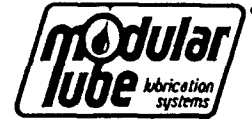


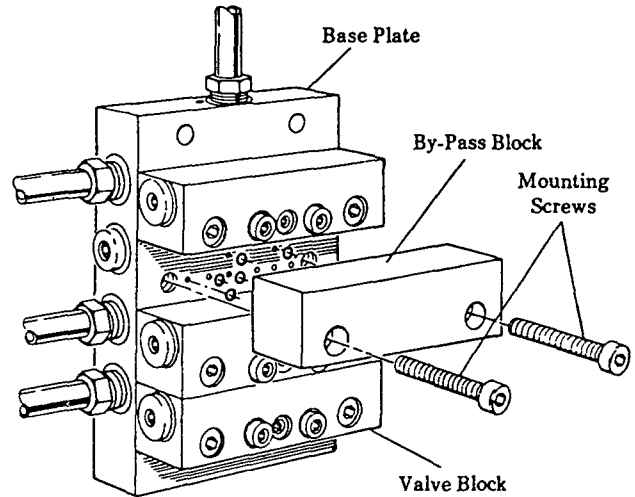
DIVIDER VALVES



Lincoln divider valves are comprised of three or more valve blocks fastened to a base plate with o-ring seals between the valve blocks and the base plate. These divider valves are used in a single line, progressive lubrication system and can be used for dispensing oil or grease. Valve blocks can be ordered with buna-N or viton o-rings with the exception of ML and MLS. ML Valve Blocks are available with buna-N o-rings only. MLS Valve Blocks contain stainless steel pistons and viton o-rings for use with special lubricants.

Refer to the Modular Lube Planning Manual for system designing and an in-depth explanation of operation. An in-line filter should be installed between the pump and the divider valves. Check valves should be installed at all bearing points. Refer to Section M50 Page 1 Series for check valves.

Valve blocks containing metering pistons discharge predetermined amounts of lubricant with each cycle. Valve blocks can be single, twin or cross-ported and can be externally or internally singled and/or cross-ported. External singling and cross-port bars are listed in the chart below. These assemblies contain a specially drilled bar with two ported screws which screw into the indicator port outlets as shown. Outlets not to be used when singling bar or cross-port bar is used must be plugged. NOTE: LP and MLS Divider Valves are available in single and twin options only.

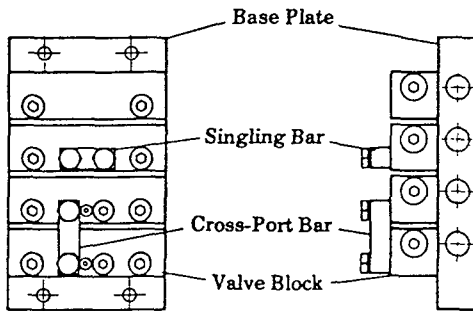
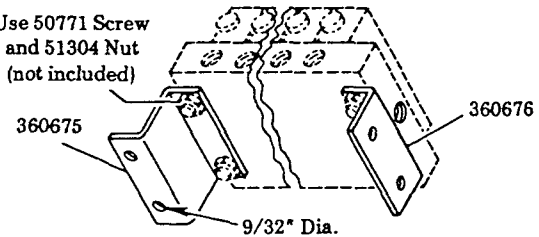


The valve blocks and by-pass blocks are fastened to a base plate mounted on the machine to be lubricated. The base plate contains the divider valve's inlet and outlet connections, interrelated passageways, and built-in check valves. All piping of lubricant to and from the divider valve is connected to the base plate. LP Base Plates do not include check valves at lube outlets.

Optional cycle indicators provide positive indication of system operation. The indicator pin is an extension of the piston in a valve block and will cycle back and forth as the piston moves.

Mounting brackets are shown below for mounting the MC, ML, MLS & MM Divider Valve Assemblies. Must be ordered separately.

