



SpeedFactory Racing FWD2AWD B-Series Gear Conversion Kit - Part# SF-05-502

Thank you for your purchase. This kit has been created to provide you with the parts and modifications needed to easily retrofit a stock layout FWD B-Series gear set into your B AWD transmission with NO MACHINE WORK required!

You will need to use the gears, hubs, sliders, and synchros from the FWD sets and the pinion shaft and ring gear will still need to be an AWD specific set – either OEM or OEM compatible aftermarket final drive set. (Note: The B AWD 2nd synchro & 3rd/4th hub/slider/synchros can also be used.)

The reverse idler gear will need to be a 3.0 ratio (24T) gear either from a FWD gearset or from a '98 CRV AWD gearset. '99-01 CRV AWD reverse gears are 3.461 ratio (29T) and are NOT COMPATIBLE with the FWD gear stacks.

NOTE: It is highly recommended that the installation be performed by a transmission rebuilding specialist.

Component List:

- 1) **Billet SFR 1/2 Shift Fork Conversion** - This is used in place of the original stock AWD 1/2 shift fork.
- 2) **Custom SFR 1st Idler Gear Split Needle Bearing** - Install this on the pinion shaft inside of the 1st idler gear.
- 3) **Custom SFR Precision Spacers** – Needed to achieve proper component locations.

- a. 1/2 Hub Spacer – BLUE paint marked

Install this under the 1/2 slider hub and then install the FWD 1/2 hub & slider. DO NOT use the AWD 1/2 slider as it has a narrower shift fork groove. You can use the needle bearing/sleeve/friction damper from either the FWD or AWD gear set inside of the 2nd idler gear. Install the rest of the pinion shaft stack as normal and use the AWD bearings/washer/nut at the top of the pinion/countershaft.

- b. Mainshaft Spacer – RED paint marked

The AWD outer transmission case upper bearing will be used on your assembled mainshaft. Our spacer replaces the OEM flat washer under the mainshaft - retain the flex washer underneath and set endplay to factory specs which is approximately the midpoint of the flex washer. Once properly shimmed, the flex washer will sit at 0.036" (0.91mm) high (midpoint of its flex range) and total shaft endplay when measured with the factory tool will be 0.004-0.007" (0.11-0.18mm).

Typically, the 78mm outer transmission case upper mainshaft shim will need to be 0.025-0.030" (0.63-0.76mm) thicker than the original shim when installing an OEM FWD set into OEM AWD housings. If you are having a hard time finding or making the needed shim, we suggest using 80mm differential shims from a B16 or LS transmission as they are readily available from Honda in varying thicknesses. You can stack 2 shims to achieve your desired total thickness and reduce the OD by 2mm down to the needed 78mm to fit in the housing.

- c. Reverse Thrust Washer – ORANGE paint marked

This goes under the reverse idler gear if you are using a short 41.9mm tall FWD 3.0 ratio idler gear. If you have a 45.8mm tall FWD or AWD 3.0 ratio reverse idler gear DO NOT use this washer.

- d. Upper Cuff Shim – GREEN paint marked

This is for use with the Albins B Dog Set only, it is not used for Albins or OEM synchro sets. This goes on the pinion shaft above the cuff bearing and is used in place of the original shim included with the Albins B Dog Set that goes above the cuff bearing.