

सम्मिश्र जांच दल/ Composite Trials Team
द्वारा नेवी कार्यालय/ C/o Navy Office
मुख्यालय/ Headquarter
अन्डमान एवं निकोबार कमान/
Andaman & Nicobar Command
पोर्ट ब्लेयर/ Port Blair - 744 102

CTT /300/11/01/TECH

18 Jan 23

The Commander-in-Chief
{for CTO(Marine)}
Headquarters
Andaman & Nicobar Command
Port Blair - 744 102

PRE REFIT TRIALS OF STBD DA - INS CHERIYAM (SR-23)

1. **Background.** Pre Refit Trials of Stbd DA onboard INS Cheriya including Performance, Vibration and attenuation checks was undertaken on 16 Jan 23. Detailed report for the same is placed at **Enclosure**.

2. **Performance Parameters.**

- (i) Max load sustained by DA was 94% (75 kW) of rated 80 kW for duration of 02 hours.
- (ii) Exhaust temperature showing erratic readings and is **UNSAT**.
- (iii) Lub oil pressure of DA at 94% load found to be 4.0 bar and is **SAT**.
- (iv) Lub oil temperature of DA at various loads found in the range of 80°C - 99°C and is **SAT**.
- (v) Fresh water temperature of DA found to be in the range of 70°C - 89 °C and is **SAT**.

3. **Observations.** The salient observations are as follows:-

- (a) DA exploited up to 94% of rated load (75 kW against rated load of 80 kW). DA tripped on reaching 100% load.
- (b) SPM readings at alternator driven end at various load and non-driven end at 94% load are at **Yellow zone**.
- (c) RPM meter showing erratic reading.
- (d) Exhaust temp gauge not working.
- (e) Two mounts at 60% and three mounts at 94% load are found **UNSAT**.
- (f) Fresh water temp alarm continuously activated at 94% load.

(g) Vibration reading at EFE Horizontal at 94% load beyond the permissible limit of 16 mm/s.

4. **Recommendations.** Following recommended:-

- (a) Torque tightening of all UNSAT mounts to be undertaken as per OEM recommendations.
- (b) All system leakages to be rectified.
- (c) Defects/ observations mentioned at para 4 above to be liquidated.



(जगन्नाथ गुरुमूर्ति / Jagannath Gurumurthy)
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The Commanding Officer
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PERFORMANCE & VIBRATION TRIALS OF STBD DA - INS CHERIYAM (SR 23)

1. Trial Inspector : (a) Sonu Yadav, ERA III
(b) PS Tomar, LME
2. Date and Time : (a) 16 Jan 23 (1000-1330h)
3. Equipment used for Performance trials : (a) SPM T-30
(b) Temperature gun

Stbd DA

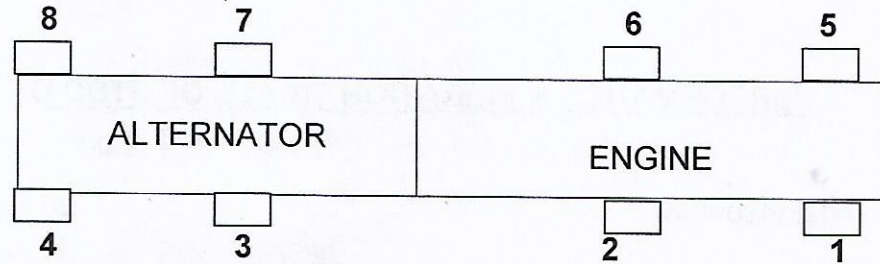
(a) **Performance Trials.**

Ser.	Parameter readings	Unit	Parameters recorded at 75 kW (94% rated load)
			Port DA
(i)	Max. sustained Load	KW	75
(ii)	RPM	RPM	1500
(iii)	L.O. Pressure	Kg/cm ²	4.0
(iv)	S.W. Pressure	Kg/cm ²	0.3
(v)	L.O. Temp.	°C	99
(vi)	F.W. Temp	°C	89
(vii)	Exhaust Temp	°C	Non-ops

- (b) **Vibration trials.** Vibration trials of Port DA were undertaken at load 48 kW (60% of rated load) and 75 kW (94% of rated load). The details of trials are as follows:-

Ser.	Measuring Points	At 60% (48 kW) load			At 94% (75 kW) load			Remarks (Limit 16 mm/sec)
		V	A	H	V	A	H	
(i)	Engine free end	13.9	6.3	15.6	14.5	9.9	21.4	UNSAT
(ii)	Engine drive end	11.5	7.3	9.8	13.4	9.4	11.8	SAT
(iii)	Alternator drive end	6.4	4.9	5.9	7.4	7.6	6.5	
(iv)	Alternator free end	4.9	5.0	3.9	7.4	8.5	5.2	

(c) **Attenuation Checks.** DA attenuation checks were carried out at 48 KW & 75KW (60 % & 94% of rated load).



Position	Vibration readings of SV mounts at 60 % Load							
	1	2	3	4	5	6	7	8
Top	11.3	9.2	5.6	1.0	12.0	9.5	6.5	8.9
Bottom	1.6	1.8	0.5	1.2	5.8	1.9	1.3	3.3
Attenuation % age (Limit 70 – 100%)	85	80	91	88	51	80	80	62
Remark	Sat				Unsat	Sat		Unsat

Position	Vibration readings of SV mounts at 94 % Load							
	1	2	3	4	5	6	7	8
Top	18.5	13.0	7.5	12.1	15.0	10.9	7.3	11.3
Bottom	4.4	2.5	0.8	3.9	7.2	2.3	2.2	2.5
Attenuation % age (Limit 70 – 100%)	76	80	89	67	51	78	69	77
Remark	Sat			Unsat		Sat	Unsat	Sat

(d) **SPM Reading.**

Ser.	Description	0 % Load dbm/dbc	60 % Load dbm/dbc	94 % Load dbm/dbc
(i)	Alternator driven end	26/9	27/9	26/-9
(ii)	Alternator free end	10/9	20/9	25/-8