

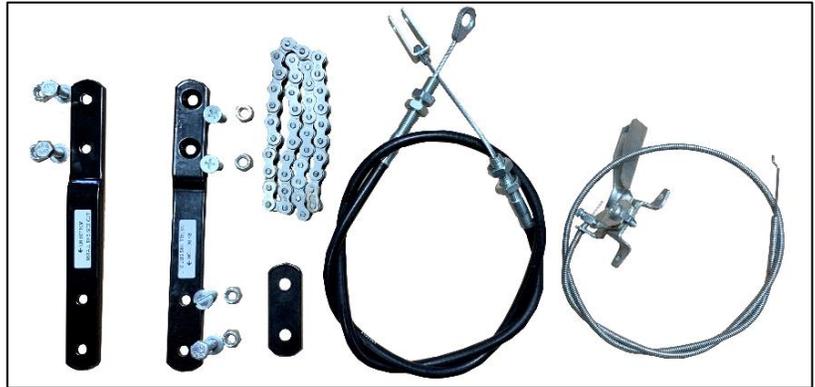


RL20H Handle Extension Kit

INSTALLATION INSTRUCTIONS

KIT CONTENTS

- Extension Brackets (1 left / 1 right)
- Right Side Bracket Spacer
- Mounting Bolts, Nuts & Washers (6 sets)
- Clutch Cable (1)
- Throttle Cable (1)
- Roller lift Chain (40 links)

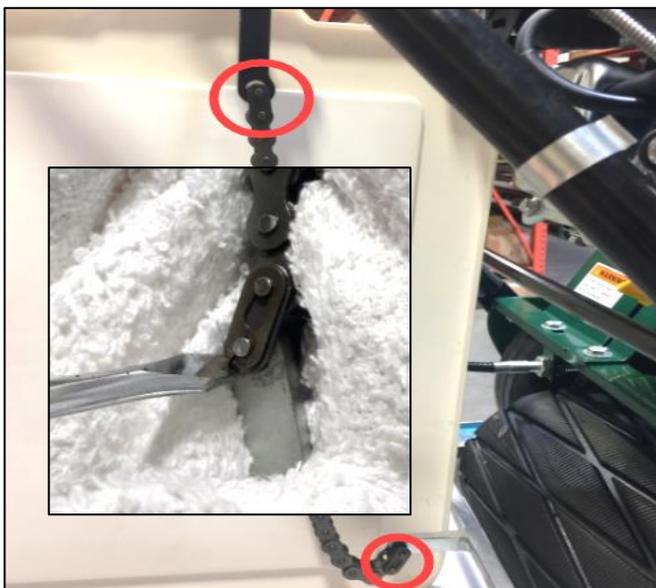


RECOMMENDED HAND TOOLS

- 1/2" combination wrench (2)
- Medium adjustable wrench
- 7/16" & 1/2" sockets
- 3/8" Ratchet & short extension
- Flat head screwdriver
- Phillips head screwdriver
- Channel lock style pliers

Step 1 – Remove Drive Roller Lift Chain

Disconnect each end of the chain by removing master links at the handle and roller frame. **Tip: Use a rag to hold chain and surround the area to catch the clip and use the flat side of the screwdriver to push the open side off.**



Step 2 – Remove Throttle Lever & Wire

- A. Remove the lever from upper handle.



- B. Remove air filter cover to access mounting clamp, loosen the screw to remove outer casing, then remove inner wire from throttle arm. **NOTE: The end is "Z" shaped.**

