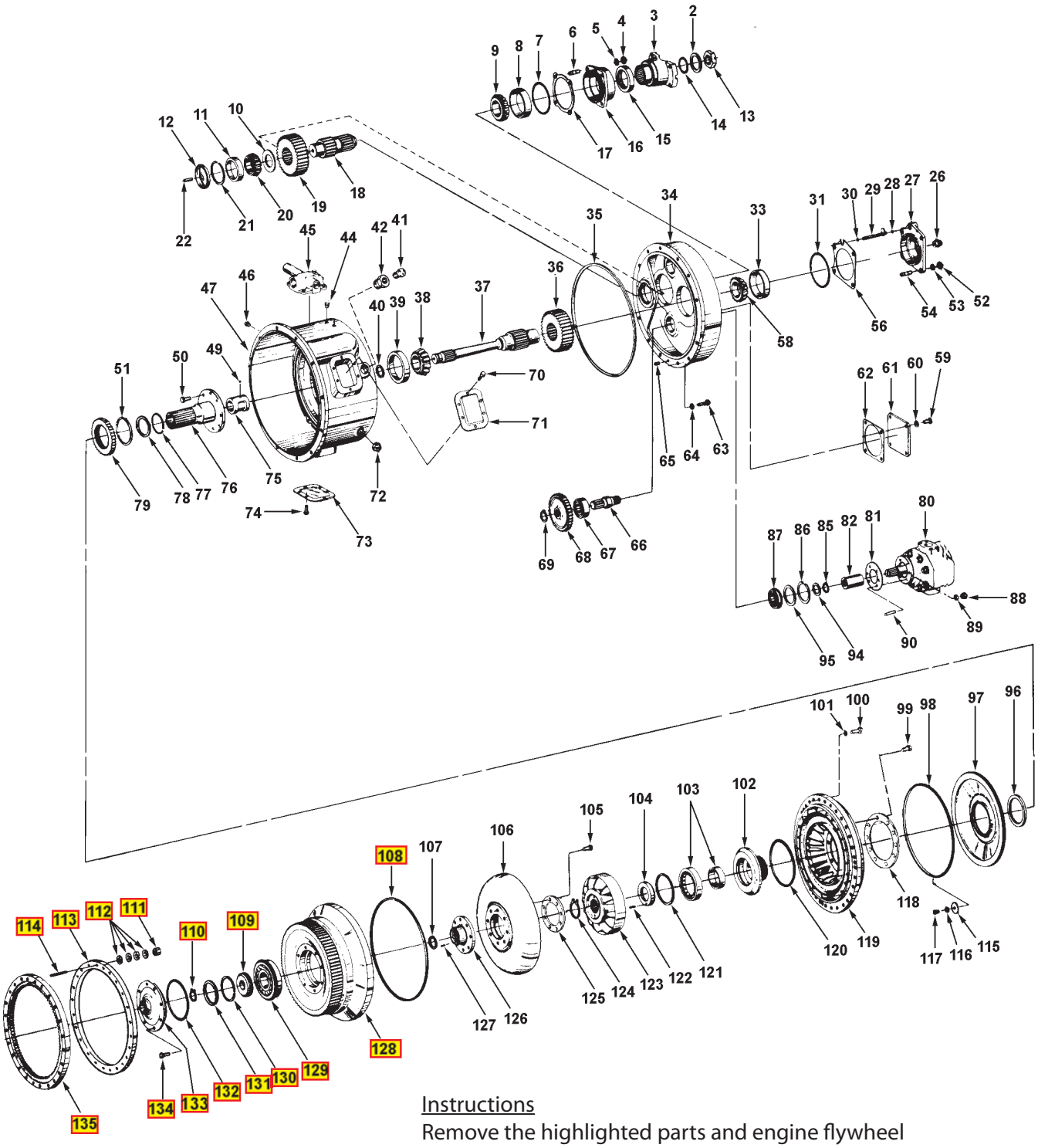
Allied Systems COMPANY

Flexplate Conversion Installation Instructions

For all Wagner units using Clark 8000 torque converter.

