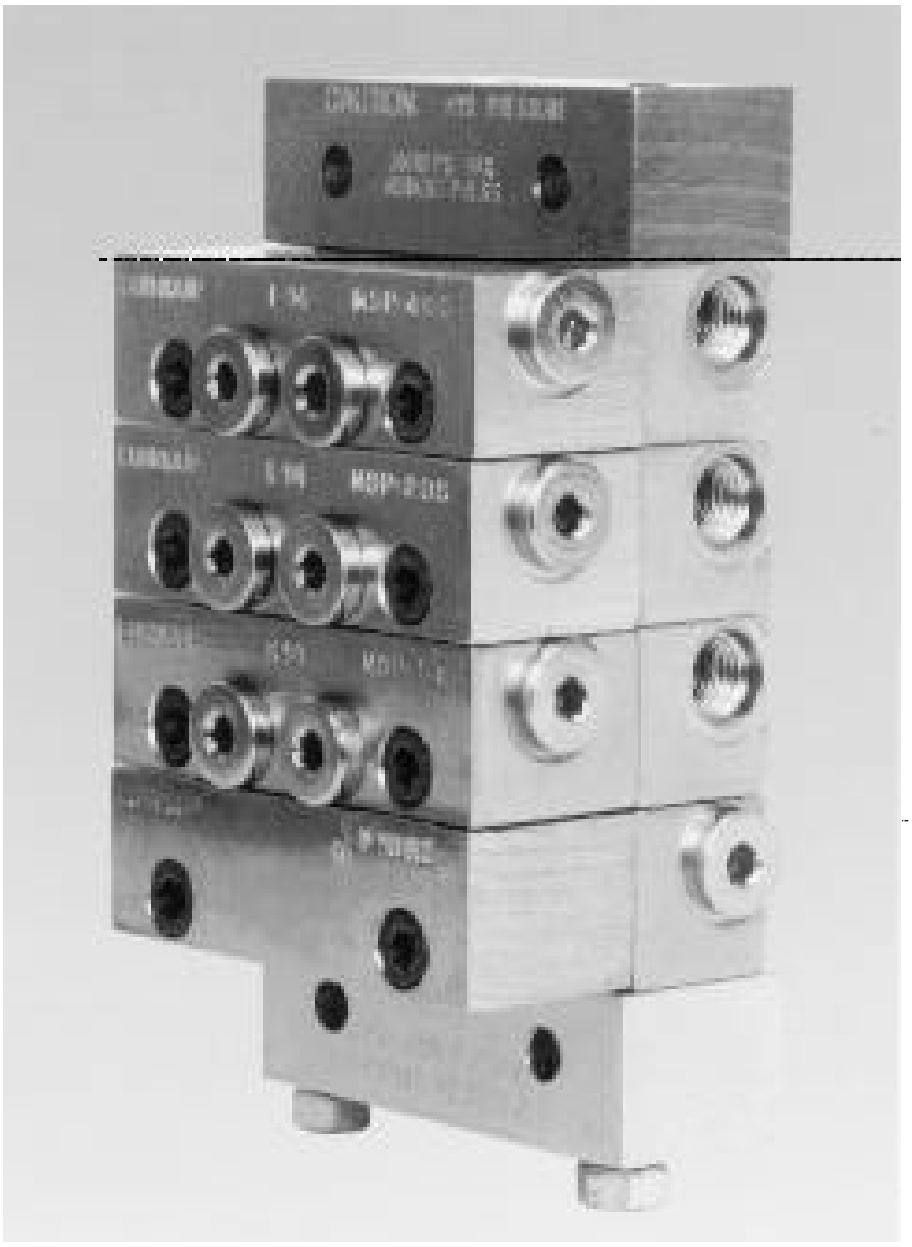
LUBRIQUIP®

Centralized Lubrication Systems

Trabon®

MSP™ Modular Divider Valves

Your key to maximum design flexibility with series-progressive reliability.



