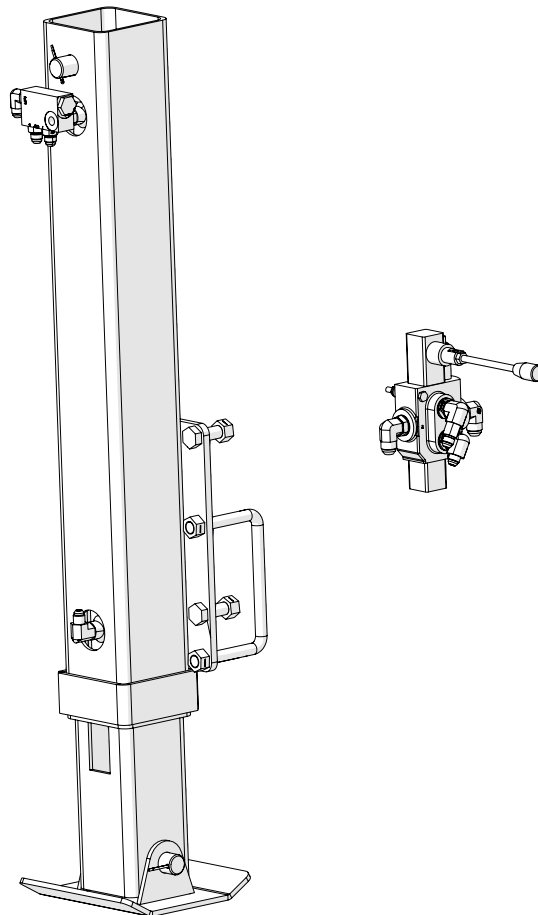




# Manual

## HYDRAULIC JACK

SERVICE AND INSTALLATION MANUAL



Rev. 4.28.2023

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# General Information

## TO THE OWNER:

The purpose of this manual is to assist you in operating and maintaining your seed tender in a safe manner. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance and help maintain safe operating conditions. If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating:

1. Is instructed in safe and proper use.
2. Reviews and understands the manual(s) pertaining to this machine.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.



This Safety-Alert symbol indicates a hazard and means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



### **DANGER**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



### **WARNING**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.



### **CAUTION**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

### **IMPORTANT**

Indicates that failure to observe can cause damage to equipment.

## Bolt Torque Chart

Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are clean and you start thread engagement properly. **Use these values when tightening all bolts and nuts with the exception of wheel nuts.**

### SAE Fasteners

| Coarse Thread Series               |            |              |            |              |
|------------------------------------|------------|--------------|------------|--------------|
|                                    | Grade 5    |              | Grade 8    |              |
| <i>Diameter and Pitch (Inches)</i> | <i>Dry</i> | <i>Oiled</i> | <i>Dry</i> | <i>Oiled</i> |
| 1/4"-20                            | 8 ft-lbs   | 6 ft-lbs     | 12 ft-lbs  | 9 ft-lbs     |
| 5/16"-18                           | 17         | 13           | 25         | 18           |
| 3/8"-16                            | 31         | 23           | 44         | 33           |
| 7/16"-14                           | 49         | 37           | 70         | 52           |
| 1/2"-13                            | 75         | 57           | 106        | 80           |
| 9/16"-12                           | 109        | 82           | 154        | 115          |
| 5/8"-11                            | 150        | 113          | 212        | 159          |
| 3/4"-10                            | 267        | 200          | 376        | 282          |
| 7/8"-9                             | 429        | 322          | 606        | 455          |
| 1"-8                               | 644        | 483          | 909        | 681          |
| Fine Thread Series                 |            |              |            |              |
| <i>Diameter and Pitch (Inches)</i> | <i>Dry</i> | <i>Oiled</i> | <i>Dry</i> | <i>Oiled</i> |
| 1/4"-28                            | 10 ft-lbs  | 7 ft-lbs     | 14 ft-lbs  | 10 ft-lbs    |
| 5/16"-24                           | 19         | 15           | 27         | 20           |
| 3/8"-24                            | 35         | 26           | 49         | 37           |
| 7/16"-20                           | 55         | 41           | 78         | 58           |
| 1/2"-20                            | 85         | 64           | 120        | 90           |
| 9/16"-18                           | 121        | 91           | 171        | 128          |
| 5/8"-18                            | 170        | 127          | 240        | 180          |
| 3/4"-16                            | 297        | 223          | 420        | 315          |
| 7/8"-14                            | 474        | 355          | 669        | 502          |



# Safety Rules

## **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be erased by an operator's single careless act. In addition, hazard control and accident prevention are dependent upon the awareness, concern, judgment, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Make certain that the operator(s), prior to operating is instructed in safe and proper use and reviews and understands the manual(s) pertaining to this machine. Read this manual before you operate this machine. If you do not understand any part of this manual, or need more information, contact the manufacturer or your authorized dealer.

## **SAFETY**

Understand that your safety and the safety of other persons is measured by how you service, and operate this machine. Know the positions and functions of all controls before you try to operate them. Make sure to check all controls in a safe area before starting your work.

The safety information given in this manual does not replace safety codes, federal, state or local laws. Make certain your machine has the proper equipment as designated by local laws and regulations.

Keep all safety shields in place.

Keep hands, feet, hair and clothing away from moving parts while unit is in operation.

Ensure that everyone is clear of equipment before operating the jack.

Avoid high pressure fluids. Escaping fluid under pressure can penetrate the skin causing serious injury. Always relieve pressure before disconnecting hydraulic lines. Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands. Keep all components in good repair.

