

SERVICE BULLETIN No.1100

Circulate to listed addressees

COACH MODEL : T800 w/ Cummins Celect engine

T900, T2100 and C2000Series

BULLETIN TYPE: Service Information

MANUAL & SECTION: Maintenance Manual: Chapter 3 – Drive train

Spare Parts Manual: Section 6110 - Engine

PARTS BOOK REVISION : No

DATE: February 26th, 2002

SUBJECT : Engine parameter settings

TERMS & CONDITIONS: No claims will be accepted with reference to this Bulletin.

APPLICATION:

The service information subject of this Bulletin is applicable to coaches equipped with an electronic engine management system (Cummins CELECT/ISM/ISB/ISL – Detroit Diesel DDEC).

DESCRIPTION:

The following Bulletin is to inform coach owners, operators and service technicians of the vehicle set-up information that has been factory programmed into the Electronic Control Module (ECM) of coaches featuring electronic fuel injection.

Whenever alterations are being made to the coach drive train gearing or the engine power output, the vehicle set-up needs to be reprogrammed.

The procedure in this Bulletin provides the requirements and steps to be taken when coach owners want the power figures, tire size and/or differential ratio to be changed.

Service personnel: please read, initial and circulate.

Service	Parts	Warranty	Workshop	Service	
Manager	Manager	Administrator	Foreman	Technician	

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PARTS:

Reprogramming does not involve any parts change.

PROCEDURE:

1. General engine management:

The electronic engine management system used on Van Hool coach engines controls the timing and the amount of fuel injected into the engine.

This system also monitors several engine functions using various sensors, which send electrical signals to the Electronic Control Module (ECM). The ECM processes this information and sends high current command pulses for actuation of the injector solenoids.

The ECM also has the ability to limit the power output and temporarily shut down the engine completely in the event of a potential engine damaging condition, such as low oil pressure, low coolant level or high engine temperature. Continuously restarting of the engine for short periods of time remains possible.

The system is also self-diagnosing and monitors itself as well as all related wiring to identify faulty components and other engine related problems by illuminating the amber "ENGINE WARNING" light and/or the red "STOP ENGINE" light.

<u>NOTE</u>: On T 2100 Series coaches, these messages appear on the multifunction display.

A fault code identifying the failed component is also logged in the ECM's internal memory for later readout by maintenance personnel.

2. Engine parameter settings:

- A number of operational parameters provided in the ECM (see Figures 1 and 2) can be enabled/disabled through an electronic data link. These selectable features allow the coach manufacturer to tailor the engine to the transmission and the ABS/ASR systems, and to the customer's needs and preferences.
- To keep track of set-up program changes, the programming equipment unit number is stored in the ECM memory during the reprogramming process.
- Once the reprogramming has been completed, the engine parameter settings are noted on a special chart, in duplicate (see Figures 1 and 2). One half is handed over to the owner, the other half stays with the company that has completed the programming, in this case ABC Companies Inc.
- A label showing the actual coach engine parameter settings may be found in the engine electronics or main junction box.

3. Drive line gearing change requirements:

When changes are going to be made to:

the tire size,

the ratio of the drive pinion and ring gear assembly (drive axle ratio), the gearbox ratios,

- 1) the engine parameter settings should be changed using Insite/DDDL software,
- 2) new engine parameter documents should be drawn up

- 3) a new label should be provided in the engine electronics/main junction box,
- 4) a new VIN plate should be provided (for tire/rim size, tire pressure changes only),
- 5) the speedometer should be recalibrated

<u>CAUTION</u>: Reprogramming of engine parameters and re-certification of the coach should ALWAYS be executed by ABC Companies Inc. personnel.

4. Power output change requirements:

- When changes are going be made to the engine power output:
 - 1) the engine parameter settings should be changed using Insite/DDDL software,
 - 2) a new engine data plate should be provided,
 - 3) new engine parameter documents should be drawn up
 - 4) a new label should be provided in the engine electronics/main junction box,

<u>CAUTION</u>: Reprogramming of engine power and re-certification of the coach should ALWAYS be executed by ABC Comapnies Inc. personnel.

Procedure complete.

