



CLICK ANYWHERE FOR MORE DETAILS

MANUAL PREVIEW

Hough Operator's Manual HA

purchase full manual at

JENSALES.COM
or Call **800-443-0625**



CLICK ANYWHERE FOR MORE DETAILS

THIS IS A MANUAL PRODUCED BY **JENSALES INC.** WITHOUT THE AUTHORIZATION OF
HOUGH OR IT'S SUCCESSORS. **HOUGH** AND IT'S SUCCESSORS
ARE NOT RESPONSIBLE FOR THE QUALITY OR ACCURACY OF THIS MANUAL.

TRADE MARKS AND TRADE NAMES CONTAINED AND USED HEREIN ARE THOSE OF OTHERS,
AND ARE USED HERE IN A DESCRIPTIVE SENSE TO REFER TO THE PRODUCTS OF OTHERS.

Operator's Manual

HO-O-HA

CLICK ANYWHERE FOR MORE DETAILS

TABLE OF CONTENTS

NAME	PAGE
TO THE OWNER	Inside Front Cover
SPECIFICATIONS & SERVICE DATA	2
PREPARATION FOR OPERATION	3
OPERATING THE "PAYLOADER"	5
Foot Pedals	6
Hand Levers	5
Dash Instruments	6
Starting the Engine	7
Driving the "Payloader"	9
Routine Service	10
Cold Weather Operation	10
Draining the Cooling System	11
MAINTENANCE SECTION	13
Hydraulic Diagram & Care of System	13
Draining the Hydraulic System	15
Bleeding the Hydraulic System	15
Hoist Cylinders - Hydraulic Packing	15
Oil Reservoir - Hydraulic	17
Pump - Hydraulic	19
Valve - Hydraulic	17
Pressure Relief - Hydraulic Valve	19
Engine	20
Fan Belt	20
Oil Filter	21
Air - cleaner	21
Clutch - Adjustments	21
Drive Shaft - Universal	24
Transmission	23
Torque Converter	23
Drive Axle	24
Brakes - Adjustments	24
Steering Gear	26
Steering Adjustments - Toe In	26
Tires	27
Bucket - Cutting Edge	29
Wiring Diagram	18
LUBRICATION POINTS & CHART	30-31-32-33

CONDENSED SPECIFICATIONS AND SERVICE DATA

ENGINE

Waukesha
No. of Cylinders
Bore
Stroke
Displacement
Speed (Governed)
Horse Power

GAS

Model F.C. IND.
4
3 1/4
4
133 Cu. In.
2000 R.P.M.
33

DIESEL

Model 180 DLC
4
3 1/2
3 3/4
144 Cu. In.
2000 R.P.M.
35

PAYLOADER DIMENSIONS: Bucket in Carry Position

Overall Height 5' - 0"
Overall Width 4' - 2 1/4"
Overall Length 10' - 6 5/8"
Wheel Base 4' - 0"
Floor Clearance 0' - 5"
Turning Radius (Tip of Bucket) 7' - 0"

WEIGHTS:

With Empty Bucket
Gas Powered
Front . . 2490
Rear . . 2080
Total . . 4570

Diesel Powered
Front . . 2620
Rear . . 2320
Total . . 5050

With 1000 Lbs. In Bucket
Gas Powered
Front . . 4400
Rear . . 1170
Total . . 5570

Diesel Powered
Front . . 4470
Rear . . 1580
Total . . 6050

TIRES:

Front (Drive) 7.50 x 16 - 8 P.R.
Rear (Steering) 6.00 x 9 - 6 P.R.

