proper clearance between driveline and mower deck. If using a quick hitch, check clearances between quick hitch and driveline.
2. Slowly lift mower and observe driveline. If clearance between driveline and mower deck is less than 1 inch, shorten top link or limit upper travel of lower hitch arms. Refer to tractor operator's manual for instructions.

ADJUSTING CUTTING HEIGHT

⚠ WARNING

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

***NOTICE*: Avoid low cutting heights. Striking the ground with blades produces one of the most damaging shock loads a mower can encounter. Allowing blades to contact ground repeatedly will cause damage to mower and drive.**

IMPORTANT: The front of the deck is designed to be 1/8" lower than the rear of the deck when all caster wheels have the same number of wheel spacers. This helps the mower cut grass more efficiently.

1. Level mower from side to side. Check by measuring distance from mower side frame to the ground at each deck rail.
2. Verify that the same amount of spacers are under all caster arms.
3. Control cutting height by adjusting front and rear caster wheels spacer count. See Table 1.
4. To raise front or rear of mower, move caster adjustment spacers from above caster arms to under caster arms.
5. To lower front or rear of mower, move caster adjustment spacers from under caster arms to above caster arms.

Table 1: Cutting Height Chart

Spacers Required Under Caster Arm Pivot Tube		
Cut Height	1/2" Spacer	1" Spacer
1-1/2"	0	0
2"	1	0
2-1/2"	0	1
3"	1	1
3-1/2"	0	2
4"	1	2
4-1/2"	0	3
5"	1	3

TRACTOR TOP LINK ADJUSTMENT

When the cutting height is set, adjust tractor top link until mower top hitch links (70) point downward between 30 and 45 degrees below horizontal. Secure tractor top link jam nut. The front tires of the mower will lift off the ground before the rear tires when raised. This will allow the mower to follow the ground contours when mowing. (See Figure 13)

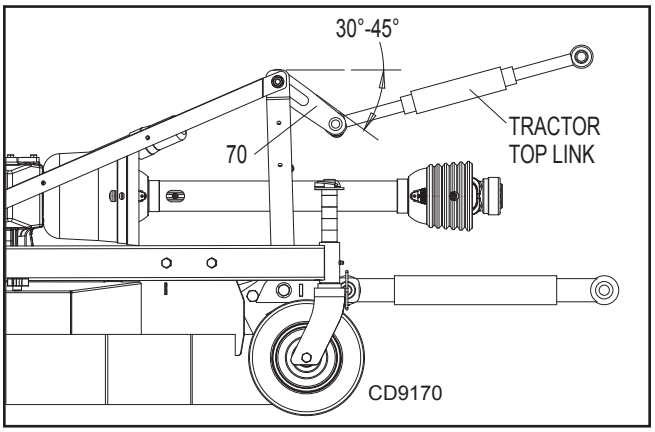


Figure 13. Top Link Adjustment

FRONT ROLLER (OPTIONAL)

The caster wheels effectively reduce scalping in most cases. However, you may encounter areas where the caster wheels and/or frame sides drop into depressions and allow center of the mower to contact ground and scalp. An optional front roller may be installed to minimize scalping. See page 44.

REAR ANTI-SCALP ROLLER (OPTIONAL)

If the front roller does not resolve your scalping issues, optional rear anti-scalp rollers can be added at the rear corners of the mower. These will prevent the rear corners of the mower from contacting the ground. See page 44.

PRE-OPERATION CHECKLIST

(OWNER'S RESPONSIBILITY)

_____ Review and follow all safety rules and safety decal instructions on 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 dam aged.

_____ Check that chain shielding is in good condition and replace any damaged chain links.

_____ Check that all hardware and cotter pins are properly installed and secured.

_____ Check to ensure blades are sharp, in good condition, and installed correctly. 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.

_____ Make sure the driveline and guards are in good condition. Driveline guards must rotate freely. If equipped, driveline tether chains should also be in good condition. Fasten the tether chains to the tractor and implement as instructed.

_____ Inspect area and remove stones, branches or other hard objects that might be thrown, causing injury or damage.

_____ Do not allow riders.

_____ Check all lubrication points and grease as instructed in "Lubrication Information" on page 17 & page 18. 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.

_____ Make sure tractor ROPS or ROPS cab and seat belt are in good condition. ROPS must be in the upright position and seat belt securely fastened during operation.

_____ 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.

OPERATING TECHNIQUE

⚠ CAUTION

Starting and Stopping

1. Power for operating the mower is supplied by the tractor PTO. Operate PTO at 540 RPM. Know how to stop the tractor and mower quickly in an emergency.
2. Engage PTO at a low engine RPM to minimize stress on the drive system and gearbox. With PTO engaged, raise PTO speed to 540 RPM and maintain throughout cutting operation.

Gearbox protection is provided by the belt drive. The belt is designed to slip when excessive loads occur.

Operation

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

Proper ground speed will depend upon the terrain, the height, and type and density of material to be cut.

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.

2. Always operate tractor PTO at 540 RPM to maintain proper blade speed and to produce a clean cut.
3. Under certain conditions, tractor tires may roll some grass down and prevent it from being cut at the same height as the surrounding area. When this occurs, reduce your ground speed, but maintain PTO at 540 RPM. The lower ground speed will permit grass to partially rebound.
4. In general, lower cutting heights give a more even cut and leave less tire tracks. However, it is better to cut grass frequently rather than too short. Short grass deteriorates rapidly in hot weather and invites weed growth during growing seasons. Follow local recommendations for the suitable cutting height in your area.

Clearing Blockages

If mower becomes plugged, causing belt to slip for over two seconds, follow these steps:

1. Maneuver equipment into a previously cut area and allow mower to clear accumulated material.
2. Continue running at least two minutes, allowing pulleys to cool. Stopping the mower when in contact with a very hot pulley will bake and ruin belt.

OPERATING TIPS

⚠ WARNING

- **Inspect and clear area of stones, branches, or other hard objects that might be thrown, causing injury or damage.**

Extremely tall material should be cut twice. Set mower at a higher cutting height for the first pass. Then cut at desired height, 90 degrees to the first pass. Remember, sharp blades produce cleaner cuts and require less power.

Analyze area to be cut to determine the best procedure. Consider height and type of grass and terrain type: hilly, level, or rough. Plan your mowing pattern to travel straight forward whenever possible. Mow with uncut grass to the right. This will distribute the clippings over the cut area.

Uneven Terrain

⚠ WARNING

- **Do not operate or transport on steep slopes.**
- **Do not stop, start, or change directions suddenly on slopes. Make turns slowly and gradually.**
- **Use extreme care and reduce ground speed on slopes and rough terrain.**
- **Watch for hidden hazards on the terrain during operation.**

Pass diagonally through sharp dips and avoid sharp drops to prevent hanging up tractor and mower. Practice will improve your skills in maneuvering rough terrain.

TRANSPORTATION

⚠ WARNING

- **Rotating blades. Contact with rotating blades could cause serious injury or death.**

1. Disengage the PTO and wait for all moving parts to come to a complete stop. Raise the tractor 3-point arms to bring the mower into transport position
2. With mower adjusted to transport position, set upper stop on tractor lift quadrant to prevent mower from contacting the driveline while being raised.

REMOVING MOWER FROM TRACTOR (STORAGE)

Follow cleaning procedure on page 21.

1. Disengage tractor PTO and raise mower with the 3-point hitch.
2. Remove pin from driveline holder and let swing down. Replace pin in a-frame bar. Disconnect mower driveline from tractor PTO shaft. Fully collapse driveline and place in holder.
3. Collapse driveshaft as far as possible and store it in drive holder to prevent ground contact.
4. Place blocks under mower side skids. Lower mower onto blocks, disconnect mower from tractor 3-point hitch, and carefully drive tractor away from mower. See Figure 14.

⚠ CAUTION

- **Pinch Hazard. Hands or fingers could be pinched between quick hitch a-frame bars and rigid a frame bars on mower. Do not push on quick hitch a frame bars when mower is disconnected from tractor.**

⚠ WARNING

- **Keep children and bystanders away from storage area.**

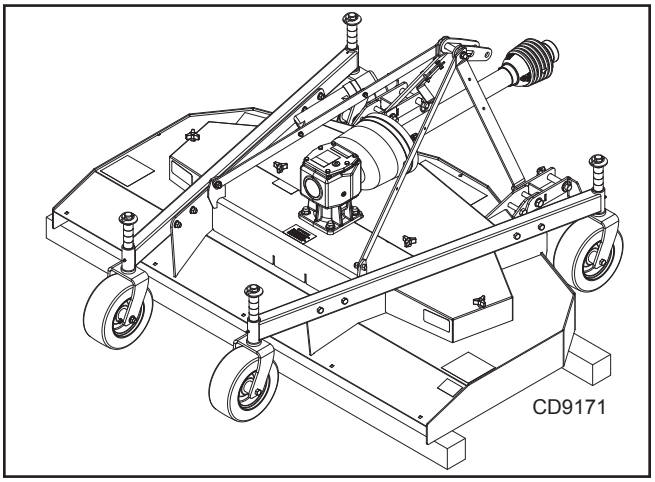


Figure 14. Mower Storage Position

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.

- **Keep machine in good working order. Replace worn or damaged parts.**

⚠ 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.**

⚠ WARNING

- **Never allow children or untrained persons to operate equipment.**
- **Keep bystanders away from equipment.**
- **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.**
- **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**
- **Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.**
- **Operate tractor PTO at 540 RPM. Do not exceed.**

BLOCKING METHOD

Do not work underneath mower unless it is properly attached to the tractor and blocked securely. When properly attached, the unit will be anchored to minimize front to rear movement.

Raise mower completely, set tractor brakes, turn engine off, remove key, block tractor wheels front and rear, and disconnect mower driveline from tractor.

The only approved blocking devices for this mower are jackstands with a load rating of 1000 pounds or more. One jackstand under each corner of the mower (four total) must be installed before working underneath this unit. See Figure 15.

When blocking, you must consider overall stability of the unit. Just blocking under the unit will not ensure your safety. The working surface must be level and solid to support the loaded weight of the jackstands. Test jackstand stability before working under any portion of the mower.

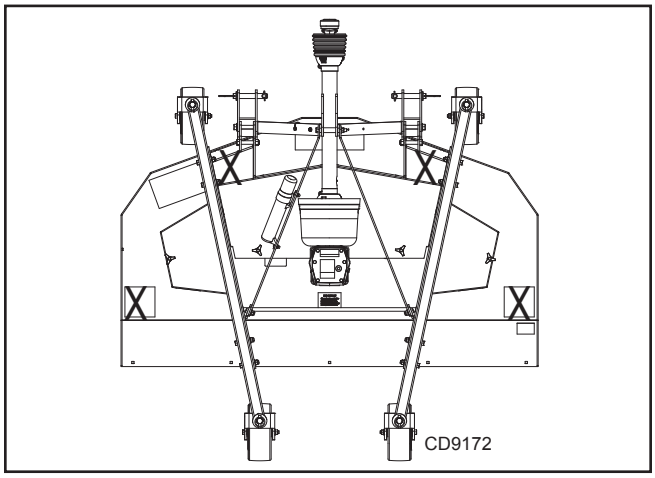


Figure 15. Jackstand Placement

LUBRICATION INFORMATION

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

Figure 16 shows the lubrication points. The accompanying chart gives the frequency of lubrication in operating hours, based on normal operating conditions.

Severe or unusual conditions may require more frequent lubrication. Some reference numbers have more than one location; be sure you lubricate all locations.

Use a lithium grease of #2 consistency with a MOLY (molybdenum disulfide) additive for all locations. Be sure to clean fittings thoroughly before attaching grease gun. When applied according to the lubrication chart, one good pump of most guns is sufficient.

Use SAE 80W or 90W gear lube in the gearbox. Fill to plug on side of gearbox. See **Fill Gearbox** on **page 29**.

Check gearbox daily for evidence of leakage at both seals and the gasket between the housing and cover. If leakage is noted, repair immediately. There may be a small amount of lube emitted from the vent plug; this is not considered leakage.

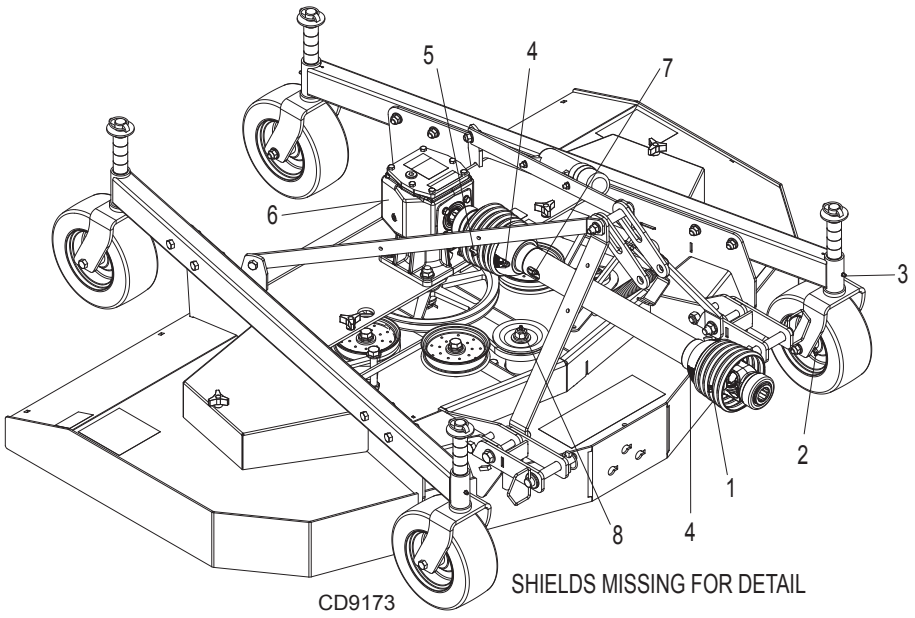
IMPORTANT: Overfilling the gearbox will cause the excess gear lube to blow out vent plug and possibly ruin the belt.

