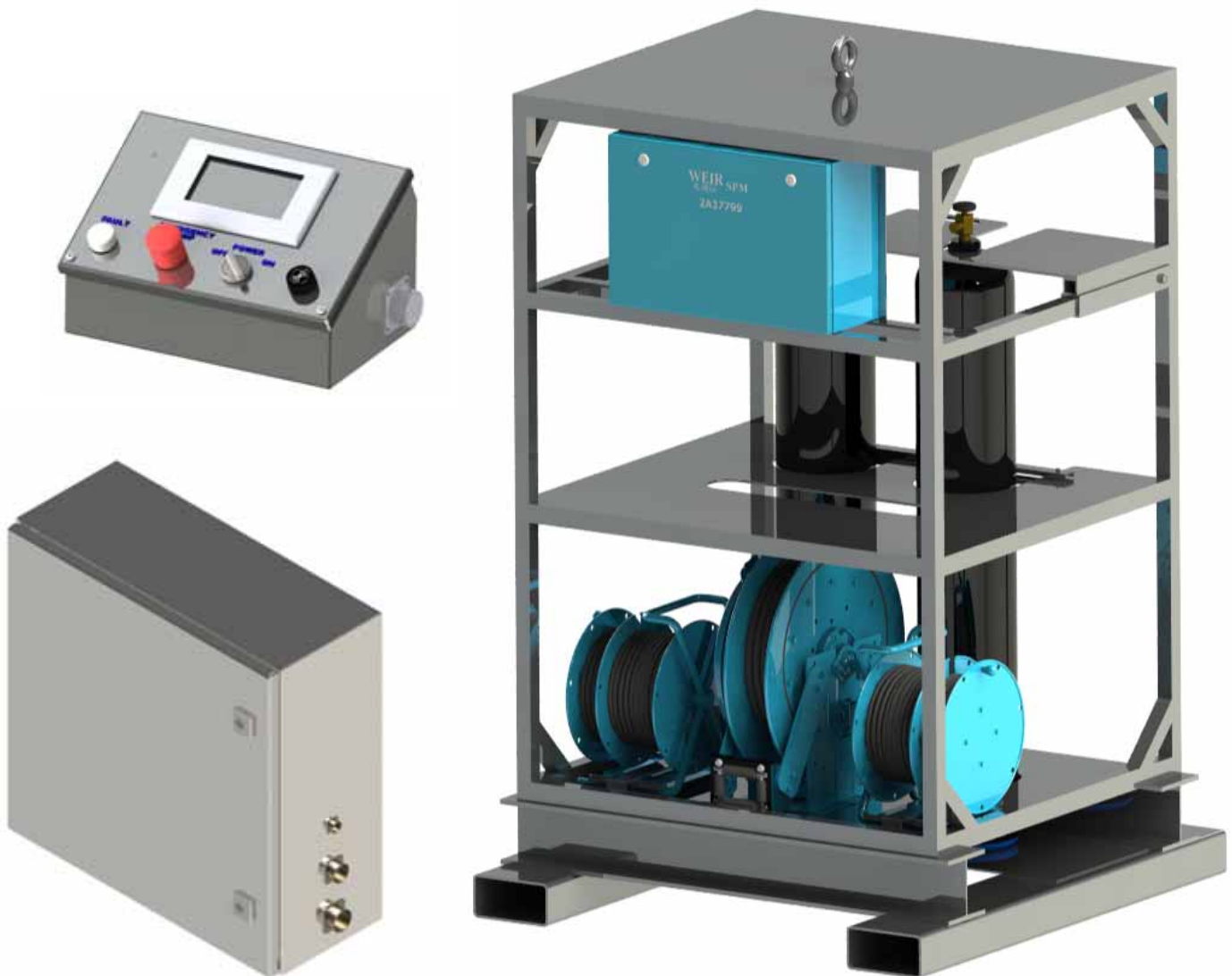


SPM®

Well Service Pumps & Flow Control Products

Automated Relief Valve Control (A.R.C.) System Operation Instruction and Service Manual

Excellent
Oil & Gas
Solutions



Part Number: 2A38151

Release Date: 10/31/2013

Revision: B

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THE FOLLOWING ICONS DENOTE IMPORTANT INFORMATION WITHIN THIS MANUAL.



GENERAL INFORMATION



INSTALLATION AND OPERATION



MAINTENANCE AND REPAIR



SALES AND SUPPORT



NOTE



CAUTION



WARNING/ DANGER

SPM® PRODUCT SAFETY GUIDE



IMPORTANT SAFETY INFORMATION ENCLOSED. READ THIS OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL BEFORE OPERATING PRODUCT.



THIS INFORMATION MUST BE AVAILABLE TO ALL PERSONNEL THAT WILL OPERATE AND MAINTAIN EQUIPMENT. FAILURE TO READ, UNDERSTAND AND FOLLOW THE OPERATING AND MAINTENANCE INSTRUCTIONS MANUAL COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH!

Most SPM® products generate, control or direct pressurized fluids; therefore, it is critical that those who work with these products be thoroughly trained in their proper application and safe handling. It is also critical that these products be used and maintained properly!!



WARNING: MISUSE, SIDE LOADING, IMPROPER MAINTENANCE, OR DISASSEMBLY UNDER PRESSURE CAN CAUSE SERIOUS INJURY OR DEATH!

The following information is given in good faith and should aid in the safe use of SPM® products. This information is not meant to replace existing user safety policies or practices.

SPM products contain elastomer seals and are not intended to provide functionality in the event of a fire.

Personal Responsibilities:

1. NEVER hammer on any component when pressure is present. Hammering on any part or component may also cause foreign material or steel slugs to become airborne.
2. DO NOT touch hot surfaces. It is your own responsibility to protect against a burn injury.
3. YOU MUST wear proper Personal Protective Equipment (PPE) when working on SPM® flow control products.
4. YOU MUST use the proper tools when servicing the A.R.C. System. It is a personal responsibility to be knowledgeable and trained in the use and handling of tools for all maintenance of the A.R.C. System.

On Location:

1. NEVER weld, braze or heat any part of the system. If accessories must be attached, consult the Weir Oil & Gas factory prior to installation.
2. NEVER allow anyone but a trained service technician who is qualified to work on the equipment perform any repairs or service (even routine maintenance) on the A.R.C. System. All such service and repairs must be supervised by qualified management personnel or returned to Weir Oil & Gas for service.
3. NEVER use anything but SPM® replacement parts. Failure to do so will void the warranty as well put you in risk of **SERIOUS INJURY OR DEATH!**
4. DO NOT TAMPER WITH THE POP-OFF PRESSURE SETTINGS. Tampering could result in serious injury or death. The A.R.C. System has built in settings to ensure that the desired pop-off pressure cannot exceed 15,000 PSI.
5. ALWAYS PROPERLY CLEAN AND MAINTAIN The communication lines and nitrogen hoses should be properly cleaned and maintained before and after every fracturing job. This will ensure their longevity and effectiveness during operation.
6. ALWAYS REPLACE any worn or damaged cables and hoses.
7. ALWAYS DO A VISUAL INSPECTION of the A.R.C. System before each use. Fix any leaking seals, broken bolts, leaking hoses or improperly tightened parts before using it.

Special Warnings:

1. **MODIFICATIONS.** Modifications to, unauthorized repair of any part of a SPM® product, and use of components not qualified by SPM®, can lead to damage or failure the A.R.C. system and even **SERIOUS INJURY OR DEATH!**
2. **THREADS.** All SPM® threaded components are right hand threaded unless specifically designated otherwise. Any turning in the counterclockwise direction will loosen the assembly.
3. **CLEANING AND LUBRICATION.** All products should be properly cleaned, greased or oiled after each use and inspected prior to each use.

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SECTION I: General Information

This service manual covers:

2A38151	Control Panel Assembly – Top Level Assembly
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Replacement Parts:

See Section IV: Spare Parts

Brief Description/Features:

The A.R.C. System provides a simple method to operate SPM's Nitrogen Relief Valves and will supersede SPM's Legacy N₂ Valve Control Panel. It provides the following features:

- Easy Two Input Setup (Pop Off Pressure & Reset Pressure)
- Can be used with SPM's Legacy or next generation Back Pressure and Full Unloading Relief Valves with no or little modification
- Multiple Valves can be controlled with one system
- Remote Nitrogen Bottle Monitoring
- Backup Power System w/auto re-charge
- Dampening of the input signal to eliminate fluctuations of system pressure to avoid false overpressure events
- Emergency Shut Down
- Frac Site Ready Skid which provides easy installation and cable management
- Warning/Alarm Indicators

Brief Operations Setup:

Simple setup allows the user to quickly ready the system for use. The following summarizes the simple setup requirements for the A.R.C.:

1. Position A.R.C Skid no more than 150 ft. between the Data Van and 25 ft. from the Relief Valve.
2. Connect Nitrogen Hoses to Relief Valve and Regulator Box
3. Connect Data Cables to Control Panel and User Interface Panel in Data Van
4. Input desired Sequence "Pop-off" and "Reset" pressure values

The system is now ready for use.

Product Overview:



User Interface Panel



Control Box

Data Van Components



Regulator Unit mounted on frac ready skid



High Pressure Transducer
(Generally connected to a Tee in the high
pressure flow line)

On Location Components



SECTION II: Component Description

Control Assembly

The Control Assembly includes two units: The Control Box, and the User Interface Panel. Each of these items should be located in the Data Van and require 110AC power. All electronics of the A.R.C. are UL listed and intrinsically safe. By definition “intrinsically safe” components are designed to provide safe operation in hazardous areas, i.e. a fracturing site.

