

Cub Cadet®

Power Equipment

Owner's Manual

FRONT HYDRAULIC OUTLET KIT

INSTALLATION INSTRUCTIONS **Part Number 759-3493A**

Important:
Read Safety Rules and Instructions Carefully

Thank you for purchasing an American-built product

CUB CADET CORPORATION • P.O. BOX 360930 • CLEVELAND, OHIO 44136

FORM NO. 772-4100A
R91531



Power Equipment

LIMITED WARRANTY

Proper maintenance of your Cub Cadet equipment is the owner's responsibility. Follow the instructions in your owner's manual for correct lubricants and maintenance schedule. Your Cub Cadet dealer carries a complete line of quality lubricants and filters for your equipment's engine, transmission, chassis and attachments.

RIDING MOWERS, LAWN TRACTORS, GARDEN TRACTORS, CUB CADET ATTACHMENTS AND HOME MAINTENANCE PRODUCTS.

FIRST YEAR

This limited warranty for residential and commercial users, covers any defect in material or workmanship in your Cub Cadet equipment for one year from the date of purchase for the first user purchaser.

Batteries have a one year prorated limited warranty with 100% replacement during the first three months.

We will replace or repair any part or parts without charge through your authorized Cub Cadet dealer.

SECOND YEAR

This limited warranty, for residential users only, covers any defects in material or workmanship in the drive train for two years from the date of purchase for the first user purchaser.

The drive train consists of the engine, engine cradle, drive shaft, drive shaft clutch, all parts enclosed by the transmission housing, rear axle housing, brakes and electric power take off (if so equipped). V-belts used for either the traction drive or any attachments are covered for one year only.

ITEMS NOT COVERED

The warranty does not cover routine maintenance items such as lubricants, filters (oil, fuel, air and hydraulic), cleaning, tuneups, brake and/or clutch inspection, adjustments made as part of normal maintenance, blade sharpening, set-up, abuse, accidents and normal wear. It does not cover incidental costs such as transporting your equipment to and from the dealer, telephone charges or renting a product temporarily to replace a warranted product.

There is no other express warranty.

HOW TO OBTAIN SERVICE

Contact your authorized Cub Cadet servicing dealer who sold you your Cub Cadet equipment. If this dealer is not available see the Consumer Yellow Pages under "lawn mowers" for the name of a dealer near you.

If you need further assistance in finding an authorized Cub Cadet servicing dealer, write or telephone:

Cub Cadet Corporation Telephone: (216) 273-4550
Post Office Box 360930
Cleveland, Ohio 44136
Attn: Customer Service

HOW DOES STATE LAW APPLY?

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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Instructions given with this symbol are for personal safety. Be sure to follow them.

IMPORTANT RULES FOR SAFE OPERATION



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO INSTALL YOUR KIT. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL -



HEED ITS WARNING.



TO THE OWNER

Contained in this manual are instructions for installation of the *Cub Cadet* Front Hydraulic Outlet Kit, Part Number 759-3493A. This kit is designed for use on the following models of *Cub Cadet* garden tractors: 1541, 1641, 1861, 1862, 1782, 1882, 2082, and 2182. Keep this manual for future reference to part numbers.



NOTE

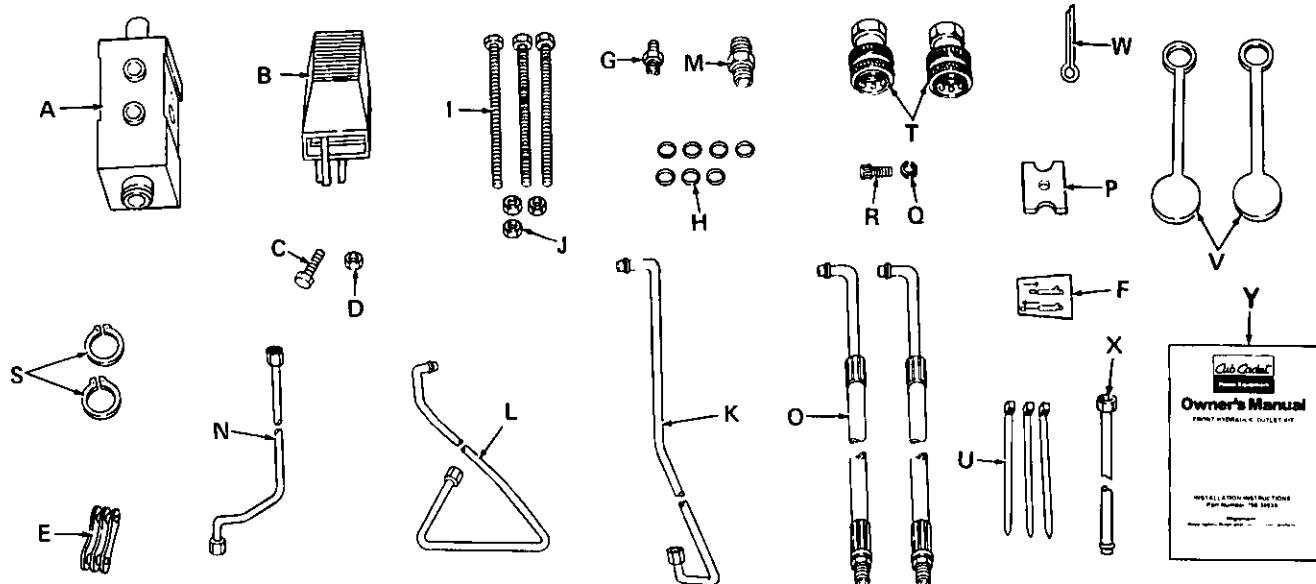
LEFT and RIGHT indicate the left and right sides of the tractor when facing forward in the driver's seat. Reference to FRONT indicates grille end of the tractor; to REAR the drawbar end.