IMPORTANT: Over-greasing the caster wheels can push powdered metal bushing out of wheel. This will lead to premature failure of the bushing or wheel hub.

Driveshaft Lubrication

Lubricate the driveshaft slip joint every 40 operating hours. Failure to maintain proper lubrication could result in damage to U-joints, gearbox, and driveshaft.

1. Lower mower to the ground, set parking brake, stop engine, and remove key.
2. Disconnect driveline from tractor PTO shaft. Collapse telescoping section completely and hang on driveline holder.
3. Locate outer profile shield grease access hole. Rotate outer shield until it aligns with lubrication hole in inner profile shield. Rotate both profile shields until the openings are over the grease fitting in the telescoping section of the driveline.
4. Insert grease gun and give 2 to 3 full pumps of grease.
5. Locate grease access holes in the tractor end joint bellows. Rotate driveline to align access hole with grease fitting in the tractor cross end cap. Apply 2 full pumps of grease.
6. Locate white plastic grease fitting at the base of the tractor end joint bellows. Apply 2 full pumps of grease to lubricate the safety shield bearings.
7. Repeat steps 5 and 6 for implement end of driveline.
8. Reconnect driveline to tractor PTO shaft.
9. Raise and lower mower several times before mowing to distribute grease along telescoping section of driveline.



REF	DESCRIPTION	FREQUENCY
1	Front U-Joint	8 Hours
2	Caster Wheel (Four wheels)	8 Hours
3	Caster Pivot (Four wheels)	8 Hours
4	Driveline Shield Bearings	8 Hours
5	Rear U-Joint	8 Hours
6	Gearbox (Fill to center of horizontal shaft with SAE 80W or 90W gear lube)	Check Daily For Leakage
7	Slip Joint	40 Hours
8	Spindle (3 spindles)	40 Hours

Figure 16. Lubrication Points

BELT SERVICING

Inspect Belt

One of the major causes of belt failure is improper installation. Before installing a new belt, check the following:

1. Remove thumb screws and remove belt shields. Set shields aside. Replace thumb screws on studs to prevent loss.
2. Check spindle shafts and bearings for wear. Spindles should not have endplay.
3. Check pulley grooves for cleanliness. If grooves require cleaning, moisten a cloth with a nonflammable, non toxic degreasing agent or commercial detergent and water.
4. Make sure spindles turn freely and without pulley or blade wobble.

If grooves require cleaning, moisten a cloth with a non flammable, nontoxic degreasing agent or commercial detergent and water.

Avoid excessive force during installation. Do not use tools to pry belt into pulley groove. Do not roll belt over pulleys to install. This can cause hidden damage and premature belt failure.

Remove Belt

⚠ CAUTION

- **Use care when installing or removing belt from spring-loaded idler. Springs store energy when extended and, if released suddenly, can cause personal injury.**

IMPORTANT: Avoid excessive force during installation. Do not use tools to pry belt into pulley groove. Do not roll belt over pulleys to install. This can cause hidden damage and premature belt failure

1. Grasp belt between spindle sheave C, spring loaded idler B, and spindle sheave D. Pull spring loaded idler with belt to obtain enough belt length to route it over sheave C.
2. Check that spring-loaded idler pivots freely. Clean and lubricate if necessary
3. Remove belt from remaining sheave grooves and then from mower. Inspect belt for damage. A belt that will not lay flat on the ground indicates broken cords.

Alternate Removal Method

1. Insert 1/2" ratchet or breaker bar into square hole on idler arm. Rotate idler arm clockwise to remove tension on belt. Obtain enough belt length to route it over spring-loaded idler B then slowly rotate idler arm counterclockwise to reduce tension in spring.
2. Check that spring-loaded idler pivots freely. Clean and lubricate if necessary.
3. Remove belt from remaining sheave grooves and then from mower. Inspect belt for damage. A belt that will not lay flat on the ground indicates broken cords.

Install Belt

⚠ CAUTION

- **Use care when installing or removing belt from spring-loaded idler. Springs store energy when extended and, if released suddenly, can cause personal injury.**

1. Route belt around spindle sheave F, backside idler E, and spindle sheave D as shown in Figure 17.
2. Route belt around backside idler G then slide belt under drive sheave A and over spring-loaded backside idler B. Position belt in drive sheave grooves, except for spindle sheave C.
3. Grasp belt between spindle sheave C, spring-loaded idler B, and spindle sheave D. Pull spring loaded idler with belt to obtain enough belt length to route it over sheave C.
4. Remove thumb screws from studs. Replace belt shields. Ensure tabs on end shields are fitted into slots in deck rails. Thumb screws to be secured tightly to prevent loss.

Alternate Installation Method

1. Route belt around spindle sheave F, backside idler E, and spindle sheaves C & D as shown in Figure 17.
2. Route belt around backside idler G then slide belt under drive sheave A.
3. Insert 1/2" ratchet or breaker bar into square hole on idler arm. Rotate idler arm clockwise to obtain enough belt length to route it over spring-loaded idler B then slowly rotate idler arm counter-clockwise to tension belt.
4. Remove thumb screws from studs. Replace belt shields. Ensure tabs on end shields are fitted into slots in deck rails. Thumb screws to be secured tightly to prevent loss.

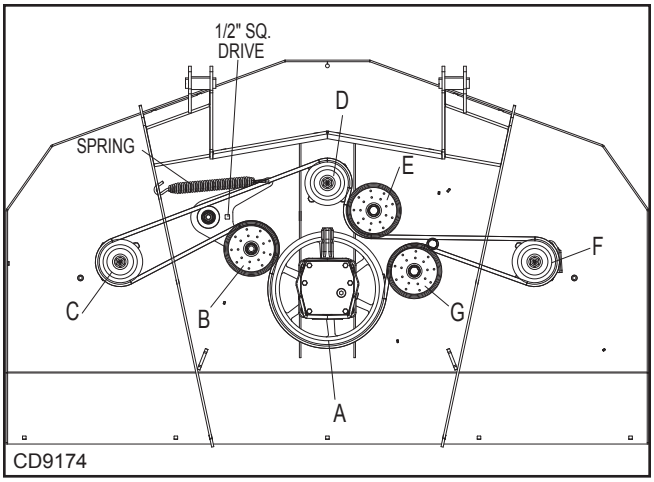


Figure 17. Belt Routing

BLADE SERVICING

⚠ 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 pres sure, set parking brake, stop engine, remove key, and unfasten seat belt.**
- **Keep all persons away from operator control area while performing adjustments, service, or maintenance.**

⚠ CAUTION

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

1. Inspect blades before each use to determine that they are mounted securely and are in good condition.
2. Replace any blade that is bent, excessively nicked, worn, or has any other damage. Do not repair.
3. Small nicks can be ground out when sharpening.

Remove Blades

⚠ CAUTION

- **Do not handle blades with bare hands. Wear gloves. Careless or improper handling may result in injury.**

1. Remove bolt (79), Figure 19, which has right hand threads.
2. Remove belville washers (78) and blade (77).

Sharpen Blades

***NOTICE:* When sharpening blades, be sure to balance them. Unbalanced blades will cause excessive vibration that can damage blade spindle bearings. Vibration may also cause structural cracks in mower housings.**

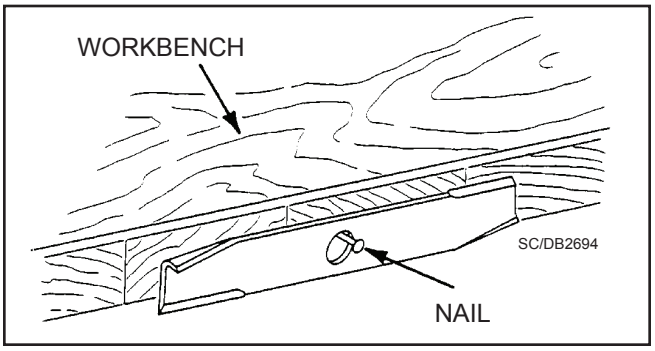


Figure 18. Blade Balancing

1. Follow original sharpening pattern.
2. Do not sharpen blade to a razor edge, but leave approximately 1/64" blunt edge.
3. Do not sharpen back side of blade.
4. Sharpen both cutting edges equally to keep blade balanced. Balance blade using the method shown in Figure 18.

Install Blades

⚠ CAUTION

- **Your dealer can supply genuine replacement blades. Substitute blades, blade pins, blade bolts may not meet original equipment specifications and may be dangerous.**

***NOTICE*: When installing blade, the lift of the blade must be toward the spindle blade housing as shown in Figure 19. Torque bolt (79) into shaft assembly to 100 lbs-ft.**

1. Place blade over the bottom of the shaft assembly.
2. Place Belleville washer (78) over blade and insert blade bolt (79). Torque blade bolt to 100 lbs-ft.

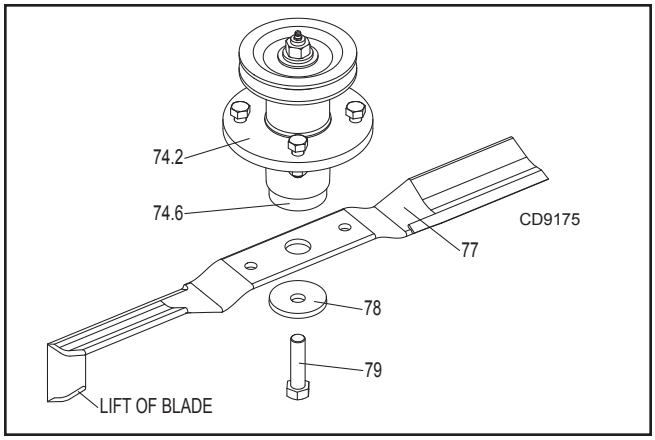


Figure 19. Blade and Spindle Assembly

Chain Shielding

⚠ DANGER

- **Full chain shielding is recommended 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 shielding, operation is recommended to 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).**
  - **Check that chain shielding is in good condition and replace any damaged chain links.**

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 (supplied free by your Woods dealer).**

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 & Instructional Decals section for location drawing.**

TROUBLESHOOTING

MOWING CONDITIONS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Grass cut higher in center of swath than at edge	Height of mower higher at front than at rear	Adjust mower height and attitude so that mower rear and front are within 1/2 inch of same height. See instructions on page 14.
	Loose blade	Check blade hardware.
Grass cut lower in center of swath than at edge	Height of mower lower at front than at rear	Adjust mower height and attitude so that mower rear and front are within 1/2 inch of same height. See instructions on page 14.
	Loose blade	Check blade hardware.
Streaking conditions in swath	Conditions too wet for mowing	Allow grass to dry before mowing.
	Blades unable to cut that part of grass pressed down by path of tractor tires	Slow ground speed of tractor but keep engine running at full PTO RPM. Cutting lower will help. Adjust tractor tire spacing if possible.
	Dull blades	Sharpen or replace blades.
	Loose blade	Check blade hardware.
Material discharges from mower unevenly; bunches of material along swath	Material too high and too much material	Reduce ground speed but maintain 540 RPM at tractor PTO, or make two passes over material. Raise mower for the first pass and lower for the second and cut 90degrees to first pass. Raise rear of mower high enough to permit material discharge, but not so high that conditions listed above occur.
	Grass is wet	Allow grass to dry before mowing. Slow ground speed of tractor but keep engine running at full PTO RPM.

TROUBLESHOOTING

BELT CONDITIONS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Belt squealing	Mower overloading; material too tall or heavy	Reduce tractor ground speed but maintain full PTO RPM. Cut material twice, one high pass and then mow at desired height. Cut 90-degrees to first pass.
	Oil on belt from over lubricating	Be careful not to over lubricate. Clean lubricant from belt and pulleys with clean rag. Replace oil-soaked belt.
	Belt hung up or rubbing	Check belt position in pulleys and idlers. Check belt for free travel in pulleys. Check under mower and around blade spindle shaft for wire, rags, or other foreign material. Clean all material from under mower.
	Bearing failure	Check that spindles turn freely. Replace any spindle that does not.
Frayed edges on belt cover	Belt is misaligned	Re-align belt. Be sure belt does not rub any other part while running.
	Pulley is misaligned	Inspect to ensure belt is running in center of backside idler. Shim idler as necessary to align.
Belt rollover	Pulley is misaligned	Re-align.
	Damaged belt	Replace belt. *
	Foreign object in pulley groove	Inspect all pulley grooves for rust, paint, or weld spots and remove.
	Worn pulley groove	Replace pulley.
Damaged belt	Rollover, high shock loads or installation damaged	Replace belt. *
Belt breakage	High shock loads	Avoid abusive mowing. Avoid hitting the ground or large obstructions.
	Belt came off drive	Check pulleys for foreign material in grooves. Avoid hitting solid objects or ground.

* Check belt for damage by laying it flat on the floor. A belt that does not lie flat (has humps or twists, indicating broken or stretched cords) must be replaced.

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.**

BLOCKING METHOD

Do not work underneath mower unless it is properly attached to the tractor and blocked securely. When properly attached, the unit will be anchored to minimize front to rear movement.

Raise mower completely, set tractor brakes, turn engine off, remove key, block tractor wheels front and rear, and disconnect mower driveline from tractor.

The only approved blocking devices for this mower are jackstands with a load rating of 1000 pounds or more. One jackstand under each corner of the mower (four total) must be installed before working underneath this unit.

When blocking, you must consider overall stability of the unit. Just blocking under the unit will not ensure your safety. The working surface must be level and solid to support the loaded weight of the jackstands. Test jackstand stability before working under any portion of the mower.