50 Lbs. Air Pressure
55 Lbs. Air Pressure

BATTERIES:

Gas - Exide Diesel - Exide
(1) Sure Start #1 (2) XF-19

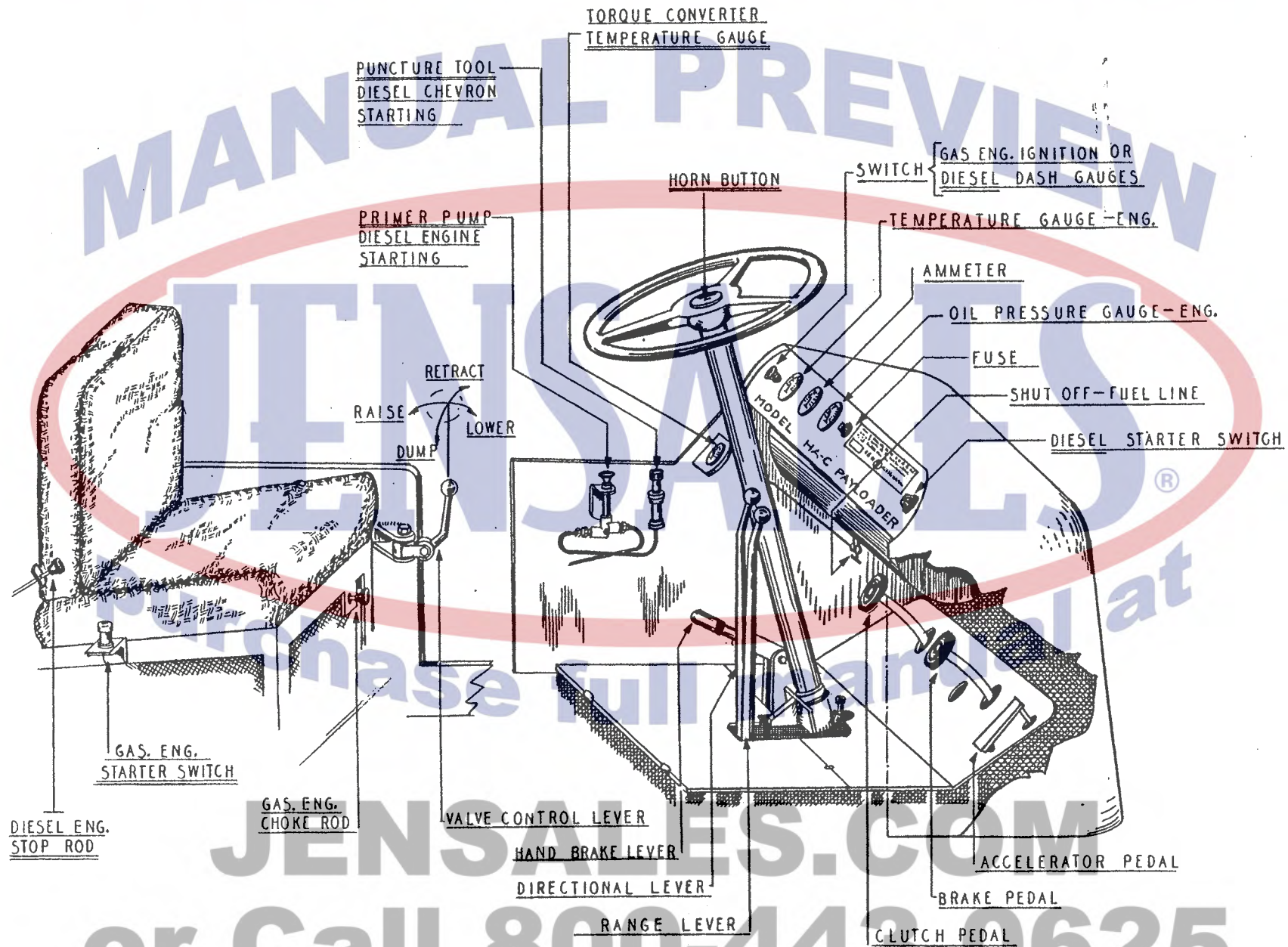
JENSALES.COM

or Call 800-443-0625

CLICK ANYWHERE FOR MORE DETAILS

CLICK ANYWHERE FOR MORE DETAILS

Fig. 1
OPERATING CONTROL



or Call 800-443-0625

CLICK ANYWHERE FOR MORE DETAILS

OPERATING THE "PAYLOADER"

When learning to use a machine of this type, it is well for the operator to work carefully, taking his time to gradually become accustomed to the machine. Operating speed and skill will be attained easier by slowly acquiring the "feel" of the PAYLOADER. The time used in learning may be well spend in preventing possible accidental damage to the machine or operator and to safe guard other personnel. The main factor in the performance of any machine of this type lies with the operator.

