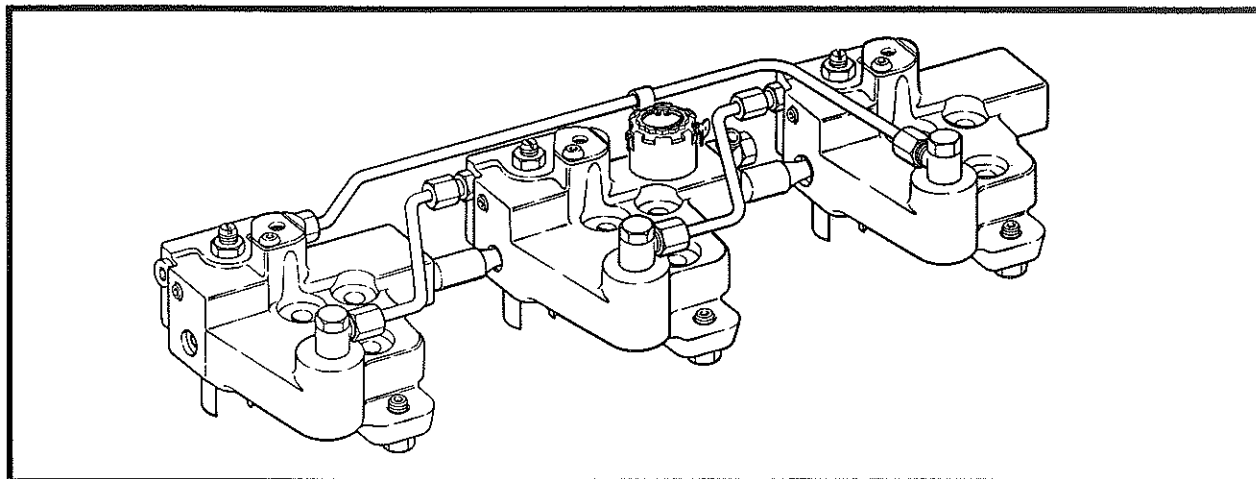




Parts Manual for Model 122 Engine Brake



The Model 122 *Jake Brake*® Engine Retarder is designed for use on Volvo 12 liter diesel engines TD 120, TD 121 and TD 122.

Refer to *Jacobs* Service Letters and instructional literature for specific application information. Information contained in this manual was current at the time of printing and is subject to change without notice or liability.

This product is covered by U.S. Patent No. 4,251,051. Other U.S. and foreign patents issued or applied for.

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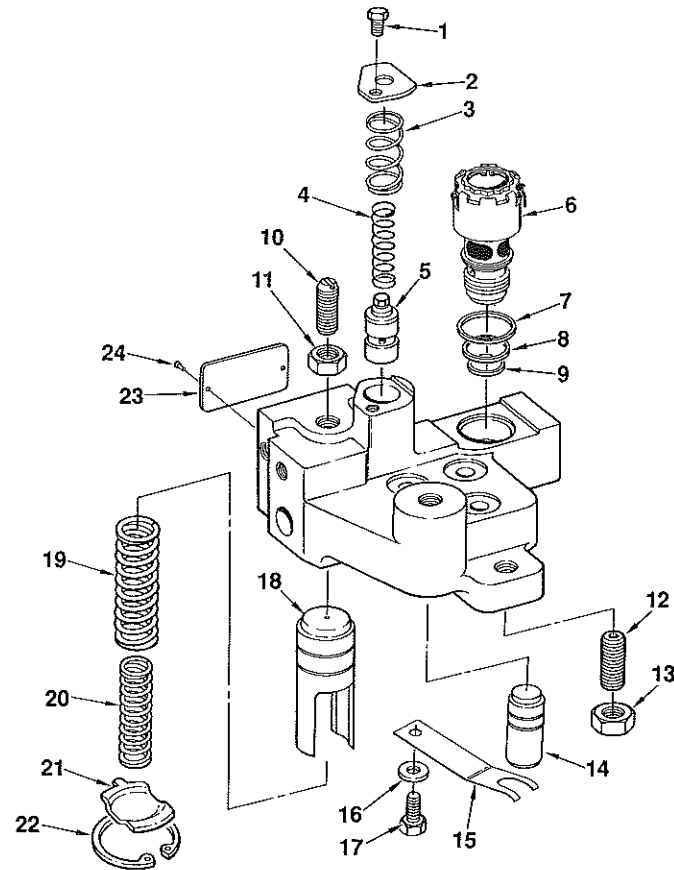
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***Jacobs*® Vehicle
Equipment Company**
22 East Dudley Town Road
Bloomfield, CT 06002 U.S.A.
203-243-1441

