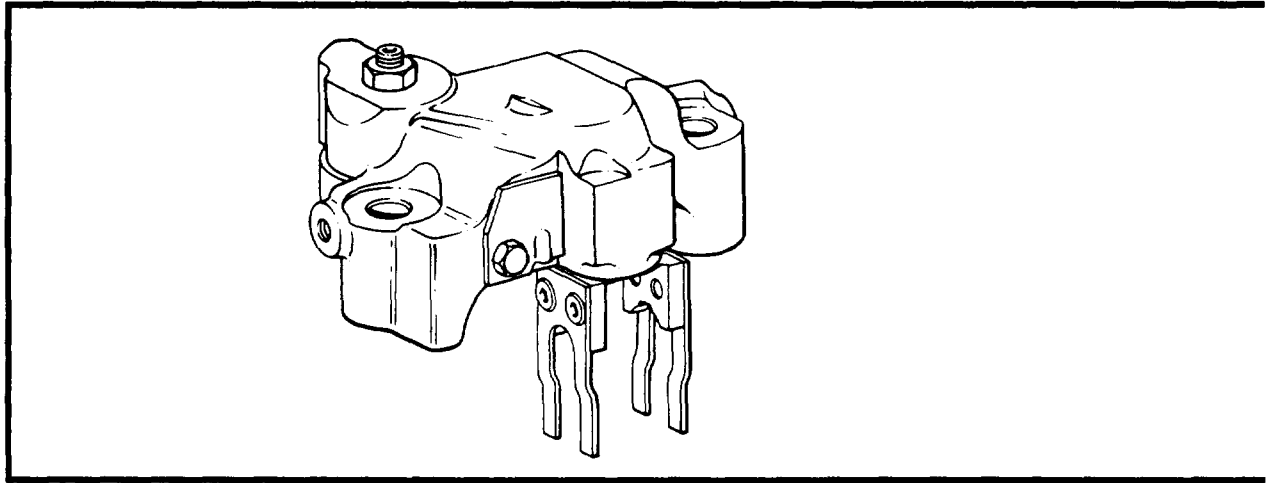




# Parts Manual for Models 71A and 92A Engine Brakes



The Models 71A and 92A *Jake Brake*® engine retarders are designed and approved for use on Detroit Diesel Corporation series 71 and 92 engines with 4 valve cylinder head configuration.

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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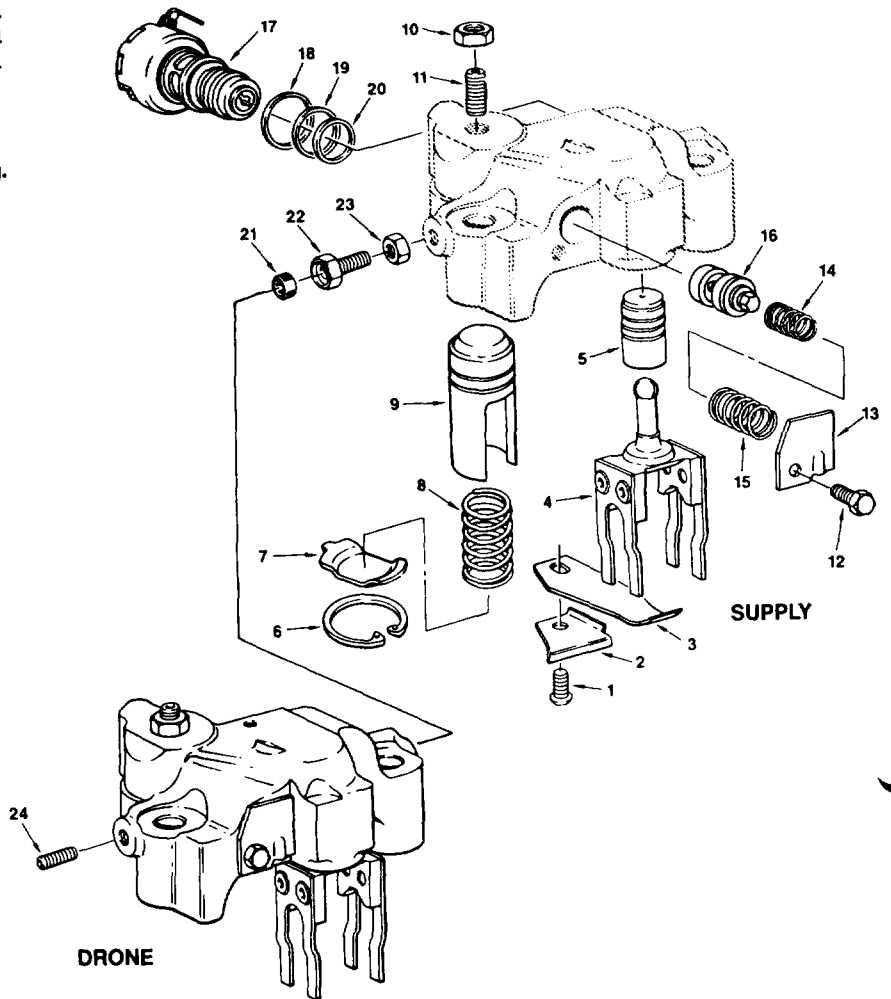


