



March 2020

Dear Honda Lawn Mower Dealer,

Honda regularly speaks to our retail customers and dealers through our Customer Relations and Techline. In addition, we regularly conduct customer satisfaction surveys. All of this allows us to monitor trends in product quality and consumer attitudes. Over recent years, through our direct contacts with customers and dealers, and through the customer survey, a level of concern continues to be present regarding symptoms of difficult rollback or the wheels locking up on HRR216 (K8~K11) lawn mowers equipped with slip-belt Smart Drive transmissions.

After extensive research, Honda Power Equipment has completely revised Lawn Mower Service Bulletin #107 to be a comprehensive guide that explains how to inspect, replace, and adjust all parts that could cause difficult rollback symptoms on affected HRR216 mowers.

Carefully read and follow the **ENTIRE** procedure. Nine critical steps must be followed to ensure a successful repair and prevent expensive comeback repairs. Do not skip any steps!

1. Replace the V-belt.
2. Inspect the Smart Drive cable for damage.
3. Check the V-belt guides for damage.
4. Check that the transmission axle rotates.
5. Properly clean the axle.
6. Only use the grease outlined in the bulletin (Do not use WD-40, spray lubricants or anti-seize).
7. Replace the adjuster arms.
8. Replace the front wheel bolts.
9. Ensure proper Smart Drive cable adjustment.

Please share this information with your staff so that they can recognize a unit with a difficult rollback symptom, and encourage them to use the resources listed below for repairing affected units.

- Lawn Mower Service Bulletin #107 (March 2020)
- **DIRECT-TO-TECH** video HRR216 K9 Hard to Pull Backwards/Service Bulletin #107 (February 2018)
 - Interactive Network (iN): Service > Service Publications > Power Equipment > **DIRECT-TO-TECH** Videos
 - PE TECH EXPRESS (PETE) (<https://pete.honda.com>): Videos > HRR216 K9 Hard to Pull Backwards/Svc Bulletin #107

If you have any questions or concerns, please contact your Service Support team at (800) 222-7693.

Thank you for your attention to this important matter.

Sincerely,
American Honda Motor Co., Inc.
Power Equipment

Enclosure

SERVICE BULLETIN

HONDA



This bulletin applies only to units within the affected serial number range that have the described symptom.

LAWN MOWER #107

REVISED

MARCH 2020

HRR216VKA/VLA/VYA (K8-K11) HARD TO PULL OR LOCKS UP WHEN PULLING BACKWARD

REVISION SUMMARY

- Revised *Corrective Action* to provide an overview of the nine critical items to address to ensure a successful repair, and included new instructions on V-belt replacement and transmission inspection.

SYMPTOM

One or both of the following symptoms occur:

- When the Smart Drive control is released and the lawn mower is pulled backward, the rear wheels lock up.
- The force required to pull the lawn mower backward is too high (greater than 13 pounds). See step 1 on page 2 to measure the roll-back force.



AFFECTED UNITS

All HRR216 K8~K11 models with the Smart Drive transmission (see [page 12](#)).

CAUSE

Excessive friction from one or more components in the slip-belt drive system may exist.

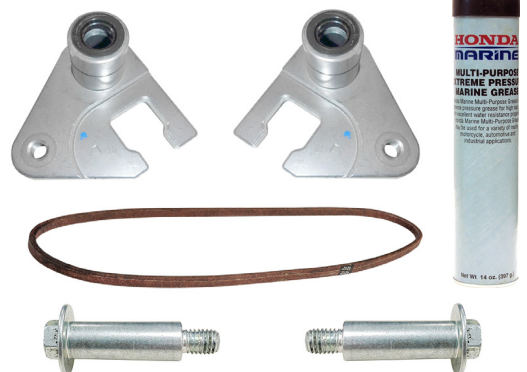
CORRECTIVE ACTION

To ensure a successful repair, **perform all nine of these steps** on any affected unit with the described symptom. **Do not skip any steps!** A complete, detailed repair procedure for the entire process is shown starting on [page 2](#).

- Replace the V-belt** (starting on [step 6, P. 3](#)).
- Inspect the Smart Drive cable for damage** ([step 18, P. 5](#)).
 - Check for kinks, cuts, improper installation, or anything that may cause the cable to bind.
- Check the V-belt guides for damage** ([step 21, P. 6](#)).
 - Damaged belt guides can add additional rollback force.
- Check the rotation of the transmission axle** ([step 23, P. 6](#)).
 - If the axle shaft can be rotated by hand, the transmission does not need replacement.
- Clean the transmission axle** ([step 24, P. 6](#)).
 - Thoroughly clean the bushing contact areas on the axle using a Scotch-Brite™ pad.
- Apply the proper grease to components** ([step 27, P. 7](#)).
 - Use Honda Marine extreme pressure NLGI #2 GC-LB grease or equivalent. DO NOT USE anti-seize, white lithium, silicone, WD-40, or any other spray lubricant.
- Replace the adjuster arms** ([step 28, P. 7](#)).
- Replace the front wheel bolts** ([step 42, P. 10](#)).
 - Do not reinstall the wave washers. Discard original bolts/washers.
- Adjust the Smart Drive cable properly** ([step 45, P. 10](#)).

The following parts are required:

PART NUMBER	QTY	DESCRIPTION
42930-VG3-B01	1	Arm, R. RR.
42940-VG3-B01	1	Arm, L. RR.
22431-VL0-P01	1	V-belt
90105-VL0-T00*	2	Wheel bolt, front
08734-0003	1	Honda Grease



* Wheel bolts not required for S/N: MZCG-1739463~1999999

CONSUMER INFORMATION: The information in this service bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely service and repair your Honda power equipment. These procedures should not be attempted by "do-it-yourselfers," and you should not assume that this bulletin applies to your equipment, or that your equipment has the condition described. To determine whether this information applies, contact an authorized Honda Power Equipment dealer.

