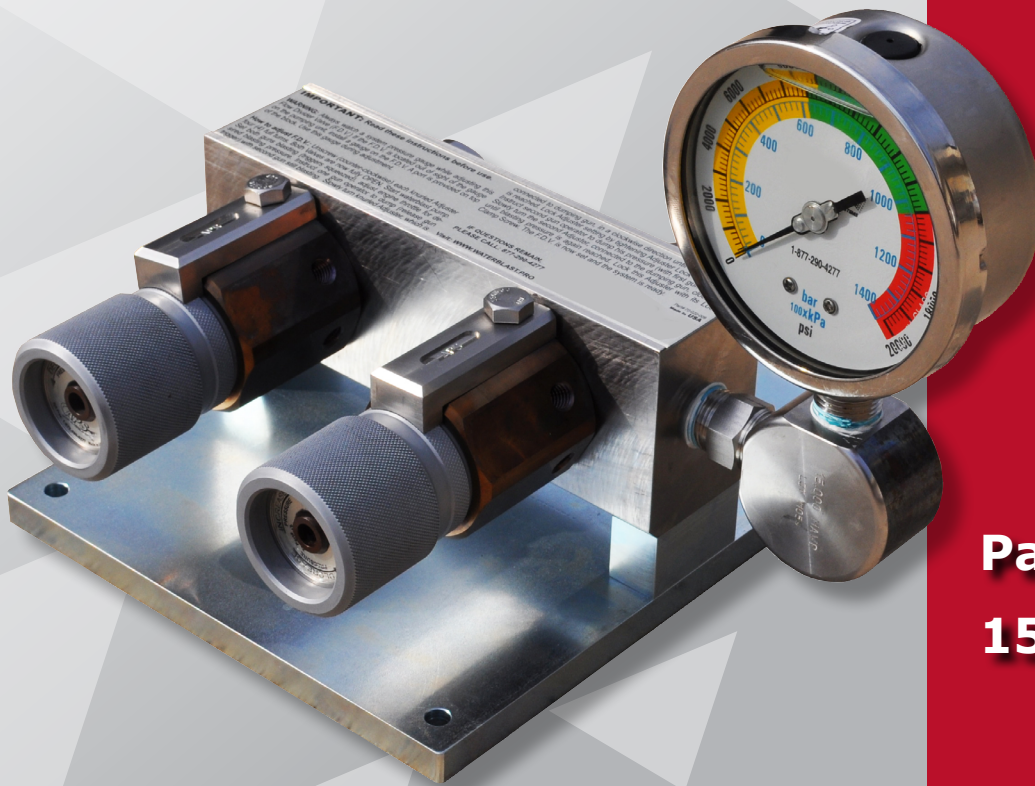


Flow Divider Valve

O&M Manual



FDV-15K

**Part #70-022-001
15,000 PSI MAWP**

FDV-20K

**Part #70-032-001
20,000 PSI MAWP**

ADVANCED PRESSURE SYSTEMS

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Advanced Pressure Systems publishes guides for the safe use of Water Blasting Equipment.

Please READ them!

We also strongly advise that all personnel are fully conversant with:

"Recommended Practices for the Use of Manually Operated High Pressure Water Jetting Equipment"

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These may be obtained free of charge by contacting:
ADVANCED PRESSURE SYSTEMS, L.P. (877) 290-4277

Conditions of Sale & Warranty

General - These terms and conditions and warranty provisions are applicable to all products contained in this catalog, and may not be varied, except in writing by a partner of APS Pressure Systems L.P.

Terms of Sale –

- 1) All sales are FOB manufacturers plant, Houston, Texas, and are priced and must be paid for in US dollars.
- 2) The purchaser agrees to hold APS Pressure Systems (DBA: Advanced Pressure Systems) harmless for any and all claims arising from the misuse or misapplication of any product manufactured or supplied by Advanced Pressure Systems.
- 3) Products returned for credit will be subject to 15% restocking charge. Only standard products will be accepted for restocking. All sales of non-standard items are final.
- 4) Payment may be made by credit cards issued by VISA or MASTERCARD. Payment by credit cards issued by AMERICAN EXPRESS will be subject to 3% service charge.

