



LOG BOOK

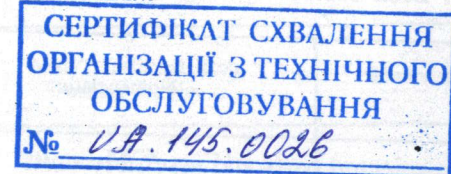
engine TV3-117VMA

No.

7087892800080

15. OVERHAUL (4th overhaul)

(To be filled in by the overhauling agency)



15.1. Brief records on engine overhaul

Data on overhaul of engine SI. No. 7087892800080p3On accumulation of 4863 hrs 17 min 3316 cycles since new, 1450 hrs 14 min691 cycles since the 3rd major overhaul the engine
(state kind and S/N of overhaul)has been removed from service for the reason of Service life expiry.For conversion into TB3-117BMA engines.The engine has undergone the major overhaul in accordance with the effective
(state kind of overhaul)
Overhaul Manuals 78CTV-024.The overhaul was started on 28.08. 2023.completed on 20.06. 2024.

In the course of overhaul:

1. The engine has been modified to incorporate all Service Bulletins effective on 28.08.2023
2. The following main parts and units have been replaced:

15.1. Brief records on engine overhaul

Nomenclature	Qty, pcs	New/Transferred from engine Sl. No.	Hours done
Instead of rejected parts and assembly units:			
Air starter rollers 0252101032	36	new	
Limiter casing 0257101270	1	new	
Planetary gear casing 0780850320	1	new	
Planetary gears 0257101810	3	new	
External flexible shaft 0780299290-02	1	new	
Internal flexible shaft 0780299560	1	new	
Inner ring 0780450298	1	new	
Outer ring 0780459220	1	new	
Stage 1 nozzle guide vanes 0780459230	42	new	
Casing 1 0780459240-01	1	new	
Casing 3 0780470020-01	1	new	
Ring 4 0780479030	1	new	
Stage 4 NGV 0780479010	1	new	
Compressor shroud rings: 0780147560-01/7570-01/7580-01/7590-9003	2/2/2/1	new	

15.1. Brief rec

IGV ring 07801460
Inlet guide vanes 0
Bearing bushing 07
Bearing body 0780
Bearing seat 0780
Housings of fuel n
Bearing body 0780
Labyrinth seal 078
Sealing bushing 0
Bearing bushing 0
Cover of speed g
Gears 078024902
Oil scavenge pun
Mount flange 07
Upper sleeve 078
Thrust ring 0780

15.1. Brief records on engine overhaul

Hours done	Nomenclature	Qty, pcs	New/Transferred from engine Sl. No.	Hours done
	IGV ring 0780146050	1	new	
	Inlet guide vanes 0780149660/9670/9680	10/1/1	new	
	Bearing bushing 0780210573	1	new	
	Bearing body 0780240556	1	new	
	Bearing seat 0780220407	1	new	
	Housings of fuel nozzles 0780339060-01	12	new	
	Bearing body 0780230207	1	new	
	Labyrinth seal 0780420411	1	new	
	Sealing bushing 0780240415	1	new	
	Bearing bushing 0780429022	1	new	
	Cover of speed governor internal drive 0780249023	1	new	
	Gears 0780249021/9045/9120	3	new	
	Oil scavenge pump shaft 0780679620-01	1	new	
	Mount flange 0780212940	1	new	
	Upper sleeve 0780269160	1	new	
	Thrust ring 0780299088	1	new	

15.1. Brief records on engine overhaul

Nomenclature	Qty, pcs	New/Transferred from engine SI, No.	Hours done
Compressor stage 1,2,4,6 thru 12 rotor blades:			
0780139124-01/9125/9127/9129,	37/5/8/5,		
0780139131/9132/9133/9134,	21/8/27/45,		
0780139135/9136	32/9	new	
Covering disks 2,3 0780410518/0519	2	new	
Turbine disks 3,4 0780420293-80/9023-80	2	K783009917	1500h
Turbine stage 1 blades 0780410522-80			
Nos.2,4,6,8,10,12,14,16,18,20-24,26,27,29-31,33,36,37,39-42,44, 46,47,50,54,56-58,60-62,65,66,72,74,76,85-93,95,97,99,100,102, 107-110,112-114,116,117,119,120,122,124-127,130-133	79	7087854803092	3457h
Turbine stage 2 blades 0780419002-02			
Nos.2,4,6,8,10,12,14,16,18,20,22,24,26,28,30-34,36-46,48,50,52, 54,56,58,60,62,64,66,68,70-72,74-78,80,82,84,86,88,90,92,94,96, 98,100	68	new	
Turbine stage 3 blades 0780429007-01	64	new	
Turbine stage 4 blades 0780429008-01			

15.1. Brief records

Nos. 2,4,6-25,27,28,31

Bearings:5632202B1,2

761000904p2(B,K)

57000103p

35126218p

Replace free turbine

Nozzle guide vanes

- stage 2 - 3 vanes

- stage 3 - 11 vanes

15.1. Brief records on engine overhaul

Nomenclature	Qty, pcs	New/Transferred from engine Sl. No.	Hours done
Nos. 2,4,6-25,27,28,31-51	45	new	
Bearings:5632202B1,25104B1,351000912B1T2	3	new	
761000904p2(B,K)	2	H78MT413319	397h
57000103p	2	H78MT733622	262h
35126218p	1	H78MT533217	1444h
Replace free turbine bearing 551032914p1 No.701Д - S.II during the next overhaul.			
Nozzle guide vanes have dress marks in trailing edges as per effective Specs:			
- stage 2 - 3 vanes have one dress mark each;			
- stage 3 - 11 vanes have one dress mark each.			

