

## 2000-2023 Suzuki DR-Z400 (and 2003-2004 Kawasaki KLX 400) ACT Wide Ratio Gear Set

Thank you for purchasing this quality ACT product. ACT has a long racing heritage supporting countless racers and series champions in many forms of racing. Now you can let ACT's experience and expertise give you the same winning results. The ongoing challenge to win puts a constant demand for improved and higher performance ACT products. Constant challenges and continual improvement are driving forces at ACT. If for any reason ACT does not meet your challenge or expectations, let us know so ACT products can continue to improve.

### Before you begin:

Modifications are required to ensure proper fitment.

Read all instructions. Review the factory service manual in all chapters covering complete disassembly and assembly of the engine.

Once the required modifications are made, the ACT Wide Ratio Gear Set installs in the same manner as the factory parts.

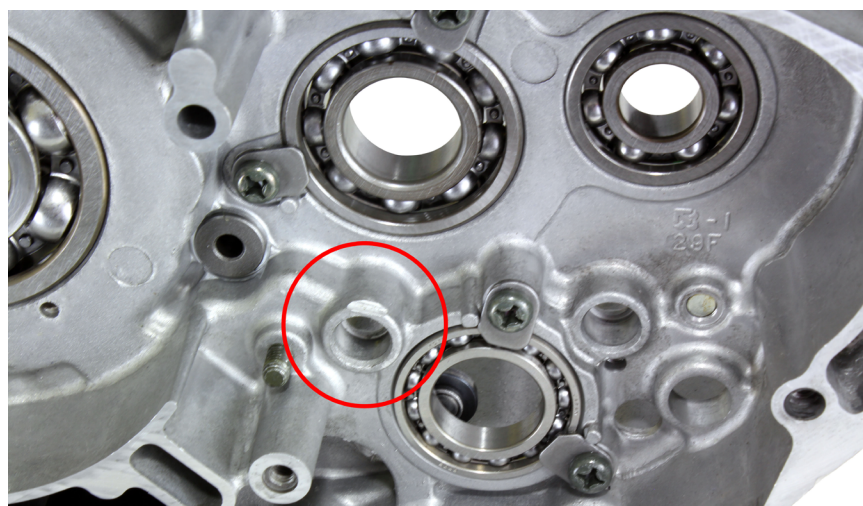
Make sure you have all the proper tools for complete disassembly and assembly of the engine.

### About Your ACT Wide Ratio Gear Set:

Gear Ratio Comparison					
	1st	2nd	3rd	4th	5th
Factory	2.286	1.733	1.375	1.091	.864
<b>ACT</b>	2.286 (existing)	1.625	1.222	.909	.680
<b>Change</b>		6.6%	11.3%	20%	27%

To achieve the best gearing ratios, the new ACT Wide Ratio fifth gear interferes in three places due to the increased diameter:

1. The engine case – Fifth gear interferes slightly with the boss in the case that supports the shift fork shaft. Test fit by placing the primary shaft with fifth gear installed into the right half of the engine case. The clearance should look like this when finished:



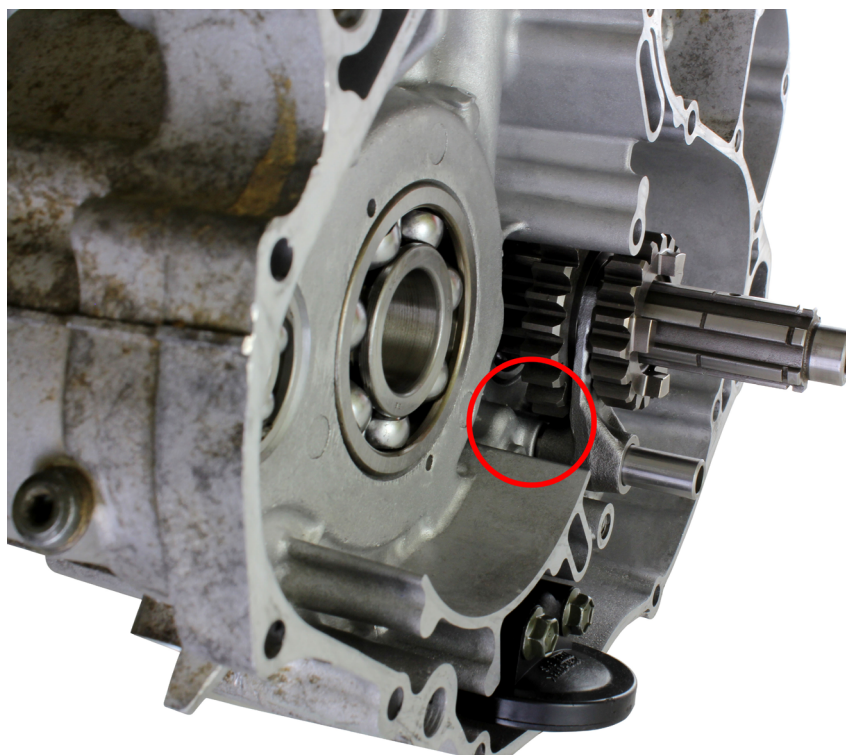
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**! WARNING** Installation should be performed by an experienced or professional motorcycle mechanic using proper tools and installation procedures as indicated in the Suzuki or Kawasaki factory service manual.

