TB-1200 AL
&
TB-1400

OPERATION/SERVICE MANUAL

TAKEUCHI
TAKEUCHI MANUFACTURING (U.S.), LTD.
1/84

CAREFUL OPERATION OF THIS MACHINE WILL RESULT IN THE AVOIDENCE OF MANY ACCIDENTS. READ AND FOLLOW THESE PRECAUTIONS CAREFULLY.

ONLY EXPERIENCED OPERATORS SHOULD USE THIS MACHINE.

DO NOT OPERATE OR START THIS MACHINE EXCEPT FROM THE OPERATORS SEAT.

WHEN IN OPERATION THE OPERATOR SHOULD BE THE ONLY PERSON ON THE MACHINE.

BE SURE ALL BYSTANDERS ARE WELL CLEAR OF THE MACHINE BEFORE OPERATING

CARRY THE BUCKET LOW WHEN OPERATING ,ESPECIALLY WHEN TRAVELING ON A SLOPE OR WHEN BACKING MACHINE UP AN INCLINE.

REMAIN WELL CLEAR OF ELECTRICAL LINES,OPERATE THE MACHINE AT LEAST TEN FEET FROM POWER AND TELEPHONE POLES.

WHEN OPERATING ON A SLOPE, AVOID SWINGING THE BUCKET TO THE DOWN HILL DIRECTION. ALWAYS DUMP ON THE UP HILL SIDE IF POSSIBLE.

USE CAUTION TO AVOID SIDEWAYS TIPPING WHEN SWINGING HEAVY LOADS TO THE SIDES OF THE TRACKS.

DO NOT USE BUCKET AS A BATTERING RAM.

ALWAYS LOWER BUCKET COMPLETELY TO THE GROUND BEFORE LEAVING THE OPERATORS POSTION.

DO NOT STOP OR PARK MACHINE ON AN INCLINE WITHOUT BLOCKING TRACKS.

DO NOT CRAWL UNDER THE MACHINE WHILE IT IS RAISED BY USE OF THE BOOM AND DOZER BLADE.

DO NOT WORK UNDER A RAISED BUCKET.

DO NOT WORK ON THE MACHINE WHILE THE ENGINE IS RUNNING UNLESS IT IS AN APPROVED PROCEDURE,AND UTMOST CARE FOR SAFETY IS TAKEN.

USE CAUTION WHEN REFUELING,NEVER REFUEL A HOT ENGINE. DO NOT SMOKE WHILE REFUELING.

ESCAPING HYDRAULIC FLUID,UNDER PRESSURE, CAN BE DANGEROUS,BY PENETRATING THE SKIN OR INJURY TO THE EYES. IF HYDRAULIC LEAKS ARE SUSPECTED CHECK FOR LEAKS BY USE OF CARDBOARD OR OTHER MATERIAL PLACED IN THE AREA OF THE SUSPECTED LEAK. ALWAYS WEAR EYE PROTECTION. IF INJURED BY ESCAPING FLUID SEE A DOCTOR AT ONCE.

Operating Environments

OPERATING IN WATER- MAXIMUM SUBMERSION IS TO THE TOP OF THE TRACKS

Before operating in water adjust the crawler tracks to suit the water bottom conditions.

Tighten all bolts on gear reduction case.

Grease all lubrication points that will be submerged under water or in contact with water. PAY CAREFUL ATTENTION TO GREASING BUCKET PINS AND LINKAGE.

After completing water operations,wash down the machine thouroughly.

When operating in areas adjacent to or in salt water conditions for extended periods; grease all points on the machine. Apply some grease to electric contacts and terminals on all electrical parts.

OPERATION IN ROCKY AREAS

Check the spaces on the tracks for lodged debris or rocks. Inspect all areas of the undercarriage carefully.

OPERATIONS IN DUSTY AREAS

Check and clean the air filter daily. Make certain all air induction system hoses are in good condition and make a tight seal.

