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PARTS MANAGER
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INGERSOLL RAND TECHNICAL SERVICE BULLETIN

Bulletin #: GEN-005
Date: 20/06/2005 Revised (10-12)
Product: GENERATORS
Subject: Changing speed from 1500 rpm (50 Hz) to 1800 rpm (60 Hz) and vice versa

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MODELS	SERIAL NUMBER
G330 with EMS2 speed regulation	All generators manufactured after 24 November 2004
G550 with EMS2 speed regulation	All generators manufactured after 18 March 2005

Changing the speed (Hz) on a Volvo engine with an EMS2 regulation (D9 and D16 at the moment, D12 in the future) requires a CIU box [Figure 1].

Figure 1



This box contains a standard Volvo CIU (control interface unit) and is already cabled and equipped with the necessary buttons.

The CIU can communicate with the ECM over the CAN BUS. The ECM has a memory.

The CIU box is to be ordered via the Service Department in Lot.

Tel: +32 (0)2 404 07 03

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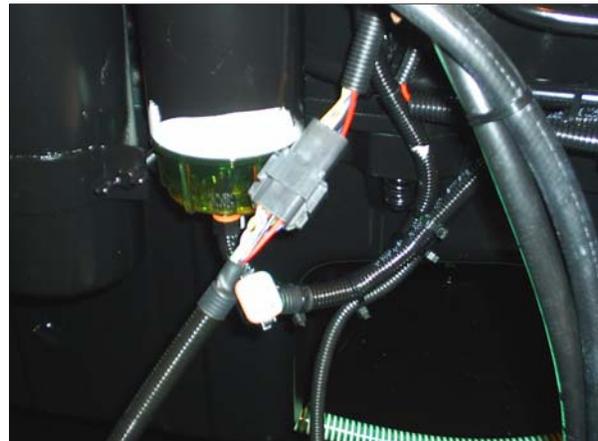
The box is not available from Bobcat Parts as it has no CPN!

Customers who want to change their frequency can easily do it themselves, once they have the CIU box.

How do we change the speed from 1500 rpm → 1800 rpm?

- Stop the engine but leave the battery switch closed.
- Before connecting the CIU box, make sure that the "Running power" switch **and** the "1500/1800" switch are in the "OFF" position.
- Disconnect the socket of the CAN BUS cable from the ECM and plug the socket of the CIU box into the ECM [Figure 2].

Figure 2



- Push the "Aux stop" button on the Volvo engine [Figure 3].

Figure 3



- Move the “Running Power” switch on the CIU box to the “ON” position.
- Move the “1500/1800” switch on the CIU box to the “ON” position.
- Push the “Stop” button on the CIU box.

These 3 steps must be performed within 10 seconds.

- Push the “Start” button on the CIU box to check the transition to 1800rpm.
- Push the “Stop” button on the CIU box to stop the engine.

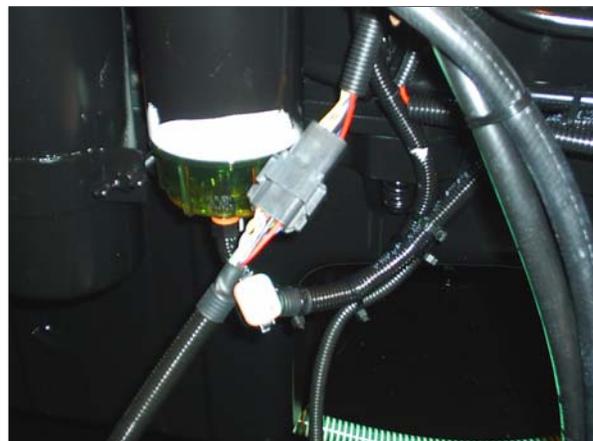
If the engine runs at 1800 rpm, disconnect the CAN BUS socket of the CIU box and connect the original ECM socket.

NOTE: Do not forget to change first the set points for the 60 Hz on the CD12 and to change the link on the AVR, before you start the machine again!

How do we change the speed back from 1800 rpm → 1500 rpm?

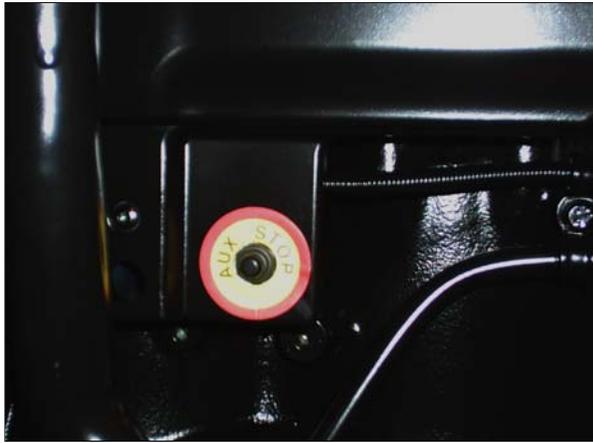
- Stop the engine but leave the battery switch closed.
- Before connecting the CIU box, make sure that the “Running power” switch is in the “OFF” position, and the “1500/1800” switch is in the “ON” position.
- Disconnect the socket of the CAN BUS cable from the ECM and plug the socket of the CIU box into the ECM [Figure 4].

Figure 4



- Push the “Aux stop” button on the Volvo engine [Figure 5].

Figure 5



- Move the “Running Power” switch on the CIU box to the “ON” position.
- Move the “1500/1800” switch on the CIU box to the “OFF” position.
- Push the “Stop” button on the CIU box.

These 3 steps must be performed within 10 seconds.

- Push the “Start” button on the CIU box to check the transition to 1500 rpm.
- Push the “Stop” button on the CIU box to stop the engine.

If the engine runs at 1500 rpm, disconnect the CAN BUS socket of the CIU box and connect the original ECM socket.

NOTE: Do not forget to change first the set points for the 50 Hz on the CD12 and to change the link on the AVR, before you start the machine again!

Figure 6