# Repair Parts List and Diagrams

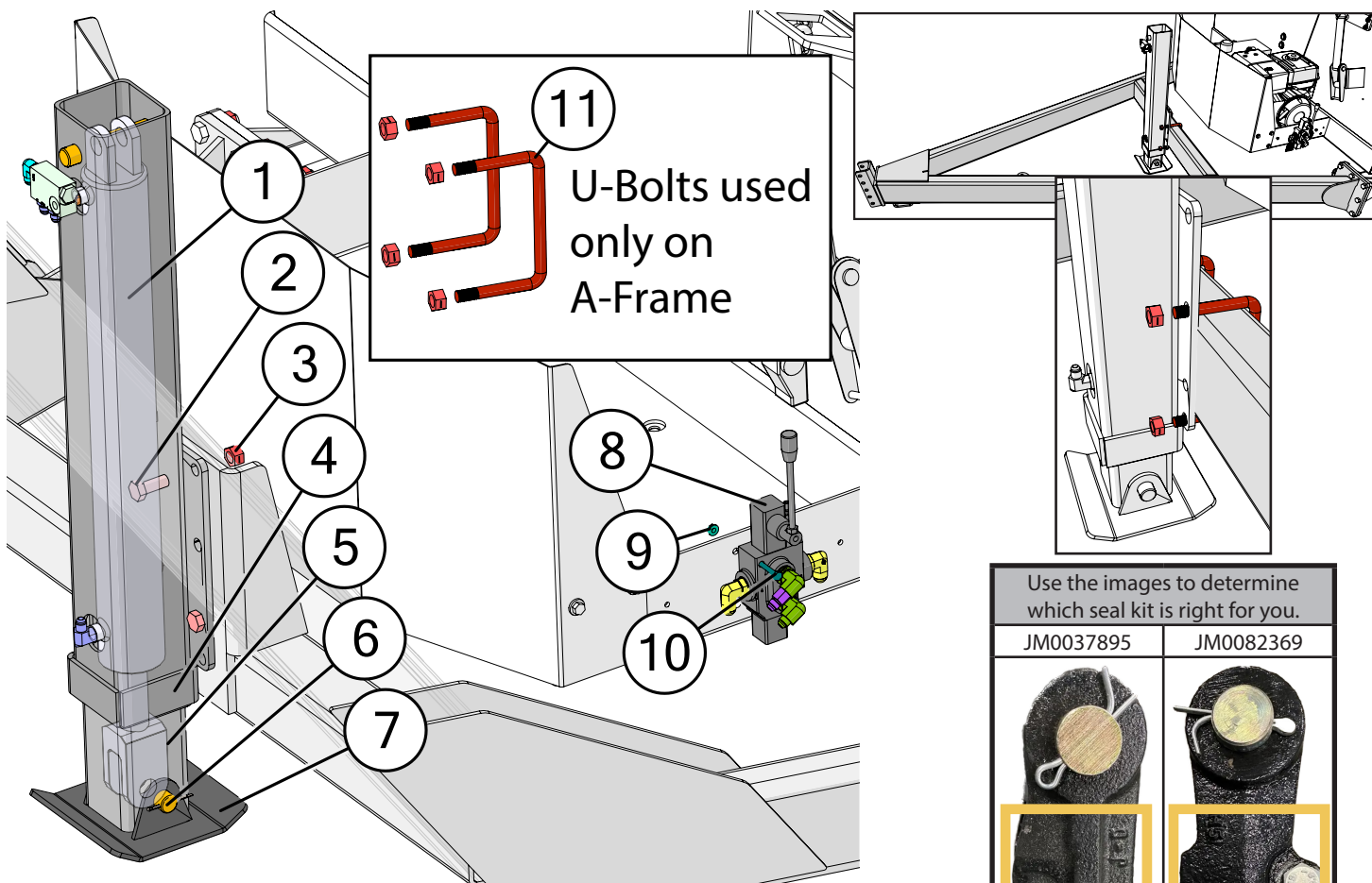
When performing maintenance work, wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head. Follow the Operator's Manual instructions to ensure safe and proper maintenance and repair.

Your local, authorized dealer can supply genuine replacement parts. Substitute parts may not meet original equipment specifications and may be dangerous.

## **WARNING**

**MAKE SURE ALL POWER IS SHUT OFF BEFORE PERFORMING ANY MAINTENANCE OR REPAIR WORK.**

# Hydraulic Jack Parts



Use the images to determine which seal kit is right for you.