SECTION I. INTRODUCTION

Before beginning installation of the Front Hydraulic Outlet Kit, remove all parts of the kit from the container. Refer to Figure 1 to confirm that all parts are present and to acquaint yourself with parts nomenclature.

NOTE

Not all parts in this kit will be installed on your tractor.



Part Number	Description	Qty	Part Number	Description	Qty
A 717-3308	Hydraulic Valve Assembly	1	M 727-3040	Union Fitting (Models 1541, 1641, and 1861 only)	1
B 731-3100	Valve Handle	1	N 727-3050	Lower Power Steering Return Tube (Model 1541 Serial No. 816,508 and below only)	1
C 710-0749	Hex Cap Screw, #10-24 x 1.0" Long	1	O 727-3059	Front Outlet Hose	2
D 712-0998	Hex Center Lock Nut, #10-24	1	P 703-1803	Double Valve Clamp	1
E 713-3000	Chain Link	1	Q 736-0329	Lock Washer, 1/4	1
F 779-3551	Front Outlet Lever Label	1	R 710-3218	Socket Head Cap Screw, 1/4-20 x .62" Long GR8	1
G 711-3294	Valve Adapter	1	S 716-3014	External Retaining Ring	2
H 721-3021	O-Ring, .301 ID x .070 Dia. (2 O-rings are extras)	7	T 727-3014	Hydraulic Coupling Body	2
I 710-3224	Hex Cap Screw, 1/4-20 x 4.0" Long GR5	3	U 726-3049	Cable Ties, 7.0" Long	3
J 712-0291	Hex Center Lock Nut, 1/4-20	3	V 731-3022	Protective Plug	2
K 727-3060	Liquid Cooled Front Outlet Tube Assembly (Models 1782 and 2182 only)	1	W 714-3014	Cotter Pin, 3/16 x .75" Long	1
L 727-3061	Air Cooled Front Outlet Tube Assembly (Models 1541, 1641, 1861, 1862, 1882, and 2082 only)	1	X 727-3070	Hydraulic Tube Extension (Model 1541 Serial No. 816,509 and above, 1641 and 1861 only)	1
			Y 772-4100	Installation Manual	1

Figure 1

NOTE

The parts in Figure 1 are referred to throughout the manual by their alphabetic callout.

SECTION II. INSTALLATION

Most of the following installation instructions are common to all tractor models in which the Front Hydraulic Outlet Kit can be used. However, some tractor models use special installation procedures and parts from the kit. These special procedures and parts, and the tractors to which they apply, will be clearly identified in the instructions.



WARNING

Before installing the front hydraulic outlet kit, place the tractor on a firm and level surface and engage the brake lock.



WARNING

Do not install the front hydraulic outlet kit while the tractor is hot.



WARNING

During the installation process, use care to avoid skin or eye contact with hydraulic fluid.



NOTE

A notation will appear on any illustrations which apply to only specific tractor models discussed in this manual. Illustrations without this special notation apply to all tractor models covered in this manual; ignore minor differences, if any, between your tractor and that illustrated.

A. TRACTOR PREPARATION



CAUTION

Refer to your tractor Owner's Manual for specific information on side panel removal and battery removal.

1. Open the hood and remove the two side panels.



CAUTION

Battery cables must be removed from the battery in the proper sequence to avoid arcing.

2. Loosen and remove the NEGATIVE battery cable from the battery first; then remove the POSITIVE battery cable from the battery.
3. Remove the battery in AIR cooled units only (Models 1541, 1641, 1861, 1862, 1882, and 2082).
4. Remove the radiator screen in LIQUID cooled units only (Models 1782 and 2182).
5. Remove the frame cover. Refer to Figure 2.

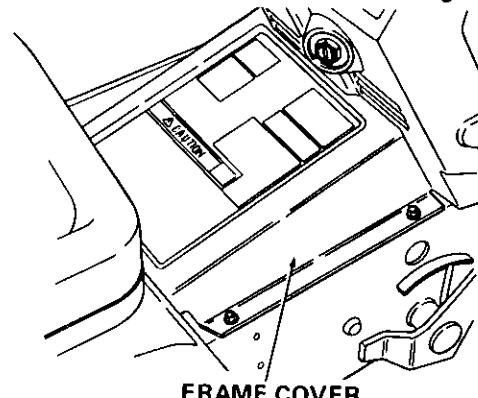


Figure 2

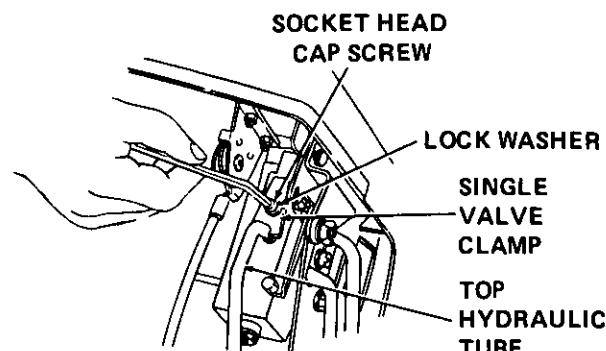
B. VALVE PREPARATION



CAUTION

Small amounts of dirt can damage the hydraulic system. Use care to keep hydraulic fittings and the area around them clean.

