

# 97 CM CRD BELT KEEPER INSTALLATION GUIDE

Kit Part Number 599348001



Please read the operator's manual carefully and ensure you understand the instructions. The instructions will enable you to assemble and maintain your tractor properly. Always observe the "SAFETY RULES".

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# 1. Safety Rules



**IMPORTANT:** THIS CUTTING 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.

## I. TRAINING

- Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
- Never allow children or people unfamiliar with the instructions to use the lawnmower. Local regulations may restrict the age of the operator.
- Never mow while people, especially children, or pets are nearby.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
- Do not carry passengers.
- All drivers should seek and obtain professional and practical instruction. Such instruction should emphasize:
  - the need for care and concentration when working with ride-on machines;
  - control of a ride-on machine sliding on a slope will not be regained by the application of the brake.

The main reasons for loss of control are:

- a) insufficient wheel grip;
- b) being driven too fast;
- c) inadequate braking;
- d) the type of machine is unsuitable for its task;
- e) lack of awareness of the effect of ground conditions, especially slopes;
- f) incorrect hitching and load distribution.

## II. PREPARATION

- To reduce the risk of fire - before use, when refueling and at the end of each mowing session - inspect and remove any debris buildup from the tractor, mower and behind all guards.
- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Thoroughly inspect the area where the equipment is to be used and remove all objects which may be thrown by the machine.
- **WARNING** - Petrol is highly flammable.
  - Store fuel in containers specifically designed for this purpose.
  - Refuel outdoors only and do not smoke while refueling.
  - Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.
  - If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapors have dissipated.
  - Replace all fuel tanks and container caps securely.
- Replace faulty silencers.
- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.

## III. OPERATION

- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Mow only in daylight or in good artificial light.
- Before attempting to start the engine, disengage all blade attachment clutches and shift into neutral.
- Do not use on slopes of more than 15°.
- Remember there is no such thing as a "safe" slope. Travel on grass slopes requires particular care. To guard against overturning;
  - do not stop or start suddenly when going up or downhill;
  - engage clutch slowly, always keep machine in gear, especially when traveling downhill;
  - machine speeds should be kept low on slopes and during tight turns;
  - stay alert for humps and hollows and other hidden hazards;
  - never mow across the face of the slope, unless the lawnmower is designed for this purpose.
- Use care when pulling loads or using heavy equipment.
  - Use only approved drawbar hitch points.
  - Limit loads to those you can safely control.
  - Do not turn sharply. Use care when reversing.
  - Use counterweight(s) or wheel weights when suggested in the instruction handbook.
- Watch out for traffic when crossing or near roadways.
- Stop the blades from rotating before crossing surfaces other than grass.
- When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the machine while in operation.
- Never operate the lawnmower with defective guards, shields or without safety protective devices in place.
- Do not change the engine governor settings or overspeed the engine. Operating the engine at excessive speed may increase the hazard of personal injury.
- Before leaving the operator's position:
  - disengage the power take-off and lower the attachments;
  - change into neutral and set the parking brake;
  - stop the engine and remove the key.
- Disengage drive to attachments, stop the engine, and disconnect the spark plug wire(s) or remove the ignition key
  - before cleaning blockages or unclogging chute;
  - before checking, cleaning or working on the lawnmower;
  - after striking a foreign object. Inspect the lawnmower for damage and make repairs before restarting and operating the equipment;
  - if the machine starts to vibrate abnormally (check immediately).
- Disengage drive to attachments when transporting or not in use.
- Stop the engine and disengage drive to attachment
  - before refueling;
  - before removing the grass catcher;
  - before making height adjustment unless adjustment can be made from the operator's position.
- Reduce the throttle setting during engine run-out and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.



