



## Knowledge Articles

# Various changes required to prevent early turbocharger Failure

KA ID: KA000001894

### Symptom

The engine begins has the following concerns:

- Emits white smoke.
- High soot level in the Diesel Particulate Filter (DPF).
- The engine will not stay running.
- Excessive oil consumption.

The above concerns indicate the turbocharger has failed.

### Resolution

To confirm the turbocharger is the source of the white smoke and high soot level in the Diesel Particulate Filter (DPF) remove the hose from the air cleaner to the turbocharger. Excessive oil in this area indicates a failed turbocharge and the replacement of the turbocharger is required. Replace the turbocharger with one from service parts.

Replacement of the DPF may be required depending on the soot level.

As part of the repair, CNHind recommends changing the engine oil.

**To address the issue of premature turbocharger failures the following changes were implemented in production :**

Any tractor produced after July 3 2018 will have factory fill of 05W-40 oil, a change from 10W-30.

Any tractor produced after August 8 2018 will have updated ECU software prevents the operator from controlling the engine speed at start up. The software change was put into place to prevent operators from speeding the engine up before oil flow reaches the turbocharger. The software uses ambient and engine coolant temperature to regulate start up rpm and delay for operator control of engine speed. There will be a three second time delay for all ambient and coolant temperatures combination. At colder temperatures the time delay will increase to 60 seconds depending on a combination of ambient and engine coolant temperature.

**For units in the field produced before the above dates the following is recommended .**

At the next engine oil service fill the engine with the specified amount of:

- New Holland: Ambra Mastergold Unitek 0W-40 engine oil.
- Case IH: Akcela Unitek 0W-40.

Install the ECU software that delays operator control of engine speed.

EST release 9.0.0.0 will have the updated software located in the PCST file folder. If there is a need for the software before release of 9.0.0.0 0 please submit a THD requesting the software with a screen shot of the current level software as an attachment to the THD.

#### How to identify the throttle control delay software:

A version of software that does not or does have the throttle delay can be identified by last 3 characters in the software title. Software version without throttle delay will have R03 or R02 as the last three characters - reference A. The version of the software with throttle delay will have R04 as the last three characters - reference B.

A one time ID is not required to install the software update, just go to the Re Programing tab in the LS tier 4 EST tool and select the correct software in the PCST folder\LS\_Engine file folder..

#### Warranty

Standard warranty terms and condition apply.

This article is provided for information purposes only.

This article does not give any authorisation to carry out warranty works. Authorisation must be obtained in the usual way.

Was this information helpful? ☆ ☆ ☆ ☆ ☆

#### Group Component

**10.250.99** Engine - Turbocharger and lines - Turbocharger and lines campaign work

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#### Region of Plant Manufacturing

NAFTA

#### Failure mode