Use 50771 Screw and 51304 Nut (not included)



A by-pass block can be used in any position on the base plate. The use of a by-pass block allows the addition or deletion of lubrication points without disturbing existing piping.

Valve Block	Max. Operating Pressure	Mounting Screw Torque	By-Pass Block		Singling Bar	Cross-Port Bar	Indicator Ports	Base Plate	Lube Inlet	Lube Outlet
			Buna-N O-ring	Viton O-ring						
LP	2,000 psi	46 in.-lbs.	87002	87003				LP	1/8" NPTF	1/8" NPTF
MC	6,000 psi	108 in.-lbs.	87016		87821	87820	5/16"-24 UNF	MCL	1/4" NPTF	1/8" NPTF
MM	2,500 psi	46 in.-lbs.	87010	87011	87827	87819	5/16"-24 UNF	MM	1/8" NPTF	1/8" NPTF
ML	2,500 psi	108 in.-lbs.	87016		87821	87820	5/16"-24 UNF	ML	1/4" NPTF	1/8" NPTF
MLS	2,500 psi	108 in.-lbs.	87016		87821	87820	5/16"-24 UNF	ML	1/4" NPTF	1/8" NPTF
XL	2,500 psi	193 in.-lbs.	87028	87029	87824	87823	1/8" NPTF	XL	3/8" NPTF	1/4" NPTF

BASE PLATES

LP	MCL	MM	ML	XL	Outlets	Valve Block Capacity	Max. By-Pass Blocks
87004-3	87007-3	87012-3	87018-3	87030-3	2-6	3	0
87004-4	87007-4	87012-4	87018-4	87030-4	2-8	4	1
87004-5	87007-5	87012-5	87018-5	87030-5	2-10	5	2
87004-6	87007-6	87012-6	87018-6	87030-6	2-12	6	3
	87007-7	87012-7	87018-7	87030-7	2-14	7	4
	87007-8	87012-8	87018-8	87030-8	2-16	8	5



A PENTAIR COMPANY

One Lincoln Way
St. Louis, MO 63120-1578
(314) 679-4200
Customer Service, (314) 679-4300

SECTION - M50

PAGE - 3A

VALVE BLOCKS

w/Buna-N O-rings	w/Viton O-rings	** C.I.P.		Twin (T) (2 Outlets) Discharge/Outlet	Single (S) (1 Outlet) Discharge/Outlet
		Left	Right		
LP	LP	LP			
87000-02	87001-02			.002 cu. in.	.004 cu. in.
87000-04	87001-04			.004 cu. in.	.008 cu. in.
87000-06	87001-06			.006 cu. in.	.012 cu. in.
87000-08	87001-08	87073-08	87067-08	.008 cu. in.	.016 cu. in.
MC	MC	MC			
87005-06	87006-06			.006 cu. in.	.012 cu. in.
87005-09	87006-09			.009 cu. in.	.018 cu. in.
87005-12	87006-12	87074-12	87063-12	.012 cu. in.	.024 cu. in.
87005-18	87006-18	87074-18	87063-18	.018 cu. in.	.036 cu. in.
87005-24	87006-24	87074-24	87063-24	.024 cu. in.	.048 cu. in.
MM	MM	MM			
87008-05	87009-05			.005 cu. in.	.010 cu. in.
87008-10	87009-10			.010 cu. in.	.020 cu. in.
87008-15	87009-15	87072-15	87064-15	.015 cu. in.	.030 cu. in.
ML	*MLS	ML			
87014-05	87085-05			.005 cu. in.	.010 cu. in.
87014-10	87085-10			.010 cu. in.	.020 cu. in.
87014-15	87085-15			.015 cu. in.	.030 cu. in.
87014-20	87085-20	87071-20	87065-20	.020 cu. in.	.040 cu. in.
87014-25	87085-25	87071-25	87065-25	.025 cu. in.	.050 cu. in.
87014-30	87085-30	87071-30	87065-30	.030 cu. in.	.060 cu. in.
87014-35	87085-35	87071-35	87065-35	.035 cu. in.	.070 cu. in.
87014-40	87085-40	87071-40	87065-40	.040 cu. in.	.080 cu. in.
XL	XL	XL			
87026-02	87027-02			.020 cu. in.	.040 cu. in.
87026-03	87027-03	87075-03	87066-03	.030 cu. in.	.060 cu. in.
87026-04	87027-04	87075-04	87066-04	.040 cu. in.	.080 cu. in.
87026-05	87027-05	87075-05	87066-05	.050 cu. in.	.100 cu. in.
87026-06	87027-06	87075-06	87066-06	.060 cu. in.	.120 cu. in.
87026-08	87027-08	87075-08	87066-08	.080 cu. in.	.160 cu. in.
87026-10	87027-10	87075-10	87066-10	.100 cu. in.	.200 cu. in.
87026-12	87027-12	87075-12	87066-12	.120 cu. in.	.240 cu. in.
87026-15	87027-15	87075-15	87066-15	.150 cu. in.	.300 cu. in.

