

# **LIFT-107**

# 6" Drop Spindle Lift Kit E-Z-Go RXV Gas & Electric 2008 - February 2013 Installation Instructions

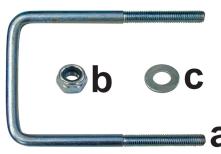


Contents of Kit		
а	Spindle, Driver Side	1
b	Spindle, Passenger Side	1
с	Shock Mount Plate, Driver Side	1
d	Shock Mount Plate, Passenger Side	1
е	Riser Blocks	2
f	Motor Mount (GAS ONLY *)	1
g	Brake Cable Bracket (GAS ONLY *)	1
h	Box of Hardware (Contents on Next Page)	1

**Caution**: Please read through the instructions carefully. Installer is responsible for damage if instructions are not followed properly. Extra installers will be helpful in some parts of the installation. Please refer to all torqueing specifications on page 2 for installation.

**Note:** You must install larger tires and wheels once the cart is lifted. Stock wheels will not work. We recommend a 23" tire with 10" or larger wheel with a minimum of a 1" offset for use on the RHOX Lift Kit.

## LIFT-107 Hardware Kit



Contents		QTY	Torque Requirements	
а	M10 U-Bolts	2	38.25 ft. lbs.	
b	M10 Nylock Nuts	6	-	
с	M10 Flat Washers	6	-	

# **Tools Needed for Installation**

- Sockets & Wrenches (5/8", 11/16", 3/4", 13/16", 15mm, 17mm, T-45)
- Flat Head Screwdriver
- Pliers
- Wire Cutters (Gas Carts Only)
- Rotary Cutting Tool (Gas Carts Only)
- Tie Rod Separator
- Grease Gun
- Jack and Jack Stands
- Chock for Wheels
- Rubber Mallet
- Tape Measure
- Safety Glasses

#### **Installation Preparation (Front)**

- 1. Engage parking brake.
- 2. Turn key OFF.
- Electric Carts Only: Place Tow/Run Switch in TOW if equipped.
- 4. Chock the back of the rear wheels.
- 5. Remove the hub caps (if any). Loosen the lug nuts on both of the front wheels but do not remove them.
- 6. Place a jack under the front chassis. Lift the cart high enough to accommodate the new tires and wheels.



- 7. Place (2) jack stands securely under the chassis and remove the jack.
- Fully remove the (8) front lug nuts, tires and 8. wheels. Discard the tires and wheels as they will not be reused.

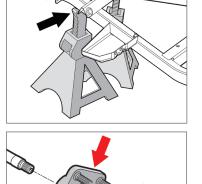
9. Remove dust covers (black arrow), nuts (green arrow) and wheel hubs (red arrow) from both spindles. Retain all three components.

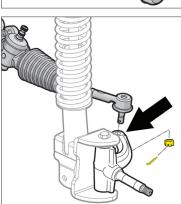
NOTE: Keep hubs in a dry, clean and safe place to protect the bearings from debris.

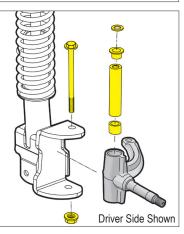
10. Disconnect the tie rod ends from the spindles. Retain hardware.

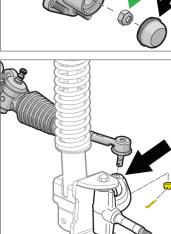
**NOTE**: Use a tie rod separator to remove the tie-rod end from the spindle. Do not hammer the stud as it will damage the threads.

11. Disconnect the spindles from the shocks. Retain all hardware, sleeves and bushings.









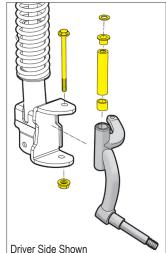
#### **Front Suspension Installation**

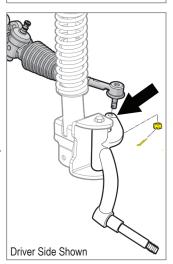
**NOTE**: Please refer to page 2 for torque specifications for included hardware. Please refer to vehicle's maintenance manual for torque specifications on reused hardware.

1. Install the new spindles where the original ones were removed using the <u>Original Hardware</u>.

- 2. Attach the tie rods to the new spindles using the <u>Original Hardware</u>.
- 3. Grease the fittings on both spindles using a general purpose automotive grease.
- 4. Tighten any hardware left loose in this section.
- 5. Reinstall the hubs and dust caps that were removed on page 3 using the <u>Original Hardware</u>. Hand tighten.
- Install the (2) front tires and wheels. The stock tires and wheels will not work on the newly lifted cart. Fully tighten the lug nuts on both wheels.

