



Action code: **WHEN CONVENIENT**

Installation of Piston Cleaning Rings

during cylinder overhaul

SL2016-620/AAB
July 2016

Concerns

Owners and operators of MAN B&W two-stroke marine diesel engines with semi-high or high piston top-land. Type: MC/MC-C and ME/ME-C, ME-B and ME-GI

Summary

Important routines that should be observed when overhauling a unit equipped with a PC ring are highlighted. Reference is made to SL00-382 and SL02-399.

Dear Sirs

As we have recently experienced an increasing number of questions about piston cleaning rings (PC rings) and their installation, replacement and wear acceptance criteria, this service letter highlights important guidelines with respect to installation of PC rings.

Secondly, several questionnaires dealing with strange minor knocking sounds occurring shortly after a piston overhaul have been sent to us for our evaluation. This phenomenon is also addressed in this service letter.

Yours faithfully

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Installation of PC rings

Important routines that should be observed when overhauling a unit equipped with a PC ring are highlighted in the following.

- A) In principle the PC ring remains (unchanged) together with the liner for the entire lifetime until replacement of the liner or PC ring due to wear of one of these above the standard wear acceptance criteria.
- B) Until this occurs it is important and MANDATORY that the original PC ring is reused if the piston rings need to be exchanged but not the liner. Furthermore, the PC ring needs to be CLEARLY marked before removing it in such a way that it can be installed in its exact original position prior to the replacement of the piston rings.
- C) In the event that engine operation has to be continued with worn-out liners for a limited period of time, two different scenarios apply due to design differences:
1. For engines from 60-cm bore and up, the PC-ring has to be removed to avoid unwanted contact between the piston top-land and the PC ring during running (knocking sound).
 2. For engines from 26-cm bore to 50-cm bore equipped with a slim-type cylinder liner, the PC ring has to be removed and a dummy-ring installed. The reason being that the PC ring for these engines is part of the sealing surface between cover and liner. In short, it must be ensured that a standard-size dummy ring is available on board at all times for emergency operation with worn-out liners for the mentioned engine types (part numbers are shown in the following table).

Product type	Item ID.
S30ME-B	5733342-9
S35MC	1846745-9
S42MC	1131918-0
L42MC	1835627-6
S46MC-C	1161952-6
S46MC-C/ME-B/C	5260183-9
L/S50MC	1144743-7
K/L/S50MC/MC-C	3171107-7
S50MC-C/ME-C	5103990-2
S35MC-C/ME-B	5096458-8
S40MC-C/ME-B	5072506-2

The relevant instruction book material has been revised accordingly, from M903-1.1 edition 0257 and onwards. This material may already be available for newer engines, but an example has also been given in this service letter for insertion in the on-board manual for engines not having the correct updated instruction.

Note: All our service letters can be downloaded free of charge from this link:

<http://primeserv.man.eu/marine-engines-and-systems/service-letter-marine>

Marking and installation of the PC ring

Figs. 1 and 2 show how to mark the PC ring before removing it from the engine and how to install the PC ring according to this marking.



Fig. 1: Marking of the PC ring before removal



Fig. 2: Installation in the original position according to the markings