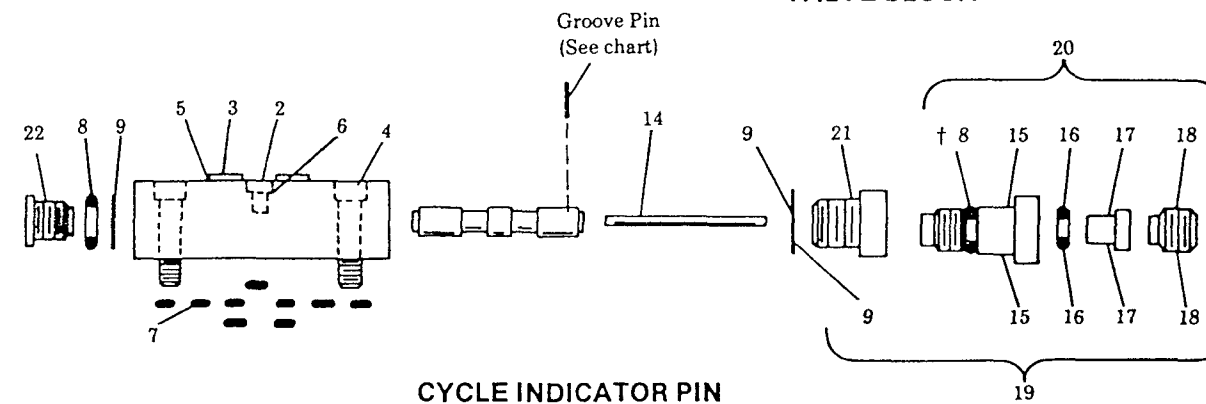
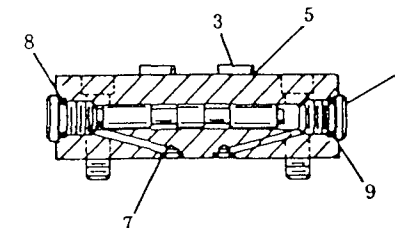
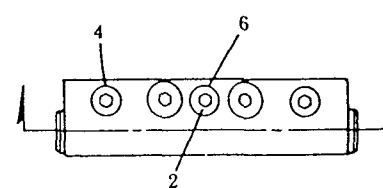
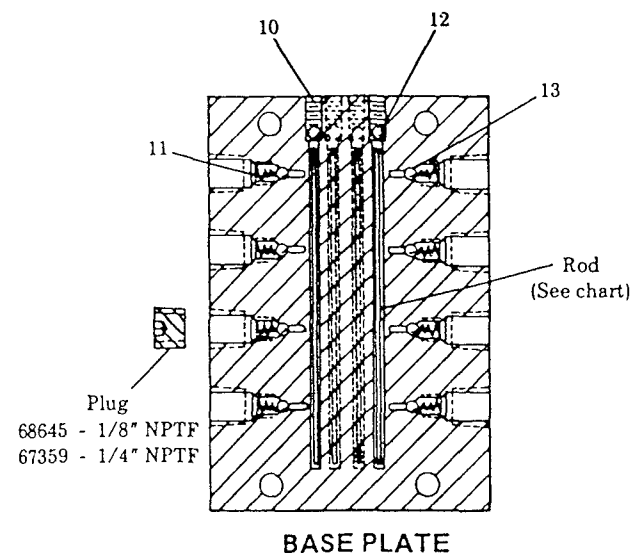
- ML Valve Blocks with Stainless Steel Pistons.
- Cycle Indicator Pin (Buna-N O-rings Included) Available in Single and Twin only.

