Appendix 'A' to HQ DGBR GMI No.67 dated 29 Apr 72

PERIODIC/PREVENTIVE MAINTENANCE AND INSPECTION OF CRAWLER TRACTOR TD-20(2000 SERIES)

Sl/No	Nomenclature	Daily/10 Hrs	After 50 Hrs	After 100 Hrs	After 250 Hrs	After 500 Hrs	After 1000 Hrs
1	Engine Oil	Check oil level (refill if necessary)	-	-	*Drain and change oil.	-	-
2	Lubricating oil filters	-	-	-	Drain and refil the filters alongwith the engine oil change.	**Change oil filter elements.	-
3	Air cleaner oil cup and air intake cap.	(a) Remove and clean. (b) Check oil cup and fill level. When 1/4' of dirt has accumulated or oil does not flow freely, clean the oil cup and refil.	Inspect for loose fit or damage flexible rubber connection between air cleaner and intake pipe.	Remove and clean the filter assembly.	-	-	Remove and clean complete air cleaner assembly.
4	Diesel fuel water trap.	Drain off water and sediment.	-	-	-	Remove and clean.	-
5	Fuel filter.	Watch for fuel oil pressure indicator while engine running. If the pointer remains in red or change filter area change fuel filter.	-	-	-		-

6	Gasoline fuel line strainer (at carburettor)	-	-	-	Take apart Gasoline strainer sediment bowl and clean.	Remove and clean.	-		
7	Radiator and connections.	-	(a) Inspect for leaks and loose connection, if anti-freeze is used, check its strength. (b) Clean radiator core spaces.	-	-	Clean cooling system.	-		
8	Fan belt	-	Check fan belt,adjust, repalace when necessary.	-	-	-	-		
9	Distributor breaker points and cap.	-	-	-	Clean cap and check gap.	-	-		
10	Spark plugs	-	-	-	Remove and clean. Check gap.	-	-		
11	Battery	-	Check level.	-	Check terminals for tightness and clean.	-	-		
12	Generator and self starter	-	-	-	-	Clean commutator.	Oil the wick in the oil passage.		
13	Engine clutch and steering clutch housing drain plugs.	-	Remove plugs and drain oil occumulation.	-	-	-	-		

14	Steering clutch levers.	-	-	-	-	Check for free movement at hand.	-	
15	Steering clutch compartment drain plugs.	-	When operating where water is likely to enter the drain hole, a solid plug should be installed. If so equipped, the solid plug should be removed to drain the compartment.	-	-	-	-	
16	Engine clutch compartement drain plug.	-		-	-	-	-	
17	Transmission	-	-	-	***Check oil level and add if necessary.	-	@ change oil.	
18	Sprocket drive.	-	-	-	-do-	-	-do-	
19	Tracks	Inspect for wear and tear.	Check sllack 3/4" to 1" at straight edge.	-	-	-	-	
20	Track rollers	-do-	-	-	-	-	-do-	
21	Carrier rollers	-do-	-	Add oil.	-	-	-do-	
22	Front idler	-do-	-	Add oil	-	-	-do	
23	Engine valves(inlet &exhaust)	-	-	-	-	Check and adjust clearance.	-	

24	Injectors	-	-	-	-	Adjust injectors.	-
25	FIP & Governor	@@ check for leaks	-	-	-	-	-
26	Hour meter	-	-	Check for efficient functioning.	-	-	-
27	Crank case breather	-	-	Clean.	-	-	-
28	Cylinder head	-	-	-	-	Tighten cyl head bolts in sequence with recommended torque.	-
29	Hydraulic oil	+Check oil level	-	-	-	-	++ Change oil.
30	Hydraulic oil filter	-	-	Clean oil filter.	-	Change filter.	Clean hydraulic suction line filter element.
31	Hydraulic pump and drain coupling.	Check for leaks of pump and inspect drive coupling for wear and tear.	-	-	-	-	Inspect. Carry out necessary repairs or replace worn out parts.
32	Control valve and linkage	Inspect control valve for leaks and effiecient action.	-	-	-	-	Check and carry out necessary repairs.

