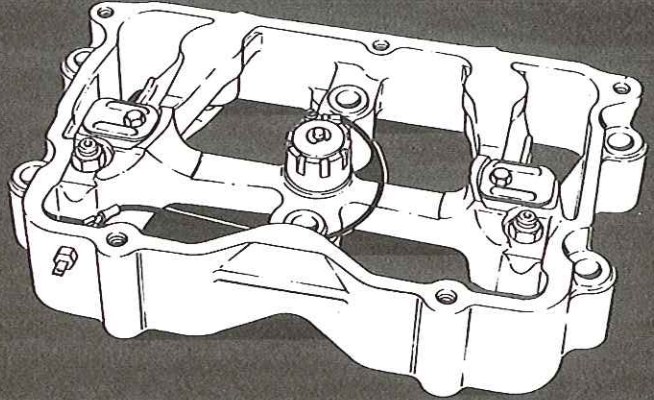


Parts Manual for

Jacobs[®]
**ENGINE
BRAKE**



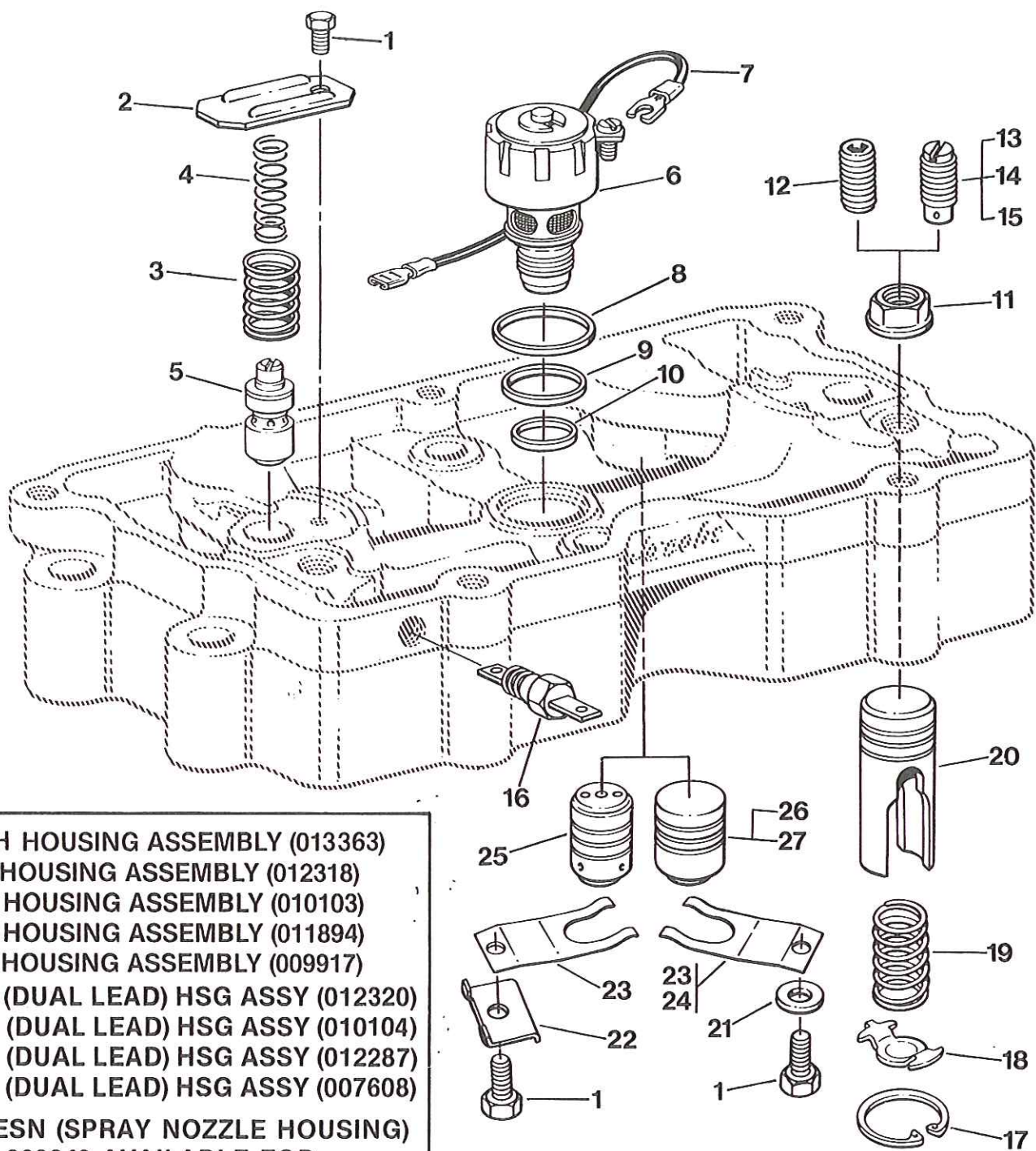
Models

400H, 400, 30E, 44B & 25B



Saves a Truckload

The Jacobs Manufacturing Company
Vehicle Equipment Division



MODEL 400H HOUSING ASSEMBLY (013363)
 MODEL 400 HOUSING ASSEMBLY (012318)
 MODEL 44B HOUSING ASSEMBLY (010103)
 MODEL 25B HOUSING ASSEMBLY (011894)
 MODEL 30E HOUSING ASSEMBLY (009917)
 MODEL 400 (DUAL LEAD) HSG ASSY (012320)
 MODEL 44B (DUAL LEAD) HSG ASSY (010104)
 MODEL 25B (DUAL LEAD) HSG ASSY (012287)
 MODEL 30E (DUAL LEAD) HSG ASSY (007608)

MODEL 30ESN (SPRAY NOZZLE HOUSING)
 P/N 009349 AVAILABLE FOR
 REPLACEMENT PARTS ONLY.

• These Parts Must Be Used As Sets. 25B,30E Only

