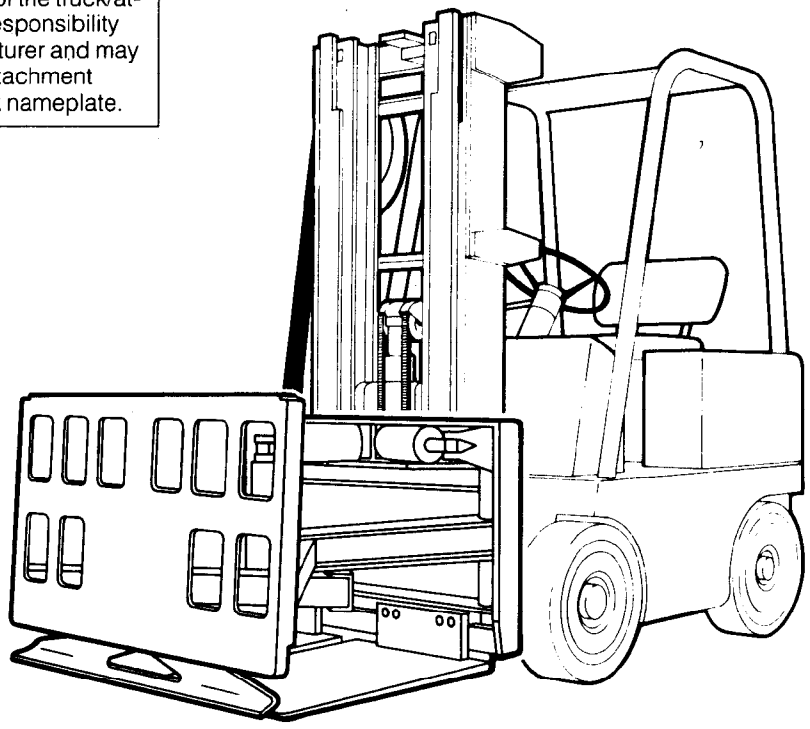
Installation Instructions

30C/45C Load Push and Load Push/Pull
Sideshifting Models

IMPORTANT: Field alterations may impair performance or capability and could result in loss of warranty. Consult Cascade for any required modifications.

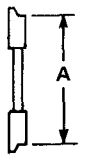
WARNING: Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than shown on the attachment nameplate. Consult the truck nameplate.



Manual Number 668674 R-2

A. Truck Requirements

- Truck Relief Valve Setting: 2000 psi (140 bar), recommended. 2300 psi (160 bar), maximum.
- Volume: **30C** 3–15 GPM (11–56L/min.) **45C** 3–10 GPM (11–37L/min.)
- Recommended hose and fitting size: No. 6 (9/32 in./7mm, I.D.)
- Truck carriage must conform to the ISO dimensional standard 2328, equivalent to Industrial Truck Association (ITA) dimensional standards as shown in chart.
- Make sure the truck carriage is clean and the notches are undamaged.
- In order to conform to industry standard practice, the hoses should be connected to the truck auxiliary valve as indicated by the chart.



Mounting	Dimension A–ITA (ISO)	
	Minimum	Maximum
Class II	14.94 in. (380.0mm)	15.00 in. (381.0 mm)
Class III	18.68 in. (474.5mm)	18.74 in. (476.0mm)

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Function, in sequence of location to the operator.	Attachment Movement	Motion of the operator's hand when actuating the truck auxiliary control handle while facing the load.
Sideshift	Sideshift Right	Rearward or Up
	Sideshift Left	Forward or Down
Push Pull	Pull (rearward)	Rearward or Up
	Push (forward)	Forward or Down

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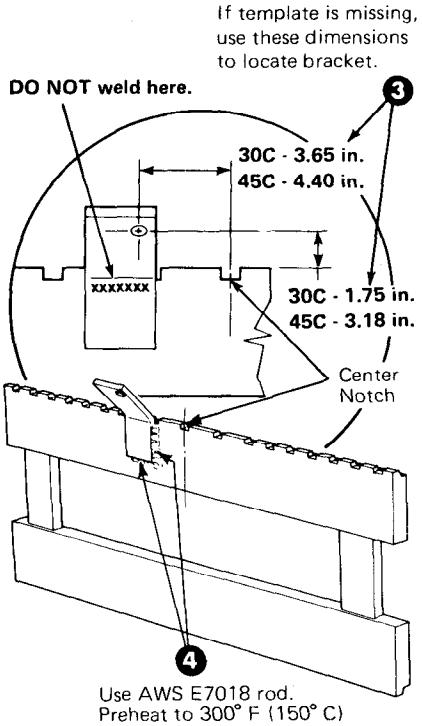
B. Truck Preparation

Skip Steps 1 through 4 if the unit is equipped with Quick Change lower mounting hooks.

TO ATTACH THE SIDESHIFT CYLINDER ANCHOR BRACKET:

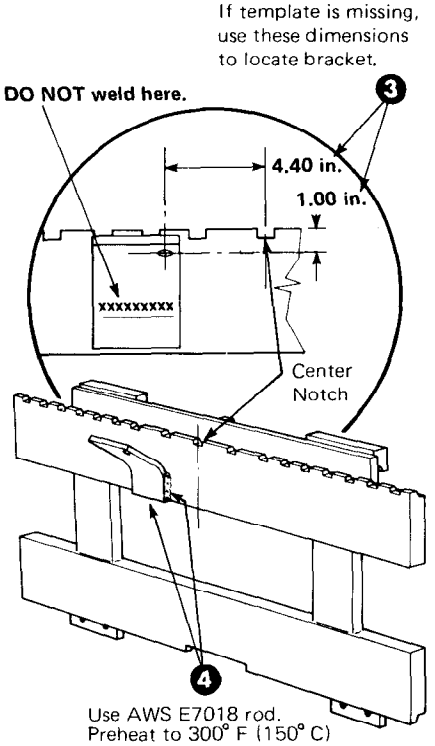
1. Position the cardboard template* in the center notch of the truck carriage.
2. Mark the two lines shown and remove the template.
3. * If the template is not available use the dimensions shown to locate the bracket.
4. Position the cylinder anchor bracket on the marks and weld the bracket in place using AWS E7018 rod. Preheat to 300° F. (150° C.), and weld the bottom and sides of the bracket with a 0.40 in. (10mm) fillet weld.

