544G, 544G LL,and 544G TC Loaders 624G Loader 644G Loader (Serial No. 553285—)

JOHN DEERE

OPERATORS MANUAL

544G, 544G LL,and 544G TC Loaders 624G Loader
644G Loader (Serial No. 553285—)

OMT158711 Issue L5 English

John Deere Dubuque Works

OMT158711 Issue L5

(Mark old manual OMT154907 L4 for machines up to Serial No. 553284)

LITHO IN U.S.A.
ENGLISH

Safety

RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

T81389 -UN-07DEC88

DX,ALERT -19-03MAR93

UNDERSTAND SIGNAL WORDS

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

TS187 -19-30SEP88

DX,SIGNAL -19-03MAR93

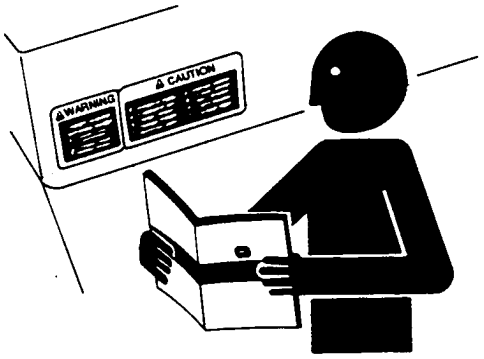
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

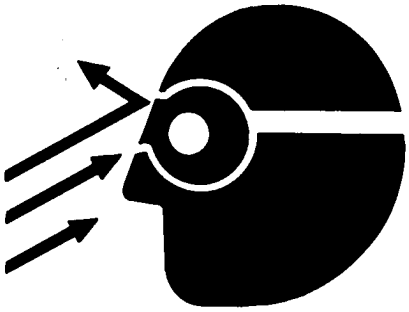


TS201 -UN-23AUG88

DX,READ -19-03MAR93

PROTECT AGAINST FLYING DEBRIS

When you drive connecting pins in or out, guard against injury from flying pieces of metal or debris; wear goggles or safety glasses.



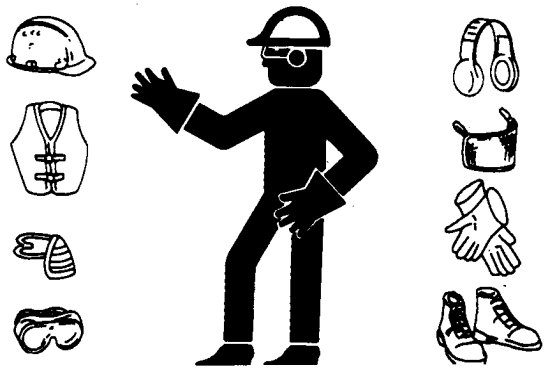
T6642DK -UN-18OCT88

02T,05,J45 -19-30MAY90

WEAR PROTECTIVE CLOTHING

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



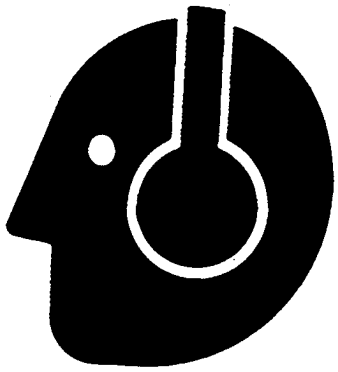
TS206 -UN-23AUG88

DX,WEAR2 -19-03MAR93

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

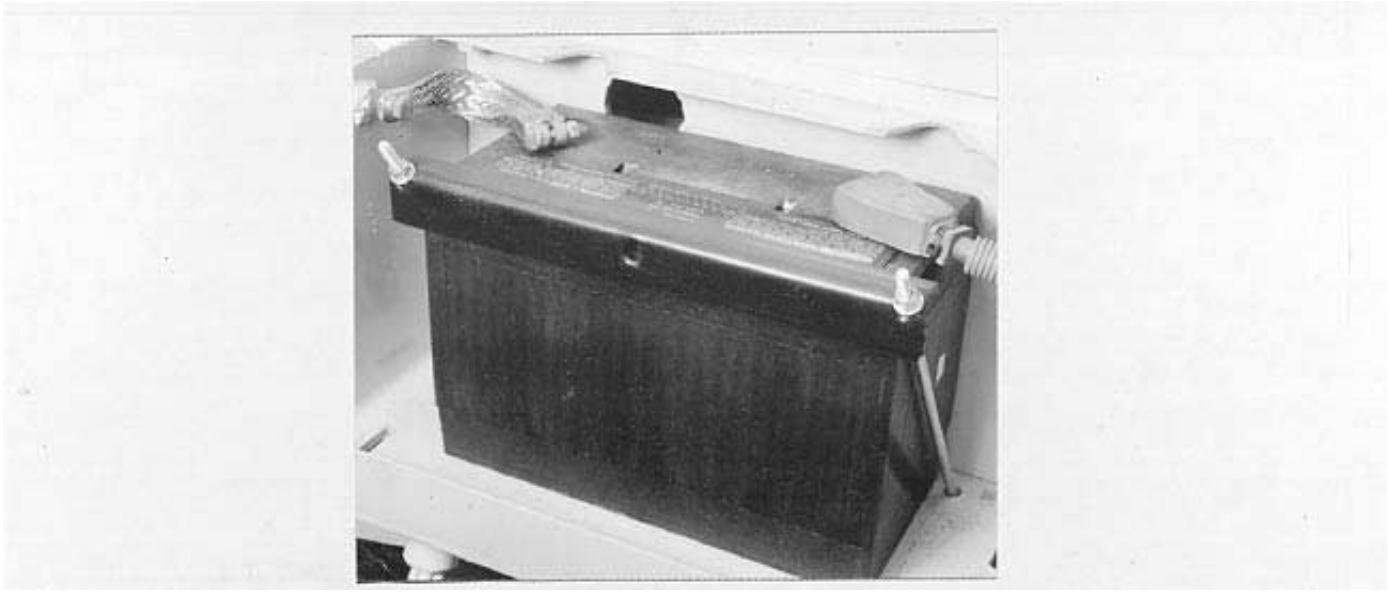
Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