Illus. No.	Part No.	Part Name	Qty/Assy				
			400H	400	44B	25B	30E
1	001492	Capscrew	4	4	4	4	4
2	004136	Cover — Control Valve	2	2	2	2	2
3	001519	Spring — Outer	2	2	2	2	2
4	007500	Spring — Inner	2	2	2	2	2
5	007505	Spool Assy — Control Valve	2	2	2	2	2
6	004205	Valve Assembly — Solenoid	1	1	1	1	1
*6	003433	Valve Assy-Solenoid	1	1	1	1	1
**7	002390	Harness — Solenoid	1	1	1	1	1
8	001081	Seal Ring — Upper	1	1	1	1	1
9	001082	Seal Ring — Center	1	1	1	1	1
10	001083	Seal Ring — Lower	1	1	1	1	1
11	009353	Nut — Hex Jam	2	2	2	2	2
12	009916	Set Screw				2	2
13	010249	Auto-Lash Assembly			2		

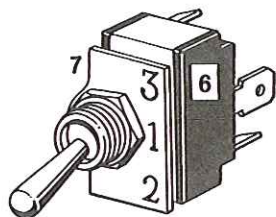
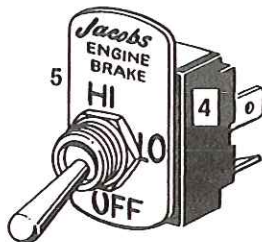
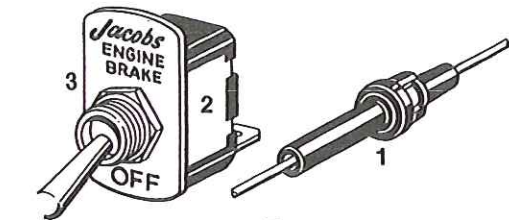
*For Dual Lead Appl. **Not Used With Dual Lead Appl.

