

Set-Up Instructions

for

EC-VM401

and

EC-TM401

Motorized Valves

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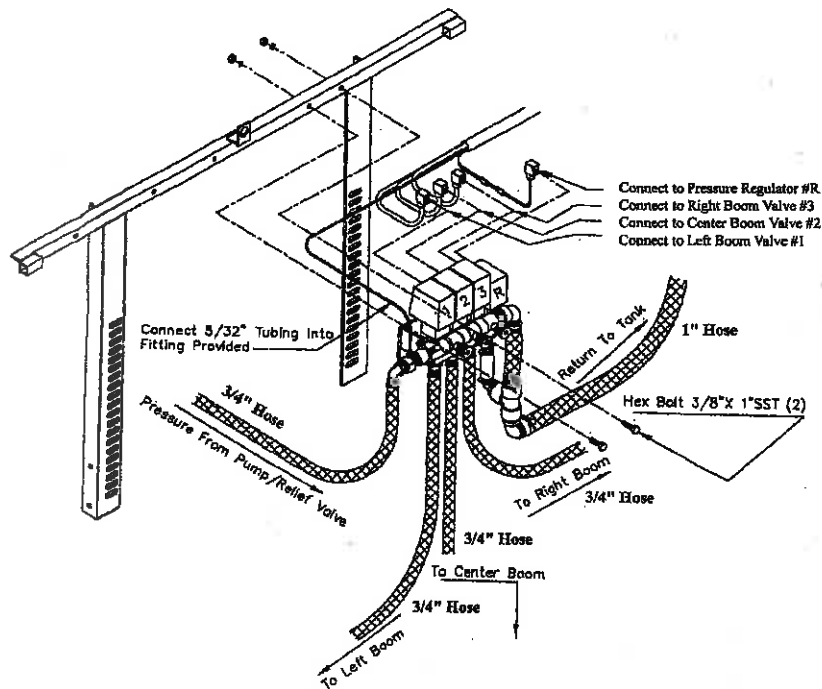
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SDI Set-Up Diagram



SDI Set-Up Instructions

Step 1:

Bolt Valve Assembly, Part **#18-300**, onto cross member of boom using 3/8 x 1" bolts, lock washers and nuts (supplied).

***Note:** If boom has adjustable channel cross angle, use 3/8" adjustable channel nuts (supplied).*

Step 2:

Install D.I.N. connectors from wiring loom using water resistant D.I.N. connector gasket and screws included in the **#18-200** kit, to Motorized Valves and Pressure Regulator.

***Note:** Using EC-VM401, use wiring harness included in the **18-300** Kit and route to desired control mounting location.*

Step 3:

Plug 5/32" tubing into tubing adapter located next to valve #1.

Step 4:

Install ball valve and 3/4" hose barb adapter elbow (included in **#18-300** kit), to pump outlet. Run 3/4" hose (cut to desired length), from pump to inlet on the Motorized Valve.

Step 5:

Remove 1" plug from return fitting on tank. Install 1" hose barb elbow to return fitting.

Step 6:

Install bypass return hose from 1" hose barb elbow on Motorized Valves to 1" elbow on tank.

Step 7:

Cut 3/4" hose to length and install from valves to boom inlet adapters (allow extra length on outer wing sections to allow for breakaway capabilities).

Step 8:

Install Control Box to Control Mount.

