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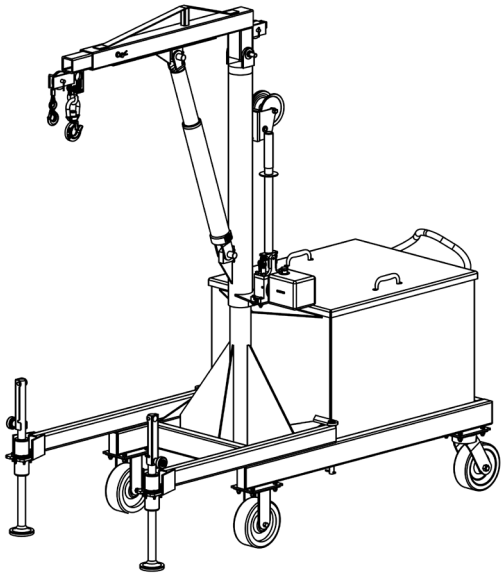
P-JIB Portable Jib Crane
Instruction Manual



Receiving Instructions

After delivery, remove the packaging from the product. Inspect the product closely to determine whether it sustained damage during transport. If damage is discovered, record a complete description of it on the bill of lading. If the product is undamaged, discard the packaging.

NOTE: The end-user is solely responsible for confirming that product design, use, and maintenance comply with laws, regulations, codes, and mandatory standards applied where the product is used.

Technical Service & Replacement Parts

For answers to questions not addressed in these instructions and to order replacement parts, labels, and accessories, call our Technical Service and Parts Department at (260) 665-7586. The Department can also be contacted online at http://www.vestilmfg.com/parts_info.htm.

Electronic Copies of Instruction Manuals

Additional copies of this instruction manual may be downloaded from https://www.vestil.com/page-manuals.php.

Table of Contents

SIGNAL WORDS

This manual classifies personal injury risks and situations that could lead to property damage with SIGNAL WORDS. A safety message appears with a signal word that describes an improper/dangerous use of the product. The signal word indicates the seriousness of the injury that could result from the described use.

DANGER Identifies a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.

WARNING Identifies a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.

CAUTION Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE injury.

NOTICE Identifies practices likely to result in product/property damage, such as operation that might damage the product.

SAFETY INSTRUCTIONS

Vestil strives to identify all hazards associated with the use of its products. However, material handling is dangerous and no manual can address every risk. The most effective means for preventing accidents is to apply common sense and sound judgment whenever using this product.

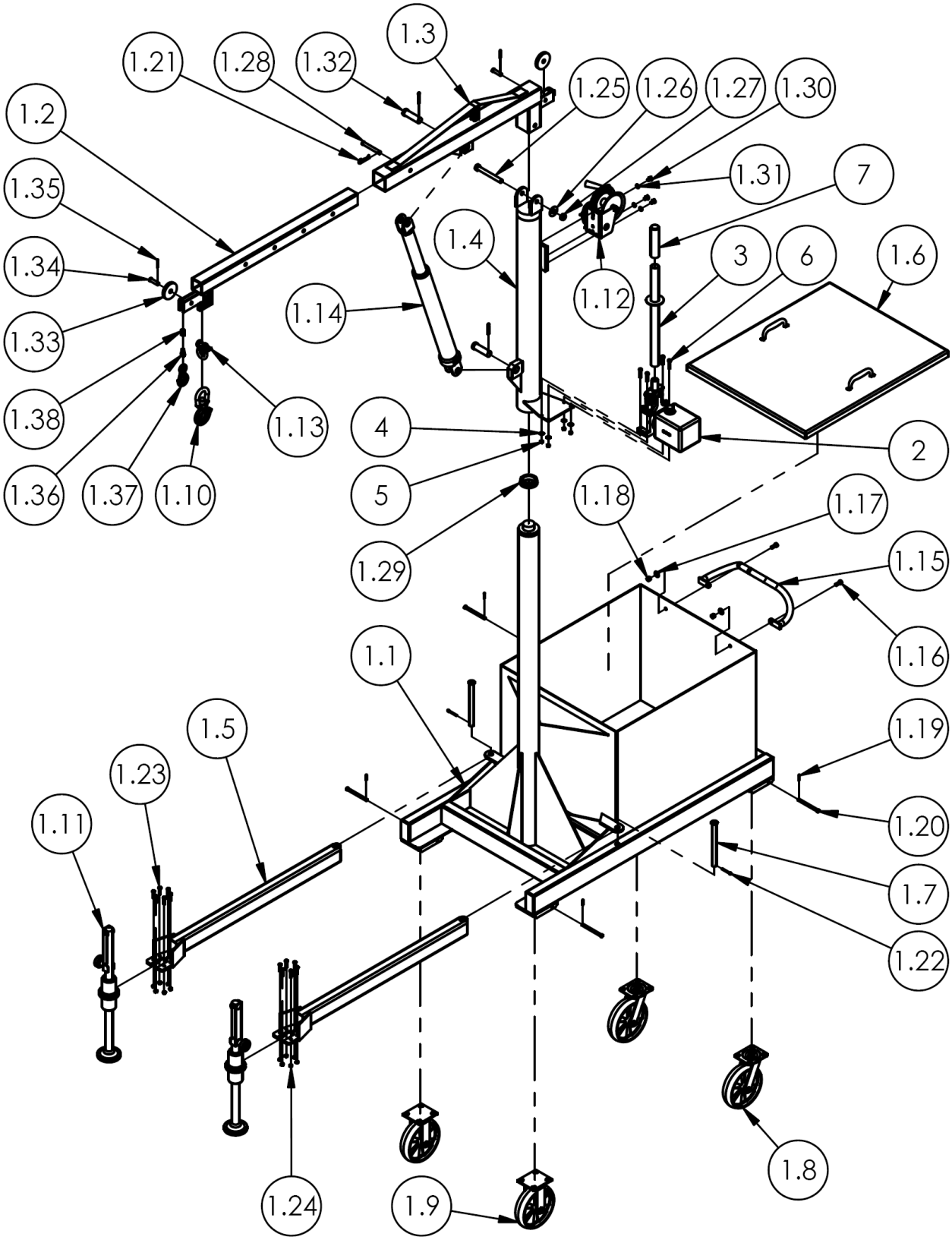
WARNING Material handling is dangerous. Improper or careless operation might result in serious personal injuries sustained by the operator and bystanders. Always apply material handling techniques, including rigging methods, learned during training and use the product properly:

