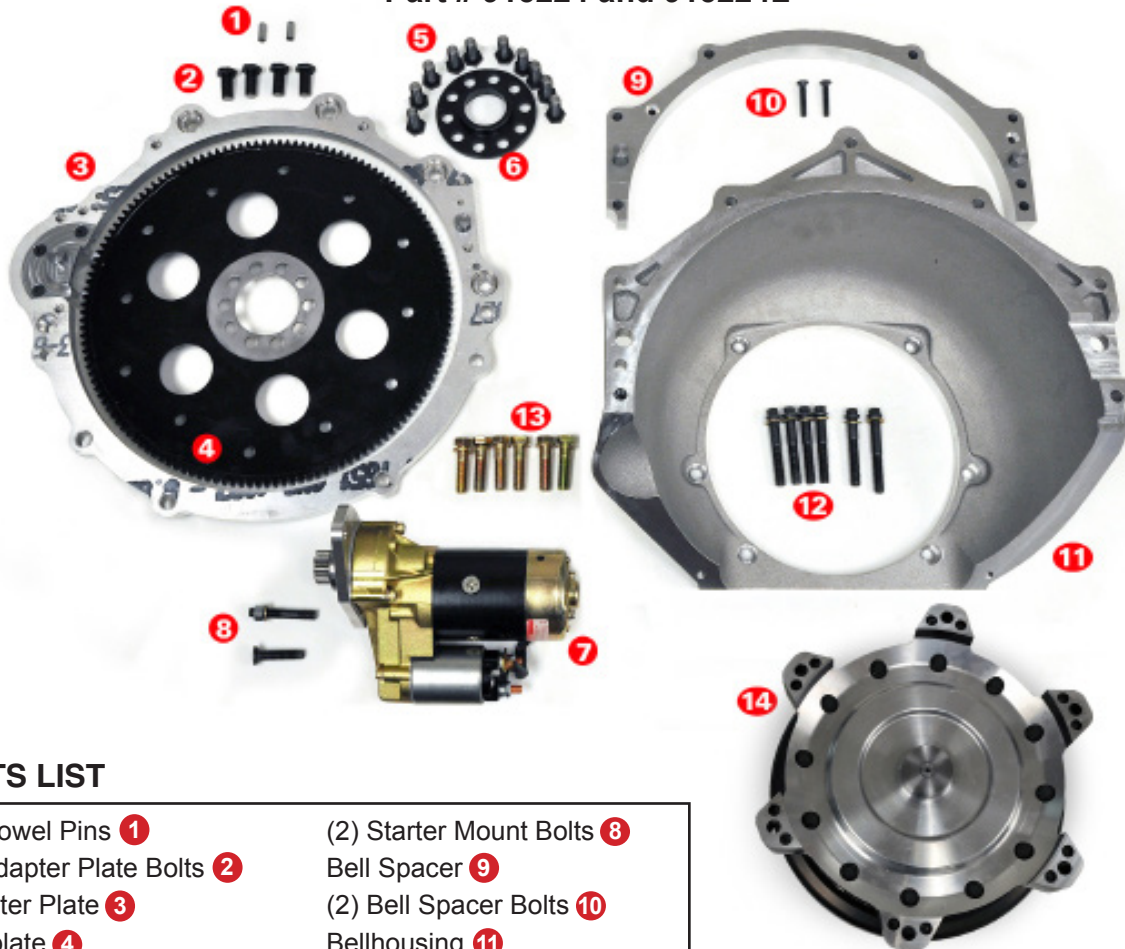


**TOYOTA 1FZ-45 ADAPTER KIT**

Part # 915224 and 915224L

**PARTS LIST**

- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| (2) Dowel Pins <b>1</b>           | (2) Starter Mount Bolts <b>8</b>     |
| (4) Adapter Plate Bolts <b>2</b>  | Bell Spacer <b>9</b>                 |
| Adapter Plate <b>3</b>            | (2) Bell Spacer Bolts <b>10</b>      |
| Flexplate <b>4</b>                | Bellhousing <b>11</b>                |
| (10) Crank Adapter Bolts <b>5</b> | (6) Bellhousing Bolts <b>12</b>      |
| Crankshaft Adapter <b>6</b>       | (6) Torque Converter Bolts <b>13</b> |
| Starter <b>7</b>                  | Torque Converter <b>14</b>           |

