

Jackson LUMBER HARVESTER

FACTS AND INFORMATION on the HYDRAULIC LUMBER HARVESTER



Jackson
LUMBER HARVESTER
COMPANY, INCORPORATED

GENERAL OFFICES AND PLANT—MONDOVI, WI 54755, U.S.A.

JACKSON SIMPLICITY ENGINEERING PROVIDES
PERFORMANCE,
DEPENDABILITY,
VERSATILITY,
UTILIZING SIMPLE, TROUBLE-FREE MECHANISMS FOR
EASE OF OPERATION, MAINTENANCE & REPAIR, ALL
WITHOUT COMPLICATED ELECTRICAL OR AIR CIRCUITS.

OVERALL DIMENSIONS OF THE
JACKSON "LUMBER HARVESTER" SAWMILL

Travel Dimensions for Standard 5 Headblocks and
Optional 7 Headblock Carriages:

Length: 30 ft. with tail section folded up
Width: (1) 30" headblock opening w/4 ft. arbor = 8 ft.
(2) 40" headblock opening w/6 ft. arbor
and outboard bracket removed = 8 ft.

Setup Operating Dimensions:

Length: Standard 5 headblock: 36 ft.
Optional 7 headblock: 42 ft.
(Allow an additional 6 ft. of clearance
on each end for safe operation.)
Width: (1) 30" headblock opening w/4 ft. arbor = 8 ft.
(Allow additional 3 ft. of clearance
behind mill for safe operation.)
(2) 40" headblock opening w/6 ft. arbor = 10 ft.
(Allow additional 4 ft. of clearance
behind mill for safe operation.)

Weight in Transit:

30" headblock with single axle = 7,000 lbs.
40" headblock with tandem axles = 9,400 lbs.
Optional 7 headblock = 10,400 lbs.

MAXIMUM SIZE OF LOGS SAWN ON THE
JACKSON "LUMBER HARVESTER" SAWMILL

- (1) Standard 5 headblock 30" opening:
40" diameter log x 24 ft. long
- (2) Standard 5 headblock 40" opening:
50" diameter log x 24 ft. long
- (3) Optional: 7 headblock 40" opening:
50" diameter log x 30 ft. long

NOTE: For maximum efficiency on the standard 5 headblock carriage, logs from 12" dia. to 36" dia. and 8 ft. to 18 ft. long are recommended.

INFORMATION AND SPECIFICATIONS ON THE
JACKSON HYDRAULIC "LUMBER HARVESTER" SAWMILL

Main Frame:

- 1) All tubular steel welded construction.
- 2) Heavy-duty 15,000 lb. transportation axle, hubs and wheels.
 - a) 40" headblock opening is equipped with 15,000 lb. tandem axle with springs and electric brakes.
- 3) Steel guide rail welded in place for permanent alignment.
- 4) 10 thrust bearing mounted leveling jacks with locking caps attached. (40" model has 11 jacks)
- 5) 38 ball bearing rollers for carriage travel.
- 6) Sawdust removal by auger and chain - all ball bearing mounted.
- 7) 2-7/16" diameter mandrel with 6" diameter x 2" thick steel collars, 2 lug pins.

Live Take-Away:

- 1) Positive drive live take-away.
 - a) 30" headblock opening - 12" wide x 10' long
 - b) 40" headblock opening - 18" wide x 10' long
- 2) Rough top belt.
- 3) Ball bearing mounted 4" diameter drive pulley.
- 4) Ball bearing support rolls.
- 5) Individually driven with hydraulic orbit motor.

Basic Hydraulic Power System:

- 1) Main pump chain driven from mandrel for positive action.
- 2) Main pump mounted to slide for easy adjustment of drive chain tension.
- 3) 10-micron filtration unit installed on return line.
- 4) Self-cooling oil reservoir -- absolutely maintenance free.
- 5) No radiator to plug up.
- 6) No fan to give trouble.
- 7) Tank constructed of 12-gauge steel, all welded construction.
- 8) Maximum horsepower absorption: 30

JACKSON HYDRAULIC CARRIAGE

Carriage Frame:

- 1) All steel frame incorporates structural angle iron with fabricated cold-drawn steel headblocks.
- 2) All welded construction for permanent alignment.
- 3) Cut steel, hardened tooth gears & sprockets.
- 4) Ball bearing mounted set shaft.
- 5) Extra heavy-duty hydraulic cylinders.
- 6) 4 guide bearing assembly units on the length of carriage which mount to guide rail on frame for perfect alignment and guidance.

