CAT D8T Dozer Service/Mechanical Inspection Sheet

EGWME
ABORIGINAL GROUPS WORKING TOGETHER

ACCIDENT PREVENTION

READ AND UNDERSTAND SAFETY WARNING IN THE OPERATION AND MAINTENANCE MANUAL

HAVE YOU COMPLETED A TAKE 5

HAVE YOU COMPLETED AND UNDERSTAND YOUR JHA or JSA

HAS YOUR JOB CIRCUMSTANCES CHANGED SINCE COMPLETING YOUR TAKE 5

- ☐ Cleaned Machine Prior to Commencement of service?
- ☐ Parking Brake Engaged?
- ☐ Blade Lowered?
- ☐ Ripper Lowered?
- ☐ Attach out of Service Tags?
- ☐ Have you locked out machine isolator as per site regulations?

Fitter: Andrew K

Sign:

Date: 31-07-18

Serviceman: Mark.

Sign:

Date: 31.07.18

Supervisor: Ben O'Keeffe

Sign:

Date: 1-8-18

Site: SOLOMON

FLEET NO	MODEL	SERVICE TYPE	DATE	CURRENT HOURS
DZ1[redacted]	D8T	500Hr	31/07/18	4511

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DESCRIPTION	Initial	250	500	1,000	2,000	COMMENT
Running checks						
Test operation of **all lights**						
Test operation of **all instruments**						
Test operation of **wipers and washers**						
Test operation of **back up alarm**						
Test operation of **warning horn**						
Test operation of **air conditioner**						
Test operation of **all radios**						
Test **ALL e-stops for correct operation**						
Test operation of **seat belt** / inspect belt / latch condition						(replace every 3 yrs)
Measure **radiator guard** pin joint wear (refer following instruction)						SPEC: 1.1mm; ACTUAL:
Measure blade linkage pin joint wear						SPEC: 4mm; ACTUAL:
Measure ripper pivot pin joint wear						SPEC: 2mm; ACTUAL:
Measure / adjust blade side arm trunnion ball clearance						SPEC: 4mm; ACTUAL:
Measure **blade lift cylinder rod pin joint** wear						SPEC: 3mm; ACTUAL:
Measure **blade lift cylinder trunnion** wear						SPEC: 3mm; ACTUAL:
Measure **pivot shaft joint** bearing wear (frame to track frame)						SPEC: 5mm; ACTUAL:
Measure center **equalizer bar pin** joint wear (bar to main frame)						SPEC: 2.54 mm; ACTUAL:
Measure outer **equalizer bar pin** joints wear (bar to track frame)						SPEC: 1.5mm; ACTUAL: LH - RH-
Inspect **cutting edges**, replace if required						
Condition of ripper boot and shin guard						
Check **both final drive oil levels**						Sinopec T40 – 50w
Line both final up for oil change out						
Inspect **both final drive magnetic plugs** for particles						CATEGORY – refer to rear pages: 1 2 3 4 5
Sample **engine oil**						
Sample **cooling system**						
Sample **transmission oil**						
Sample **both final drive oil**						
Sample **hydraulic tank oil**						
Check **coolant level**						Sinopec YF-2A
Check **transmission oil level**						Sinopec T40 – 50w
Check **pivot shaft** oil level						Sinopec T40 – 50w
Check **hydraulic tank oil level**						Sinopec T40 – 30w
Lube service						
Replace **engine oil**						Sinopec T500 15W40 – 37 L
Replace **engine oil filter**						1R-1808
Cut open and **inspect engine oil** filter for particles and record findings						Filter condition:
Clean engine **crankcase breather**						O-ring – 6V-3831
Replace **primary fuel filter / water separator**						326-1643
Replace **secondary fuel filter**						1R-0749
Clean/Replace engine **outer air filter**						123-6855
Replace **inner air cleaner**						123-6856

