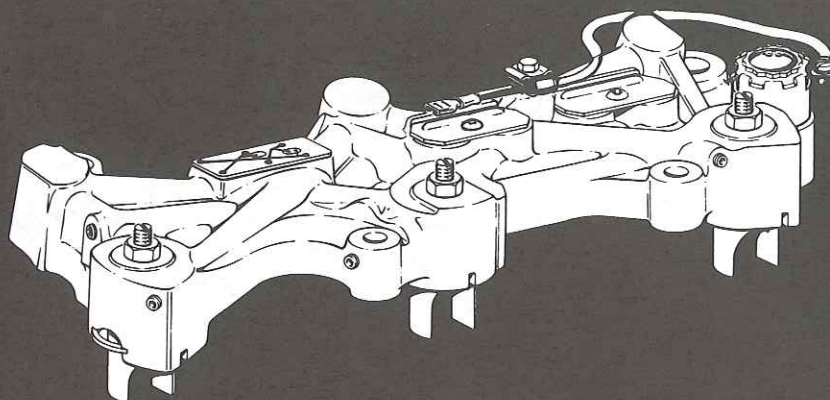




# Parts Manual for MODEL C-346B

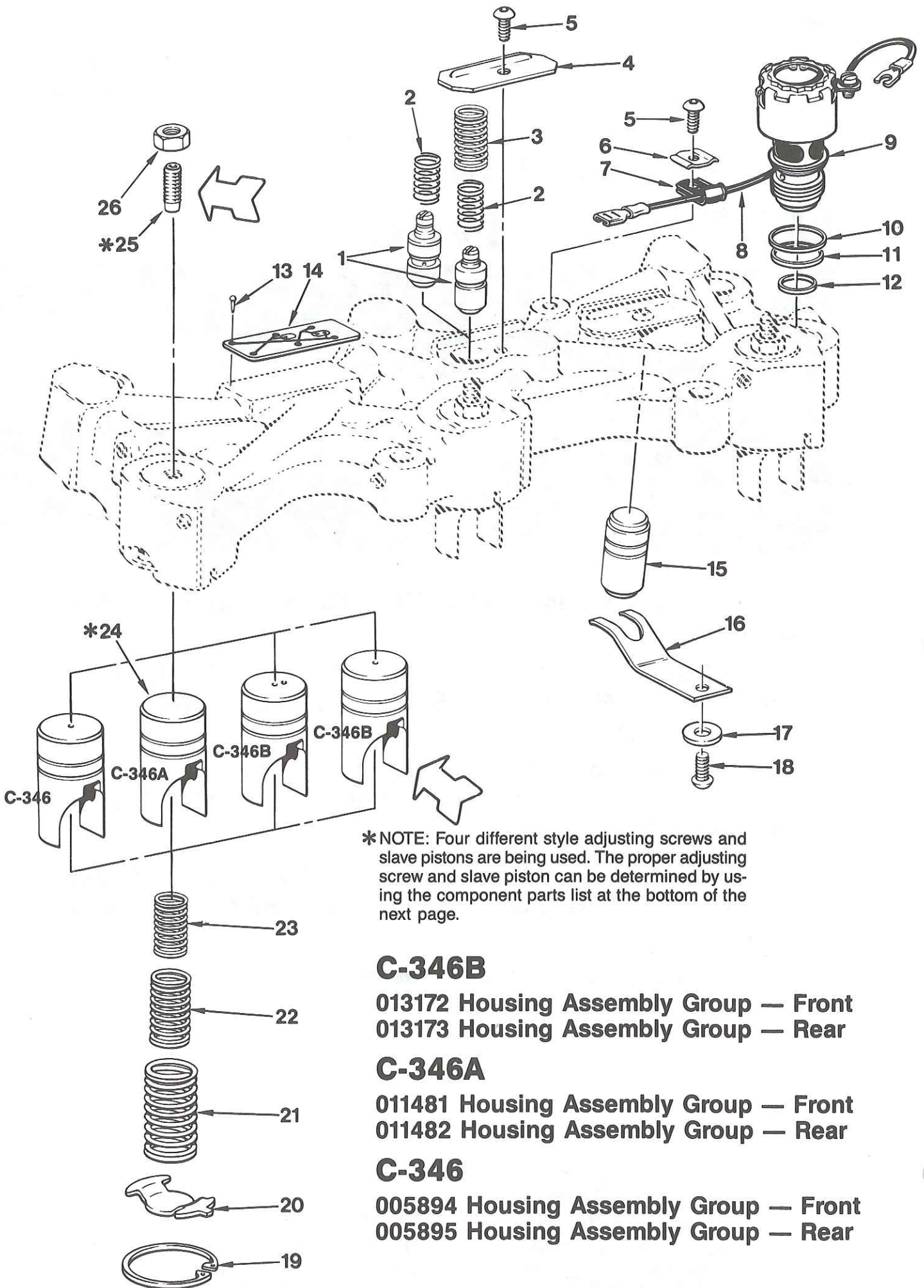
*Jacobs*<sup>®</sup>  
**ENGINE  
BRAKE**



