



**Technical Service
BULLETIN**

June 6, 2005

Title: **ISC LEARNING PROCEDURE**
Models: **'06 Highlander HV**

TSB

ENGINE
EG026-05
REVISED



TSB REVISION NOTICE:

- February 27, 2006: Step 3 of the ISC Learning Procedure and steps 3 and 7 of the ISC Initialization Procedure have been updated.
- Previous versions of this TSB should be discarded.

Introduction When the 12-volt battery is disconnected or is depleted below 7 volts on 2006 model year Highlander HV vehicles, it is necessary to perform the ISC Learning procedure to re-initialize the idle speed control. The information in this TSB relates to this procedure.

- Applicable Vehicles**
- 2006 model year **Highlander HV** vehicles.

Required SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PART NUMBER	QTY	DRW**
1	Toyota Diagnostic Tester Kit* NOTE: <ul style="list-style-type: none"> • All components from this kit/set are required • 12 Megabyte Diagnostic Tester Program Card (P/N 01002593-005) with version 13.3a Software (or later) is required 	TOY220036	1	9
2	CAN Interface Module Kit* NOTE: <ul style="list-style-type: none"> • All components from this kit/set are required 	01002744	1	9

* Essential SSTs.
 ** Refers to drawer number in SST Storage System.

NOTE:

Additional Diagnostic Tester Kits, CAN Interface Modules, Program Cards, or other SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFFP	T1	T2
N/A	Not Applicable to Warranty	-	-	-	-



ISC Learning Procedure

It is important to perform the ISC Learning procedure anytime the 12-volt battery is disconnected or the voltage falls below 7 volts. This procedure allows the I.C. (internal combustion) Engine to re-learn its optimal idle speed during the initial engine warm-up cycle or charging the HV battery. If this procedure is NOT performed, the following customer complaints may occur:

- Engine runs too long or more frequently than normal
- Reduced fuel economy
- Transmission gear “clatter” noise at idle is more pronounced

In the Diagnostic Tester, the current state of ISC Learning status can only be accessed through the following path:

DIAGNOSIS / ENHANCED OBD II / DATA LIST / USER DATA / ISC LEARNING**NOTE:**

Please note that these values are found on the 17th screen of this list so usage of “*” in combination with the down button (▼) is suggested until these items are visible.

ISC Learning value identifies the current status of ISC Learning and is expressed as either “COMPL” (complete) or “INCOMP” (incomplete).

Each time the ignition is cycled to the “OFF” position, ISC Learning value will show “INCOMP” until the engine completes its initial startup/shutdown. The following procedure should be used to verify the current status of the ISC Learning:

1. Drive the vehicle until the engine reaches operating temperature 158°F (70°C) (can be accessed through the Diagnostic Tester with the menu items: DIAGNOSIS / ENHANCED OBD II / DATA LIST / PRIMARY / COOLANT TEMP).
2. Park the vehicle and turn the ignition OFF.
3. Access the ISC LEARNING data parameter (DIAGNOSIS / ENHANCED OBD II / DATA LIST / USER DATA / ISC LEARNING).
4. Turn the ignition key back to “READY ON”.
5. Wait for the engine to start and run through its initial startup cycle and shut off.
6. Observe the ISC Learning status.

If the vehicle shows “INCOMP” after initial engine shutdown in step 5, then the ISC Learning procedure should be performed.

**ISC
Initialization
Procedure**

1. Select the following menu items:
DIAGNOSIS / ENHANCED OBD II / DATA LIST / PRIMARY / COOLANT TEMP
2. Check that the engine coolant temperature is 181.4°F (83°C) or more.

HINT:

If the engine coolant temperature is below 181.4°F (83°C), start the engine by depressing the accelerator pedal with the shift lever in the “P” position to increase the coolant temperature.

3. Select the following menu items:
DIAGNOSIS / ENHANCED OBD II / DATA LIST / USER DATA / CALCLOAD
4. Move the shift lever to the “D” position while depressing the brake pedal with the left foot.
5. Depress the accelerator pedal with the right foot while firmly depressing the brake pedal with the left foot, and maintain an engine load value of 45% or more (60 – 70% of full acceleration) for approximately 30 seconds.

NOTE:

Do NOT perform this step for more than 40 seconds.

6. Shift the lever to the “P” position. Turn the ignition switch OFF and then wait for 5 seconds before putting the vehicle into the “READY ON” state again.
7. Select the following menu items:
DIAGNOSIS / ENHANCED OBD II / DATA LIST / USER DATA / ISC LEARNING
8. Check that the air conditioner is OFF. Lightly depress the accelerator pedal and release it when the engine starts.
9. Check that “COMPLETE” is displayed on the Diagnostic Tester screen.

HINT:

- If “ISC LEARNING” is NOT completed within 1 minute, repeat steps 5 – 8.
- The engine will usually stop when the “ISC LEARNING” is completed. However, the engine will NOT stop even when the “ISC LEARNING” is completed in such cases where the charge level of the auxiliary battery is decreased.