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Coding Information

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Title: Espar Hydronic S3 Heater (GEN 3) Diagnostic Guide

Applies To: MY2023, MY2024, MY2025, MY2026 LT, HX w/ Hydronic S3 Heater (GEN 3), w/ feature code 0016UZL

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

03/27/2026 - Initial Article Release

DESCRIPTION

The purpose of this article is to provide the user with the necessary tools and related manuals to maintain, diagnose, and repair an Espar Hydronic S3 Heater (GEN 3).

The Espar Hydronic S3 (GEN 3) Auxiliary Heater is a diesel-fired coolant heater for maintaining cabin heat without running the engine. The heater uses fuel from the fuel tank to heat coolant before it goes to the heater core in the sleeper HVAC unit. The heater is located under the cab's sleeper area and is powered by the vehicle's batteries.

SYMPTOM(s)

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
See the complete DTC list below	
See Espar Repair Instructions Manual	25.2696.95.2682

Customer Observations or Concerns:

Performance:

- No heat in the cab
- Espar is not working all the time

- Espar intermittent operation
- Espar stops working after a period of time

Noise:

- Abnormal noise

LOCATION AND IDENTIFICATION

- The Hydronic S3 heater (GEN 3) is located under the cab's sleeper area (**Figure 1**).
- The nameplate on the side of the heater can be used to identify the model and version type of the heater. (**Figure 2**).
- The diagnostic connector in the heater cable harness is connected to a terminating resistor cap. The terminating resistor cap must be removed to connect a diagnostic interface cable to the Hydronic S3 Heater (**Figure 3**).

