DIRECTOR GENERAL BORDER ROADS

GENERAL MAINTENANCE INSTRUCTION NO-**220**

OF

ESCORT CONSTRUCTION EQUIPMENT SOIL COMPACTOR EC-5250

INTRODUCTION: - Escort make EC-5250 DD model Soil compactor having hydrostatic drive on both front drum and rear drive axle, with high strength main frame/chassis with dual amplitude setting and infinitely variable vibratory system having frequency between 0 to 33HZ in the front drum, Hydraulic steering mechanism, hydrostatic dynamic service brake and multi disc spring applied hydraulic released fail safe parking brake on both front drum and rear drive axle powered by HA series engine. Soil compator EC-5250 is essential to ensure satisfactory operation. If trouble should accur. This will be frequently due to in correct operation, improper lubrication or bad maintenance of the engines/machine. This could be avoided if you follow the instruction as per this GMI. Keep the machine clean so that any leakage, loose bolt, loose connections can easily deducted. Make a habit of inspecting the machine every day before starting up by checking all round and underneath the machine to detect any sign of leakage or other fault. This GMI contains direction for periodical servicing which should normally be carried out by the operator. The regular servicing and preventive maintenance are essential for optimum usages of machines to achieve maximum life and timely repair to arrest defect from developing in to major one, where minimising the down time and production losses.

AIM:- The common trouble, their causes and remedies are given in this GMI. Instructions are issued as guide lines for scheduled of preventive maintenance, lubrication of soil compactor EC-5250 manufactured by escort construction equipment Ltd for regular maintenance to keep the machine in good mechanical condition and it must be strictly followed. How ever if you can not identify the cause of trouble or unable to put it right your self, the best way is to connect your local escort construction equipment distributor.

ACTION BY:-

(a) **USER UNIT:-** To carry out periodic inspection and monitoring regular maintenance as laid down in this instruction and record the all task in concern log book.

(b) **FIELD WORK SHOP (GREF):-** (I) To carry out and monitor maintenance schedule **,**oil change and general check up of machines as per periodical maintenance laid down in this GMI.

(II) To advise the user unit in respect of any lapse noticed.

(c) **MOBILE MAINTENANCE TEAM: -** To carry out and fix the schedule time to time for mobile maintenance, change of engine oil and general check up of machine and ensure all report accordingly to task force commander and OC field workshop for necessary.

DETAILS: - These instructions cover the following:-

(a)	Periodic maintenance schedule	Appx 'A'
(b)	Operator instruction	Appx 'B'
(c)	Lubrication chart	Appx 'C'
(d)	Technical data	Appx 'D'

5. Please ack receipt.

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PERIODICAL MAINTENANCE SCHEDULE:- **Appx 'A'**

DAILY (Every 10hrs operation)

(1) Before first start check level of engine oil.
(2) Check scrapers setting.
(3) Check level of hydraulic reservoir drain and refill new oil if needed.

WEEKLY (Every 50hrs operation)

(1) Change engine oil and filter.
(2) Clean air filter insert ensure that hoses and connection are tight.
(3) Check the battery top up with electrolyte/distilled water if needed.
(4) Lubricate the steering joints, cylinder and bracket'
(5) Check the rubber elements and bolts.
(6) Check oil in the torque hub (D&PD).
(7) Check tightening torque, wheel nuts.
(8) Check tyre pressure.

MONTHLY (Every 250hrs operation)

(1) Clean the engine cooling fins.
(2) Check the belt tension monitor.
(3) Check belt tension on fan and alternator.
(4) Change engine oil and filter.
(5) Clean out side of hydraulic fluid cooler.
(6) Check oil level in torque hubs.
(7) Check oil level in drum.
(8) Check oil level in rear axle.
(9) Lubricate controls and moving joints.
(10) Check tightening torque of bolted joints.
(11) Check oil level in pump drive.

EVERY THREE MONTH (Every 500 hrs operation)

(1) Change hydraulic oil tank breather.