*Figure 1:*  
*Toyota 1FZ Adapter Kit Components*

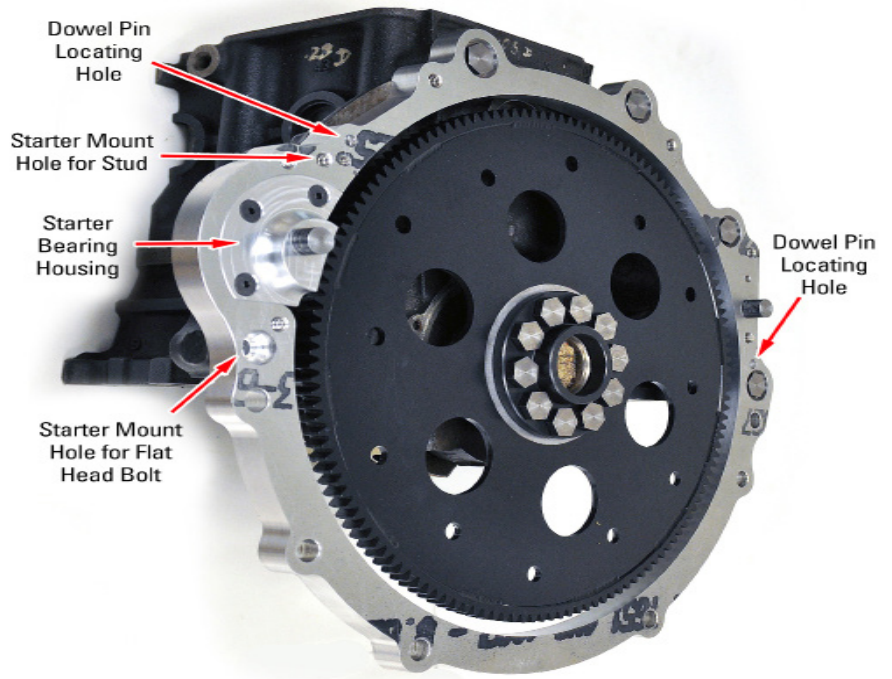
**ASSEMBLY PROCEDURE FOR LOCK-UP CONVERTER**

**Notes:** Long Bellhousing Bolts (#12) must be used with lock-up converter.  
Short Bellhousing Bolts (#12) must be used with non lock-up converter.  
Use the .750" thick converter pad spacers (may already be installed on converter).

**Step 1:** Press the two (2) locating Dowel Pins (#1) into the appropriate holes in the engine block.

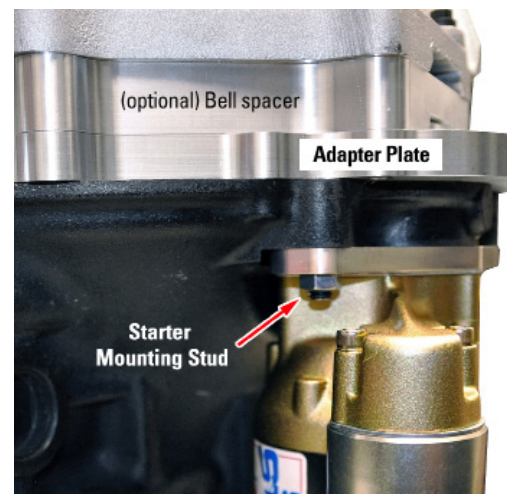
**Step 2:** Slide the Adapter Plate (#3) over the Dowel Pins in the engine block making sure the Adapter Plate rests flush against the block. Using four (4) Adapter Plate Bolts (#2), secure the Adapter Plate in place. Figure 2 on page 2 shows the Adapter Plate properly located and installed on the engine block.

**Step 3:** Place the Flexplate (#4) onto the crankshaft so that the ring gear is offset toward the engine ("ENGINE SIDE" sticker on flexplate should be facing engine). Slide the Crankshaft Adapter (#6) on over the crankshaft snout so that the small step on the Crankshaft Adapter slides inside of the center bore on the Flexplate (this locates/centers the Flexplate). All holes in the Flexplate and Crankshaft Adapter should now line up with the threaded holes in the crank. Secure the Crankshaft Adapter and the Flexplate in place using ten (10) Crankshaft Adapter Bolts (#5). A properly installed Flexplate and Crankshaft Adapter can be seen in Figure 2.