TS207 -UN-23AUG88

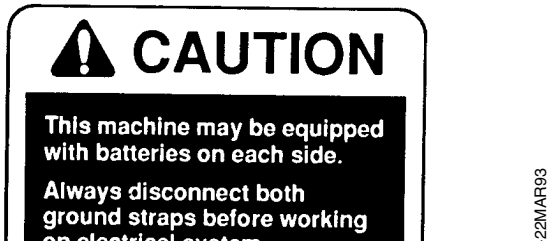
DX,NOISE -19-03MAR93

T7593AC -19-30AUG91



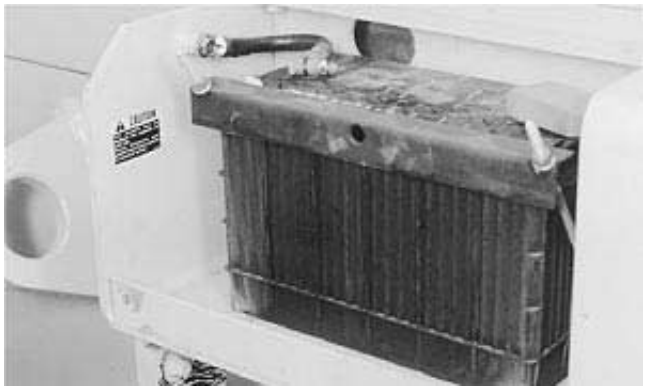
T6976AE -UN-30JAN89

TX,06,DH2949 -19-12MAY93



T146438

T7939AK -19-22MAR93



T8029AF -UN-15JUN93

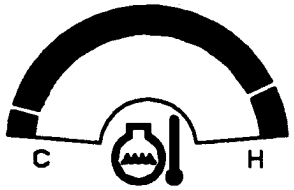
TX,06,DH2950 -19-16JUN93

ENGINE COOLANT TEMPERATURE GAUGE

The first arrow will flash until engine temperature warms to 38˚C (100˚F).

Audible alarm will sound once when temperature first reaches 99-103˚C (210-217˚F).

All the arrows will flash, STOP indicator light will flash, and audible alarm will sound when temperature reaches above 103˚C (217˚F). If all 9 arrows are ON but not flashing, system has a malfunction. Stop machine and allow engine to cool. Shut off engine and take corrective action.



T7747AU

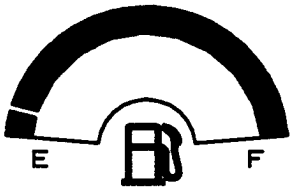
T7747AU -UN-19MAY92

TX,10,JC244 -19-29NOV94

FUEL GAUGE

First arrow will flash if fuel is low or system has a malfunction.

Always fill fuel tank at the end of the day to eliminate condensation in fuel tank.



T7747AV

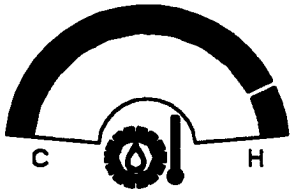
T7747AV -UN-19MAY92

TX,10,DH2164 -19-29NOV94

TRANSMISSION OIL TEMPERATURE GAUGE

Audible alarm will sound once when temperature first reaches 127-132˚C (260-270˚F).

All arrows will flash, STOP indicator light will flash, and audible alarm will sound when temperature reaches above 133˚C (271˚F), If all 9 arrows are ON but not flashing, system has a malfunction. Stop machine and allow engine to cool. Shut off engine and take corrective action.



T7747AW

T7747AW -UN-19MAY92

TX,10,JC245 -19-29NOV94

OPERATING LIGHTS

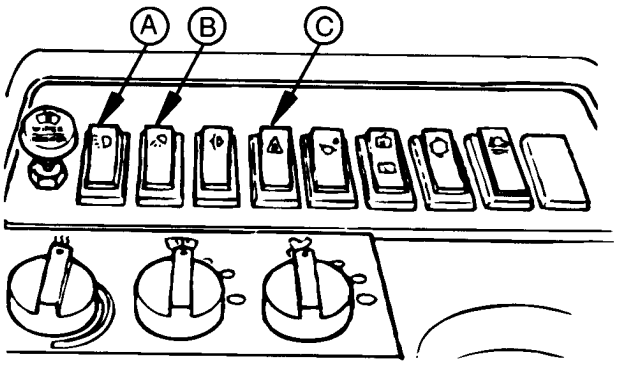
Press light switch (A). Lights (E and I) will come on.

Press light switch (B). Lights (D and G) will come on.

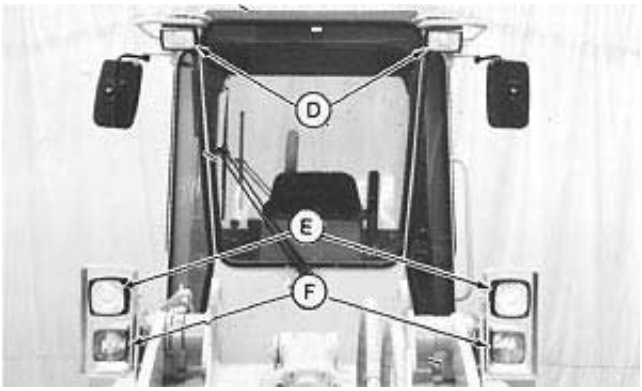
Press turn signal switch to left or right position. One turn indicator light on monitor, if equipped, will be on. One front amber light (F) and one rear amber light (H) will be flashing.

Press hazard light switch (C). Both front amber lights (F) and both rear amber lights (H) will be flashing.

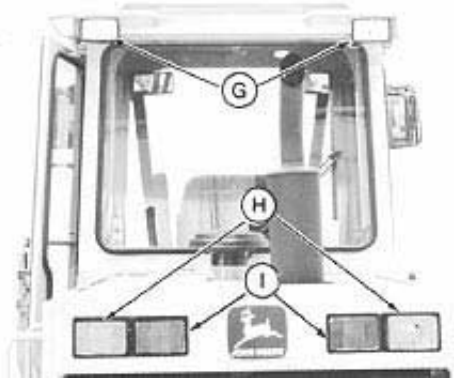
A—Operating Light Switch
B—Work Light Switch
C—Hazard Light Switch
D—Front Work Lights—If Equipped
E—Headlights
F—Turn Signals/Hazard Lights
G—Rear Work Lights—If Equipped
H—Turn Signals/Hazard Lights
I—Tail Lights/Brake Lights



T8373BD -UN-02DEC94



T7773AX -UN-10AUG92



T7773AY -UN-10AUG92

TX,10,DH2144 -19-29NOV94

STARTING FLUID—IF EQUIPPED (COLD WEATHER STARTING AID)

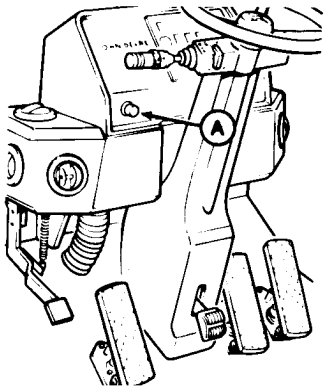
TS281 -UN-23AUG88

• USING STARTING FLUID

CAUTION: Prevent possible injury from exploding container. Starting fluid is highly flammable. Keep container away from heat, sparks, and open flame. Contents are pressurized. DO NOT puncture or incinerate container. Remove container from machine if engine does not need starting fluid.