A study of the following pages should be made by the operator before attempting to start the engine. This will acquaint him with the functions of the various controls and their use. Refer to the Operators Control picture to note location of the levers and pedals.

The term "right hand" or "left hand" as used in these pages, is determined by the operators position when sitting in the seat facing the bucket.

HAND LEVERS:

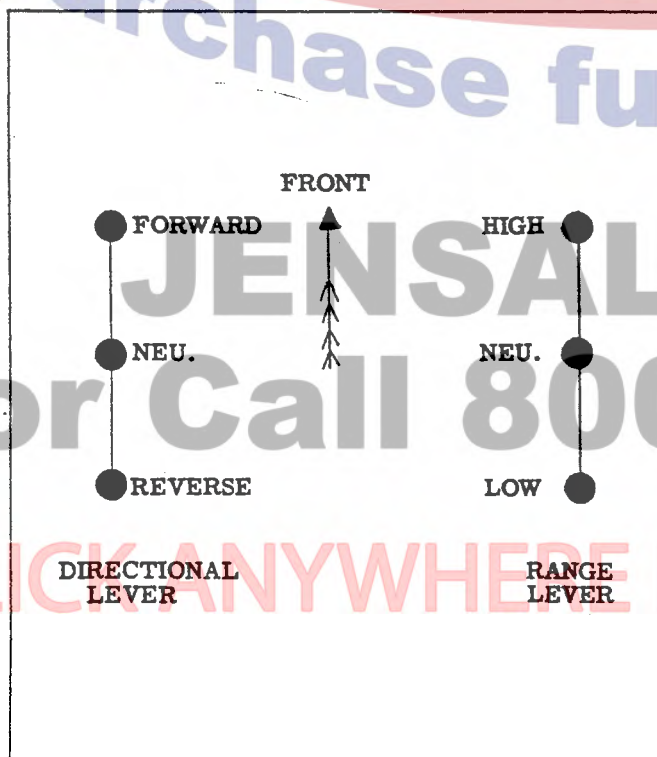
This "PAYLOADER" is equipped with a two speed forward and two speed reverse transmission. The

speed and direction of travel is selected by shifting a RANGE LEVER and a DIRECTIONAL LEVER. These levers are located at the right side of the steering column. See the Operating Controls picture.

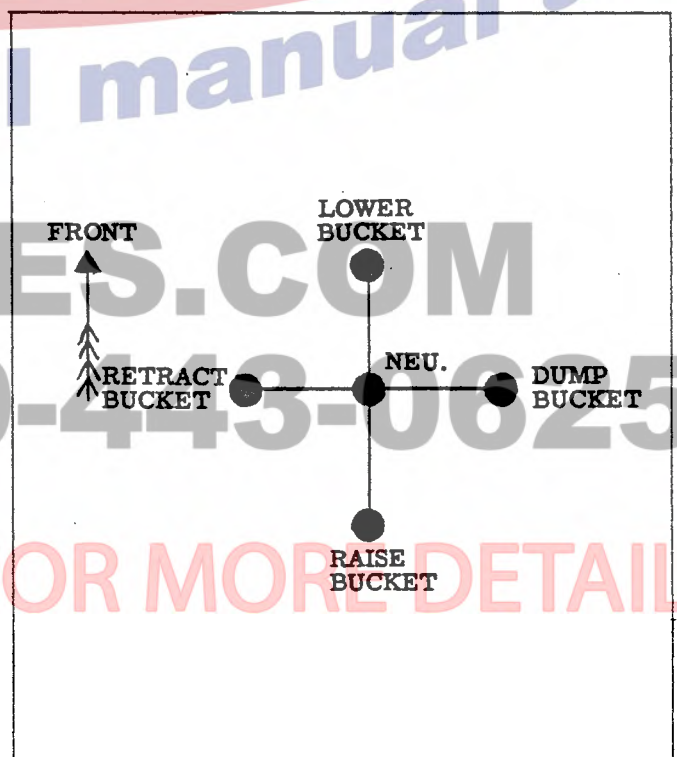
DIRECTIONAL LEVER is the longer lever adjacent to the right side of the steering column. Shift this lever to drive the machine in a forward or reverse direction. Push it forward to shift the transmission into forward gear. Pull it backward toward the operator to shift the transmission into reverse gear. This lever is in neutral when in its central position.

