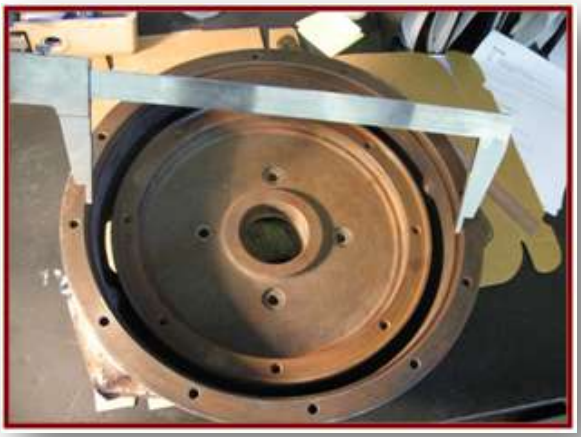
MER EQUIPMENT

Installing Generator Ends

These instructions will help you correctly install generators to diesel engines.

Note: When installing a generator to a used engine, remove the flywheel and visually inspect the rear crankshaft seal for any sign of oil leakage, and replace the seal if needed. After replacement of the flywheel, check it with dial indicator to insure it is installed correctly and running true.

Be sure to verify that the flywheel and flywheel housing are the same SAE size as the drive face of the generator you are installing. To verify, measure the depth of the “g” dimension on the flywheel and the drive end of the generator.



Next, measure the “B” dimension of the flywheel housing and compare it to the

corresponding boss on the drive end of the generator.

Larger generators use more bolts to retain the generator and smaller generators use less bolts, as shown below. (See the charts at the back of this document to find sizing measurements.)

If the generator drive plates are the wrong size, they must be switched with the right size, according to the following directions.

When drive plates require a change, the front housing adapter on the generator will, most often, need to be replaced as well.

Notice the smaller Marathon generator adapter above, on the left

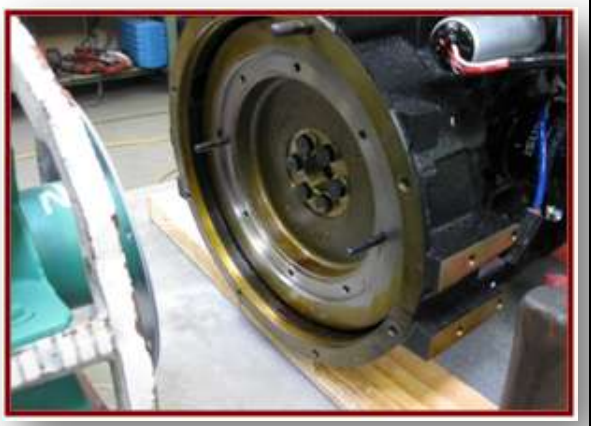
Every generator maker has a method for attaching the front adapter to the generator. In the case of this Marathon unit, there is a clever system of dogs that allow quick adapter change.

All it takes to bolt on the adapter is replacement of the dogs and their bolts after the new adapter is in place.

Note: In some instances it may be necessary to also add or remove a spacer behind the drive

plate to maintain the correct "G" dimension spacing, as shown in the earlier photo.

Next, clean and degrease the flywheel and its housing,



To insure a good fit to the engine, use a dial indicator and check the crankshaft thrust, which is also known as end-float. This is done with a dial indicator and is done before and after installing any crankshaft driven equipment (no matter if it is driven off the front or back end of the crankshaft). If this not done, the crankshaft may be forced hard against the crankshaft thrust bearing and it will cause the engine to fail.

If the crank thrust is within manufacturers specifications, then proceed by inserting two line-up studs in the flywheel.

These studs will engage two holes in the drive plates and will make the job much quicker.

Line-up studs are easy to make by cutting the head from a bolt and then grinding the end of the studs so they have rounded ends to engage the drive plates.

After the line-up studs are installed directly across from each other, level both the engine and the generator so they can come together without a bind.

Slowly move the generator drive plates onto the studs until the plates bottom in the flywheel.