All Class II models except Sheet Sav®



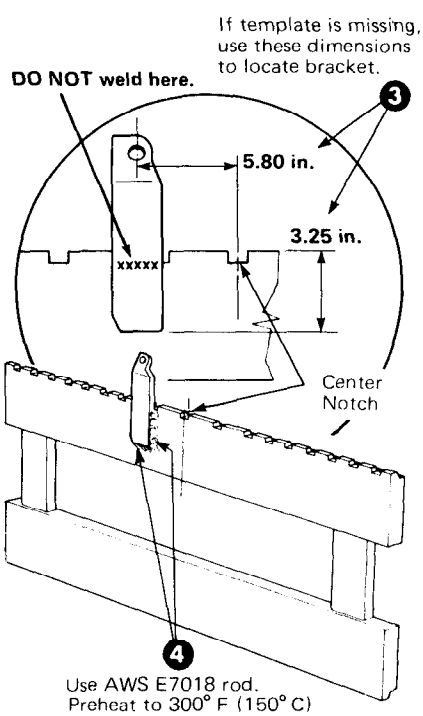
Use AWS E7018 rod. Preheat to 300° F (150° C) 0.40 in. (10mm) fillet welds, bottom and sides.

All Class III models



Use AWS E7018 rod. Preheat to 300° F (150° C) 0.40 in. (10mm) fillet welds, bottom and sides.

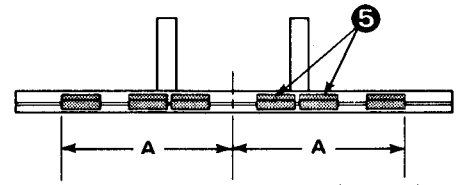
Sheet Sav®



Use AWS E7018 rod. Preheat to 300° F (150° C) 0.40 in. (10mm) fillet welds, bottom and sides.

B. Truck Preparation
(Continued)

ALL UNITS PERFORM THE FOLLOWING:



32 in. (812mm) carriage: A= 14 in. (355mm) MIN
16 in. (406mm) MAX.

36 in. (914mm) carriage: A= 14 in. (355mm) MIN.
17 in. (431mm) MAX.

❺ Place the sideshifting bearing segments in the notches of the truck carriage as shown. Apply a liberal coating of graphite base grease to the bearing segments.

❻ Install the two lower bearing strips on the attachment and coat them with a graphite base grease.

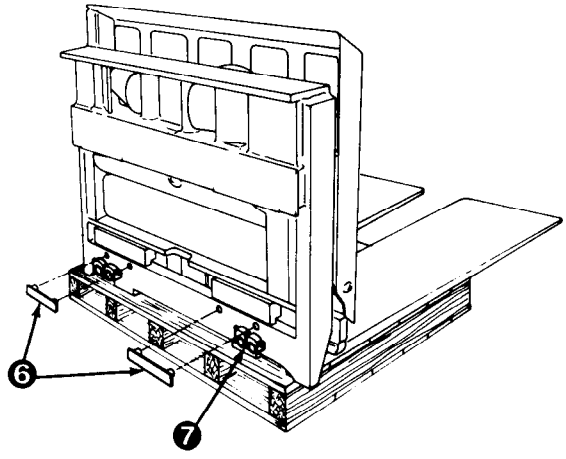
❼ Install the **Quick Change** lower mounting hooks. For attachments with bolt-on type hooks, proceed to Step 8.

Quick Change Type A – Install the components as shown. Tighten the capscrews to a torque of 105–115 ft.-lbs. (140–155 N·m).

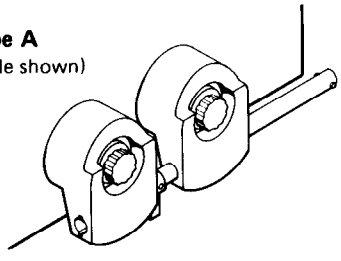
Quick Change Type B –

a. Install the guides to the baseplate mounting holes with the guide hole offset in the upward position (5/8in./16mm from top of guide to hole center). Tighten the capscrews to a torque of 105–115 ft.-lbs. (140–155 N·m).

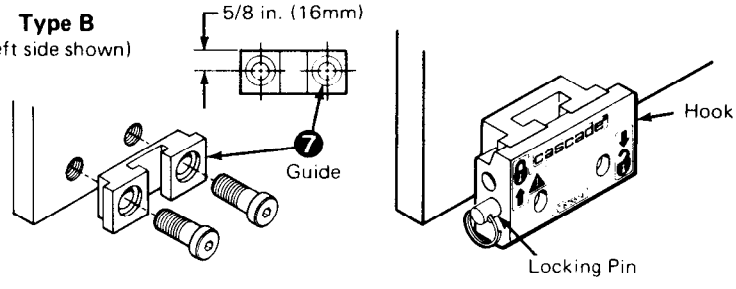
b. Slide the hooks over the top of the guides. Install each locking pin through the hook lower hole.



