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Andaman & Nicobar Command  
पोर्ट ब्लेयर/ Port Blair - 744 102

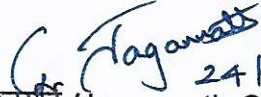
CTT/300/03/13/TECH

24 May 23

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

**RUNNING HOUR EXTENSION TRIALS OF PORT MAIN ENGINE - /IN LCU L-55**

1. Refer to HQANC fax ANC/42002/EG/13/1 dated 03 May 23.
2. **Background** As part of running hour extension trials, safety device checks, performance, vibration and attenuations checks of Port Main Engine onboard /IN LCU L-55 were undertaken from 19-20 May 23.
3. **Observations.** Detailed report of parameters is placed at **Enclosure**. Salient observations during the checks are as follows: -
  - (a) Sea water outlet pressure gauge non-ops.
  - (b) Attenuation across 02 mounts at 75% load (8.5 AH) found **UNSAT.**
  - (c) Attenuation across 02 mounts at 100% load (10 AH) found **UNSAT.**
  - (d) Torsion meter of PME non-ops.
4. **Recommendation** Following recommended: -
  - (a) Liquidation of defects/ observations mentioned at para 3.
  - (b) Torque tightening of mounts to be undertaken as per OEM recommendations.
  - (c) Extension of running hours may be accorded for normal exploitation of Port Main Engine up to 100% in ahead & astern mode post liquidation of observations by SS.

  
(जगन्नाथ गुरुमूर्ति / Jagannath Gurusurthy)  
लेफ्टिनेंट कमांडर / Lieutenant Commander  
प्रभारी अधिकारी/ Officer-in-Charge (AOL)

**Encl:** - As Above

**Copy to: -**

The Naval Component Commander\*  
{for SSO(Tech)}  
Headquarters Naval Component  
c/o Navy Office  
Port Blair - 744 102

The Commanding Officer  
IN LCU L-55  
c/o Navy Office  
Port Blair-744102



**RUNNING HOUR EXTENSION OF PME – /N LCU L-55**

1. Trial Inspectors : (a) Paras Kumar, MECH III  
(b) Ajit Singh, ERA III
2. Date and Time : (a) 20 May 23 (0645 - 1245 Hrs)
3. Equipment used for SDCs : (a) Temp Calibrator.  
(b) Pressure Calibrator.  
(c) SPM T-30.  
(d) Temperature Gun.
4. **Safety Device Checks.**

Ser	Description	Unit	Design Value	Remarks	
				LOP	
(a)	High Coolant Water temp Alarm	°C	101	101	SAT
(b)	High Coolant Water temp Slow Down	°C	103	103	
(c)	High Coolant Water temp Trip	°C	106	106	
(d)	High Lub Oil temp Slow Down	°C	101	101	
(e)	High Charge Air temp Alarm	°C	75	75	
(f)	High Charge Air temp Slow Down	°C	85	84	
(g)	Low Coolant Water Pressure Alarm (at 1200 RPM)	Bar	1.6	1.7	
(h)	Low Coolant Water Pressure Alarm (at 1800 RPM)	Bar	4.2	4.2	
(i)	High Coolant Water temp Alarm (at 650 RPM)	°C	101	101	
(k)	High Coolant Water temp Slow Down (at 650 RPM)	°C	103	103	
(l)	High Coolant Water temp Trip (at 650 RPM)	°C	106	106	
(m)	Low Lub Oil Pressure Alarm (at 1200 RPM)	Bar	3.7	3.7	
(n)	Low Lub Oil Pressure Trip (at 1200 RPM)	Bar	3.4	3.4	
(p)	Low Lub Oil Pressure Alarm (at 1800 RPM)	Bar	4.7	4.7	
(q)	Low Lub Oil Pressure Trip (at 1800 RPM)	Bar	4.4	4.4	
(r)	Low Fuel Pressure Alarm (at 650 RPM)	Bar	3.9	3.9	
(s)	High Exhaust temp Alarm for A & B Bank (at 650 RPM)	°C	651	650	
(t)	Very High Exhaust temp Alarm for A & B Bank (at 650 RPM)	°C	680	650	



