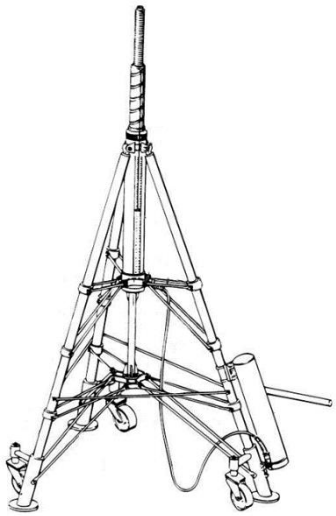
OPERATION & SERVICE MANUAL



Model: 53J6268-10E3
30 Ton (27 Metric Ton)
Tripod Jack

05/2019 – Rev. 01

ColumbusJACK/Regent
1 Air Cargo Pkwy East
Swanton, OH 43558

Phone: 614.443.7492
Web: www. columbusjack.com
Email: sales@ columbusjack.com

REVISION	DATE	TEXT AFFECTED
01	05/2019	Original release

TABLE OF CONTENTS

PAGE

This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., it suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.

1.0 PRODUCT INFORMATION

1.1 DESCRIPTION

20 Ton (18 Metric Ton) Tripod Jack

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

ColumbusJack/Regent
1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

Telephone: 614.443.7492
Fax: 614.444.9337
E-mail: sales@columbusjack.com
Website: www. columbusjack.com

1.4 SPECIFICATIONS

Capacity	30 Ton (27 Metric Ton)		
Hydraulic Lift	40 in (101.6 cm)		
Screw Extension	15 in (38.1 cm)		
Leg Extensions	3 sets	Minimum Height	Maximum Height
	Zero	55 in (139.7 cm)	110 in (279.4 cm)
	One	73 in (185.42 cm)	128 in (325.12 cm)
	Two	91 in (231.14 cm)	146 in (370.84 cm)
	Three	109 in (276.86 cm)	164 in (416.45 cm)
Extension Increments	18 in (45.72 cm)		
Operating Pressure	2733 psi (188 bar)		
Relief Valve Pressure	3000 psi (206.8 bar)		
Reservoir Capacity	5 gal (18.9 l)		

2.0 SAFETY INFORMATION

2.1 USAGE AND SAFETY INFORMATION

To insure safe operations please read the following statements and understand their meaning. Also refer to your equipment manufacturer's manual for other important safety information. This manual contains safety precautions which are explained below. Please read carefully.

WARNING! — Warning is used to indicate the presence of a hazard that ***can cause severe personal injury, death, or substantial property damage*** if the warning notice is ignored.

CAUTION! — Caution is used to indicate the presence of a hazard that ***will or can cause minor personal injury or property damage*** if the caution notice is ignored.

2.2 PRODUCT SAFETY

Make sure all personnel involved with this jack read and understand these instructions before using.

WARNING!

Each jack is operated independently and aircraft must be raised evenly to provide stability. Failure to use safe jacking practices may result in equipment damage and injury to personnel. Personnel not involved in jacking the aircraft must remain clear of the immediate area. Other work should not be performed until jacking is completed and aircraft is stabilized. Do not work under suspended loads unless required. Failure to follow strict safety precautions may result in equipment damage and injury or death to personnel. When jacking operations are completed and aircraft is stabilized, necessary personnel may complete required maintenance actions under aircraft.

The jack is designed to lift only vertical loads with a maximum weight of 30 Ton (27 Metric Ton). Do not use jack for lifts exceeding the weight or design limits. Failure to comply can result in injury or death to personnel and/or severe damage to the jack and aircraft.

Casters will carry only the weight of the jack. Ensure casters compress under aircraft load to prevent injury to personnel and equipment damage.

3.0 TRAINING

3.1 TRAINING REQUIREMENTS

The employer of the operator is responsible for providing a training program sufficient for the safe operation of the unit.

3.2 TRAINING PROGRAM

The employer provided operator training program should cover safety procedures concerning use of the unit in and around the intended aircraft at the intended aircraft servicing location.

3.3 OPERATOR TRAINING

The operator training should provide the required training for safe operation of the unit.

NOTE: Maintenance and Trouble Shooting are to be performed by a skilled and trained technician.

4.0 SYSTEM BLEED PROCEDURE

1. Break hydraulic line at base of cylinder.
2. Operate hand pump until oil comes out freely with no air bubbles. Retighten hydraulic line at base of cylinder.
3. Raise ram approximately six (6) inches with hand pump.
4. Open release valve on hand pump.
5. If ram fails to raise, repeat steps 1 thru 2 until all air is removed and ram is able to raise upon using hand pump.

5.0 PRE-OPERATION PROCEDURE

1. Perform visual inspection, by checking for oil leakage.
2. Check for loose, damaged or missing parts.
3. Check oil level.
4. Ensure Air Vent is open, if applicable.

6.0 ASSEMBLY AND ERECTION

6.1 BASIC TRIPOD JACK

The jack may be assembled in the basic jack configuration or erected to various heights by the addition of leg extensions and supporting braces. Complete assembly can be accomplished without the use of excessive force. If alignment cannot be accomplished, inspect parts for bending or twisting. If bending or twisting is evident, replace part.

CAUTION!

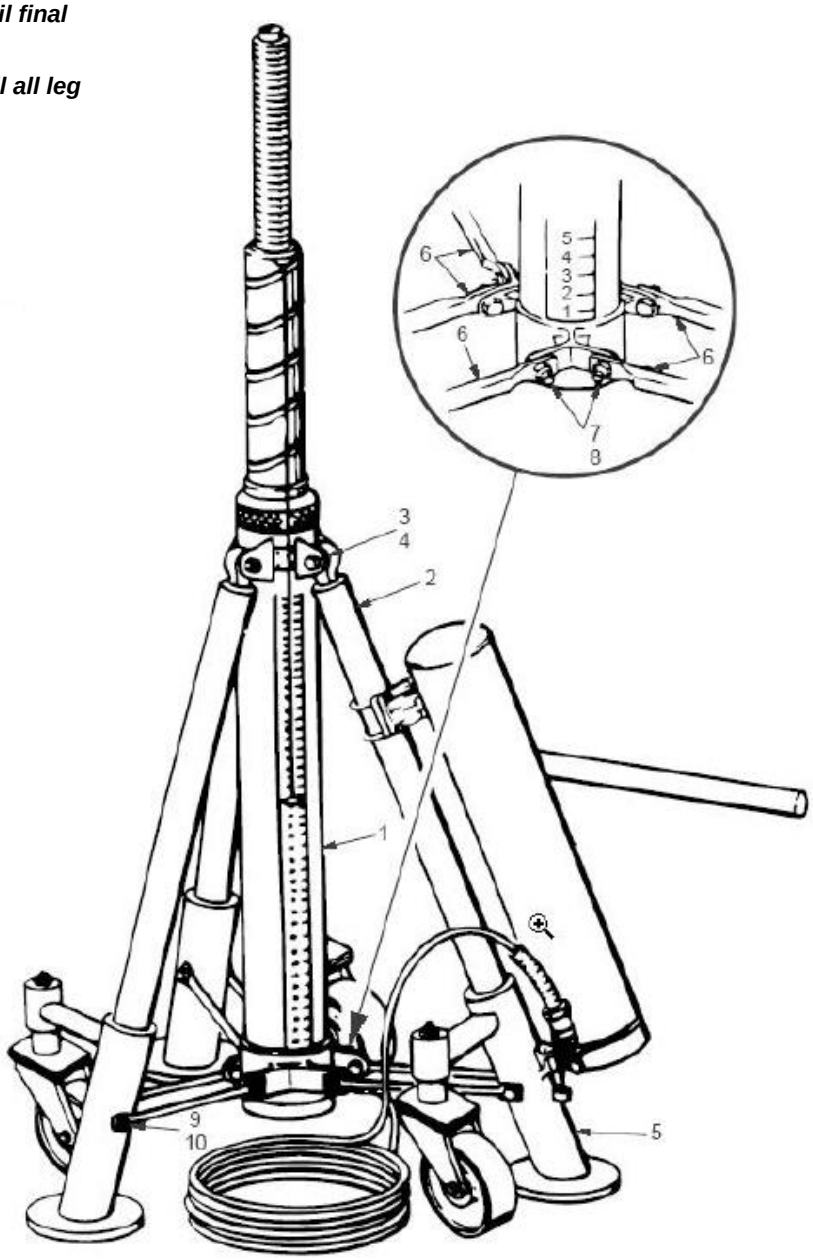
Do not tighten bolts and nuts at basic leg. Over tightening will distort ears and/or cylinder bore. This can result in premature parts failure.