- *Read and understand the entire manual before assembling, using, or servicing the product*. Read the manual to refresh your understanding of proper use and maintenance procedures whenever necessary.
- DO NOT use the crane unless the required ballast is installed. Ballast specifications are provided on pages 5 & 8.
- DO NOT attempt to lift items that weigh more than the capacity of your crane. Capacity decreases as boom length increases. Capacities of both models appear in FIGS. 1B & 2B on pages 5 & 8.
- DO NOT stand or sit on either the crane or the load. Avoid contact with the casters.
- Stand clear of the load while raising and lowering it.
- ONLY use the crane on even, level, improved surfaces (concrete or asphalt) capable of supporting the combined weight of the crane and a full capacity load. DO NOT attempt to move the crane up or down sloped surfaces.
- DO NOT perform maintenance on this crane UNLESS it is unloaded and the casters are chocked to prevent movement. If the crane requires repair, ONLY install manufacturer-approved replacement parts.
- DO NOT begin to raise a load until the load hook is centered above it.
- ALWAYS observe the boom while raising and lowering a load. It should rise smoothly. Watch for binding or jerky movement and listen for unusual noises.
- DO NOT use the crane unless it is in normal condition. Inspect the unit before each use following the *INSPECTIONS AND MAINTENANCE* instructions on p. 9-10 to determine whether it is functioning normally.
- Always watch the load carefully while raising and lowering the boom. Before transporting a load, adjust the load height to just a few inches above the ground. ONLY transport loads with the boom straight in front of the crane.
- DO NOT continue to move the pump handle back-and-forth if the boom is fully elevated (does not continue to rise).
- Always lower and disconnect the load before leaving the crane unattended.
- Relieve hydraulic pressure by turning the release lever counterclockwise until the boom begins to descend. Lower the boom completely; then close the release valve.
- DO NOT alter the pressure relief valve setting!
- DO NOT use the crane UNLESS it is labeled as shown in *LABELING DIAGRAM* on p. 13.
- DO NOT modify this crane in any way. Modifications automatically void the limited warranty and might make the crane unsafe to use.
- Always make sure that the shackle pin (item 1.13 on p. 3, 4; item 1.13 on p. 6, 7) is secure before applying a load to the stationary hook. Tighten the screw pin before each use.

NOTICE Proper maintenance is essential for this product to function properly.

- Follow the *INSPECTION AND MAINTENANCE* procedures provided on pages 11-12. If repairs are necessary, only install manufacturer-approved replacement parts.
- Periodically lubricate pivot points.
- Keep the crane clean & dry.