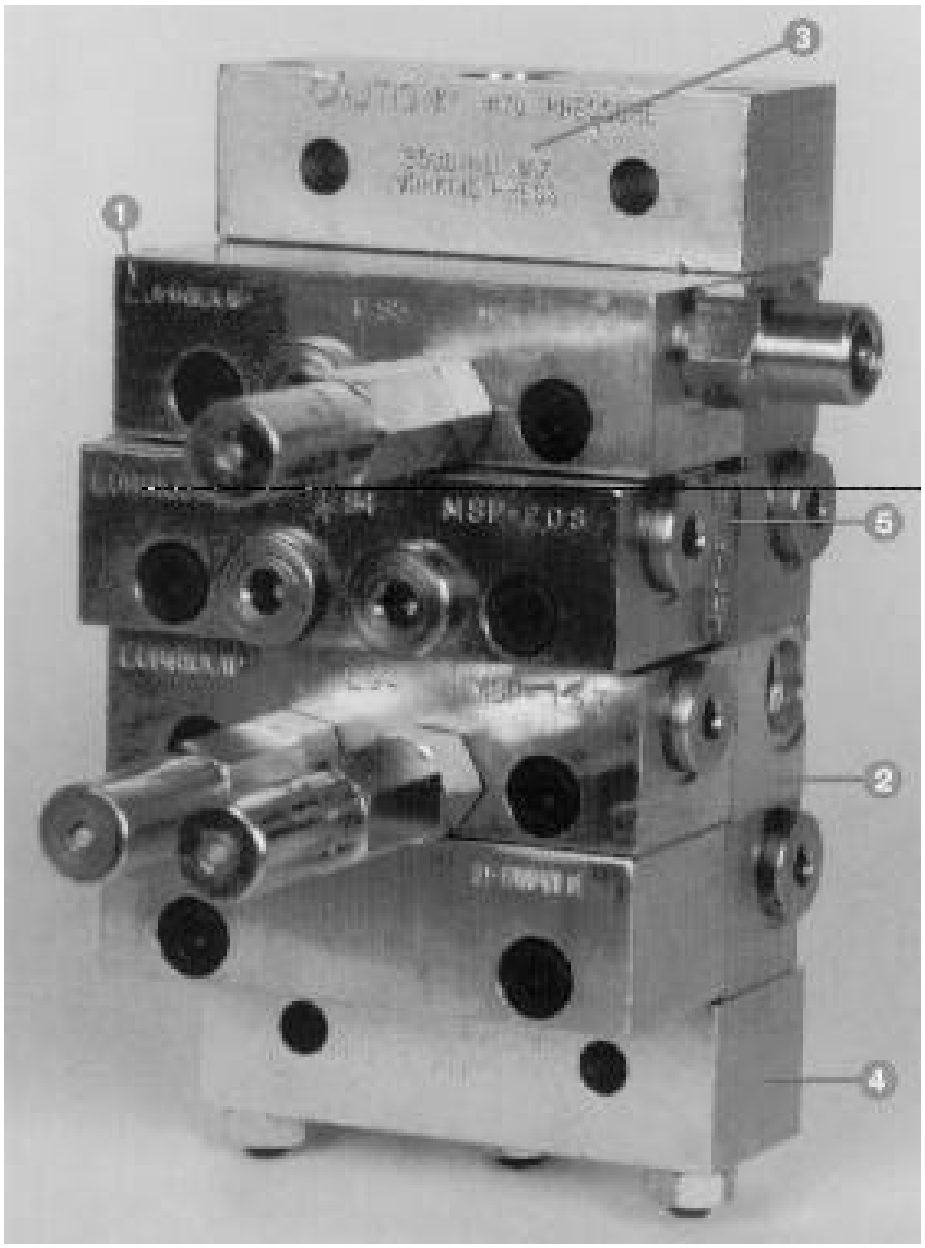
Revised August, 1995

Match lubricant flow to the exact needs of each point.

- Precise monitoring, positive feedback
- Simple to install and operate
- Modular design for total flexibility

THE FLEXIBLE, MODULAR MSP DIVIDER VALVE

- For grease or oil systems up to 3,500 psi (24,100 kPa)
- Lubricate up to 16 points per valve assembly
- Choice of SAE, NPSF, or BSPP inlet/outlet connections
- O-ring sealing prevents leaks, reduces maintenance
- Valve outputs vary by a maximum ratio of 32:1
- Built-in check valves prevent lube re-entry and help keep lines full
- Stackable design simplifies installation, adds flexibility



Each assembly includes: (1) *valve sections* with working piston (3 minimur (2) *subplates* with outlet ports, (3) *inlet* section, and (4) *end* section.

Twin piston sections are ported to create *separate outputs* for two lube points. *Single* sections *combine* the output from both ends of the piston and send it to a single lube point.

Field-installable *crossport* or *singling* plates (5) may be used to increase th flow to a single point or accommoda an odd number of lube points.

A *bypass section* is available to elimi nate a piston section or provide for added lube points in the future.

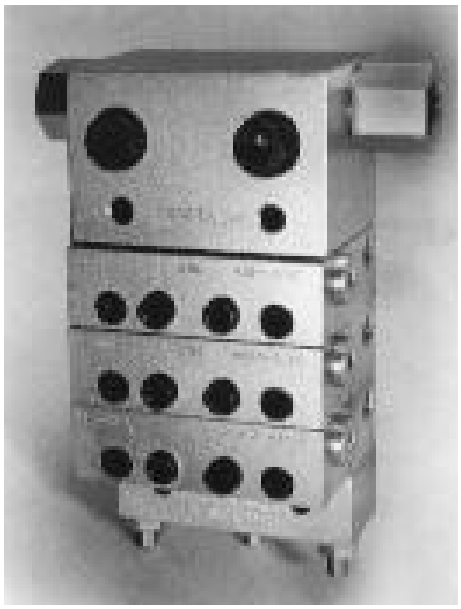
Improve matchup of lube delivery and machine usage.

- Better control of extensive systems
- Choice of SAE, NPSF, BSPP connection
- In-line or remote mounting

SPECIAL INLET SECTIONS

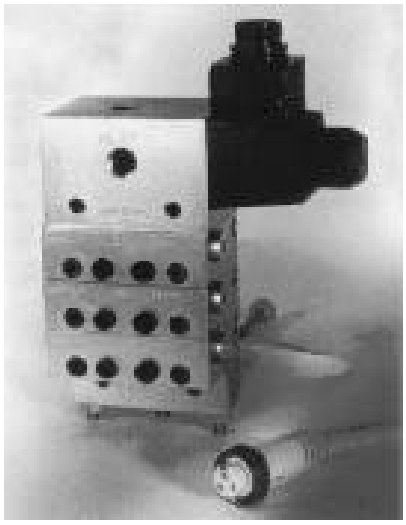
- Allow zoning of large systems served by single pump and reservoir
- Choice of inlet port activation: electric or pneumatic
- Simpler to install, add or remove points

