

# MULTIPLEX STRAIGHT BLADE HYDRAULIC UNIT SERVICE INSTRUCTIONS

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## RELIEF VALVE ADJUSTMENTS

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**NOTE:** Before removing hoses and fittings, carefully note hose routing for proper reassembly. For complete hydraulic fluid level/change or hose/fitting instructions, see the Maintenance Section of your Owner's Manual.

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**NOTE:** Loosen fill plug slowly to relieve any pressure in reservoir.

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## 42292-2 & 42294-2 SERVICE MANIFOLD ASSEMBLIES

Angle ram relief valves A and B are factory set at 2500 psi for use on FISHER® MC and SD snowplows. For use on FISHER HD or HC snowplows, follow Relief Valve A and B Adjustment instructions on page 2 and refer to the table below for specific model adjustments.

### Relief Valve A and B Adjustment

Snowplow Model	No. of Turns Off (CCW) from Fully Seated	Approximate Setting (psi)
FISHER® MC or SD snowplow	2-1/4 to 2-1/2	2500 (factory setting)
FISHER HC snowplow	1-3/4	3000
FISHER HD or HDX™ snowplow	1 to 1-1/4	4000

### Return Tube Installation

For all service manifold assemblies, install the return tube as shown on page 2. Press or tap in until the shoulder of the tube is flush with the manifold.

## TORQUE CHART

Multiplex Straight Blade Hydraulic Unit Torque Chart		
Location	Fastener Size	Torque
Pump Cap Screws	5/16-18 x 2-1/4	150–160 in-lb
Motor Terminals (+ and –)	5/16 Nut	50–60 in-lb
Motor to Manifold Cap Screws	1/4-20	55–65 in-lb*
Reservoir Screws	#10-24 x 5/16	30–35 in-lb*
Solenoid Valves	7/8 Hex Head	19–21 ft-lb
Coil Nuts	3/4 Hex Head Jam Nut	48–60 in-lb
SAE O-Ring Plugs	1/8 or 5/32 Internal Hex	7–9 ft-lb
Hydraulic Unit Mount Bolts	3/8-16 x 1	22–27 ft-lb
Motor Relay Small Terminals	10-32 Nut	15 in-lb max
Motor Relay Large Terminals	5/16-24 Nut	35 in-lb max
Motor Relay Mount Screws	1/4-20 x 1/4	55–65 in-lb
Plow Module Mount Screws	1/4-20 x 3/8	60–70 in-lb
Module Plate to Manifold	1/4-20 x 5/8	60–70 in-lb

\* Torque with low-strength threadlocker.

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**Relief Valve Service:** Apply one drop of low-strength threadlocker to all relief valve stems.

**Relief Valve A and B Adjustment:** Screw stem in CW until spring is fully compressed, then back out CCW the number of full turns for the plow application as specified in the table on page 1.

## ⚠ WARNING

**Do not stand between the vehicle and the blade or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.**

**Relief Valve C Adjustment:** Attach 3000 psi gauge in line with PS ram. Adjust relief valve C to obtain 2250 psi pump relief pressure at full angle left. Relieve pressure before adjusting.

Remove motor. Fit seal protector onto end of pump shaft and install lubricated shaft through seal.\*\*

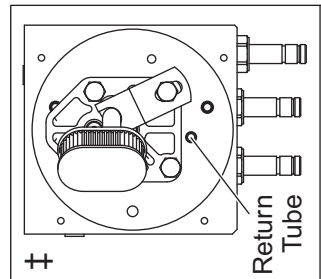
Snap filter onto tube and align filter as shown in end view.†

Replace O-ring whenever disassembled. Apply light film of white lithium grease for reassembly. Clean manifold groove and reservoir surface.