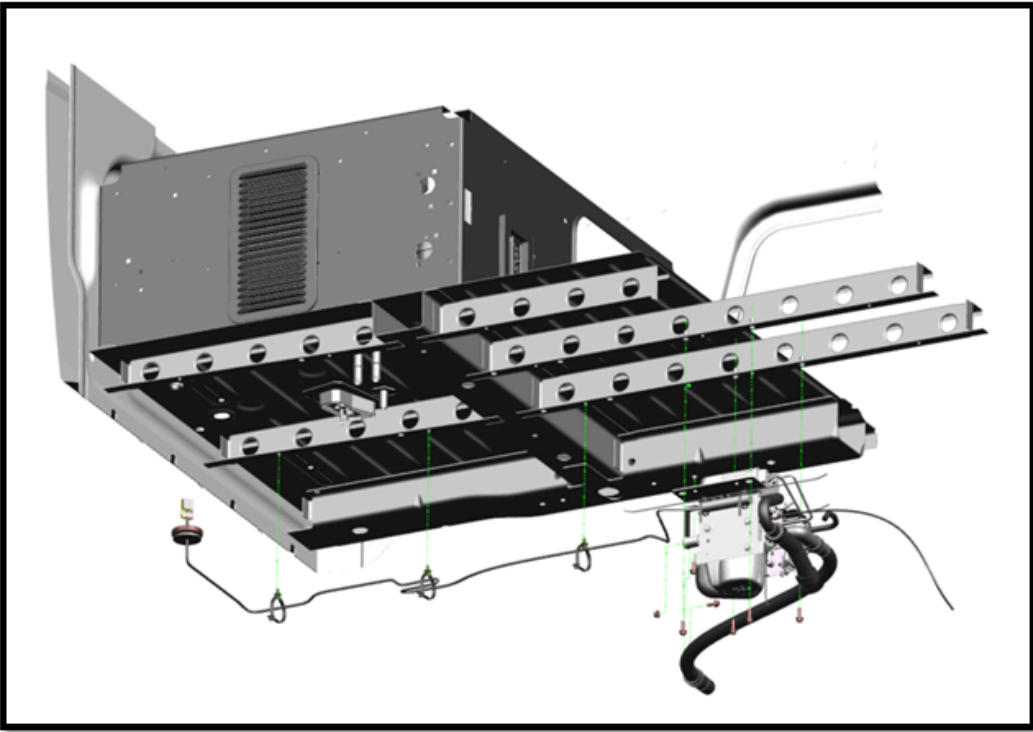


Figure 1: Hydronic S3 Heater (GEN 3) Location

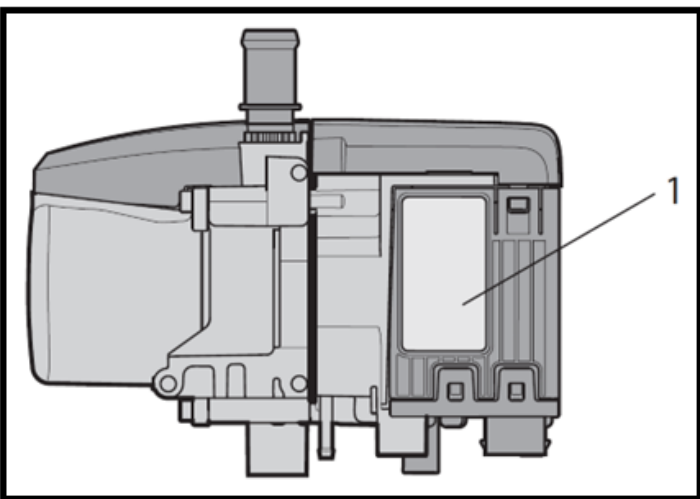


Figure 2: Hydronic S3 Heater (GEN 3) Nameplate Location

Item 1: Espar unit nameplate

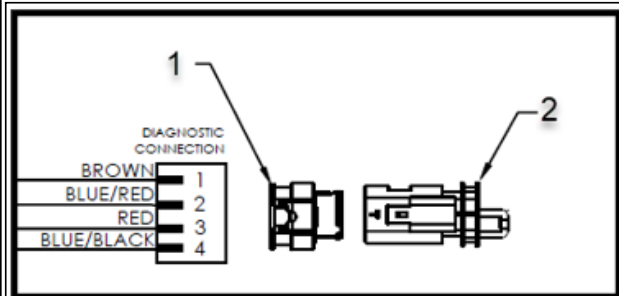


Figure 3: Diagnostic Connector and Terminating Resistor Cap

Item 1: 4-pin diagnostic connector

Item 2: Terminating resistor cap

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Reference	Notes	Comments
EasyScan Diagnostic Tool (Can-VCI)	ESP2215608900000Z (22.1560.89.0100)	Diagnostic Interface Cable	Source: International Tools Catalog
Espar EasyScan Diagnostic Tool (CAN/LIN-VCI)	ESP2215508900000Z (22.1550.89.0000)	Diagnostic Interface Cable	Discontinued - No longer available
EasyScan Diagnostics	Version 1.0.60 or higher	Diagnostic and service software	Download: IK2700065 - EZ-Tech Download Center Eberspaecher EasyScan Software - Manufacturer



Figure 4: EasyScan Diagnostic Tool (CAN-VCI) Diagnostic Interface Cable



Figure 5: EasyScan Diagnostic Tool (CAN / LIN-VCI) - Diagnostic Interface Cable

[Tools Resource Center](#)
[International Tools Catalog](#)

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
Order parts based on VIN	N/A	N/A	Parts catalog

SERVICE AND DIAGNOSTIC MANUALS

Document	Use	Comments	File Download
Repair Instructions - Espar	Fault code diagnostics, circuit diagrams, removal and installation procedures	The circuit diagrams may not fully represent the harness configurations as they are installed on International® vehicles	HS3 Repair Instructions Manual - 25.2696.95.2682.0H_EN_0824
Spare Parts List - Espar	Part Catalog (Espar part numbers)		Hydronic S3 Commercial - Parts List Manual - 25.2933.95.2681.0C_EN_0425
EasyScan Pro Operating Instructions - Espar	EasyScan Pro software installation, operation, and instructions	Must use any CAN VCI diagnostic interface cable to connect to the Hydronic S3	EasyScan Pro Operating Instructions (Compressed Zip)

DIAGNOSTIC FAULT CODE LIST

Espar Fault Code	Error Description
P000100	Water outlet sensor – Interruption
P000101	Water outlet sensor – Short circuit
P000102	Water outlet sensor – Short circuit after Ub+
P00010A	Cold air timeout
P000110	Water inlet sensor – Interruption
P000111	Water inlet sensor – Short circuit
P000112	Water inlet sensor – Short circuit after Ub+
P000114	Possible risk of overheating temperature difference too large
P000115	Overheating software threshold exceeded
P000116	Overheating hardware threshold exceeded
P00011A	Operating lockout too many overheating events
P000120	Flame sensor – Interruption
P000121	Flame sensor – Short circuit
P000122	Flame sensor – Short circuit after Ub+
P000125	Flame cutout from start process
P000126	Flame cutout within the control range 0% – 25%
P000127	Flame cutout within the control range 25% – 50%
P000128	Flame cutout within the control range 50% – 75%
P000129	Flame cutout within the control range 75% – 100%
P00012A	Unsuccessful start procedure

P00012B	Operation inhibit too many unsuccessful starts
P000143	Air pressure sensor implausible signal
P000150	Circuit board temperature sensor – defective (voltage too high)
P000151	Circuit board temperature sensor – defective (voltage too low)
P000152	Circuit board temperature sensor – Overtemperature detected
P000200	Metering pump interruption
P000201	Metering pump short circuit
P000202	Metering pump – short circuit downstream of +Ub or transistor error
P0002a1	Water pump – Control / Diagnosis pin interruption
P0002a2	Water pump – Control / Diagnosis pin interruption
P000210	Glow plug – interruption
P000211	Glow plug – short circuit
P000212	Glow plug – short circuit downstream of +Ub or transistor error
P000213	Glow plug – ignition energy too low
P000220	Electric motor – interruption
P000221	Electric motor – short circuit
P000222	Electric motor – short circuit downstream of +Ub or transistor error
P000223	Electric motor – blocking
P000224	Electric motor – current input too high
P000250	Water pump – interruption
P000251	Water pump – short circuit
P000252	Water pump - short circuit downstream of +Ub or transistor error
P000253	Water pump – blocking
P000254	Water pump – overcurrent cutout

P000255	Water pump – speed below minimum
P000256	Water pump – dry running
P000257	Water pump – overheating
P000258	ADR water pump – Undervoltage / Overvoltage
P000259	ADR water pump / vehicle blower – Short circuit
P000260	Universal output interruption
P000261	Vehicle blower – short circuit
P000262	Universal output Short circuit downstream of Ub+ or transistor fault
P000300	Overheating detection - Metering pump hardware or cutout circuit defective
P000301	Watchdog reset
P000302	Watchdog reset - too many resets
P000303	Operating lockout: Too frequent output stage errors
P000304	Too many resets (loose contact)
P000305	Control box not calibrated
P000306	Second cutout circuit is defective
P000307	CAN communication error control unit
P00030A	CAN communication error
P000310	Control box cutout due to overvoltage
P000311	Heater cutout due to overvoltage
P000312	Control box cutout due to undervoltage
P000313	Heater cutout due to undervoltage
P000315	Implausible air pressure information
P000316	Insufficient heat dissipation via coolant
P000330	Control box defective

P000331	Control box defective
P000332	Control box defective
P000342	Invalid configuration
P000394	ADR button – Short circuit
P000500	Fault memory entry ErrorState_GSC.
P000A00	Communication ended by heater
P000E01	Runtime limit exceeded

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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