Illus. No.	Part No.	Part Name	Qty/Assy				
			400H	400	44B	25B	30E
14	009329	Auto-Lash Assembly			2		
15	013197	Auto-Lash Assembly		2			
16	002299	Terminal Assembly	1	1*	1*	1*	1*
•17	001023	Ring — Retainer	2	2	2	2	2
•18	008895	Retainer — Spring	2	2	2	2	2
19	001022	Spring — Slave Piston	2	2	2	2	2
**20	007623	Piston — Slave	2	2	2	2	2
21	001030	Washer — Plain	2	2		2	2
22	010819	Retainer — Spring			2		
23	007447	Spring — Flat	2	2	2		2
24	011841	Spring — Flat				2	
25	007942	Master Piston—Pressure Relief			2		
26	004089	Master Piston—(3/4" Dia. Solid)	2	2			2
27	001017	Master Piston—(1/2" Dia. Solid)				2	

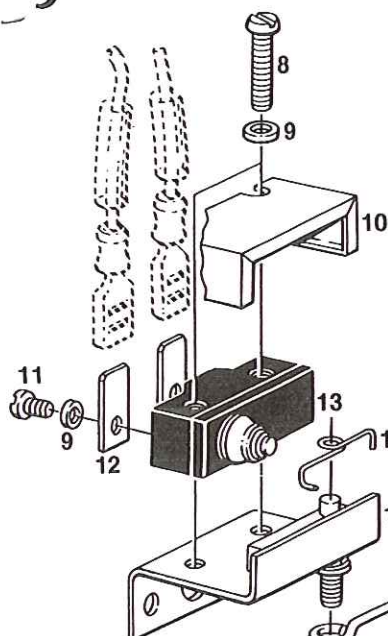
*Quantity is 2/Assy with Dual Lead Applications

**•Short Slave Piston PN007696

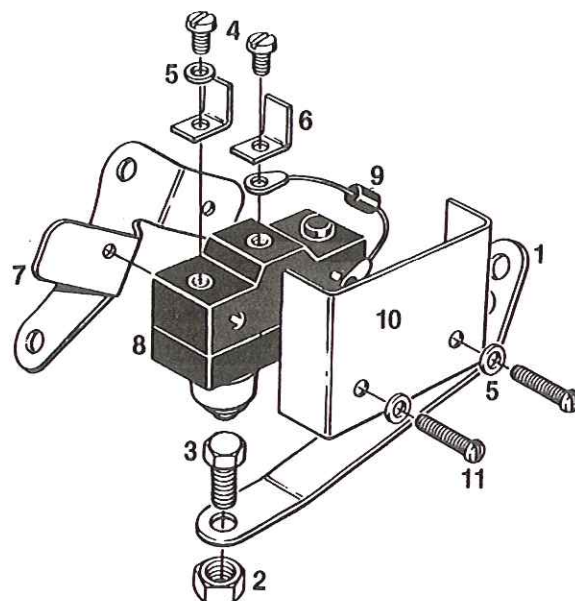
3776 SWITCH ASSEMBLY



2970 TOGGLE SWITCH GROUP



1495 CLUTCH SWITCH ASSEMBLY



002102, 002103, 010128, 010131 & 012665 ENGINE CONTROL GROUPS

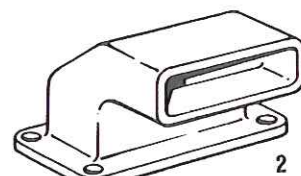
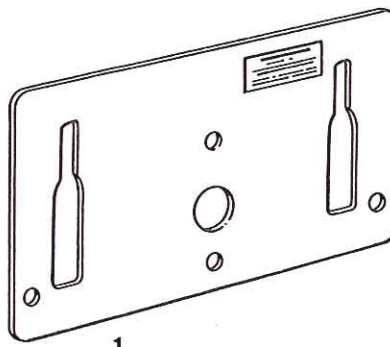
003965, 010132, CAB CONTROL GROUPS

