

## SETTING UP THE FUEL ECONOMY INCENTIVE WITH DDDL 4.1 OR LATER

This document outlines the decisions to make and steps to take when setting up FEI using DDDL 4.1 or later. Some of these steps require you to enter data into a vehicle's engine calibration. If you are using an earlier version of DDDL or the Pro-Link reader please refer to the document on setting up FEI with the DDDL 3.1x or the DDR on the DDDL CD.

In Diagnostic Link the screen for setting up FEI appears below:

test.cdf

Vehicle ^1 Shift ^2 Protection ^3 ISD & VSG ^4 Cruise ^5 VSS ^6  
Speed Limit ^7 Compressor ^8 Econ & ESS ^9 Lockout ^0 Misc ^1 Limits ^2

Fuel Economy Incentive

Calculation Type: Short Term

Minimum Economy (mpg): 7 3.0..25.0

Maximum Speed (mph): 5 0..10

Economy for Max Speed (mpg): 7.5 7.25..57.00

ESS Trans

Late Change

Engine Brake

Second Chance

Skip Shift

TOP 2

Cruise Master Switch

Password:

Restore Reset Transmit Close

Step 1.

### SHORT TERM OR LONG TERM (Calculation Type)

Choose either Short Term or Long Term. Because the overall success of Fuel Economy Incentive will be greatly determined by which mode is selected, it is important to carefully evaluate your fleet's operating characteristics and fuel economy goals. Use the definitions of Short and Long term and the table below to help guide your decision.

- **Short Term:** This mode recognizes some factors are not in a driver's control and would make good performance over longer driving periods difficult. Short term allows rewards when performance over short periods of time - about 30 minutes - exceeds company set goals. For example, drivers caught in a congested city area or construction slow down would see fuel economy drop and rewards diminish. However, with good driving habits, rewards can return as quickly as within a half-hour, depending on conditions.
- **Long Term:** This mode requires good performance over longer periods of time. Long Term is defined as the period between ECM data extractions. An event such as the congestion or urban driving described above will not have as quick an impact on Long Term F.E.I. However, once the Long Term F.E.I. reward is withdrawn, it may take a longer period - several hours or more - of good driving habits for the reward to return.

\*\*Keep in mind, idling is zero mpg and will have a rapid impact on both modes of F.E.I.

OPERATING CHARACTERISTICS	SHORT TERM	LONG TERM
Do loads vary widely?	X	
Need quick response or fast start?	X	
Routes always the same?		X
Trucks available for regular extraction?		X
High idle times?	X	
Low idle times?		X
Slip seat operation?	X	
Team drivers?	X	
Have ProDrivers?	X	X
Operating in different weather patterns?	X	
Mix of Urban and Interstate operation?	X	

Step 2.

#### SETTING YOUR FLEET TARGET (Minimum Economy)

Set your fleet target, or minimum, fuel economy goal. This is the minimum fuel economy that must be achieved before the reward can be delivered. In order to set a realistic fuel economy goal, gather a sampling of average fuel economy readings from your vehicles and set your minimum slightly higher. Use mpg data from Diagnostic Link or the hand held reader to determine a realistic target fuel economy. Do not use tank and hub fuel economy calculations as your base mpg, as they may not agree with the DDEC calculations

Regardless of where you set your fuel economy goal, the minimum fuel economy increase required to trigger a reward is .1 mpg. This means the driver has to achieve *at least* .1 mpg *better* than your target fuel economy goal before he sees an increase in speed. The values you can enter range from 3 mpg to 25 mpg

Step 3.

#### SETTING YOUR MAXIMUM REWARD (Maximum Speed)

Decide what the maximum speed increase, available as a reward, will be. This increase is above the road speed limit\* stored in the engine's calibration. The values range from 0 mph (F.E.I. disabled) to 10 mph.

*\*Road Speed Limit, in this case, is a term to describe the specific function in the ECM. It does NOT mean legal posted speed limits.*

Step 4.

#### DETERMINE THE MPG DRIVERS MUST REACH TO ACHIEVE MAXIMUM REWARD (Economy for Max Speed - mpg)

You've already set your minimum target fuel economy and decided what your maximum reward will be. Now, decide what fuel economy the drivers must reach to get the full, maximum reward. Place this value in the "Economy for Max Speed (mpg)" section of the calibration screen. Using this number, the software automatically calculates the linear rate the mph reward will be received by the driver. In our sample screen above, the driver will be able to travel a maximum of five miles per hour the calibration's road speed limit by achieving a fuel economy of .5 mpg above the target. For each .1 mpg

increase in road speed the driver will get an additional 1 mph in road speed. The table below illustrates our example, where the road speed limit is 62 mph in the calibration:

Target Fuel Economy	Max Reward	MPG needed for Max reward	7.1 mpg	7.2 mpg	7.3 mpg	7.4 mpg	7.5 mpg
7.0 mpg	5 mph	7.5	63 mph	64 mph	65 mph	66 mph	67 mph

**In summary, follow the steps listed below:**

1. Choose calculation type and enter into "Calculation Type" box: Short Term or Long Term
2. Choose target MPG and enter into "Minimum Economy" box: (for example, 7.0 MPG)
3. Choose maximum reward and enter into "Maximum Speed" box: (for example, 5 MPH)
4. Choose MPG required to achieve maximum reward and enter into the "Economy for Max Speed" box: (for example, 7.5 MPG)