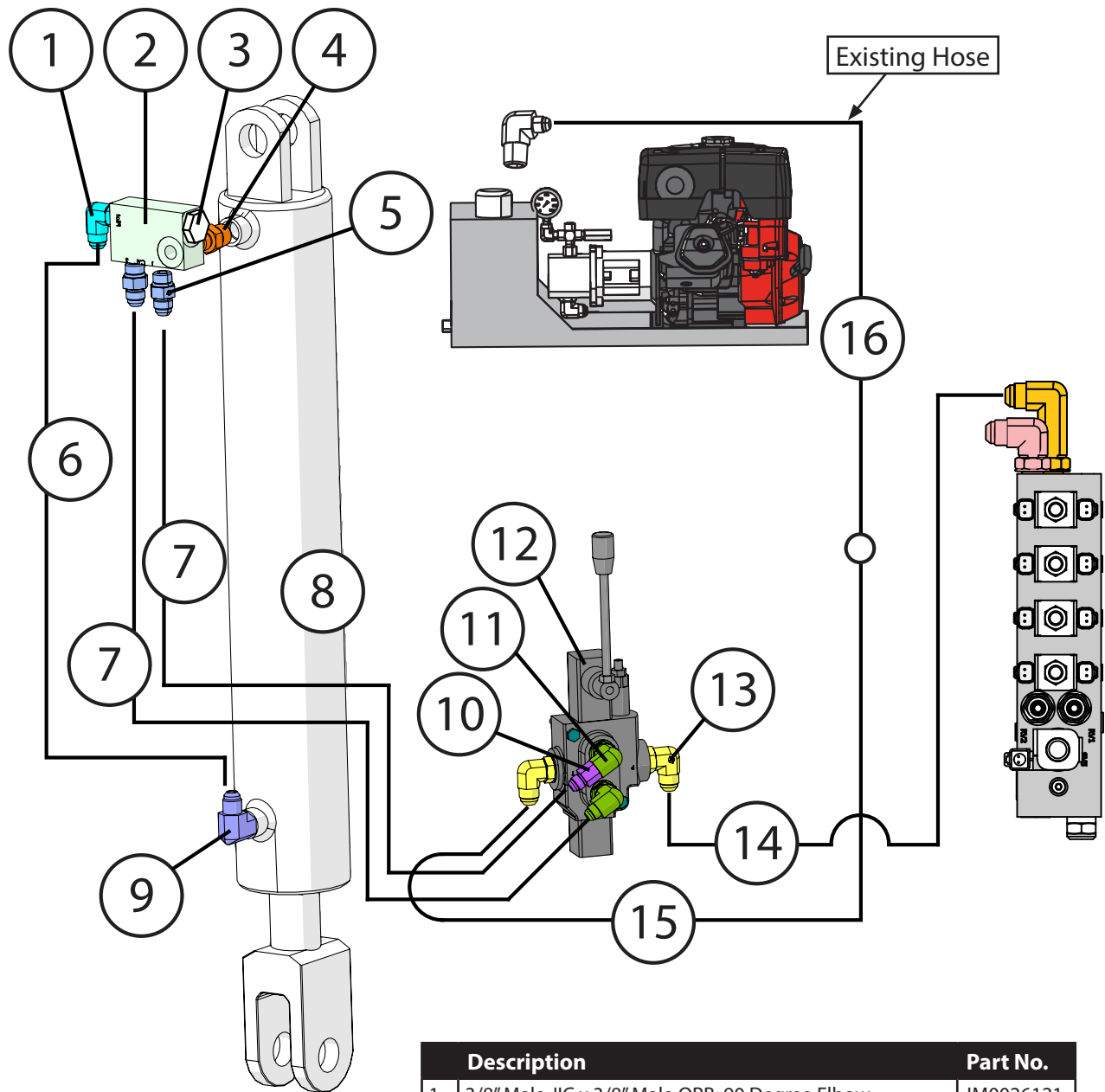
JM0037895

JM0082369



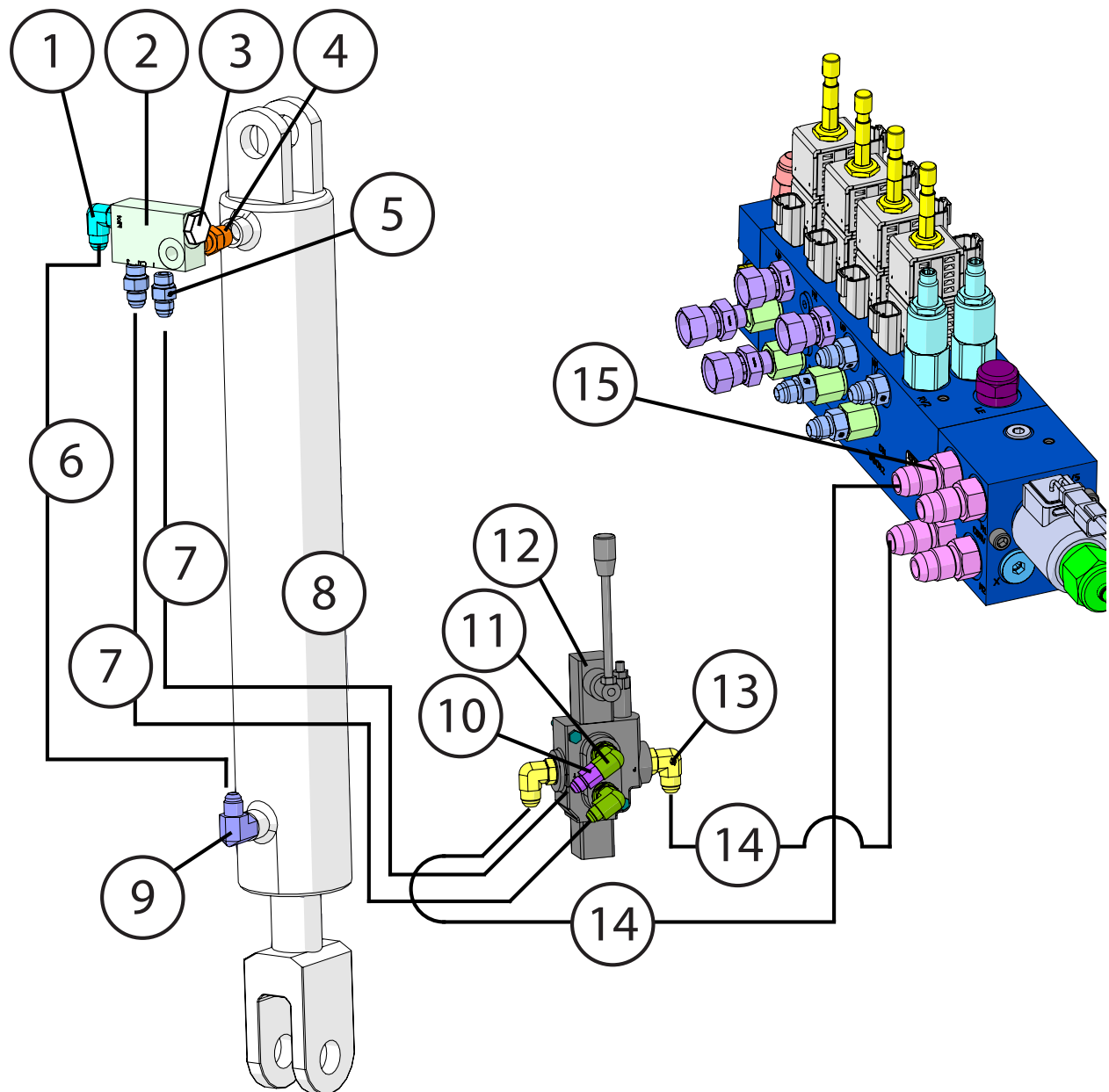
| Description   | Part No.  |
|---|-----------|
| 1 3" x 24" x 1-1/2" Welded Cylinder (JD324)           | JM0019644 |
| 1 Seal Kit 3" x 24" Cylinder (JD324-1) (JD480)        | JM0037895 |
| 1 Seal Kit for 3" x 24" Hydraulic Cylinder (30024-SK) | JM0082369 |
| 2 5/8"-11 x 1-1/2" Gr5 Z Hex Bolt                     | JM0002103 |
| 3 5/8"-11 Gr2 Z Centerlock Hex Nut                    | JM0002146 |
| 4 Outside Tube Weldment (Hydraulic Jack)              | JM0074387 |
| 5 4" x 4" x 3/16" Inner Tube (Hydraulic Jack)         | JM0061831 |
| 6 1" x 6" Pin   | JM0031495 |
| 7 Foot Pad Weldment (Hydraulic Jack)                  | JM0074390 |
| 8 Hydraulic Jack Hand Valve with Pressure Relief      | JM0031858 |
| 9 1/4"-20 Gr5 Z SF Hex Nut                            | JM0001630 |
| 10 1/4"-20 x 2-1/2" Gr5 Z Hex Bolt                    | JM0001506 |
| 11 5/8"-11 x 6-1/16" x 4-1/16" Square U-Bolt          | JM0074246 |