Warranty - The following classes of products carry the warranty indicated. Any component included in an assembled product which is subject to wear is not warranted. Products which have been subject to abuse including misapplication, corrosion, excessive pressure, over-tightening and galling of screw threads will not be accepted for replacement under warranty. Products not manufactured by Advanced Pressure Systems will carry the warranty by of the respective manufacturer

Hose - Not warranted. Coupling may be warranted by manufacturer.

Rigid Lances - Ninety days from date of shipment.

Plungers and Pump Packing - Not warranted.

Control Guns, Flow Divider Valves, Flow Control Valves - Ninety days from date of shipment.

Relief Valves - 180 days from date of shipment.

Nozzles and nozzle inserts / orifices - Not warranted

Fittings, Connectors and Couplings - 180 days from date of shipment.

Shipping Costs - Orders may be shipped prepaid by any regularly available means, and the cost will be paid by the customer. Other shipping costs including but not limited to: insurance for the full retail value of the products, packaging, crating and any other handling costs will be billed to the customer. If the customer collects the products from the Houston plant there will not be any shipping charges.

Payment - All invoices are due net 30 days from date of shipment. Any invoices which are more than 30 days past due will result in the account of the customer concerned to be placed on hold.

The **Flow Divider Valve (FDV)** is for applications where two dump style guns are to be operated from one pump. The FDV will maintain full pressure to either gun when the other gun is dumping. When both guns are operating, the flow and pressure will be unaffected.

These valves are very easy to set up. They are of very rugged construction, and the only wear part is a cartridge which can be quickly changed in the field.

Features in addition to the easy cartridge overhaul, an optional pressure gauge (which is recommended equipment). Easy clamping of the adjuster handle, and available adapters for different hose connections, including NPT and BSP.

FDV (Flow Divider Valve)

- **FDV-15K #70-022-002 with Gauge**
- **FDV-15K #70-022-001 without Gauge**
- **FDV-20K #70-032-002 with Gauge**
- **FDV-20K #70-032-001 without Gauge**

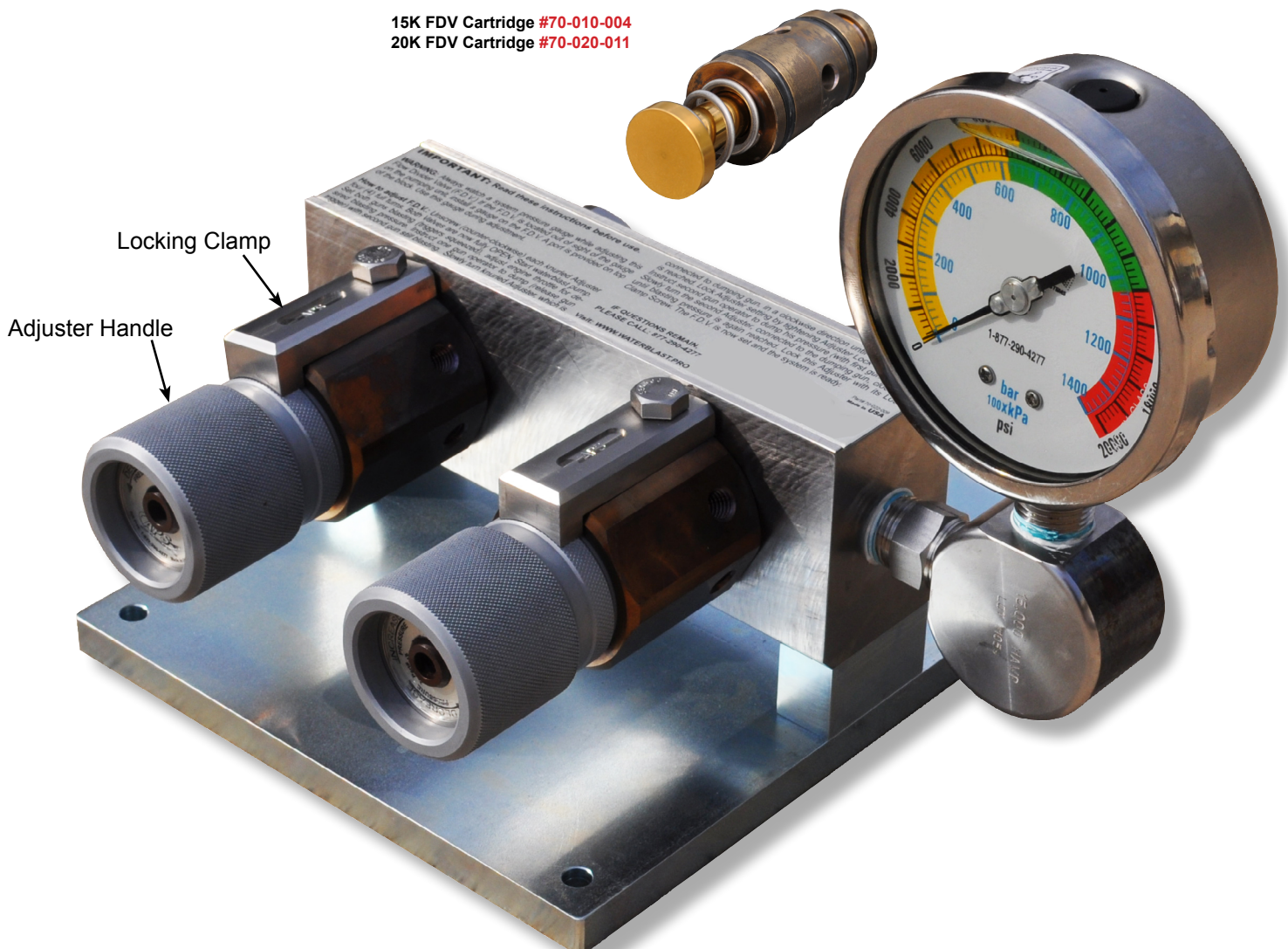
The Flow Divider Valve features:

- Easy set-up.
- Easy operation
- Easy to set and lock clamp.
- Maintains pressure and flow to two guns at once during all phases of operation.
- Rugged construction.
- Quick-change cartridge overhaul.
- Optional pressure gauge.
- Hose adapters for different connections available.

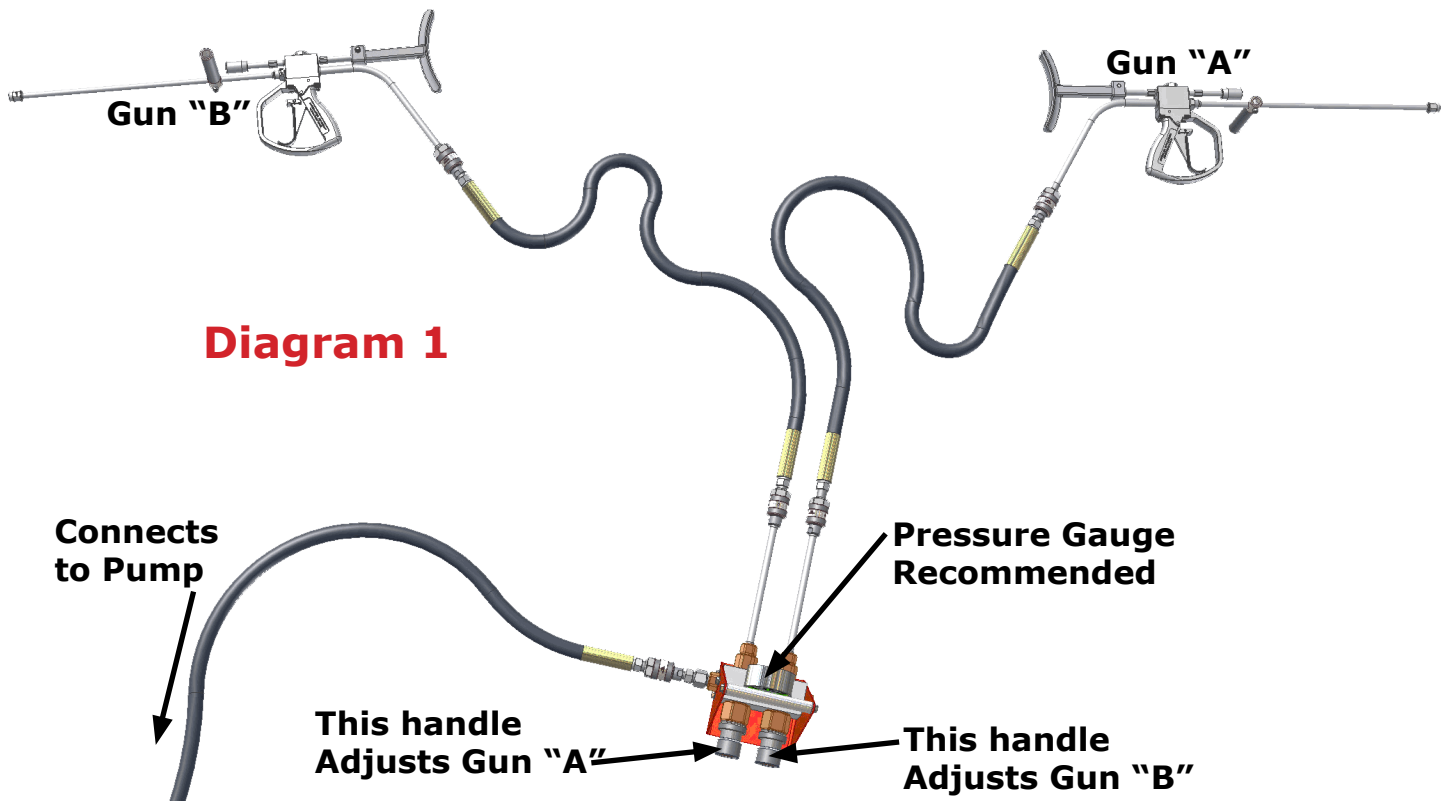
Easy-Change Cartridge Assembly

The cartridge assembly enables rebuilding of the FDV in the field in 30 seconds or less with common tools.

- 15K FDV Cartridge #70-010-004**
- 20K FDV Cartridge #70-020-011**



FDV-15K Flow Divider Valve Operating Instructions



Connect the inlet port of the FDV to the high pressure pump. **DO NOT START THE PUMP** at this time. There is an inlet port on both sides of the FDV. The port that is not being used must be closed with a plug adapter.

To carry out the SAFE & ACCURATE adjustment of the FDV, it will be necessary to observe the effect of adjustments on the pressure in the system. If the FDV is set up in close proximity to the high pressure pump, then the gauge on the pump could be used to make the adjustments. If the FDV is located remotely from the pump, then it will be necessary to install a gauge on the FDV. There is a port in the top of the FDV for this purpose, or the inlet port which is not being used could accept a gauge.

