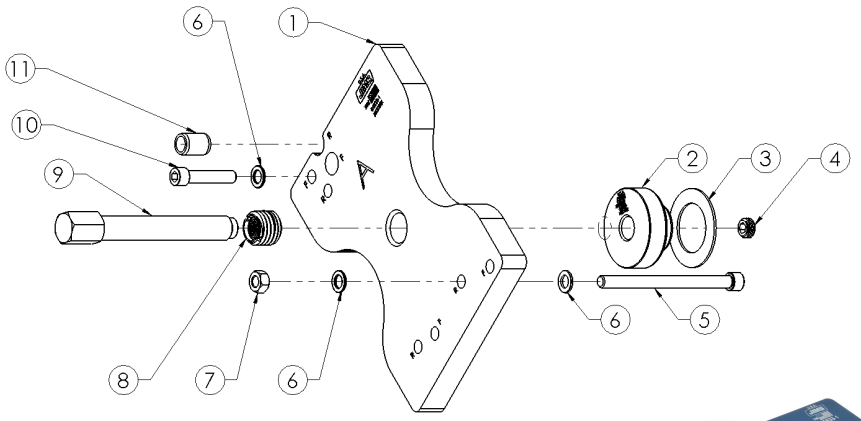
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Instruction Sheet For Tool #5833

JIMS® Milwaukee-Eight® Balancer Bearing Installer Instructions

WARNING: DO NOT USE AIR POWERED OR IMPACT TOOLS WHILE INSTALLING THE BALANCER BEARING OR INSTALLATION PLATE. SEVERE CASE DAMAGE MAY RESULT.



PARTS AVAILABLE SEPARATELY

No.	Qty.	Description	Part No.
1	1	BALANCER BEARING INSTALLER PLATE	5833-1
2	1	BEARING INSTALLER PILOT	5833-2
3	1	OIL-EMBEDDED THRUST BEARING	5833-3
4	1	1/2-20 HOLLOW LOCKSET SCREW	5833-4
5	3	5/16 X 4" SHCS BLACK ALLEN SCREW	5833-5
6	6	WASHER AN, 5/16"	1216
7	3	5/16-18 NUT	1222
8	1	THREADED INSERT 5/8-18	2397
9	1	SCREW	1024
10	3	5/16-18 X 1-1/2" BLACK ALLEN SCREW	1217
11	1	DOWEL PIN	1186-2000

Scan to watch video.
Note: Video for reference only.

Tools Required:
JIMS **5833** M8 Balancer Bearing Installer
3/4" Wrench or Socket
1/4" allen wrench
9/16" wrench



Only use the supplied hardware during use of this tool. Using different, especially shorter hardware may cause serious damage to the case and/or case threads.

NOTE: PLEASE READ ALL INSTRUCTIONS COMPLETELY BEFORE PERFORMING ANY WORK!
IF YOU DO NOT KNOW WHAT YOU ARE DOING, DO NOT DO IT!

No information in this instruction sheet pertaining to motorcycle repair is represented as foolproof or even altogether safe. Even something safe, done incorrectly or incompletely can and will backfire. You and only you are responsible for the safety of your repair work and for you understanding the application and use of repair equipment, components, methods and concepts.

Each and every step this tool is designed to do must be carefully and systematically performed safely by you. All information listed in this instruction sheet has been tested, re-tested and used daily in JIMS® Research and Development Department.

ALWAYS WEAR SAFETY GLASSES OR OTHER FACE AND EYE PROTECTION SUCH AS FULL FACE SHIELD. JIMS® IS NOT RESPONSIBLE FOR DAMAGE, INJURY, OR YOUR WORK. JIMS® IS NOT RESPONSIBLE FOR THE QUALITY AND SAFETY OF YOUR WORK.

