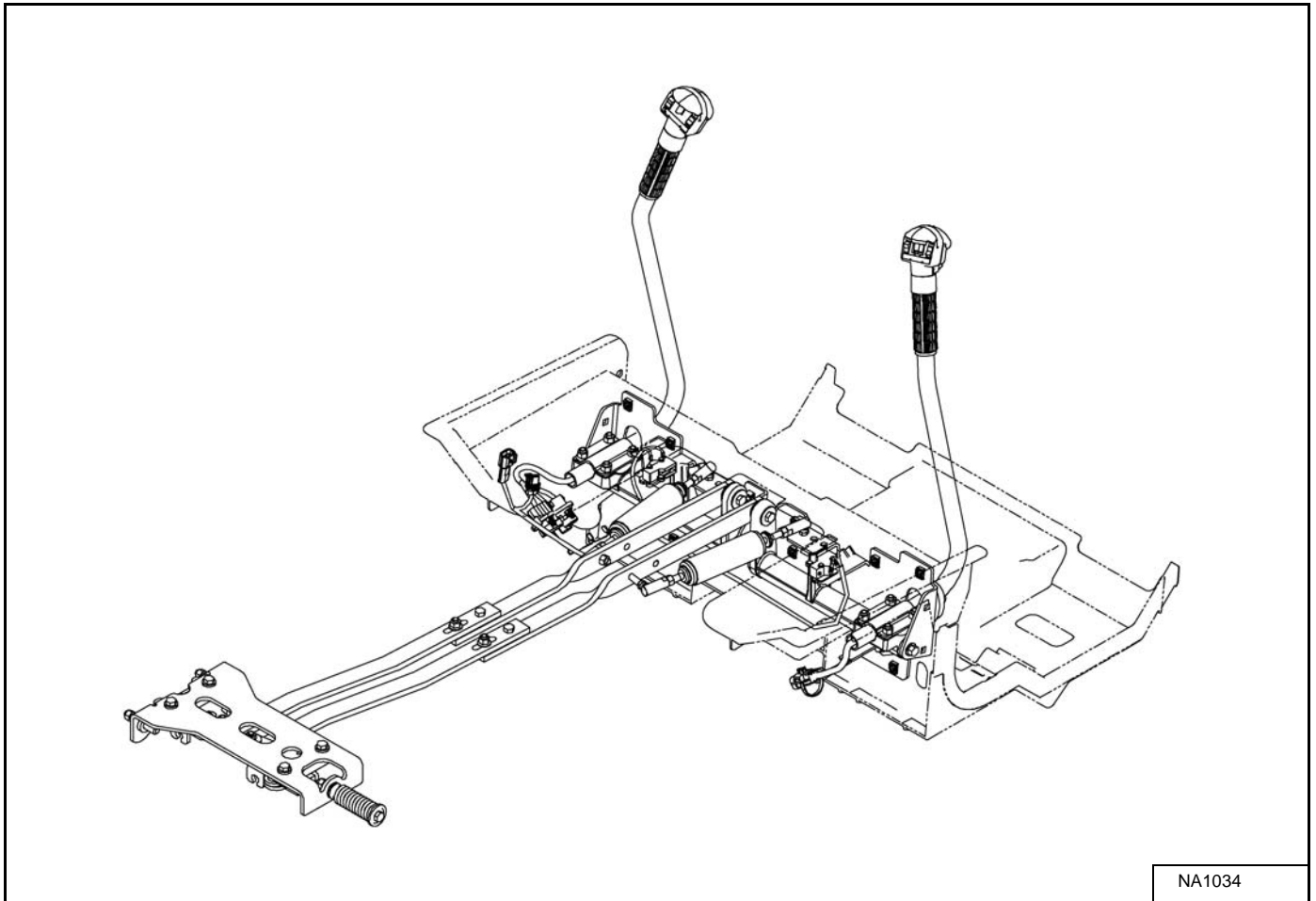


## CONTROL PANEL

### Description

Figure 50-100-1



The steering system consists of independent steering levers the operator uses to provide steering input to the loader.

The steering levers are attached to pivoting bellcranks that pivot on a steering shaft and plastic bushings.

The forward travel is adjusted by drift adjustment bolts.

The bellcranks are attached to steering linkage bars with torsion bushings pressed into the bellcranks. Bellcranks mount to the control handle assembly and mount to the control panel.

Steering linkage bars are a two-piece design. Steering linkage bars are adjustable in length for "full travel adjustment".

