

Quick Guide

GRAS 147EB CCP X-Rugged Microphone

Description

The 147EB microphone set for wheelhouse brake testing consists of a robust microphone set and three layers of protection. The basic microphone set consists of a preamplifier which is designed to resist shocks and vibration, and a microphone capsule with a diaphragm which is a more robust type than that conventionally used on measurement microphones. The preamplifier/microphone assembly is watertight to IP67, the venting is protected against water and the BNC connector is also watertight. A windscreen and two protection grids with built-in filters provide easily exchangeable protection.



Fig. 1. Three layers of protection: Windscreen on top of 1" protection grid on top of 1/2" protection grid. Both grids have built-in acoustically transparent filters.

Delivered Items

147EB CCP X-Rugged Microphone Set	
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Optional Items

Windscreen for 147EB. 1 pc.	AM0387-1
Windscreen for 147EB. 20 pcs.	AM0387-4
1/2" Dust, Oil and Water resistant protection grid	RA0360
1" Dust, Oil and Water resistant protection grid	RA0355
5 m waterproof/high temperature BNC-BNC cable with sleeve	AA0121
1/2" Calibration Adapter	RA0341



Maintenance

When driving in conditions with rain, snow, mud or dirt and dust, the windscreen and the protective filters will protect the diaphragm. This also means, of course, that over time they will become contaminated. The only way to deal with this problem is visual inspection routines that take the driving conditions into account.

Apart from the obvious visual signs of contamination you should look for water in the windscreen. Especially in cold weather near or below freezing temperatures, water may accumulate and freeze to ice in the windscreen. Has this happened, the windscreen should probably be discarded.

If a protection grid is clogged with dirt and dust, it should be replaced.

Also beware that if there is water inside the 1/2" grid, and this water freezes, this will most probably damage the diaphragm, therefore wet items must be dried between test sessions.

Recommended Inspection and service routines				
	Temperature below 0° C/32° F		Temperature above 0° C/32° F	
	Dry roads, low humidity	Wet roads, high humidity	Dry roads, low humidity	Wet roads, high humidity
Calibration intervals	Once a week	Daily	Once a week	Daily
Inspection intervals	Once a week	Daily	Once a week	Daily
Windscreen	Check and clean* for dust	Exchange daily	Check and clean* for dust	Exchange daily
1" Grid (filter)	Check and clean* for dust	Check for contamination, clean*, dry or exchange	Check and clean* for dust	Check for contamination, clean*, dry or exchange
1/2" Grid (filter)	Check and clean* for dust	Check for contamination, clean*, dry or exchange	Check and clean* for dust	Check for contamination, clean*, dry or exchange

**Cleaning: compressed air applied from the inside.*

Calibration

The microphone set is factory calibrated with the 1/2" protection grid mounted. We therefore recommend that you dismount the 1" protection grid prior to calibration. In this way you can directly compare your calibration result with the factory calibration. We recommend using a 42AG Multifunction Sound Calibrator with an RA0341 Calibration Adapter.

Warranty and Service

All parts are manufactured and assembled in Denmark by skilled and dedicated operators in a verified clean-room environment. Our warranty against defective materials and workmanship is 5 years, the windscreen and the protective grids are consumables covered by a 6 month warranty.

The warranty does not cover damages to the protection grids caused by their intended use in the challenging conditions in the wheelhouse.

GRAS offers a complete overhaul including calibration at a reasonable price.