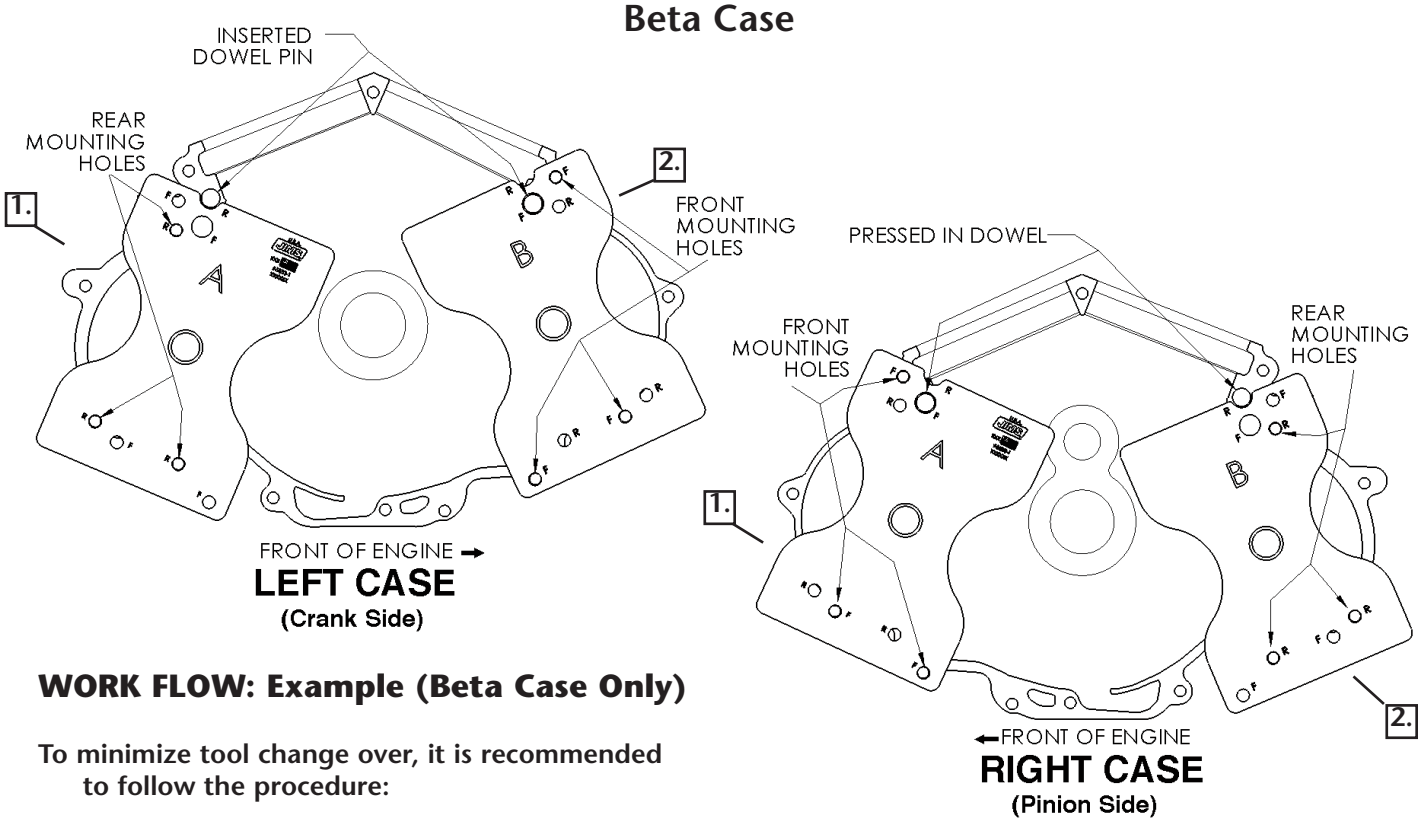
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Determine which case half you are working on. The right case half contains the pressed in hollow dowel pins adjacent to the spigot bore openings that align the case halves during assembly. Refer to **Fig. 1** to determine correct installer plate orientation for each bearing position.

Beta Case



WORK FLOW: Example (Beta Case Only)

To minimize tool change over, it is recommended to follow the procedure:

1. Install bearing using **A** side of plate up on the right case front. Then install bearing using **A** side of plateup on the left case rear bearing.

Loosen hollow set screw #**5833-4**, unscrew pilot #**5833-2** from screw #**1024**, remove screw #**1024** from plate #**5833-1**, flip plate over, and install screw #**1024** with **B** side up, repeat install process.

2. Install bearing using **B** side of plate up on the right case rear bearing. Then install bearing using **B** side of the plate up on the left case front bearing.