**NOTE**: It is recommended to use a wheel with at least a 1" offset.





7. Once the tires and wheels are fully secure, place the jack under the cart. Remove the jack stands and lower the cart. Remove the chocks behind the rear wheels.

**NOTE**: Toe adjustments will be made at the end of the installation.

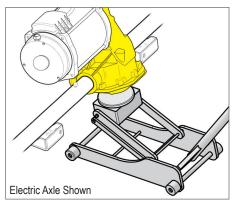
## Installation Preparation (Rear)

**SAFETY NOTE**: Proper eye and mouth protection should be worn during this section to protect the installer from falling debris when working under the cart.

The rear axle is only secured in place by the leaf springs, U-bolts and the jack. For safety reasons, only complete one side of the suspension at a time.

- 1. Engage parking brake.
- 2. Turn key OFF.
- 3. Electric Carts Only: Place Tow/Run Switch in TOW.
- 4. Chock the front of the front wheels.
- 5. Remove the hub caps (if any). Loosen the lug nuts on both rear wheels but do not remove them.
- Place a jack securely under the rear axle. Safely lift the rear end of the cart enough to accommodate the additional height of the larger tires and wheels.
- Place jack stands under the chassis on both sides of the cart to stabilize it. DO NOT remove the jack.
- 8. Fully remove the (8) rear lug nuts, tires and wheels. Discard.
- 9. Carefully raise the jack to support the rear axle.





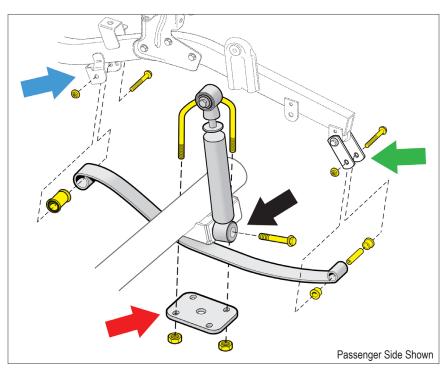
#### **Rear Suspension Installation (Electric)**

**SAFETY NOTE**: Proper eye and mouth protection should be worn during this section to protect the installer from falling debris when working under the cart.

The rear axle is only secured in place by the leaf springs, U-bolts and the jack. For safety reasons, only complete one side of the suspension at a time.

- 1. Disconnect the bottom of both shocks from the axle (page 6, black arrow). Push them up and out of the way. Retain hardware.
- 2. With the rear axle supported by the jack, disconnect the passenger side leaf spring at the rear shackle (page 6, green arrow). Retain hardware.
- With the axle supported by the jack, remove the U-bolt holding the passenger side rear axle, leaf spring and shock mounting plate (page 6, red arrow). Remove and discard the U-bolt. Retain shock mounting plate. Use caution and complete one side at a time.

- 4. Disconnect the front portion of the leaf spring from the front shackle (blue arrow). Retain hardware and leaf spring.
- 5. Carefully lower the jack to lower the rear axle away from the chassis. Do not remove the jack stands. They will support the chassis.



- 6. Place the leaf spring on top of the axle as shown on page 7.
- 7. Reattach the front portion of the leaf spring to the front shackle using the <u>Original</u> <u>Hardware</u> (page 7, blue arrow). Do not fully tighten.
- 8. Place a riser block on top of the axle and under the leaf spring as shown on page 7. When oriented correctly, the wider leg will be towards the front of the cart and the pin on the bottom of the leaf spring will seat into the hole on top of the riser block.

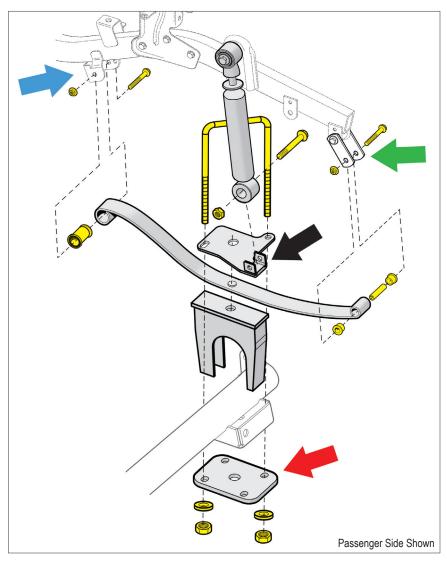


**NOTE**: Slightly loosen the opposite U-bolt and adjust the axle position to help with alignment if needed.

- 9. Once the spring is seated, identify the new passenger side shock mounting plate. Place it on top of the leaf spring (page 7, black arrow). The pin will seat in the small hole. The shock mounting tabs will face towards the center rear of the cart as shown.
- 10. Slide the new <u>M10 U-Bolt</u> through the shock mounting plate, over the rear axle and through the original leaf spring plate (page 7, red arrow). Tighten the assembly evenly