Control Box

The Control Box houses all the electronics of the A.R.C. System including a Back-Up Battery System. In the event of a power loss to the Control Box, the Backup Battery System will provide approximately 30 minutes of power to the system; which will keep the programming enabled. This will allow the user sufficient time to determine if the Relief Valve should remain closed or be opened. Once power is restored the batteries will begin to re-charge.

The Control Box should be mounted at a convenient location in the Data Van where it can be accessible if needed. All communication cabling connects from the Control Box to the following components as shown below:

1. System Pressure Transducer (Blue Cable)
2. Regulator Unit (Grey Cable)
3. User Interface Panel (Grey Cable)

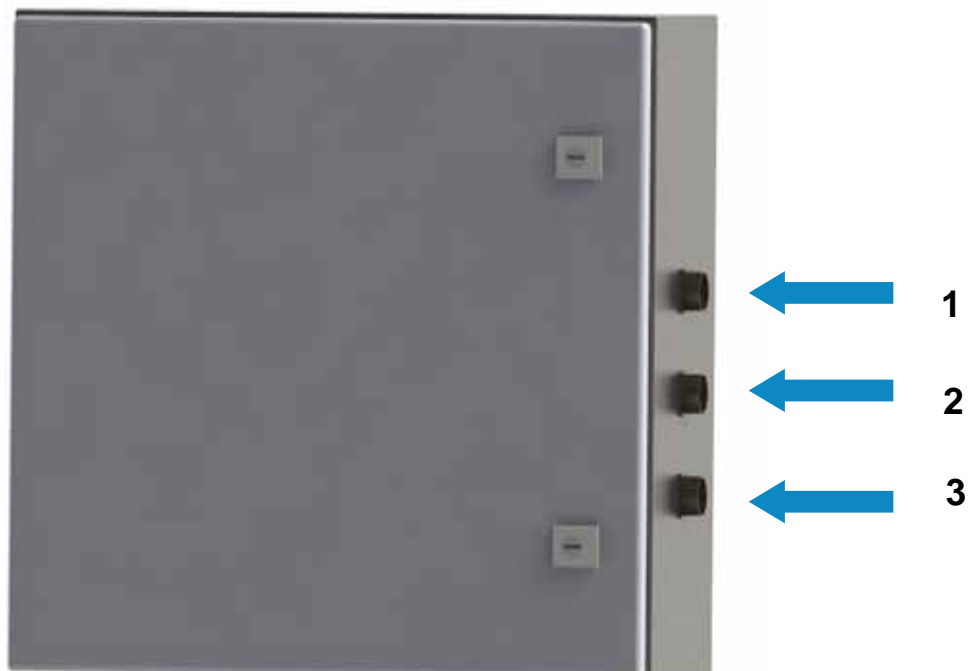


Image 1: Control Box

Mounting Hole Dimensions – Control Panel:

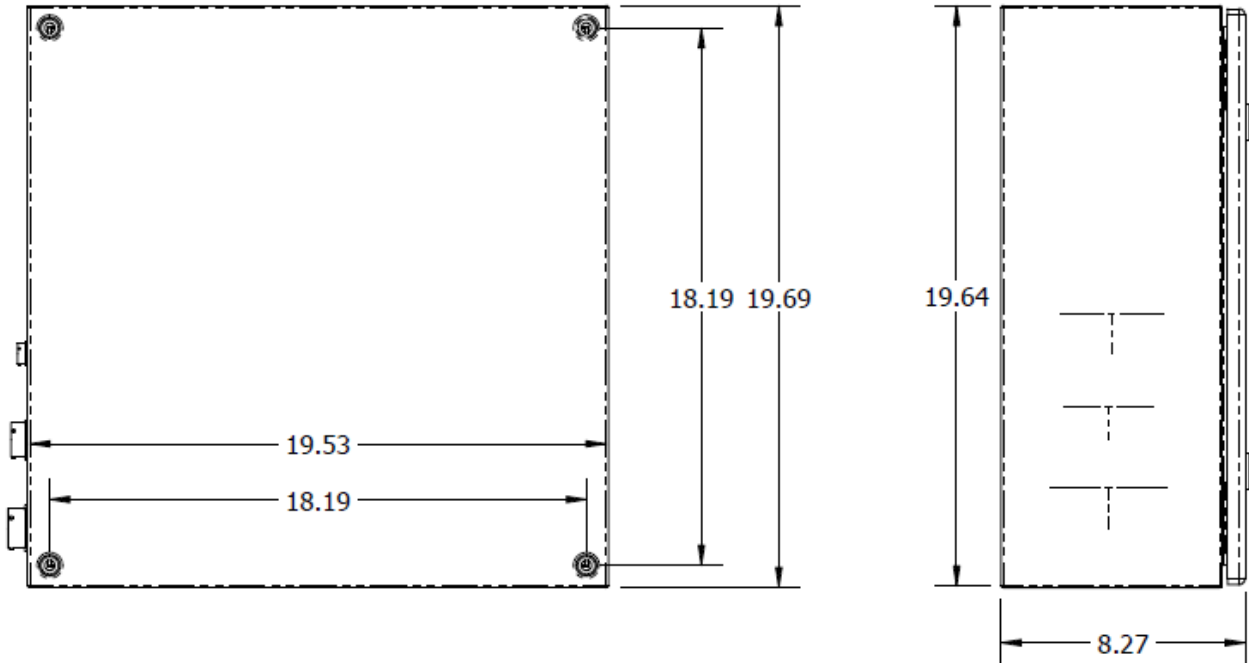


Image 2: Control Box mounting holes and dimensions

User Interface Panel:

The User Interface Panel connects to the Control Box via a communications cable and can be mounted in the Data Van's workspace for easy control and availability. The User Interface Panel features the following as shown in image 3 below:



Item	Description
1	Fault Light
2	Emergency Dump Button
3	Touch Screen LCD
4	Power Switch (ON/OFF)
5	Audible Speaker for Alarm
6	Connector from Control Panel Cable

Image 3: User Interface Panel

Overall dimensions – User Interface Panel

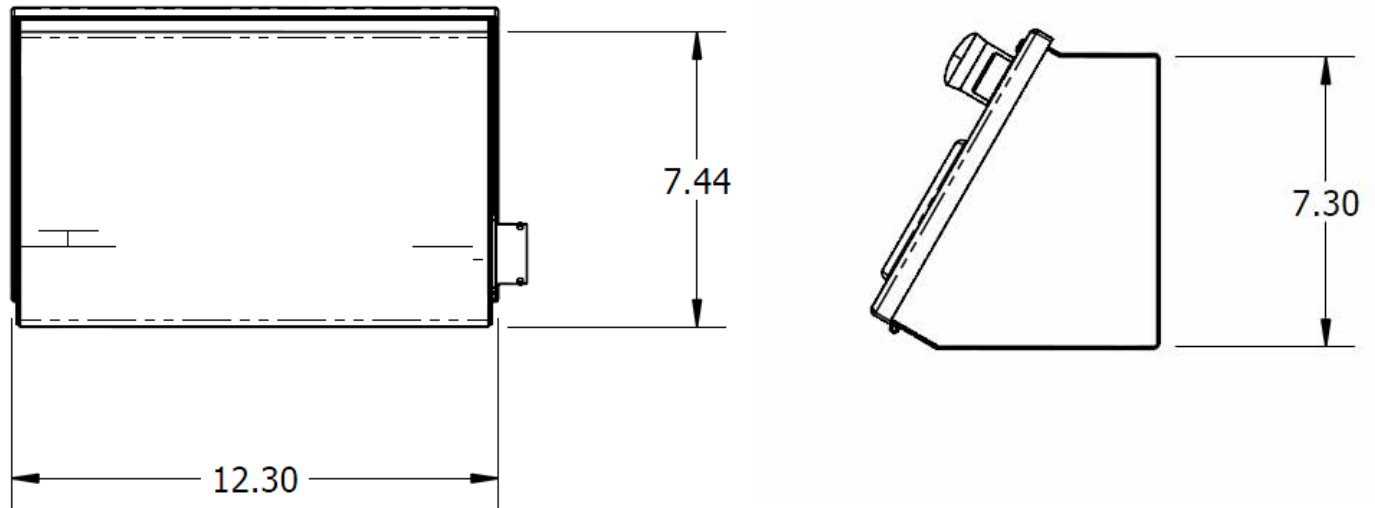


Image 4: User Interface Panel overall dimensions (Bottom & Side View)



Using the User Interface Panel – Touch Screen LCD

Main Menu

After powering up the ARC System's User Interface Panel, the following screen will appear as shown in Image 5 below. The Main Menu features three (3) buttons:

- “Main” – This button will display the Main Screen as shown in Image 6. The Main screen will allow the user to input the desired Pop Off and Reset Pressures.
- “Alarms” – This button will display the Alarm Screen as shown on Image 7. The Alarms Screen shows the current alarms and a button to silence (Acknowledge) the alarm.
- “Admin” – This button displays a password protected Administrative section that is only to be used by a qualified Weir Oil & Gas Technician.



Image 5: User Interface Panel display

Using the User Interface Panel – Touch Screen LCD Cont.

Main Screen - Easy Two Input Setup (Pop Off Pressure & Reset Pressure)

This feature eliminates the ERV calibration process, which was once required with SPM®'s N₂ Legacy Control Panel. All that is needed to set the ARC System is two user inputs: "Pop Off" and "Reset". Once these values are inputted, the system determines the amount of Nitrogen to send to the Relief Valve. This value is based off of real world data and has been modified to eliminate chattering of the Relief Valve during operation.

There are only (2) user inputs needed to set the ARC System:

N2 Valve Pop off PSI (**INPUT FROM USER**)-
This is the desired "Pop Off" pressure of the Relief Valve.

