DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

TIME BETWEEN OVERHAUL (TBO) FOR ALL MARINE ENGINES

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Headquarters, Department of the Army, Washington, D.C.
22 June 1988

Reporting of Errors

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, U.S. Army Troop Support Command, ATTN: AMSTR-MCTS 4300 Goodfellow Blvd., St. Louis, Mo 63120-1798. A reply will be furnished directly to you.

1. General Information. The instructions contained in this bulletin apply to a target Time Between Overhaul (TBO) for all Marine Main and Auxiliary Engines. The responsibility of each maintenance level and U.S. Army Troop Support Command (TROSCOM) in the overhaul program is defined herein.

2. Purpose. The purpose of this bulletin is to provide a target TBO for Marine Main and Auxiliary engines, and to provide a firm analytical overhaul program upon which to base TBO adjustments.

3. Leading Particular. The target TBO's are shown in Table 1 and 2.

Table 1. Main Engines.

Atlas Imperial 45 M5X8	Detroit Diesel 6-71
Buda 6 DCSM-R-1879	Detroit Diesel 12V-71
Caterpillar D353	Fairbanks Morse 37-F-16
Caterpillar D375	Fairbanks Morse 38D-8-Y8
Copper Bessemer FVA-8-MGT	GM 6 through 12-278A
Copper Bessemer LS6 DRT	Norberg 32112
Cummins V8-300	Pratt & Whitney ST 6T-76

*This technical bulletin supersedes TB 55-1900-202-12-2, dated 1 December 1987.

Engine Classification	Engine RPM	TBO
Low Speed	0-600	14000 Hrs.
Medium Speed	601-1200	9000 Hrs.
High Speed	1201-3000	10,000 to 12,000 Hrs.
	Air Cushioned Vehicle	
Present	6600 RPM	1200 Hrs.
Target	6600 RPM	1500 Hrs.

Quantity Number of Analytical Overhauls. When deemed necessary by Chief Engineer (Shore Installation) Maintenance Officer.

Table 2. Auxiliary Engines.

Caterpillar D311, D318, D364 and D375
Cleveland Diesel all models
Detroit Diesel all models
General Motors all models
Joshua Hendy D-56-E
Norberg 4SF2 and 4F53
Waushesha all models

Engine Classification	Engine RPM	TBO
Low Speed	0-600	12000 Hrs.
Medium Speed	601-1200	8000 Hrs.
High Speed	1201-3000	6000 Hrs.

Quantity Number of Analytical Overhaul. When deemed necessary by Chief Engineer (Shore Installation) Maintenance Officer.

4. Instructions.

a. Organizational, Direct and General Support Maintenance Activities.

(1) A target TBO of a cyclic drydock (overhaul) is established for all Marine Main and Auxiliary Engines. This target TBO is established as a realistic goal considering present day experience; however, this does not relieve the crew, or the DS/GS, of providing sound maintenance during normal operation (Daily Operation), and correcting problems detected through inspections (PMCS).

(2) Ninety days prior to cyclic drydock or target TBO established by TROSCOM and AR 750-1, the operating activities shall conduct a meeting with the Marine Surveyor, Chief Engineer, Maintenance Officer and Vessel Master or other responsible individual. Specifications for vessel overhaul/drydocking will be initiated at this time to cover work to be accomplished by contractor/shipyard. TBO's will be discussed by participating parties on all on-board equipment (engine hours since overhaul).

(3) Components will be overhauled with engine upon which they are installed.

b. Depot Maintenance Activities.

(1) Upon receipt of an engine for overhaul, each engine shall be subject to an as-received test/performance run. Further, the analytical disassembly and inspection shall list the condition of all major components. Deficiencies noted shall be recorded on DA Form 5544 (Engine Department Log Book), DA Form 2407 and 2407-1 (Maintenance Request and Maintenance Request Continuation Sheet), and all applicable TAMMS forms and records, and all written reports required by contract.

(2) Should engine condition warrant-no wear or deterioration evidenced-recommendations shall be made for the extension of target TBO, and/or requirements for an interim TBO on the entire engine or on specific components.

