

# Injection Mode Active Test Diagnostics

**Service Category** Engine/Hybrid System

**Section** Engine Control

**Market** USA

Toyota Supports  
ASE Certification 

## Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2021	ES250	VDS(s): B11D1 Engine(s): A25
2019 - 2021	ES350	VDS(s): BZ1B1 Engine(s): 2GR
2017 - 2020	GS350	VDS(s): BZ1BL Engine(s): 2GR
2017 - 2021	IS300, IS350	VDS(s): A81F2 Engine(s): 2GR
2017 - 2021	RC300, RC350	VDS(s): A85EC Engine(s): 2GR
2016 - 2021	RX350	VDS(s): AZKEA Engine(s): 2GR
2019 - 2021	UX200	VDS(s): E3JBH Engine(s): M20

## Introduction

This Service Bulletin provides a procedure to properly perform the Techstream “Control the Injection Mode” active test in some 2016 – 2021 model year Lexus vehicles equipped with an FKS engine.

## Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	–	–	–	–

## Injection Mode Active Test Diagnostics

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### Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVi*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

\*Essential SST.

**NOTE**

- Only ONE of the Techstream units listed above is required.
- Software version 16.00.021 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

### Test Procedure

1. Using Techstream, select *Engine – Active Test – Control the Injection Mode*.
  
2. Verify the execute conditions are met to perform the active test.

**NOTE**

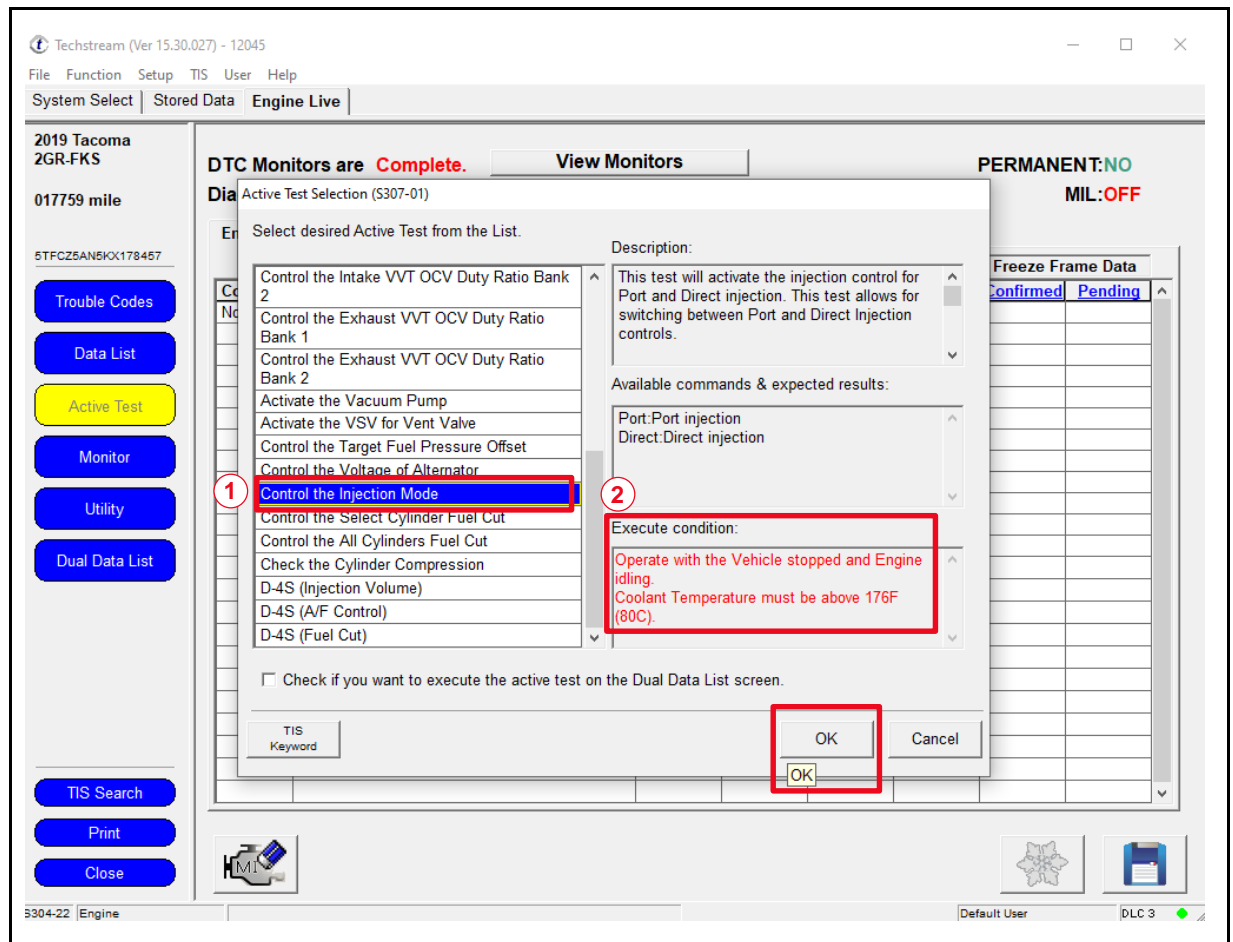
The vehicle MUST be stopped with the engine idling, and the coolant temperature MUST be above 176°F (80°C).