FIG. 1A: P-JIB-2 EXPLODED VIEW (28-006-268)
BILL OF MATERIALS ON FOLLOWING PAGE

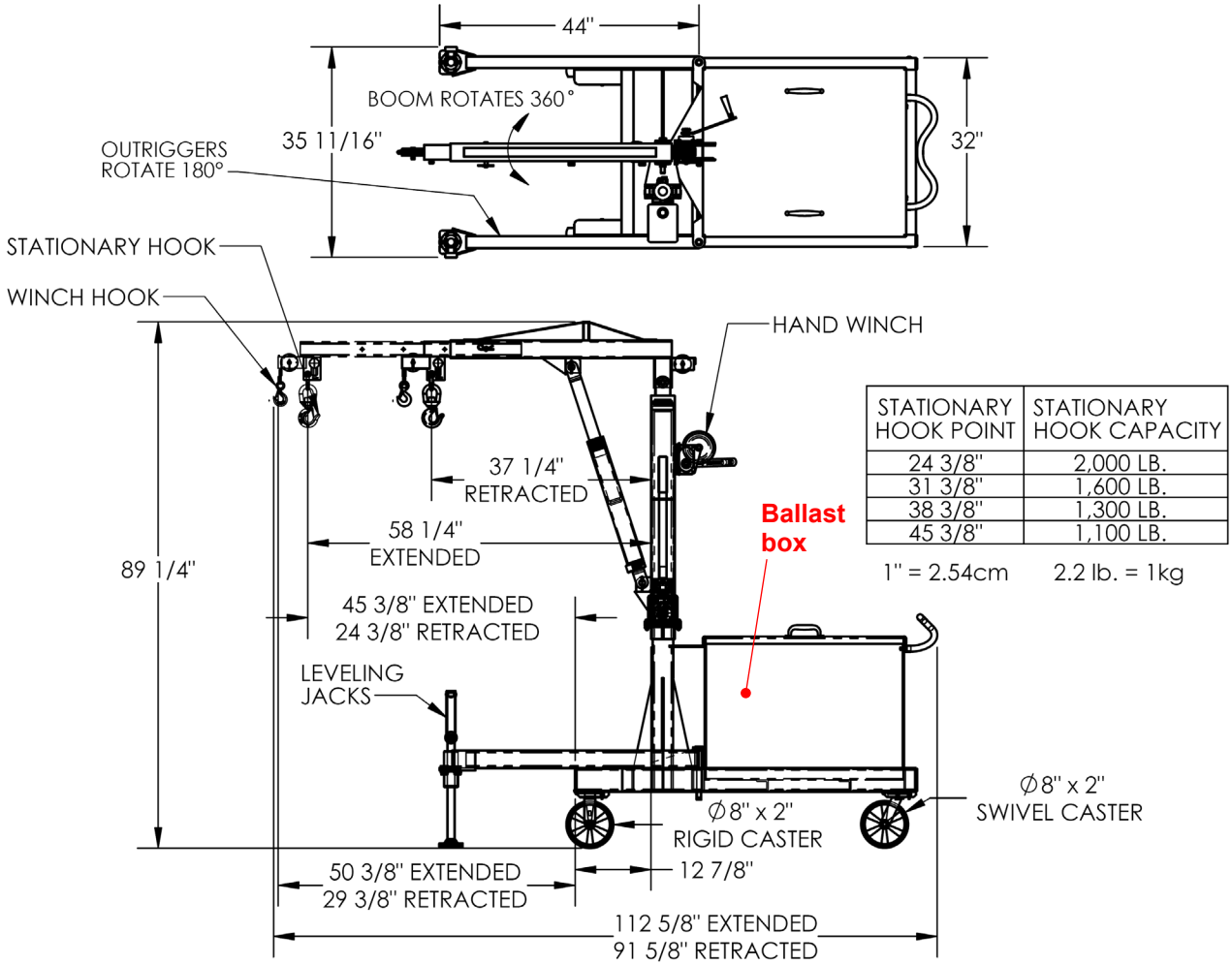


P-JIB-2 Bill of Materials

Item	Part no.	Description	Qty.
1	28-002-268	Final assembly without power unit	1
1.1	28-514-208	Weldment, base	1
1.2	28-514-202	Weldment, boom, inner	1
1.3	28-514-203	Weldment, boom, outer	1
1.4	28-514-205	Weldment, mast	1
1.5	28/-514-206	Weldment, outrigger	2
1.6	28-514-207	Weldment, lid	1
1.7	28-612-005	Weldment, outrigger pin	2
1.8	16-132-208	Caster, 8”x2”, swivel	2
1.9	16-132-233	Caster, rigid, GFN-8/2-R	2
1.10	08-145-001	Swivel hook, 2-ton capacity	2
1.11	30-001-011	Leveling jack	2
1.12	21-042-002-001	Hand winch, foldable handle grip	1
1.13	08-145-010	Shackle, $^{1}/_{2}$”, 2-ton capacity	1
1.14	99-021-948	Cylinder, hydraulic, 2”x18” stroke	1
1.15	16-025-025	Handle, formed, HT/ergo handle	1
1.16	11105	Hex bolt, grade A, zinc-plated, $^{3}/_{8}$”-16x1”	2
1.17	33008	Flat washer, low carbon, USS, zinc-plated, $^{3}/_{8}$”	2
1.18	37024	Nylon insert lock nut, grade 2, zinc finish, $^{3}/_{8}$”-16	2
1.19	65076	$^{1}/_{8}$”x1” cotter pin, zinc-plated	4
1.20	99-112-006	Pin, clevis	4
1.21	45286	#11 hitch pin clip, $^{1}/_{8}$”x2$^{5}/_{8}$”	3
1.22	65127	Cotter pin, zinc-plated, $^{3}/_{16}$”-2	4
1.23	11007	Hex bolt, $^{1}/_{4}$”- 20UNC x1$^{1}/_{4}$”	16
1.24	37018	Nylock nut, grade 2, zinc-finish, $^{1}/_{4}$”-20	12
1.25	11324	Hex bolt, $^{5}/_{8}$”-11x5$^{1}/_{2}$”	1
1.26	33016	Flat washer, low carbon, USS, zinc-plated, $^{5}/_{8}$”	1
1.27	37036	Nylock nut, zinc-plated, $^{5}/_{8}$”-11	1
1.28	66122	$^{1}/_{2}$”x4” clevis pin	1
1.29	28-110-001-001	Inner bearing	1
1.30	11101	Hex bolt, $^{3}/_{8}$”-16x$^{1}/_{2}$”	3
1.31	33622	Split lock washer, carbon steel, medium zinc-finish, $^{3}/_{8}$”	3
1.32	47-112-001	Clevis pin, 1” x 3$^{1}/_{4}$”	2
1.33	99-027-003	$^{1}/_{4}$” cable pulley, 3” OD, $^{1}/_{2}$” ID	2
1.34	21-112-003	Pin, $^{1}/_{2}$” x 1$^{15}/_{16}$” retaining clevis	2
1.35	65078	Extended prong cotter pin, zinc finish, $^{1}/_{8}$” x 1$^{1}/_{2}$”	2
1.36	21-145-013	Specialty hardware, thimble	1
1.37	08-145-045	Clasp hook, $^{3}/_{4}$” hook opening	1
1.38	99-145-067	Compression sleeve, $^{3}/_{16}$” x 1”	1
2	99-640-013	Assembly, hand pump, $^{1}/_{2}$gal. tank	1
3	07-525-006	Assembly, handle	1
4	33004	Flat washer, USS, zinc-plated, $^{1}/_{4}$”	4
5	37018	Nylock nut, grade 2, zinc-finish, $^{1}/_{4}$”-20	4
6	11009	Hex bolt, gr. A, zinc plated, $^{1}/_{4}$”-20 x1$^{1}/_{2}$”	4
7	07-025-005	Handle, black rubber, 6”	1

FIG 1B: P-JIB-2 specifications

The inner boom has 4 pin holes spaced 7 inches apart to allow boom length to be adjusted in 7in. increments. Boom length determines the maximum rated load of the crane, which decreases as boom length increases as indicated in the table below.



STATIONARY HOOK POINT	STATIONARY HOOK CAPACITY
24 3/8"	2,000 LB.
31 3/8"	1,600 LB.
38 3/8"	1,300 LB.
45 3/8"	1,100 LB.

1" = 2.54cm 2.2 lb. = 1kg

DIMENSION TOLERANCE +/- 1/4"

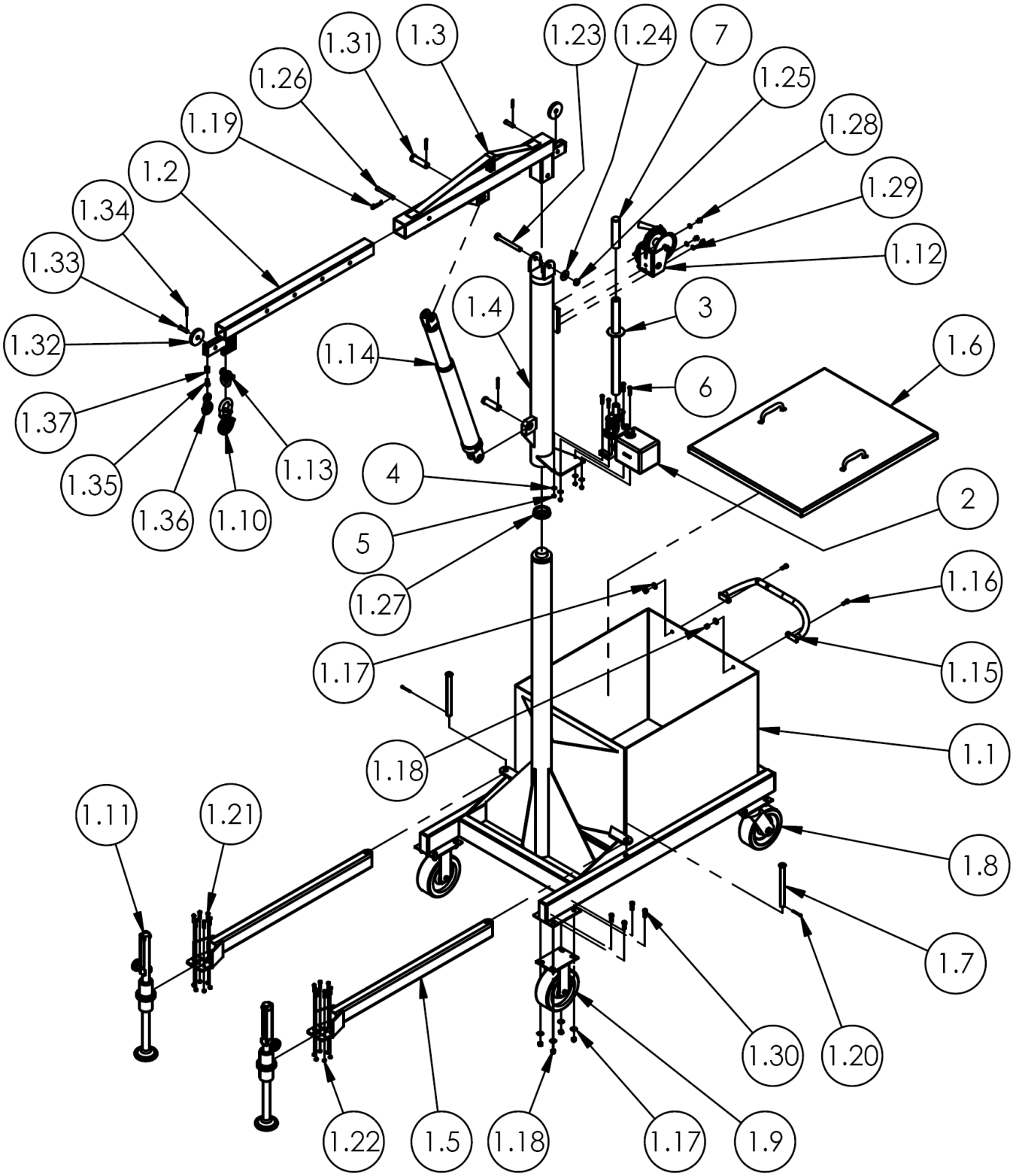
STANDARD FEATURES

MODEL NUMBER: P-JIB-2
STATIONARY HOOK CAPACITY: SEE CHART
HAND WINCH CAPACITY: 800 LBS.
WIDTH: 35 11/16"
EXTENDED LENGTH: 113 3/8"
RETRACTED LENGTH: 92 3/8"
LEVEL HEIGHT: 89"
(2) RIGID & (2) SWIVEL Ø8" x 2"
GLASS FILLED NYLON CASTERS
SWIVEL CRANE FOR SIDE LOADING
TWO OUTRIGGERS TO INCREASE STABILITY
LEVELING JACKS TO STABILIZE UNIT TO FRONT/SIDE
DURABLE LIQUID PAINT BLUE FINISH
WITH YELLOW INNER BOOM
THE P-JIB-BALL-2 COUNTER BALANCE BALLAST (SOLD SEPARATELY) IS RECOMMENDED FOR PROPER USE OF THIS PRODUCT

NOTE: Ballast is *ALWAYS* required whenever the crane is used.