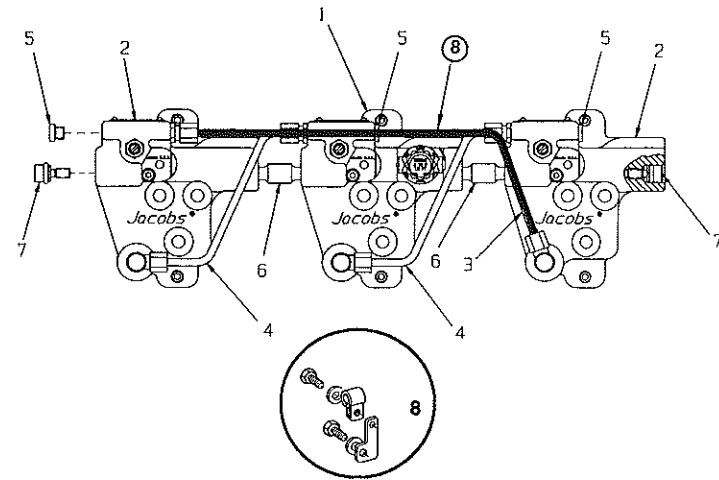
Model 122 Housing Assemblies

Illustration Number	P/N	Part Name	Quantity/Housing
1, 17	1492	Cap screw, hex head	2
2	18096	Cover, control valve	1
3	10843	Spring stop, control valve	1
4	11823	Spring, control valve	1
5	11930	Spool assembly, control valve	1
6	16441	Solenoid, 24 VDC - 18064 Hsg.	1
6	16442	Solenoid, 24 VDC - 18066 Hsg.	1
6	16440	Solenoid, 12 VDC - 18067 Hsg.	1
7	1081	Seal, upper - supply housing	1
8	1082	Seal, center - supply housing	1
9	1083	Seal, lower - supply housing	1
10	16997	Safety screw assembly	1
11	1026	Nut, hex jam	1
12	18094	Set screw, anti-rocking	2
13	17977	Nut, hex	2
14	14103	Piston, master	1
15	2030	Spring, flat, master piston	1
16	11545	Washer, plain	1
18	18501	Piston, slave	1
19	13418	Spring, outer, slave piston	1
20	13417	Spring, inner, slave piston	1
21	7620	Spring retainer, slave piston	1
22	1023	Ring, retainer	1



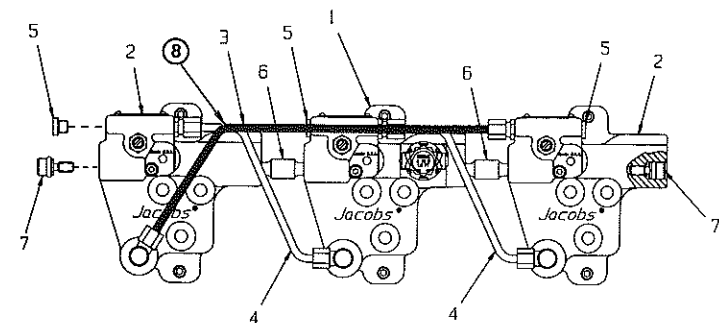
Brake Assembly - Front, P/N 17961

Illustration Number	P/N	Part Name	Quantity/Assembly
1	18064	**Housing assembly, supply - 24 VDC single lead	1
2	18065	Housing assembly, drone	2
3	18530	Tube assembly, long, front	1
4	18077	Tube assembly, short	2
5	18076	High pressure plug	3
6	17352	*Jumper tube assembly	2
7	18063	*Jumper plug assembly	2
8	18410	Tube clamp group	1



