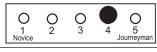


# **BRAVO 25 Blade Spindle Replacement**

# **SERVICE TIPS**

# **DIFFICULTY LEVEL - 4**





**Before working -** always follow all instructions and warnings described in the Operator's Manuals for this mower.

Updated: 09/2011

#### NOTICE:

If you are unsure of how to use these instructions please contact us by e-mail: <a href="mailto:service@ybravo.com">service@ybravo.com</a>

or by phone: 1.888.ybravo.1 (1.888.927.2861)

Tools needed:
Torque Wrench
2 pcs 10mm wrench
1 pcs 13mm wrench
1 pcs 13, 17 and 19mm socket
Screwdriver
Measuring device
"Wire hook"



#### STEP 1

Always remove the ignition cable from the spark plug before performing any service work!



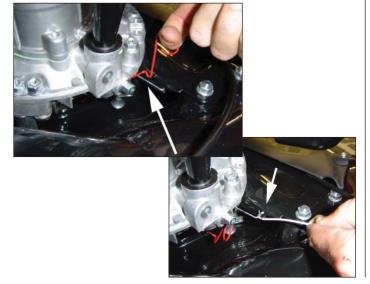
# STEP 2

Remove the three screws for the front belt cover.



#### STEP 3

Unhook the red alert spring and unhook the tension spring (201339-1). It is helpful to make a hook from a thick wire.



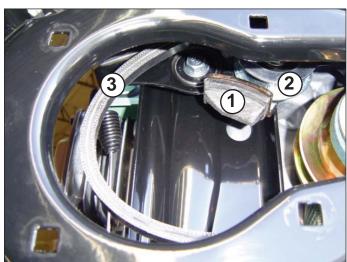
#### STEP 4

Place the mower on the right side and remove the four nuts and bolts for the spindle. Remove the spindle from the deck.



#### STEP 5

Inspect the tensioning arm, brake pad (1), tension pulley (2) and belt (3). You can make a good visual inspection of the parts from the bottom of the deck as well as from the front of the mower. Make sure there is no damage to any of these parts.



#### SPINDLE VERSIONS

Early spindles use one screw (1/2"x20) to tighten the blade. It is critical to use a high torque, minimum 75 ft-lb, when fastening the blade.

New style spindles use two (M10x16mm) screws. Use 30 ft-lb of torque to fasten these screws.

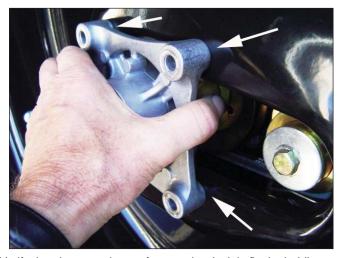


#### CAUTION.

If you are replacing a spindle because the blade struck a hard object and the spindle housing broke it is important to pay extra attention to the following:



If the spindle housing is broken it is possible that the spindle pulley moved to the extent that it damaged the brake pad (1) on the tensioning arm. If needed replace the tensioning arm (201334-1).



Verify that the mounting surface on the deck is flat by holding the spindle against the deck before inserting the screws and tightening the housing. A new spindle housing can break if the mounting surface is uneven.

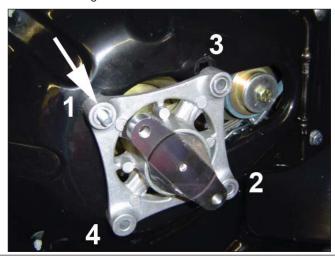
Please contact service at Ybravo.com for advice.

#### **ASSEMBLY**

#### Step 6

Assemble the spindle on the deck.

- Install the belt onto the spindle pulley.
- Carefully position the spindle so that the top left bolt can be inserted (1).
- Install remaining screws in the order illustrated.

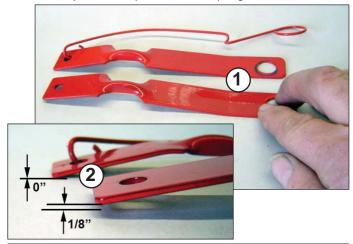


#### STEP 7

Before installing the red alert spring verify it for proper shape.

- Place the alert spring on a flat surface.
- Press the end of the spring (1) against the surface.
- The distance at (2) should be from 0" to 1/8".

If needed adjust the shape of the alert spring.



STEP 8

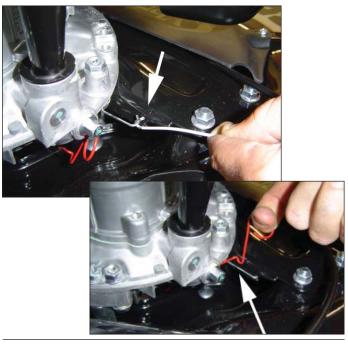
Install the nuts and red alert spring.

When tightening the nut for the alert spring it is important to prevent the red spring arm from rotating.



#### STEP 9

Install the tension spring (201339-1) and hook up the red alert spring. Note: Follow the instructions for the cable adjustment before installing the front belt cover.



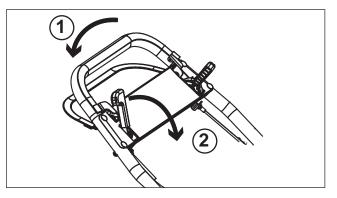
#### **STEP 10**

Make a measurement of the length of the spring without any tension on the cable. The total length is approximately 2 inches.



## STEP 11

Engage the BBC control and block the upper bail from releasing the brake.



#### **STEP 12**

The stretched out length of the spring should now measure 5/16 to 3/8 inch more than the first measurement. If necessary make an adjustment with the adjustment screws on the cable. Note: If the spring stretches more than 3/8" inch it can cause premature damage and breakage of the spring.



#### WARNING

If a BBC cable is replaced or work is performed to the BBC system on the Bravo 25 mower it is important to adjust the cable tension correctly. Failure to adjust the cable correctly can cause damage or a complete malfunction of the BBC system. A malfunction can cause serious injury. ALWAYS refer to the Operator's Manual for the complete testing procedure of the BBC function.

This instruction assumes that the BBC cable is properly in place and that the BBC control on the handle is in operational condition and not damaged or broken.

### **BBC Function Test - Before each use**

A simple test to verify the BBC function is to install an empty grass collection bag. The mulch plug should not be installed.

- 1. Start the engine.
- 2. Engage the blade. Notice how the noise changes and that the bag becomes "inflated".
- Release the upper control bar. If the bag does not "deflate" immediately, it indicates that the blade is still engaged and rotating
- If the bag deflated <u>verify</u> that the blade has stopped rotating by removing the grass bag and look at the stopped blade through the grass discharge chute.



# **WARNING**

NEVER insert a hand or any other object in the grass discharge chute to verify that the blade has stopped.

If the blade continues to run (no change in the noise or size of the grass bag) after releasing the upper control bar it is an indication of a malfunction of the BBC system.

If the blade did not stop during the BBC Function Test procedure or if you are unsure immediately stop the engine by using the throttle control on the left side of the control panel. The BBC system will require a repair before further use. Immediately contact Ybravo.com for advice. Do not under any circumstances defeat the function of the BBC system. This can cause serious injury or death.