

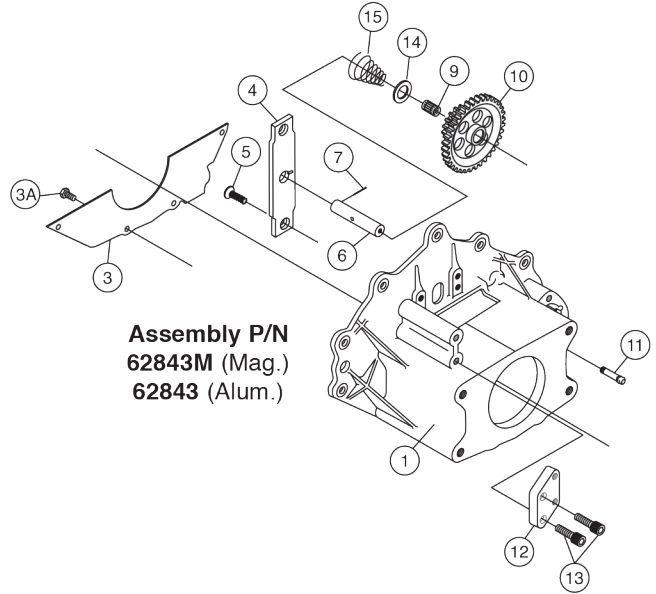
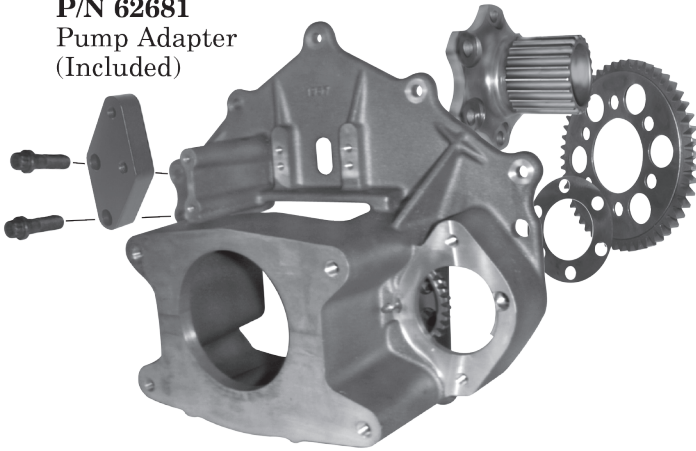


**WINTERS PERFORMANCE, INC.**  
 1580 Trolley Road  
 York, PA 17408  
 Phone: 717-764-9844

# Chevy<sup>®</sup> Flywheel Housing

**P/N 62843M** Chevy (Mag.)  
**P/N 62843** Chevy (Alum.)

**P/N 62681**  
 Pump Adapter  
 (Included)



**Assembly P/N**  
**62843M** (Mag.)  
**62843** (Alum.)

**P/N 62843M** Chevy  
 Magnesium Housing  
 9Lbs. 14oz. (Mag.)

**P/N 62843** Chevy  
 Aluminum Housing

6 1/4" Deep Flywheel Housing Assembly – With reverse starter mounting. Mounting locations for both belt driven or camshaft driven pumps from the popular pump manufacturers. Accepts popular internal clutch late model transmissions, including the **Falcon<sup>®</sup> Transmission**.

Includes idler gear, starter ring gear, crank coupler with HTD gear and spacer shims

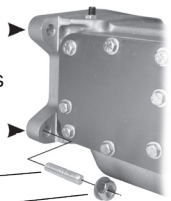
Use **Gears Unlimited** starter **P/N 62911**.

Dowel pins and pilot bushings must be lengthened to compensate for motor plate thickness.

Install 1/2"-13 x 2 1/2" Studs at these two locations.

**P/N 62444**  
**P/N 68039**

**P/N 68727** Stud & Nut Kit (2 pcs. each)



Install Studs and Nuts to retain transmission to flywheel housing on left side (optional at four locations).

