

DIRECTORATE GENERAL BORDER ROADS
GENERAL MAINTENANCE INSTRUCTION NO. 163

ON
HIND DRAGLINES

INTRODUCTION

This instruction is published to lay down the detailed instructions for the regular and periodic maintenance of Hind Draglines so as to keep the equipment in good mechanical condition.

ACTION BY :-

- (a) User Units :- To carry out regular/weekly maintenance tasks as laid down.
- (b) Enter the weekly task in log book.

Field Workshop:- To check the record of maintenance and lubrication in the log book of the eqpt during its inspection and repairs if carried as per maintenance schedule given in the instruction.

DETAILS:- Details of maintenance and lubrication alongwith periodicity have been tabulated in Appendix 'A' to this instruction.

WEEKLY MAINTENANCE TASK

GENERAL

1. Start up machine.

2. Check crowd machinery

Check crowd mechanism, intermediate gears, racking on handle and air clutch, Handle and dipper allowed to drift through crowd out, dipper raised and drift back through retract Gears for grinding noises, vibration in moving parts and check bolts and lock on clutch. Check hoses and grease lines.

3. Check Dipper:-

Raise dipper several times to inspect bail pin. Check all connecting pins and sheave bearings. Check dipper door, latch bar and other moving parts. Check lip, front and back for cracks.

4. Check boom

Visually check boom welds, including side wear bars. Burn accumulated grease away by torches if necessary. Make necessary minor repair welds.

5. Clean interior of machine. Drain and clean the through under the hoist machinery.

6. Remove inspection plates and check gears for tooth wears. Cracks and broken teeth. Listen for growling and grinding of gear teeth. Place hand on bearing housing after machine has been running to detect vibration and eventually heat.

7. Shut machine down. Test all gears for side motion with heavy pry bar. Check clutch and brake lining and lining clearance with putty knife.

8. Clean crawler side frames with wide scrapers. Check condition of frames for cracks, crawler belt condition, and roller and sprocket condition. Check sprocket shafts and check bushings, gears and clearances. Test sprocket for side play with long pry bar. Adjust crawler tread belts if necessary. Spray penetrating oil over adjusting block, shims and associated parts.

9. Clean and check propel brake visually. Determine if band set has proper clearance.

10. Check gear case in lower frame. Remove plugs to remove excess lubricant.

11. Check proper shafting, clutches, and cylinders for proper through and engagement check for wear on clutches.

12. Check the roller, roller circle and roller rails Make minor repairs if necessary. Check bull gear tooth wear. Cracks and tight bolts.

13. Check pedestal hold down bolts with impact wrench. Check Friction check housing cap screws, tighten them if necessary.
14. Check grease piping and all ejectors. Grease lines from ejectors to bearings are disconnected and filled to purge each bronze bearing and to make sure all lines are full.
15. Visually check all weldments, boom foot lugs, gantry connections for cracks, bent plates, tight bolts and make minor pairs if necessary.
16. Check all wire ropes and sheaves. Check boom point sheaves for side motion. Check bridge strand support ropes for broken strands. Check sockets and pins.
17. Check gantry weldment, rope sockets and pins in gantry head.
18. Check out dipper trip assembly complete.
19. After all minor repairs are made, start up machine again. Bury dipper in material and rock upper frame back and forth to check center Journal, thrust washer, bushings and adjustment. Run machine through several digging cycles.
20. Check engines drive chain case for oil and chain tension.
21. Check engine, torque convertor and compressor also.
22. Electrical connection if any also should be checked.

HIND MARIONS – INSPECTION CHECK LIST
ENGINE-CUMMINS NHRS 601

1. Check and adjust belts.
2. Clean P.T pump wire mesh filter (magnetic filter element).
3. Check for Oil and water leakage.
4. Check Radiator water and engine