Setworks:

JACKSON SETWORKS:

- 1) Patented, simplest, most efficient, most accurate and most trouble-free setworks being sold today.
- 2) Only three rotating parts, two tilting parts and one sliding part.
- 3) No complex air or hydraulic circuits.
- 4) No electrical units to cause trouble.
- 5) Operates between two absolutely fixed points, therefore, is totally accurate, can't overset or can't underset, yet the operator has total control to just "nudge" the log out a little or take any part of a full set.
- 6) The operator may stop anywhere and start anywhere -- he need not be bound to "complete cycles".

Multiple Selection Stop:

- 1) Consists of five positive stops from 4/4 to 8/4 by quarters.
- 2) Each stop individually adjustable for absolute accuracy. (Can be adjusted with adjustable wrench).
- 3) All wear points "hard surfaced" and reinforced to virtually eliminate wear.
- 4) No electrical or air circuits.

Power Motor Headblock Receder:

- 1) Provides fast, powerful and smooth retraction of headblocks, PLUS the same qualities forward.
- 2) All forward and reverse motions are independent of setworks.

JACKSON Hydraulic Dogs - Bar Type:

- 1) Roller mounted to reduce wear
- 2) Provide maximum control, but are still fast and efficient.
- 3) Independent action UP and DOWN, as well as IN and OUT.
- 4) Heavy-duty hydraulic cylinders.

Roller Glide Headblock System:

- 1) A patented feature of all JACKSON carriages.
- 2) Provides a carriage of superior quality and performance over other systems and types.
- 3) Faster, smoother, longer lasting and more efficient than any other carriage of comparable price.
- 4) This system incorporates the fabricated cold-drawn steel channel headblocks with the knees mounted on steel rollers within the headblocks.
- 5) Provides better lumber and fewer saw problems.
- 6) Since the "wear" is on the circumference of the rollers, the gradual taper which results in conventional style carriages is virtually eliminated in the JACKSON carriage.

JACKSON Hydraulic Dogs - Bite Type:

- 1) Specifically designed for use on the JACKSON Hydraulic "Lumber Harvester" Sawmills or any other sawmills.
- 2) Powerful biting action coupled with smooth control provides finest dogging action available.
- 3) Wide (1") Bor alloy structural steel bars are virtually indestructible and cannot be bent, broken, or damaged by any use or misuse on the sawmill.
- 4) FULL VERTICAL travel means no pushing away of big logs or over-dogging of small logs.
- 5) Full upward travel of bottom dog means never-fail dogging, even if bottom dog comes all the way to top dog.
- 6) Controlled power in & out permits taper sawing of any shape log.

JACKSON Hydraulic Feedworks:

- 1) Powered by vane-type hydraulic motor, capable of delivering up to 1,600 inch lbs. of torque.
- 2) Driven by double strand ASA 50 chain.
- 3) Hardened-tooth sprockets with split taper bushings for trouble-free operation.
- 4) Heavy cast cable drum with two 3/8" x 6 x 19 cables, dead-ended on drum to prevent slippage.
- 5) 12" diameter cast steel cable pulleys.

JACKSON Controlled Environment Cab (Optional):

- 1) Safety of the sawmill operator is a key factor.
- 2) Reduces noise, thus reducing possibility of hearing loss to sawmill operator.
- 3) Provides excellent visibility of entire operation, as well as protection.
- 4) Many sizes and styles available (with or without heat and air conditioning).
- 5) Provides office-type atmosphere.

JACKSON HYDRAULIC LOG TURNER

- 1) Made from structural steel, with welded construction for maximum rigidity, strength and durability.
- 2) Powered by a heavy-duty hydraulic cylinder with 8,500 lbs. of lift.
- 3) Provides the pure muscle required for those heavy logs, yet the quick action of the elbow arm provides the fast, efficient turning of small logs.
- 4) A totally self-contained unit that requires no costly installation — merely set in place.

SIMPLICITY ENGINEERING makes the JACKSON Hydraulic Log Turner easy to use and it requires minimal maintenance.

JACKSON HYDRAULIC LOG DECK

To put the JACKSON SIMPLICITY ENGINEERING to work on a Log Deck was a challenge to us. We went to work on this and came up with some revealing facts that we have made sure apply to the JACKSON Log Deck:

- 1) A Hydraulic Log Deck must be fast. One must be able to bring logs from the back of the deck to the front quickly. This can be done on a JACKSON Hydraulic Log Deck.
- 2) Must give smooth even performance, without jerks and starts. This feature is built into every JACKSON Deck, because we roll the load on our large roller conveyor chain.
- 3) Must Be Dependable. This is the hallmark of the JACKSON Hydraulic Log Deck. All steel, welded construction with high-strength roller chain throughout. We do not use any cast chain or cast parts. (Cast parts frequently break and cause trouble.)
- 4) Must be versatile. Every sawmill set-up is slightly different. Therefore, a Log Deck must adapt easily and quickly to various functions. Because the JACKSON Log Deck has INDEPENDENT power on EACH skid, it is readily adaptable to all sawmill installations, as well as debarkers, chippers, etc.