# Hydraulic Jack Hydraulics Schematic Except Blue Valve



| Description   | Part No.  |
|---|-----------|
| 1 3/8" Male JIC x 3/8" Male ORB; 90 Degree Elbow        | JM0026121 |
| 2 Serviceable Pilot Check Valve                         | JM0061684 |
| 3 Check Valve Cartridge                                 | JM0074412 |
| 4 3/8" Male NPT x 3/8" Male ORB; Straight               | JM0061726 |
| 5 3/8" Male JIC x 3/8" Male ORB; Straight               | JM0043614 |
| 6 3/8" x 25" Hydraulic Hose 25inch6M3K-6G-6FJX-6G-6FJX  | JM0049162 |
| 7 3/8" x 68" Hydraulic Hose 68inch6M3K-6G-6FJX-6G-6FJX  | JM0073253 |
| 8 3" x 24" x 1-1/2" Welded Cylinder (JD324)             | JM0019644 |
| 9 3/8" Male NPT x 3/8" Male JIC; 90 Degree Elbow        | JM0061728 |
| 10 3/8" Male JIC x 3/8" Female JIC with .047 Orifice    | JM0054918 |
| 11 3/8" Male JIC x 1/2" Male ORB; 90 Degree Elbow       | JM0037159 |
| 12 Hydraulic Jack Hand Valve with Pressure Relief       | JM0031858 |
| 13 1/2" Male JIC x 1/2" Male ORB; 90 Degree Elbow       | JM0010297 |
| 14 1/2" x 68" Hydraulic Hose 68inch8M3K-8G-8FJX-8G-8FJX | JM0073262 |
| 15 1/2" x 34" Hydraulic Hose 34inch8M3K-8G-8MJX-8G-8FJX | JM0073263 |
| 16 1/2" x 34" Hydraulic Hose 34inch8M3k-8G-8FJX-8G-8FJX | JM0025347 |

# Hydraulic Jack Hydraulics Schematic for Blue Valve



|    | Description  | Part No.  |
|----|--|-----------|
| 1  | 3/8" Male JIC x 3/8" Male ORB; 90 Degree Elbow                 | JM0026121 |
| 2  | Serviceable Pilot Check Valve                                  | JM0061684 |
| 3  | Check Valve Cartridge  | JM0074412 |
| 4  | 3/8" Male NPT x 3/8" Male ORB; Straight                        | JM0061726 |
| 5  | 3/8" Male JIC x 3/8" Male ORB; Straight                        | JM0043614 |
| 6  | 3/8" x 25" Hydraulic Hose 25inch6M3K-6G-6FJX-6G-6FJX           | JM0049162 |
| 7  | 3/8" x 68" Hydraulic Hose 68inch6M3K-6G-6FJX-6G-6FJX           | JM0073253 |
| 8  | 3" x 24" x 1-1/2" Welded Cylinder (JD324)                      | JM0019644 |
| 9  | 3/8" Male NPT x 3/8" Male JIC; 90 Degree Elbow                 | JM0061728 |
| 10 | 3/8" Male JIC x 3/8" Female JIC with .047 Orifice              | JM0054918 |
| 11 | 3/8" Male JIC x 1/2" Male ORB; 90 Degree Elbow                 | JM0037159 |
| 12 | Hydraulic Jack Hand Valve with Pressure Relief                 | JM0031858 |
| 13 | 1/2" Male JIC x 1/2" Male ORB; 90 Degree Elbow                 | JM0010297 |
| 14 | 1/2" x 43" Crimped Hydraulic Hose - 43inch8CR2-8G-8FJX-8G-8FJX | JM0083304 |
| 15 | #8 Male JIC x #8 Male ORB - Straight                           | JM0010293 |