- Add 2,780 lb. (1,264 kg) of ballast to the ballast box *BEFORE* putting the crane into service.
- If you ordered option P-JIB-BALL-2, then your crane is already equipped with the necessary ballast.

FIG. 2A: P-JIB-4 Exploded View & Bill of Materials

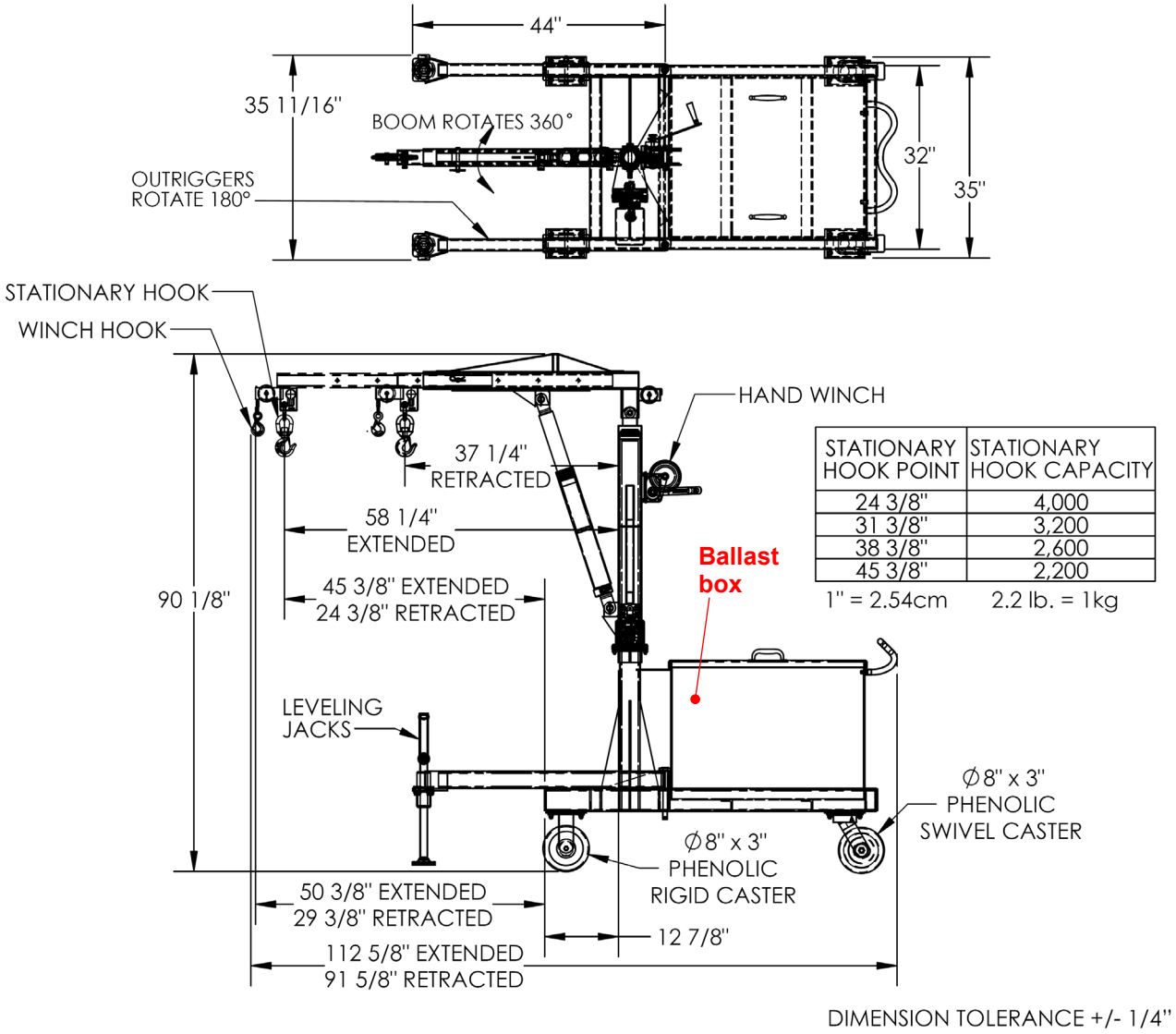


P-JIB-4 Bill of Materials

Item	Part no.	Description	Qty.
1	28-002-269	Final assembly without power unit	1
1.1	28-514-209	Weldment, base	1
1.2	28-514-202	Weldment, boom, inner	1
1.3	28-514-204	Weldment, boom, outer	1
1.4	28-514-205	Weldment, mast	1
1.5	28/-514-206	Weldment, outrigger	2
1.6	28-514-207	Weldment, lid	1
1.7	28-612-005	Weldment, outrigger pin	2
1.8	16-132-171	Caster, 8”x3”, phenolic, swivel	2
1.9	16-132-172	Caster, 8” x 3”, phenolic with fiber, rigid	2
1.10	08-145-001	Swivel hook, 2-ton capacity	1
1.11	30-001-011	Leveling jack	2
1.12	21-042-002-001	Hand winch, foldable handle grip	1
1.13	08-145-010	Shackle, $^{1}/_{2}$”, 2-ton capacity	1
1.14	99-021-945	Cylinder, hydraulic, $2^{1}/_{2}$”x18” ram style with clevis mounts	1
1.15	16-025-025	Handle, formed, HT/ergo handle	1
1.16	11105	Hex bolt, grade A, zinc-plated, $^{3}/_{8}$”-16x1”	2
1.17	33008	Flat washer, low carbon, USS, zinc-plated, $^{3}/_{8}$”	18
1.18	37024	Nylon insert lock nut, grade 2, zinc finish, $^{3}/_{8}$”-16	18
1.19	45286	#11 hitch pin clip, $^{1}/_{8}$” x $2^{5}/_{8}$”	1
1.20	65127	Cotter pin, zinc-plated, $^{3}/_{16}$”-2	4
1.21	11007	Hex bolt, $^{1}/_{4}$”- 20UNC x$1^{1}/_{4}$”	12
1.22	37018	Nylock nut, grade 2, zinc-finish, $^{1}/_{4}$”-20	12
1.23	11324	Hex bolt, $^{5}/_{8}$”-11x$5^{1}/_{2}$”	1
1.24	33016	Flat washer, low carbon, USS, zinc-plated, $^{5}/_{8}$”	1
1.25	37036	Nylock nut, zinc-plated, $^{5}/_{8}$”-11	1
1.26	66122	$^{1}/_{2}$”x4” clevis pin	1
1.27	28-110-001-001	Inner bearing	1
1.28	11101	Hex bolt, $^{3}/_{8}$”-16x$^{1}/_{2}$”	3
1.29	33622	Split lock washer, carbon steel, medium zinc-finish, $^{3}/_{8}$”	3
1.30	11107	Hex bolt, gr. A, zinc finish, $^{3}/_{8}$”-16 x $1^{1}/_{4}$”	16
1.31	47-112-001	Clevis pin, 1” x $3^{1}/_{4}$”	2
1.32	99-027-003	$^{1}/_{4}$” cable pulley, 3” OD, $^{1}/_{2}$” ID	2
1.33	21-112-003	Pin, $^{1}/_{2}$” x $1^{15}/_{16}$” retaining clevis	2
1.34	65078	Extended prong cotter pin, zinc finish, $^{1}/_{8}$” x $1^{1}/_{2}$”	2
1.35	21-145-013	Specialty hardware, thimble	1
1.36	08-145-045	Clasp hook, $^{3}/_{4}$” hook opening	1
1.37	99-145-067	Compression sleeve, $^{3}/_{16}$” x 1”	1
2	99-640-013	Assembly, hand pump, $^{1}/_{2}$gal. tank	1
3	07-525-006	Assembly, handle	1
4	33004	Flat washer, USS, zinc-plated, $^{1}/_{4}$”	4
5	37018	Nylock nut, grade 2, zinc-finish, $^{1}/_{4}$”-20	4
6	11009	Hex bolt, gr. A, zinc plated, $^{1}/_{4}$”-20 x$1^{1}/_{2}$”	4
7	07-025-005	Handle, black rubber, 6”	1