**WARNING: CHILDREN CAN BE INJURED BY THIS EQUIPMENT. The American Academy of Pediatrics recommends that children be a minimum of 12 year of age before operating a pedestrian controlled lawn mower and a minimum of 16 years of age before operating a riding lawn mower.**

- When loading or unloading this machine, do not exceed the maximum recommended operation angle of 15°.
- Wear proper Personal Protective Equipment (PPE) while operating this machine, including (at a minimum) sturdy footwear, eye protection, and hearing protection. Do not mow in shorts and/or, open toed footwear.
- Vibration levels reported in this manual are not adjusted for worker exposure to vibrations. Employers should calculate the 8-hour equivalent exposure values (A(8)) and limit worker exposure accordingly.
- Always let someone know you are outside mowing.

#### IV. MAINTENANCE AND STORAGE

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with petrol in the tank inside a building where fumes may reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease.
- Check the grass catcher frequently for wear or deterioration.
- Replace worn or damaged parts for safety.
- If the fuel tank has to be drained, this should be done outdoors.
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.
- When machine is to be parked, stored or left unattended, lower the cutting means unless a positive mechanical lock is used.



**WARNING: Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.**



Use ear protectors to avoid damage to hearing.



Always wear eye protection when operating machine.

## INTRODUCTION

The purpose of this document is to illustrate the proper procedure to install the following wire form belt keepers and their respective brackets onto a 97 crd unit: 5989692, 5989038, 5992363, 5992107

## REQUIRED TOOLS

- 1/2 in., 3/8 in. drive socket
- 9/16 in., 3/8 in. drive socket
- 9/16 in., 3/8 in. drive deep socket
- 9/16 in. ratcheting combination wrench
- 3/8 in. drive ratchet wrench
- 3/8 in. drive torque wrench
- Pliers

## OPTIONAL TOOLS

- 3/8 in. drive impact driver
  - Or 1/4 in. hex drive with 3/8 in. drive adapter impact driver.
- 3/8 in. electric or air ratchet

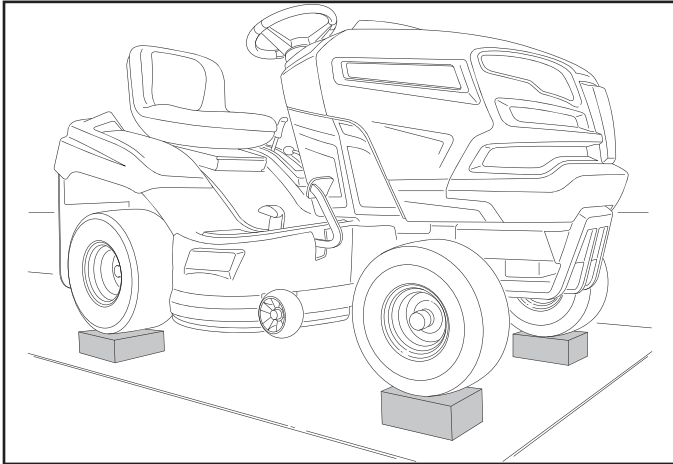


**WARNING: TO AVOID SERIOUS INJURY, BEFORE PERFORMING ANY SERVICE OR ADJUSTMENTS:**

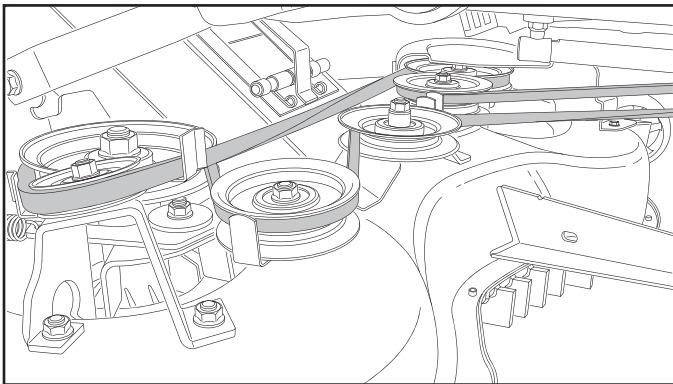
- Park on a level surface.
- Engage park brake.
- Disengage blade switch.
- Turn ignition key to "STOP" and remove key.
- Make sure the blades and all moving parts have completely stopped.
- Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with plug.