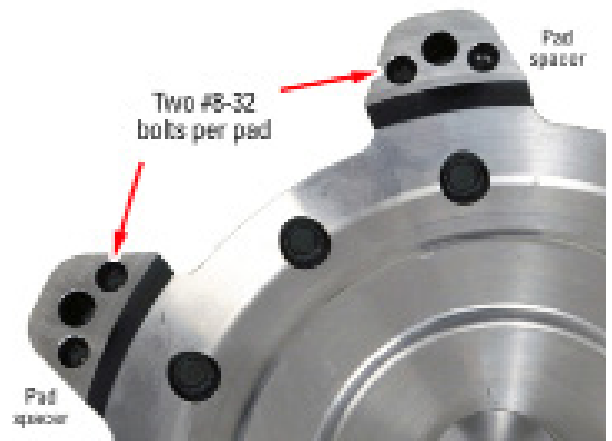
**Figure 2: Installed Flexplate, Crankshaft Adapter, and Adapter Plate**

**Step 4:** Locate the stud from the Starter Mount Bolts (#8) and screw the shorter of the two threaded ends into the engine side of the Adapter Plate. Hold the Starter (#7) so that the solenoid points toward the top of the engine then push the Starter up into the Starter Bearing Housing (see Figure 2 above) making sure the mounting hole clears the stud. Secure the Starter in place using a nut and washer on the stud and a flathead bolt on the opposite side. See Figures 2 and 3 for reference.



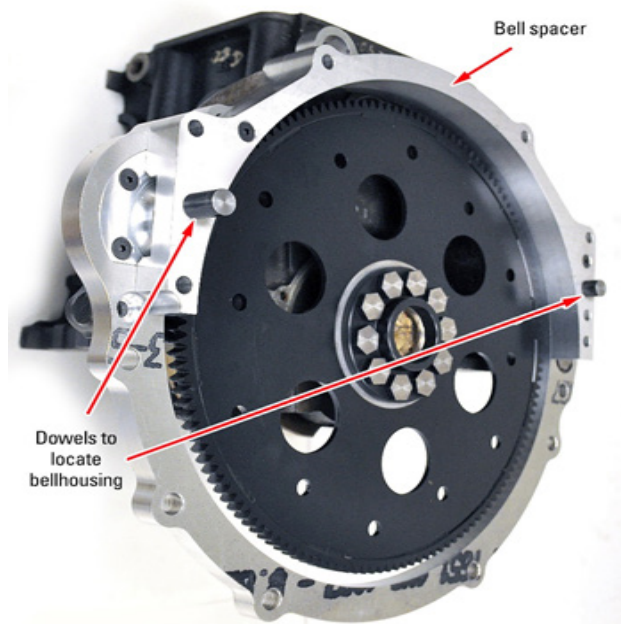
**Figure 3: Starter mounted to Adapter Plate**

**Step 5:** If the spacers are not already installed, install the six (6) .750" thick converter pad spacers on the Torque Converter (#14) using twelve (12) #8-32 bolts. See Figure 4 (right) for reference.



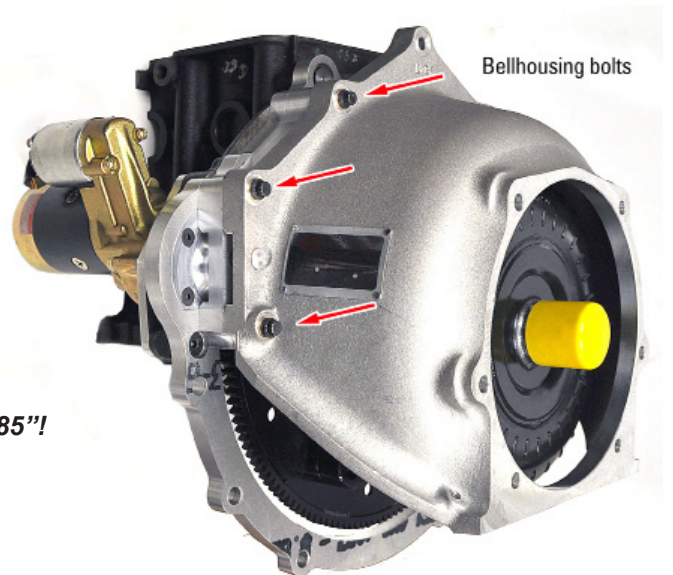
**Figure 4: Torque Converter and pad spacers**