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## Test Procedure (continued)

3. Select OK.

Figure 1.



1 Active Test Selection

2 Execute Conditions

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## Test Procedure (continued)

4. Select the criteria desired for monitoring (see the figure below).
  - A. Select Primary as the data set to be displayed.
  - B. Select the parameters.
  - C. Select the graph button.

**Figure 2. Example of Selecting Criteria for Monitoring**

The screenshot shows a diagnostic software window with a menu bar (File, Function, Setup, TIS, User, Help) and a toolbar. The main area displays a list of parameters with columns for Parameter, Value, and Unit. A red circle labeled '1' points to the 'Data Set to Be Displayed' dropdown menu, which is set to 'Primary'. A red circle labeled '2' points to a list of parameters, including 'Injection Mode', 'Injection Timing Cylinder #1 (D4)', and various sensors. A red circle labeled '3' points to the 'Graph' button at the bottom of the interface. A small dialog box titled 'Control the Injection Mode (3307-106)' is also visible in the bottom right corner.

<b>1</b>	<b>Data Set to Be Displayed</b>
<b>2</b>	<b>Parameters</b>

<b>3</b>	<b>Graph Button</b>
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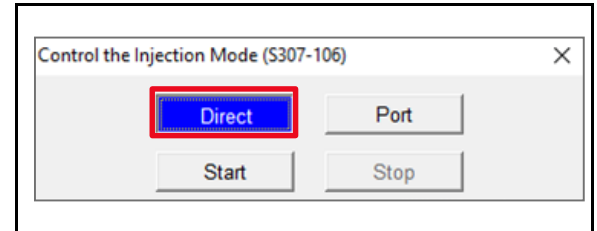
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### Test Procedure (continued)

5. Select Direct on the Control the Injection Mode window.

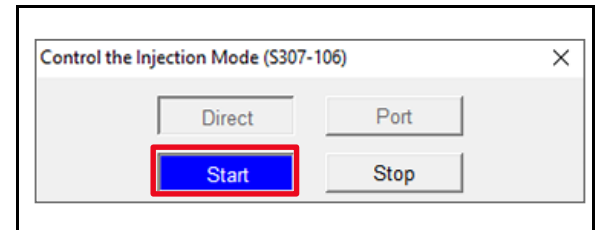
**Figure 3.**



6. Raise engine to 2,000 RPM.

7. Press Start

**Figure 4.**

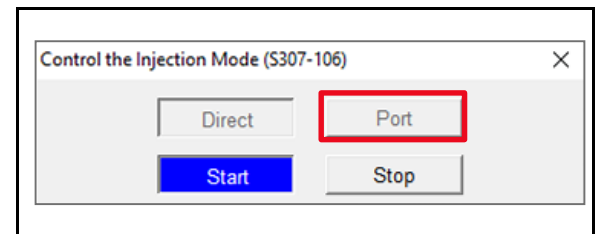


8. Keep the engine RPM at 2,000 for 30 seconds.

9. Idle the engine for one minute.

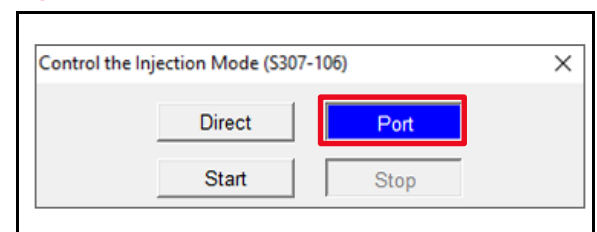
10. Click Stop.