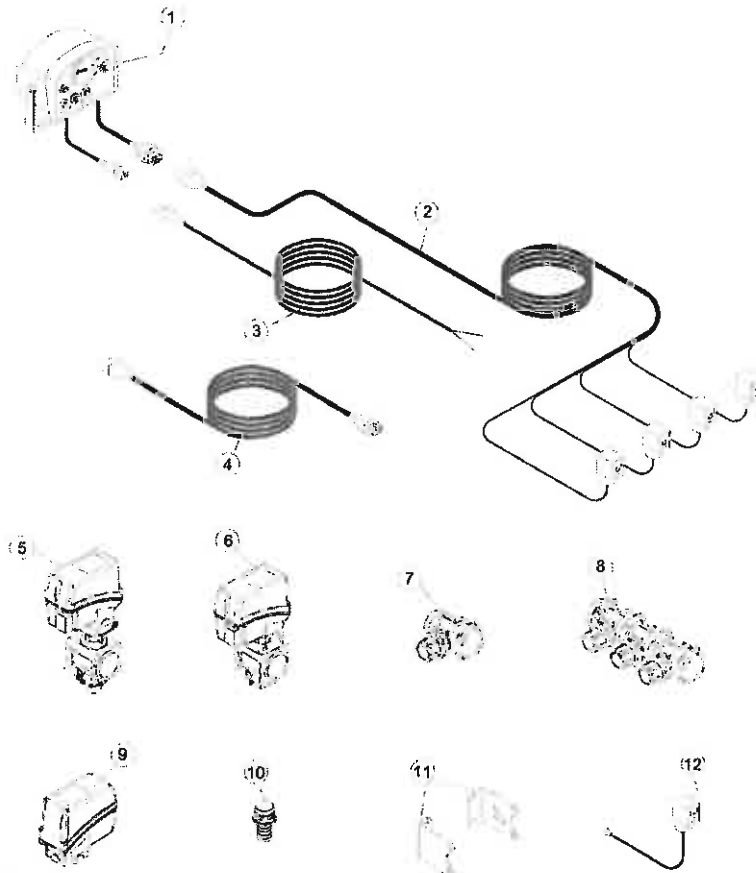
Using Control Box for **18-310**, plug harness into back of Control Box, install power lead and connect to battery, brown wire (+) positive, blue wire (-) ground.

Step 9:

Install 5/32" tubing into adapter on Control Box.

SDI Control Box Accessories

| <u>Item No.</u> | <u>Part Number</u> | <u>Description</u> | <u>Qty</u> |
|-----------------|--------------------|-------------------------------|------------|
| 1 | 56-5031 | Control Box | 1 |
| 2 | 56-5041 | Control Harness 17 Ft. | 1 |
| 3 | 61-645 | Power Harness 8.5 Ft. | 1 |
| 4 | 56-5081 | Extension Harness 10 Ft. | 1 |
| 5 | 56-801 | Motorized Valve 2-3 Wire | 1 |
| 6 | 56-802 | Pressure Regulator Valve | 1 |
| 7 | 56-4991 | One Metered By Pass Valve | 1 |
| 8 | 56-499 | Three Metered By Pass Valves | 1 |
| 9 | 56-814 | Motorized Valve Head | 1 |
| 10 | 56-105 | Hose Barb Fitting 3/4 In x T4 | 1 |
| 11 | 56-505 | Valve Mounting Brackets | 2 |
| 12 | 56-536 | D.I.N. Connector 2-3 Wire | 1 |



Setting Pressure for Motorized Controls

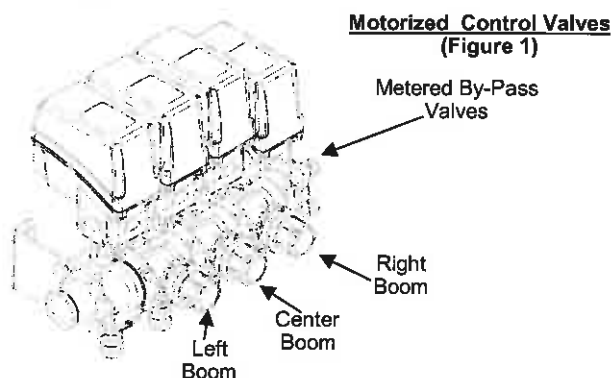
The following instructions are designed to assist you with the proper setting and testing of your Motorized Control Unit.

For models with a diaphragm pump:

1. Shut off ball valve to boom.
2. Set manual relief valve to 70-80 PSI (*this is used mainly as a safety valve and will not operate below that pressure*).
3. Open ball valve to booms.