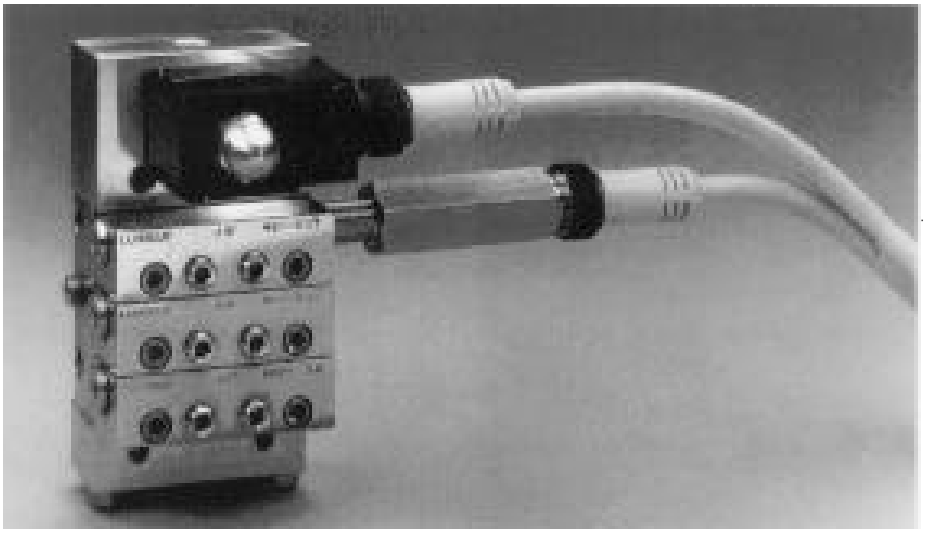
These versatile inlets provide positive, series-progressive lubrication for extended lines and systems. You easily match lube delivery to machine usage, bypass machinery that's not currently in use, and get reliable start-up testing, monitoring, and fault detection.



Reversing Inlet Section. Hydraulically activated, it is used with a separate, hydraulically-controlled reverser valve to serve large zoned systems without need for electrical solenoid valves.

Shunt Inlet Section. A three-function valve, either electric or pneumatic, (1) allows lubricant to enter divider valve, (2) bypasses it to another divider valve or (3) diverts it back to tank. Replace standard inlet or mount in-line with remote manifold kit.





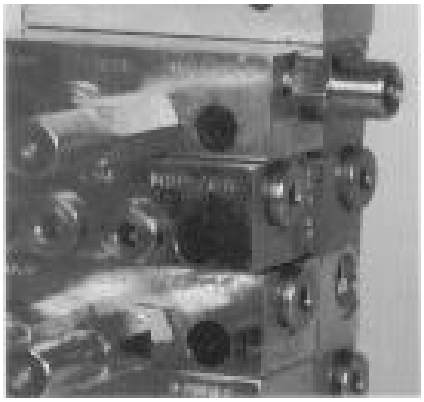
Zero-Leak Inlet Shut-off. A two-way valve that can be used with either continuous or intermittent pressurized header systems. Replaces a standard inlet section or mounts in-line with a remote manifold kit.

A wide variety of safeguards monitor and verify lube cycles.

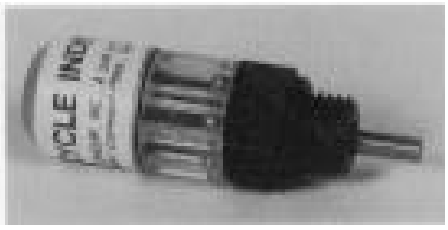
- Track valve-piston action
- Easily interfaced to system controller

CYCLE INDICATORS

These mechanical and electrical units sense the divider valve piston's action for accurate control and monitoring of lube cycles.

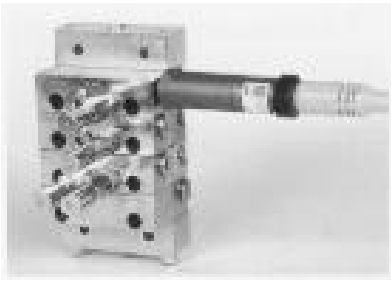


- **Cycle Indicator Pin.** Valve sections are available with a factory-installed indicator pin which moves in and out as lubricant passes through the valve.
- **Universal Cycle Counter.** Six-digit counter displays each complete cycle of the divider valve. Requires divider valve section with indicator pin (described above). Part number: 527-002-410.



- **Magnetic Visual Indicator.** Six steel balls in a clear sleeve follow a magnet which moves with the cycling piston, providing a clear visual indication of lube cycles. Part number: with "O" ring, 509-932-522; with crush gasket, 509-932-521.

- **Cycle Indicator Switch.** Used in conjunction with the cycle indicator pin, it provides an electrical signal to the system controller which counts cycles to monitor and verify completion of the lube cycle. Part number: 510-599-000. A moisture-resistant switch, 510-522-200, is also available.



- **LED Field-sensitive Proximity Switch.** This 24 VDC device magnetically senses the movement of the piston, triggering the switch and illuminating the LED. Part numbers: 3-pin with "O" ring, 527-005-690; with crush gasket, 527-005-680; 5-pin with "O" ring, 527-005-670; with crush gasket, 527-005-620.
- **Field-sensitive Proximity Switch.** A ceramic-magnet switch for grease or oil systems up to 200 cpm at pressure up to 3,500 psi (24,100 kPa), accurately signals piston cycles, and is ideal for high-cycle applications. Part numbers: 3-pin with "O" ring, 527-003-251; 5-pin with "O" ring, 527-004-111; Explosion-proof with "O" ring, 527-003-431.
- **Connecting Cables.** Brad Harrison mating cables with either 3- or 5-pin connectors are available in 12-ft. (3.65 m) lengths for the F/S proximity

Choice of indicators offer automatic system protection and fault location.

- Immediate response to blockages
- Manual or automatic reset
- Continues to serve unaffected points

PERFORMANCE INDICATORS

These vital safeguards react to excess lube pressure when points or lines become blocked. Installed in indicator ports on the working piston sections, they quickly identify the affected lines.

- **Automatic Relief-to-Atmosphere Indicator.** Spring-loaded piston unseats when blockage occurs, venting lubricant to atmosphere each time piston cycles. Allows system to keep lubricating unaffected points. When blockage is cleared, reseats automatically.