1. Attach the basic legs (2) to the lugs at the top of the cylinder assembly (1) and secure with bolts (3) and nuts (4).
2. Attach braces #1 (6) to each side of the lugs at the bottom of the cylinder assembly (1) and secure with bolts (7) and nuts (8).
3. If a leg extension is not to be added, attach foot assemblies (5) and secure free ends of braces #1 (6) to the foot assemblies (5) with bolts (9) and nuts (10).
4. Attach pump only if you are not adding leg extensions (Section 7.0 Pump Assembly Installation).

NOTE: Do not fully tighten bolts and nuts until final desired height is attained.

NOTE: Do not attach the foot assemblies until all leg extensions have been installed.

LEGEND
1. Cylinder Assembly
2. Basic Leg
3. Bolt
4. Nut
5. Foot Assembly
6. Brace #1
7. Bolt
8. Nut
9. Bolt
10. Nut

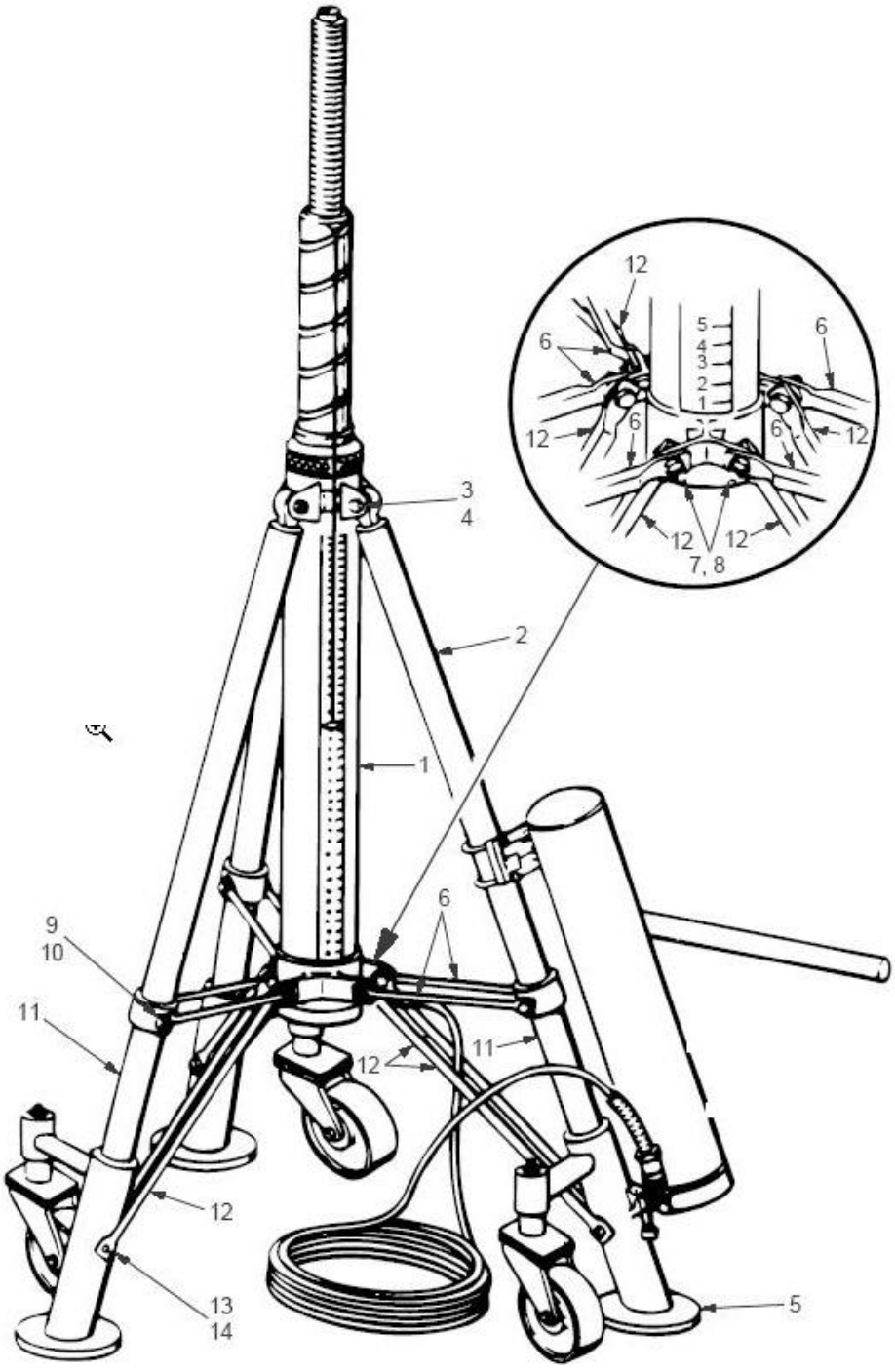


6.0 ASSEMBLY AND ERECTION *(continued)*

6.2 ONE-LEG EXTENSION ASSEMBLY

1. Be sure foot assemblies and pump assembly are not attached to tripod before installing leg extension.
2. Place the flared end of leg extensions (11) over end of basic legs (2) and align holes
3. Place the end of braces #1 (6) over each side of leg extensions (11) and insert bolts (9) through braces #1 (6), leg extensions (11) and basic legs (2). Install nuts (10).
4. Place one end of braces #2 (12) under braces No. 1 (6) and secure both braces to lugs at bottom of cylinder assembly (1) with bolts (7) and nuts (8).
5. If another leg extension is not to be added, attach foot assemblies (5) and secure free ends of braces #2 (12) to the foot assemblies (5) with bolts (13) and nuts (14).
6. Install pump only if you are not adding leg extensions (Section 7.0 Pump Assembly Installation).

LEGEND
1. Cylinder Assembly
2. Basic Leg
3. Bolt
4. Nut
5. Foot Assembly
6. Brace #1
7. Bolt
8. Nut
9. Bolt
10. Nut
11. Leg Extension
12. Brace #2
13. Bolt
14. Nut