For all models (*for centrifugal pump models, the first three steps are not required*):

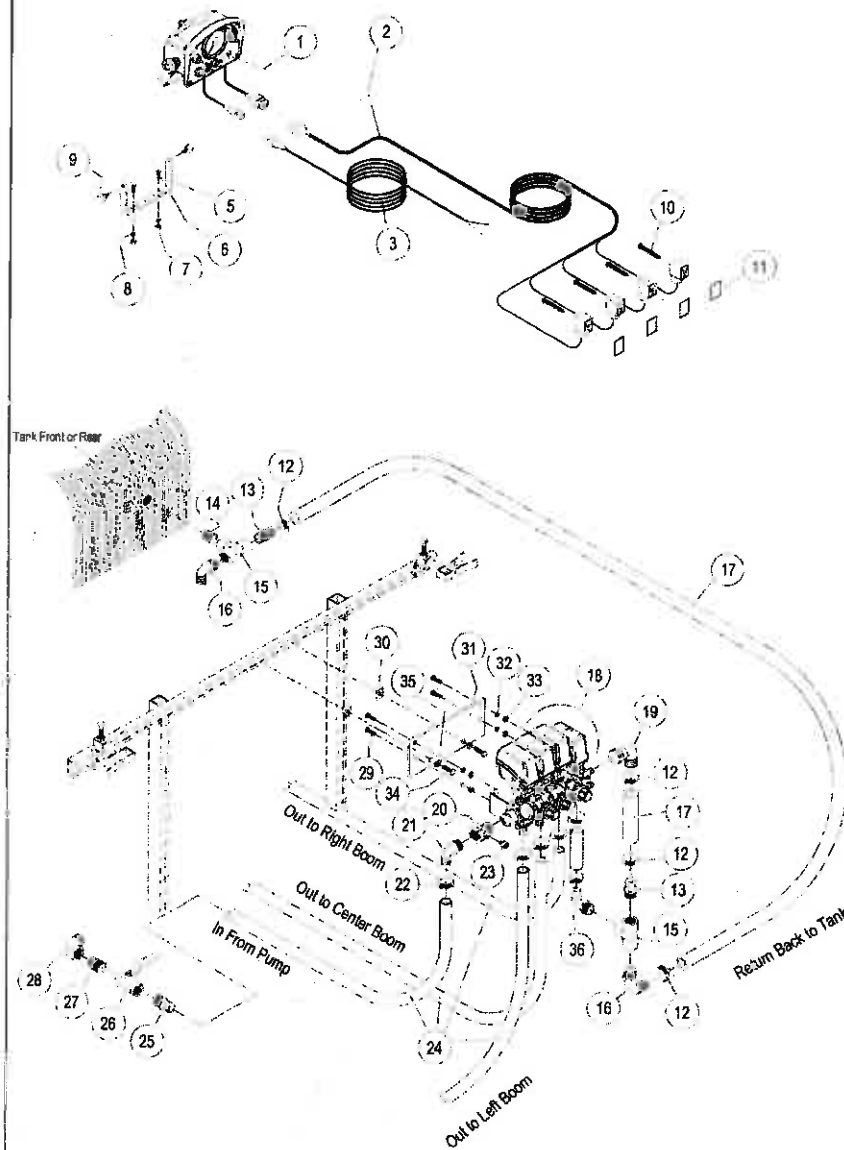
4. Close all three (3) **Metered Bypass Valves** (red knobs), by turning knobs in a clockwise direction as far as they will go (Figure 1).
5. Open all three (3) sections of the boom from the **Control Panel**. Set desired operating pressure using electric **Control Switch** on the **Control Panel**. To set the **Metered Bypass Valve**, close one (1) boom section at a time. Then open the **Metered Bypass Valve** for that boom section until the desired operating pressure is achieved.



Example: Desired pressure is 40 PSI—To set **Metered Bypass Valve**:

- A. Shut left boom section off on the Control Panel.
 - B. Pressure will read more than 40 PSI.
 - C. Using left **Metered Bypass Valve**, open valve until operating pressure returns to 40 PSI.
6. **Repeat** the above procedure for the **center and right boom sections**, making sure the other two (2) boom sections are open.