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## Models 71A and 92A Housing Assemblies

Pkgd. Hsg. P/N	Description	Qty./Engine		
		6-71	6V	8V
13592	Supply, 12 VDC	2	2	4
17019	Supply, 24 VDC	2	2	4
12474	Drone	4	4	4

Ill. No.	Part No.	Part Name	Qty./Hsg.
1	1265	Capscrew, button head	1
2	3669	Retainer, spring	1
3	9505	Spring, master piston	1
4	3337	Fork assy., master piston	1
5	3329	Master piston	1
6	1023	Ring, retaining	1
7	7620	Retainer, spring	1
8	1288	Spring, slave piston	1
9	9442	Slave piston	1
10	1026	Nut, hex jam	1
11	1031	Set screw	1
12	1492	Capscrew, hex head	1
13	2221	Cover, control valve	1
14	7500	Spring, control valve, orange	1
15	11434	Spring, control valve, white	1
16	11930	Control valve	1
17	16440	Solenoid valve, 12 V -13592 Hsg.	1
17	16441	Solenoid valve, 24 V -17019 Hsg.	1
18	1081	Seal, upper - supply hsg.	1
19	1082	Seal, center - supply hsg.	1
20	1083	Seal, lower - supply hsg.	1



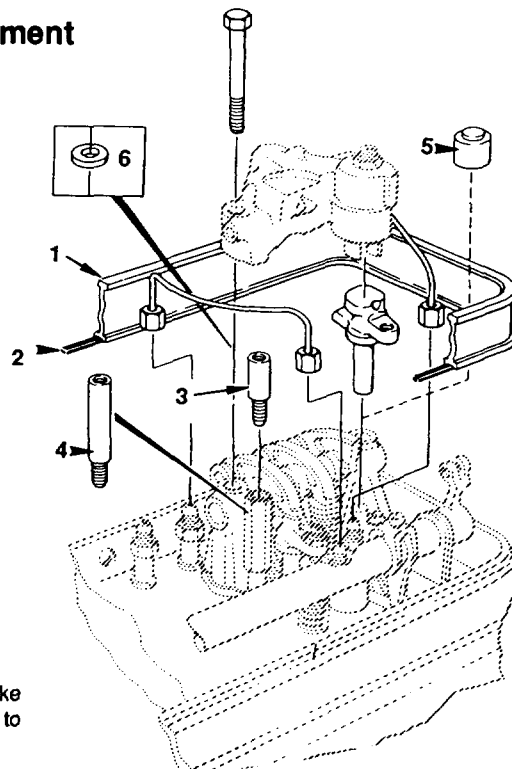
## Attaching Parts Groups

Ill. No.	Part No.	Part Name	Engine Type		
			6-71	6V	8V
P/N and Qty./Group (Qty./Engine)					
		<b>Attaching Parts Group</b>	<b>2167 (1)</b>	<b>2167 (1)</b>	<b>2165 (2)</b>
21	1332	• Seal ring	4	4	2
22	1287	• Connector, oil	4	4	2
23	1340	• Nut, hex jam	4	4	2
24	1341	• Set screw	4	4	2