1. Disconnect the top hydraulic tube from the installed hydraulic valve by removing socket head cap screw, lock washer and single valve clamp. Refer to Figure 3. Retain the hardware.



NOTE:
AIR COOLED TRACTOR
IS SHOWN.

Figure 3

2. Insert a plastic plug (taken from uninstalled hydraulic valve in kit) in the open port on top of the valve from which the top hydraulic tube was removed. Use care to keep the uninstalled hydraulic valve clean. Refer to Figure 4.

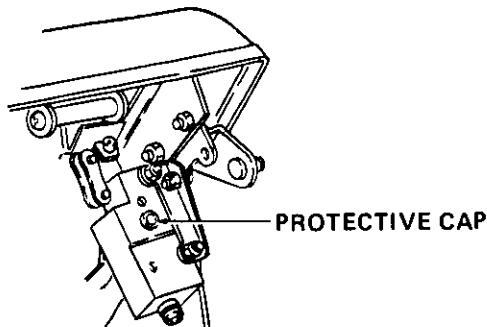


Figure 4



Place a pan beneath the tractor to catch any hydraulic fluid which may spill during the valve preparation process.

3. For all tractors (except Model 1541) refer to Figure 5 and remove the threaded end of the top hydraulic tube from the T-fitting.

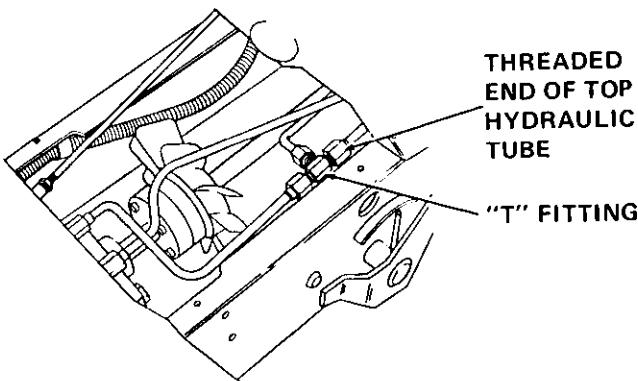


Figure 5

4. For tractor Model 1541 (Serial No. 816,508 and below) only, the top hydraulic tube extends directly back to the pump. Remove the tube from the pump. Refer to Figure 6.

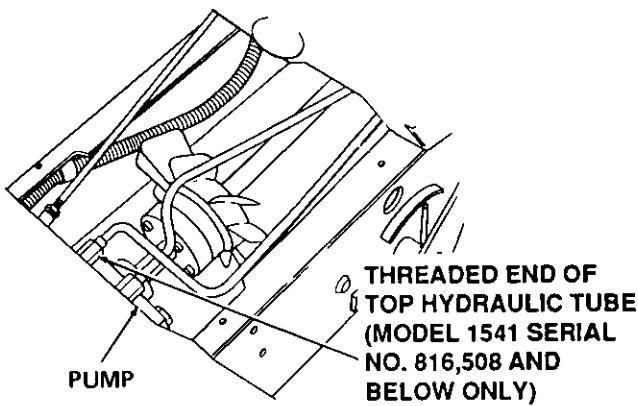
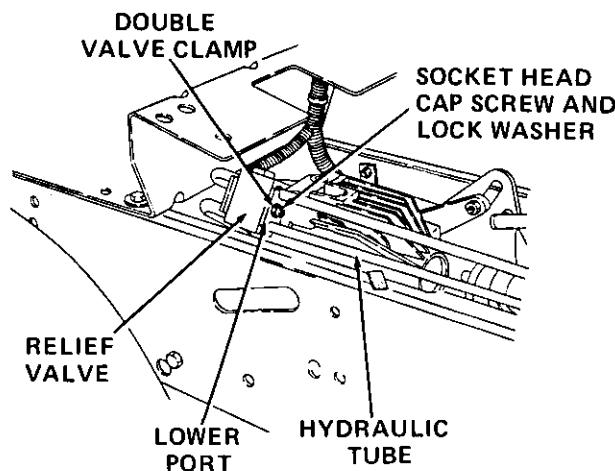


Figure 6

5. Following removal of the threaded end of top hydraulic tube in steps 3 or 4, stand on the left side of the tractor and work the tube out of the tractor. Discard the tube and cover the male fitting (at T-fitting or pump) to which the tube was attached.

6. For tractor Models 1541 (Serial No. 816,509 and above), 1641 and 1861 only, disconnect the hydraulic tube from the lower port of the relief valve by removing socket head cap screw, lock washer and double valve clamp. Refer to Figure 7. Retain the hardware.



FOR MODELS 1541 (SERIAL NO. 816,509 AND ABOVE), 1641 AND 1861 ONLY.

Figure 7

7. Following removal of the hydraulic tube from the relief valve, stand on the left side of the tractor and work the tube out of the tractor. Discard the tube.

8. Cut a hole in the dash panel immediately above the hydraulic lift control lever for the new hydraulic valve handle as follows:

- a. Refer to Figure 8 and scribe an area extending approximately 1-3/4 inches above the hydraulic lift control lever.
- b. Place masking tape around the outside of the scribed lines in order to protect the panel from scratches.



