

E. L. SMITH AIR COMPRESSORS  
DIVISION OF P. K LINDSAY CO., INC.  
QUALITY AIR COMPRESSORS SINCE 1920

FOR REPLACEMENT PARTS.  
SEND ORDERS TO:

E. L. SMITH AIR COMPRESSORS 63  
Nottingham Road  
Deerfield, NH 03037  
603-463-8311

INFORMATION NEEDED:

Compressor Model Number  
Serial Number (if any)  
Part Number  
Description  
Quantity Ordered  
DO NOT ORDER BY REFERENCE NUMBER

COMPRESSOR INSTALLATION AND  
OPERATING INSTRUCTIONS  
V4 8 2-CYLINDER MODELS

IMPORTANT: READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY.

- 1 Do not use any air receiver except one designed and tested specifically for compressed air service.

CAUTION: Air pressure beyond the design limits of your air receiver could cause it to explode. This could cause fatal injuries.

2. Location: Select a clean, cool, dry, well ventilated location
3. The flywheel side of the air compressor should be Installed next to the wall to allow ample circulation of air, the flywheel should be no closer than 12" to the wall. The direction of rotation should conform to the arrow on the flywheel. Compressors with solid steel pulleys may be operated in either direction.
4. Compressor lubrication: Oil has been drained from your compressor prior to the shipment. Before operating your compressor, replenish oil. Oil level should be checked daily. Use non-detergent SAE 30 oil when temperature is 65 degrees or above, SAE 20 when temperature is between 32 and 65 degrees, and SAE 10 when temperature is between zero and 32 degrees.

The compressor must be Installed In a level position to provide proper lubrication.

CAUTION: Change oil every 100 hours or sooner If it becomes dirty. Most air compressor failure is caused by Improper lubrication.

5. The compressor flywheel, drive pulley and v-belt must be enclosed in a suitable belt guard to prevent any personal Injury.

Never operate compressor without belt guard properly Installed.

6. Make sure all local and national electrical codes are followed. Compressor must be properly grounded. Select proper voltage for your motor.

CAUTION: Always disconnect the electric power and remove all air from the air receiver before servicing the air compressor.

7. A pressure control device (pressure switch or constant run control) must be provided. Maximum pressure is 100 psi continuous, 150 psi intermittent.  
  
Compressor speed should not exceed 1050 rpm (1250 rpm (or V360 and V480 models) without consulting the factory.
- 9 CAUTION: An air pressure safety valve must be provided set at no more than 10% above the pressure control setting.
10. Never install a shut off valve between compressor and air receiver. A *check* valve should be Installed to prevent the air in your air receiver from coming back out through your compressor.
11. Compressor break-in procedure: open air compressor outlet valve and start compressor. Allow compressor to run 30 minutes without building any pressure to insure proper piston and bearing lubrication. Your compressor is now ready to operate.
12. Air Intake filters: it is essential to have the compressor located in a clean, dry, well ventilated location to prevent excess dirt from clogging the air Intake filter. The filters should be cleaned or replaced every month or sooner if dirty.
13. WARNING: any part of the compressor, motor, engine, or discharge line, after operating, may be hot enough to cause injury.

#### INSTRUCTIONS FOR HEAD INSTALLATION

1. Make sure parts are assembled as shown in exploded views (especially the valve plates).
2. Make sure gaskets are all in good condition and properly assembled.
- 3 For the V4 cylinder models, assemble both heads on cylinders with head bolts (#2433 and #2274) started only, non tight Set pulsation tank In place between heads, making sure the #2098 "O" ring is in place in each head. Screw the (4) tank mounting bolts (#2136) down but not tight. Snug (6) head bolts in each head to light torque. Tighten (4) tank bolts to 450 inch pounds torque. Tighten (6) head bolts In each head to 450 Inch pounds torque, doing the (2) long center bolts (#2274) first and the (4) short bolts (#2433) last After S hours use, re-torque all head bolts tq 450 inch pounds.

