

Subject

Injection Mode Active Test Remedy

Market

USA

Service Category

Engine/Hybrid System

Section

Fuel System

Applicability

All current vehicles with FKS engine

APPLICABLE VEHICLES

2017-2020	Highlander	2018-2020	Camry
2019-2020	Avalon	2017-2020	Sienna
2020	RAV4	2016-2020	Tacoma
2019-2020	Corolla Hatchback	2020	Corolla

CONDITION

The current engine active test "Control the Injection Mode" is not operating as desired when controlling the direct injectors manually on 2GR-FKS engines.

When direct injection is started and then stopped using the active test, current ECU logic does not turn off the direct injectors and can cause DTCs P017200, P017500 and P0160300.

To avoid this condition, technicians should raise engine RPM when changing back and forth between the Direct Injection and Port Injection active tests.

Use the recommended procedure below to avoid this concern while testing injection mode of FKS equipped vehicles.

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 vehicle to customer.

RECOMMENDATIONS

- Using Techstream navigate to Active Test → Control the Injection Mode
- Verify the Execute conditions are met to perform the Active Test

NOTE: Vehicle must be stopped and the engine idling, Coolant Temperature must be above 176F (80C)

Subject

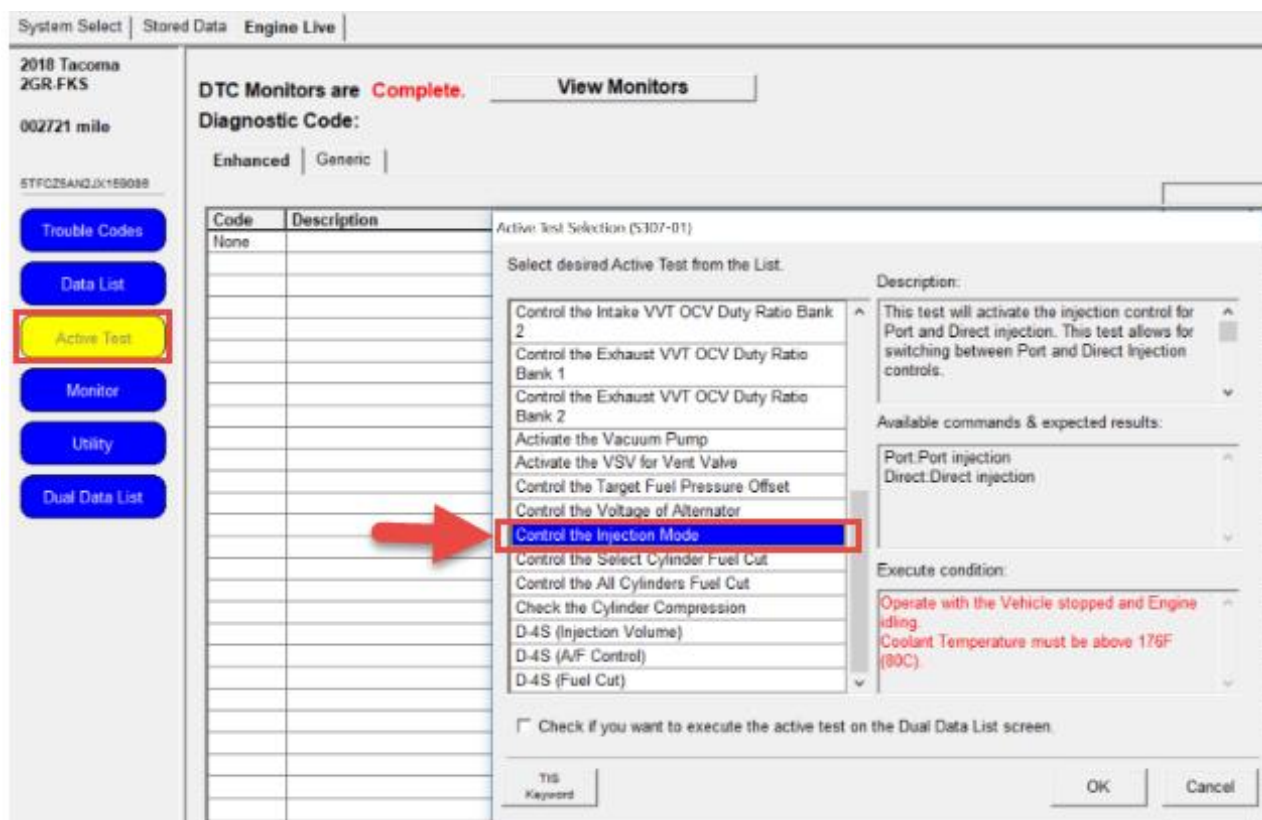
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RECOMMENDATIONS