PROCEDURE

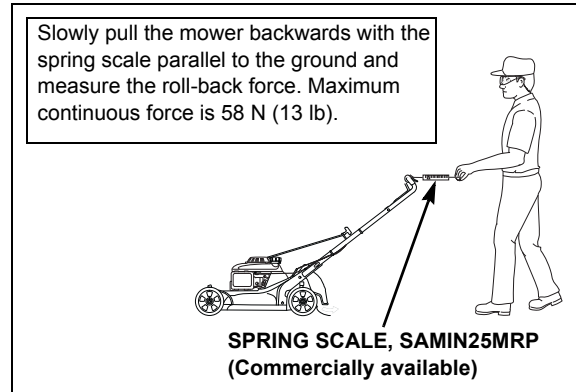
Refer to the shop manual if necessary.

1. Perform an initial measurement to confirm the roll-back force is out of specification.
 - a. Raise the mower to the highest cutting setting.
 - b. With the engine off and the Smart Drive control released, place a commercially available spring scale on the handlebar. **Slowly and steadily** pull the mower backward and measure the continuous roll-back force. Take multiple readings to ensure a consistent measurement. Pulling too fast or in a jerking motion will produce inaccurate results.

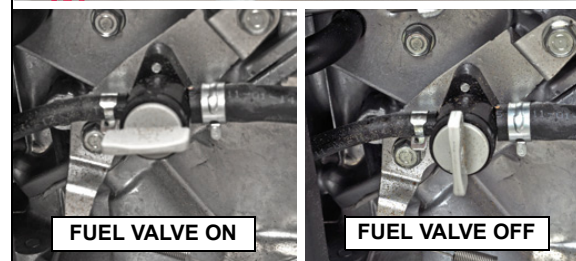
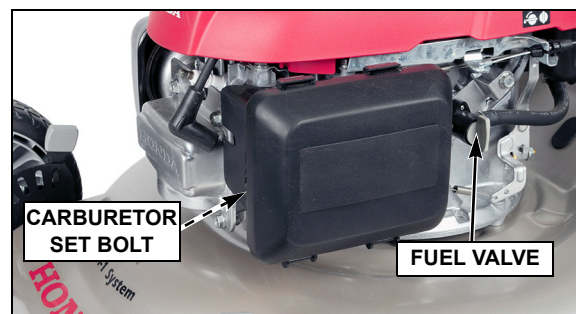
MAXIMUM FORCE: 58 N (13 lbs)

If the force is too high, proceed to [step 2](#).

2. Disconnect the spark plug cap.



3. Drain the fuel tank and carburetor to prevent fuel leakage.
 - a. Turn the fuel valve to the OFF position.
 - b. Loosen the carburetor bowl set bolt and drain the fuel from the bowl into an approved container.
 - c. Turn the fuel valve to the ON position and allow the remaining fuel in the tank to fully drain.

**⚠ WARNING**

Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

- Stop the engine and let it cool.
- Keep heat, sparks and flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

4. Drain the engine oil to prevent oil from leaking out of the breather or into the combustion chamber.

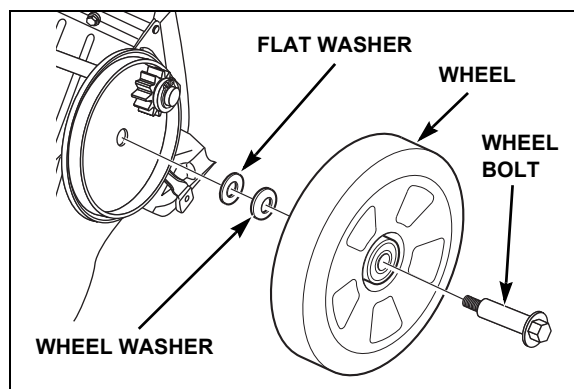


- Engage the flywheel brake/blade control lever and then wrap a protective cloth around the lever and the Smart Drive control.

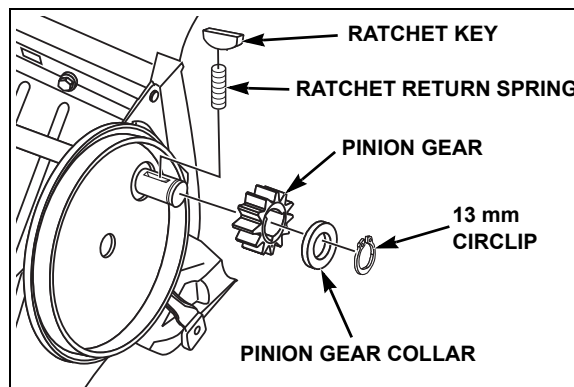
Tip the lawn mower upside down, and rest the Smart Drive control on a work bench.



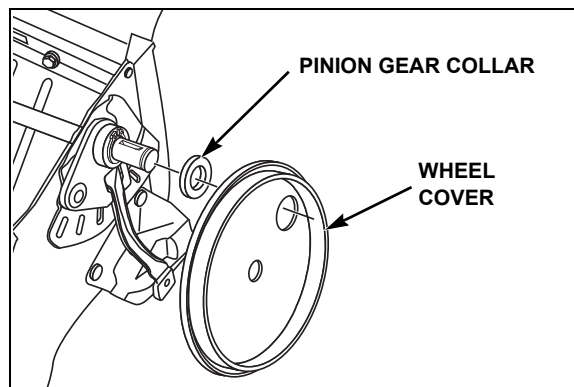
- Remove the right wheel bolt, wheel, wheel washer, and flat washer.



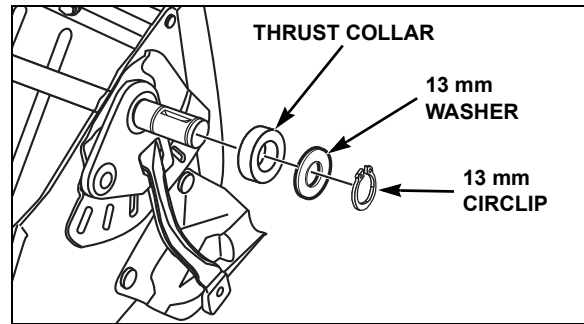
- Remove the 13 mm circlip, pinion gear collar, pinion gear, ratchet key, and ratchet return spring.