#### WARRANTY

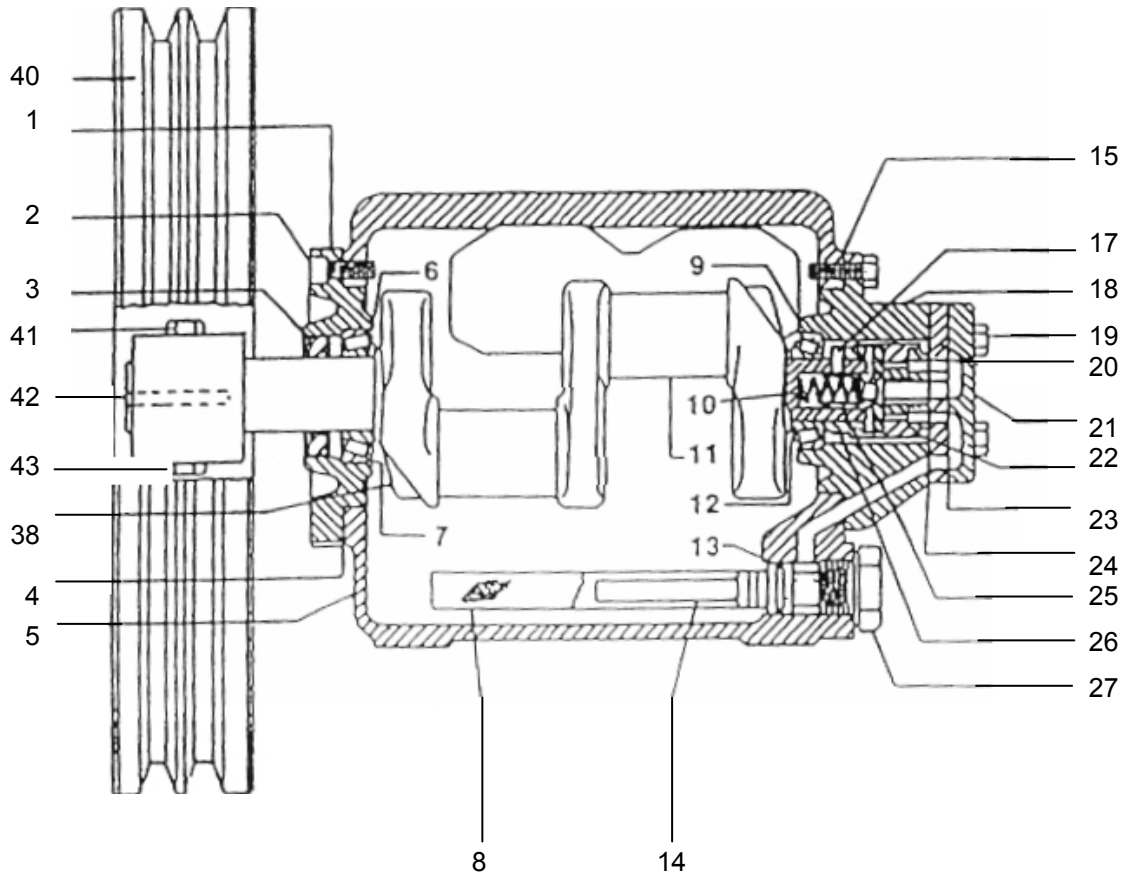
E. L. Smith Air Compressors warrants Its product to be free or defect in material and workmanship under normal use and service for 12 months from date of purchase.