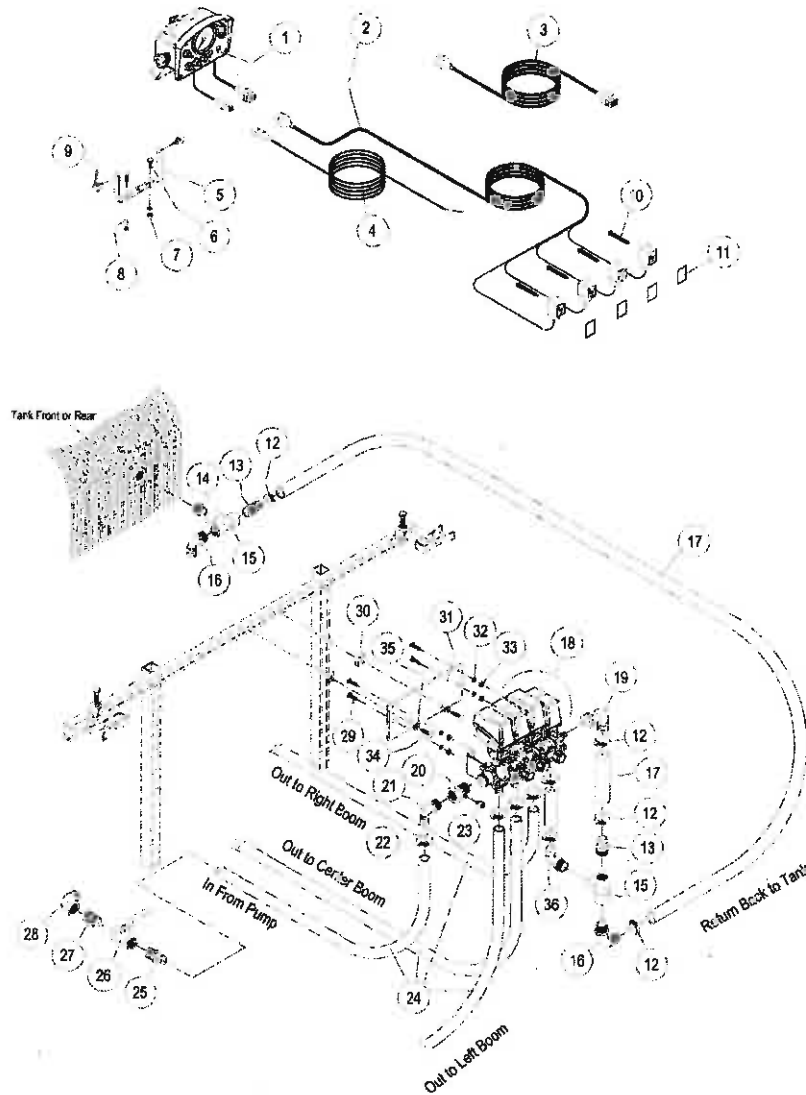
EC-VM401



SDI Motorized Boom Valve Controls/EC-VM401

| <u>Item No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Qty</u> |
|-----------------|-----------------|------------------------------------------------------------------|------------|
| 1 | 56-5031 | Control Box | 1 |
| 2 | 56-5041 | Control Box Harness 17 Ft. | 1 |
| 3 | 61-645 | Power Harness 8.5 Ft. | 1 |
| 5 | 61-713 | Control Box Mounting Bracket | 1 |
| 6 | 31-101SS | Hex Bolt 1/4 x 1 In. SS | 2 |
| 7 | 41-101SS | Hex Nut 1/4 In. SS | 2 |
| 8 | 43-101SS | Lock Washer 1/4 In. SS | 2 |
| 9 | 61-711 | Nob Kit (consists of 2 nobs) | 1 |
| 10 | 56-491 | D.I.N. Connector Screw | 4 |
| 11 | 56-490 | D.I.N. Connector Gasket | 4 |
| 12 | 24-116SS | Hose Clamp 1 In. SS | 4 |
| 13 | 53-435 | Adapter 1 MPT x 1 In. HB Poly | 3 |
| 14 | 53-912 | Close Nipple 1 In. PVC | 1 |
| 15 | 53-826 | Tee FPT 1 x 1 x 1 In. Poly | 2 |
| 16 | 52-120 | Elbow Adapter 1 MPT x 1 In. HB Poly | 2 |
| 17 | 21-938 | Hose 1 In. ID 200 PSI Per Ft. | 4' |
| 18 | 56-800 | Three Motorized Valves, three Wire, 1 Regulator 1 Metered ByPass | 1 |
| 19 | 56-599 | Elbow 1 In. HB for 56-4991 with locking pin | 1 |
| 20 | 56-2152 | Adapter 3/4 MPT x 3/4 In. FPT with 1/8 In. Port Poly | 1 |
| 21 | 52-112 | Elbow Adapter 3/4 MPT x 3/4 In. HB Poly | 1 |
| 22 | 24-112SS | Hose Clamp 3/4 In SS | 10 |
| 23 | 56-510 | Tube Fitting 1/8 MPT x 5/32 In. | 1 |
| 24 | 21-930 | Hose 3/4 In. ID 250 PSI, Per Ft. | Specify |
| 25 | 53-134 | Adapter 3/4 MPT x 3/4 In. HB Poly | 1 |
| 26 | 60-324 | Ball Valve 3/4 In. HD Full Port Brass | 1 |
| 27 | 51-501SS | Close Nipple 3/4 In. SSW | 1 |
| 28 | 50-510SS | Street Elbow 3/4 In. x 90° SS | 1 |
| 29 | 31-503 | Hex Bolt 5/16 x 1 In. SS | 4 |
| 30 | 41-106 | Channel Nut 3/6 In. W/O Spring | 2 |
| 31 | 11-639 | Bracket Motorized Valves | 1 |
| 32 | 43-502 | Lock Washer 5/16 In. SS | 4 |
| 33 | 41-502 | Hex Nut 5/16 In. NC SS | 4 |
| 34 | 32-102SS | Hex Bolt 3/8 NC x 3/4 In. SS | 2 |
| 35 | 42-503 | Flat Washer 3/8 In SS | 2 |
| 36 | 52-119 | Elbow Adapter 1 MPT x 3/4 In. HB | 1 |
| | 56-598 | (Not Shown) O-ring for 56-599 | 1 |