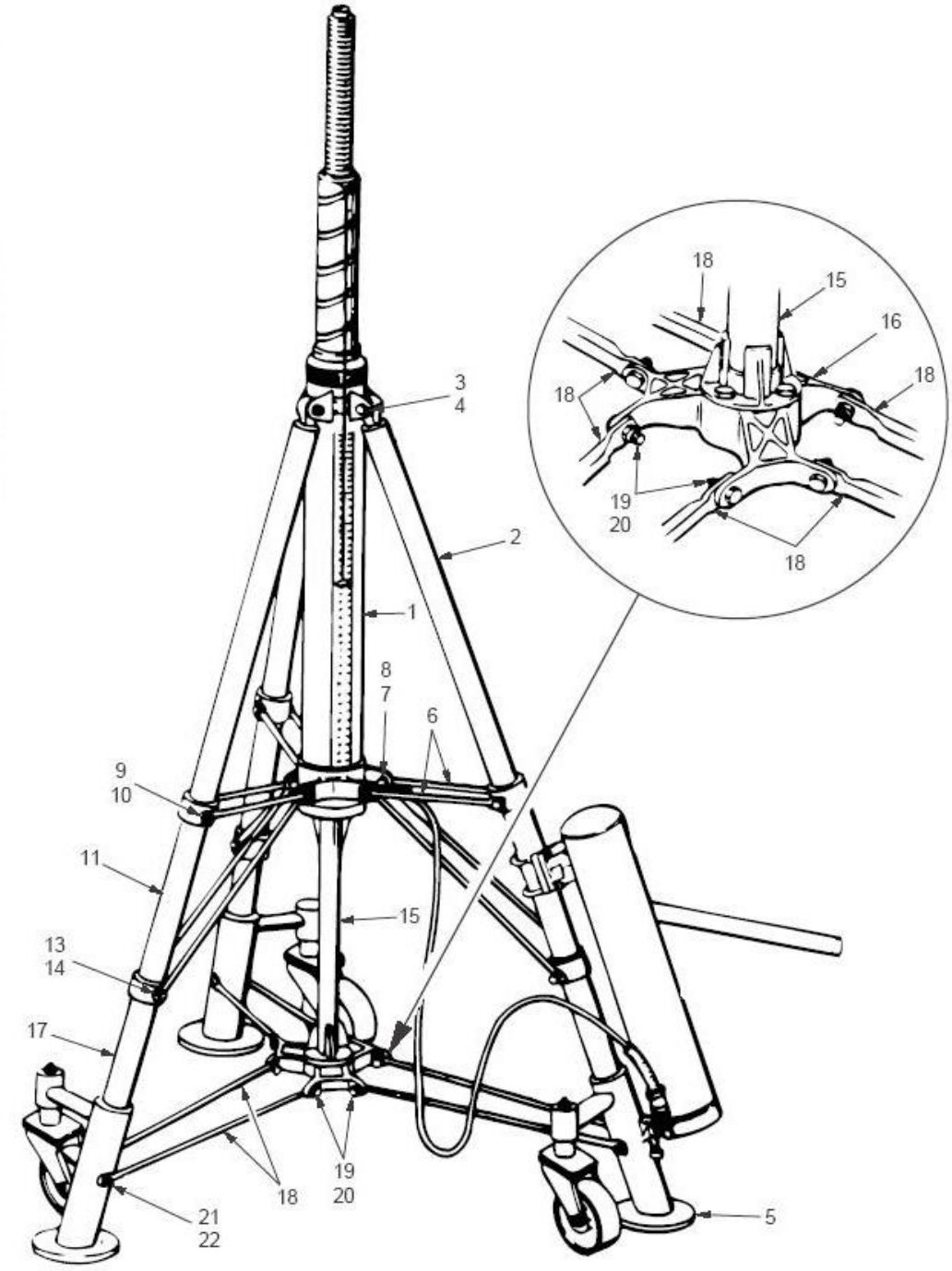


6.0 ASSEMBLY AND ERECTION *(continued)*

6.3 TWO-LEG EXTENSION ASSEMBLY

1. Be sure foot assemblies and pump assembly are not attached to tripod before installing leg extensions.
2. Attach tension bar (15) to the underside of cylinder assembly (1) with bolts provided. Attach web (16) to tension bar with bolts provided.
3. Place the flared end of leg extensions (17) over the bottom of leg extensions (11) and align holes.
4. Place the end of braces #2 (12) over each side of leg extensions (17) and insert bolts (13) through braces #2 (12), leg extensions (17). Install nuts (14).
5. Place flat end of braces No. 3 (18) against lugs on web (16) and secure with bolts (19) and nuts (20).
6. If another leg extension is not to be added, attach foot assemblies (5) and secure free ends of braces #3 (18) to the foot assemblies (5) with bolts (21) and nuts (22).
7. Attach pump assembly only if you are not adding leg extensions (Section 7.0 Pump Assembly Installation).

LEGEND
1. Cylinder Assembly
2. Basic Leg
3. Bolt
4. Nut
5. Foot Assembly
6. Brace No. 1
7. Bolt
8. Nut
9. Bolt
10. Nut
11. Leg Extension
12. Brace #2
13. Bolt
14. Nut
15. Tension Bar
16. Web
17. Leg Extension
18. Brace #3
19. Bolt
20. Nut
21. Bolt
22. Nut

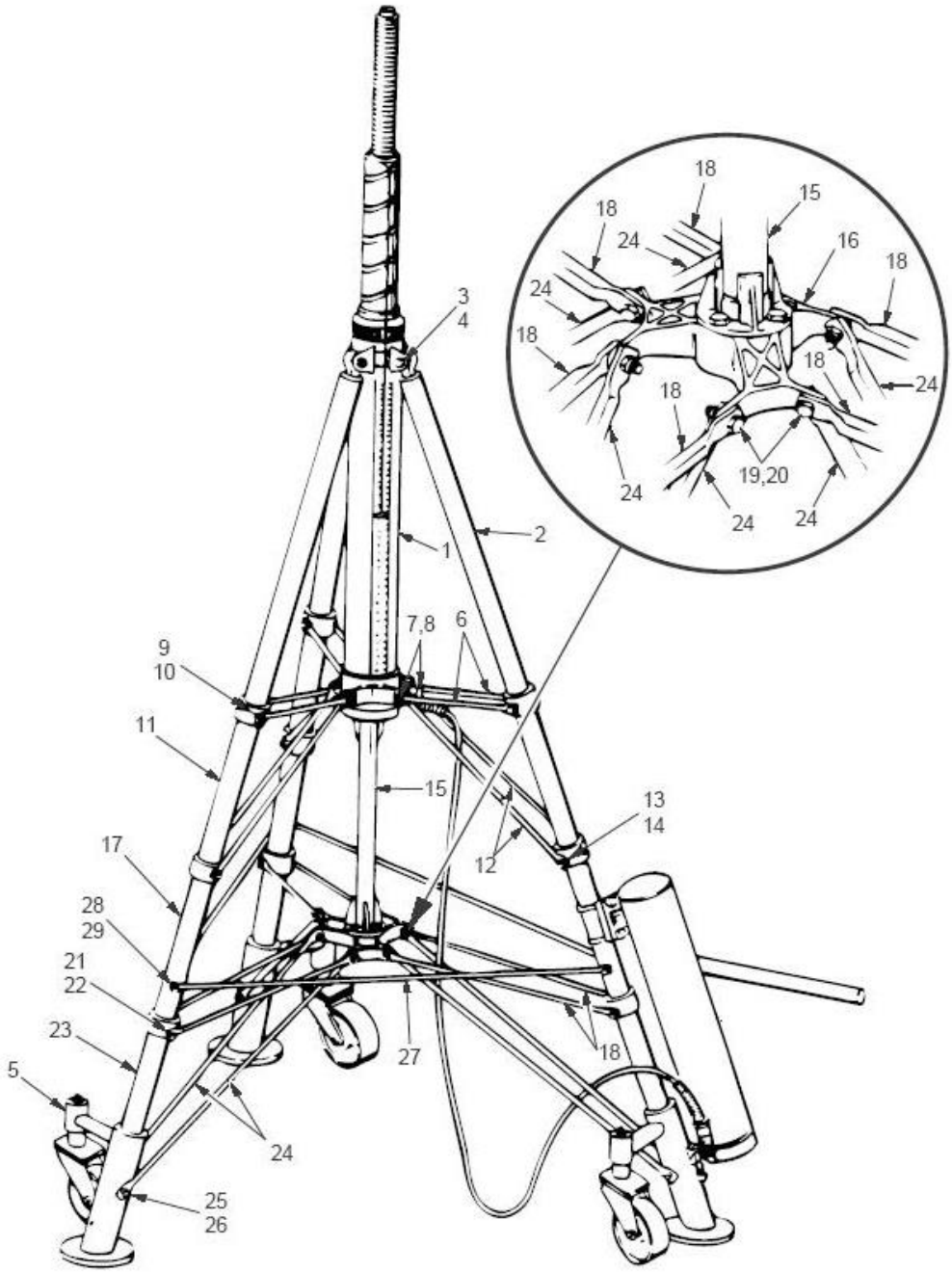


6.0 ASSEMBLY AND ERECTION *(continued)*

6.4 THREE-LEG EXTENSION ASSEMBLY

1. Be sure foot assemblies and pump assembly are not attached to tripod before installing leg extensions.
2. With the basic jack and one-leg and two-leg extensions erected place the flared end of leg extensions (23) over the bottom of leg extensions (17) and align holes.
3. Place the ends of braces #3 (18) over each side of leg extensions (23). Install bolts (21) and nuts (22).
4. Place one end of braces #4 (24) against lugs on web (16) and insert bolts (19) through braces #3 (18), lugs on web (16) and braces #4 (24). Install nuts (20).
5. If another leg extension is not to be added, attach foot assemblies (5) and secure free ends of braces #4 (24) with bolts (25) and nuts (26).
6. Attach pump assembly only if you are not adding leg extensions (Section 7.0 Pump Assembly Installation).

LEGEND
1. Cylinder Assembly
2. Basic Leg
3. Bolt
4. Nut
5. Foot Assembly
6. Brace #1
7. Bolt
8. Nut
9. Bolt
10. Nut
11. Leg Extension
12. Brace #2
13. Bolt
14. Nut
15. Tension Bar
16. Web
17. Leg Extension
18. Brace #3
19. Bolt
20. Nut
21. Bolt
22. Nut
23. Leg Extension
24. Brace #4
25. Bolt
26. Nut
27. Brace #7
28. Bolt
29. Nut



6.6 PUMP ASSEMBLY INSTALLATION

Place the lug on the lower part of the pump reservoir into the slotted support located on the foot assembly and secure with clamp assembly to right hand leg.

7.0 OPERATION

7.1 LIFTING PROCEDURE

1. Extension screw should be screwed down and ram should be fully retracted.
2. Position jack under load lifting point. Verify that jack footpads will rest on level concrete foundation. If not on concrete, it may be necessary to place a flat steel plate under footpads to distribute jack bearing pressure.
3. Unscrew the extension screw as required.
4. Close release valve.
5. Operate pump to extend ram until contact is made with load lift point and extension screw adapter, with no pressure applied.
6. Rotate jack approximately 15° in any direction to minimize jack movement when load is applied to casters.
7. Operate pump to extend ram until the footpads touch the ground.
8. Extend ram to desired height.