IMPORTANT: Prevent damage to engine. Use starting aid when temperatures are below 4˚C (40˚F) and only when engine is COLD.

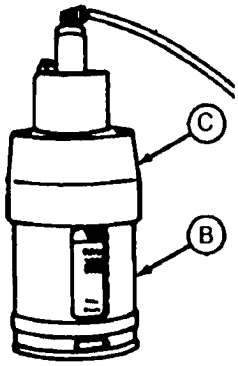
1. Turn key switch clockwise to START position.



T7747BT -UN-19MAY92

IMPORTANT: Excess starting fluid could damage engine; press starting aid button only when engine is cold and cranking. Starting aid fluid is being injected into engine as long as you press button.

2. After one or two revolutions of engine crankshaft, press starting aid button (A) at short intervals. Crank engine for 20 seconds maximum, then allow 2 minutes between cranking periods.



T7527EF -UN-01AUG91

T7527EF CV

• REPLACING STARTING AID CAN

1. Turn container (B) counterclockwise to remove the container and starting aid can.

2. Remove safety cap and spray button from new can.

3. Place new can in container.

4. Turn container clockwise in starting aid base (C) to install starting aid can.

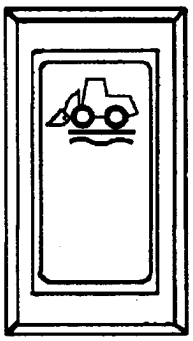
• OPERATING MACHINE WITHOUT STARTING AID CAN INSTALLED

IMPORTANT: Protect starting aid components from possible damage. Install the starting aid can container upside down.

Remove container from base, turn upside down, and reinstall.

TX,25,DH2164 -19-29NOV94

RIDE CONTROL SWITCH—IF EQUIPPED



T7829AV -UN-08SEP92

CAUTION: Prevent possible injury from unexpected boom movement. The bucket may "jump up" when ride control switch is turned ON.

Turn ride control switch ON to improve machine ride and reduce tire flexing when traveling over rough terrain at a high speed with loaded bucket.

If engine is stopped with ride control switch in ON position, ride control is automatically disengaged. Start the engine, press switch to OFF and then back to ON to engage ride control. Switch will be backlit when engaged (ON).

To discharge the energy in the ride control accumulator, do the following:

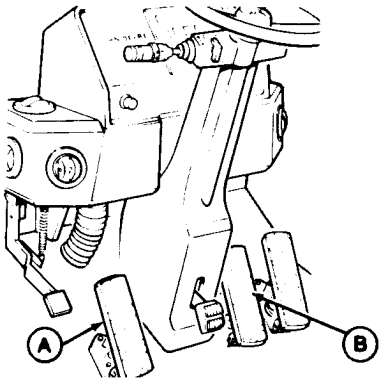
1. Make sure area around bucket is clear.
2. Lower bucket to ground.
3. Stop engine.
4. Turn key switch to ON.
5. Move hydraulic control lever to float detent position.
6 Cycle ride control switch from OFF to ON.
7. Push boom down switch to release accumulator pressure.

TX,30,DH2505 -19-16JUN93

STOPPING THE MACHINE

Depress left brake pedal (A) or right brake pedal (B) to stop the machine.

Left brake pedal also serves as a clutch cut-off pedal when clutch cut-off switch is in "clutch disengaged" position.



T7747BS -UN-19MAY92

TX,30,DH2173 -19-31JUL92

ADJUSTING RETURN-TO-DIG

1. Start engine.

2. Move control lever to return-to-dig detent position and release.

NOTE: On 544G LL and 544G TC, the return-to-dig switch and magnet are located below the cylinder.

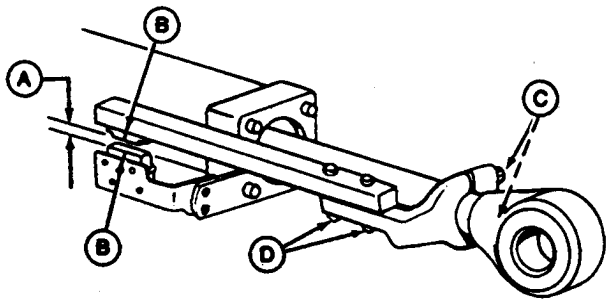
3. After control lever returns to neutral, make a mark (B) on magnet and return-to-dig switch.

4. Position the boom and bucket in the desired return-to-dig position. Stop engine.

5. Loosen cap screws (D) and slide bar to align marks on magnet and return-to-dig switch.

6. Loosen cap screws (C) and adjust clearance (A) between magnet and return-to-dig switch to 9 ± 3 mm (0.35 ± 0.12 in.).

7. Raise boom. Cycle bucket from full rollback to dump. Check return-to-dig for correct adjustment.



T6599AD -UN-21OCT88

A—Clearance
B—Mark
C—Cap Screws
D—Cap Screws

TX,35,DH2184 -19-02OCT92

LIFTING THE MACHINE

CAUTION: Prevent possible injury from unexpected machine movement. Clear all bystanders from lifting area. Select correct lifting cable strength for weight of machine. Test lift by raising machine 0.3 m (1 ft) off the ground.

SPECIFICATIONS

Approximate machine weight (544G) . . . . . 10 262 kg (22,624 lb)

Approximate machine weight (LL) . . . . . 10 377 kg (22,881 lb)

Approximate machine weight (TC) . . . . . 10 466 kg (23,078 lb)

Approximate machine weight (624G) . . . . . 12 398 kg (27,338 lb)

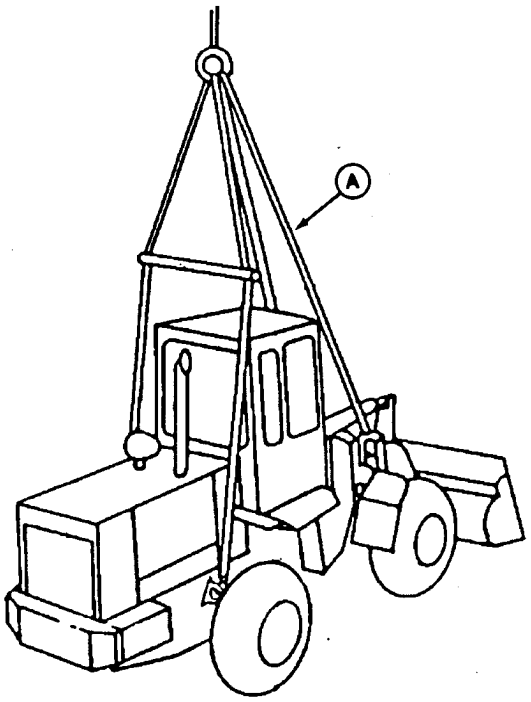
Approximate machine weight (644G) . . . . . 15 666 kg (34,538 lb)

1. Attach cables (A) to machine so cables do not rub machine.

2. Attach a tether cable to machine to control machine as it is lifted.

3. Test lift by raising machine 0.3 m (1 ft) off the ground.

4. Lift machine and swing to unloading area.



T7477AV -UN-19MAR91

TX,40,DH2187 -19-12SEP92

PREPARE MACHINE FOR MAINTENANCE

Before performing maintenance procedures given in the following chapters, and before leaving the operator's seat, park the machine as described below unless another position is specified in the procedure.