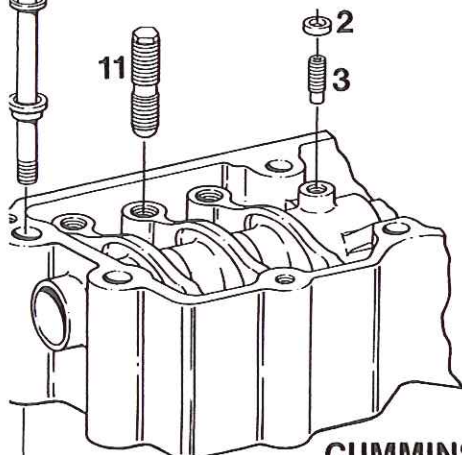
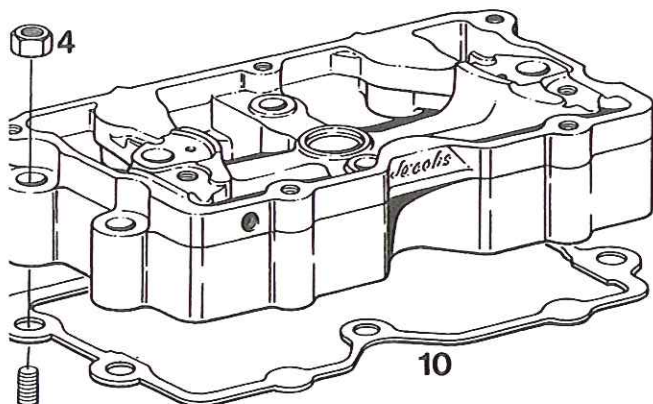
Illus. No.	Part No.	Part Name	Qty/Group	
			All Models	*Dual Lead Only
1	001300	Harness — Ign. to Dash	1	—
2	001304	Switch — Toggle Dash	1	—
3	001305	Plate	1	—
	003776	Switch Assembly — Dash	—	1
4	003586	• Switch — Toggle (3-Position)	—	1
5	003777	• Plate — Dash Switch	—	1
	002970	Switch Group — Toggle	1	—
6	002957	• Switch — Toggle (3-Position)	1	—
7	002959	• Plate — Dash Switch	1	—
	001495	Switch Assembly — Clutch	1	1
8	001244	• Screw — Tapping	2	2
9	001559	• Washer — Lock	4	4
10	001506	• Cover — Switch	1	1
11	001558	• Screw — Binder Head	2	2
12	001040	• Terminal	2	2
13	001218	• Switch	1	1
14	001497	• Spring — Actuating Lever	1	1
15	002198	• Bracket and Lever Assy	1	1
16	002183	• Rod — Switch Actuating	1	1
17	002190	• Washer — Flat	1	1
18	002186	• Nut — Hex	1	1
N.I.	003278	Receptacle	6	5
N.I.	003707	Tube — Shrink	6	6
N.I.	003781	Wire — Harness	1	1
N.I.	003780	Harness — Ign. to Clutch	—	1
N.I.	003807	Terminal — Spade	—	1
N.I.	003964	Wiring Diagram	1	—
N.I.	009972	Wiring Diagram	—	1
N.I.	006833	Tie — Cable	12	12

Illus. No.	Part No.	Part Name	Qty/Group				
			002102 Pos. Gnd.	002103 Neg. Gnd.	010128 Dual Pos.	010131 Lead Neg.	012665 Neg. Gnd.
1	001179	Arm — Actuator	1	1	1	1	1
2	001181	Nut — Hex	1	1	1	1	1
3	001182	Screw — Hex	1	1	1	1	1
	001219	Switch Assy	—	1	—	1	—
	002112	Switch Assy	1	—	1	—	—
	007671	Switch Assy	—	—	—	—	1
4	001558	• Screw	2	2	2	2	2
5	001559	• Lock Washer	3	3	3	3	3
6	001512	• Tab — Q-Disc.	2	2	2	2	2
7	001178	• Bracket	1	1	1	1	—
7	006796	• Bracket	—	—	—	—	1
8	001218	• Switch	1	1	1	1	1
9	001534	• Diode	1	1	1	1	1
10	001180	• Switch Cover	1	1	1	1	1
11	001244	• Screw	2	2	2	2	2
N.I.	003708	Shrink Tube	3	3	3	3	3
N.I.	002014	Receptacle	3	3	3	3	3
N.I.	003881	Harness	3	3	3	3	3
N.I.	001955	Harness	—	—	1	1	—
N.I.	003778	Loom	—	—	—	—	1

