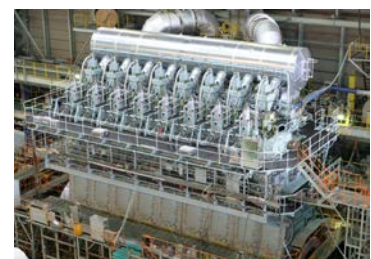


MES SERVICE NOTE

MITSUI ENGINEERING & SHIPBUILDING CO., LTD.
DIESEL TECHNICAL INVESTIGATION GROUP.

for MITSUI—MAN B&W engines, Update of the Maintenance Schedule for TCA turbocharger		No. 191	
		APPROVED	N. Osako
		CHECKED	
		PREPARED	K. Kaneko
ENGINE TYPE	All TCA type Turbocharger	Date	14 th Jan. 2015
<p>Based on the good service experience, they have recently updated the overhaul items and interval in the licensor's instruction manual. We hereby revise the maintenance schedule in instruction manual to new built engines, and it is also applied to the vessels in service, as follows.</p> <p>1) Elimination of the inspection item</p> <p>931 Clean and check "diffuser" -> As the overhaul interval is extended, every 12,000h overhaul is deleted and unified to 951 "Major overhaul" every 24,000-30,000h (* Compressor casing, insert and compressor wheel are every 12,000h as before)</p> <p>2) Extension of the overhaul interval</p> <p>941 Check thrust bearing, counter-thrust bearing, bearing disc -> As the overhaul interval is extended, every 12,000h overhaul is deleted and unified to 951 "Major overhaul" every 24,000-30,000h</p> <p>page2 : Instruction manual "Maintenance Schedule (Turbocharger on the Two-stroke Engine)" page3 : Old Maintenance Schedule</p>			
PRIORITY			
IMMEDIATELY <input type="checkbox"/>	AT FIRST OPPORTUNITY <input type="checkbox"/>	WHEN CONVENIENT <input checked="" type="checkbox"/>	OTHERS <input type="checkbox"/>

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Maintenance Schedule (Turbocharger on the Two-stroke Engine)

1, 2, 3							per	24	50	150	250	1500	3000	6000	12000	18000	24000	36000	
<i>Maintenance (in common with an engine maintenance)</i>																			
931	Clean and check compressor casing, insert and compressor wheel (visually check and clean, as required) Establish operational readiness of the turbocharger again		500.41 500.42 500.43		2	4	TCA								X				
951	Major overhaul 24 000 – 30 000 operating hours: Dismantle, clean and check all components of the turbocharger. Check gaps and clearances upon assembly		C2- 3.3.3.5 C2-2.2		2	20	TCA										X		
1,2,3		Serial number of the maintenance work Brief description of the maintenance work Pertaining work card with detailed instructions A = No work card necessary/available Cross-reference to tasks that are ideally carried out together. Required personnel					per	24 - 24000	Required time in man hours Size of ratio for the data of required time Repetition intervals in operating hours X Maintenance work due 1 As required/depending on condition 2 Checking of new or overhauled parts required (once after the mentioned time)										



Maintenance



Maintenance Schedule (Turbocharger on the Two-stroke Engine)

1, 2, 3				$\frac{x}{y}$			per	24	50	150	250	1500	3000	6000	12000	18000	24000	36000
Maintenance (in common with an engine maintenance)																		
931	Clean and check compressor casing, insert diffuser and compressor wheel (visually check and clean, as required) Establish operational readiness of the turbocharger again	500.41 500.42 500.43	2	4	TCA										X			
941	Check thrust bearing, counter-thrust bearing, bearing disc	500.46	1	2.0	TCA										X			
951	Major overhaul 24 000 – 30 000 operating hours: Dismantle, clean and check all components of the turbocharger. Check gaps and clearances upon assembly	C2- 3.3..3.5 C2-2.2	2	20	TCA													X
1,2,3	 Serial number of the maintenance work Brief description of the maintenance work Pertaining work card with detailed instructions A = No work card necessary/available Cross-reference to tasks that are ideally carried out together. Required personnel		$\frac{x}{y}$			Required time in man hours Size of ratio for the data of required time Repetition intervals in operating hours X Maintenance work due 1 As required/depending on condition 2 Checking of new or overhauled parts required (once after the mentioned time)	per 24 - 24000											