## INSTALLATION

1. Set the mower up so that you can access both the top and bottom side of the deck. Using blocks to lift the mower as shown is recommended.

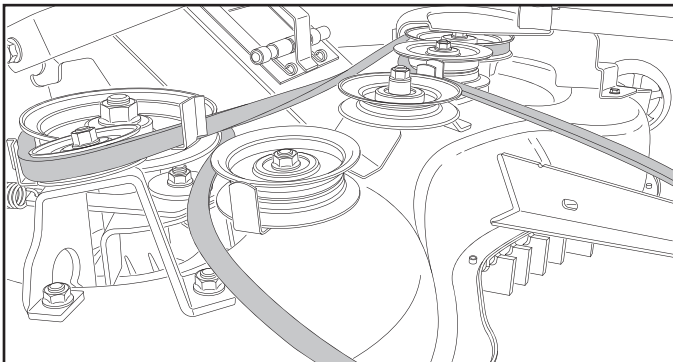


2. Remove the guards, and the right hand mandrel cover.



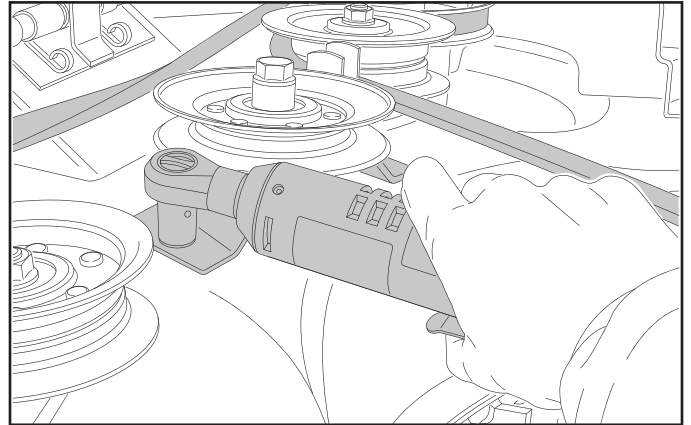
3. Remove the belt from the clutching pulley and v-idler pulley as shown.

**NOTE:** The belt can be completely removed.

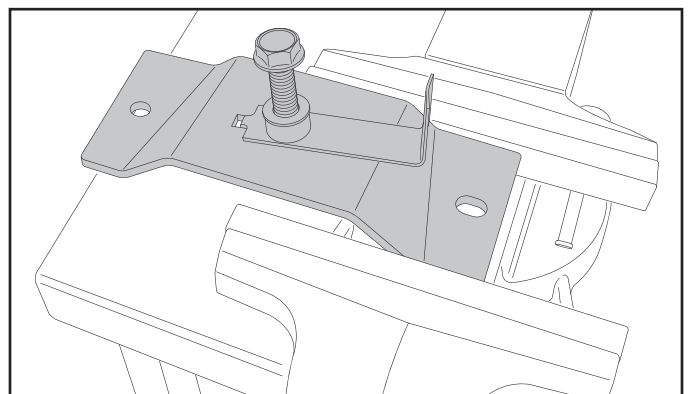
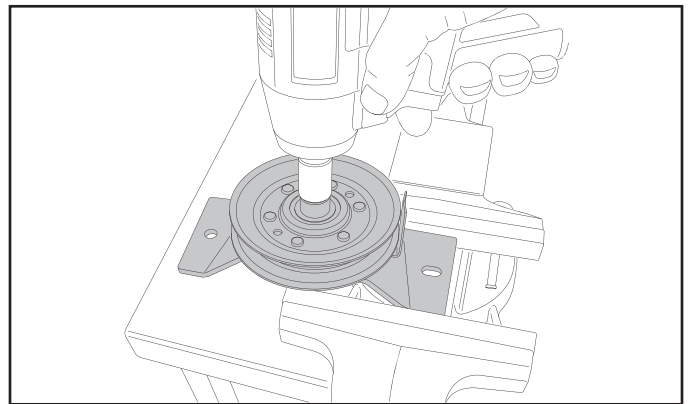


4. Using a 1/2 in. socket, remove the 2 nuts and 2 carriage bolts that secure the v-idler bracket to the deck. Set the fasteners aside for reassembly.