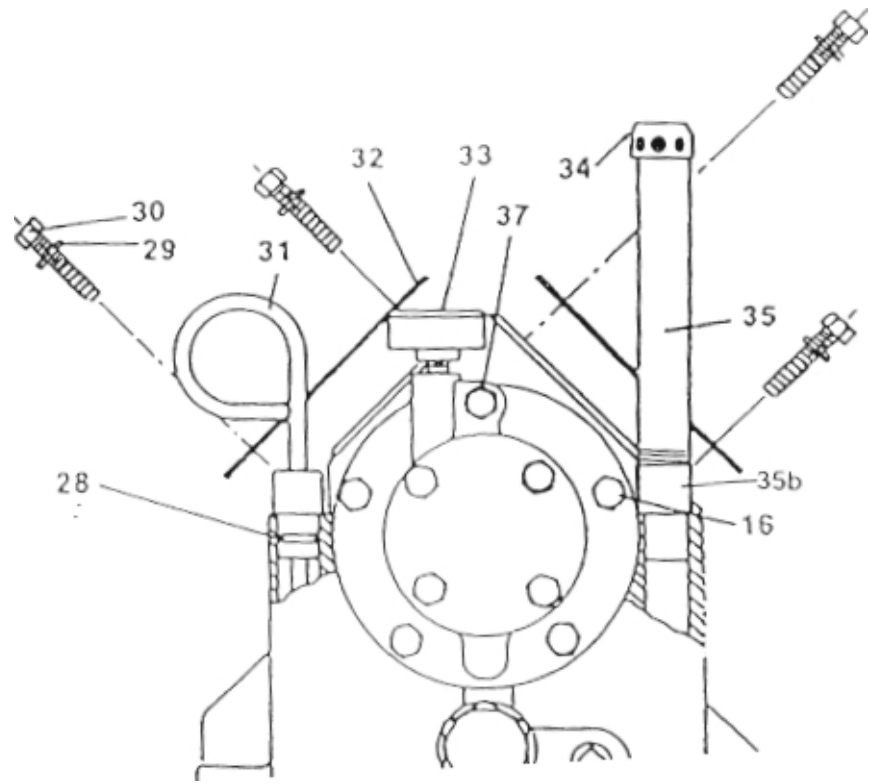
Our warranty applies only when such defective parts are returned to us, transportation prepaid, and subject to our Inspection and approval.

Liability Is limited to repair or replacement of material found defective, free of charge, F.O.B. our plant. Motors and engines are covered by the original manufacturers warranty only and should be returned by the customer to their authorized station for service. Unauthorized repairs or replacements will not be subject to factory warranty.

This warranty is in lieu of all other warrants, expressed or Implied.