- ALSO INCLUDES INFORMATION FOR MODELS C-346 & C-346A.
- THE MODEL C-346B IS DESIGNED AND APPROVED FOR USE ON BOTH THE CATERPILLAR 3406B AND 3406 TRUCK ENGINES.
- MODELS C-346A AND C-346 ARE DESIGNED FOR CATERPILLAR 3406 TRUCK ENGINES AND MUST NOT BE USED ON 3406B ENGINES.
- THE MODEL C-346B NOW REPLACES THE MODEL C-346 AND C-346A IN THE JACOBS ENGINE BRAKE PRODUCT LINE



*Jacobs* Vehicle  
Equipment Company  
22 East Dudley Town Road  
Bloomfield, CT 06002



**COMPONENT PARTS FOR HOUSING ASSEMBLY GROUPS  
FRONT OR REAR HOUSING**

Ill. No.	Part No.	Part Name	013172	011481	005894
			013173	011482	005895
			Qty/Per	Qty/Per	Qty/Per
			C-346B	C-346A	C-346
1	001521	Spool Assembly - Control Valve	3	3	
1	001200	Spool Assembly - Control Valve			3
2	011435	Spring - Inner (Control Valve)	3	3	
2	001518	Spring - Control Valve			3
3	011434	Spring - Stop (Control Valve)	3	3	
4	001189	Cover - Control Valve	2	2	2
5	001722	Buttonhead Screw	2	2	2
	<b>007670</b>	<b>HARNES GROUP</b>	<b>1</b>	<b>1</b>	<b>1</b>
5	001722	•Buttonhead Screw	1	1	1
6	001508	•D-Washer	1	1	1
7	002408	•Clamp	1	1	1
8	007450	•Wire - Solenoid Harness	1	1	1
9	008674	Valve - Solenoid (Replaces 004205)	1	1	1
10	001081	Seal - Upper	1	1	1
11	001082	Seal - Center	1	1	1
12	001083	Seal - Lower	1	1	1
13	002039	Screw - Drive	2		
13	009155	Screw - Drive		2	2
14	009158	Flow Plate - Front		1	1
14	009159	Flow Plate - Rear		1	1
14	012577	Flow Plate - Front	1		
14	012578	Flow Plate - Rear	1		
15	005612	Piston - Master	3	3	3
16	013158	Spring - Flat (Replaces 006862)	3	3	3
17	001030	Washer	3	3	3
18	003790	Buttonhead Screw	3	3	3
19	005611	Ring - Retaining	3	3	3
20	005610	Retainer - Spring	3	3	3
21	007833	Spring - Outer (Slave Piston)	3	3	3
22	007832	Spring - Center (Slave Piston)	3	3	3
23	011433	Spring - Inner (Slave Piston) Repl. 006789	3	3	3
24	013169	Piston - Slave (Top surface - 2 holes)	*3		
24	011484	Piston - Slave (Top surface - no holes)	3		
24	010830	Piston - Slave (Top surface - 1 hole)	**3		3
25	013177	Screw Assembly (Spring loaded plunger)	*3		
25	001031	Screw - Adjusting (Solid screw)		3	
25	013745	Screw Assembly (Replaces 007763) (Spring loaded plunger with slotted face)	**3		
26	001026	Nut - Hex	3	3	3