- Remove the wheel cover and pinion gear collar.



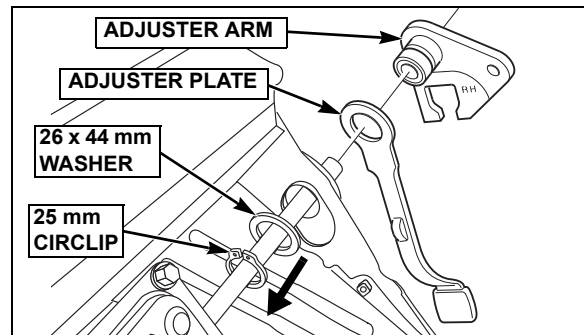
9. Remove the 13 mm circlip, 13 mm washer, and thrust collar.



10. Remove the 25 mm circlip, and then slide the circlip and 26 mm washer inward toward the transmission.

11. Remove the right adjuster arm and adjuster plate.

12. Repeat steps 6 through 11 for the left side.



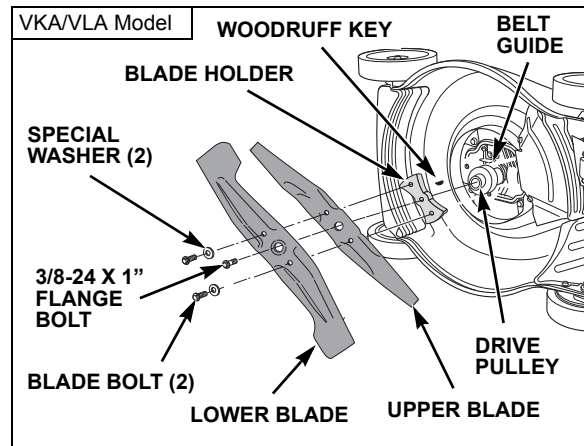
13. Remove the blades, blade holder (VKA/VLA model) or Roto-Stop assembly (VYA model), and Woodruff key.

VYA model:

Use the flywheel holder special tool or hold the flywheel nut with a 19 mm socket while loosening the center 10 x 24 mm flange bolt from the Roto-Stop assembly.

Note:

If the flywheel nut loosens, the fan cover will have to be removed so the flywheel nut can be retightened to the correct torque. Refer to the shop manual.

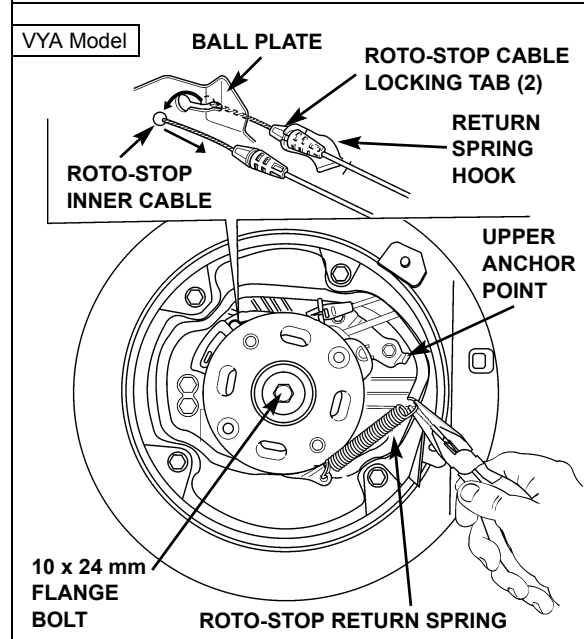


14. For serial numbers

MZCG-9506882~9999999 and MZCG-1000001~1999999:

Remove the belt guide and two 6 mm flange bolts.

15. Remove the V-belt from the drive pulley.



16. Remove the rear scroll/belt cover.

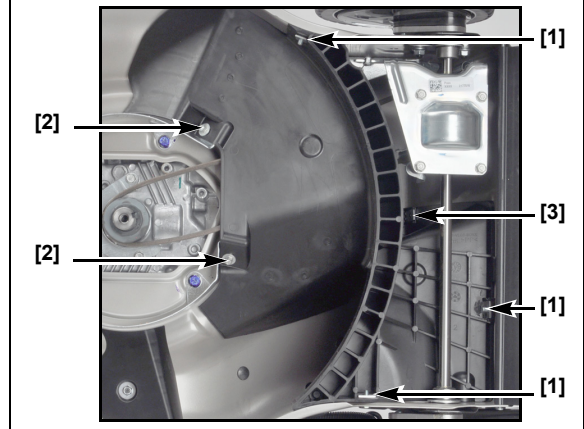
K8 Models:

Remove the four flange bolts and the belt cover.

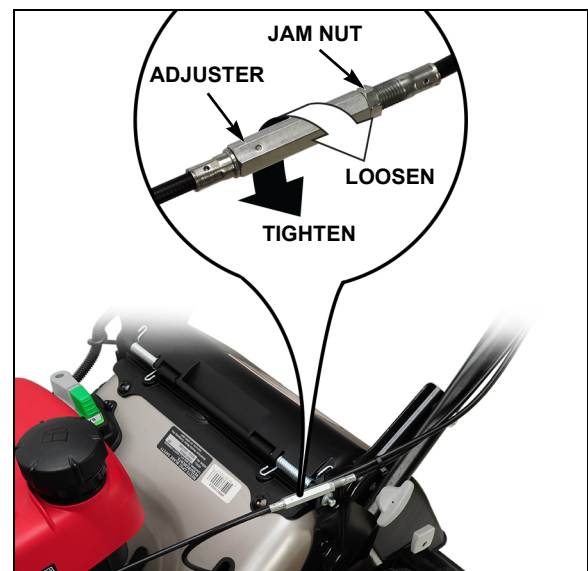
K9~K11 Models:

Remove the three 6 x 10 mm flange bolts [1], two 6 x 8 mm shoulder bolts [2], and one shoulder screw [3], and then remove the rear scroll.