Type A
(Right side shown)



Type B
(Left side shown)



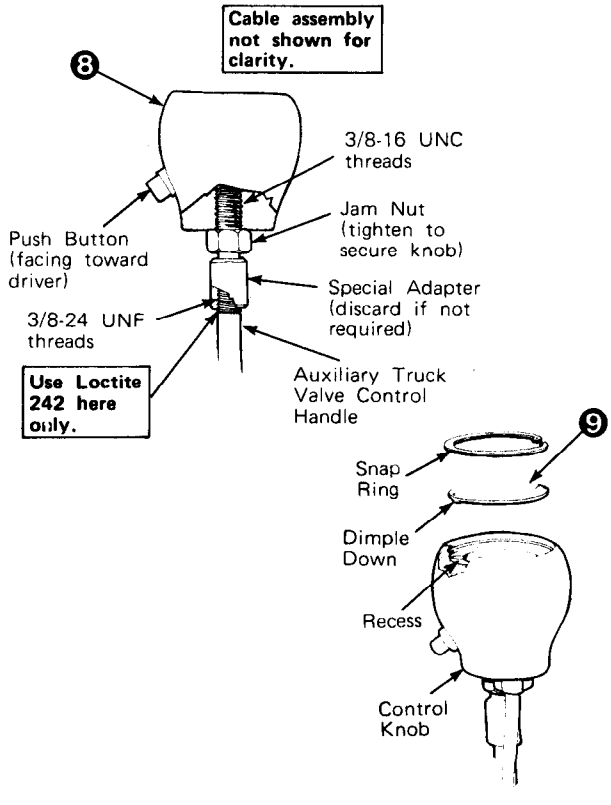
TO INSTALL THE CONTROL KNOB (Solenoid Units Only):

❽ Remove the existing knob from the auxiliary valve control handle and install the new knob as shown. If the control handle is not threaded, weld on the adapter supplied with the new knob.

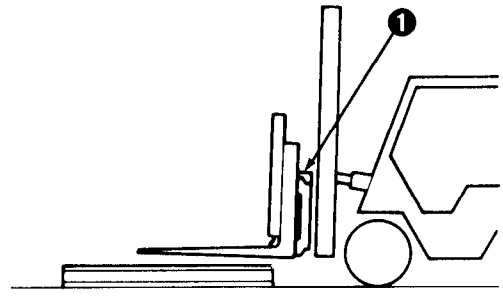
NOTE: It may be necessary to saw off a portion of the control handle to achieve a comfortable length.

CAUTION: Secure the cable assembly to the control handle so the cable will not be pinched at the truck cowl when the handle is actuated.

❾ If the control knob has 1 button, then the two-function side of the control knob placard should be showing. When the control knob has 2 buttons, the three-function side of the placard should be showing. Fit the dimple on the placard into the recess on the knob and install the snap ring.

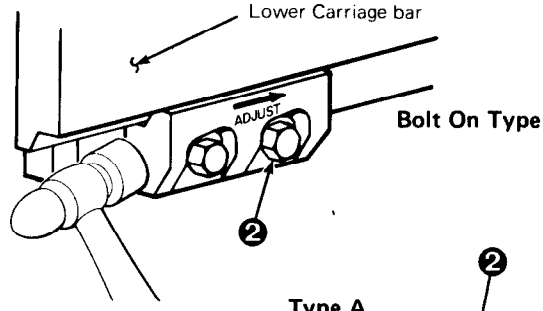


C. Installation



1. Center the lift truck behind the attachment. Tilt the mast forward. Engage the truck carriage with the attachment upper hook, then raise the truck carriage into position behind the attachment. Lift the attachment 2 in. (5cm) off the pallet.

> **WARNING:** The upper mounting hook must be properly engaged with the upper carriage bar.



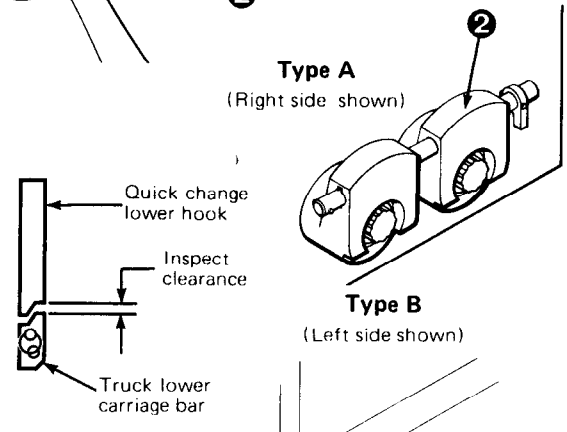
2. Engage the lower hooks with the truck lower carriage bar.

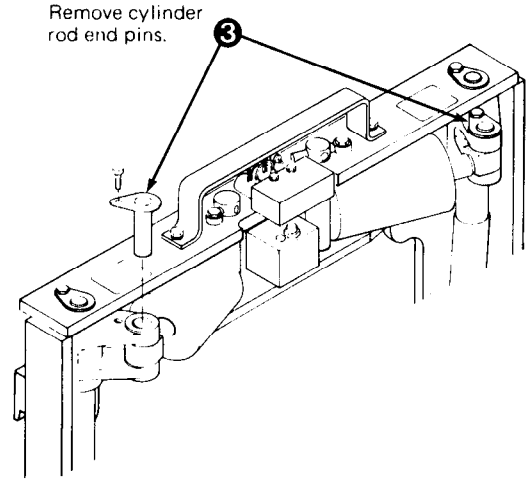
   Bolt On Type–Install the hooks and capscrews. Tighten the capscrews finger tight. Tap the end of the hooks with a hammer in the direction of the adjust arrow for **maximum** engagement with the carriage bar. Tighten the capscrews to a torque of 105–115 ft.-lbs. (140–155 N·m).