**INFORMATION ON SLAVE PISTON ADJUSTING SCREWS AND SLAVE PISTONS**

**IMPORTANT!** The correct screw assembly to use in your engine brake depends on the slave piston design. The proper parts for the C-346 and C-346A engine brakes can be determined from the component parts list above.

C-346B engine brakes contain two different slave piston/screw assembly designs. The proper replacement parts can be determined from the engine brake serial numbers and from the component parts list above.

\* Part used in C-346B Engine Brakes prior to serial number 360079.

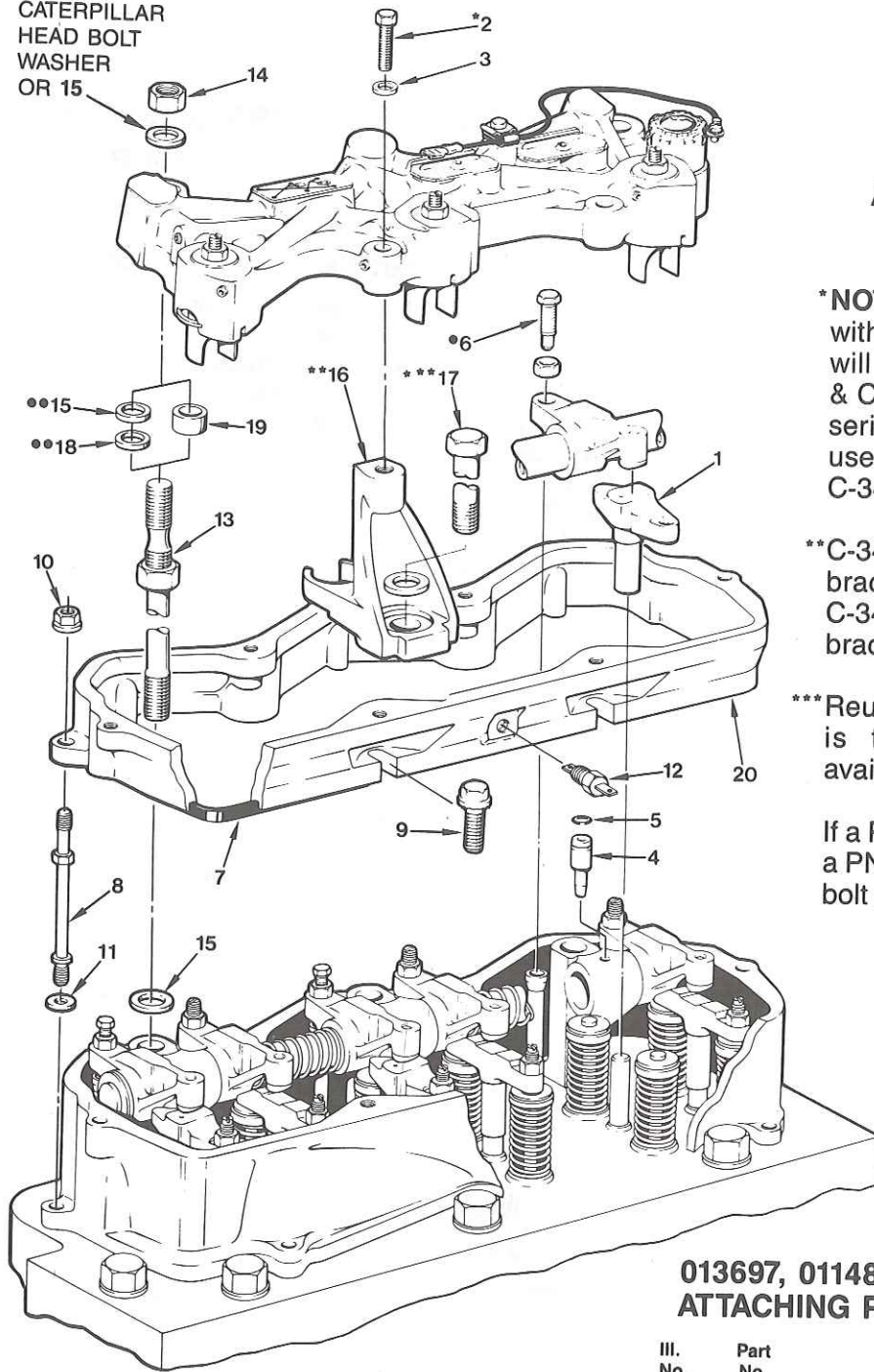
\*\* Part used in C-346B Engine Brakes Beginning with serial number 360079.