Part Number	Relief Pressure
508-310-415	750 psi (5,200 kPa)
508-310-425	1,000 psi (6,900 kPa)
508-310-435	1,250 psi (8,600 kPa)
508-310-445	1,500 psi (10,300 kPa)
508-310-455	2,000 psi (13,800 kPa)
508-310-465	2,500 psi (17,200 kPa)
508-310-475	3,000 psi (20,700 kPa)

- **Manual Reset Indicator with Memory.** System blockage triggers a spring-loaded piston to display an indicator. Since there is no relief, pressure backs up in the system and the system stops, allowing a controller to alarm. After correction, spring automatically resets the piston, indicator pin is reset manually.

Part Number	Relief Pressure
509-932-590	250 psi (1,700 kPa)
509-932-600	500 psi (3,400 kPa)
509-932-610	750 psi (5,200 kPa)
509-932-620	1,000 psi (6,900 kPa)
509-932-630	1,500 psi (10,300 kPa)
509-932-640	2,000 psi (13,800 kPa)
509-932-650	2,500 psi (17,200 kPa)

Automatic Relief-to-Atmosphere Indicator

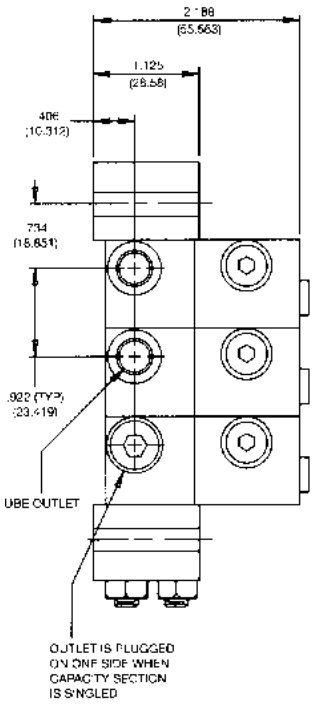
Manual Reset Indicator with Memory

Designed with over 90 years experience in centralized lubrication.

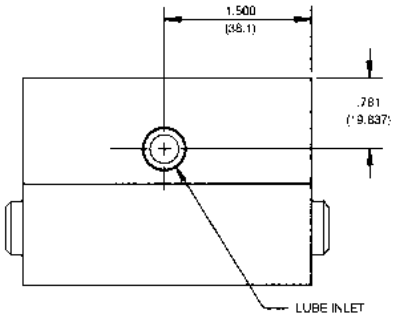
- Engineering certified to ISO 9001 Standards
- Modular design for maximum flexibility
- Install and maintain without disturbing lube lines

QUALITY DESIGN

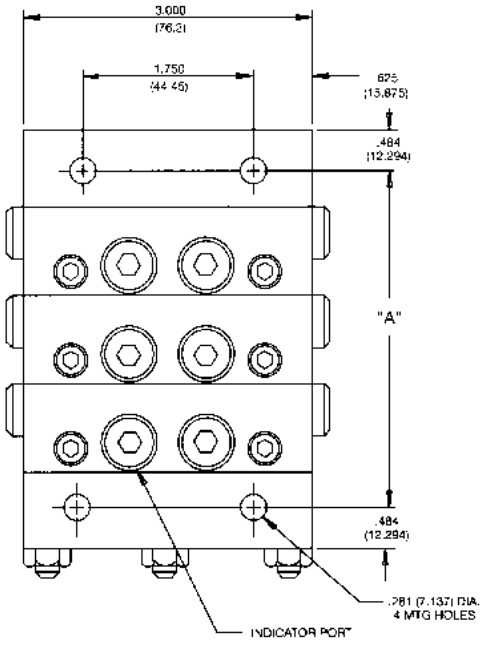
SIDE VIEW



TOP VIEW



FRONT VIEW



MSP DIVIDER SPECIFICATIONS

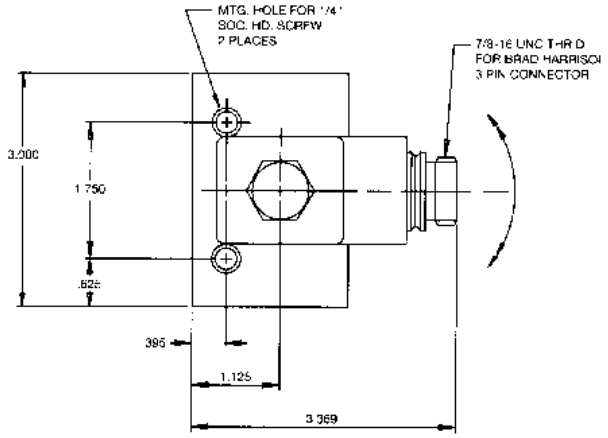
Standard Material .....Corrosion Protected Steel
Optional Material .....Nickel Plated Steel
Pressure (Max.) .....3,500 psi (24,100 kPa)
Lubricant .....Oil or Grease

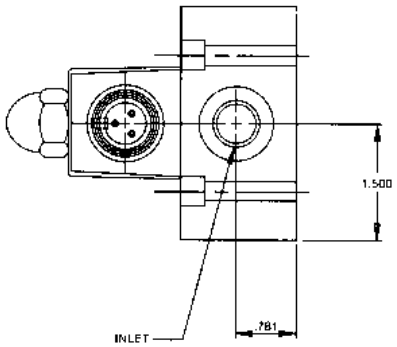
Net Weight		Lbs.	(kg)
3-section	Divider Valve Assembly	5.9	(2.7)
4-section	" " " " "	7.3	(3.3)
5-section	" " " " "	8.7	(4.0)
6-section	" " " " "	10.2	(4.6)
7-section	" " " " "	11.6	(5.6)
8-section	" " " " "	13.0	(5.9)

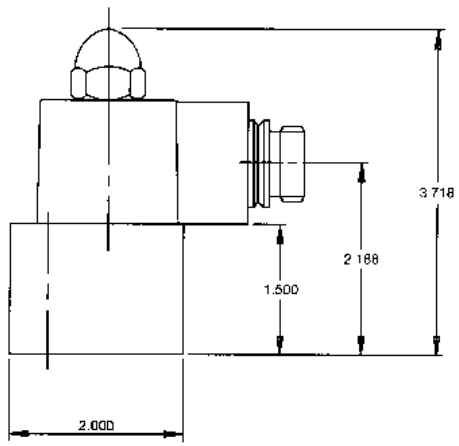
Max. Operating Temperature
Buna-N O-rings.....200° F (93° C)
Viton O-rings.....350° F (163° C)

