

## 1 How They Work?

Air/Oil Intensifiers convert shop air, up to 100 psi, into hydraulic pressure. Air pressure applied to the air inlet displaces a piston of pre-defined ratio which is transferred to the hydraulic fluid stored within the intensifier housing. An internal spring retracts the piston drawing in hydraulic oil from a reservoir as needed. The vented spring chamber eliminates back pressure.

## 2 Air/Oil Intensifier Sizing:

### 5:1 - Model 1777 & 10:1 - Model 1778

Rating of .44 cu. in. displacement per stroke. Can be used with W.C. Branham hydraulic caliper disc brake H38, H47, H200 series only. Do not use with retractable pistons.

### 20:1 Ratio - Model 1779

Rating of .50 cu. in. displacement per stroke. Can be used with W.C. Branham hydraulic caliper disc brake H38, H47, H200 series only. Do not use with retractable pistons.

### 36:1 Ratio - Model 1782

Rating of 1.77 cu. in. displacement per stroke. Can be used with W.C. Branham hydraulic caliper disc brake H491, H493, H962 series AND hydraulic spring applied FS400, FS500 series.

**Caution.** Do not exceed the rated maximum pressure of the brake as failure can occur.

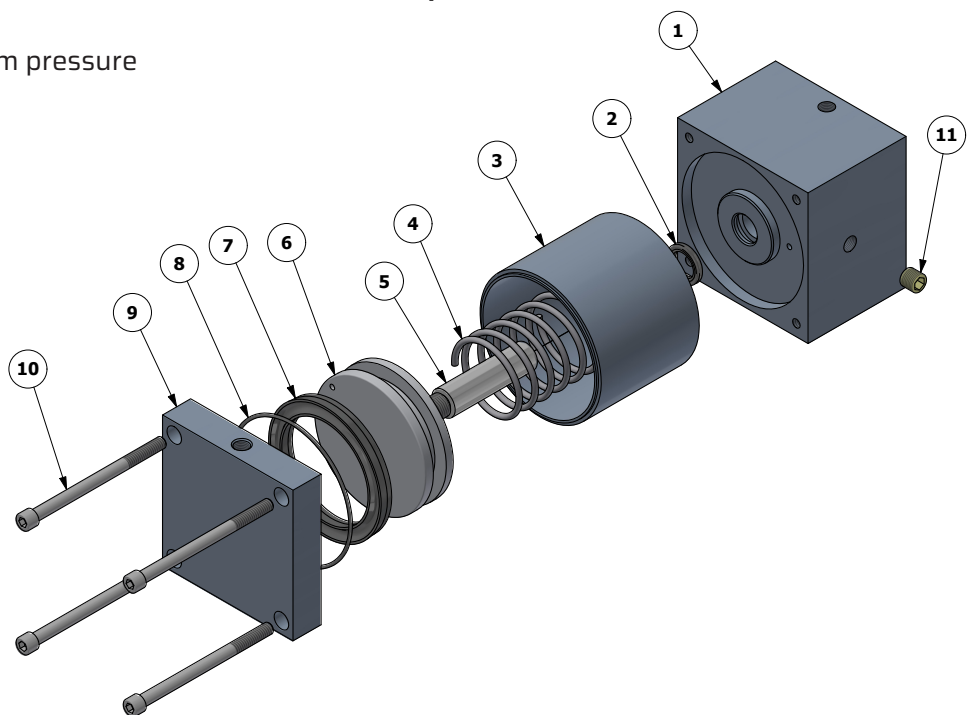
## 3 Repair - Disassembly:

- Before disassembly confirm that both air and hydraulic pressure has been relieved from the intensifier.
- Dismount intensifier.
- Remove (4) SHCS's #10.
- Remove tube #3 from housing #1.
- Remove piston, piston rod and spring (#4, 5 and 6) from tube.
- Remove all seals #2, #7 and #8. If a removal tool is required use care not to scratch or mark the seal grooves.
- Clean and degrease all parts using degreaser solvent.
- Inspect piston, piston rod and tube for any damage or wear.