CAUTION

When cutting the plastic panel, use care not to cut into the metal pedestal underneath the scribed area.

NOTE

Depending on the tools used, prior removal of the steering wheel and/or the hydraulic lift control lever may ease removal of the scribed portion of the plastic dash panel.

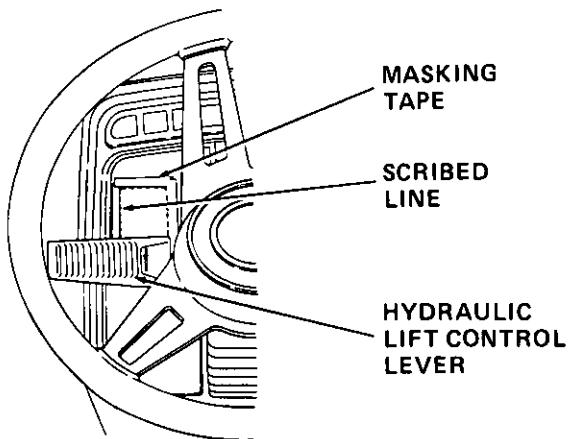


Figure 8

- c. Carefully cut out the scribed portion of the plastic.
- d. Install the steering wheel and/or hydraulic lift lever if previously removed.

C. INSTALLATION OF HYDRAULIC VALVE

1. For Models 1541, 1641, 1861, 1862, 1882, and 2082 only, the valve handle may be assembled to the hydraulic valve before the valve is installed on the tractor. Proceed as follows:
 - a. Turn the valve stem on the hydraulic valve assembly (A) so the curved portion of the valve stem is at the top of the valve. Refer to Figure 9.

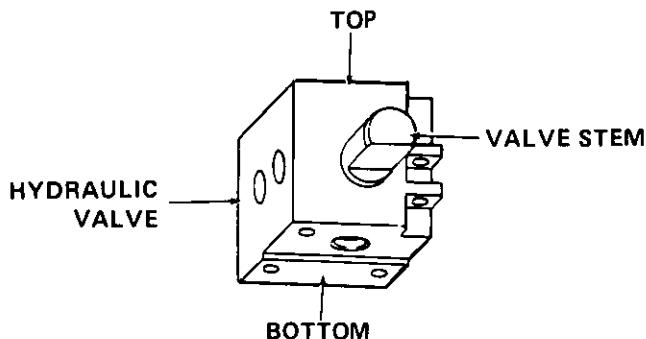


Figure 9

- b. Position the valve handle (B) to the hydraulic valve as shown in Figure 10, and secure with hex cap screw (C) and hex center lock nut (D).

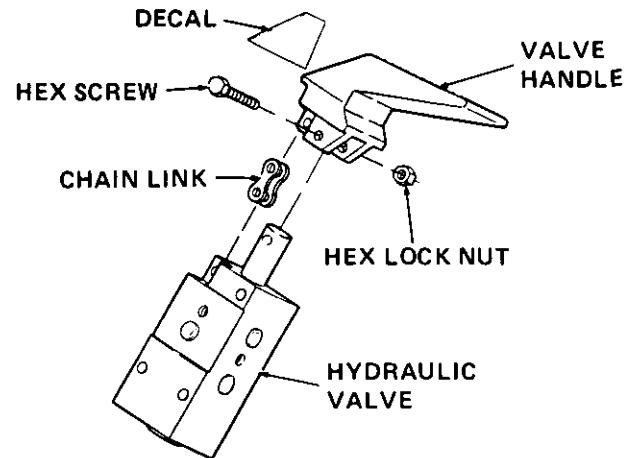


Figure 10

- c. Attach the chain link to the valve and handle as shown in Figure 10.
- d. Attach the label (F), with picture of closed cylinder on top, to the valve handle. Refer to Figures 10 and 14.
2. Remove and discard the lower hex nut and bolt (Figure 11) from the left side panel mounting bracket.

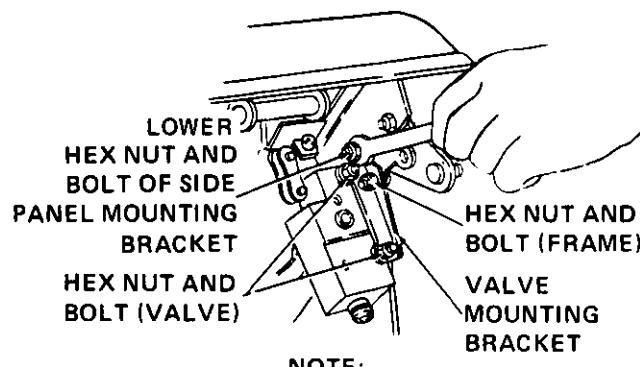


Figure 11

3. Remove and discard the two hex nuts and bolts securing the valve to the valve mounting bracket.
4. Remove and retain the hex nut and bolt securing the top of the valve mounting bracket to the frame. Retain the bracket. Refer to Figure 11.
5. Install two O-rings (H) on the valve adapter (G). Refer to Figure 12.

