Caterpillar

Operator's Manual

D4 Crawler

S/n 4G, 7J, 2T & 5T

Operator's® Manual

CATERPILLAR

OPERATOR'S MANUAL

D4 DIESEL TRACTOR

SERIAL NUMBER

Base Unit Number

4G1-4G9999

7J1-7J9999

8T1-8T9999

2H1-2H9999

5T1-5T7411

Index

LUBRICATION INSTRUCTIONS

OPERATION INSTRUCTIONS

MAINTENANCE INSTRUCTIONS

INDEX—Continued

ATTACHMENT INSTRUCTIONS

OPERATING OVER AN OBSTRUCTION

The fact that the steering clutches are controlled by separate levers may be used to advantage in running over an obstruction, such as a log or a ditch bank. Both of the clutches may be released slightly until the tractor balances on top of the obstruction. Then one clutch may be engaged gradually so the tractor moves forward at an angle, over and down. If the tractor is being operated without a load it may be necessary to use the brakes.

OPERATING IN DEEP MUD OR WATER

If the tractor must be operated for any length of time in deep mud or water, certain precautions are necessary. See that the plugs are in place under the steering clutch compartments. Lubricate the track rollers, carrier rollers, the front idlers and track roller frame inner bearings every 5 hours. Inspect the oil in the final drives frequently for mud or water and drain, wash and refill as soon as the oil shows the presence of mud or water. The presence of mud in the final drives or the excessive leakage of oil indicates the seals should be repaired. See the topic, LUBRICATION INSTRUCTIONS.

STOPPING THE TRACTOR

To stop the tractor when it is desired to allow the engine to continue to run, disengage the flywheel clutch and move the throttle control lever to the idling position. Shift the transmission gears into neutral and engage the flywheel clutch. Do not allow the tractor to idle with the flywheel clutch disengaged.

STOPPING THE DIESEL ENGINE

After the normal load is removed from the engine allow it to idle five minutes with the throttle half open before stopping.

Move the throttle to the extreme forward position and lock the plunger in the hole in the bracket. Leave the Diesel fuel tank valve open.

If the tractor must stand without shelter, cover the exhaust pipe to exclude rain or snow. If the temperature is below freezing, or if freezing weather is expected before the engine will be started again, drain the cooling system or protect it with an anti-freeze solution. See the topic, OPERATING IN COLD WEATHER.

DAILY CARE

A daily check of the tractor should be made to see if there are any loose nuts, bolts, capscrews, or parts worn to such an extent that they are no longer serviceable. The capscrews of the track roller brackets, the

liners many times, or ring sticking may become a factor in controlling engine life. Usually this has been due to the higher sulphur content of the fuel.

When fuels of sulphur content higher than 0.5 per cent must be burned certain precautions should be observed. Engine cooling water temperatures should not be below 170° F. Lubricating oils, known as Superior Lubricants (Series 2) for "Caterpillar" Diesel Engines which are very effective in reducing the detrimental effects of high sulphur fuels, should be used in the Diesel engine crankcase. See topic, CRANKCASE LUBRICATING OIL.

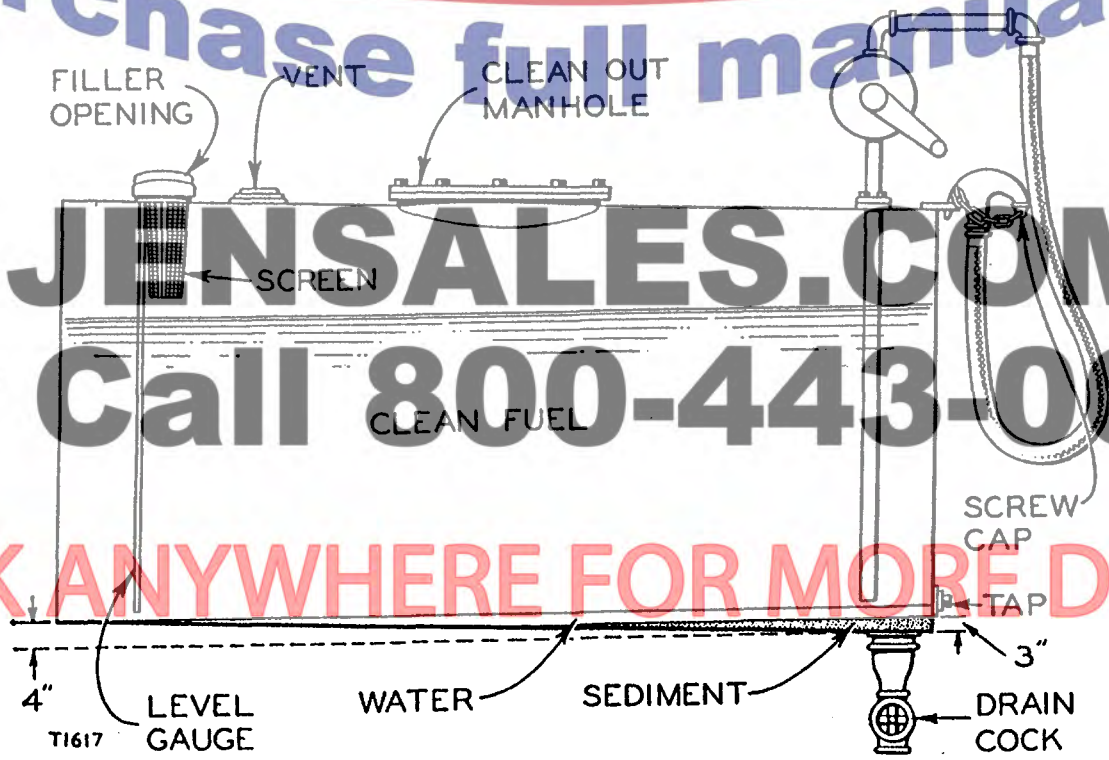
In subzero (—18° C.) weather, where warm storage is not provided, fuels with unusually low pour points may be required. It is necessary that it be fluid enough to flow from the Diesel fuel tank to the engine transfer pump at the lowest temperature at which the engine must start and operate.

CARE OF THE FUEL SUPPLY

Keep the Fuel Clean: Too much emphasis cannot be placed on the importance of using only clean Diesel fuel. In selecting a fuel, it should be pointed out that distillates are especially desirable because, in refining, they are heated to a vaporous state and condensed in another container; thus, all the sediment and residue remain in the still.

It is important to buy clean fuel, and keep it clean. The best fuel can be rendered unsatisfactory by inadequate storage facilities or careless handling. The clearance between the fuel injection pump plunger and the barrel is very small, actually less than .0001 inch (0.00254 mm.), which makes it evident that the invisible particles of dirt which might pass through the filters can damage these finely finished parts.

Effort should be constantly expended to prevent contamination of the fuel. An important step is to reduce the number of times the fuel must be handled. When the fuel can be delivered by the distributor to storage tanks and then pumped from the storage tank to the Diesel fuel tank, the handling is reduced to a minimum.



RECOMMENDED FUEL STORAGE TANK