on each side using (2)  $\underline{\text{M10 Flat Washers}}$  and (2)  $\underline{\text{M10 Nylock Nuts}}.$  Adjust alignment if necessary.

- 11. Attach the leaf spring to the rear shackle using the <u>Original Hardware</u> (green arrow). Adjust the axle position if needed for alignment.
- 12. Attach the shock to the shock mounting plate using the <u>Original Bolt</u>, (1) <u>M10 Nylock</u> <u>Nut</u> and (1) <u>M10 Flat Washer</u>.
- 13. Repeat steps 2-12 for the driver side rear suspension.
- 14. Tighten all hardware left loose in this section.



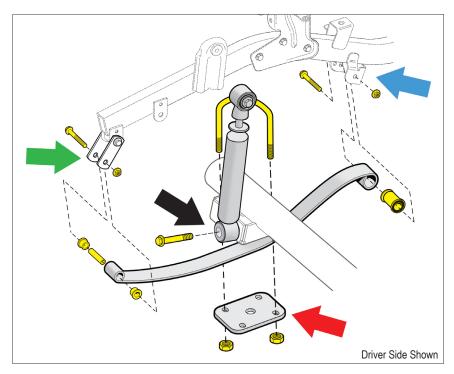
- 15. If the cart is not high enough to accommodate the larger tires and wheels, raise the cart to the correct height with the jack.
- 16. Install the (2) new rear tires/wheels on the rear hubs.
- 17. Remove jack stands. Lower the cart. Remove jack.

#### **Rear Suspension Installation (Gas)**

**SAFETY NOTE**: Proper eye and mouth protection should be worn during this section to protect the installer from falling debris when working under the cart.

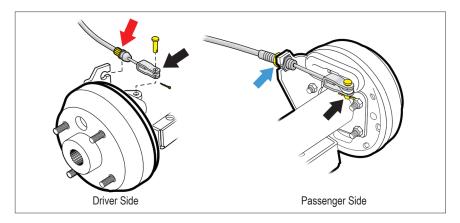
The rear axle is only secured in place by the leaf springs, U-bolts and the jack. For safety reasons, only complete one side of the suspension at a time.

- 1. Disconnect the bottom of the shocks from the axle and push them out of the way (black arrow). Retain hardware.
- 2. With the rear axle supported by the jack, start on the driver side by disconnecting the leaf spring at the rear shackle (green arrow). Retain hardware.



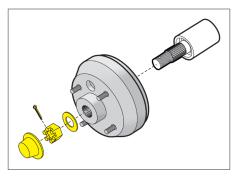
3. Make sure both front wheels are chocked and release the parking brake. Remove and release BOTH brake cables from the rear axle by removing the cotter pins and the pins holding them in place (page 9, black arrows). Release the passenger side brake

cable by loosening the jam nut (blue arrow). Release the driver side brake cable by pushing the tabs inward on the brake cable to allow it to fit through the bracket (red arrow).

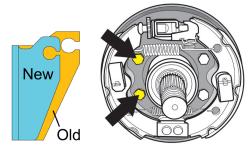


- 4. Loosen both nuts on the driver side U-bolt then carefully remove the U-bolt (page 8, red arrow). Discard the U-bolt and retain the leaf spring plate.
- 5. Remove the front portion of the leaf spring by removing the bolt on the front shackle (page 8, blue arrow). Remove the leaf spring. Retain hardware.
- 6. Carefully lower the jack to lower the rear axle away from the chassis. Do not remove the jack stands. They support the chassis.
- 7. Remove the driver side hub by removing the dust cover, cotter pin and castle nut. Retain all components.