**Rod Chart
For MCL Base Plates Only
(4 req'd)**

Base Plate	Rod
87007-3	15025
87007-4	15026
87007-5	15027
87007-6	15028
87007-7	15029
87007-8	15030

Groove Pin Chart

69815-9 Groove Pin	
Type	Cycle Indicator Pin
MC	87063-18 & 87074-18 87063-24 & 87074-24
ML	87065-30 thru 87065-40 87071-30 thru 87071-40
XL	87066-04 thru 87066-15 87075-04 thru 87075-15
70062-9 Groove Pin	
Type	Cycle Indicator Pin
LP	87067-08 & 87073-08
MC	87063-12 & 87074-12
MM	87064-15 & 87072-15
ML	87065-20 & 87071-20 87065-25 & 87071-25
XL	87066-03 & 87075-03



OPERATION

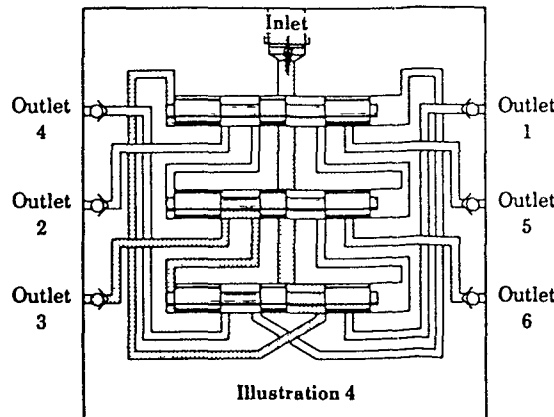
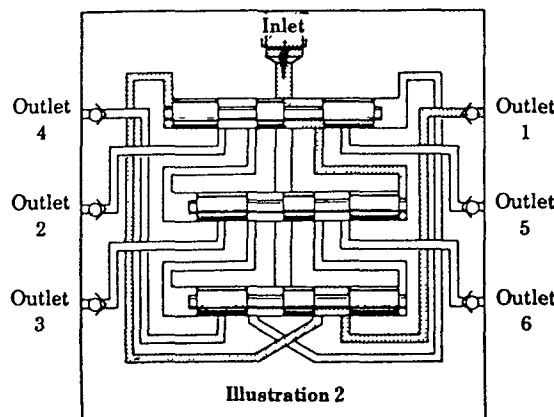
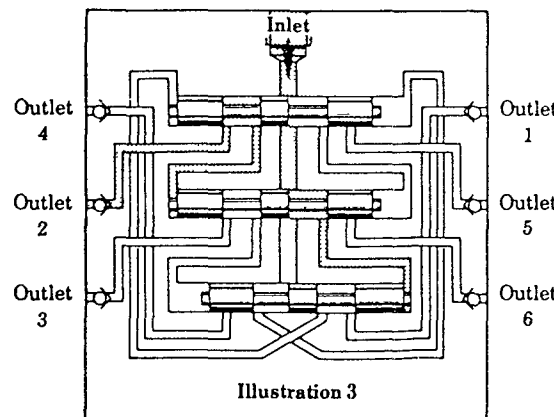
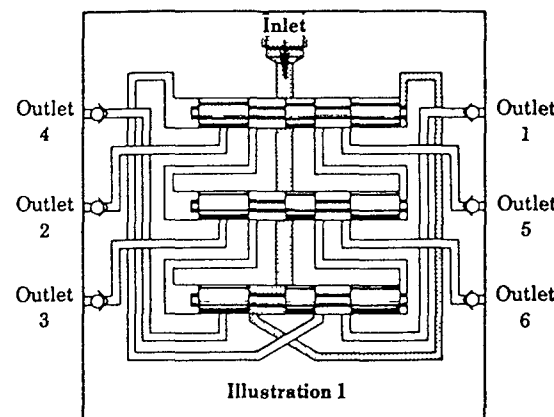
The inlet passageway is connected to all piston chambers at all times with only one piston free to move at any one time. With all pistons at the far right, lubricant from the inlet flows against the right end of piston 1. (See illustration 1)

