

2021-1 WARRANTY CONDITIONS FOR XEAMOS EXHAUST AFTER TREATMENT SYSTEMS

1. SCOPE

These warranty conditions apply for Xeamos systems installed at engines that always run with the fuels as described in the Xeamos sales contract.

With sales contract Xeamos means, Order Confirmation (CO) included attached Technical specification (T.S.).

Subject to the limitations herein, the Xeamos Distributor warrants that its Exhaust After Treatment systems are free from defects in materials and workmanship under pre-scribed conditions and intended use, and fulfil the requirements stated in the written specification or order confirmation.

Should Xeamos or its authorized dealer receive a written notice of any defect in material or workmanship of a generator component during the term of this warranty, and not subject to warranty limitations, Xeamos or its authorized dealer will repair or replace the non-conforming or defective unit or parts.

2. COVERAGE

Unless agreed upon otherwise in the Sales Contract the Warranty period is limited to 12 months after commissioning, however with a maximum of 18 months after delivery.

Defective units, components, or parts shall be returned to the Xeamos premises in Wijchen, The Netherlands at customer's cost and expense. All travel time and expenses associated with a technician traveling to and from a customer's location to perform warranty services are not covered and will be charged according to the standard rates for field work.

3. STANDARD TERMS AND CONDITIONS

This document is intended as an amendment to the contractual Terms & Conditions that apply. In case of contradictory information, this document prevails.

4. WARRANTY LIMITATIONS

4.1 NORMAL MAINTENANCE PARTS

Normal maintenance parts during maintenance intervals are: burner fuel nozzles, flame sensors, burner ignition electrodes and urea filters. These parts are not subject to warranty.

4.2 WEAR AND TEAR PARTS

The following wear & tear parts are covered by specific warranty conditions that prevail over the contractual warranty period.

The table below (table 4.2) gives the period wherein the emission performance can be achieved in relation to the sulphur content of the engine fuel.

Table 4.2: performance guarantee

	Ultra-Low Sulphur Fuels max. 50 ppm (Engine running hours)	Fuels with Max. 1000 ppm Sulphur (Engine running hours)	Fuels with > 1000 ppm Sulphur (Engine running hours)
SCR Catalyst	15.000 ¹	8.000 ²	8000 ²
Diesel Oxidation Catalyst	15.000 ¹	n/a	n/a
Diesel Particle Filters (un-coated)	15.000 ¹	n/a	See sales contract
Diesel Particle Filters (Catalyst coated)	8.000 ¹	4.000 ²	See sales contract

¹ With a max. of 36 months after first start of the engine or maximum 48 months after delivery whichever comes first.

² With a max. 24 months after first start of the engine or maximum 36 months after delivery whichever comes first.

Urea pump stator:

4.000 engine running hours with a maximum of 12 months after first start of the engine or maximum 36 months after delivery whichever comes first.

NOx sensor:

4.000 engine running hours with a maximum of 12 months after first start of the engine or maximum 36 months after delivery whichever comes first.

The expected life time of above-mentioned items are significantly higher under normal conditions, but depend on parameters such as urea, fuel and lubricant oil composition, engine emissions and engine load profile.

4.3 STORAGE

This warranty does not apply in case the after treatment system is commissioned more than twelve (12) months from the date of shipment from the Xeamos or its distributor's factory unless the units are conserved for long storage by Xeamos or its distributor. In this case the warranty period shall be extended by an additional written statement.

The shelf life of the elastomeric stator is limited to 12 months. This means that after this period the stator should be checked and replaced if needed. Replacement is not subject to warranty.

4.4 INSTALLATION AND OPERATION

The warranty is only valid if the DPF system is installed, connected, commissioned and serviced according the instructions provided by Xeamos, and by its qualified engineers.

With respect to operation (functionality or life-time) of the Xeamos system the warranty is void, if:

1. the engine runs on another fuel as specified in the contract.
2. another urea type or quality is applied as specified in the contract.
3. any modifications are made to the engine that will affect the exhaust emissions, flow or temperature.
4. additives are mixed with the engine's fuel without written permission from Xeamos.
5. the engine is idling for multiple hours continuously the engine-on time or when the engines are turned on and off repeatedly preventing the exhaust gases from reaching a minimum temperature
6. the exhaust gases contain excessive amount of particles due to poor fuel injectors, poor fuel quality, or faulty engine parts.
7. the engine has excessive lubricant oil consumption
8. the system is deployed on another engine type or certification than specified.
9. the exhaust temperature is higher than specified in the sales contract.
10. external input signals (engine load, running contact) are not available or reliable.
11. alarms generated by the after treatment system are ignored.
12. the maximum concentration of poisonous elements, not applicable EN590 and DMA (ISO 8217 - 2012) fuels.
A list of poisonous elements can be provided by Xeamos on request.