**Step 6:** Slide the Bell Spacer (#9) on over the dowel pins that are pressed into the Adapter Plate and secure it in place using the two (2) Bell Spacer bolts (#10). A properly installed Bell Spacer can be seen in Figure 5.



**Figure 5: Bell Spacer installed on Adapter Plate**

**Step 7:** The transmission locates via the dowel pins pressed into the Bell Spacer (see Figure 5). After installing the Torque Converter (#14) in the transmission, slide the Bellhousing (#11) over the dowel pins; the pilot on the Torque Converter will locate inside the Crankshaft Adapter. Secure the transmission to the engine using the long Bellhousing Bolts (#12) – long bolts include five (5) 2.500" long and one (1) 2.750" long counterbore bolts. See Figure 6 for completed assembly.

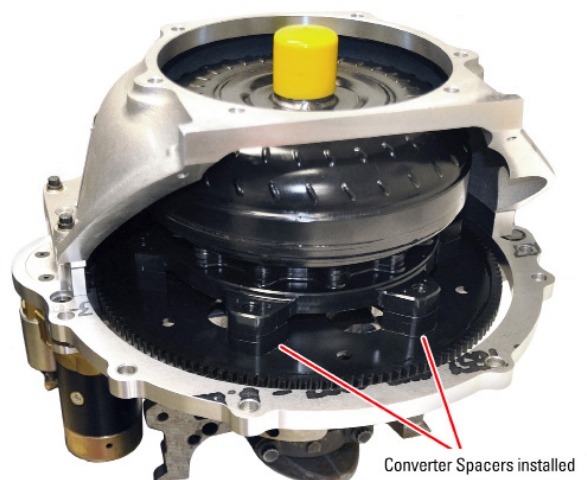


**Figure 6: Complete assembly**

**Note!**

***Torque converter pull-out should measure .125" to .185"!***

**Step 8:** Thread a Torque Converter Bolt (#13) through the flexplate, through the converter pad spacer, and into the Torque Converter. Rotate the engine to gain access to the next mounting hole and repeat this process until all six (6) Torque Converter Bolts are in place. Tighten all bolts down. Figure 7 shows a properly installed Torque Converter.



**Figure 7: Installed Torque Converter**



## ASSEMBLY PROCEDURE FOR NON LOCK-UP CONVERTER:

**Notes:** Long Bellhousing Bolts (#12) must be used with lock-up converter.

Short Bellhousing Bolts (#12) must be used with non lock-up converter.