FIG 2B: P-JIB-4 rated loads for specified boom lengths

The inner boom has 4 pin holes spaced 7 inches apart to allow boom length to be adjusted in 7in. increments. Boom length determines the maximum rated load of the crane, which decreases as boom length increases as indicated in the table below.



STATIONARY HOOK POINT	STATIONARY HOOK CAPACITY
24 3/8"	4,000
31 3/8"	3,200
38 3/8"	2,600
45 3/8"	2,200

1" = 2.54cm 2.2 lb. = 1kg

DIMENSION TOLERANCE +/- 1/4"

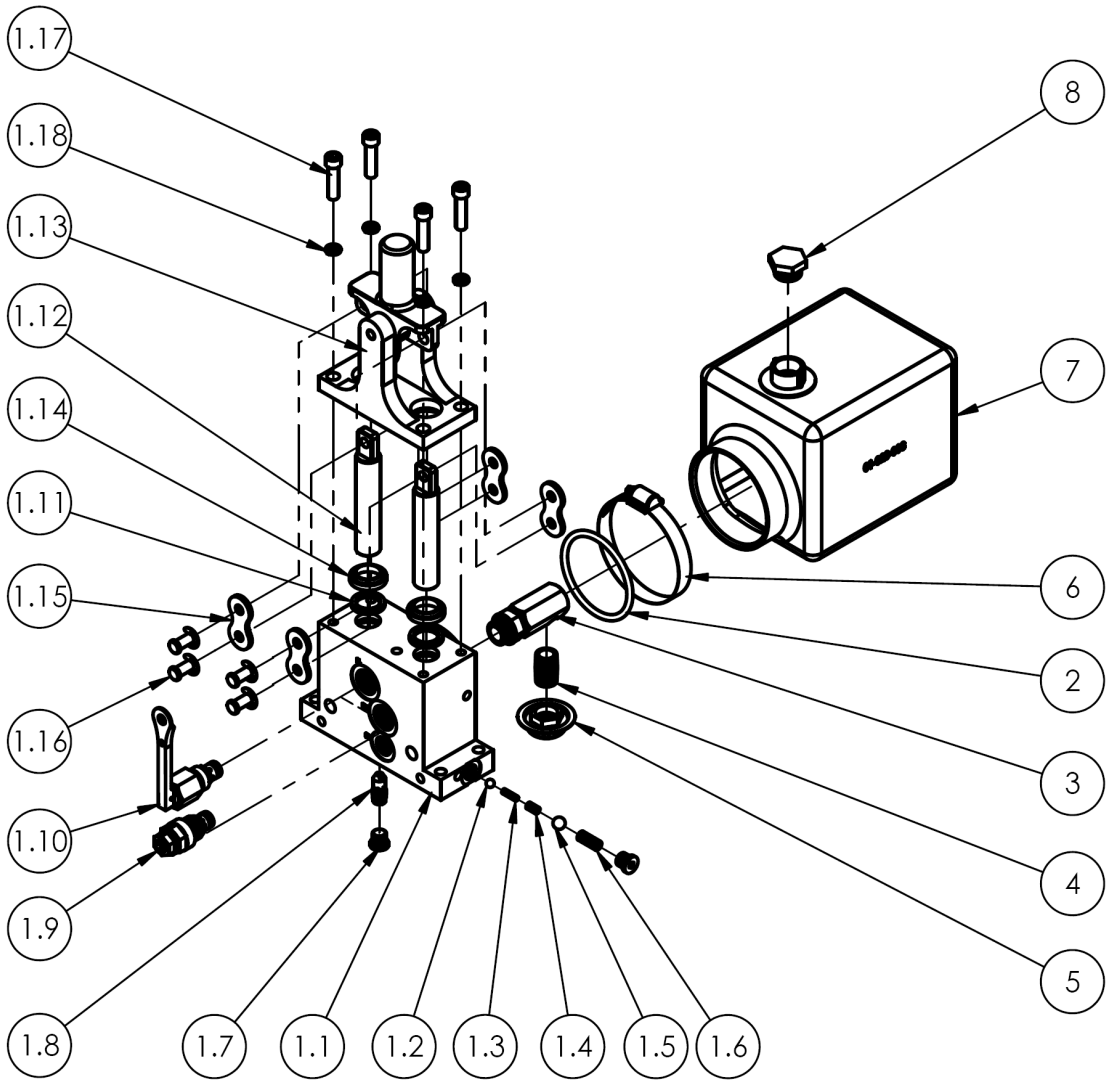
STANDARD FEATURES

MODEL NUMBER: P-JIB-4
STATIONARY HOOK CAPACITY: SEE CHART
HAND WINCH CAPACITY: 800 LBS.
WIDTH: 35 11/16"
EXTENTED LENGTH: 113 3/8"
RETRACTED LENGTH: 92 3/8"
LEVEL HEIGHT: 90 1/8"
(2) RIGID & (2) Ø8" x 3" PHENOLIC CASTERS
SWIVEL CRANE FOR SIDE LOADING
TWO OUTRIGGERS TO INCREASE STABILITY
LEVELING JACKS TO STABILIZE UNIT TO FRONT/SIDE
DURABLE LIQUID PAINT BLUE FINISH
WITH YELLOW INNER BOOM
THE P-JIB-BALL-4 COUNTER BALANCE BALLAST (SOLD SEPARATELY) IS RECOMMENDED FOR PROPER USE OF THIS PRODUCT

NOTE: Ballast is *ALWAYS* required whenever the crane is used.

- Add 3,650 lb. (1,660 kg) of ballast to the ballast box *BEFORE* putting the crane into service.
- If you ordered option P-JIB-BALL-4, then your crane is already equipped with the necessary ballast.