Brake Assembly - Rear, P/N 17962

Illustration Number	P/N	Part Name	Quantity/Assembly
1	18064	**Housing assembly, supply - 24 VDC single lead	1
2	18065	Housing assembly, drone	2
3	18528	Tube assembly, long, rear	1
4	18519	Tube assembly, short	2
5	18076	High pressure plug	3
6	17352	*Jumper tube assembly	2
7	18063	*Jumper plug assembly	2
8	18410	Tube clamp group	1



*Includes P/N13155 O-ring

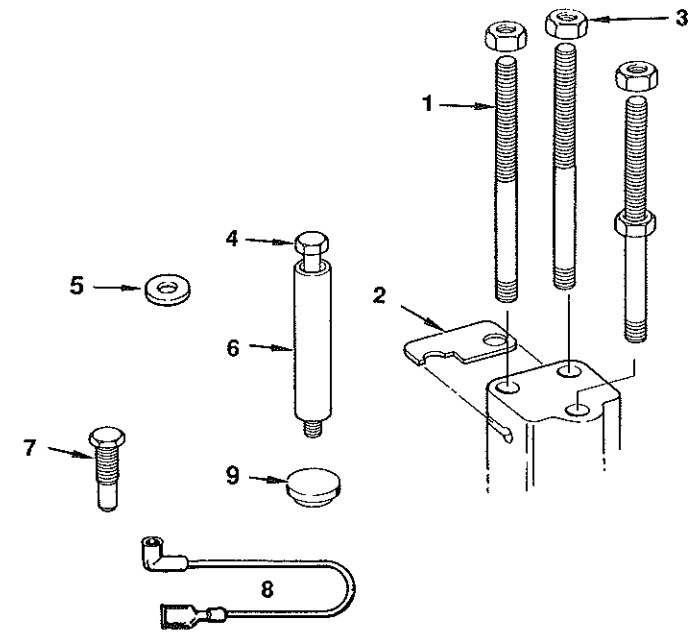
**Optional Supply Housing Assemblies :

P/N 18066 - 24 VDC-dual lead available in Front Brake Assembly, P/N 17967, and Rear Brake Assembly, P/N 17968
 P/N 18067 - 12 VDC - single lead available in Front Brake Assembly, P/N 17971, and Rear Brake Assembly, P/N 17972

Attaching Parts Groups

Engine Attaching Parts Group A, P/N 18068

Illustration Number	P/N	Part Name	Quantity/Group
1	17970	Stud	18
2	17963	Shim, mounting	6
3	17977	Nut, hex	24
4	13535	Bolt, hex head	1
5	18086	Washer	1
6	18320	Spacer tube	1



Engine Attaching Parts Group B - Single Lead, P/N 18538

Illustration Number	P/N	Part Name	Quantity/Group
7	18082	Adjusting screw, rocker	6
8	17368	Harness, solenoid	2
9	17969	Valve cap	6
11	17366	Electrical connector, single lead	2