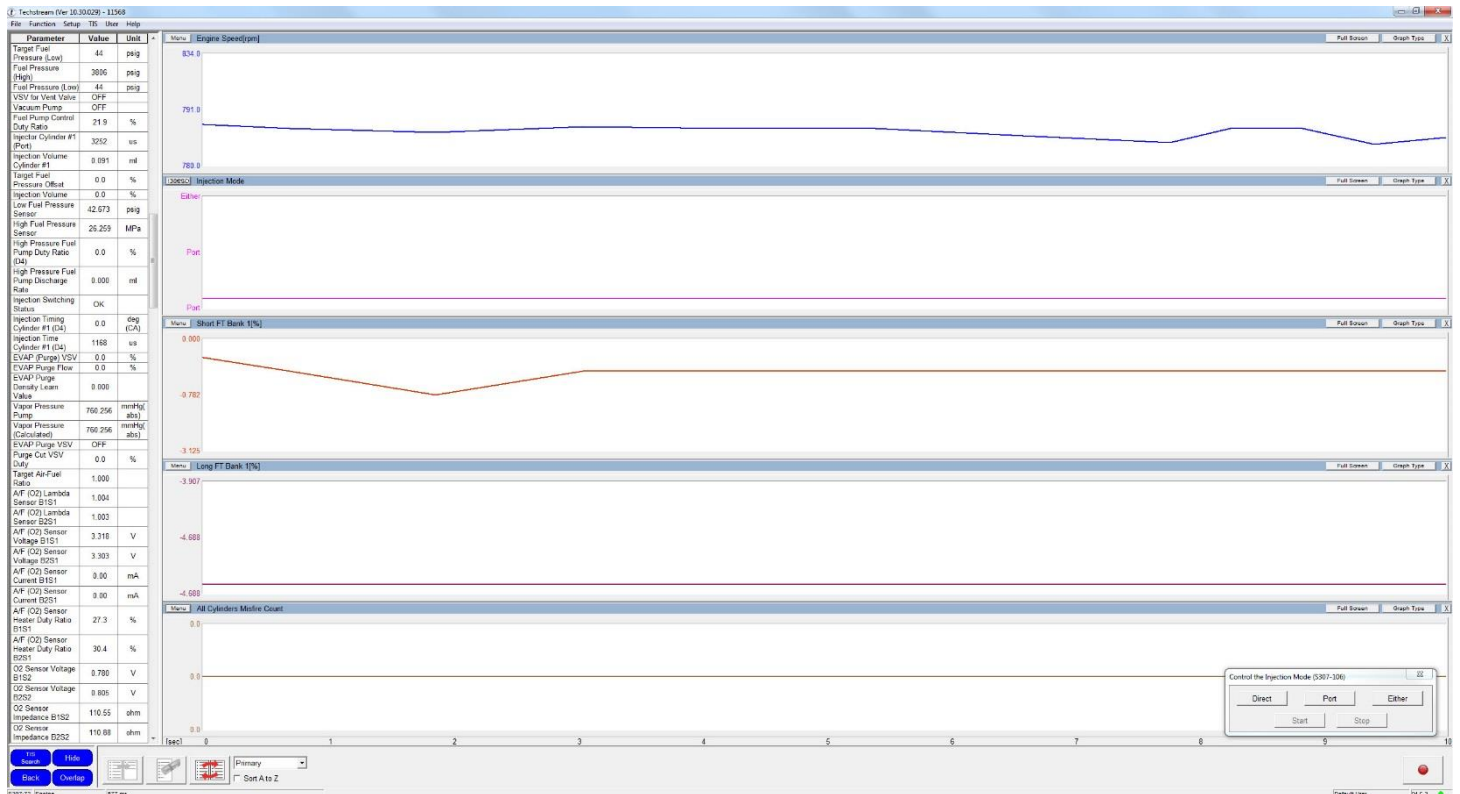
- After selecting the criteria desired for monitoring, the following screen will appear:

NOTE: When selecting a Data List for the Injection Mode Active test be sure to have the following parameters in the **primary data list** to aid in diagnosis. You may have to add the following to the primary data list on Techstream version 13.30.018

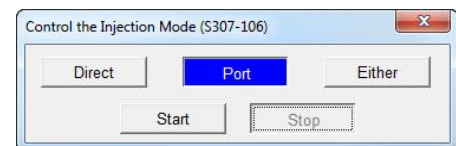
- Injection Mode
- STFT (for all banks)
- LTFT (for all banks)
- Misfire count for all cylinders and individual cylinders
- Misfire margin
- Knock correct learn value

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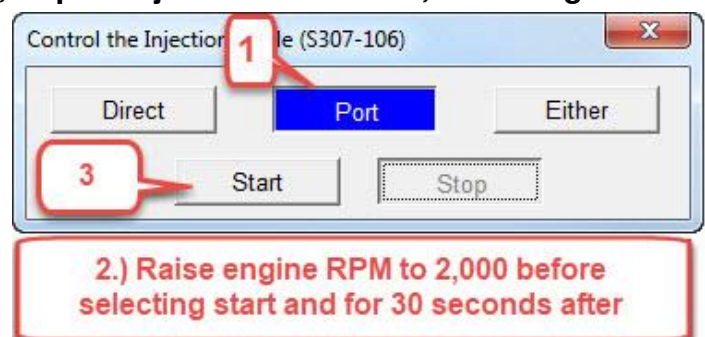


- Utilize the active test control window to command direct injectors or port injectors to “Start” and “Stop.”