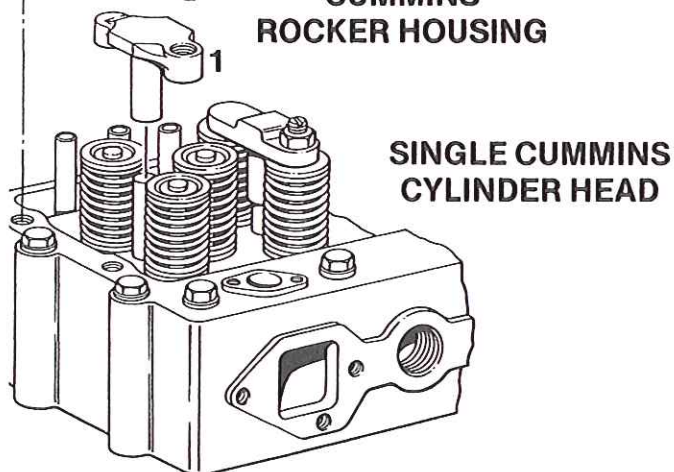
MISCELLANEOUS ACCESSORIES

Illus. No.	Part No.	Part Name	Qty/Eng.
1	001153	Gage—Exhaust Rocker Lever Grinding Fixture	1
2	001593	Air Intake Connection for Int'l. DC0405 Truck	1





**CUMMINS
ROCKER HOUSING**



**SINGLE CUMMINS
CYLINDER HEAD**

!663 HOUSING ATTACHING PARTS GROUP

One Group Per Brake Housing

Illus. No.	Part No.	Part Name	Qty/Group
1	011573	Cross Head — Exhaust Valve	2
2	010180	Seal Ring	1
3	002969	Screw — Oil Supply	1



STUD AND SPACER GROUPS

Illus. No.	Part Number	Part Name	Qty./6 Cyl. Eng. 012368	Qty./6 Cyl. Eng. 012372
4	001094	Nut—Hex	18	18
5	001234	Spacer (Use w/All Lift. Eyes)	4	10
6	013012	7 1/8" (181mm) Long Stud	12	8
7	001232	8 1/8" (206mm) long Stud (Use with Dual Head Lifting Eyes)	4	8
8	002514	Washer—Bearing	18	18
*9	002856	8 3/8" (219.07mm) Stud	2	2

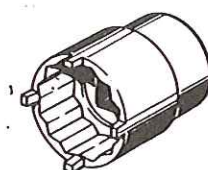
*Use with Compression Release Fan Support Bracket and Single Head Lifting Eye.

ENGINE CONVERSION PARTS

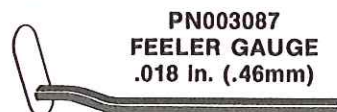
Illus. No.	Part No.	Part Name	Qty/6 Cyl. Eng.
10	013294	Gasket—Rocker Hsg. to Brake Hsg.	3
*11	001015	Screw Inj. Adj. 5/8"-18	6
*11	003678	Screw Inj. Adj. 1/2"-20 with Slot	6