SERVICE INFORMATION:

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

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ENGINE PARAMETER SETTING

VIN: PROG. DATE: Settings list Ref VH DV082900 Detroit Diesel SSO 430Hp 18 657 836/3/0 VSS Type VSS Signal Idle Adjust RPM Switche LSG Droop RPM Tire Size (Revisite) 15/60R22,5 (491 Engine/Service Brake Half Engine Mode Distabled Top Gear Ratio 0.64 A. Asia Ratio Enable Progressive Shift Disabled Speed Limit Set Speed Limit Enable 71 mpf Speed Limit (mph) Of Pressure Shutdo Overspeed Limit (mph) 72 mpl Oil Temperature Oil Level Shutdon Overspeed No Fast (mph) 75 mp Costant Pressure NA Coolant Temperature alculation Type envirsion Factor (rephreps) Shuldow Shuldow Coolant Level An Economy (mpg) Enable Idle Shutdown Override Temperature Disable VSG Dress RPM VSG Min RPM VSG Max RPM 1400) flash at Craise Control 4DS enabled Exable Vehicle Speed Sevest Exabled J1922 Transmission enabled enable Enable Craise Control Exabled J1939 enabled enable Enable Craise Switch VSG Etrables disable governant. Initial RPM 1000 DDEC Data emable RPM Increment Blocks. emable all clat-Enable Engine Brake Dissibled Minimum Craine Speed 20 mph Limits 71 mph Food RPM Maximum Cruise Speed Enable Dynamic Broking Dimables Ide RPM 60 Auto Resurre Drawbled Max Idle Offset MAX LSS Droop Enable Vehicle Speed Senser Enabled Auto/J193 Trans Type

CUSTOMER'S COPY

ENGINE PARAMETER SETTING

	VIN:		PROG. DATE:		
			Settings list	DVDB0900	
	Detroit Diesel SSO 430Hp		RefVH	19 657 836/3/0	
Vehic			MSS Type	.19936	
	Ide Adust RPM	ď	VSS Signal	Switched	
	LSG Droop RPM	126	Tire Size (Rw/mile)	315/80R22.5 (#91)	
	Engine/Service Brake	N/A	VSS Teeth	- 18	
	Half Engine Mode	Distabled	Top Gear Ratio	0.64	
	100000000000000000000000000000000000000		Auta Ratio	4.5	
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	Enable Prograssive Shift	Disabled	Speed Limit		
			Set Speed Limit	Enabled	
Protec	ction		Speed Limit (mgh)	71 mph	
	Oil Pressure	Shutdown	Overspeed Limit (mph)	72 mpt	
	Oil Temperature	Shutdown	Overspeed No Fael (mph)	75 mpt	
	Oil Level	NA			
	Coolant Pressure	16/4	Econ & ESS		
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RPW Increment		25	Blacks	enable all data	
	Enable Engine Brake	Disabled			
	Minimum Craise Speed	20 mph			
	Maximum Cruise Speed	71 mph	Robed RPM	211	
	Enable Dynamic Broking	Dissabled	Ide RPM	600	
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VS8			MAX LSG Droop	150	
	Enable Vehicle Speed Sensor	Enabled	Trims Type	AutoC1936	
	Enable Anti-Tamper	Disabled	1.0		

ABC BUS Companies' COPY

ENGINE PARAMETER SETTING

CUSTOMER'S COPY ENGINE PARAMETER SETTING

VIN:			PROG. DATE:			VIN:			PROG. DATE:	
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VSS Arti-Tartoir		Freeze	Brake Centrol			VSS Arti-Tumper		Frais	e Brake Control	
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whicle Setup 1	1000000		P10 Service Brake Overside	Enabled	Vahir	e Setup 1	100000		PTO Senice Brake Dvertde	Enab
Max. Speed Without VSS	1900 rpm		P10 Clutch Overside	Disabled		Max. Speed Without VSS	1600 rpm		PTO Clutch Overide	Dinab
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ehicle Setus 2		DEM	Engine Perfern. Blocking Table	FR 2571	Victor	le Setap 2		CEM	Engine Perform, Blacking Table	FR 25
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Plean-aide ratio	43	-	Governed Engine Speed	2100 rpm		Francis of the	43	100	Governod Engine Speed	2100 s
Tire Revolutions	491/mile	1	Paver (Live/Hgk)	450 HP		Tire Revolutions	491/mile		Power (LowPrigit)	450
No Of Transon, Gear Teeth	45111111		Peak Tosque (Low/High)	1450 n-b		Nr Of Transm. Gear Teeth	10		Peak Tarque (LavePligh)	1450 f
Transmission Type	Automotic		- La company providing (1400.7%		Transmission Type	Automatic		The second second	1400
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