WARNING!

Maintain approximately one (1) inch clearance between locknut and mating surface during raising and lowering of ram.

9. Screw locknut down against cylinder head and screw thumbscrew in locknut down against ram to mechanically secure the lifted load.

NOTE: Thumbscrew must be screwed down against ram to secure lifted load.

10. Open release valve to release hydraulic pressure.

7.2 LOWERING PROCEDURE

1. Close release valve.
2. Unscrew thumbscrew in locknut and operate pump to raise ram until locknut is free to rotate.
3. Slowly open jack release valve and allow ram to fully retract

NOTE: Speed of lowering is controlled by how far release valve is open.

WARNING!

Maintain approximate one (1) inch clearance between locknut and mating surface during lowering of ram.

4. Lower extension screw completely.

7.3 RELIEF VALVE SETTING

1. Position jack under a jack tester. Partially extend the ram.
2. Remove pipe plug.
3. Insert a screwdriver into plug hole and align with adjusting screw.
4. Operate hand pump and verify that safety valve is set at 31.5 - 33 tons. Increase pressure setting by using screwdriver to adjust safety valve screw clockwise. To decrease pressure setting, adjust safety valve screw counterclockwise.

CAUTION!

Use care not to set valve more than 10% above rated capacity.

WARNING!

DO NOT exceed 33 tons.

5. Remove screwdriver and reinstall pipe plug.

8.0 TROUBLE SHOOTING

If operational troubles are encountered, refer to the Trouble Shooting Chart which lists the most commonly occurring problems and gives information which will facilitate location of trouble source and determination of remedial action.

TROUBLE	PROBABLE CAUSE	REMEDY
Casters fail to retract fully under load	Dirty casters	Remove casters, clean housing, and reassemble
Jack will not raise	Pump release plunger is open (fluid passing back to reservoir)	Tighten pump release valve. If necessary reopen valve, pump rapidly to flush out foreign matter
	Discharge valve is open	Pump rapidly to flush
	Suction valve is stuck. Lack of fluid	Pump rapidly to flush. Refill fluid reservoir
	Faulty safety valve (set too low or leaks)	Reset or replace spring and reset
Jack will not raise capacity load	Faulty safety valve (set too low)	Reset or replace spring and reset
	High-pressure hose leaks	Tighten or replace
	Release valve leaks	Tighten
	Discharge valve leaks	Reset
	Faulty packing	Replace lift unit packings
	Leaking pump packings	Replace pump packings
Jack will not raise to full height	Lack of fluid	Fill reservoir
	Closed air vent	Open air vent
	Sticking suction valve	Pump rapidly to dislodge
	Clogged fluid screen	Clean fluid screen
Ram rises and falls during each stroke	Discharge valve leaks	Replace ball or spring, reseat or reset
	Air locked	Relieve air pressure in system
Jack will not hold up load	Pump release valve leaks	Tighten valve nut
	Discharge valve leaks	Replace spring or ball. Reface seat. Reseat
	Safety valve leaks	Replace ball. Reseat and adjust
	Faulty ram o-ring	Replace packing
	Faulty ram packing	Replace packing
	Fluid line leaks	Replace high-pressure hose
Jack will not lower the load	Ram safety locknut in wrong place	Rotate nut to top of ram and tighten retaining screw
	Broken pump release plunger	Replace or repair
	Bent ram	Repair.
Ram will not completely lower	Ram safety locknut in wrong place	Rotate nut to top of ram and tighten screw
	Damaged ram	Replace lift unit
	Faulty ram ‘V’ packing	Replace packing
	Air under ram	Bleed system
	Restricted fluid passage on return to reservoir	Disconnect one end of hose connection and pump rapidly to flush
Handle works too hard	Wrong position for handle in piston	Change position
	Restricted fluid passage	Disconnect hose and pump to flush line
	Clogged fluid screen	Clean fluid screen
Handle stroke partially wasted	Air in pump cylinder. Suction valve sticks	Open pump release plunger and pump rapidly to flush system
	Clogged fluid screen	Clean fluid screen
	Closed air vent	Open air vent
Handle moves up without effort	Discharge valve leaks, or air in pump cylinder	Open pump release valve and pump rapidly
Handle snaps back	Closed air vent	Open air vent
	Suction valve sticks	Open pump release valve and pump rapidly
	Clogged fluid screen	Clean fluid screen

9.0 MAINTENANCE

There are no special maintenance instructions for this jack.

9.1 SHOP AIDS AVAILABLE

Contact ColumbusJACK/Regent Sales for any shop aids.

9.2 OVERHAUL KITS AVAILABLE

Soft Kit SKTES3-2
Repair Kit TES3-2

10.0 PROVISION OF SPARES

10.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

Columbus**Jack**/Regent
1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

Telephone: 614.443.7492
Fax: 614.444.9337
E-mail: sales@columbusjack.com
Website: www. columbusjack.com

10.2 RECOMMENDED SPARE PARTS LISTS

Reference the following page(s) for Replacement Parts and Kits available.

11.0 IN SERVICE SUPPORT

Contact Columbus Jack. for technical services and information. See Section 1.3 – Manufacturer.

12.0 GUARANTEES/LIMITATION OF LIABILITY

1. ColumbusJACK Corporation, (Seller) warrants each new product of its manufacture to be free from defects in material or workmanship, under proper, reasonable and normal use and service, and for a period of twelve (12) months after date of shipment from Seller's Swanton, OH. USA facility.
2. Where Buyer claims an alleged defect in material or workmanship and so advises Seller in writing within ten (10) days after discovery thereof, then and in such event, Buyer shall return said equipment, transportation prepaid, to the Seller, provided such return is timely and within twelve (12) months form date of original shipment. This warranty and liability of the Seller is expressly limited solely to replacement of repair of defective parts or goods, and return at Buyer's expense to Seller after find by Seller the product was defective prior to original shipment or, at the option of Seller, to making refund to Buyer of the purchase price for said product.
3. It is further expressly understood and agreed that:
    a. THERE IS NO WARRANTY, representation of condition OF ANY KIND, express or implied, (INCLUDING NO WARRANTY OF MERCHANT-ABILITY OR OF FITNESS) EXCEPT THAT THE MATERIAL SHALL BE OF THE QUALITY SPECIFIED HEREIN, and none shall be implied by law. Except as otherwise provided herein, quality shall be in accordance with seller's specifications. Final determination of the material for the use contemplated by Buyer is the sole responsibility of Buyer and Seller shall have no responsibility in connection with such suitability, and
    b. The Buyer's sole and exclusive remedy shall be repair or replacement of defective parts by the Seller. Should the goods, in the judgment of Seller, preclude the remedying of the warranted defects by repair or replacement, the buyer's sole and exclusive remedy shall the be the refund of the purchase price, and
    c. Seller shall not be liable for prospective profits or special, indirect or consequential damages, nor shall any recovery of any kind against Seller be greater in amount than the purchase price of the specific material sold and causing the alleged loss, damage or injury. Buyer assumes all risk and liability for loss, damage or injury to persons or property of Buyer or others arising out of use or possession of any product or part sold hereunder, and
    d. The Seller shall in no way be deemed or held to be obligated, liable or accountable upon or for any guarantees or warranties, express or implied, or created by statute or by operation of law or otherwise, in any manner of form beyond its express agreement above set forth, and
    e. No warranty herein shall apply to any product which shall have been repaired or altered, unless such alteration or repair has been made by Seller or where, after return to and inspection by Seller, the product is found by Seller to have been subject to misuse, negligence or accident, and
    f. No warranty of any nature is made by Seller as to any component forming a part of the product sold and Buyer shall receive only such warranties offered by such other manufacturer pertinent to such component, and
    g. Seller does not assume nor does Seller authorize any other person to assume for it any other liability or make any warranty in connection with the sale of its products.