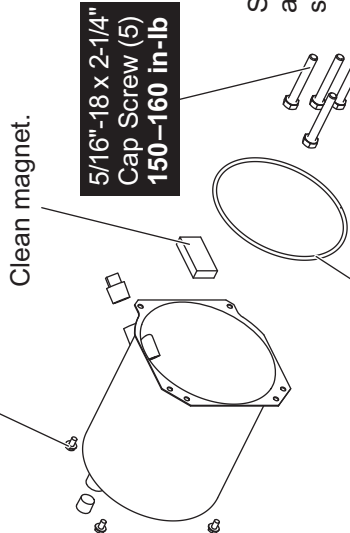
## General

1. **Before any service**, loosen breather to relieve reservoir pressure.
2. Lubricate all O-rings with clean hydraulic fluid except where noted otherwise.
3. DS = Driver's Side; PS = Passenger's Side

\*\* Seal Protector  
Fit over pump shaft tang and lubricate w/ hydraulic fluid.



#10-24 x 5/16" Washer-Head Screw (4)  
30-35 in-lb  
Apply low-strength threadlocker.

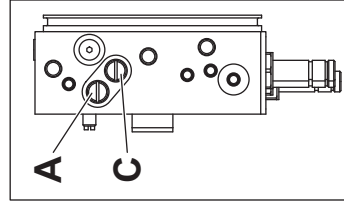


5/16"-18 x 2-1/4"  
Cap Screw (5)  
150-160 in-lb

C — Pump Relief Valve

O-Ring Boss Plug  
7-9 ft-lb

A — DS Plowing  
Relief Valve



Alignment Ring  
Return Tube for  
Service Manifold

Inspect seal and  
replace if damaged.

B — PS Plowing  
Relief Valve

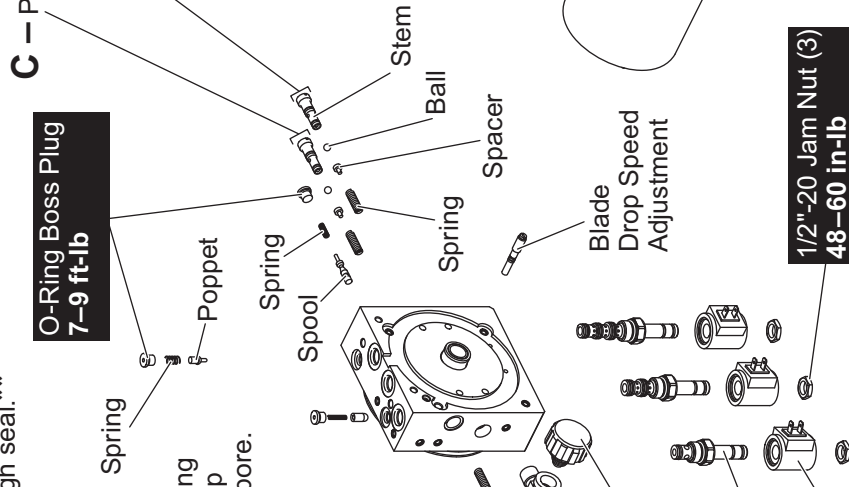
Breather

Cartridge Valve (3)  
19-21 ft-lb

Assemble coils with  
printing facing out.