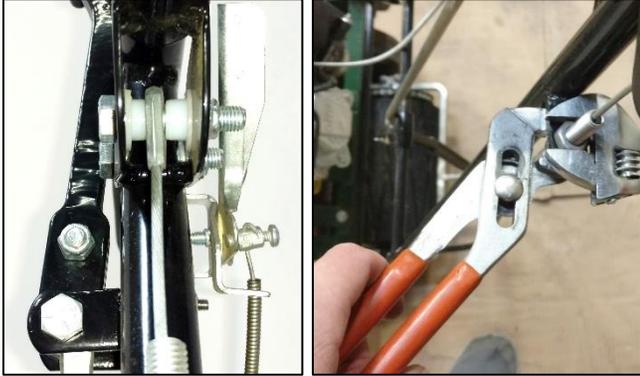




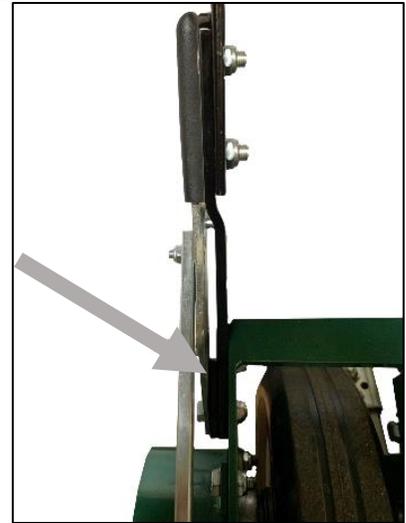
RL20H Handle Extension Kit INSTALLATION INSTRUCTIONS

Step 3 – Remove Clutch Cable – Handle Side

Remove the bolt, nut and spacers from the lever, then loosen the cable adjustment nuts so it can be removed from the bracket.



On the RH side, use the new fasteners supplied and place the spacer between the extension bracket and adjustment bracket (as shown in the image) to provide extra space for



handle movement and position locking. Tighten all fasteners securely on both sides.

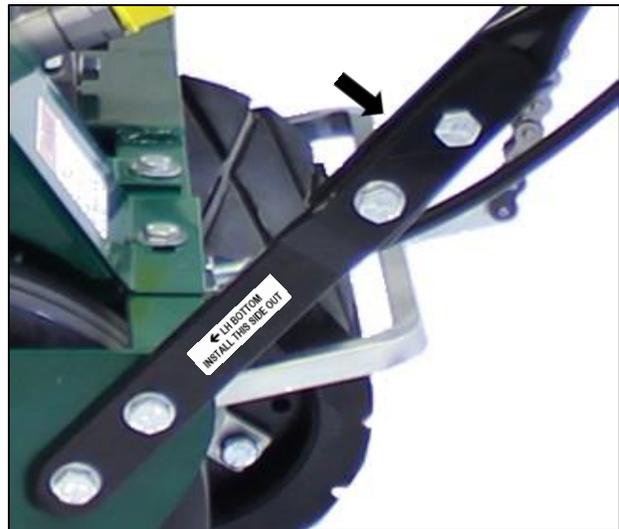
Step 4 – Remove Handle from Frame

Remove 2 x hex head bolts, nuts & washers from the left side. On the right side, move the height adjustment handle for access to the Phillips head bolt. **Note: there are no washers on this side.**



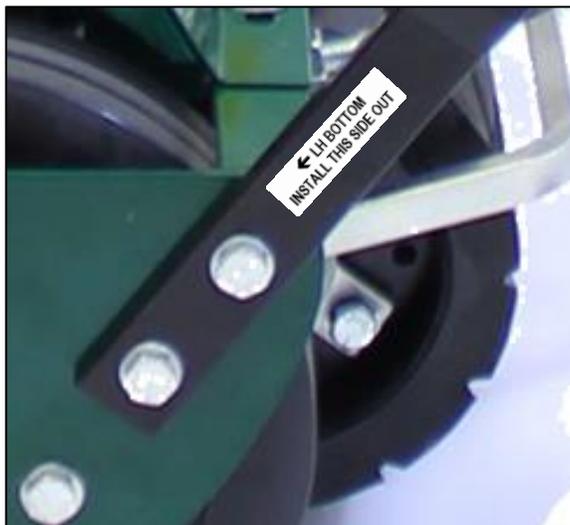
Step 6 – Reinstall Handle

Install the handle onto the extension brackets using the new bolts, washers and nuts provided in the kit. Tighten securely on both sides.