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Clean **transmission screen** (bottom of trans)						O-ring – 6L-9965
Clean/Replace **transmission breather**						**Remove floor to access** 9G-5127
Replace **transmission and torque converter charge oil filter element**						Filter – 337-5270, O-ring – 095-1678
Cut open and inspect both **transmission and torque converter oil filters and report**						**Filter condition**
Clean **torque converter scavenge screen**						O-ring – 6V-1195
Clean **transmission magnetic screen**						O-ring – 6V-5188
Replace **transmission oil**						Sinopec T40 – 50w – 164-211L
Replace **final drive oil**						Sinopec T40 – 50w – 15L EA
Replace **hydraulic tank** cap gasket						9H-6454
Replace **hydraulic case filter** – tank						1R-0774, O-rings – 5H-6733, 7D-1195
Cut open and inspect all **hydraulic filter and report findings**						**Filter condition**
Replace steering filter						Filter -371-0537, O-rings – 2H-3928, 5K-1770, 7M8485
Cut open steering filter inspect and report findings						**Filter condition**
Replace **fuel cap filter** and mount O-ring						Filter – 9X-8600, O-ring – 9X-2205
Replace Hydraulic system **pilot filter**						Filter - 126-1813, Ring – 103-8236
Replace **hydraulic oil**						Sinopec T40 – 30w – 89L
Mechanical service						
Inspect radiator cores for leaks						
Clean rocks / debris from **radiator guard**						
Check for **coolant leaks** / hose clip tension						
Check engine compartment for **oil leaks**						
Check condition of **engine mounts** and security of all engine mount bolts						
Check condition of **air con and alternator belts**						
Check condition of **belt tensioners**						
Check **Induction system** for leaks/cracks						
Check **bonnet mounts** - condition and tension						
Inspect engine **wiring harnesses for damage / security**						
Pressure test **engine induction system** for leaks						
Adjust **valve clearance**						To be authorized by supervisor
Inspect/Adjust **Engine Valve rotors**						To be authorized by supervisor
Inspect/Adjust **Engine Electronic Unit Injectors**						To be authorized by supervisor
Check **fire suppression test date** (if installed)						Date__/3/2018 - 6 month max
Check **fire extinguisher test date**						Date___/___/_____ - 6 month max
Check **fire extinguisher bracket mount bolts** for security						
Check **fire extinguisher bracket for** clamp effectiveness and adjust if required						
Check **hydraulic tank** mounts and bolts						
Check **battery acid** level						
Clean and lubricate **battery terminals**						
Tighten **battery hold down** bolts						
Fill **windscreen washer** bottle						
Inspect / replace **windscreen wiper blades** as required						
Clean / replace cab **Internal recirculation filter**						209-8217
Clean / replace **cab External filter**						231-0167
Inspect **ROPS bolts** for loose damaged						

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DESCRIPTION	Initial	250	500	1,000	2,000	COMMENT
Inspect operators **seat suspension** for wear						
Lubricate **operator seat slides**						
Inspect **torque converter compartment for oil leaks** – REMOVE CAB FLOOR						
Inspect **torque converter compartment hoses for chaffing**						
Check **cab mounts** - condition and tension						
Inspect **wiring harnesses within torque converter area for damage / security**						
Check **pump driveshaft rubber couplings**						
Inspect **belly plates** for missing / loose fasteners						
Inspect / replace **equalizer bar rubber pads**						
Inspect / replace **bogie rubber pads**						
Inspect **roller frame track guides** for wear						
Remove **engine belly plate** for internal cleanout						
Remove **torque converter belly plate** for internal cleanout						
Check **main driveshaft universal joint** wear						
REFER TO START OF NEXT PAGE FOR MEASURMENT INSTRUCTIONS						
Inspect **rollers** wear – percentage worn **Double dia.** **0% - 20mm 100% - 50.5mm** **Single dia.** **0% - 15mm 100% - 52mm**						
Inspect **idlers** – percentage worn **SPEC** 0% 20mm 100% - 36mm						**LHF** **RHF** **LHR** **RHR**
Check / adjust **track tension** Track sag between idler and roller 75mm + - 10mm						
Measure **track grouser** height **SPEC** New 84 mm – 100% worn 38mm						**ACTUAL** LH RH
Measure **sprocket segment wear** **SPEC** New 266mm – 100% worn 240 mm						**ACTUAL – 3 teeth** LH RH
Inspect machine **frame** for damage						
Inspect machine **frame** for cracks						
Inspect ripper **hoses for damage / clamping**						
Inspect blade **hoses for damage / clamping**						
Grease blade **lift cylinder yoke** bearings						
Grease blade **tilt cylinder bearings**						
Grease outer **equaliser bar pin** joint (as per O&MM)						"Note" Must use a hand operated grease gun.
Grease **ripper linkage** and cylinder bearings						