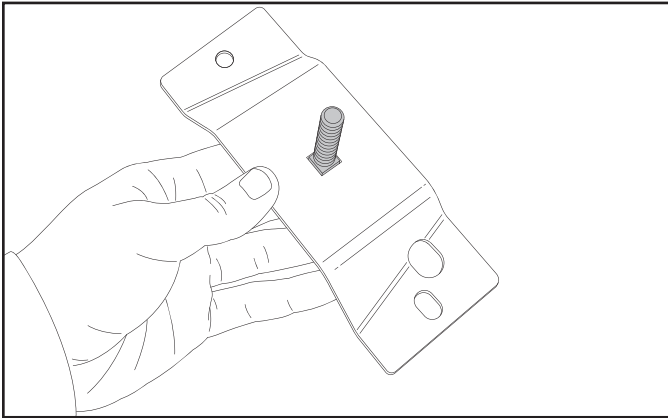
**NOTE:** If the bracket is difficult to remove, use a hammer and/or punch to drive out the carriage bolt(s).



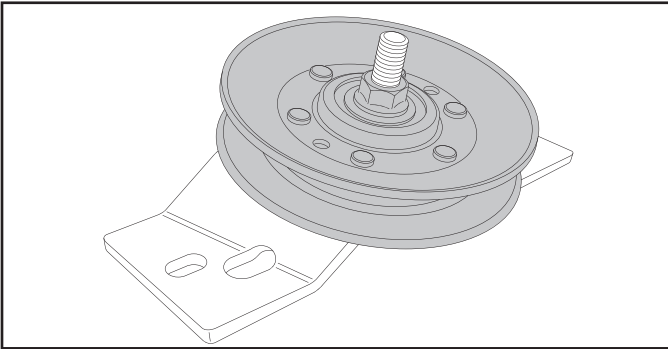
5. Place the v-idler assembly in a vice, as shown. Using a 9/16 in. socket, loosen the mounting bolt, remove the pulley, and set aside for reassembly. The mounting bolt, bracket, spacer, and old keeper may now be discarded.



6. Insert the supplied carriage bolt (596136301) through the bottom of the new v-idler bracket (599210703), as shown.

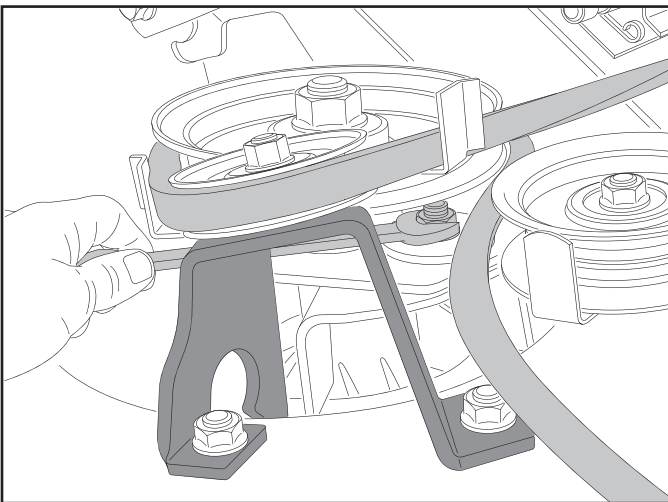


7. Place the pulley onto the bracket in the same orientation that it was removed. The hub should be facing down. Use nut (73900600) to secure the pulley to the bracket. Torque to 15-25 ft-lbs. Set aside for reassembly.

