



Model: BAT-KA5T-001

5 TON AXLE JACK

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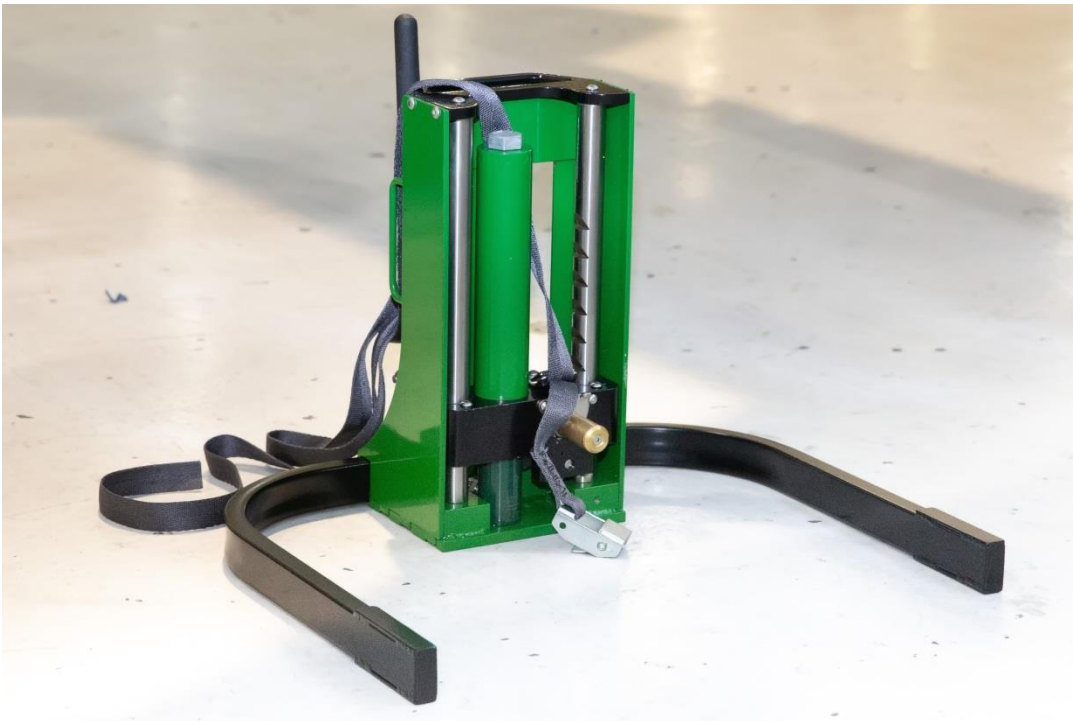




TABLE OF CONTENTS

1.0 DESCRIPTION	3
2.0 USAGE	3
3.0 SPECIFICATIONS	3
4.0 ASSEMBLY INSTRUCTIONS	4
A. GENERAL INFORMATION	4
B. PRE-USE CHECKS	4
5.0 OPERATING INSTRUCTIONS.....	5
A. JACK INSTRUCTIONS	6
6.0 MAINTENANCE	9
A. GENERAL	9
B. SERVICING PUMP	9
C. JACK FUNCTION LOAD TEST	9
7.0 TROUBLE SHOOTING	10
8.0 ILLUSTRATED PARTS LIST	11
A. REPLACEMENT PARTS	11
B. PART REFERENCE - FRONT	12
C. PART REFERENCE - REAR	13
D. Citation Fuselage Lift.....	14



1.0 DESCRIPTION

The BAT Tools Five Ton Axle Jack incorporates the following quality features:

- Steel construction
- 10,000 pound weight limit with over lift lock-out
- Retention Strap
- Uses standard MIL-H-5606 hydraulic fluid
- The product arrives fully serviced and ready for use
- Relief/release valve with resting points

2.0 USAGE

The purpose of this jack is to lift aircraft for maintenance. It has a maximum cylinder lift capacity of 5 tons (5080 kg).

