



# Pressure Regulating Valve

## O&M Manual



**Pressure Regulating Valve**

**PRV-15K**  
Part #65-110-015  
15,000 PSI MAWP

**PRV-20K**  
Part #65-120-015  
20,000 PSI MAWP

**PRV-40K**  
Part #65-040-010  
20,000 PSI MAWP

### **ADVANCED PRESSURE SYSTEMS**

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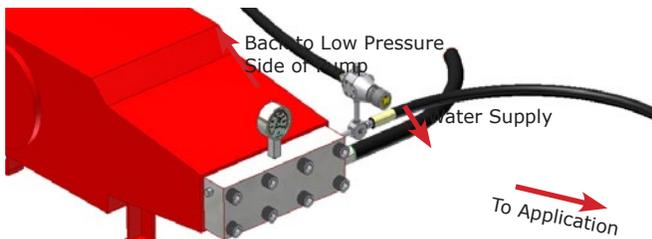
# Pressure Regulating Valve (By-Pass Valve)

A Pressure Regulating Valve (PRV) is used on both diesel and electric pumping units to divert a portion of the flow to a low pressure outlet. It is really a hand adjusted needle valve, and it can be used to control pressure when the application requires a flow at the low end of the pumping unit's operating range.

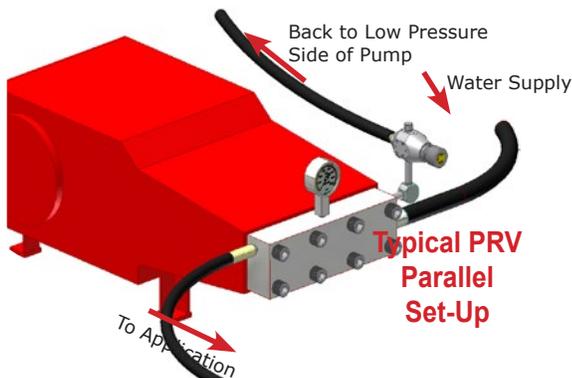
For electric units a PRV is required equipment, because the speed of the drive is not adjustable.

The design provides:

- ▲ Simple field rebuild using a cartridge unit. Down time is two minutes or less.
- ▲ Easy hand adjustment without the need for wrenches. This includes the locking of the adjuster handle, after the pressure is set.
- ▲ All components machined from stainless steel.
- ▲ Direct mounting to fluid end discharge manifold.
- ▲ A base mounted model ("Gauge Board") available with protective cage and gauge.



**Typical PRV  
Flow-Through  
Set-Up**



**Typical PRV  
Parallel  
Set-Up**

**PRV-15K  
#65-110-015**

**PRV-20K  
#65-120-015**



**15K PRV  
Gauge Board  
#65-010-004**

**20K PRV  
Gauge Board  
#65-020-005**



# PRV (Pressure Regulating 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 Pressure Regulating Valve (PRV) is designed for quick and easy servicing by simply replacing the Valve and Seat CARTRIDGE ASSEMBLY. Remove the Cartridge Holder 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. Replace the worn cartridge and reassemble.