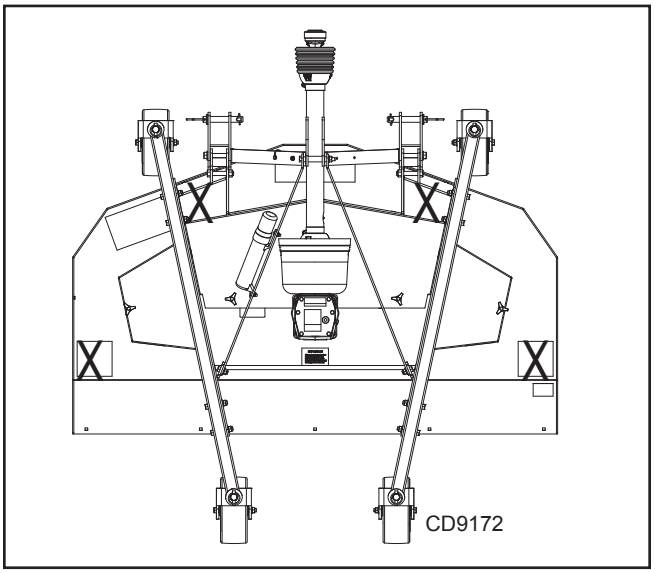


Figure 20. Jackstand Placement

BLADE SPINDLE REPAIR

Spindle repair requires special skills and tools. If your shop is not properly equipped or your mechanics are not trained in this type of repair, you may be time and money ahead to use a new spindle assembly

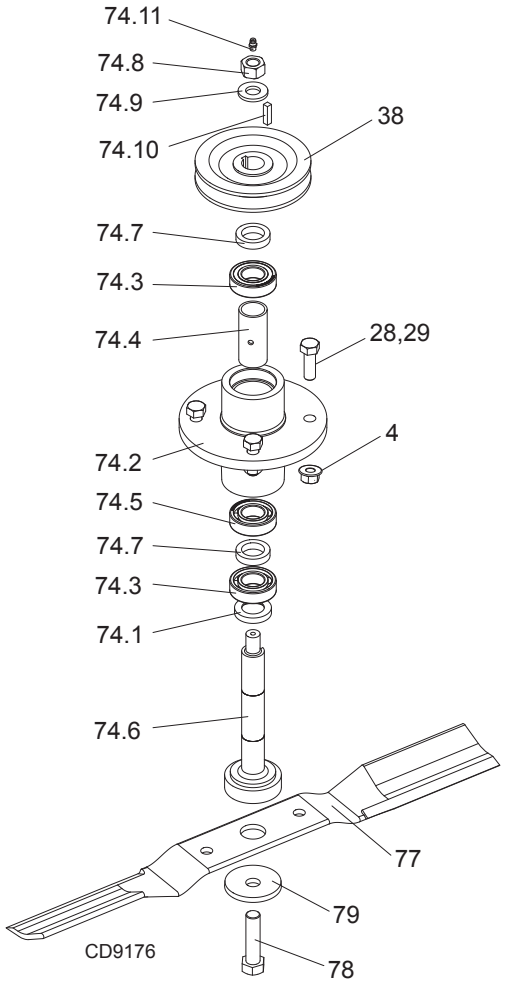
For reference, the grease fitting is in the top of the spindle shaft.

Remove Spindle

1. Remove belt shields from deck.
2. Remove belt. See page 19 for procedure.
3. Remove blade from spindle assembly.
4. Remove nut (74.8) and washer (74.9) from the top of the spindle.
5. Remove sheave (38) from spindle assembly.

NOTE: A wheel puller may be needed if sheave cannot be removed by hand. Retain key (74.10).

6. Remove nuts (4) and bolts (28, 29) that secure spindle to mower. (See Figure 21.)



4	1/2 NC Flange lock nut
28	1/2 NC x1.5 HHCS GR5
29	1/2 NC x 1.75 HHCS GR5
38	Sheave
74.1	Spindle spacer
74.2	Housing, cast
74.3	Bearing, 1" sealed
74.4	Sleeve, 1.03 X 1.25 X 2.72
74.5	Bearing, 1"
74.6	Spindle shaft
74.7	Sleeve, 1.01 X 1.50 X .34
74.8	Nut, 5/8 NC lock
74.9	Washer, 5/8 SAE flat
74.10	Key, 1/4 X 1/4 X 1.0
74.11	Grease fitting
77	Blade kit (high suction)
78	Cap screw, 5/8 NF x 2.5 GR5
79	Bell washer, 5/8 x 2.5 x .25

Figure 21. Spindle Assembly

Disassemble Spindle

1. Slide shaft (74.6), short spacer (74.1), lower bearing (74.3), short bearing spacer (74.7), middle bearing (74.5), and long spacer (74.4) out the bot tom of spindle housing (74.2).
2. Remove upper bearing (74.3) from top of spindle housing.
3. Inspect parts and replace as needed.

Assemble Spindle

1. Slide short spacer (74.1) and lower bearing (74.3) over spindle shaft (74.6) with bearing seal facing down.
2. Slide short bearing spacer (74.7), middle bearing w/o seal (74.5), and long spacer (74.4) over spindle shaft (74.6).
3. Insert spindle shaft with bearings and spacers into spindle housing (74.2) from the bottom.
4. Install upper bearing (74.3) over shaft with the seal facing up.
5. Install short bearing spacer (74.7) over shaft.
6. Install sheave (38) with key (74.10) on shaft. Secure with washer (74.9) and nut (74.8) torque to 110 lbs-ft.

GEARBOX REPAIR

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

Fill gearbox with SAE 80W or 90W gear lube until it runs out the side level plug. Gearbox capacity is almost 4 pints.

Repair to this gearbox is limited to replacing bearings, seals, and gaskets. Replacing gears, shafts, and a housing is not cost effective. It is more economical to purchase a complete gearbox if repair to anything other than replacement of bearings, seals or gaskets is required.

Inspect gearbox for leakage and bad bearings.

Leakage is a very serious problem and must be corrected immediately.

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 shaft gasket or seal can be repaired without removing the gearbox from the mower.

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. See Figure 22.
5. Carefully press seal into housing, avoiding distortion to the metal seal cage.

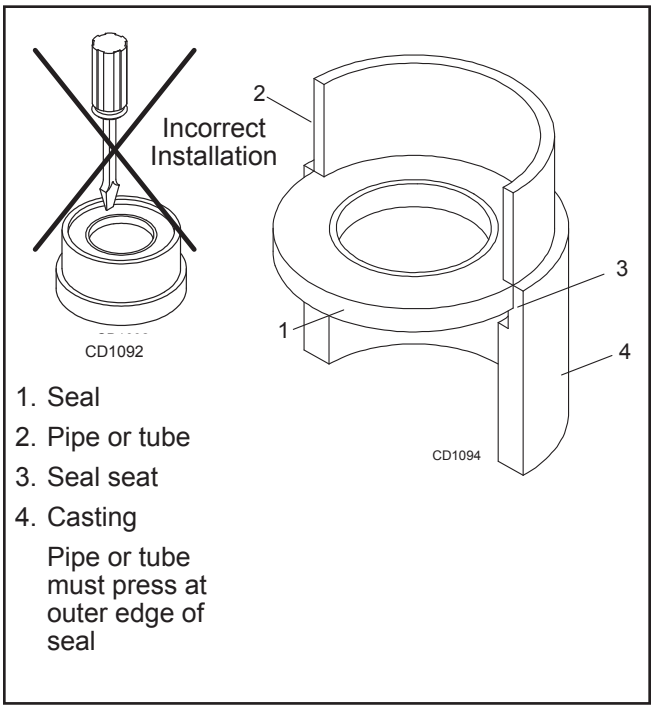


Figure 22. Seal Installation

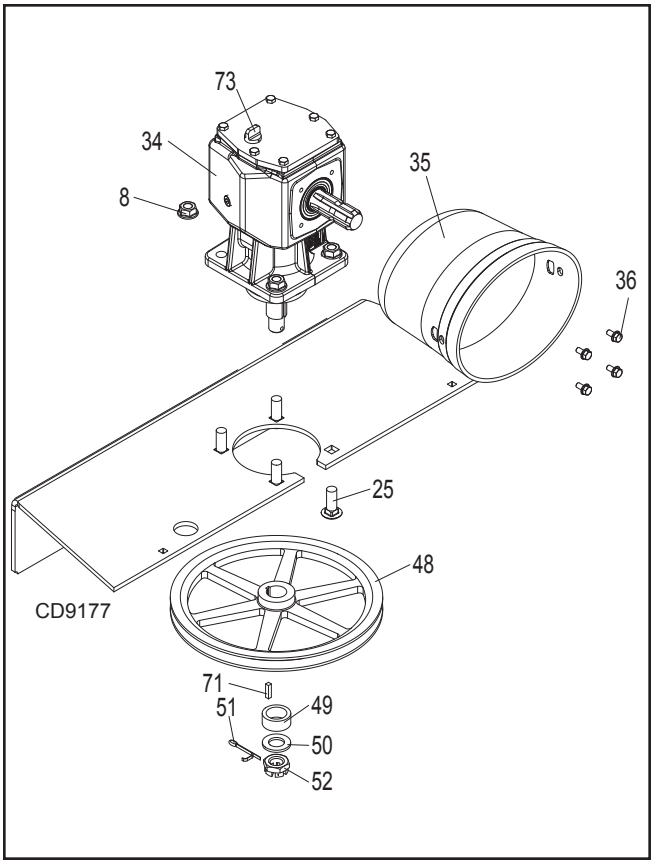
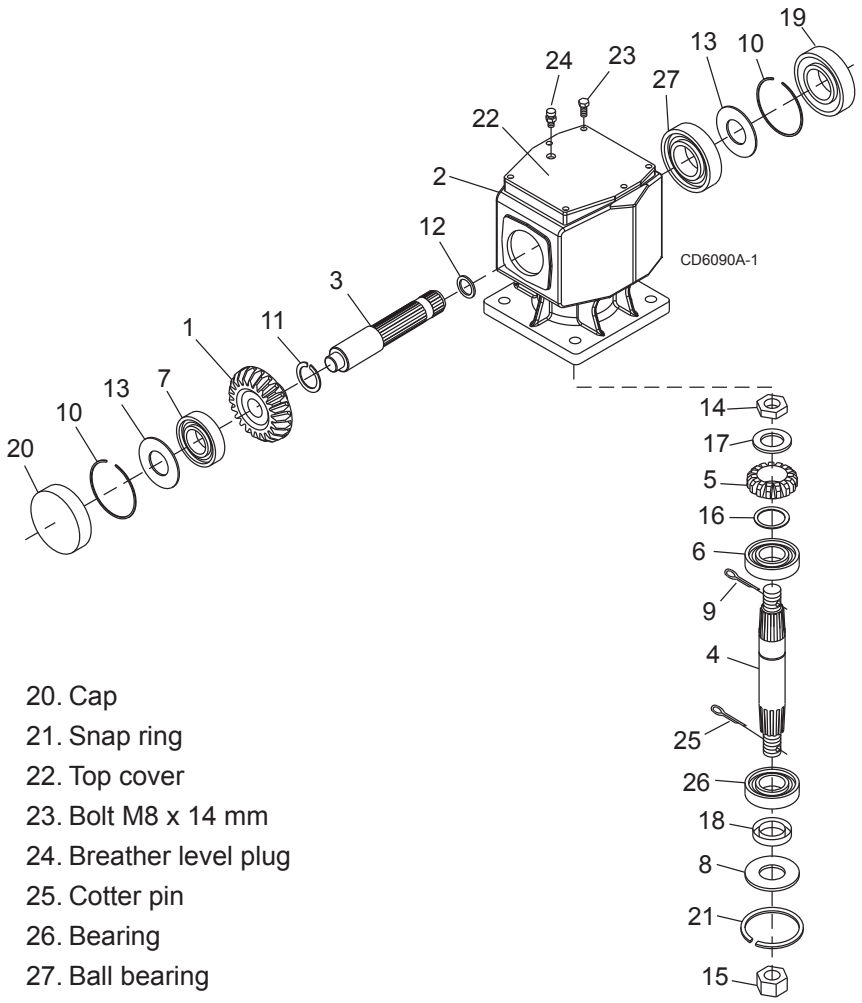


Figure 23. Gearbox Stand Assembly



1. Crown gear
2. Gearbox housing
3. Input shaft
4. Output shaft
5. Gear pinion
6. Bearing
7. Bearing
8. Protective flat washer
9. Cotter pin
10. Snap ring
11. Snap ring
12. Spacer
13. Shim
14. Castle nut
15. Castle nut M24 x 2
16. Shim
17. Flat washer
18. Oil seal (40 x 80 x 12 mm)
19. Oil seal (35 x 72 x 10 mm)
20. Cap
21. Snap ring
22. Top cover
23. Bolt M8 x 14 mm
24. Breather level plug
25. Cotter pin
26. Bearing
27. Ball bearing

Figure 24. Gearbox Assembly

Horizontal Shaft Seal Replacement (Figure 24)

1. Disconnect and remove the driveline from the gearbox.
2. Remove vent/dipstick (24) and siphon gear lube from housing through this opening.
3. If the leak occurred at either end of horizontal shaft, remove oil cap (20) and/or oil seal (19). Replace with new one (see Seal Replacement, page 25). Horizontal seal should be pressed flush with outside of housing.
4. Fill gearbox with SAE 80W or 90W gear lube until it runs out the level plug.

Remove Gearbox from Mower (Figure 24)

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

1. Disconnect and remove driveline from gearbox.
2. Remove vent/dipstick (24) and siphon gear lube from housing through this opening.
3. Remove flanged cap screws (36) to remove drive shield (35) from gearbox.
4. Remove thumb screws from left and center belt shields. Remove shields.
5. Grasp belt on both sides of left spindle sheave and pull against spring loaded idler until belt slips over spindle sheave. Carefully release tension on the belt (see Remove Belt, page 19).
6. Remove belt from drive sheave groove and from backside idler on idler arm.
7. Remove flange lock nuts (8) and carriage bolts (25) from gearbox mounting. Remove gearbox from mower by lifting gearbox up and sliding toward the front of the mower.
8. Remove cotter pin (51), castle nut (52), washer (50), and sleeve (49) from gearbox output shaft.
9. Remove drive sheave (48) and key (71) from gearbox output shaft.