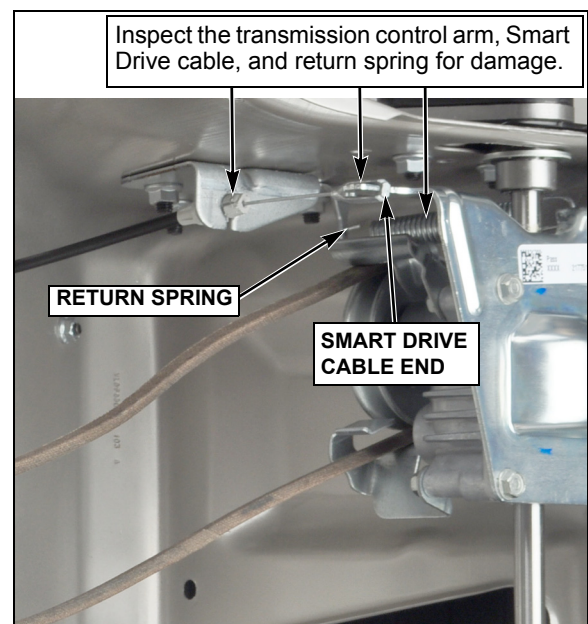
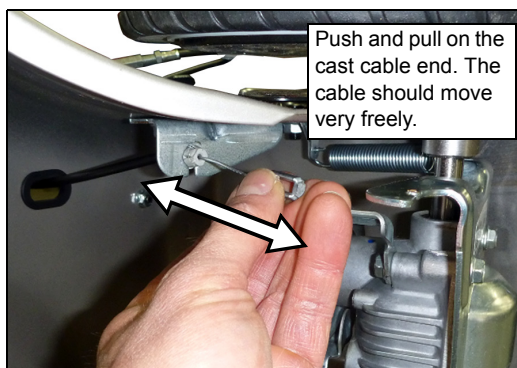
K9 ~ K11 model shown



17. Fully loosen the jam nut, and then fully loosen the Smart Drive cable.

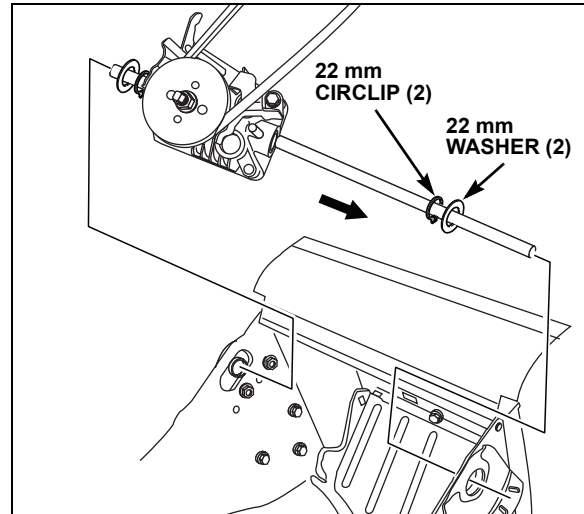


18. Inspect the transmission control arm, entire Smart Drive cable, and return spring for damage. Disconnect the Smart Drive cable from the transmission control arm. Move the inner cable up and down and confirm it moves completely free. Replace the Smart Drive cable if it appears damaged (refer to Chapter 11 of the shop manual for this procedure).

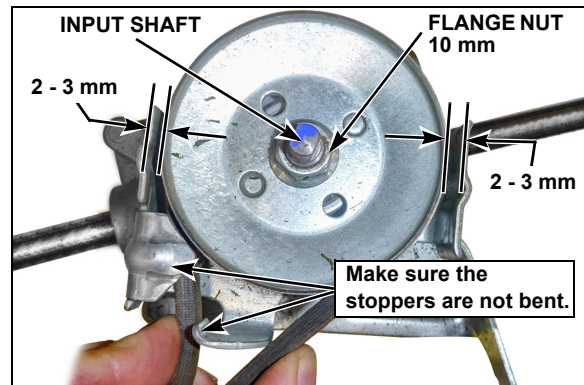


19. Disconnect the transmission return spring from the transmission.

20. Slide the transmission/axle to the right side, and then rotate it until the left side can be removed from the mower deck; remove the transmission.

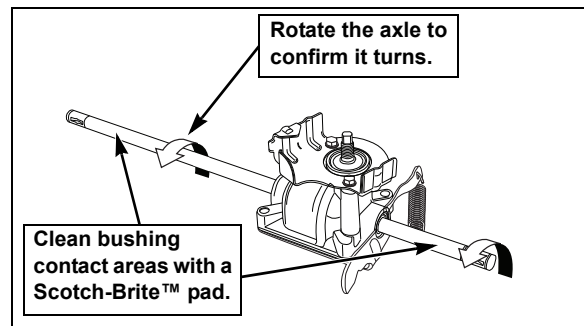


21. Inspect the transmission belt guides for damage. Straighten or replace if necessary after the belt has been removed.
Clearance between the belt guides and belt should be 2 - 3 mm, and the stoppers must not be bent.



22. Hold the end of the input shaft with an adjustable wrench and then remove the 10 mm flange nut. Remove the driven pulley, V-belt, and 10 mm special washer from the transmission.

23. Firmly grip the axle by hand and rotate it several revolutions to confirm it rotates. It may seem hard to rotate the axle and it will feel tight, but this is normal. If the axle rotates, the transmission is functioning properly and does not need replacement. Transmission replacement is rarely required and requires prior warranty authorization from Honda.

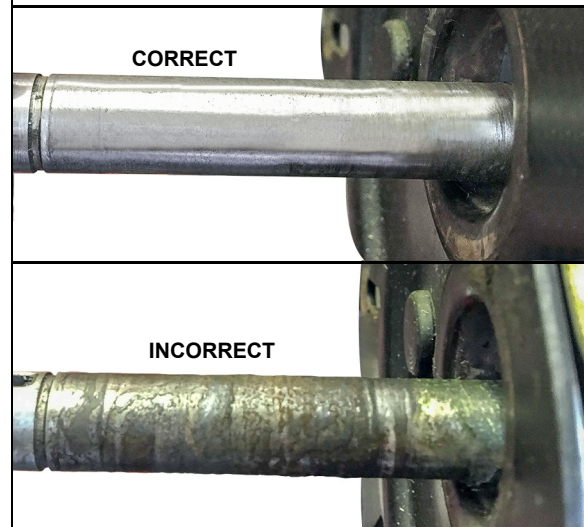


24. Thoroughly clean the bushing contact areas on the axle using a Scotch-Brite™ pad. Remove all rust, grease, and residual bushing material from the axle.