FIG. 3: MANUAL HYDRAULIC PUMP (99-640-013 REV. B) EXPLODED VIEW & BILL OF MATERIALS



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	99-140-005	SUB-ASSEMBLY, MANUAL PUMP, HAND	1	1.13	99-640-008	SUB-ASSEMBLY, PUMP, ROCKER	1
1.1	99-039-005	BODY, MANUAL PUMP, HAND	1	1.14	99-144-003	WIPER, SOLID PROFILE, PISTON	2
1.2	99-110-007	BEARING, BALL, Ø1/4"	2	1.15	99-042-001	CHAIN, SIDE PLATE, #80	4
1.3	99-146-004	SPRING, COMPRESSION, INLET CHECK	2	1.16	11484-01103	PIN, SS GROOVED CLEVIS w/ SNAP RING	4
1.4	99-146-006	SPRING, COMPRESSION, RETAINER	2	1.17	93257	SHCS 5/16-18 x 1 1/4	4
1.5	99-110-006	BEARING, BALL, Ø3/8"	2	1.18	129169	LOCK WASHER, HI COLLAR, ZINC PLATED	4
1.6	99-146-005	SPRING, COMPRESSION, OUTLET CHECK	2	2	99-144-007	O-RING, MANIFOLD, 3" OD	1
1.7	99-116-005	FITTING, HYDRAULIC, 04MORB HOLLOW HEX PLUG	3	3	99-116-001	SUCTION FITTING, MINI MANIFOLD	1
1.8	99-153-038	FLOW CONTROL, PRES. COMP., 1.0 GAL.	1	4	99-031-033	ACCESSORIES, NIPPLE, CLOSE PIPE	1
1.9	99-153-006	VALVE, PRESSURE RELIEF, 210 BAR	1	5	99-031-029	ACCESSORIES, HYDRAULIC	1
1.10	99-153-080	VALVE, CARTRIDGE w/TOGGLE ARM	1	6	99-145-061	Clamp, Worm Gear Hose, 2 13/16 - 3 3/4	1
1.11	99-144-015	SEAL, U-CUP	2	7	01-023-008	RESERVOIR, OIL	1
1.12	99-041-004	PLUNGER/PISTON, PUMP	2	8	99-616-001	ASSEMBLY, BREATHER	1
				*	99-144-001	Replacement seals (kit)	1

USING THE CRANE

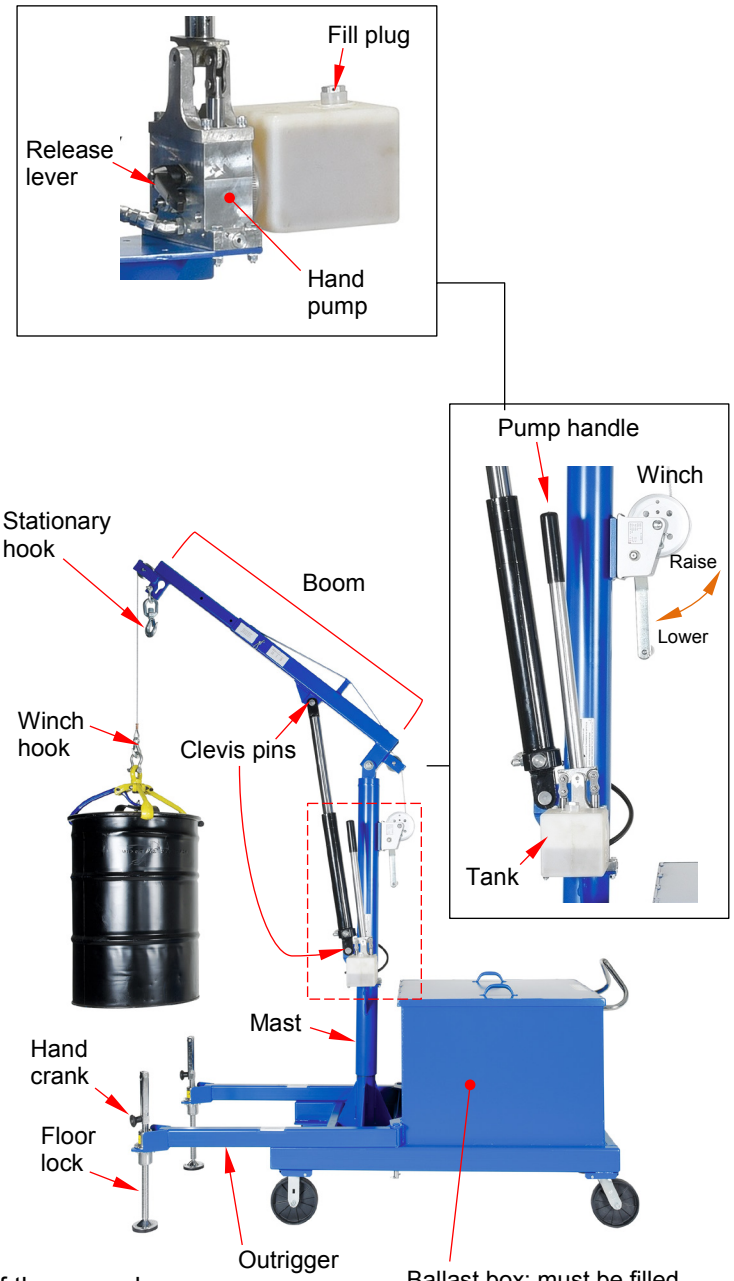
The floor crane must be used only on improved surfaces (concrete or asphalt) that are even and level.

1) Attach appropriate rigging to the load.
2) Carefully push the crane to the work location; then low.
3) Position the outriggers and deploy the floor locks. Outriggers can be rotated out to the side of the crane to enhance stability. **Always keep the load between the outriggers** (don't rotate the load beyond the outriggers).

   To deploy the floor locks, rotate the hand cranks clockwise until the feet solidly contact the floor but *do not lift the front casters off of the ground*.
4) Adjust the position of the boom.
   a. To raise the boom, move the pump handle back-and-forth.
   b. To lower the boom, slowly turn the release lever counterclockwise until the boom begins to lower. To increase the lowering speed, turn the release lever further counterclockwise. Close the release valve when boom adjustment is complete by turning the release lever clockwise until the connection is tight.
5) Attach the rigging to the stationary hook at the end of the boom. If the stationary hook cannot be lowered enough engage the rigging. Connect the rigging to the winch hook. The winch hook capacity is always 800 pounds (363.6kg), *regardless of boom length*. Raise and lower the winch hook by turning the winch handle in the appropriate direction.

   Prevent load swing! Be sure that whichever hook is used is centered above the load before raising it. Do not raise the boom or the winch hook until the hook is centered above the load.

   NOTE: Add the weight of all rigging to the weight of the load to calculate the net weight applied to the crane. The net weight must be less than or equal to the capacity of the crane. Capacity decreases as the boom is extended See FIGS. 1B and 2B on pages 5 and 8.



6) Slowly raise the load until it is a few inches off of the ground.
   a. The load should not swing as it rises.
   b. The crane should not tip or rock when the load is suspended.
   c. If the crane is unstable, lower the load and adjust rigging.
   d. The mast rotates to allow the user to move loads to either side of the crane. Rotate the boom *slowly* when loaded. **Don't rotate the load beyond the outriggers**.
   e. Transport the load by pushing the cane slowly and carefully. The load should never be more than a few inches above the ground during transport.
7) Lower the boom until there is slack in the rigging and disconnect the load from the hook.