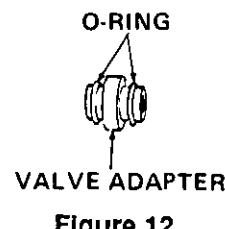


Figure 12

- Carefully wipe any debris from the top of the installed valve, remove the plastic plug from the top port and install the valve adapter in the port.
- Carefully wipe any debris from the hydraulic valve (A) and remove the plastic plug from the bottom of the valve. (Bottom of valve is identified in Figure 9.)
- Align bottom port of hydraulic valve (A) with valve adapter (G) and position hydraulic valve on top of installed valve. Refer to Figure 13.
- Position the valve mounting bracket on top of hydraulic valve (A) and loosely secure valves together with three hex cap screws (I) and hex center lock nuts (J). Refer to Figure 13.

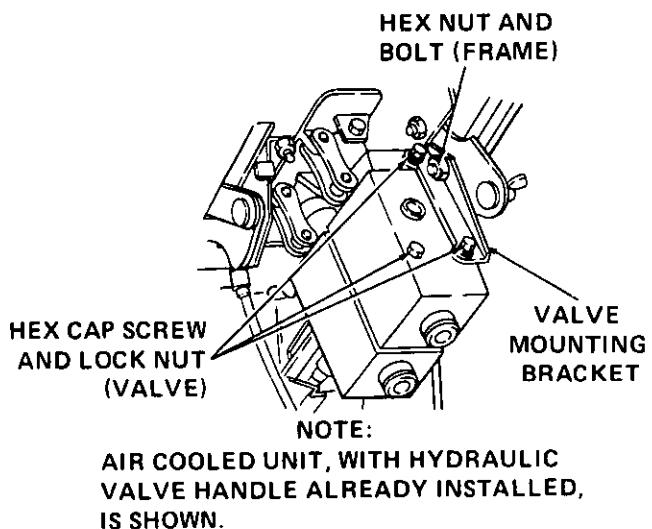


Figure 13

- Loosely secure the valve mounting bracket to the frame with hex nut and bolt retained in step C.4. Refer to Figure 13.
- Alternately and evenly tighten the three hex cap screws securing the two valves together. Refer to Figure 13. Then tighten valve mounting bracket to frame.



Be sure space between valves is even after tightening screws which secure valves.

- For tractor Models 1782 and 2182 only, install the hydraulic valve handle per instructions in part C, steps 1.a. through 1.d. Refer to Figure 14 for view of properly installed valve handle.

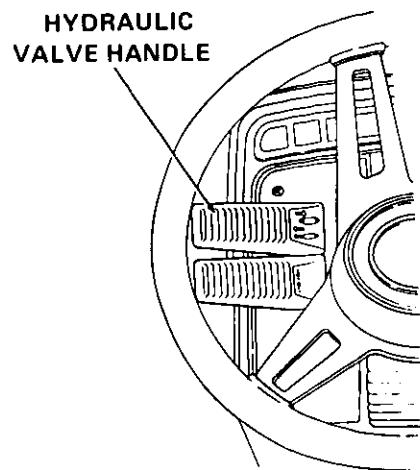


Figure 14

D. INSTALLATION OF OUTLET TUBES AND POWER STEERING RETURN TUBE

There are several variations, based on tractor model, for installation of the outlet tubes. Follow the sequence of instructions for your particular tractor.

- For tractor Models 1782 and 2182 only, install the front outlet tube (K) to the hydraulic valve as follows:
 - Install an O-ring (H) on the end of the outlet tube.
 - Wipe any debris from the top of the hydraulic valve, and remove the plastic cap from the top valve port.
 - Position the front outlet tube as shown in Figure 15 and manipulate the tube as shown in Figure 16 until the threaded female end of the tube passes through the lower right side of the pedestal near the hydraulic T-fitting.

BEGIN INSTALLATION OF
OUTLET TUBE BY PLACING
IT IN THIS POSITION.

(MODELS 1782 AND 2182 ONLY)

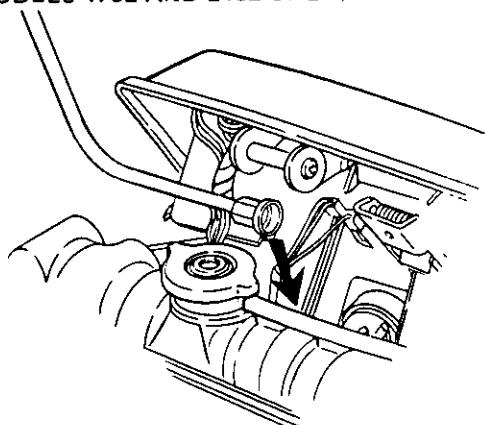
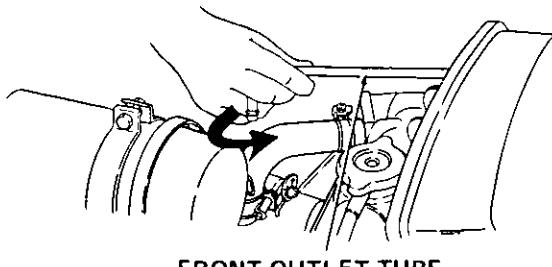


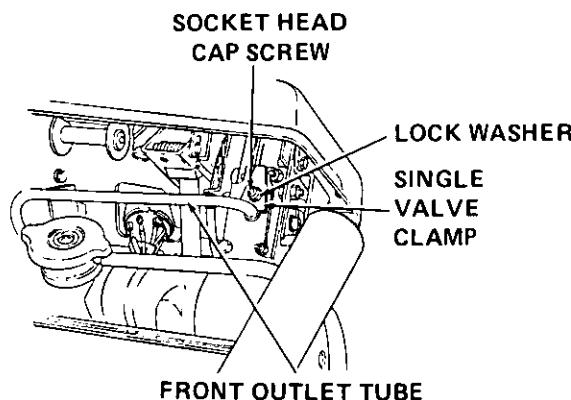
Figure 15



MODELS 1782 AND 2182 ONLY

Figure 16

- d. Place the upper end of the front outlet tube in the top port of the hydraulic valve and loosely attach with the single valve clamp, lock washer and socket head cap screw retained in step B.1. Refer to Figure 17.