   Quick Change Type A – Turn both hooks up and reinstall the pin. The maximum allowable clearance between the hooks and carriage bar is 1/8 in. (4mm) as shown.

   Quick Change Type B – Remove the locking pins. Slide the hooks up to engage with the carriage bar. Install the locking pins through the upper holes.

   > **CAUTION:** If the clearance between the carriage bar and the hooks exceeds 3/16 in. (6mm), the guides (refer to Truck Preparation, step 7) should be inverted and installed with the hole offset downward (5/8 in./16mm from bottom of guide to hole center) to minimize the gap.

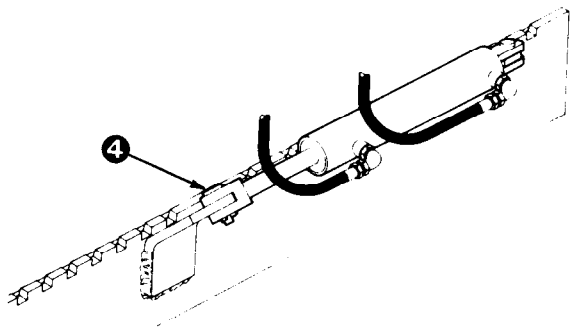




3. Remove the push/pull cylinder rod end pins. Manually pull the faceplate away from the frame.

C. Installation (Continued)

❹ Install the sideshift cylinder rod to the anchor bracket. Push the faceplate back against the frame and reinstall the push/pull cylinder rod end pins.



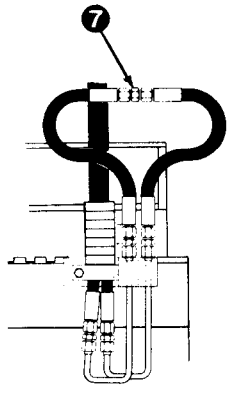
❺ Position the attachment 4 in./10cm (1/2 sideshift cylinder stroke) to one side of center.

NOTE: Open both fittings on the sideshift cylinder to allow the rod to move easily.

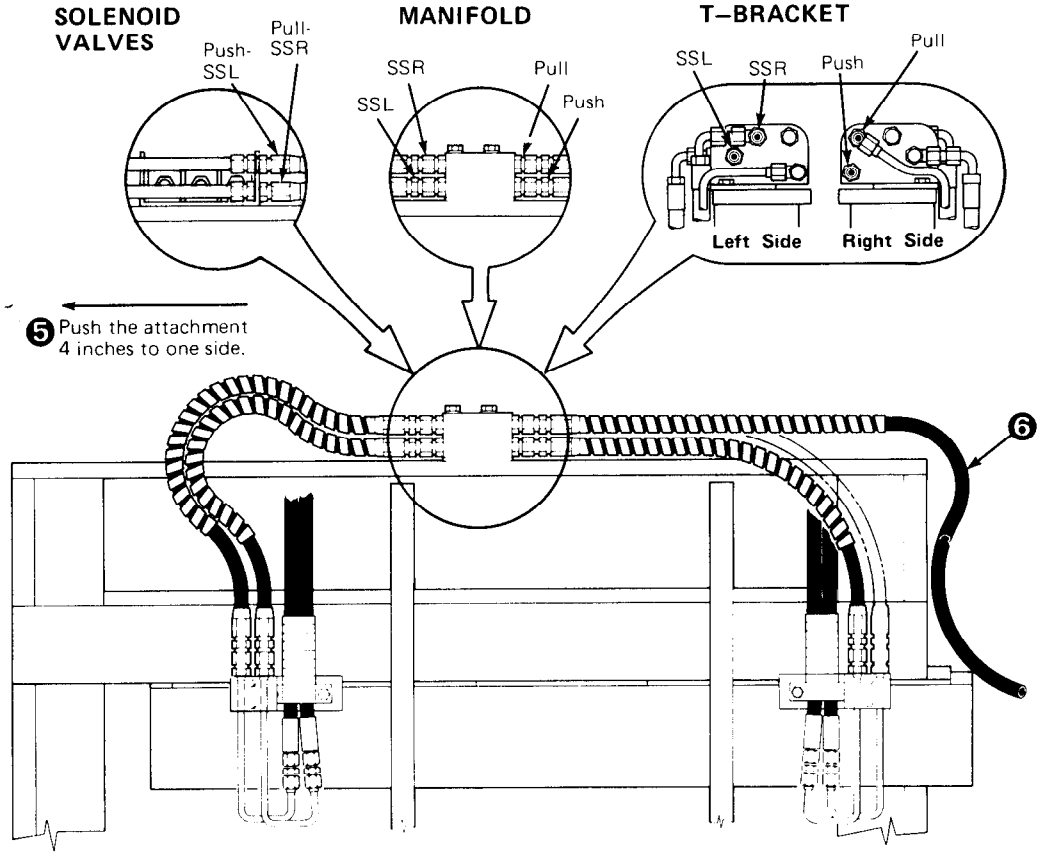
❻ Measure the hydraulic hose length required to connect the hoses to the hose terminal. Remove the hoses and cut to length as required.

CAUTION: Flush the hoses as follows to prevent damage to the attachment hydraulic components.

❼ Connect the hoses to the truck hose terminal. Connect the hoses together using a union fitting. Start the truck and actuate the truck control valve in both directions for about 30 seconds to carry any debris in the hoses to the truck hydraulic tank and filter.