N2 Valve Reset PSI (**INPUT FROM USER**) - This is the desired pressure the Relief Valve will "Reset"/close. This will occur when the system pressure is equal or less than the "Reset" pressure for two seconds.

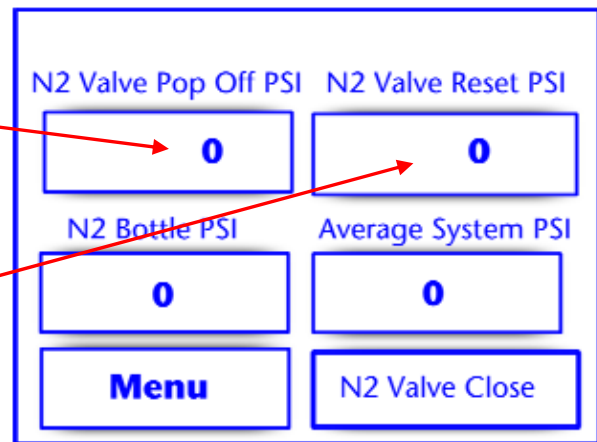


Image 6: Control Panel LCD Interface

The system will continuously monitor the high-pressure transducer until it indicates an over-pressure event exceeding the "POP Off" pressure for an amount of 100 ms (by default). Dampening of the system pressure signal has been added to the programming to avoid pressure spikes from prematurely opening the valve.

Once an over-pressure event has occurred, the ARC System will dump the programmed Nitrogen from the Relief Valve, thus opening until the system pressure normalizes for an amount of two seconds. After the system pressure has normalized at or below the "RESET" pressure for the two second increment, the system will send the programmed amount of Nitrogen back to close the Relief Valve.

Using the User Interface Panel – Touch Screen LCD Cont.

Other features displayed on the LCD Touchscreen are as follows (Image 6):

- “N₂ Bottle PSI” – This feature remotely monitors the connected Nitrogen Bottle Pressure.
 - Monitoring the Nitrogen bottles ensures that the required amount of Nitrogen needed to properly control the Relief valve is present during operation.
 - If the Nitrogen pressure of the N₂ Bottle is below 1000 PSI, the system will alarm and display that the Nitrogen levels are too low.
 - If the Nitrogen pressure of the N₂ is above 3500 PSI, the system will alarm and display that the Nitrogen levels are too high.
- “Average System PSI” – Displays the treating line pressure from the 2”-1502 transducer; which is mounted on one of the high pressure lines leading up to the wellhead. It is recommended that the transducer be installed in front of the Relief Valve and before the check valve.
- Relief Valve Status Indicator – This button is located in the lower right of the LCD screen. It displays whether the valve is OPEN or CLOSED.

Alarm Acknowledgement Screen

The User Interface Panel Screen features an Alarm Acknowledgement Screen that will display when any of the following alarms listed below are indicated by the A.R.C System. The alarm can be disabled by acknowledging the alarm. This is done by pressing the “Ack Alarm” button.

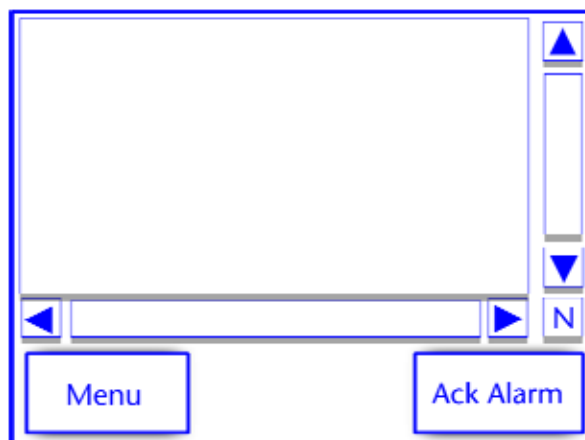


Image 7: Alarm Acknowledgment Screen

Alarm Acknowledgement Screen Cont.

- “N2 Input Low/High Alarms” – Displays/Alarms when the N₂ bottle pressure is below 1000 PSI or equal to or greater than 3500 PSI.
- “System Pressure Lost Alarm” – Displays/Alarms when the System Pressure Transducer cable is not plugged in or shows no signal. This alarm will sound until the System Pressure Transducer indicates a pressure reading.
- “System Pressure High Alarm” – Displays/Alarms when the System Pressure has exceeded the set “Pop Off” pressure.
- “Main Control Power Alarm” – Displays/Alarms when main power is lost. The backup battery continues to power the system for approximately 30 minutes.

Regulator Unit



No User interaction is necessary except for ensuring all cables are connected correctly.

NEVER tamper with the internal components. All components have been preset at the time of manufacturing. Tampering will result in erratic performance and void the warranty.

The Regulator Unit houses all necessary components needed to control the Relief Valve via the User Interface Panel and Control Box which are located in the Data Van. It is designed with intrinsically safe components and is UL listed. The Regulator Unit is made from Stainless Steel to provide resistance to harsh environments. It is mounted on the A.R.C. Skid (Image 10), but is shown separately in Image 8 below. Each port on the bottom of the Regulator Unit is labeled for convenience as shown in the “Pre-Op Checklist” section.



Image 8: Regulator Unit

High Pressure Transducer

The High Pressure Transducer is mounted on a 2"-1502 connection on the High Pressure Frac Iron leading up to the Wellhead. Image 9 shows the transducer mounted on a Tee with a 2" 1502 connection. This transducer monitors the system pressure for the A.R.C. System and is resistant to fracturing fluid (sand, gels, and acid).



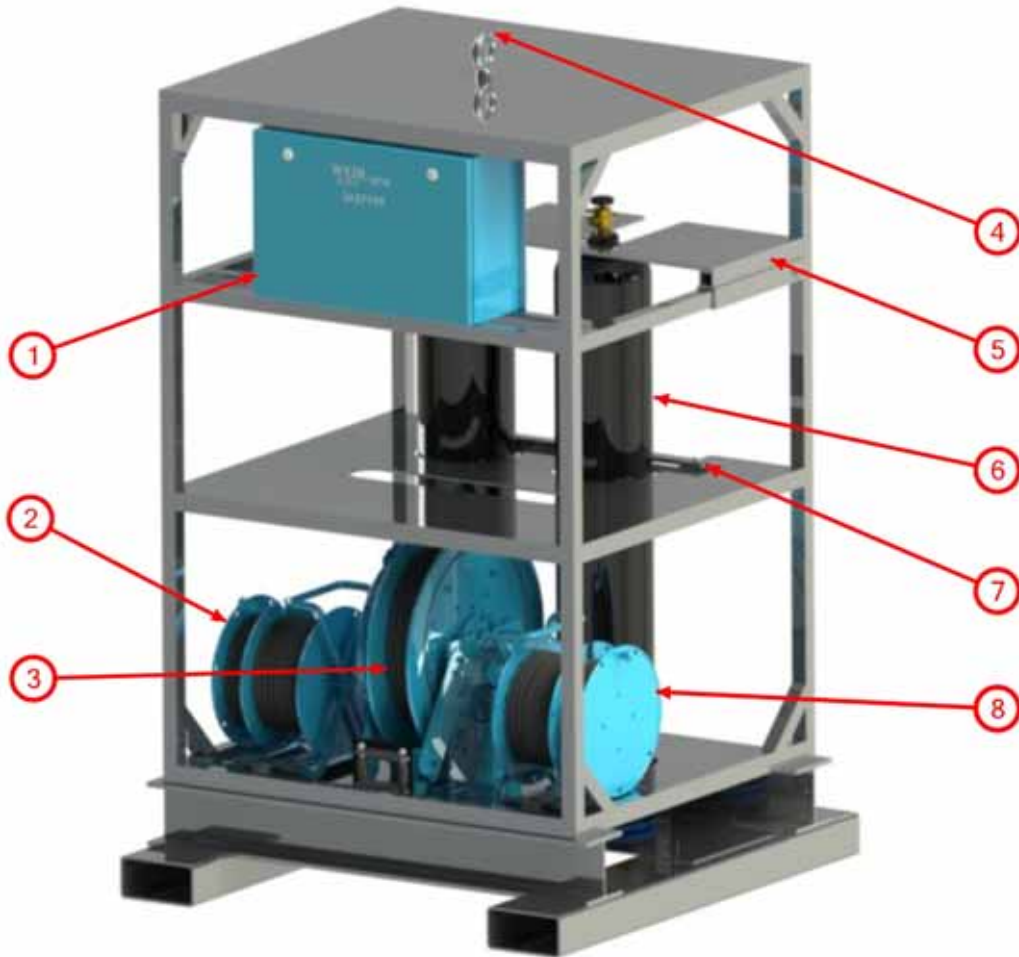
Transducer mounted on
2"-1502 connection

Image 9: High Pressure Transducer mounted
onto a Tee with a 2" 1502 connection

A.R.C. Skid

The A.R.C. Skid is designed to provide easy setup in the field and for convenient, durable transport. By using the skid, it reduces setup time and provides a method of easy cable/hose management.

The A.R.C. Skid houses the Regulator Unit as well as the following vital system components:



Item	Description
1	Regulator Unit
2	Control Panel Cable (Grey Cable), 150 ft.
3	Nitrogen Hose, 150 ft.
4	Skid Lifting Eye
5	Upper N2 Bottle Retainer
6	N2 Bottles
7	Lower N2 Bottle Retainer
8	Transducer Cable (Blue Cable), 150 ft.