QTY. OF SECTIONS	"A"
3	3.578 (90.881)
4	4.500 (114.30)
5	5.422 (137.718)
6	6.344 (161.138)
7	7.266 (184.556)
8	8.188 (207.975)

ZERO LEAK INLET SHUT-OFF VALVE

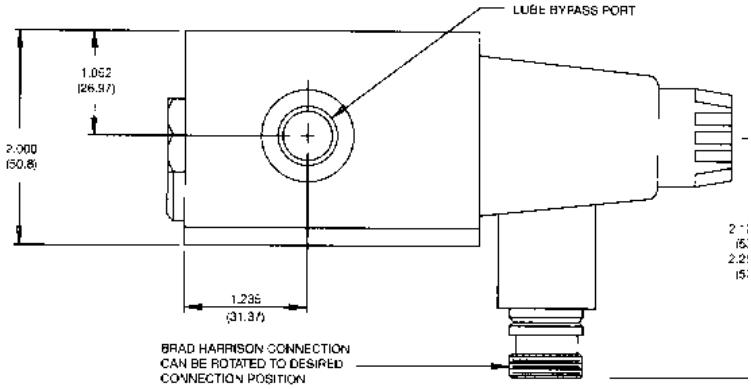


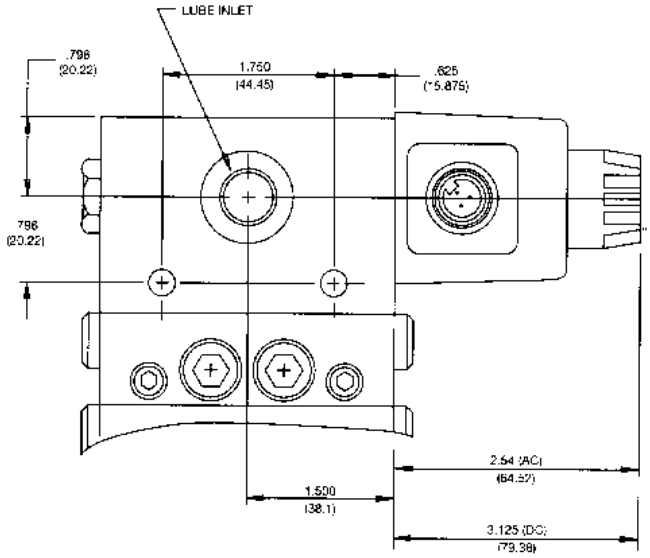




ZERO LEAK ELECTRICAL SPECIFICATIONS
115 VAC, .22 A IN-RUSH, .14 A HOLDING
24 VDC, 28 W

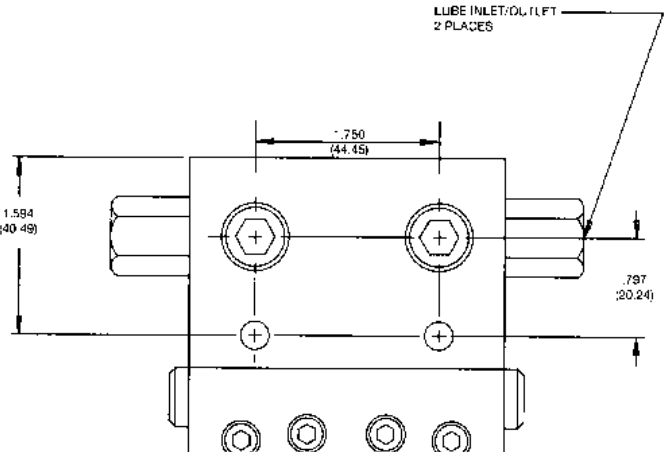
SHUNT INLET OPTION





SHUNT/SHUT-OFF ELECTRICAL SPECIFICATIONS
115 VAC, 1.6 A IN-RUSH, .54 A HOLDING
24 VDC, 28 W

REVERSIBLE FEEDER INLET



You can easily configure the system to the need.

- Custom performance from stock modules
- Choice of Single or Twin outlets

SPECIFYING GUIDE - MSP DIVIDER VALVE
Component Identification and Ordering Information*

Parts List Key	Size	Description	Displacement in.³ cm³	Buna-N Seal Part No.	With Cycle Pin (Rt. Side) Buna-N Seals Part No.	With Prox. Switch & Cycle Pin (Rt. Side Part No.)
1		Valve Sections				
	5T	.005 Twin Outlet	0.005 0.082	106-100-175		106-104-675
	5S	.005 Single Outlet	0.010 0.164	106-100-015		106-104-645
	10T	.010 Twin Outlet	0.010 0.164	106-100-185		106-104-685
	10S	.010 Single Outlet	0.020 0.328	106-100-025		106-104-655
	15T	.015 Twin Outlet	0.015 0.246	106-100-195		106-104-695
	15S	.015 Single Outlet	0.030 0.492	106-100-035		106-104-665
	20T	.020 Twin Outlet	0.020 0.328	106-100-205	106-100-935	106-100-535
	20S	.020 Single Outlet	0.040 0.656	106-100-045	106-100-735	106-100-335
	25T	.025 Twin Outlet	0.025 0.410	106-100-215	106-100-945	106-100-545
	25S	.025 Single Outlet	0.050 0.820	106-100-055	106-100-745	106-100-345
	30T	.030 Twin Outlet	0.030 0.492	106-100-225	106-100-955	106-100-555
	30S	.030 Single Outlet	0.060 0.983	106-100-065	106-100-755	106-100-355
	35T	.035 Twin Outlet	0.035 0.574	106-100-235	106-100-965	106-100-565
	35S	.035 Single Outlet	0.070 1.148	106-100-075	106-100-765	106-100-365
	40T	.040 Twin Outlet	0.040 0.656	106-100-245	106-100-975	106-100-575
	40S	.040 Single Outlet	0.080 1.311	106-100-085	106-100-775	106-100-375