Step 5 – Install Handle Extension Brackets

On the LH side, install in the same position on the frame as the handle just removed, using the same bolts, washers and nuts.



Step 7 – Remove Belt

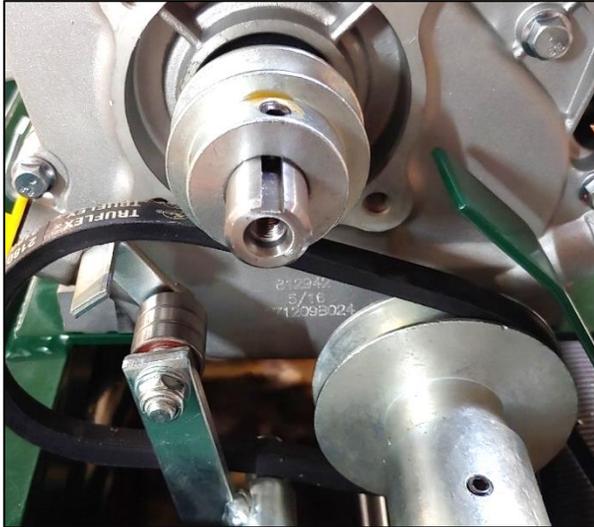
Remove the belt cover (2 x 7/16" bolts).





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Remove the belt from only the engine pulley as shown. This will allow the idler arm to move more freely when installing the clutch cable.



While blocking the front wheels, use the handles to lift/tip the unit forward and slide the jack stand under the drive roller sufficiently, then lower the unit down on to it (the roller will move upward and press against the frame).

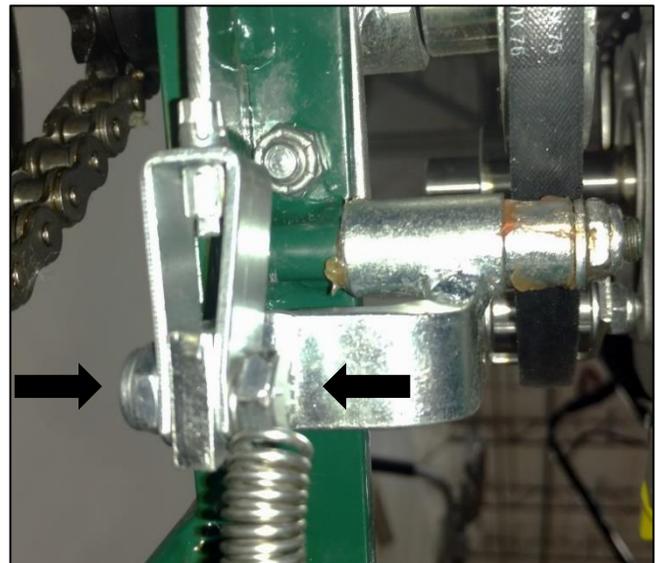
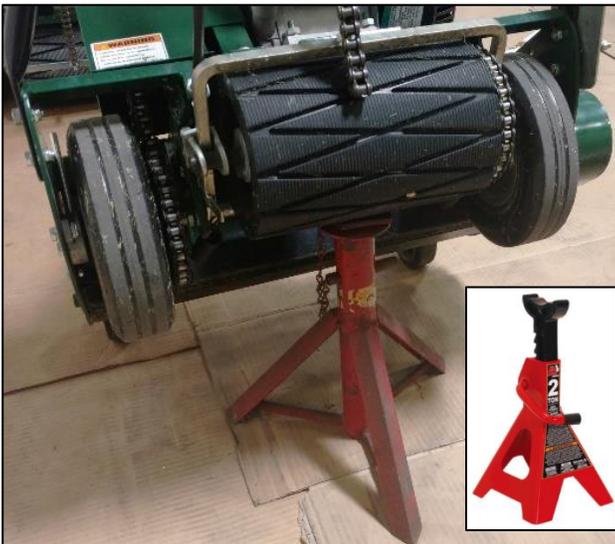
CAUTION: FUEL MAY LEAK IF TIPPED TOO FAR WHEN THE TANK IS COMPLETELY FULL.