### 1. Loosen PRV Cartridge Holder with Wrench



### 2. Unscrew Cartridge Holder





**3. Pull Cartridge Holder out**



**4. Remove old Cartridge, then replace  
install new Cartridge**

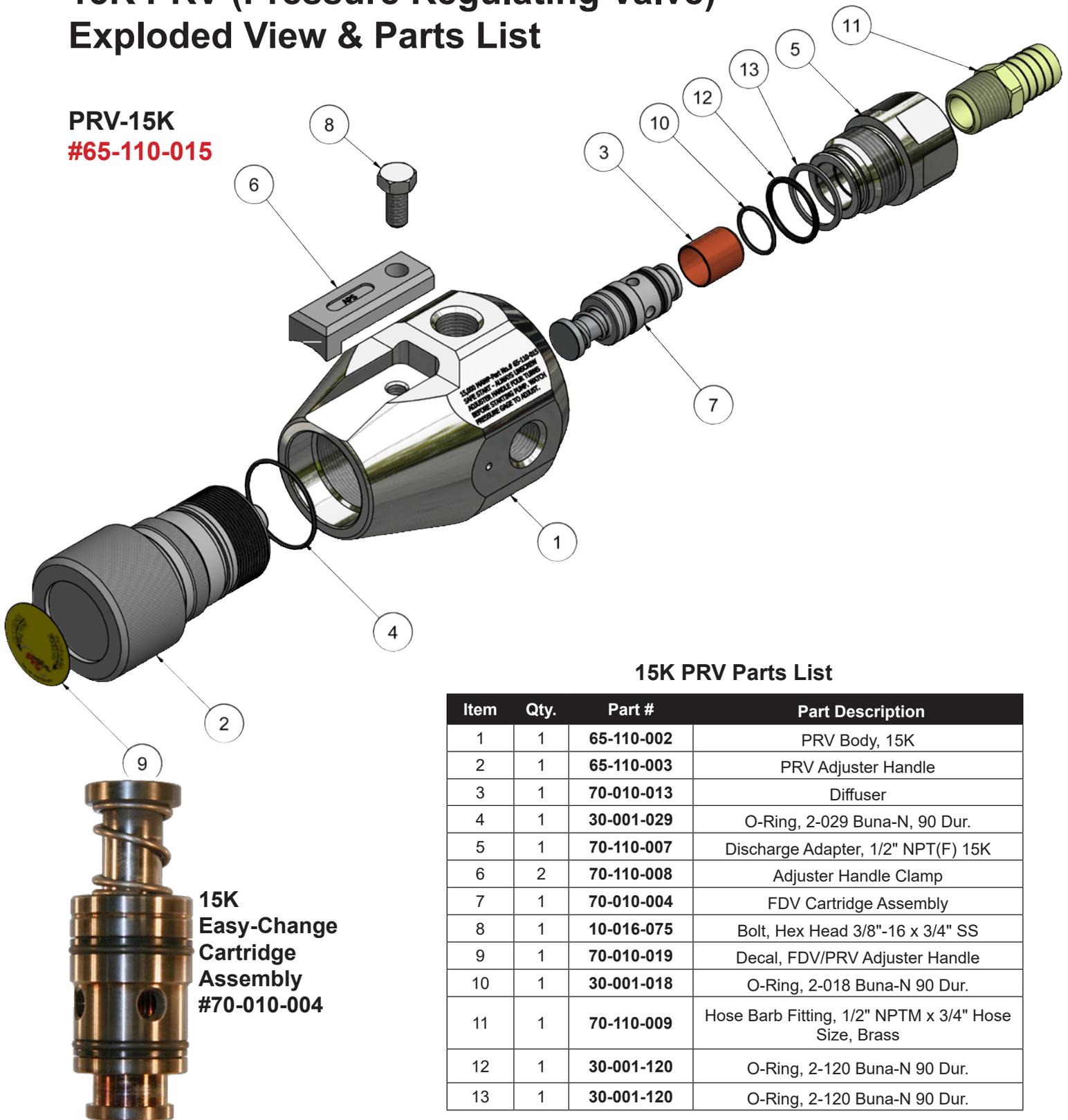
*(Note: The cartridge can be pushed out by screwing  
the Adjuster Handle in clockwise direction.)*



