2001 Toyota Echo L4-1.5L (1NZ-FE)

Removal and Installation

Component Search: [OK]

Conversion Calculator
REMOVAL

1. REMOVE HOOD HINT: At the time of installation, please refer to the following item. Adjust the hood.

2. REMOVE WIPER ARM HINT: At the time of installation, please refer to the following item. Adjust the installation position of the wiper arms.
3. REMOVE RH AND LH COWL TOP VENTILATOR LOUVERS
4. REMOVE NO. 2 CYLINDER HEAD COVER Remove the 4 nuts and No. 2 cylinder head cover. Torque: **7.0 Nm (71 kgf-cm, 62 inch lbs.)**
5. REMOVE BATTERY AND AIR CLEANER CASE ASSEMBLY WITH AIR HOSE

6. DISCONNECT WIRE HARNESS FROM TRANSAXLE Remove the set bolt of the wire harness clamp.
7. DISCONNECT CONTROL CABLE
   a. Remove the 2 clips and washers.
   b. Remove the 2 clips and disconnect the control cables from the transaxle.

8. DISCONNECT CLUTCH RELEASE CYLINDER
   a. Remove the set bolt of the clutch line. Torque: **4.9 Nm (50 kgf-cm, 43 inch lbs.)**
   b. Remove the 2 set bolts of the clutch release cylinder. Torque: **12 Nm (120 kgf-cm, 9 ft. lbs.)**
9. DISCONNECT GROUND CABLE Remove the set bolt of the ground cable from the engine left mounting bracket.

10. DISCONNECT BACK-UP LIGHT SWITCH AND VEHICLE SPEED SENSOR CONNECTORS

11. REMOVE 2 TRANSAXLE UPPER SIDE MOUNTING BOLTS Torque: **33 Nm** (340 kgf-cm, 25 ft. lbs.)

12. REMOVE STARTER SET BOLT Torque: **39 Nm** (400 kgf-cm, 29 ft. lbs.)

13. ATTACH ENGINE SLING DEVICE TO ENGINE HANGER
a. Remove the bolt.

b. Install the 2 No. 1 engine hangers with the bolts in the correct direction.
   Parts No.: No. 1 engine hanger: 12281-21010 Bolt: 91642-81025 Torque: 40 Nm (400 kgf-cm, 29 ft. lbs.)
   c. Attach the engine chain hoist to the engine hangers. CAUTION: Do not attempt to hang the engine by hooking the chain to any other part.

14. RAISE VEHICLE CAUTION: Make sure that the vehicle is securely supported.
15. REMOVE LH ENGINE UNDER COVER

16. DRAIN TRANSAXLE OIL Oil grade: API GL-4 or GL-5 Viscosity: SAE 75W-90 Capacity: 1.9 liters (2.0 US qts, 1.7 Imp. qts) Torque: 39 Nm (400 kgf-cm, 29 ft. lbs.)
17. REMOVE RH AND LH FRONT DRIVE SHAFTS
18. REMOVE SUSPENSION MEMBER
   a. Remove the 2 set nuts and bolt of the engine rear mounting insulator from the suspension member.
   b. Disconnect the sliding yoke.
   c. Power steering: Disconnect the pressure feed and return tubes.
   d. Power steering: Disconnect the tube clamp.
e. Remove the suspension member.

19. JACK UP TRANSAXLE SLIGHTLY Using a transmission jack, support the transaxle.

20. DISCONNECT ENGINE LEFT MOUNTING BRACKET FROM ENGINE LEFT MOUNTING INSULATOR Remove the 2 bolts. Torque: 49 Nm (500 kgf-cm, 36 ft. lbs.)

21. REMOVE ENGINE REAR MOUNTING INSULATOR AND BRACKET

   a. Remove the bolt, nut and engine rear mounting insulator. Torque: 64 Nm (650 kgf-cm, 47 ft. lbs.)
   b. Remove the 3 bolts and engine rear mounting bracket. Torque: 49 Nm (500 kgf-cm, 36 ft. lbs.)
22. REMOVE STARTER

   a. Remove the bolt, starter cover and starter. Torque: **39 Nm (400 kgf-cm, 29 ft. lbs.)**
   b. Disconnect the starter connector.
   c. Remove the nut and starter wire.

23. REMOVE 5 TRANSAXLE LOWER SIDE MOUNTING BOLTS Torque: **33 Nm (340 kgf-cm, 25 ft. lbs.)**

24. REMOVE TRANSAXLE Lower the engine left side and remove the transaxle from the engine. **HINT:** At the time of installation, please refer to the following items.

   - Align the input shaft with the clutch disc and install the transaxle to the engine.
   - Temporarily tighten the transaxle mounting bolts.

**INSTALLATION**

Installation is in the reverse order of removal.

**HINT:** After installation, check and inspect items as follows.
- Front wheel alignment.
- Do the road test.