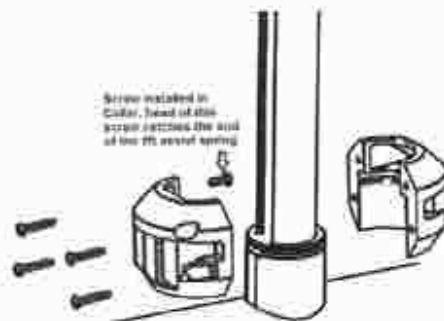


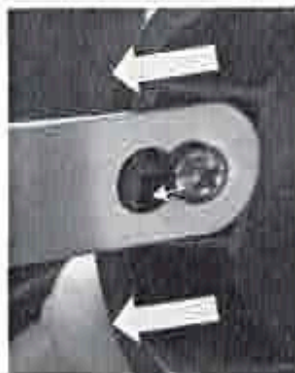
Note: These instructions assume the motor is disconnected from its power source and if replacing the Lift Assist Spring Assembly, that the control box cover and control box have been removed from the upper end of the shaft. It is not necessary to remove the control box cover and control box if only the lower collar is being replaced.

**Lower Collar Removal**

1. Place the motor in the stowed position. This limits the distance the spring will travel and the damage it can cause if you would happen to lose control of it.
2. With one hand maintain pressure on the two collar halves so they do not release when the four screws holding the collar together are removed; remove the four screws that hold the collar halves together.



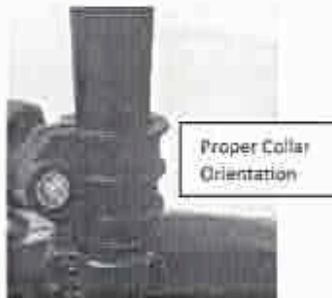
3. Gently allow the collar halves to separate and allow the back collar half to retract until it is resting against the bottom edge of the drive housing.
4. If only servicing the collar continue to the lower collar installation section. If replacing/servicing the lift spring assembly, deploy the motor, pull the spring out 6-8 inches, firmly grasp the spring, remove the lower collar from the spring by pushing it up until the screw head moves from the narrow portion of keyhole slot to the open area then slide it out. Immediately attach your lift spring assembly tool by positioning the post of the tool in the keyhole slot. Note: The tool will install from the side of the spring assembly opposite from the side the collar was attached. The raised/offset portion of the tool will be oriented away from the shaft when properly attached.



**Lift Spring Removal**

The following steps assume the motor is deployed with the control box cover, control box, and lower collar removed and the lift spring tool engaged in the end of lift spring; if the motor is not in this condition please review the previous Section (Lower Collar Removal)

1. Position the tool flat against the flat side of the Terrova Shaft. If the tool was installed correctly the button and the bump should be facing out with a flat surface against the tube.
2. Allow the tool to slide up through the drive housing until there is no pressure on it.
3. Support the motor lower unit if it is not contacting the floor, then remove the depth collar. Note the orientation of the depth collar, it does matter which end is up. Extra rib is toward the bottom.
4. Lift the Lift Assist Spring Assembly and the tool up the shaft, then clear of the shaft.

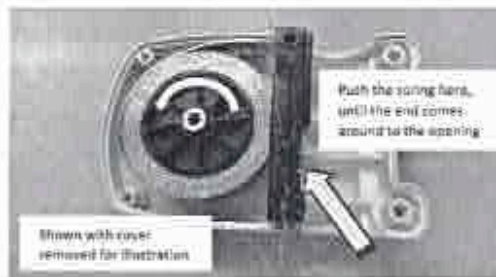


**Lift Spring Assembly Prep**

The Lift Spring Assembly will sit with 3-4" of spring pulled out; unfortunately a certain amount of vibration will allow the spring to retract so when you receive a new lift spring assembly the spring may be fully retracted.

If it is fully retracted:

To gain access to the spring reach into the tube opening from the bottom end and push upward on the spring assembly until the end comes around to the opening. Once the end is at the opening it will be possible to use the lift spring assembly tool to hook the end of the spring and pull it out of the housing. You may also use a hook shaped pick tool to pull the spring out of the housing.