Use the following instructions for modifying your ring gear torque converter to a flexplate torque converter.

If you have any questions, please feel free to contact the Allied Systems Company service or service parts department and reference this service form (503) 625-2560.



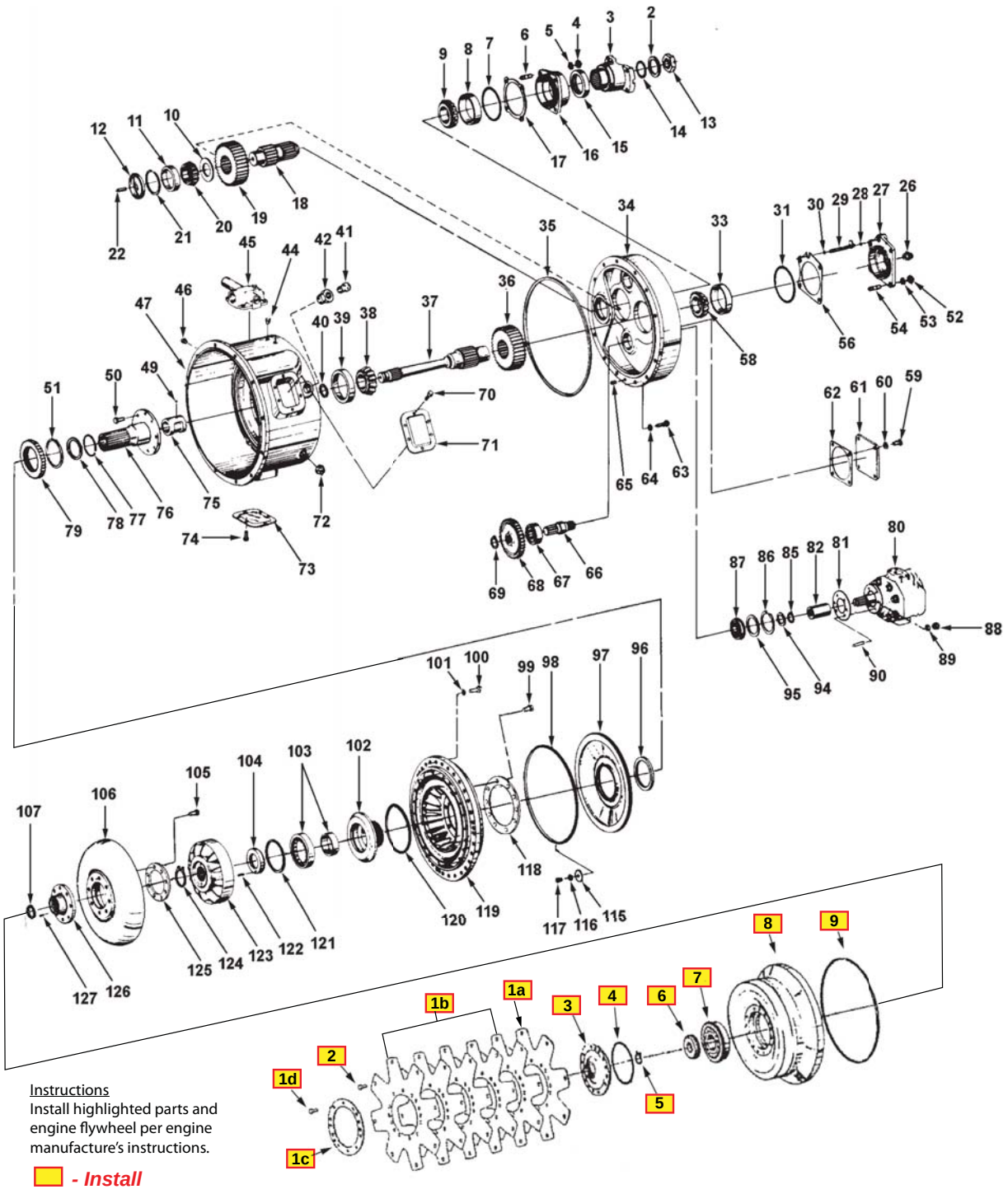
Instructions

Remove the highlighted parts and engine flywheel per engine manufacture's intstuctions.