**Figure 5.**



11. Select Port on the Control the Injection Mode window and repeat steps 6 – 10 once BEFORE continuing to step 12.

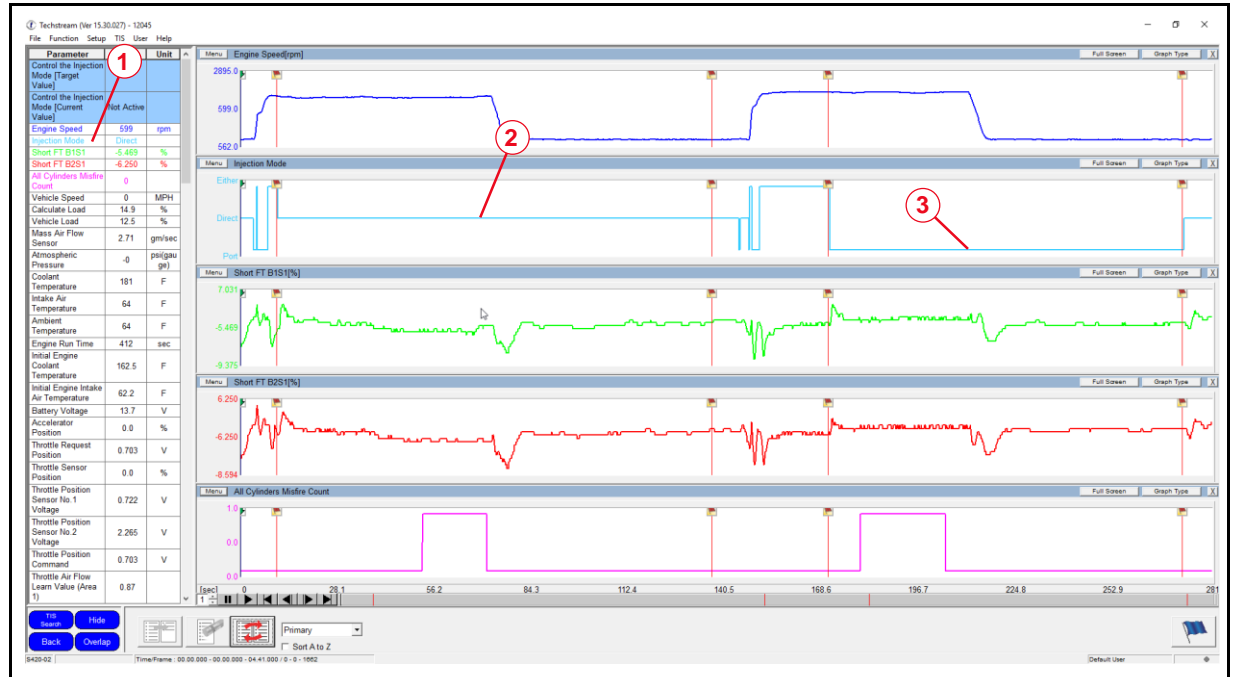
**Figure 6.**



# Injection Mode Active Test Diagnostics

## Test Procedure (continued)

**Figure 7. Primary Data List Graph Snapshot**



<b>1</b>	<b>Injection Mode Parameter</b>
<b>3</b>	<b>Port Injection Mode Confirmation</b>

<b>2</b>	<b>Direct Injection Mode Confirmation</b>
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- Utilizing the primary data list graph snapshot, confirm the switch occurred when commanded with the injection mode parameter.

Did the vehicle respond to the selected modes (direct and port) during the active test?

- **YES** — The active test is complete.
- **NO** — Retake the active test, return to step 1.

**NOTE**

If the active test is used multiple times without using this procedure to raise engine RPM, it may be necessary to reset learning values for fuel trim and air to fuel ratio before returning the vehicle to the customer.