Steering linkage bars attach to the pintle arms where a rubber torsion bushing is pressed into the pintle arms.

Pintle arms are of a two-piece design that allow easy adjustment of the neutral or "creep".

The steering system returns the levers to their starting position by means of the centering spring and the returning force of the torsion bushings.

**NOTE: Torsion bushings need to be replaced if torn or rotating in the housing. Loosen torsion bushing bolts slightly before adjustments are made.**

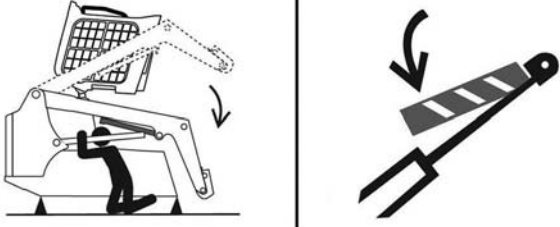
Sequence of steering adjustments:

1. Set neutral of pintle arms, "creep"
2. Set full travel at steering linkage bars
3. Set drift at drift adjustment bolts

## CONTROL PANEL (CONT'D)

### Removal And Installation

**! DANGER**



P-90328

#### AVOID DEATH

- Disconnecting or loosening any hydraulic tubeline, hose, fitting, component or a part failure can cause lift arms to drop.
- Keep out of this area when lift arms are raised unless supported by an approved lift arm support. Replace if damaged.

D-1009-0409

**! WARNING**

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

W-2059-0598

**! WARNING**

Put jackstands under the front axles and rear corners of the frame before running the engine for service. Failure to use jackstands can allow the machine to fall or move and cause injury or death.

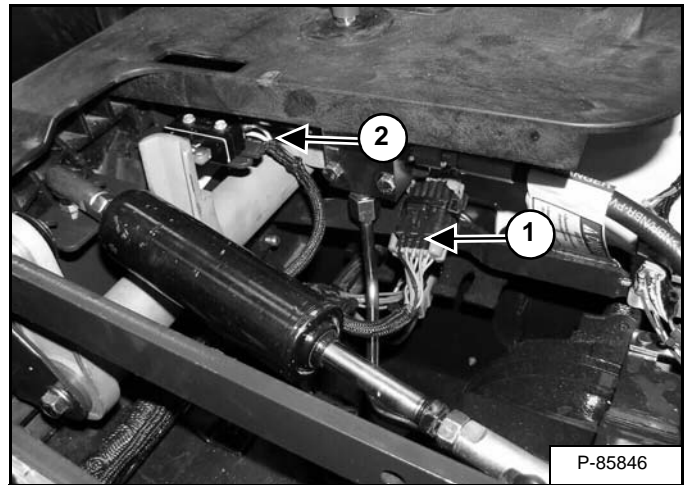
W-2017-0286

Lift and block the loader. (See Procedure on Page 10-10-1.)

Raise the lift arms and install an approved lift arm support device. (See Installing on Page 10-20-1.)

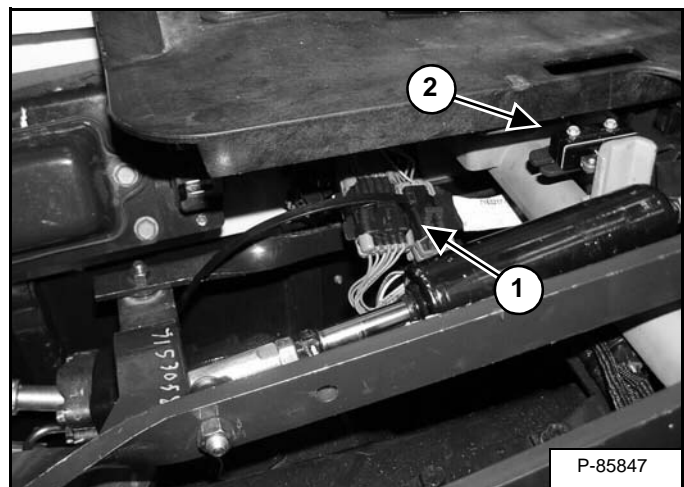
Raise the operator cab. (See Raising on Page 10-30-2.)

