

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/300/03/12/TECH

05 Apr 23

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

RUNNING HOUR EXTENSION OF DA NO. 3 (350 KW) - /IN LCU L54

1. Refer to following:-

- (a) CTT letter CTT/300/03/12TECH dated 02 Jan 23.
- (b) HQANC letter ANC/42002/EG/12/2 dated 16 Mar 23.
- (c) HQANC FAX ANC/42002/EG/12/2 dated 18 Jan 23.

2. **Background.** Running Hour Extention Trials of DA no.3 were undertaken and report forwarded vide CTT letter at para 1(a). HQANC vide letter at para 1(c) had granted 5% RH extension. Trials for second running hour extension including performance, vibration and attenuation checks were undertaken on 29 Mar 23. DA was loaded upto 75% (262 KW) on load bank and sustained for a duration of 02 hours.

3. **Performance Parameters.** A detailed report w.r.t engineering and performance trial is placed at **Enclosure**. The salient parameters are as follows: -

| Ser | Parameter | Range | Remarks |
|-----|-------------------------|---------------|---|
| (a) | Lub Oil Presssure | 3.4 – 3.6 bar | SAT |
| (b) | Lub Oil Temperature | 81 – 95 °C | |
| (c) | Fresh Water Temperature | 74 – 87 °C | |
| (d) | Exhaust Temperature | 574 °C | High exhaust temp limit reached at 75% load |

4. **Vibration Analysis.** Vibration trials were undertaken at 60% and 75% of rated load and found SAT.

5. **Observations.**

(a) **Pending since last RH extension.**

(i) Analog lub oil temperature gauge non-ops in local, digital display available.

(ii) Attenuation across one mount at 60% and 75% load found **UNSAT.**

(b) **Fresh observations.**

- (i) 75% (262kW) load offered by SS.
- (ii) High exhaust temperature alarm activated at load above 75% load.
- (iii) Overflow line not connected to expansion tank.

6. **Recommendations.** Following recommended:-

- (a) Liquidation of defects/ observations mentioned at para 5 ibid.
- (c) RH Extension may be accorded at restricted load of 75% (262kW).



(एस सी विलियम/ S C William)
कमांडर/ Commander
प्रभारी अधिकारी/ Officer-in-Charge

Encl : - As above

Copy to : -

The Naval Component Commander
{for SO (Engineering)}
c/o Navy Office
Port Blair – 744 102

The Commanding Officer
/N LCU L54
c/o Navy Office
Port Blair – 744 102

RUNNING HOUR EXTENTION OF DA NO. 3 (350 KW) - /N LCU L54

1. Trial Inspector : (a) Amit Kumar, ERA-3
(b) N N Rao, LME
2. Date and Time : 29 Mar 23 (1330-1730 Hrs)
3. Equipment used for trials : (a) SPM T-30
(b) Temperature Gun
4. Details of trials are as follows:-

(a) **Safety Device Checks.**

| Ser. | Description | Unit | Design Value | DA 3 (350 KW) |
|--------|--------------------|--------------------|--------------|---------------|
| (i) | Low LO Pr Alarm | Kg/cm ² | 1.2 | 1.2 |
| (ii) | Low LO Pr Trip | Kg/cm ² | 0.8 | 0.8 |
| (iii) | High FW temp Alarm | °C | 91 | 93 |
| (iv) | High FW temp Trip | °C | 97 | 97 |
| (v) | High LO temp Alarm | °C | 119 | 121 |
| (vi) | Over speed Trip | RPM | 1650 | 1651 |
| (vii) | Crash stop Local | -- | Ops/ Non-ops | Ops |
| (viii) | Crash stop Remote | -- | Ops/ Non-ops | Ops |