## Optional Equipment

**NOTE:**

Detroit Diesel Corp. offers die cast aluminum valve covers for use on their series 71 and 92 engines. These valve covers and the Jacobs valve cover spacers are not compatible. DDC also offers deep die cast covers for Jacobs engine brake installations. Only DDC stamped steel valve covers can be used with Jacobs valve cover spacers.



Ill. No.	Part No.	Part Name
1	1795	Spacer Assy. (4 cyl.)
2	1469	• Gasket
1	1796	Spacer Assy. (6 cyl.)
2	1471	• Gasket
1	1797	Spacer Assy. (3 cyl.)
2	1470	• Gasket
3	1320	Extension, cover bolt
4	2329	Stud, rocker cover
5	2568	Cap, valve stem (2 valve cyl. head)
6	9464	Washer*

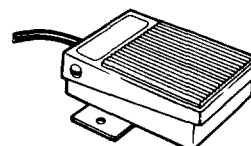
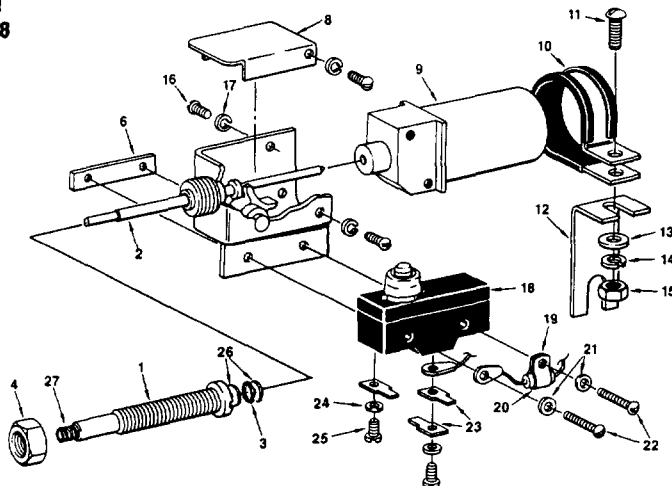
\*The P/N 9464 Washer may be required for 71A/92A engine brake housings starting with Serial No. A305894 through A384283. Refer to Service Letter 163 for part requirements.

## Control System Options

### Fast Idle Buffer Switch Assemblies

P/N 12408 - V Engines; P/N 3223 - In-line Engines

Ill. No.	Part No.	Part Name	Qty./Assy. P/N	
			3223	12408
1	2275	Screw assy.	1	-
2	3224	Plunger	1	-
1	2725	Screw assy.	-	1
2	2811	Plunger	-	1
3	2017	O-ring	1	1
4	2724	Nut	1	1
5	2887	Bracket assy.	1	1
6	1531	Clamp	1	1
7	2812	Plunger, cyl.	1	1
8	2816	Cover, switch	1	1
9	2815	Body	1	1
10	2820	Clamp, body	1	1
11	2818	Screw, round head	1	1
12	2819	Bracket, switch	1	1
13	2891	Washer, plain	1	1
14	1328	Washer, lock	1	1
15	2499	Nut, hex	1	1
16	2817	Screw, round head	4	4
17	2833	Washer, lock	4	4
18	18188	Switch	1	1
19	2769	Clamp	1	1
20	1534	Diode	1	1
21	1538	Washer, plain	2	2
22	2744	Screw, round head	2	2
23	1040	Terminal	3	3
24	1559	Washer, lock	1	2
25	1558	Screw, binder head	2	2
26	9877	Washer	2	2
27	12418	Spring	-	1