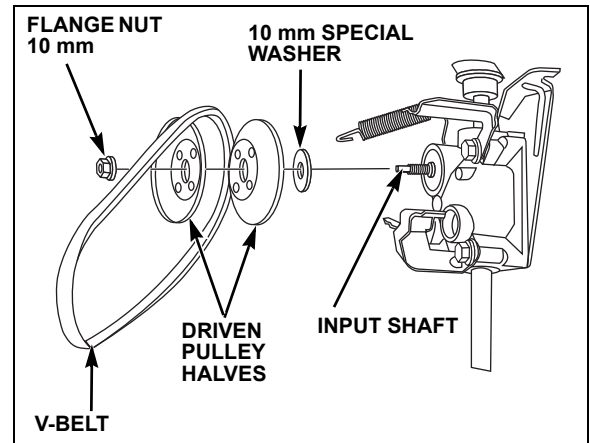
IMPORTANT:

Properly cleaning the axle surfaces is critical to preventing the symptom from returning.

After a thorough cleaning, some normal wear to the metal is OK, but the surface must be very smooth to the touch.



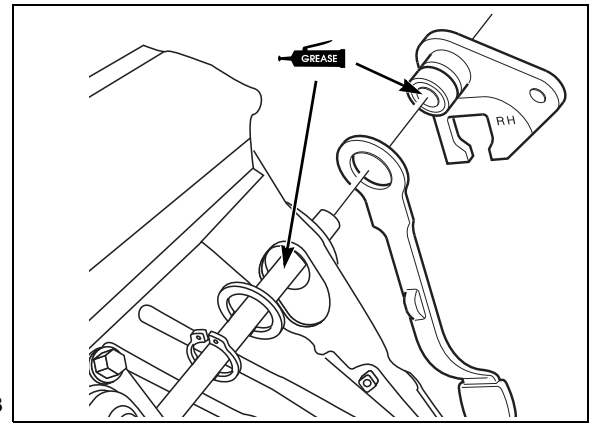
25. Install a **new** V-belt onto the transmission regardless of the original belt's condition.
- Be sure to install the 10 mm special (hardened) washer on the transmission input shaft before assembling the driven pulley.
 - Align the holes in the driven pulley halves when reassembling the pulley.
 - Hold the end of the input shaft with an adjustable wrench and tighten the 10 mm flange nut securely.
26. Install the transmission back into the mower deck following the reverse order of removal ([step 20](#)).



27. Thoroughly apply a coat of multipurpose extreme pressure wheel bearing grease **INSIDE** the adjuster arms and on the axle surfaces. Use Honda Marine extreme pressure NLGI #2 GC-LB grease or equivalent.



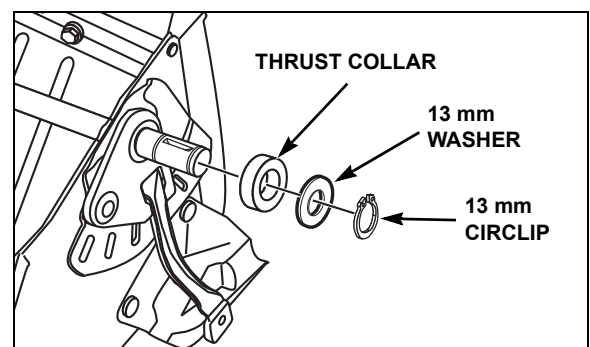
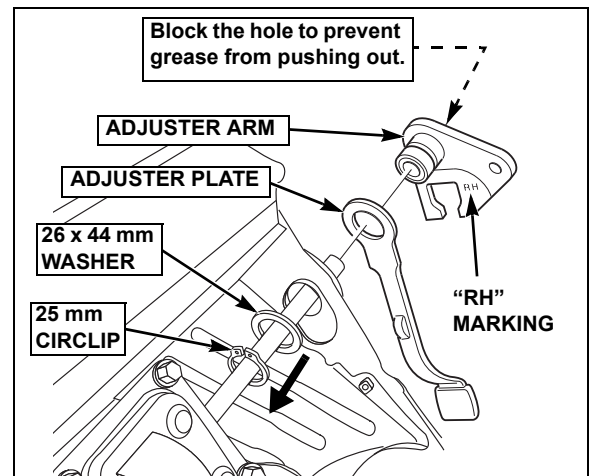
Honda Marine
Grease
P/N 08734-0003



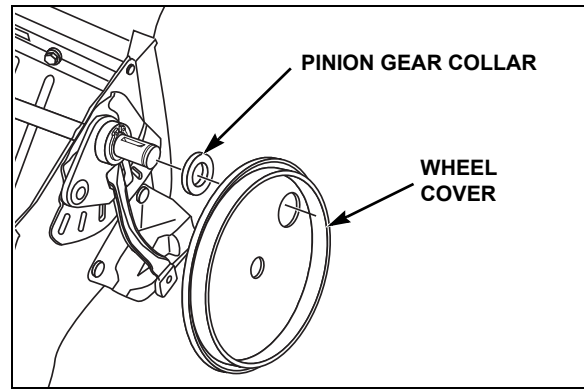
IMPORTANT:

Only use an extreme pressure NLGI #2 GC-LB wheel bearing grease. Proper application of the correct grease is critical to preventing the symptom from returning. **DO NOT USE anti-seize, white lithium, silicone, WD-40, or any other spray lubricant.**

28. Slide the adjuster plate onto a **new** right-hand side adjuster arm. The arms are labeled "RH" for right-hand side and "LH" for left-hand side.
29. Install the right-hand side adjuster arm, taking care not to damage the seal. Use your thumb or a shop towel to cover the outer bushing opening in the adjuster arm to prevent grease from easily pushing out when installing the arm.
30. Slide the 26 mm washer over the adjuster arm, and then secure the adjuster arm in place using the 25 mm circlip. Be sure the circlip is fully seated in the groove.
31. Repeat steps 27 through 30 for the left side.
32. Install the thrust collar and 13 mm washer, and then secure them with a 13 mm circlip.