COLD WEATHER OPERATION

Make certain that the anti-freeze content of the engine radiator is sufficient to protect against engine freeze up.

Make sure the Specific Gravity of the battery is normal(1.25). A weak battery is more suseptable to freezing.

Adjust the engine oil to recommended viscosity for the ambient air temperatures to be encountered.

'eep engine fuel tank full, to prvent moisture condensation in the tank.

In severely cold conditions do not leave the machine on the ground, place boards or other materila between the tracks and ground to prevent the tracks from freezing to the ground.

Allow ample time for the machine to warm up, do not place heavy loads on the hydraulic system until you are certain the system has reach an acceptable operating temperature.

Engine Start and Operation

NEW ENGINE BREAK-IN

In the early life of a new engine, the internal surfaces of all moving parts of the engine must be allowed to wear-seat, in order to allow for the proper development of seal and oil lubricant transfer. Therefore it is recommended that the engine be operated as follows for the first 50-100 hours.

1. Avoid engine overload and full throttle operation.

2. Allow the engine to operate at fast idle until normal operating temperture is reached.

3. Periodically inspect the engine and service frequently.

PRECAUTIONS FOR COLD WEATHER STARTING

1. The engine comes from the factory with the correct anti-freeze mixture. it is recommended to operate the engine year-round with a 50/50 mix.

2. Battery capacity diminishes with a drop in ambient air temperature, always keep battery at full charge whenever possible.

3. Make certain that the engine thermostat is operating normally, inoperative thermostat will cause overheating or undercooling. In cold temperatures a thermostat stuck in the full-open position will not all the engine to reach normal operating temperature. This will greatly reduce to efficency of the engine and can cause abnormal wear of internal parts due to inefficient oil flow.

ENGINE PRESTART

A. Check engine oil level and fuel level.

B. Check Radiator Coolant Level.

C. Check Hydraulic Fluid Level.

D. Visually inspect all hoses for wear and leakage

E. Check undercarriage and tracks for obstructions

F. Check for trash and obstructions in engine cover vents

STARTING ENGINE

A. Master Switch ON

B. Throttle open 1/3

C. Engage Preheat(Turn key toward operator)

D. When engine fires check for oil pressure and generator lite OFF

E. Allow engine to warmup and check for unusual vibrations,sounds and engine exhaust color.

Controls and Gauges

BATTERY MASTER SWITCH

The master switch is located on the side of the instrument panel housing between the operator seat. This switch must be on before any functions of the machine will operate. Upon shutdown of the machine for periods in excess of (5) minutes turn the master switch OFF to avoid unnecessary battery drain.

A- Ignition Switch
B- Preheat Indicator
C- Tachometer
D- Master Switch
E- Temperature Guage
F- Throttle Lever
G- Light Switch
H- Horn
I- Fuse Box
J- Oil Pressure Lite
K- Ammeter Lite
L- Deompression Cable

SWING LEVER

Press the lever down to swing boom clockwise
Pull lever UP to swing boom countercloclwise

SWING LOCK PIN

When inspecting the hydraulic pressure or when transporting the machine, the upper body should be locked to prevent possible injury and damage. These are the only two occasions for using the swing lock.

The temp. gauge should indicate between (158-185) once the engine has reached normal operating temperature. Failure to achieve the normal indication of temperature will result in inefficient operation of engine. Excessive temp. indications are cause for immediate shutdown of the engine to determine the problem. Fig. 1-1.

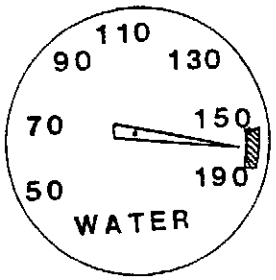


FIG.

Ammeter Light

With the engine running at normal speed the generator light should be illuminated. Illumination of the generator light, with the engine operating above the idle range, gives cause to shut down the engine and determine the problem.