**NOTES:** C-346A housings have the letter "A" marked in the casting next to or on the flow plate. C-346B housings are marked on the flow plate.

Model C-346 or C-346A housings can be upfitted to C-346B housings by changing the different parts as noted. When replacing a Model C-346 housing with C-346A or a C-346A housing with a C-346B, the other housing, front or rear should be updated to the same model parts list.

Stamp the model revision letter "A" or "B" on the flow plate after upfitting a housing assembly.

CATERPILLAR  
HEAD BOLT  
WASHER  
OR 15



**013697, 011483 and 005896  
ATTACHING PARTS GROUPS  
(Two Groups per Kit)**

**\*NOTE:** C-346 Engine Brake Housings with serial numbers up through A272883 will use PN 008894 Capscrews. C-346 & C-346A Engine Brake Housings with serial numbers A272884 and larger will use PN 011852 Capscrews as will C-346B Engine Brake Housings

**\*\*C-346 installations use two support brackets per housing. C-346A and C-346B installations use one support bracket per housing.**

**\*\*\*Reuse engine bolt. PN 011932 bracket is the only replacement bracket available.**

If a PN 011932 bracket is used to replace a PN 006894 bracket, a Caterpillar head bolt must be used instead of PN 006882

**013697, 011483 and 005896  
ATTACHING PARTS GROUPS**

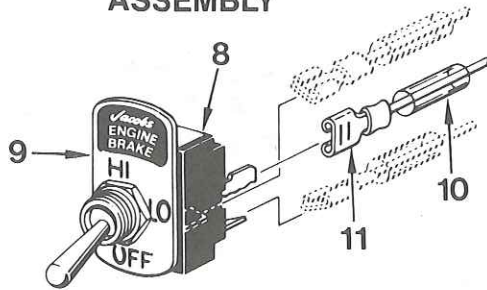
C-346B PN 013697 Qty/Grp	C-346A PN 011483 Qty/Grp		C-346 PN 005896 Qty/Grp
	↓	↓	
3	3	3	3
1	1	2	2
1	1	2	2
1	1	1	1
1	1	1	1
3	3	3	3
1	1	1	1
4	4	4	4
2	2	2	2
4	4	4	4
4	4	4	4
1	1	1	1
2	2	2	2
2	2	2	2
2	2	2	2
2	4	4	4
2	1	2	2
1	1	2	2
4	4	4	4
2	2	2	2
1	1	1	1