Disassemble Gearbox (Figure 24)

1. Remove top cover (22) from housing. Turn gearbox upside down and pour out remaining gear oil from gearbox.
2. Remove oil cap (20) (to be replaced).
3. Remove snap ring (10) and shim (13) from input shaft (3).
4. Support gearbox in hand press and push on input shaft (3) to remove bearing (7).
5. Remove gear (1) from inside housing.
6. Remove oil seal (19) from front of housing (to be replaced).
7. Remove snap ring (10) and shim (13) from front of housing (2).
8. Remove input bearing (27) by using a punch and hammer from outside of housing.
9. Support housing in vise in a horizontal position.
10. The castle nut (15) and cotter pin (25) are already removed with the drive sheave. Remove snap ring (21), washer (8), and seal (18).
11. Remove cotter pin (9), castle nut (14), and washer (17) from output shaft (4).
12. Remove output shaft (4) by using a punch and hammer and tap on top to drive down
13. Remove gear (5) and shim (16) from inside housing.
14. Remove bearing (26) by using a punch and hammer from the top, outside the housing.
15. Support housing upside down (top cover surface) and remove bearing (6) by using a punch and hammer from the bottom side of the housing.
16. 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 wear pattern is smooth.
17. Inspect vertical and horizontal shafts for grooves, nicks, or bumps in the areas where the seals seat. Resurface any damage with emery cloth.
18. Inspect housing and caps for cracks or other damage.

Vertical Shaft Seal Replacement (Figure 24)

1. Disconnect and remove the driveline from the gearbox.
2. Remove vent/dipstick (24) and siphon gear lube from housing through this opening.
3. Remove gearbox stand from mower (see Remove Gearbox from Mower, page 27).
4. If the leak occurred at the vertical shaft, remove vertical shaft oil seal (18). Replace with new seal (see Seal Replacement, page 25).

   Vertical seal should be recessed in housing. Horizontal seal should be pressed flush with outside of housing.

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 until it runs out the level plug.
6. Assemble gearbox and pulley to gearbox stand. Attach gearbox stand to mower deck.

Reassemble Gearbox (Figure 24)

NOTE: Repair to this gearbox is limited to replacing bearings, seals, and gaskets. Replacing gears, shafts, and a housing is not cost effective. Purchasing a complete gearbox is more economical.

1. Clean housing, paying special attention to areas where seals will be installed.
2. Wash housing and component thoroughly. Select a clean area for gearbox assembly. Replace all seals and bearings. All parts must be clean and lightly oiled before reassembling.
3. Insert output bearings (6 & 26) in the housing, using a round tube of the correct diameter and a hand press.
4. Slide output shaft (4) through both bearings (6 & 26) until it rests against bearing (6).
5. Slide shim (16) over output shaft (4).
6. Press gear (5) onto output shaft (4) and secure with washer (17), castle nut (14), and cotter pin (9).
7. Apply grease to lower seal lips (18) and press seal over output shaft (4), using a tube of the correct diameter. Be sure not to damage the seal lip. Press in housing so that seal is recessed.
8. Insert protective washer (8) by hand. Install snap ring (21) and position it together with dual lip seal (18) by pressing it into position. Verify that snap ring is seated correctly.
9. Press bearing (7) into the housing, using a round tube of the correct diameter and a hand press. Secure with shim (13) and snap ring (10).
10. Secure snap ring (11) on input shaft (3) if not already secure.
11. Place gear (1) through top of housing and align gear (1) and gear (5) so that gear teeth are a match.
12. While holding gear (1) in place, slide input shaft (3) through gear (1) and bearing (7). Align splines on shaft (3) and gear (1).
13. Slide spacer (12) over input shaft (3) and press bearing onto input shaft (3), using a round tube of the correct diameter and a hand press.
14. Slide shim (13) over input shaft (3) and secure with snap ring (10).

15. Check input shaft end float by moving the input shaft (3) by hand. If end float is higher than 0.012", insert shim between input shaft (3) and rear bearing (7). Repeat until end float is less than 0.012". Check rotational torque by hand. The torque should be less than 2.2 lbs-inch.
16. Check that the gear backlash is between 0.006" and 0.016". You should not have to adjust the backlash.
17. Press in input oil seal (19), using tube of correct diameter. Be careful not to damage seal lip.
18. Press oil cap (20) on to cover the rear of housing, using a tube of the correct diameter.
19. 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.
20. Remove gearbox from water and dry off with compressed air. Add SAE 80W or 90W EP oil until it runs out of side level hole. Tighten all plugs.

Install Gearbox (Figure 24)

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

1. Install drive sheave (48) and key (71) on gearbox output shaft.
2. Install sleeve (49), washer (50), and castle nut (52) on gearbox output shaft. Torque castle nut to 170 lb-ft. Install cotter pin (51) through castle nut and gearbox output shaft.
3. Slide gearbox onto gearbox stand. When gearbox is installed on mower, dimension A (from the top of mower deck to the center line of the drive pulley) must be 2-3/4" (±1/8"). **This is a critical dimension and must be carefully adjusted for proper belt life.** Add or subtract shim washers under idler sheave to align with drive sheave. See Figure 25.
4. Install carriage bolts (25) and new flange lock nuts (8) through gearbox base. Torque nuts to 175 lb-ft.
5. Install belt into drive sheave groove and route around backside idler on idler arm. See Figure 17.
6. Grasp belt with both hands between the left spindle sheave and the idler arm. Pull on belt to rotate idler arm and slip belt over left spindle sheave. Carefully release belt, ensuring proper seat in left spindle sheave groove. Ensure belt is properly seated in all sheave grooves.
7. Reinstall belt shields and retain with thumb screws.
8. Install drive shield (35) over gearbox input shaft.
9. Install flange head cap screws (36) through drive shield and into gearbox housing. Carefully snug hardware.
10. Use SAE 80W or 90W gear lube to fill gearbox.
11. Reinstall vent/dipstick (24) and reconnect driveline to gearbox input shaft.

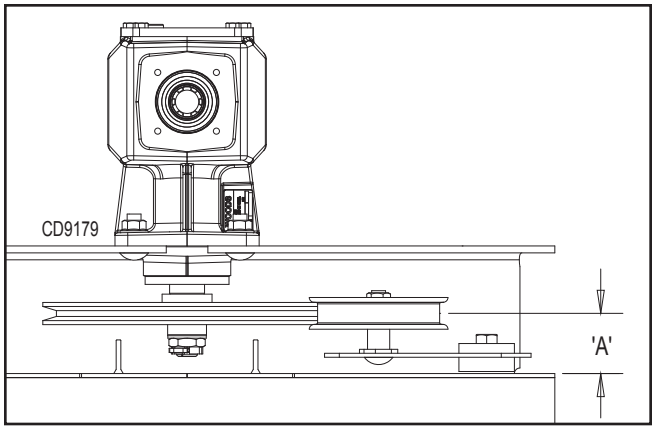


Figure 25. Drive Sheave Installation

FILL GEARBOX

1. Make sure vent/dipstick hole is clear. Fill gearbox half-full with high quality gear oil that has a viscosity index of 80W or 90W and an API service rating of GL-4 or GL-5.
2. Pour in one pint of gear oil. Wait five minutes, then add additional gear oil until it just comes out of gearbox side hole. Gearbox holds approximately 4 pints.
3. Allow an additional five minutes for the oil to flow through bearings, then make sure oil level is at bottom side hole. Replace side plug. Install vent plug.

UNIVERSAL JOINT REPAIR

1. Yoke
2. Cup and bearings
3. Snap ring
4. Journal cross

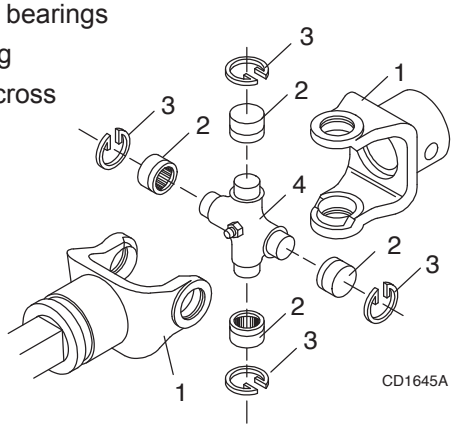


Figure 26. U-Joint Exploded View

U-Joint Disassembly

1. Remove external snap rings from yokes in four locations as shown in Figure 27.

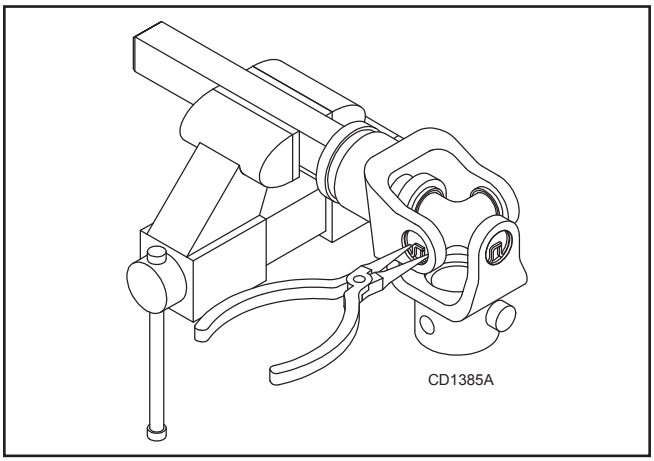


Figure 27

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 28.
3. Clamp cup in vise as shown in Figure 29 and tap on yoke to completely remove cup from yoke. Repeat Step 2 & Step 3 for opposite cup.
4. Place universal cross in vise as shown in Figure 30 and tap on yoke to remove cup. Repeat Step 3 for final removal. Drive remaining cup out with a drift and hammer.

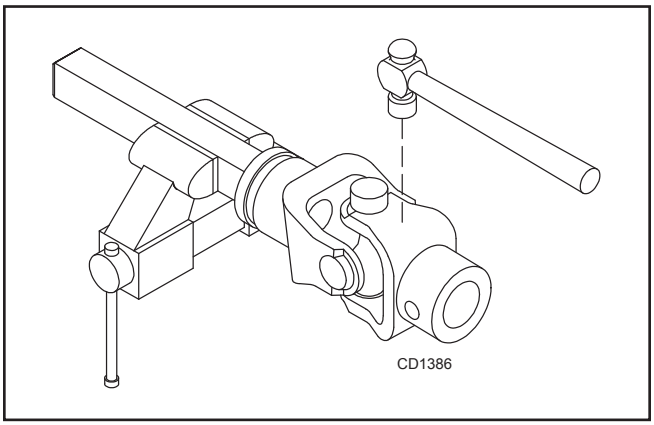


Figure 28

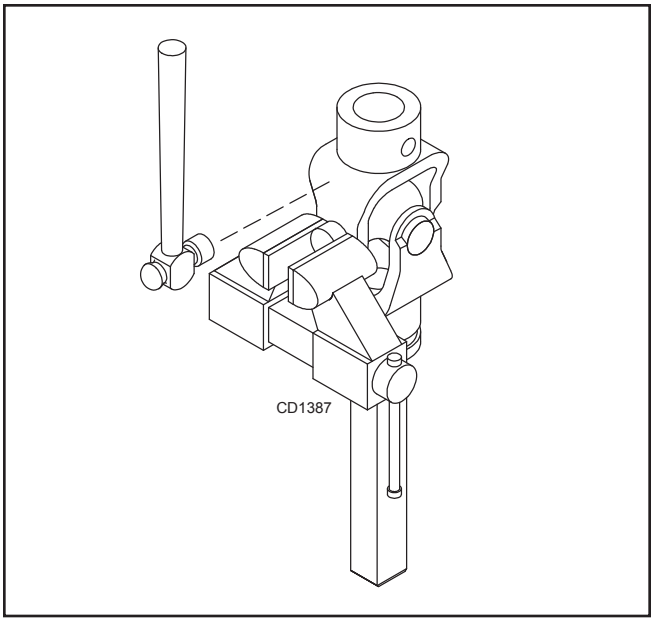


Figure 29

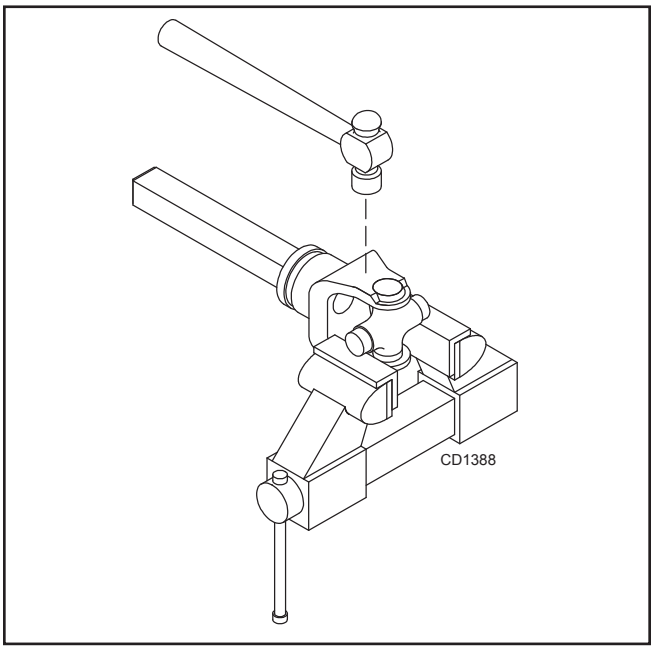


Figure 30

U-Joint Assembly

1. 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.
2. 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.
3. Seat cups by placing a drift or socket (slightly smaller than the cup) on cup and rap with a hammer. See Figure 31. Install snap ring and repeat on opposite cup.
4. Repeat Step 1 & Step 2 to install remaining cups in remaining yoke.
5. 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.

