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## MSS54

### module description

### tank leak pump heater LDPH (Bosch DMTL) from V4.17

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# 1 General

Since the pump flow is affected by condensation of air humidity in the pump (DMTL), a heating system for the pump body has been introduced. The heating must be switched on whenever a diagnosis is about to be made in order to preheat the pump.

## 1.1 On/off conditions

The heating will be switched off in any case if:

- The engine is not running
- or (tmo\_start < K\_LDP\_TEMP\_START\_MIN) is
- or the fill level can\_fst is plausible and less than K\_LDP\_FST\_MIN
- or LDP\_CFG is set without error correction and the MIL is triggered due to tank leak

Otherwise, the heating will be switched on under one of the following conditions:

- Tank cap message is enabled (K\_ED\_FIL\_CTL[179] and previous measurement aborted due to refueling or tank cap measurement or the fill level has increased (possible cap diagnosis)
- or the counter ldp\_anz\_fahrten >= K\_LDP\_ANZ\_FAHRTEN is
- or the counter ldp\_anz\_fahrten is equal to (K\_LDP\_ANZ\_FAHRTEN-1) and the vehicle downtime (5h-condition) is already fulfilled
- or previous measurement was aborted due to moisture and the vehicle downtime has already been fulfilled or the counter ldp\_anz\_fahrten is greater than 0

If LDPH\_CFG is set to "always on", heating will occur when the engine is running, regardless of the above conditions.

## 1.2 Installation detection

Since it is not yet clear whether retrofitting the heater will be necessary (e.g. in problem vehicles), an automatic installation detection of the heater has been implemented.

If no "OpenLoad" is detected at the SG output ten times in a row, the detected installation is stored in ldp\_verbaut == 10 in a non-volatile memory. From this point on, the OpenLoad diagnosis is active if LDP\_CFG is set to "Retrofit". This can only be reset via DS2 (or Gredi).

# 2 Description of the identifiers


## 2.1 Application sizes:

name	Meaning:
K_LDPH_CFG	Configuration of the LDPH: Without LDPH: no control, no diagnosis With LDP installed ex works  LDPH as a retrofit solution (open load diagnosis only when installation is detected) LDPH always on when engine is running (test purposes)

## 2.2 Process variables:


Name	Meaning:
ldph_st	LDPH status

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Name	Meaning:
ldph_ed	error memory variable
ldph_verbaut	Installation detection of the heater (installation detected if == 10)

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## 2.3 Meaning of the control flags:

\*\*\*\*\* Defines for ldph\_st, in the DPR: \*\*\*\*\*

Info from driver diagnostics ldph_st, BIT0	= SH_TO_UB
Info from driver diagnostics ldph_st, BIT1	= SH_TO_GND
Info from driver diagnostics ldph_st, BIT2	= OPENLOAD
Info from driver diagnostics ldph_st, BIT3	= always = 0
Info from driver diagnostics ldph_st, BIT4	= Driver info current
B_LDPH_GETOGGELT ldph_st, BIT5	= Driver diagnosis has already been read once
B_LDPH_ON ldph_st, BIT6	= LDPH is switched on
B_LDPH_DS2 ldph_st, BIT7	= LDPH is controlled via DS2

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