1. Park machine on a level surface.

2. Lower bucket to ground.

NOTE: Boom down switch (C) must be pushed while moving control lever forward to lower boom with engine stopped.

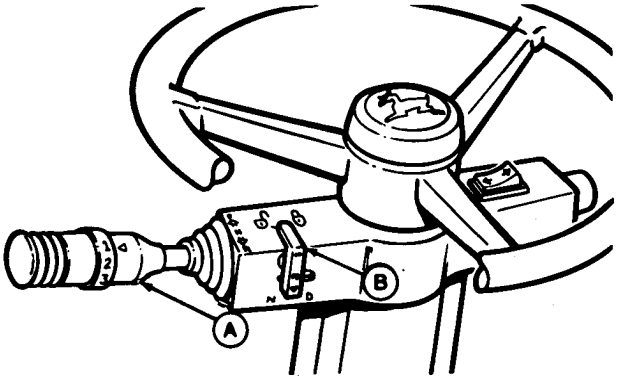
3. Move transmission control lever (A) to neutral "N". Engage neutral lock (B).

CAUTION: Prevent possible injury from unexpected machine movement. Never rely on transmission control lever alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park brake to hold machine.

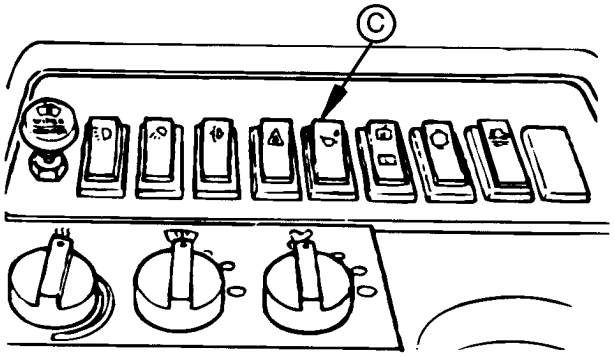
4. Engage park brake.

5. Turn key switch to STOP. If maintenance must be performed with engine running, do not leave machine unattended.

6. Turn battery disconnect switch OFF, if equipped.



T7747BR -UN-19MAY92



T8375AM -UN-02DEC94

TX,50,DH2194 -19-29NOV94

644G

Tire Size	Type	Ply Rating	Operating Pressure* kPa	bar	psi
16.0 X 24	G2	12	380	3.8	55
20.5 X 25	L2	12	275	2.8	40
20.5 x 25	L2	16	345	3.4	50
20.5 x 25	L3	16	345	3.4	50
20.5R x 25	L2 or L3 Equiv	(I) Star	**Front 415	4.1	60
			**Rear 205	2.0	30
			Rear, alternate 310	3.1	45
23.5 x 25	L2	12	240	2.4	35
23.5 x 25	L3	16	310	3.1	45
23.5 x 25	L3	20	380	3.8	55
23.5R x 25	L2 or L3 Equiv	(1) Star	**Front 275	2.8	40
			**Rear 205	2.0	30
			Rear, alternate 240	2.4	35
28L x 26	LS-2	14	170	1.7	25

**Shipping pressure may vary from operating pressure.*

***These radial tire pressures are recommended for optimum traction and tire wear under typical conditions. If a higher rear tire pressure is used, it should not exceed the alternate pressure listed.*

TX,55,DH2711 -19-12MAY93

TIGHTEN WHEEL RETAINER CAP SCREWS

NOTE: Tighten cap screws after first 10 hours, then again after first 50 hours of loaded operation. After that, tighten as required.

Tighten wheel cap screws to 542 N·m (400 lb-ft).

TX,55,DH2551 -19-16JUN93

CHECK TRANSMISSION OIL LEVEL

IMPORTANT: Prevent possible transmission damage. DO NOT operate engine when transmission oil level is low.

1. Before starting engine, check oil level on dipstick (A). If oil is to upper mark when oil is cold, there is sufficient oil to start the engine.

2. If necessary, add oil to filler tube. (See Fuels and Lubricants chapter.)

3. Install dipstick.

4. Start engine.

5. Engage service brakes. Move clutch cut-off switch up, to disengaged position.

6. Release park brake.

7. Move transmission control lever to 3rd speed forward “F” position.

Operate engine at fast idle for 30 seconds. Reduce engine speed to slow idle and place transmission control lever in neutral “N”, for 15 seconds.

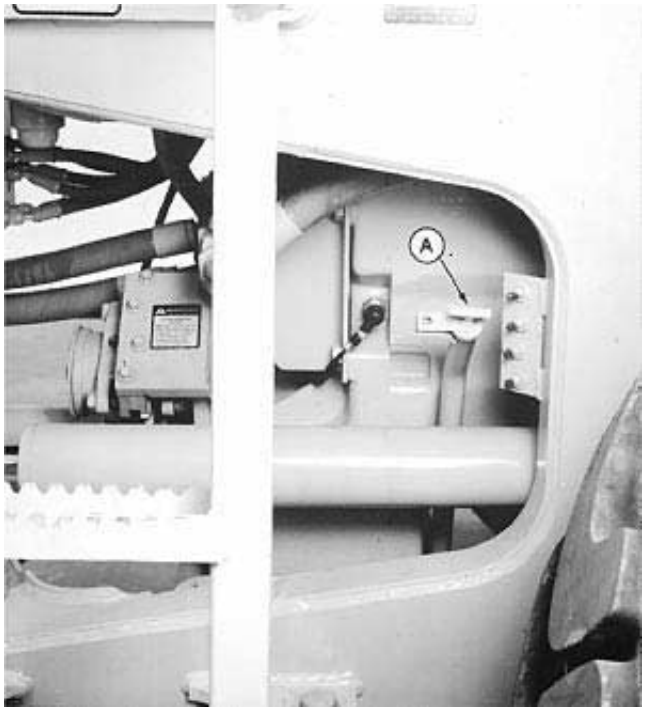
Repeat this step until transmission oil reaches normal operating temperature.