- Remove

Item		Part No.	Qty	Description
		248962		**Converter**
2		212254	1	. Washer
3		212252	1	. Flange, Output
4		234217	4	. Nut
5		200604	4	. Lockwasher
6		212440	4	. Stud
7	*a	236877	1	. O-Ring
8		236878	1	. Bearing Cup, Rear
9		236879	1	. Bearing Cone, Rear
10		212433	1	. Bearing Spacer, Front
11		212432	1	. Bearing Cup, Front
12		212431	1	. Oil Baffle
13		201250	1	. Nut
14	*a	236880	1	. O-Ring
15	*a	212250	1	. Oil Seal
16		214844	1	. Bearing Cap
17		212443	A/R	. Shim, Bearing Cap, .004
17A		212444	A/R	. Shim, Bearing Cap, .007
17B		212445	A/R	. Shim, Bearing Cap, .010
18		212446	1	. Shaft, Output
19		222324	1	. Shaft Gear, Output
20		212448	1	. Bearing Cone, Front
21		212450	1	. Snap Ring, Front Bearing
22		212451	1	. Oil Tube
26		209916	1	. Plug, Pipe
27		212455	1	. Bearing Cap
28	*a	212456	1	. O-Ring
29		212457	1	. Lube Tube
30	*a	212456	1	. O-Ring
31	*a	26273	1	. O-Ring
33		236878	1	. Bearing Cup
34		227811	1	. Cover, Housing Rear
35	*a	212460	1	. O-Ring
36		222323	1	. Gear, Turbine Shaft
37		222445	1	. Turbine Shaft
38		212469	1	. Bearing Cone
39		212470	1	. Bearing Cup
40	*a	242390	1	. Piston Ring
41		R233598	1	. Breather
42		209510	1	. Reducing Bushing
44		209512	1	. Plug, Pipe
45		212545	1	. Pressure Regulating Valve (See Pg 4)
46		222444	1	. Housing, Converter
47		209511	1	. Plug, Pipe
49		212358	1	. Ball
50		237295	8	. Capscrew
51		212472	1	. Snap Ring, Gear
52		234217	4	. Nut
53		200604	4	. Lockwasher
54		212440	4	. Stud
56		212482	A/R	. Bearing Cap Shim, .004
56A		212483	A/R	. Bearing Cap Shim, .007
56B		212484	A/R	. Bearing Cap Shim, .010
58		236879	1	. Bearing Cone
61		212492	2	. Cover
63		214234	12	. Screw
64		219344	12	. Lockwasher
65		212486	1	. Dowel Pin
66		234901	3	. Pump Drive Shaft
67		212489	3	. Bearing, Pump Shaft Front
68		234902	3	. Gear
69		234564	3	. Snap Ring
70		200303	2	. Capscrew
70A		200602	2	. Lockwasher
71		212477	1	. Cover, Housing Inspection
72		222448	4	. Plug, Drain
73		212477	2	. Cover, Housing Inspection
74		200303	4	. Capscrew
74A		200602	4	. Lockwasher
75		212475	1	. Sleeve, Oil Distributor
76		212474	1	. Sleeve Assembly, Stator Support
77	*a	222446	1	. Piston Ring
79		234904	1	. Gear, Oil Pump Drive
80	*c	222452	1	. Pump, Converter Charging
81	*a	R235961	1	. Gasket, Charging Pump
82		539968	1	. Pump Sleeve With Snap Ring
85		212494	3	. Snap Ring
86		212493	3	. Snap Ring
87		234905	3	. Bearing, Pump Shaft Rear
87A		234903	3	. Spacer
88		223453	6	. Nut
89		201567	6	. Lockwasher
90		233078	6	. Stud
94		212499	3	. Washer, Rear Bearing
95		212500	3	. Washer, Rear Bearing
96	*a	222453	1	. Oil Seal
97		212502	1	. Oil Baffle
98	*a	212530	1	. O-Ring
99		233079	16	. Screw, Impeller Hub
100		222416	32	. Screw
101		200603	32	. Lockwasher
102		236078	1	. Hub, Impeller
103		212506	1	. Bearing
104		212507	1	. Spacer, Reaction Member
105		233081	8	. Screw, Turbine Hub
106		241474	1	. Turbine
107		212511	1	. Snap Ring
108	*a	214760	1	. O-Ring
109		212513	1	. Retainer, Bearing
110		212514	1	. Snap Ring
111	*b*d	NSS	24	. Nut
112	*b*d	NSS	96	. Washer, Belleville
113		217598	1	. Plate, Backing
114	*b*d	NSS	24	. Stud
115		212531	3	. Washer
116		00114606	3	. Lockwasher
117		00171837	3	. Screw
118		236079	1	. Backing Ring
119		241553	1	. Impeller
120	*a	212528	1	. O-Ring, Impeller Hub
121		212527	1	. Snap Ring
122		212526	1	. Pin, Spacer Roll
123		212525	1	. Reaction Member
124		212283	1	. Snap Ring
125		233084	1	. Ring, Backing
126	*c	212524	1	. Hub, Turbine
127		212523	2	. Dowel Pin
128		212522	1	. Cover, Impeller
129		212521	1	. Bearing, Front
132	*a	212515	1	. O-Ring
133		212519	1	. Cap, Impeller Cover
134		212518	8	. Capscrew
135	*b*c*d	570775	1	. Ring Gear Kit
136		R221391	1	. Nameplate (Not Shown)
137		212535	2	. Nameplate Screw (Not Shown)