BEFORE THE PUMP IS STARTED, loosen the Locking Clamp on the Adjuster Handle and unscrew the Handle 4-5 turns from the fully closed position. Repeat this procedure for the other Adjuster Handle. This will place the FDV in the full open position. (**Note:** *Unscrewing the Handle will be in the "DECREASE PRESSURE" direction as indicated on the decal at the end of each handle.*)

FDV-15K Flow Divider Valve Overhaul & Maintenance

VALVE & SEAT CARTRIDGE REPLACEMENT:

After prolonged use it may become difficult or impossible to set the pressure for each gun. This is a sign that wear has taken place in the Valve and Seat Cartridge. The Advanced Pressure Systems Flow Divider Valve is designed for quick and easy servicing by simply replacing the Valve and Seat CARTRIDGE ASSEMBLY. Remove the Cartridge Holder (Discharge) and simply pull out the old cartridge. Sometimes it may be necessary to use two flat-blade screwdrivers to help withdraw the cartridge. Care should be used so as not to damage the screw thread for the Cartridge Holder (Discharge). Replace the worn cartridge and reassemble. Repeat for the other side.

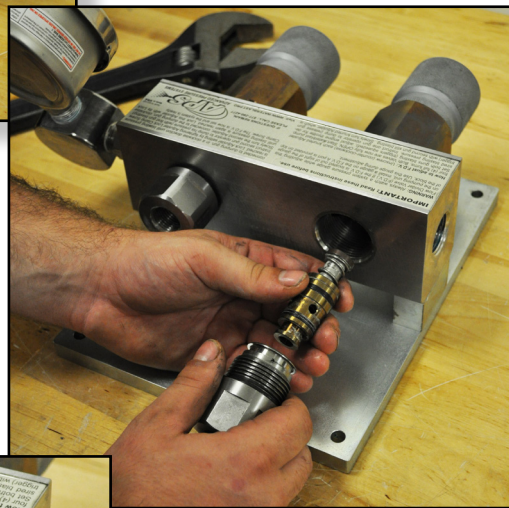


Discharge
side of FDV

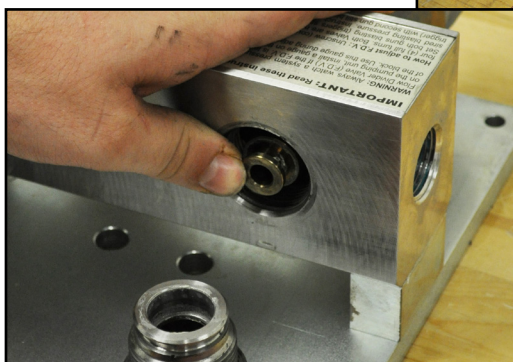
1. Loosen Cartridge Holder



2. Pull Cartridge Holder out,
then remove old Cartridge
*(Note: The cartridge can be
pushed out by screwing the
Adjuster Handle in clockwise
direction.)*