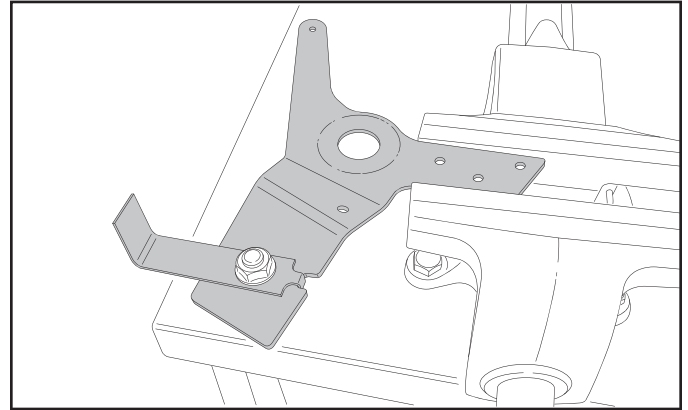


8. Remove the clutching arm. To remove the clutching arm, remove the clutching cable and/or belt tension springs, brake arms or other return springs. Using a 9/16 in. wrench, remove the nut shown in the picture below.

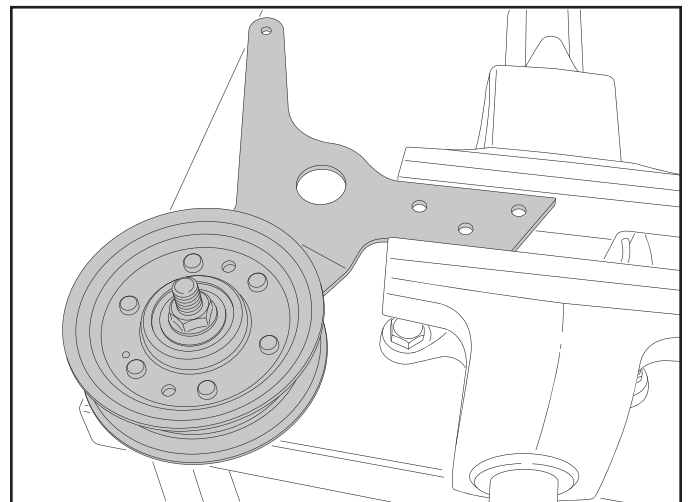
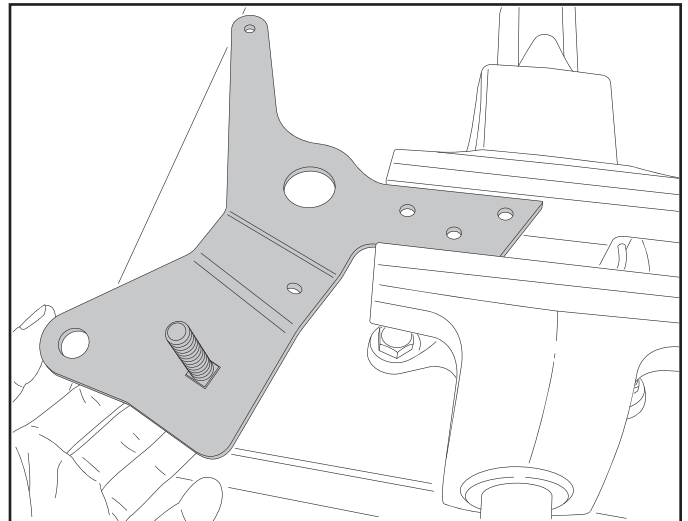
**NOTE:** The mandrel pulley or small v-idler bracket (Dark Grey) may be removed to gain better access to the nut.