**5. Replace Cartridge Holder**

# 15K PRV (Pressure Regulating Valve) Exploded View & Parts List

**PRV-15K**  
**#65-110-015**



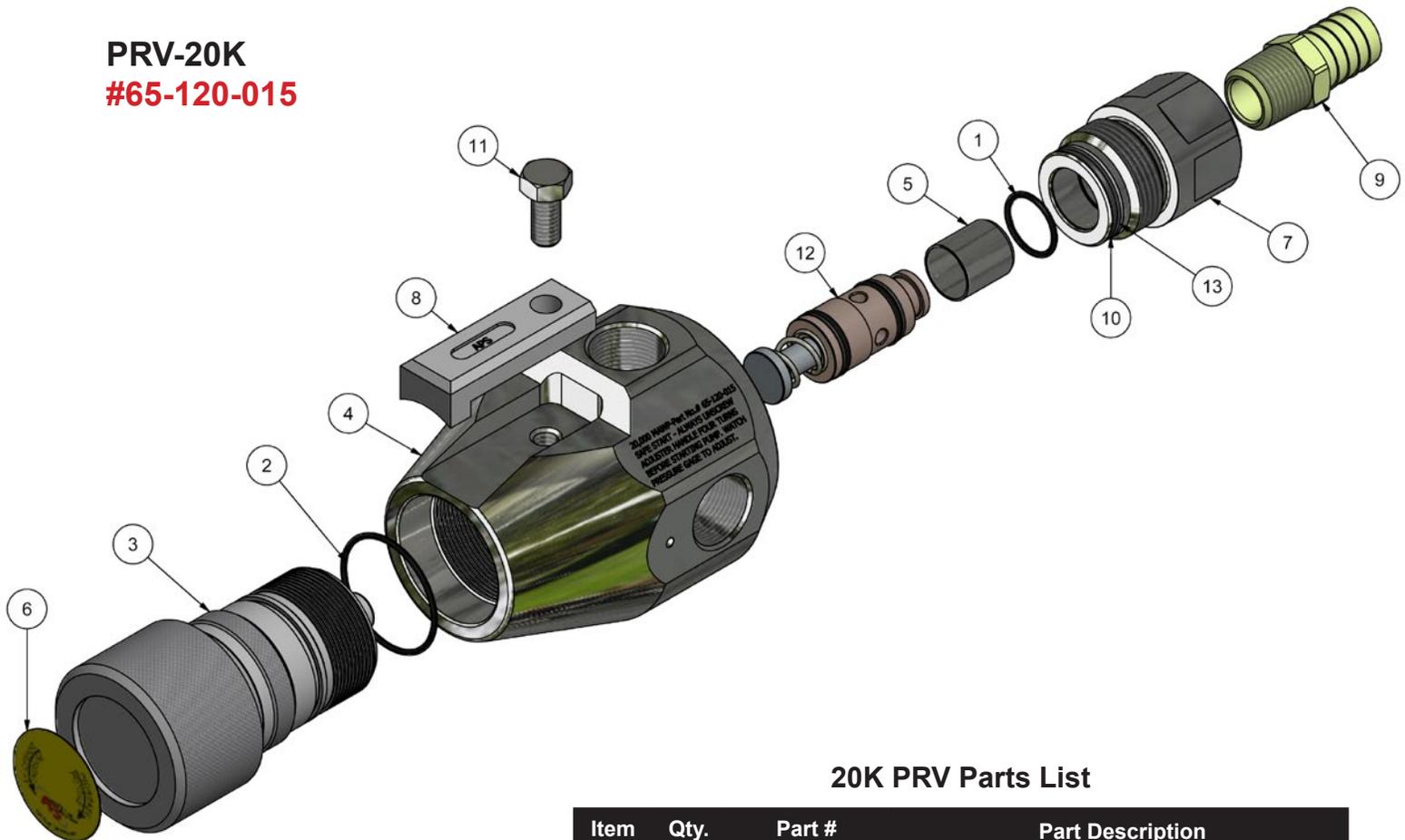
**15K PRV Parts List**

Item	Qty.	Part #	Part Description
1	1	65-110-002	PRV Body, 15K
2	1	65-110-003	PRV Adjuster Handle
3	1	70-010-013	Diffuser
4	1	30-001-029	O-Ring, 2-029 Buna-N, 90 Dur.
5	1	70-110-007	Discharge Adapter, 1/2" NPT(F) 15K
6	2	70-110-008	Adjuster Handle Clamp
7	1	70-010-004	FDV Cartridge Assembly
8	1	10-016-075	Bolt, Hex Head 3/8"-16 x 3/4" SS
9	1	70-010-019	Decal, FDV/PRV Adjuster Handle
10	1	30-001-018	O-Ring, 2-018 Buna-N 90 Dur.
11	1	70-110-009	Hose Barb Fitting, 1/2" NPTM x 3/4" Hose Size, Brass
12	1	30-001-120	O-Ring, 2-120 Buna-N 90 Dur.
13	1	30-001-120	O-Ring, 2-120 Buna-N 90 Dur.

