

DIRECTORATE GENERAL BORDER ROADS
GENERAL MAINTENANCE INSTRUCTION NO.113

ON

MAINTENANCE AND LUBRICATION
OF

ZETOR TRACTOR – 50A

Introduction

1. Regular servicing and Preventive Maintenance are essential to prolong the life of the equipment, ensure timely repairs to arrest defects from developing into Major ones, to work the equipment effectively at all times, and minimize inopportune break down and down time losses. This instruction is being issued to improve the maintenance and lubrication of ZETOR TRACTOR – 50A.

Aim

2. (a) To ensure the details of periodic and preventive maintenance and lubrication of ZETOR TRACTOR-50A.

(b) To issue 'CHECK CARD' for use by Mobile Maintenance Team.

Action By

3. (a) User Units. To carry out periodic inspection, regular servicing and preventive maintenance tasks as laid down.

(b) Field Workshop (GREF). To check the Record of 'Maintenance and Lubrication' in the Log Book of the equipment during its inspection and repairs, if carried out as per Maintenance and Lubrication Schedules given in this instruction.

Details

4. Details of Maintenance and Lubrication alongwith the periodicity have been tabulated in Appendix 'A' to this instruction.

PREVENTIVE MAINTENANCE – ZETOR TRACTOR-50A

S/No.	Item/Assy	Maintenance Task	Lubrication	No of points
1	2	3	4	5
		<u>EVERY 8 HOURS TASK</u>		
1.	General	(a) Check oil, water or gas for leak (b) Check for exhaust smoke colour, noise or vibration. (c) Read all gauges and meters. (d) Check all bolts and nuts if loose or deficient.		
2.	(a) Engine	Check oil level and top up	Engine Oil	1
	(b) Air Cleaner	Check oil level and replace if dirty.		
3.	Fuel Tank	Drain water from fuel tank		
4.	Fuel filter	Drain water from fuel filter		
5.	Cooling system	To up coolant level		
6.	Water pump	Fill grease with grease gun	Grease No.1	1
7.	Front axle	Lubricants with grease		6
8.	Front axle pin	Lubricants with grease	Grease No. 00	1
9.	Steering tierod	Lubricants grease	-do-	4
10.	Hydraulic equipment arm shaft	“ two or three drops of oil	Engine Oil	2
11.	Suspension	Lubricate cylinder ical pins and ball points	Grease No. 00	9
12.	Battery	Top up ¼ “ (6mm) plate with distrilled water		3
			Contd... ..	2

1	2	3	4	5
		<u>EVERY 60 HOURS TASK</u>		
1.	General	Carry out 8 hours maintenance task		
2.	Engine	Check engine oil	Engine Oil	1
3.	Oil filter	Clean and replace oil filter if required.		
4.	Oil bath air cleaner	Clean and change oil	Engine Oil	1
5.	Fuel Injection Pump	Check and, if necessary top up to gauge mark on check gauge.		
6.	Speed regulator	Check and top up, if necessary		1
7.	Clutch housing	Check and top up, if necessary		1
8.	Clutch release bearing	Lubricate grease	Grease No.4	1
9.	Clutch shaft	Lubricate grease	Grease No. 00	2
10.	Clutch pedal	Lubricate grease	Grease No. 00	1
11.	Steering Gear Box	Check and top up, if necessary		
12.	Gear Box	Check and, if necessary top up to gauge mark on check gauge	Engine Oil	1
13.	Gear shifting lever	Lubricate grease	Grease No. 00	1
14.	Brake pedal	Lubricate grease	-do-	2
15.	Tyre pressure	Check tyre pressure correct as per specifications		
16.	Brake lever	Lubricate grease	Grease No.00	2
17.	Front wheel hub	Lubricate grease	Grease No. V2	2

1	2	3	4	5
18.	Differential gear lock	Lubricate grease	Grease No. V2	1

19. Hydraulic equipment Box
Check and top up, if necessary

20. Fan belt
Check for slack, adjust tension or replace

Note:-
(i) Change engine Oil early hours under adverse working condition.
(ii) Clean oil filter early hours under adverse working condition.

Engine Oil Air Cleaner

Summer

Winter

SAE-40

SAE-30

Hydraulic Transmission

Hydraulic

SAE-30

SAE-30

Clutch & Housing

SAE-140

SAE-90

Steering

SAE-90

SAE-90

Gear Box

SAE-140

SAE-90

EVERY 300 HOURS TASK

1. General
Carry out 8 hours and 60 hours Task
2. Fuel filter
Change fuel filter element.
3. Generator
(a) Change carbon brush of Generator
(b) Lubrication ball bearing of D.C Generator
4. Valve
Check valve clearance as per specification
5. Injector
Remove injectors and test, set injector pressure as per specification.

Grease

1	2	3	4	5
6.	Radiator	Flush radiator with fresh soft water		1

7. Wiring Check wiring connection for looseness

Note:- (i) No attempt should be made to adjust the injector pressure without a proper testing equipment..

Engine Oil Air Cleaner

Summer

Winter

SAE-40

SAE-30

Hydraulic Transmission

Hydraulic

SAE-30

SAE-30

Clutch & Housing

SAE-140

SAE-90

Steering

SAE-90

SAE-90

Gear Box

SAE-140

SAE-90

EVERY 600 HOURS TASK

- | | | | | |
|----|----------------|--|------------|---|
| 1. | General | Carry out 8, 60 and 300 hours Task | | |
| 2. | Clutch housing | Drain and change oil | Grease Oil | 2 |
| 3. | Steering | Drain and change Oil | Grease Oil | 1 |
| 4. | Gear Box | Drain and change Oil | Grease Oil | 1 |
| 5. | Wheel bearing | Check wheel bearing play adjust to specification | | |
| 6. | Fuel Tank | Thoroughly clean fuel tank | | |
| 7. | Starter Motor | Lubricate few drop of oil | Engine Oil | |

Note:- In areas with a variable yearly temperature change the oil in the gear box and in the clutch house when changing the type of oil according to operating condition.

1	2	3	4	5
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Engine Oil Air Cleaner

Summer

Winter

SAE-40

SAE-30

Hydraulic Transmission

Hydraulic

SAE-30

SAE-30

Clutch & Housing

SAE-140

SAE-90

Steering

SAE-90

SAE-90

Gear Box

SAE-140

SAE-90

EVERY 900 HOURS TASK

- | | | | |
|----|---------------------|---|---|
| 1. | General | Carry out 8, 60 and 600 hours Task | |
| 2. | Fuel Injection Pump | Drain and change oil | 1 |
| 3. | Speed regulator | Drain and change Oil | 2 |
| 4. | Hydraulic Eqpt | Drain and change Oil | 2 |
| 5. | Differential | Check and adjust the play in differential as per specification. | |

Engine Oil Air Cleaner

Summer

Winter

SAE-40

SAE-30

Hydraulic Transmission

Hydraulic

SAE-30

SAE-30

Clutch & Housing

SAE-140

SAE-90

Steering

SAE-90

SAE-90

Gear Box

SAE-140

SAE-90