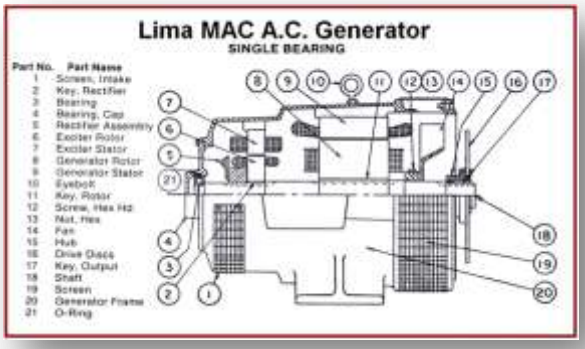
When the plates are bottomed put two bolts in the generator flange outer circle of bolts (only finger tight). Next remove the line-up studs and begin nstalling the drive plate bolts, again finger tight, one at a time, until they are all installed.

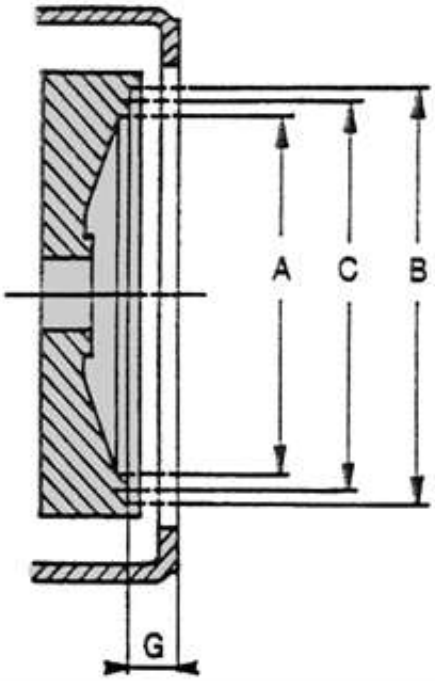
Next, tighten one bolt to the specified torque and then tighten the bolt that opposes this first one,to the final torque. Then tighten the rest of the drive plate bolts in any order. Now, torque them all a second time, putting a bright colored paint mark on each bolt as it is torqued the second time.

After the generator is installed, perform one more measurement of the crankshaft thrust to insure the generator is not binding and forcing the crankshaft hard against the thrust bearing before running and testing the generator set.

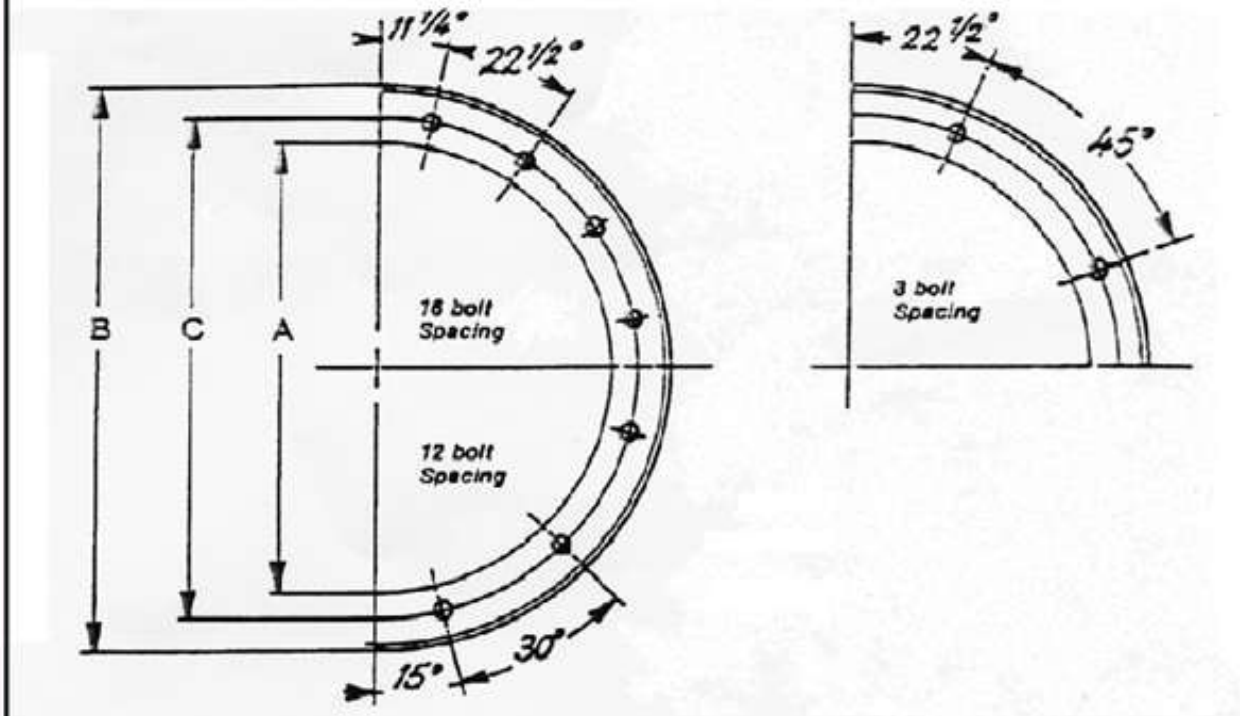
Note: The single bearing in the generator is constructed so it can slide in its bore, fore and aft to allow thermal expansion in the generator rotor and also to eliminate all strain from the crankshaft thrust bearing. A slip fit in the generator bearing pocket allows the rotor to have safe thermal expansion and contraction. Notice No.20 o-ring, below, prevents No.3 bearing from spinning in the bore.

