MITSUI E&S

Mitsui E&S Machinery Co., Ltd.

TECHNO NEWS

for MITSUI－MAN B&W engines,		No.091	
Caution on operation of “PMI Auto-tuning”		APPROVED	H.Sakamoto
		CHECKED	Y.Ishida
Rev1: 26th Nov. 2019 Addition to calibration interval		PREPARED	T.Yahagi
ENGINE TYPE	**All (with “PMI Auto-tuning”)**	**DATE**	**2016.9.8**

“PMI Auto-tuning” is an online system for continuous monitoring of cylinder pressure. We would like to announce important attention point when operating “PMI Auto-tuning” as follows.

<Automatic adjustment function>

Following automatic functions of “PMI Auto-tuning” are selectable by user.

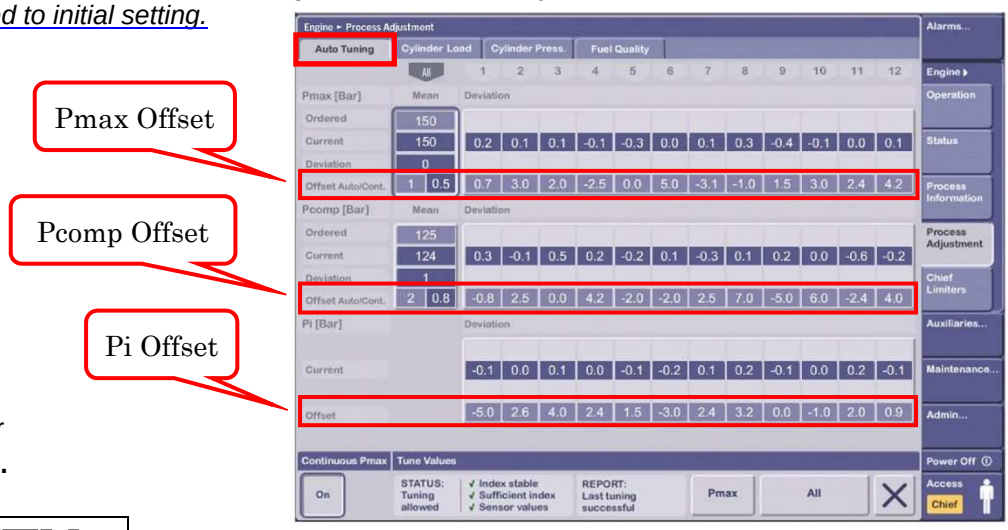
1. Continuous automatic adjustment of Pmax, Pcomp
2. User controlled automatic adjustment of Pmax, Pcomp and Pi

} (Items vary depending on the engine type.)

However, in the following cases, please do not use the automatic adjustment function.

*Trouble or abnormality found on cylinder condition.
* Offset value of the automatic adjustment exceed the allowable limit.
(Criteria=Pmax, Pcomp:±3bar, Pi:±0.5bar)
*Deviation of cylinder exhaust gas outlet temperature exceed ±50degC at more than 50% engine load.

※ The functions of automatic adjustment are effective for fuel saving. However, trouble on engine or fuel oil might be obscured. It is important to monitor the changes of offset value. When measuring the performance data, we recommend turning OFF automatic adjustment, and manual offset values should be returned to initial setting.