8. Move transmission control lever to neutral “N”, and engage neutral lock. Lower all equipment to ground.

9. Engage park brake.

10. Release service brakes.

11. Check oil level with engine at slow idle. Oil must be between marks on dipstick.



624G Shown

TX,60,DH2214 -19-02OCT92

CHECK RADIATOR COOLANT LEVEL

CAUTION: Prevent possible injury from hot spraying water. DO NOT remove radiator filler cap unless engine is cool. Then turn cap slowly to the stop. Release air to relieve all pressure before you remove cap.

T6642EK -UN-01NOV88

1. Slowly remove cap. Coolant level must be at bottom of the filler neck.

NOTE: If radiator coolant level is low, check for leaks on radiator cap, and hose connections between radiator and coolant recovery tank.

2. Add coolant, if necessary.

3. Install filler cap.

TX,75,DH3501 -19-29NOV94

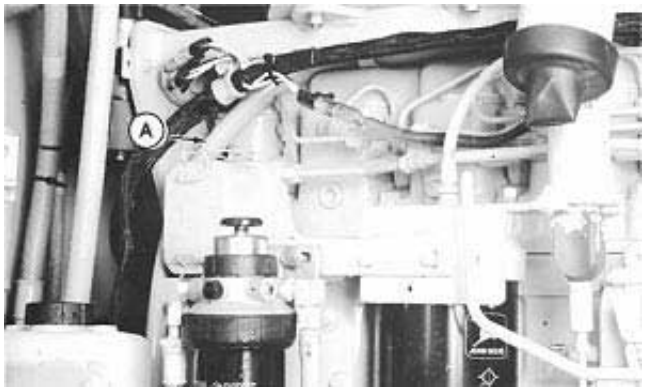
CLEAN ENGINE CRANKCASE VENT TUBE (A)

T7829AK -UN-31AUG92

544G Shown

T7829AL -UN-31AUG92

624G Shown



T7829AM -UN-31AUG92

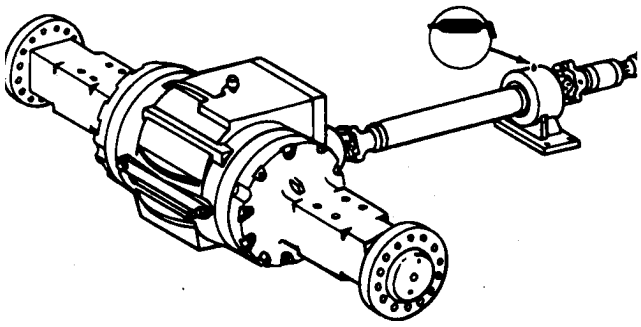
644G Shown

TX,85,DH2230 -19-02OCT92

LUBRICATE FRONT DRIVELINE SUPPORT BEARING

CAUTION: Prevent possible injury from unexpected machine movement. Install frame locking bar before lubricating.

Lubricate until grease escapes around seal. (See Fuels and Lubricants chapter.) Grease every 250 hours if operating in deep mud or water.



T7114AS -UN-23AUG89

One Point

TX,86,DH2553 -19-02OCT92

The DB4 Drive Gear Puller Kit now can be used on Stanadyne's DB4 and DB2 Injection Pumps. Earlier pumps displayed the metal plate (A) attached to the fuel injection pump's mounting flange.

TX,90,RR,249 -19-29AUG94

1. Park machine on a level surface.

2. Lower bucket to ground.

3. Move transmission control lever (A) to neutral "N". Engage neutral lock (B).

CAUTION: Prevent possible injury from unexpected machine movement. Never rely on transmission control lever alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park brake to hold machine.

4. Engage park brake.

IMPORTANT: Turbocharger may be damaged if engine is not properly shut down.

5. Run engine at 1/2 speed without load for 2 minutes before stopping, to avoid damage to turbocharger. Release accelerator pedal to slow idle.

6. Turn key switch to STOP.

7. Turn battery disconnect switch OFF, if equipped.

TX,90,DH2967 -19-04AUG94

USING BATTERY CHARGER

CAUTION: Prevent possible injury from exploding battery. Do not charge a battery if the battery is frozen or it may explode. Warm battery to 16˚C (60˚F). Disconnect battery ground (—) clamp before you charge batteries in the machine to prevent damage to electrical components.

TS204 -UN-23AUG88

IMPORTANT: Do not use a battery charger as a booster if a battery has a 1.150 specific gravity reading or lower. Turn off charger before connecting or disconnecting it.

A battery charger may be used as a booster to start engine.

TX,FF,121 -19-15MAR93

REPLACING BATTERIES

Your machine is equipped with a negative ground electrical system. It uses one or two 12-volt batteries. If one of the two batteries fails, both batteries must be replaced. Use only batteries meeting following specifications.

BCI Group Size: 27

544G, 624G:
625 cold cranking amps at -18˚C (0˚F)
160 minutes reserve capacity at 25 amps

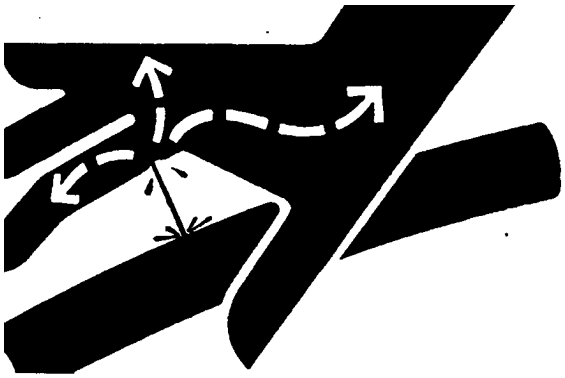
644G:
925 cold cranking amps at -18˚C (0˚F)
180 minutes reserve capacity at 25 amps

TX,90,DH2264 -19-16SEP92

BLEEDING BRAKES

CAUTION: Escaping fluid under pressure can penetrate skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.



X9811 -UN-23AUG88

NOTE: Two people are required to bleed brake system oil, one to operate brake valve and the other to open and close bleed screws.