Image 10: A.R.C. Skid



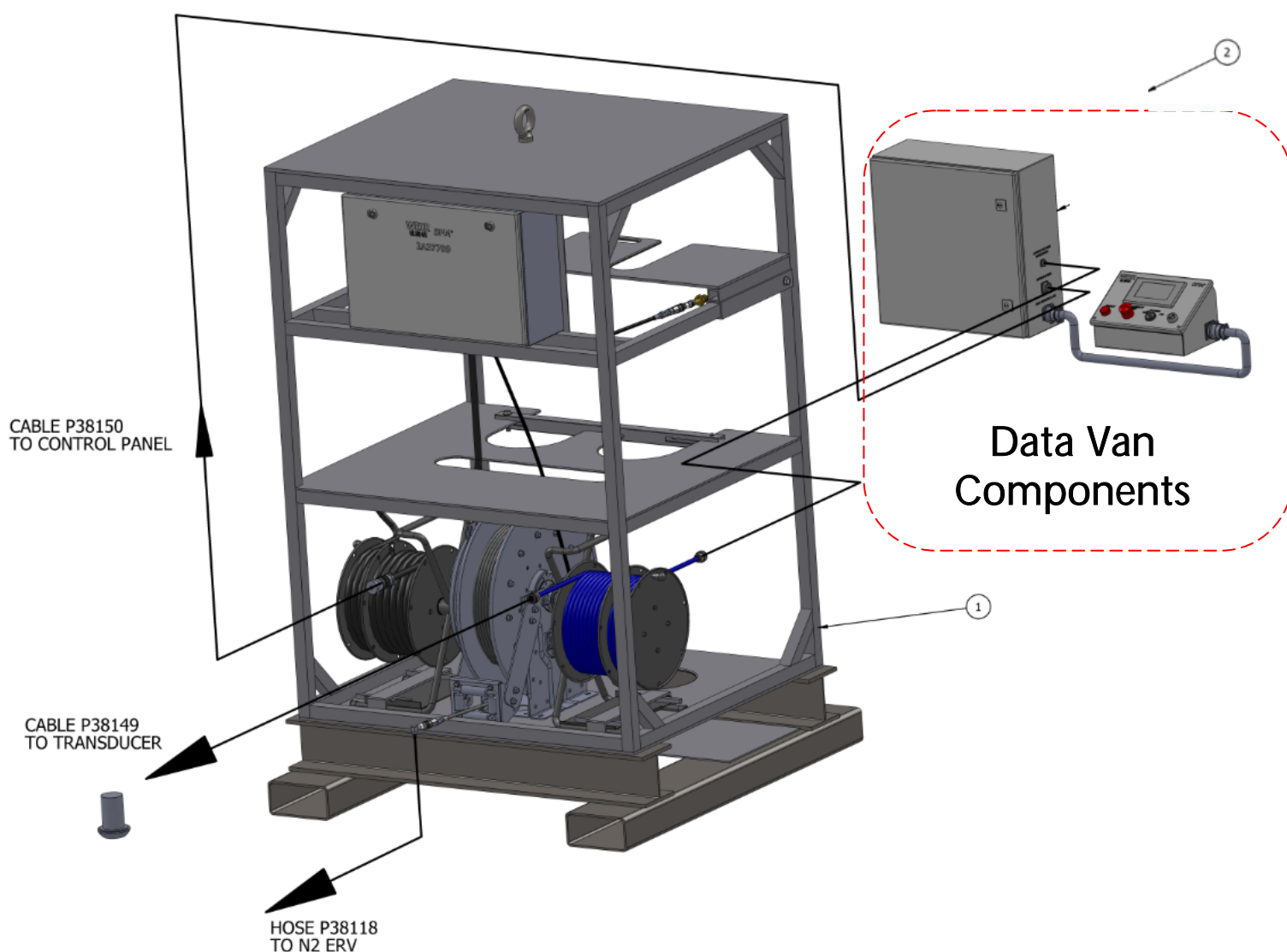
SECTION III: OPERATION

Pre-Op Checklist:

The following steps shall be followed in order to prepare the A.R.C. for operation:

YOU MUST complete the following checklist (before powering ON the system)

1. Position the A.R.C. Skid in a position that is desired, preferably between the Data Van and the Relief Valve. The total distance must be less than 150ft from the Data Van and 25ft from the Relief Valve(s).



2	1	2A38159	KIT/DATAVAN/CNTRL PANEL/N2 ERV
1	1	2A38143	ASSY/SKID/CNTRL PANEL/N2 ERV
ITEM NO.	QTY. REQD	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Image 11: Control System Assembly with Skid

Pre-OP Checklist – Continued

2. Connect Nitrogen hose via the N₂ reel (Hose Part P38118) to the Nitrogen Relief Valve as referenced in Image 12. This is a Quick Disconnect connection.
3. Connect the N₂ hose from the Nitrogen tank to the “INPUT PORT – NITROGEN” connection as shown in Image 13. One end of this hose is fixed to the Regulator Unit, while the other is a Quick Disconnect going to the N₂ Tank.



Visual inspection will determine if any Nitrogen connections are damaged or loose. If necessary all damaged connections should be replaced before operation. Ensure that (2) wrenches are used to avoid loosening the internal parts when removing the fittings on the outside of the Regulator Box.

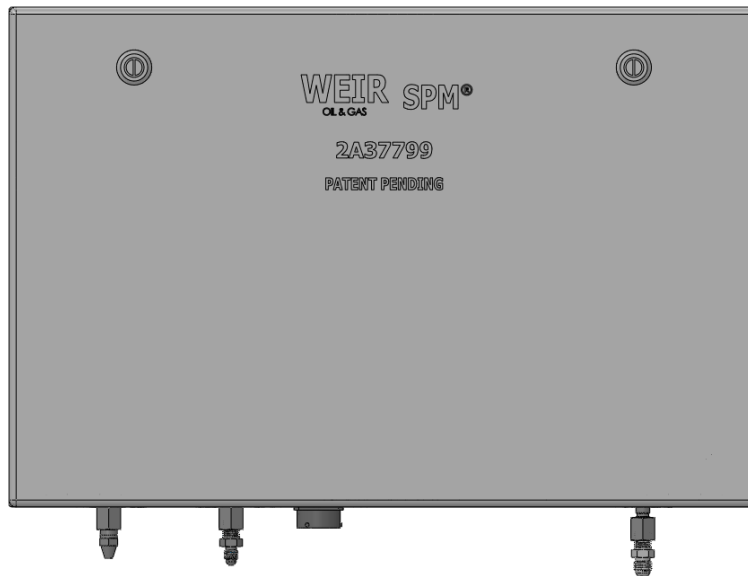


Image 12: Regulator Box – Front View

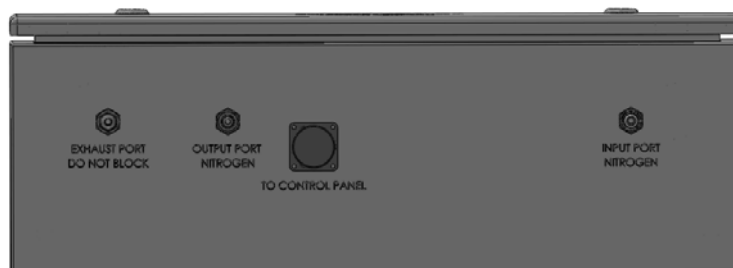


Image 13: Regulator Box – Bottom View

Pre-OP Checklist – Continued

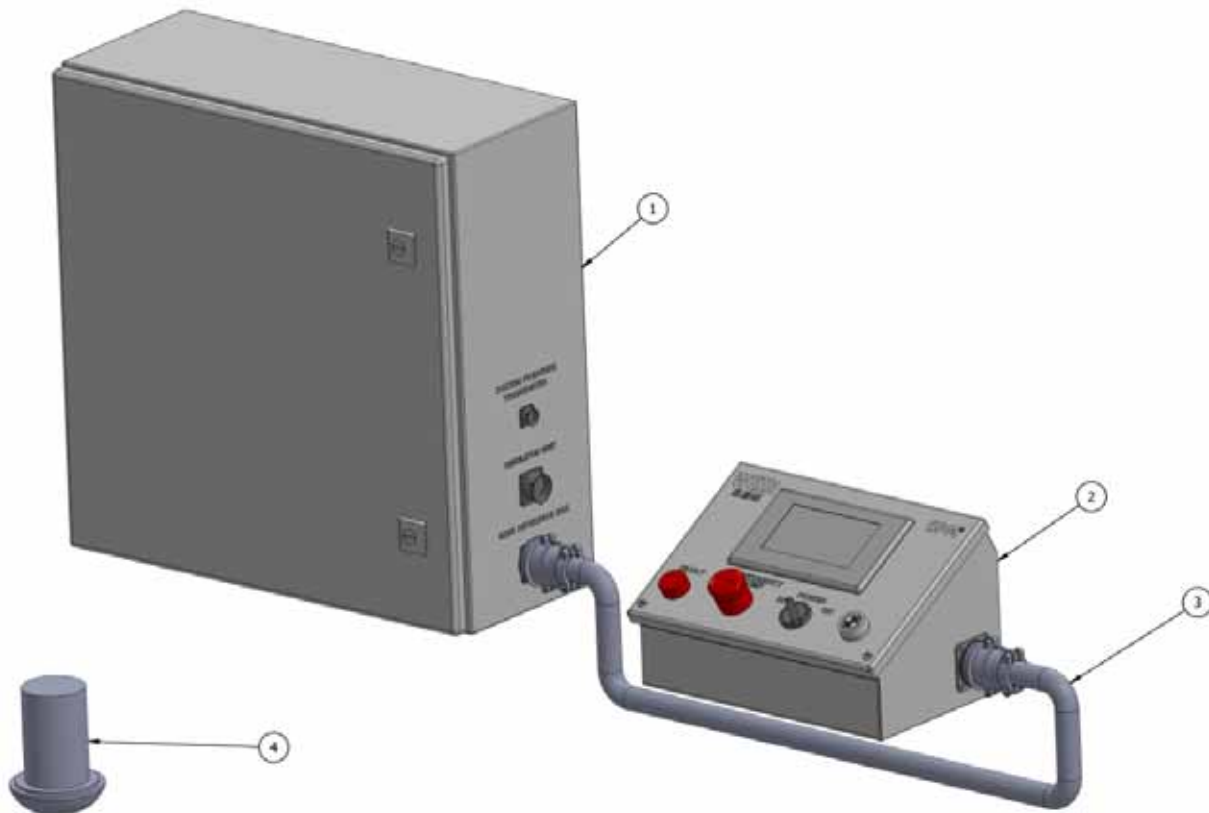
4. Connect the “OUTPUT PORT – NITROGEN” hose to the N₂ Cable Reel.
5. Connect and turn the grey Control Panel Communication Cable (P38150) to the Regulator Unit and to the Control Panel Box in the Data Van. Ensure that the connection lines up and is turned till snug. (DO NOT OVER-TIGHTEN)
 - a. Unwind the longer side of the Control Panel Cable (Grey) to the Data Van and connect it to the Control Panel.
 - b. Unwind the shorter side of the Control Panel Cable from the same reel and connect it to the Communications port on the back of the Regulator Unit.