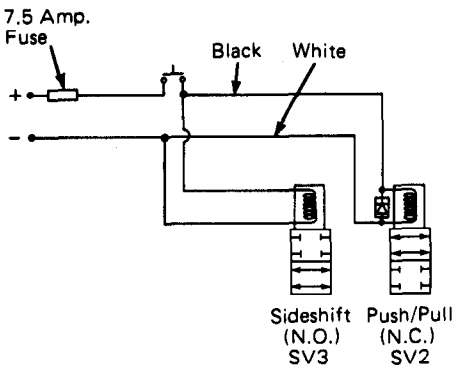
❽ Remove the union fittings and connect the hoses to the attachment fittings as shown. Position the hose guards to prevent the hoses from being scuffed by the frame.

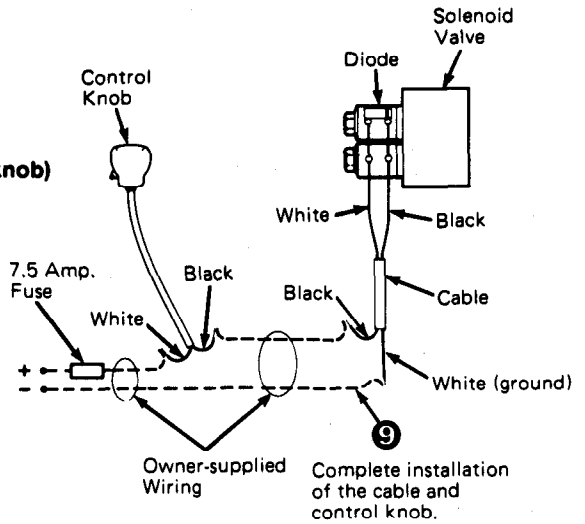


C. Installation (Continued)

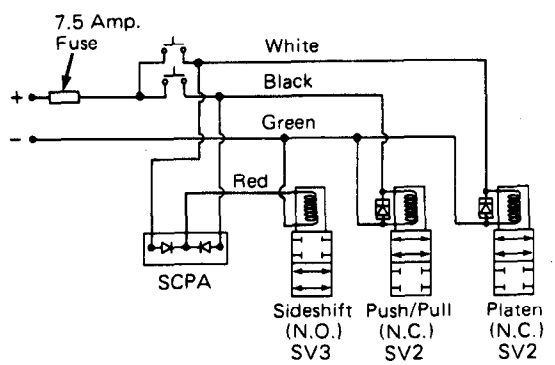
⑨ **Solenoid Equipped Attachments** – The electric cable leading from the attachment should be tied to the hoses to prevent scuffing of the cable during attachment sideshifting. See the electric schematic to complete installation of the cable.

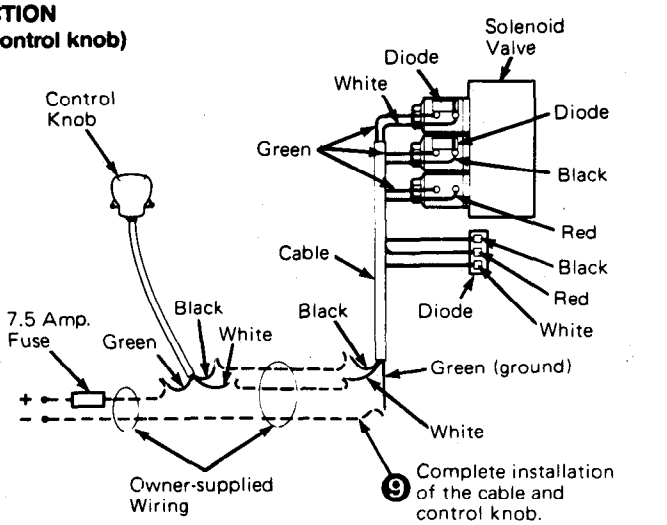
TWO-FUNCTION
(One-button control knob)



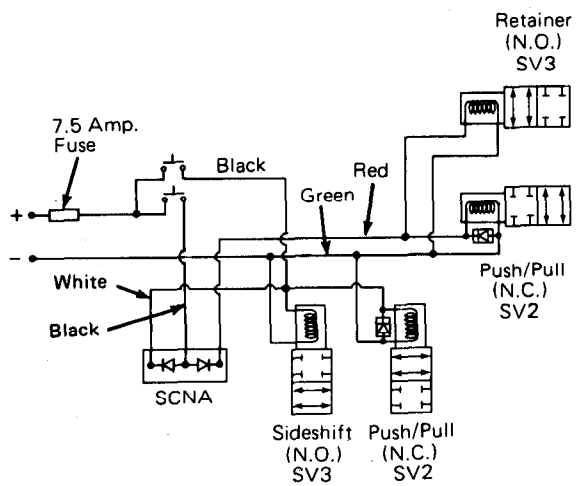


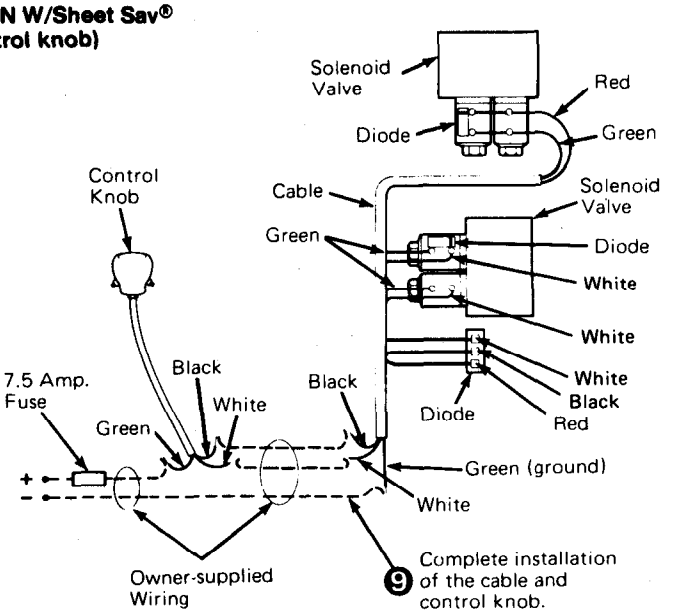
THREE-FUNCTION
(Two button control knob)