# Mounting the Jack

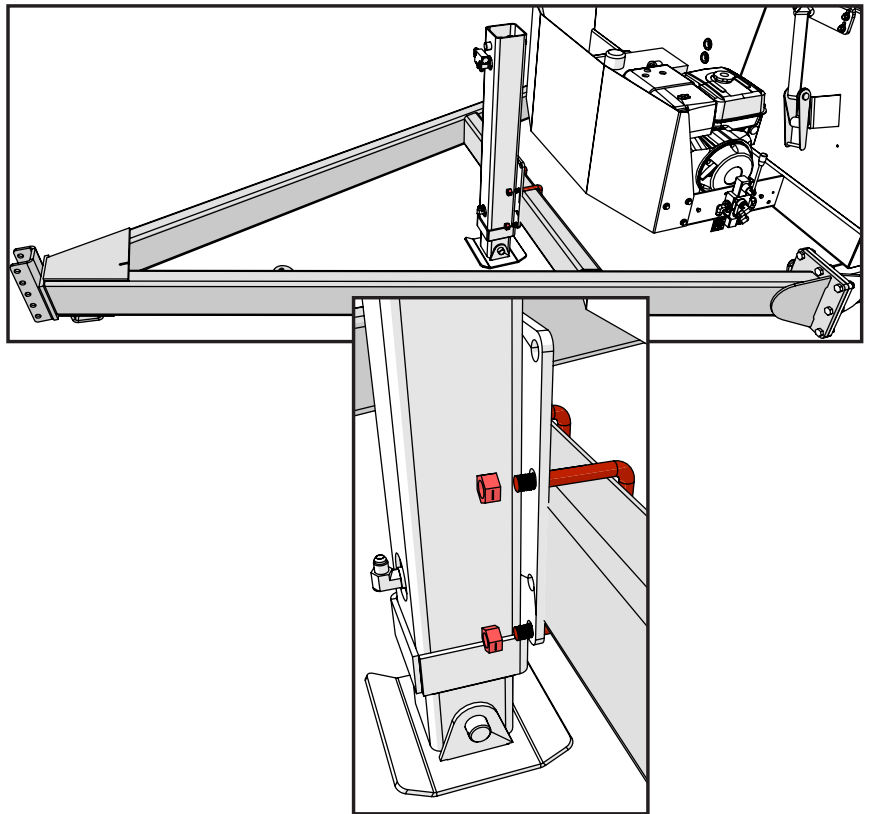
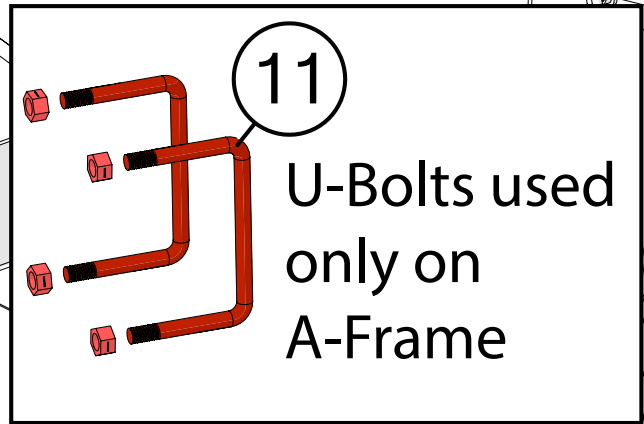
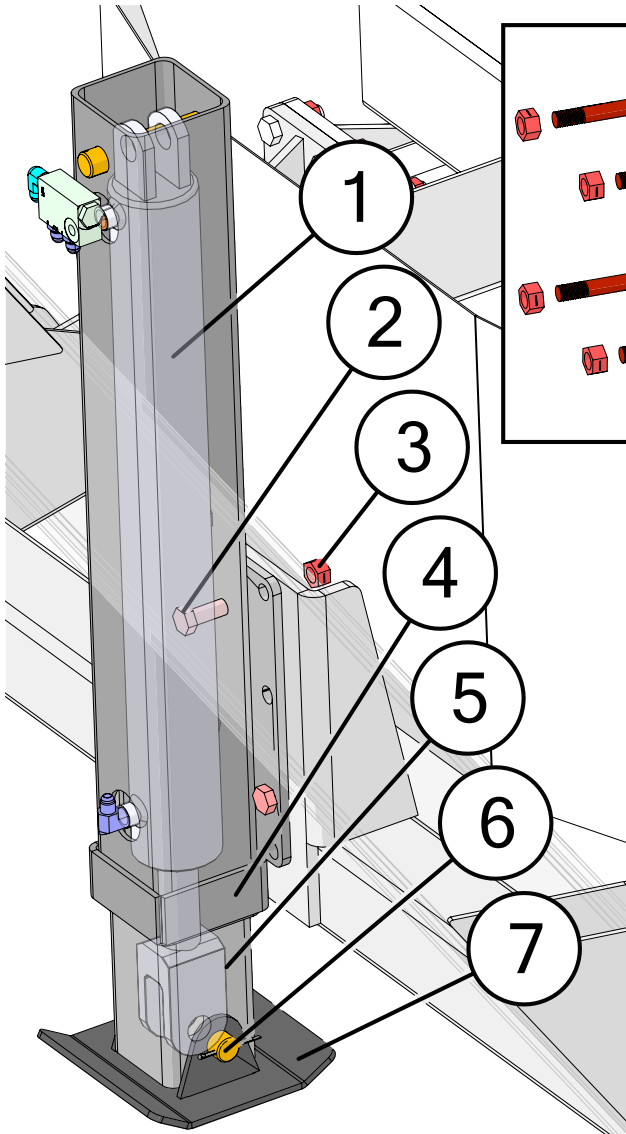
## Attach Hydraulic Jack to SpeedTender

### Gooseneck

- Use (4) 5/8" x 1-1/2" hex bolts and (4) 5/8" centerlock hex nuts to fasten jack to mounting bracket.
- Tighten hardware.

### A-Frame

- Use (2) 5/8"-11 x 6-1/16" x 4-1/16" Square U-Bolt and (2) 5/8" centerlock hex nuts to fasten jack to side of A-Frame leg.
- Tighten hardware.