## 4 Reassembly:

- Install new seals #2 and #7 ensuring that piston u-cup is installed in the proper direction with cup side facing end cap #9
- Lubricate tube ID, Piston and piston rod OD and all new seals with grade 2 grease compatible with Buna-N seals. Only a light film of grease is required.
- Install tube #3 onto housing #1 with the o-ring groove end facing end cap #9.
- Install spring #4 inside tube and on center.
- Install piston and piston rod into tube and spring until all seals are engaged. Use care to align seals during installation.
- Install O-ring #8 onto tube end groove.
- Install end cap #9 onto tube end and use care to align and seat oring #8 into end cap. Be sure to align the end cap port location with #1 pressure housing port location.
- Installed (4) SHCS's #10. Use removeable threadlocker like Loctite 242 or equivalent on screw threads. Tighten screws evenly by alternating and torque to 60 in-lbs for models 1777, 1778 and 1779 and 120 in-lbs for models 1782.

**Remount intensifier then plumb both air and hydraulic lines. Slowly pressurize intensifier and inspect for leaks. Refill, prime and bleed hydraulic side before operation.**



## AIR/OIL INTENSIFIER PARTS LISTING

MODEL			
1777	1778	1779	1782



ITEM	PART NO.	DESCRIPTION	QTY	QTY	QTY	QTY
1	1777-4002	Housing, Pressure	1	-	-	-
	1778-4002	Housing, Pressure	-	1	-	-
	1779-4002	Housing, Pressure	-	-	1	-
	1782-4002	Housing, Pressure	-	-	-	1
2 <sup>(A,B)</sup>	4000-1574	Seal, Quad Buna-N	1	1	-	-
	1779-1006	Seal, Quad Buna-N	-	-	1	-
	1778-1001	Seal, Polypak	-	-	-	1
3	1777-4000	Tube Body	1	-	-	-
	1778-4000	Tube Body	-	1	-	-
	1779-4000	Tube Body	-	-	1	-
	1782-4003	Tube Body	-	-	-	1
4 <sup>(B)</sup>	4006-1010	Spring	1	-	-	-
	1778-1007	Spring	-	1	-	-
	1779-1004	Spring	-	-	1	-
	1782-1001	Spring	-	-	-	1
5 <sup>(B)</sup>	1778-4005	Piston Rod	1	1	-	-
	1779-4005	Piston Rod	-	-	1	-
	1782-4000	Piston Rod	-	-	-	1
6 <sup>(B)</sup>	1777-4003	Piston	1	-	-	-
	1778-4003	Piston	-	1	-	-
	1779-4003	Piston	-	-	1	-
	1782-4001	Piston	-	-	-	1
7 <sup>(A,B)</sup>	1777-1000	U-Cup Buna-N	1	-	-	-
	1778-1000	U-Cup, Buna-N	-	1	-	-
	1300-1001	U-Cup, Buna-N	-	-	1	-
	1782-1002	U Cup, Buna-N	-	-	-	1
8 <sup>(A,B)</sup>	1880-1062	O-Ring Buna-N	1	-	-	-
	4300-1189	O-Ring Buna-N	-	1	-	-
	1779-1003	O-Ring Buna-N	-	-	1	-
	1780-1006	O-Ring Buna-N	-	-	-	1
9	1777-4001	End Cap	1	-	-	-
	1778-4001	End Cap	-	1	-	-
	1779-4001	End Cap	-	-	1	-
	1782-4004	End Cap	-	-	-	1
10	1778-1003	SHCS 1/4-20 x 2.5	4	4	-	-
	1779-1002	SHCS 1/4-20 x 3.5	-	-	4	-
	1782-1000	SHCS 3/8-24 x 6.0	-	-	-	4
11	4300-1416	Breather Vent	1	1	1	1

A Seal Kit: Includes Items #2,7,8		
ORDER	1777-9000	5:1
	1778-9001	10:1
	1779-9003	20:1
	1782-9000	36:1

B Rebuild Kit: Includes Items #2,4,5,6,7,8		
ORDER	1777-9002	5:1
	1778-9002	10:1
	1779-9002	20:1
	1782-9002	36:1

## Contact Us

Tel: 715 426 2000  
800 428 1974

[www.WCBranham.com](http://www.WCBranham.com)  
[AskWCB@wcbbranham.com](mailto:AskWCB@wcbbranham.com)

398 Troy Street, River Falls,  
Wisconsin, 54022 USA.

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