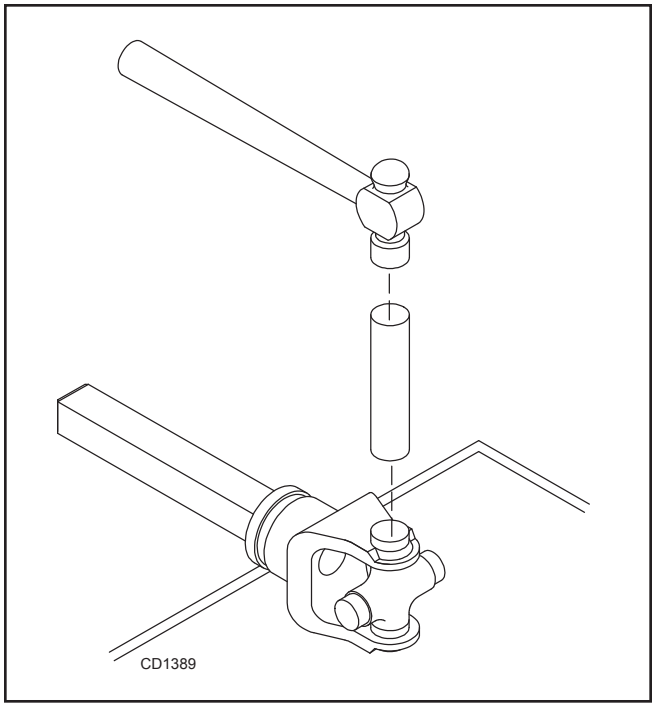


Figure 31

ASSEMBLY

DEALER SET-UP INSTRUCTIONS

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

Complete Dealer Check Lists on page 36 when you have completed the assembly.

The mower 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 47.

Select a suitable working area. Open parts boxes and lay out parts and hardware to make location easy. Refer to illustrations, accompanying text, parts lists and exploded view drawings.

⚠ WARNING

- **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.**

⚠ 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.**

Uncrate Mower

⚠ CAUTION

- **Be cautious of nails, staples, or splinters protruding from boards.**

1. Remove sides and top of mower shipping crate.
2. Remove lag screws and brackets that secure mower to crate base.
3. Remove driveshaft wired to mower deck.
4. Cut tie holding gearbox shield to mower.
5. Open center belt shield and remove the following: a-frame arms (69), rear offset links (55), top link plates (70), quick hitch a-frame arms (68), driveline holder (64), lower hitch clevises (7), manual tube (57), and hardware bag. Cut ties and discard cardboard.

NOTICE: Gearbox is filled at the factory. Prior to delivery, make sure each gearbox is half-filled with 80W or 90W API GL-4 or GL-5 gear lube. Check by removing sight plug in the side of box and confirm oil level even with bottom of sight plug.

Hitch Assembly (Figure 32)

1. Open the hardware bag and arrange your components by size.
2. Loosely assemble the lower hitch clevises (7) to deck with 5/8 NC x 5 cap screw (12) washer (11) spacer (10) and spacer (9). Install lower hitch pins (13) through lower hitch clevises and secure with included klik pins.
3. Loosely assemble A-frame bars (69) over spacer (9) and secure with 5/8 flanged lock nut (8).
4. Loosely assemble straight end of lift links (55, 56) to rear deck lugs with 1/2 NC x 1.25 cap screw (31) and 1/2 NC lock nut (4).
5. Rotate lift links (55,56) and A-frame bars (69) upwards then install sleeve (60) and hitch links (7) between A-frame bars and secure with 1/2 NC x 5 cap screw (61) and 1/2 NC lock nut (4).
6. Install manual tube (57) to left lift link (56) with 5/16 x 1 carriage bolts (58) and 5/16 whiz nuts (59). Remove vent/dipstick from manual tube. Remove 3/8 NPT plug from top of gearbox and install vent/dipstick.
7. Install drive holder (64) to left A-frame bar (69) using 5/16 NC x 1.5 cap screw (62) and 5/16 whiz nuts (59) on each side of A-frame bar. Rotate drive holder up into storage position and retain with safety pin (63).
8. Install shield (35) to front of gearbox (34) with M8 x 16 flanged lock screws (36).
9. Connect driveline (37) to gearbox input shaft. Be sure the driveline QD is seated firmly in the input shaft spline groove.
10. Remove safety pin (63) and rotate drive holder down and rest driveline in holder. Reinstall safety pin (63) in A-frame bar (69) for storage.
11. Tighten all hardware using recommended torque values located on page 47. Do not torque 5/8 cap screws in lower hitch clevises. These must pivot freely to function properly..

At this point assembly for Category 1 free link connection is complete. For Category 1 quick hitch connection continue through steps 12-14.

12. Install 5/8NC x 3-1/2 cap screws (5) through deck hitch plates behind mower lower hitch links (7) to keep hitch links level. Retain with 5/8NC lock nuts (6).

13. Install quick hitch sleeves (14) over clevis pins (13) in mower lower hitch links (7). Install mower quick hitch a-frame bars (68) over the clevis pins on the inside face of the mower lower hitch links. Retain with included klik pins.

14. Position top quick hitch sleeve (66) between mower top hitch links (70). Align mower quick hitch a-frame bars (68) on outside of top hitch links. Ensure alignment of assembly using 3/4NC x 4-1/2 cap screw (65). Retain with ¾ NC lock nut (67). Tighten then back off 1/4 – 1/2 turn to ensure assembly moves up and down freely.

⚠ CAUTION

- **Pinch Hazard. Hands or fingers could be pinched between quick hitch a-frame bars and rigid a- frame bars on mower. Do not push on quick hitch a-frame bars when mower is disconnected from tractor.**

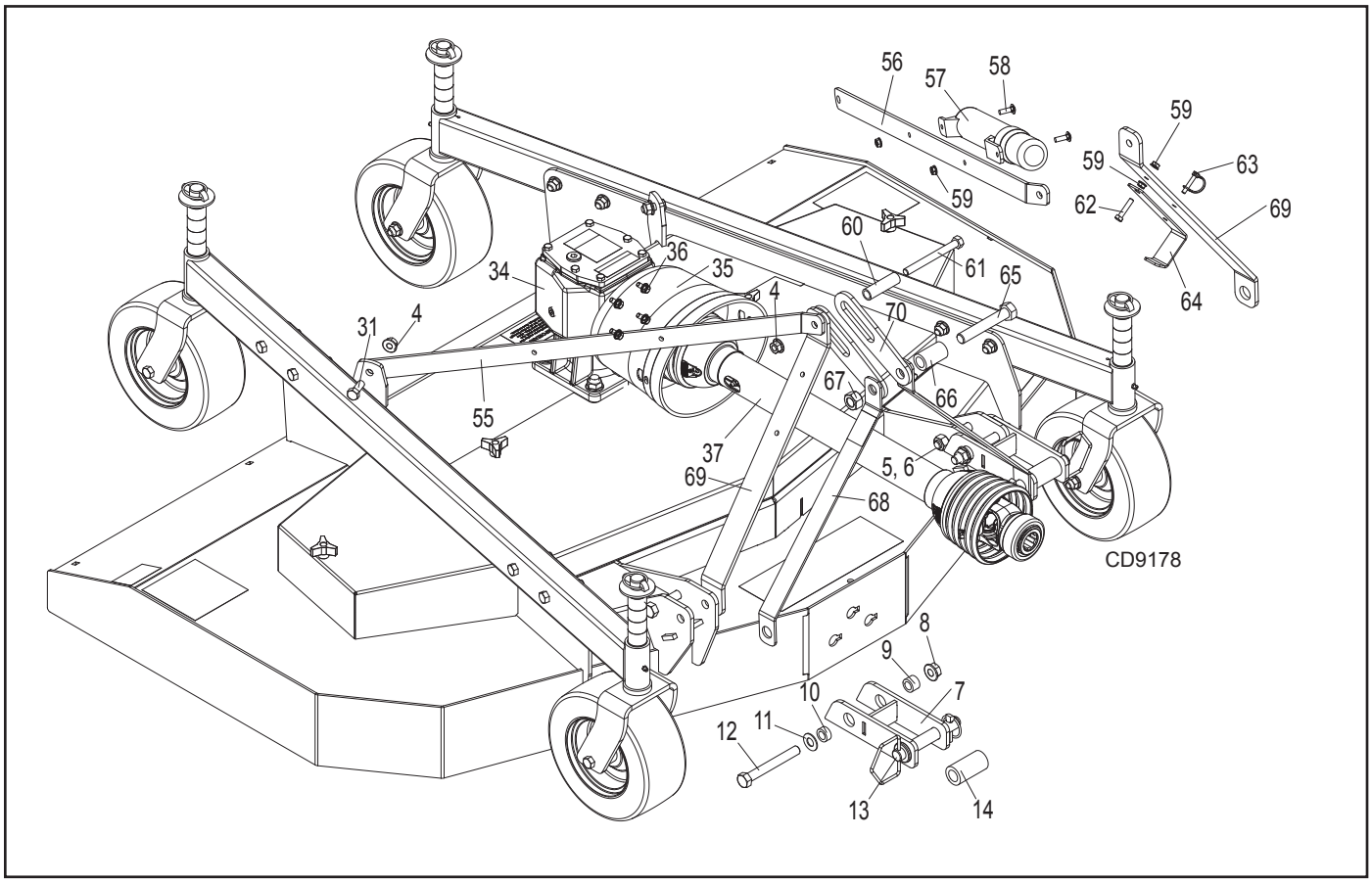


Figure 32. Hitch Assembly

⚠ WARNING

- **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.**

Driveshaft Installation

1. Orient the driveline with the implement end toward the mower gearbox. The implement end uses the female profile tube (large), which is covered by the smaller profile shield (plastic tube). Slide the QD collar back and push the drive yoke onto the gearbox input shaft. Make sure the QD is seated securely in the groove of the gearbox shaft.

2. The tractor end of the driveline uses the male profile tube (small). The male profile is covered by the larger profile shield (plastic tube). Slide the QD collar back to ensure it operates smoothly. Lubricate if necessary.

3. Hang the driveline on the driveline holder.

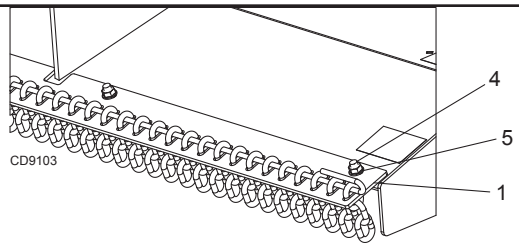
4. If your driveline came with tether chains, attach the implement end chain to the gearbox input shield.

Fill Gearbox

1. Make sure vent/dipstick hole plug is clear. Fill gearbox half-full with high quality gear oil that has a viscosity index of 80W or 90W and an API service rating of GL-4 and GL-5.
2. Fill gearbox until oil runs out of the side plug on gearbox.
3. Pour in one pint of gear oil, wait five minutes and add additional gear oil until it just comes out of side hole.
4. Allow an additional five minutes for the oil to flow through bearings, then check to make sure oil level is at bottom of side hole. Replace side plug. Install vent plug.

Install Chain Shielding (Optional)

1. Install chain shielding plate (1) on top rear edge of mower frame as shown in Figure 33.
2. Secure with carriage bolts (4) and flanged lock nuts (5).
3. Insert carriage bolts from bottom upward as shown. Torque bolts to 35 lb-ft.



1. Plate, chain shield
4. Bolt, carriage 3/8 NC x 1
5. Nut, 3/8 NC lock

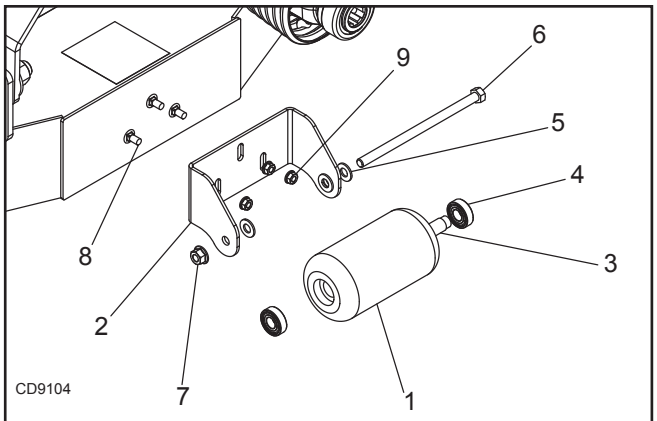
Figure 33. Chain Shielding Installed

⚠ DANGER

- **Full chain shielding is recommended 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 shielding, operation is recommended to 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).**
  - **Check that chain shielding is in good condition and replace any damaged chain links.**

Install Front Roller (Optional)

1. Install three carriage bolts (8) through front roller bracket (2) as shown in Figure 34. Install flanged lock nuts (9) loosely. Do not tighten.
2. Align roller bracket (2) with keyhole slots in the front of the mower deck. Pass head of carriage bolt thru round hole and slide toward square end of keyholes. Tighten flanged lock nuts (9) to 35 lbs-ft.
3. Place roller (1), spacer (3), bearings (4), and washers (5) in roller bracket as shown in Figure 34.
4. Insert cap screw (6) through bracket and roller.
5. Secure with flanged lock nut (9). Do not overtighten; roller must spin freely.