Key Point:

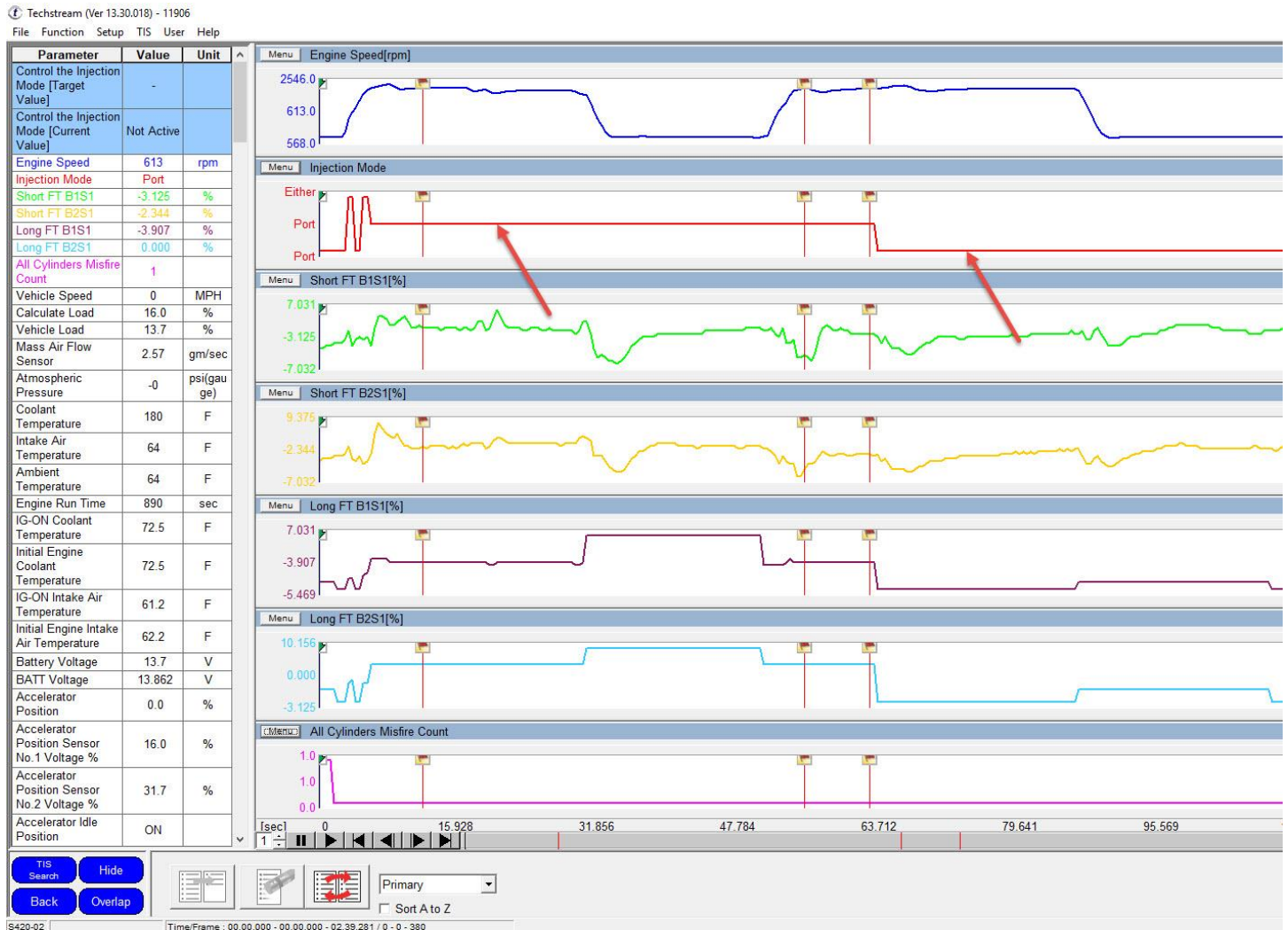
When switching the direct injection active test, to port injection active test, raise engine RPM to 2,000 RPM prior to pressing “Start” and for 30 seconds after as shown. Perform the same when switching from port injection active test to direct injection



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RECOMMENDATIONS

- Utilizing the data list confirm the switch occurs when commanded with the Injection Mode parameter



LINK REFERENCES

This Tech Tip does not contain any link references