Parts List Key	Description	1/8-27 NPSF Part No.	7/16-20 SAE Part No.	1/8-28 BSPP Part No.
2	Subplate	527-000-311	527-003-550	527-003-140

Parts List Key	Description	1/4-18 NPSF Part No.	7/16-20 SAE Part No.	1/4-19 BSPP Part No.
3	Inlet	527-001-800	527-003-540	527-003-130
	Inlet w/Bleed	527-000-321	527-000-325	———
4	End Section	527-001-900	527-001-900	527-001-900
†	End (SPP)	510-770-332	510-770-332	510-770-332
5	Crossport Plate			
	Right	527-005-320	527-005-320	527-005-320
	Left	527-005-330	527-005-330	527-005-330
	Both	527-005-340	527-005-340	527-005-340
6	Singling Plate	527-005-350	527-005-350	527-005-350
7	Bypass Block	106-000-010	106-000-010	106-000-010

*All part numbers shown are for standard Buna-N Seals. Consult Lubriquip for Viton Seals. Valve sections are standard Right Hand; can be made Left Hand. Consult factory. Also consult Lubriquip for systems requiring thread connection series other than those listed.

† End Section (SPP) is tapped 1/8-27 NPSF for manual lube fitting 412-700-490.

Parts List Key	Description	Part Number
8	Tie Rod & Nut Assembly	———
	3 Section	527-001-930
	4 Section	527-001-940
	5 Section	527-001-950
	6 Section	527-001-960
	7 Section	527-001-970
	8 Section	527-001-980
9	Tie Rod Nut Only	410-440-010
10	Valve Block Mounting Screws	419-140-070
11	Piston Enclosure Plug	527-000-232
12	Piston Enclosure "O" Ring	422-210-040
13	Indicator Port Plug	527-300-840
14	Indicator Port Plug "O" Ring	422-210-030
15	MSP Buna-N "O" Rings	422-010-060
	MSP (70 Duro) Viton "O" Rings	527-000-810
16	Valve Block Mounting Screw for Crossport/Singling Plate	419-140-080

SPECIAL INLETS

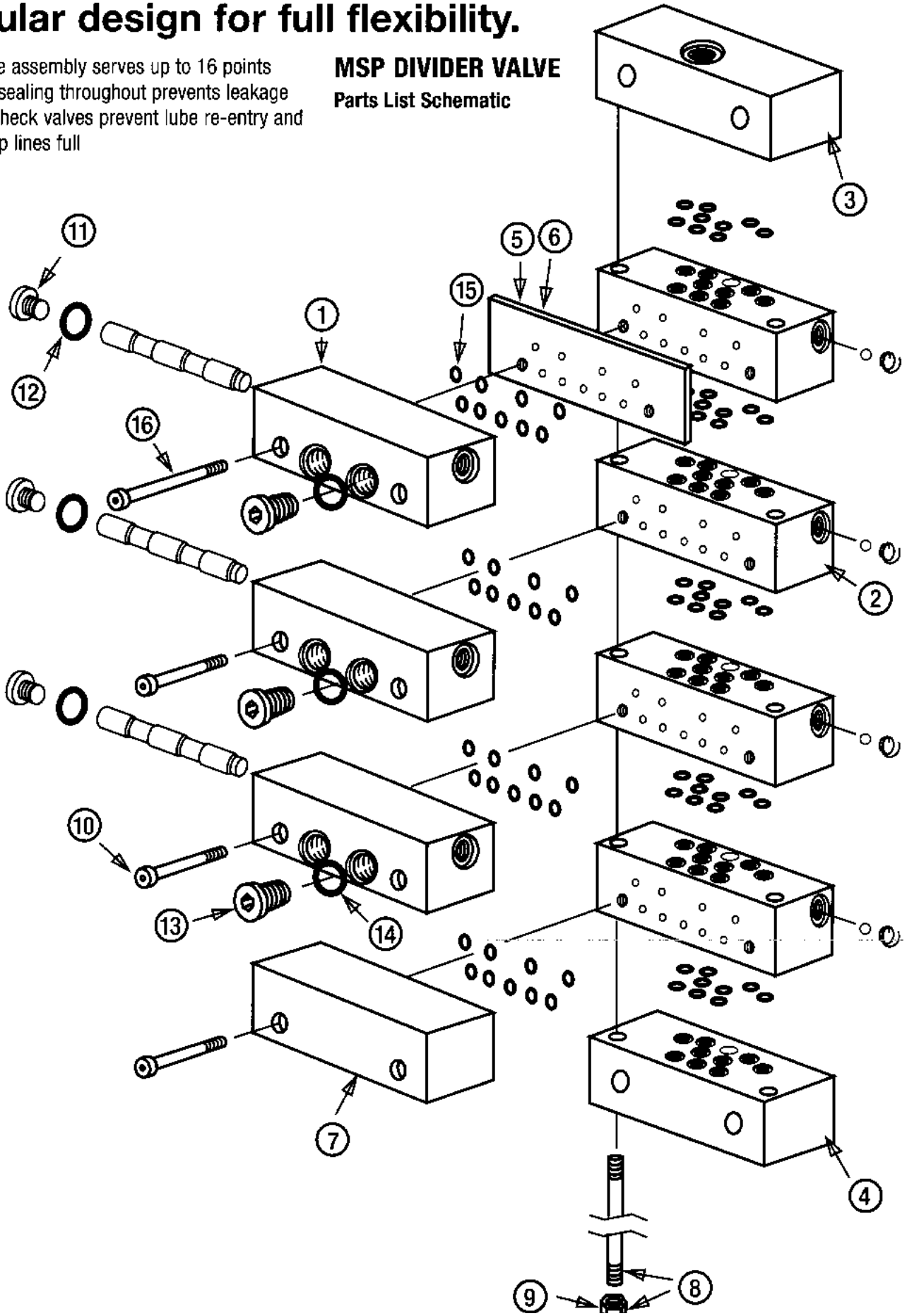
Description	1/4-18 NPSF Part Number	9/16-18 SAE Part Number
Zero Leak, 115 VAC, 3-pin Brad Harrison Connector	527-004-320	527-005-200
Zero Leak, 24 VDC, 3-pin Brad Harrison Connector	527-004-870	527-005-180
Shunt/Shut-Off, 115 VAC, 3-pin Brad Harrison Connector	527-003-660	527-004-800
Shunt/Shut-Off, 24 VDC, 3-pin Brad Harrison Connector	527-003-680	527-005-780
Shunt/Shut-Off Pneumatic Operator	527-003-730	———
Remote Manifold Kit for Zero Leak and Shunt/Shut-Off	527-004-360	527-005-400