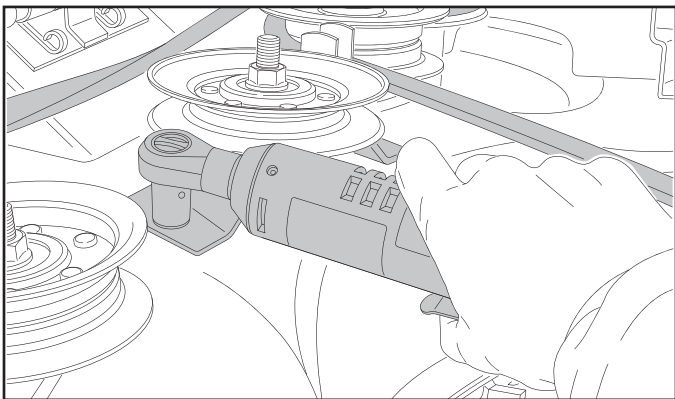
9. Clamp the clutching arm in a vice and use a 9/16 in. socket to remove the pulley from the clutching arm. Save the pulley and all hardware. Discard the clutching arm, short carriage bolt, nut, and old keeper.



10. Clamp the new clutching arm (599236302) in a vice. Insert the supplied carriage bolt (596136301) from below the bracket as shown. Place the pulley on top of the bracket and secure with another nut (73900600). Torque to 15-25 ft-lbs., reinstall the brake pad if present, and set aside for reassembly.

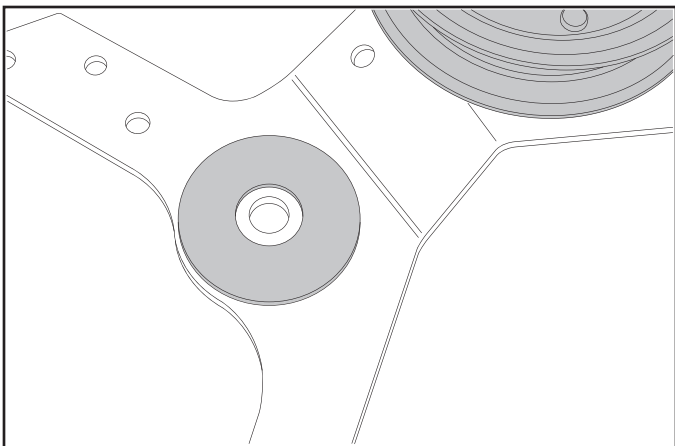


11. Install the v-idler in the same orientation as the original was removed. Secure using the same hardware that was previously set aside. Torque to 15-25 ft-lbs.



12. Install the old clutching pulley to the new clutching arm. Torque the nut to 15-25 ft-lbs. Reinstall the brake linkage if present.

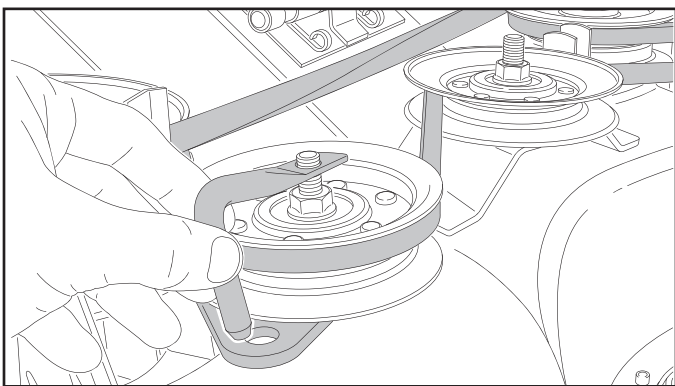
**NOTE:** The order of reassembly should be; bolt, deck bracket, thin washer, clutching arm, thick spacer, nut.