33	Hydraulic cylinder, hoses and fittings	Check for leaks, tighten connections and replace damaged hoses.	-	-	Tighten nuts, bolts and clamps.	-	Inspect and repair/replace.
34	Blade assembly	Inspect cutting edges and end bits. Replace these before wear occurs on the mould board. Check cutting edges and end bits nut and bolts for tightness. Clean assy daily.	-	-	-	-	Repair/rebuild/replace worn out assembly or parts.
35	Upper and lower sltruts	Inspect lower and upper struts for damage or bent. Inspect arms, pins and bushing for wear and tear.	-	-	-	-	-
36	C' Frame and trunion	Inspect 'C' Frame for cracks and excessive wear specially at the bottom and side where it is constantly in contact with earth/soil. Tighteen trunion bracket bolts.	-	-	Check for distortion.	-	Inspect 'C' frame for excessive wear and tear,repair/rebuild as necessary.

NOTE:-

* (2 drain plugs provide for either side or bottom draining).Drain the oil while the engine is hot. It may be necessary to change the oil after shorter working periods under severe operating conditions, such as extemely dusty conditions, low engine tempertures, intermitent operation, excessively heavy loads with high oil temperature or when diesel fuel with high sulphur content is used.

** It may be necessary to change the filter element after shorte working periods under severe operating conditions.

*** It is advisable to check the oil level after the tractor has stood idle for several hours.

@ Change oil after 1000 hrs or once a year which ever is earlier. If the oil has been changed for cold weather operation, change to the proper grade before hot weather. Whenever the oil in the sprocket drive housings is changed, wash out the housings with kerosene before refilling with oil. First drain the old oil from the housings, then fill them to the proper level with kerosene. Operate the tractor in low gear for several minutes. Remove the drain plugs and allow time for complete drainage of the kerosene. Replace the plugs and refill at the refilters with proper grade of oil.

@@ Do not attempt to adjust FIP and GOVERNOR.

+ If excessive foam is seen in the hydraulic reservoir it may be due to poor quality of oil is being used.

APPENDIX 'B' TO HQ DGBR GMI NO 67 DT 29 APR 72 (Para 4 refers)

DETAILS OF LUBRICATION POINTS OF CRAWLER TRACTOR TD-20 (200 SERIES)

Srl No	Location point of lubrication	No of points	Interval of lubrication in Hrs
01	Water pump housing	1	250
02	Ignition cut out switch	1	1000
03	Distributor drive shaft	1	500
04	Distributor breaker arm rubbing block	1	500
05	Front engine support	1	50
06	Steering brake pedal and shaft	2	50
07	Steering clutch lever and shaft	3	50
08	Steering brake outer rods	2	50
09	Steering clutch bearings: -		
	(a) Release bearings	2	50
	(b) Release fork bearings	4	50
10	Steering clutch pilot bearings	2	50
11	Engine clutch and universal joint lubrication points		
	(a) Engine clutch cam shaft bearings	1	50
	(b) Engine clutch release sleeve	1	50
	(c) Engine clutch release bearing	1	50
	(d) Engine clutch pilot bearing	1	50
	(e) Universal joint bearing	3	50
12	Forward and reverse gear shift lever	1	50
13	Gear shifter lock shaft bracket	3	50
14	Gear shifter lock shaft bracket	1	50
15	Front idlers	2	100
16	Track frame guide rollers	2	50
17	Track frame diagonal bracess	2	50
18	Track frame pivots	2	10
19	Track rollers	12	1000
20	Upper struts	4	10
21	Hydraulic controls	5	10
22	Universal joint (Hyd pump PTO)	2	50
23	Hyd pump pilot flange	1	10
24	Gimbal trunion ring and cross tube	6	10

25	Piston rod	2	10
26	Rod end bearing	2	10
27	Track idlers	4	100