Step 8 – Remove Clutch Cable / Frame Side **RECOMMENDED UNIT POSITIONING**

NOTE: The steps of removing / installing the clutch cable includes the end that connects to the idler arm. Access to this location is on the underside of the frame, so it is recommended that the unit be tipped forward and secured in place. A common **jack stand** (10-11" minimum height / available at auto parts stores, Home Depot, Lowes, Walmart, etc.) is an effective way to lift and hold the unit in place.

With the unit tipped forward and secured in place, access the connection bolt & nut and use 2 x 1/2" wrenches to loosen. **NOTE: The return spring is also held in place on then bolt head side of this connection.**

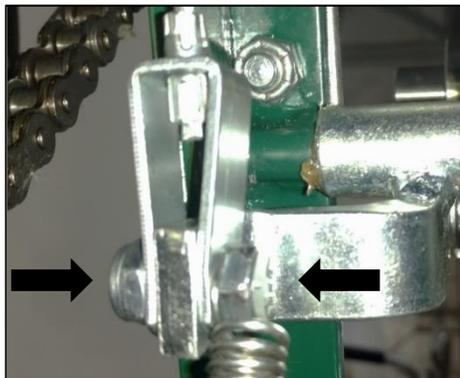


After the end is disconnected, un-screw the inner nut entirely to remove the entire cable from the frame.



STEP 9 – Install (New) Clutch Cable – Frame Side

It's best to immediately install the new cable at this time, so insert the new cable into the frame in the same position (equal threads on both sides), then place the cable end in position and insert the bolt (with the spring still connected) through the cable end and idler arm then install the nut.

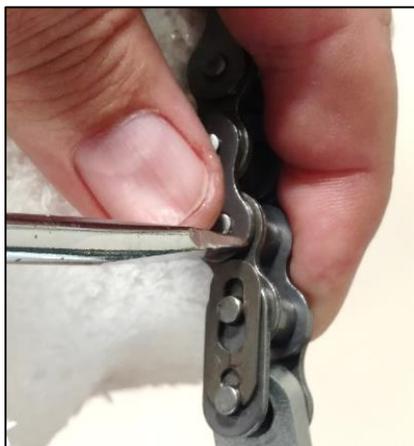


NOTE: Do not tighten the bolt/nut completely as the cable end needs to move freely on the idler arm.

Step 3 – Install (New) Drive Roller Lift Chain

Connect the chain to the roller frame and the handle lift using the master links.

TIP: Hold / pull the chain to keep tight, then place your thumb against the flat edge of screwdriver to push clip into place.



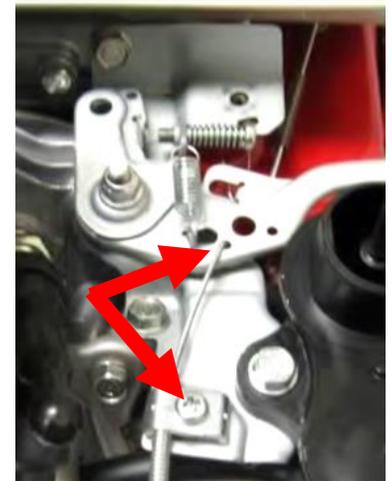
Step 10 – Install (New) Throttle Wire

Insert the "Z" end of the inner wire into the throttle arm on the carburetor, then place the outer cover under the clamp – do not tighten completely. Route the wire underneath the crossbar back and up to the lever mounting point of the upper handle and install. Move the lever to the slow position (turtle icon), then push the wire at the carburetor until the throttle arm is in the corresponding slow position. Tighten clamp screw.