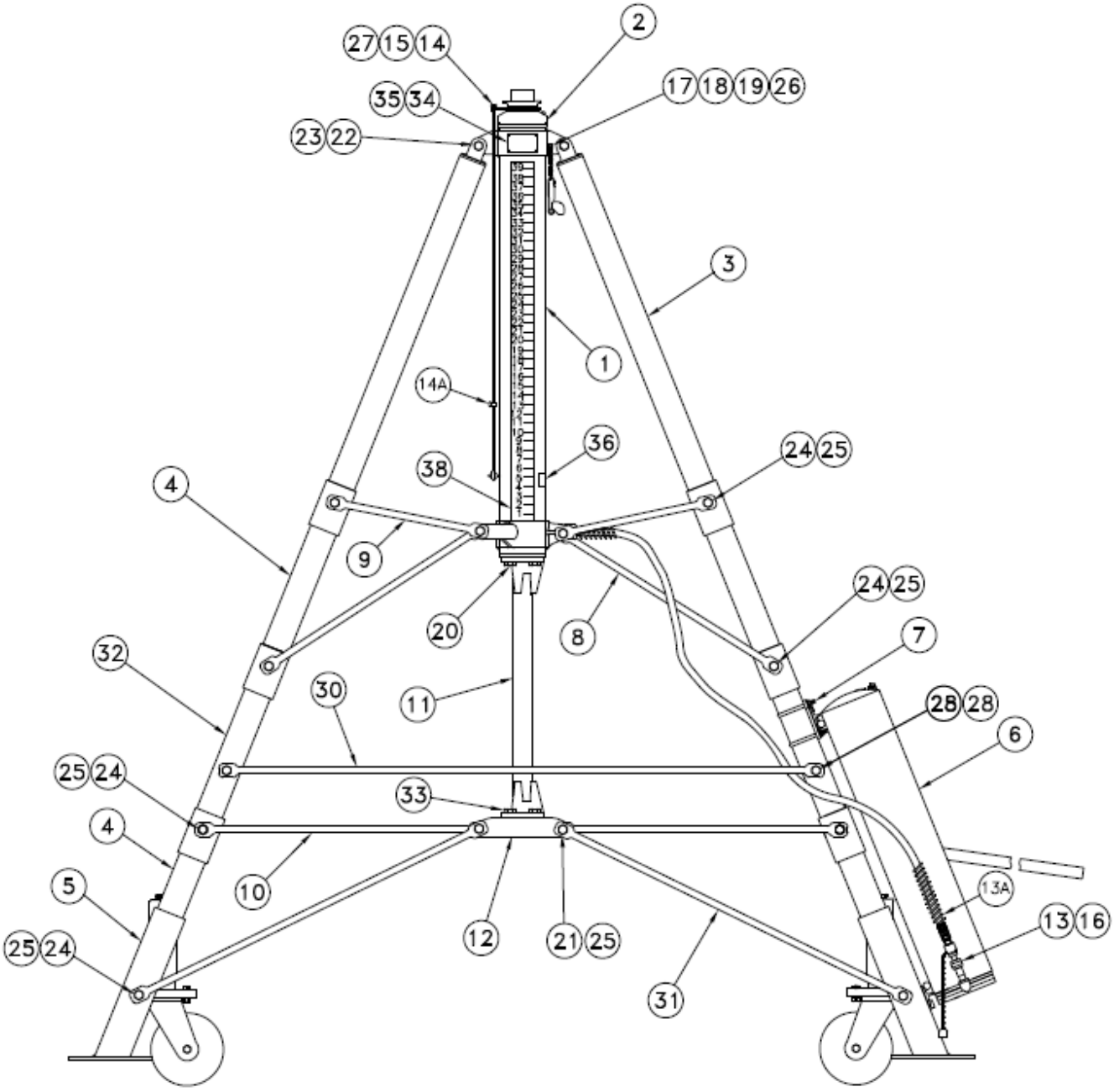
The obligations of ColumbusJACK expressly stated herein are in lieu of all other warranties or conditions expressed or implied. **Any unauthorized modification of the ColumbusJACK products or use of the ColumbusJACK products in violations of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by ColumbusJACK will immediately *void any warranty, express or implied* and ColumbusJACK *disclaims any and all liability for injury (WITHOUT LIMITATION and including DEATH), loss or damage arising from or relating to such misuse*.**

13.0 APPENDICES

APPENDIX I Routine Jack Maintenance Bulletins

Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



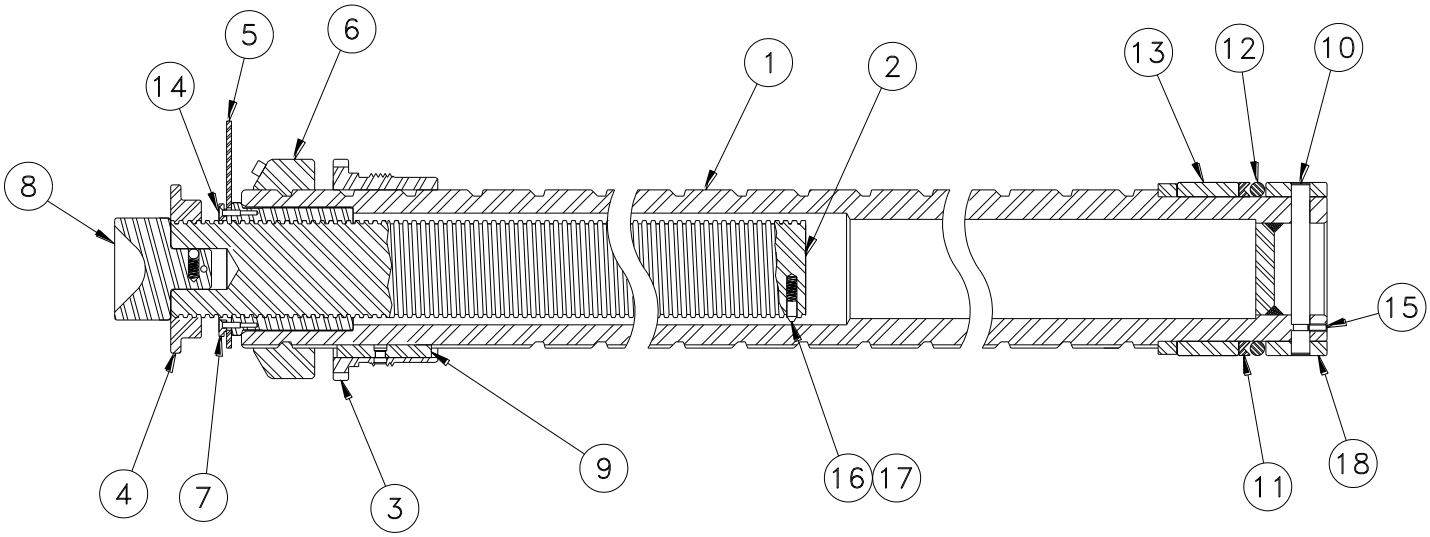
Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
1	50D25185	Cylinder Weldment	1
2	50D25182	Ram Assembly	1
3	53C6273	Leg, Upper	3
4	53C6274	Leg Extension	6
5	53J7247	Foot Assembly	3
6	52H22937-4	Pump	1
7	270AS204-3	Clamp Assembly	1
8	44D9837	Brace #2	6
9	44D9838	Brace #1	6
10	44D9840	Brace #3	6
11	50C25219	Tension Bar	1
12	64D34622-7	Web, Brace	1
13	49B6568	Hose Assembly	1
13A	900732-6	Spring Guard	2
14	49B6450	Tube Assembly	1
14A	6-32	Thumbscrew	1
15	48A7878	Rod	1
16	43A13906	Connector Assembly	1
17	42A7530	Adapter	1
18	450-4001	Chain	1
19	JC11636	Pin, Blanket	1
20	42A13043-2	Hex Head Cap Screw	3
21	AN10-20A	Hex Head Cap Screw	12
22	AN14-23A	Hex Head Cap Screw	3
23	MS21083-N14	Hex Nut, Self-Locking	3
24	AN10-47A	Hex Head Cap Screw	12
25	MS21083-N10	Hex Nut, Self-Locking	27
26	MS35207-261	Screw, Pan Head	1
27	MS35426-25	Wing Nut	1
28	AN10-43A	Hex Head Cap Screw	3
30	44D23637	Brace #7	3
31	44D9839	Brace #4	6
32	53C6275	Leg Extension	3
33	AN12-11A	Hex Head Cap Screw	3
34	160A601	Nameplate	1
35	450A6984	Drive Screw	4
36	42A13047-1	Decal, 30 Ton	1
37	50D25160-1	Assembly Decal, (Not Shown)	1
38	51B6545	Decal, Rise Indicator	1