**Lift Spring Assembly Installation**

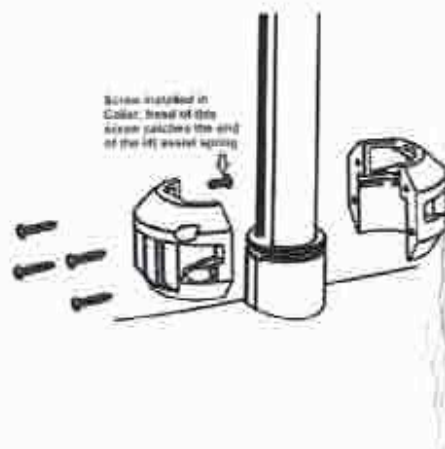
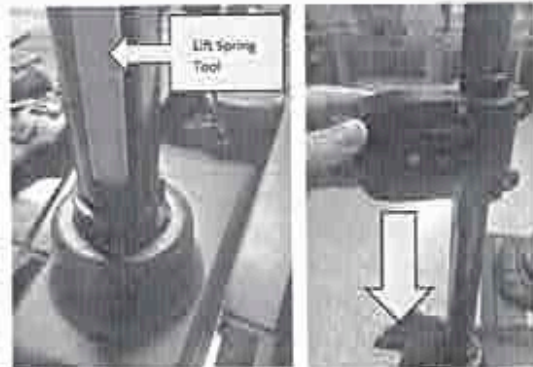
The following steps assume the motor is in the deployed position, with the control box cover, control box, depth collar and all components of the lift spring housing and lower collar removed.

1. Attach the lift spring tool to the end of the spring assembly. Looking at the bottom of the lift spring assembly where the tail of the spring is extended out attach the tool so the raised portion/offset is oriented away from you and toward the lift spring housing.



**Note:** As you position the tool and lift spring housing and slide them onto the shaft do not allow the tool to be retracted completely into the lift spring housing, once between the motor and lift spring housing the tool will be stuck if too far into the housing. If this happens slide the lift spring housing up and off the top of the tube, extend the lift spring and lift spring tool a couple inches down the shaft and then reposition the lift spring housing on the tube. Once the tool and housing are on the shaft the tool cannot retract far enough into the housing to become an issue.

2. Place the handle end of the tool against the flat side of the Terrova Shaft with the raised portion/offset oriented away from the shaft.
3. Slide the tool down the shaft, keeping it tight to the shaft and guiding it through the steering housing. As the top of the tool reaches the top of the shaft guide the lift spring housing onto the motor shaft.
4. Verify that the screw in the inside diameter of the back half of the lower collar is installed and that there is enough of a gap behind the screw to catch the slotted hole at the end of the spring assembly.





5. Pull the handle of the lift spring tool toward the lower unit until 4-5 inches of the lift spring is extended beyond the bottom of the steering housing. Firmly grasp the lift spring, remove the lift spring tool from the end of the lift spring, and attach the back half of the lower collar to the end of the lift spring. Use a #2 Phillips Screwdriver to tighten the screw in the collar until it is snug (not tight, but leaving little to no movement of the spring between the body of the collar and the screw).



6. Allow the collar half to rest against the bottom of the steering housing. Stow the motor.

### Lower Collar Installation

The following steps assume the motor is in the stowed position with the lift assist spring housing against the top side of the drive housing and the lift assist spring attached to the lower collar, with the lower collar resting against the bottom side of the drive housing.

If only replacing the lower collar assembly (having skipped the previous two sections of this document) pull the old collar far enough out to allow you firmly grasp the spring (3-4"), grasp the spring, slide the collar half up the spring to allow the screw in the collar half to pass through the wider portion of the keyhole in the spring and remove the old collar half. Replace the old collar half with the replacement one.

1. With the motor stowed place the front collar half against the motor bung so that the raised detail on the inside diameter of the collar is in the groove of the motor bung (groove is located at the top of the bung just below the plastic bung cap). Make sure the 4 screws that hold the lower collar halves together are readily available.
2. Pull the back collar half and spring out of the steering housing and place the collar half on the motor bung so it aligns with the front collar half. Install and tighten the 4 screws that secure the lower collar in place.



Once the screws are installed, complete the installation by reinstalling the depth collar, control box cover and control box, if they were removed.