**15K  
Easy-Change  
Cartridge  
Assembly  
#70-010-004**

# 20K PRV (Pressure Regulating Valve) Exploded View & Parts List

**PRV-20K**  
**#65-120-015**

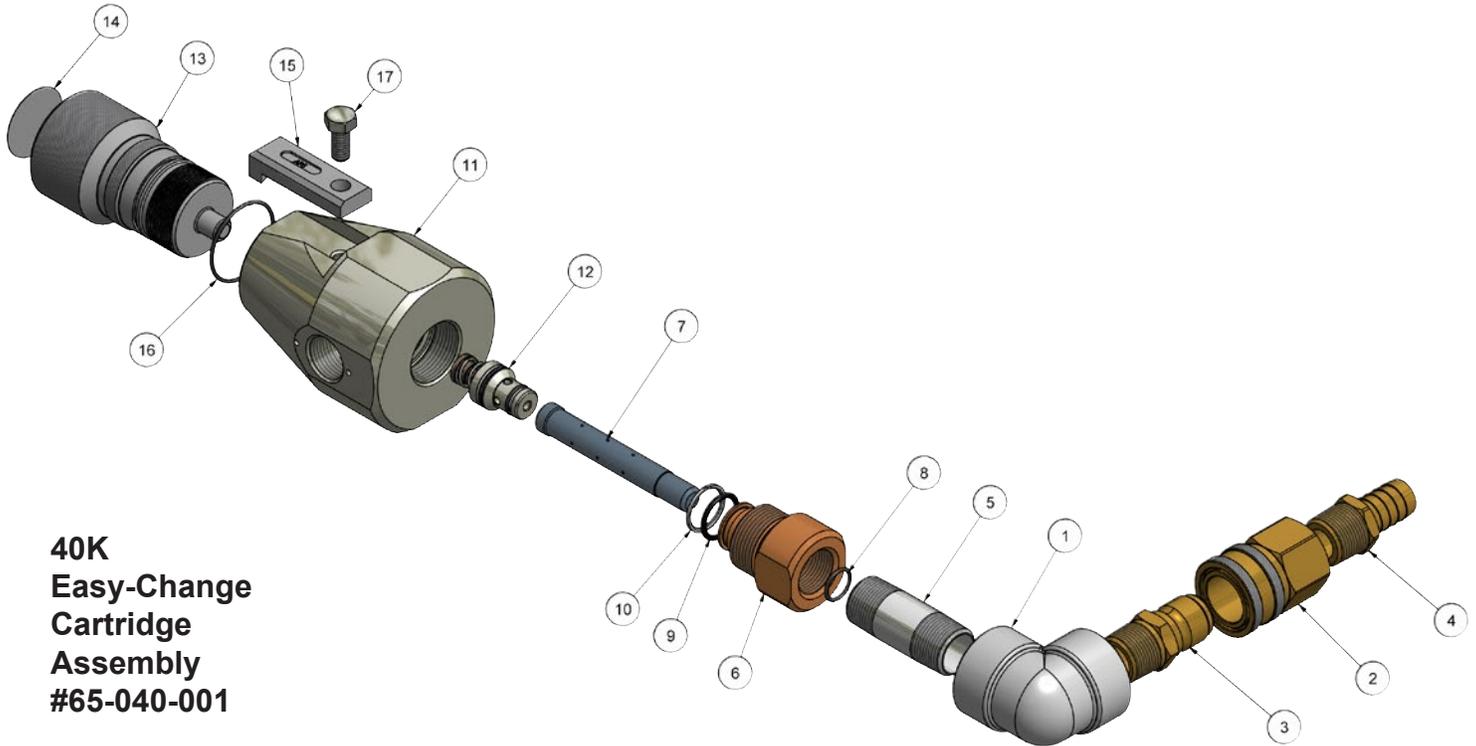


**20K PRV Parts List**

Item	Qty.	Part #	Part Description
1	1	30-001-018	O-Ring, 2-018 Buna-N 90 Dur.
2	1	30-001-029	O-Ring, 2-029 Buna-N 90 Dur.
3	1	65-110-003	Adjuster Handle, 15K/20K PRV
4	1	65-120-003	PRV Body, 20K
5	1	70-010-013	Diffuser, 15K/20K
6	1	70-010-019	Decal, FDV/PRV Adjuster Handle
7	1	70-120-015	Discharge Adapter, 1/2" NPT(F)
8	1	70-110-008	Adjuster Handle Clamp
9	1	70-110-009	Brass Hose Barb Fitting, 1/2" NPTM x 3/4"
10	1	30-001-121	O-Ring, 2-121 Buna-N 90 Dur.
11	1	10-016-075	Bolt, Hex Head 3/8"-16 X 3/4" long SS
12	1	70-020-011	20K FDV/PRV Cartridge Assembly
13	1	30-003-121	Parbak backup ring

# 40K PRV (Pressure Regulating Valve) Exploded View & Parts List

**PRV-40K**  
**#65-040-010**



**40K**  
**Easy-Change**  
**Cartridge**  
**Assembly**  
**#65-040-001**



ITEM	QTY	PART #	DESCRIPTION
1	1	65-040-006	3/4"NPT x 3/4"NPT Cast SS Elbow
2	1	65-040-007	3/4"NPTF Parker Quick Disconnect
3	1	65-040-008	3/4"NPTM Quick Disconnect Male Half
4	1	65-040-005	3/4"NPTM x 3/4" Barb
5	1	65-040-004	3/4"Sch 40 SS Nipple
6	1	65-040-003	Discharge Adapter - 40K Pressure Regulating Valve
7	1	65-040-002	Diffuser - 40K Pressure Regulating Valve
8	1	30-001-015	O-Ring 2-015 Dur.90
9	1	30-001-117	O-Ring, 2-120 Dur.90
10	1	30-017-117	Delrin (White) Backup Ring
11	1	65-040-009	Body - 40K JS Compatible Pressure Regulating Valve
12	1	65-040-001	40K Cartridge Assembly - Pressure Regulating Valve
13	1	65-110-003	Adjuster Handle, 15K/20K/40K JS Compatible Pressure Regulating Valve
14	1	70-010-019	Decal, FDV/PRV Adjuster Handle
15	1	70-110-008	Clamp, JS Compatible FDV/ PRV Adjuster Handle
16	1	30-001-029	O-Ring 2-029 Dur.90
17	1	10-016-075	Bolt, Hex. Head - 3/8"-16 X 3/4" SS

# YOU ARE RESPONSIBLE FOR SAFETY!

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"***  
published by the Water Jet Technology Association.



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.



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