A/R As Required
NSS Not Sold Separately
*a Service Kit Number 570774
*b Ring Gear Kit (Item 135) includes Items 111, 112, & 114.
*c These items differ on units with steel gear installation. See Converter Steel Gear Installation and Power Unit pages for details.
*d Ring Gear Kit (Item 135) is not included in Converter 248962. Order Kit separately.



Position drive plate and weld nut assembly (item 1a) on impeller cover (item 8) with weld nuts toward cover. Align intermediate drive plate and backing ring with holes in impeller cover (items 1a,1b,1c and 8). NOTE: Two dimples 180° apart in backing ring (item 1c) must be out (toward engine flywheel). Install capscrews (item 1d). Torque capscrews 52-57 ft-lbs [70.4 - 77.1 N.m].

NOTE: Assembly of flexplates must be completed within a 15 minute period from start of screw installation. If the screw (item 1d) is removed for any reason it must be replaced. The adhesive left in the tapped holes must be removed with proper tap and cleaned with solvent. Dry the hole thoroughly and use new screw for reinstallation.

See page 6 for converter installation instructions.

Item	Part No.	Qty	Description
	589716		**Kit; Flexplate Conversion F/CAT**
1	257100	1	.Kit; Flexplate, 16"
1a	NSS	1	. . Drive Plate and Weld Nut Assy
1b	257103	5	. . Plate, Drive
1c	256300	1	. . Ring, Backing
1d	256303	14	. . Capscrew, Locking
2	257167	8	. Capscrew, Socket Head
3	257363	1	. Cap, Bearing
4	212515	1	. O-Ring
5	212514	1	. Ring, Snap
6	240541	1	. Retainer, Bearing
7	212521	1	. Bearing
8	257362	1	. Cover, Impeller
9	214760	1	. O-Ring
10	R13811432	12	. Washer
11	R13806770	6	. Nut
12	586603	6	. Stud
13	R13811059	6	. Capscrew
14	*a 80-900	1	. Converter C8000 Service Manual
15	*a 80-1031	1	. Flexplate Conversion Instruction
16	*a,*b - - - - -	1	Flywheel
17	*a,*b - - - - -	1	adapter-flywheel housing

