

AUTOMATIC TRANSMISSION SYSTEM

PRECAUTION

1. INITIALIZATION

NOTICE:

- Perform the AT initialization when replacing the automatic transmission assembly, engine assembly or ECM.
- Perform the REGISTRATION (VIN registration) when replacing the ECM. (See page [ES-16](#)).

HINT:

Initialization can be completed by only disconnecting the battery terminal.

2. FOR USING INTELLIGENT TESTER

CAUTION:

Observe the following instructions for safety reasons:

- Read its instruction books before using the tester.
- Prevent the tester cable from being caught on the pedals, shift lever and steering wheel when driving with the tester connected to the vehicle.
- When driving the vehicle for testing purposes using the tester, two persons are required. One is for driving the vehicle, and the other operates the tester.

3. CONNECT BATTERY NEGATIVE TERMINAL

- (a) Connect the battery negative terminal to the cable and run the engine at no less than 2,000 rpm for 1 minute.

NOTICE:

If the engine exceeds 2,000 rpm, the clutch is automatically disengaged by the compressor protection control system.

4. DISASSEMBLY AND REASSEMBLY

CAUTION:

When using compressed air, always aim away from yourself to prevent Automatic Transmission Fluid (ATF) or kerosene from spraying on your face.

NOTICE:

- The automatic transmission is composed of precision-made parts, necessitating careful inspection before reassembly because even a small nick could cause fluid leakage or affect performance.
- The procedures are organized so that you work on only one component group at a time. This will help avoid confusion with similar-looking parts of different sub-assemblies being on your workbench at the same time.
- The component groups are inspected and repaired from the converter housing side.

- Whenever possible, complete the inspection, repair and reassembly before proceeding to the next component group. If a defect is found in a certain component group during reassembly, inspect and repair this group immediately. If a component group cannot be assembled because parts are being ordered, be sure to keep all parts of the group in a separate container while proceeding with disassembly, inspection, repair and reassembly of other component groups.
- When changing the automatic transmission fluid, use only "Toyota Genuine ATF Type T- IV" (ATF JWS3309 or NWS6500)
- All disassembled parts should be washed clean, and compressed air should be blown through any fluid passages and holes.
- Dry all parts with compressed air. Never use cloth.
- The recommended ATF or kerosene should be used for cleaning.
- After cleaning, the parts should be arranged in the order they were removed for efficient inspection, repairs, and reassembly.
- When disassembling a valve body, be sure to match each valve with its corresponding spring.
- New discs for the brakes and clutches that will be used for replacement must be soaked in ATF for at least 15 minutes before reassembly.
- All oil seal rings, clutch discs, clutch plates, rotating parts, and sliding surfaces should be coated with ATF prior to reassembly.
- All old gaskets and rubber O-rings must be replaced.
- Do not apply adhesive cement to gaskets and similar parts.
- Make sure that the ends of the snap rings are not aligned with any cutouts. Also make sure that snap rings are correctly installed into the grooves.
- If a worn bushing is to be replaced, the sub-assembly containing the bushing must also be replaced.
- Check the thrust bearings and races for wear or damage. Replace if necessary.
- Use petroleum jelly to keep parts in place.

- **When working with FIPG material, perform the following:**
 - Using a razor blade and gasket scraper, remove all old FIPG material from the gasket surface. Clean all components thoroughly to remove all foreign matter.**
 - Clean both sealing surfaces with a non-residue solvent.**
 - Apply FIPG material in a continuous line approximately 1 mm (0.04 in.) in diameter on the sealing surface.**
 - Reassemble parts within 10 minutes of applying FIPG material. Failing to do so will require the FIPG material to be removed and reapplied.**