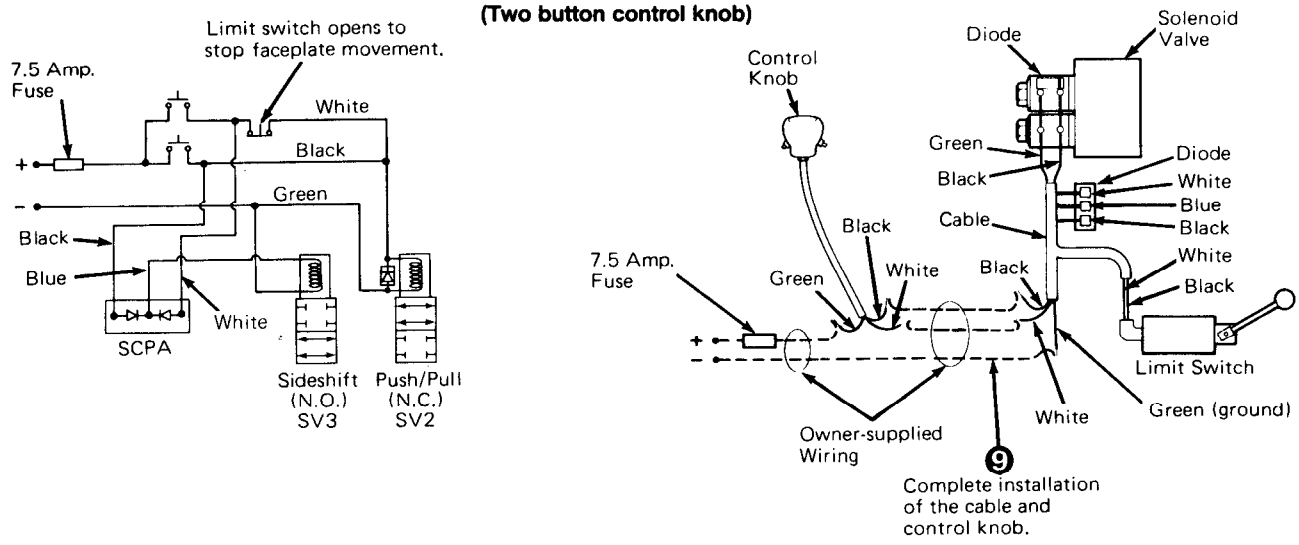
THREE-FUNCTION W/Sheet Sav®
(Two-button control knob)



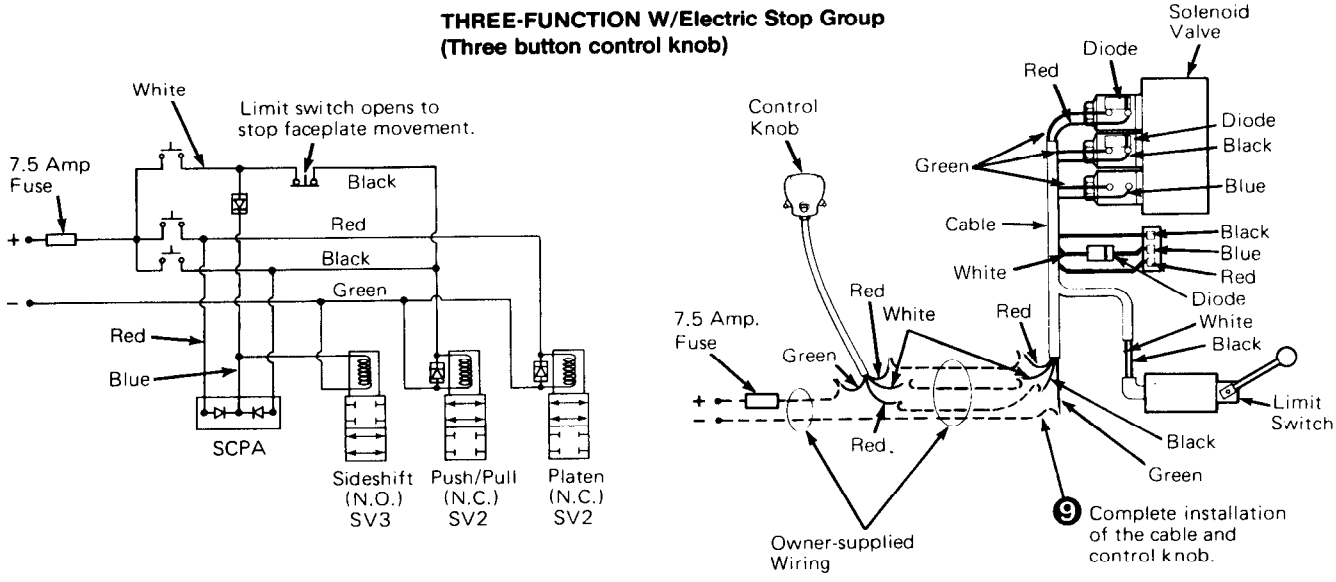


C. Installation (Continued)

TWO-FUNCTION W/Electric Stop Group
(Two button control knob)



THREE-FUNCTION W/Electric Stop Group
(Three button control knob)



D. Prior to Operation

Remove air from the system by extending the faceplate fully and keeping it there for 10–20 seconds with the control valve actuated.

NOTE: This should correct an irregularly extending faceplate. If it does not, retract the faceplate and repeat the process.