1. Install frame locking bar.

2. Start engine and run at slow idle.

3. Push and hold brake pedal down until brake bleeding procedure is complete.

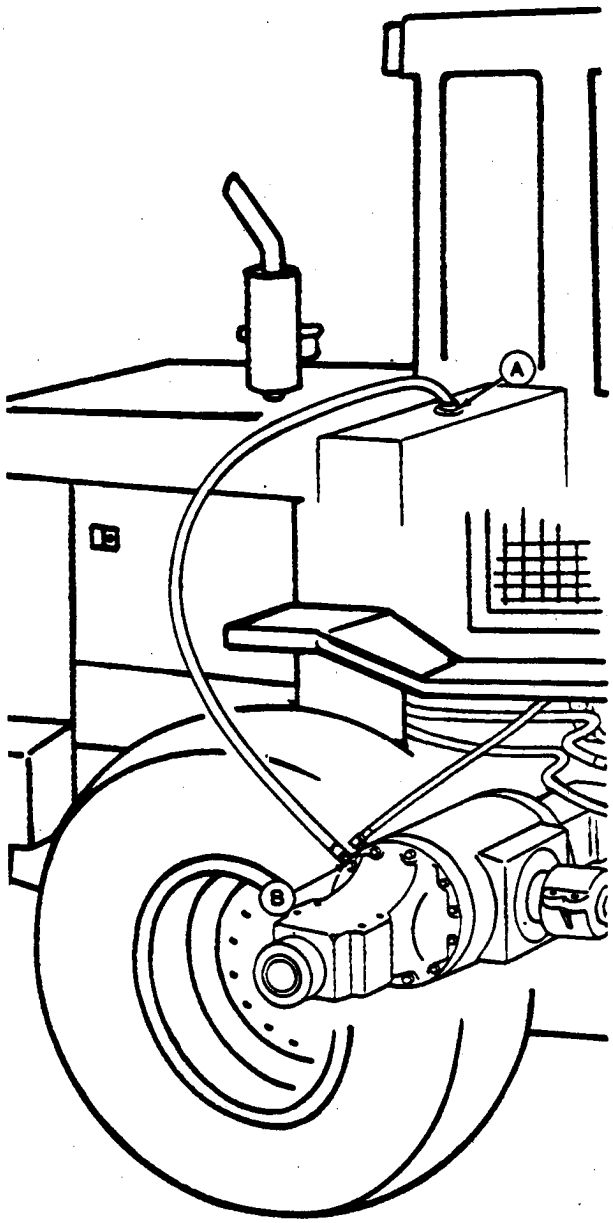
4. Put a clear plastic tube on bleed screw (B) to route flow to hydraulic reservoir filler tube (A) or to a container.

5. Open one bleed screw on differential and axle assembly until hydraulic oil starts to flow. Close bleed screw when oil is free of air.

6. Repeat steps 2—4 for each bleed screw (two bleed screws on each differential).

7. Release brake pedal and stop engine.

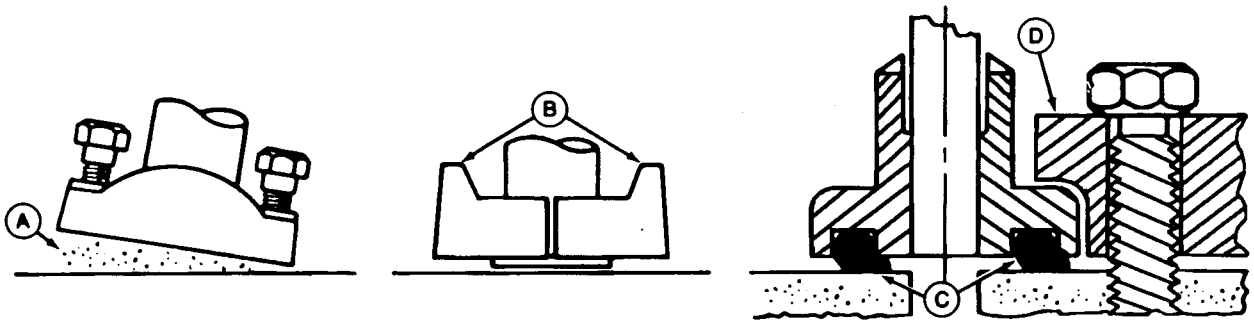
8. Check hydraulic oil level. (See Maintenance—Every 10 Hours or Daily chapter.)



T6522BR -UN-20OCT88

TX,DH,114 -19-06JUN91

SERVICE RECOMMENDATIONS FOR INCH SERIES FOUR BOLT FLANGE FITTINGS



T6890BB -UN-01MAR90

A—Sealing Surface **B—Split Flange** **C—Pinched O-Ring** **D—Single Piece Flange**

1. Clean sealing surfaces (A). Inspect. Scratches cause leaks. Roughness causes seal wear. Out-of-flat causes seal extrusion. If defects cannot be polished out, replace component.

2. Install O-ring (and backup washer if required) into groove using petroleum jelly to hold it in place.

3. Split flange: Loosely assemble split flange (B) halves. Make sure split is centrally located and perpendicular to port. Hand tighten cap screws to hold parts in place. Do not pinch O-ring (C).

4. Single piece flange (D): Place hydraulic line in center of flange and install cap screws. Flange must be centrally located on port. Hand tighten cap screws to hold flange in place. Do not pinch O-ring.

5. Tighten one cap screw, then tighten the diagonally opposite cap screw. Tighten two remaining cap screws. Tighten all cap screws as specified in the chart below.

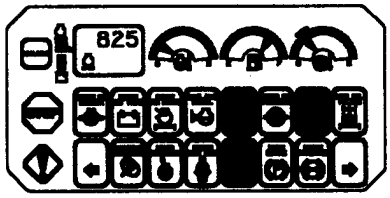
DO NOT use air wrenches. DO NOT tighten one cap screw fully before tightening the others. DO NOT over tighten.

TORQUE CHART*

		N·m		lb-ft	
Nominal Flange Size	**Cap Screw Size**	**Min**	**Max**	**Min**	**Max**
1/2	5/16-18 UNC	20	31	15	23
3/4	3/8-16 UNC	28	54	21	40
1	3/8-16 UNC	37	54	27	40
1-1/4	7/16-14 UNC	47	85	35	63
1-1/2	1/2-13 UNC	62	131	46	97
2	1/2-13 UNC	73	131	54	97
2-1/2	1/2-13 UNC	107	131	79	97
3	5/8-11 UNC	158	264	117	195
3-1/2	5/8-11 UNC	158	264	117	195
4	5/8-11 UNC	158	264	117	195
5	5/8-11 UNC	158	264	117	195

**Tolerance ± 10%. The torques given are enough for the given size connection with the recommended working pressure. Torques can be increased to the maximum shown for each cap screw size if desired. Increasing cap screw torque beyond this maximum will result in flange and cap screw bending and connection failures.*

04T,90,K174 -19-01AUG94



T7773BB -UN-21AUG92

LOOK: Seat belt indicator must go out after 5 seconds after engine starts.

LOOK: Monitor must display engine rpm and gauges must indicate only one reading.

Release park brake.