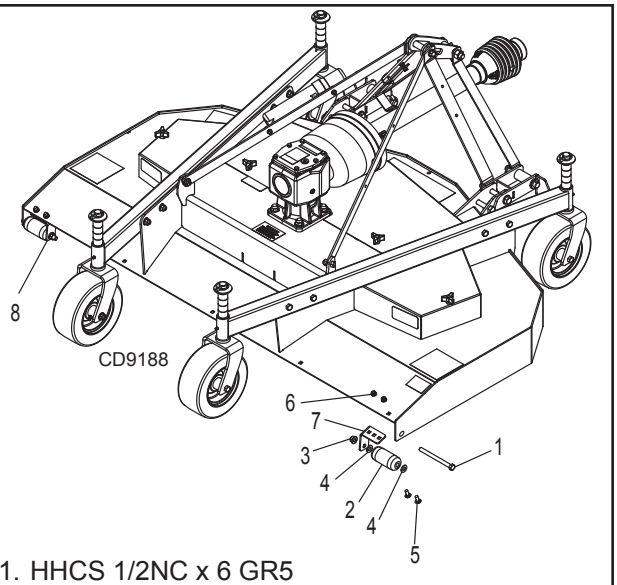


1. Roller
2. Roller bracket
3. Spacer
4. Bearing
5. Washer 1/2 flat SAE
6. HHCS 1/2 NC x 9 GR5
7. Nut, 1/2 NC flange locknut
8. Bolt, carriage 3/8 NC x 3/4
9. Nut, 3/8 NC lock

Figure 34. Front Roller Installation

Install Rear Anti-Scalp Roller (Optional)

1. Kit supplied with roller angle brackets for both TurfKeeper and TurfKeeper Pro mowers. TurfKeeper brackets are 1.50" wide. TurfKeeper Pro brackets are 1.75" wide.
2. Use opposite roller angle bracket for drill template. Position RH roller angle bracket (7) at LH rear corner of deck. Position LH roller angle bracket (8) at RH rear corner of deck. Insert carriage bolts (5) thru center bracket hole and chain shield hole in deck. Retain with flanged lock nuts (6).
3. On each bracket, mark the roller hole on side frame. Use drill and 9/16" drill bit to drill LH and RH side frames.
4. Unbolt roller angle brackets and swap to their proper side. Reinstall each bracket using chain shield hole and bracket hole for the widest spacing. Use carriage bolts (5) and flanged lock nuts (6) to retain. Mark inboard-most mounting hole for each roller bracket. Use drill and 7/16" drill bit to drill thru deck plate. Install second carriage bolt (5) thru bracket and retain with flanged lock nut (6).
5. Install plastic roller (2) and two flat washers between roller angle bracket and side frame as shown in Figure 35. Install ½ x 6 cap screw (1) through side frame, roller, and then angle bracket. Retain with flanged lock nut (3). Do not over tighten. Rollers must turn freely.



1. HHCS 1/2NC x 6 GR5
2. Roller 2 x 4.38
3. Nut, 1/2NC flanged locknut
4. Washer, 1/2 flat SAE
5. Bolt, carriage 3/8NC x 1
6. Nut, 3/8NC flanged locknut
7. RH roller angle bracket
8. LH roller angle bracket

Figure 35. Rear Anti-Scalp Roller Installation

DEALER CHECKLISTS

DEALER PRE-DELIVERY CHECKLIST

(DEALER'S RESPONSIBILITY)

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

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

_____ Check that all safety decals are installed and in good condition. Replace if damaged.

_____ Check 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 that all cotter pins and safety pins are properly installed. Replace if damaged.

_____ Check and grease all lubrication points as identified in "lubrication information" on page 17.

_____ Gearboxes are filled at the factory. Prior to delivery, fill as specified in the "Service, lubrication information" on page 17 and check to see that there are no leaking seals.

_____ Check that blades have been properly installed.

DEALER DELIVERY CHECKLIST

(DEALER'S 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.

_____ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.

_____ 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 "Service, blocking methods" section of the Operator's Manual. Explain that blocking up prevents equipment dropping from hydraulic leak down, hydraulic system failures, or mechanical component failures.

_____ 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.

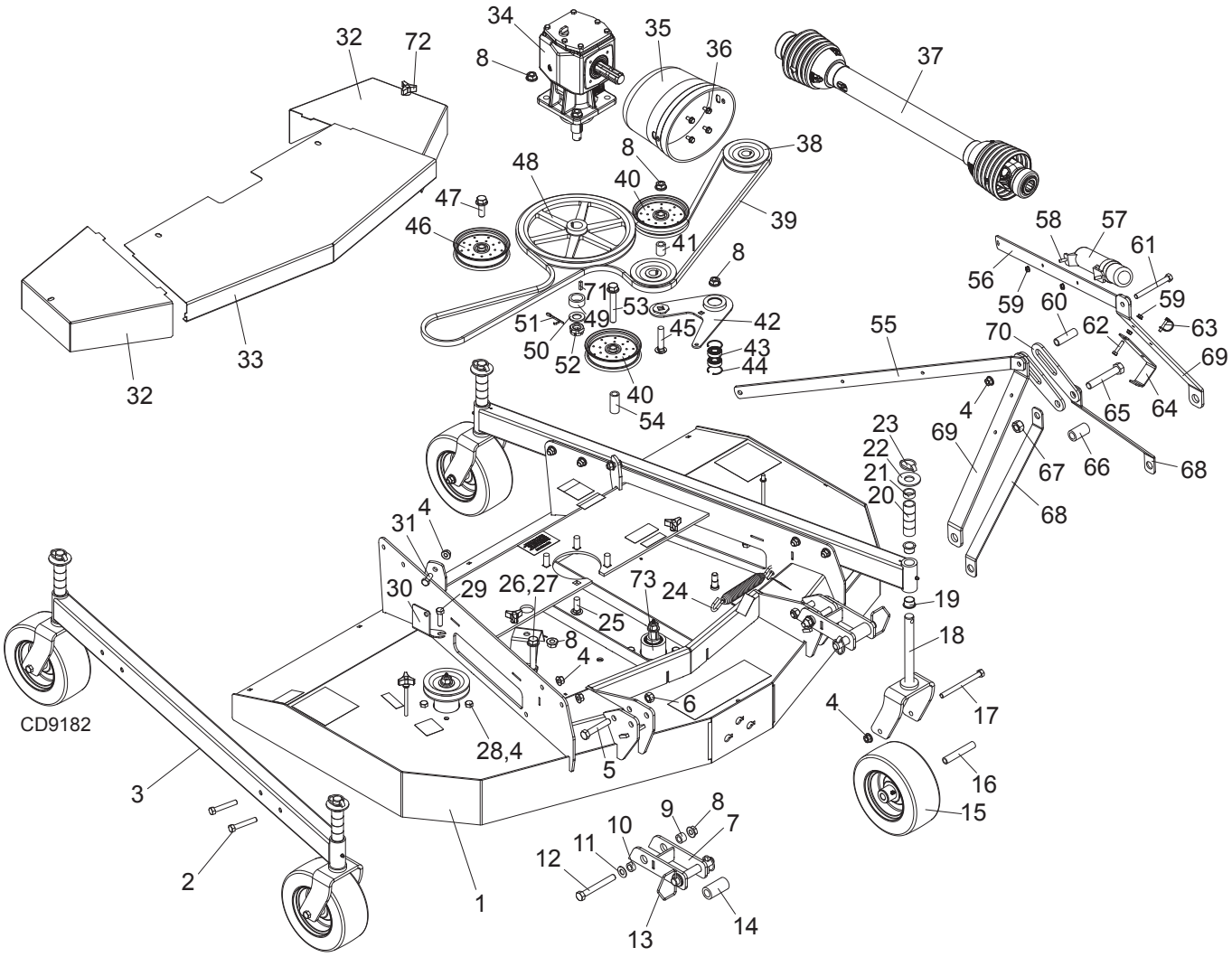
WOODS®

PARTS INDEX

Turfkeeper Pro™ Finish Mowers:

TKP60.40
TKP72.40
TKP84.40

TKP60.40, TKP72.40 & TKP84.40 MAIN FRAME ASSEMBLY



TKP60.40, TKP72.40 & TKP84.40 MAIN FRAME ASSEMBLY PARTS LIST

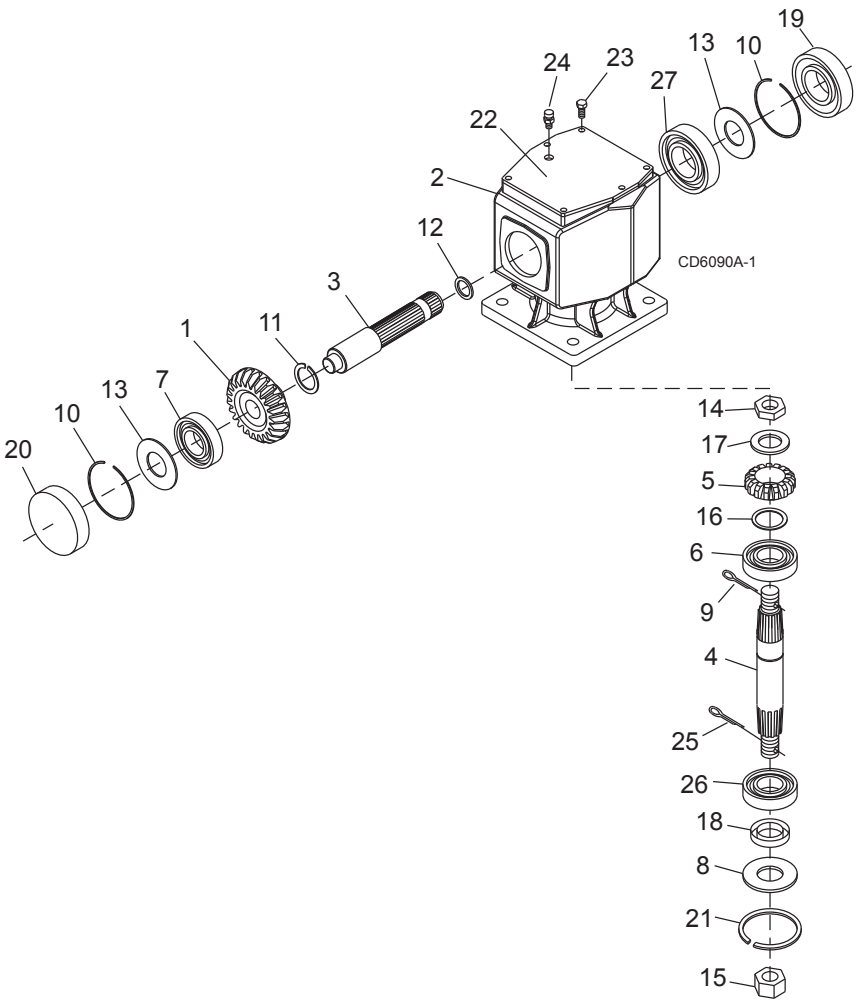
REF	TKP60.40	TKP72.40	TKP84.40	QTY	DESCRIPTION
1	NSS	NSS	NSS	1	Main Frame
2	3489	3489	3489	8	HHCS 1/2 NC X 3 GR5 ZP
3	613760RP	616160RP	613800RP	2	Wheel arm, TKPxx.40
4	11900	11900	11900	27	Nut, 1/2 NC flange lock
5	23141	23141	23141	2	HHCS 5/8 NC X 3.5 GR5 ZP
6	6239	6239	6239	2	Nut, 5/8 NC lock
7	616165RP	616165RP	620888RP	2	Lower hitch weldment
8	609225	609225	609225	9	Nut, 5/8 NC flange lock
9	67222	67222	67222	2	Sleeve .625 x 1.00 x .672
10	484	484	484	2	Sleeve .625 x 1.00 x .438
11	3632	3632	3632	2	Washer, 5/8 flat
12	378	378	378	2	HHCS 5/8 NC X 5 GR5 ZP
13	SU105	SU105	SU105	2	Hitch pin, CAT 1
14	1002012	1002012	1002012	2	Sleeve, CAT 1 QH
15	616085	616085	616085	4	Wheel, 10X4
16	616083	616083	616083	4	Sleeve, .51 X .75 X 4.44
17	13563	13563	13563	4	HHCS, 1/2 NC X 6
18	616175RP	616175RP	616175RP	4	Caster yoke
19	616086	616086	616086	8	Bushing, 1.0 X 1.13 X .75
20	65130	65130	65130	16	Spacer 1" height
21	65129	65129	65129	4	Spacer 1/2" height
22	892	892	892	4	Washer, 1 FLAT
23	43627	43627	43627	4	Klik pin 7/16
24	1042375	1042375	1042375	1	Spring, idler
25	33034	33034	33034	4	Bolt, carriage 5/8 NC X 1-3/4 GR5 ZP
26	-----	-----	578454	1	Bolt, flanged 5/8 NC X 4.25 GR5 ZP
27	-----	-----	1598	1	Jam nut 5/8 NC
28	3379	3379	-----	12	HHCS, 1/2 NC X 1.5 GR5 ZP
28	-----	-----	3379	11	HHCS, 1/2 NC X 1.5 GR5 ZP
29	-----	-----	24576	1	HHCS, 1/2 NC X 1.75 GR5 ZP
30	-----	-----	613775RP	1	Belt guide
31	6100	6100	6100	2	HHCS, 1/2 NC X 1.25 GR5 ZP
32	613766RP	616169RP	616169RP	2	Side belt shield
33	613763RP	616168RP	616148RP	1	Center belt shield
34	614201RP	614201RP	614201RP	1	Gearbox CW 1:1.92
35	1002048	1002048	1002048	1	Shield
36	1041071	1041071	1041071	4	Bolt, flanged M8 X 16 DRI-LOC
37	601752	601752	613748	1	Driveline
38	616067	-----	-----	3	Sheave, spindle 4.00 PD
38	-----	616064	-----	3	Sheave, spindle 4.75 PD
38	-----	-----	616066	3	Sheave, spindle 5.50 PD
39	616093	-----	-----	1	Belt, W95 Aramid
39	-----	616092	-----	1	Belt, W116 Aramid
39	-----	-----	616091	1	Belt, W140 Aramid
40	64555	64555	-----	3	Idler 5.50" w/ bearing
40	-----	-----	64555	2	Idler 5.50" w/ bearing
41	66661	66661	66661	1	SLEEVE .626 X 1.00 X 1.26
42	613765RP	616182RP	613795RP	1	Idler arm
43	35193	35193	35193	2	Bearing 6203
44	35141	35141	35141	2	Retaining ring
45	20419	20419	20419	1	Bolt, carriage 5/8 NC X 3 GR5 ZP
46	-----	-----	616098	1	Idler 7.0" w/ bearing
47	19024	19024	19024	1	Bolt, flanged 5/8 NC X 1.75 GR5 ZP
48	616065	616065	616065	1	Sheave, drive 12.65 PD
49	1008113	1008113	1008113	1	Sleeve 1.25 X 1.75 X .75
50	614346	614346	614346	1	Washer 1.732 X .984 X .157