RANGE LEVER is the shorter lever next to the directional lever on the right side of the steering column. The speed of travel is selected by shifting the range lever. The transmission is in neutral when this lever is in its central position. Push this lever forward, ahead of neutral, to shift the transmission gears into low speed range. Pull it backward from neutral to shift into high speed range. The low speed range is used for working conditions in which more power is needed. The high speed range is used primarily for transporting loads to various locations.

Always be sure the range lever is in neutral before the engine is started or when leaving the machine.



GEARSHIFT DIAGRAM



VALVE LEVER POSITION

Avoid breathing in the fumes from the fluid as it is highly toxic.

Avoid contact of the chevron capsules with water as the capsules will dissolve and release the fluid.

Do not keep the capsules at temperatures above 120° F. (approx.). Use extreme caution to handle the chevron starting capsules safely.

7. An important prerequisite to easy starting of any diesel engine is keeping the batteries fully charged. If they are not, the attempt to start the engine will pull them down to a point where starting will become almost impossible. Keeping the "PAYLOADER" stored in a warm building or garage, when not in use during freezing weather, will relieve the strain when starting a cold engine.

STOPPING THE DIESEL ENGINE:

The diesel engine shut off cable is just back of the right hand side of the operators seat.

To stop the diesel engine, merely pull out this cable to shut off the flow of fuel and starve the engine. The cable is spring-loaded so that it automatically returns to open position when the knob is released.

DRIVING THE "PAYLOADER":

Skill in the use of the machine is acquired by practice and by intelligent observation of the performance of the machine. For instance, correct loading of the bucket can be judged by the sound of the engine, and the speed of the tractor.

1. Start the engine; when it has been running long enough to warm up partially, and oil pressure has been built up as indicated on the dash gauge, the "PAYLOADER" may be put to work.
2. Draw backward on the valve control lever to raise the boom and bucket about two or three feet above the ground.
3. Depress the clutch and shift the directional lever and the speed range lever into one of their positions, depending on direction and speed of travel wanted.
4. Release the pressure on the clutch pedal while increasing pressure on the accelerator pedal and drive to the working area.

LOADING THE BUCKET:

The operation of loading the bucket with machines fitted with torque converters differs in the technique used with ordinary machines of this type.

The torque converter increases the normal thrust on the drive wheels, thereby crowding the bucket in the bank or face of the cut with a force greater than can be overcome by the hydraulic power generated to raise the bucket out of the cut. Especially when the bucket is held near ground level when loading hard or heavy material.

To overcome this crowding or "wedging" action imparted to the bucket, by the multiplied thrust of the drive wheels, the operator should decrease pressure on the foot pedal. Less pressure on the accelerator will diminish torque output resulting in less drive thrust.

Avoid depressing the clutch pedal to decrease the pushing force of the drive wheels. Cutting out the engine by declutching defeats the purpose of the torque converter and rapidly increases the rate of clutch wear and failure.

By proper manipulation of the foot accelerator the operator will be able to govern the rate of torque output and control the rate of advancement and push being exerted into the face of the cut or bank, thus allowing the bucket to fill and raise smoothly. Proficiency in the use of accelerator technique on torque converter machines will result in production rates in excess of those ordinarily obtained.

Shift to the low speed range when loading the bucket. Have the bucket fully retracted and hold the cutting edge at digging level. Drive the machine forward into the bank or stock pile, letting the forward movement of the machine fill the bucket.

The loading operation is best done on level or slightly up-hill terrain. The inherent tendency is to "dig in" when working down grade. Also, backing up-hill with a heavy load is difficult due to the increased weight on the drive wheels.