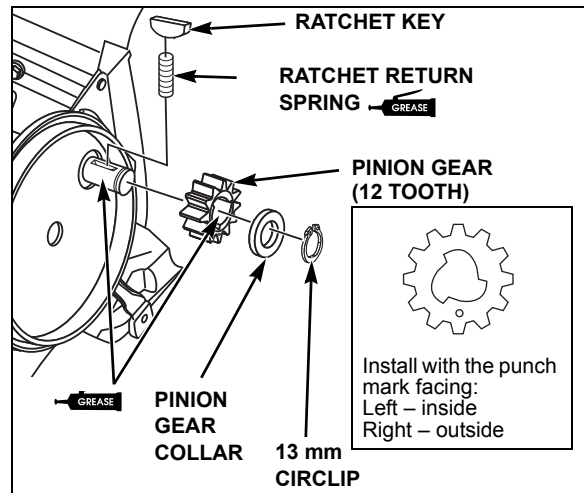
33. Install the pinion gear collar and wheel cover.



34. Apply multipurpose extreme pressure wheel bearing grease to the areas shown. Use Honda Marine extreme pressure NLGI #2 GC-LB grease or equivalent. **DO NOT USE anti-seize, white lithium, silicone, WD-40, or any other spray lubricant.**

35. Install a ratchet return spring and ratchet key.

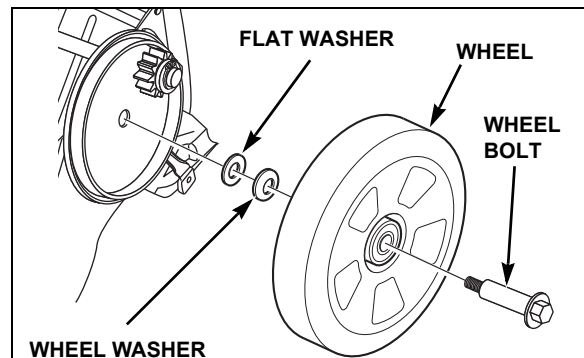
36. Install a pinion gear, pinion gear collar, and 13 mm circlip. Make sure the pinion gear is installed correctly for each side, as shown.



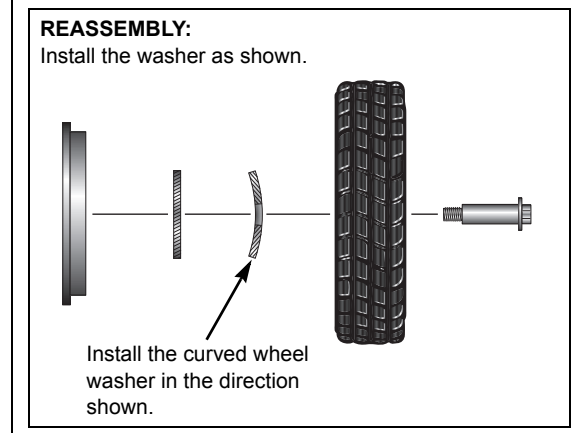
37. Install a flat washer, wheel washer (in the direction shown), wheel, and wheel bolt. Carefully check the position of the flat washer and wheel washer to be sure they are installed in the correct positions.

Tighten the wheel bolt to the specified torque. Make sure the wheel spins freely after tightening.

TORQUE: 21.6 N•m (15.9 lbf-ft)



38. Repeat steps 32 through 37 for the other side.



39. Reinstall the rear scroll.

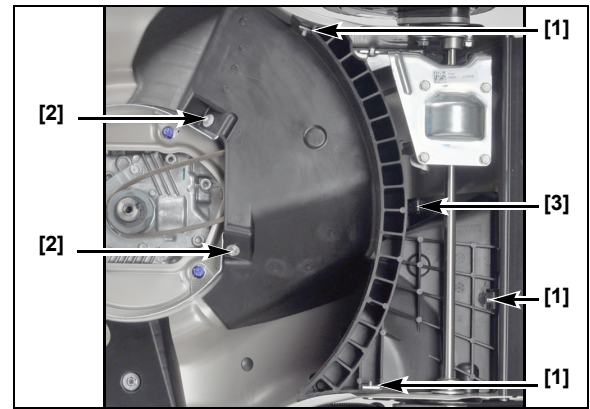
K8 Models:

Install the belt cover and tighten the four flange bolts.

K9~K11 Models:

Install the rear scroll and tighten the three 6 x 10 mm flange bolts [1], two 6 x 8 mm shoulder bolts [2], and one shoulder screw [3].

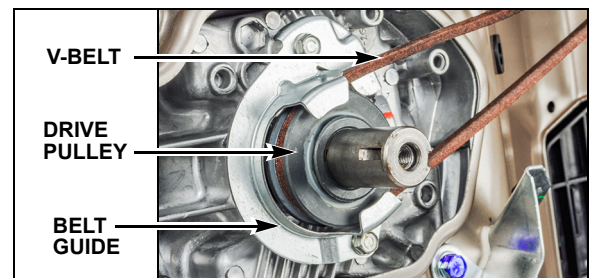
- Be sure the Clip Director® is fully open (BAG) and the lower hinge pin is aligned when installing the rear scroll.
- Use a long flat-blade screwdriver and a piece of tape to hold the upper special nut in place while installing the shoulder screw [3] in the center of the rear scroll.



40. Install the V-belt onto the drive pulley.

For serial numbers

MZCG-9506882~9999999 and MZCG-1000001~1999999:
Install the belt guide and two 6 mm flange bolts.