13. Reinstall any components that were removed. Route belt included in this kit per the belt routing diagram.

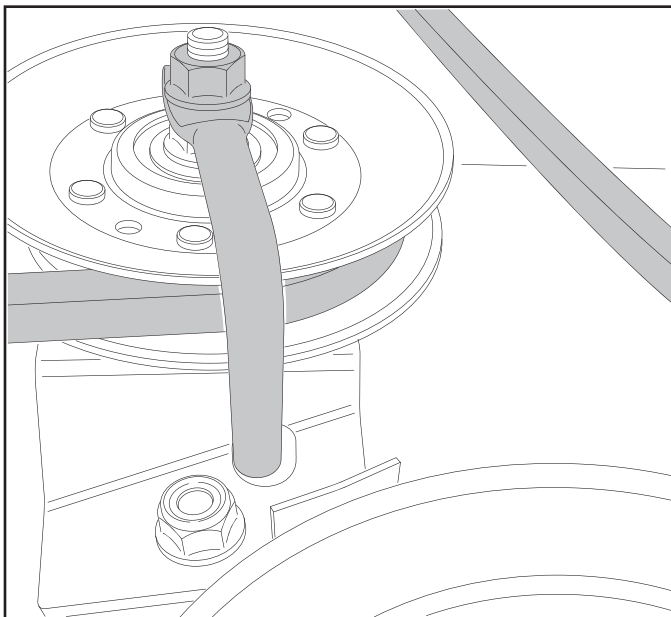
14. Install the zinc or grey clutching arm keeper (598969201) into the clutching arm as shown, thread nut (73900600) over the keeper, and torque to 15-25 ft-lbs.

**NOTE:** it is important that the keeper sits into its locating hole, verify that the keeper is located properly after installation.



15. Install the black v-idler keeper (598903802) as shown, thread nut over the keeper, and torque to 15-25 ft-lbs.

**NOTE:** It is important that the keeper sits into its locating hole, verify that the keeper is located properly after installation.