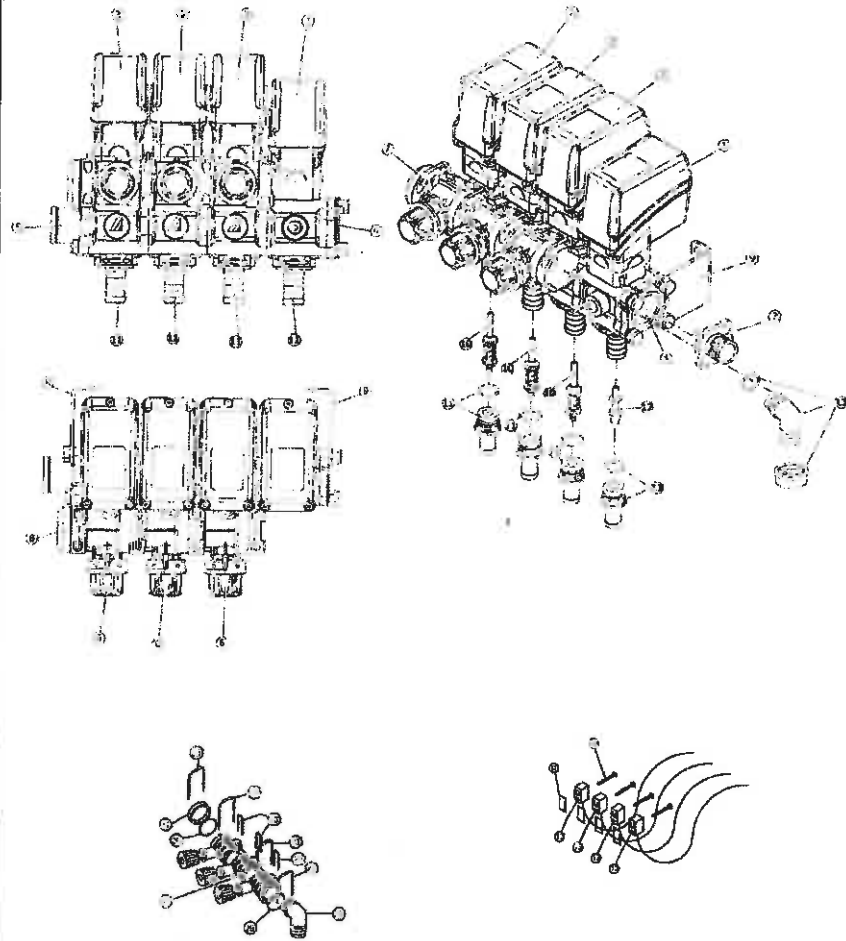
EC-TM401



SDI Motorized Boom Valve Controls/EC-TM401

| <u>Item No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Qty</u> |
|-----------------|-----------------|------------------------------------------------------------------|------------|
| 1 | 56-5031 | Control Box | 1 |
| 2 | 56-5041 | Control Box Harness 17 Ft. | 1 |
| 3 | 56-5081 | Control Harness Extension 10 Ft. | 1 |
| 4 | 61-645 | Power Harness 8.5 Ft. | 1 |
| 5 | 61-713 | Control Box Mounting Bracket | 1 |
| 6 | 31-101SS | Hex Bolt 1/4 x 1 In. SS | 2 |
| 7 | 41-101SS | Hex Nut 1/4 In. SS | 2 |
| 8 | 43-101SS | Lock Washer 1/4 In. SS | 2 |
| 9 | 61-711 | Nob Kit (consists of 2 nobs) | 1 |
| 10 | 56-491 | D.I.N. Connector Screw | 4 |
| 11 | 56-490 | D.I.N. Connector Gasket | 4 |
| 12 | 24-116SS | Hose Clamp 1 In. SS | 4 |
| 13 | 53-435 | Adapter 1 MPT x 1 In. HB Poly | 3 |
| 14 | 53-912 | Close Nipple 1 In. PVC | 1 |
| 15 | 53-826 | Tee FPT 1 x 1 x 1 In. Poly | 2 |
| 16 | 52-120 | Elbow Adapter 1 MPT x 1 In. HB Poly | 2 |
| 17 | 21-938 | Hose 1 In. OD 200 PSI Per Ft. | 4' |
| 18 | 56-800 | Three Motorized Valves, three Wire, 1 Regulator 1 Metered ByPass | 1 |
| 19 | 56-599 | Elbow 1 In. HB for 56-4991 with locking pin | 1 |