Parts List

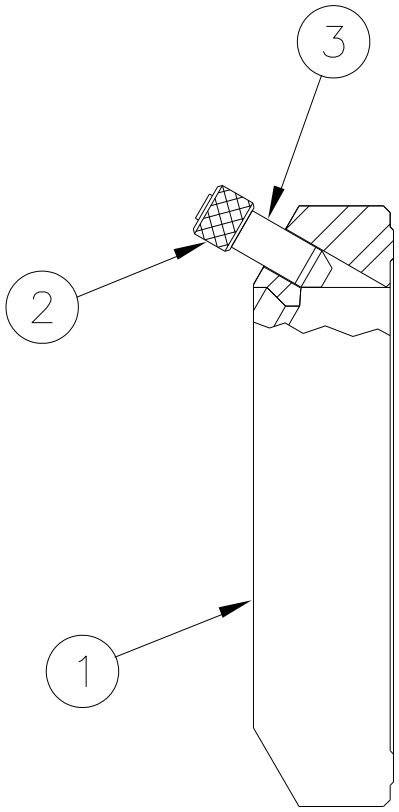
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	50D25182	**Ram Assembly;** consists of:	
1	50C25206	Ram and Nut Assembly	1
2	50C25202	Extension Screw	1
3	50C25169	Bearing, Upper	1
4	50B25233	Locknut	1
5	50B25173	Collar, Rise Indicator	1
6	43A12190-3	Locknut Assembly	1
7	50B25172	Retainer	1
8	56B6129	Socket Assembly	1
9	43A12189-1	Key Assembly	1
10	50A25188	Pin	1
11	50B25175-1	Backup Ring	1
12	50B25174-1	O-Ring	1
13	50B25190	Bearing	1
14	AN510-6-8	Screw	4
15	AN565A416H8	Set Screw	1
16	42A12988	Plunger	1
17	42A12989	Spring	1
18	50B25153	Bearing	1

Parts List

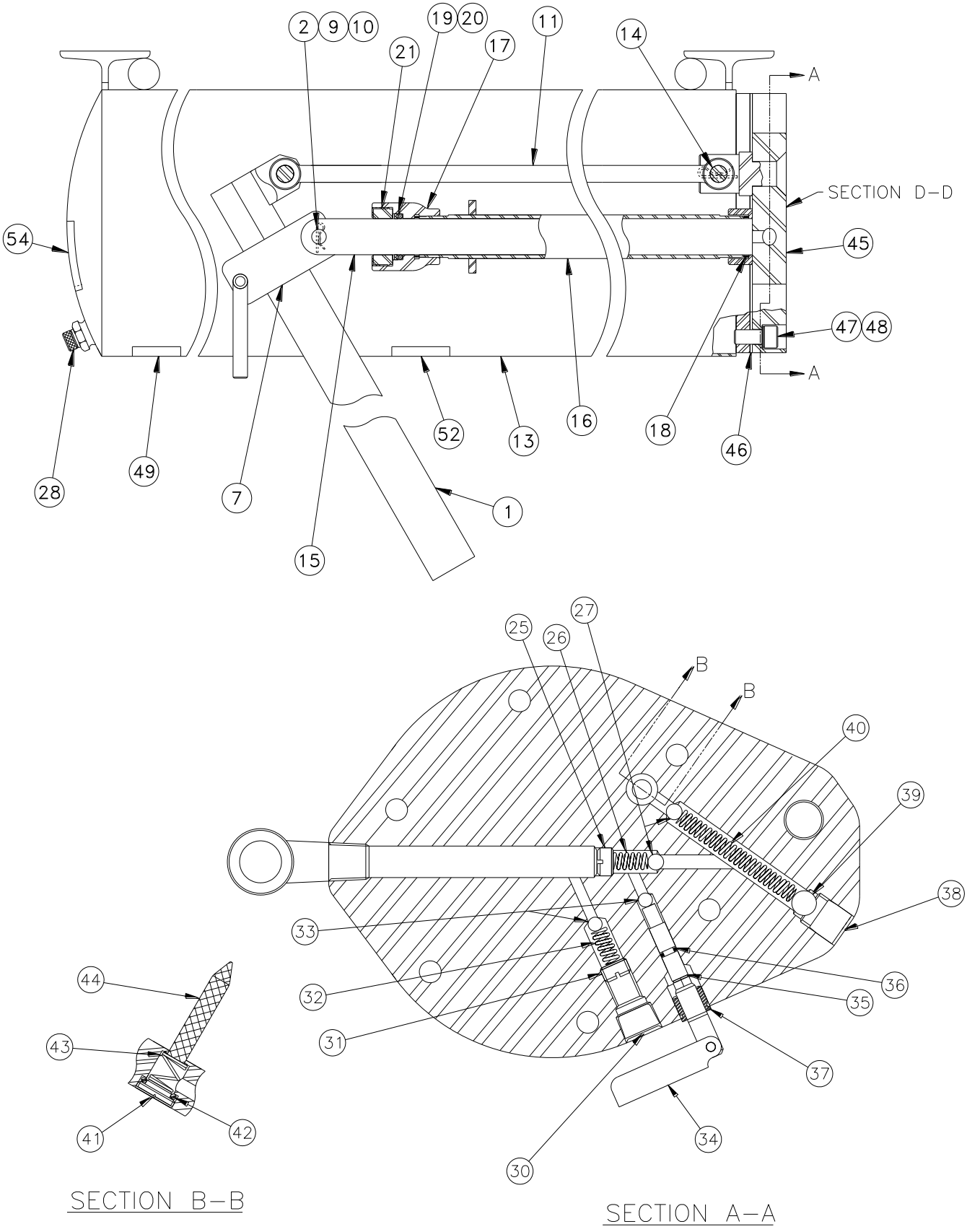
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	43A12190-3	**Nut Assembly;** consists of:	
1	50C25230	Locknut	1
2	42A13037	Head, Screw	1
3	42A13036	Retaining Screw	1

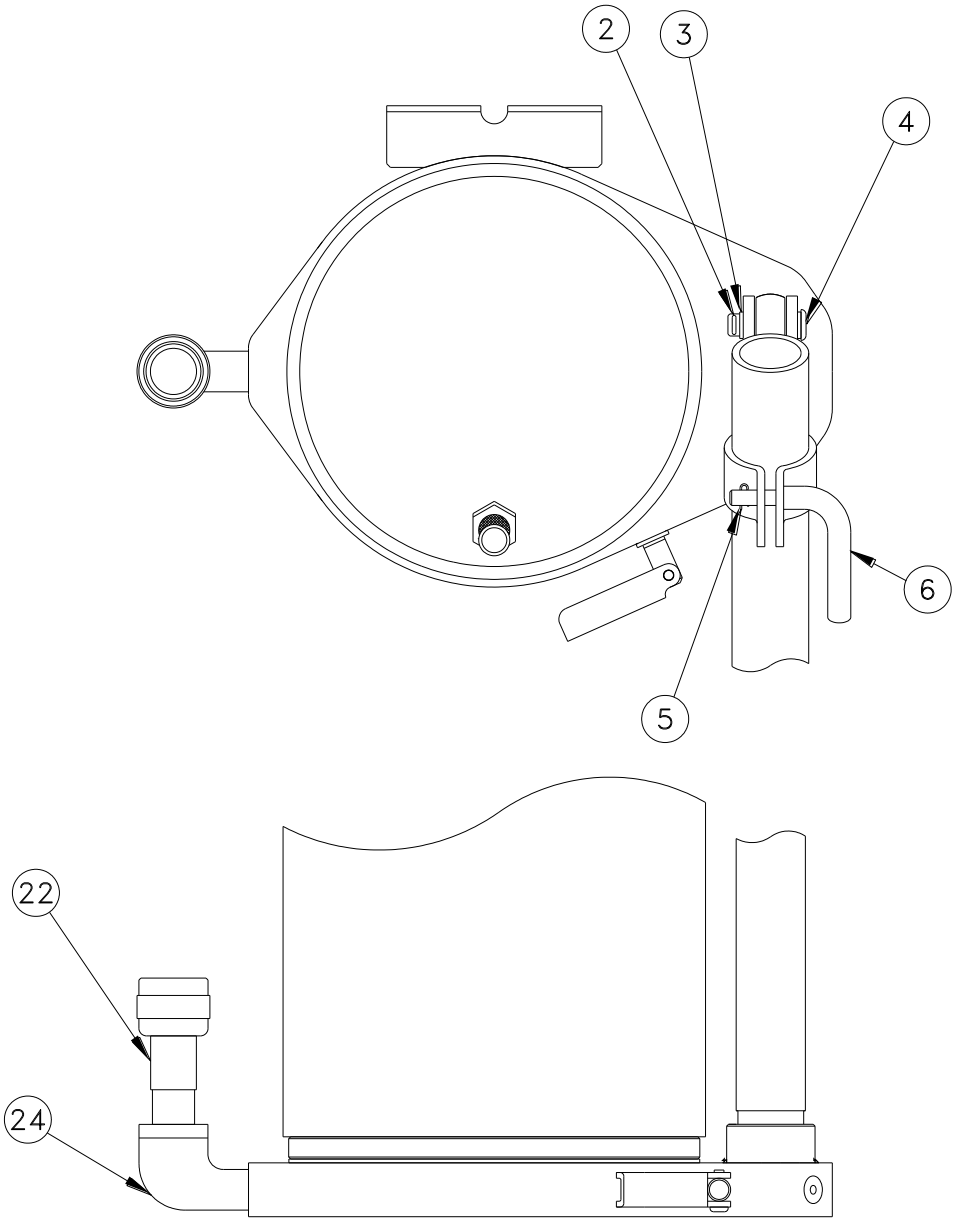
Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
	52H22937-4	**Pump Assembly;** consists of:	
1	52C22938	Pump Handle	1
2	MS24665-300	Cotter Pin	3
3	AN960-716	Flat Washer	2
4	MS20392-6C31	Pin, Flat Head	1
5	MS24665-151	Cotter Pin	1
6	52A22940	Lever Clamp	1
7	52B22939	Clamp, Pump	1
9	AN960-616	Flat Washer	1
10	MS20392-5C33	Pin, Flat Head	1
11	44A9858	Link, Pump	1
13	50B7759	Reservoir Weldment	1
14	MS20392-6C39	Pin, Flat Head	1
15	52B22890	Piston, Pump	1
16	44A9859	Cylinder, Pump	1
17	44B9849	Bearing	1
18	45A21336	Washer, Fiber	2
19	MS28775-213	O-Ring	1
20	49B6412-18	Backup Ring	1
21	44A9868	Nut, Pump	1
22	43A13905	Connector Assembly, Female	1
24	303D	Street Elbow	1
25	44A9864	Plug, Retaining	1
26	42A13004	Spring	1
27	MS19059-2417	Ball	2
28	50B7763	Air Vent Assembly	1
30	MS27769-4	Pipe Plug	1
31	50B7769	Screw, Adjusting	1
32	50B7770	Spring, Release	1
33	MS19059-2414	Ball	2
34	50B7765	Release Valve Assembly	1
35	44A8562	Snap Ring	1
36	MS28775-008	O-Ring	1
37	44A8566	Nut, Packing	1
38	312-24041	Set Screw, Flat Point	1
39	MS19059-2422	Ball	1
40	44A10313	Spring, Pump	1
41	50B7768	Plug, Screen	1
42	MS28775-111	O-Ring	1
43	50B7767	Spring, Screen	1
44	44A10314	Screen, Pump	1
45	50D7758	Base Assembly	1