15.2. Check and acceptance test data

Parameter		Power setting	Test data	Remarks	
Name	Notation and unit of measure				
1	2	3	4	5	
Ambient pressure	P_{amb} , mm Hg		755.0		
Engine air inlet temperature	T_1 , °C	Takeoff	29.4		
Gas generator rotational speed	N_{gg} , %	* Contingency	-	Parameters are corrected to standard atmospheric conditions ($T_{amb} = 15^\circ\text{C}$, $P_{amb} = 760$ mm Hg) and rated thrust	
		Takeoff	98.0		
		Max. cont.	95.15		
		Cruise I	93.9		
		Cruise II	91.9		
		Idling	74.69		
Consumption	Fuel	* Contingency	-	Parameters are corrected to standard atmospheric conditions ($T_{amb} = 15^\circ\text{C}$, $P_{amb} = 760$ mm Hg) and rated thrust	
		Takeoff	215.0		
		Max. cont.	230.0		
		Cruise I	240.0		
		Cruise II	259.0		
		Idling	128		
		G_{fuel} , kg/h			
	Oil	G_{oil} , lit/h		0.0	

NOTE: *To be filled in for certain engine models.

15.2. Check and

Name

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Temperature

Pressure

15.2. Check and acceptance test data

Parameter		Notation and unit of measure	Power setting	Test data	Remarks
Name					
1		2	3	4	5
Temperature	Turbine gas inlet	$T_3, ^\circ\text{C}$	* Contingency	-	Parameters are corrected to standard atmospheric conditions ($T_{\text{amb}} = 15^\circ\text{C}$, $P_{\text{amb}} = 760 \text{ mm Hg}$) and rated thrust
			Takeoff	897	
			Max. cont.	827	
			Cruise I	799	
			Cruise II	757	
	Engine oil outlet	$T_{\text{oil}}, ^\circ\text{C}$	Idling	604	
			* Contingency	-	
			Takeoff	127.4	
			Max. cont.	135.6	
			Cruise I	129.9	
Pressure	Main fuel nozzle	$P_{\text{m.f.n.}}, \text{kgf/cm}^2$	Cruise II	123.6	
			Idling	114.2	
			* Contingency	-	
			Takeoff	39.7	
			Max. cont.	37.8	
	Engine oil	$P_{\text{oil}}, \text{kgf/cm}^2$	Cruise I	37.2	
			Cruise II	36.3	
			Idling	28.0	
			* Contingency	-	
			Takeoff	3.97	
			Max. cont.	3.66	
			Cruise I	3.6	
			Cruise II	3.56	
			Idling	3.06	

corrected atmospheric conditions ($T_{\text{amb}} = 15^\circ\text{C}$, $P_{\text{amb}} = 760 \text{ mm Hg}$) and

corrected atmospheric conditions ($T_{\text{amb}} = 15^\circ\text{C}$, $P_{\text{amb}} = 760 \text{ mm Hg}$) and

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15. OVERHAUL (overhaul)
(To be filled in by the overhauling agency)

15.3. Acceptance certificate

Remarks

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Engine **TV3-117VMA**, Sl. No. **7087892800080p2**, has been overhauled by the **MOTOR SICH JSC** in compliance with the effective technical publications and found fit for service.

The engine TBO is **1500 (one thousand and five hundred)** hours, **1500** cycles within **10 (ten)** years of service (cumulative storage and operation life) including storing in preservation (package) of overhauling agency: **6** years of storing in regions with moderate and moderately cold climate in wooden containers in depots, **3** years of storing in the open; under conditions of tropical and maritime climate the term of storing is **2** years in depots, **10** years of storing in metal containers under any storage conditions.

Upon expiry of the warranty period or completion of the warranty life (whichever reaches the limiting value first) the engine on-condition warranty operation is to be performed according to the effective Service Bulletin.

The engine operating time shall not exceed: **5** % of the service life at takeoff power, **40** % of the service life at maximum continuous power, — % of the service life or — min. at contingency power.

The total service life of the engine is **7500 (seven thousand and five hundred)** hours, **7500** cycles.

The limiting total service life of II and III covering disks 078.41.0518 and 078.41.0519 is **2000** hours, **2000** cycles.

The above overhaul period and service life are valid for sets of spares and of mounting, tools supplied together with the engine.

The above time limits are valid on condition that Operator observes the requirements for storage, shipping and maintenance specified in the effective operation and maintenance publications.

Warranties conform to the contract **No. 1323/658-E14-235-MD498(FTD)**.

completed on _____
the course of overhaul _____
the engine has been modified to incorporate all Service Bulletins _____
the following main parts and units have been replaced: _____



Inspection Department Manager

Stamp here

signature

20.06.24
date