* Select one to match engine parts

SERVICE TOOLS AND PARTS



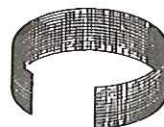
**PN 011494
SOLENOID
WRENCH**



**PN 003087
FEELER GAUGE
.018 In. (.46mm)**



**PN 001283 SOLENOID
SCREEN RETAINER**



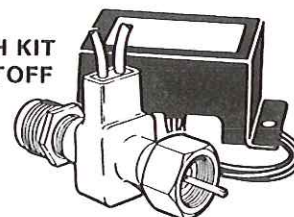
**PN 001282
SOLENOID
SCREEN**

CONTROL SYSTEM OPTIONS

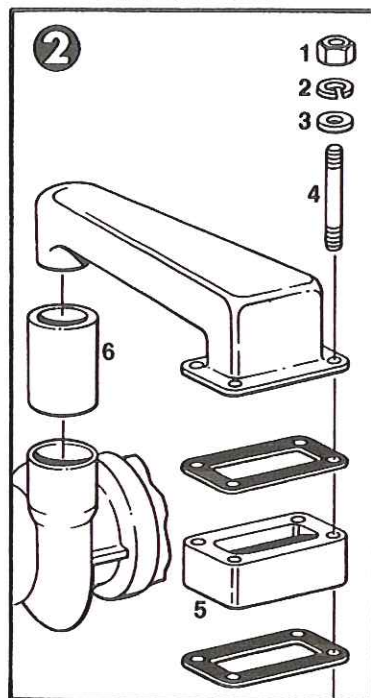


**PN 012260
FOOT SWITCH**

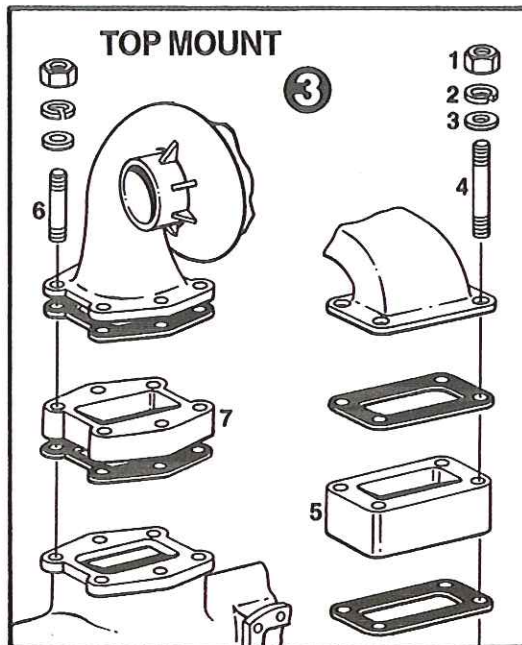
**PN 010489 SWITCH KIT
LOW SPEED SHUTOFF**



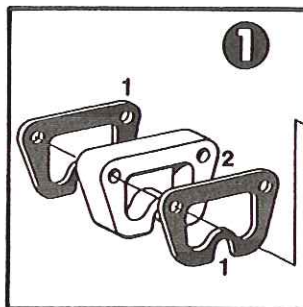
SIDE MOUNT



TOP MOUNT



MANIFOLD SPACER GROUPS



2359 SPACER KIT – OFFSET INT. MANIFOLD (For Use w/Cummins 177273 Air Int. Manifold)

Illus. No.	Part No.	Part Name	Qty/Kit
1	002357	Gasket—Manifold to Head	6
*2	002354	Spacer—Intake Manifold 1/2" Thick	3
3	002355	Cap Screw—Hex Head 3/8"-16x1 1/2" Long	6
N.I.	003624	Cap Screw—Hex Head 3/8"-16x2" Long	3

*If Air Compressor Governor interference occurs, use optional 5/8" thick spacer Part No. 2806

SPACER GROUP – AIR INTAKE MANIFOLD CONNECTION PART NO. 1271

(For Use on Cummins Side Mnt Turbochgrs)

Illus. No.	Part No.	Part Name	Qty/Group
1	001276	Nut—Hex (Air Intake Manifold Conn. Stud)	4
2	001275	Washer—Lock (Air Inlet Manifold Conn. Stud)	4
3	001274	Washer Plain (Air Inlet Manifold Conn. Stud)	4
4	001273	Stud—(Air Intake Manifold Connection)	4
*5	001226	Spacer—2 3/8" Thick (Air Inlet Manifold Conn.)	1
**6	001229	Air Outlet Conn. 3 3/8" I.D. (Used on T50, VT-50 or T-590 Turbocharger)	1
**6	001255	Air Outlet Conn. 3" I.D. Used on T-506 Turbocharger)	1

*Available Optional Spacers: 1 5/8" thick Part No. 1065, 1" thick Part No. 1714 and 1/2" thick Part No. 2805.

NOTE: If there is sufficient Engine Brake installation clearance

SPACER GROUP – AIR INTAKE MANIFOLD CONNECTION PART NO. 1271

(For Use on Cummins Top Mnt. Turbochgrs.)

Illus. No.	Part No.	Part Name	Qty/Group
1	001276	Nut—Hex (Air Inlet Manifold Conn. Stud)	4
2	001275	Washer—Lock (Air Inlet Manifold Conn. Stud)	4
3	001274	Washer—Plain (Air Inlet Manifold Conn. Stud)	4
4	001273	Stud (Air Intake Manifold Connection)	4
5	001226	Spacer—2 3/8" Thick (Air Int. Manifold Conn.)	1

Select One Exh. Manifold Spacer Group to Match Turbocharger.