USING THE HAND PUMP

The hydraulic pump controls up-and down-movement of the boom. With the lowering lever in the closed position (rotated clockwise until the connection is snug), move the pump handle back-and-forth to extend the cylinder. As the cylinder extends, the end of the boom rises and elevates the hooks.

To lower the boom, slowly rotate the release lever counterclockwise. The farther the lever is turned, the faster the boom lowers. To change load elevation but not lower the load completely, simply close the release valve when the load is at the desired height, i.e. turn the lever clockwise until the connection is snug.

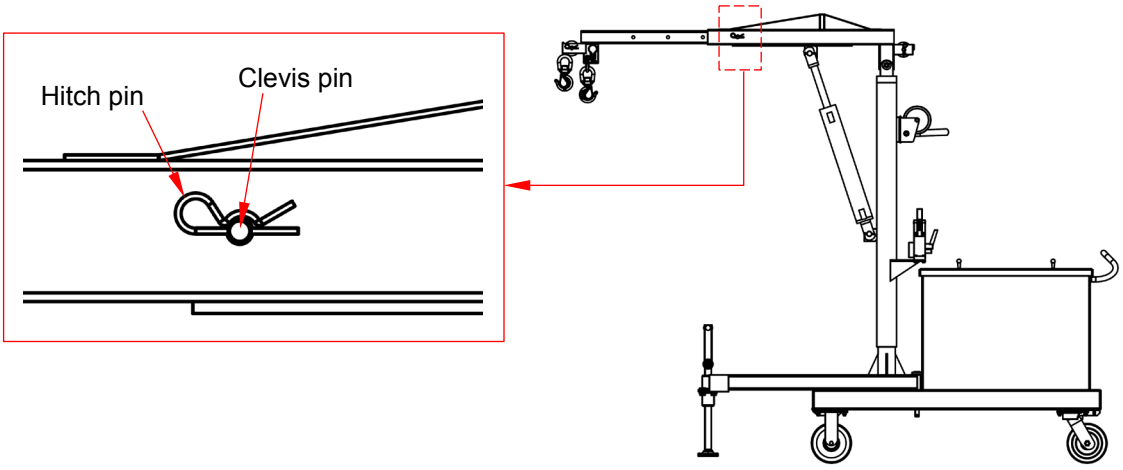
AIR PURGING PROCEDURE

Air can be trapped inside the hydraulic circuit. If this happens, you might notice that the boom feels spongy when it is raised. Air must be removed from the circuit if this happens.

1. Lower the boom and disconnect the cylinder from the crane by removing the clevis pins. See Diagram on p. 10.
2. Lay the cylinder on a flat surface with the hose on top.
3. Loosen the hose fitting but do not disconnect the hose. Wrap a rag around the fitting.
4. Circulate oil to the cylinder by slowly moving the handle back and forth. Air and oil will sputter from the fitting. When no more air is present, tighten the fitting and pin the cylinder to the crane.

BOOM LENGTH ADJUSTMENT

To adjust the length of the boom, first use the hand pump to raise the boom to make it level. Remove the hitch pin and pull out the clevis pin. The inner boom is now free and can be pulled or pushed. Align the appropriate holes in the inner and outer booms to produce the desired boom configuration; then reinstall the pins.



RECORD OF SATISFACTORY CONDITION

Before putting the crane into service, describe the appearance and functions of the crane in writing. Include observations about each part of the crane. Photograph the unit from multiple angles. Include close range photographs of pivot points and pins, the hydraulic system (cylinder, pump, hoses, and oil tank), hooks, shackles and shackle pins, floor locks, and casters. Use the crane to lift a test weight. Raise and lower the boom. Include notes about how much force is required to move the pump handle moves back-and-forth, as well as sounds heard while the cylinder extends and retracts (boom elevates and lowers). Thoroughly photograph the unit and all labels applied to it. Add the photographs to the record. This record documents **satisfactory condition** of the crane.

INSPECTIONS & MAINTENANCE

Compare observations during inspections to your RECORD to determine whether the unit is in satisfactory condition. DO NOT use the crane unless it is in satisfactory condition. If repairs are necessary, only install manufacturer-approved replacement parts.

(A) *Before each use*, inspect the following items:

1) **Frame, mast, cylinder brackets (where cylinder attaches to mast and boom), & booms (inner and outer.** Examine each item for damage and severe wear.
2) **Cylinder and pump.** Check for oil leaks. Raise and lower the boom. Listen for unusual noises and watch the cylinder. Confirm that it extends and retracts smoothly.
3) **Load hook and shackle**. Closely examine the load hook and shackle. Make sure that neither is severely worn, warped, bending or cracking. Confirm that the safety latch (of the hook) operates correctly. Also inspect the shackle bracket. The bracket should be square and rigid and lack cracks and significant bends. The pin hole (for the shackle pin) should not be elongated.
4) **Shackle and shackle pin.** Make sure that the shackle and pin are not bent, cracked, stretched, or severely worn. The opening in the lifting arm for the shackle should not be stretched, bent or cracked.
5) **Inner and outer booms**. Confirm that both parts are rigid and square.
6) **Repairs.** Complete all necessary repairs before returning the crane to service. Make a dated record of all repairs, adjustments and replacements.

(B) Inspect the following *at least once per month*:

1) **Oil level**. Lower the boom completely. Oil should be within ¾in. of the top of the tank with the boom in the fully lowered position. See *Subpart C*, "Yearly inspection".
2) **Hoses**. Check for cuts, kinks, and other damage. Confirm that the ends of the hose are firmly fastened to the pump and the cylinder.
3) Hardware. Check the integrity of all nuts, bolts, and pins. Replace any item that is damaged.
4) **Casters**. Move the crane a short distance. Determine whether each caster is loose, severely worn, or damaged. Clean the casters. Replace casters that do not roll smoothly or are bent or cracked.
5) **Winch, cable, and pulleys**. Examine the cable for frays, broken strands, kinks, etc. Make sure that the cable clamp (connects the hook to the cable) is secure. Make sure that all pulleys operate satisfactorily. Confirm that hardware is in satisfactory condition.
6) **Labels**. Check all labeling. The crane should be labeled as shown in the *LABELING DIAGRAM*.

(C) Regularly inspect the hydraulic oil (at least twice per year)

In addition to the inspections described in parts A and B, check the hydraulic fluid at least twice per year. Change the oil immediately if it darkens, becomes gritty, or turns a milky color (indicating the presence of water). Replace the hydraulic fluid with anti-wear hydraulic oil of viscosity grade 150 SUS at 100°F, (ISO 32 at 40°C). Examples of proper hydraulic fluid are AW 32 and HO 150 hydraulic oil, and non-synthetic transmission fluid. You may use a synthetic transmission fluid if you flush the system with the synthetic fluid before filling the reservoir.

TROUBLESHOOTING

Refer to Manual Hydraulic Pump Exploded View and Bill of Materials on page 9.