Note: Always consult Xeamos or its authorized dealer in case of doubt or questions or for written approval with regards to deviating conditions or situations.

With respect to Installation and Maintenance of the Xeamos system, the warranty is void, if:

1. there is mechanical damage caused by external factors
2. there is damage to electrical components caused by installation errors by other personnel than Xeamos or its authorized dealer.
3. Xeamos installation- and operating instructions are not obeyed, such as faulty electrical wiring, incorrect power supply voltage, mechanical damage, excessive ambient temperatures, etc.
4. a failure is directly or indirectly caused by ignoring an advise for a corrective action by a Xeamos commissioning or maintenance engineer.
5. the maximum specified mechanical forces on supports or flanges are exceeded, or if the supports do not allow for sufficient thermal expansion or vibration damping.
6. sensitive parts, such as controller panels and junction boxes are exposed to strong vibrations.
7. any part is damaged by excessive temperatures due to poor or insufficient thermal insulation of the DPF system or exhaust system.
8. diesel particle filters are cleaned by non-authorized personnel.
9. modifications to the system are done without written approval by Xeamos or its authorized dealer.
10. the damage is not detrimental to function or compromising safety.

4.5 SOUND ATTENUATION

The specified sound attenuation of Xeamos After Treatment systems is based on expertise and best engineering practices. However, as the acoustic performance of Xeamos systems also depends on the geometry of the in- and outlet exhaust piping as well as the downstream dry or wet exhaust system, Xeamos cannot be held accountable for the overall acoustic performance in case up- or downstream piping or components are not engineered or supplied by Xeamos.

4.6 EMISSION PERFORMANCE

Emission performance are guaranteed for a period of, see table 4.2.

4.7 ACCESSIBILITY

This warranty does not cover costs incurred in gaining access to the After Treatment system; i.e., overcoming physical barriers such as walls, fences, floors, decks or similar structures impeding access to the After Treatment system, rental of cranes or similar, or construction of ramps or lifts or protective structures for After Treatment system removal and reinstallation. In any case any overtime labour requested by the end user shall be charged to end user.

5. END-USER OBLIGATIONS

The End user shall keep records regarding repairs, checks, part replacement and other relevant information.

In the case of a warranty claim where excessive oil consumption is considered as a possible cause of the defect, End-user must submit adequate records of the oil consumption for investigation by Xeamos.

In the case of a warranty claim where poor or wrong lubricant oil is considered as a possible cause of the defect, end user shall submit a bunker note showing the type and chemical analysis of the lubricant oil for investigation by Xeamos.

In the case of a warranty claim where poor or wrong type of fuel is considered as a possible cause of the defect, End user shall submit a bunker note showing the type and chemical analysis of the fuel oil for investigation by Xeamos. Xeamos reserves the right to have the catalyst and fuel examined by a third party for a root cause analysis in case of premature failure of catalyst or particle filters.

If the supplied after treatment system is delivered under IMO Tier III compliance according to the MARPOL Annex VI regulation 13, any modification to the after treatment system or the engine shall be subject to approval from Xeamos or its authorized dealer.

Measurements and application tests are performed during start-up & commissioning to verify if the maximum back pressure does not exceed the maximum value as specified by the engine manufacturer. It is end users' obligation to ensure that during operation the back pressure in the exhaust line is not increased due to obstruction or closure of exhaust valves or outlet.

6. CLAIMS PROCEDURE

To accept any claim, claims should be reported within 72 hours after failure to Xeamos authorized dealers and/or service agents. The customer is required to follow further claim procedures & instructions from Xeamos, its authorized dealers and/or service agents, to avoid loss of warranty.

In case of component replacements, Xeamos will send an invoice together with the replacement components. The customer is obligated to send the defective components to Xeamos B.V. Wijchen, the Netherlands at customer's cost and expense, for investigation purposes. After investigation and claim acceptance by Xeamos, a credit note for the replacement components will be send to the customer.

To comply with Xeamos warranty conditions it is of utmost importance that you fill out this form completely and return to your distributor either dealer. In case of change of ownership, any change in contact details during warranty period it is required to inform distributor or dealer. For latest overview of dealers we refer to the Xeamos website www.xeamos.com

MODEL AND SERIAL NUMBER _____

VESSEL OWNER/OPERATOR _____

PHONE NUMBER _____

E-MAIL _____

STREET OR P.O. BOX _____

CITY AND COUNTRY _____

PURCHASED FROM (fill in dealer name): _____

START UP BY _____

DATE OF START UP _____

VESSEL NAME _____

SHIPYARD AND HULL NUMBER _____

REFIT SHIPYARD _____

VESSEL FLAG _____

VESSEL IMO NUMBER _____

VESSEL CONTACT DETAILS

PHONE _____

E-MAIL _____

COMMENTS OR OTHER INFORMATION _____