TKP60.40, TKP72.40 & TKP84.40 MAIN FRAME ASSEMBLY PARTS LIST (CONTINUED)

REF	TKP60.40	TKP72.40	TKP84.40	QTY	DESCRIPTION
51	64803	64803	64803	1	Cotter pin 3/16 X 2
52	51946	51946	51946	1	Nut, castle M24 X 2
53	578454	578454	578454	1	Bolt, flanged 5/8 NC X 4.25 GR5 ZP
54	616097	616097	616097	1	Sleeve .65 X 1.00 X 2.34
55	610584RP	610578RP	610586RP	1	Lift link, right
56	610585RP	610579RP	610587RP	1	Lift link, left
57	1026530	1026530	1026530	1	Manual tube
58	24409	24409	24409	2	Bolt, carriage 5/16 NC X 1 GR5ZP
59	W73163	W73163	W73163	4	Nut, 5/16 NC flange whiz nut
60	64814	64814	64814	1	Sleeve .50 SCH 40 X 2.88
61	23479	23479	23479	1	HHCS 1/2 NC X 5 GR5 ZP
62	24408	24408	24408	1	HHCS 5/16 NC X 1.50 GR5 ZP
63	613811	613811	613811	1	Lock pin .25
64	610657RP	610657RP	610657RP	1	Driveline hanger
65	12558	12558	12558	1	HHCS 3/4 NC X 4-1/2 GR5 ZP
66	1002018	1002018	1002018	1	Sleeve .81 X 1.25 X 2.12
67	2371	2371	2371	1	Nut, 3/4 NC lock
68	613753RP	613753RP	613753RP	2	Quickhitch A-Frame
69	618197RP	618197RP	618197RP	2	A-Frame
70	616181RP	616181RP	616181RP	2	Hitch link
71	6593	6593	6593	1	Key 1/4 X 1/4 X 1.0
72	66840	66840	66840	4	Knob 3/8 NC
73	616100	616100	616100	3	Spindle
74	613745	613745	613745	2	Woods decal 2.5 X 13.13 (not shown)
75	613786	-----	-----	1	Model decal, TKP60.40 (not shown)
75	-----	613787	-----	1	Model decal, TKP72.40 (not shown)
75	-----	-----	613790	1	Model decal, TKP84.40 (not shown)

NSS Not Serviced Separately

TKP60.40, TKP72.40 & TKP84.40 GEARBOX ASSEMBLY



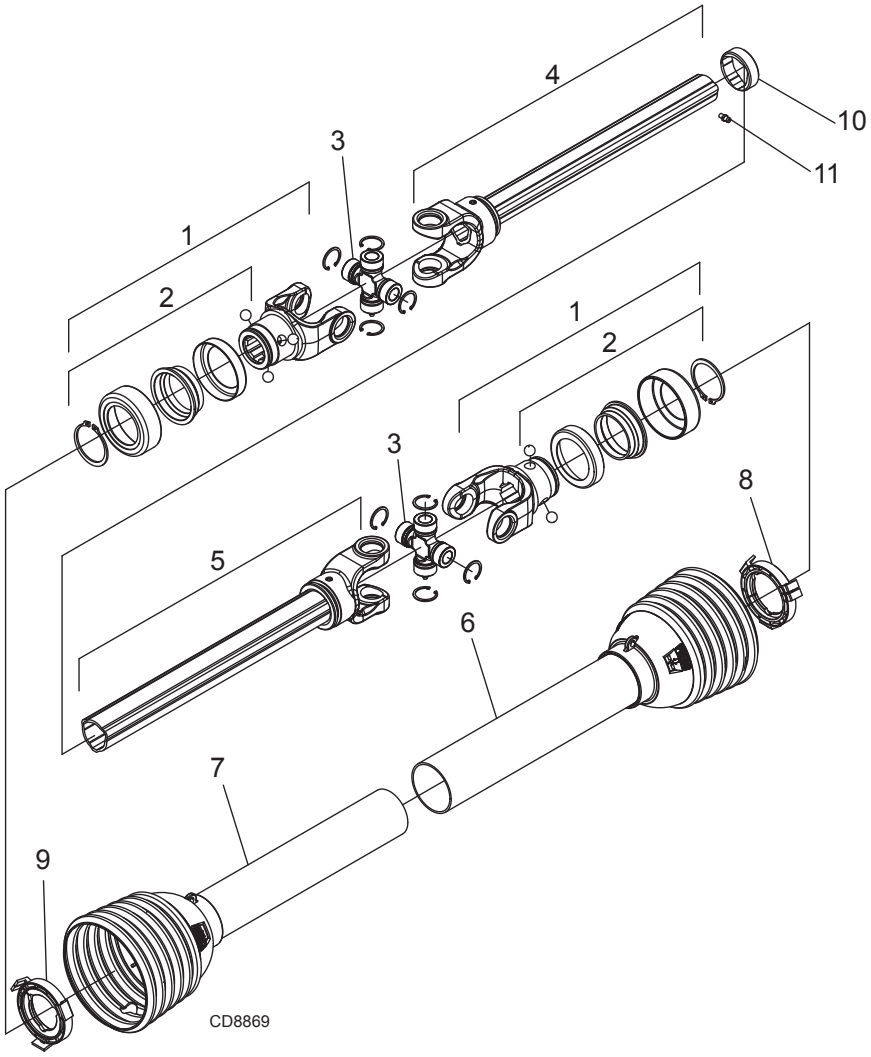
REF	PART	QTY	DESCRIPTION
	1002499	1	Gearbox Assembly, Complete
1	57458	1	Gear, Crown 25T M5.3
2	NSS	1	Gearbox Housing
3	1005320	1	Shaft, Input 1-3/8 -6
4	1005321	1	Shaft, Output 1-1/4
5	57491	1	Pinion Gear 13T M5.3
6	57476	1	Bearing Cup & Cone
7	57462	1	Bearing Cup & Cone
8	20888	1	Washer, 1.58 x 3.13 x .04 Protective Flat
9	*	1	Pin, Cotter B4 x 50
10	57466	2	Snap Ring
11	20895	1	Snap Ring, 45 mm
12	57373	1	Spacer, 35.3 x 48 x 2.5
13	57328	2	Kit, Shim 60.3 x 71.6
14	57468	1	Nut, Castle
15	51946	1	Nut, Castle M24 x 2
16	57328	1	Kit, Shim 30.3 x 44

REF	PART	QTY	DESCRIPTION
17	57473	1	Washer, 21 x 37 x 3 mm Flat
18	20900	1	Seal, Oil 40 x 80 x 12 mm
19	57463	1	Seal, Oil 35 x 72 x 10 mm
20	57374	1	Oil Cap
21	20897	1	Snap Ring SB 81 Int
22	57375	1	Cover, Top
23	*	6	Bolt, 8 mm x 14 mm
24	614342	1	Plug, 1/2 Breather Level
25	*	1	Pin, Cotter 5 x 50
26	57478	1	Bearing Cup & Cone
27	20890	1	Ball Bearing

NSS Not Sold Separately

* Standard hardware, obtain locally

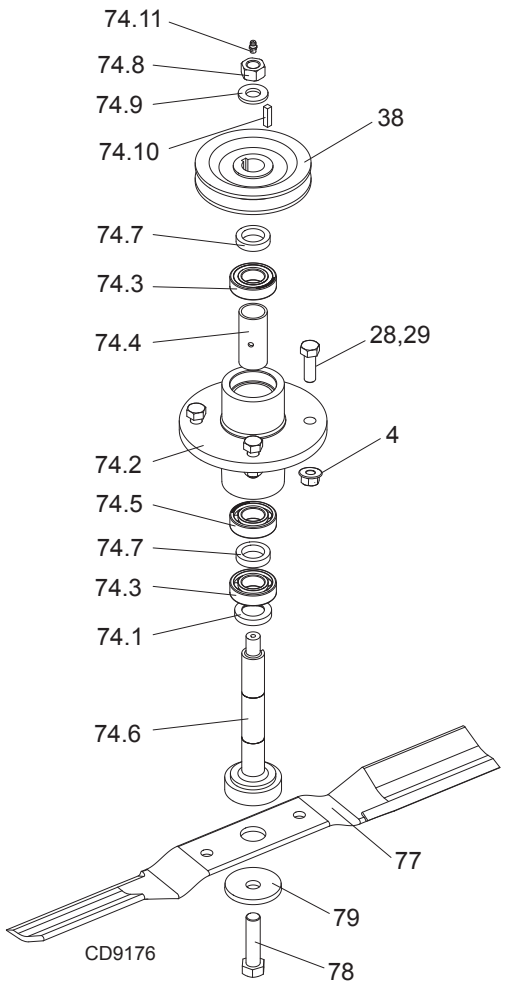
TKP60.40, TKP72.40 & TKP84.40 DRIVELINE ASSEMBLY



REF	PART	QTY	DESCRIPTION
	601752	1	Complete driveline asy (TKP60.40 & TKP72.40)
	613748	1	Complete driveline asy (TKP84.40)
1	1044051	1	Complete collar yoke C12 1-3/8 - 6
2	1044050	1	Lock collar repair kit
3	1044052	2	Cross & bearing kit
4	603622	1	Outer yoke & tube
5	603623	1	Inner yoke & tube
6	603624	1	Outer shield with bearing
7	603625	1	Inner shield with bearing
8	605784	1	Outer shield bearing
9	605785	1	Inner shield bearing
10	620299	1	Bearing outer tube
11	613791	1	Fitting, grease zerk nipple M6 - 1

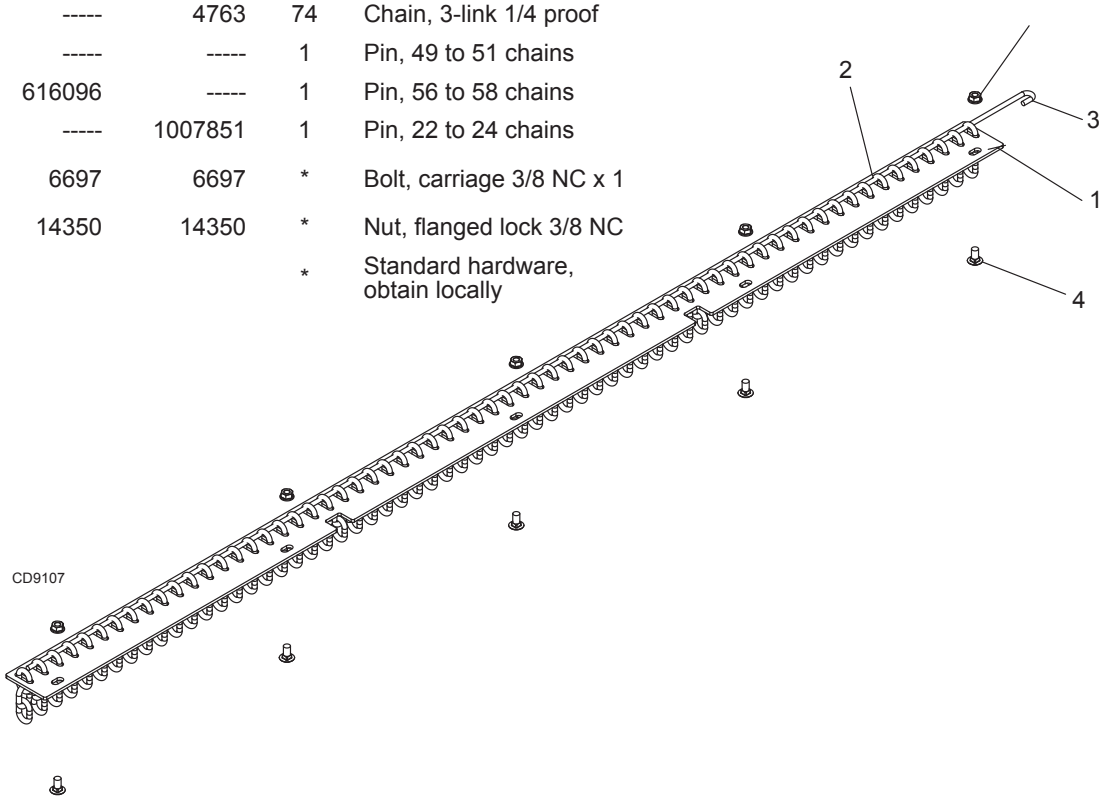
TKP60.40, TKP72.40 & TKP84.40 BLADE & SPINDLE ASSEMBLY