41. *VKA/VLA Models:*

Install the Woodruff key, blade holder, blades, blade bolts, and special washers as shown.

⚠ WARNING

Failure to properly install the Woodruff key can allow spinning mower blades to fall off the crankshaft. Detached spinning blades can seriously injure or hurt someone. Always make sure the Woodruff key is properly installed.

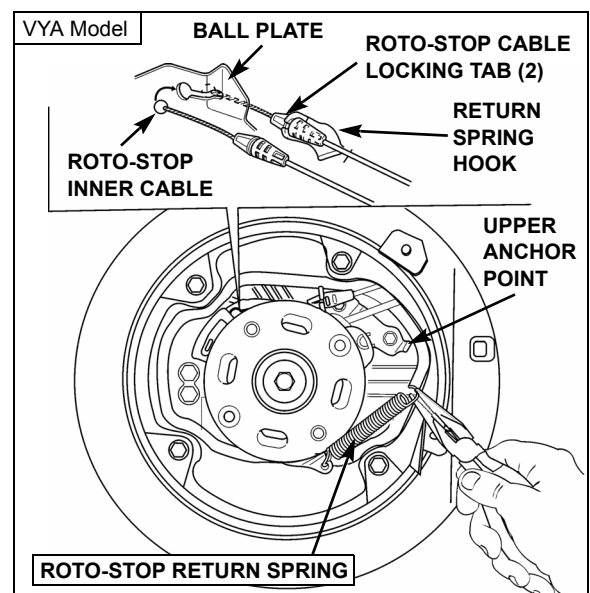
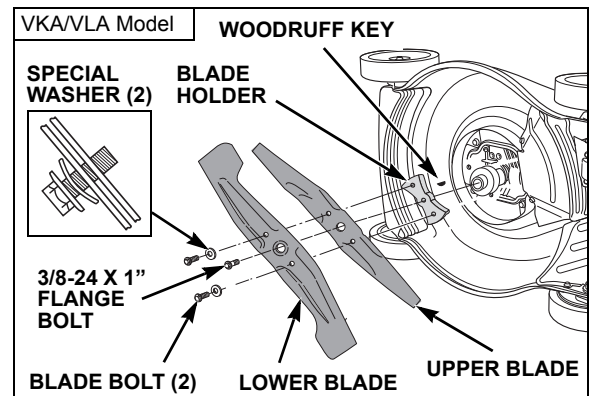
Tighten the blade bolts and center 3/8-24 x 1" flange bolt to the specified torque. Wear a pair of thick leather gloves and hold the blades with your hand to prevent the blades from turning when tightening the three bolts.

TORQUE: 54 N•m (40 ft-lb)

VYA Model:

- Align the brake assembly hole with the stopper post, and slide the brake assembly over the drive pulley.
- Install the Woodruff key into the end of the crankshaft.
- Install the drive disk onto the crankshaft, aligning the disk with the Woodruff key.
- Install the blade holder, clutch spring, and driven disk as an assembly.
- Remove the recoil starter and hold the flywheel nut with a socket while tightening the 10 x 24 mm blade holder bolt to the specified torque shown in [step h](#).
- Attach the Roto-Stop cable to the ball plate.
- Use pliers to lift the Roto-Stop return spring hook onto the upper anchor point.
- Install the blades, blade bolts, and special washers, and tighten them to the specified torque.

TORQUE: 54 N•m (40 ft-lb)



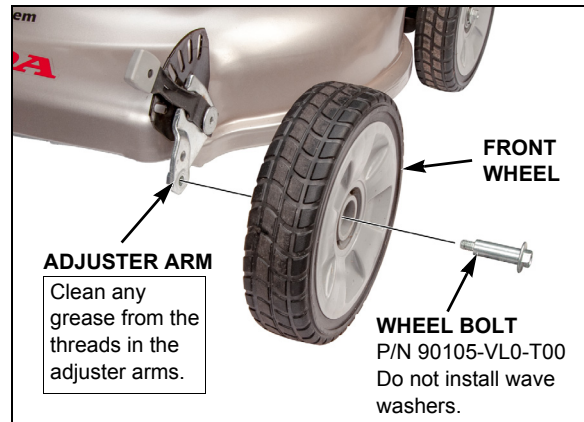
42. *This step only applies to frame serial number ranges MZCG-8400001~9999999 and MZCG-1000001~1739462.*

Remove both front wheel bolts, wave washers, and wheels. Discard the original wheel bolts and wave washers.

Remove any grease in or around the adjuster arm threads that secure the front wheels and bolts.

Reinstall the front wheels using the new, shorter wheel bolts (P/N 90105-VL0-T00) **without** using wave washers or grease. Tighten the wheel bolts to the specified torque:

TORQUE: 22 N•m (16 ft-lb)



43. Place the lawn mower on the ground and refill the engine with oil and gasoline.

OIL REFILL AMOUNT: 12.0 ~ 13.5 oz. (0.35 ~ 0.40 L)

