

# Hollrock Engineering, INC.

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## Quick Pick Reverse Ball Picker (QP9RZ & QP15RZ)



Figure 1: QP9RZ 9 ft. Reverse Picker

### Parts List

Your ball washer comes with the following parts:

<u>Part Name</u>	<u>Quantity (9ft) , (15ft)</u>
T Frame	1
H Frame	1
Swivel Channel	1
Cart Mounting Bracket	1
Mounting Bracket Connecting Rod with snap pin	1
3-foot Section Gang	(3) , (5)
Swivel Bracket	(3) , (5)
Wire Range Baskets	(6) , (10)
Extension Arms (15' picker only)	2
<u>Parts Box Content:</u>	
3/4" x 2" Swivel Channel Bolt with nut & washers	1
1/2" x 1-3/4" Swivel Channel Bolts with nuts & washers	2
1/4" x 1-1/2" Swivel Bracket bolt & jam nut	(3) , (5)
1/2" x 3-1/2" Swivel Bracket lower pin	(3) , (5)
Swivel Bracket plastic cap	(3) , (5)
Swivel Bracket stainless steel lower washer	(3) , (5)
Swivel Bracket steel upper washer	(3) , (5)
Swivel Bracket lower pin spring clip	(3) , (5)
1/2" x 1-3/4" Extension arm bolts with nuts (15' picker only)	4

## Assembly

- 1: Attach the one-piece mounting bracket to a solid bumper or mounting frame on the front of the pushing vehicle. Make sure that the bracket is mounted between 18" and 24" above the ground.
2. Gently lay the large T Frame on the ground with the long ends of the swivel collars facing down toward the ground. Slip one large thin stainless steel washer over each spindle shaft, then insert the spindle shafts up into each collar. Add steel washers, then secure each spindle to the T frame by inserting the 1/4" x 1-1/2" bolt through the small hole at the top. Secure with nut and add plastic cap over the spindle shafts onto the collar for protection from the weather. Refer to Figures 2, 3 & 4.

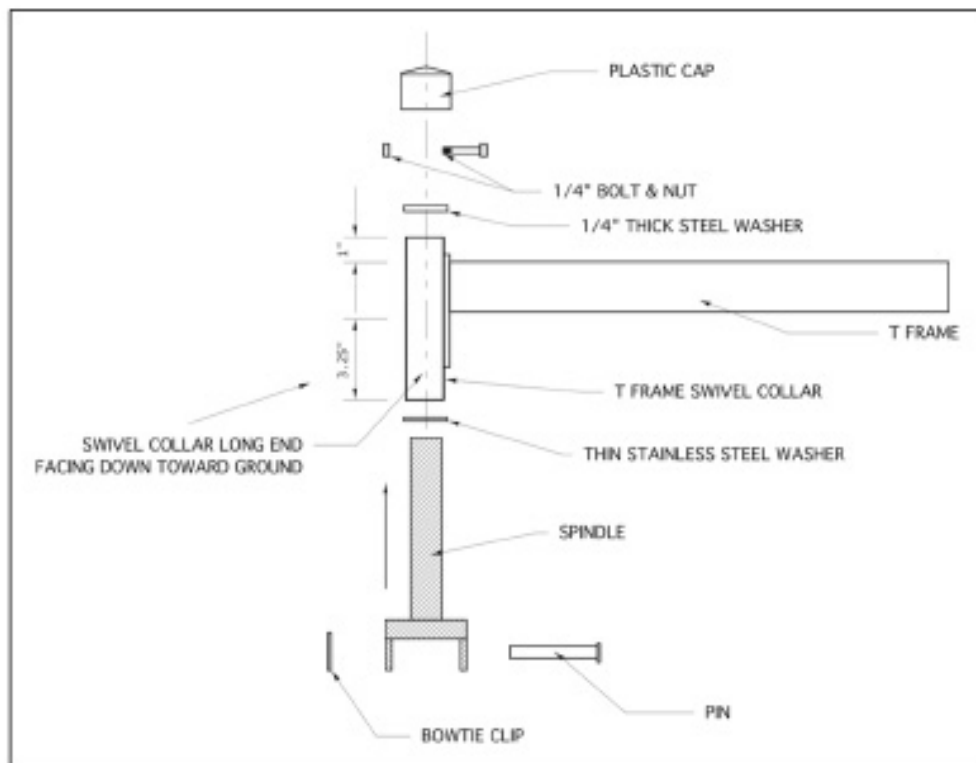


Figure 2: Spindle assembly diagram



Figure 3: Spindle assembled without cap



Figure 4: Spindle assembled with cap

3. Place the picker gangs in position under the T frame as shown in Figure 1. It is very important to make sure the split two-piece spool is placed as the front gang.

4. Attach each picker gang to the swivel brackets using the 1/2" x 3-1/2" pins. Lock each pin into position using the bow tie spring clips. **IMPORTANT:** Be sure to insert the pin from the basket side of the gang so that the bow tie clip is on the disc side of the gang, as seen in Figure 5. Positioning the clip above the discs will prevent interference with basket removal.