# CRANKCASE GROUP MODELS V480 & V4800



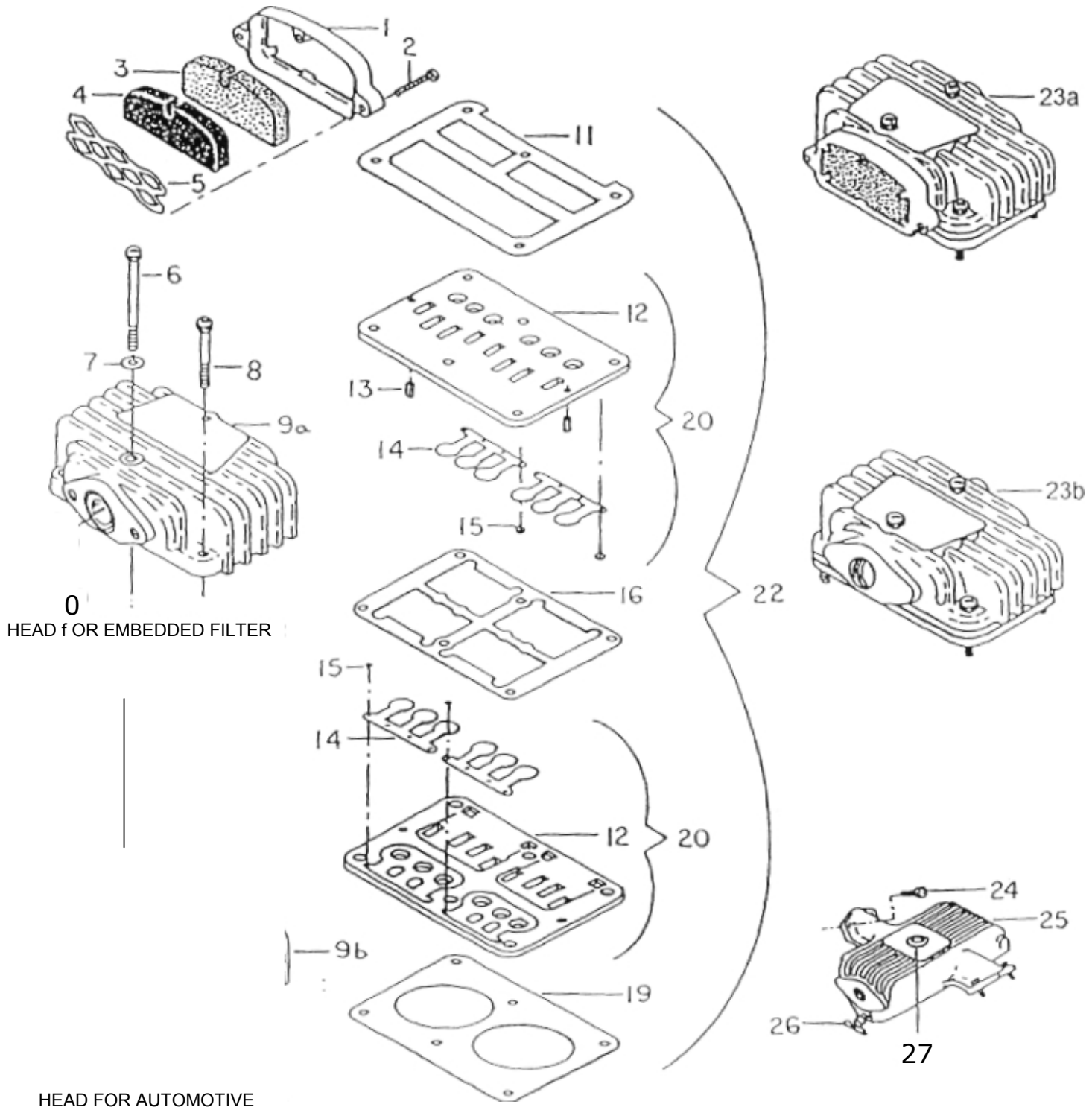


## C R A N K C A S E   G R O U P M O D E L S V 4 8 0 & V 4 8 0 C

REF. NO.	PART NO.	PART DESCRIPTION	QTY	QTY
			REQ'D V480	REQ'D V480C
1	2487T	BEARING CARRIER (PULLEY END)	1	
	3004	BEARING CARRIER ASSY (PULLEY END)	1	
	1406T	BEARING CARRIER (PULLEY END)		1
	3002	BEARING CARRIER ASSY (PULLEY END)		1
2	1595	SHC SCREW 916 X 1 3/4	3	1
	1934	SHC SCREW 916 X I	2	4
3	1381	BEARING SEAL	1	1
4	2892	BEARING CARRIER GASKET	4"	
5	1540T	CRANKCASE	1	1
6	2942	BEARING CONE	1	1
7	3006	BEARING CUP	1	1
6	1480	OIL INTAKE FILTER SCREEN	1	1
9	3007	BEARING CUP	1	1
10	1482	OIL PUMP SPRING	1	1
11	6179F	CRANKSHAFT	1	
	6213	CRANKSHAFT ASSY.	1	
'	6218F	CRANKSHAFT		1
'	6214	CRANKSHAFT ASSY.		1
12	2940	BEARING CONE	1	1
13	1476	'O-RING	1	1
14	1541	OIL INTAKE TUBE	1	1
15	2890	BEARING CARRIER GASKET .006	2"	2"
	2891	BEARING CARRIER GASKET 015	8"	