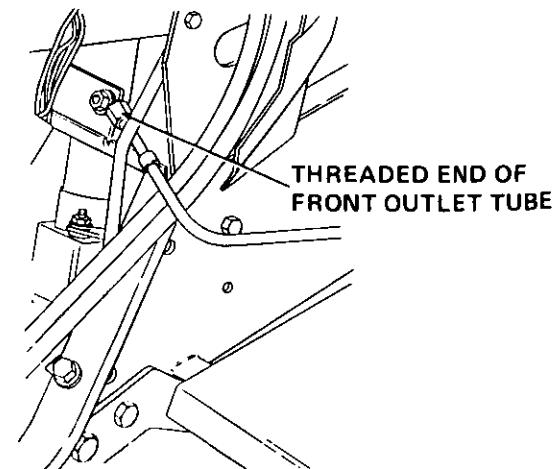
MODELS 1782 AND 2182 ONLY

Figure 17

- e. Skip step 2 and proceed directly to step 3 to continue installation of front outlet tube (K).

2. For tractor Models 1541, 1641, 1861, 1862, 1882, and 2082 only, install the front outlet tube (L) to the hydraulic valve as follows:

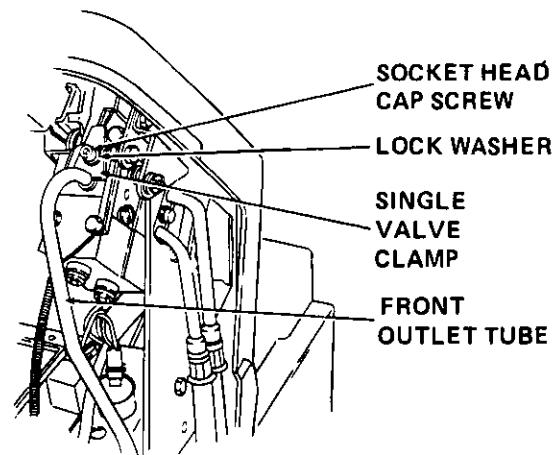
- a. Install an O-ring (H) on the end of the outlet tube.
- b. Wipe any debris from the top of the hydraulic valve, and remove the plastic cap from the top valve port.
- c. Position the front outlet tube as shown in Figure 18 and manipulate the tube across the tractor until the threaded female end of the tube passes through the lower right side of the pedestal.



MODELS 1541, 1641, 1861, 1862,
1882, AND 2082 ONLY

Figure 18

- d. Place the upper end of the front outlet tube in the top port of the hydraulic valve and loosely attach with the single valve clamp, lock washer and socket head cap screw retained in step B.1. Refer to Figure 19.



MODELS 1541, 1641, 1861, 1862,
1882, AND 2082 ONLY

Figure 19

- e. Tractor Models 1862, 1882 and 2082 proceed directly to step 3 to continue installation of front outlet tube (L).
- f. For tractor Model 1541 (Serial No. 816,508 and below) only, skip step 3 and proceed directly to step 4.
- g. For tractor Models 1541 (Serial No. 816,509 and above) 1641 and 1861 only proceed directly to step 5.

3. For tractor Models 1862, 1882, 2082, 1782, and 2182 only, complete installation of front outlet tubes (K or L) as follows:

a. Secure the threaded female fitting on the front outlet tube to the T-fitting. Refer to Figure 20.

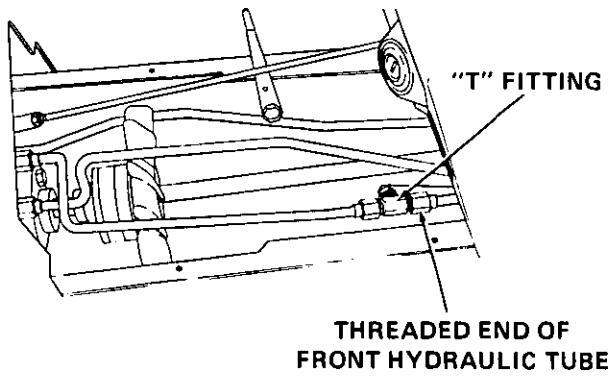


Figure 20

b. Securely tighten the front outlet tube to the hydraulic valve with the socket head cap screw.

4. For tractor Model 1541 (Serial No. 816,508 and below) only, complete installation of front outlet tube (L) and power steering return tube (N) as follows:

a. Secure the threaded female fitting on the front outlet tube to union fitting (M). Refer to Figure 21.

b. Position front end of power steering return tube as shown in Figure 21, and secure to the union fitting (M).

c. Position rear end of power steering return tube as shown in Figure 21, and secure to the threaded fitting on the pump.