#	P/N	Description	Qty
1	61967	Flywheel Housing, Chevy, Late Model (Alum.)	1
1	61967M	Flywheel Housing, Chevy, Late Model (Mag.)	1
3*	61997	Cover	2
3A*	67179	5/16-18 x 1/2 HHCS	1
4	62277	Idler Mounting Plate, Late Model	2
5	67120	5/16-18 x 3/4 FHCS	1
6	62278	Idler Shaft, Late Model	1
7	68015	Roll Pin, Idler Shaft	1
9	62204	Bushing	1
10	62344	Idler Gear	1
11	62816	Grease Fitting, Long	1
12	62681	Adapter Block	2
13	67162	5/16-18 x 1 1/4 12 pt	1
14	62815	Thrust Washer	1
15	62341	Return Spring	1

\* Denotes options



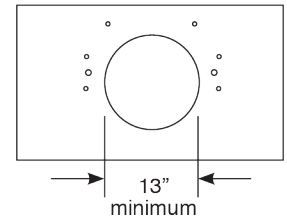
Application	#1 Starter Ring Gear	#2 Shim
Chevy SB and BB	62479-A	62320
Mopar 6-Bolt	62479-B	62323
Ford SB	62479-C	62322
Chevy Late SB	62479-D	62321
Ford BB	62479-E	62322-BB
Mopar 8-Bolt	62479-F	62324

## Flywheel Housing Tips

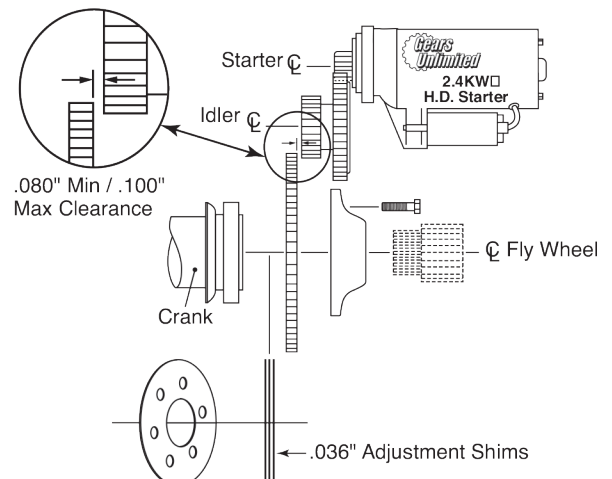
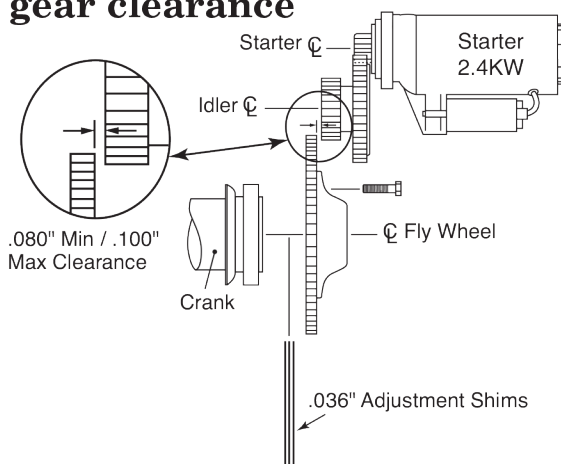
- When using a motor plate it must be flat with back of motor block and perfectly true and flat across chassis.
- Dowel pins must be long enough to pass through the motor plate and fully engage into flywheel housing.
- Flywheel housing must be aligned with motor. See flywheel housing alignment instructions
- Pilot bushing, if used, must be long enough to **compensate** for thickness of motor plate.
- Remove pilot bushing from crankshaft with **Falcon** transmission.
- Caution: **Do Not** attempt to force transmission into flywheel housing with bolts. Transmission will assemble into flywheel housing if splines are aligned assuming input shaft splines and your clutch splines or crank coupler splines are compatible. **Do Not** install and torque transmission retaining bolts unless transmission is solidly against flywheel housing.
- Flywheel housing **distortion** can be greatly reduced by using a support mount under the