PERFORMANCE, DEPENDABILITY AND VERSATILITY --
these are the secrets of the success of the
JACKSON Hydraulic Sawmill machinery.

MORE FACTS ABOUT THE JACKSON HYDRAULIC

"LUMBER HARVESTER" SAWMILL

1. The JACKSON Hydraulic "Lumber Harvester" Sawmill is specifically engineered to be as light as possible, with a maximum of strength. The main frame is constructed from tubular steel of 2" diameter with approximately 1/4 inch wall. It is all welded into a one-piece frame. This is done when it is held in place in a steel jig, reinforced to keep the frame absolutely rigid during fabrication. The main frame is truss braced and stress plated at all strategic points for maximum rigidity, yet allowing flexing for the dissipation of stress and shock.
2. Because the carriage has no wheels, but travels rather over the 38 rollers mounted on the main frame, the weight of a log is dissipated over a broad area, which eliminates any focal points of strain. In fact, the carriage is supported by 18 rollers at all times. This means that the maximum load on each roller would be approximately 600 lbs., including the weight of the carriage itself. Each of these rollers has approximately 2,000 lbs. radial load rating, thereby providing a service factor of better than 3 to 1, under the load of your heaviest log.
3. In regard to the carriage frame itself, the main frame is 1/2 inch thick steel structural angle with the headblocks made from 1/2 inch thick cold-drawn steel fabricated by welding into 4-inch channels. Each headblock is capable of carrying in excess of 20,000 lbs. of weight. This means that an 18-foot log weighing 9,000 lbs. is resting on a carriage structure capable of supporting 100,000 lbs., and a frame structure capable of supporting in excess of 25,000 lbs. on the longest span between support jacks, thus providing the engineering characteristics that totally exclude damage to carriage or frame from excess log weight.

SOME COMMONLY ASKED QUESTIONS
ABOUT THE "LUMBER HARVESTER"

QUESTION: How long does it take to set up?

ANSWER: Set-Up time can be as little as 30 minutes. Generally speaking though, about two hours is the normal average excluding any site preparation, i.e., cutting trees or removing undergrowth.

QUESTION: How does it transport?
(On the Highway? - Off the Road?)

ANSWER: Transporting is normally done by means of a truck. The size of the truck is determined by the load in addition to the sawmill as well as by the type of terrain. In some cases heavy-duty pickups can be used. However, a single axle straight truck of 6,000 to 8,000 lb. load capacity is sufficient for highway travel. For off-highway towing it is common to use log skidders, crawler tractors, farm tractors or 4-wheel drive trucks.

QUESTION: How long does it take to take down after operation to prepare for transport?

ANSWER: It normally takes approximately 1 to 1-1/2 hrs. to dismantle the mill and be ready to move. When the unit has remained in one spot for several months it may require 1 to 2 extra hours to clean up around the unit to prepare for transport.

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QUESTION: What other options are available?

ANSWER: There are a number of options available for the "Lumber Harvester". To begin, there are 3 separate choices in edgers available -- the Vertical Edger, Standard 2-Saw or 3-Saw Edgers and Bull Edgers. All of these units are described in separate brochures. Cut-Off Saws as well as Double-End Trim Saws are also available along with unique, special purpose units, such as, Green Chains, Slab Dumps, etc.

QUESTION: How much H.P. is required and how does it hook up?

ANSWER: We recommend approximately 200 H.P. diesel engines. These power units are available through JACKSON LUMBER HARVESTER with all the belts, pulleys, guards and power shafts.

The power is usually transmitted by means of V-Belt drives through tumbler shafts with special positive couplers. It is recommended that the Jackson Power Unit Set-Up be supplied with the sawmill for maximum performance

QUESTION: How do you sharpen the saw blade?

ANSWER: Saw sharpeners are available all the way from just a hand file to electric grinders. Usually we recommend and supply either the hand-operated rotary file system or the electric powered stone grinding unit. Some very skilled operators prefer to sharpen by hand with a file to achieve certain performance levels; however, this is used only by those with a great deal of skill and experience.

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FACTS ABOUT LOG SIZE:

The "Lumber Harvester" is capable of sawing a 4 ft. diameter log. When sawing a log of this size a great deal of skill and knowledge is required. Also a larger percentage loss is experienced than on moderate sized logs. It is not intended or recommended that the "Lumber Harvester" be used continually on logs greater than 36 In. diameter. For maximum production capacities, logs 12 In. to 36 In. diameter and 8 ft. to 18 ft. are required.

All of the preceding information is for standard equipment at the time of printing. We are continually seeking improvements on our machinery, therefore we reserve the right to vary from these specifications as new models are introduced.

Also, special models will be built to fit your needs. Just let us know and we will be pleased to work with you.