3.0 SPECIFICATIONS

Cylinder Vertical Lift capacity:	10,000 lbs. (5080 kg)
Minimum Lift Pin height:	4.00 in. (10.16 cm)
Cylinder Stroke:	9.18 in. (23.32 cm)
Maximum height obtainable:	13.18 in. (33.48 cm)
Weight:	51.00 lbs. (23.10 kg)



4.0 ASSEMBLY INSTRUCTIONS

A. GENERAL INFORMATION

1. This product should be assembled and/or repaired using good workmanship practices and proper tools.
2. No tools are required to assemble the jack.
3. All replacement parts must be the same as the original parts supplied.

B. PRE-USE CHECKS

1. Refer to the Jack Illustrated Parts List and Illustration at end of this document to identify and assure that all parts are present.
2. Generally check over unit to assure the integrity of the unit.
3. With rams completely collapsed, check hydraulic fluid level to verify it is in the full range shown on dipstick.
4. Replenish with MIL-H-5606 fluid as required.
5. Inspect for rust and damaged surfaces where there is a potential for rust.

C. ASSEMBLING THE AXLE JACK

1. **Connecting the Legs**

- a. Connect universal legs to base of Jack by inserting the smaller end with the guide hole into base of jack by sliding in while pulling the Leg Quick Disconnect on base of the jack until the leg is fully inserted.
- b. Release the Leg Quick Disconnect into the guide hole and ensure the legs are now locked into place by verifying the pin dropped into the guide hole and pull the leg to verify the leg is solidly mounted.
- c. Single Wheel Main Landing Gear (C90/E90, PC12, and Citation) install L Bracket on front side of Axle frame then swivel leg until dowel pin fully engages leg interface on rear of jack, then install quick release pin to ensure leg stays engaged completely.



2. Inserting the Lift Pin

- a. Install axle lifting pin into the block of the jack. Lift the catch mechanism and insert the black side of the lifting pin leaving the Bronze end exposed and toward aircraft.
- b. You must ensure that the catch mechanism properly engages by pulling out on axle lift pin to verify the catch is fully engaged.
- c. C90/E90, PC12, and Citation follow steps a. and b. with applicable lifting pin. **(Warning: Citation lift pin has an additional internal wrenching screw that must be installed during use located at the 12 O Clock position on Lift pin.)**

NOTE: You will do this step prior to moving the jack into position.

3. Attaching the Retention Strap

- a. Install retention strap into mounting clip on top of the block directly above axle lift pin. Ensure strap is not hung on any moving parts or resting on any aircraft parts that can be damaged during the jacking process

5.0 OPERATING INSTRUCTIONS

The user should be familiar with the following statements prior to using the jack(s).

CAUTIONS

1. **AIRCRAFT JACK MUST REST ON A STABLE AND LEVEL SURFACE.**
2. **NEVER PUT HANDS BETWEEN AIRCRAFT AND JACK.**
3. **ALWAYS KEEP HANDS, TOOLS, AND ANY FOREIGN OBJECT DEBRIS CLEAR OF ALL MOVING SURFACES**



A. JACK INSTRUCTIONS

1. Setting Up Jack for Lift

- a. Ensure pump pressure bleed valve is turned to the closed position (fully clockwise) then pump the jack until the axle pin is at the proper height for axle insertion.
 - For the Main Landing Gear (MLG) you will do this opposite tire of the one requiring maintenance.
 - For the Nose Landing Gear (NLG) look for the placarded insertion point on opposite side from tire.

NOTE: MLG requires removal of axle nut cotter pin only.

CAUTIONARY NOTE:

Ensure you do not back off axle nut during the procedure or it will require torque procedure and could cause serious harm to the aircraft or persons.

2. Lifting the Aircraft

- a. Push the jack forward into the center axle point, inserting the pin as far as possible while maintaining proper clearance from aircraft surfaces to prevent damage to the aircraft finishes.

