

DIRECTOR GENERAL BORDER ROADS
GENERAL MAINTENANCE INSTRUCTION NO-222
OF
WALK BEHIND VIBRATORY ROAD ROLLER
VIBROTECH –T-80

INTRODUCTION: -

T-80 vibratory RR is the only indigenous hydraulic version of the machine available in this size (690 mm rolling width) class. It is totally hydraulic machine operated with single lever operation, one each for travel and vibration, which discard the barriers of employing skilled man power for its operation.

Machine is equipped with dual drums of 690mm rolling with and weighing approximately 800kgs. It has no gear box or clutch forward/Reverse transmission hence low maintenance down time. Hydraulic transmissions provide safe operation and minimum maintenance.

It is very versatile machine to be used on existing road patch work, internal road for complexes, road shoulders, land scaping, basement parking lots and slop compaction where the bigger machines don't find adequate space for operation where as in VibroTech T-80 the small dia and vibratory movement compact, the surface very effectively and faster then any other existing methods.

This is tandem compaction technology, hence the compaction affectivity will increase, and it has gravity water sprinkling on both drum, which will ensure the optimum use of bituminous aggregate without any loss due to aggregate sticking on drum dia. It reduces the labour cost, as no skilled labour is employed for its operation.

AIM: - To lay down the detail of periodical maintenance, lubrication and safety precaution of walk behind vibratory road roller manufactured by surelia engineering works for regular maintenance to keep the machine in good mechanical condition.

ACTION BY

USER UNIT: - To carry out regular / periodical maintenance of machine as land down in this instruction and enter the all task in concern log book.

FIELD WORKSHOP: - (a) To carry out and check the maintenance, lubrication actually carryout as per log book record.

(b) Advise user unit in respect of any discrepancies/short coming noticed.

DETAILS: - The following details lay down in this instruction are as under: -

(1)	Maintenance instruction	Appx 'A'
(2)	Safety precaution and guide line for operator	Appx 'B'
(3)	Lubrication chart	Appx 'C'
(4)	Technical specification	Appx 'D'

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MAINTENANCE INSTRUCTIONS

DAILY MAINTENANCE: -

Check oil level in hydraulic tank.

Check oil level and diesel in tank every day and top up if needed.

Check V belt on cooler fan whether it is loosen or tight gently.

Ensure filling diesel in engine before tank gets empty.

Press forward/Reverse and vibration lever gently.

Do not use machine when fan belt is broken or loosen.

WEEKLY MAINTENANCE: -

Dirt in the Hydraulic system will lead to premature component failure.

A clean system is extremely important for proper function of machines.

Take extra care when working around or on the hydraulic system to ensure the Complete cleanliness.

Since the reservoir supplied the oil for the unit hydraulic system it is essential that

The hydraulic oil level be checked every 50 working hours or weekly which ever comes first.

There is a sight gauge for hydraulic oil level, which indicates the minimum level of oil.

To be mentioned. A drain plug is provided in the bottom of the tank for draining the Worn out hydraulic oil. Fill the hydraulic reservoir with clean oil through the 10 micron filter.

Hydraulic oil filter should be change after 500 working hours of the machines.

Check engine oil level if needed.

Check the air cleaner filter after every 100 working hour of the machines.

MONTHLY MAINTENANCE: -

There are two hydraulic filters (each 33 micron) in the hydraulic tank. Both are suction filters. Check and replaced if found dirty.

YEARLY MAINTENANCE: -

Major components are engine and pump should be maintenance/over haul once in a year.

SAFTY PRECAUTION AND GUIDE LINE FOR OPERATORS: -

Inspect your roller daily; ensure that the routine maintenance and lubrication are being duly performed. If there are any broken or missing parts gets corrected are replaced before use.

Do not operate the machine with a damage fan belt.

Never fill the fuel tank or hydraulic tank while the engine is in running condition.

Do not work in the vicinity of over hanging obstructions such as wire or tree limbs or on grades that could cause the roller to slide or roll over.

Avoid side hill travel operate up and down a slop when ever possible.

Do not put the machine in vibration mode when the machine is stationary.

Always park the roller off the asphalt and on solid level ground.

Avoid when ever possible servicing cleaning or examining the roller with the engine in running condition.

Check the fluid lines, hoses fittings; filter openings, drain plug and the area underneath the unit for sign of leakage correct any damage before operating.

Check water tank and add water if necessary.

Do not operate faulty equipment.

LUBRICATION CHART

Fan boss	-	grease
Gear box	-	90 No oil
Drum & chassis brg housing	-	Life time lubrication/or as and when require
Hydraulic oil	-	Enclo 68 or100

TECHNICAL SPECIFICATION OF WALK BEHIND VIBRATORY ROAD ROLLER VIBRO TECH – T- 80

A walk behind vibratory road roller with hydraulic drive and vibration model vibrotech-T-80 powered with greaves type GA-75, G -1510, performance kw/HP= 5.9/8 (at 3000 RPM) engine.

In spite of its low weight, the use of double drums, result in to high compaction performance & has necessary gradient climbing ability.

No gear box, drive is hydraulic drive hence very less down time, no failure limited maintenance machine.

Speed for both forward and reverse remain same & being hydraulic, it has more power than mechanical type roller

FEATURES: - Two Hydraulic Motor synchronizes the action of both drum vibrators. The eccentric weight is positioned 180° out of phase to each other.

DRIVE: - Positive traction drive via two hydraulic motor.

OPERATING: - Individual control lever for traction & vibration, located at easy reach.

Weight:-	Static weight	850 Kgs
	Rolling weight	690 mm

Compaction characteristics: -

Vibration drive system	Hydraulic
Frequency	50. oHz
Centrifugal force/Drum	19.6 kN
Total applied force	2800 kgs

DRIVING CHARACTERISTICS: -

Traveling speed	0-2.5 km/h
Gradeability with vibration	30%
Gradeability without vibration	35%

CAPICITY: -

Hydraulic oil tank	25 Ltrs
Water tank	25 Ltrs
Fuel tank	5.50 Ltrs

TRANSMISSION:-

Drive	Hydraulic
Vibration	Hydraulic

DRIVE:-

Engines make	Greaves
Model	G-1510
Type	GA_75

OPTIONAL ACCESSORIES: -

Water sprinkle type gravity
Remote mounting 12V dynast art with pulley
12 V electric strat