REF	TKP60.40	TKP72.40	TKP84.40	QTY	DESCRIPTION
-	616100	616100	616100	3	Complete spindle asy
4	11900	11900	11900	27	Nut, 1/2 NC flange lock
28	3379	3379	-----	12	HHCS, 1/2 NC X 1.5 GR5 ZP
28	-----	-----	3379	11	HHCS, 1/2 NC X 1.5 GR5 ZP
29	-----	-----	24576	1	HHCS, 1/2 NC x 1.75 GR5 ZP
38	616067	-----	-----	3	Sheave, spindle 4.00 PD
38	-----	616064	-----	3	Sheave, spindle 4.75 PD
38	-----	-----	616066	3	Sheave, spindle 5.50 PD
74.1	620885RP	620885RP	620885RP	1	Spindle spacer
74.2	616109RP	616109RP	616109RP	1	Housing, cast
74.3	616105RP	616105RP	616105RP	2	Bearing, 1" Sealed
74.4	616104RP	616104RP	616104RP	1	Sleeve, 1.03 X 1.25 X 2.72
74.5	616103RP	616103RP	616103RP	1	Bearing, 1"
74.6	616101RP	616101RP	616101RP	1	Spindle shaft
74.7	613768RP	613768RP	613768RP	2	Sleeve, 1.01 X 1.50 X .34
74.8	302179	302179	302179	1	Nut, 5/8 NC lock
74.9	57817	57817	57817	1	Washer, flat 5/8 SAE
74.10	6593	6593	6593	1	Key 1/4 X 1/4 X 1.0
74.11	1972	1972	1972	1	Grease fitting
77	616080	616082	616084	3	Blade (high suction)
77	613782	613783	613784	3	Blade (low suction)
78	78142	78142	78142	3	Cap screw, 5/8 NF x 2.5 GR5
79	53584	53584	53584	3	Bell washer, 5/8 x 2.5 x .25
				*	Standard Hardware - Obtain Locally

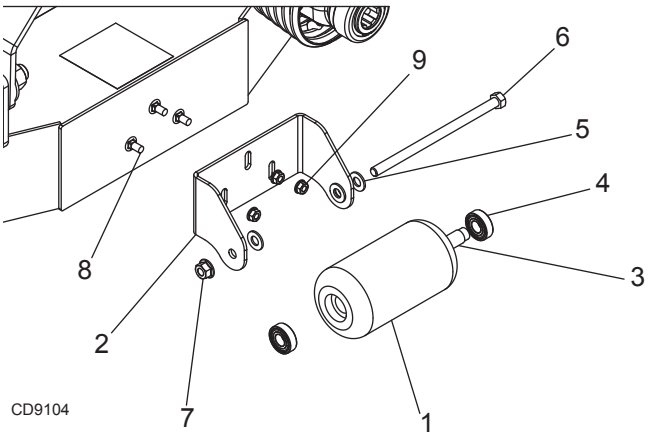


TKP60.40, TKP72.40 & TKP84.40 REAR CHAIN SHIELDING ASSEMBLY (OPTIONAL)

REF	TKP60.40	TKP72.40	TKP84.40	QTY	DESCRIPTION
A	616077	616076	616078		Chain shield kit, complete
1	613771	-----	-----	1	Shield, chain plate
1	-----	613772	613772	1	Shield, chain plate
2	4763	-----	-----	53	Chain, 3-link 1/4 proof
2	-----	4763	-----	64	Chain, 3-link 1/4 proof
2	-----	-----	4763	74	Chain, 3-link 1/4 proof
3	1007855	-----	-----	1	Pin, 49 to 51 chains
3	-----	616096	-----	1	Pin, 56 to 58 chains
3	-----	-----	1007851	1	Pin, 22 to 24 chains
4	6697	6697	6697	*	Bolt, carriage 3/8 NC x 1
5	14350	14350	14350	*	Nut, flanged lock 3/8 NC
				*	Standard hardware, obtain locally

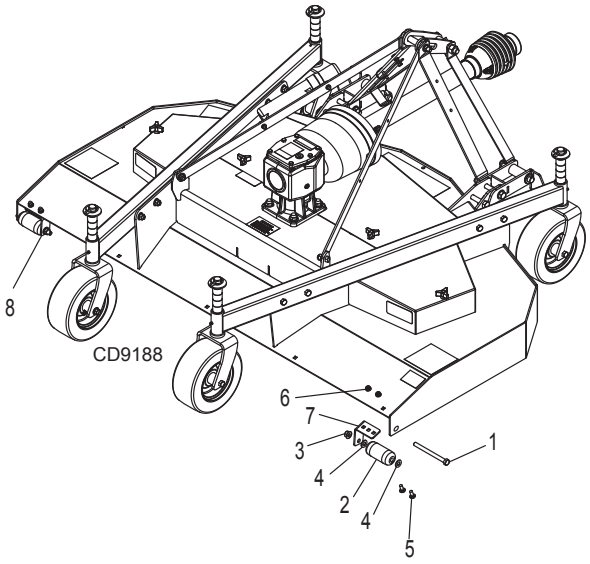


TKP60.40, TKP72.40 & TKP84.40 FRONT ROLLER ASSEMBLY (OPTIONAL)



REF	PART	QTY	DESCRIPTION
-	616079		Front roller kit, complete
1	1006418	1	Roller
2	613774	1	Roller bracket
3	1006420	1	Spacer
4	35193	2	Bearing
5	3598	2	1/2 flat washer SAE
6	38107	1	HHCS 1/2 NC x 9 GR5
7	11900	1	Nut, 1/2 NC flange locknut
8	24597	3	Bolt, carriage, 3/8 NC x 3/4
9	14350	3	Nut, 3/8 NC flange locknut

TKP60.40, TKP72.40 & TKP84.40 REAR ROLLER ASSEMBLY (OPTIONAL)



REF	PART	QTY	DESCRIPTION
-	618210		Rear roller kit, complete
1	13563	2	HHCS, 1/2 NC x 6 GR5
2	1029865	2	Roller, 2 x 4.38
3	11900	2	Nut, 1/2 NC flange locknut
4	3598	4	1/2 flat washer SAE
5	6697	4	Bolt, carriage, 3/8 NC x 1
6	14350	4	Nut, 3/8 NC flange locknut
7	603642	1	TKP rear roller bracket, RH 1.75
8	603643	1	TKP rear roller bracket, LH 1.75
NS	603652	1	TKP rear roller bracket, RH 1.50
NS	603653	1	TKP rear roller bracket, LH 1.50

INDEX

BOLT TORQUE CHART

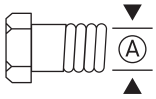
Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application.

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

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for metric hardware. Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 MAR 99 & J1701M JUL 96.

SAE SERIES TORQUE CHART



SAE Bolt Head Identification

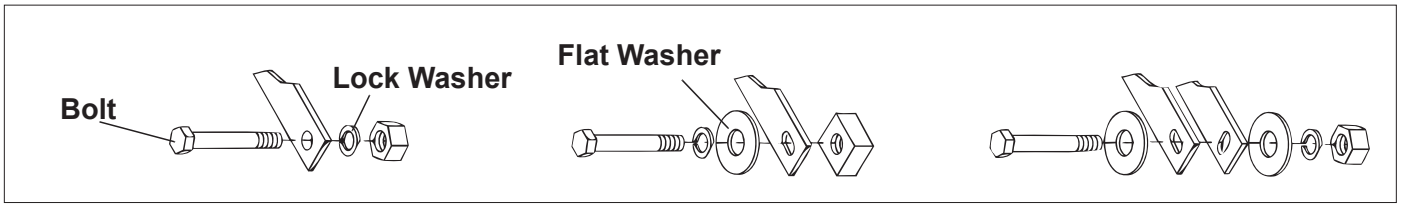
SAE Grade 2
(No Dashes)

SAE Grade 5
(3 Radial Dashes)

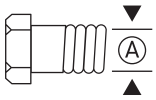
SAE Grade 8
(6 Radial Dashes)

Ⓐ		Marking on Head					
		SAE 2		SAE 5		SAE 8	
Diameter (Inches)	Wrench Size	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

Typical Washer Installations



METRIC SERIES TORQUE CHART



Metric Bolt Head Identification

Metric
Grade 8.8

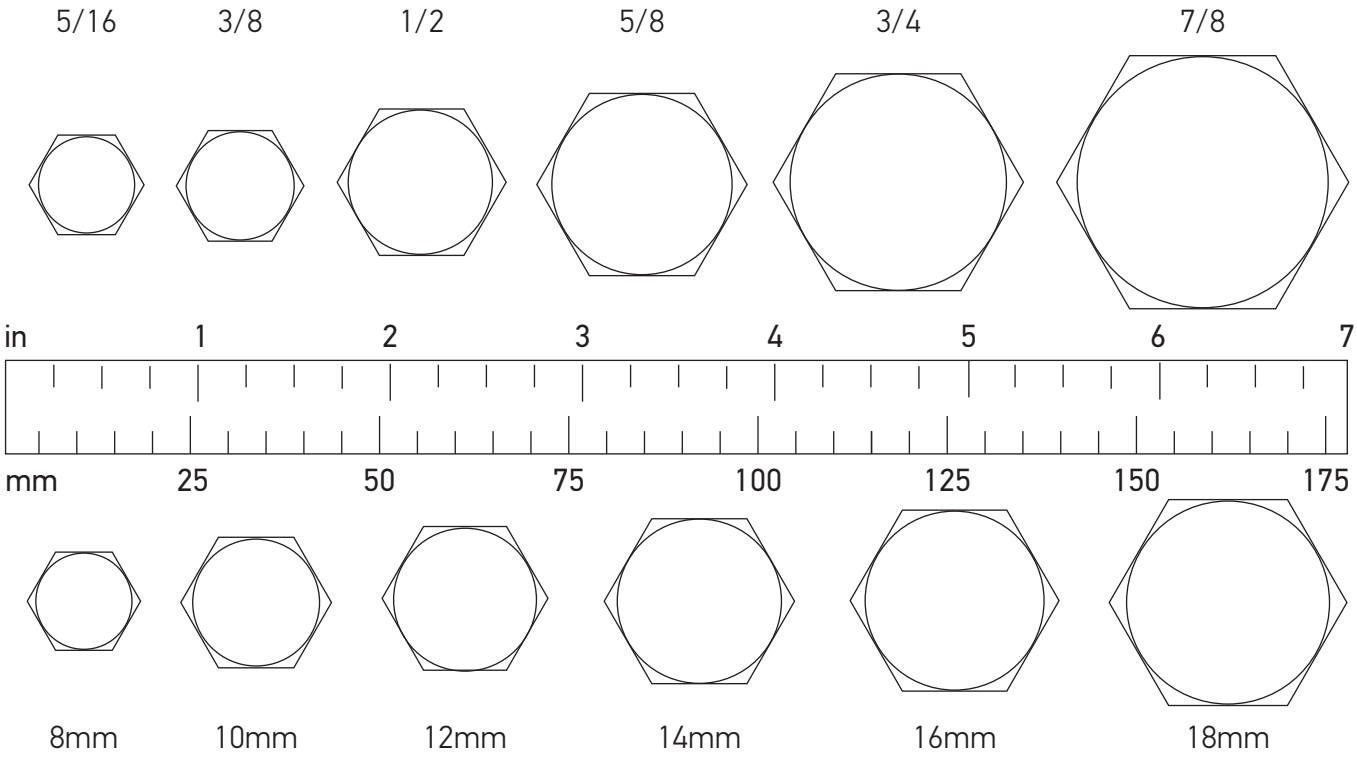
Metric
Grade 10.9

Ⓐ Diameter & Thread Pitch (Millimeters)	Wrench Size	Coarse Thread				Fine Thread				Ⓐ Diameter & Thread Pitch (Millimeters)
		Marking on Head				Marking on Head				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
		N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m	lbs-ft	
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12 x 1.75	18 mm	68	50	94	70	75	55	103	76	12 x 1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

BOLT SIZE CHART

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

SAE Bolt Thread Sizes



Metric Bolt Thread Sizes

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 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 SALE OF THE PRODUCT TO THE ORIGINAL PURCHASER. UPON REQUEST A DATED BILL OF SALE MUST BE SUBMITTED AS PROOF OF PURCHASE.

All current model backhoes and mounts (except 3-pt. SAF-T-LOK® mounts) are warranted for two (2) years from the date of delivery to the original purchaser. The limited warranty covers any defects in the material and/or workmanship. Following the proper, recommended installation by an authorized Woods Dealer and normal use of a Woods mounting and backhoe or loader, if a tractor incurs damage resulting from the attachment, Woods will cover the existing tractor warranty in the event the manufacturer voids its tractor warranty because of the attachment. Warranty does not cover any misuse or abusive conditions that could cause premature wear or damage to attachment or tractor.

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

Part or Condition Warranted	Model Number	Duration (from date of delivery to the original purchaser)
Gearbox components	BB48.30, BB60.30, BB72.30, BB84.40, BB60.50, BB60.60, BB72.50, BB72.60, BB84.50, BB84.60, DS8.30, DS10.40, DS8.50, DSO8.50, DS10.50, DSO10.50, DBH5.31, DBH6.31	6 years
	BW12, BW10.50, BW15.50, BW10.60, BW13.70, BW15.60, BW10.70, BW15.70, BW20.50, BW20.60, BW20.70, BW20.51, BW20.61, BW20.71. BW13.71	
	RD990X, S15CD, S20CD, S22CD, S25CD, S27CD, S30CD, TBW144, TBW180, TBW204, TSG50, TPD25, TPD35, TPD65, TPD95, PD25.20, PD35.30, PD95.50, TKP60.40, TKP72.40, TKP84.40	
	TBW150C, RT/R42.30, RT/R48.30, RT/R60.40, RT/R72.40, RC42.20, RC48.20, RC60.20, RC72.20, TK60.20, TK72.20, TBW12.20	3 years (1 year if used in rental or commercial applications)
Blade spindles	RD990X, TBW144, TBW180, TBW204, TKP60.40, TKP72.40, TKP84.40	3 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®

2606 South Illinois Route 2
Post Office Box 1000
Oregon, Illinois 61061 USA

800-319-6637 tel
800-399-6637 fax
woodsequipment.com

WOODS®

WAIN-ROY®
WOODS®

WARRANTY

(Replacement Parts For All Models Except 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.

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.

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Oregon, Illinois 61061 USA
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800-399-6637 fax
woodsequipment.com

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WOODS®

2606 South Illinois Route 2
Post Office Box 1 000
Oregon, Illinois 61061 USA

800-319-6637 tel
800-399-6637 fax
woodsequipment.com