NOTE: Observe to ensure the Jack is not resting against any aircraft surfaces where damage could occur.

- b. Once installed at proper axle depth install retention strap around tire not requiring service on MLG and NLG can be installed in a secure position so that it does not impede removal and installation of the wheel and tire assembly.

Continued on Next Page



NOTE: When installing on NLG, ensure that the strap buckle is not resting on metal aircraft surfaces to prevent aircraft surface damage.

- c. You are now ready to lift the aircraft. Pump jack to the clearance height necessary for wheel and tire removal

NOTE: If the aircraft landing gear needs to be off the ground for a longer duration of time there is a mechanical safety mechanism that can be engaged.

- **Engage:** Slowly bleeding off pump pressure by turning pump pressure bleed valve counter clockwise. The jack will rest on closest tow to the pawl then turn pump pressure bleed valve clockwise to close.
- **Disengage:** Lift the aircraft from the mechanical rest, turn pump pressure bleed valve clockwise and pump the jack until the pawl mechanism is disengaged.

3. Lowering the Aircraft:

- a. To down jack aircraft you will need to hold mechanical safety stop handle to vertical position then very slowly turn pump pressure relief valve counterclockwise and slowly release pressure.

Safety Note:

The aircraft will immediately start to lower so make sure the area is clear and safe to lower.

- b. Once the aircraft is lowered and the aircraft is resting on the landing gear. Close pump pressure bleed valve (fully clockwise) prior to removing jack and axle pin from aircraft.



4. Removing the Jack

- a. Verify once more that the aircraft is safely on ground and remove the retention strap.
- b. Slide Axle Jack slowly away from aircraft using the Jack handles until it has cleared the landing gear area.

5. Returning the Jack to Starting Position

- a. You return the jack to the stowed position by holding mechanical safety stop handle to vertical position and turning the pump pressure bleed valve counterclockwise to release pressure.

Safety Note:

Be careful to keep fingers clear of any pinch hazards between pump pressure relief valve and the mechanical safety stop handle.

6. Stowing the Jack

- a. Remove Axle lift pin from the block and stow properly in case
- b. Remove legs from base of jack by disengaging quick release pins.
- c. Inspect pump for any fluid leaks
- d. Place in foam lined storage case
- e. Lock Case clasps and you are now ready to store the jack



6.0 MAINTENANCE

A. GENERAL

1. All maintenance and/or repair work should be done using good workmanship practices and proper tools.
2. The work area should be clean and free of dirt.

B. SERVICING PUMP

NOTE: If pump is found faulty, call the factory for replacement .

1. It will only be necessary to check the pump for fluid.
2. Remove top cap bolt and verify fluid is present at top of reservoir. The cap bolt has indication marks for reference.

C. JACK FUNCTION LOAD TEST

1. Return to BAT Tools or Authorized BAT Tools Service Center annually for load test and preventative maintenance.



7.0 TROUBLE SHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Ram will not rise or rises erratically	Open Pump Valve	Close Pump Valve
	Open Oil Fill Location	Close Oil Fill Location. Oil Fill Hole should only be Opened when cylinder is fully down.
	Leaky release valve	Tighten release valve
	Leaky pump O-ring packing	Repair pump
	Air under ram	Bleed system
	Lack of oil	Refill reservoir, check system for leaks
Jack will not lower	Broken pump release valve	Send to BAT for Repair
	Bent ram	Send To BAT for Repair



8.0 ILLUSTRATED PARTS LIST

A. REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY
1	KA5T-LP	Jacking Lift Pin	1
2	KA5T-LGS	Jack Legs	2
3	KA5T-TH	Jack Top Handle	1
-	KA5T-CC	Jack Carrying Case (not pictured)	1
-	KA5T-FD	Carrying Case Foam Divider (not pictured)	1
-	KA5T-RS	Jack Retention Strap (not pictured)	1