LOOK: Park brake indicator must go out.

NOTE: It is normal for Engine Oil Pressure, Brake Pressure, and Transmission Pressure indicators to stay on 4—6 seconds after engine starts.

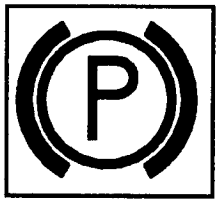
OK: Go to next check

NOT OK: Check for an unhooked wiring connecter.
IF OK: Go to your authorized dealer.

TX,95,DH2307 -19-07OCT92

MONITOR PRIMARY AND SECONDARY LEVEL CHECKS

Engine running.



T7747AG1 -UN-24AUG92

Engage park brake

LOOK: Park brake indicator must come ON.

Move transmission control lever to forward “F”.

LOOK: Park brake indicator must remain ON and STOP indicator must come ON and flash at 1 second intervals.

Engage park brake.

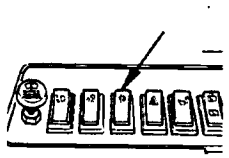
OK: Go to next check

NOT OK: Go to your authorized dealer.

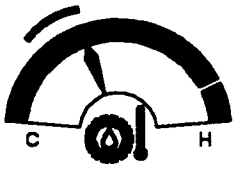
TX,95,DH2308 -19-07OCT92

TRANSMISSION TEMPERATURE GAUGE CHECK

Engine running.



T7773BO2 -UN-05AUG92



T7773BF -UN-05AUG92

Release park brake.

Move clutch cut-off switch to the ON position.

Apply service brakes.

Move transmission control lever to 3rd gear forward.

Increase engine speed to fast idle for 30 seconds.

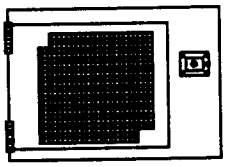
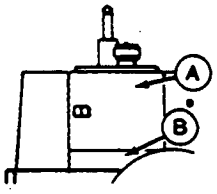
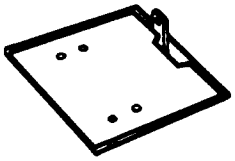
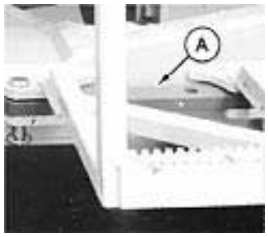
LOOK: Transmission temperature indicator arrow must move to the right.

OK: Go to next check.

NOT OK: If gauge shows solid arrows, check connector at sender.
IF OK: Go to your authorized dealer.

TX,95,DH2309 -19-02OCT92

RETURN-TO-DIG CHECK Run engine at slow idle.	 T7827AI3 -UN-24AUG92	Position bucket fully dumped just above ground level. Move control lever to return-to-dig detent position and release. *LOOK: Bucket must rollback to the level position and control lever must return to neutral.* *NOTE: If bucket is in a rolled back position when key switch is turned ON, control lever must be returned to neutral manually if placed in the return-to-dig detent position. After bucket is dumped once, return-to-dig will work normally.*	**OK:** Go to next check **NOT OK:** Check fuse. **IF OK:** Adjust switch. See Adjusting Return-To-Dig in Operating the Machine chapter. TX,95,DH2512 -19-04NOV92
BOOM HEIGHT KICKOUT CHECK—IF EQUIPPED Run engine at slow idle.	 T7825BL -UN-24AUG92	Position bucket flat on ground. Move control lever to boom raise detent position and release. *LOOK: Boom must raise to the set height and stop. Control lever must return to neutral.*	**OK:** Go to next check **NOT OK:** Check fuse. **IF OK:** See Adjusting Boom Height Kickout in Operating the Machine chapter. TX,95,DH2513 -19-11SEP92
PIN DISCONNECT CYLINDER CHECK (544G-TC ONLY) Engine running.	Run engine at slow idle. Lower boom to ground. Push and hold down pin disconnect switch. *LOOK: Pin disconnect cylinder must retract both pins, while switch is depressed.*		**OK:** Go to next check. **NOT OK:** Hold a screwdriver blade against the end of the solenoid valve and check for magnetism with the switch pushed. If the problem is electrical, check fuse. **IF OK:** Go to your authorized dealer. If the problem is hydraulic, go to your authorized dealer. TX,95,DH2514 -19-02OCT92

LOAD CENTER DOOR CHECK	 T7832AK -UN-27AUG92	Unlock and open door on right side of operator's station. Close and lock door. *LOOK: Door must open and close smoothly.* *FEEL: Lock must operate freely and key MUST NOT stick in lock.*	**OK:** Go to next check. **NOT OK:** Lubricate hinges. Lubricate or repair lock. TX,95,DH2528 -19-18SEP92
ENGINE SIDE PANELS CHECK	 T6633AS -UN-18OCT88	Unlock and open side panel (A). Latch side panel in open position. Pull rear of panel up and slide out side panel (B). Install side panel (B). Close panel (A). *LOOK: Panels must open and close smoothly.* *FEEL: Latch must operate freely and locking tab must be able to accept a padlock.* Repeat with other side.	**OK:** Go to next check. **NOT OK:** Lubricate hinges. Repair latch. TX,95,DH2529 -19-29AUG92
RADIATOR CAP ACCESS DOOR CHECK	 T6633AY -UN-18OCT88	Open and close access door on top of grille housing. *LOOK: Door must move freely. Locking pin for padlock MUST NOT be bent.*	**OK:** Go to next check. **NOT OK:** Lubricate hinges. Repair door. TX,95,DH2530 -19-31AUG92
FRAME LOCKING BAR CHECK	 T7799CX -UN-23SEP92	*LOOK: Red frame locking bar must be pinned to engine frame below left side cab step.*	**OK:** Go to next check. **NOT OK:** Order new parts and install new locking bar and pins. TX,95,DH2531 -19-18SEP92
BOOM LOCK CHECK	*LOOK: Red boom lock must be fastened to front frame at hinge in vertical position.*		**OK:** Go to next check. **NOT OK:** Order new parts and install new boom lock. TX,95,DH2532 -19-02OCT92

Symptom	Problem	Solution
	Excessive connecting rod bearing clearance.	See your authorized dealer.
	Cracked cylinder block.	See your authorized dealer.
	Piston cooling orifice missing.	See your authorized dealer.
	Leakage at internal oil passage.	See your authorized dealer.
High Oil Pressure	Wrong viscosity oil (too thick).	Check for antifreeze in oil. Change oil.
	Oil pressure gauge or sender.	See your authorized dealer.
	Oil pressure regulating valve.	See your authorized dealer.
Engine Overheats	Low coolant level.	Fill cooling system and check for leaks.
	Low engine oil level.	Add oil.
	Loose or broken fan belt.	Tighten or replace belt.
	Fan on backwards, damaged, or wrong fan installed.	Check for correct fan installation.
	Radiator dirty, clogged, or fins damaged.	Check air flow. Clean radiator. Straighten fins.
	Radiator shroud missing, damaged, or baffles missing.	Inspect. Repair or replace.
	Engine overloaded.	Reduce load.
	Incorrect grade of fuel.	Drain fuel tank and add correct fuel.
	Radiator cap.	Replace cap.
	Faulty gauge or sender.	See your authorized dealer.
	Incorrect injection pump timing.	See your authorized dealer.
	Faulty thermostats (stuck).	See your authorized dealer.
	Thermostats missing.	See your authorized dealer.
	Cooling system coated with lime deposits.	Flush cooling system.

