

**mitsubishi Diesel Engine
TECHNICAL INFORMATION**

ITEM No.

T0102-0009E Rev.5 (1/2)

DATE

December, 2018

**Rating Definitions for Power Generation
(S16R2-PTAW-E , S16R2-PTAW2-E)**

Following Contents are enclosed herein.

1. Rating Definitions for S16R2-PTAW-E and S16R2-PTAW2-E

The specifications are subject to change without notice.

Revision	First Edition : August, 2014	Engine Engineering Department		
	Rev.1 : Feb, 2015	High Speed Engine Designing Section		
	Rev.2 : September, 2016	Approved by	Checked by	Drawn by
	Rev.3 : November, 2016	M.NAKAMURA	T.NISHIOKA	T.N
	Rev.4 : August, 2017			
	Rev.5 : December, 2018			

MHIET's Diesel Engine Rating Definition for Power Generation (applicable for S16R2-PTAW-E & S16R2-PTAW2-E only)

Symbol	Name of rating		Overload operation (Rack set)	Definition	Required conditions for warranty(*1)					Application
					Load/operating hour(*2)			Overhaul interval after delivery <Maximum> (*3)		
					Ave. load factor /24Hr	Ave. load factor /yr	Operating Hr/yr (*4)	Top	Major	
E	Critical Power Operation		Not possible (E')	Stand-by usage with the maximum 300hr continuous operation. Typically example : For Data center.	---	Maximum 100%	Maximum 300Hr	4yr	300Hr or 8yr whichever comes earlier	Emergency, stand-by
E	Stand-by		Rated power of an emergency generator as Stand-by that supplies power in case of a failure of main power source or commercial power.	Maximum 80% Over 90% load operation is acceptable for 12Hr per year.	Maximum 60%	Maximum 500Hr	4yr	1000Hr or 8yr whichever comes earlier		
P	Prime	Limited Running Time	+10% (E')	Regular power source of which the operating hour is limited to the short period as specified in the required conditions for warranty in this document.	Maximum 90% Over load($\leq 110\%$) :allowed for 12Hr per year. Over 90% load is allowed for max. 1Hr per 12Hr operation.	Maximum 60%	Maximum 500Hr	4yr	3000Hr or 8yr whichever comes earlier	
DCP (*5)	Data center Continuous Power		+10% (E')	For generator in Data center application (where reliable grid is available)	100% load is allowed in case of grid failure. Overload operation ($\leq 110\%$) is allowed for 1Hr per 12Hr.	Maximum 100%	Unlimited	500Hr or 4yr whichever comes earlier	1000Hr or 8yr whichever comes earlier	Data center

(*1) This condition constitutes a part of required conditions for warranty that Mitsubishi Heavy Industries Engine & Turbocharger, Ltd.(hereinafter "MHIET") agrees with the other party under Diesel Engine Sales Contract with the party(hereinafter "Individual Contract"), however details of the warranty descriptions and the conditions shall be referred to the Individual Contract.

Atmospheric condition as per ISO 15550:2002(JIS B 8003:2005)(Barometric pressure :100kPa, ambient temperature :298K, relative humidity :30%).

(*2) Average load factor(per day or year) shall be calculated as per the formula in ISO 8528:2005 'average power output(Ppp)'.
(*)

(*3) Refer to Operation Manual for more information regarding inspection and maintenance including items and descriptions.

(*4) Warranty coverage shall be expired after Major Overhaul.

(*5) UPTIME compliant: This DCP rating meets the requirement of a Tier III and Tier IV data center site with no runtime limitation when the operation is loaded to 'N' demand for the engine generator set.

★ This document may be changed without prior notification.