**NOTE**: If the hub cannot be removed by hand, use a hub puller, which can be purchased at a local auto store.



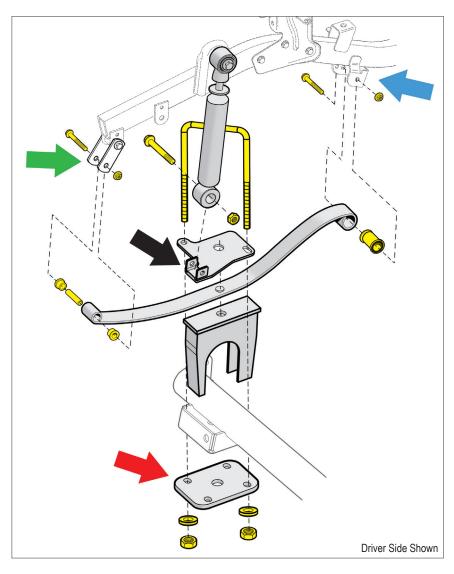
- Remove the (2) bolts on the brake assembly connected to the brake cable bracket. Discard bracket. Retain hardware.
- 9. Install the new brake cable bracket in the same location where the original one was removed using the <u>Original Hardware</u>. Fully tighten.



10. Reinstall the hub onto the axle using the <u>Original Castle Nut</u>. Tighten fully. If the cotter pin hole is not entirely visible through the castle nut's gaps, keep tightening. Backing off the nut could strip the hub over time. Once the hole and castle nut are aligned, insert the <u>Cotter Pin</u>. Do not reconnect the brake cable.



- 11. Place the leaf spring on top of the axle as shown below.
- 12. Reattach the front portion of the leaf spring to the front shackle using the <u>Original</u> <u>Hardware</u> (blue arrow). Do not fully tighten.



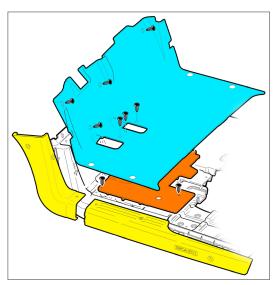
13. Place a riser block on top of the axle and under the leaf spring as shown on page 10. When oriented correctly, the wider leg will be towards the front of the cart and the pin on the bottom of the leaf spring will seat into the hole on top of the riser block. Loosen the opposite U-bolt and adjust axle position to help with alignment.



- 14. Once the spring is seated, identify the new driver side shock mounting plate. Place it on top of the leaf spring (page 10, black arrow). The pin will seat in the small center hole. The shock mounting tabs will face towards the center rear of the cart.
- Slide the new <u>M10 U-Bolt</u> through the shock mounting plate, over the rear axle and through the original leaf spring plate. Tighten the assembly evenly on each side using (2) <u>M10 Flat Washers</u> and (2) <u>M10 Nylock Nuts</u> (page 10, red arrow). Adjust alignment if necessary.
- 16. Attach the leaf spring to the rear shackle using the <u>Original Hardware</u> (page 10, green arrow). Adjust the axle position if needed for alignment.
- 17. Attach the shock to the shock mounting plate using the <u>Original Bolt</u>, (1) <u>M10 Nylock</u>. <u>Nut</u> and (1) <u>M10 Flat Washer</u> (page 10, black arrow).
- 18. Repeat steps 2, 4-6 and 11-17 for the passenger side rear suspension.
- 19. Tighten all hardware left loose in this section.

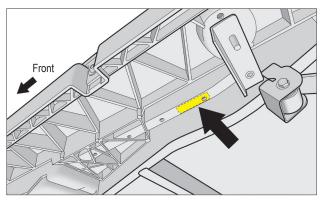
#### Reroute Driver Side Brake Cable

- Remove the driver side upper and lower rocker panels (shown in yellow) Retain panels and hardware.
- 2. Remove the floor mat over the pedal area (shown in blue). Retain rivets.
- Remove the pedal cover plate (shown in orange). Retain rivets.

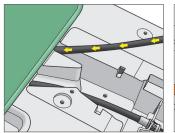


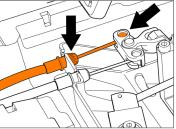
- 4. Locate the brake cable furthest on the driver side (shown in orange). Push the tabs on the cable inward to release it from the bracket. Rotate the cable and push the end down to release it from the equalizer.
- 5. Gently pull the driver side brake cable completely out of the cart.

 Under the driver side of the cart, locate the plastic channel on the outside edge of the chassis. Using a sharp cutting tool, cut an opening in the channel large enough to fit the end of the brake cable (shown in yellow to the right).

