

**United States**  
**Environmental Protection Agency**  
**Office of Transportation and Air Quality**  
**National Vehicle and Fuel Emissions Laboratory**  
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**Engine Operation Procedure**

This procedure is written for the Environmental Protection Agency, National Vehicle and Fuel Emissions Laboratory (NVFEL) internal use. The use of specific brand names by NVFEL in this procedure are for reference only and are not an endorsement of those products. This document may be used for guidance by other laboratories.

**NVFEL Reference Number**

007A

**Implementation Approval**

Original Test Procedure Authorized by EPCN #216 on 08-02-2000

**Revision Description**

- (1) 09-18-2001 The purpose of this change is to update the Group Responsible name per EPCN #316

Table of Contents

1. Purpose.....	3
2. Test Procedure.....	3
3. Acceptance Criteria.....	6

## 1. Purpose

The purpose of this working procedure is to describe the procedure required to perform initiation and shutdown of a Advanced Testing Group engine test using the MTS System.

## 2. Test Procedure

101 On the PowerTek Computer click on the "Template exe" icon, located on the desktop. See the arrow in Figure 1.

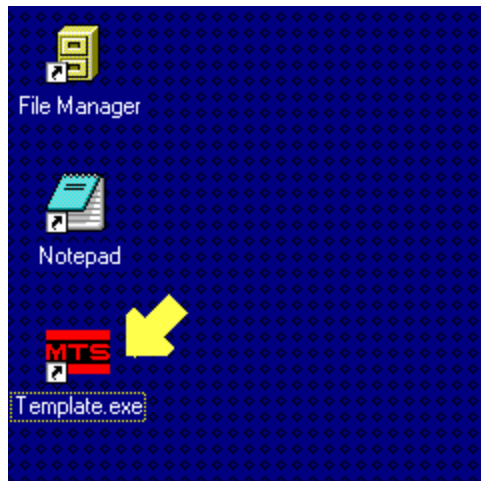


Figure 1  
Template exe Icon

102 Click on the "OK" button in the "Communications Established" dialog box.

103 When the "Test Builder" dialog box appears with the message "Test Build Successfully Completed", click on the "OK" button.

104 In the Softpanel, click on the "Launch" button. See the arrow in Figure 2.

Wait for the "Prompter" dialog box to appear with the message "Launch Sequence Started."

MEXA Transfer	New Test	Continuous Log	Singlemode Log	SnapAcc Test	Nmode Test	Soft Stop	
Enable Drive		Reset System / Safeties		Heated Probe	Fan	Abort Test	Alarm Reset
Enable Starter		Launch		Chg Amp Reset	CVS Blower	Hold Test	Next Stage
Speed / Position		Speed / Torque		Torque / Position		AUTO MODE	MANUAL MODE

Figure 2  
Softpanel Screen - Launch Button

105 On the "Prompter" dialog box, click on the "OK" button. See the arrow in Figure 3.

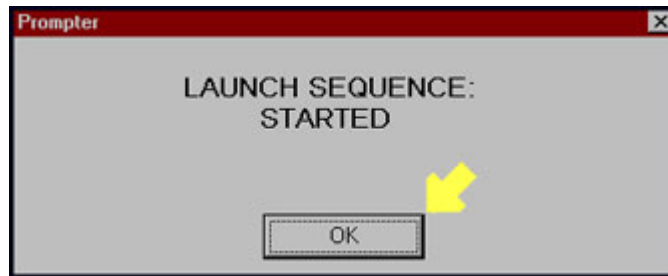


Figure 3  
Prompter Dialog Box

- 106 When the "Message Queue" dialog box appears with the message "Select Auto or Manual Engine Start", click on the "AUTO" button. See the arrow in Figure 4.

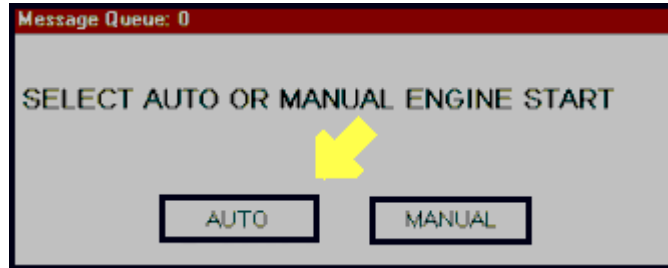


Figure 4  
Message Queue Dialog Box - AUTO Button

- 107 When the "Message Queue" dialog box appears with the message "Select Engine or Dyno Crank", click on the "Dyno" button. See the arrow in Figure 5. Wait for the "Drive Start Sequence Started" prompt to appear.



Figure 5  
Message Queue Dialog Box - DYNO Selection

- 108 At the top of the screen, click on the "File" menu. Click on "Exit" from the selections shown.
- 109 On the Softpanel, click on the button to start the desired test.
- 110 At the completion of the test ensure that the torque is zero and the engine is cooled down..
- 111 Dial the Dyno speed to idle and maintain for 30 seconds.

112 On the Softpanel, click on the "Soft Stop" button. See the arrow in Figure 6. An alarm will be activated.

MEXA Transfer	New Test	Continuous Log	Singlemode Log	SnapAcc Test	Nmode Test	Soft Stop	
Enable Drive		Reset System / Safeties		Heated Probe	Fan	Abort Test	Alarm Reset
Enable Starter		Launch		Chg Amp Reset	CVS Blower	Hold Test	Next Stage
Speed / Position		Speed / Torque		Torque / Position		AUTO MODE	MANUAL MODE

Figure 6  
Softpanel Screen - Soft Stop Button

113 On the Softpanel, click on the "Alarm Reset" button. See the arrow in Figure 7.

MEXA Transfer	New Test	Continuous Log	Singlemode Log	SnapAcc Test	Nmode Test	Soft Stop	
Enable Drive		Reset System / Safeties		Heated Probe	Fan	Abort Test	Alarm Reset
Enable Starter		Launch		Chg Amp Reset	CVS Blower	Hold Test	Next Stage
Speed / Position		Speed / Torque		Torque / Position		AUTO MODE	MANUAL MODE

Figure 7  
Softpanel Screen - Alarm Reset

### 3. Acceptance Criteria

- 3.1 At the end of the test, the engine is maintained at idle for 30 seconds.
- 3.2 At the end of the test, the torque is zero and the engine is cooled down before the "Soft Stop button is pushed.