Figure 5: Positioning of bow tie clip above discs

5. Using the large 3/4"x2" bolt, attach the swivel channel to the H frame. Tighten snugly allowing only slight movement.

6. Using the two 1/2"x1-1/2" bolts, attach the swivel channel to the T frame.

7. (Model QP15RZ only) Using the four 1/2"x1-3/4" bolts, attach the two extension arms to the T frame. There are right side and left side extension arms. Be sure the swivel bracket collars are in the same position as the T frame collars as detailed in Step 2. Assemble and attach the additional swivel brackets as in Step 2.

### **Routine Maintenance**

Your picker is designed to be used on grass or sod, and pushed by limited-power vehicles such as golf carts. If you drive on a more rugged terrain, you need to adjust your maintenance schedule accordingly. Avoid driving the picker on concrete, crushed stone or asphalt.

Check the spacing of the discs and finger plates. The discs should not be touching the finger plates. Re-shim if necessary. Check all bolts and disc spool rods weekly to make sure that they are tight. Tighten if necessary.

After every 300 hours of use:

- Re-shim the disc spools
- Oil the disc spool axle shafts

## Troubleshooting

With routine maintenance, your picker should operate efficiently. Occasionally, however, you may encounter a problem. Listed below are some common problems and recommended solutions.

Problem	Reason	Solution
Balls are being tossed over the back of the baskets	The picker is being driven too fast.	Slow down
The picker is not picking up all balls.	<ul style="list-style-type: none"> <li>• The picker is being turned too sharply</li> <li>• The threaded spool rods are loose</li> </ul>	<ul style="list-style-type: none"> <li>• Turn the picker less sharply. Straight driving and wide, sweeping turns provide the most effective picking.</li> <li>• Tighten the nuts at the ends of the threaded rods. TIP: As part of your routine maintenance, check the threaded spool rods to see that they are snug.</li> </ul>
A disc (or more) is rubbing against a finger plate.	The disc spool has shifted.	Install axle shims at both ends of the axle to shift the disc spool back to its correct position (see directions below) You should not be able to move the spool back and forth. Call the company for advice, and to order the axle shims. TIP: Check the spacing of the discs and finger plates daily.
Discs are wearing more heavily than expected.	The picker is being driven over a surface other than grass or sod.	Drive the picker only on grass or sod.
The picker squeaks.	The spool axle needs oiling.	Oil the axle. See directions below.
A disc is broken.	<ul style="list-style-type: none"> <li>• The pushing vehicle is too big and you are driving over the disc at the end of the spool.</li> <li>• The picker is being driven too fast.</li> </ul>	<ul style="list-style-type: none"> <li>• Call the company.</li> <li>• Slow down; replace the disc (see directions below)</li> </ul>

<b>Problem</b>	<b>Reason</b>	<b>Solution</b>
A disc is broken (continued)	<ul style="list-style-type: none"><li>• Finger plates are rubbing.</li><li>• The picker is being driven on terrain for which it is not designed.</li><li>• The disc was struck by a line-drive golf ball.</li></ul>	<ul style="list-style-type: none"><li>• Re-shim the disc spool; replace the disc (see directions below)</li><li>• Call the company.</li><li>• Replace the disc (see directions below); avoid driving the picker too close to a busy tee line.</li></ul>

**Directions for oiling the spool axle:**

**NOTE:** Make sure you are using oil that contains no hydrocarbons. Call the company to order oil, if necessary.

**NOTE:** Check to see that the discs are centered in the finger plates and that there is no lateral movement of the spool. If not, re-shim the axle as part of this process (see directions below).

1. Remove the nut and bolt on the side of the red frame that holds the axle in place. The discs spool is now free from the picker frame.
2. Slide the axle out.
3. Apply oil to the axle by smoothing oil over the surface of the axle.
4. Slide the axle back in. Make sure that the discs are centered in the finger plates.
5. Reattach the nut and bolt.

Call the company to order the oil for oiling the spool axle.

**Directions for Re-shimming the spool axle:**

**NOTE:** Estimate the number of shims you will need at each end of the axle so that each disc is centered in its finger plate space.

1. Remove the nut and bolt on the side of the red frame that holds the axle in place. The disc is not free from the picker frame.
2. Slide the axle out.
3. Check to make sure that the axle is oiled adequately. Add oil if necessary.
4. At one end of the frame, align the frame and the shims with your hand.
5. Slide the axle through the frame, shims and disc spool.
6. Align the shims on the opposite end.
7. Continue to slide the axle through the spool, shims and frame.
8. Reattach the nut and bolt.

**Directions for replacing a disc:**

1. Remove the nut and bolt on the side of the red frame that holds the spool axle in place. The disc spool is now free from the picker frame.
2. Slide the spool is now free from the picker frame.
3. Locate the nuts on each side of the disc spool.
4. With a 9/16" wrench on each end of the spool, remove a nut on one end. Repeat for all four nuts.
5. Remove the discs that precede the broken disc, then remove the broken disc.
6. Replace the broken disc.
7. Replace the preceding discs.
8. Replace the nuts snugly on the disc spool.
9. Put the spool back in the frame. Make sure that the discs are centered in the finger plate.
10. Reattach the nut and bolt that the spool axle in the frame.

**Contacts:**

If you have any questions about your picker, contact:

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