Issue	Explanation	Remedy
1. Cylinder does not extend when I move the handle	a. Too much weight applied (load exceeds capacity). b. Too little oil in hydraulic system. c. Pinched hydraulic hose. d. Relief valve pressure setting too low.	a. Remove enough of load that weight of load is within capacity. b. Add oil until level is within one inch of top of reservoir. c. Correct as appropriate. d. Increase pressure setting as necessary, but NEVER to more than 3,000psi
2. A lot of force is required to move the handle	e. Autoshifter valve stuck in deactivated position. f. Load exceeds capacity.	e. Remove port plug from port marked "UL" (on manifold); then remove piston. Inspect piston and springs f. Reduce load to be within capacity
3. Cylinder extends only when unloaded or handle pumped rapidly. -OR- I can pump the handle but the cylinder does not move.	g. Pump is air locked. h. Debris on seat of inlet check valve. i. Pressure setting of relief valve needs adjustment. j. Debris on seat of relief valve.	g. Remove air from the pump. See *Air Purging Procedure* on p. 11. h. Remove inlet check valve and clean debris from valve seat (the bottom of the cavity in pump body that valve fits into). i. Increase pressure setting as necessary, but NEVER more than 3,000psi. j. Remove relief valve and clean debris from valve seat in pump body.
4. Cylinder extends during down stroke of handle, but lowers during return stroke.	k. Outlet check valve stuck in open position.	k. Remove, disassemble, clean (with mineral spirits or kerosene), reassemble and reinstall outlet check valve assemblies.
5. Have to keep pumping handle to maintain cylinder extension	l. Outlet check valve allowing oil to return to pump chamber. m. Release valve allowing oil to leak back to the tank.	l. Remove both outlet check valves. Clean valves. Score bottom of chamber for ball bearing. m. Remove release valve assembly, inspect, clean, & repair as necessary
6. Pump feels spongy or cylinder extends in jerks	n. Oil level is low o. Air present in pump and/or cylinder	n. Add oil until within 1in. of top of reservoir. o. Purge air by following *Air purging procedure* on p. 11.
7. Cylinder retracts very slowly	p. Flow control valve obstructed	p. Remove valve and inspect for debris or non-operating spool
8. Cylinder retracts too rapidly	q. Flow control valve obstructed or not moving freely	q. Remove valve and inspect for debris or non-operating spool

LABELING DIAGRAM

The unit should be labeled as shown in the diagram. However, label content and location are subject to change so your product might not be labeled exactly as shown. Compare this diagram to your *RECORD OF SATISFACTORY CONDITION*. Replace all labels that are damaged, missing, or not easily readable (e.g. faded). Order replacement labels by contacting the *PARTS DEPARTMENT* online at http://www.vestilmfg.com/parts_info.htm or by calling (260) 665-7586 and asking for the PARTS DEPARTMENT.

A: Capacity information

ALL CAPACITIES ARE FROM STATIONARY HOOK ONLY.
WINCH HOOK IS 800LB. CAPACITY

B: Boom capacities at various lengths (label is specific to P-JIB-2 and P-JIB-4)

Capacity at Arm length	Max. Height	Pounds
$24^3/_8$"	___"	_____ lb.
$31^3/_8$"	___"	_____ lb.
$38^3/_8$"	___"	_____ lb.
$43^3/_8$"	___"	_____ lb.

C: Label 206 (hydraulic fluid specifications)

ISO 32 / 150 SUS
HYDRAULIC OIL OR NON-SYNTHETIC TRANSMISSION FLUID
ACEITE HIDRAULICO O LIQUIDOS DE TRANSMISION NO SINTETICOS
HUILE OU LIQUIDE HYDRAULIQUE NON-SYNTHÉTIQUE
206 Rev. 1003
VESTIL MANUFACTURING CORPORATION • Phone (260) 665-7586 • www.vestil.com

D: Label 586 (on counterweight; use-related warnings)

⚠ WARNING	⚠	⚠ AVERTISSEMENT
• DO NOT exceed rated capacity • LOWER LOAD before moving to avoid load swing • NEVER STAND under, beside or in front of load • USE on hard level surface • INSPECT connections before using • READ manual before use	• No exceda la capacidad tasada • Descienda la carga antes de mover para evitar que la carga se balancee • Nunca se situe debajo, al lado o delante de la carga • Use en una superficie a nivel dura • Inspeccione las conexiones antes del uso • Lea el manual antes del uso	• NE PAS DÉPASSER la capacité nominale • DESCENDRE la charge avant de la transporter pour éviter la giration • JAMAIS vous mettre sous, à côté de ou devant une charge • UTILISER sur un sol plat et dur • INSPECTER les connexions avant utilisation • LIRE le guide avant utilisation

586 rev 1210

E: Label 287 (on counterweight; model, serial number, & capacity)

MODEL/MODÉLO/MODÈLE _____
STATIC CAPACITY (evenly distributed) _____ lbs.
LA CAPACIDAD CONSTANTE (distribuida uniformemente) _____ kgs.
CAPACITÉ STATIQUE (distribuée régulièrement) _____ kgs.
SERIAL/SERIE/SÉRIE _____
287 REV 0812

F: Use instructions

LOCATE OUTRIGGERS AND ENGAGE LEVELING JACKS BEFORE LIFTING LOAD.

G: Floor lock info.

Model: LJ-17
LEVELING JACK. 17" TRAVEL
Made in China

LIMITED WARRANTY

Vestil Manufacturing Corporation ("Vestil") warrants this product to be free of defects in material and workmanship during the warranty period. Our warranty obligation is to provide a replacement for a defective, original part covered by the warranty after we receive a proper request from the Warrantee (you) for warranty service.

Who may request service?

Only a warrantee may request service. You are a warrantee if you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

Definition of "original part"?

An original part is a part used to make the product as shipped to the Warrantee.

What is a "proper request"?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by one of the following methods:

US Mail	Fax	Email
Vestil Manufacturing Corporation	(260) 665-1339	info@vestil.com
2999 North Wayne Street, PO Box 507	Phone	Enter "Warranty service request"
Angola, IN 46703	(260) 665-7586	in subject field.

In the written request, list the parts believed to be defective and include the address where replacements should be delivered. After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil will require you to send the entire product, or just the defective part (or parts), to its facility in Angola, IN.

What is covered under the warranty?

The warranty covers defects in the following original, dynamic parts: motors, hydraulic pumps, motor controllers, and cylinders. It also covers defects in original parts that wear under normal usage conditions ("wearing parts"), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original dynamic components is 90 days. For wearing parts, the warranty period is 90 days. Both warranty periods begin on the date Vestil ships the product to the Warrantee. If the product was purchased from an authorized distributor, the periods begin when the distributor ships the product. Vestil may, at its sole discretion, extend a warranty period for products shipped from authorized distributors by up to 30 days to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any *covered* part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

The Warrantee (you) is responsible for paying labor costs and freight costs to return the product to Vestil for warranty service.

Events that automatically void this Limited Warranty.

- Misuse;
- Negligent assembly, installation, operation or repair;
- Installation/use in corrosive environments;
- Inadequate or improper maintenance;
- Damage sustained during shipping;
- Collisions or other accidents that damage the product;
- Unauthorized modifications: Do not modify the product IN ANY WAY without first receiving written authorization from Vestil.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty. Vestil makes no warranty or representation that this product complies with any state or local design, performance, or safety code or standard. Noncompliance with any such code or standard is not a defect in material or workmanship.