B. PART REFERENCE - FRONT

ITEM NO.	QTY.	DESCRIPTION
1	1	LIFT PIN
2	2	JACK LEGS
3	1	TOP HANDLE
4	1	PIN RELEASE
5	1	RETENTION STRAP (NOT PICTURED)
6	1	RETENTION STRAP CONNECTION POINT
7	1	RAM
8	2	LEG QUICK DISCONNECT

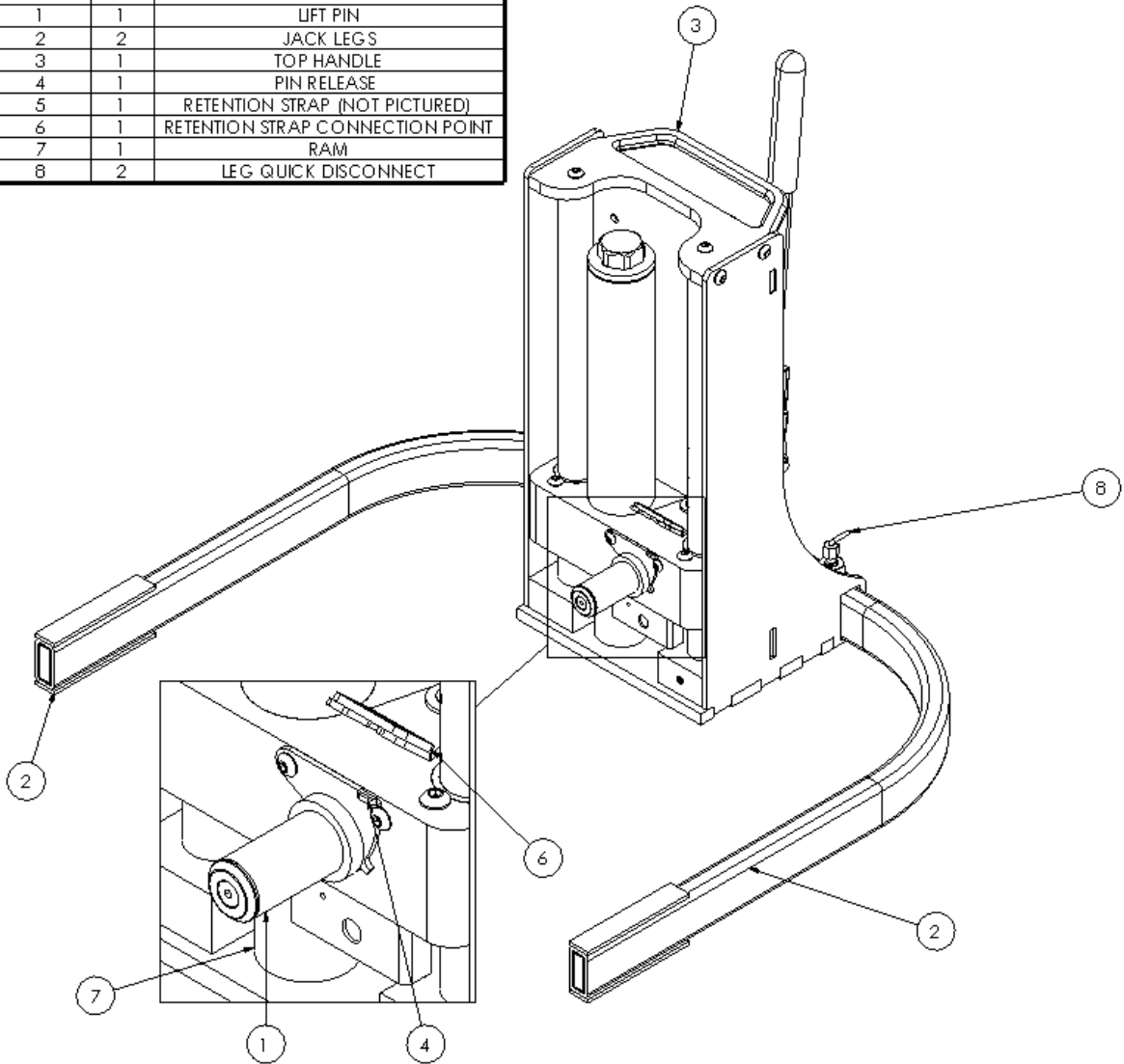
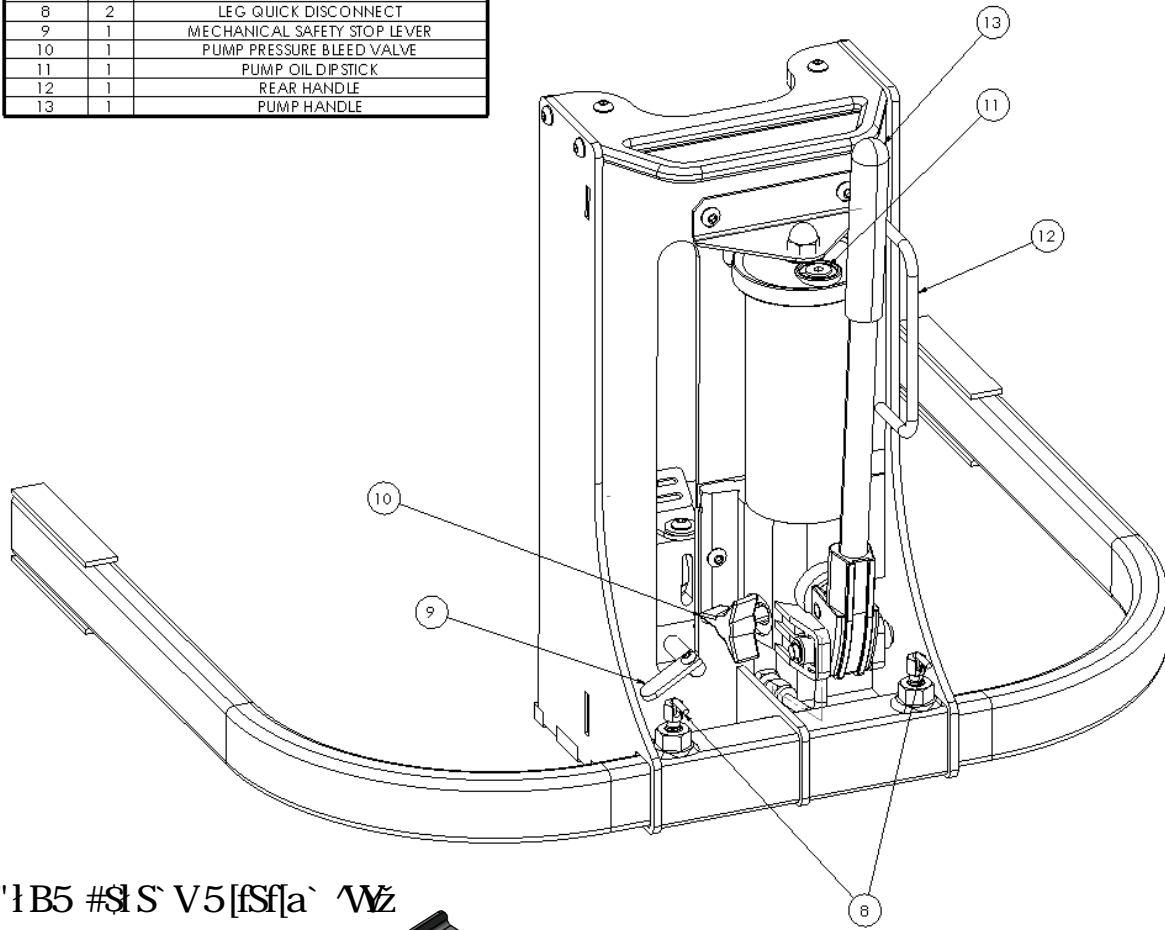