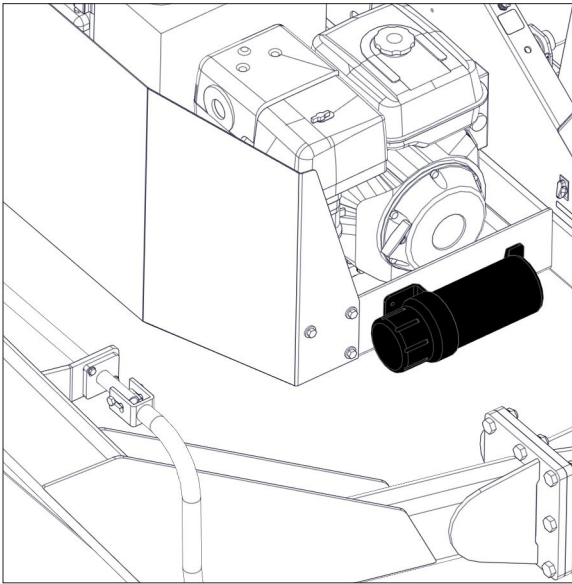


# Mount the Control Valve

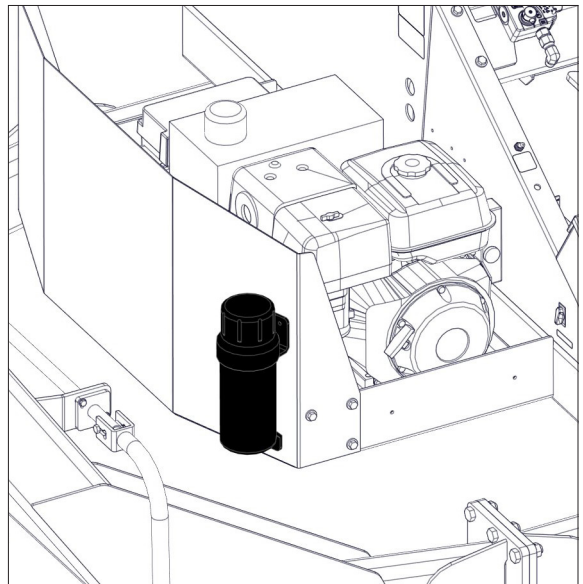
## **Move the Manual Canister**

- Remove both 1/4" x 1" hex bolts and hex nuts which fasten the manual canister to the SpeedTender.
- Use the manual canister as guide and mark two points on the engine cover. Drill (2) 5/16" holes using the points as guides.
- Mount the manual canister on the engine cover using the same (2) 1/4" x 1" hex bolts and nuts.
- Tighten hardware.

Before

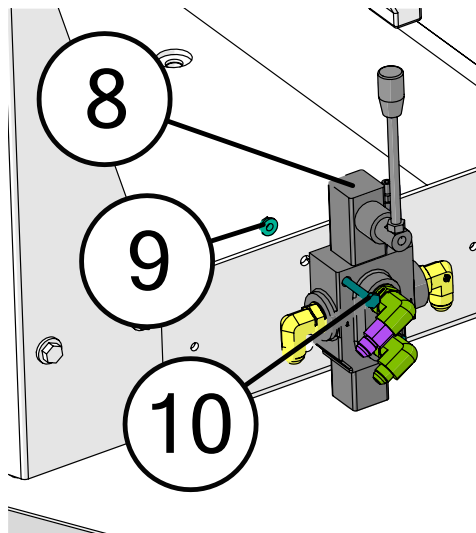


After



## **Mount the Hydraulic Jack Control Valve**

- Attach the valve control using (2) 1/4" x 2-1/2" hex bolts and (2) 1/4" SF hex nuts.
- Tighten hardware.

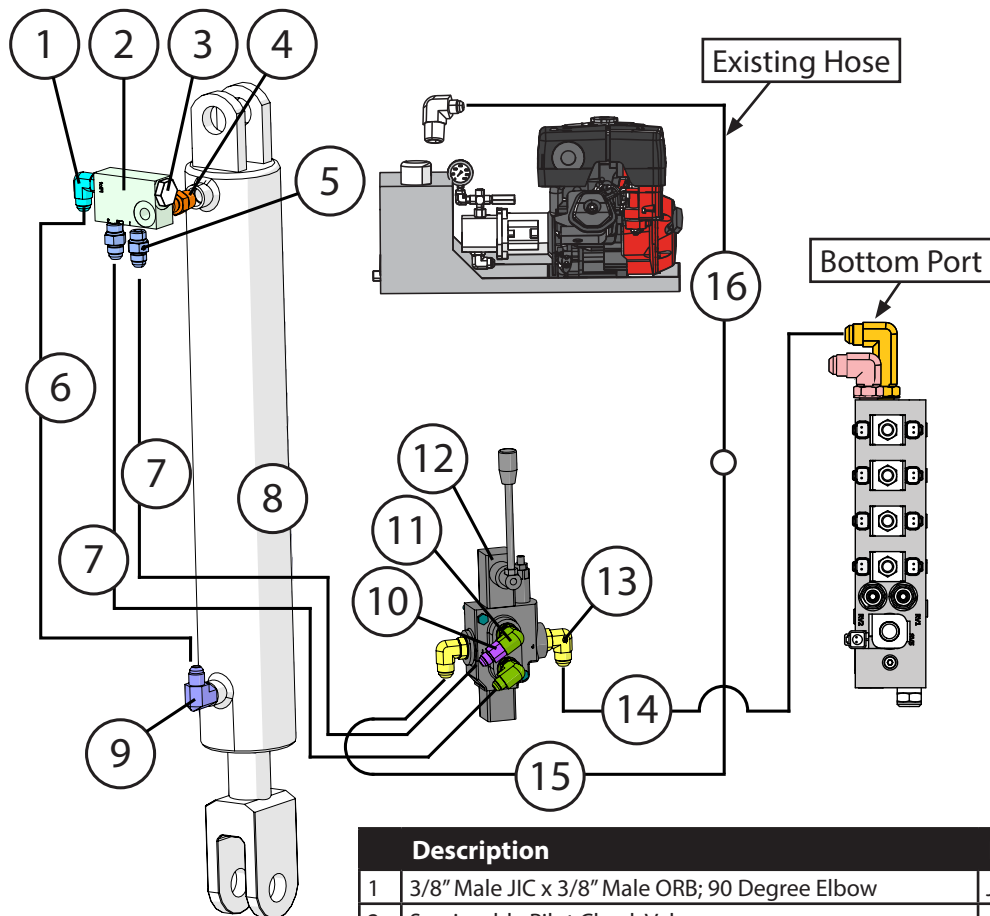


# Hose Setup for All Valves Except Blue

If you have a blue colored valve bank then go to the next page, if not continue on.