Ill. No.	Part No.	Part Name
1	013525	Bridge (Replaces 010831)
*2	011852	Capscrew - Hex Head
3	006788	Washer - Support
4	005647	Adapter - Oil Supply
5	002411	O-ring
*6	012810	Screw - Adjusting
7	005639	Seal
8	011470	Stud - Spacer Mount
9	005653	Screw - Serrated
10	005654	Nut - Serrated
11	005656	Washer - Plain
12	002299	Terminal Assy
13	013694	Stud - Mounting Replaces 005625 & 011471
14	013094	Nut - Holddown
**15	013695	Washer - Marked 'A'
**16	006849	Bracket - Support
***16	011932	Bracket - Support
17	006882	Bolt - Hex
**18	006837	Shim - Laminated
**19	013696	Spacer - Marked 'B'
20	005602	Spacer

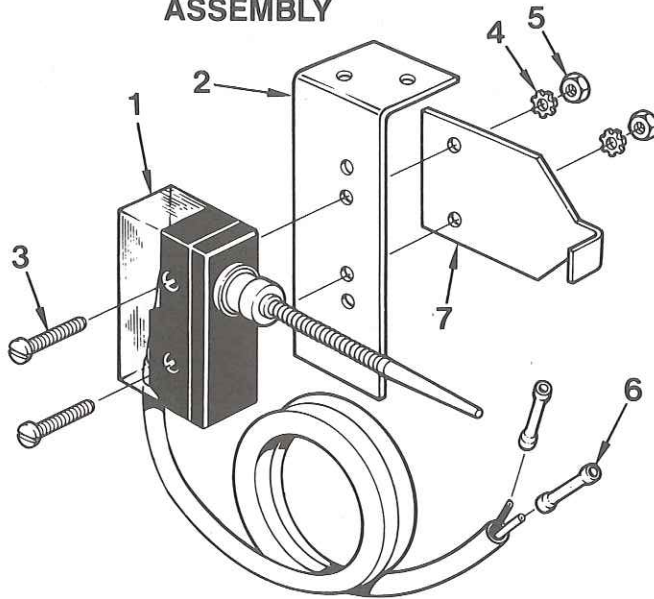
• Use Master Piston Spring, PN 013158, whenever PN 012810 Adjusting Screw is used. PN 012810 Adjusting Screw replaces PN 012695.

•• 3406B engines prior to serial number 7FB39279 **MUST** use (8) PN 006837 shims and (4) PN 013695 washers in place of the 4 spacers, PN013696. C346B Engine Brakes prior to serial number 360079 **MUST ALSO** use these shims and washers. The Shim and Washer Group, PN 013677, can be ordered to provide the necessary parts to sufficiently install both engine brake housings.

**003776 DASH SWITCH ASSEMBLY**



**012261 CLUTCH SWITCH ASSEMBLY**



**MODELS C-346, C-346A & C-346B  
005898 CAB CONTROL GROUP**

III. No.	Part No.	Part Name	Qty/Grp
	<b>012261</b>	<b>Switch Assembly - Clutch</b>	<b>1</b>
1	012246	•Clutch Switch	1
2	012269	•Switch Mount Bracket	1
3	005377	•Pan Head Screw	2
4	005378	•Lockwasher	2
5	003306	•Hex Nut	2
6	013078	•Butt Splice	2
*7	012262	•Overtravel Bracket	1
NI	013674	•Instruction Sheet	1
	<b>003776</b>	<b>Switch Assy - Dash</b>	<b>1</b>
8	003586	•Switch - Toggle	1
9	003777	•Plate - Dash	1
10	003707	Shrink Tube	1
11	002014	Receptacle	2
NI	007221	Harness	1
NI	003780	Harness	1
NI	005660	Diagram - Wiring	1
NI	006833	Tie - Cable	12
NI	003708	Shrink Tube	2

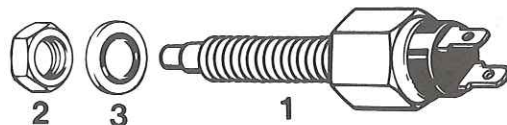
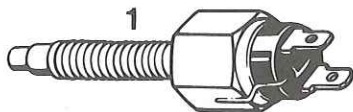
\* Optional item not included in group.