Image 14: Control Panel Box Connections

Pre-OP Checklist – Continued

6. Connect the 10 ft. grey Communications Cable, Item #3, between the Control Panel and the User Interface Panel as shown in Figure 15 below.



4	1	P38128	CBL/TRANSDUCER
3	1	P38152	ASSY/CABLE/COMMN/10 FT/CNTL PANEL TO UIB
2	1	2P37881	UIB/CNTRL PANEL/N2 ERV
1	1	2P37883	CNTRL PANEL/DATA VAN/N2 ERV
ITEM NO.	QTY REQD	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Image 15: Control Panel and User Interface Panel with 10ft Cable and High Pressure Transducer

7. Connect the Transducer Cable (Blue) via the cable reel to the High Pressure Transducer and the Control Panel Box in the Data Van.
 - a. Unwind the longer side of the Blue Transducer Cable and connect it to the Transducer.
 - b. Unwind the shorter side of the Blue Transducer Cable and connect it to the Control Panel which is located in the Data Van.

Pre-OP Checklist – Continued



8. Open the connected N₂ Bottle by turning the handle counter-clockwise.
9. Ensure the **E-Stop Button** is disabled. This can be verified by twisting the E-Stop knob on the User Interface Panel (Page 10, Item #2) and pulling it up. If it does not pull up, then it is disabled.
10. Turn the power switch ON from the User Interface Panel.



--IMPORTANT--

All Communication cables and Nitrogen hoses must be connected before powering on the system.

Once the system is powered on, the POP OFF and RESET Pressures can be entered by using the User Interface Panel. As a built in system feature a continuous self-check of each component will take place. If a problem is indicated it will sound the following alarm:

- Nitrogen Levels less than 1000 PSI – In this case the Nitrogen Tank will need to be replaced with another tank with at least 1000 PSI of Nitrogen.
- Nitrogen Level greater than 3500 PSI – The Regulator Box's internal components maximum pressure is 3500 PSI. The Nitrogen pressure will need to be below 3500 PSI to silence this alarm.
 - The use of a regulator may have to be used if the Nitrogen Pressure Source is equal to or greater than 3500 PSI.
- NO A/C Power – If the status warning states that there is no AC Power, it is necessary to ensure that the Control Panel is receiving AC power. The system will operate on its back up battery system only for approximately 30 minutes.
- Communications line not connected damaged, or no system pressure is being indicated. This alarm will continue to alarm until there is system pressure indicated.
- No System Pressure (Once the transducer indicates system pressure on the lines, this alarm will continue to alarm until it is acknowledged from the Touch Screen Panel)

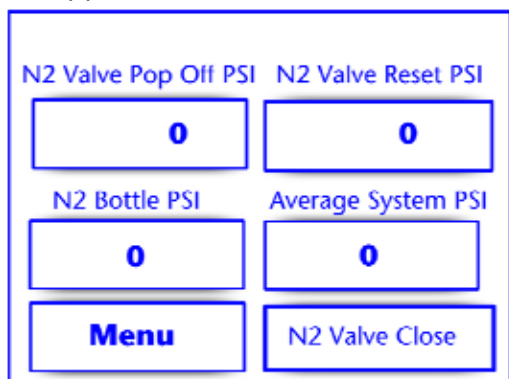
Setting the POP OFF and RESET Pressures:

In most field applications, the customer will require that the Relief Valve be popped off before fracturing operations can occur. This ensures the function of the Relief Valve in that it will provide protection of the wellhead casing and personnel in the event an overpressure in the system occurs.

Once the Pre-Operation checklist has been completed, the values at which the valve needs to Pop Off (OPEN) and RESET (CLOSE) can be entered into the system. The following steps should be followed in order to properly set the A.R.C. System:

 **NOTE: Weir Oil & Gas recommends setting the Pop Off Pressure to at least 500 PSI below the maximum pressure rating of the system.**

1. Touch the “N₂ Valve Pop off PSI” button as shown in Image 16. Once this is pressed a secondary screen will appear on the screen.



The screen displays four input fields for pressure settings, each with a '0' inside. The fields are labeled: 'N2 Valve Pop Off PSI', 'N2 Valve Reset PSI', 'N2 Bottle PSI', and 'Average System PSI'. At the bottom, there are two buttons: 'Menu' and 'N2 Valve Close'.

Image 16: User Input Screen




The screen shows a numeric keypad for entering a pressure value. At the top, there is a display showing '0' and a 'CLR' button. Below the display is a range indicator '0-15000'. The keypad includes buttons for digits 0-9, a decimal point, a minus sign, and function buttons 'ESC', 'DEL', and 'ENT'.

Image 17: Pressure input screen

2. On the secondary screen, the desired pressure can be entered by using the number keypad on the screen as shown in Image 17.

 **(The A.R.C System will not allow the pop off pressure to exceed the maximum rated working pressure of 15,000 PSI.)**

3. Once the desired Pop off pressure is entered the Enter (ENT) button should be pressed which will return to the main screen.
4. Enter the Reset Pressure by pressing the “N₂ Valve Reset PSI” Button. This value cannot be more than the POP off pressure.
5. Once the desired Reset Pressure is entered the Enter (ENT) button will have be pressed, which will return to the main screen.
6. At this point the system will release the programmed amount of Nitrogen Gas to the Relief Valve
7. The system is now ready for use.

 **Field verification of the “POP OFF” pressure can be achieved by increasing the fluid pressure until the valve discharges. The valve will automatically reset after the fluid pressure drops below the “RESET” pressure for an amount of 2 seconds. Care must be taken to limit the discharge rate of the fluid during verification testing. Extremely high discharge rates may reduce the life of the internal seal components.**

Using A.R.C. System with Legacy Backpressure & Full Unloading Relief Valves:

Legacy Back Pressure Relief Valve

SPM's Legacy Backpressure Valve is fully compatible with the A.R.C. System and requires no modification.

Legacy Full Unloading Relief Valve

The Full Unloading Valve (Figure 18 below) includes a secondary N₂ line to pressurize the underside of the internal piston. Each of these parts must be plugged to allow proper operation of the A.R.C. System

 **Note: Plugging the ports may affect the performance of the valve if used without the A.R.C. System**

The following steps should be followed to prepare the Full Unloading Relief Valve for use with the ARC System.

1. Disconnect all hoses and Tees from Relief Valve
2. Plug all four ports around Relief Valve Body with ¼" MNPT Plugs
3. Connect 90 degree elbow on top of valve with Quick Disconnect adapter
4. Valve is now ready for use

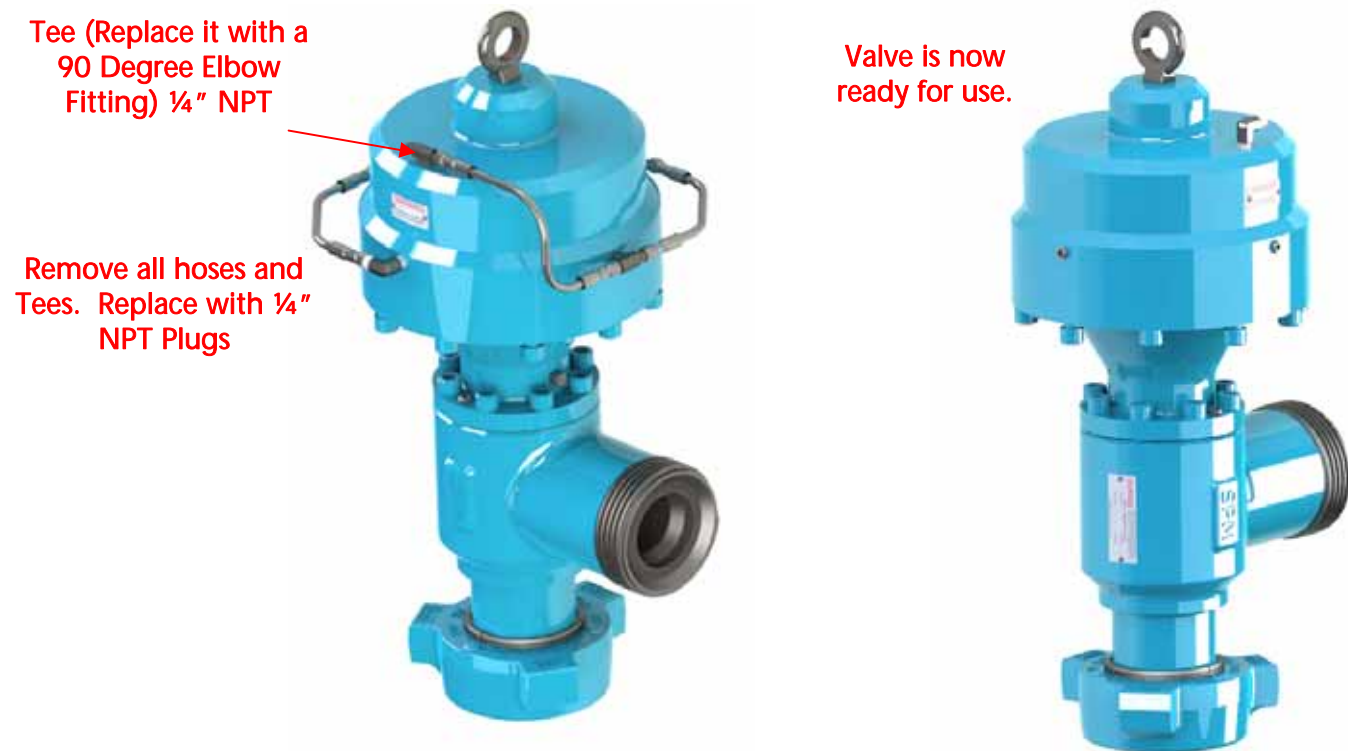


Image 18: Preparing Full Unloading Relief Valve for A.R.C. System use

Using the A.R.C. System to control multiple Relief Valves:

The A.R.C. System can be used to control multiple Relief Valves on location. This is achieved by connecting the two Relief Valves to the Nitrogen “Output Port – Nitrogen” of the Regulator Box. A Tee can be used to split the Nitrogen hoses to each valve. If Quick Disconnect (QD) hoses are used, the use of a QD Tee Adapter will need to be used.

Using the A.R.C. System with Legacy N₂ Setup:

Weir SPM's Legacy N₂ Setup includes a Backpressure and Main Regulator as shown in Image 19 below. The A.R.C. System **does not** require either regulator. Using the regulators will create a limit to the amount of Nitrogen Input going to the Relief Valve.



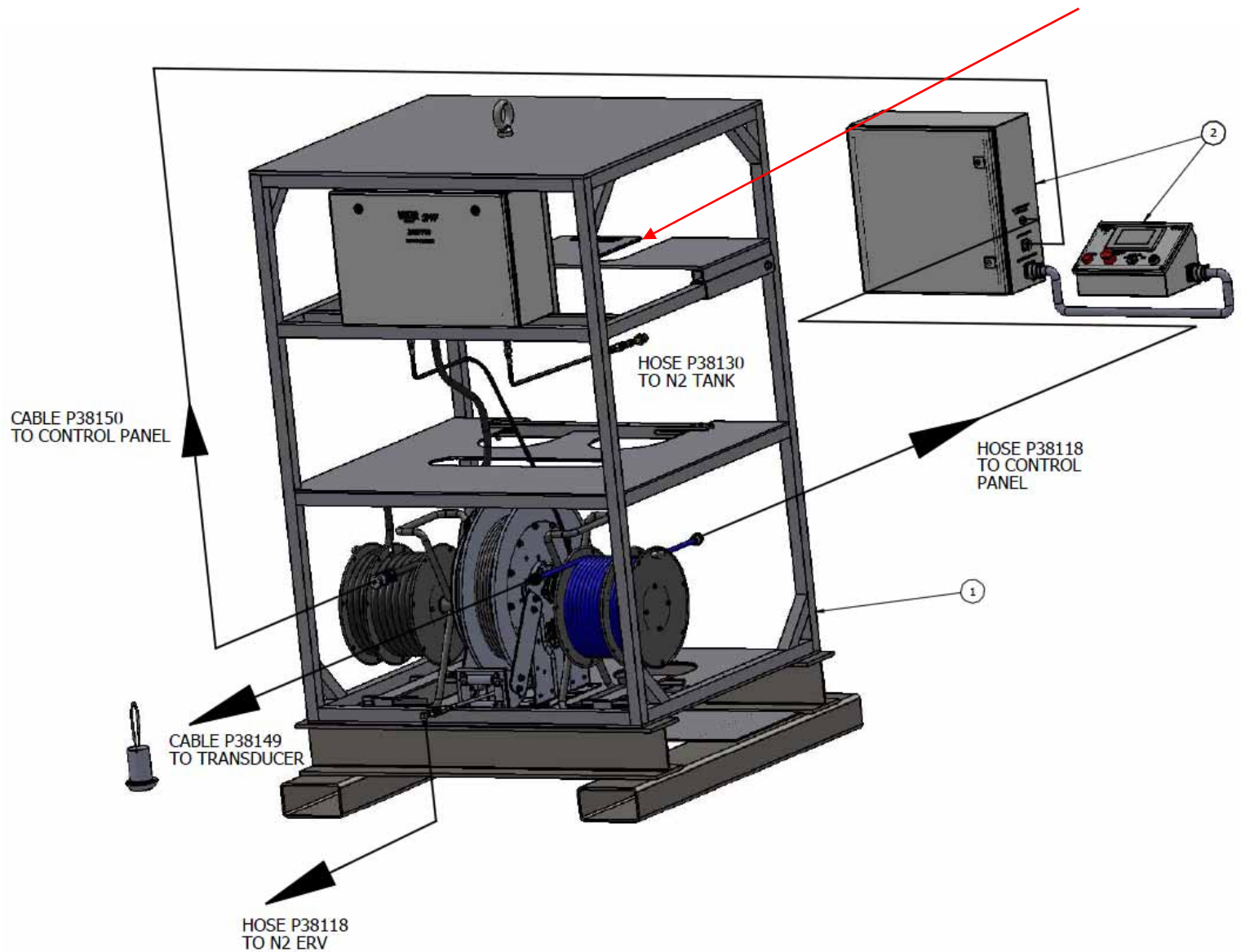
Image 19: Legacy Back Pressure/Main Regulator Setup