Lubricant flow shifts piston 1 from right to left dispensing piston 1 output through connecting passages to outlet 1. Piston 1 shift directs flow against right side of piston 2. (See illustration 2)

Lubricant flow shifts piston 2 from right to left dispensing piston 2 output through valve ports of piston 1 and through outlet 2. Piston 2 shift directs lubricant flow against right side of piston 3. (See illustration 3)

Lubricant flow shifts piston 3 from right to left dispensing piston 3 output through valve ports of piston 2 and through outlet 3. Piston 3 shift directs lubricant through connecting passage to the left side of piston 1. (See illustration 4)

Lubricant flow against left side of piston 1 begins the second half-cycle which shifts pistons from left to right dispensing lubricant through outlets 4, 5 and 6 of the divider valve.



SERVICE PARTS

CODE	QUAN.	DESCRIPTION	LP	MC	MM	ML	MLS	XL
1	2	Plug	15021	15019	15021	15019	15019	15061
2	1	Plug		15020		15020	15020	
3	2	Plug		15021	15021	15021	15021	68645
4	2	Screw	50720	50821	50823	50821	50821	50745
5	2	Gasket		31157	31157	31157	31157	
6	1	Gasket		31158		31158	31158	
7	9	O-ring (buna-N)	34591	34241	34593	34241		34624
7	9	O-ring (viton)	34590	34417	34594		34417	34598
8	2	O-ring (buna-N)		34592		34592		
8	2	O-ring (viton)		34589			34589	
9	2	Gasket	31157		31157*			31159
10	4	Screw	50554	50554	50554	50554		50555
11		Spring (one per outlet)		56128	56157	56128		56129
12	4	Ball	66250	66250	66250	66250		66003
13		Ball (one per outlet)		68915	68915	68915		66003
14	1	Indicator pin	26402-9	26407-9	26402-9	26407-9		26427-9
15	1	Indicator body	15058	15064	15058	15064		15064
16	1	O-ring (polyurethane)	34595	34600	34595	34600		34600
16	1	O-ring (viton)	34596	34599	34596	34599		34599
17	1	Bearing	15057	15063	15057	15063		15063
18	1	Plug	15056	15056	15056	15056		15056
19	1	Indicator plug ass'y (polyurethane)	87022		87022*			
20	1	Indicator plug ass'y (polyurethane)		87031		87031		87031
20	1	Indicator plug ass'y (viton)		87032		87032		87032
21	1	Adapter						15129
22	1	Plug	15021	15019	15021	15019		15061

* IMPORTANT - Series "B" MM Blocks use 31162 Gasket & 87095 Indicator Plug Assembly.