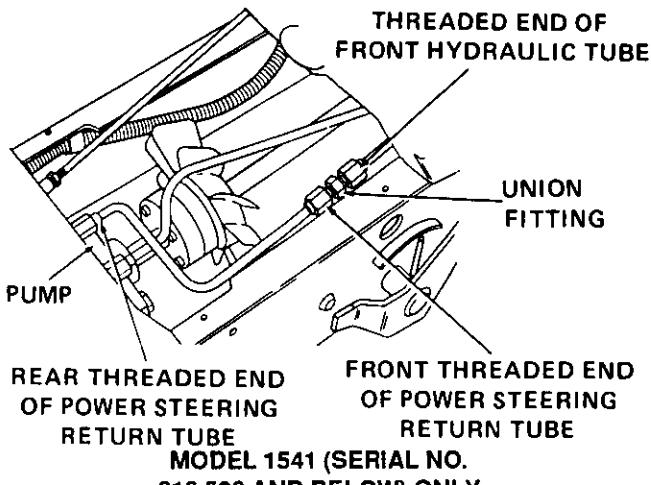


Figure 21

d. Securely tighten the front outlet tube to the hydraulic valve with the socket head cap screw.

5. For tractor Model 1541 (Serial No. 816,509 and above), 1641 and 1861 only, complete installation of front outlet tube (L) and hydraulic tube extension (X) as follows:

a. Secure the threaded female fitting on the front outlet tube to union fitting (M). Refer to Figure 22.

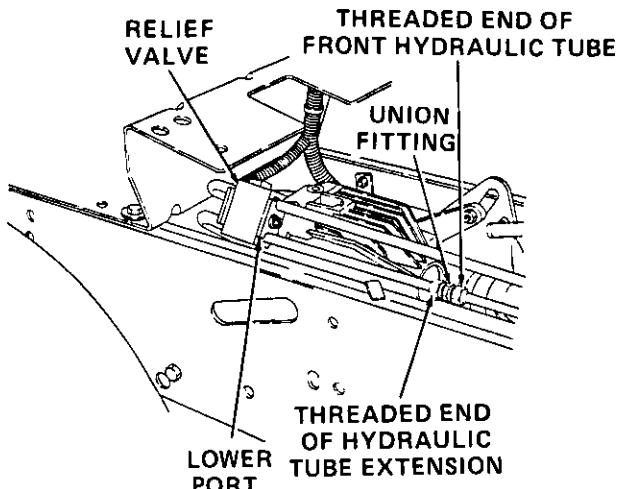


Figure 22

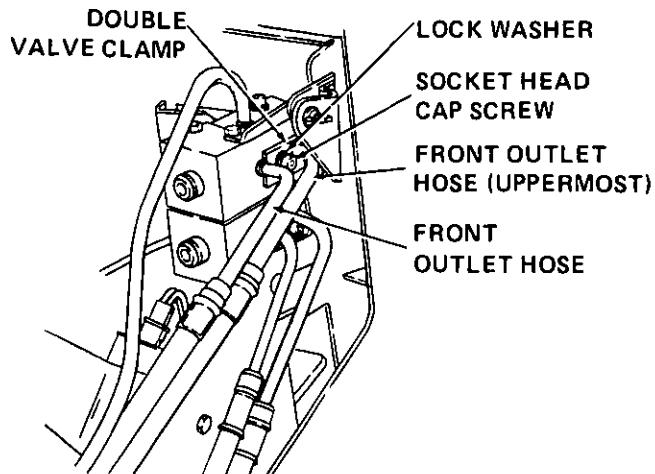
b. Install an O-ring (H) on the end of the hydraulic tube extension (X) and secure to union fitting (M).

c. Position the hydraulic tube extension in the lower port of the relief valve and secure with the double valve clamp, lock washer and socket head cap screw.

d. Securely tighten the front outlet tube to the hydraulic valve with the socket head cap screw.

E. INSTALLATION OF FRONT OUTLET HOSES

1. Loosen the valve mounting bracket from the frame.
2. Wipe any debris from the left side of the top hydraulic valve and remove the two plugs.
3. Install an O-ring (H) on each of the front outlet hoses (O).
4. Position a front outlet hose in each of the side ports and secure with the double valve clamp (P), lock washer (Q) and socket head cap screw (R). Refer to Figure 23.



NOTE:
AIR COOLED TRACTOR IS SHOWN.

Figure 23

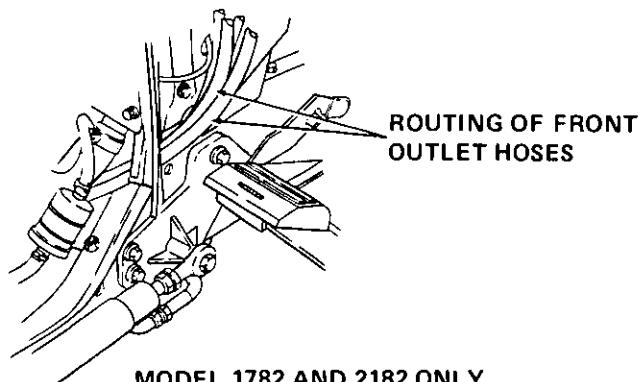
5. Mark the threaded end of the uppermost front outlet hose with a piece of tape for later reference. Refer to Figure 23.
6. Tighten the valve mounting bracket to the frame.
7. Route the two front outlet hoses to the right front side of the tractor as follows:



CAUTION

Do not position front outlet hoses directly against the engine.