EVERY SIX MONTH (Every 1000 hrs operation)

(1) Drain condensed water from hydraulic reservoir.
(2) Drain condensed water from the fuel tank.
(3) Change oil in torque hub (D&PD).
(4) Change the fuel filter.
(5) Change the fuel strainer.
(6) Check the valve clearance.
(7) Change the pre-filter.
(8) Change drum oil.
(9) Change oil in the rear axle differential.

YEARLY (Every 2000 hrs operation)

(1) Clean in side of the reservoir and change the fluid.

Appx 'B'

OPERATOR INSTRUCTIONS

(1) Operator must read and under stand the content of this GMI before starting the machine.
(2) Only trained and experienced operators are allowed to drive the roller/soil compactor.
(3) Never use the roller/compactor when it is in need of adjustment and/ or repairs.
(4) Follow all safety instructions use the available safety equipment.
(5) Remember the risk of over turning; avoid driving on loose edges or close to large hole in the ground.
(6) Before driving, check all operator controls, brakes and steering.
(7) To enable the engine to be started, set the forward/reverse control to neutral; adjust the seat in order to easily reach all controls.
(8) Drive with particular care on un even ground.
(9) Do not allow passenger on the machine.
(10) Board and leave the machine while it is standing still only. Use the steps, handrail and handles provided.
(11) Do not free wheel down hill.
(12) Before getting off the machine, switch off the vibrator; set the forward/reverse selector in neutral, press the emergency stop button and stop the engine.
(13) Keep the machine clean avoids dirt and grease on the operator platform.
(14) Stop the engine, chock the drum/wheel and apply the articulation lock prior to repair and servicing.
(15) Operator must note that the Roller is equipped with a parking brake which applies automatically as the engine is stopped or when hydraulic pressure drops in the drive system for any other reason.

Appx 'C'

LUBRICANT CHART

(1) With new machine Ist gear oil with drum assy to be change at 500 hrs.
(II) With new machine Ist hydraulic oil to be change at 1000 hrs.
(III) With new machine Ist hydraulic pressure filter to be changed at 250 hrs.

RECOMMENDED LUBRICANTS

	QUANTITY	SPECIFICATIONS	IOC	CASTROL	SHELL	KIRLOSKAR	ELF OIL
Engine oil	14 Ltrs+I ltrs	API CD/SE	15W-40 OR 20W-40	15W-40 OR 20W-40	15W-40 OR 20W-40	K-OIL	-
HYD OIL	80 Ltrs	DIN 515224 /2	SERVO HYDAX 68		SHELL Tellus T 68	-	ELFONA DS 68
DRUM VIBRATOR UNIT	2 X26.5 L	APIU, GL 4 MIL L 2105	SERVO HP 85W-90	85W-90	SHELL SPIRAX HD 85W-90	-	-
REAR AXLE DIFFERENTIAL PLANTARY GEARS	15 L	API,GL 5 MIL L 2104 C WITH LS ADDITIVE	SERVO GEAR SUPER LS 80W-90	SAF-XLS	-	-	ELF 85W-90 LS
GREASE	-	LITHIUM SOAP BASE WITH AP ADDITIVE	EP 2	EP 2	EP 2	EP 2	-

Appx 'D'

TECHNICAL DATA EC-5250 SOIL COMPACTOR

	Std	D	PD
Weight standard equipped roller	9350	9550	10950
Length standard equipped roller	5380	5380	5520
Width standard equipped roller	2373	2554	2794
Height standard equipped roller	2860	2860	2910
Height standard equipped roller with cab	2900	2900	2960
Capacity rear axle differential planetary gears	15 Ltrs		
Fuel tank	265 Ltrs		
Engine oil	14 Ltrs + 1 Ltrs		
Hyd system,reservoir	80 Ltrs		
Drum vibrator unit	2 x26.5 Ltrs		
Drum drive torque hub	Check level		
Tyre Size	23.1 x 26 x 8 Ply		
Tyre pressure	0.11 – 0.15 M Pa / 16-21 Psi		
Battery	12V 160 AH		
Fuses	8 A		
Engine	Kirloskar HA series engine HA-694, air cooled 6 cylinder diesel engine, developing 108 HP @2400 RPM		