Ser	Description	Unit	Design Value	Remarks	
				LOP	
(u)	Low Crankcase Pressure Alarm (at 1200 RPM)	Bar	25	25	
(v)	Low Crankcase Pressure Trip (at 1200 RPM)	Bar	40	40	
(w)	Low Crankcase Pressure Alarm (at 1800 RPM)	Bar	30	30	
(x)	Low Crankcase Pressure Trip (at 1800 RPM)	Bar	50	50	
(y)	Low Sea Water Pressure Alarm (at 1200 RPM)	Bar	1.2	1.2	
(z)	Low Sea Water Pressure Alarm (at 1800 RPM)	Bar	3.2	3.2	
(aa)	Over-speed Trip	RPM	2070	2070	

5. **General Ship's Data.**

SHIP - /N LCU L-55	
DISPLACEMENT – 959 TONS	AFT DRAFT – 2.53
	FWD DRAFT – 1.25
	SEA STATE - 02
SHIPS MODE – 10 AH (WITH TWIN ENGINE)	SPEED BY LOG – 15.3 KNOTS
	SPEED BY GPS - 15.1 KNOTS
SHIPS MODE – 6.6 AS (WITH TWIN ENGINE)	SPEED BY LOG – 6.6 KNOTS
	SPEED BY GPS – 6.3 KNOTS

6. **Parameter Readings at MCR**

SER	DESCRIPTION	UNIT	PME				
			25%	50%	75%	100%	100%
(a)	MODE	AH/AS	2.5 AH	4.2AH	8.5AH	10 AH	6.6 AS
(b)	ERPM	RPM	710	938	1577	1799	1290
(c)	LOADING	%	25%	50%	75%	100%	66%
(d)	SHAFT RPM	RPM	152	207	347	393	281
(e)	INJECTION QTY	%	25	36	65	97	59
(f)	ENGINE OIL PRESSURE	Bar	3.3	4.6	6.0	6.2	5.5
(g)	COOLANT PRESSURE	Bar	0.8	1.3	3.6	4.7	2.4
(h)	CHARGE AIR PRESSURE	Bar	1.0	1.2	2.6	3.2	1.9
(i)	RAW WATER PRESSURE	Bar	0.6	1.1	2.6	3.2	1.8
(k)	FUEL PRESSURE	Bar	6.2	7.0	7.2	7.0	6.8
(l)	LUB OIL TEMP	°C	74.8	76	85.5	89.4	83.2
(m)	COOLANT TEMP	°C	75.9	76.4	83.1	86.8	81.7
(n)	CHARGE AIR TEMP	°C	65.3	64.6	61.8	61.8	62.5
(p)	PRESSURE CRANKCASE	mbar	-0.8	-5.3	-6.5	-15.1	-18.8
(q)	INTAKE AIR TEMP	°C	38	38	39	40	39
(r)	EXHAUST MEAN	°C	221	316	55	557	458
(s)	EXHAUST TEMP	°C	221	319	549	568	458



SER	DESCRIPTION		UNIT	PME				
				25%	50%	75%	100%	100%
	COMB A/B							
(t)	EXHAUST TEMP	A1 CYL.	°C	233	342	557	568	478
(u)		A2 CYL.	°C	220	310	559	568	468
(v)		A3 CYL.	°C	250	350	540	544	462
(w)		A4 CYL.	°C	216	313	529	541	430
(x)		A5 CYL.	°C	205	276	541	491	452
(y)		A6 CYL.	°C	249	314	542	546	432
(z)		A7 CYL.	°C	254	288	542	546	459
(aa)		A8 CYL.	°C	210	300	507	584	471
(bb)		B1 CYL.	°C	229	365	549	560	487
(cc)		B2 CYL.	°C	212	342	566	548	441
(dd)		B3 CYL.	°C	212	299	526	568	474
(ee)		B4 CYL.	°C	211	329	562	560	472
(ff)		B5 CYL.	°C	209	317	546	550	481
(gg)		B6 CYL.	°C	224	319	542	554	472
(hh)		B7 CYL.	°C	203	312	550	582	450
(ij)		B8 CYL.	°C	197	332	550	582	430
(kk)	CHARGE AIR SEQ. TEMP		°C	65.3	64.7	61.8	61.8	62.5
(ll)	ETC1 SPEED		RPM	11	18	34	43	35
(mm)	ETC2 SPEED		RPM	0	0	40	50	0
(nn)	G/BOX L.O. PRESSURE		Bar	0.5	0.7	1.2	1.4	1.0
(pp)	GB CONTROL OIL PRESS		KG/C M <sup>2</sup>	19.5	19.7	20.9	21.3	20.4
(qq)	STERNTUBE LUB OIL TEMP		°C	31	32	34	42	40.7
(rr)	FWD SEAL TEMP		Bar	33	37	39	44	42
(ss)	STARTING AIR PRESSURE/AIR BOTTLE PRESSURE		Bar	27.9	28.3	27.1	27.7	27.8