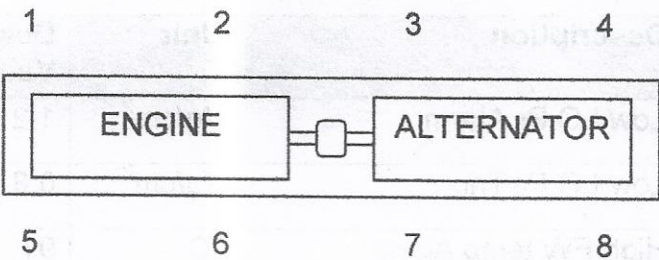
(b) **Performance Parameters at 75% Load.**

| Ser. | Description | Unit | Parameters recorded at 262 KW (75% rated load) |
|-------|-------------------------|--------------------|--|
| | | | 350 KW DA |
| (i) | Max sustained Load | KW | 262 |
| (ii) | RPM | RPM | 1499 |
| (iii) | Lub oil Pressure | Kg/cm ² | 3.4 |
| (iv) | Sea water Pressure | Kg/cm ² | 0.6 |
| (v) | Lub oil Temperature | °C | 95 |
| (vi) | Fresh water Temperature | °C | 87 |
| (vii) | Exhaust Temperature | °C | 574 |

(c) **Vibration Trials.** Vibration trials of DA was undertaken at load 210 KW (60% of rated load) and 262 KW (75% of rated load). Overall vibration readings of DA at monitoring points found within permissible limit and is Sat. The details of trials are as follows:-

| Ser | Description | 350 KW DA | | | | | | Remarks (Limit 16 mm/sec) |
|-------|---------------|--------------------------|------|------|----------------------------|------|------|------------------------------|
| | | At 60 % load (210 KW) | | | At 75 % load (262.5 KW) | | | |
| | | V | A | H | V | A | H | |
| (i) | Engine FE | 5.74 | 5.23 | 5.56 | 6.01 | 5.98 | 6.25 | Sat |
| (ii) | Engine DE | 6.62 | 4.92 | 6.62 | 6.56 | 5.23 | 6.52 | Sat |
| (iii) | Alternator DE | 4.49 | 4.72 | 7.45 | 4.56 | 4.87 | 7.5 | Sat |
| (iv) | Alternator FE | 7.34 | 3.73 | 8.64 | 7.94 | 4.01 | 8.23 | Sat |

(d) **Attenuation checks.**



| Positions | 210 KW (60 % load) | | | | | | | |
|-----------|--------------------|-----|-----|------|------|------|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Top | 10.2 | 9.2 | 5.7 | 10.1 | 11.2 | 10.0 | 5.6 | 11.1 |
| Bottom | 4.2 | 1.7 | 1.3 | 0.4 | 2.9 | 0.9 | 1.3 | 0.6 |
| Atten. | 58 | 81 | 79 | 96 | 74 | 91 | 76 | 94 |
| Remarks | UNSAT | | SAT | | | | | |

| Positions | 262 KW (75 % load) | | | | | | | |
|-----------|--------------------|-----|-----|------|------|-----|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Top | 10.8 | 9.7 | 5.2 | 10.4 | 10.9 | 9.9 | 5.8 | 10.5 |
| Bottom | 4.8 | 1.6 | 1.4 | 0.6 | 2.8 | 1.1 | 1.2 | 0.8 |
| Atten. | 55 | 83 | 73 | 94 | 74 | 88 | 79 | 92 |
| Remarks | UNSAT | | SAT | | | | | |

Note: Attenuation lesser than 70% indicates overloaded/over tightened mounts. All SV mounts to be loosened and torque tightened as per OEM specified values.

(e) **SPM Readings.**

| Ser. | Description | 0% Load dbm/ dbc | 60 % Load dbm/ dbc | 75%Load dbm/ dbc | Remarks |
|------|----------------------|---------------------|-----------------------|---------------------|---------|
| (a) | Alternator Drive End | 18/11 | 19/13 | 20/12 | SAT |
| (b) | Alternator Free End | 16/03 | 20/01 | 19/02 | SAT |