Compartment Drain / Fill Plugs	250	500	1,000	2,000	Comments
Check **engine oil drain plug** for tension					Print name: Signed: Date:
Check **final drive drain and fill plugs** for tension					Print name: Signed: Date: / /
Check **transmission drain plug** for tension					Print name: Signed: Date: / /
Check **hydraulic drain plug** for tension					Print name: Signed: Date: / /

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How to obtain undercarriage measurements			
Track grouser height	Rollers – double and single	Idlers – front and rear	Drive sprocket

Comments/Required repairs	Parts Ordered	Repaired

Braking System - Test

Warning
If the machine moves during the test, reduce the engine speed immediately, and engage the parking brake.
If the machine moved while testing the brakes, consult your Caterpillar dealer for brake inspection and repair. Damaged brakes must be repaired before returning the machine to operation.
Note: The machine can be driven through the brakes in first gear.

- Make sure that the area around the machine is clear of personnel and clear of obstacles.
- Test the brakes on a dry, level surface.
- Fasten the seat belt before you test the brakes.

The following test is used to determine whether the service brake is functional. This test is not intended to determine the maximum brake holding effort. This machine's brake holding effort will be different from other machines because of variations in the engine setting, in the power train efficiency, and in the brake holding ability.

1. Start the engine.
2. Raise all attachments.
3. Apply the service brakes.
4. Release the parking brake.
5. While the brake pedal is depressed, move the directional control to the SECOND SPEED FORWARD position.
6. Gradually increase the engine speed to HIGH IDLE. The machine should not move.
7. Move the directional control to the NEUTRAL position.
8. Reduce the engine speed to LOW IDLE.
9. Engage the parking brake.
10. Lower all attachments to the ground.
11. Apply a slight down pressure.
12. Stop the engine.
13. **NOTICE**

If the machine moved while testing the brakes, contact your Caterpillar dealer. Have the dealer inspect and, if necessary, repair the service brake before returning the machine to operation.

Radiator Guard Pin Joint – Measure

1. Park on a level surface.
2. Raise the bulldozer blade
3. Install the magnetic base of a dial indicator on the main frame of the machine. Place the tip of the indicator on the bottom edge of the radiator guard directly beneath one of the pins.
4. Lower the bulldozer blade. Apply sufficient down pressure in order to raise the front of the machine off the ground.
5. If the travel of the indicator is more than 1.1 mm, replace the pin and replace the bushing.
6. Check the other three pin locations.

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	RATING 1: **This display is normal wear. Contents are only fine Grey paste, no shiny chips or metal fragments.** OK to return to work after plug is cleaned
	RATING 2: **Advanced stages of fines showing early stages of bearing race and roller wear. Contents are small shiny metal particles. No chips or large fragments. Rating noted on service sheets for closer monitoring over coming period. OK to return to work after plug is cleaned**
	RATING 3: **Shiny metal particles. More advanced stages of bearing race and roller breakdown. Contents are small shiny chips. If final drive, check differentials magnetic plug and vise versa to ensure the other component is not the source. Notify Shift leader. Closer monitoring to continue. OK to return to service after plug is cleaned.**
	RATING 4: **Well-advanced failure of components provided this amount of contaminants has accumulated in one week since last inspection. Contents will be a heavy covering of metal fragments with small to large chips. If final drive, check differentials magnetic plug and vise versa to ensure the other component is not the source. Inform Shift leader immediately, inspection of failing component to be done ASAP.O.K to return to work for a short period if shift leader gives OK.**
	RATING 5: **Failure has occurred provided this amount of contaminants has accumulated in one week since last inspection and is not residue from a previous failure. If final drive, check differentials magnetic plug and vise versa to ensure the other component is not the source. Contents will be a very heavy covering of large shiny chips and slivers.** **Inform Shift leader immediately so repairs can be organized.** **THE MACHINE IS NOT TO BE USED**