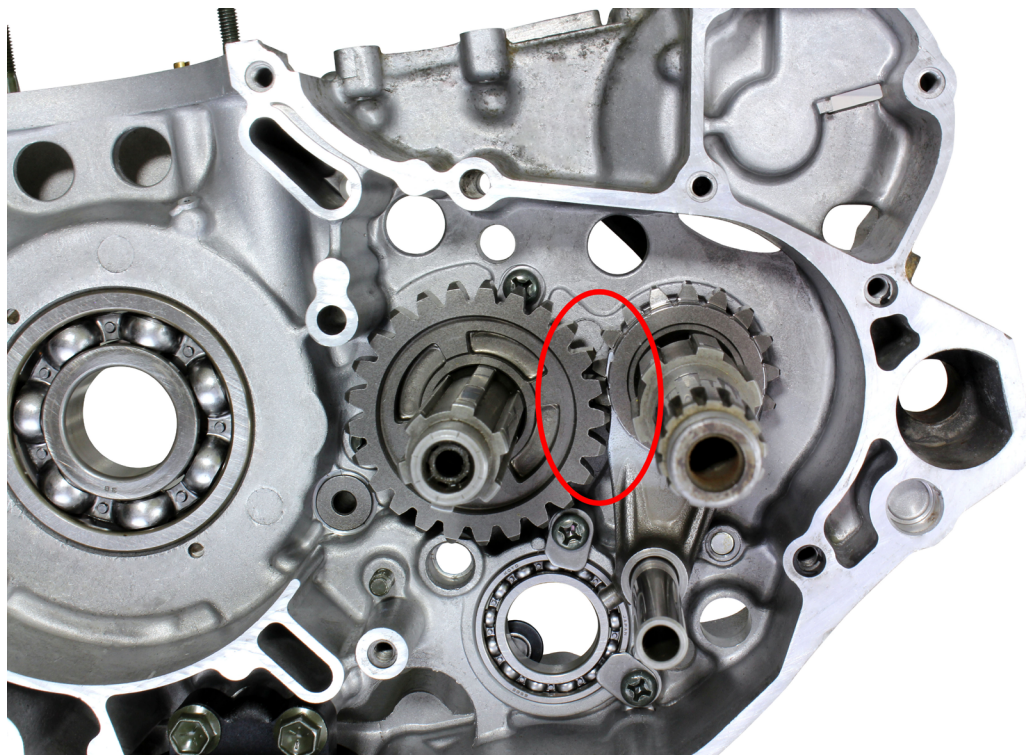
2. The third gear shift fork (primary shaft) – The area of the shift fork that must clear over the gear needs to be less than .060" (1.5mm) thick at the closest point (as shown below).



To check clearance, place primary shaft and fifth gear in place into the right side case. Slide third gear onto the shaft and place the shift fork and shift fork shaft in place as shown below. The gears should spin together freely.



3. The fifth gear shift fork (secondary shaft) - With the primary shaft and fifth gear installed, the secondary fifth gear shift fork needs to be able to pass over primary fifth gear (to allow the transmission to engage first gear). The shift fork must be about .150" (3.8mm) its thinnest point to clear fifth gear. Test fit the parts to verify proper clearance (as shown).



The shift forks are very hard and must be ground with a bench or angle grinder, or cut with a carbide tool. ACT offers this service at a reasonable price. Below is what the shift forks will look like after being properly modified for clearance. For an instructional video on how to check clearance go to [http://youtu.be/34EQzLC4\\_g0](http://youtu.be/34EQzLC4_g0).



**ACT Wide Ratio Transmission for DR-Z400**