Continued on next page

HYDRAULIC SYSTEM

Symptom	Problem	Solution
Noisy Hydraulic Pump	Low oil supply or wrong viscosity.	Fill reservoir with proper oil.
	Suction line clogged or pinched.	Clean or replace line.
	Air in oil.	Check for foamy oil. Tighten connections. Replace O-rings and/or lines.
	Clogged suction strainer.	Inspect and clean strainer in reservoir.
	Loose or missing hydraulic line clamps.	Tighten or replace clamps.
	Hydraulic lines in contact with frame.	Inspect and repair.
	Worn or damaged pump.	See your authorized dealer.
Slow Hydraulic Functions	Cold oil.	Warm the oil.
	Suction line air leak.	Check for foamy oil.
	Low oil supply.	Fill reservoir with recommended oil.
	Wrong oil viscosity.	Use recommended oil.
	Slow engine speed.	Adjust engine speed control linkage. Check fast idle speed. (See Maintenance—Every 1000 Hours chapter.)
	Oil leaking past cylinders or control valve.	See your authorized dealer.
	Blocked or damaged line.	Inspect lines.
	Misadjusted pressure reducing valve.	See your authorized dealer.
	Pilot control valve.	See your authorized dealer.
	Binding loader control valve spool.	See your authorized dealer.
	Secondary steering check valve leaking.	See your authorized dealer.
	Steering valve leaking.	See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
	Aerated oil.	Check and add oil.
	Low transmission pressure.	See your authorized dealer.
	Torque converter freewheel clutch.	See your authorized dealer.
	Warped transmission clutch.	See your authorized dealer.
	Brake drag.	See your authorized dealer.
	Clutch cut-off valve sticking.	See your authorized dealer.
	Low engine power.	See your authorized dealer.
Torque Converter Stall RPM Too High	Aerated oil.	See your authorized dealer.
	Converter relief valve stuck open.	See your authorized dealer.
	Torque converter seal leakage.	See your authorized dealer.
	Torque converter not transferring power (bent fins, broken stator).	See your authorized dealer.
Torque Converter Stall RPM Too Low	Low engine power.	See your authorized dealer.
	Mechanical malfunction.	See your authorized dealer.
Transmission Pressure Light Comes On When Shifting From Forward To Reverse (All Other Gears OK)	Low oil level.	Add oil.
	Cold oil.	Warm oil.
	Leak in reverse pack	See your authorized dealer.
Transmission Pressure Light Comes On For Each Shift	Cold oil.	Warm oil.
	No time delay in module.	See your authorized dealer.
	Shorted sensor.	See your authorized dealer.
	Stuck modulation valve.	See your authorized dealer.
	Low transmission pressure.	See your authorized dealer.
	Leak in transmission pressure circuit.	See your authorized dealer.
	Transmission pump.	See your authorized dealer.

Continued on next page

Storage

PREPARE MACHINE FOR STORAGE

1. Repair worn or damaged parts. Install new parts, if necessary, to avoid needless delays later.

2. Loosen alternator and fan belts.

3. Clean primary air cleaner element.

T47764 -UN-09NOV88

TX,105,FF1190 -19-03AUG92

544G LL SPECIFICATIONS

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards. Except where otherwise noted, specifications are based on a machine equipped with all standard, 17.5—25, 12 PR, L3 tires, two rear counterweights, ROPS cab, full fuel tank, and 79 kg (175 lb) operator.

Engine:

John Deere 6059T (S.N. 553285—) . . . . . 89 kW (120 hp)
Piston displacement . . . . . 5.884 L (359 cu in.)
Air cleaner . . . . . Dual stage dry type with restriction indicator
Electrical system . . . . . 12-volt battery with 95-amp alternator
Cold cranking capacity at -18˚C (0˚F) . . . . . 625 amps
Reserve capacity . . . . . 160 min.

Torque Converter . . . . . Single phase, single stage

Transmission . . . . . Countershaft, power shift, automatic

Travel Speeds:

Forward Speeds:	**km/h**	**mph**
1	0—7.4	0—4.6
2	0—12.3	0—7.7
3	0—27.2	0—16.9
4	0—38.4	0—23.8

Reverse Speeds:	**km/h**	**mph**
1	0—7.4	0—4.6
2	0—12.3	0—7.7
3	0—27.2	0—16.9

NOTE: All travel speeds are with 20.5—25 tires.

TX,115,DH2292 -19-08DEC95

Brakes, Service:

Power-actuated, 4-wheel, inboard-mounted, wet disk
Foot-operated, by either pedal
Left pedal also disconnects transmission (if selected by operator)
External inspection
Low brake pressure warning light and buzzer in monitor

Brakes, Park:

Expanding shoe on transmission output shaft, foot-operated
Transmission disconnects with park brake applied
Warning light in monitor—Dual-level
Amber lights with transmission in neutral
Red STOP indicator lights, and buzzer sounds with transmission in gear

Steering:

Turning radius (to centerline of outside tire) . . . . . 5.46 m (17 ft 11 in.)
Rear axle oscillates 26˚ total

Tires:

20.5—25, 12 PR L2
20.5—25, 16 PR L2
20.5—25, 16 PR L3
20.5—25, Radial, One Star, L2 equivalent
20.5—25, Radial, One Star, L3 equivalent
23.5—25, 12 PR L2
23.5—25, 20 PR L3
23.5—25, Radial, One Star, L3 equivalent

TX,115,DH2354 -19-16JUN93

DRAIN AND REFILL CAPACITIES:

	Metric	U.S.
Cooling system	28 L	29.5 qt
Fuel tank	284 L	75 gal
Engine crankcase and filter	24 L	25 qt
Transmission case and filter	14.2 L	15 qt
Front differential	28.4 L	30 qt
Rear differential	28.4 L	30 qt
Hydraulic reservoir	115 L	120 qt

TX,115,DH1819 -19-02OCT92