1170 EXHAUST MANIFOLD SPACER GROUP (For Use w/T-50 & T-590 Top Mnt. Turbochgrs.)

Illus. No.	Part No.	Part Name	Qty/Group
6	001167	Stud (Turbocharger to Exhaust Manifold)	6
7	001165	Spacer (Turbocharger to Exhaust Manifold)	1

1171 EXHAUST MANIFOLD SPACER GROUP (For Use w/T-506 Top Mount Turbocharger)

Illus. No.	Part No.	Part Name	Qty/Group
6	001167	Stud (Turbocharger to Exhaust Manifold)	6
7	001166	Spacer (Turbocharger to Exhaust Manifold)	1

2947 EXH. MANIFOLD SPACER GP. (4 HOLE) (For Use w/VT-50 Top Mount Turbocharger)

Illus. No.	Part No.	Part Name	Qty/Group
6	002899	Stud (Turbocharger to Exhaust Manifold)	4
7	002898	Spacer (Turbocharger to Exhaust Manifold)	1

COMPRESSION RELEASE BELL CRANK

(With Fan Support Bracket)

3250 CONVERSION GROUP

(FOR ENGINES WITH 7/16" - 14 FAN SUPPORT BRACKET BOLTS
AND 12-POINT HEAD COMPRESSION RELEASE SHAFT)

Illus. No.	Part No.	Part Name	Qty/ Group
1	003252	Cap Screw — Hex Hd. 7/16" - 14	2
2	003251	Spacer — Fan Bracket	2
3	003286	Cap Screw — Hex Hd. 1/4" - 20	1
4	001030	Washer — Plain	1
5	003285	Support — Fan Bracket Brace	1
6	003254	Shaft — Compression Release (12-Pt. Hd.)	1
7	001235	Spacer — Compression Release, Lower Lever	1
8	001061	Roll Pin — Compression Release Lever	1

COMPRESSION RELEASE BELL CRANK

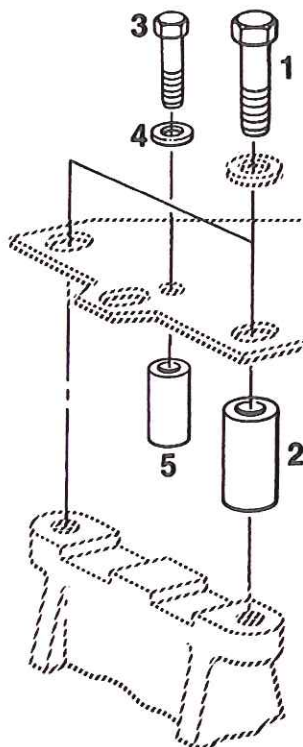
(With Fan Support Bracket)

2880 CONVERSION GROUP

(FOR ENGINES WITH 1/2" - 13 FAN SUPPORT BRACKET BOLTS
AND 12-POINT HEAD COMPRESSION RELEASE SHAFT)

1	001237	Cap Screw — Hex Hd. 1/2" - 13	2
2	001236	Spacer — Fan Bracket	2
6	003254	Shaft — Compression Release (12-Pt. Hd.)	1
7	001235	Spacer — Compression Release, Lower Lever	1
8	001061	Roll Pin — Compression Release Lever	1

COMPRESSION RELEASE BELL CRANK CONVERSION GROUPS



COMPRESSION RELEASE BELL CRANK

(With Fan Support Bracket)

2878 CONVERSION GROUP

(FOR ENGINES WITH 1/2" - 13 FAN SUPPORT BRACKET BOLTS
AND PLAIN HEAD COMPRESSION RELEASE SHAFT)

1	001237	Cap Screw — Hex Hd. 1/2" - 13	2
2	001236	Spacer — Fan Bracket	2
7	001235	Spacer — Compression Release, Lower Lever	1
8	001061	Roll Pin — Compression Release Lever	1
9	001233	Shaft — Compression Release (Plain Head)	1

5344 FAN BRACKET SPACER GROUP

Illus. No.	Part No.	Part Name	Qty/ Group
1	012647	Cap Screw - Hex Head	2
2	003251	Spacer - Fan Bracket	2