Modular design for full flexibility.

- One valve assembly serves up to 16 points
- "O" ring sealing throughout prevents leakage
- Built-in check valves prevent lube re-entry and help keep lines full

MSP DIVIDER VALVE

Parts List Schematic



How to Order

ORDERING INFORMATION

[ ][X][X]-[X][X][X]-[X][X]-[X]-[X]-[X][X]-[X]-[X][X]

SERIES OF FEEDER
MSP - Standard Industrial to 3,500 psi (24,100 kPa)
MSV - Synthetic Industrial to 3,500 psi (24,100 kPa) (Viton Seals)

INLET/OUTLET PORT TYPES
SAE - Straight Thread "O" Ring Seal
NPT - Dryseal Pipe Thread
BSP - British Parallel Pipe "O" Ring Seal

INLET SECTION OPTIONS
MS - MS Divider Inlet
MH - Divider Inlet with Bleed Screws
SH - MS Divider with Shunt/Shut-Off (115 VAC)
SD - MS Divider with Shunt/Shut-Off (24 VDC)
RV - Reversible
ZL - Zero Leak Shut-Off (115 VAC)
ZF - Zero Leak Shut-Off (24 VDC)

***DIVIDER VALVE ACCESSORY OPTIONS**
P - Assembly of Performance Indicators in All Working Outlets
E - End with Manual Lube Fitting (SPP)

NUMBER OF SECTIONS
3 - Three 6 - Six
4 - Four 7 - Seven
5 - Five 8 - Eight

VALVE CAPACITY MS VALVE BLOCK
BP - Bypass
05 - .005 cu. in. (.082 cm³)
10 - .010 cu. in. (.164 cm³)
15 - .015 cu. in. (.246 cm³)
20 - .020 cu. in. (.328 cm³)
25 - .025 cu. in. (.410 cm³)
30 - .030 cu. in. (.492 cm³)
35 - .035 cu. in. (.574 cm³)
40 - .040 cu. in. (.656 cm³)

TYPE OF VALVE BLOCK
T - Twin Valve
S - Single Valve-RH Outlet
L - Single Valve-LH Outlet
B - Twin Valve with Cycle Pin Right
C - Single Valve with Cycle Pin Right-RH Outlet
D - Single Valve with Cycle Pin Right-LH Outlet
E - Twin Valve with Proximity Switch Right
F - Single Valve with Proximity Switch Right-RH Outlet
G - Single Valve with Proximity Switch Right-LH Outlet
H - Twin Valve with Cycle Pin Left
J - Single Valve with Cycle Pin Left-RH Outlet
K - Single Valve with Cycle Pin Left-LH Outlet
M - Twin Valve with Proximity Switch Left
N - Single Valve with Proximity Switch Left-RH Outlet
P - Single Valve with Proximity Switch Left-LH Outlet

***CROSSPORTING OPTION**
CR - Right Hand Side
CL - Left Hand Side

NOTES

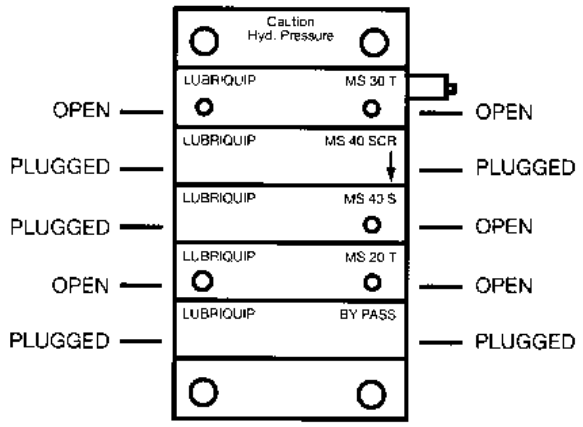
1. Right/Left Hand determined when viewing front of divider valve assembly. (Divider valve assembly placed on flat surface with inlet at top.)
2. Valves are specified starting from inlet section.
3. When valve is crossported, its outlet is plugged and output is diverted to next valve away from inlet.
4. Last valve in divider assembly, farthest from inlet, cannot be crossported.
5. Single valve can be crossported on one side only.
6. When valve is a single, only one outlet in its subplate can be used, other outlet must be plugged.
7. Cycle pins are available on MS (20, 25, 30, 35, and 40) valves only.
8. All divider valve assemblies must have a minimum of 3 working valves.
9. Bypass block cannot be supplied on divider valve with 3 subplates. Bypass block is not a working valve.
10. Divider systems should be limited to first and second stages only. Third staging is not recommended. Refer to Trabon Bulletins 20101, 20105 and 20115 for further information on system design.