## Inboard Starter Flywheel Housings

- Center hole in motor plate must be large enough to clear all protrusions from back of flywheel housing, minimum 13" ID.
- Adjust flywheel clearance to idler gear. Shim flywheel to .080/.100 clearance. Make sure starter is in place while checking clearance.
- Idler gear must slide freely on shaft. • Check idler shaft periodically for signs of wear.
- Check alignment of idler gear to flywheel. By hand, push idler gear forward and engage into flywheel, making sure there is clearance. Follow flywheel housing alignment instructions carefully. **Very Important!**
- Clean and regrease bushing/bearing in idler gear during routine maintenance.
- A moderate amount of grease is correct. "More is **not** better"



## Idler gear clearance



## Determine belt length

L = Belt length

□

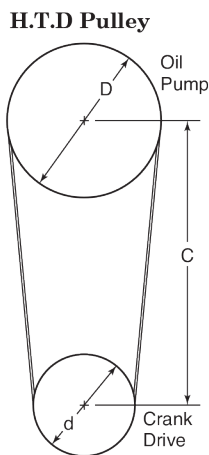
C = Center to center distance (to be measured on your own setup)

□

D = Pitch diameter of large pulley

□

d = Pitch diameter of small pulley  
Gears Unlimited  
(24 teeth) = 2.4



$$L = 2C + 1.57'' (D + d)$$

Ex: If C = 8.00'' (Example) 2C =  
(8.00'' + 8.00'' = 16.00'')

D = 3.5'' (Example) D + d =  
d = 2.4'' (3.5'' + 2.4'' = 5.9'')

$$2C + 1.57'' (D + d)$$

1.57'' x 5.9'' = 9.263''

16.00'' + 9.263'' = 25.263''

Belt length = 25.263''

For HTD Belt Number  
Length x 25.4 = Number

25.263'' x 25.4 = 641.6802 (Use 640 belt)

## Flywheel Housing Alignment Instructions

Crank shaft and transmission **MUST** be in alignment with each other. (.005 T.I.R. tolerance)

Flywheel housing misalignment with crank holds the key to almost all transmission problems. **DO NOT** shortcut proper alignment.

Regardless of what brand flywheel housing you use (**Gears Unlimited**, Tilton®, Quarter Master® or Bert®), the procedure for zeroing the register bore in the housing is the same.

You assume **new** flywheel housings are made accurately and the bolt holes, dowel pin holes, etc., are machined in the right locations and the front and rear of the housing is parallel. If using a **used** flywheel housing, it is likely that the housing faces are not parallel within .005 T.I.R. Before using a **used** housing, have a machine shop reface a minimum amount off the rear to bring the housing into specifications. Before having the flywheel housing refaced, measure the transmission register bore diameter to determine if flywheel housing is compatible with transmission register diameter. See chart on back page.

Check the flywheel housing on the motor after installing motor plate over dowel pins, making sure the dowel pins are long enough to exit the dowel pin holes in the flywheel housing. See chart on back page.

Torque retaining bolts to 28-32 Ft Lbs.

Install 6-8'' threaded rod into the crank flange threaded hole. (see figure 1)

Mount and zero dial indicator in the bore in the flywheel housing. (see figure 2)

Rotate the crankshaft while observing the indicator reading (.005 T.I.R. maximum allowable run-out).

If in tolerance, reposition the dial indicator to the rear face of the flywheel housing. (see figure 3)

Zero indicator, rotate crankshaft while observing indicator reading (.005 T.I.R. maximum allowable run-out).