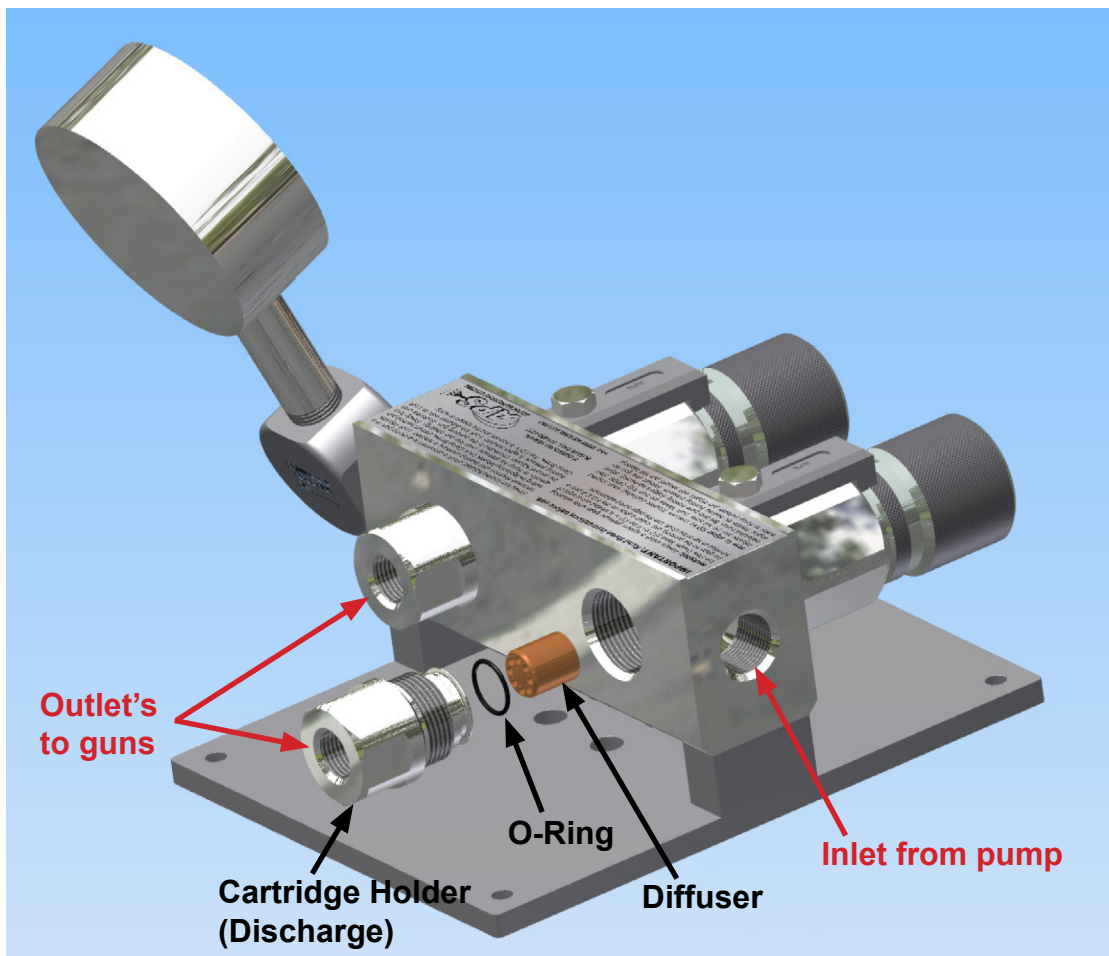
3. Replace install
new Cartridge, then
replace Cartridge
Holder