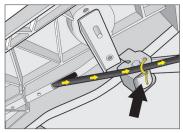


- 7. Feed the original brake cable, rear end first, into the channel in the pedal compartment and through the newly cut hole.
- 8. Push the front portion of the brake cable through the brake cable bracket and expand the tabs. Reattach the end to the equalizer.

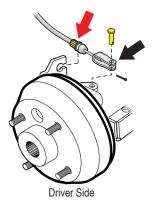




9. Loosely attach the brake cable to the extra hole in the front leaf spring shackle with a wire tie to prevent it from swaying excessively.

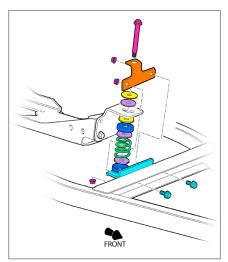


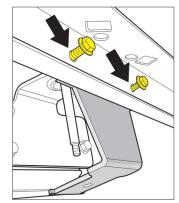
- Push the rear end of the brake cable through the new brake cable bracket on the hub and expand the tabs (red arrow). Put the pin back in its original location and reinstall the <u>Original Cotter Pin</u> (black arrow).
- 11. Reinstall the pedal cover plate, floor mat and rocker panels using the <u>Original Hardware</u>.



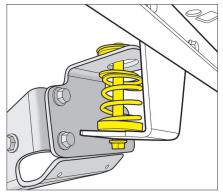
Engine Mount Bracket Installation

- 1. Place the jack under the engine.
- 2. Place jack stands securely under both sides of the rear axle for support.
- Begin removing the original engine mount by removing the M10 bolt going through the center of the assembly (shown in pink). Retain all hardware.
- Remove the upper weldment mount (orange) by removing the (2) nuts holding it in place. Discard hardware and mount.
- Remove all delrin washers (purple), rubber washers (yellow), cap adapters (dark blue) and the compression spring (green). Retain all items.
- Remove the lower weldment mount (light blue) by removing the (2) bolts holding it in place. Retain hardware and discard mount.
- Place the new engine mount bracket where the lower weldment mount was removed. The engine mount tab will face the rear. Install the engine mount bracket using the <u>Original Hardware</u>. Tighten the bolts.

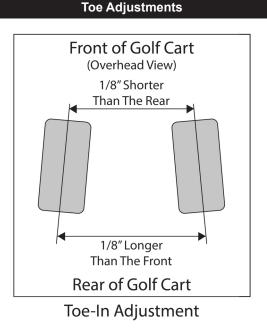




- 8. Place the <u>Original M10 Bolt</u> through the front engine mount hole. Lower the jack until the bolt threads extend through small hole on the new engine mount bracket.
- Place all <u>Washers</u>, <u>Cap Adapters</u> and the <u>Compression Spring</u> in their original locations in relation to the front engine mount and the new engine mount bracket. Fasten the <u>Original M10 Bolt</u> and <u>Nut</u>. Adjust the height of the engine if necessary for alignment.



- 10. After the engine mount bracket is completely installed, remove the jack stands from the rear axle.
- 11. If the cart is not high enough to accommodate the larger tires and wheels, raise the cart to the right height with the jack.
- 12. Install the (2) new rear tires/wheels on the rear hubs.
- 13. Remove the jack stands and lower the cart.
- 14. Remove the jack.



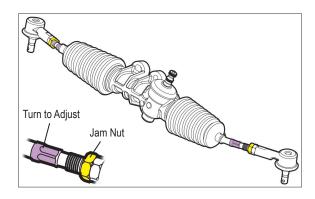
1. Drive forward and back 20-40 feet to check the toe before making adjustments. Only make adjustments if needed.

**NOTE**: For stability, an 1/8" toe-in is recommended. This will level out when the cart is loaded.

- 2. Calculate the toe of the front tires by measuring the center-to-center distance of the front of the front tires versus the center-to-center distance of the back of the front tires. The front measurement should be 1/8" shorter than the rear.
- 3. Adjust the toe by loosening the jam nut on the tie rod. Lengthen or shorten the tie rod by turning the hex shaped rod adjustment. Adjustments should be made evenly on both sides.

**NOTE**: Shortening the tie rods increases the toe, lengthening decreases it.

4. Once the desired toe is reached, tighten the jam nuts on the tie rods.



This completes the installation of your RHOX Drop Spindle Lift Kit. Please enjoy safely!

Scan QR code or use the link to view our installation video library. https://www.youtube.com/user/golfcartinstructions