| 20 | 56-2152 | Adapter 3/4 MPT x 3/4 In. FPT with 1/8 In. Port Poly | 1 |
| 21 | 52-112 | Elbow Adapter 3/4 MPT x 3/4 In. HB Poly | 1 |
| 22 | 24-112SS | Hose Clamp 3/4 In SS | 10 |
| 23 | 56-510 | Tube Fitting 1/8 MPT x 5/32 In. | 1 |
| 24 | 21-930 | Hose 3/4 In. ID 250 PSI, Per Ft. | Specify |
| 25 | 53-134 | Adapter 3/4 MPT x 3/4 In. HB Poly | 1 |
| 26 | 60-324 | Ball Valve 3/4 In. HD Full Port Brass | 1 |
| 27 | 51-501SS | Close Nipple 3/4 In. SSW | 1 |
| 28 | 50-510SS | Street Elbow 3/4 In. x 90° SS | 1 |
| 29 | 31-503 | Hex Bolt 5/16 x 1 In. SS | 4 |
| 30 | 41-106 | Channel Nut 3/6 In. W/O Spring | 2 |
| 31 | 11-639 | Bracket Motorized Valves | 1 |
| 32 | 43-502 | Lock Washer 5/16 In. SS | 4 |
| 33 | 41-502 | Hex Nut 5/16 In. NC SS | 4 |
| 34 | 32-102SS | Hex Bolt 3/8 NC x 3/4 In. SS | 2 |
| 35 | 42-503 | Flat Washer 3/8 In SS | 2 |
| 36 | 52-119 | Elbow Adapter 1 MPT x 3/4 In. HB | 1 |
| | 56-598 | (Not Shown) O-ring for 56-599 | 1 |

SDI Motorized Valve Bank 2-Wire #56-800



SDI Motorized Valve Bank 2-Wire #56-800

| <u>Item No.</u> | <u>Part Number</u> | <u>Description</u> | <u>Qty</u> |
|---------------------|------------------------|--------------------|------------|
|---------------------|------------------------|--------------------|------------|

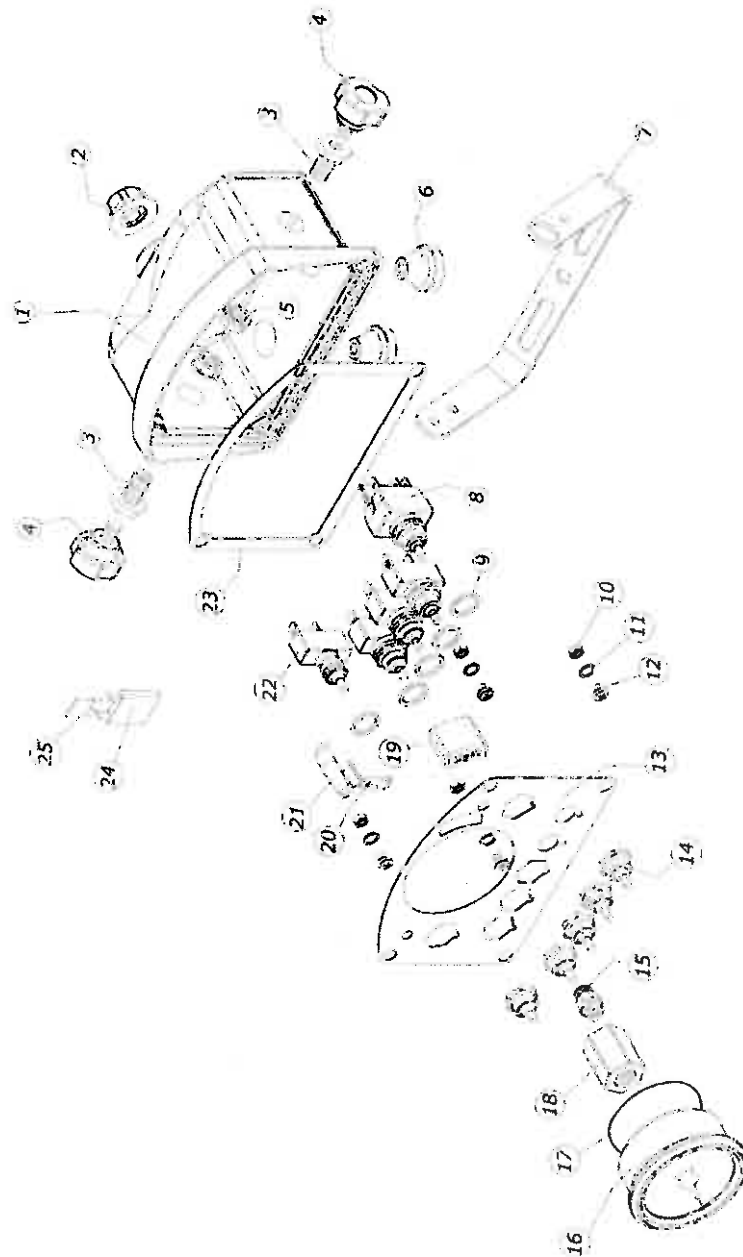
Note: 56-800 consists of 3 Part #56-801 Single Motorized Valves, 1 Part #56-802 Pressure Regulator Valve and 1 Part #56-499 Metered Bypass Valve

| | | | |
|----|---------|----------------------------|---|
| 1 | 56-802 | Pressure Regulator | 1 |
| 2 | 56-801 | Three Wire Motorized Valve | 3 |
| 3 | 56-514 | 3/4 In. Outlet Adapter | 4 |
| 4 | 56-597 | Blank End Plate | 1 |
| 5 | 56-513 | Inlet Adapter 3/4 In. FPT | 1 |
| 6 | 56-4991 | Metered By-Pass Valve (1) | 3 |
| 7 | 56-499 | Metered By-Pass Valve (3) | 1 |
| 8 | 56-600 | End Cap | 1 |
| 9 | 56-505 | Mounting Plate | 2 |
| 10 | 56-538 | Plunger Kit for 56-801 (3) | 1 |
| 11 | 56-105 | Slip Hose Barb and O-ring | 4 |
| 12 | 56-203 | Stem for 56-802 | 1 |
| 13 | 56-511 | Elbow 1 In | 1 |

Repair Kits:

| | | | |
|----|--------|------------------------------|---|
| 31 | 56-539 | Seal Kit | 1 |
| 32 | 56-540 | Seal Kit for Regulator Valve | 1 |