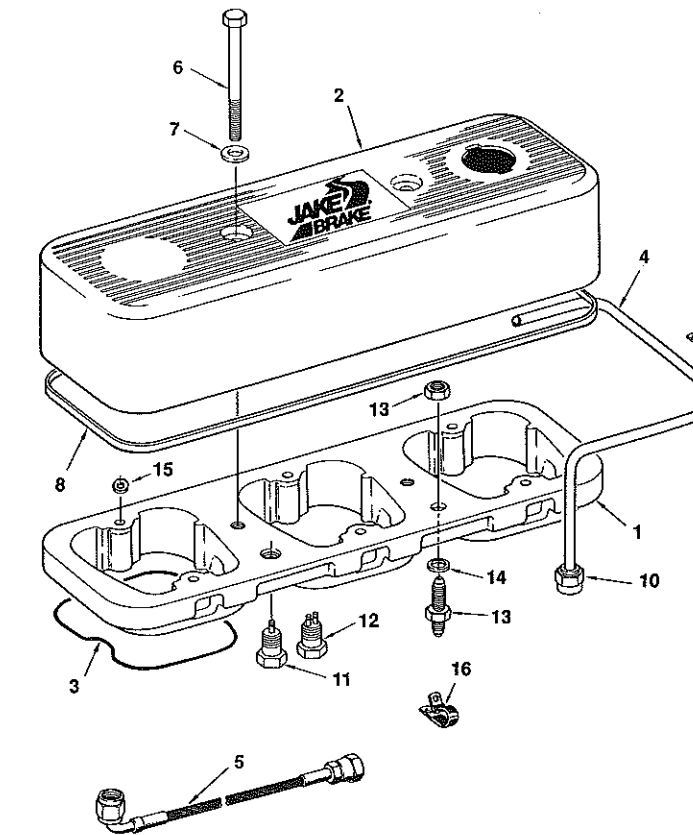
Engine Attaching Parts Group B - Dual Lead, P/N 18069

Illustration Number	P/N	Part Name	Quantity/Group
7	18082	Adjusting screw, rocker	6
8	17368	Harness, solenoid	4
9	17969	Valve cap	6
12	17367	Electrical connector, dual lead	2

Illustration Number	P/N	Part Name	Quantity/Engine
1	17973	Spacer	2
2	18071	Cover, Front	1
NI	18072	Cover, Rear	1
3	17979	Gasket, spacer	6
4	18088	Aneroid tube	1
5	18093	Hose assembly	2

Engine Attaching Parts Group C, P/N 18539

Illustration Number	P/N	Part Name	Quantity/Group
6	18070	Cover Attaching Parts Group	1
6	18085	• Capscrew	4
7	18621	• Copper washer	4
8	18087	• Gasket	2
8	18605	Aneroid Attaching Parts Group	1
9	18604	• Clamp	1
10	18322	• Nut, tube	1
NI	18073	• Union, tube	1
NI	18321	• Ferrule, tube	1
NI	18081	Hydraulic Attaching Parts Group	1
NI	17185	Elbow, oil gallery	2
NI	18317	Tee adaptor	2
NI	18390	Tee adaptor	2
13	17186	Bulkhead adaptor	2
14	17184	Seal, washer	2
15	11548	Washer	12
16	17879	Clamp	10
NI	18078	Oil supply tube (spacer to solenoid valve)	2



Attaching Parts Groups

Engine Attaching Parts Group A, P/N 18068

Illustration Number	P/N	Part Name	Quantity/Group
1	17970	Stud	18
2	17963	Shim, mounting	6
3	17977	Nut, hex	24
4	13535	Bolt, hex head	1
5	18086	Washer	1
6	18320	Spacer tube	1