## Install Hoses

- Install the hoses as shown below.
- Hose "16" is an "Existing Hose" connected to the "Bottom Port"
- Unhook "16" from the bottom port of the valve bank, and connect directly to hose "15" shown below.
- Hose 14 will then get connected to the "Bottom Port" on the valve bank.
- Tighten fittings.

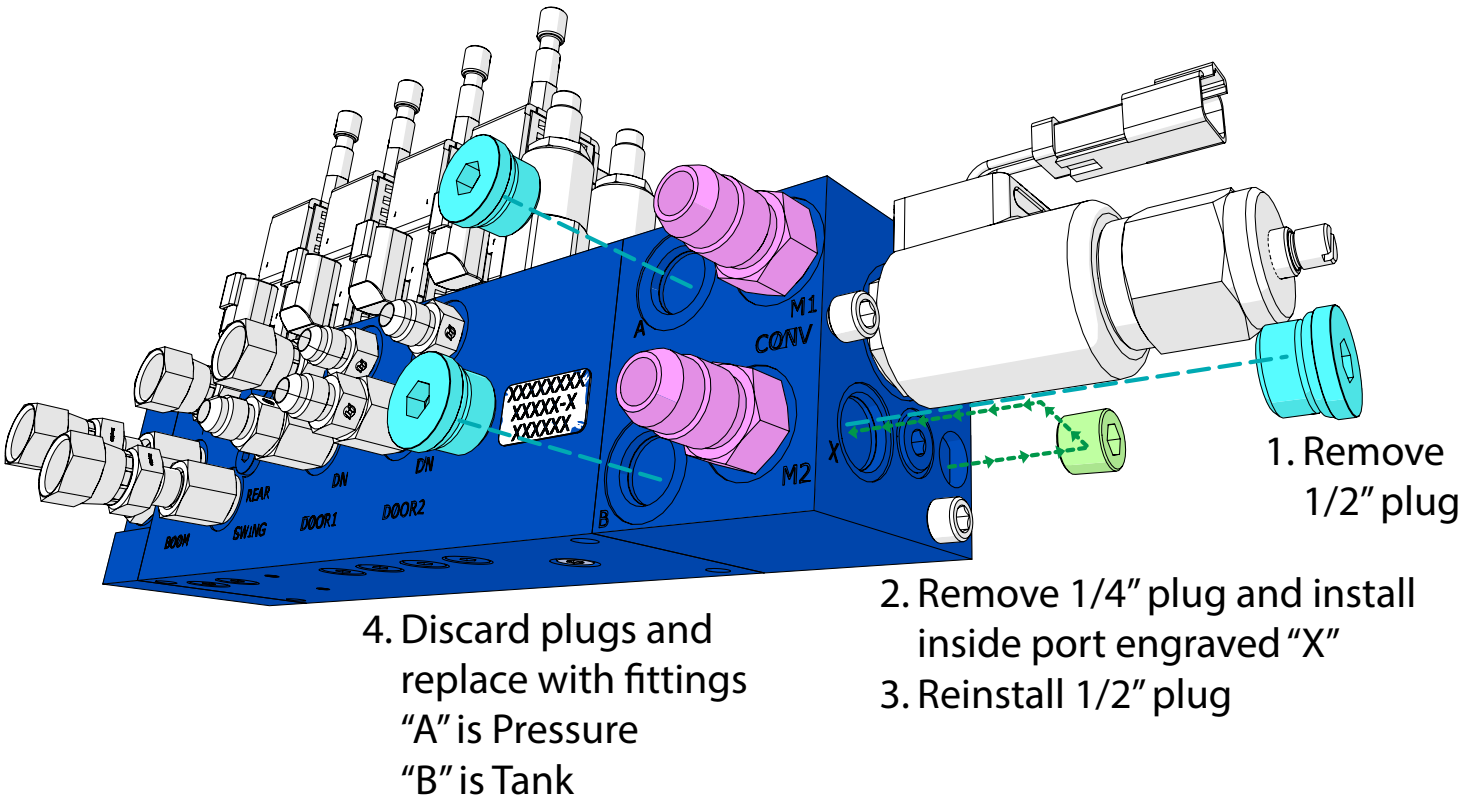


|    | Description  | Part No.  |
|----|--|-----------|
| 1  | 3/8" Male JIC x 3/8" Male ORB; 90 Degree Elbow       | JM0026121 |
| 2  | Serviceable Pilot Check Valve                        | JM0061684 |
| 3  | Check Valve Cartridge                                | JM0074412 |
| 4  | 3/8" Male NPT x 3/8" Male ORB; Straight              | JM0061726 |
| 5  | 3/8" Male JIC x 3/8" Male ORB; Straight              | JM0043614 |
| 6  | 3/8" x 25" Hydraulic Hose 25inch6M3K-6G-6FJX-6G-6FJX | JM0049162 |
| 7  | 3/8" x 68" Hydraulic Hose 68inch6M3K-6G-6FJX-6G-6FJX | JM0073253 |
| 8  | 3" x 24" x 1-1/2" Welded Cylinder (JD324)            | JM0019644 |
| 9  | 3/8" Male NPT x 3/8" Male JIC; 90 Degree Elbow       | JM0061728 |
| 10 | 3/8" Male JIC x 3/8" Female JIC with .047 Orifice    | JM0054918 |
| 11 | 3/8" Male JIC x 1/2" Male ORB; 90 Degree Elbow       | JM0037159 |
| 12 | Hydraulic Jack Hand Valve with Pressure Relief       | JM0031858 |
| 13 | 1/2" Male JIC x 1/2" Male ORB; 90 Degree Elbow       | JM0010297 |
| 14 | 1/2" x 68" Hydraulic Hose 68inch8M3K-8G-8FJX-8G-8FJX | JM0073262 |
| 15 | 1/2" x 34" Hydraulic Hose 34inch8M3K-8G-8MJX-8G-8FJX | JM0073263 |
| 16 | 1/2" x 34" Hydraulic Hose 34inch8M3k-8G-8FJX-8G-8FJX | JM0025347 |

