

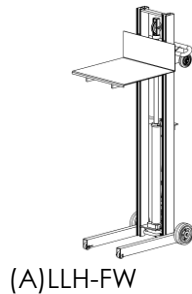

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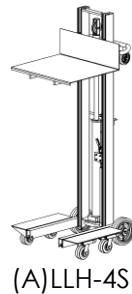
LLH-, LLPH-, ALLH-, & ALLPH-Series Light Load Lifters



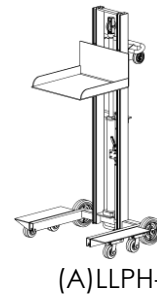
(A)LLH-FW



(A)LLPH-FW



(A)LLH-4SFL



(A)LLPH-4SFL

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 <https://www.vestil.com/page-parts-request.php>.

Electronic Copies of Instruction Manuals

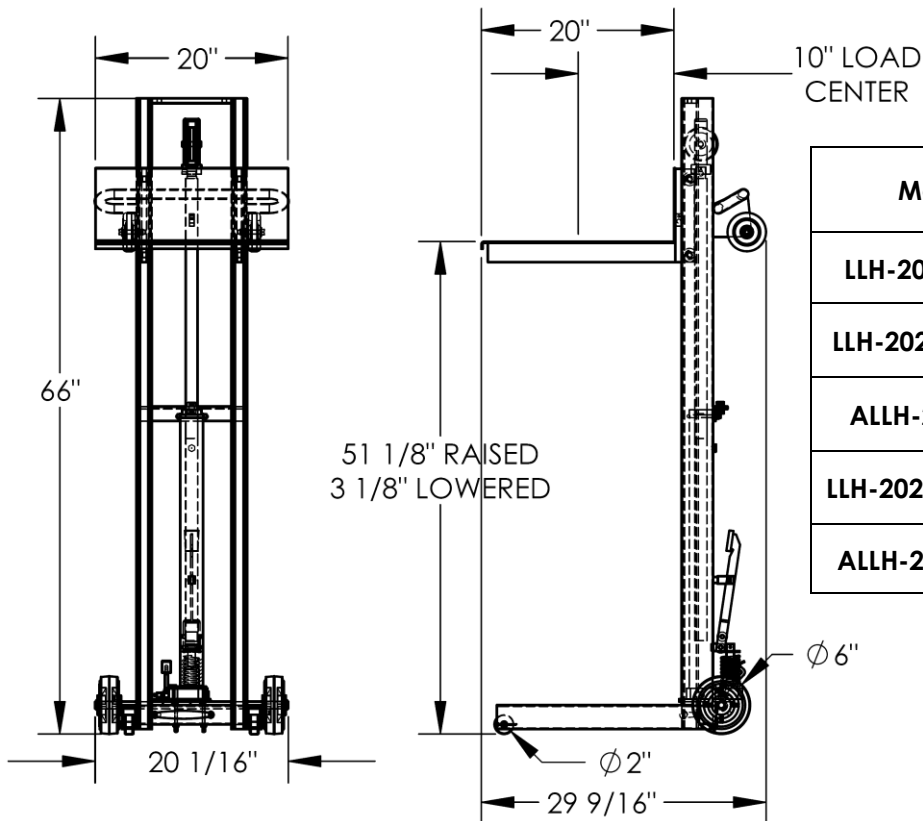
Additional copies of this instruction manual may be downloaded from <https://www.vestil.com/page-manuals.php>.

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SPECIFICATIONS

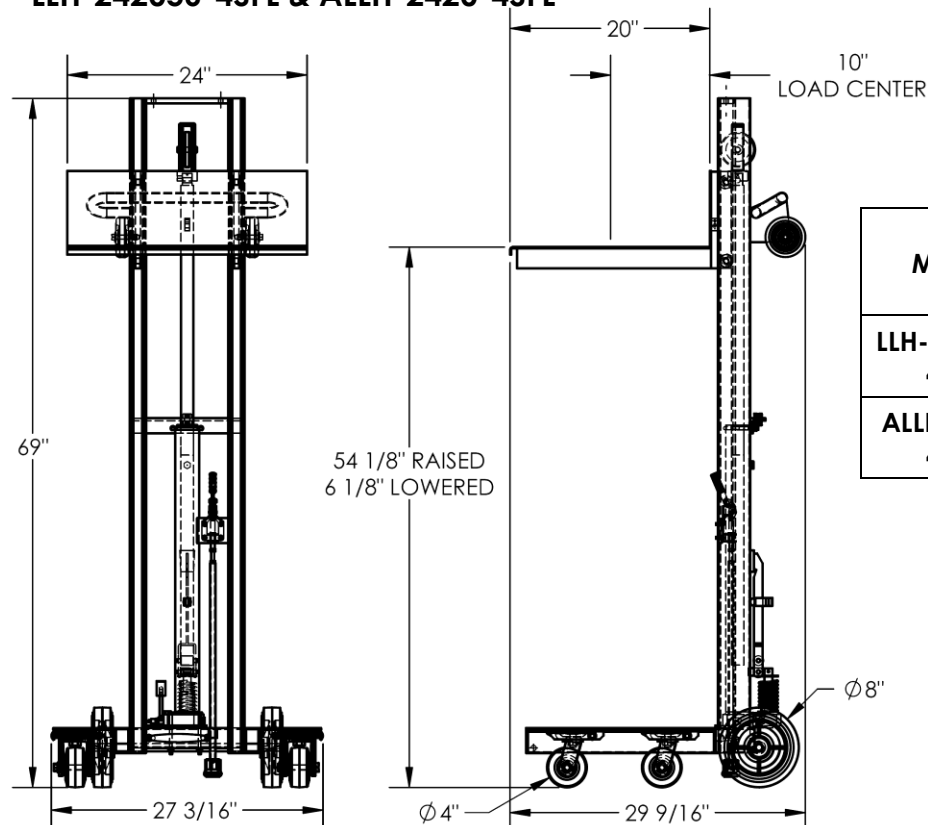
Dimensions, net weight, and capacity information for standard models appear in the diagrams & tables.

LLH-202053-FW, LLH-202053-FWFL, ALLH2020-FW, LLH-202053-FWWL, & ALLH-2020-FWFL

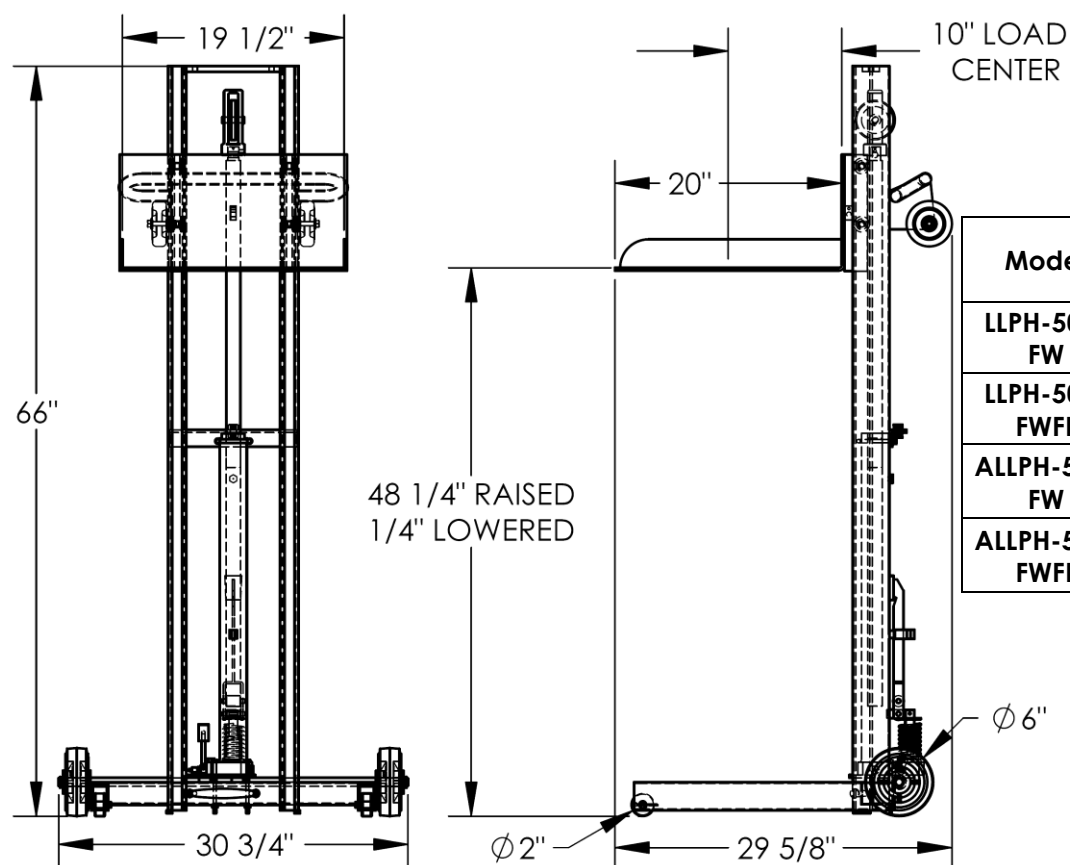


Model	Net Weight	Capacity
LLH-202053-FW	178 lb. 80.7 kg	400 lb. 181.8 kg
LLH-202053-FWFL	200 lb. 90.9 kg	400 lb. 181.8 kg
ALLH-2020-FW	128 lb. 58.2 kg	400 lb. 181.8 kg
LLH-202053-FWWL	200 lb. 90.9 kg	400 lb. 181.8 kg
ALLH-2020-FWFL	130 lb. 59.1 kg	400 lb. 181.8 kg

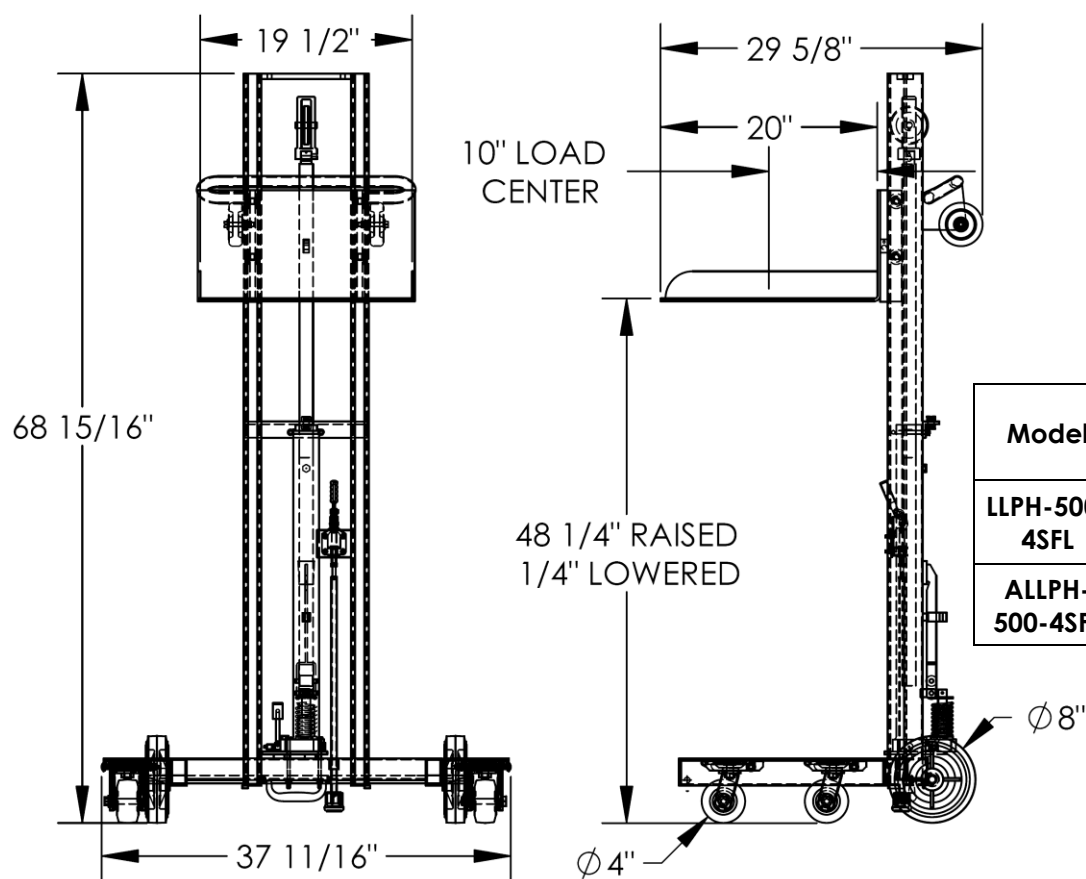
LLH-242056-4SFL & ALLH-2420-4SFL



Model	Net Weight	Capacity
LLH-242056-4SFL	260 lb. 118.2 kg	400 lb. 181.8 kg
ALLH-2420-4SFL	171 lb. 77.7 kg	400 lb. 181.8 kg

LLPH-500-FW, LLPH-500-FWFL, ALLPH-500-FW, & ALLPH-500-FWFL

Model	Net Weight	Capacity
LLPH-500-FW	223 lb. 101.4 kg	400 lb. 181.8 kg
LLPH-500-FWFL	226 lb. 102.7 kg	400 lb. 181.8 kg
ALLPH-500-FW	137 lb. 62.3 kg	400 lb. 181.8 kg
ALLPH-500-FWFL	139 lb. 63.2 kg	400 lb. 181.8 kg

LLPH-500-4SFL and ALLPH-500-4SFL

Model	Net Weight	Capacity
LLPH-500-4SFL	283 lb. 128.6 kg	400 lb. 181.8 kg
ALLPH-500-4SFL	178 lb. 80.9 kg	400 lb. 181.8 kg

SIGNAL WORDS

SIGNAL WORDS appear in this manual to draw the reader's attention to important safety-related messages. The following are signal words used in this manual and their definitions.

 DANGER	Identifies a hazardous situation which, if not avoided, <u>WILL</u> 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, <u>COULD</u> result in DEATH or SERIOUS INJURY.
 CAUTION	Indicates a hazardous situation which, if not avoided, <u>COULD</u> 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 foreseeable hazards associated with the use of its products, but no manual can address every conceivable risk. Minimize the likelihood of injury by observing the hazards identified below and by inspecting and maintaining the product as instructed in [INSPECTIONS & MAINTENANCE](#) on p. 20.

WARNING

Risks of serious personal injuries or death.