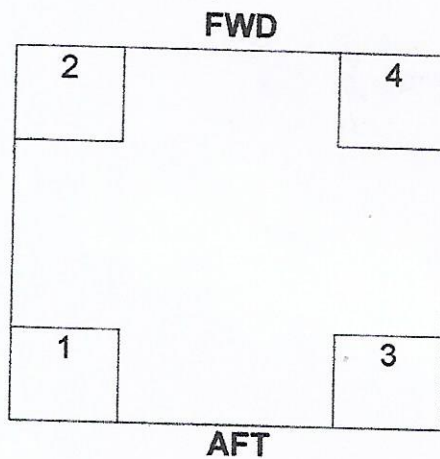
7. Local Parameter Readings.

SER	DESCRIPTION	UNIT	PME			
			25%	50%	75%	100%
(a)	ERPM	RPM	710	950	1350	1801
(b)	SRPM	RPM	155	205	310	390
(c)	L.O. TEMP. ENGINE INLET	°C	63	69	70	72
(d)	L.O. TEMP. ENGINE OUTLET	°C	73	77	79	81
(e)	F.W. TEMP. ENGINE INLET	°C	50	51	54	58
(f)	F.W. TEMP. ENGINE OUTLET	°C	54	55	57	58
(g)	FW INLET TEMP TO L.O. COOLER	°C	64	68	70	71
(h)	FW OUTLET TEMP. TO H/E	°C	80	87	90	93
(j)	FW INLET TEMP. FROM H/E	°C	72	79	82	83
(k)	SW INLET TEMP. TO INTER COOLER	°C	34	34	33	33
(l)	SW OULET TEMP. FROM INTERCOLER	°C	37	39	43	48
(m)	GB L.O. INLET TEMP. TO COOLER	°C	40	43	48	53
(n)	GB L.O. OUTLET TEMP. FROM COOLER	°C	34	37	40	44
(p)	STERNTUBE LUB OIL TEMP	°C	31	35	39	48
(q)	FWD SEAL TEMP	°C	35	39	44	50
(r)	GB LUB OIL PR AFTER PP	Kg/cm <sup>2</sup>	20	20	20	20

8. Vibration Readings of PME, G/B and Shafting.

SER	MEASURING POINTS	DIRECTION	AT 75% LOAD
			PME
(a)	EFE	V	4.5
		A	3.7
		H	6.8
(b)	EDE	V	5.2
		A	3.4
		H	5.3
(c)	GBIN	V	1.4
		A	1.7
		H	1.9
(d)	GBOUT	V	1.11
		A	3.9
		H	3.9
(e)	GBTOP	V	0.9
(f)	ST	V	1.7
		A	1.7
		H	2.1

9. Attenuation Checks of PME



Ser	Eqpt	Load%	Mount	Top	Bottom	Attenuation %	Remarks
(a)	PME	75%	Mount 1	2.3	1.0	56	UNSAT
			Mount 2	2.4	0.9	62	
			Mount 3	2.3	0.8	71	SAT
			Mount 4	2.4	0.7	70	
(b)	PME	100%	Mount 1	2.6	1.0	61	UNSAT
			Mount 2	2.7	0.8	70	SAT
			Mount 3	2.9	0.9	68	UNSAT
			Mount 4	2.7	0.9	74	SAT