FIG. 1

Continued on next page

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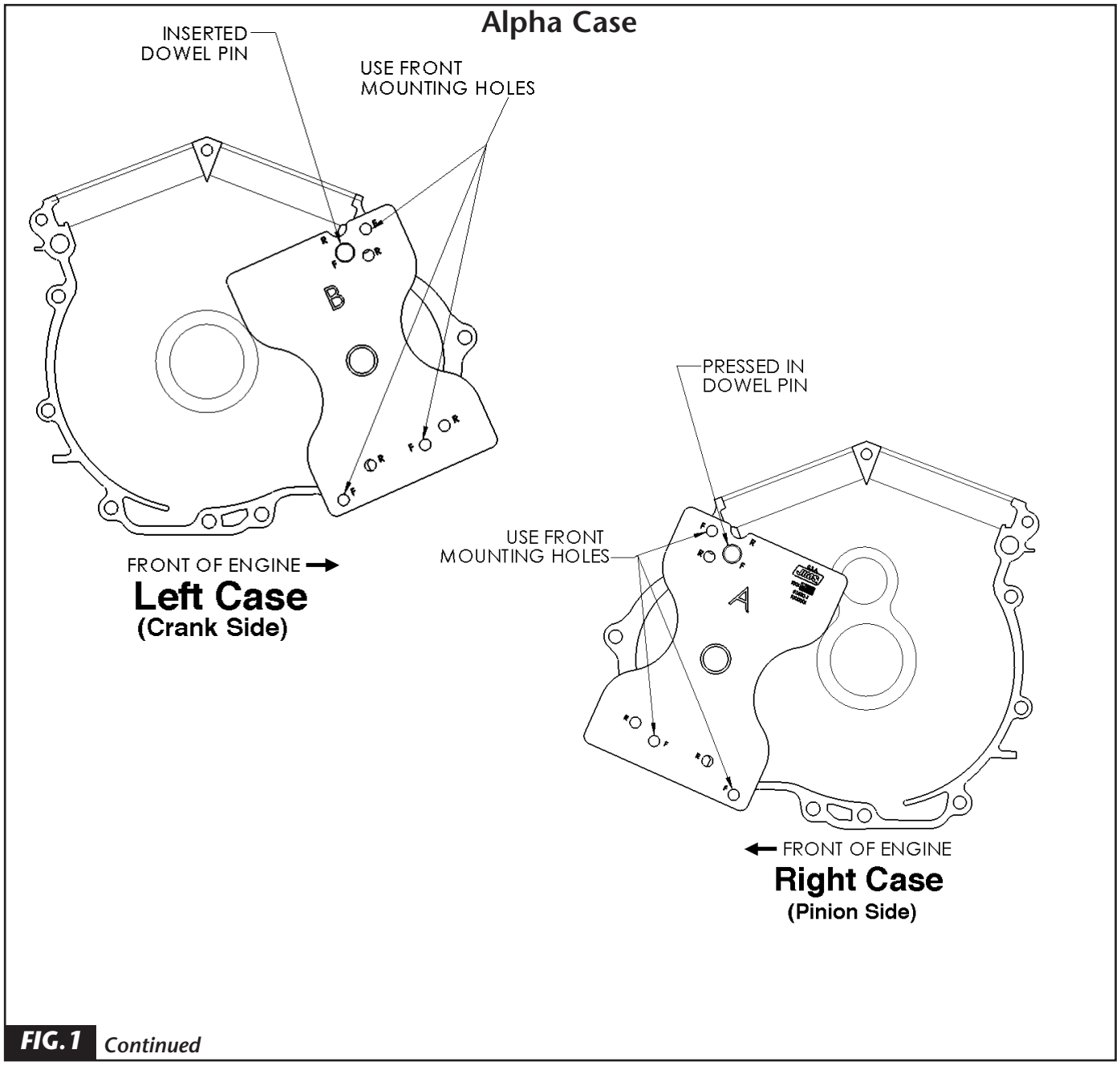