4. Showing Cartridge
seated in FDV

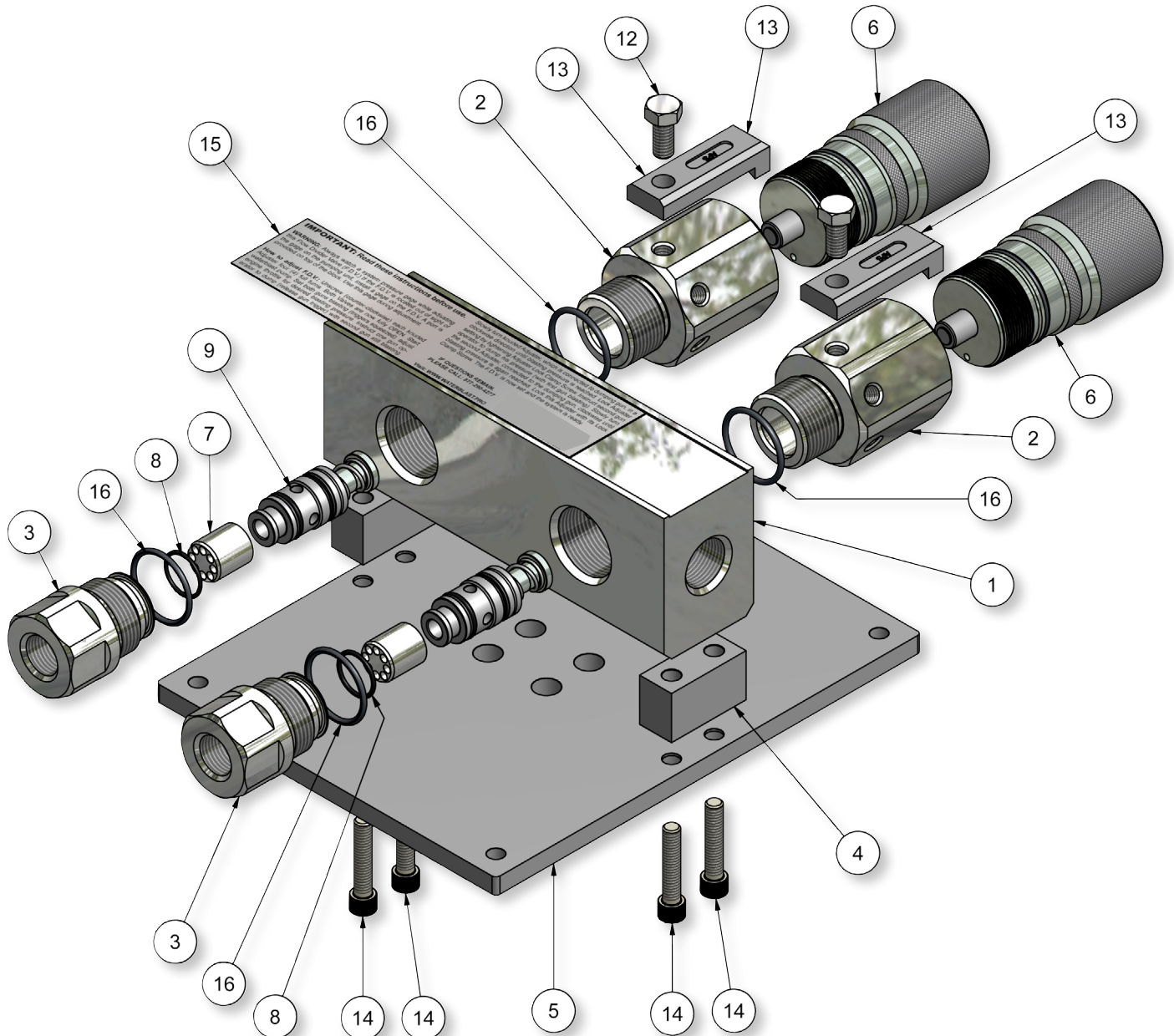
DIFFUSER REPLACEMENT:

The Cartridge Holder (Discharge) has a replaceable Diffuser inside, which protects the hoses which carry flow to the guns. The condition of the Diffuser should be checked each time that the Valve and Seat Cartridge is replaced. If it shows signs of excessive wear then it should be replaced. The old Diffuser can easily be pushed out of the Cartridge Holder (Discharge) using a screwdriver from the discharge side. A replacement Diffuser can then be installed and pushed into place also using the screwdriver. There is an O-Ring inside the Cartridge Holder which holds the Diffuser, and this may be replaced if necessary.