Figure 50-100-2



P-85846

Figure 50-100-3



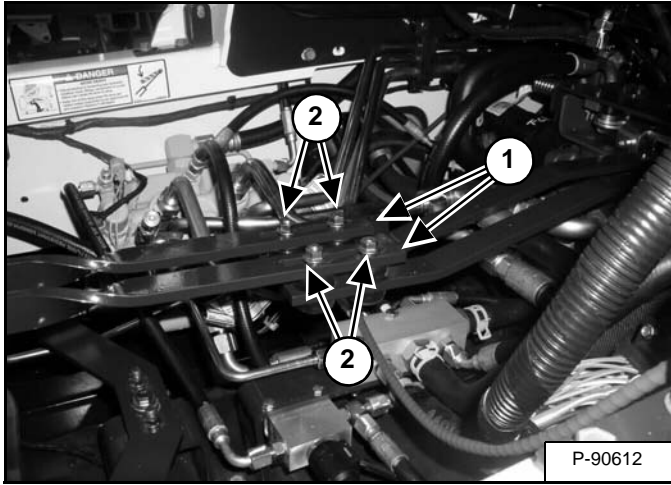
P-85847

Disconnect the control harness connectors (Item 1) and the back-up alarm wires (Item 2) [Figure 50-100-2] & [Figure 50-100-3] from the control levers.

## CONTROL PANEL (CONT'D)

### Removal And Installation (Cont'd)

Figure 50-100-4



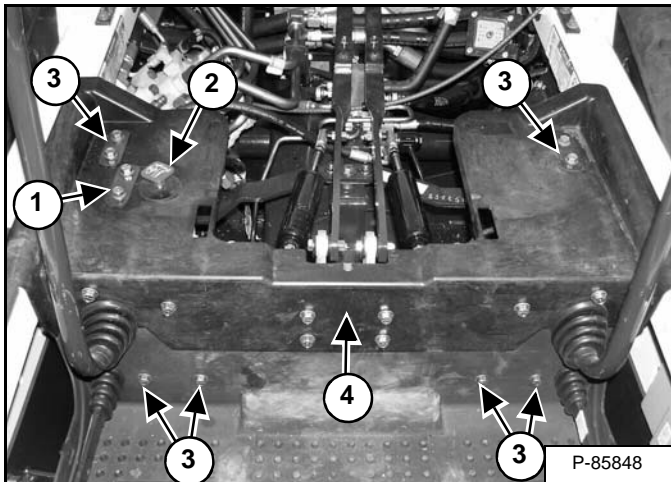
Scribe a mark across the top of the steering linkage bars (Item 1) [Figure 50-100-4] which are connected to the steering shaft on the control panel.

Remove the four steering linkage mounting bolts, nuts and rubber isolators (Item 2) [Figure 50-100-4].

Inspect and replace any damaged parts.

**Installation:** Align the marks on the steering linkage bars. Tighten the steering linkage mounting bolts to 47,5 - 54,2 N•m (35 - 40 ft-lb) torque.

Figure 50-100-5



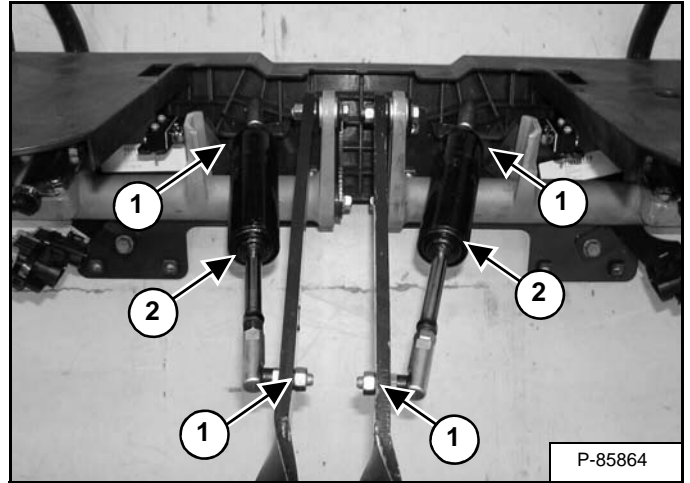
Remove the two bracket mounting bolts (Item 1) and the knob (Item 2) [Figure 50-100-5] from the lift arm bypass valve.

Remove the eight control panel bolts (Item 3) and the control panel assembly (Item 4) [Figure 50-100-5].

## Disassembly And Assembly

Remove Control Panel. (See Removal And Installation on Page 50-100-2.)

Figure 50-100-6



Remove the nuts (Item 1) and the steering stabilizers (Item 2) [Figure 50-100-6].

## CONTROL PANEL (CONT'D)

### Disassembly And Assembly (Cont'd)

Figure 50-100-7

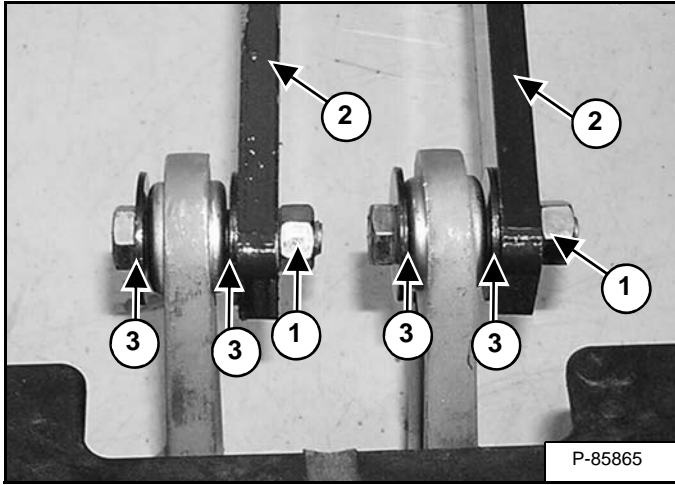
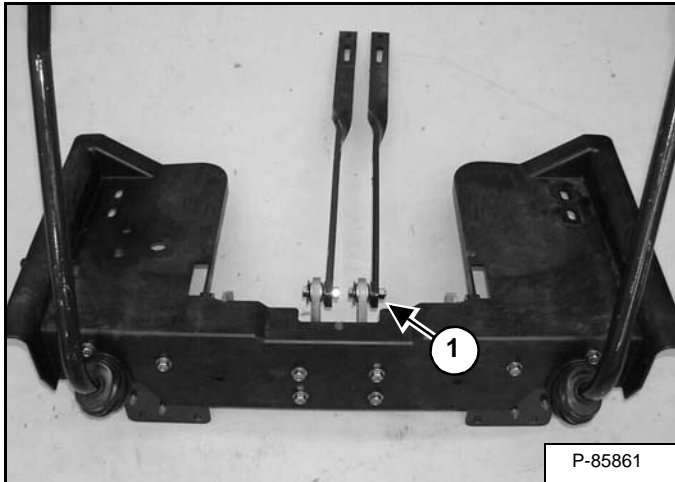


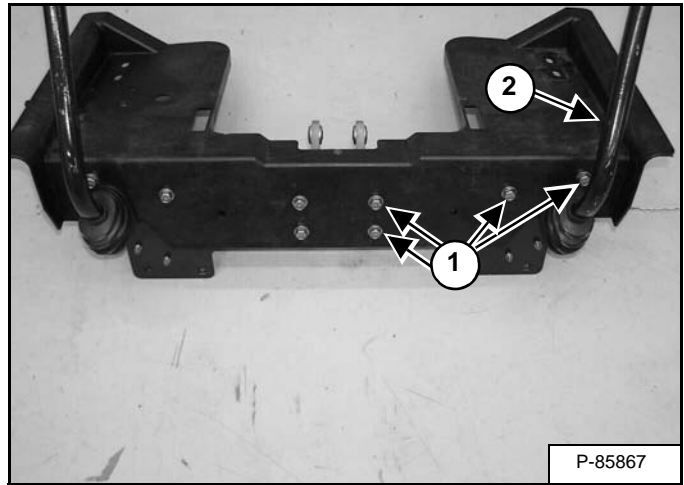
Figure 50-100-8



Remove the bolt and nut (Item 1), steering link, (Item 2), and washers (Item 3) [Figure 50-100-7] and [Figure 50-100-8].

**Installation:** Verify correct orientation of components [Figure 50-100-7] and [Figure 50-100-8].

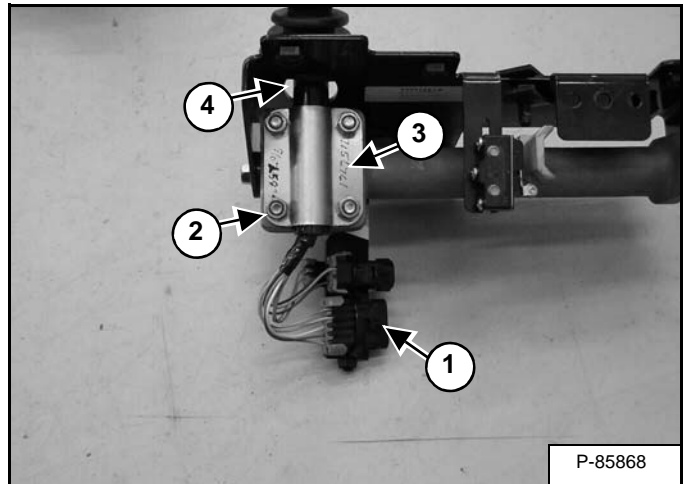
Figure 50-100-9



Remove the four bolts (Item 1) [Figure 50-100-9] from the control panel.

Remove the control handle assembly (Item 2) [Figure 50-100-9].

Figure 50-100-10



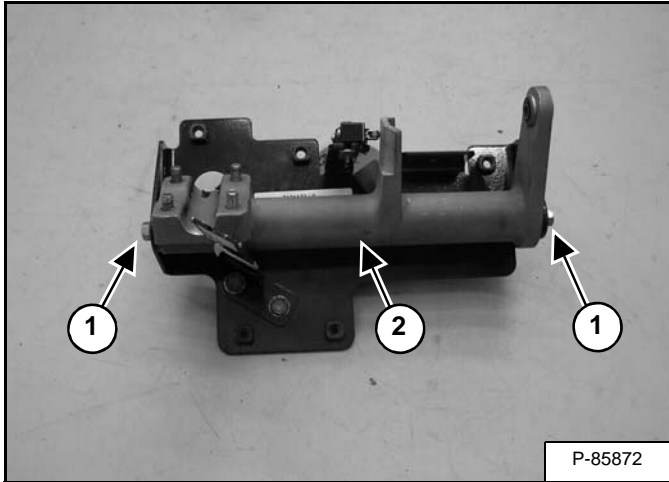
Remove the tie straps (Item 1), the four nuts (Item 2), and the plate (Item 3) [Figure 50-100-10].

Remove the control handle (Item 4) [Figure 50-100-10].

## CONTROL PANEL (CONT'D)

### Disassembly And Assembly (Cont'd)

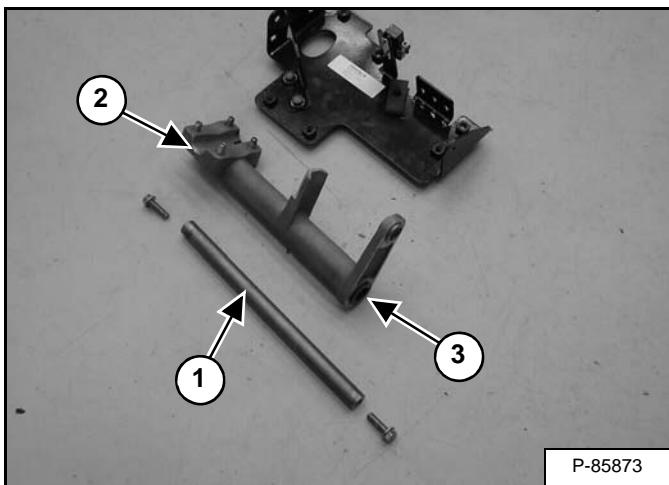
Figure 50-100-11



Remove the two bolts (Item 1) from the bellcrank (Item 2) [Figure 50-100-11].

Remove the bellcrank from the bracket [Figure 50-100-11].

Figure 50-100-12



Inspect the shaft (Item 1), the bellcrank (Item 2), and the bushings (Item 3) [Figure 50-100-11] for wear and replace as need.

Repeat the procedure for the other control handle assembly.

## Linkage Removal And Installation

### **WARNING**

Never work on a machine with the lift arms up unless the lift arms are secured by an approved lift arm support device. Failure to use an approved lift arm support device can allow the lift arms or attachment to fall and cause injury or death.

W-2059-0598

### **WARNING**

Put jackstands under the front axles and rear corners of the frame before running the engine for service. Failure to use jackstands can allow the machine to fall or move and cause injury or death.

W-2017-0286

Lift and block the loader. (See Procedure on Page 10-10-1.)