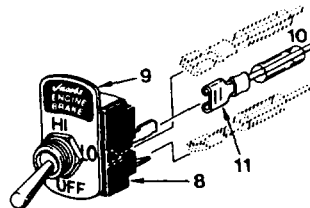
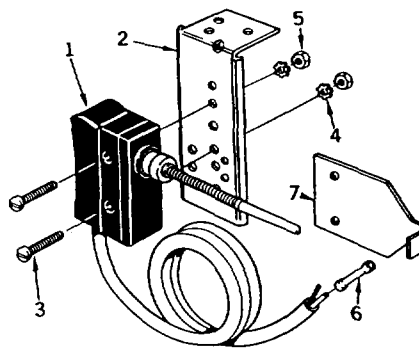
**12260 Foot Switch Group**

## Control Groups (Cont'd.)

### 3975 Cab Control Group - Non DDEC

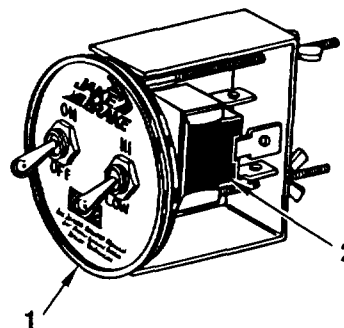
Ill. No.	Part No.	Part Name	Qty./Grp.
	<b>12261</b>	<b>Switch Assembly - Clutch</b>	<b>1</b>
1	12246	• Clutch switch	1
2	12269	• Mounting bracket, switch	1
3	5377	• Screw, pan head	2
4	5378	• Lockwasher	2
5	3306	• Hex nut	2
6	13078	• Butt splice	2
7	12262	• Overtravel bracket*	1
NI	13674	• Installation instructions	1
	<b>3776</b>	<b>Switch Assembly - Dash</b>	<b>1</b>
8	3586	• Switch, 3 position	1
9	3777	• Plate, switch	1
10	3707	Shrink tube	3
11	3278	Receptacle	3
NI	3781	Harness	1
NI	3778	Loom	1
NI	6833	Cable tie	12
NI	16556	Diagram, wiring	1

\* Optional item not included in group.



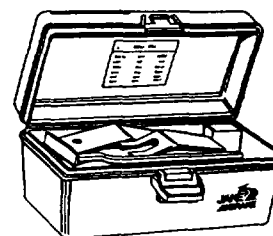
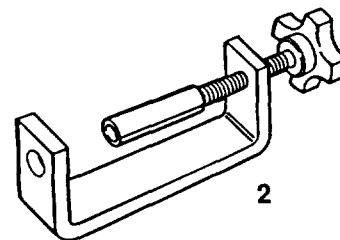
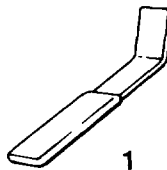
### 17363 DDEC - ATEC Control Group

Ill. No.	Part No.	Part Name	Qty./Grp.
1	<b>17346</b>	<b>2-Mode Switch Group</b>	<b>1</b>
2	1304	• Switch	2
NI	17370	In-line switch harness	1
NI	15708	Harness, aux. power	1
NI	17378	Harness, output	1
3	17179	DDEC- ATEC Control Module	1
NI	17371	Wire diagram	1



## Service Tools and Parts

Ill. No.	Part No.	Part Name
1	3496	Feeler gauge 0.064 in. (1.63 mm)
1	7958	Feeler gauge 0.059 in. (1.50 mm)
2	17397	Slave piston removal tool
3	1283	Solenoid screen retainer
4	1282	Solenoid screen
5	17466	Tool Box, DDC
NI	17056	Tune-up Kit, 6V71-92
NI	17057	Tune-up Kit, 8V71-92