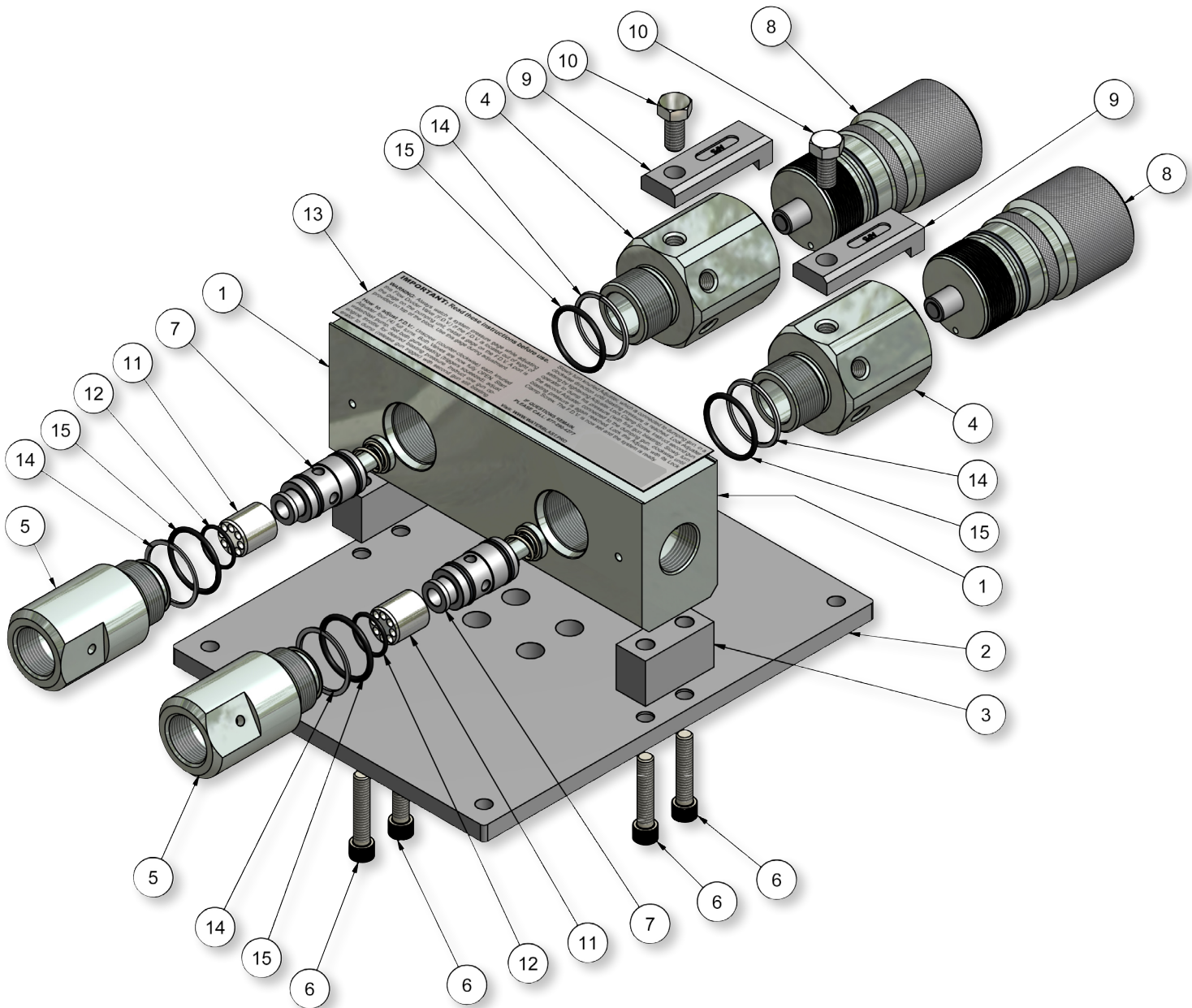
15K FLOW DIVIDER VALVE (FDV)