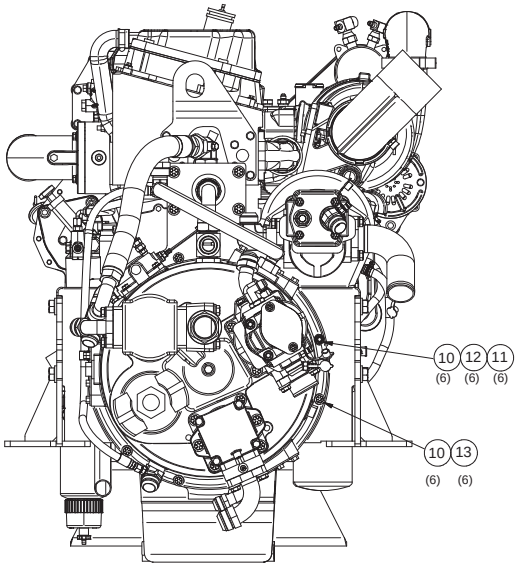
Item	Part No.	Qty	Description
	589717		**Kit; Flexplate Conversion F/Cummins**
1	257099	1	. Kit; Flexplate, 17"
1a	NSS	1	. . Drive Plate W/Weld Nut Assy
1b	257101	5	. . Plate, Drive
1c	256300	1	. . Ring, Backing
1d	256303	14	. . Capscrew, Locking
2	257167	8	. Capscrew, Socket Head
3	257363	1	. Cap, Bearing
4	212515	1	. O-Ring
5	212514	1	. Ring, Snap
6	240541	1	. Retainer, Bearing
7	212521	1	. Bearing
8	257362	1	. Cover, Impeller
9	214760	1	. O-Ring
10	R13801834	12	. Capscrew
11	201568	12	. Washer, Lock
12	*a 80-900	1	. Converter C8000 Service Manual
13	*a 80-1031	1	. Flexplate Conversion Instruction
14	*a,*b - - - - - -	1	Flywheel

*a Not Illustrated
*b Contact engine manufacturer to order parts and service instructions.

For CAT: Specify the flywheel should fit a SAE #1 flywheel housing and 16” flexplate.

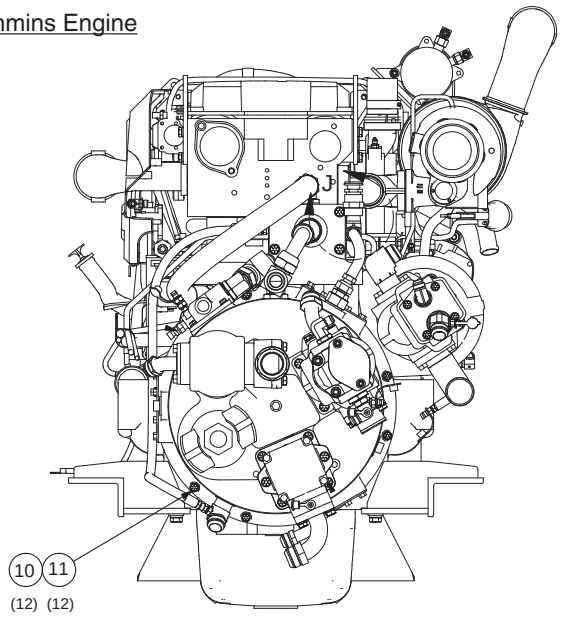
For Cummins: Specify the flywheel should fit a SAE #1 flywheel housing and 17” flexplate.

CAT Engine



Note: Capscrew and stud location may be different on your converter to CAT engine installation.