Continue to page 14

## Set Up Instructions for Blue Valve

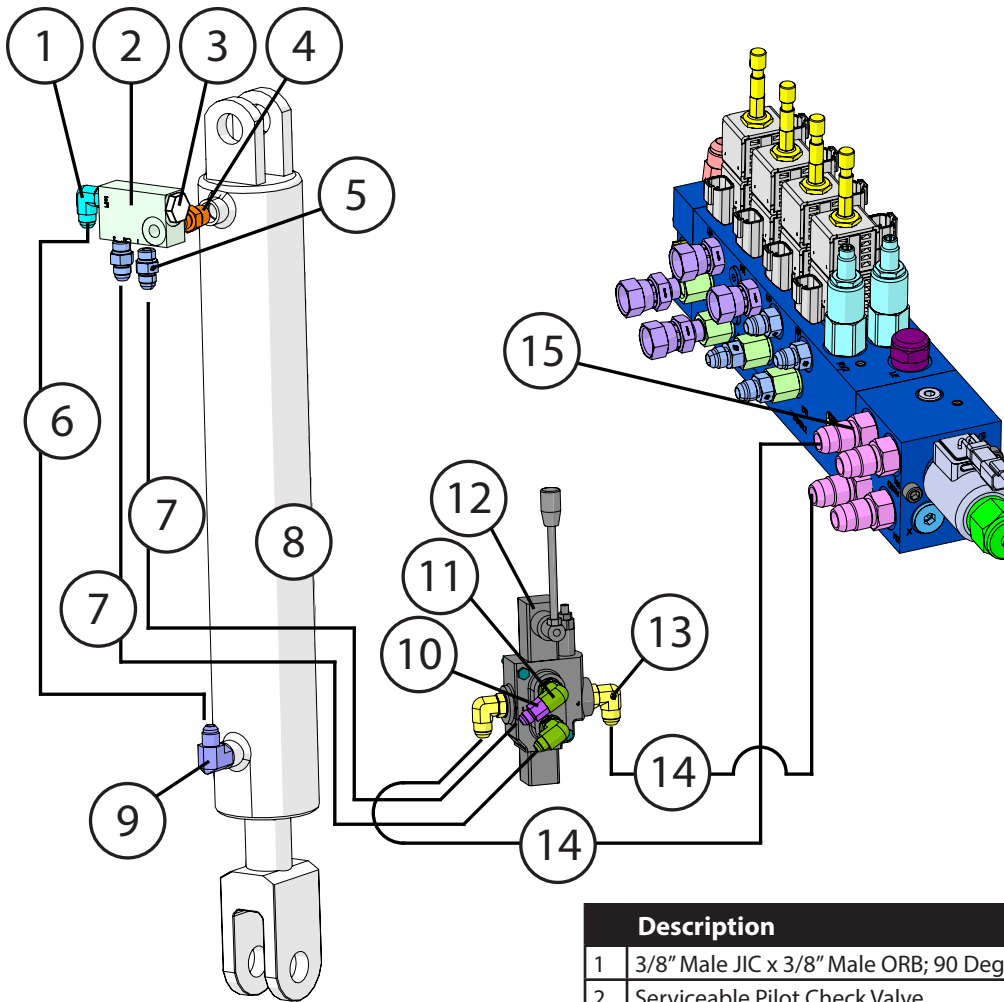
## Convert Assembly to Run External Accessories



## **Install Hoses**

- Install the fittings with 1/2" JIC x 1/2" ORB into "A" and "B" ports.
- Install the hoses as shown on the next page.
- Tighten fittings.

# Set Up Instructions for Blue Valve



|    | Description  | Part No.  |
|----|--|-----------|
| 1  | 3/8" Male JIC x 3/8" Male ORB; 90 Degree Elbow                 | JM0026121 |
| 2  | Serviceable Pilot Check Valve                                  | JM0061684 |
| 3  | Check Valve Cartridge  | JM0074412 |
| 4  | 3/8" Male NPT x 3/8" Male ORB; Straight                        | JM0061726 |
| 5  | 3/8" Male JIC x 3/8" Male ORB; Straight                        | JM0043614 |
| 6  | 3/8" x 25" Hydraulic Hose 25inch6M3K-6G-6FJX-6G-6FJX           | JM0049162 |
| 7  | 3/8" x 68" Hydraulic Hose 68inch6M3K-6G-6FJX-6G-6FJX           | JM0073253 |
| 8  | 3" x 24" x 1-1/2" Welded Cylinder (JD324)                      | JM0019644 |
| 9  | 3/8" Male NPT x 3/8" Male JIC; 90 Degree Elbow                 | JM0061728 |
| 10 | 3/8" Male JIC x 3/8" Female JIC with .047 Orifice              | JM0054918 |
| 11 | 3/8" Male JIC x 1/2" Male ORB; 90 Degree Elbow                 | JM0037159 |
| 12 | Hydraulic Jack Hand Valve with Pressure Relief                 | JM0031858 |
| 13 | 1/2" Male JIC x 1/2" Male ORB; 90 Degree Elbow                 | JM0010297 |
| 14 | 1/2" x 43" Crimped Hydraulic Hose - 43inch8CR2-8G-8FJX-8G-8FJX | JM0083304 |
| 15 | #8 Male JIC x #8 Male ORB - Straight                           | JM0010293 |

# Final Steps and Testing

## **Test Functions**

- Ensure all fittings and hardware are tight.
- Use zip ties to secure all hydraulic hoses to the SpeedTender.
- Turn motor on.
- Use control valve to raise and lower the hydraulic jack.

**You may have extra hoses/fittings depending on your SpeedTender.**