※ Sample screen for **ME-C type engine.**

PRIORITY

IMMEDIATELY	☐	AT FIRST OPPORTUNITY	☐	WHEN CONVENIENT	☐	OTHERS	■

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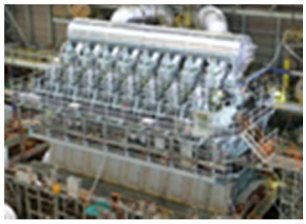
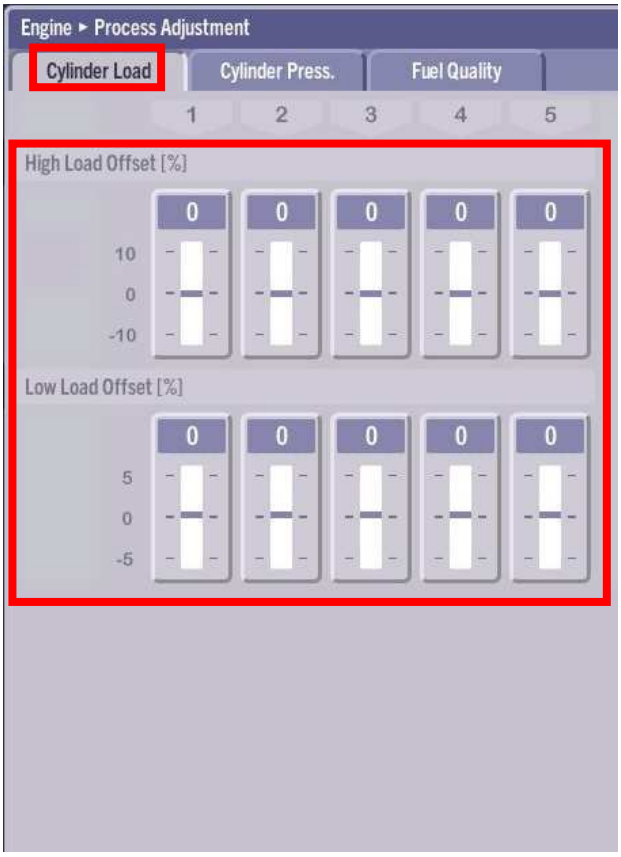
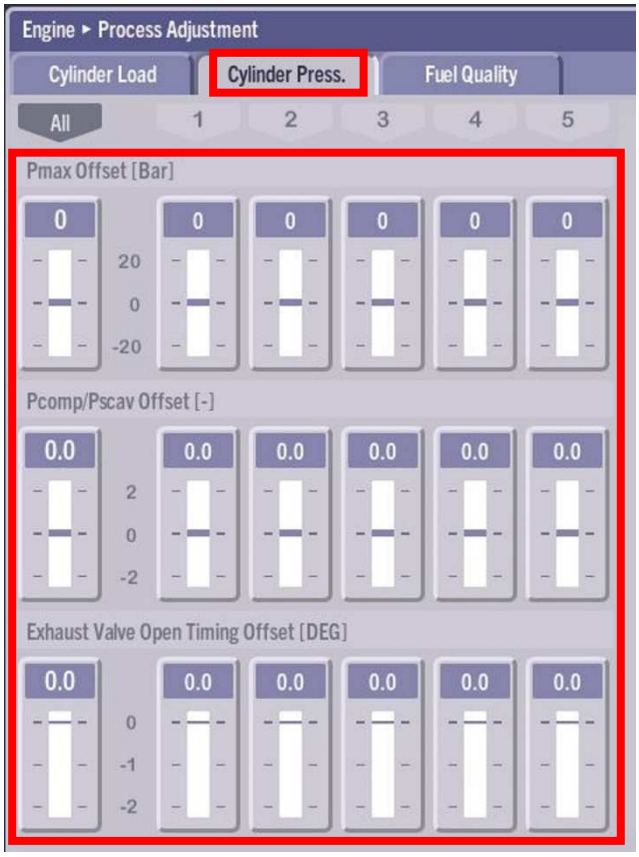
ClassNK ISO 9001 JAB CM 005







※ Sample screen for ME-C type engine.

Furthermore, for engine earlier than Dot2, in summer season or hotter area etc where the temperature of suction air is high, Pmax value adjusted automatically might exceed the tolerance value specified in Technical File. In this case, it is necessary to adjust the Pmax Offset manually.

<Calibration>

As required by NOx Technical code, calibration of pressure sensors within the following intervals is necessary.

Sensor type	Calibration interval	Procedure
Fixed sensor	Every 12 months (maker recommends every 6 months)	Calibrate onboard (by portable sensor)
Portable sensor (Reference sensor)	Every 24 months	Calibrate at shore (by maker)
Calibration Box	Every 5 years	Portable sensor and Calibration Box to be sent together to Maker for calibration

※For the calibration interval of the PMI offline sensor, please refer to TN104.

<Precautions on handling>

* Do not blow through the indicator valve at high load. [To prevent sensor overheat]
  If clogging is suspected, blow through at low load for maximum 1 engine revolution.
* Wait for minimum 10 minutes after blown through before measurement. [To stabilize the signal output]
* When engine running, ensure that there are no exhaust gas leaks at the valve and indicator pipe arrangement.
* Sensor element should not be disassembled from the sensor block (for cleaning the sensor etc).
  [Applied to Kistler sensor]
* Insulate the indicator pipe arrangement at all times. [To raise temperature above the acid dew point.]

For any inquiries please contact your regional sales representative by referring to Service Note No. 111.