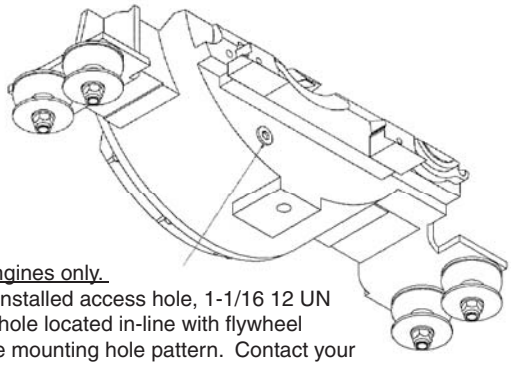
Cummins Engine



1. Remove all burrs from flywheel mounting face and nose pilot bore. Clean drive plate surface with solvent. Dry thouroughly.
2. Check engine flywheel and housing for conformance to standard S.A.E. #1 - S.A.E J-927 and J-1033 tolerance specifications for pilot bore size, pilot bore runout and mounting face flatness. Measure and record engine crankshaft end play.
3. Install two 3.50 [88,90 mm] long converter to flywheel housing guide studs in the engine flywheel housing as shown. Rotate the engine flywheel to align a drive plate mounting screw hole with the flywheel housing access hole.
4. Install a 4.00 [101,60 mm] long drive plate locating stud in a drive plate nut. Align the locating stud in the drive plate with the flywheel drive plate mounting screw hole positioned in Step No. 3.
5. Locate converter on flywheel housing aligning drive plate to flywheel and converter to flywheel housing.

   Install converter to flywheel housing screws. Tighten screws to specified torque. Remove converter to engine guide studs. Install remaining screws and tighten to specified torque.
6. Remove drive plate locating stud.

* 7. Install drive plate attaching screw. Snug screw but **do not tighten.** Some engine flywheel housings have a hole located on the flywheel housing circumference in line with the drive plate screw access hole. A screwdriver or pry bar used to hold the drive plate against the flywheel will facilitate installation of the drive plate screws. Rotate the engine flywheel and install the remaining seven (7) flywheel to drive plate attaching screws. Snug screws but do not tighten. After all eight (8) screws are installed, tighten each capscrew to the following torque- 7/16 capscrew 58-64 ft. lbs torque [78-86 N.m]:M-10 capscrews 48-55 ft. lbs torque [65-75 N.m]. This will require rotating the engine flywheel until the full amount of eight (8) screws have been tightened.
8. Measure engine crankshaft end play after converter has been completely installed on engine flywheel. This value must be within .001 [0,025 mm] of the end play recorded in Step No. 2.



* Cat engines only.
Dealer installed access hole, 1-1/16 12 UN tapped hole located in-line with flywheel flexplate mounting hole pattern. Contact your local CAT dealer if your flywheel housing does not have this access hole.

Note: Your flywheel housing access hole may vary.

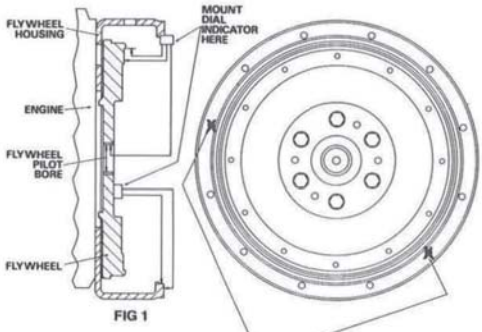


FIG 1

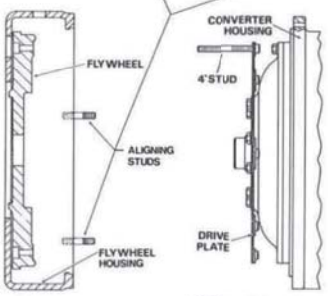


FIG 2

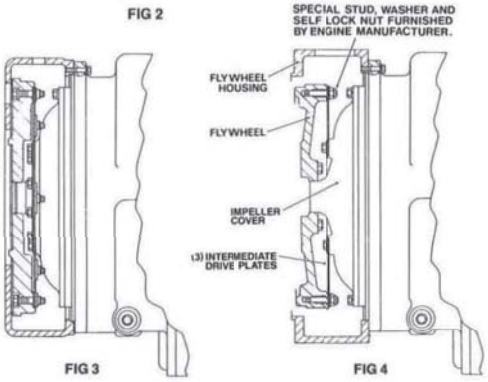


FIG 3 FIG 4