16	1409	SHC SCREW 5/16 X 3/4	4	4
17	1451T	011 PUMP DRIVE PIN (OBSOLETE 695)	1	1
16	1458T	BEARING CARRIER (OIL PUMP END)	1	1
	3033	BEARING CARRIER ASSY (OIL PUMP END)	1	1
19	1670	HHC SCREW 5/16 X 1 1/2	4	4
20	1453T	Oil. PUMP PORT PLATE	1	1
71	1455T	OIL PUMP COVER	1	1
72	1449	Oil PUMP	1	1
23	1457OIL	PUMP GASKET	1	1
24	1456	OIL PUMP PORT PLATE GASKET	1	1
25	1481T	OIL PUMP TRANSFER BUSHING	1	1
26	6283	OIL PUMP DRIVE SLEEVE (USE 3571T BEFORE 6/95)	1	1
27	1474	OIL INTAKE PLUG	1	1
28	1265	O-RING	1	1
29	805-014	LOCK WASHER	12	12
30	005-341	HHC SCREW 5/16 - 18 X 1 1/4	12	12
31	6187	DIP STICK ASSY.	1	1
32	1404	CYLINDER BASE GASKET	4	4
33	1520	OIL PRESSURE GAUGE	1	1
34	6244	CRANKCASE BREATHER	1	1
35	803-463	NIPPLE 25 NET X6'	1	1
35b	6185	BREATHER PIPE ADAPTOR	1	1
36	1729	OIL DRAIN PLUG	1	1
	803-462	NIPPLE .25 NPT X 5" (V480X OR MODEL 30K)	1	
	1919	PIPE CAP .25 NPT (V480X OR MODEL 30K)	1	
37	159\$	SHC SCREW 5/16 X 1 3/4"	1	1