Briggs & Stratton



Honda



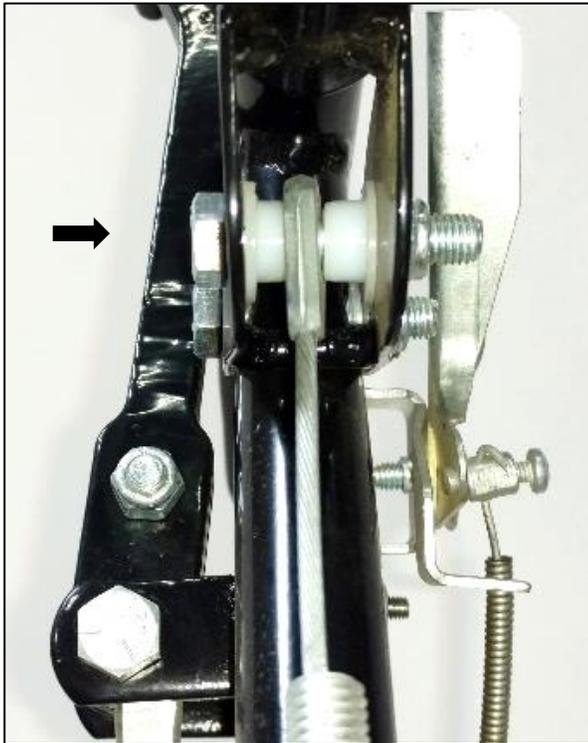
Step 11 – Install (New) Clutch Cable – Handle Side

With the top nut off and the bottom nut at the lower portion of the threads, insert the cable through handle bracket slot, followed by the adjustment section. Install the top nut and move it against the bracket.

NOTE: further movement of the nut (lower) may be needed to provide adequate reach to connect the end to the lever. See pages 5-6 for final adjustment.



Step 12 – Install (New) Clutch Cable – Hand Lever

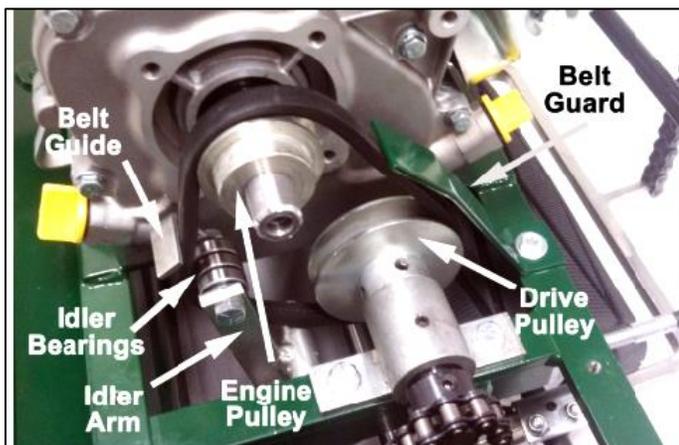


Insert the bolt through the front of the lever, add the first spacer, the cable end, the second spacer then the nut on the back side of the lever as shown in the picture.

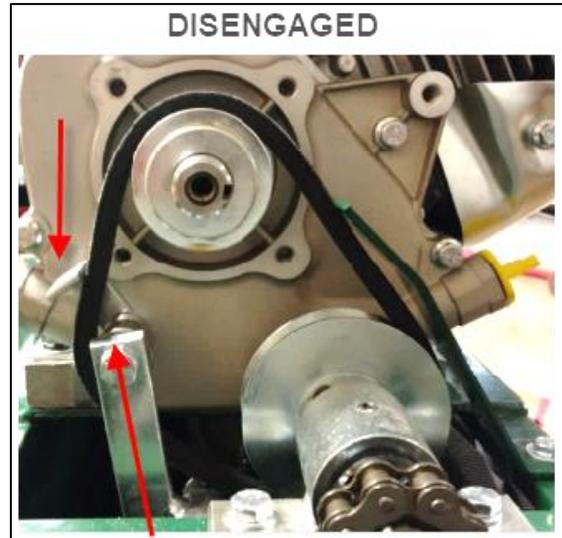
NOTE: do not over-tighten the bolt/nut as the end needs to move freely.