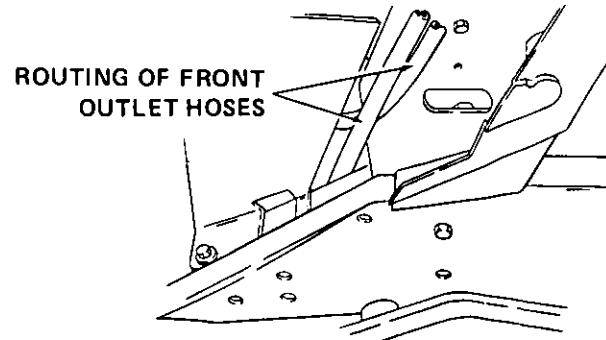
- a. For tractor Models 1782 and 2182 only, route the hoses through the opening shown in Figure 24. Push hoses across to the right side of the tractor and carry forward to front of tractor.



MODEL 1782 AND 2182 ONLY

Figure 24

- b. For tractor Models 1541, 1641, 1861, 1862, 1882, and 2082, route the hoses through the opening shown in Figure 25. Push hoses across to the right side of the tractor and carry forward to front of tractor.



MODELS 1541, 1641, 1861, 1862,
1882, AND 2082 ONLY

Figure 25

8. Place an external retaining ring (S) on each of the front outlet hoses as shown in Figure 26.

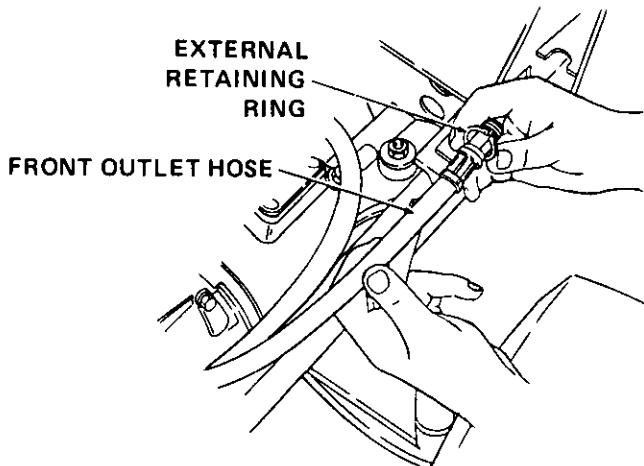
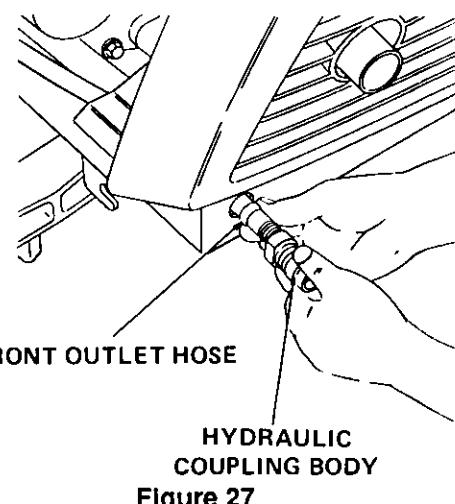


Figure 26

9. Place the outlet hose marked with tape in step E.5 through the TOP hydraulic outlet opening. Place the unmarked hose through the BOTTOM hydraulic outlet opening.
10. Thread a hydraulic coupling body (T) securely onto each of the front outlet hoses. Refer to Figure 27.



HYDRAULIC COUPLING BODY

Figure 27

11. Position hydraulic coupling bodies into openings and secure with external retaining rings placed in groove of hydraulic coupling body. Refer to Figure 28.
12. Secure the two front outlet hoses using cable ties (U).
13. Attach two protective plugs (V) to the cotter pin (W).
14. Secure cotter pin to tractor frame as shown in Figure 28.



Protective plugs should be installed whenever hydraulic couplings are not in use. Always wipe debris from plugs before inserting in couplings.

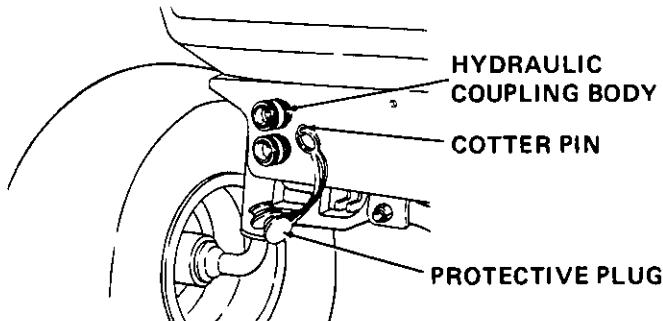


Figure 28

F. POST-INSTALLATION PROCEDURES



Refer to your tractor Owner's Manual for specific information on side panel installation and battery installation.

1. Install battery (except Models 1782 and 2182).



Battery cables must be installed on the battery in the proper sequence to avoid arcing.

2. Reconnect battery cables as follows: POSITIVE cable first, then NEGATIVE cable.
3. Install radiator screen (Models 1782 and 2182 only).
4. Install side panels.
5. Following installation, operate the hydraulic valve several times. Check hydraulic fluid level in transmission and replace if necessary. Refer to Owner's Manual.
6. Start tractor and check for leaks at hydraulic fittings.