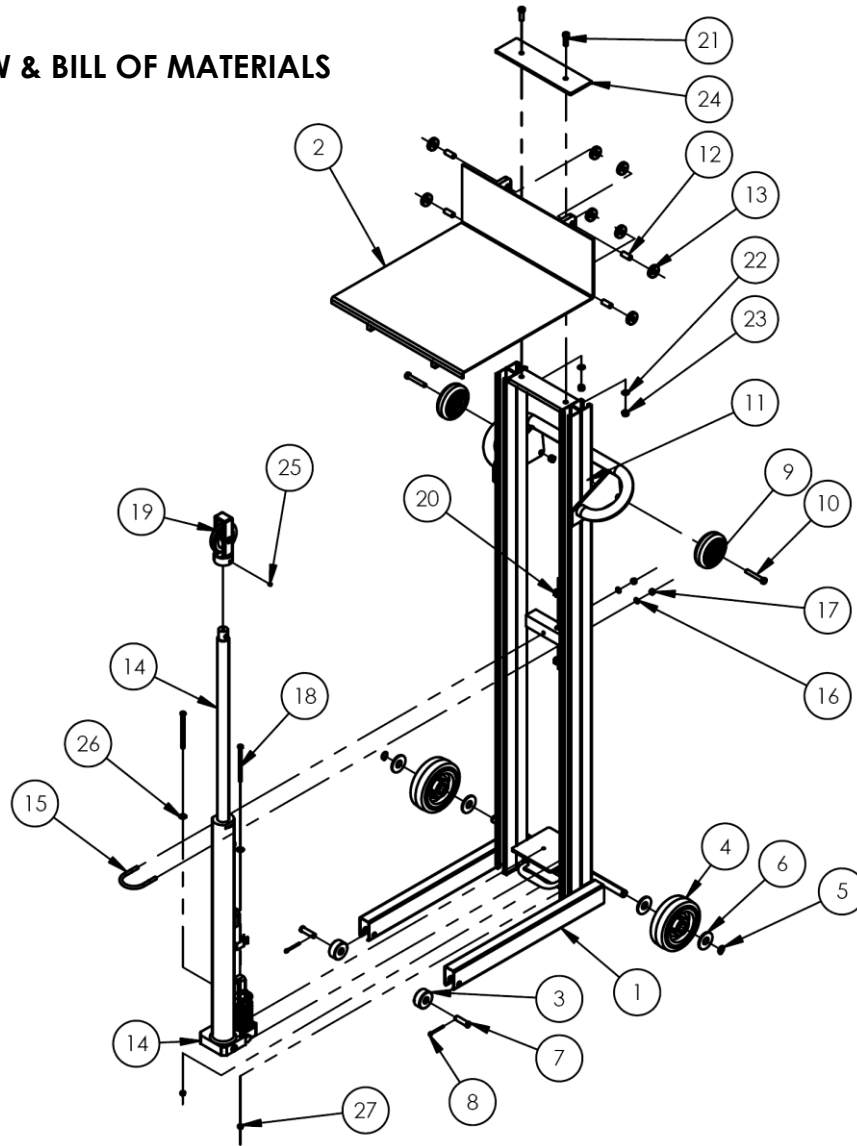
Always apply material handling techniques learned during training and use the product properly.

- **Read and understand the entire manual before assembling, using or servicing the product.**
- Inspect the lifter as directed in the [INSPECTIONS & MAINTENANCE](#) instructions on [p. 20](#). DO NOT use the lifter unless it is in satisfactory condition. See [RECORD OF SATISFACTORY CONDITION](#), [p. 20](#).
- ALWAYS inspect the area where the lifter will be used before using it.
- Regardless of whether the lifter is loaded or unloaded, DO NOT stand or travel under the deck.
- Instruct others to stay clear of the device and the supported load during operation.
- Avoid contact with moving parts. In particular, avoid contact with the cable, deck, wheels & rollers.
- DO NOT allow people to ride on the lifter.
- Failure to properly position a load on the deck might result in injury:
 1. DO NOT exceed the maximum rated load (capacity). The rated load appears on label 287 as shown in [LABELING DIAGRAM](#) on p. 28. Also see applicable [SPECIFICATIONS](#) on [p. 2](#) or [3](#).
 2. Center & evenly distribute loads. DO NOT handle off-center loads or loads that cannot be centered.
 3. Start & stop gradually to avoid upsetting the load on the deck. Strap loads to the deck if they might roll or slide.
 4. NEVER tilt the lifter while carrying a load. All wheels and casters must maintain contact with the ground when a load is on the deck.
- ALWAYS observe the deck while raising and lowering it. The deck should rise smoothly and evenly from side-to-side. Watch for binding or jerky movement and listen for unusual noises. Tag the unit "Out of order" and do not use it if you observe anything abnormal.
- Only use this lifter on even, level ground. DO NOT transport loads over inclines or stairs.
- Enlist a coworker to help you lift, load, and unload the unit whenever necessary.
- DO NOT perform maintenance on this product UNLESS it is unloaded and the deck is lowered. If the unit requires repairs, ONLY install manufacturer-approved replacement parts.
- Before leaving the unit unattended, unload it and lower the deck.
- DO NOT use the lifter UNLESS all labels are in place and readable. See [LABELING DIAGRAM](#) on [p. 28](#).
- DO NOT modify this product in any way. Modifying the lifter automatically voids the limited warranty and might make it unsafe to use.

NATIONAL STANDARDS

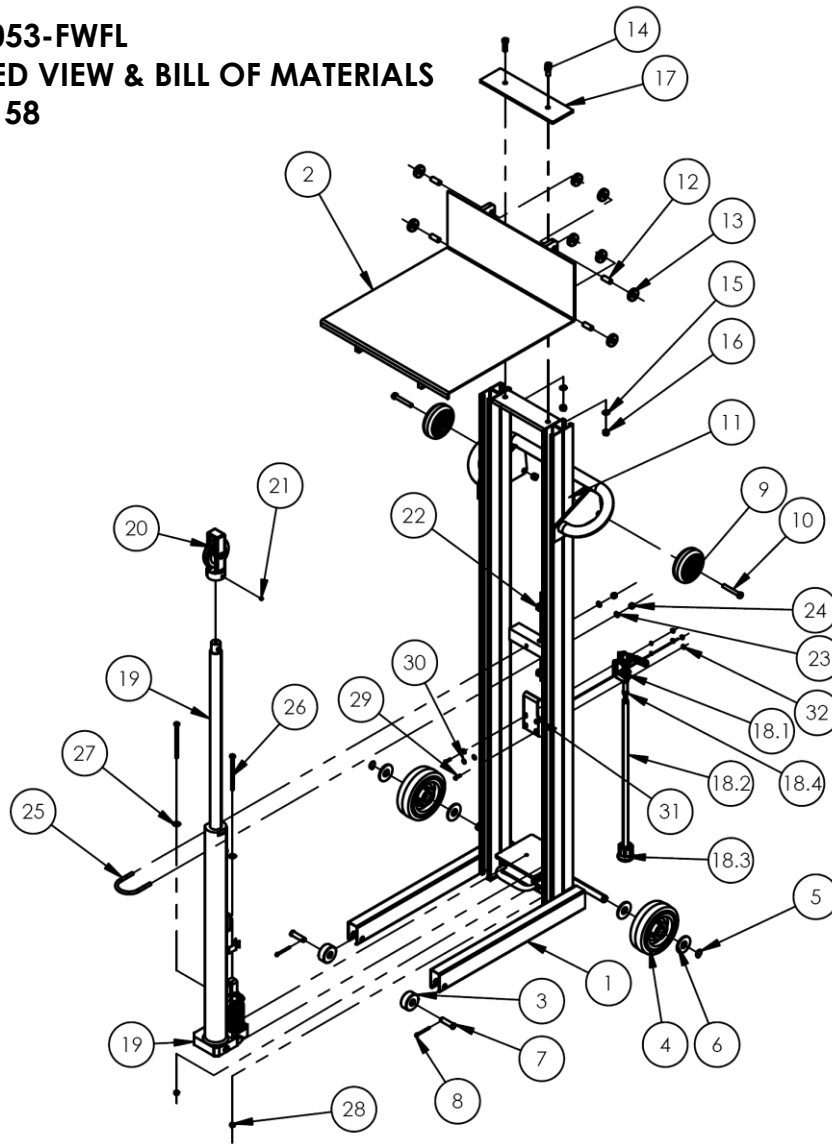
This product is a manually propelled high lift truck. The Industrial Truck Standards Development Foundation (ITSDF) publishes national standard ANSI/ITSDF B56.10 (the "Standard") on its website (www.itsdf.org). The standard is freely downloadable at <http://www.itsdf.org/cue/b56-standards.html>. Before putting the unit into service, acquire a copy of the Standard and apply all recommendations in Part II: For the User. If instructions provided in this manual conflict with instructions in the Standard, then you should apply the instructions in the Standard. Vestil encourages you to immediately contact [TECHNICAL SERVICE](#) to report any differences between instructions in this manual and the Standard.

LLH-202053-FW
EXPLODED VIEW & BILL OF MATERIALS
21-006-004



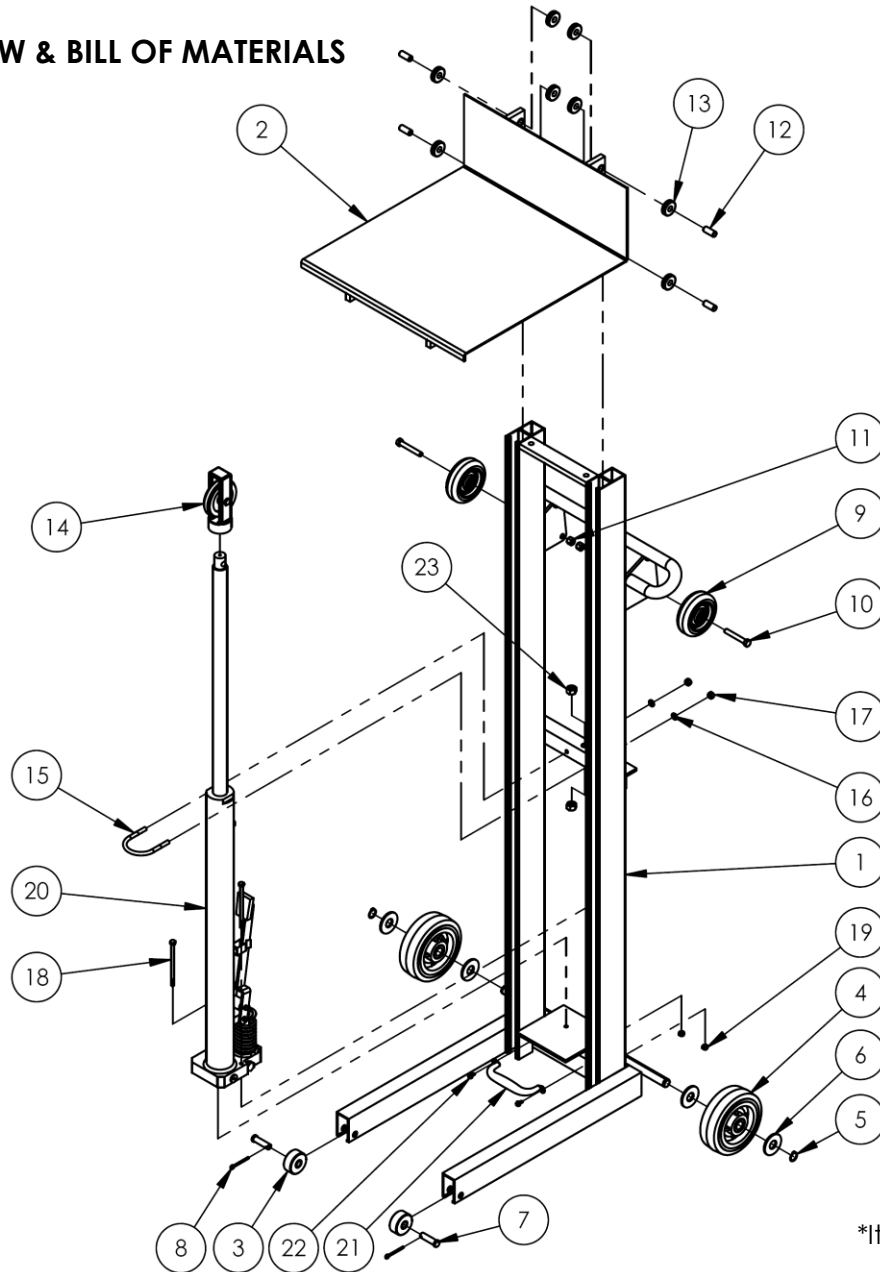
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	21-514-004	WELDMENT, FRAME	1	15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
2	21-513-002	WELDMENT, DECK	1	16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
3	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
4	16-132-058	WHEEL, POLY ON POLY	2	18	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
5	68015	EXTERNAL RETAINING RING,PHOSPHATE, 3/4"	2	19	33-542-001	ASSEMBLY, PULLEY	1
6	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	20	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
7	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	21	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2
8	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	22	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2
9	16-132-009	PP-4/1.25-W	2	23	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	24	21-017-155	BAR, RETAINER	1
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	25	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
12	21-112-002	PIN. ROLLER	4	26	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
13	21-027-003	ROLLER, GUIDE	8	27	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2
14	01-640-031	PUMP, MANUAL, STK 24" FHJ	1				

LLH-202053-FWFL **EXPLODED VIEW & BILL OF MATERIALS** **21-006-158**



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	21-514-172	WELDMENT, FRAME	1	18.1	21-145-001	SPECIALTY HARDWARE, PUSH-PULL CLAMP	1
2	21-513-002	WELDMENT, DECK	1	18.2	21-537-006	WELDMENT, FLOOR LOCK	1
3	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	18.3	14-037-005	RUBBER STOP CRUTCH TIP	1
4	16-132-058	WHEEL, POLY ON POLY	2	18.4	40307	HEX NUT, CLASS 8, ZINC PLATED, M8-1.25	1
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	19	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
6	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	20	33-542-001	ASSEMBLY, PULLEY	1
7	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	21	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
8	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	22	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
9	16-132-009	PP-4/1.25-W	2	23	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	24	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	25	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
12	21-112-002	PIN, ROLLER	4	26	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
13	21-027-003	ROLLER, GUIDE	8	27	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
14	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2	28	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2
15	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2	29	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
16	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2	30	33074	SAE FLAT WASHER, Z-PLATED, 3/16" (#10)	4
17	21-017-155	BAR, RETAINER	1	31	33614	LOCK WASHER, Z-PLATED, #10	4
18	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1	32	36030	10-32 HEX NUT	4

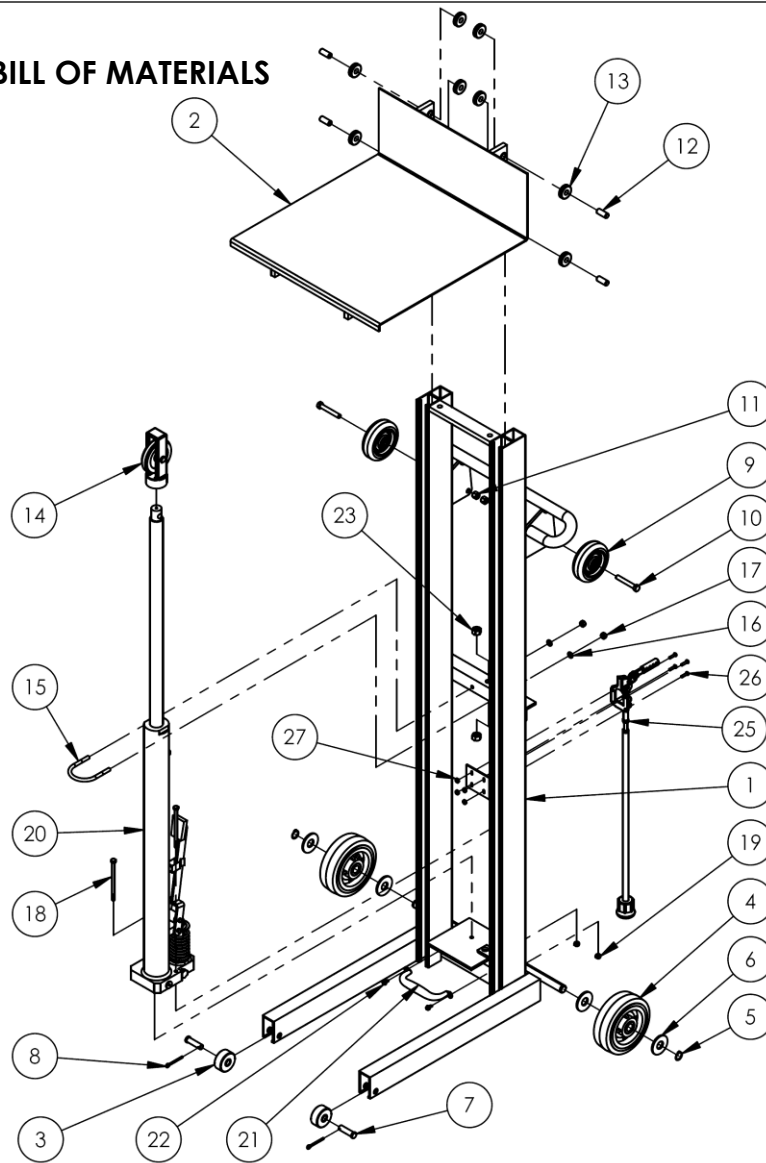
ALLH-2020-FW **EXPLODED VIEW & BILL OF MATERIALS** **42-006-018**



*Item 24 not shown

Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-013	WELDMENT, FRAME	1	13	21-027-003	ROLLER, GUIDE ROLLER	8
2	42-513-006	WELDMENT, DECK	1	14	33-542-001	ASSEMBLY, PULLEY	1
3	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
4	16-132-058	WHEEL, POLY ON POLY	2	16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
6	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	18	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
7	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	19	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2
8	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	20	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
9	16-132-009	PP-4/1.25-W	2	21	13-025-004-002	HANDLE, WITH HOLES	1
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	22	31802	SCREW, SELF-TAPPING SCREW	2
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	23	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
12	21-112-002	PIN, ROLLER	4	*24	33-542-003	CHAIN, CHAIN ASSEMBLY	1

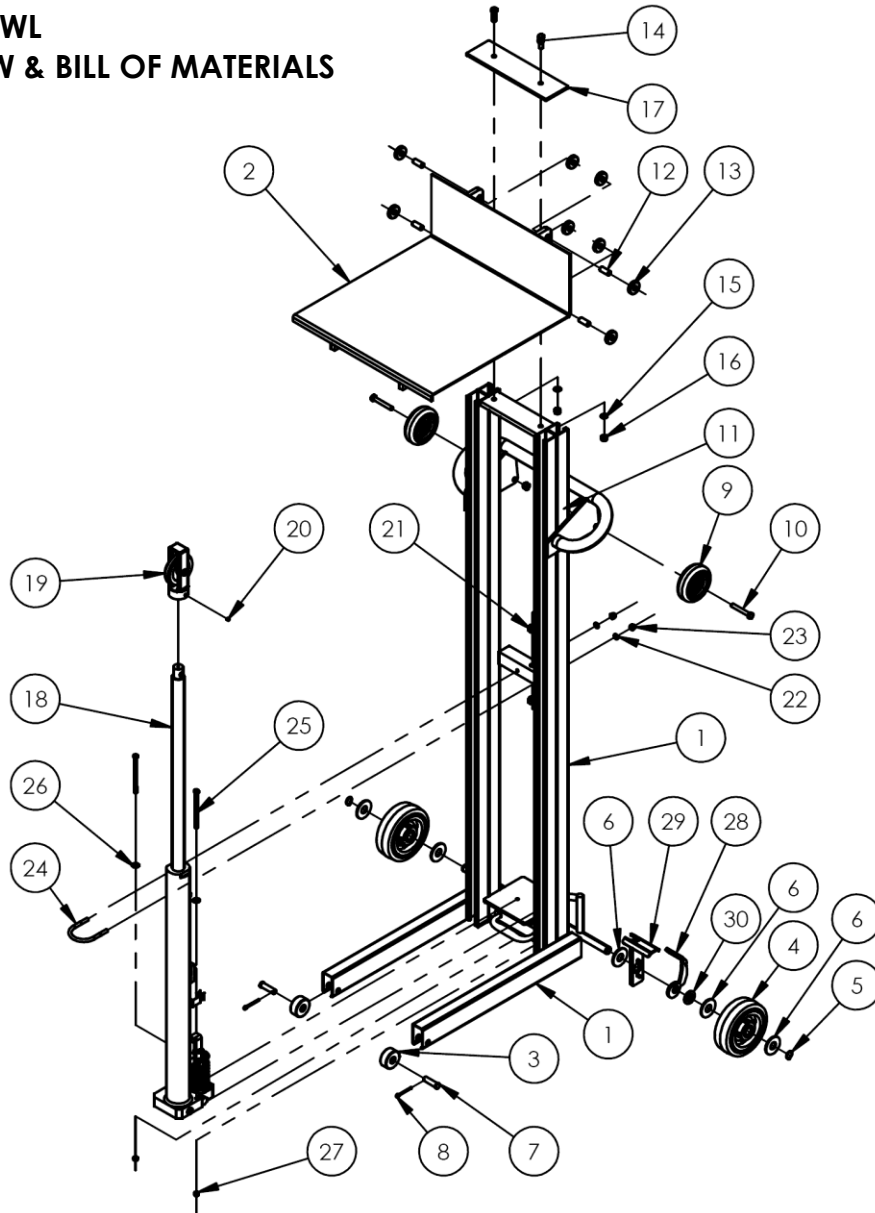
ALLH-2020-FWFL **EXPLODED VIEW & BILL OF MATERIALS** **42-006-027**



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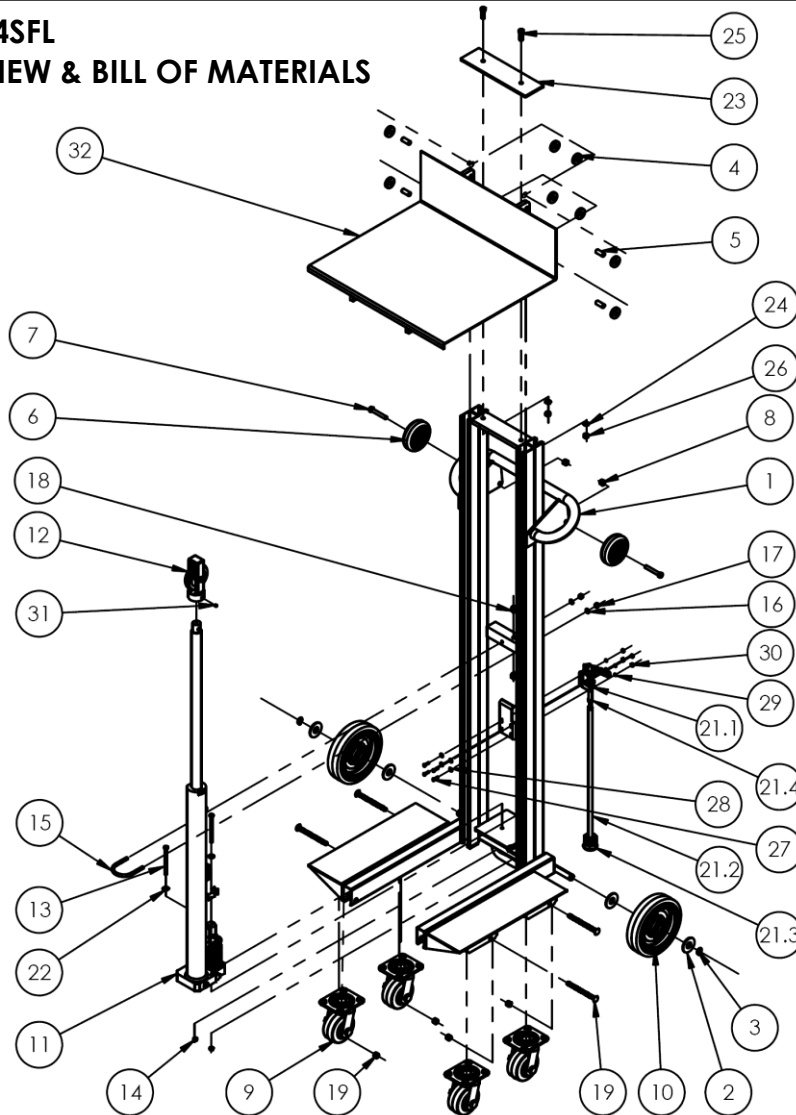
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-033	WELDMENT, FRAME	1	15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
2	42-513-006	WELDMENT, DECK	1	16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
3	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
4	16-132-058	WHEEL, POLY ON POLY	2	18	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	19	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2
6	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	20	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
7	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	21	13-025-004-002	HANDLE, WITH HOLES	1
8	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	22	31802	SCREW, SELF-TAPPING SCREW	2
9	16-132-009	PP-4/1.25-W	2	23	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	*24	33-542-003	CHAIN, CHAIN ASSEMBLY	1
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	25	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
12	21-112-002	PIN. ROLLER	4	26	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
13	21-027-003	ROLLER, GUIDE ROLLER	8	27	37015	10-32 NYLOCK NUT Z-PLATED	4
14	33-542-001	ASSEMBLY, PULLEY	1				

LLH-202053-FWWL **EXPLODED VIEW & BILL OF MATERIALS** **21-006-161**



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	21-514-176	WELDMENT, FRAME	1	16	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
2	21-513-002	WELDMENT, DECK	1	17	21-017-155	BAR, RETAINER	1
3	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	18	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
4	16-132-058	WHEEL, POLY ON POLY	2	19	33-542-001	ASSEMBLY, PULLEY	1
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	20	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
6	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	5	21	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
7	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	22	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
8	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	23	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
9	16-132-009	PP-4/1.25-W	2	24	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	25	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	26	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
12	21-112-002	PIN. ROLLER	4	27	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2
13	21-027-003	ROLLER, GUIDE	8	28	21-037-015	LOCK, BRAKE LEVER	1
14	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2	29	21-537-010	WELDMENT, WHEEL BRAKE	1
15	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2	30	21-014-227	FRAME, FLAT WASHER	1

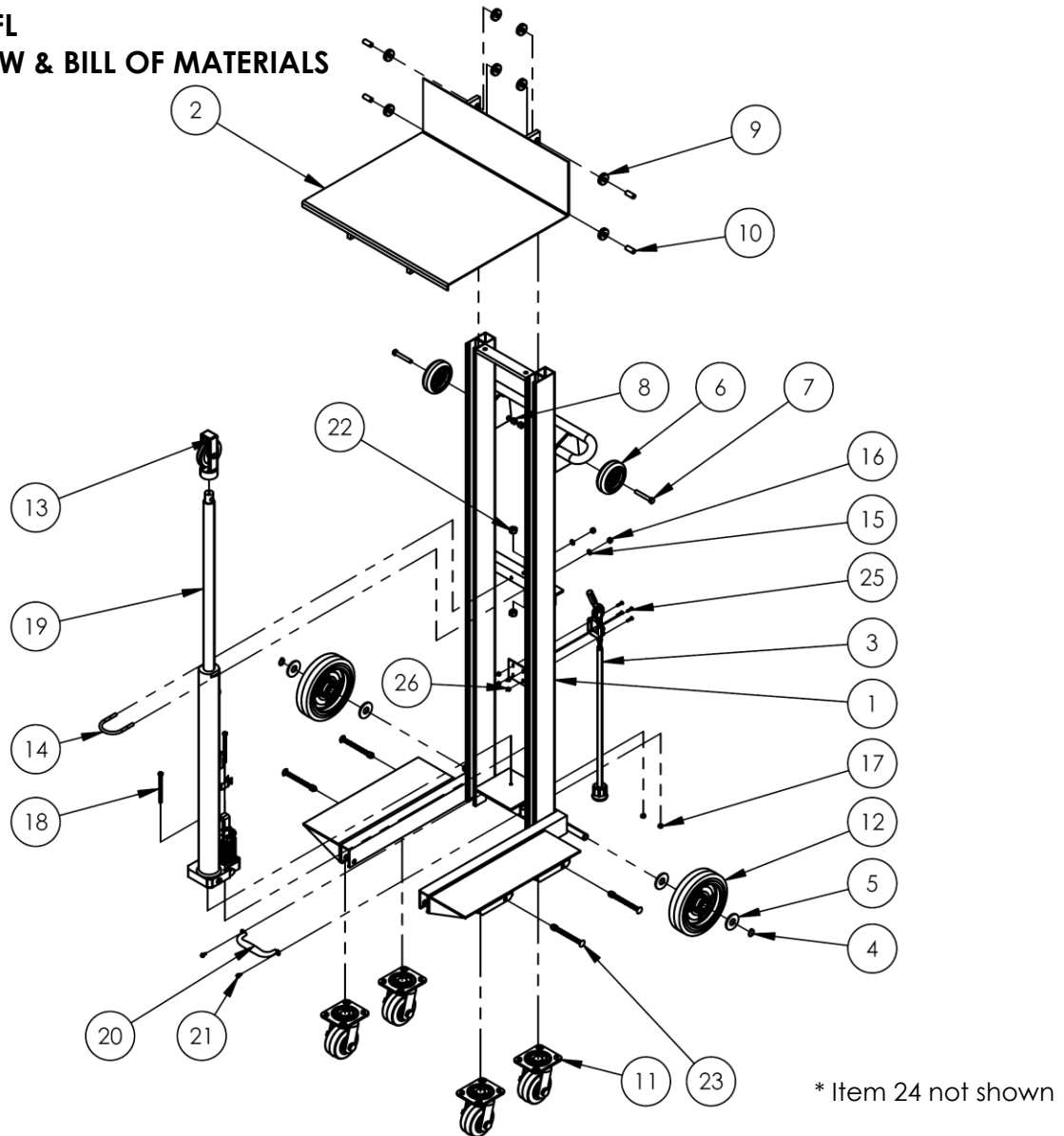
LLH-242056-4SFL **EXPLODED VIEW & BILL OF MATERIALS** **21-006-006**



* Item 20 not shown

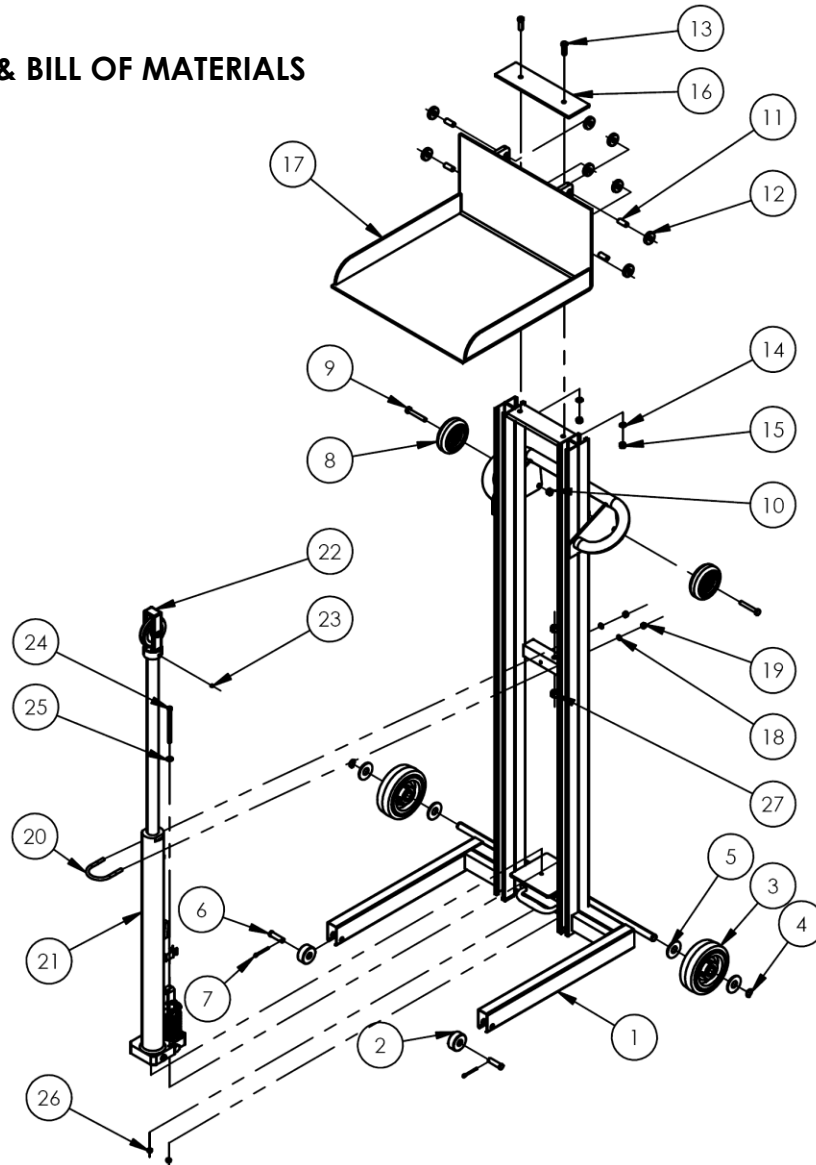
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	21-514-006	WELDMENT, FRAME	1	19	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
2	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	*20	33-542-003	CHAIN, CHAIN ASSEMBLY	1
3	68015	EXTERNAL RETAINING RING,PHOSPHATE, 3/4"	2	21	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
4	21-027-003	ROLLER, GUIDE	8	21.1	21-145-001	SPECIALTY HARDWARE, PUSH-PULL CLAMP	1
5	21-112-002	PIN. ROLLER	4	21.2	21-537-006	WELDMENT, FLOOR LOCK	1
6	16-132-009	PP-4/1.25-W	2	21.3	14-037-005	RUBBER STOP CRUTCH TIP	1
7	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	21.4	40307	HEX NUT, CLASS 8, ZINC PLATED, M8-1.25	1
8	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	22	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
9	16-132-011	CASTER SWIVEL, 4X2	4	23	21-017-155	BAR, RETAINER	1
10	16-132-200	CASTER, PP-8/2-W, RED	2	24	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2
11	01-640-031	PUMP, MANUAL, STK 24" FHJ	1	25	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2
12	33-542-001	ASSEMBLY, PULLEY	1	26	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
13	11019	HEX BOLT, GRADE A, ZINC PLATED, 1/4"-20x4"	2	27	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
14	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2	28	33074	SAE FLAT WASHER, Z-PLATED, 3/16" (#10)	4
15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1	29	33614	LOCK WASHER, Z-PLATED, #10	4
16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2	30	36030	10-32 HEX NUT	4
17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2	31	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
18	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2	32	21-513-003	WELDMENT, DECK	1

ALLH-2420-4SFL **EXPLODED VIEW & BILL OF MATERIALS** **42-006-012**



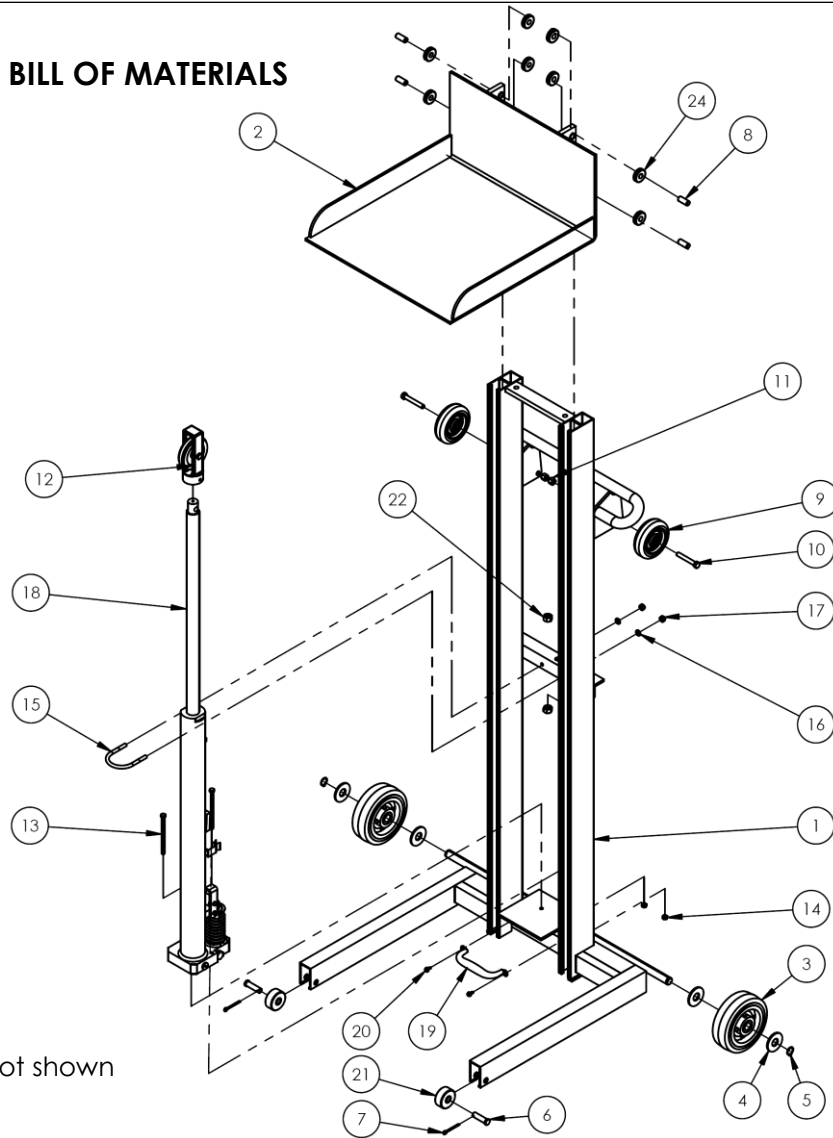
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-015	WELDMENT, FRAME	1	14	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
2	42-513-007	WELDMENT, DECK	1	15	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
3	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1	16	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
4	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	17	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2
5	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	18	11019	HEX BOLT, GRADE A, ZINC PLATED, 1/4" - 20 x 4"	2
6	16-132-009	PP-4/1.25-W	2	19	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
7	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	20	13-025-004-002	HANDLE, WITH HOLES	1
8	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	21	31802	SCREW, SELF-TAPPING SCREW	2
9	21-027-003	ROLLER, GUIDE ROLLER	8	22	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
10	21-112-002	PIN. ROLLER	4	23	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
11	16-132-011	CASTER SWIVEL, 4X2	4	*24	33-542-003	CHAIN, CHAIN ASSEMBLY	1
12	16-132-200	CASTER, PP-8/2-W, RED	2	25	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
13	33-542-001	ASSEMBLY, PULLEY	1	26	37015	10-32 NYLOCK NUT Z-PLATED	4

LLPH-500-FW
EXPLODED VIEW & BILL OF MATERIALS
42-006-013



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-018	WELDMENT, FRAME	1	15	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
2	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	16	21-017-155	BAR, RETAINER	1
3	16-132-058	WHEEL, POLY ON POLY	2	17	33-513-032	WELDMENT, DECK	1
4	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	18	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
5	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	19	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
6	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	20	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
7	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	21	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
8	16-132-009	PP-4/1.25-W	2	22	33-542-001	ASSEMBLY, PULLEY	1
9	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	23	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
10	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	24	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
11	21-112-002	PIN. ROLLER	4	25	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
12	21-027-003	ROLLER, GUIDE	8	26	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2
13	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2	27	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
14	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2				

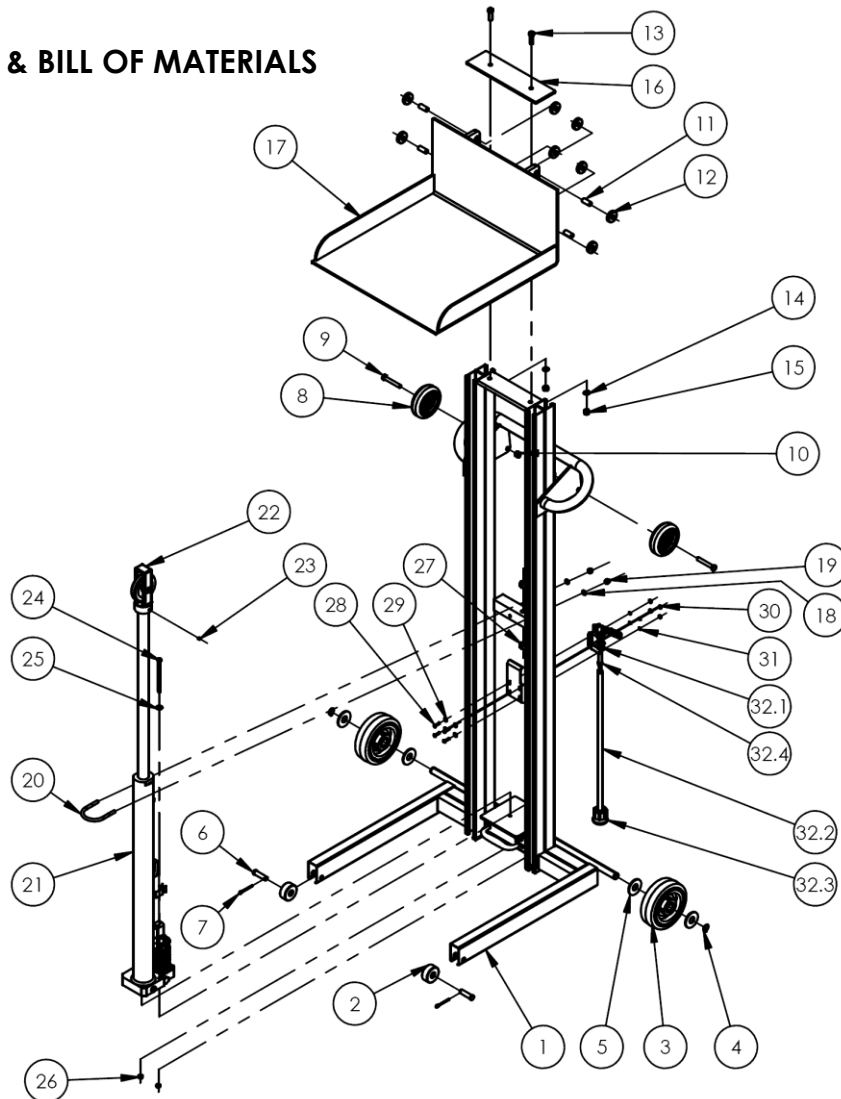
ALLPH-500-FW **EXPLODED VIEW & BILL OF MATERIALS** **42-006-016**



* Item 23 not shown

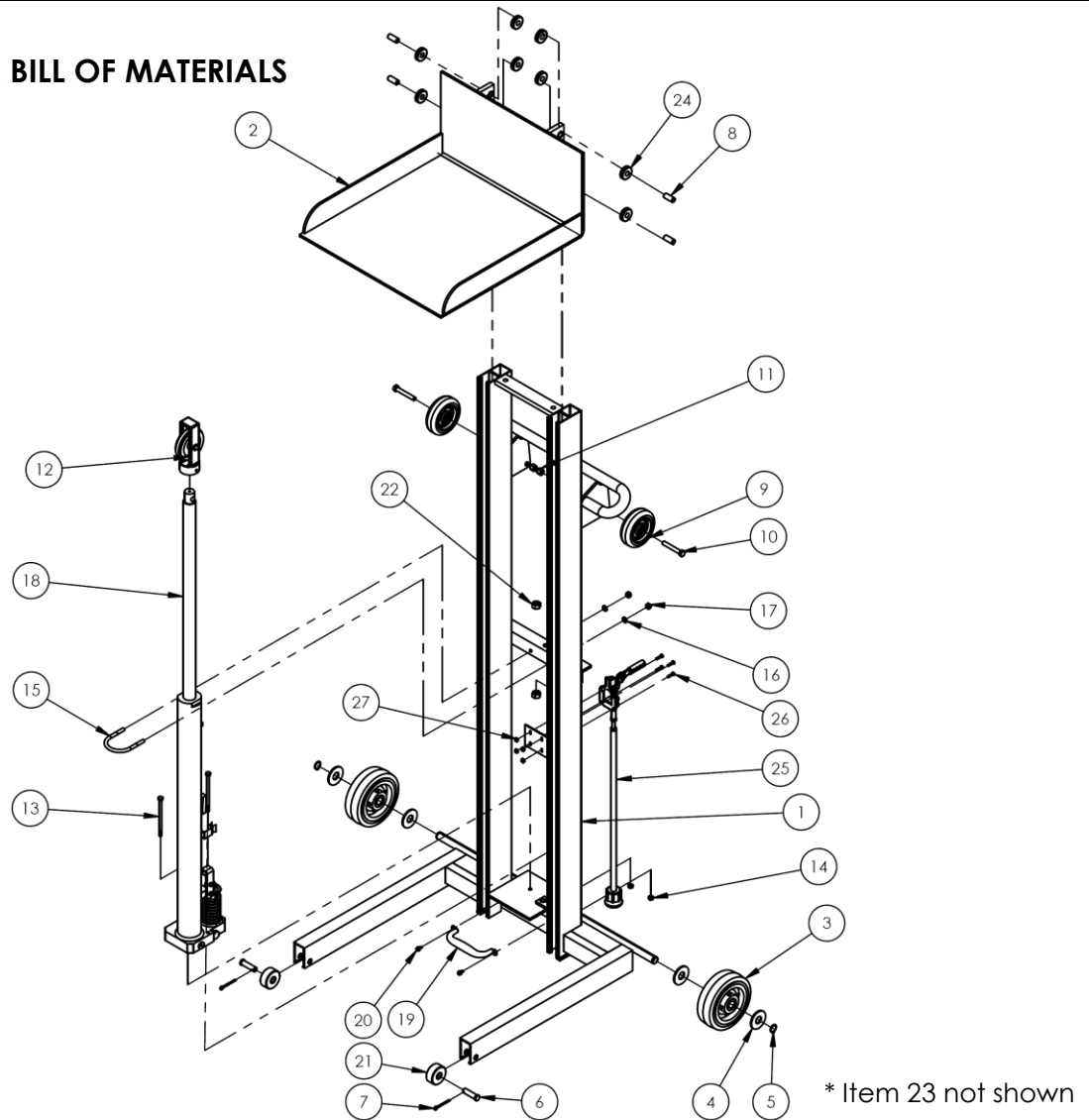
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-035	WELDMENT, FRAME	1	15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
2	21-513-038	WELDMENT, DECK	1	16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
3	16-132-058	WHEEL, POLY ON POLY	2	17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
4	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	18	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	19	13-025-004-002	HANDLE, WITH HOLES	1
6	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	20	31802	SCREW, SELF-TAPPING SCREW	2
7	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	21	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2
8	21-112-002	PIN, ROLLER	4	22	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
9	16-132-009	PP-4/1.25-W	2	*23	33-542-003	CHAIN, CHAIN ASSEMBLY	1
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	24	21-027-003	ROLLER, GUIDE ROLLER	8
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	25	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
12	33-542-001	ASSEMBLY, PULLEY	1	26	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
13	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2	27	37015	10-32 NYLOCK NUT Z-PLATED	4
14	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2				

LLPH-500-FWFL **EXPLODED VIEW & BILL OF MATERIALS** **21-006-160**



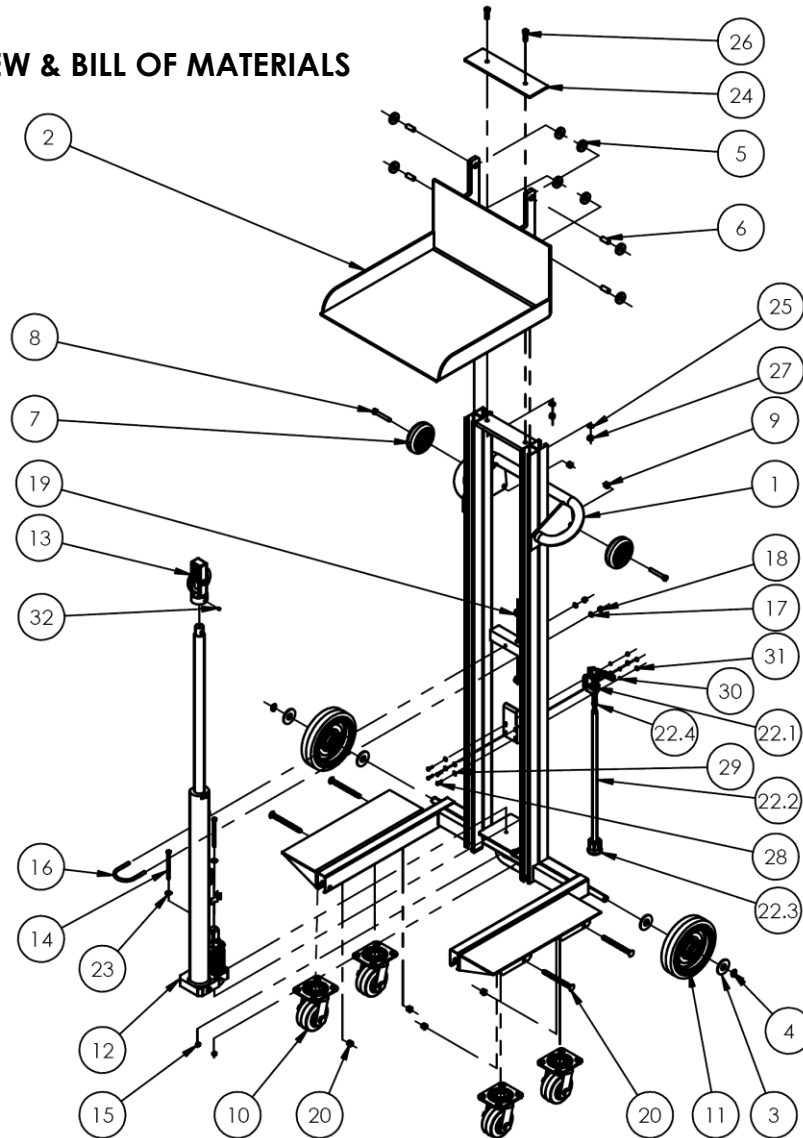
Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	21-514-174	WELDMENT, FRAME	1	19	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
2	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2	20	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
3	16-132-058	WHEEL, POLY ON POLY	2	21	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
4	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	22	33-542-001	ASSEMBLY, PULLEY	1
5	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	23	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1
6	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	24	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
7	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	25	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
8	16-132-009	PP-4/1.25-W	2	26	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2
9	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	27	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
10	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	28	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
11	21-112-002	PIN. ROLLER	4	29	33074	SAE FLAT WASHER, Z-PLATED, 3/16" (#10)	4
12	21-027-003	ROLLER, GUIDE	8	30	36030	10-32 HEX NUT	4
13	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2	31	33614	LOCK WASHER, Z-PLATED, #10	4
14	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2	32	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
15	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2	32.1	21-145-001	SPECIALTY HARDWARE, PUSH-PULL CLAMP	1
16	21-017-155	BAR, RETAINER	1	32.2	21-537-006	WELDMENT, FLOOR LOCK	1
17	33-513-032	WELDMENT, DECK	1	32.3	14-037-005	RUBBER STOP CRUTCH TIP	1
18	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2	32.4	40307	HEX NUT, CLASS 8, ZINC PLATED, M8-1.25	1

ALLPH-500-FWFL **EXPLODED VIEW & BILL OF MATERIALS** **42-006-029**



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-035	WELDMENT, FRAME	1	15	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
2	21-513-038	WELDMENT, DECK	1	16	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
3	16-132-058	WHEEL, POLY ON POLY	2	17	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
4	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	18	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	19	13-025-004-002	HANDLE, WITH HOLES	1
6	21-112-003	PIN, Ø1/2 X 1-15/16 LG RETAINING CLEVIS	2	20	31802	SCREW, SELF-TAPPING SCREW	2
7	65107	COTTER PIN, ZINC FINISH, Ø5/32" X 2"	2	21	21-527-002	SUB-ASSEMBLY, ROLLER W/ BUSHING	2
8	21-112-002	PIN. ROLLER	4	22	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
9	16-132-009	PP-4/1.25-W	2	*23	33-542-003	CHAIN, CHAIN ASSEMBLY	1
10	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	24	21-027-003	ROLLER, GUIDE ROLLER	8
11	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	25	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
12	33-542-001	ASSEMBLY, PULLEY	1	26	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
13	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2	27	37015	10-32 NYLOCK NUT Z-PLATED	4
14	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2				

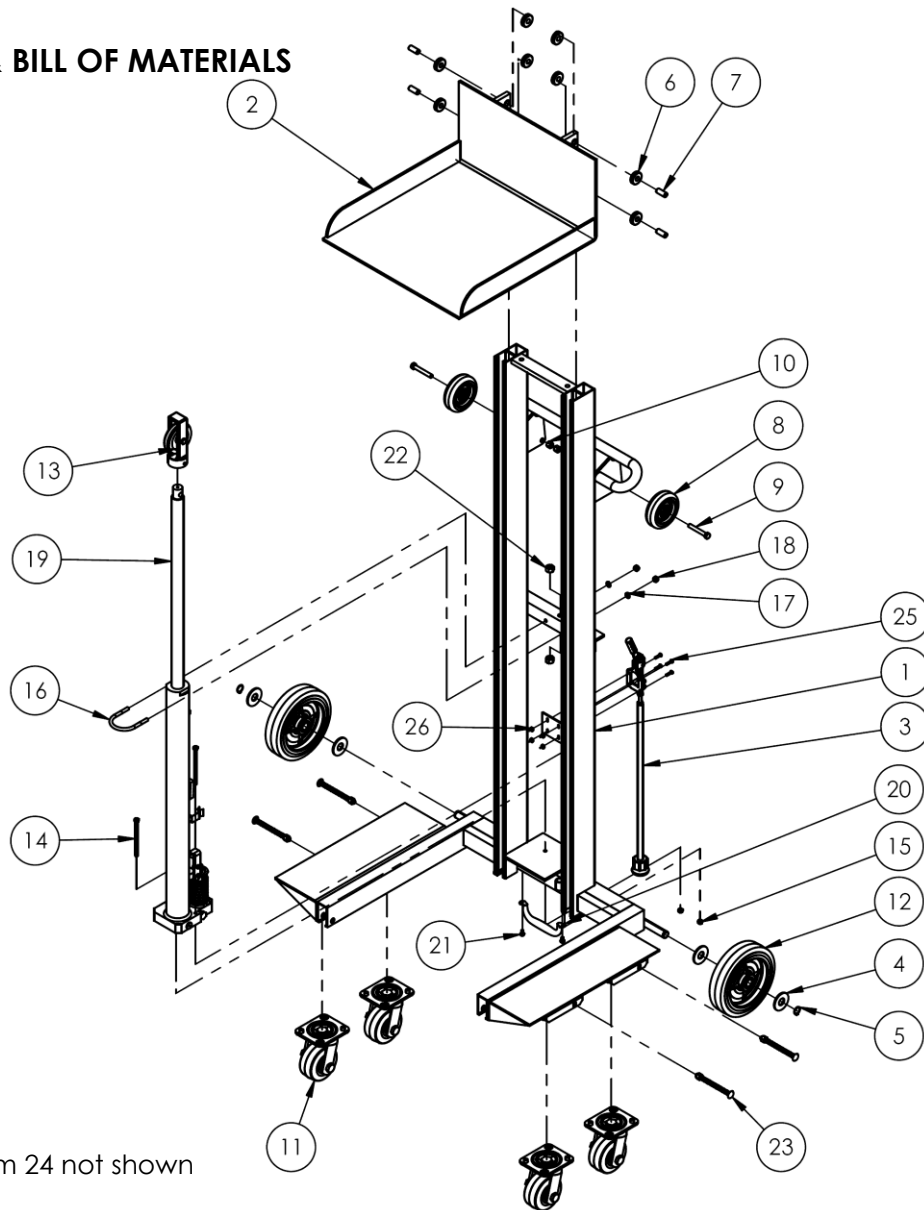
LLPH-500-4SFL **EXPLODED VIEW & BILL OF MATERIALS** **42-006-014**



* Item 21 not shown

Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-020	WELDMENT, FRAME	1	19	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
2	33-513-093	WELDMENT, DECK	1	20	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
3	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	*21	33-542-003	CHAIN, CHAIN ASSEMBLY	1
4	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	22	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1
5	21-027-003	ROLLER, GUIDE	8	23	21-145-001	SPECIALTY HARDWARE, PUSH-PULL CLAMP	1
6	21-112-002	PIN, ROLLER	4	24	21-537-006	WELDMENT, FLOOR LOCK	1
7	16-132-009	PP-4/1.25-W	2	25	14-037-005	RUBBER STOP CRUTCH TIP	1
8	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	26	40307	HEX NUT, CLASS 8, ZINC PLATED, M8-1.25	1
9	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	27	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
10	16-132-011	CASTER SWIVEL, 4X2	4	28	21-017-155	BAR, RETAINER	1
11	16-132-200	CASTER, PP-8/2-W, RED	2	29	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	2
12	01-640-031	PUMP, MANUAL, STK 24" FHJ	1	30	11107	HEX BOLT, GRADE A, ZINC FINISH, 3/8"-16 x 1-1/4"	2
13	33-542-001	ASSEMBLY, PULLEY	1	31	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
14	11019	HEX BOLT, GRADE A, ZINC PLATED, 1/4"-20x4"	2	32	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
15	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	2	33	33074	SAE FLAT WASHER, Z-PLATED, 3/16" (#10)	4
16	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE	1	34	33614	LOCK WASHER, Z-PLATED, #10	4
17	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2	35	36030	10-32 HEX NUT	4
18	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2	36	25326	SOCKET SET SCREW, BLACK OXIDE, 1/4-20 X 1/4"	1

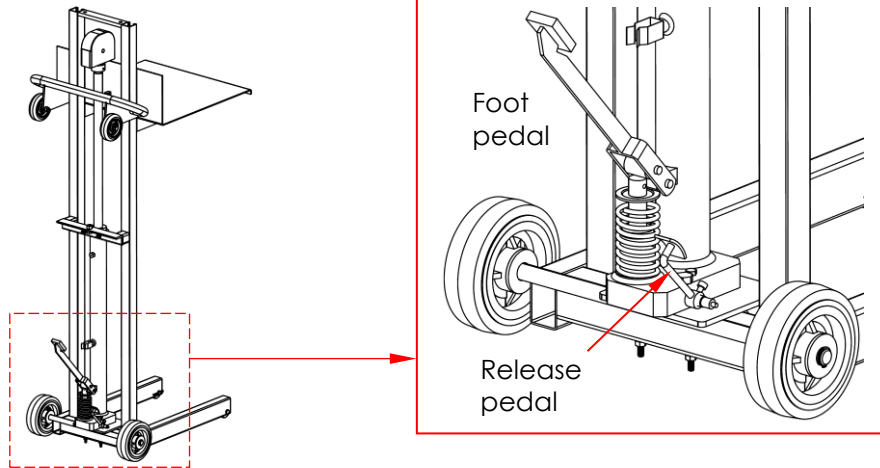
ALLPH-500-4SFL **EXPLODED VIEW & BILL OF MATERIALS** **42-006-017**



Item	Part no.	Description	Qty.	Item	Part no.	Description	Qty.
1	42-514-019	WELDMENT, FRAME	1	14	11021	HHCS #2 Z PLATED, Ø1/4 - 20 UNC x 4 1/2 LG	2
2	21-513-038	WELDMENT, DECK	1	15	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	2
3	21-001-132	FLOOR LOCK, HAND, ASSEMBLY	1	16	42034	U-BOLT, ZINC PLATED, Ø5/16"-18 X 2" PIPE SIZE	1
4	33018	USS FLAT WASHER, Z PLATED, Ø 3/4"	4	17	33620	LOCK WASHER, MEDIUM SPLIT, Ø5/16"	2
5	68015	EXTERNAL RETAINING RING, PHOSPHATE, 3/4"	2	18	36104	HEX NUT, GRADE A, ZINC PLATED, 5/16-18	2
6	21-027-003	ROLLER, GUIDE ROLLER	8	19	01-640-031	PUMP, MANUAL, STK 24" FHJ	1
7	21-112-002	PIN. ROLLER	4	20	13-025-004-002	HANDLE, WITH HOLES	1
8	16-132-009	PP-4/1.25-W	2	21	31802	SCREW, SELF-TAPPING SCREW	2
9	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2	22	36110	HEX NUT Z-PLATED, Ø 1/2 - 13	2
10	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2	23	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
11	16-132-011	CASTER SWIVEL, 4X2	4	*24	33-542-003	CHAIN, CHAIN ASSEMBLY	1
12	16-132-200	CASTER, PP-8/2-W, RED	2	25	27560	#10-32 x 3/4 LG SLOTTED MACHINE SCREW	4
13	33-542-001	ASSEMBLY, PULLEY	1	26	37015	10-32 NYLOCK NUT Z-PLATED	4

RAISING AND LOWERING THE DECK

To elevate the platform, press and release the foot pedal. The platform rises ~1 inch per pedal stroke. To lower the deck, press the release pedal. To fully lower the deck, hold the release pedal down until the platform reaches its lower travel limit and stops.



USING THE LIFTER

This product is a manually-propelled high lift truck of the sort describes in American national standard ANSI/ITSDF B56.10 ("B56.10" or the "Standard"). Vestil recommends that the owner of this product acquire a copy of the latest revision of B56.10, which is available at no cost through the ITSDF website (www.itsdf.org). The copy, along with this manual, should be available to all persons who use this product. Instructions in this manual are meant to **complement** the information provided in Part II – For the User of the Standard.

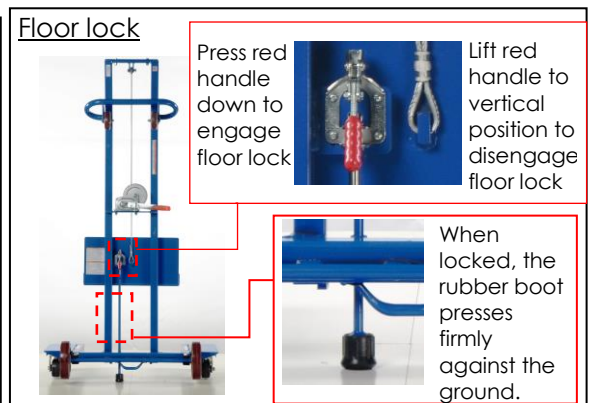
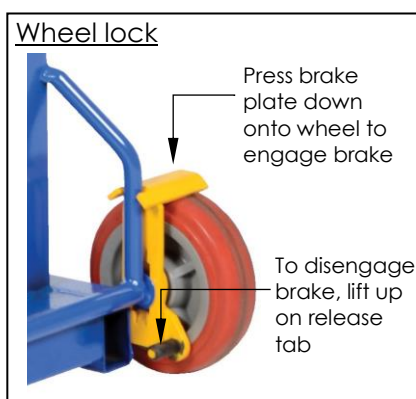
ONLY use this device after completing the operator training program in B56.10, sections 4.17 and 4.18.1-.4.

- Develop safe working habits and an awareness of hazardous conditions occurring or present during operation of the lifter.
- Inspect the area where the lifter will be used **before each use** to identify unusual operating conditions. Implement additional safety precautions as conditions require. Conditions might include:
 1. Irregularities in the floor/surface;
 2. Debris or other obstructions on the floor/surface;
 3. Unsound surfaces or surfaces that cannot support your weight plus the weight of the lifter and load.
- Perform the following **function test before each use**:
 1. Raise and lower the deck and confirm normal operating condition of the lift mechanisms.
 2. Test the casters/wheels: wheels should roll smoothly, should not be severely worn, and should be rigidly fastened to the frame of the lifter.

Inspect the lifter as recommended in the [INSPECTIONS & MAINTENANCE](#) section of this manual (p. 20). Use the lifter only if it is in [SATISFACTORY CONDITION](#).

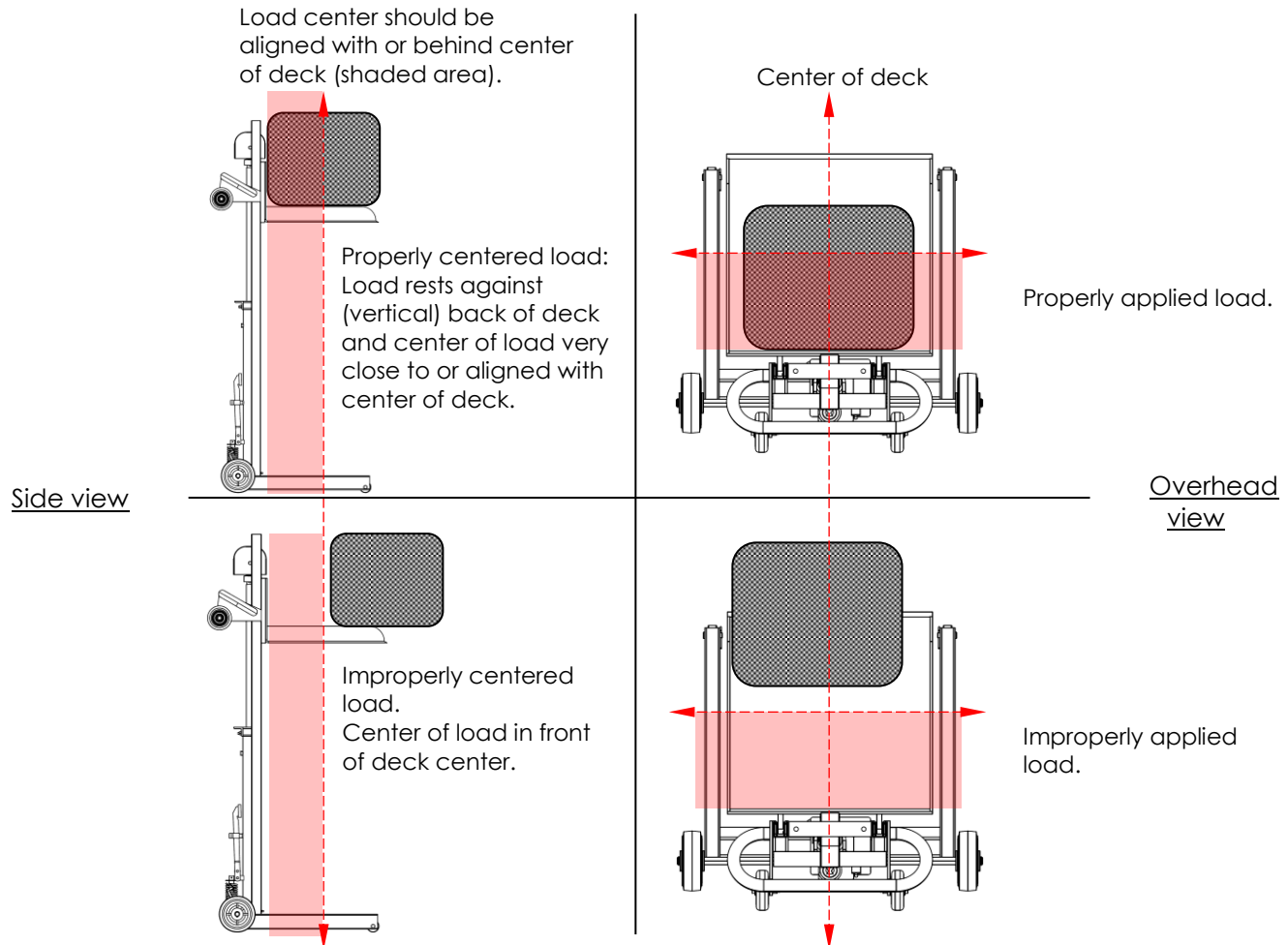
Step 1: Grasp the handle with both hands. Walk behind the lifter. Keep feet away from the wheels.

Step 2: Move the lifter to load. If the lifter is equipped with either a floor lock or a wheel lock, engage the locking device.



Step 3: Raise the deck to bring it to the level of the load. Press the foot pedal until the deck reaches the desired height.

Step 4: Place the load on the deck. The load should rest against the vertical wall (the “back”) of the deck. The center of the load should either align with the center of the deck or be behind it (see red shaded areas in diagrams below). Secure it to the deck (with ratchet straps, for example) to prevent sliding, rolling, etc.



Step 5: Press the release pedal (see [RAISING AND LOWERING THE DECK](#) on p. 18) to lower the deck. Lower the deck to just a few inches above the ground before transporting the load. At the unloading destination:

- Lock the casters or set the brake or floor lock;
- Pump the foot pedal to raise the deck to a comfortable height; and
- Remove the load.

Step 6: Lower the deck and return the lifter to its storage location. Engage the brake or floor lock, if so equipped. Store the lifter in a dry, indoor location.

RECORD OF SATISFACTORY CONDITION (THE “RECORD”)

Before putting this machine into service, make a record of its appearance and operation. Photograph the unit from multiple vantage points in the lowered and fully elevated positions. Take close range photographs of all labeling applied to the machine. Photograph the wheels and casters, caster brakes and/or floor lock, mast (the vertical portion of the frame), mast rollers, hydraulic cylinder, chain, load deck/platform, and fasteners (pins, bolts, nuts, etc.). Work the pump treadle. Describe the force necessary to move the treadle. How far does the deck move with each stroke? Describe the motion of the deck as it elevates and descends, e.g. smoothly and evenly from side-to side without binding or lurching. Lower the deck. Describe the sounds made by the machine as the cylinder extends and retracts. Collate all photographs and writings into a file. Mark the file appropriately to identify it. This file is a record of the unit in satisfactory condition (the “Record”). Compare the results of all inspections to this RECORD to determine whether the lifter is in satisfactory condition. Do not use the lifter unless it is in satisfactory condition. Purely cosmetic changes, like damaged paint or powdercoat, are not changes from satisfactory condition. However, touchup paint should be applied as soon as damage occurs.

INSPECTIONS & MAINTENANCE

Regular inspections and maintenance are necessary to keep the device in satisfactory condition. Compare the results of each inspection to your [RECORD](#) to determine whether the unit is satisfactory condition or requires repairs or replacement parts. If you are uncertain whether a part requires repair or replacement, contact [TECHNICAL SERVICE](#) for assistance.

- Periodically lubricate moving parts.
- Keep the product clean and dry.
- Only use manufacturer- approved replacement parts.

Perform the following inspections at least once every 2 weeks:

1. Foot pump, chain, and pulley (see [RAISING AND LOWERING THE DECK](#) on p. 18): Cycle the deck up and down. Listen for unusual noises and watch for binding or rough movement as the deck moves. Examine chain links and coupling hardware for elongations, twists, and breaks. Confirm that the cylinder extends and retracts smoothly. The chain should move without binding, catching, or jumping. Make sure that the pulley rotates freely and is securely fastened to the mast
2. Frame (mast, base, deck, and deck rollers): Examine the frame members for damaged welds, severe rusting, cracks, bends, etc. Remove rust with steel wool. Clean the affected areas and apply touch-up paint.
3. Casters and wheels: Check each caster and wheel for wobbling, damage, and severe wear. Wheels and casters should roll smoothly. Clean the casters to remove grit from the surfaces, if necessary.
4. Hardware: Examine the pins, bolts, nuts, etc. Tighten loose fasteners.
5. Floor lock: If your unit is equipped with the floor lock option confirm that it makes solid contact with the ground when applied. Check the condition of the rubber pad. Replace the pad if wear or damage affects its function.
6. Platform, mast and platform rollers: Cycle the platform up and down while listening for unusual noises and watching for binding or rough movement.

Maintenance: Implement a maintenance program to ensure that the lifter continues to function properly. ANSI/ITSDF B56.10 provides maintenance recommendations in part 6. [The standard is downloadable for free from the ITSDF website (www.itsdf.org)]. Apply those recommendations in conjunction with the following steps.

1. Tag the lifter, “Out of Service.”
2. Inspect the lifter as described above. If deformity, corrosion, rusting, or excessive wear of frame members and/or load bearing elements is present, DO NOT continue to use the lifter. If the deck does not move smoothly or makes noise as it moves up or down the mast, apply a silicon wax or silicon spray to the inside of the mast channels (i.e. the interior spaces where the deck rollers operate).
3. Remove any dirt or other matter from the cable and pulleys and other lifter surfaces.
4. Perform all other adjustments and/or repairs necessary to restore the lifter to [SATISFACTORY CONDITION](#). DO NOT modify the lifter.
5. Make a dated record that indicates the repairs, adjustments and/or replacements performed.

TROUBLESHOOTING

Fully lower the deck before beginning maintenance work on the lifter. If an issue with your lifter is not addressed in the table below, contact Vestil for answers.

Issue / Problem	Possible Causes	Suggested Corrective Action
1. I pump the pedal, but the deck does not rise; -OR- I can move the pedal with very little force.	A. Oil not getting through the pump because i) too little oil in reservoir or ii) pump is air-locked. B. Relief valve is opening. C. Foreign material holding inlet check valve open. D. Foreign matter in release valve.	A. i) Check oil level in reservoir. ii) Bleed air from hydraulics. See <i>Remove air trapped inside hydraulic system</i> , p. 22. B. Verify that load does not exceed lifter's maximum rated load. See <i>Specifications</i> on p. 2 or 3. C. Remove material from inlet check valve assembly. See <i>Cleaning the Inlet Check Valve Assembly</i> , p. 22; diagrams on pp. 23, 24, 25, 26. D. Disassemble release valve and clean the components. See <i>Release valve assembly</i> , p. 24.
2. Deck rises during pedal down stroke, but lowers during pedal upstroke.	A. Foreign material preventing outlet-check from closing.	A. Clean outlet check assembly
3. Deck rises but does not maintain raised position (slowly returns to lowered position over time).	A. Foreign material holding outlet-check open B. Foreign material holding relief-valve open C. Foreign material holding release-valve open	A. Disassemble and clean the outlet check valve components. B. Disassemble and clean the relief-valve components. C. Disassemble and clean the release-valve components.
4. Deck rises when pedal pumped, but in smaller increments than normal.	A. Foreign matter holding open relief valve. B. Foreign matter holding inlet check valve open. C: Foreign matter holding outlet check open.	A. Disassemble and clean the relief valve components. B. Disassemble and clean inlet check valve parts. See <i>Cleaning the Inlet Check Valve Assembly</i> , p. 22; diagrams on pp. 23, 24, 25 & 26. C. Clean outlet check assembly.
5. Great effort required to operate foot pump.	A. Operating pressure exceeds the pump's force capability.	A. Reduce load weight.
6. Deck will not lower.	A. Release pedal screw out of adjustment. B. Pedal not properly positioned on release cam. C. Pedal lock-screw not tight. D. Release cam broken. E. Debris obstructing flow control. F. Internal components missing. G. Something preventing deck cam roller bearing(s) from rolling	A. See <i>Release pedal adjustment</i> , p. 22. B. Pedal lock screw must be seated into the mating detent on the release-cam. C. The screw must be snug against the release cam to prevent it from rotating relative to the cam during use. D. Replace broken components. E. Flush the jack assembly and add fresh hydraulic fluid. F. Study applicable <i>Exploded View</i> (p. 5-17); replace and install components as indicated. G. Inspect frame for obstructions interfering with roller bearing movement; remove obstruction(s).
7. Deck lowers maddeningly slowly when release pedal pressed.	A. Release pedal screw improperly adjusted. B. Pedal not properly positioned on release cam. C. Pedal lock screw not tight. D. Release cam broken. E. Debris obstructing flow control.	A. See <i>Release pedal adjustment</i> , on p. 22. B. Pedal lock screw must be seated in the mating detent on the release-cam. C. The screw must be snug against the release cam to prevent it from rotating relative to the cam during use. D. Replace broken components. E. Flush jack assembly and install new fluid.
8. Deck lowers too quickly.	A. Release pedal screw out of adjustment. B. Pedal lock-screw not properly positioned on release cam.	A. See <i>Release pedal adjustment</i> procedure on p. 22. B. Pedal lock screw must be seated into the mating detent on the release-cam.
9. Deck lowers in jerks.	A. Air trapped in hydraulic system. B. Oil level too low.	A. Bleed air from system. See <i>Remove air trapped inside hydraulic system</i> , p. 22. B. Add oil to hydraulic reservoir.

DETAILED TROUBLESHOOTING — HYDRAULIC FOOT PUMP

The following tools are required to resolve the issues listed above:

- 5mm hex key wrench
- Standard (flat head) screwdriver
- Adjustable crescent wrench

Hydraulic Fluid Level Adjustment

1. Remove the fill/breather plug.
2. Hydraulic fluid level should be 2 - 2.5 inches below the bottom of the fill hole when the cylinder rod is fully lowered. Do not overfill the reservoir; if overfilled, oil may leak or seep around the fill plug.

NOTICE

ONLY use ISO AW-32 anti-wear hydraulic pump oil. The oil must be clean; strain the oil, if necessary, before adding it to the reservoir.

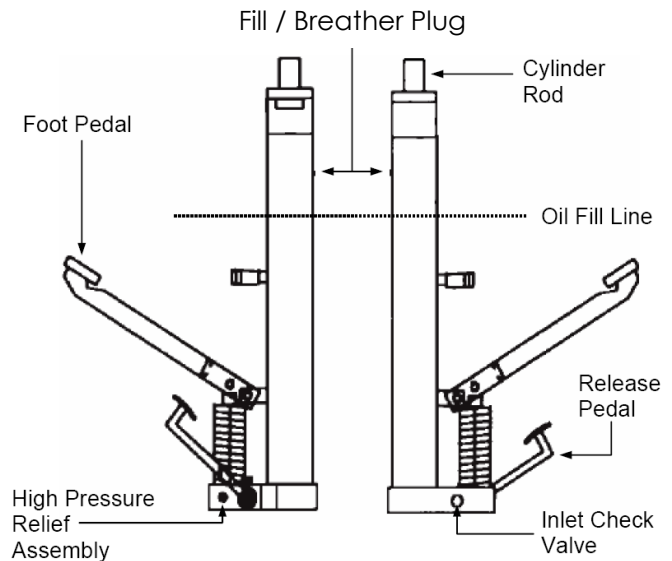
Remove Air Trapped Inside Hydraulic System

1. Pump the foot pedal until the cylinder rod is fully extended. The small hole near the base of the rod will pass by the high pressure seal and air will automatically vent into the reservoir tube.

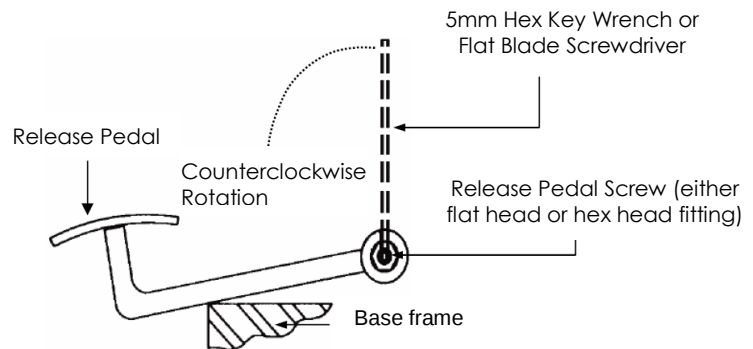
Release Pedal Adjustment

1. Loosen the **RELEASE PEDAL SCREW RETAINING NUT**. Refer to p. 24.
2. Loosen the release pedal screw: $\frac{1}{2}$ to a full counterclockwise turn using either a 5mm hex key wrench (Allen wrench) or flat blade screwdriver.
3. Apply a test weight to the deck; pump the foot pedal until the deck rises ~2ft; then press the release pedal down. If the deck lowers, turn the release pedal screw by another $\frac{1}{2}$ turn, and repeat step 3. The deck should not lower when you press the release pedal.
4. Turn release pedal screw *clockwise* $\frac{1}{8}$ to $\frac{1}{4}$ turn. repeat step 3. The deck now *should* lower; if it does not, turn the screw clockwise by another $\frac{1}{8}$ turn. Repeat this step until the desired deck-lowering rate is achieved.
5. Tighten the retaining nut. To prevent the screw from rotating while tightening the nut, either hold the screw with your fingers or insert the 5mm hex key wrench (or flat blade screwdriver) into the fitting.

Proper Hydraulic Fluid Level



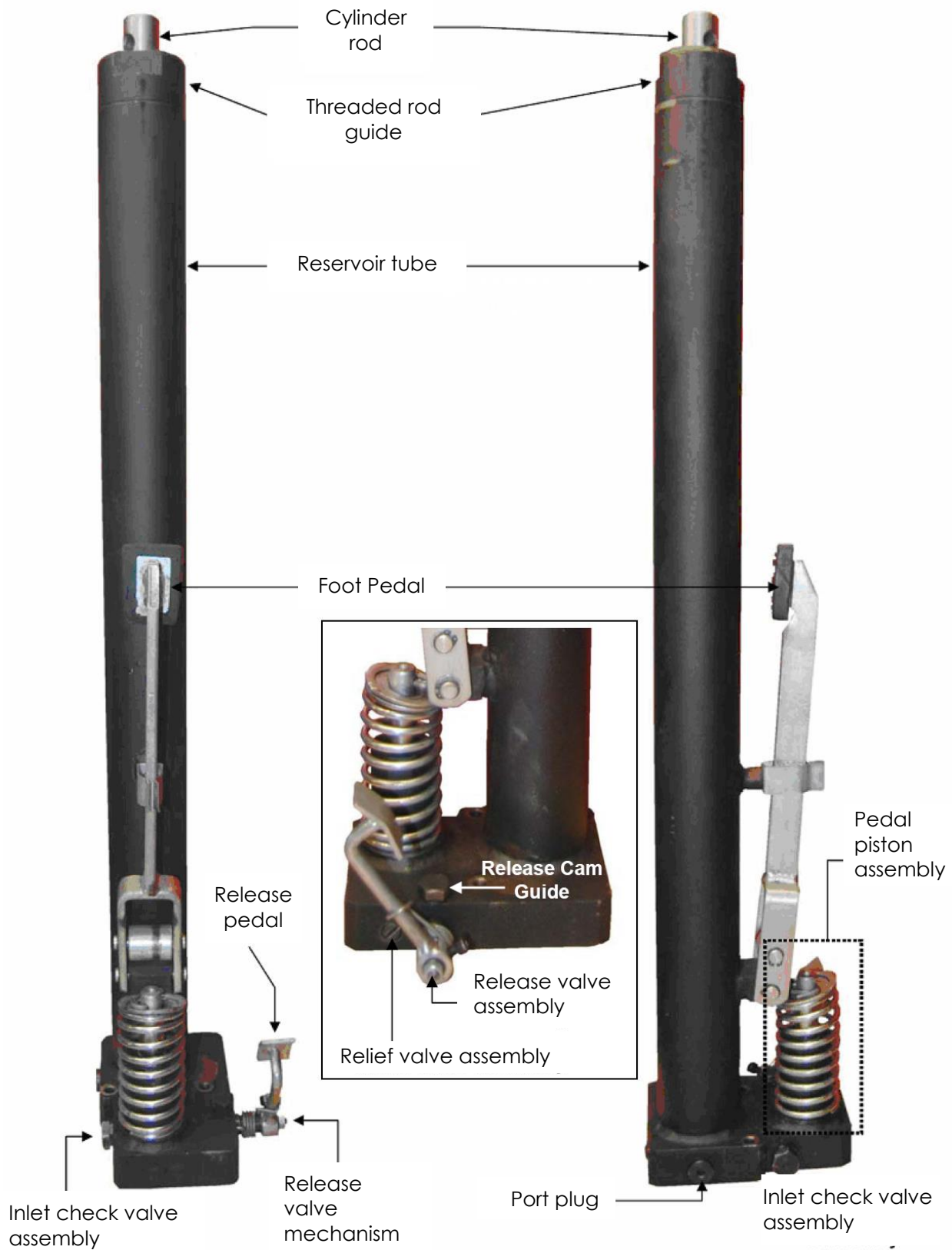
RELEASE PEDAL ADJUSTMENT



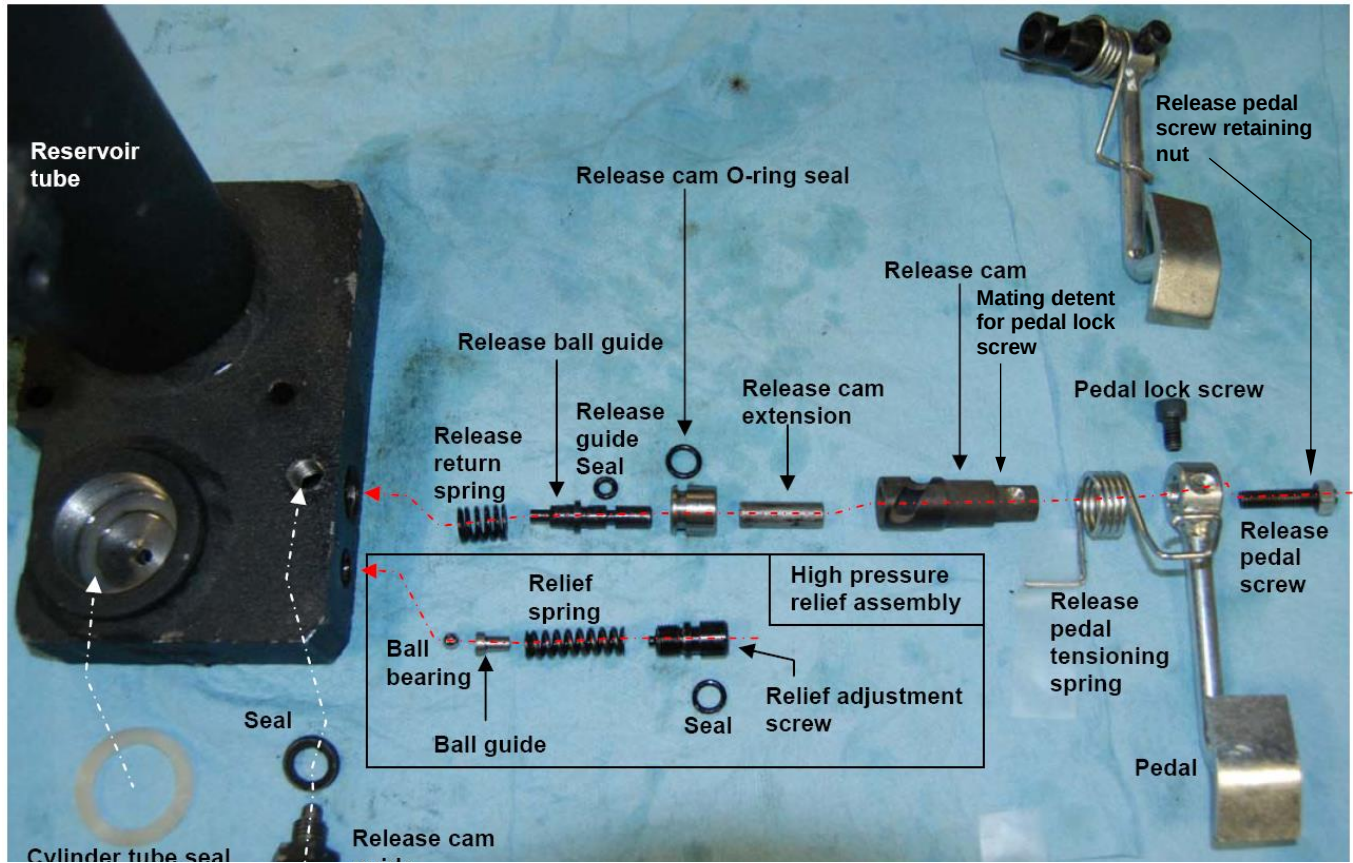
Cleaning Inlet Check Valve Assembly

1. Remove **INLET CHECK PORT PLUG** with a crescent wrench. See p. 25.
2. Clean the valve components.
3. While the valve is disassembled, pump the foot pedal at least 5 times. Fluid will discharge from the inlet check valve opening, which should dislodge debris clogging the valve.
4. Reassemble the valve & reconnect the port plug.
5. Add hydraulic fluid as necessary according to the **HYDRAULIC FLUID LEVEL ADJUSTMENT** instructions

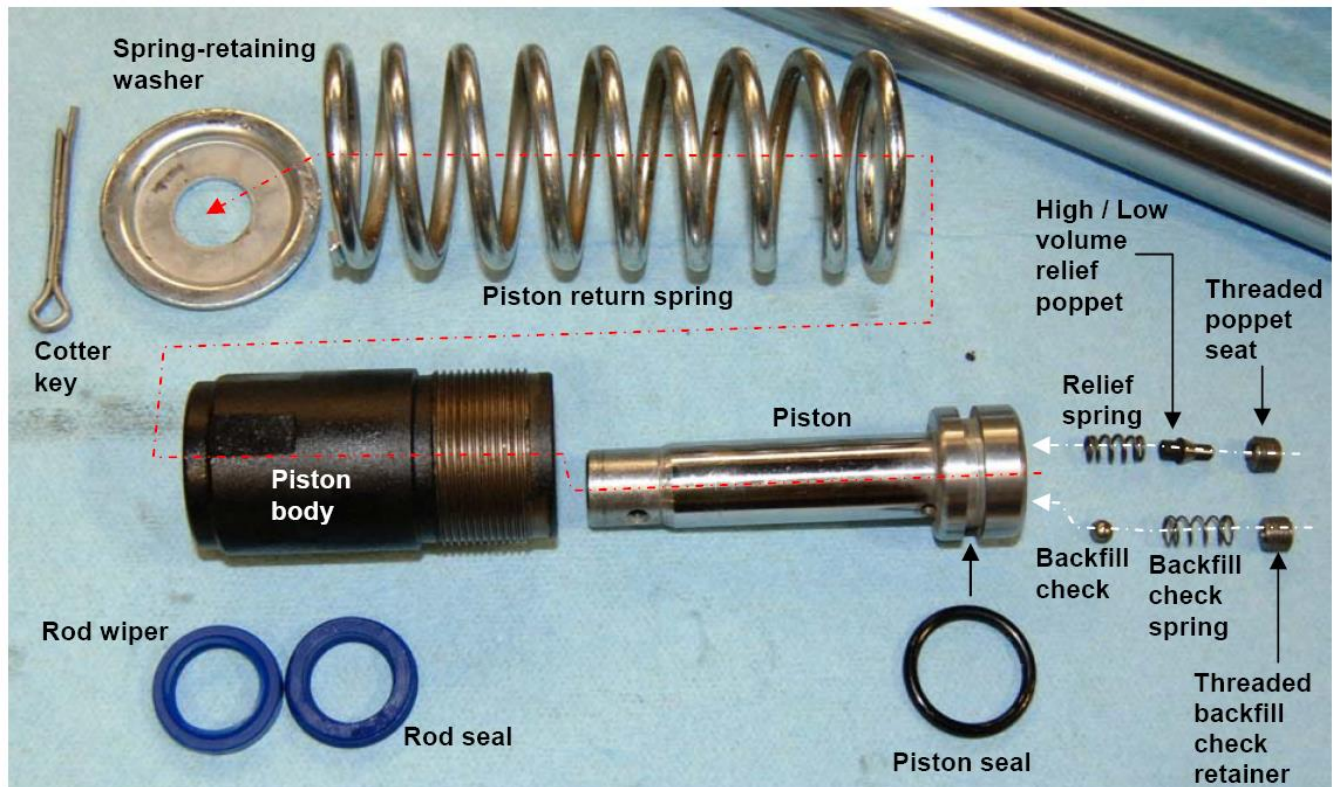
HYDRAULIC FOOT PUMP



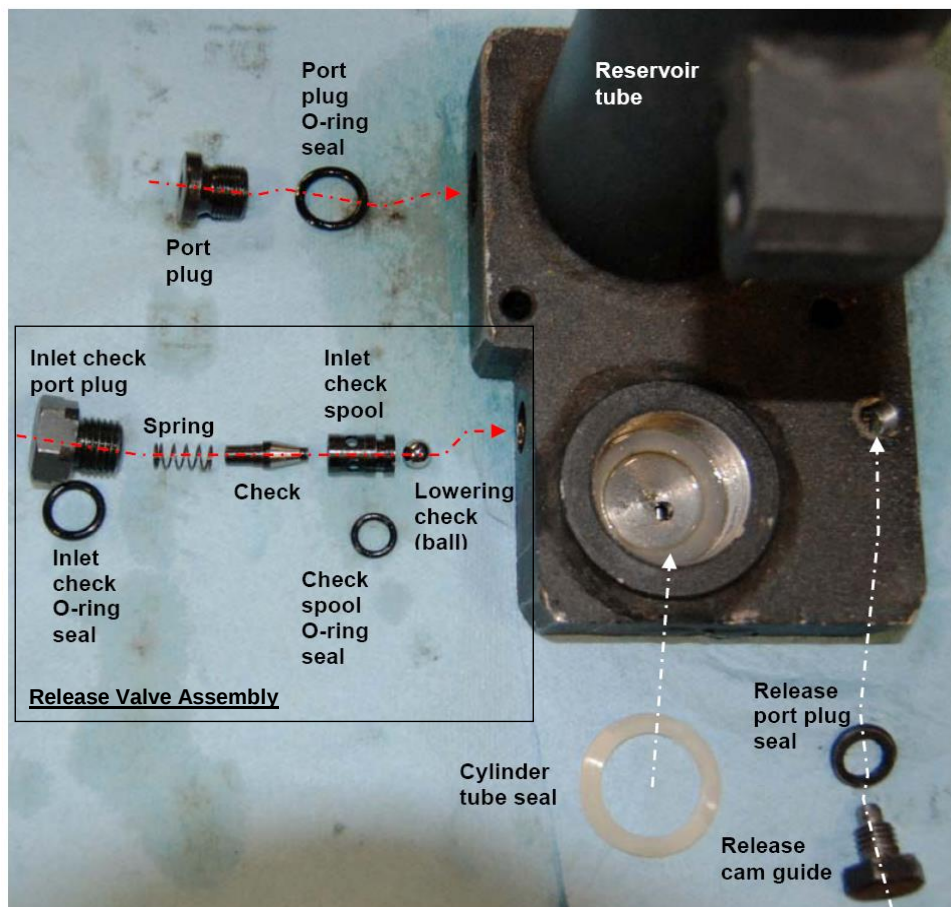
HYDRAULIC FOOT PUMP RELEASE VALVE AND HIGH PRESSURE RELIEF VALVE ASSEMBLIES



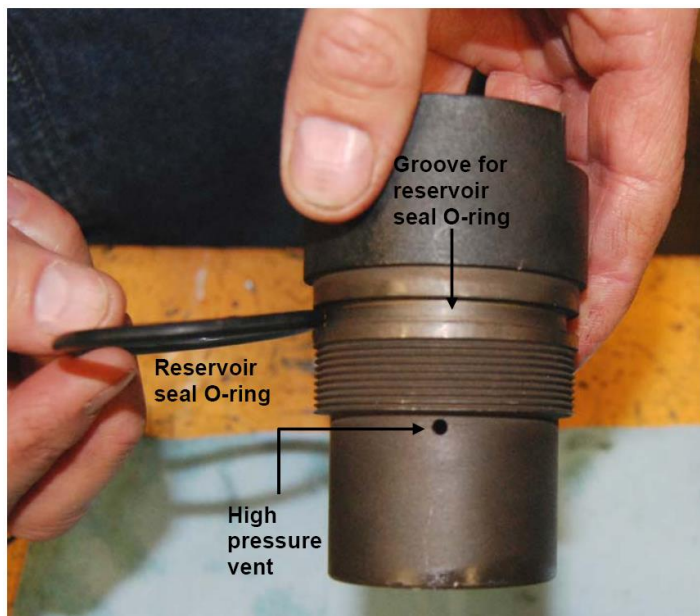
PEDAL PISTON ASSEMBLY



INLET CHECK VALVE ASSEMBLY



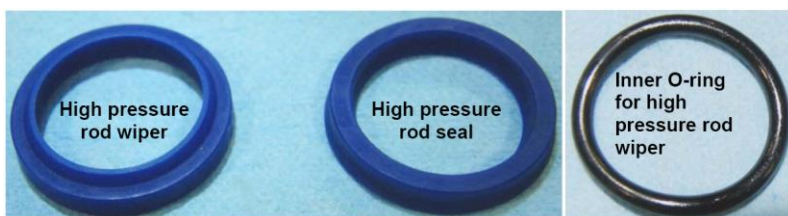
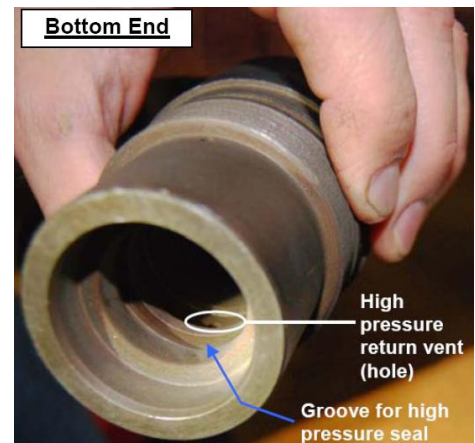
THREADED ROD GUIDE



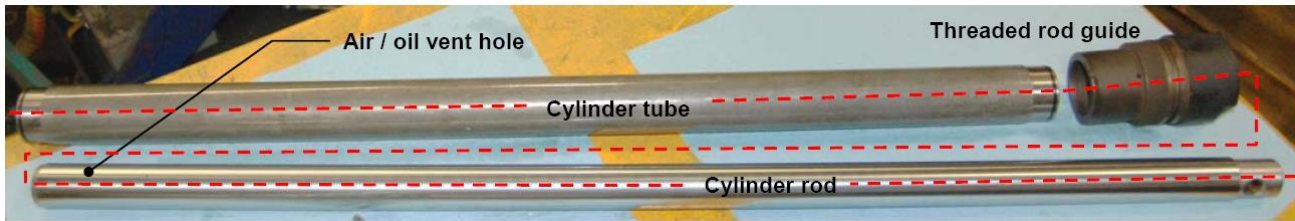
Top End



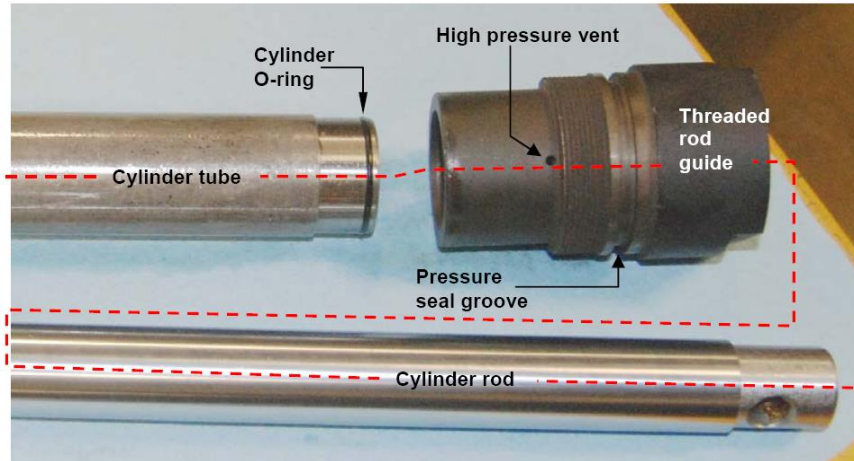
Bottom End



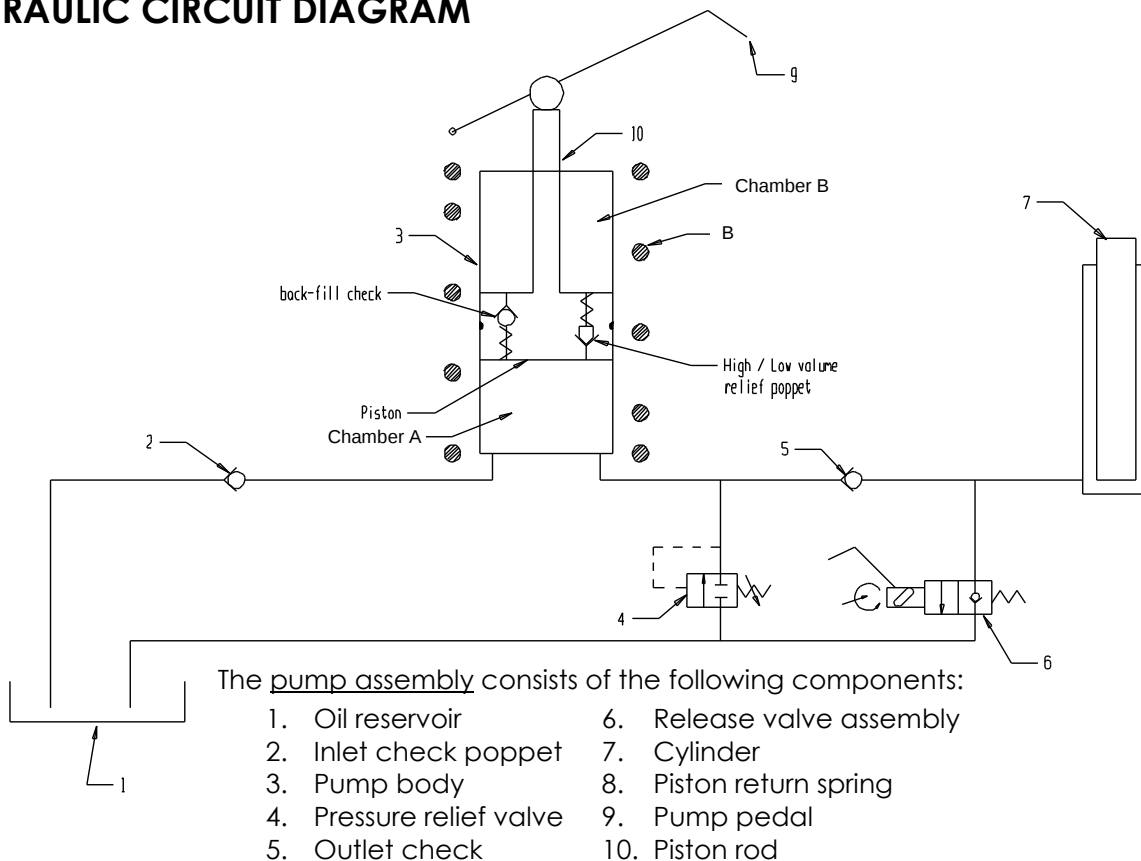
CYLINDER ASSEMBLY



CLOSE-UP VIEW OF CYLINDER ASSEMBLY



HYDRAULIC CIRCUIT DIAGRAM



The following are the primary components of the two-speed mechanism of the piston assembly:

- Piston blind-side – Chamber A
- Rod-side – Chamber B
- Back-fill check
- High-volume / low-volume relief poppet
- Piston rod

HYDRAULIC SYSTEM OPERATION (REFER TO [CIRCUIT DIAGRAM ON P. 26](#))

Raising the deck: The sequence begins with the foot pedal in the neutral, or "home", position. The operator first activates the hydraulic system by pressing the foot pedal down. This is referred to as a "power-stroke". After releasing the foot pedal, the piston return spring (B) exerts an upward force on the piston. Consequently, oil flows from the reservoir, through the inlet check valve, and into chamber A. At the same time, oil trapped in chamber B (from a prior cycle) flows across the back-fill check into chamber A. When another power stroke occurs, the inlet check valve closes, which prevents oil from flowing back into the reservoir; simultaneously, the outlet check valve opens and oil flows into the cylinder. In preparation for the next stroke, the piston return spring forces the piston and the foot pedal back to the home position. Chamber A again fills with oil as the piston rises.

The pump piston has two modes of operation: 1) Low-pressure, high-volume; and 2) High-pressure, low-volume.

1. Low-pressure, High-volume.

When raising an unloaded or lightly loaded platform, the piston will function in low-pressure mode. As the operator presses the foot pedal (power stroke):

- a. Back-fill check remains closed;
- b. High / low volume relief poppet remains closed; and
- c. All oil in chamber A flows into the cylinder.

2. High-pressure, low-volume

When raising a partly loaded or heavily loaded platform, the piston will function in high-pressure mode. As the operator executes a power stroke, the back-check remains closed:

- a. High / low volume relief poppet opens;
- b. A volume of oil equal to the annulus (piston diameter minus the rod diameter) flows from A to B;
- c. Oil equal to the cross-sectional area of the rod flows to the cylinder; and
- d. The opening force of the high / low volume relief poppet adds to the cylinder load resistance.

Pressure relief system

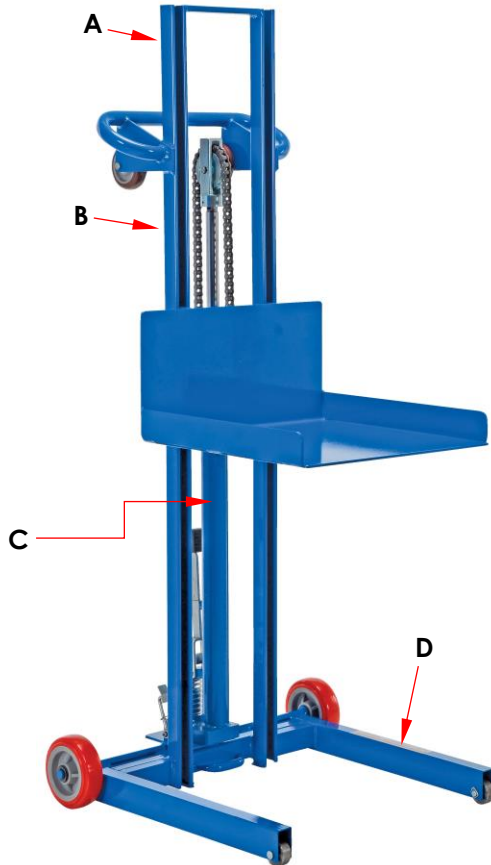
If a load that exceeds the maximum rated load is placed on the deck, or a mechanical malfunction interferes with the movement of the deck, the pressure relief valve will open during a power-stroke. The pressure relief valve reduces the likelihood that excessive loads will damage the lifter frame or the hydraulic system. The pressure relief valve directs oil from chamber A to the reservoir.

Release valve assembly

The foot-actuated release valve assembly is the mechanism that allows the deck to lower. When the release pedal is pressed down, the release valve opens, and oil flows from the cylinder to the reservoir. The lowering rate is adjustable; instructions appear under [RELEASE PEDAL ADJUSTMENT](#) on p. 22. Lowering rate is also variable: the farther down the release pedal is pressed, the more rapidly the deck descends. The weight of a load on the deck affects the flow rate, and therefore, a heavier load will lower more rapidly than a lighter load, regardless of the lowering rate selected. When the operator lets the pedal loose, the release pedal tensioning spring returns the release pedal to the home position, which automatically closes the valve.

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. Thoroughly photograph the unit when you first receive it as discussed in the [RECORD OF SATISFACTORY CONDITION](#) section of this manual. Make sure that your Record includes a photograph of each label. Modify this diagram, if necessary, to indicate labeling actually applied. Replace all labels that are, damaged, missing, or not easily readable (e.g. faded). Contact the [TECHNICAL SERVICE AND REPLACEMENT PARTS DEPARTMENT](#) online at <https://www.vestil.com/page-parts-request.php>. You may also call (260) 665-7586 and ask the operator to connect you to the [REPLACEMENT PARTS DEPARTMENT](#).



A: Label 1153 (on back side of mast)

MODEL / MODÉLO / MODÈLE _____
WEIGHT / PESO / MASS _____
CAPACITY / CAPACIDAD / CAPACITÉ _____
SERIAL / SERIE / SÉRIE _____
UNITS: 2.2 lb. = 1kg 1" (or 1in.) = 2.54cm 1153

B: Label 527 (on back side of mast)

⚠ WARNING Only trained, authorized persons should operate this device. Improper operation might result in serious personal injuries sustained by the truck operator and/or bystanders. Operators must observe the following safety-enhancing practices: • BEFORE operating, inspect mast, carriage, forks/deck, cable/chain, wheels, and brakes for damage. DO NOT use if damaged. • ALWAYS walk travel path before using truck to identify hazards: 3 DO NOT contact electrical lines or overhead objects with device or load; 3 DO NOT travel up/down inclines if an alternate route is available; 3 DO NOT travel over debris. • ONLY travel with forks/deck in lowest position appropriate for conditions. • ALWAYS center and evenly distribute loads on forks/deck. • ALWAYS secure load to forks/deck. • ONLY drive or operate truck functions from operator position. • DO NOT exceed maximum rated load (capacity). • DO NOT allow people to ride on device. • DO NOT lift loads over people; DO NOT permit people to walk beneath the forks/deck when raised (loaded or unloaded). • DO NOT leave unattended UNTIL fully lowered AND unloaded. • DO NOT modify device in any way.
⚠ ADVERTENCIA Solo personas entrenadas y autorizadas deben operar este equipo. La operación inadecuada podría resultar en daños serios al operario del camión y/o a los transeúntes. Los operarios deben observar y seguir las siguientes prácticas de seguridad: • ANTES de usar, inspeccione el mástil, el equipo, las horquillas/plataforma, cable/cadena, ruedas y frenos por daños. NO use si se observan daños. • SIEMPRE camine el trayecto de viaje antes de usar el camión para identificar riesgos: 3 NO toque las líneas eléctricas u objetos altos con el dispositivo o la carga; 3 NO viaje en inclinaciones de subida y bajada si hay otra ruta alternativa; 3 NO viaje sobre desechos. • SOLO viaje con las horquillas/plataforma en la posición de descenso más apropiada para las condiciones. • SIEMPRE centre y distribuya las cargas uniformemente en las horquillas/plataforma • SIEMPRE asegure la carga a las horquillas/plataforma. • SOLO conduzca u opere las funciones del camión desde la posición del operario. • NO exceda la capacidad máxima tasada de carga. • NO permita que la gente viaje en el equipo. • NO eleve las cargas sobre la gente; NO permita que la gente camine debajo de las horquillas/plataforma cuando este elevada (con carga o sin carga). • NO deje el equipo desatendido HASTA que este completamente cargado Y descargado. • NO modifique el equipo de ninguna manera. 527 • Rev 1109

C: Label 206 (on cylinder of foot pump)

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 208 (on top of both outriggers)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
KEEP CLEAR OF PINCH POINT	MANTENGASE ALEJADO DEL PUNTO DE CORTE	SE TENIR À DISTANCE DU POINT DE PINCEMENT
		208A



LIMITED WARRANTY

Vestil Manufacturing Company ("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:

<u>US Mail</u>	<u>Fax</u>	<u>Email</u>
Vestil Manufacturing Company 2999 North Wayne Street, PO Box 507 Angola, IN 46703	(260) 665-1339 <u>Phone</u> (260) 665-7586	info@vestil.com Enter "Warranty service request" 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 Co. 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.