When the bucket is full or the end of the cut is reached, pull backward on the boom lever to raise the bucket out of the cut. As the bucket raises it will crowd forward, into the face of the cut, exclusive of the forward travel of the machine. This is especially noticeable when cutting into a bank or stock pile. The forward movement of the tractor and the bucket tip-back feature will give a scooping action, similar to a "dipper stick" shovel, as the bucket raises out of the stock pile or face of the bank being cut. As the bucket raises, it tips back to hold a full load with minimum spillage.

TRANSPORTING LOADS:

When transporting loads, the travel speed of the machine will depend on the length of haul and the kind of surface over which the machine must pass. Rough terrain calls for slow speed.

When the bucket is full, raise the boom to carry the cutting edge of the bucket about four (4) feet above the ground. Never transport the machine, loaded or empty, with the bucket fully raised. The nearer the ground the bucket is held, the better the stability, especially on slopes or when turning the machine. Shift the gears into position for speed and direction of travel desired, and drive the machine to the dumping location.

DUMPING THE BUCKET:

When dumping into a truck or bin, raise the bucket so it clears the top edge safely. Move the machine up so the bucket is inside the dumping area. With the boom lever in the hold or neutral position, push forward slowly on the bucket control lever, thus causing the bucket to tip forward and spill its load. The load may be dumped entirely or part at a time, by manipulating the bucket lever. Dumping the load slowly will ease the shock of suddenly added weight to a truck body. Releasing pressure on the bucket control lever will allow it to return to neutral, holding the bucket in dumped position. Pull backward on the bucket control lever, to return the bucket to closed position, before backing the machine away from the dumping area. Back the machine well away from the truck or bin and lower the bucket to carry position (about four (4) feet above the ground) before returning the machine for another load.

ROUTINE SERVICE:

The operator's job does not consist of merely working the "PAYLOADER". The mechanical and operating condition, as well as the general appearance and maintenance of the machine, is also a part of his responsibility. It is to the operator's advantage to become familiar with the functions of each working part, and a study of the information and suggestions as set forth in this manual will help him do so.

The operating life of the "PAYLOADER" may be considerably extended if the machine is properly serviced at regular intervals. Often major repairs or shut downs are avoided if the machine is inspected regularly, and minor trouble corrected at this time.

Refer to the LUBRICATION CHART for major points requiring periodic service and inspection.

Be sure to refer to the Waukesha engine operation and maintenance manual for suggestions in the care and operation of the engine. Many important points, pertinent to the life and service of the engine which have not been explained in this book, are thoroughly covered and discussed in detail in the Waukesha engine manual, which should be read and studied by the operator. This is important.

COLD WEATHER OPERATION:

When not in use, park or store the "PAYLOADER" in a warm garage or building during freezing weather to relieve the strain when starting a cold engine. In starting any engine, particularly a cold engine, do not allow it to run up to governed speed or apply a load until the oil has become warm enough to circulate. This is important. Refer to "Cold Weather Starting" in the Waukesha engine manual. This applies especially to the Diesel engine.

When operating the "PAYLOADER" in temperatures of 32° F. (0° C.) or lower, there is danger of the water freezing in the cooling system, and an anti-freeze solution must be used. To avoid freeze ups in the cooling system, use a permanent type anti-freeze solution such as distilled glycerine or ethylene glycol.

There are several standard reliable anti-freeze solutions on the market which may be used in the cooling system. They should be added to the radiator according to the manufacturer's instructions found on the container. See Specification Data list for cooling system capacities.

Do not use a calcium chloride solution or any alkaline solution as an anti-freeze, as they are injurious to metal. Do not use fuel oil or kerosene as an anti-freeze as they are injurious to rubber hoses.

Do not use alcohol as an anti-freeze solution as it tends to boil away at average operating temperatures of the "PAYLOADER". If alcohol is used, test the strength of the solution with a hydrometer several times a day. It will be necessary to add alcohol frequently to replace that lost by evaporation.

If no anti-freeze solution is used in freezing temperatures, there is danger of the water freezing in the cooling system, although the engine may be running, and damage to the engine block, radiator and the water pump may result.

Never pour cold water in a hot engine, as the sudden contraction may cause the engine block to crack.