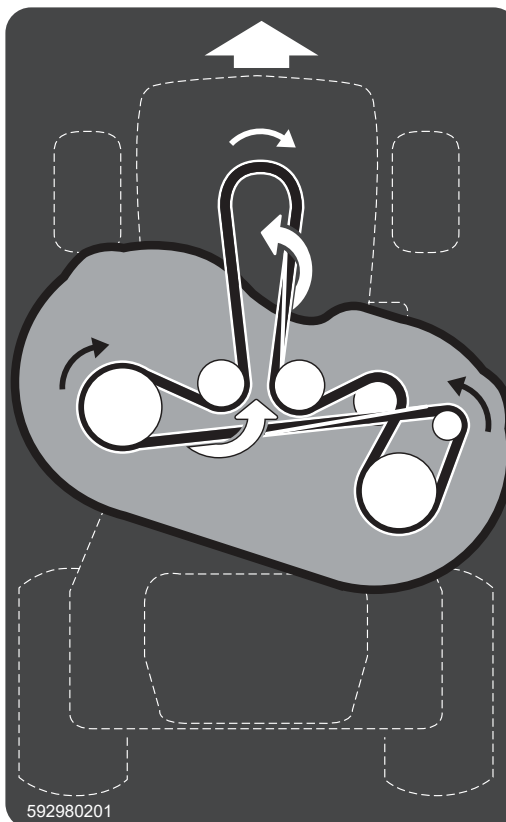


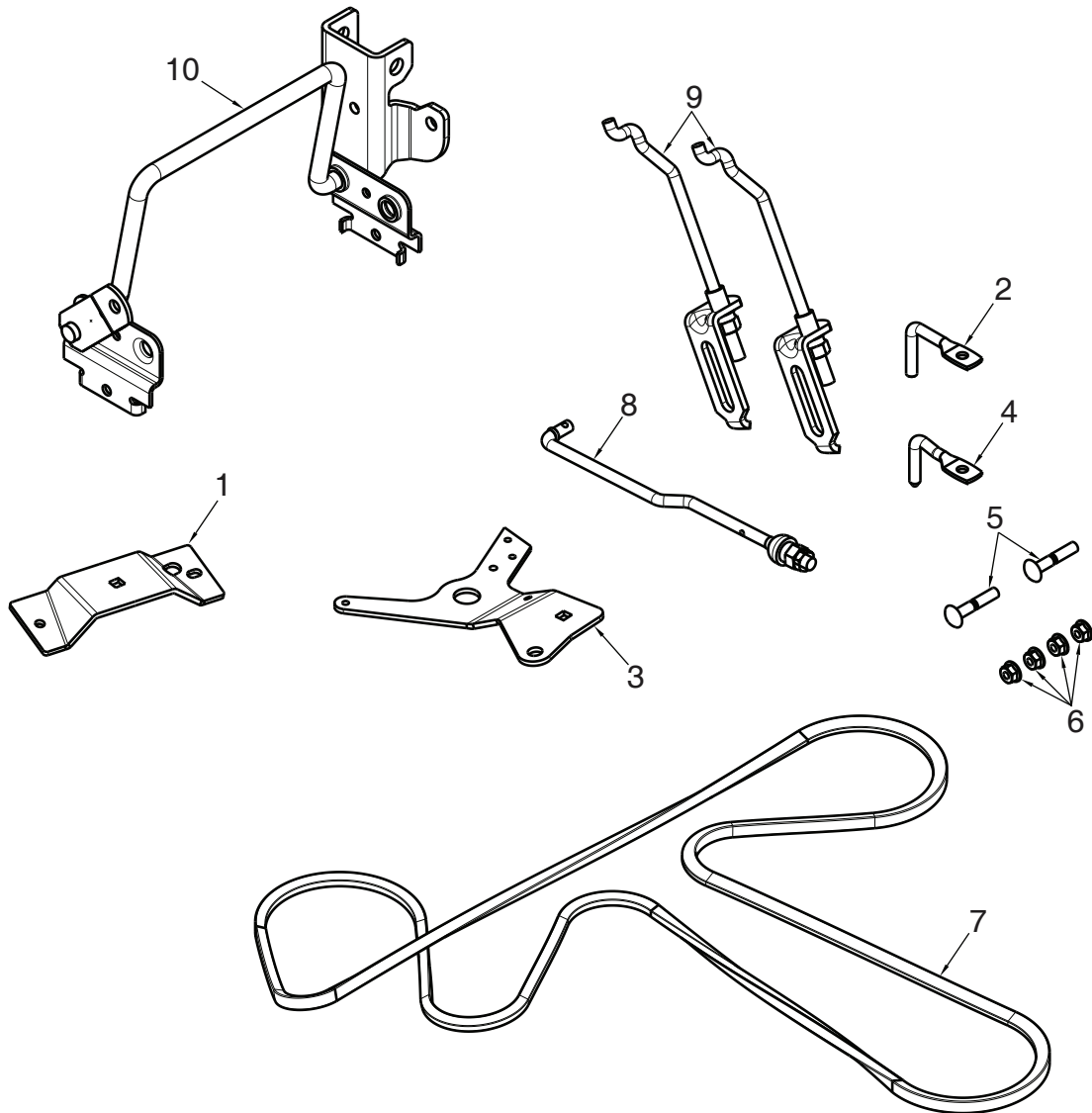
16. Replace existing deck links with those included with this kit.

17. Rake and level the deck as specified in the owner's manual.

18. Reinstall all covers and guards.

## BELT ROUTING DIAGRAM





Ref.	Part No.	Qty	Description	Kit / Assy Includes
1	599 21 07-03	1	Idler Bracket	
2	598 90 38-02	1	Belt Keeper, Black	
3	599 23 63-02	1	Clutching Arm	
4	598 96 92-01	1	Belt Keeper, Zinc or Grey	
5	596 13 63-01	2	Bolt	
6	873 90 06-00	4	Nut	
7	599 36 53-01	1	Belt	
8	581 50 96-06	1	Front Suspension Link	
9	589 46 48-04	2	Rear Lift Link	
10	532 43 69-96	1	Cross Shaft Weldment	
11	599 36 58-01	1	Instruction Sheet (Not Shown)	