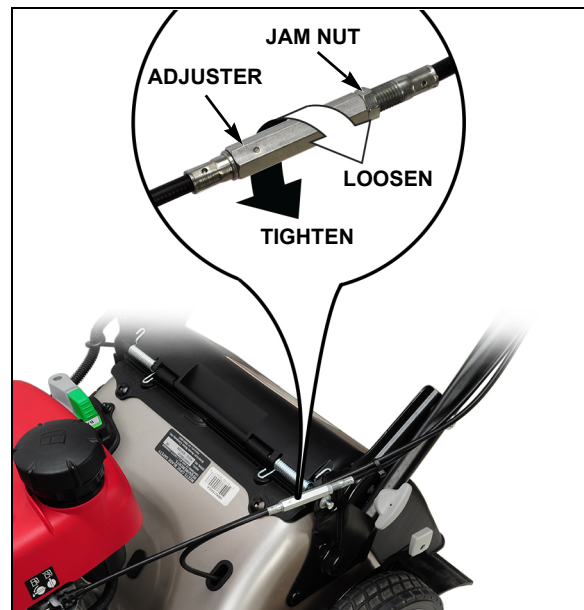


44. Reconnect the spark plug cap.



45. Adjust the Smart Drive cable.

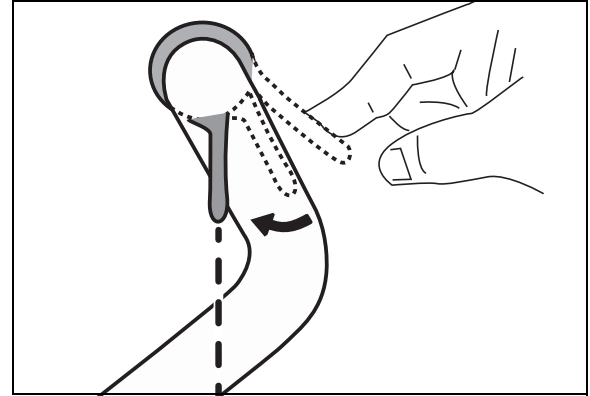
- a. With the engine OFF, loosen the cable adjuster jam nut.
- b. Without pushing the Smart Drive control, slowly pull the lawn mower backward to check wheel resistance.
- c. Tighten the adjuster 1/2 turn at a time and pull the mower backward after each 1/2 turn adjustment until the wheels lock up (without engaging the Smart Drive control) when pulling backward.
- d. As soon as the wheels lock up, loosen the adjuster eight (8) complete revolutions.
- e. Tighten the jam nut to lock the adjuster in place.



After adjusting, position the Smart Drive lever in the lowest adjustment position. Slowly pull the lawn mower backward while gradually engaging the Smart Drive lever. The wheels should lock up just before the paddles are straight down (between 5 and 6 o'clock position). Repeat the adjustment if necessary.

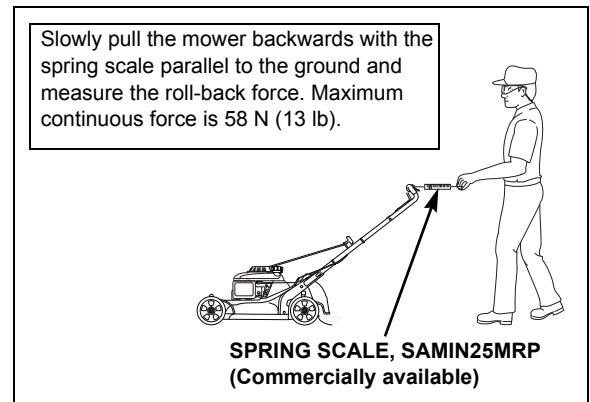
IMPORTANT:

Precise adjustment of the Smart Drive cable is critical to ensure a successful repair.



46. Start the engine and confirm the Smart Drive control operates properly and the lawn mower rolls backward freely when the Smart Drive control is released.
47. Perform a final roll-back force measurement using a spring scale.
 - a. Raise the mower to the highest cutting setting.
 - b. With the engine off and the Smart Drive control released, place a commercially available spring scale on the handlebar. **Slowly and steadily** pull the mower backward and measure the continuous roll-back force. Take multiple readings to ensure a consistent measurement. Pulling too fast or in a jerking motion will produce inaccurate results.

MAXIMUM FORCE: 58 N (13 lbs)



INFORMATION FOR CUSTOMERS

- Inform the customer that under normal use, the HRR216 lawn mower requires a certain amount of effort to pull backward. It will not roll backward as freely as it does when pushing the mower forward.
- The rear adjuster bushings require periodic inspection and lubrication, as outlined in the owner's manual maintenance schedule. The rear wheel adjuster bushings should be inspected and lubricated every **two years or 150 hours**, whichever comes first.
- Explain to the customer that he/she must be careful when washing the mower. Directing pressurized water from a garden hose nozzle or pressure washer into the rear wheel areas may wash the grease out of the adjuster bushings over time, and will increase wear and the amount of effort required to pull the lawn mower backward. Cleaning the mower deck and surrounding areas is best done by hand using an appropriate wash mitt. Refer them to the *Cleaning* section of the owner's manual for complete information.

PARTS INFORMATION

Order parts using your normal parts ordering procedures. These parts listed will always be needed to perform a successful repair.

Order additional parts only as needed. Transmission replacement is rarely required and requires prior warranty authorization from Techline or your District Service Manager.

PART NUMBER	QTY	DESCRIPTION
42930-VG3-B01	1	Arm, R. RR.
42940-VG3-B01	1	Arm, L. RR.
22431-VL0-P01	1	V-belt
90105-VL0-T00*	2	Wheel bolt, front
08734-0003**	1	Honda Grease (14 oz.)

* Wheel bolt replacement is not required for frame serial numbers MZCG-1739463 through MZCG-1999999.

** The 14 oz. tube of Honda grease is enough to repair a large quantity of lawn mowers.

WARRANTY INFORMATION**Duration*****In Warranty***

The normal warranty applies.

Out of Warranty


Any repair performed after warranty expiration may be eligible for goodwill consideration. Contact Techline or your District Service Manager. You must request consideration and receive a decision before starting work.

VIN Information

MODEL	FRAME SERIAL NUMBER RANGE
HRR216VKA	MZCG-8400001 ~ 9999999
HRR216VLA	MZCG-1000001 ~ 1999999
HRR216VYA	(all K8 ~ K11 models)

Processing

Service bulletin warranty claim submission requirements apply. After completing the Service Bulletin repair procedure, submit one warranty claim per unit with the following information:

 Dealers
<ul style="list-style-type: none"> Select <i>Service Bulletin</i> claim type. Enter VIN information. From the <i>Service Bulletin</i> drop-down menu, select LM107 (Lawn Mower Service Bulletin #107) for the appropriate model and repair.

All others:
<ul style="list-style-type: none"> Defect code: 03001
<ul style="list-style-type: none"> Labor Operation Number: 7101CC (0.7 hr) 710199 (0.3 hr)
<ul style="list-style-type: none"> Flat Rate Time: 1.0 hr total
<ul style="list-style-type: none"> Failed Part: 44327-VG3-B00