**MODEL C-346B  
Used on 3406B Engine only  
013178 ENGINE CONTROL GROUP**

III. No.	Part No.	Part Name	Qty/Grp
	<b>013179</b>	<b>Switch Group</b>	<b>1</b>
*1	012889	•Switch - Internal	1
NI	003881	Harness	2
NI	003708	Shrink Tube	2
NI	002014	Receptacle	2
NI	003778	Loom - Auto	1

**MODEL C-346 & C-346A  
Use on 3406 engine only  
005897 ENGINE CONTROL GROUP**

III. No.	Part No.	Part Name	Qty/Grp
	<b>012291</b>	<b>Switch Group</b>	<b>1</b>
*1	008920	•Switch - Internal	1
2	001713	•Nut - Hex	1
3	012290	•Seal	1
NI	003881	Harness	2
NI	003708	Shrink Tube	2
NI	002014	Receptacle	2
NI	003778	Loom - Auto	1



\*NOTE: PN 008920 and 012889 are NOT interchangeable.

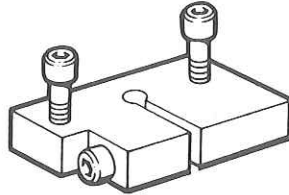
# SERVICE TOOLS AND PARTS

## 011724 FUEL LINE PROTECTION KIT (NOT SHOWN)

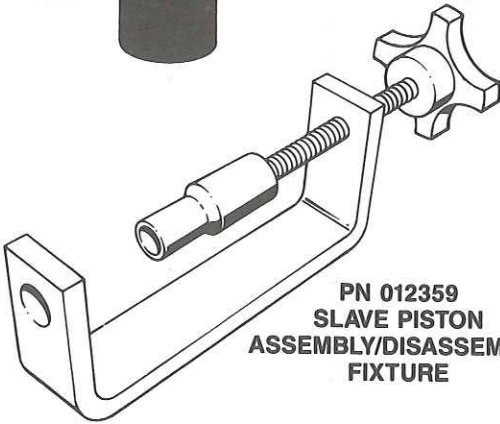
Part No.	Name	Qty
008022	Poly Bag	1
008884	Cap	6
008885	Plug	6
008522	Poly Bag	1



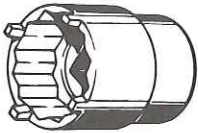
**PN 011722  
OIL BREATHER  
PIPE EXTENSION  
HOSE**



**PN 007397  
DOWEL PIN  
EXTRACTOR**

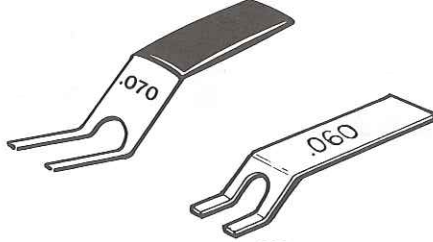


**PN 012359  
SLAVE PISTON  
ASSEMBLY/DISASSEMBLY  
FIXTURE**



**PN 011494  
SOLENOID  
WRENCH**

(For old style Solenoid, PN 004205)