After mounting the engine and generator on the skid, and just before running the unit, loosen all of the outer generator bolt circle fasteners, and then re-tighten them. This will insure there is no soft foot or bind between the four mounting feet and the generator skid.





SAE Size	A-Inner Diameter Flex Plate Seat	B-Diameter (Flex Plate)	C-Bolt Circle (Flex Plate)	G-Flex Face To Flange Face	No. Of Bolt Holes	Bolt Thread Size
6-1/2	7.25 Inch *184.15* MM	8.5 Inch *215.9* MM	7.875 Inch *200* MM	1.188 Inch *30.16* MM	6	5/16 - 18
7-1/2	8.125 *206.37*	9.5 *241.13*	8.75 *222.25*	1.188 *30.16*	8	5/16 - 18
8	8.875 *220.42*	10.375 *263.52*	9.625 *244.47*	2.438 *61.91*	6	3/8 - 18
10	10.875 *276.22*	12.375 *314.32*	11.625 *295.27*	2.125 *53.97*	8	3/8 - 18
11-1/2	12.375 *314.32*	13.875 *352.42*	13.125 *333.37*	1.563 *39.68*	8	3/8 - 18
14	16.125 *409.57*	18.375 *466.72*	17.25 *438.15*	1 *25.4*	8	1/2 - 13
16	18.125 *460.37*	20.375 *517.52*	19.25 *488.95*	0.625 *15.875*	8	1/2 - 13
18	19.625 *498.47*	22.5 *571.52*	21.375 *542.92*	0.625 *15.875*	6	5/8 - 11
21	23 *584.2*	26.5 *673.1*	25.25 *641.35*	0 0	12	5/8 - 11
24	25.375 *644.52*	28.875 *733.42*	27.25 *692.15*	0 0	12	3/4 - 10
GM 71	13.5 *342.9*	17.75 *450.0*	15.5 *393.7*	0.703 *17.85*	4 X 2	5/8 - 11
GM 53	12.375 *314.32*	15.5 *393.7*	13.875 *352.42*	0.734 *18.65*	4 X 2	5/8 - 11



SAE Size	A-Diameter Housing Inner Pilot	OD-Flange	C-Bolt Circle Bell Housing	No. Of Bolts	Thread
00	31.000 *787,37*	34.750 *882,62*	33.500 *850,87*	16	1/2 - 13
0	25.500 *647,67*	28.000 *711,17*	26.750 *679,42*	16	1/2 - 13
1/2	23.000 *584,18*	25.500 *647,67*	24.375 *619,10*	12	1/2 - 13
1	20.125 *511,15*	21.750 *552,43*	20.875 *530,20*	12	7/16 - 14
2	17.625 *447,66*	19.250 *488,93*	18.375 *466,70*	12	3/8 - 16
3	16.125 *409,56*	17.750 *450,83*	16.875 *428,61*	12	3/8 - 16
4	14.250 *361,94*	15.875 *403,21*	15.000 *380,99*	12	3/8 - 16
5	12.375 *314,31*	14.000 *355,59*	13.125 *333,36*	8	3/8 - 16
6	10.500 *266,69*	12.125 *307,96*	11.250 *285,74*	8	3/8 - 16

SAE #	I. D.	BOLT CIRCLE	HOLES	USED WITH SAE CLUTCH
1	20.125 "	20.8752"	12	14"
2	17.625"	18.375"	12	11.5"
3	16.125"	16.875"	12	11.5"
4	14.25"	15"	12	8"/10"
5	12.375"	13.125"	8	7.5"
6	10.5"	11.25"	8	6.5"

Commonly Used Flywheel and Housing Combinations