Model: 02-7834-0110

12 Ton Axle Jack

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1.0 DESCRIPTION

The Tronair Model 02-7834-0110 Hydraulic Axle Jack incorporates the following quality features:

- Steel construction
- