

# How to use this file...(Installation Instruction Sheets)

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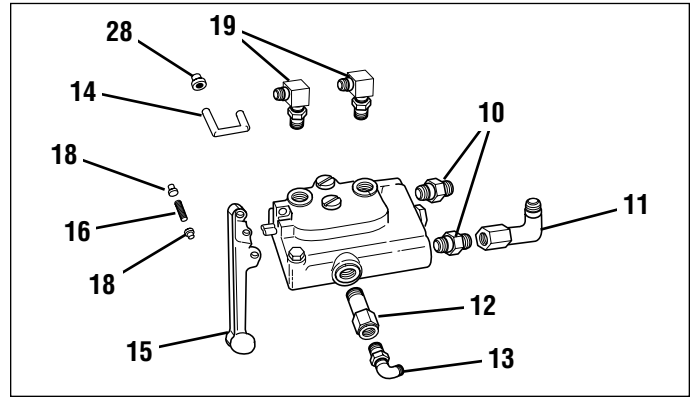
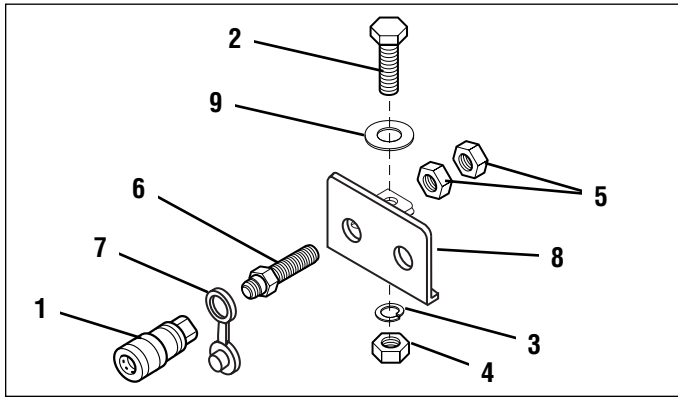
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# Installation Instructions

## Rear Auxiliary Hydraulic Kit

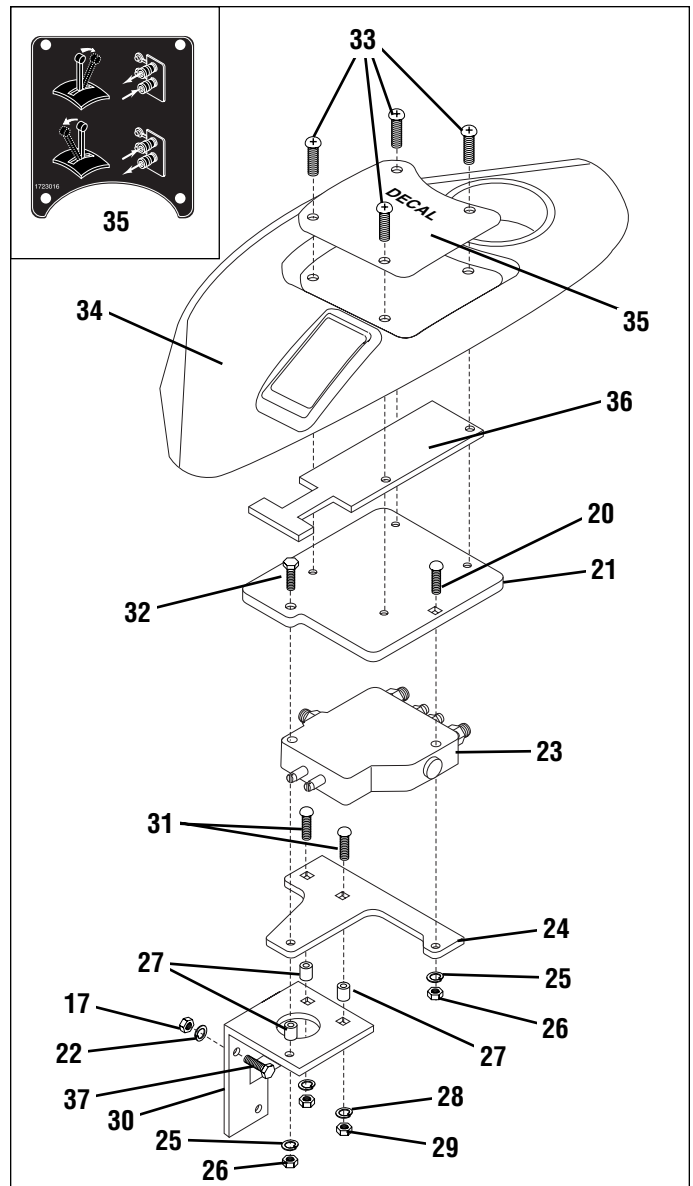
Mfg. No. 1694122

For Legacy / 2000 / 2900 Series Garden Tractors



### Kit Contents:

Ref	Part No.	Qty.	Description
1	1723130	2	COUPLER ASMY, Hydraulic
2	1921176	2	CAPSCREW, 1/2-13 x 1-1/4
3	1916966	2	LOCKWASHER, 1/2
4	1916951	2	NUT, 1/2-13
5	1723146	4	LOCKNUT, 3/4-16
6	1723132	2	FITTING, Bulkhead
7	1723131	2	CAP, Dust Cover
8	1723011	1	BRACKET, Rear, Couplers
9	1924361	2	WASHER, 1/2
10	1718435	2	FITTING, Large
11	1719132	2	FITTING, 90°
12	1717647	1	PORT, Pressure Beyond
13	922523	1	FITTING, 90°
14	1719218	1	LINK, RH
15	1719224	1	LEVER ASSY, Vinyl Coated
16	916001	1	ROLL PIN, 3/16 x 1
17	1916622	2	NUT, 1/4-20
18	1960140	2	PAL NUT, 3/16
19	1675789	2	FITTING, 90°
20	960651	1	CARRIAGE BOLT, 1/4-20 x 2-1/2"
21	1723012	1	COVER, Mounting Plate
22	1916964	2	LOCKWASHER, 1/4
23	1718418	1	VALVE ASSY., Single Spool
24	1723014	1	PLATE, Valve Mounting
25	1916964	2	LOCKWASHER, 1/4-20
26	1916622	2	NUT, Hex, 1/4-20
27	1706644	3	SPACER, 3/8 x 3/4 x 1
28	1916964	2	LOCKWASHER, 5/16
29	1916622	2	NUT, 5/16-18
30	1718991	1	SUPPORT ASSY, Valve
31	1931338	2	CARRIAGE BOLT, 5/16-18 x 1-3/4
32	960603	1	CAPSCREW, 1/4-20 x 3-1/2
33	1926025	4	SCREW, Phillips Hd, 1/4-20 x 1/2
34	1719393	1	POD, Seat Deck
35	1723016	1	DECAL, Hydraulic Levers
36	1723013	1	INSERT, Hydraulic Levers
37	1923341	2	CAPSCREW, 1/4-20 x 3/4
38	1960126	1	PAL NUT, 1/4

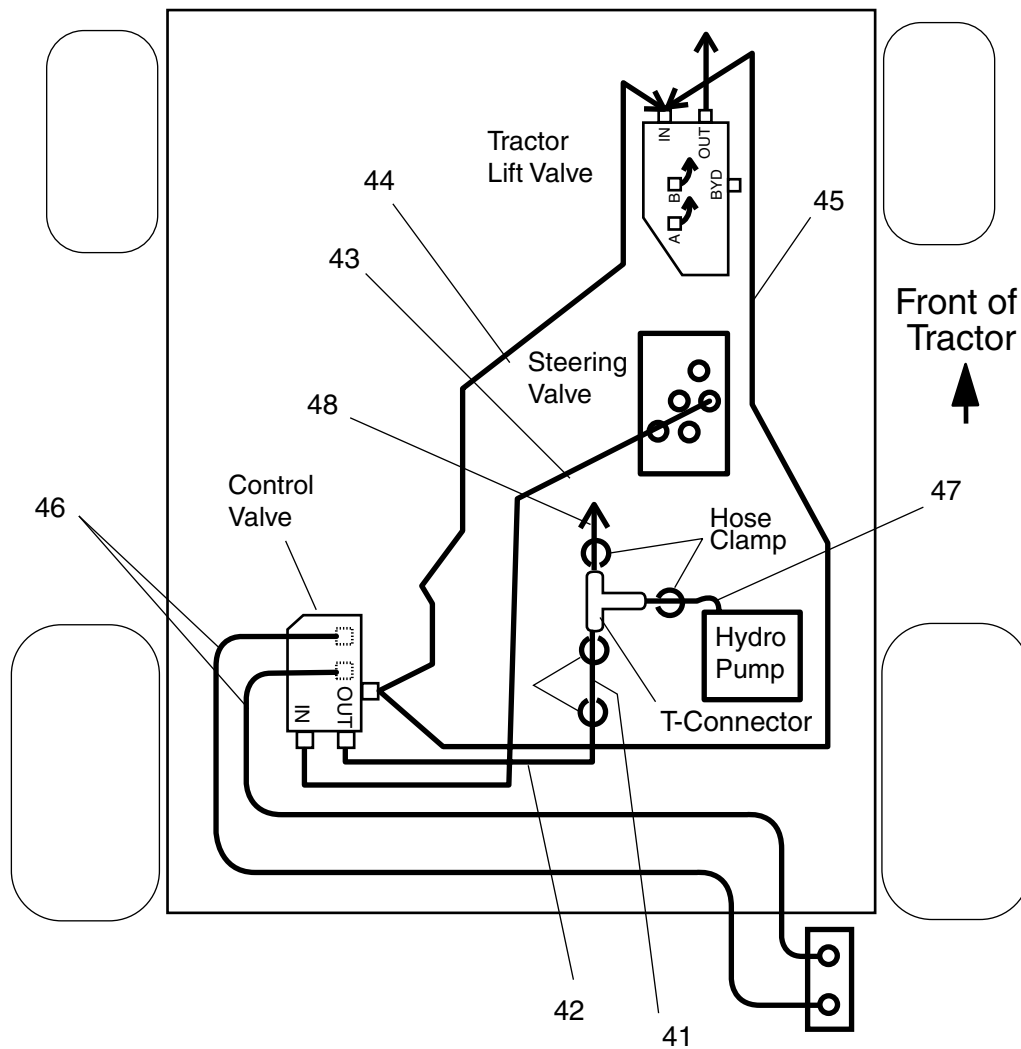
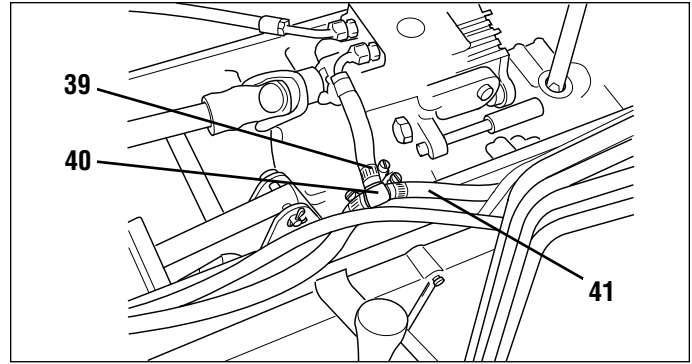


# Installation Instructions

## Rear Auxiliary Hydraulic Kit

39	960266	4	CLAMP
40	1719564	1	FITTING, "T"
41	1718413	1	HOSE
42	1719216	1	TUBE ASSY, Return
43	1719215	1	TUBE ASSY,
44	1719330	1	TUBE ASSY, Valve to Valve, Gas
45	1719331	1	TUBE ASSY, Valve to Valve, Diesel
46	1723133	2	HOSE ASMY, Valve to Coupler
47	1719861	1	HOSE, Hydraulic, 1/2 x 3/4 x 5-3/4
48	1719860	1	HOSE, Hydraulic, 1/2 x 3/4 x 32
*	1701011	3	TIE, Self-locking, 15" Long

\* Not Pictured



This kit provides two rear auxiliary hydraulic connections.

## PROCEDURE

### General

Installation of this kit requires the following procedures to be carried out:

- Removal of the seat deck, dashboard, and tunnel.
- Installation of new mounting brackets and hydraulic lines.
- Installation of a new single-pool control valve.
- Reinstallation of the tunnel, dashboard, and seat deck.

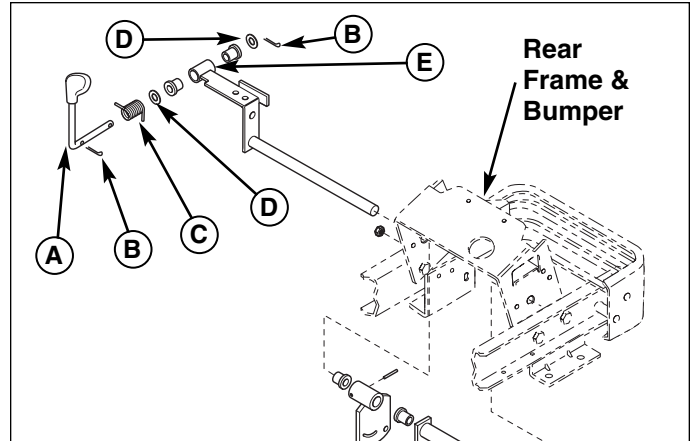
## WARNING

Before beginning any service work turn off the PTO, set the parking brake, turn off the ignition, and disconnect the spark plug wire(s).

## INSTALLATION

### Remove the Seat Deck

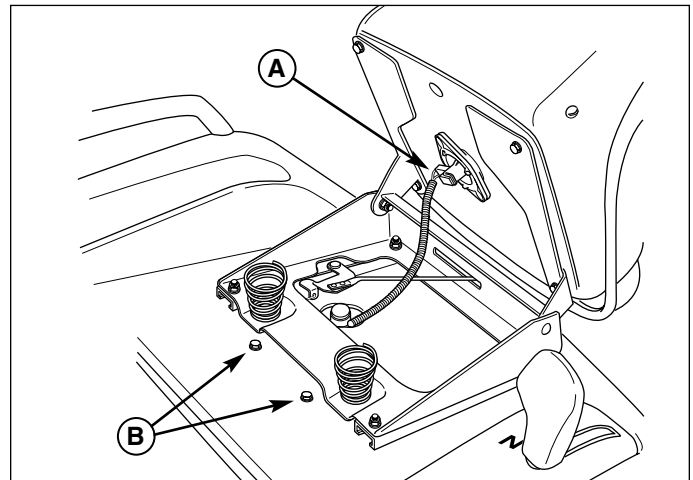
1. Disconnect the negative battery cable.
2. Remove the knob from the two-speed control lever by pulling the knob straight off the lever.
3. Release the return spring (C, Figure 1) from the cruise lever (A). The lever can be reached from under the wheel well.
4. Remove the cotter pin (B, Figure 1) and washer (D) from the cruise control lever (A). Remove the lever from the pivot bracket (E).
5. Tilt the seat forward and disconnect the seat switch (A, Figure 2).
6. Slide the seat fully forward.
7. Remove the two capscrews (B, Figure 2) securing the seat deck to the support.
8. Remove the four capscrews (A, Figure 3) securing the seat deck to the foot rests.



**Figure 1. Cruise Control Lever**

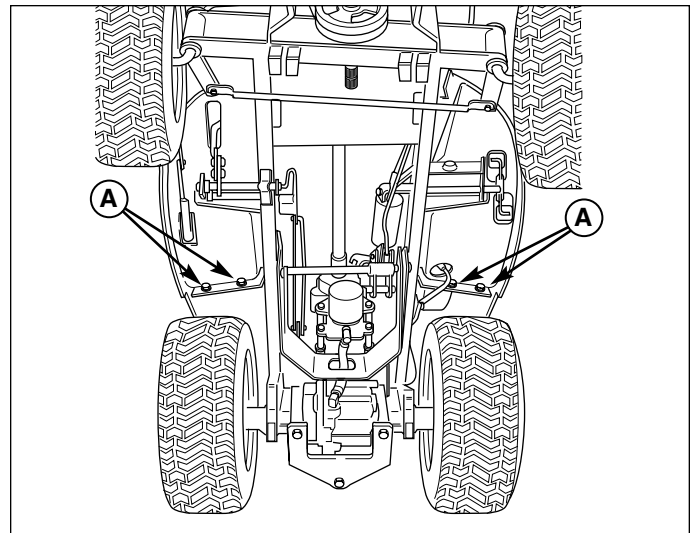
**A. Cruise Lever**  
**B. Cotter Pin**  
**C. Return Spring**

**D. Washer**  
**E. Pivot Bracket**



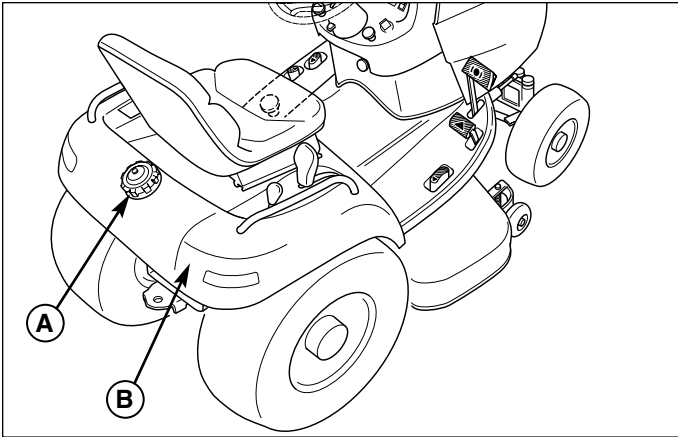
**Figure 2. Remove Seat Deck**

**A. Seat Switch Plug**      **B. Capscrews**



**Figure 3. Remove Seat Deck**

**A. Capscrews**



**Figure 4. Remove Seat Deck and Tunnel**  
**A. Gas Cap                      B. Seat Deck**

9. Remove the tail light sockets and bulbs from the tail light bezels (see Figure 5).
10. Remove the gas cap (A, Figure 4).
11. Remove the seat deck assembly (B, Figure 4).
12. Reinstall the gas cap.

### Remove the Dashboard

1. Peel up the rubber boot (A, Figure 6) covering the tilt assembly.
2. Remove the four flange nuts (B, Figure 6) securing the tilt assembly.

#### Gas Models:

3. Mark and disconnect the throttle and choke control cables from the engine.
4. Locate the rod extending from the back of the parking brake knob (A, Figure 7). Rotate the connector clip (B) off the rod and disconnect the linkage.

#### Diesel Models

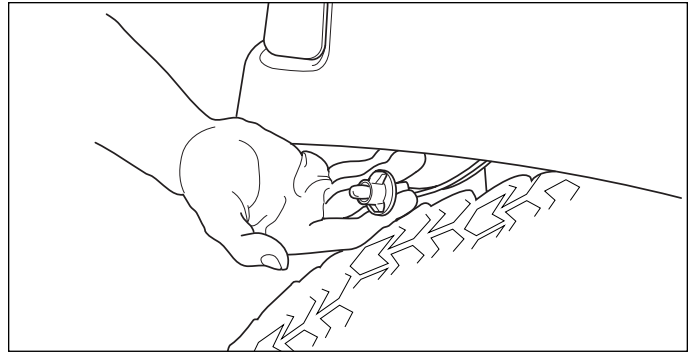
3. Mark and disconnect the throttle control cable from the engine.
4. Remove the knob (D, Figure 7) and nut (C) from the parking brake rod (A).

#### All Models

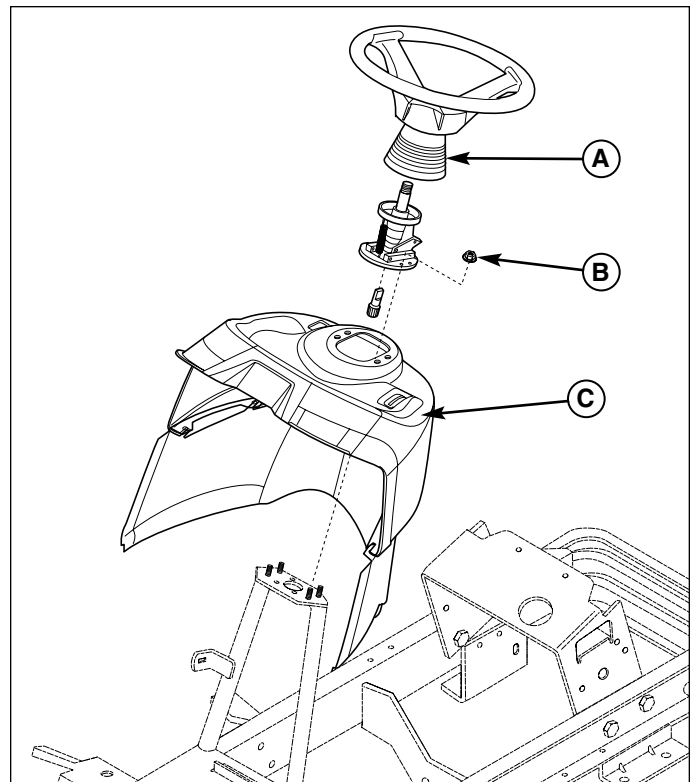
5. Lift the dashboard and disconnect the wire harnesses from the following electrical components:
  - Ignition Switch
  - PTO Switch
  - Headlight Switch
  - Dashboard Display
  - Mower Cutting Height Switch

*Note the small dot on the cutting height switch connector plug. When reconnecting the plug, the dot should face the same direction (to the right).*

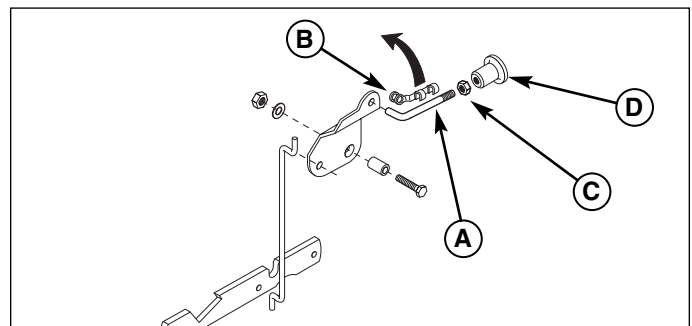
6. Lift the dashboard (C, Figure 6) off the control tower.



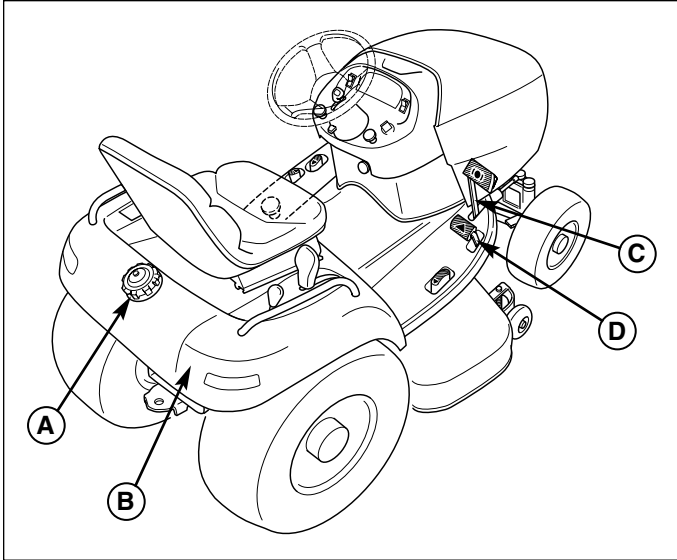
**Figure 5. Remove Taillight Sockets & Bulbs**



**Figure 6. Remove Dashboard**  
**A. Rubber Boot                      C. Dashboard**  
**B. Flange Nuts**

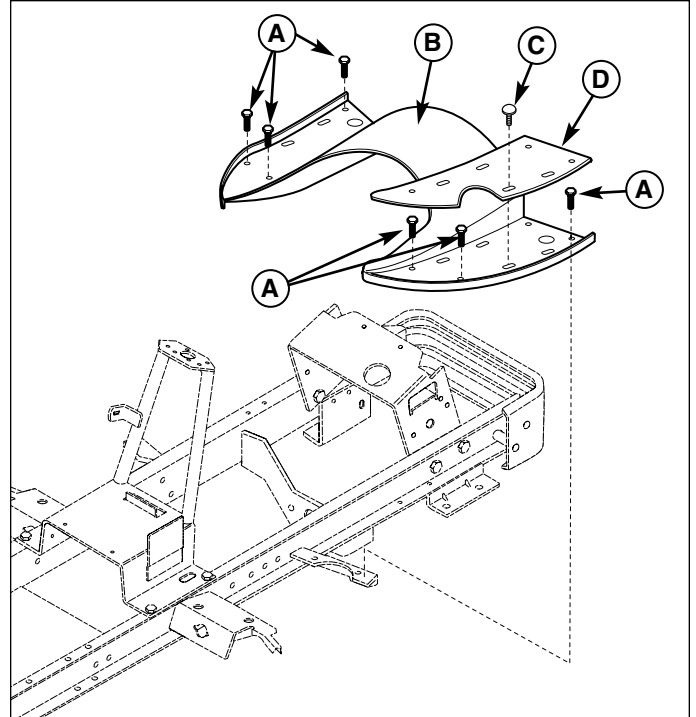


**Figure 7. Disconnect Parking Brake Linkage**  
**A. Rod                                      C. Nut**  
**B. Clip                                      D. Knob**



**Figure 8. Remove Seat Deck and Tunnel**

- A. Gas Cap
- B. Seat Deck
- C. Brake Pedal Arm
- D. Forward Ground Speed Pedal

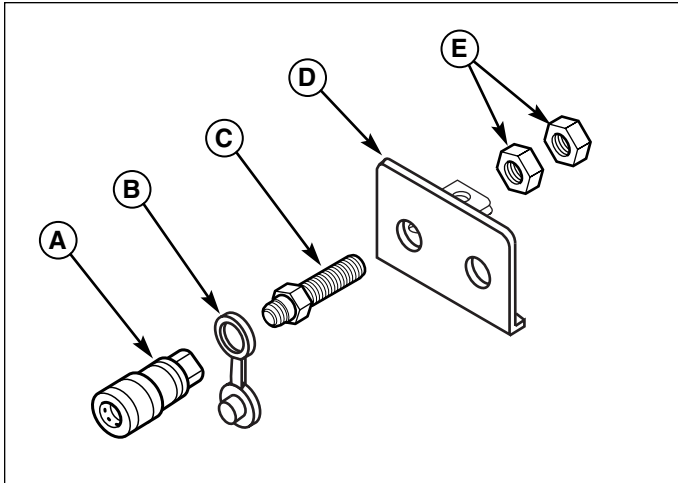


**Figure 9. Remove Tunnel Assembly**

- A. Taptite Screws
- B. Tunnel Assembly
- C. Panel Fastener
- D. Foot Rest Pad

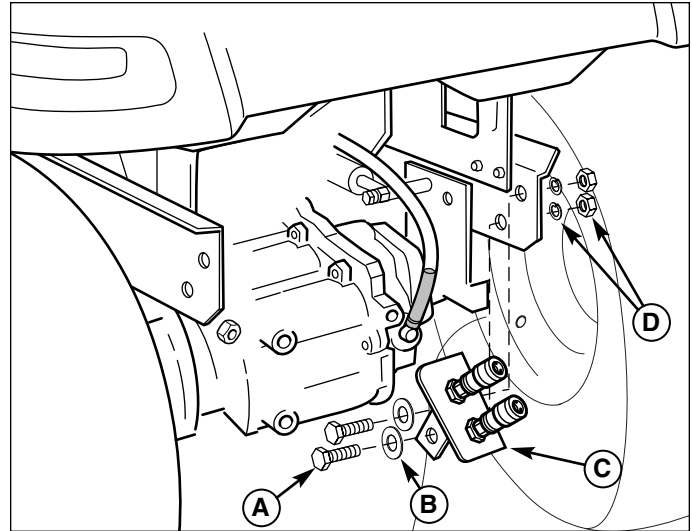
## Remove the Tunnel Assembly

1. Remove the two taptite screws attaching the brake pedal arm (C, Figure 8) to the pivot shaft. Remove the brake pedal assembly from the tunnel.
2. Remove the two taptite screws attaching the front ground speed control pedal (D, Figure 8) to the pivot shaft. Remove the pedal from the tunnel assembly.
3. Remove both foot rest pads (D, Figure 9) and panel fasteners by prying the foot rest pads up.
4. Remove the six small taptite screws (A, Figure 9) securing the tunnel (B) to the frame.
5. Depress the differential lock pedal and remove the tunnel (B, Figure 9) from the frame.



**Figure 10. Assemble Quick Connector Plate**

- A. Female Quick Connector
- B. Cap
- C. Fitting
- D. Mounting Bracket
- E. Nuts



**Figure 11. Install Quick Connector Plate**

- A. 1/2-13 x 1-1/4 Capscrews
- B. 1/2 Washer
- C. Quick Connector Bracket
- D. Lockwasher & Nut

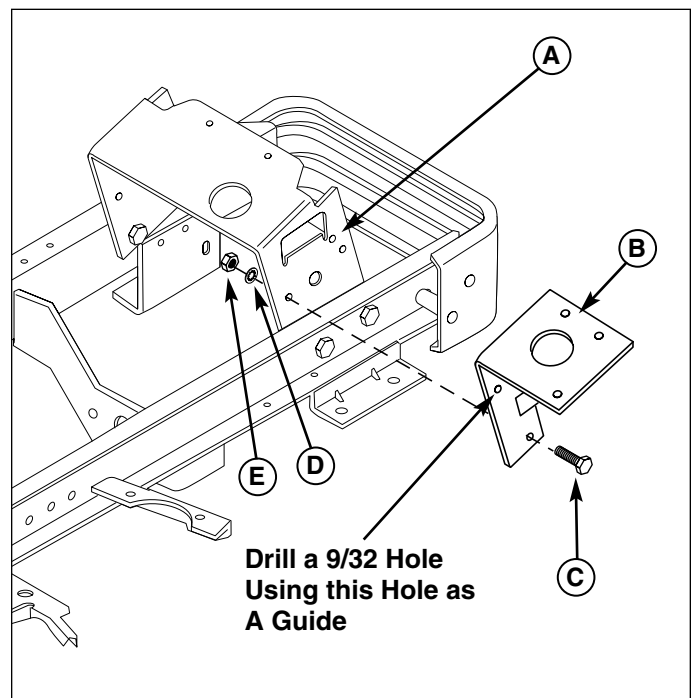
## Install Mounting Brackets

### QUICK CONNECTOR MOUNTING PLATE

1. See Figure 10. Install two female quick connectors (A), male / male fittings (C), and plastic caps (B) in the mounting bracket (D) as shown. Secure with nuts (E).
2. See Figure 11. Mount the quick connector plate (C) to the rear frame rail.
3. Secure the quick connector bracket using two 1/2-13 x 1-1/4 capscrews (A), washers (B), lockwashers, and nuts (D).

### VALVE MOUNTING BRACKET

4. Attach the lower hole of the valve mounting bracket (B, Figure 12) to the seat deck support (A) as shown. Secure with 1/4-20 x 3/4 capscrew (C), lockwasher (D), and nut (E).
5. Orient the bracket (B) so that it is level with the top of the seat deck support (A). Hold in this position with a C-clamp.
6. Using the bracket (B) as a guide, drill a 9/32" hole to mount the top of the bracket (see Figure 12).
7. Secure the top of the bracket using a 1/4-20 x 3/4 capscrew, lockwasher, and nut.



**Figure 12. Install Valve Mounting Bracket**

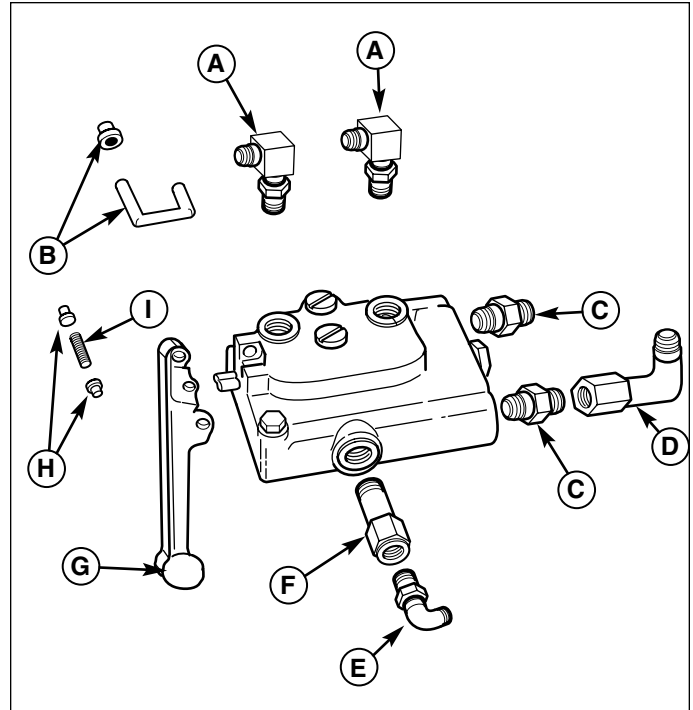
- A. Seat Deck Support
- B. Valve Mounting Bracket
- C. 1/4-20 x 3/4 Capscrew
- D. Lockwasher
- E. Nut



## Assemble the Control Valve

Install fittings into the control valve and hand tighten until the fittings bottom out. DO NOT torque the hex-jam nut until the hydraulic lines are connected. See Figure 13.

1. Remove the steel plug from the power beyond port (BYD).
2. Install the power beyond port fitting (F). Torque the fitting.
3. Install a right angle fitting (E) into the power beyond port (F). Hand tighten the fitting.
4. Install the two large fittings (C) in the front valve ports. Torque the fittings.
5. Install two right angle fittings (D) on the large fittings (C). Hand tighten the right angle fittings.
6. Install two pivoting right angle fittings (A) in the control valve in the locations shown in Figure 13. Torque the fittings.
7. If not already done, assemble the control lever (G) as shown in Figure 13. Install the link (B) through the valve body. Secure the levers to the control valve using 3/16 x 1 roll pins (I) and pal nuts (H).

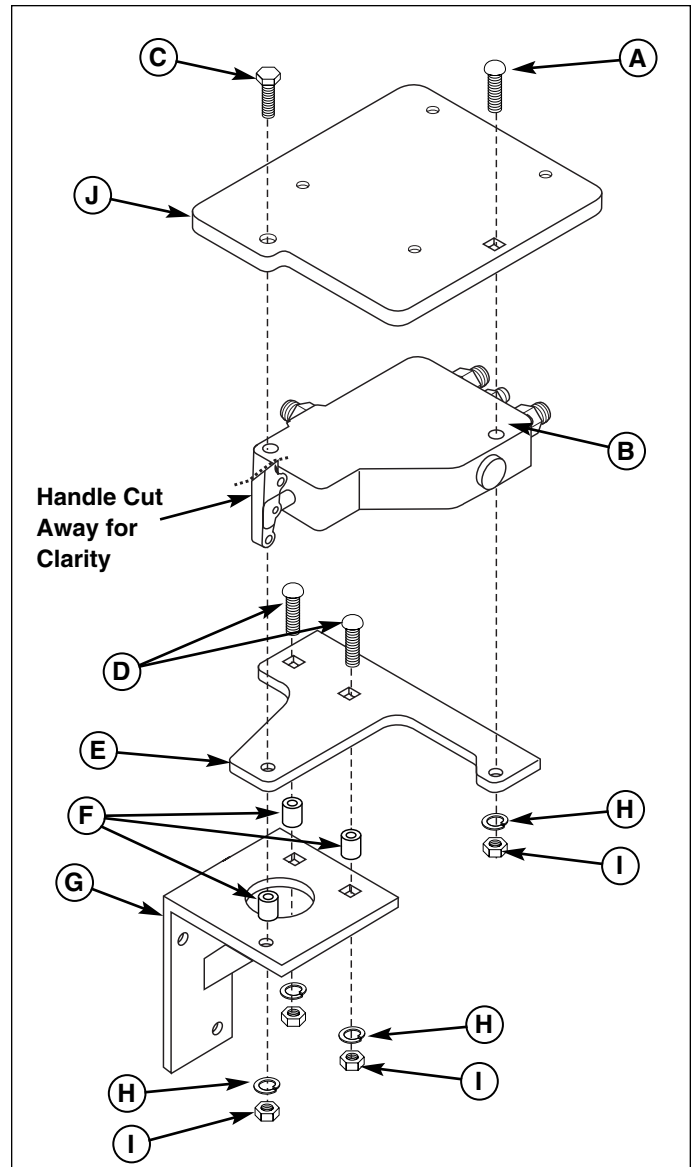


**Figure 13. Assembly Control Valve & Fittings**  
**A. Right Angle Fitting**                      **F. Power Beyond Port**  
**B. Lever Link & Pal Nut**                    **G. Control Lever**  
**C. Straight Fitting, Large**                   **H. Pal Nut**  
**D. Right Angle Fitting**                      **I. Roll Pin, 3/16 x 1**  
**E. Right Angle Fitting**

## Mount the Control Valve Assembly

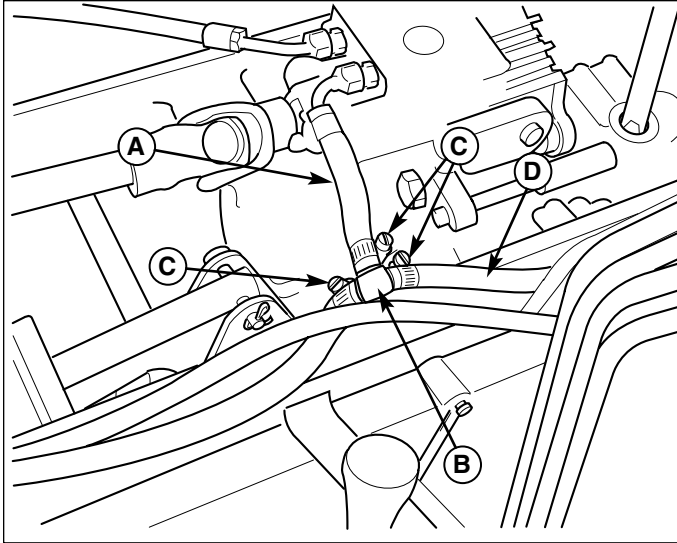
See Figure 14.

1. Attach the mounting plate (E) to the mounting bracket (G) using two 1/4-20 x 1-1/2 carriage bolts (D), spacers (F), lockwashers (H), and nuts (I). DO NOT tighten the hardware at this time.
2. Secure the right front corner of the pod plate (J) and control valve (B) using a 1/4-20 x 3-1/2 capscrew (C), lockwasher (H), and nut (I). DO NOT tighten the hardware at this time.
3. Secure the left rear corner of the control valve (B) and plate (J) using a 1/4-20 x 3/4 carriage bolt (A), lockwasher (H), and nut (I). DO NOT tighten the hardware at this time.

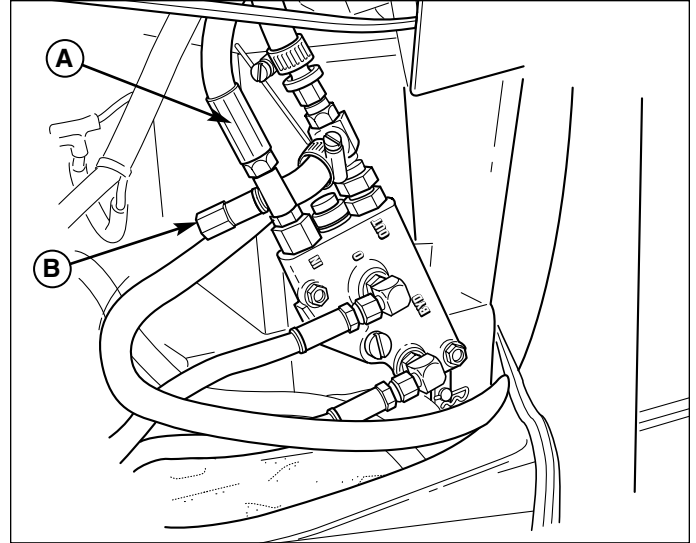


**Figure 14. Mount Control Valve Assembly**

- A. 1/4-20 x 2-1/2 Capscrew**
- B. Control Valve**
- C. 1/4-20 x 3-1/2 Capscrew**
- D. 5/16-18 x 1-1/2 Carriage Bolt**
- E. Mounting Plate**
- F. Spacer, 21/64 x 5/8 x 25/32**
- G. Mounting Bracket**
- H. Lockwasher**
- I. Nut**
- J. Pod Plate**



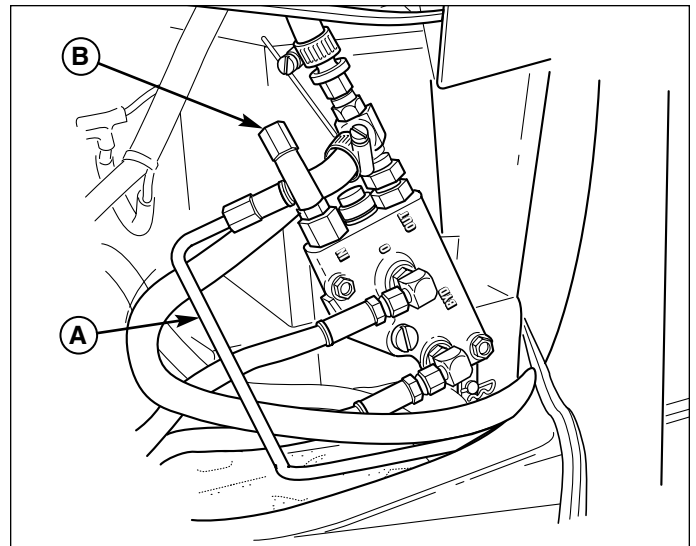
**Figure 15. Install “T” Connector**  
**A. Return Line      C. Hose Clamp**  
**B. “T” Connector    D. Hose (To Control Valve OUT)**



**Figure 16. Remove Hydraulic Hose - Gas Model Shown**  
**A. Hose from “E” Port of Power Steering Valve**  
**B. Cap**

## Install Hydraulic Lines

1. Remove and discard the hose (A, Figure 16) connecting the “E” port of the power steering valve to the IN port of the tractor lift valve. *NOTE: Later models use a steel tube instead of a hose.*
2. **Gas Models Only:** Locate the cap (B, Figure 16) on the tractor lift valve IN fitting. Move the cap from the side to the top (B, Figure 17a). Connect the power beyond port (BYD) of the attachment control valve to the IN port of the tractor lift valve using the formed tube (A, Figure 17; C, Figure 18).
3. **Diesel Models Only:** Locate and remove the cap (B, Figure 16). Install the 1719331 return line (A, Figure 17b) between the power beyond port (BYD) and the attachment control valve as shown in Figure 17b.
4. Cut the low pressure return line (A, Figure 15) 4-1/2” inches from the hydro pump.
5. Install the “T” connector (B, Figure 15) in the return line (A) and secure with two hose clamps (C).
6. Connect the “L” shaped tube (A, Figure 17a) to the OUT port of the control valve.
7. Connect the “E” port of the power steering valve to the IN port of the attachment control valve using tube (A, Figure 18).
8. Connect the “T” connector (B, Figure 15) to the “L” shaped tube 1719216 using the 1/2 x 9 hose (D) and two hose clamps (C).



**Figure 17a. Install Tube - Gas Model Shown**  
**A. Tube from “BYD” Port of Attachment Valve**  
**B. Cap**

# Installation Instructions

## Rear Auxiliary Hydraulic Kit

9. Connect the attachment control valve OUT fittings to the rear quick connectors using hoses (B, Figure 18).
10. Check that all tube fittings and valve fittings have been tightened.
11. Tighten all control valve mounting hardware (see Figure 14).
12. Secure the rear hoses (B, Figure 18) to the frame using the plastic ties provided.

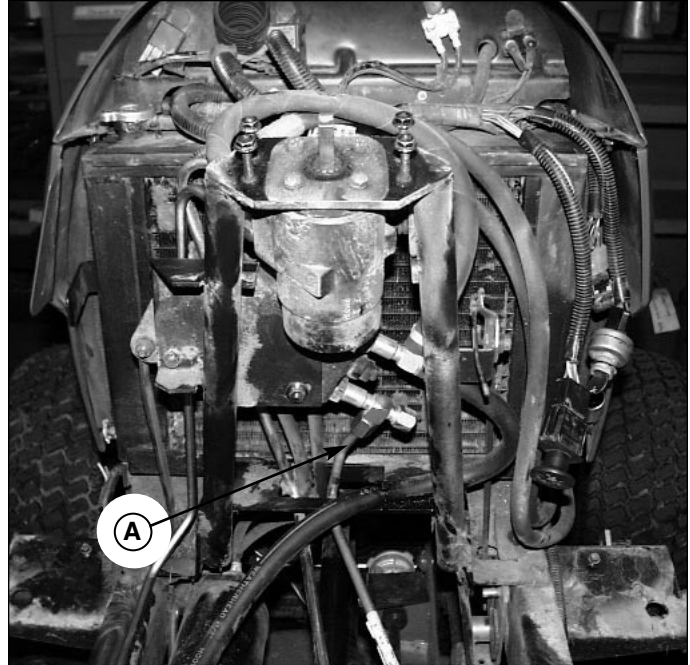


Figure 17b. Install Tube - Diesel Model Shown  
A. Tube from "BYD" Port of Attachment Valve

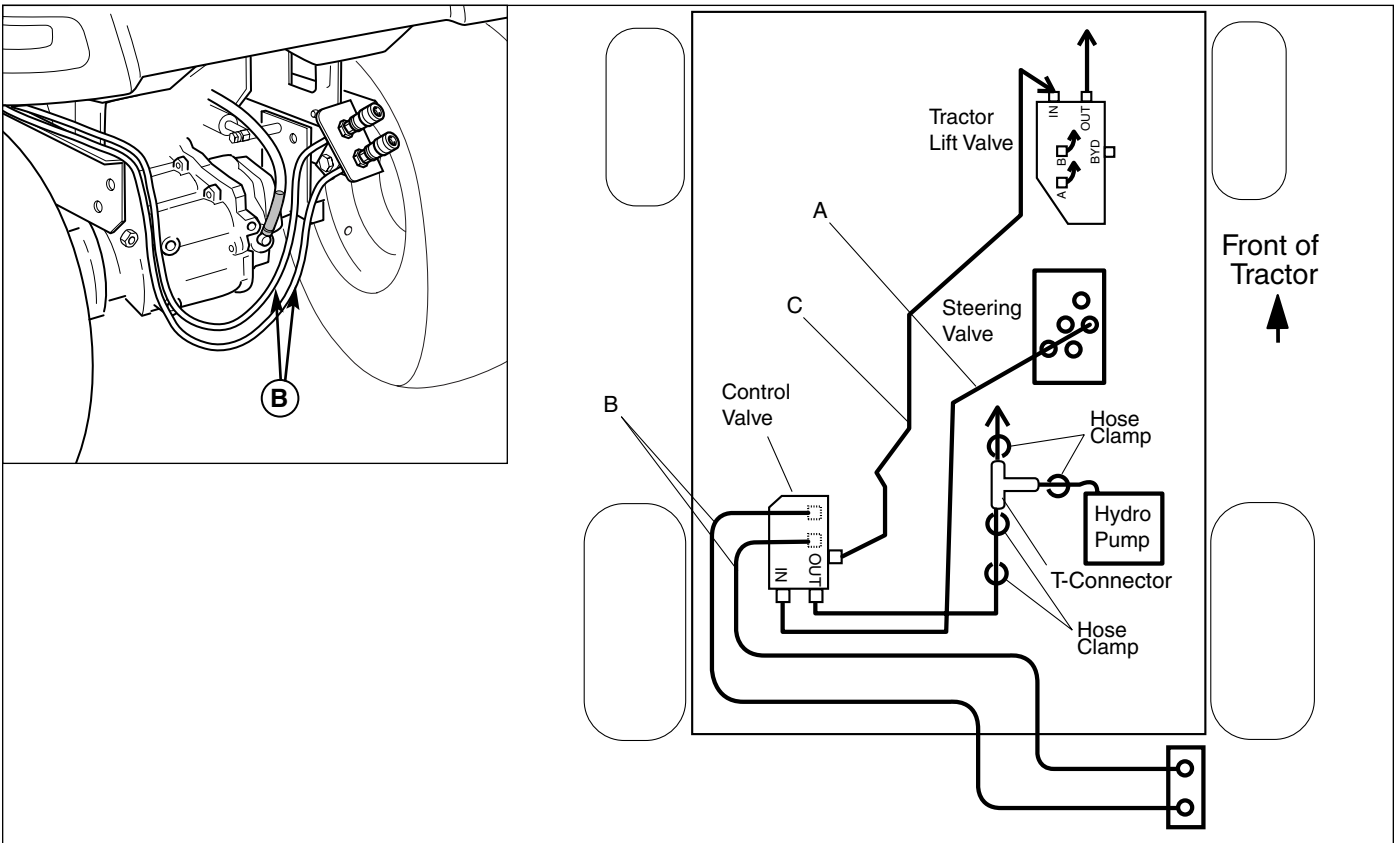


Figure 18. System Diagram

- A. 1719215 Tube
- B. 38" Hoses
- C. 1719330 Tube

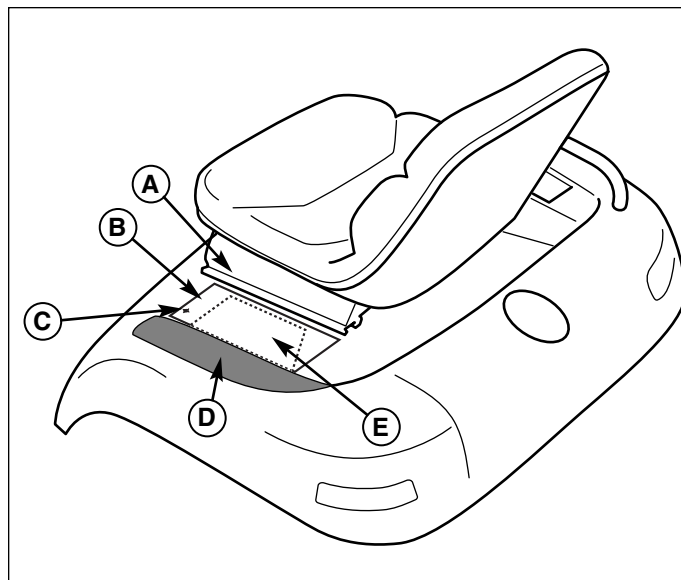
### Modify Seat Deck

1. Cut out the seat deck template located at the back of these instructions.
2. Remove the screws securing the plastic pod (cup holder) to the left side of the seat deck. Remove and discard the pod.
3. Line up the marked left edge of the template (B, Figure 19) with the opening in the seat deck left by the pod (D).

Line up the right edge of the template (B) parallel to the seat slide assembly (A).

Center the marked hole in the template with the bolt hole (C) in the seat deck.

4. Mark the area of material to be removed (E) using a grease pencil or marker.
5. Use a hack saw to cut the marked area out of the seat deck.
6. Using a flat file, remove any burrs or sharp edges from the seat deck.



**Figure 19. Modify Seat Deck**

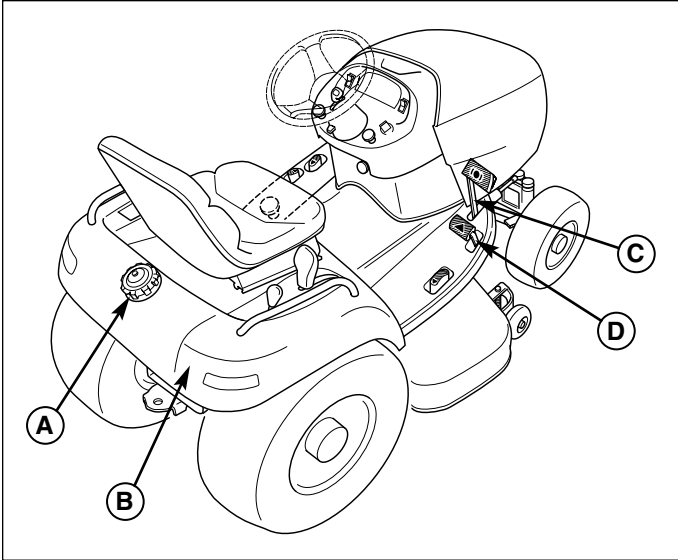
**A. Seat Slide**

**B. Template**

**C. Bolt Hole**

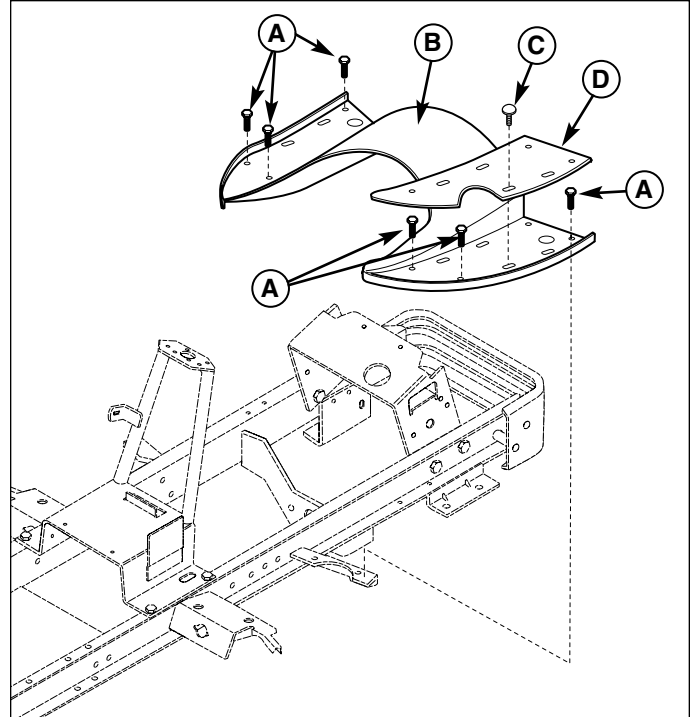
**D. Pod Hole**

**E. Material to be Removed**



**Figure 20. Install Seat Deck and Tunnel**

- A. Gas Cap**
- B. Seat Deck**
- C. Brake Pedal Arm**
- D. Forward Ground Speed Pedal**

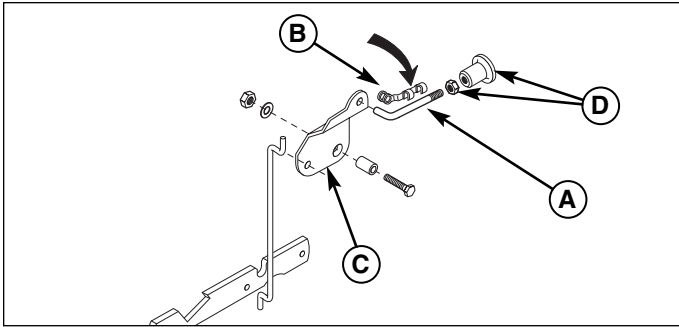


**Figure 21. Install Tunnel Assembly**

- A. Taptite Screws**
- B. Tunnel Assembly**
- C. Panel Fastener**
- D. Foot Rest Pad**

## Reinstall Tunnel

1. Set the tunnel assembly (B, Figure 21) on the frame.
2. Make sure none of the hydraulic hoses, fuel line, or electrical harnesses will be collapsed when the tunnel hardware is installed.
3. Install the six taptite screws (A, Figure 21) securing the tunnel assembly (B) to the frame.
4. Install the forward ground speed pedal (D, Figure 20) and brake pedal (C). Secure using the original hardware.
5. Install the foot rest pads (D, Figure 21) and panel fasteners (C).



**Figure 22. Reconnect Parking Brake Linkage**  
A. Rod  
B. Clip  
C. Parking Brake Cam  
D. Knob and Nut

### Reinstall Dashboard

1. Set the dashboard (C, Figure 23) on the tower assembly.

#### Gas Models:

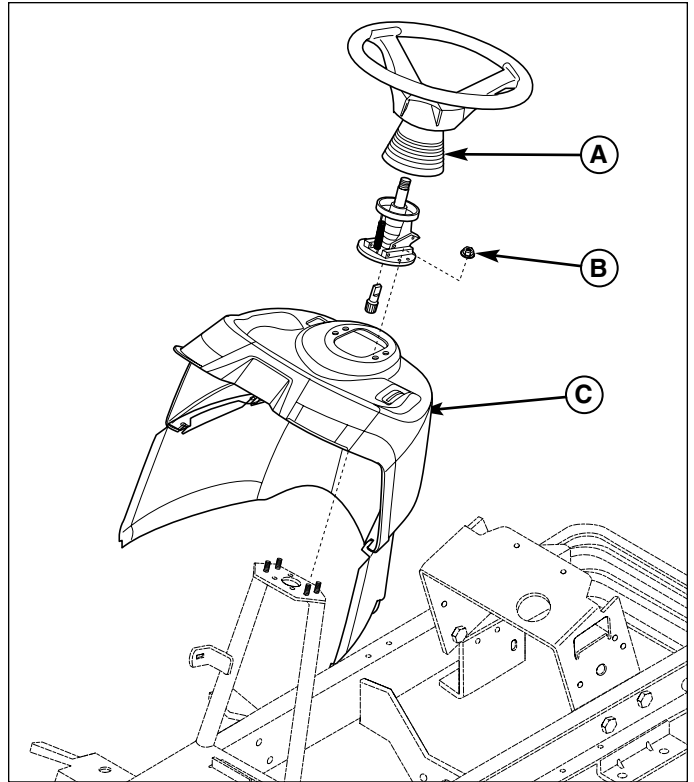
2. Insert the parking brake rod (A, Figure 22) through the parking brake cam and secure using the clip (B).

#### Diesel Models:

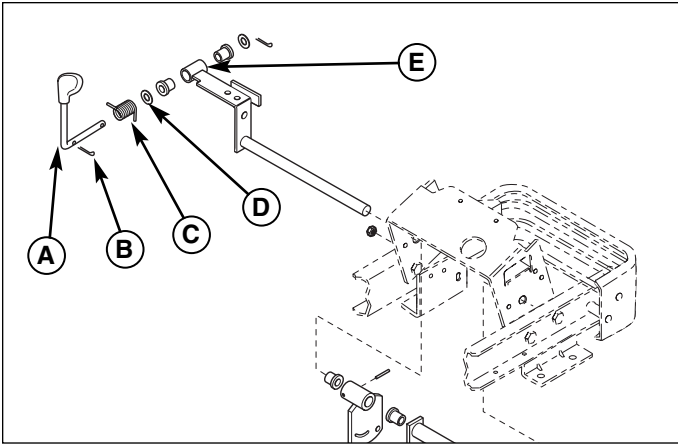
2. Insert the parking brake rod (A, Figure 22) through the dashboard and reinstall the knob and nut (D).

#### All Models

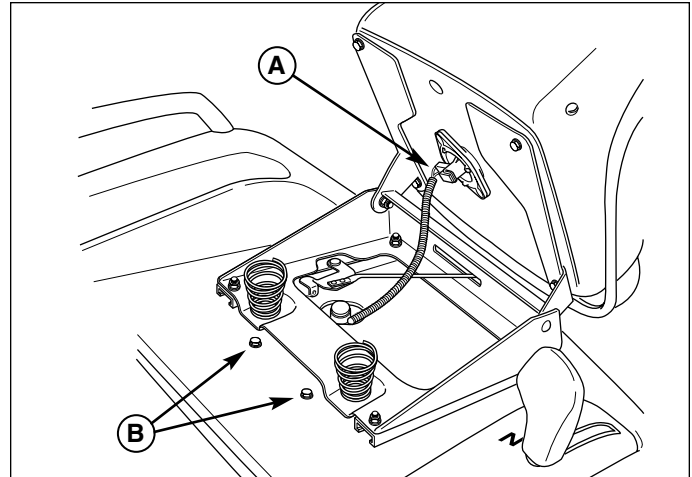
3. Reconnect the throttle and choke cables.
4. Reconnect the wire harnesses to the following electrical components:
  - Ignition Switch
  - PTO Switch
  - Headlight Switch
  - Mower Cutting Height Switch (Make sure the black dot on the connector plug faces right).
  - Dashboard Display
5. Set the steering tilt assembly (A, Figure 23) back on the tower assembly. Secure using the original flange nuts (B).



**Figure 23. Install Dashboard**  
A. Steering Tilt Assy.  
B. Flange Nuts  
C. Dashboard



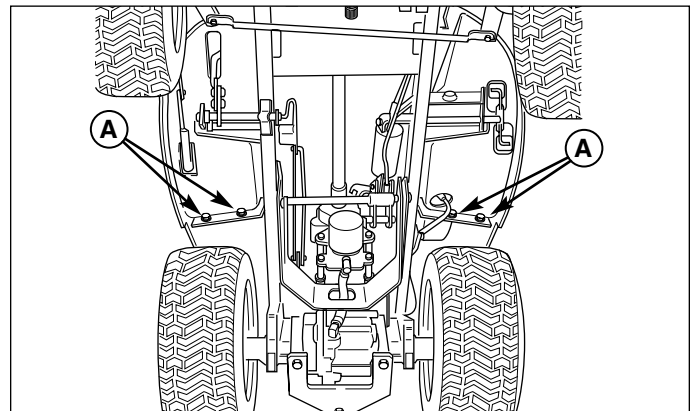
**Figure 24. Cruise Control Lever**  
A. Cruise Lever                      D. Washer  
B. Cotter Pin                         E. Pivot Bracket  
C. Return Spring



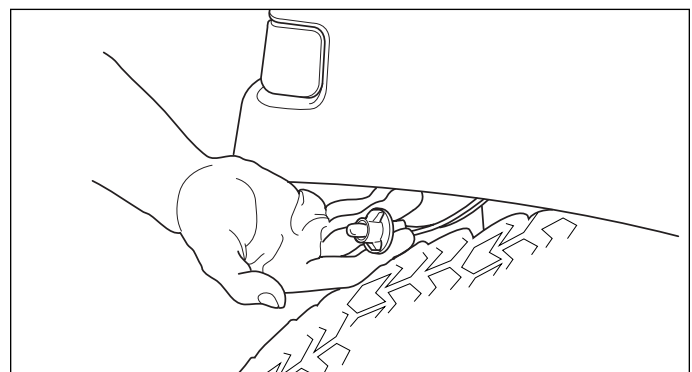
**Figure 25. Install Seat Deck**  
A. Seat Switch Plug                B. Capscrews

## Reinstall Seat Deck

1. Remove the gas cap.
2. Set the seat deck on the support assembly. Be sure the seat switch wire harness is routed through the seat deck as shown in Figure 25.
3. Reinstall the gas cap.
4. Reassemble the cruise control lever as shown in Figure 24.
5. Install the four capscrews (A, Figure 26) securing the seat deck to the foot rests. **DO NOT** tighten the hardware at this time.
6. Install the capscrews (B, Figure 25) securing the top of the seat deck to the support.
7. Tighten the seat deck hardware.
8. Press the two-speed control knob back onto the two-speed control lever.
9. Reconnect the seat switch (A, Figure 25).
10. Reinstall the tail light bulbs and sockets into the tail light assemblies (See Figure 27).



**Figure 26. Install Seat Deck**  
A. Capscrews



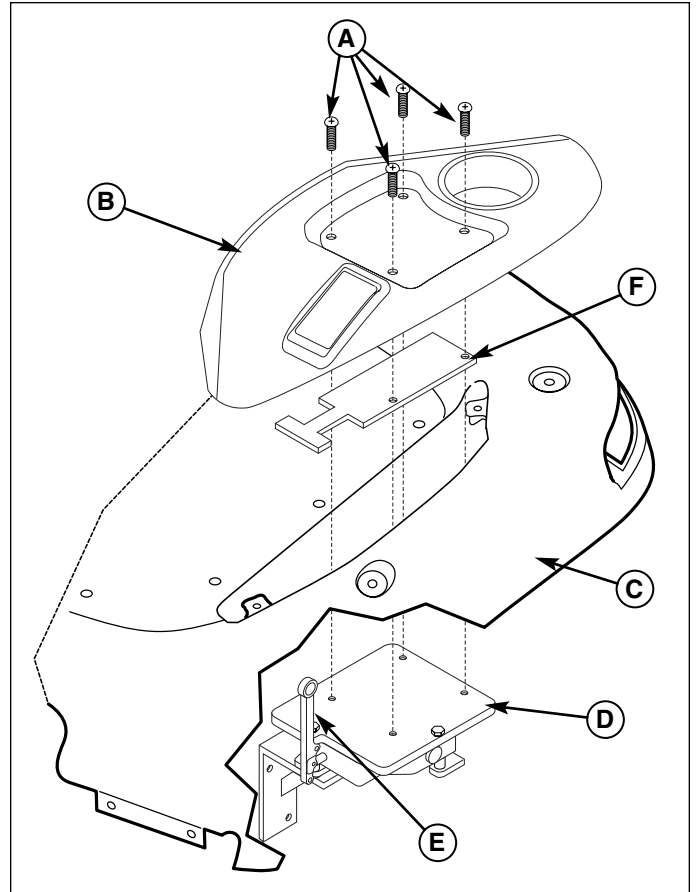
**Figure 27. Install Taillight Sockets & Bulbs**



## Install Control Pod

See Figure 28.

1. Install handle insert (F) and control pod (B) in the seat deck (C). The control levers (E) should go through the pod (B).
2. Secure the pod (B) to the pod plate (D) using four 1/4-20 x 1/2 phillips head screws (A).

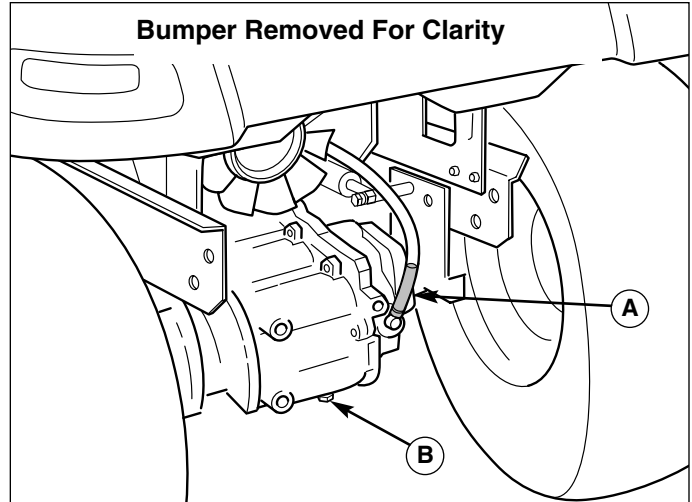


**Figure 28. Install Control Pod**  
**A. 1/4-20 x 1/2 Phillips Head Screws**  
**B. Control Pod**  
**C. Seat Deck (Cut Away for Clarity)**  
**D. Pod Plate**  
**E. Control Lever**  
**F. Handle Insert**

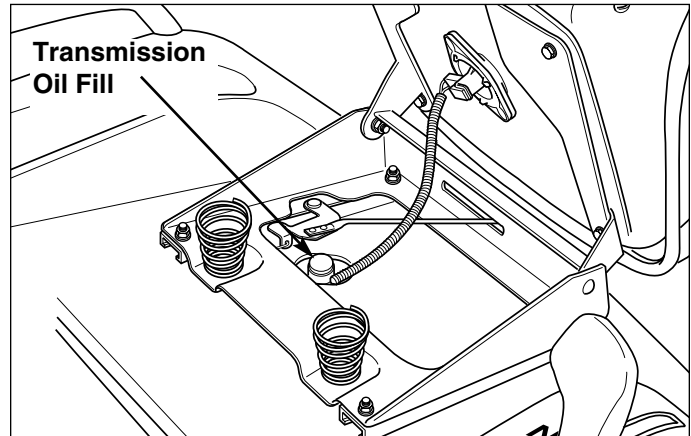
## Test the Unit & Check Oil Level

1. Start the tractor.
2. Test all controls for proper function.
3. Check all fittings, connections, and hoses for leaks.
4. Run the tractor for at least 10 minutes. Move the attachment from side to side and up and down 10 times to bleed air out of the hydraulic system.
5. Check the transmission oil level. Observe the oil level in the plastic tube (A, Figure 29) at the rear of the tractor.

There should be 1" to 1-1/2" of oil in the tube. If there is no oil in the tube add Type-F automatic transmission oil a few ounces at a time. The transmission fill tube is located under the seat (see Figure 30).



**Figure 29. Transmission Fluid Check**  
**A. Hydraulic Tube**  
**B. Drain Plug**

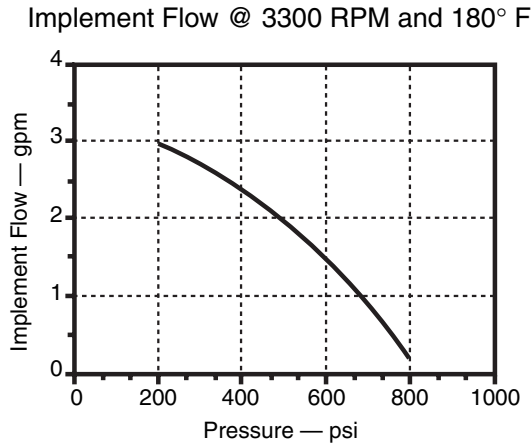


**Figure 30. Transmission Oil Fill**

## AUXILIARY HYDRAULIC SYSTEM

### General

The optional auxiliary hydraulics can be used to control a hydraulic cylinder. Refer to the following chart for hydro pump output data.

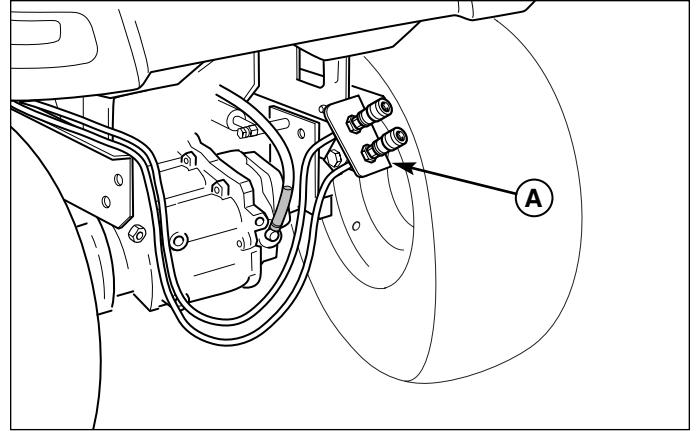


The auxiliary hydraulic control lever is located in the control pod to the left of the seat and controls the flow of hydraulic fluid to the quick connectors located at the rear of the tractor (Figure 31).

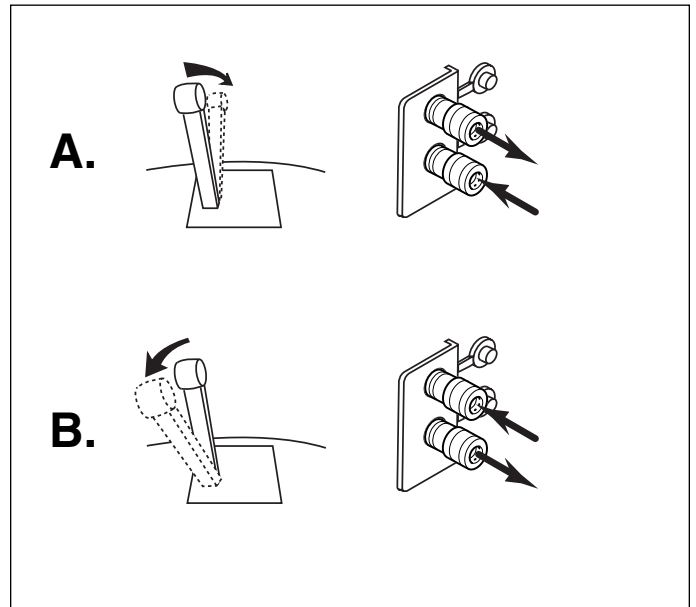
### Control Lever Functions

Moving the control lever forward (A, Figure 32) will send pressurized hydraulic fluid to the top quick connector.

Moving the control lever backward (B, Figure 32) will send pressurized hydraulic fluid to the lower quick connector.



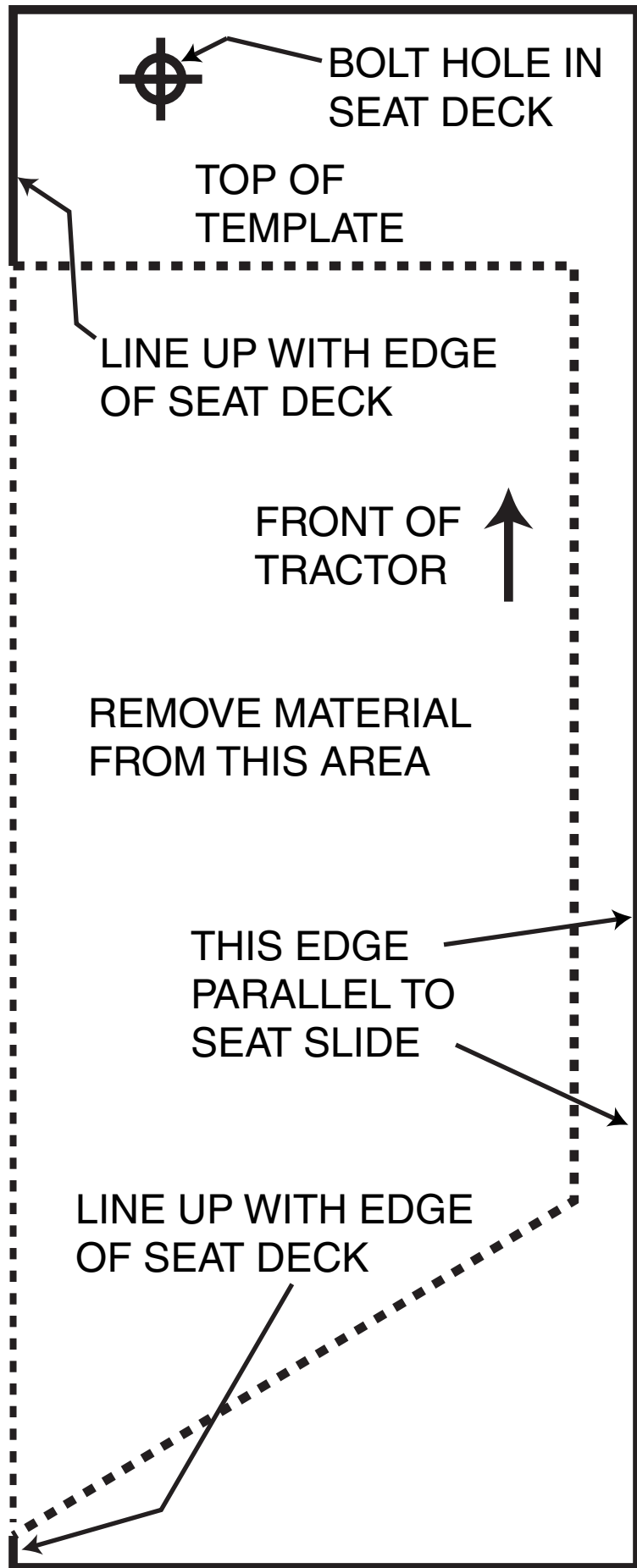
**Figure 31. Auxiliary Hydraulics**  
A. Quick Connector Panel



**Figure 32. Auxiliary Hydraulic System Function**  
(Levers shown as viewed from Operator's position when seated on tractor. Quick Connect panel shown as viewed from rear of unit.)



# SEAT DECK TEMPLATE



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SEE TEMPLATE ON OPPOSITE SIDE.