REF. NO.	PART NO.	PART DESCRIPTION	QTY	QTY
			REQ'D V480	REQ'D V480C
1	2487T	BEARING CARRIER (PULLEY END)	1	
40	)032	FLYWHEEL 14" 2 'B' GROOVE	1	
	3031	FLYWHEEL I T 1 Tr GROOVE	1	
41	805-349	PULLEY CLAMP BOLT	1	
42	1382	PULLEY KEY	1	
43	121 6	PULLEY CLAMP NUT	1	
	6226	COMPLETE GASKET SET	1	1

# HEAD GROUP (WITHOUT UNLOADER) MODELS V480 & V480C

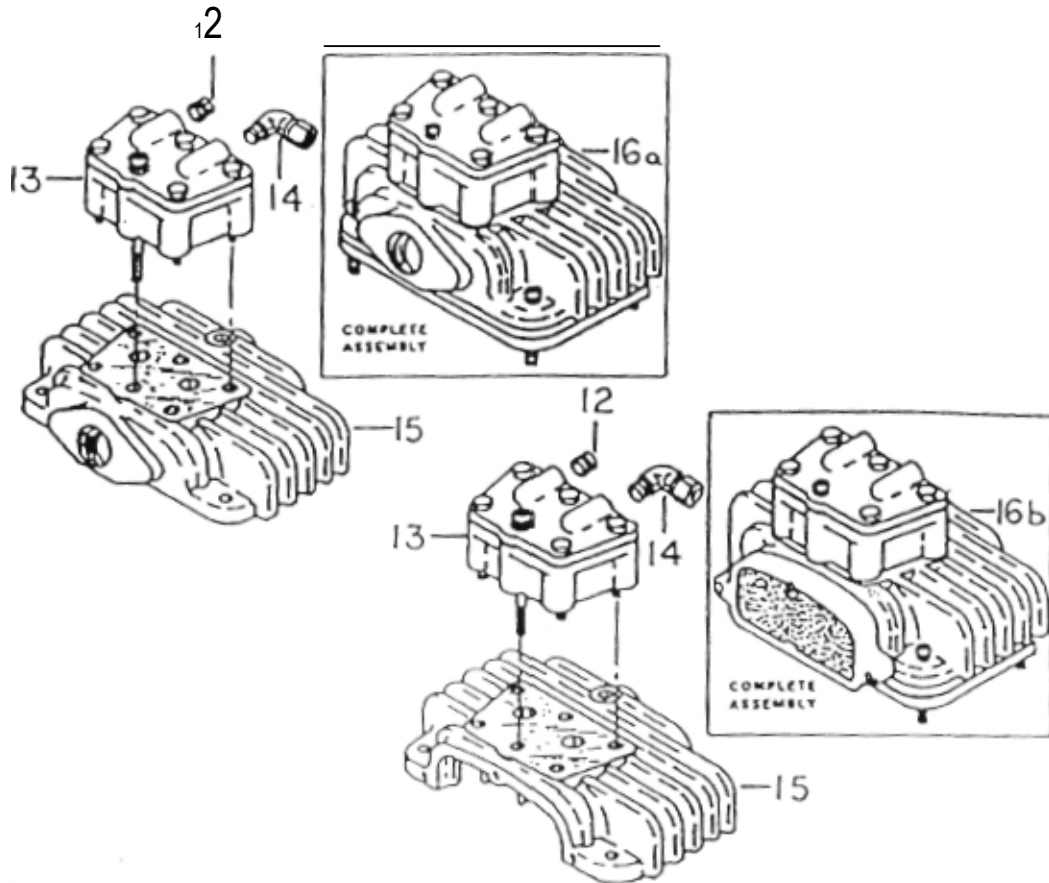


# HEAD GROUP (WITHOUT UNLOADER) MODELS V480 & V480C

REF. NO.	PART NO.	PART DESCRIPTION	QTY REQ'D
	2104T	FILTER RETAINER	2
2	2131	FILTER RETAINER SCREW	6
3	2412	FILTER INNER ELEMENT	2
4	2128	FILTER OUTER ELEMENT	2
5	2130	FILTER SCREEN	2
6	2274	HEAD BOLT (SHC SCREW 3/8 - 18 X 3")	4
7	2272	WASHER FOR LONG HEAD BOLT	2
8	2273	HEAD BOLT (SHC SCREW 3/8 - 18 X <b>1.75"</b> )	8
9a	2147T	HEAD (AIR-COOLED. CAST IRON, EMBEDDED FILTER)	2
•	2384T	HEAD (AIR-COOLED. ALUMINUM EMBEDDED FILTER)	7
	3487T	HEAD (WATER-COOLED. ALUMINUM. EMBEDDED FILTER)	7
9b	7320T	HEAD (AIR-COOLED. AUTOMOTIVE FILTER)	2
10	2098	O - RING	2
11	2138	TOP VALVE PLATE GASKET (BTWN VALVE PLATE & HEAD)	1
12	7037T	VALVE PLATE	a
13	2023	VALVE PLATE ROLL. PIN	4
14	5780	REED VALVE	8
15	805- 152	REED VALVE SCREW	16
16	2058	MIDDLE VALVE PLATE GASKET (BTWN VALVE PLATES)	2
19	800-105	BOTTOM VALVE PLATE GASKET (BTWN CYL & VALVE PLATE)	2
20	2158	SINGLE VALVE PLATE ASSY	4
22	6227	VALVE PLATE SET (w/ TOP & BOTTOM GASKETS)	2
	2933	VALVE PLATE SET (W/O GASKETS)	2
73a	6282	HEAD ASSY (w/ GASKET, VALVES BOLTS. FILTER) AIR-COOLED IRON EMBEDDED (IV4)	2
•	6228	HEAD ASSY (w/ GASKETS, VALVES, BOLTS, FILTER) AIR-COOLED ALUM. EMBEDDED (AIV4)	2
	6230	HEAD ASSY (w/ GASKETS. VALVES. BOLTS. FILTER) WATER-COOLED EMBEDDED (WIV4)	2
23b	6235	HEAD ASSY (W/ GASKETS. VALVES, BOLTS. FILTER) AIR-COOLED AUTOMOTIVE (6V4)	2
24	2136	DISCHARGE MANIFOLD MOUNTING BOLT	4
25	6269T	DISCHARGE MANIFOLD	1
	6277	DISCHARGE MANIFOLD ASSY (W/ PLUGS)	1
26	1459	DRAIN COCK	1
27a	1923	PIPE PLUG 3/4" NPT	1
27b	1671	PIPE BUSHING <b>3/4"</b> NPT X 1/4" NPT	
Pc	1847	PIPE BUSHING 3/4" NPT X 1/8" NPT	1
	806-191	PIPE PLUG 1/8" NPT	1
•	2539	AUTOMOTIVE FILTER	2