Step 13 – Adjusting Clutch Engagement

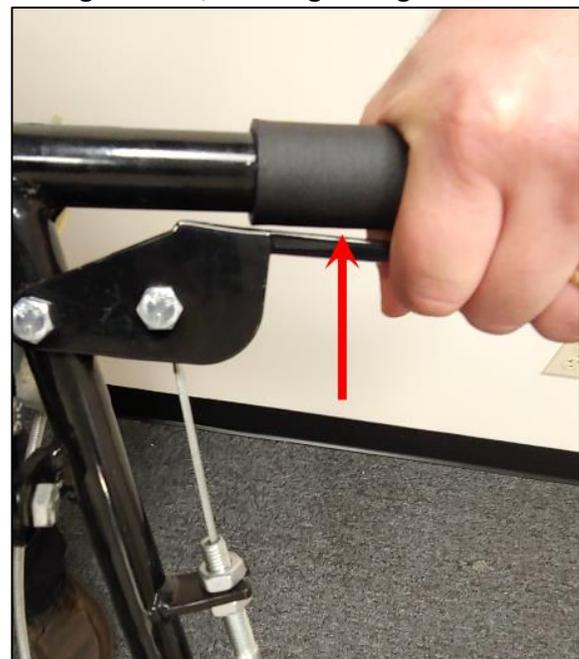
Re-install the belt on to the engine puller and proceed with making the adjustments using the cable. Here is a photo of all the key components...



Adjusting the clutch will ensure the hand lever properly engages and disengages the drive system. The objective of the disengaged position is to ensure the belt is sufficiently out of the groove of the drive pulley. Below is a photo of a typical disengaged belt position, where the idler arm is slightly forward, while the belt guide (in front) and belt guard (in back) are contacting the belt to help push it out of the pulley groove.



Squeeze the engagement lever to check the idler movement and belt engagement / tension. The optimum function is to have the lever get close to touching the handle while the idler is engaging and tightening the belt, creating enough tension.



At this point, there should be visible clearance between the belt, the belt guide (in front) and belt guard (in back).



The idler position and belt engagement tension can be changed by adjusting the clutch cable. Use the lock nuts to move the outer cable in the bracket (which will move the idler position) ... downward moves the idler forward to increase the belt tension / upward moves the idler backwards to decrease the belt tension.



Again, the ideal function is to have firm belt tension when squeezing the lever just before it contacts the handle.

To check the clutch action, verify that the drive roller lift lever is in the up and disengaged position, then start the engine.

CAUTION: IF THE BLADE / REAR DRIVE ROLLER ARE TURNING CONTINUOUSLY WITHOUT ENGAGING (SQUEEZING) THE CLUTCH LEVER, STOP THE ENGINE AND RE-ADJUST.

IMPORTANT: DO NOT ENGAGE THE CLUTCH AND ALLOW REEL BLADE TO SPIN FOR AN EXTENDED AMOUNT OF TIME WHILE NOT CUTTING GRASS. THE DRY CONTACT OF THE BLADE AND BED-KNIFE WILL GENERATE EXCESSIVE FRICTION WHICH EXPANDS THE METAL WHICH CAN CAUSE LOUD SCREECHING SOUNDS.

The belt is a component that, by design, will wear depending on how the clutch is used. Frequent and continual partial engagement (for slower speeds and gradual acceleration) causes the belt to slip which can result in excessive wear and possible premature failure of the belt. Replacement belts are readily available and instructions are posted online at <http://caltrimmer.com>

Once the clutch action is properly adjusted, install the clutch cover and tighten the bolts securely.