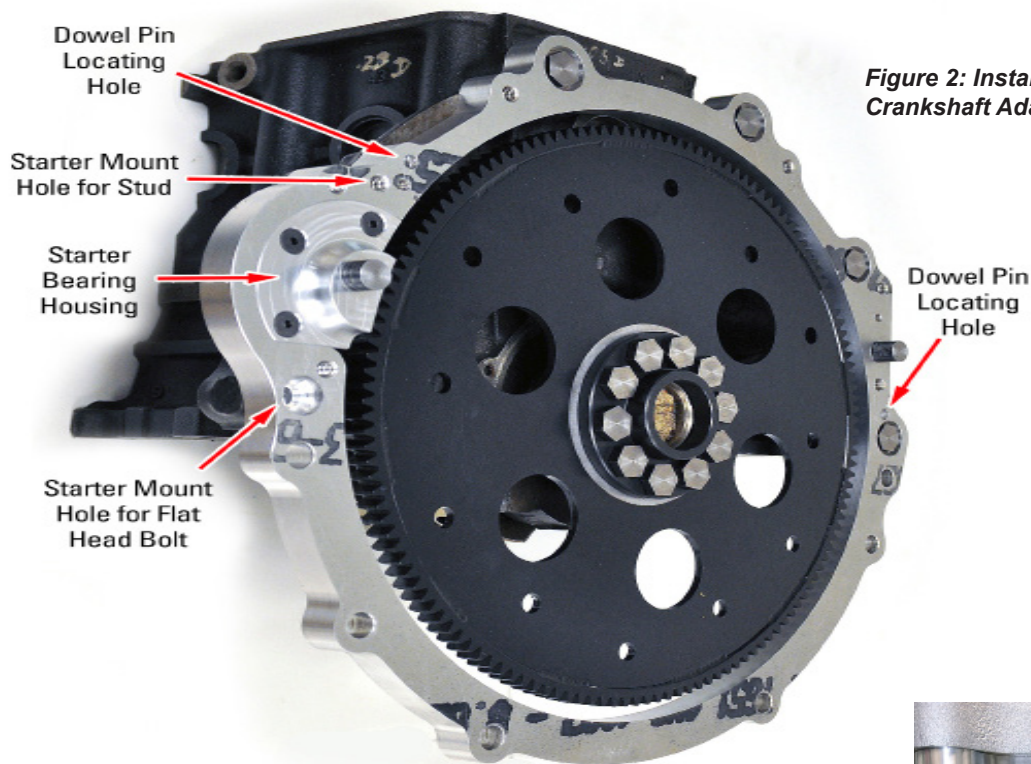
Bell Spacer (#9) and Bell Spacer Bolts (#10) will not be used with non lock-up converter.

Use the .850" thick, round converter pad spacers with non lock-up converter.

**Step 1:** Press the two (2) locating Dowel Pins (#1) into the appropriate holes in the engine block.

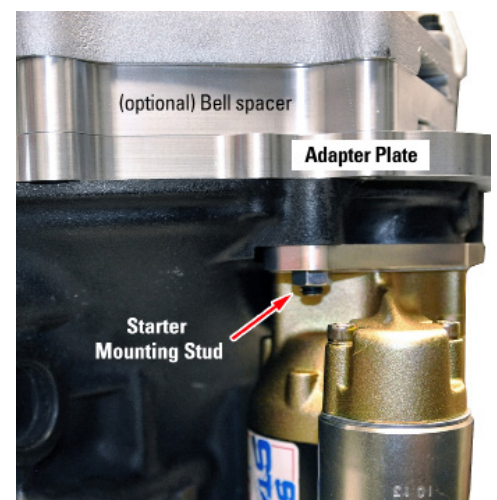
**Step 2:** Slide the Adapter Plate (#3) over the Dowel Pins in the engine block making sure the Adapter Plate rests flush against the block. Using four (4) Adapter Plate Bolts (#2), secure the Adapter Plate in place. Figure 2 below shows the Adapter Plate properly located and installed on the engine block.

**Step 3:** Place the Flexplate (#4) onto the crankshaft so that the ring gear is offset toward the engine ("ENGINE SIDE" sticker on Flexplate should be facing engine). Slide the Crankshaft Adapter (#6) on over the crankshaft snout so that the small step on the Crankshaft Adapter slides inside of the center bore on the Flexplate (this locates/centers the Flexplate). All holes in the Flexplate and Crankshaft Adapter should now line up with the threaded holes in the crank. Secure the Crankshaft Adapter and the Flexplate in place using ten (10) Crankshaft Adapter Bolts (#5). A properly installed Flexplate and Crankshaft Adapter can be seen in Figure 2.



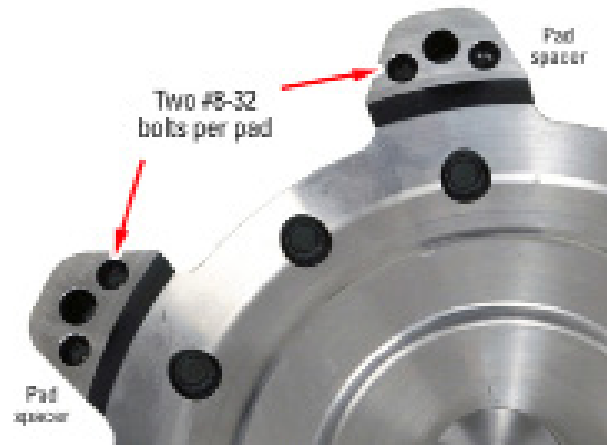
*Figure 2: Installed Flexplate, Crankshaft Adapter, and Adapter Plate*

**Step 4:** Locate the stud from the Starter Mount Bolts (#8) and screw the shorter of the two threaded ends into the engine side of the Adapter Plate. Hold the Starter (#7) so that the solenoid points toward the top of the engine then push the Starter up into the Starter Bearing Housing (see Figure 2 above) making sure the mounting hole clears the stud. Secure the Starter in place using a nut and washer on the stud and a flat head bolt on the opposite side. See Figures 2 and 3.