Figure 1 - BAT-KA5T-001 (FRONT VIEW)



C. PART REFERENCE - REAR

ITEM NO.	QTY.	DESCRIPTION
8	2	LEG QUICK DISCONNECT
9	1	MECHANICAL SAFETY STOP LEVER
10	1	PUMP PRESSURE BLEED VALVE
11	1	PUMP OIL DIP STICK
12	1	REAR HANDLE
13	1	PUMP HANDLE



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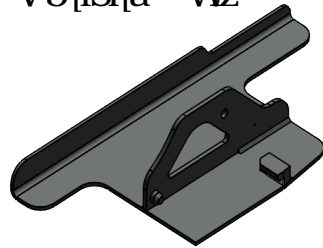


Figure 2 - BAT-KA5T-001 (Rear View)

Citation Fuselage Nose Fuselage Lift.
Ref Fig 1

ITEM NO.	QTY.	DESCRIPTION
1	1	BUTTON LIFTING PIN
2	2	JACK LEGS
3	1	TOP HANDLE
4	1	PIN RELEASE
5	1	RETENTION STRAP (NOT PICTURED)
6	1	RETENTION STRAP CONNECTION POINT
7	1	RAM
8	1	CJ FUSELAGE LIFT TUBE
9	1	CJ FUSELAGE ADAPTER
10	2	LEG QUICK DISCONNECT

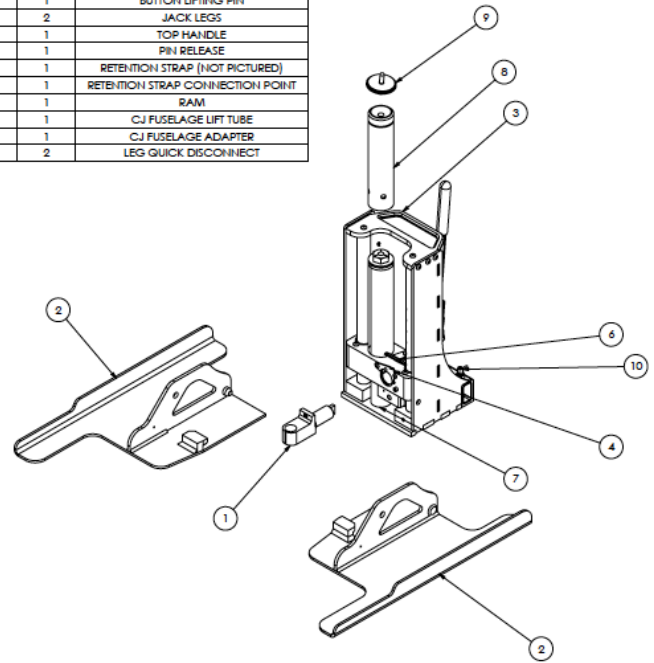


Figure 1

1. Install item (2) Citation Legs by placing L Bracket on the front of legs over the base of the jack frame, swivel the leg until the pin on citation leg fully engages the leg interface, then install the Quick release pin through citation legs and hole located in Jack frame to ensure the legs remain in place during the lift. Failure to do so could cause serious damage to aircraft and or serious or life threatening injury if the leg is not properly installed.
2. Install item (8) Citation Fuselage lift tube by screwing it clockwise into Ram lift tube until it is fully seated and no visible gap.
3. Set jack in proper location install button pad (1) in its proper location. (reference applicable Maintenance manual) then pump jack until it holds the button pad in the proper location.

ITEM NO.	QTY.	DESCRIPTION
1	1	BUTTON LIFTING PIN
2	2	JACK LEGS
3	1	TOP HANDLE
4	1	PIN RELEASE
5	1	RETENTION STRAP (NOT PICTURED)
6	1	RETENTION STRAP CONNECTION POINT
7	1	RAM
8	2	LEG QUICK DISCONNECT
9	1	CJ FUSELAGE LIFT TUBE
10	1	CJ FUSELAGE ADAPTER

