



**Speed Gems**  
transmission adapters

Performance. Delivered.  
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## Ford 239/252/272/292/312 "Y" - Block to Ford AOD

### Disclaimer - Please Read Carefully

**WARNING:** Due to the nature of engine and transmission swaps, we cannot guarantee fitment into your vehicle without having to make mild to extensive modifications. This should be considered when starting your project. It is highly recommended to take the time to research any potential issues you may face prior to starting your build. There are numerous forums and websites that can help and give insight into any potential issues involved in the project. This project is not for a novice mechanic. If an individual is not confident in performing such extensive vehicle modifications, Speed Gems recommends finding a capable shop for assistance.

Prior to and during installation of your new Speed Gems Transmission Adapter Kit, always ensure to:

- Clean everything, including all components and surfaces.
- Use proper torque and **Loctite all bolts.**
- Do not force anything and begin all bolts by hand before using any tools. This will prevent cross-threading.
- Check all bolt clearances.

We try to make everything as simple as possible to help you, but the ultimate responsibility as to the assembly of the kit is up to the installer.

If you have any additional questions, please contact us by phone (763) 767-4480 during business hours or email [sales@transmissionadapters.com](mailto:sales@transmissionadapters.com) at any time.

### COMPONENTS INCLUDED IN KIT

|  |
|--|
| (1) Adapter Plate - Ford/Lincoln/Mercury to Ford                   |
| (1) Crank Adapter - Ford 223 Inline-6 or 239 "Y"-block to Ford AOD |
| (1) Flexplate  |
| (1) High-torque mini-Starter                                       |
| (1) Inspection Cover - Ford (most)                                 |
| (4) SHCS 7/16-14 x 1-3/4   |
| (6) SHCS 7/16-20 x 1   |
| (6) 7/16-20 x 3/4 flexplate bolts                                  |
| (2) HCS 1/4-20 x 1/2   |
| (2) FLAT WASHER 1/4  |
| (2) LOCK WASHER 1/4  |
| (2) SHCS 1/4-28 x 1-3/4 (Starter Bolts)                            |
| (4) HCS 7/16-14 x 2  |
| (2) HCS 7/16-14 x 1 3/4  |
| (2) Stepped Dowel Pin Threaded 7/16-14                             |



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## APPLICATION NOTES

- The crank adapter and flexplate provided in this kit have been pre-assembled for reference on how they go together. Both parts have offset bolt holes.
- There are oil galley plugs in the back of the block that have been known to cause clearance issues for this application in the past. The adapter plate in this kit has been machined to clear them, although it is still good practice to be aware of them in case there is a clearance issue.
- The flexplate that comes with the kit is for the AOD transmission only! It will not work with any other transmission. Other transmissions will mate to this adapter plate and will require purchasing the correct flexplate that is compatible to the transmission application. The difference is the 1/4" setback in the flexplate. The flexplates used for other Ford transmissions, i.e. – the C6 and the E4OD, do not have the same spacing. Flexplates for other transmissions are commonly available, give us a call for assistance!

These applications require Ford 4.9 (300ci 6-cylinder) 164-tooth flexplates. These flexplates are the same as the 302 & 351W motors in all aspects, except balancing.

The 4.9 flexplates are neutral balanced. The 302 & 351W are externally balanced.

The 410 & 428 engines have externally balanced flexplates shipped with the kit to match the original factory balance. They are indexed to the crank adapter.

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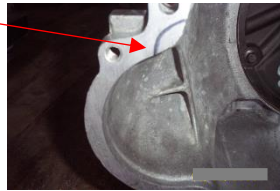
## INSTALLATION INSTRUCTIONS

1. Once the transmission is removed, clean the back surface of the block where the adapter will contact. Make sure both alignment dowels are in place.
2. Make sure that the crank flange is extremely clean (i.e. - no burrs). Note the position of the factory notch in the crankshaft compared to the position of the offset bolt hole. This will be the same on all offset crankshafts.
3. Bolt the provided crank adapter onto the crank making sure to line up the bolt holes first. Using the (6) 7/16-20 x 1" SHCS included, ensure that the bolts don't go through the crank flange too far binding on the crank.  
**NOTE:** It may be necessary to grind a little off the bolts. The crank adapter only bolts on one way. There is an offset bolt hole.
4. Mock-up the provided block adapter plate onto the transmission case without the torque converter to note where it will be necessary to grind some aluminum off the transmission case.

Look through the hole where the starter drive protrudes through the adapter. You will need to remove some material so the starter drive can extend rearward. This is to clear the starter drive only.

Grind the area away until the starter drive can be extended without touching the transmission case (\*approximately 1 inch).  
*\*See picture below.*

*\*This line is the edge of where the aluminum must be removed for the starter drive.*



5. Install the provided block adapter plate to the block using the (4) 7/16-14 x 1-3/4" SHCS included.
6. Install the provided starter to the block adapter plate using the (2) 1/4-28 x 1-3/4" SHCS included.
7. Bolt the provided flexplate to the crank adapter installed in *Step #3*. While doing so, make sure to line up the offset bolt holes.  
**NOTE:** Ensure that the starter drive clears the flexplate. Approximately .040-.080" is the desired clearance, although sometimes less is acceptable.
8. Install the provided inspection cover plate as needed using the (2) 1/4-20 x 1/2" HCS included.
9. Install the starter to make sure it aligns with the ring gear. Next, turn the engine over with the starter to make sure everything is going to work correctly. Check and confirm the depth of starter engagement, or distance of the drive to the ring gear. If the engine can be started and ran, you can also make sure there is no vibration present.
10. Everything should now be set to install the AOD transmission using the (4) 7/16-14 x 2" HCS & (2) 7/16-14 x 1-3/4" HCS included.



Speed Gems would like to THANK YOU for purchasing our products!

We would love to see pictures of our products installed on your Hotrod. Please tag us on our social media or send a picture to [sales@transmissionadapters.com](mailto:sales@transmissionadapters.com) and we will get your project posted on our website.

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