(3) Recommendations shall be forwarded by message to Commander, TROSCOM, ATTN: AMSTR-MPD, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798.

5. Procedures.

a. The using unit shall direct the overhaul of their assigned engines (craft) at the next Intermin TBO (as shown in Tables 1 and 2). Selecting of the engines (craft) shall be in accordance with operating hours. Should the engines hours exceed the Intermin, every effort should be expended to meet the Target (cyclic drydock) period. Until notification of an approved increase in TBO's for all engines, only designated engines (see 5b(2) above) should be operated to the next Interim.

b. Overhaul of engines shall be accomplished in a professional manner; and in keeping with good workmanship. Engines shall be put in a new/near new condition, whenever possible new repair parts will be utilized. Should it become necessary to use overhauled parts or components, all parts and components will be inspected and approved by the Chief Engineer/Maintenance Officer or ships surveyor prior to assembly of same on engine/equipment. Further, should the ship surveyor and Chief Engineer/Maintenance Officer disagree on condition of parts/components, the latter officers will have final say.

6. Recording of Engine Time. Record entries in accordance with procedures outlined in Chapter Six (6) AR 56-9. DA Form 5544 (Engine Department Log Book) will be utilized, and maintained by the Chief Engineer/Maintenance Officer to record engine hours. All historical data, i.e., overtemperature, unusual noise, uneven compression and firing pressures, head readings clearance, etc., will be recorded on DA Form 55-44 (Remarks Section). Recorded entries on DA Form 5544 will be used to justify an analytical overhaul; the Chief Engineer/Maintenance Officer will make the determination that an analytical teardown is necessary to ensure continued trouble free operation.

7. Replacement Engines. NSN's for replacement engines for the following, Landing Craft Mechanized (LCM), Landing Craft Utility (LCU), Boat Picket Design 4003, Lighter Amphibious Self-propelled 15 and 60 Ton, and the Air Cushioned Vehicle are:

LCM MOD 0

LCM MOD 1
PORT 2815-00-522-1872
STBD 2815-00-522-1871

LCU MOD 1466
PORT 2815-01-007-6124
MIDSHIPS 2815-00-000-0075
STBD 2815-00-000-0075

LCU MOD 1667 and 1671
PORT 2815-01-018-0637
STBD 2815-01-018-0637

BOAT PICKET DSN 4003
PORT 2815-00-965-0889
STBD 2815-00-965-0886

LIGHTER AMPHIBIOUS 15 TON
PORT 2815-00-963-5806
STBD 2815-00-963-5806

LIGHTER AMPHIBIOUS 60 TON
Forward PORT 2815-00-513-9874
Forward STBD 2815-00-513-9873
Aft PORT 2815-00-513-9873
Aft STBD 2815-00-513-9874

AIR CUSHIONED VEHICLE

	Part No.	Mfg. Code
Power Unit	ST6T-76	00198

The above engines can be requisitioned through normal supply channels utilizing DA Form 2765-1 (Request for Issue or Turn-in) AR 710-2. The aforementioned engines are source coded PADOD repairable item. When beyond lower level capability, return to Depot. Condemnation and disposal not authorized below depot level, (Appendix C, AR 700-82). Should the estimated Repair/Overhaul cost exceed the limitation outline in TB 43-0002-26 on unserviceable/uneconomically repairable engines, DA Form 3590 (Repair Eligibility Data Sheet) will be accomplished in accordance with Section IV, paragraph 7, TB 43-0002-26. On all other Marine engines which are no longer available through the system/local purchase, the local Major Subordinate Command/Director of Industrial Operations, will have the responsibility of determining expenditures of available funds. TB 43-0002-26 will be used as a guide in determining allowable expenditure limits of available funds. Should the estimated repair/overhaul cost exceed the limitation outlined in TB 43-0002-26, the Major Army Commander will exercise approval authority on requests for waivers of published maximum one-time repair/overhaul allowances in accordance with paragraph 3-39, AR 750-1.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

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