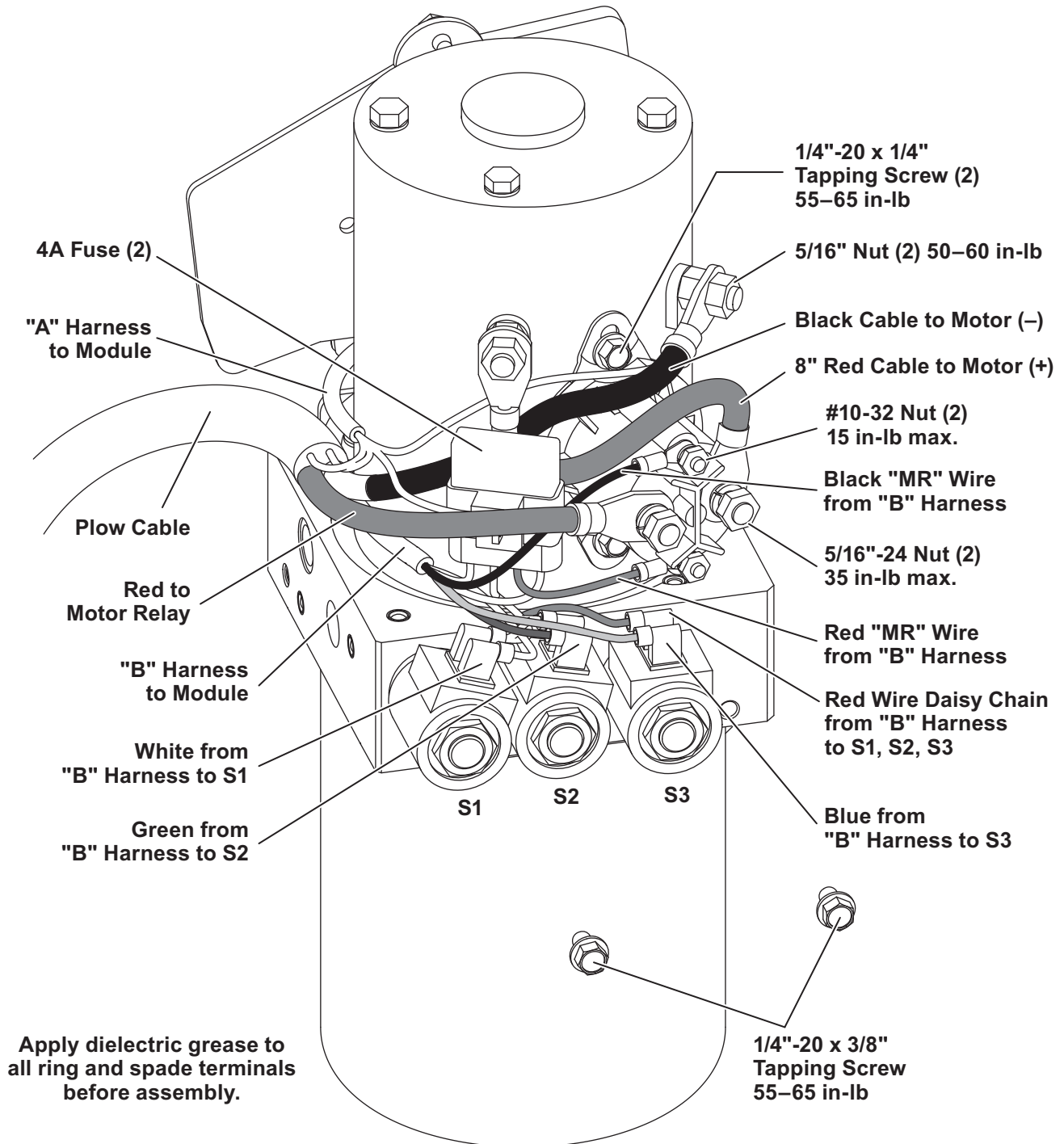
1/2" -20 Jam Nut (3)  
48-60 in-lb

Motor Cap Screw (2)  
55-65 in-lb  
Apply low-strength  
threadlocker.



