easYgen with Volvo EMS2 ECU

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Issue:

Volvo engine (240 kVA) with EMS2 starts to swing at a certain power level (40-50 kW) and is stopped on monitoring alarm (overvoltage/overfrequency), after GCP-30 has been replaced with easYgenXT device.

Background:

GCP-30 was sending frequency droop flag always when ECU was configured to EMS2. This doop flag (LM 12904) is not sent automatically when an easYgen is connected to EMS2.

To get the droop activated in the EMS2, the droop flag need to be sent before a start command is issued to the engine.

Solution:

To achieve a proper regulation over the whole power range of the engine, the droop mode must be either sent via CAN bus before a start command is issued or it need to be activated permanently in the EMS2.

It is also helpful to change the PID settings for all PID controllers in the EMS2 to the following values:

P: 1

I: 1

D: 1

Also the droop need to be adjusted to 3%