Engine Attaching Parts Group B - Single Lead, P/N 18538

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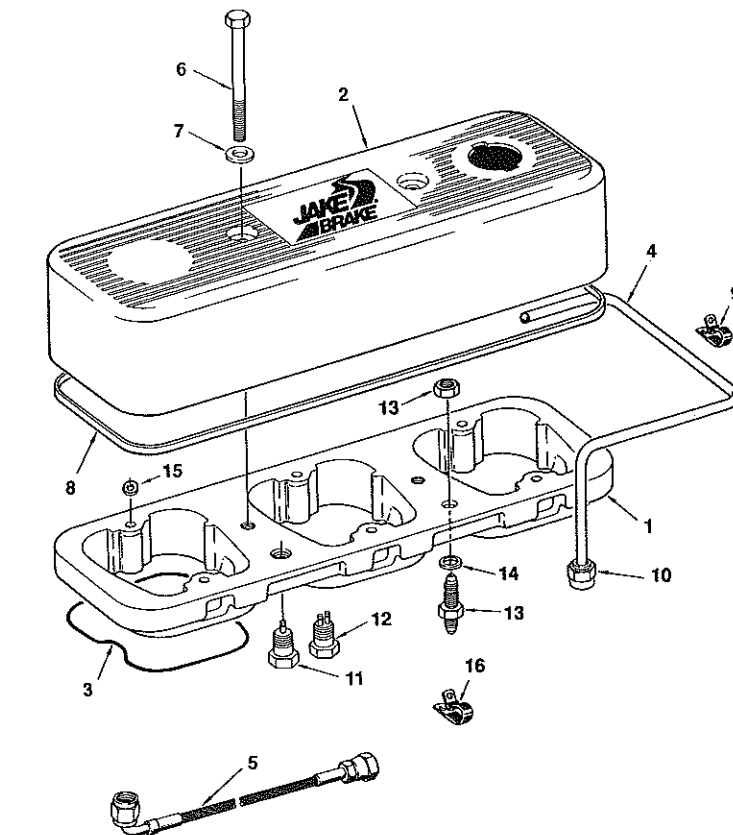
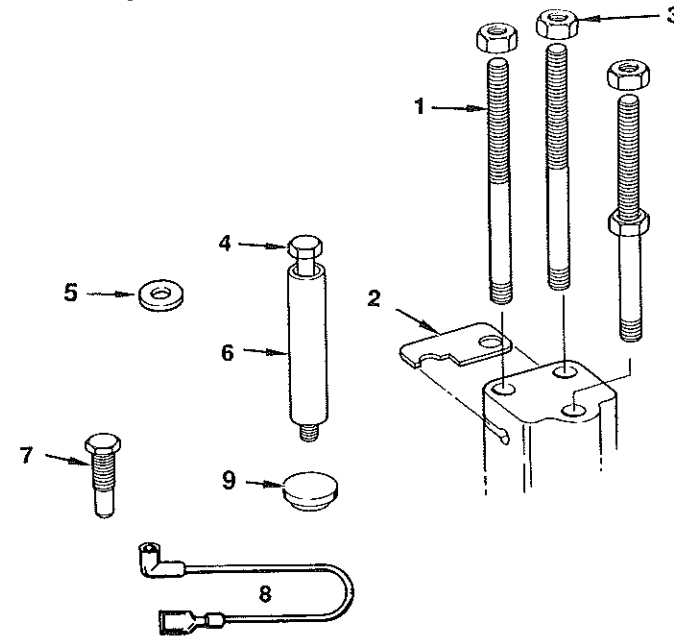
Engine Attaching Parts Group B - Dual Lead, P/N 18069

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Engine Attaching Parts Group C, P/N 18539

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NI	18390	Tee adaptor	2
13	17186	Bulkhead adaptor	2
14	17184	Seal, washer	2
15	11548	Washer	12
16	17879	Clamp	10
NI	18078	Oil supply tube (spacer to solenoid valve)	2