FIG. 1 *Continued*

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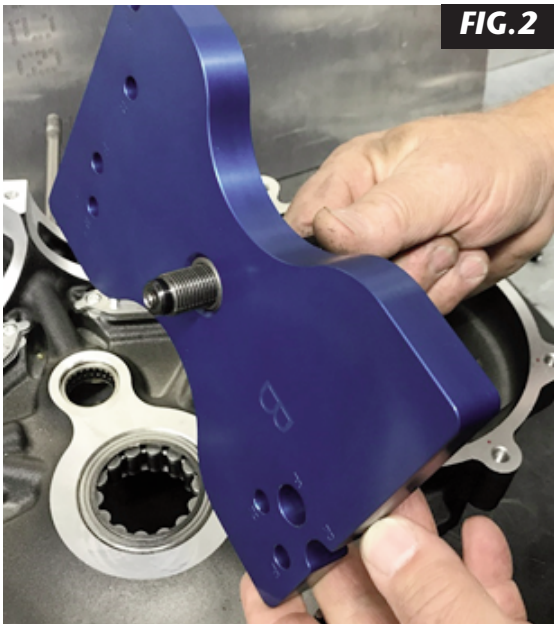
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BEARING INSTALLATION (EXAMPLE USES PINION SIDE CASE)

Right Case (Pinion Side) Bearing Plate Use:

1. Apply a small amount of oil to the threads of the screw #**1024.** Install the screw #**1024** approximately 1/2 way through the installer plate ensuring the correct side will be facing up. See **Fig. 2.**



2. Screw the bearing installer pilot #**5833-2** onto the screw #**1024** and hand tighten, then back off 1/4 turn. See **Fig. 3**.



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3. Insert hollow set screw #**5833-4** into the bottom of the bearing installer pilot #**5833-2** and using a 1/4" allen key, hand tighten. Use a 3/4" wrench on the end of the screw #**1024** to sufficiently tighten the hollow set screw #**5833-4**. **See Fig 4**.

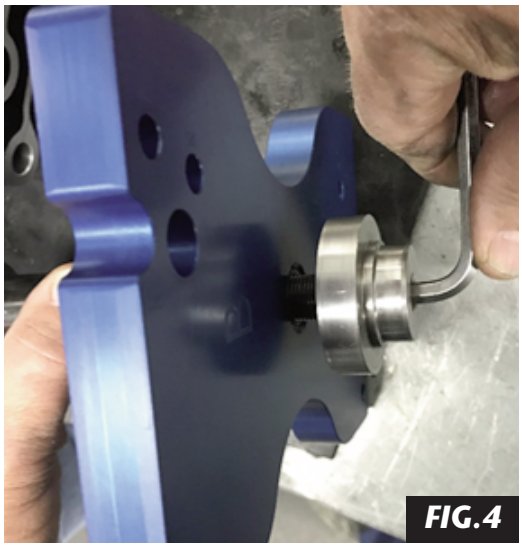
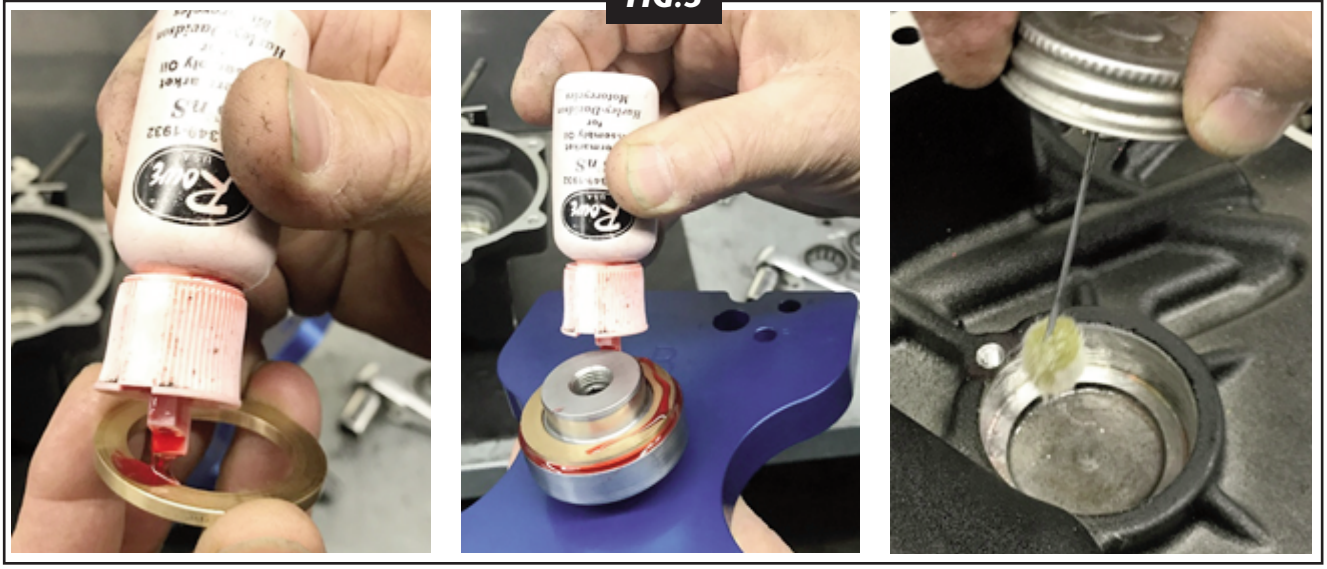