ITEM	QTY	PART #	DESCRIPTION
1	1	70-022-003	15K Flow Divider Valve (FDV) Block
2	2	70-022-017	15K FDV Adjuster Adapter
3	2	70-110-007	15K FDV Discharge Adapter, 1/2" NPT(F)
4	2	70-022-013	Spacer Block
5	1	70-022-014	15K/20K FDV Base Plate
6	2	70-022-004	15K/20K FDV Adjuster Handle
7	2	70-010-013	15K/20K FDV Discharge Diffuser
8	2	30-001-018	O-Ring 2-018
9	2	70-010-004	15K FDV Cartridge Assembly
12	2	10-016-075	Bolt, Hex. Head 3/8"-16 x 3/4" SS
13	2	70-110-008	15K FDV Lock Down Clamp
14	4	10-002-150	SHCS 5/16"-18 x 1-1/2" long SS
15	1	70-022-009	Operating Instructions Decal
16	4	30-001-123	O-Ring 2-123



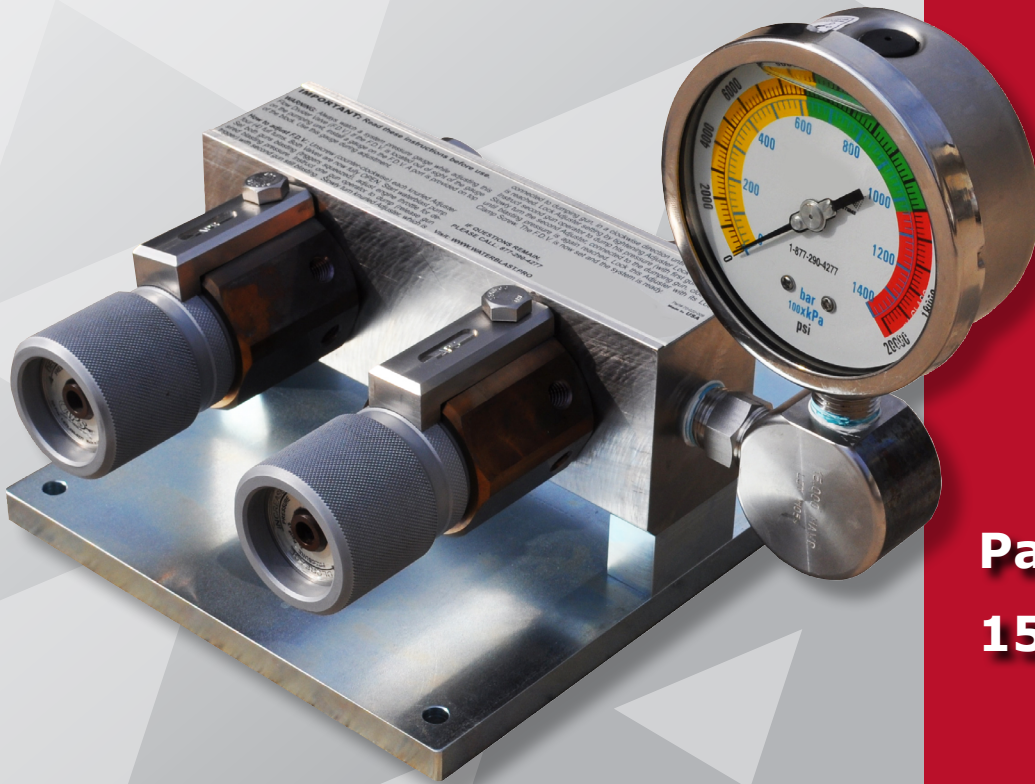
20K FLOW DIVIDER VALVE (FDV)

ITEM	QTY	PART #	DESCRIPTION
1	1	70-032-003	20K FDV Manifold
2	1	70-022-014	15/20K FDV Base Plate
3	2	70-022-013	15/20K FDV Base Plate Support Block
4	2	70-032-017	20K FDV Adjuster Adapter
5	2	70-032-016	20K FDV Discharge Adapter
6	4	10-002-150	SHCS 5/16"-18 x 1-1/2" long SS
7	2	70-020-011	20K FDV Cartridge Assembly
8	2	70-022-004	15/20K FDV Adjuster Handle Assembly
9	2	70-110-008	15/20K FDV Adjuster Locking Clamp
10	2	10-016-075	Bolt, Hex. Head 3/8"-16 x 3/4" long SS
11	2	70-010-013	15/20K FDV Diffuser
12	2	30-001-018	O-Ring 2-018
13	1	70-022-009	15/20K FDV Instruction Nameplate
14	4	70-032-018	20K FDV Back-up Ring (split)
15	4	30-001-122	O-Ring 2-122



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