Control Groups - Model 440 - STC

Cab Control Group, P/N 18514

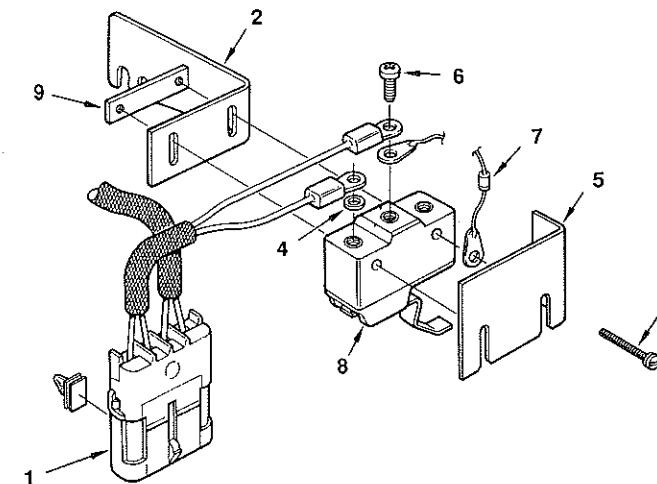
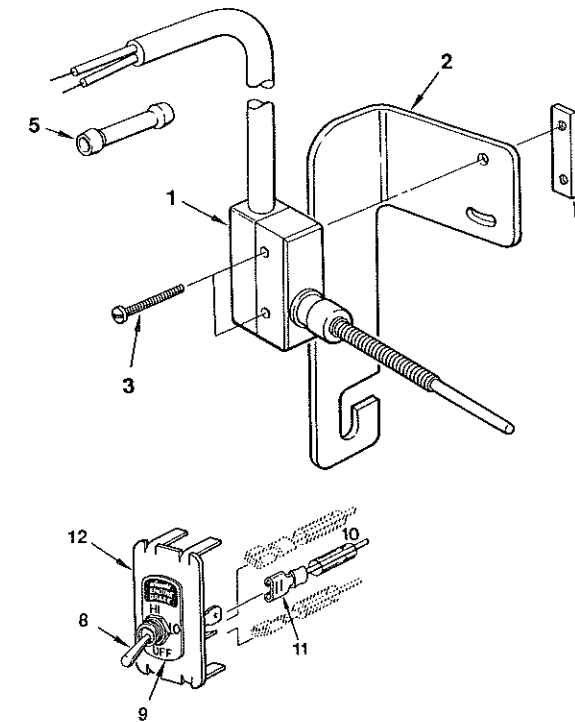
Illustration Number	P/N	Part Name	Quantity/Group
	18507	Clutch Switch Group	1
1	12246	• Clutch switch	1
2	18465	• Switch mount bracket	1
3	5377	• Pan head screw	2
4	1531	• Clamp	1
5	13078	• Butt splice	2
NI	13674	• Instruction sheet	1
	18508	Dash Switch Group	1
8	3586	• Switch, toggle	1
9	3777	• Plate, dash	1
10	3707	• Shrink tube	4
11	3278	• Receptacle	4
12	18467	• Dash mounting plate	1
NI	17504	Harness, cab to engine	1
NI	18391	Diagram, wiring	1
NI	6833	Tie, cable	12

Engine Control Group - Single Lead, P/N 18512

Illustration Number	P/N	Part Name	Quantity/Group
	18472	Switch Assembly, Mounted	1
1	17364	• Wire harness	1
2	18464	• Switch mount bracket	1
3	17152	• Screw #6-32 1 1/8 lg.	2
4	1559	• Lockwasher	1
5	18468	• Switch cover	1
6	1558	• Screw #6-32 1/4 lg.	2
7	1534	• Diode assembly	1
8	18471	• Switch	1
9	1531	• Clamp	1
NI	18469	• Switch gauge	1
NI	18466	Harness, mounting plate	1

Engine Control Group - Dual Lead, P/N 18513

Illustration Number	P/N	Part Name	Quantity/Group
	18472	Switch Assembly, Mounted	1
1	17364	• Wire harness	1
2	18464	• Switch mount bracket	1
3	17152	• Screw #6-32 1 1/8 lg.	2
4	1559	• Lockwasher	1
5	18468	• Switch cover	1
6	1558	• Screw #6-32 1/4 lg.	2
7	1534	• Diode assembly	1
8	18471	• Switch	1
9	1531	• Clamp	1
NI	18469	• Switch gauge	1
NI	18466	Harness, mounting plate	1
NI	17661	Ground wire, dual lead	2



NI = Not Illustrated