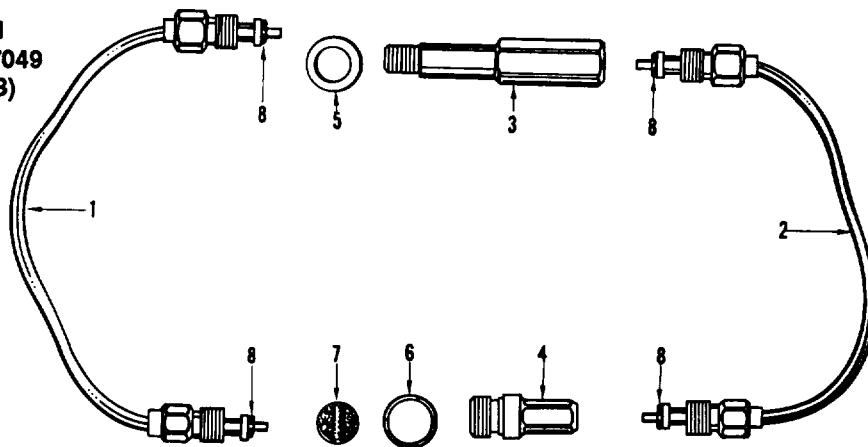
## Attaching Parts Groups (Cont'd.)

Ill. No.	Part No.	Part Name	Qty./Group	Qty./Engine				
				6-71	6V-71	6V-92	8V-71	8V-92
	<b>17049</b>	<b>Fuel Pipe Set (1 Cyl.)</b>		6	6	6	8	8
1	16971	• Fuel pipe assy., long (red cap)	1					
2	16972	• Fuel pipe assy., short (blue cap)	1					
-	17050	• Connector Group	1					
3	17051	• Connector, fuel manifold	2					
4	17052	• Fuel injector cap	2					
5	17053	• Washer	2					
6	17054	• Gasket, fuel inj. cap	2					
7	17066	• Injector filter	1					
8	16977	• O-ring	2					
NI	17198	Instructions, fuel pipe	1					
9	1322	Bridge, exhaust valve		6	6	-	8	-
9	3330	Bridge, exhaust valve		-	-	6	-	8
10	1318	Bolt, oil supply		12	12	12	16	16



### NOTE:

When replacing former fuel pipes P/N 1294 and 1295, all parts contained in fuel pipe set P/N 17049 must be installed. Instructions and parts (Ill 1-8) are contained in the set.

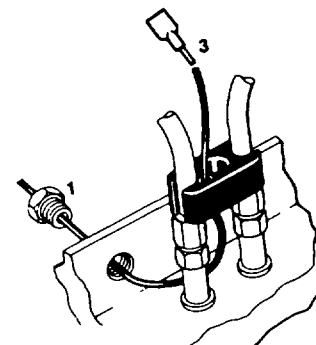
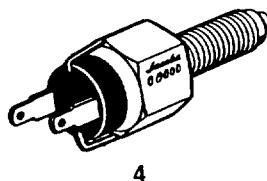
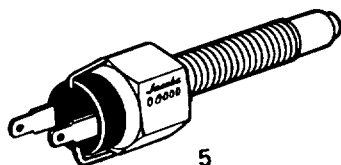
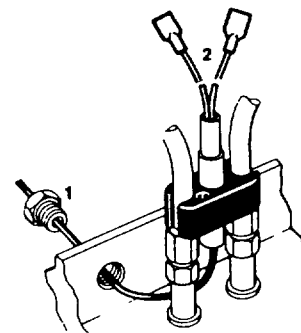


## Control Groups

**NOTE:**  
Controls installed by vehicle OEMs may be different than controls supplied by *Jacobs*.

Ill. No.	Part No.	Part Name	Engine Type				
			6-71 - Non DDEC -	6V	8V	6V-92 DDEC	8V-92 DDEC
		<b>Control Group</b>	<b>16796 (1)</b>	<b>16798 (1)</b>	<b>16791 (1)</b>	<b>16795 (1)</b>	<b>16789 (1)</b>
1	4653	Seal bushing	2	2	2	2	2
2	16733	Solenoid harness	-	-	2	-	2
3	16732	Solenoid harness	2	2	-	2	-
NI	3778	Loom	1	1	1	-	-
NI	2014	Receptacle	2	2	2	-	-
NI	3708	Shrink tube	2	2	2	-	-
4	14115	Buffer switch	1	-	-	-	-
5	14435	Buffer switch	-	1	1	-	-
NI	14436	Installation instructions	1	1	1	-	-

NI = Not Illustrated



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