Either bore or face exceed .005 T.I.R., correction must be made for bore run-out. There are three popular methods of correction.



figure 1

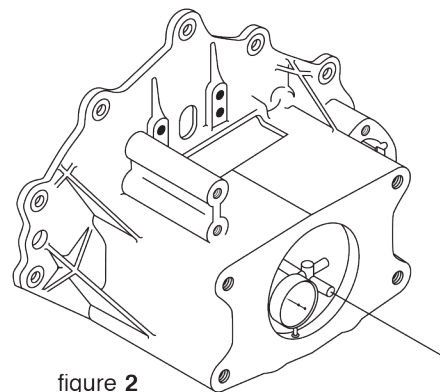


figure 2

Indicating Bore

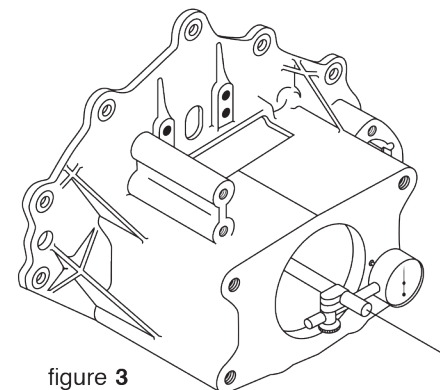


figure 3

Indicating Rear Face

# Flywheel Housing Alignment Instructions

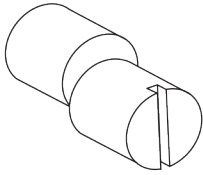


figure 4

**Method 1** Off-set dowel pins are the preferred method. (see figure 4)

Suppose your off-set is (plus)  $+0.020$  @ 12 o'clock. (The bore must be raised  $.010$ ). Very common with blocks that have been align bored. Have a machine shop make  $.010$  off-set dowel pins with a timed slot in the end so that the pins can be installed with the slots parallel to each other. Remove original pins and correctly install the new pins.

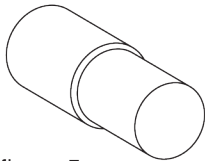


figure 5

**Method 2** Remove original dowels from motor and reinstall the motor plate (if used) and the flywheel housing. Lightly torque the bolts and re-indicate. Bump the housing into perfect alignment and finish torquing the retaining bolts. With an oversized reamer, ream and oversize the dowel pin holes. Make new over sized, stepped pins (see figure 5) and install.

Re-check the bore alignment.

If rear face is out of tolerance and the flywheel housing was checked for parallelism and is in tolerance, the problem is your motor plate or the back of the motor is not square with the crank shaft.

Correct as necessary.

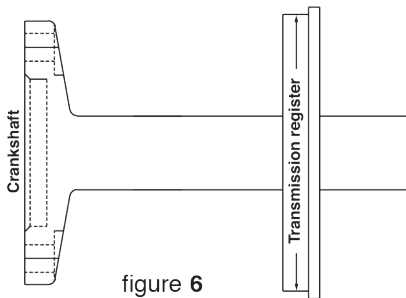


figure 6

**Method 3** Use a commercially available flywheel housing alignment tool (figure 6) which bolts directly to the crankshaft flange and has an appropriate diameter flange which registers in the bore of your flywheel housing, positioning the flywheel housing in the proper location respective to the crankshaft center line. Install and evenly torque housing attachment bolts. Ream over size dowel pin holes, insert oversize pins. Re-check bore and face with an indicator to insure housing bore remains within specifications.

	TRANSMISSION				FLYWHEEL HOUSING			
	Input Spline	Pilot Bushing Shaft OD	Seal Plate OD	Dowel Pin OD	Trans. Register ID	Dowel Pin Bore	Pilot Bushing ID	Pilot Bushing OD
Gears <input type="checkbox"/> Unlimited <input type="checkbox"/> or Chevy	1 1/8 - 10 OR 1 1/8 - 26	.590	4.685 Gears 4.683 Chevy	0.625	4.687	0.626 TO 0.628	.592	1.094
Ford	1 1/16 - 10 OR 1 1/8 - 26	.668	4.849	0.500	4.851	0.501 TO 0.503	.670	1.379
Mopar	1 3/16 - 18	.748	4.807	0.625	4.810	0.626 TO 0.628	.750	1.815



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