SECTION IV: Spare Parts

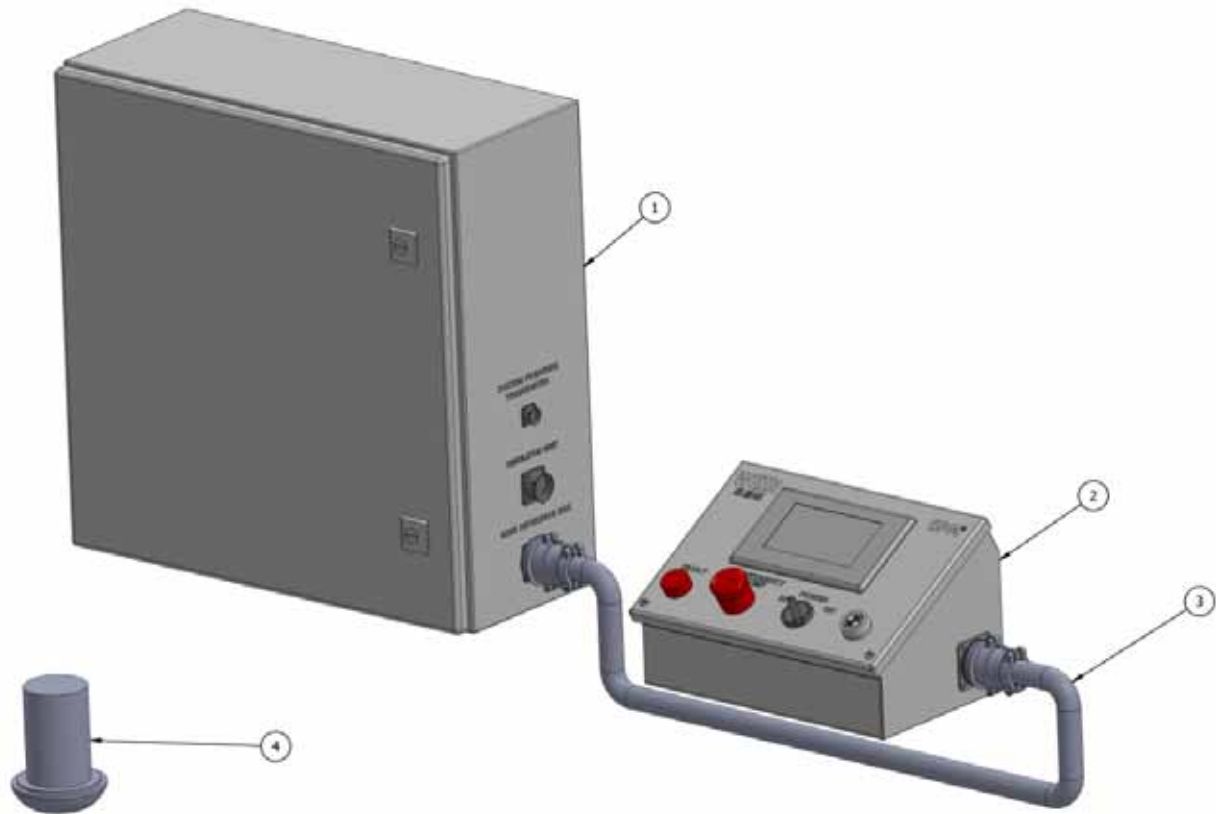
Full Assembly – 2A38151

N2 "H" Series Bottles



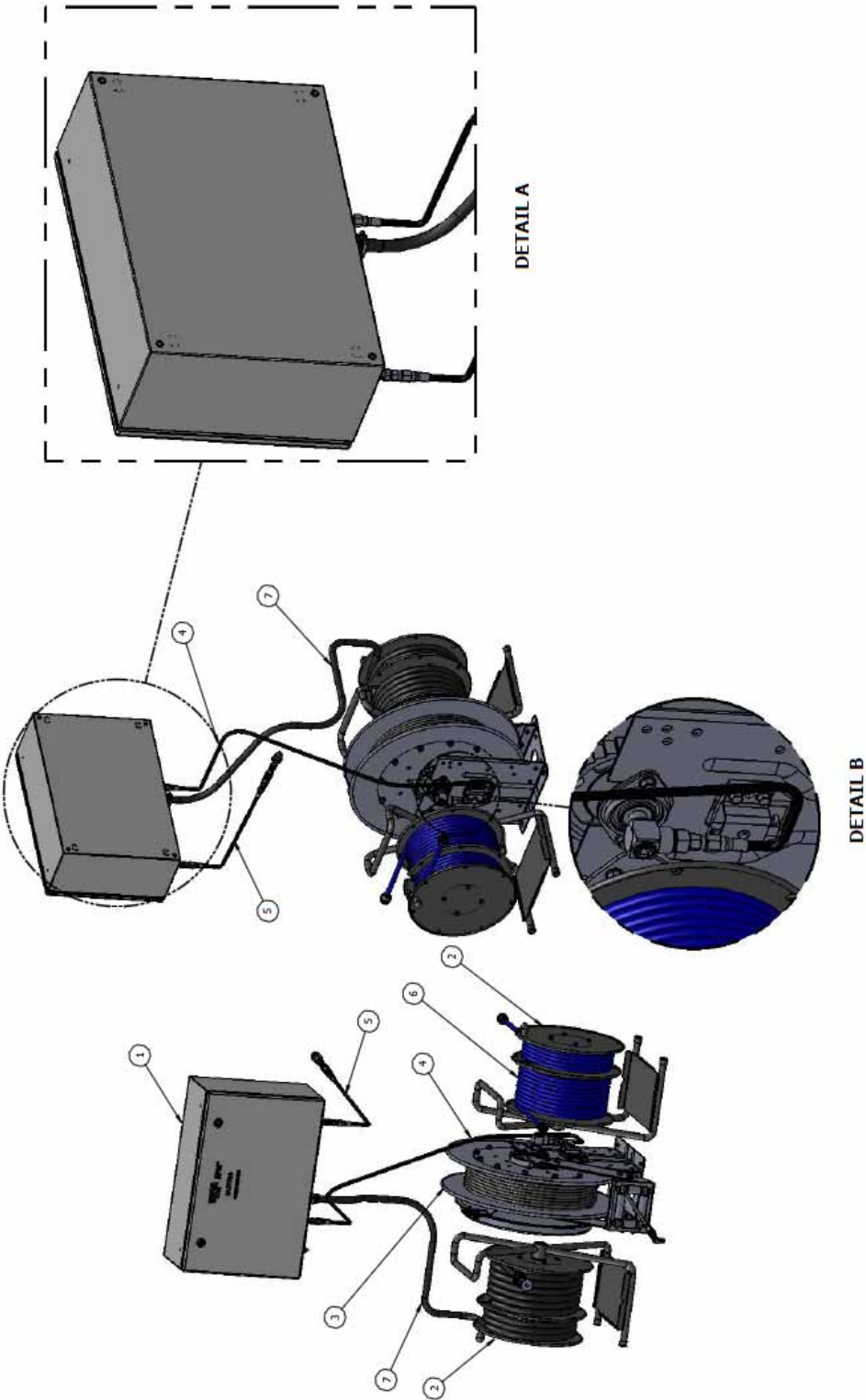
2	1	2A38159	KIT/DATAVAN/CNTRL PANEL/N2 ERV
1	1	2A38143	ASSY/SKID/CNTRL PANEL/N2 ERV
ITEM NO.	QTY. REQD.	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Data Van Components – 2A38159



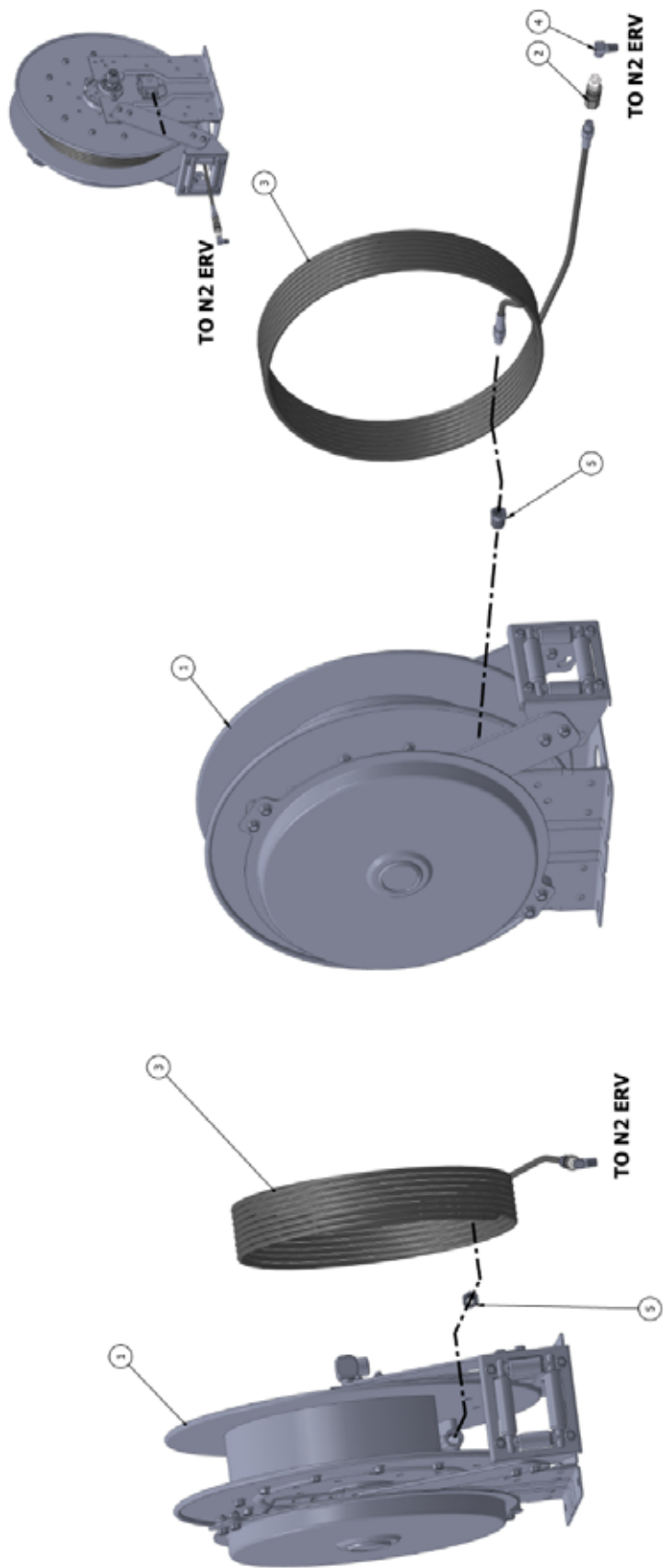
4	1	P38128	CBL/TRANSDUCER
3	1	P38152	ASSY/CABLE/COMMN/10 FT/CNTL PANEL TO UIB
2	1	2P37881	UIB/CNTRL PANEL/N2 ERV
1	1	2P37883	CNTRL PANEL/DATA VAN/N2 ERV
ITEM NO.	QTY REQD	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Skid Components – 2A38371



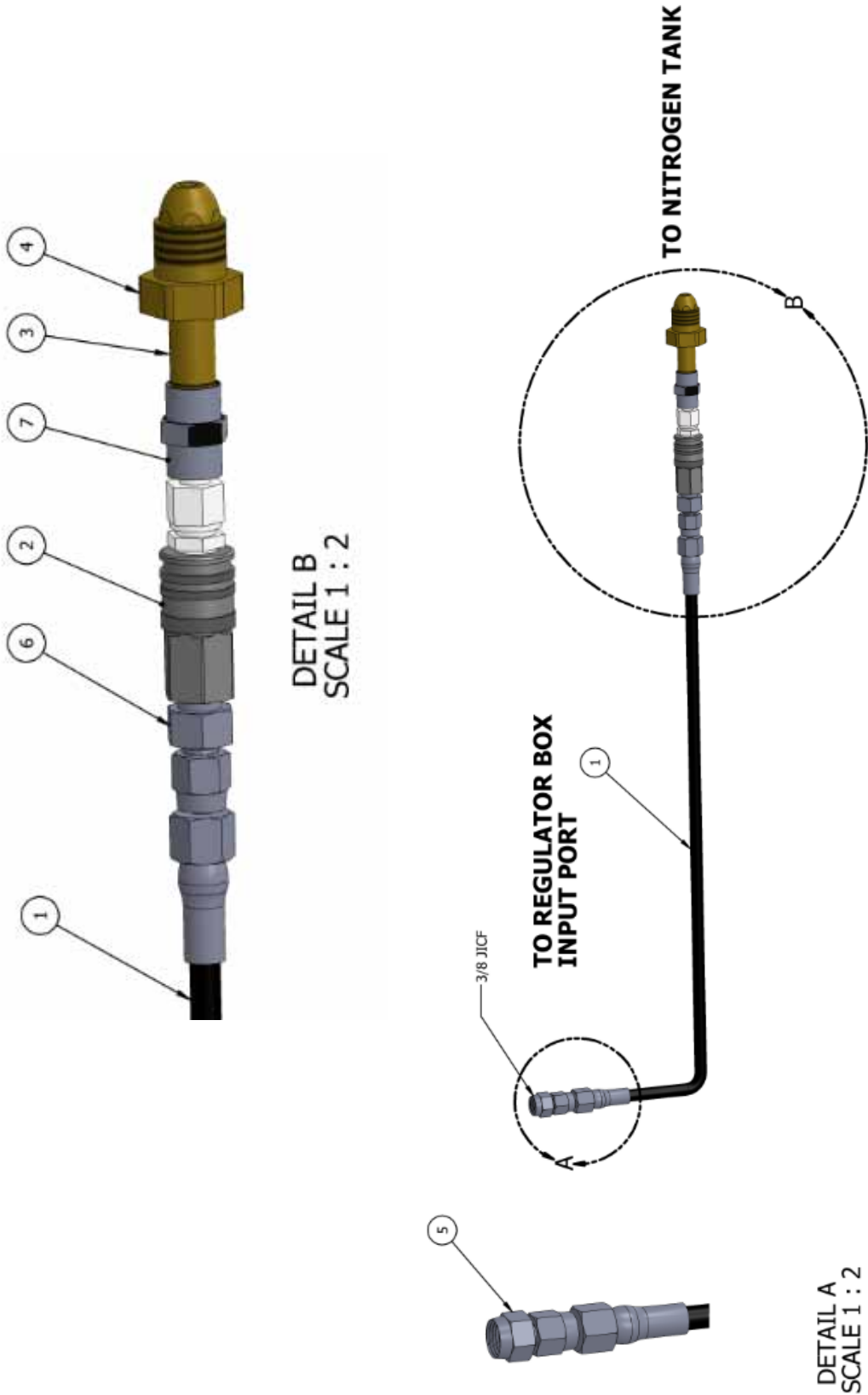
7	1	P38150	ASSY/CABLE/150 FT/REG BX TO CNTRL PANEL
6	1	P38149	ASSY/CABLE/150 FT/TRNSDCR TO CNTRL PANEL
5	1	P38130	ASSY/HOSE/1/4" ID/24" LG/TO NITRO TANK
4	1	P38105	ASSY/HOSE/1/4" ID/48" REEL TO REG. BOX
3	1	P38118	ASSY/HOSE/1/4" ID/25'/TO NITRO TANK
2	2	P37886	REEL/AVX-100
1	1	2P37890	RGLTR BX/CNTRL PANEL/N2 ERV
ITEM NO.	QTY. REQD	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Nitrogen Hose Assembly – P38118