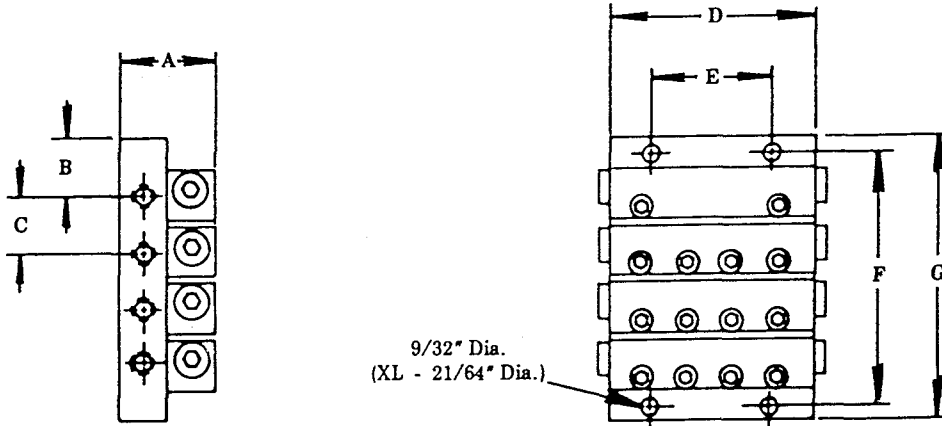
PORTING DESIGNATION

Description	Valve Block Stamping	Ordering Code
Twin	T	T
Single	S	S
Single Cross-port Right	SCR	J
Single Cross-port Left	SCL	K
Twin Cross-port (Right & Left)	TC	C
Twin Cross-port Left	TCL	E
Twin Cross-port Right	TCR	D

ORDERING EXAMPLE:

LP Valve Block
Size - .002 cu. in.
Twin
87000-02T

MM Valve Block
Size - .010 cu. in.
Single Cross-port Left
87008-05K



DIMENSIONS

Base Plate	A	B	C	D	E	F	G
87004-3	1-1/2"	5/8"	23/32"	1-7/8"	1-3/8"	2-5/8"	3-1/16"
87004-4	1-1/2"	5/8"	23/32"	1-7/8"	1-3/8"	3-11/32"	3-25/32"
87004-5	1-1/2"	5/8"	23/32"	1-7/8"	1-3/8"	4-1/16"	4-1/2"
87004-6	1-1/2"	5/8"	23/32"	1-7/8"	1-3/8"	4-25/32"	4-7/32"
87007-3 & 87018-3	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	3-3/8"	4"
87007-4 & 87018-4	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	4-9/32"	4-29/32"
87007-5 & 87018-5	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	5-3/16"	5-13/16"
87007-6 & 87018-6	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	6-3/32"	6-23/32"
87007-7 & 87018-7	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	7"	7-5/8"
87007-8 & 87018-8	1-7/8"	29/32"	29/32"	3-3/8"	1-7/8"	7-29/32"	8-17/32"
87012-3	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	2-13/16"	3-5/16"
87012-4	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	3-19/32"	4-3/32"
87012-5	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	4-3/8"	4-7/8"
87012-6	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	5-5/32"	5-21/32"
87012-7	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	5-15/16"	6-7/16"
87012-8	1-11/16"	5/8"	25/32"	2-1/2"	1-1/2"	6-23/32"	7-7/32"
87030-3	2-5/8"	15/16"	1-11/32"	5"	3"	4-23/32"	5-11/32"
87030-4	2-5/8"	15/16"	1-11/32"	5"	3"	6-1/16"	6-11/16"
87030-5	2-5/8"	15/16"	1-11/32"	5"	3"	7-13/32"	8-1/32"
87030-6	2-5/8"	15/16"	1-11/32"	5"	3"	8-3/4"	9-3/8"
87030-7	2-5/8"	15/16"	1-11/32"	5"	3"	10-3/32"	10-23/32"
87030-8	2-5/8"	15/16"	1-11/32"	5"	3"	11-7/16"	12-1/16"

— RETAIN THIS INFORMATION FOR FUTURE REFERENCE —

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.
LINCOLN ST. LOUIS provides a Distributor Network that stocks equipment and replacement parts.