FIG.4

4. Place lubricant between the bearing installer pilot #**5833-2** and the Oil-Lite bearing/bushing #**5833-3**. Lubricate the bottom face of the Oil-Lite bearing/bushing as shown in **Fig. 5.** Lubricate the bearing bore with Sunnen Assembly lube or similar.

FIG.5



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Instruction Sheet For Tool #5833

5. Place the bearing installer plate #**5833-1** in the correct orientation indexed on the case dowel pin **(refer to Fig. 1 for correct placement)**. Insert the 5/16-18 x 1-1/2" SHCS #**1217** and washers (right case) and screw them into the appropriate holes (Marked "**F**" for front case, and "**R**" for the rear of the case) snug, and back off 1/8 turn, see **Fig. 6**.



6. Align the bearing installer pilot #**5833-2** with the balancer bearing bore and carefully lower the bearing installler pilot by rotating the screw #**1024** clockwise until it bottoms out in the balancer bearing bore, back off 1/4 turn. DO NOT force the pilot into the bore or case damage may result. Tighten the three 5/16-18 x 1-1/2" SHCS #**1217** until tight with an Allen key. **See Fig. 7.**



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7. Back the bearing installer pilot #**5833-2** out by rotating it counter clockwise, feeling for any binding between the balancer bearing bore and the balancer bearing pilot. If binding is detected, loosen the three 5/16-18 x 1-1/2" SHCS #**1217** and re-insert the bearing installer pilot #**5833-2** and retighten the SHCS. Repeat until there is no binding.

WARNING: -DO NOT OVER TIGHTEN FASTENERS OR DAMAGE TO THE CASE MAY OCCUR.

-DO NOT FORCE PILOT INTO BORE OR DAMAGE TO THE WILL OCCUR.

-BALANCER BEARING PLATE MUST BE ALIGNED TO BEARING BORE ACCORDING TO DIRECTIONS BEFORE PRESSING THE BEARING INTO THE CASE OR CASE DAMAGE WILL OCCUR.

9. Back the Bearing installer Pilot #5833-2 out until it almost touches the Balancer Installer Plate #**5833-1**.

10. Lubricate the leading face and outer edge of the bearing (customer supplied) to be installed with Sunnen Assembly Lube or similar. Place the Balancer Bearing onto the Balancer Bearing Pilot #**5833-2** with the lettering facing upward, and hold in place using your fingers while turning the Screw #**1024** clockwise until the bearing contacts the balancer bearing bore. **See Fig. 8.**

FIG.8



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11. Using a ¾" wrench, turn the Screw #**1024** clockwise slowly, driving the Balancer bearing into the balancer bearing bore. Rotate the Screw #**1024** until the balancer bearing stops. See Fig. 9

WARNING: DO NOT force bearings into case or damage to the case may occur.
WARNING: Do not use impact or air/electric power drivers during bearing installation or case damage WILL occur.

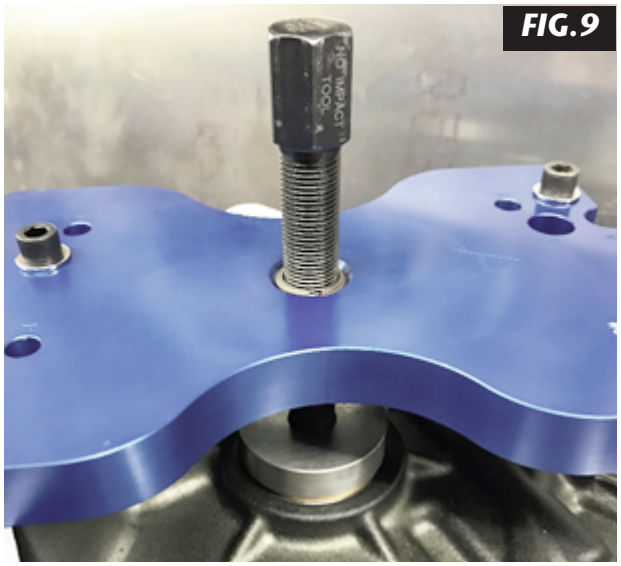


FIG.9

12. Remove the three 5/16-18 x 1-1/2" SHCS #1217 and remove the Balancer Bearing Installation Plate. Disassemble and store appropriately.