Oil Pressure Light

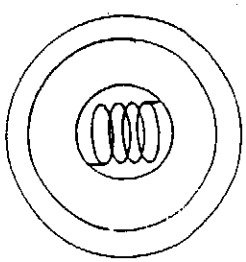
Oil Pressure indication is provided with a red indicator light. The oil pressure light should go out within 10 seconds after the engine is started. If the indicator lamp does not go out within this time-span, shutdown the engine immediately and determine the problem. Continued operation with the light illuminated can result in severe engine damage.

Starter Switch

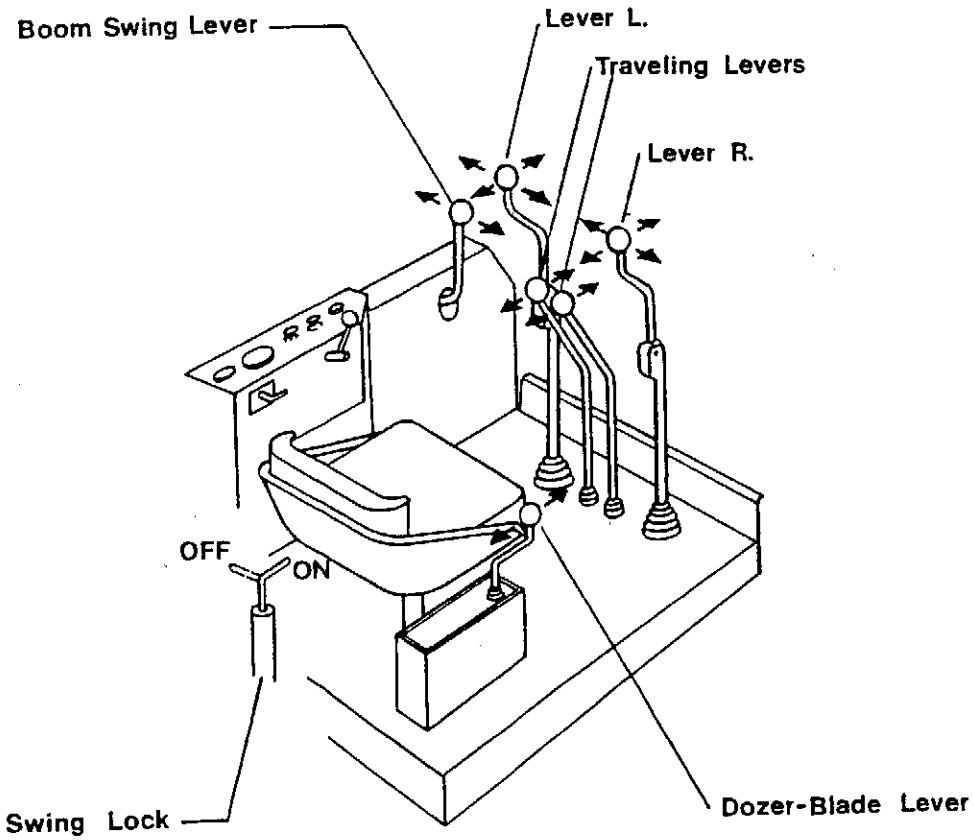
The starter switch has three positions.(1)Center/Off position, (2)Start, (3)Glow plug Pre-heat.Positions (2) and(3) are spring loaded to center. By turning switch to the left, starter is engaged ; by turning switch to right, pre-heat current is provided to the engine glow plugs. For pre-heat hold the switch in the far right position for 30 seconds, then turn to start position. When engine fires, release key.

Pre-Heat Indicator

The pre-heat indicator will glow red when the proper amount of electrical current has been applied to the glow plugs. The indicator is located to the far right end of the instrument panel.



Right Hand Lever
By pushing the lever forward, the stick boom is operated upward by pulling the lever towards the operator the stick boom is operated downward. Left movement operates the bucket curl,right movement operates the bucket dump.



Lefthand Lever
By pushing the lever forward the main boom is lowered and by pulling the main boom is raised. Moving the lever from side to side rotates the upper body of the machine.