Operate the unit through several complete cycles and make sure all functions operate smoothly and correctly.

PUSH/PULL UNITS:

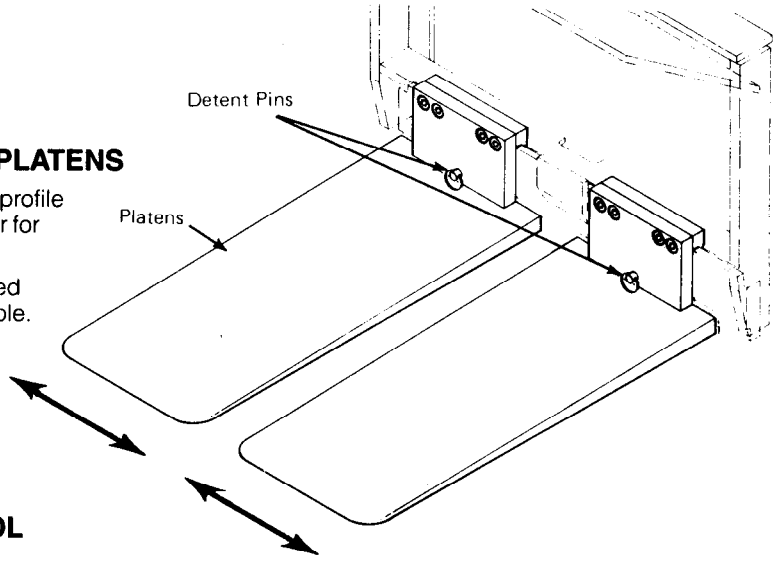
- The gripper jaw should open prior to the faceplate extension when the control handle is pushed forward.
- The gripper jaw should close completely prior to faceplate retraction when the control handle is pulled back.

D. Prior to Operation
(Continued)

PUSH/PULL UNITS with ADJUSTABLE PLATENS

The platens can be adjusted to a wider or narrower profile without tools to accommodate different size loads or for pallet handling.

1. Pull outward on detent pin. Slide platen to desired location. Engage detent pin in closest locator hole.



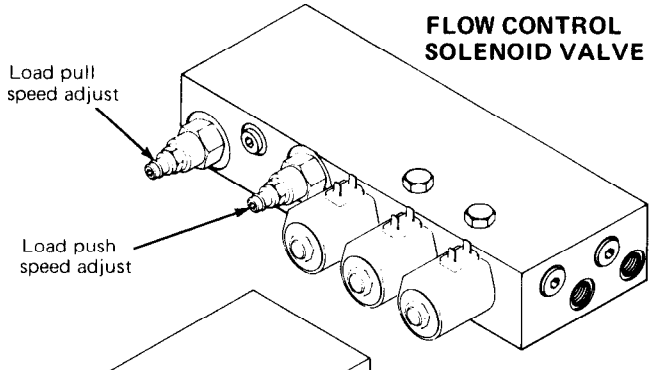
PUSH/PULL UNITS with FLOW CONTROL MANIFOLD or SOLENOID VALVE:

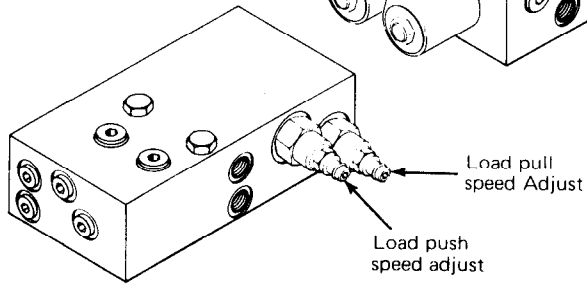
PUSH/PULL SPEED ADJUSTMENT

The optional flow control manifold has a separate speed adjustment range of ± 30% for the Load Push and Load Pull functions.

1. Loosen the lock nut on each adjustable valve cartridge.
2. Turn the adjustment screw, with a hex wrench, clockwise to increase the speed or counterclockwise to decrease the speed. The adjustment range is ± 30%. Adjust as necessary while operating the attachment.

   Do not bottom out the adjustment. Operating pressure will be lost.
3. Tighten the lock nuts after final adjustment.





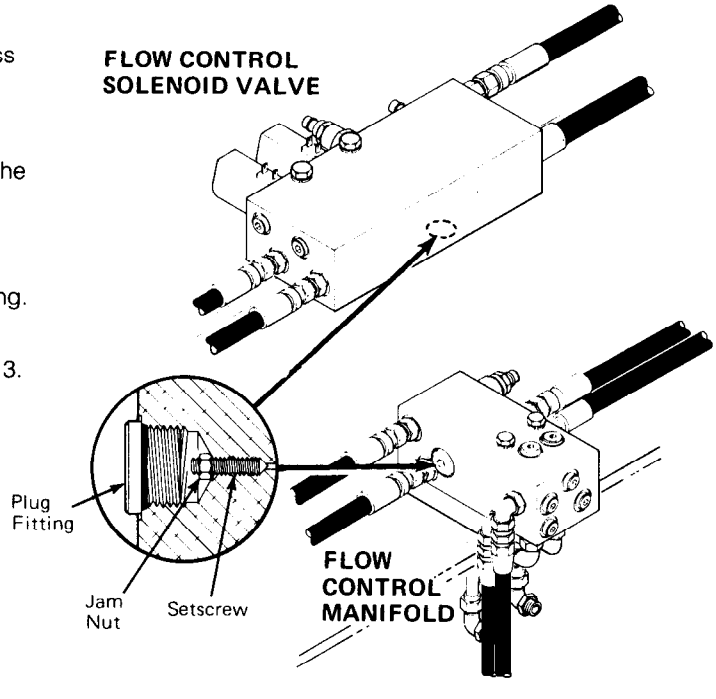
FLOW CONTROL MANIFOLD

HIGH VOLUME BYPASS ADJUSTMENT

The flow control manifold and solenoid valve have a bypass orifice for use with high volume truck applications over 16 GPM (60L/min.). The bypass can be adjusted to reduce truck engine stall during actuation of the attachment.

