



Rudy's 6R140 Transmission Installation Instructions

To install the 6R140 transmission, specific diagnostic and flashing tools are necessary. You must have a Ford IDS scan and flash tool to complete the installation. Do not proceed with the installation unless you have this tool available.

After removing the old transmission, please follow these steps:

- Ensure both dowel pins are properly positioned in the motor plate. This is crucial for the correct alignment of the new transmission. Missing dowel pins can lead to early transmission failure, which will not be covered under warranty.
- Clean all electrical connections related to the transmission and/or transfer case. Poor or loose electrical connections can result in early transmission failure that is not covered by warranty.
- Inspect all u-joints, carrier bearings, and motor mounts. Faulty u-joints, carrier bearings, or motor mounts can cause early transmission failure or damage to the transmission and transfer case. Such failures or damage will not be covered under warranty if they result from these components.

After removing the old transmission, it is essential to flush the cooler and lines to maintain the validity of your Rudy's warranty.

At Rudy's, we use a Hot Flush machine for this process. This method involves using hot oil and briefly reversing the flow to remove any foreign material from the cooler. This is the only approved flushing method for your cooler and lines.

Failure to properly flush the transmission oil cooler system may lead to erratic operation and premature failure.

NOTE: If you initiate a warranty claim and have not flushed your cooler and lines, your warranty will be denied.

IMPORTANT:

The transmission must be re-flashed at a Ford dealer or using a Ford IDS scan tool before the truck resumes normal operation. Neglecting this step will disrupt the shift programming, leading to broken parts and a voided warranty.

For a successful rebuild, adhere to Ford instruction sheet #SK-BC3P-7A100-AB, including the drive cycle re-learn. Failure to follow these instructions will result in transmission failure and void the warranty.

Any warranty claim must include proof of compliance with the above requirements.

TRANSMISSION FLUID FILL PROCEDURE

FLUID CAPACITY:

- Stock Pan: 18 Quarts ± 1
- Deep Pan: 26 Quarts ± 1

To avoid overfilling the transmission, follow these steps:

- Remove the dipstick.
- Add approximately 10 quarts for the stock pan or 14 quarts for the deep pan.
- Apply the parking brake.
- Start the engine and let it run at normal curb idle speed.
- With the service brakes applied, shift the transmission to NEUTRAL, set the parking brake, and keep the engine running at curb idle speed.
- Add fluid until it reaches the hash marks on the dipstick.
- Reinsert the dipstick and check the fluid level. If it's low, add fluid until it reaches the MIN mark. Ensure both sides of the dipstick are level; if one side is higher, oil may have collected on the dipstick tube. Allow it to drain and recheck.
- Shift the transmission between DRIVE and REVERSE 4 to 5 times while keeping the parking and service brakes applied, then shift back to NEUTRAL.
- Recheck the fluid level on the dipstick.
- Drive the vehicle until the transmission fluid reaches normal operating temperature.
- With the engine running at curb idle speed and the gear selector in NEUTRAL with the parking brake applied, recheck the transmission fluid level.
- **CAUTION: Avoid overfilling the transmission, as this can cause fluid foaming and shifting problems. Once the fluid level is correct, turn off the engine, release the parking brake, and reinstall the dipstick in the fill tube.**

BREAK-IN PROCEDURE

500-MILE BREAK-IN PERIOD REQUIRED FOR WARRANTY VALIDITY

*To ensure your warranty remains valid, **complete a break-in period of 500 miles**. During this time, use stop-and-go driving with light to moderate throttle openings before performing any high-throttle up-shifts.*

- Accelerate from a stop to 6th gear using 25% throttle, then bring the vehicle to a gradual stop. **Repeat this process 10 times.**
- Accelerate from a stop to 6th gear using 50% throttle, then bring the vehicle to a gradual stop. **Repeat this process 5 times.**

*The relearn process will take 5 days, with overnight cool-down periods required before it is complete. Initially, you may experience slip or flare during the 1-2, 2-3, and 3-4 shifts when the transmission is cold, particularly in the morning, until the TCM adapts. **Once these issues have resolved, you can safely exceed 50% throttle**. It is normal for the transmission to require some mid and heavy-throttle driving after the initial break-in period to fully adapt to these higher throttle positions.*