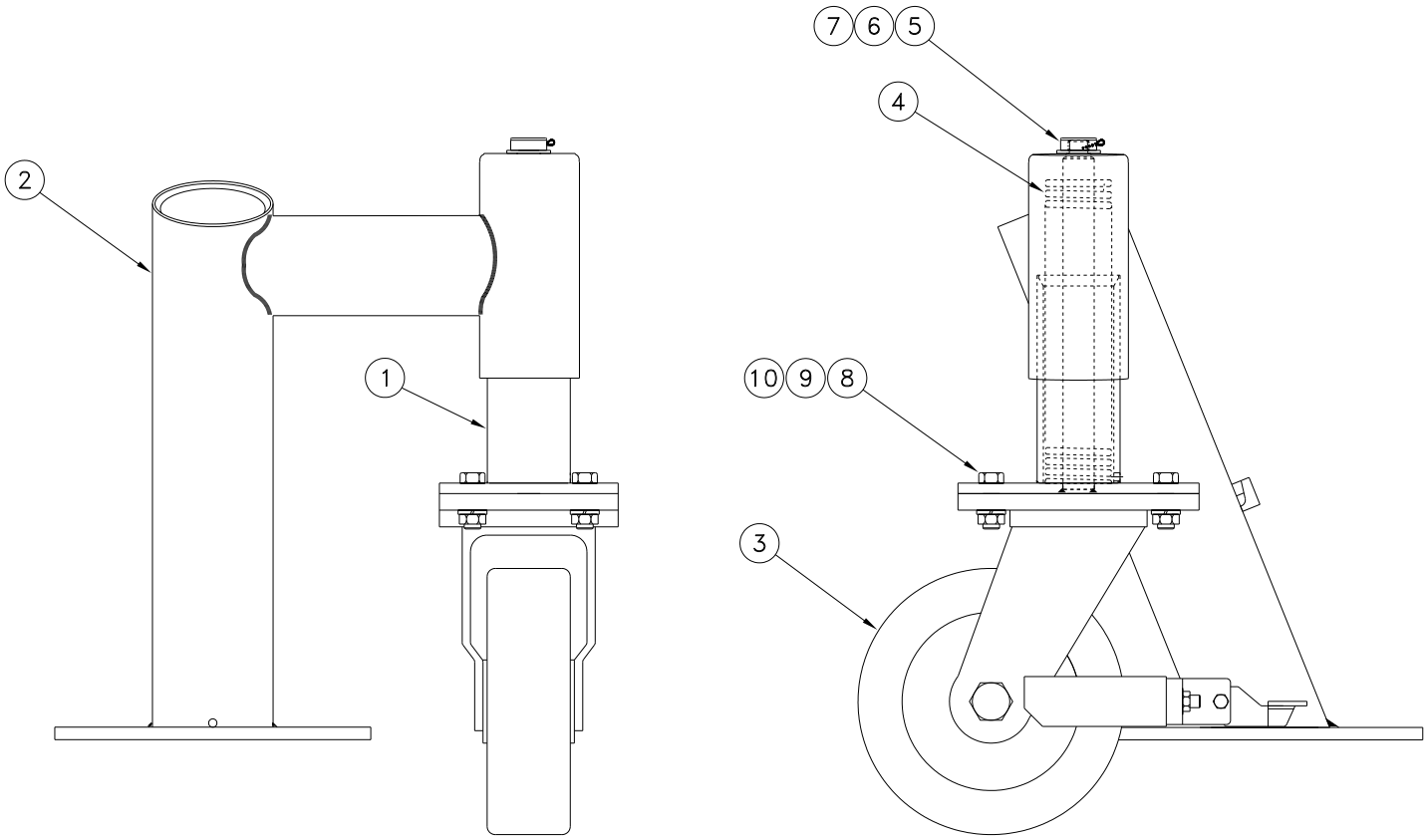
Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

Item	Part Number	Description	Qty
46	50B7762	Gasket, Pump	1
47	378-16060	Socket Head Cap Screw	6
48	48A7858	Washer, Cap	6
49	44A8573	Decal-Caution	1
52	42A13047	Decal, Capacity	1
54	44A10315	Decal, Pump Instruction	1

Parts List

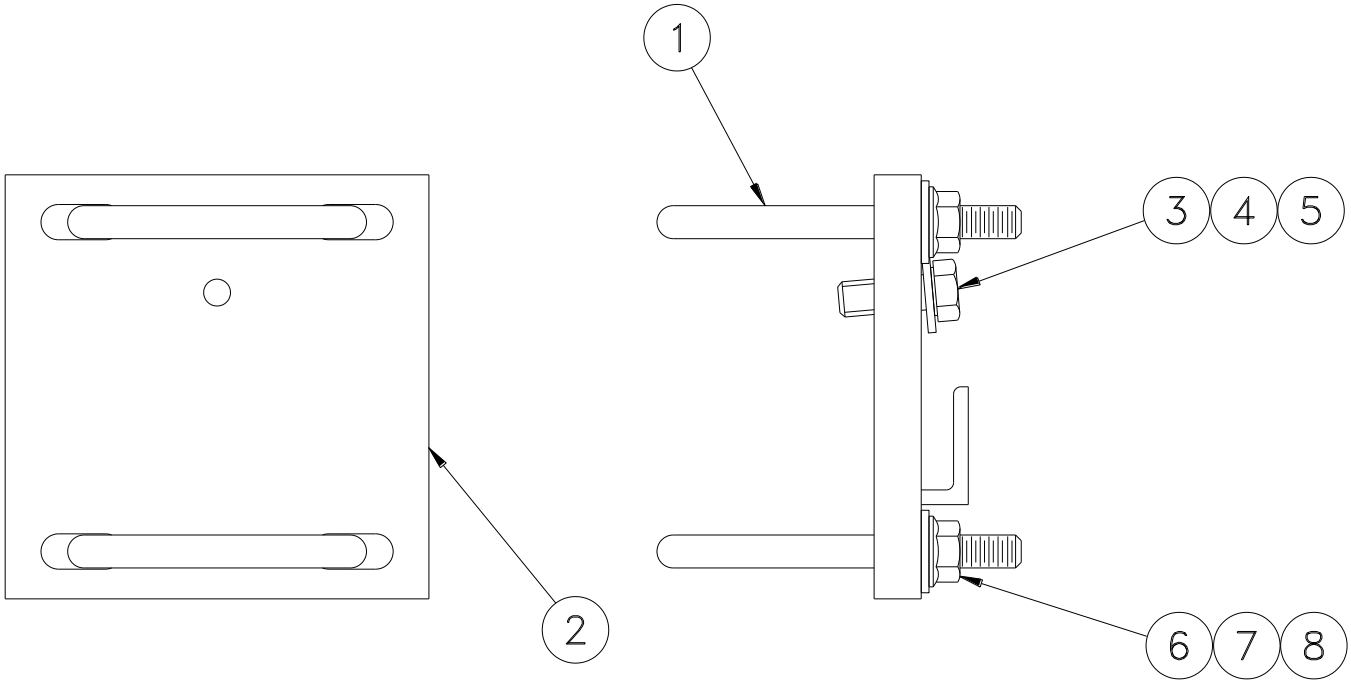
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	53J7247	**Foot Assembly;** consists of:	
1	53C6272	Caster Mount	1
2	53J7248	Foot Caster Weldment	1
3	MS24380-8SM	Caster, Steel	1
4	CJ66A0160	Spring	1
5	AN960-1216	Flat Washer.	1
6	AN320-10	Nut, Castle	1
7	MS24665-370	Cotter Pin	1
8	MS90726-113	Hex Head Cap Screw	4
9	MS35338-86	Lockwasher	4
10	MS51968-14	Hex Nut	4

Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	270AS204-3	**Clamp Assembly;** consists of:	
1	450A3610	U-Bolt	2
2	270AS205-1	Plate	1
3	346-10024	Lockwasher.	1
4	371-16080	Hex Head Cap Screw	1
5	345-11024	Flat Washer	1
6	345-11020	Flat Washer	4
7	346-10020	Lockwasher.	4
8	335-14600	Hex Nut, Jam	4

APPENDIX I

Routine Jack Maintenance Bulletins

Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 102 – PROCEDURE FOR WINTERIZATION OF HYDRAULIC AIRCRAFT JACKS

The following procedures should be utilized for optimum operational characteristics when using jacks at various temperature extremes:

1. Above 0ºF (-18ºC) Use MIL-PRF-5606, or equal, with no further additive required.
2. At 0º to -20ºF (-18ºC to 29ºC) Use a mixture of 75% MIL-PRF-5606, or equal, and 25% kerosene.
3. Below -20ºF (-29ºC) Use a mixture of 50% MIL-PRF-5606, or equal, and 50% kerosene.

Due to most company, safety, or union regulations which restrict employees from working out-of-doors below -30ºF (-34ºC), there is a lack of experience beyond this point. It is permissible, however, to increase the percentage of kerosene up to 100%. As the ambient temperature increases, MIL-PRF-5606, should be added back to the system in the appropriate mixture.

The air supply should be clean and dry. At -30ºF (-34ºC), the air pump will start to react sluggishly and continue to operate less efficiently as the temperature decreases when a normal air supply is used. The problem can be eliminated by using a dry nitrogen source of sufficient capacity.

To ease the operation of the locknut(s) and screw extension, use "Never Freeze" by Snap-On, or equal, and apply liberally to the thread surfaces.

Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 116 –SCREW EXTENSION USAGE

When using a jack that has a screw extension, it is advisable that the screw extension be extended as far as possible, and still has the jack roll under the jacking point. If the screw extension is not properly extended, the aircraft may not be able to be raised to the desired height.

A periodic check should be made to the screw extension to ensure that the stop is operating properly to prevent over-extension. To do this, rotate the screw extension counterclockwise until it stops rotating. DO NOT FORCE THE SCREW EXTENSION BEYOND THIS POINT. If the screw extension does not stop rotating, remove it and repair the stop. DO NOT USE WITHOUT THE SCREW EXTENSION STOP WORKING PROPERLY, AS THE JACK COULD FAIL WITH AN OVER-EXTENDED SCREW EXTENSION.

Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 147 – RECOMMENDED ANNUAL JACK CERTICIFATION PROCEDURE

The following Recommended Annual Jack Certification Procedure is provided as a guide to insure that hydraulic aircraft jacks are always certified for operation. An annual time interval is a general recommendation only. The actual interval used should include factors for the climatic conditions in which the equipment is stored and the frequency of equipment use. Recommendations for Suggested Preventative Maintenance can be found in RJM 170.

1. With no external load applied to the jack, fully close release valve and fully extend ram(s) to verify function and the absence of external hydraulic leakage.

WARNING!

DO NOT APPLY PRESSURE AGAINST INTERNAL RAM STOP(S).

2. Open release valve and verify ram(s) retract fully.
3. Position jack under jack tester.

NOTE: For tripod jacks, all leg extensions should be installed on the jack.

4. Close release valve, and extend ram(s) until cup adapter contacts jack tester. Make sure that the ram of a single stage jack is partially extended and that the smaller ram of a multi-stage jack is partially extended.
5. Pressurize the jack against the jack tester. Using a calibrated pressure gauge on either the jack or the jack tester, monitor the pressure until the capacity (operating pressure) of the jack is reached.
6. With the jack pressurized against the jack tester, hold in this position for 3 minutes. Verify that the jack pressure has not decreased, indicating internal leakage.
7. Open the release valve to relieve jack pressure against the jack tester.
8. Set the safety relief valve per jack operation and maintenance manual.

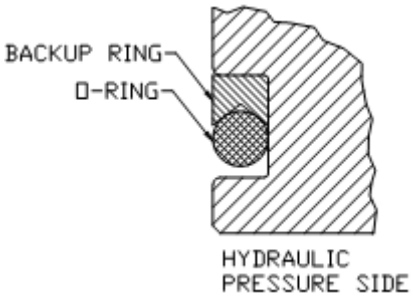
Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 149 – TEFLON BACKUP RING INSTALLATION PROCEDURE

When installing new Teflon backup rings on a ram or piston of any jack model, the following procedure should be observed to ensure correct installation of the ring. When installing a new backup ring, the corresponding o-ring should always be replaced also.

1. Cut existing o-ring and Teflon backup ring.
2. Clean and visually inspect the groove in the ram or piston for any nicks, scratches of score marks, which could cut the o-ring and backup ring during installation.
3. Check to ensure backup ring is clean and not damaged.
4. Set backup ring on a flat metal surface.
5. Using a propane torch, heat backup ring in a circular motion until backup ring is equally softened and pliable or flexible.
6. Carefully pick-up the HOT Teflon backup ring off the HOT metal plate and stretch the ring enough to fit over the end of the ram (piston).
   NOTE: Make sure the "V" cup portion of the backup ring will face the o-ring. (see figure)
7. If backup ring does not return to size after cooling, re-heat backup ring while on the part, and cool quickly with a cold, wet towel or rag.
8. Check to ensure o-ring is clean and not damaged.
9. Carefully stretch o-ring over the end of the ram (piston). Ensure that the o-ring and the "V" cup of the backup ring are facing each other. (See figure)



Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 170 – SUGGESTED PREVENTATIVE MAINTENANCE FOR JACKS

The following Preventative Maintenance Schedule is provided as a guide to insure that hydraulic aircraft jacks are always ready for operation. The time intervals listed are a general recommendation only. The actual interval used should include factors for the climatic conditions in which the equipment is stored and the frequency of equipment use.

Prior to Operation

1. Inspect for damaged or missing components.
2. Inspect for oil leakage and proper fluid level.
3. Inspect screw extension for mechanical stop.
4. Inspect all snap rings for engagement into grooves.
5. Inspect jack adapter for damage.

Every 6 Months

1. Inspect for worn snap ring grooves.
2. Change hydraulic filters if applicable.
3. If jack has not been used regularly, cycle jack without load.
4. Grease all lube fittings with a general purpose grease.
5. Wipe down ram(s) and screw extension with hydraulic oil.

Every 12 Months

1. Calibrate pressure gauge if applicable per RJM 173.
1. Perform "Recommended Annual Jack Certification Procedure" per RJM 147.

Routine Jack Maintenance Bulletin

TO PROVIDE COMPLETE INFORMATION ON SERVICING
ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

BULLETIN RJM 171 – RECOMMENDED HYDRAULIC OILS

The following hydraulic oils are recommended for use in all ColumbusJACK/Regent products, though any oil compatible with Buna-N seals may be used. Proper oil level should be .5 to 1 inch below the fill port when all rams are collapsed.

Exxon/Mobil Aero HF (MIL-PRF-5606)
Exxon/Mobil DTE-11, -15
NATO Code No. H-538 (MIL-PRF-87257)
Phillips 66 X/C 5606
Royco 783 (Anderol) (MIL-PRF-6083)
Royco 782 (Anderol) (MIL-PRF-83282)
Shell Tellus 10, 15
Shell Aerofluid 31 (MIL-PRF-83282)
Shell Aerofluid 41 (MIL-PRF-5606)
Texaco Regal Oil R & O (32, 46, 100, 150, 220, 320, 460)