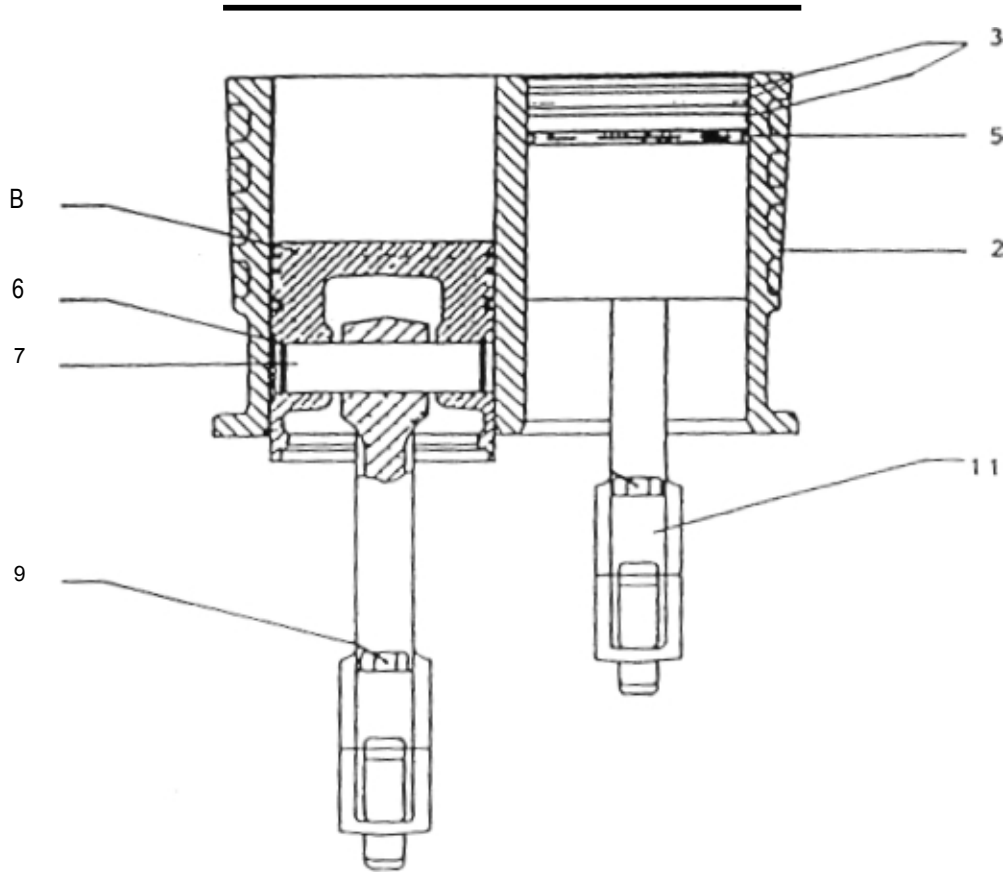
# HEAD GROUP (WITH UNLOADER) MODEL V480



REF NO	PART NUMBER	PART DESCRIPTION	CRV REQ'D
1	2275	HEAD BOLT (SHC SCREW 3/8 - 16 X 4")	2
2	805-338	COVER BOLT (HHC SCREW 1/4 - 70 X 1.5')	10
3	2272	WASHER FOR LONG BOLT	2
4	2106T	UNLOADER COVER	2
5	2113	UNLOADER GASKET	2
6	2105T	UNLOADER BODY	2
7	2107	UNLOADER PISTON	4
6	1263	'O' RING	4
10	2159	UNLOADER PLUNGER PIN	4
11	2097	PLUNGER PIN SPRING	4
12	1525	SOCKET HEAD PIPE PLUG, 1/8 NPT	7
13	2160	UNLOADER ASSY (W/ BOLTS, GASKETS, PLUNGER PINS, 6 SPRINGS)	2
14	801-773	ELBOW, TUBE CONNECTOR	2
15a	2321T	HEAD, THREADED, DRILL ED FOR UNLOADER	2
15b	2148T	HEAD, EMBEDDED, DRILLED FOR UNLOADER	7
16.3	6232	HEAD ASSY, AUTOMOTIVE FILTER (W/ GASKETS, VALVES, BOLTS, FILTER, & UNLOADER PARTS)	2
16b	6231	HEAD ASSY, EMBEDDED FILTER (W/ GASKETS, VALVES, BOLTS, FILTER & UNLOADER PARTS)	2
	2325	UNLOADER HOLE COVER	2
	805-335	UNLOADER HOLE COVER 801.T	8

Not shown

# CYLINDER GROUP MODELS V480 & V480C



## DESCRIPTION

REF NO	PART NO.	DESCRIPTION	QTY REQ'D
	800-705	GASKET (BETWEEN VALVE PLATES CYLINDER)	2
2	6178T	CYLINDER	2
3	800-707	COMPRESSION RING (BEVELED INSIDE EDGE UP)	8
5	800-721	OIL RING	4
6	800-196	SNAP RING	8
7	800-197	PISTON PIN	4
8	800.274	PISTON & PIN	4
9	805-510	CONNECTING ROD BOLT	4
11	6217T	CONNECTING ROD	4
	6233	COMPLETE RING SET	1
	6234	PISTON, PIN, & RINGS	4
	6226	COMPLETE GASKET SET	1

' Not shown.