ORDERING EXAMPLE

5-section MSP Divider Valve Assembly, standard seals, SAE ports and performance indicators in each working outlet. Consisting of:

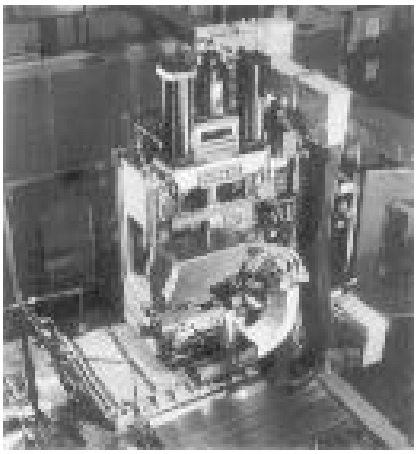
1 - .030 Twin Valve with Cycle Pin Right Side
1 - .040 Single Valve - Crossport Right Side
1 - .040 Single Valve - Right Hand Outlet
1 - .020 Twin Valve
1 - Bypass Block

Ordering Code - MSP-SAE-MS-P-5-30B-40SCR-40S-20T-BP



LUBRIQUIP® has applied automatic lubrication technology to a world of needs including yours!

Lubriquip systems require minimum attention. Filling the reservoir and periodic inspections are the only routine maintenance required.

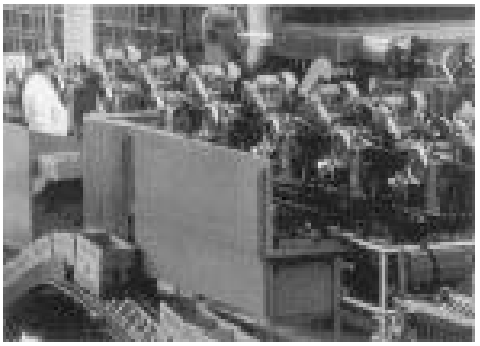


Automated systems improve safety. Maintenance personnel do not have to lubricate dangerous machinery. Operators have less exposure to oil and lubricants on equipment and floor.

Lube delivery to machines in motion is often superior to static lubrication. Oil and grease are forced into the load area to coat wear points.

Lubriquip's precise lubricant delivery eliminates lubricant waste, product contamination and heat build-up from excessive viscous shear.

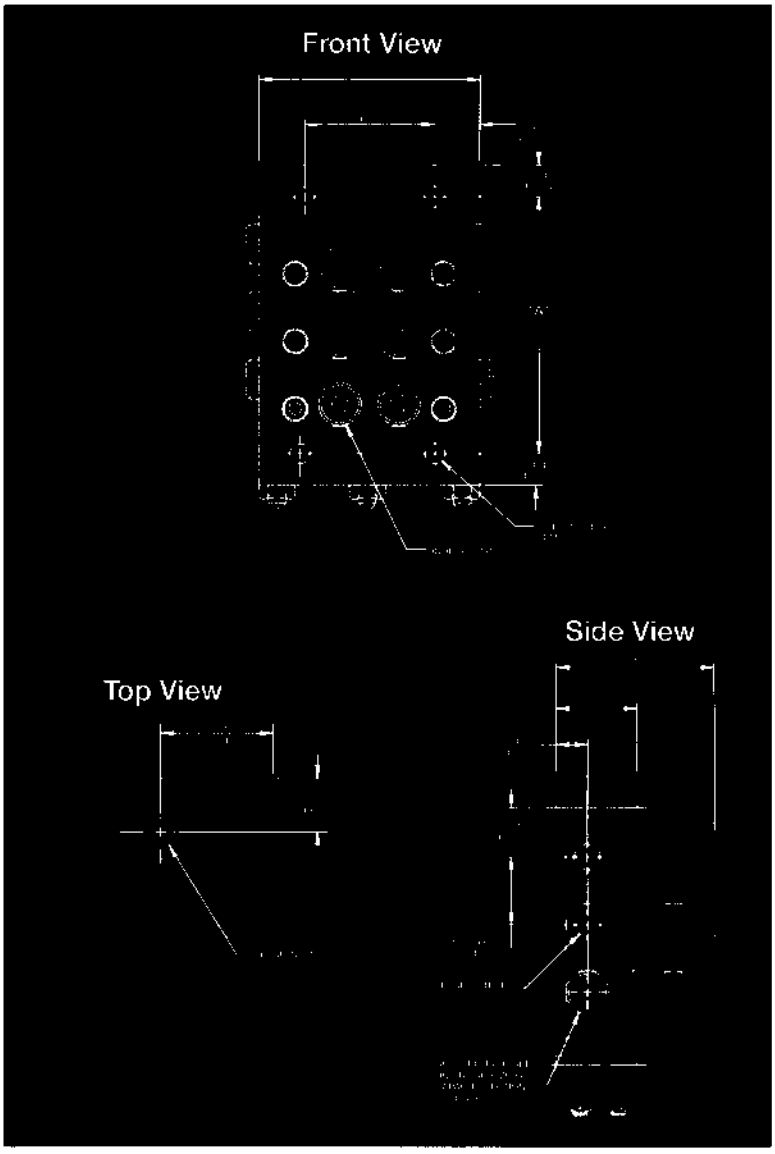
Lubriquip's automated systems deliver lubricant to vital mechanisms, prolonging equipment life and reducing downtime.



Surges, vibration, and other erratic operations are reduced with automatic lube systems. This minimizes risk of damage to equipment, products and personnel.

All Lubriquip systems are engineered for the machinery and lubricant being used. We can even supply the lubricant, matched to the system you need.

Your solution is at hand.



Our years of engineering innovative lubrication technology, plus our worldwide network of more than 100 distributors means that the components you need are probably in stock right now. This inventory of proven components allows distributors and factory engineers to design a truly customized system using economical on-the-shelf parts.

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