5	1	5406-08-04	ADPTR/1/4NPTF X 1/2NPTM/BRENNAN 5406-08-
4	1	(5502-04-02-SS)	ELL/90/1/8NPTF X 1/4NPTM/BRENNAN
3	1	P38191	ASSY/HOSE/1/4" ID/1/4NPTM ENDS/SS/25' LG/AXT-PS
2	1	P38120	QCK DSCNCT ASSY/1/8 NPT
1	1	P37896	REEL/N716-23-24-15.5G SR/3000 PSI MAX
ITEM NO.	QTY. REQD	PART NUMBER	NOMENCLATURE OR DESCRIPTION

Assembly Hose (Regulator Box to N2 Tank) – P38130



ITEM NO.	QTY. REQD.	PART NUMBER	NOMENCLATURE OR DESCRIPTION
7	1	(5000-04-02-SS)	ADPTR/1/4 NPTF X 1/8NPTF/BRENNAN
6	1	(2404-04-04-SS)	ADPTR/1/4 NPTM X 1/4 JICM/BRENNAN
5	1	(2406-06-04-SS)	ADPTR/3/8JICF X 1/4JICM/BRENNAN
4	1	P23358	NUT/CYLINDER/RELIEF VA
3	1	P23359	NPPL/CYLINDER/RELIEF VA/1/4NPT
2	1	P38120	QCK DSCNCT ASSY/1/8 NPT
1	1	P38370	ASSY/HOSE/1/4 ID/1/4JICF ENDS/SS/24 "LG



SECTION V: Service and Support

Service Center Order Information:

SPM® stocks a large inventory of genuine original equipment replacement parts. In order to expedite a parts order and avoid any delays, please provide the following information with your order:

- The part number and description (refer to drawings and parts lists in this section) of each item ordered.
- The quantity of each part, kit, or assembly ordered.
- The model number and serial number
- Your purchase order number.
- Specify method of shipment, complete shipping address, complete billing address and telephone number at the destination of the shipment.

Parts and service may be ordered through the locations on the following page

Weir Oil & Gas

601 Weir Way
Fort Worth
TX 76108
USA

Tel: (817) 246 2461
Fax (817) 246 6324

www.weiroilandgas.com

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Headquarters:

601 Weir Way

Ft. Worth, TX 76108

Ph: +1-800-342-7458 • +1-817-246-2461

Fax: +1-817-977-2508

www.weiroilandgas.com/

www.weirinaction.com

UNITED STATES:

Houston, TX - Sales Office
363 N. Sam Houston Pkwy. E., Suite 550
Houston, TX 77060
Ph: +1-281-847-7270
Fax: +1-281-820-2972

GULF COAST:

Alice, TX - Service Center
2450 Business Hwy. 281 North
Alice, TX 78332
Ph: +1-361-661-0900
Fax: +1-361-661-0909

Deer Park, TX - Service Center
920 Seaco Court
Deer Park, TX 77536
Ph: +1-832-200-6220
Fax: +1-832-200-6227

Lafayette, LA - Service Center
401 S. Bernard Rd.
Broussard, LA 70518
Mailing: PO Box 82099, Lafayette, LA 70508
Ph: +1-337-837-3161
Fax: +1-337-839-1985

Pleasanton, TX - Service Center
772 HWY 281 South
Pleasanton, TX 78064
Ph: +1-830-569-3571
Fax: +1-830-569-3643

MID CONTINENT:

Bossier City, LA - Service Center
2403 Grimmer Dr.
Shreveport, LA 71107
Ph: +1-318-677-2422
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Elk City, OK - Service Center
2111 S. Main
Elk City, OK 73648
Ph: +1-580-225-2385
Fax: +1-580-225-3402

Ft Worth, TX - Service Center
7711 Wyatt Dr.
Ft. Worth, TX 76108
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Fax: +1-817-246-3970

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1102 State Hwy 31W
Kilgore, TX 75662
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Fax: +1-903-984-8626

Searcy, AR - Service Center
Searcy, AR 72143
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Fax: +1-501-305-3419

PERMIAN:

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2424 E. I-20
Odessa, TX 79766
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Fax: +1-432-333-1351

NORTH EAST:

Blairsville, PA - Service Center
1519 Route 22 Hwy East
Blairsville, PA 15717
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Fax: +1-724-459-4771

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52 Norwins Drive
Buckhannon, WV 26201
Ph: +1-304-472-9701
Fax: +1-304-472-9130

Horseheads, NY - Service Center
36 Level Acres Dr
Horseheads, NY 14845
Ph: +1-607-739-1215
Fax: +1-607-739-1314

Williamsport, PA - Service Center
76 Odell Road
Muncy, PA 17756
Ph: +1-570-546-1005
Fax: +1-570-546-2033

ROCKIES:

Fort Lupton, CO - Service Center
13055 Weld County Road 8
Fort Lupton, CO 80621
Ph: +1-303-535-5450
Fax: +1-303-535-5455

Grand Junction, CO - Service Center
842 21 1/2 Rd., Building A
Grand Junction, CO 81505
Ph: +1-970-243-4600
Fax: +1-970-243-8027

Williston, ND - Service Center
5073 Owens Industrial Park
Williston, ND 58801
Ph: +1-701-572-0776
Fax: +1-701-572-0784

CANADA:

Edmonton, AB, Canada - Service Center
4737 97th Street
Edmonton, Alberta T6E 5W2
Ph: +1-780-438-1122
Fax: +1-780-437-5218

Fort St. John, BC, Canada - Service Center
10508, 89th Avenue
Fort St. John, British Columbia V1J 5P9
Ph: +1-250-785-6627
Fax: +1-250-785-4501

Grande Prairie, AB, Canada -Service Center
8801 99th Street
Clairmont, Alberta T0H 0W0
Ph: +1-780-567-3857
Fax: +1-780-567-2808

Medicine Hat, AB, Canada - Service Center
1202 Dirkson Drive N.E
Redcliff, Alberta T0J 2P0
Ph: +1-403-504-8353
Fax: +1-403-504-8370

Red Deer, AB, Canada - Service Center
Unit A, 8060 Edgar Industrial Crescent
Red Deer, Alberta T4P 3R3
Ph: +1-403-341-3410
Fax: +1-403-341-3072

INTERNATIONAL:

MEXICO:

Villahermosa, Mexico - Service Center
Bodega 3, Lote 8, Manzana 3
Sobre Calle San Lazaro
Parque Logistico Industrial, Tobasco
Villahermosa, Tabasco 86150
Ph: +52-993-142-7083

Poza Rica, Mexico - Service Center
San Miguel Mecatepec Tihuatlan, Veracruz
Bodega C
Ph: +782-111-73-55

BRAZIL:

Macaé, Brazil - Service Center
Rua Internacional, No 245,
Lote 09, Quadra W
Loteamento Novo Cavaleiros,
Macaé, RJ Brazil -1
Ph: +55-22-2106-8750
Fax: +55-22-2106-8777

EUROPE:

Aberdeen, Scotland -Service Center
Badentoy Industrial Park, Portlethen
Aberdeen AB12 4YD, Scotland
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MIDDLE EAST:

Dubai, UAE - Service Center
Oilfields Supply Center, L.T.D., Building 22
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Ph: +971-48836-368
Fax: +971-48836-485

AUSTRALASIA:

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15 Tukang Innovation Drive,
Singapore, 618299
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Australia - Service Center
Henderson Service Center
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Perth, Western Australia 6166
Ph: +61-8-9410-7500

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Salisbury South SA 5106
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Toowoomba QLD 4350
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Ph: +86-546-7766997
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