

ENGINE TEST RECORD (DNV/LR)



CUSTOMER

MTEE

Test Date 22-AUGUST-2018

Model Serial No.	S16R2-T2MPTAW-3 SNo 31149
No. of Cyl. × Bore × Stroke	16 × 170mm × 220mm
Injection Timing	19° B.T.D.C
Rated Output	1450 kW / 1350 min ⁻¹
Total St. Vol.	79.9 ℓ
Comp. Ratio	14.0 : 1
Barometric Press	999.0 hPa
Weather	Fine, Cloudy, Rainy

F.O.		S.G.	
Gas Oil		0.814 / 27 °C	
Governor (Actuator) No. 21196531			
Without Fan			
Injection Pump No.	L	PS8A-HL-25 - 35234	
	R	PS8A-HR-25 - 35236	
Turbo Charger No. TD10L2-40MRC	L	180613002	
		180613002	
	R	180613002	
		180613002	
Actual Timing	L	19.2°	
	R	19.1°	

1. Governor Test	100% Rated Load 1350 min ⁻¹ → No Load 1422 min ⁻¹ (5.3%)
2. Rack Set & Gov. Set	1450 kW 1350 min ⁻¹ No Load Max. Speed 1428 min ⁻¹
3. Remark	NOx Mode Value : E3 782.8 ppm Test Bench No 313

ENGINE QUALITY ASSURANCE SECTION
QUALITY ASSURANCE DEPARTMENT

MITSUBISHI HEAVY INDUSTRIES ENGINE & TURBOCHARGER, LTD.

Approved By

Checked By

K. Kawahara

Tested By

H. CHI BA

ENGINE TEST RECORD

Model Serial No. S16R2-T2MPTAW-3-31149

Test Date 22-August-2018

1. Load Test (E3 Mode)

Time	hour : min	13:10 13:20	13:30	13:40	13:50	14:00	14:30	15:00	15:30	15:25	
Load	%	0	25	50	75	90	100	100	110	Idle	
Eng. Speed	min ⁻¹	600	851	1071	1227	1303	1350	1350	1393	600	
Brake Load	N	0	4266	6769	8867	10015	10740	10740	11450	0	
Output	kW	0	363	725	1088	1305	1450	1450	1595	-	
Fuel Consumption	cm ³	-	498	1008	1496	1842	2082	2081	2334	-	
	sec.	-	20	20	20	20	20	20	20	-	
	l/h	-	89.6	181.4	269.3	331.6	374.8	374.6	420.1	-	
	g/kWh	-	201	204	201	207	210	210	214	-	
	Revised F.C.	-	200.6	203.0	200.9	-	209.6	209.6	-	-	
J/W Temp.	Out °C	68	80	79	79	79	80	80	80	70	
A/C Coolant	Temp.	In °C	30	33	33	33	39	33	33	39	30
	Flow	l/min	100	250	250	250	250	250	250	250	100
Lub.Oil	Temp.	°C	76	83	88	89	90	91	91	91	85
	Press.	MPa	0.47	0.53	0.56	0.58	0.58	0.58	0.58	0.58	0.38
Exh.Gas Temp.	T/C in (L)	°C	101	353	470	500	526	554	556	583	219
	T/C in (R)	°C	77	346	464	492	518	548	549	580	174
	T/C out	°C	82	309	395	391	394	409	410	426	213
Intake Air	Temp.	°C	25.4	25.6	25.8	25.8	26.1	26.2	26.3	26.4	26.0
	Humi.	%	55.4	54.8	54.5	54.5	53.9	53.8	53.8	53.6	53.6
Charging Air	Temp.	°C	28	33	42	51	54	57	58	60	40
	Press.	MPa	-	0.009	0.056	0.123	0.178	0.201	0.202	0.221	-
F/O Temp.	°C	33	36	37	38	39	39	40	39	39	
NOx	ppm	-	989	938	736	-	602	601	-	-	
O ₂	%	-	11.44	10.70	11.63	-	11.74	11.75	-	-	
Rack Scale 0 base	mm	75	79	81	83	85	86	86	88	76	
Smoke	Bosch	-	0.2	0.2	0.1	0.1	0.1	0.1	0.1	-	
Room Temp.	Dry.	°C	30	30	31	32	33	33	34	34	34
	Wet.	°C	24	24	25	25	26	27	27	27	26

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Remark

ENGINE TEST RECORD

Model Serial No. S16R2-T2MPTAW-3- 31149

Test Date 22- August- 2018

1. Load Test (E2 Mode)

Time	hour : min	15:30 15:40	15:50	16:00	16:10	16:20	16:30	17:20	17:40	17:45
Load	%	0	25	50	75	90	100	100	110	0
Eng. Speed	min ⁻¹	1350	1350	1350	1350	1350	1350	1350	1350	600
Brake Load	N	0	2689	5370	8059	9667	10740	10740	11815	0
Output	kW	0	363	725	1088	1305	1450	1450	1595	0
Fuel Consumption	cm ³	—	591	1060	1545	1865	2079	2081	2306	—
	sec.	—	20	20	20	20	20	20	20	—
	l/h	—	106.4	190.8	278.1	335.7	374.2	374.6	415.1	—
	g/kWh	—	239	214	208	209	210	210	212	—
	Revised F.C.									
J/W Temp.	Out °C	72	79	79	80	80	80	80	80	70
A/C Coolant	Temp. In °C	31	38	38	38	39	38	38	40	30
	Flow l/min	250	250	250	250	250	250	250	250	100
Lub.Oil	Temp. °C	84	87	89	89	90	90	91	92	88
	Press. MPa	0.63	0.61	0.60	0.59	0.58	0.58	0.58	0.57	0.38
Exh. Gas Temp.	T/C in (L) °C	191	334	429	486	523	551	554	589	255
	T/C in (R) °C	173	327	426	481	516	544	546	583	208
	T/C out °C	169	287	347	372	388	405	407	438	247
Intake Air	Temp. °C	25.6	25.8	25.9	26.0	26.0	26.2	26.3	26.4	26.1
	Humi. %	54.7	54.1	53.8	53.7	53.7	53.3	53.1	53.3	53.7
Charging Air	Temp. °C	39	43	46	50	56	57	57	60	42
	Press. MPa	—	0.028	0.076	0.139	0.179	0.201	0.202	0.223	—
F/O Temp.	°C	42	42	42	41	40	39	40	40	40
NOx	ppm	—	331	471	550	—	586	585	—	—
O ₂	%	—	14.72	13.14	12.65	—	11.84	11.87	—	—
Rack Scale 0 base	mm	75	76	80	82	85	86	86	88	76
Smoke	Bosch	—	0.1	0.2	0.1	0.1	0.1	0.1	0.1	—
Room Temp.	Dry. °C	32	32	33	34	34	34	34	34	34
	Wet. °C	25	25	25	26	26	27	27	27	26

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