NOTE: The bypass orifice setscrew is adjusted closed at the factory.

1. Remove the plug fitting.
2. Turn the setscrew counterclockwise one turn with a screwdriver. Tighten the jam nut. Replace the plug fitting.
3. Start the truck and actuate the attachment.
   - If the truck continues to stall, repeat steps 1 through 3.
   - If the truck does not stall, adjustment is complete.

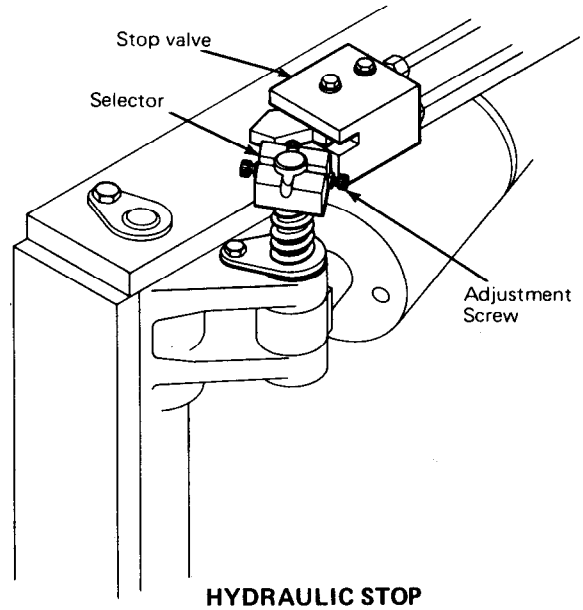


D. Prior to Operation
(Continued)

PUSH/PULL UNITS with FACEPLATE STOP GROUPS:

HYDRAULIC FACEPLATE STOP ADJUSTMENT

1. Extend faceplate to expose stop mechanism. Depress selector and turn to corresponding number (stamped in selector) of inches (0, 3, 6 or 9) faceplate is to be positioned to, for full back travel. Number selected should be turned so corresponding adjusting capscrew will contact lever on stop valve.
2. A more precise faceplate stop position may be attained by adjusting the capscrews on the selector. Loosen the lock nut and turn the capscrew (counterclockwise to decrease the dimension of faceplate to platen tips, clockwise to increase the dimension of faceplate to platen tips).

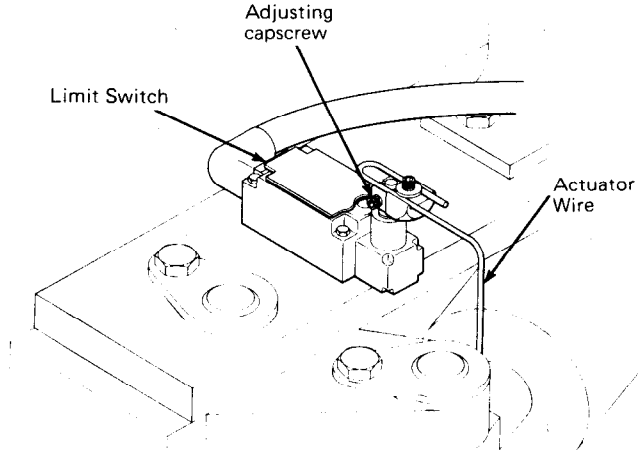


HYDRAULIC STOP

ELECTRIC FACEPLATE STOP ADJUSTMENT

1. Extend faceplate to expose stop switch. Adjustment is made by loosening the capscrew and rotating the actuator wire. Rotate actuator counter-clockwise to decrease faceplate to platen tip dimension. Rotate clockwise to increase the faceplate to platen tip dimension.

   NOTE: When the arm contacts the actuator wire, the normally closed switch opens to stop faceplate travel. Wiring is connected to terminals 1 and 2 for normally closed operation.



ELECTRICAL STOP

Do you have questions you need answered right now? Call your nearest Cascade Service Department.

AMERICAS

Cascade Corporation
U.S. Headquarters
2201 NE 201st
Fairview, OR 97024-9718
Tel: 800-CASCADE (227-2233)
Fax: 888-329-8207

Cascade Canada Inc.
5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
Fax: 905-629-7785

Cascade do Brasil
Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA

Cascade Italia S.R.L.
European Headquarters
Via Dell'Artigianato 1
37030 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

Cascade (Africa) Pty. Ltd.
PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
Fax: 27-11-394-1147

ASIA-PACIFIC

Cascade Japan Ltd.
2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea
121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, Korea
Tel: +82-32-821-2051
Fax: +82-32-821-2055

Cascade-Xiamen
No. 668 Yangguang Rd.
Xinyang Industrial Zone
Haicang, Xiamen City
Fujian Province
P.R. China 361026
Tel: 86-592-651-2500
Fax: 86-592-651-2571

Cascade India Material Handling Private Limited
No 34, Global Trade Centre
1/1 Rambaugh Colony
Lal Bahadur Shastri Road,
Navi Peth, Pune 411 030
(Maharashtra) India
Phone: +91 020 2432 5490
Fax: +91 020 2433 0881

Cascade Australia Pty. Ltd.
1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand
15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: +64-9-273-9136
Fax: +64-9-273-9137

Sunstream Industries Pte. Ltd.
18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

cascade™

Part Number 668674 R-2