**PN 013184  
.070 FEELER GAUGE**

**PN 007446  
.060 FEELER GAUGE**

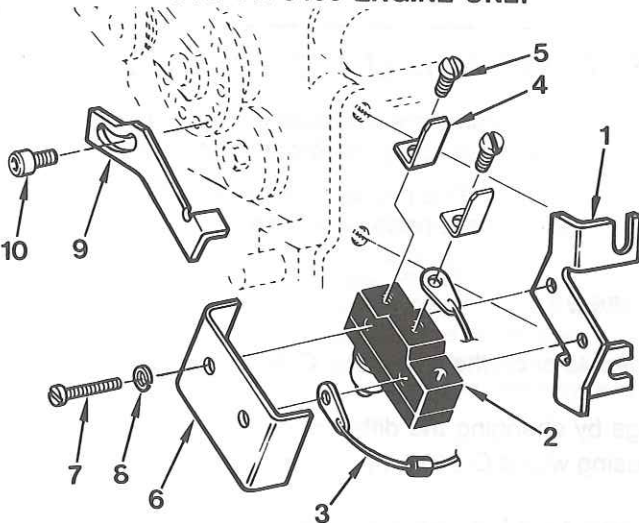


**PN 001282  
SOLENOID  
SCREEN**

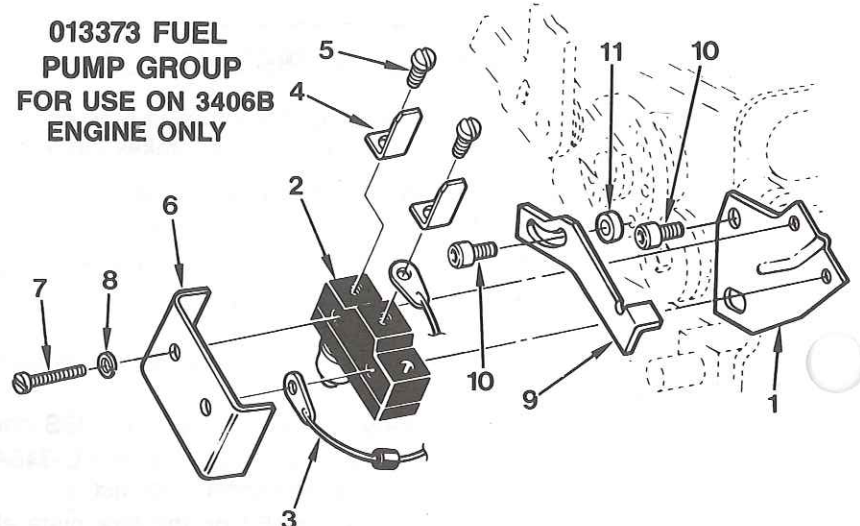


**PN 001283 SOLENOID  
SCREEN RETAINER**

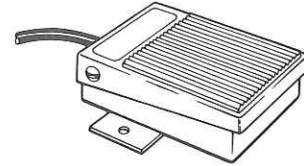
### 012609 FUEL PUMP GROUP FOR USE ON 3406 ENGINE ONLY



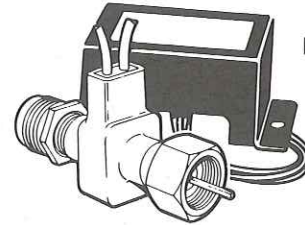
### 013373 FUEL PUMP GROUP FOR USE ON 3406B ENGINE ONLY



# CONTROL SYSTEM OPTIONS



**PN 012260  
FOOT SWITCH**



**PN 010489 LOW SPEED  
SHUTOFF SWITCH KIT**

### PN 012609 FUEL PUMP GROUP

III. No.	Part No.	Part Name	Qty/Grp
	<b>005666</b>	<b>Switch Assy - Fuel Pump</b>	<b>1</b>
1	005663	•Bracket	1
2	001218	•Switch	1
3	001534	•Diode	1
4	001512	•Tab	2
5	001558	•Screw - Binder Head	2
6	001180	•Cover - Switch	1
7	001244	•Screw - Tapping	2
8	001559	•Washer - Lock	2
9	005648	Lever - Switch	1
10	001569	Cap Screw - Socket	2

### PN 013373 FUEL PUMP GROUP

III. No.	Part No.	Part Name	Qty/Grp
	<b>013374</b>	<b>Switch Assy - Fuel Pump</b>	<b>1</b>
1	013371	•Bracket	1
2	001218	•Switch	1
3	001534	•Diode	1
4	001512	•Tab	2
5	001558	•Screw - Binder Head	2
6	001180	•Cover - Switch	1
7	001244	•Screw - Tapping	2
8	001559	•Washer - Lock	2
9	005648	Lever - Switch	1
10	001265	Cap Screw - Socket	4
11	013372	Spacer	2