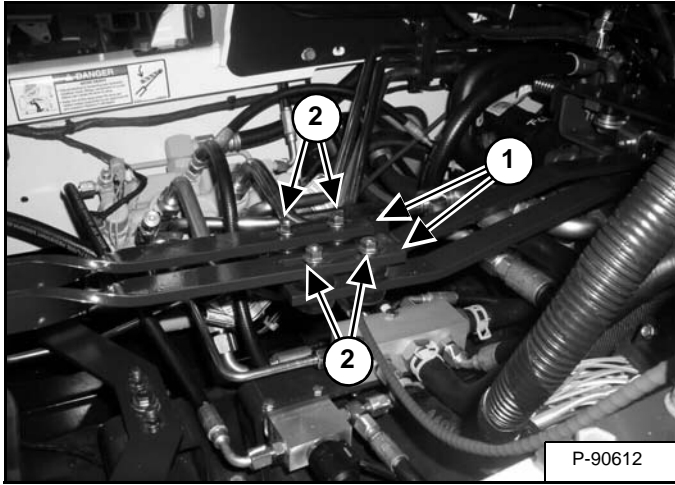
Raise the lift arms and install an approved lift arm support device. (See Installing on Page 10-20-1.)

Raise the operator cab. (See Raising on Page 10-30-2.)

## CONTROL PANEL (CONT'D)

### Linkage Removal And Installation (Cont'd)

Figure 50-100-13



Scribe a mark across the top of the steering linkage bars (Item 1) [Figure 50-100-13] which are connected to the steering shaft on the control panel.

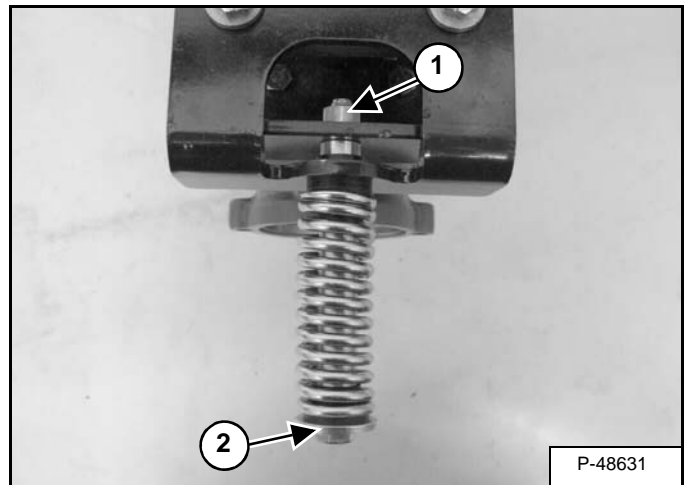
Remove the four steering linkage mounting bolts, nuts and rubber isolators (Item 2) [Figure 50-100-13].

Inspect and replace any damaged parts.

**Installation:** Align the marks on the steering linkage bars. Tighten the steering linkage mounting bolts to 47,5 - 54,2 N•m (35 - 40 ft-lb) torque.

**NOTE:** After removal and installation of the linkage, the linkage neutral adjusting procedure must be performed. (See Linkage Neutral (Adjusting) on Page 50-100-10.)

Figure 50-100-14

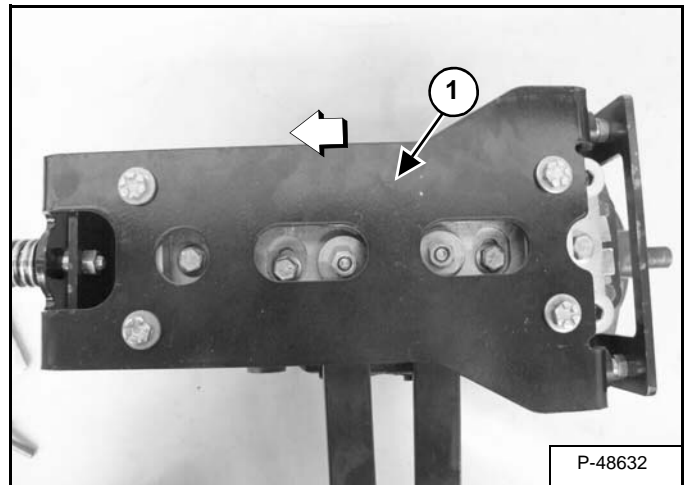


Remove the nut (Item 1) from the end of the centering spring shoulder bolt (Item 2) [Figure 50-100-14].

Remove the bolt / spring assembly.

**Installation:** Tighten the centering spring bolt and a NEW lock nut to 34 - 38 N•m (25 - 28 ft-lb) torque.

Figure 50-100-15



Slide the centering plate (Item 1) [Figure 50-100-15] to the right to remove it from the hydrostatic pumps.

**NOTE:** Directions are shown and stated as if you were sitting in the operator's seat.