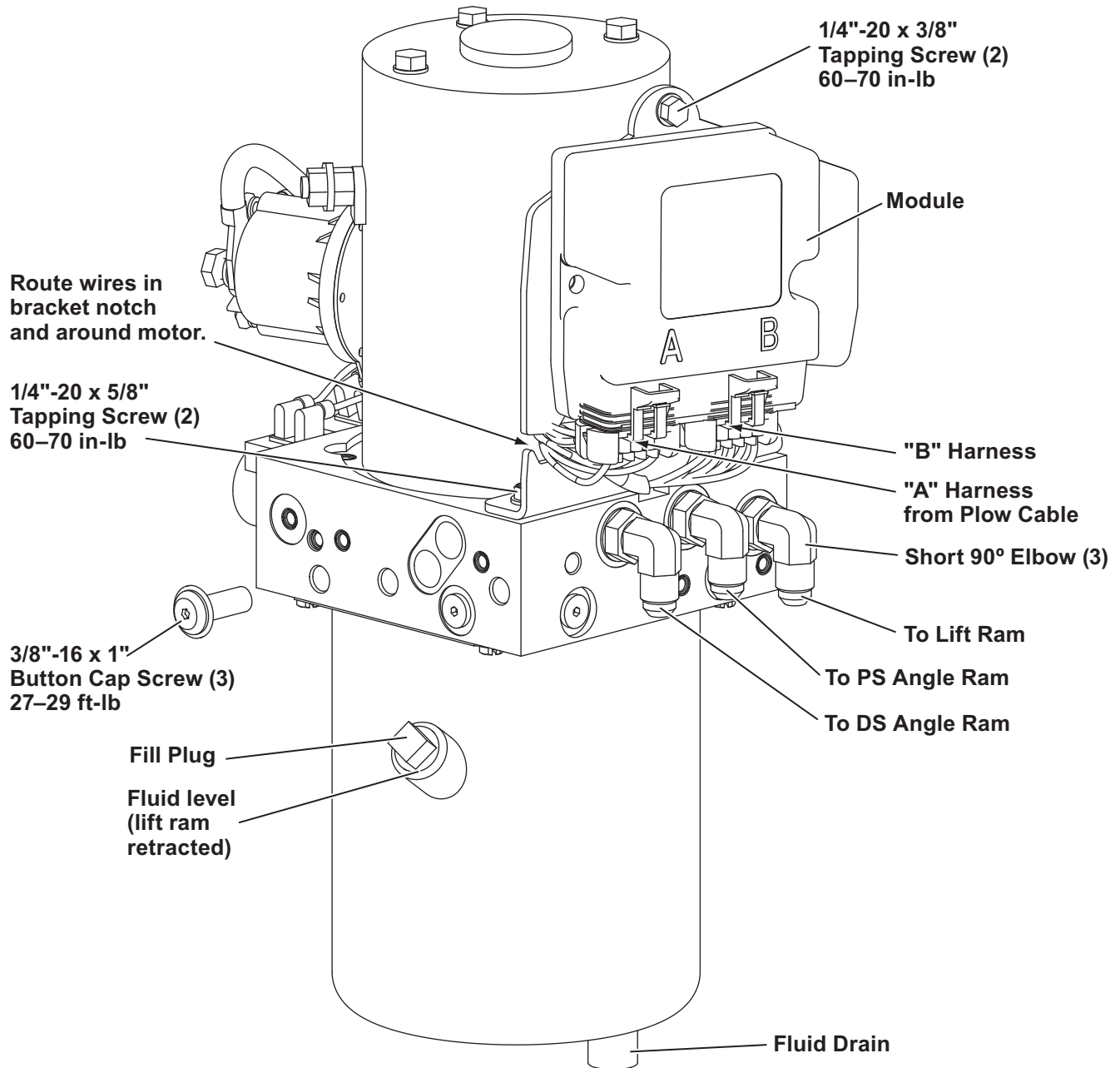
# MULTIPLEX STRAIGHT BLADE HYDRAULIC UNIT SERVICE INSTRUCTIONS

## ELECTRICAL ASSEMBLY



# MULTIPLEX STRAIGHT BLADE HYDRAULIC UNIT SERVICE INSTRUCTIONS

## ELECTRICAL ASSEMBLY, HYDRAULIC FLUID (DRAIN AND FILL), FITTINGS



The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used. This equipment manufacturer or the vehicle manufacturer may require or recommend optional equipment for snow removal. Do not exceed vehicle ratings with a snowplow. The company offers a limited warranty for all snowplows and accessories. See separately printed page for this important information.

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