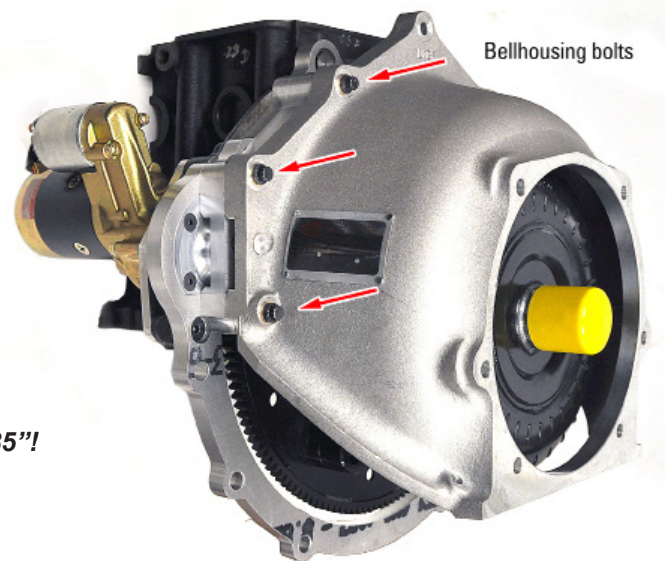
*Figure 3: Starter mounted to Adapter Plate*

**Step 5:** If the spacers are already installed, un-install the six (6) .750" thick converter pad spacers on the Torque Converter (#14) using twelve (12) #8-32 bolts. See Figure 4.



**Figure 4: Torque Converter and pad spacers**

**Step 6:** The transmission locates via the dowel pins pressed into the Adapter Plate. After installing the Torque Converter (#14) in the transmission, slide the Bellhousing (#11) over the dowel pins - the pilot on the Torque Converter will locate inside the Crankshaft Adapter. Secure the transmission to the engine using the short Bellhousing Bolts (#12) – short bolts include five (5) 1.500" long and one (1) 1.750" long counterbore bolts. See Figure 5 (right) for completed assembly.

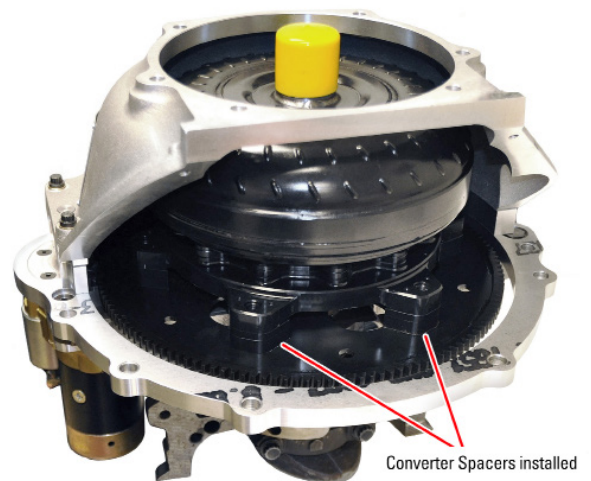


**Figure 5: Complete assembly**

**Note!**

**Torque converter pull-out should measure .125" to .185"!**

**Step 7:** Hold a round, .850" thick converter pad spacer over one of the mount holes in the Flexplate, then thread a Torque Converter Bolt (#13) through the Flexplate, through the spacer, and into the Torque Converter. Rotate the engine to gain access to the next mounting hole and repeat this process until all six (6) Torque Converter Bolts are in place. Tighten all bolts down. Figure 6 shows a properly installed Torque Converter.



**Figure 6: Installed Torque Converter (spacers shown are for lock-up converter)**