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Instruction Sheet For Tool #5833

Left Case (Crank Side) Bearing Plate Use:

WARNING: DO NOT USE AIR POWERED OR IMPACT TOOLS WHILE INSTALLING THE BALANCER BEARING OR INSTALLATION PLATE. SEVERE CASE DAMAGE MAY RESULT.

Follow the procedures listed for RIGHT CASE BEARING PLATE USE with the following changes:

13. Insert the Dowel Pin #**1186-2000** into the appropriate case alignment hole in order to correctly align the installer plate. This is a slip fit. Do not force the Dowel Pin into the case alignment holes as this may result in damage to the case. **See Fig. 10.**



14. Insert three 5/16 x 4" SHCS #**5833-5** from the bottom of the case up through the bearing installer plate. Use a 5/16 AN Washer #**1216** on both sides as shown, securing each SHCS with a nut #**1222**. This method will prevent cosmetic damage to the case. **See Fig. 11** (Next page).

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Instruction Sheet For Tool #5833

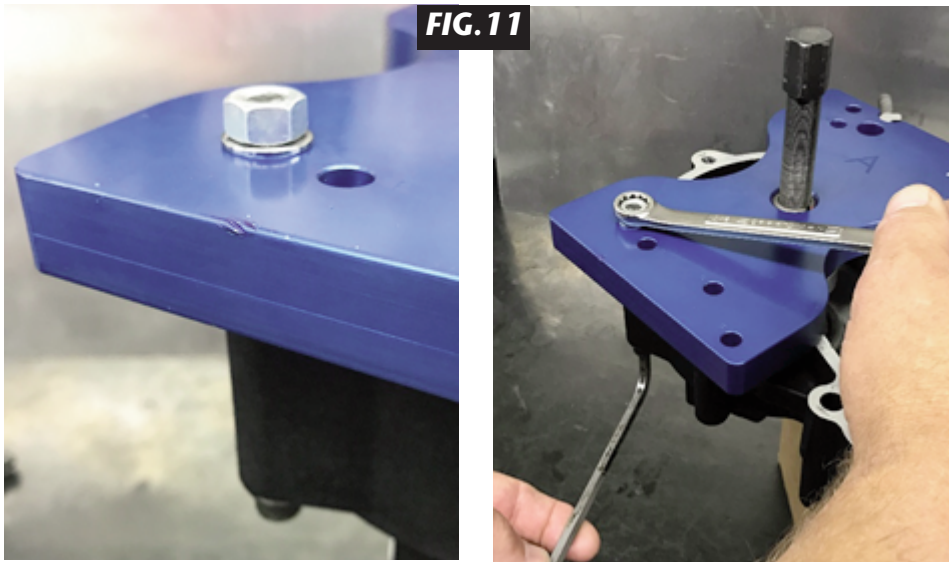


FIG.11

15. Align the Bearing Installer Pilot #**5833-2** with the balancer bearing bore and carefully lower the Bearing Installer Pilot by rotating the Screw #**1024** clockwise until it bottoms out in the balancer bearing bore, back off ¼ turn. DO NOT force the pilot into the bore or case damage may result. Tighten the three 5/16-18 x 4" SHCS #**5833-5**, 5/16" washers #**1216** and nuts #**1222** until tight with an Allen key.
See Fig. 7.

16. Back the Bearing Installer Pilot #**5833-2** out by rotating counter clockwise, feeling for any binding between the balancer bearing bore and the Bearing Installer Pilot. If binding is detected, Loosen the three 5/16-18 x 4" SHCS #**5833-5**, 5/16" washers #**1216** and nuts #**1222** and re insert the Bearing Installer Pilot #**5833-2** and retighten the SHCS. Repeat until there is no binding.

17. Continue process - **Fig 8. - Step 9.**

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