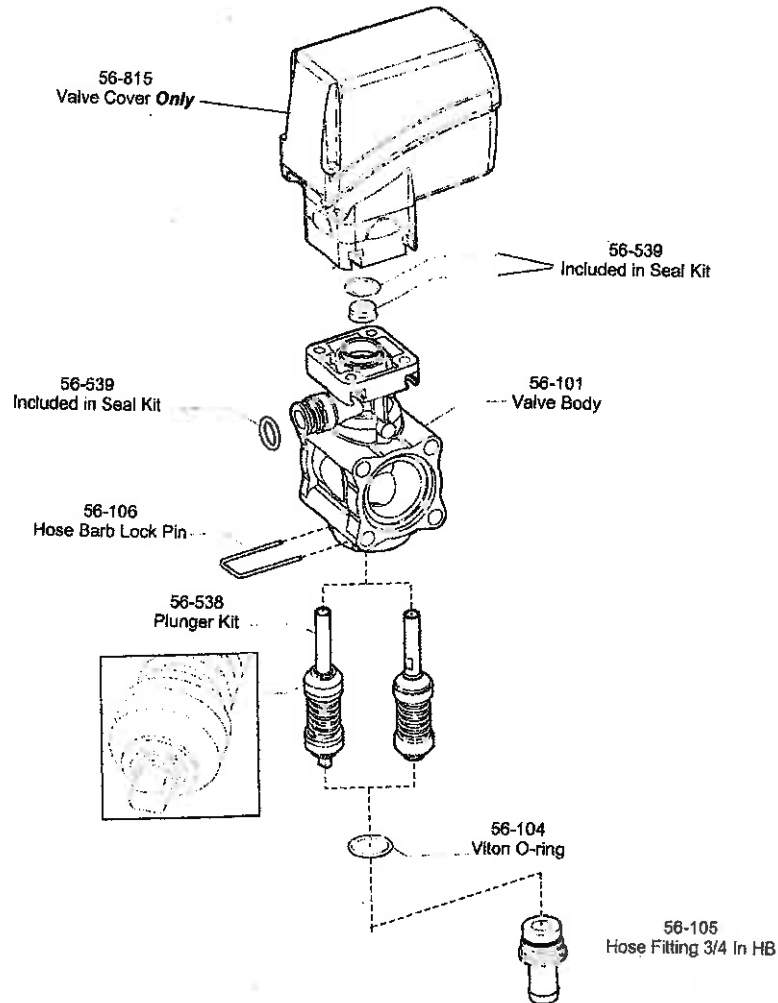
SDI Complete Box Assembly #56-5031



SDI Complete Box Assembly #56-5031

| <u>Item No.</u> | <u>Part Number</u> | <u>Description</u> | <u>Qty</u> |
|---------------------|------------------------|---------------------------|------------|
| 1 | | Control Box Shell | 1 |
| 2 | 61-527 | Nut Reducer | 1 |
| 3 | 61-710 | Nut, Double Threaded | 2 |
| 4 | 61-711 | Nob Kit—contains two nobs | 1 |
| 5 | 61-714 | Nob Nut | 2 |
| 6 | 61-612 | Grommet | 2 |
| 7 | 61-713 | Mounting Bracket | 1 |
| 8 | 61-515 | Pressure Switch | 1 |
| 9 | 61-270 | Spacer for Switch | 5 |
| 10 | 61-715 | Nut | 4 |
| 11 | 61-716 | Washer | 4 |
| 12 | 61-717 | Screw | 4 |
| 13 | | Face Plate | 1 |
| 14 | 61-516 | Switch Boot | 5 |
| 15 | 61-528 | Tubing Connector | 1 |
| 16 | 56-509 | Pressure Gauge 0-100 PSI | 1 |
| 17 | 61-721 | Pressure Gauge O-ring | 1 |
| 18 | 61-535 | Pressure Gauge Adapter | 1 |
| 19 | | Face Light | 1 |
| 20 | 61-718 | Light Holder | 1 |
| 21 | 61-620 | On-Off Light | 1 |
| 22 | 61-619 | On-Off Switch | 4 |
| 23 | 61-722 | Face Gasket | 1 |
| 24 | 61-723 | Spade Fuse Holder | 1 |
| 25 | 61-724 | Spade Fuse 10 AMPS | 1 |

SDI Motorized Valve #56-801



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Form No. 1975/1117jh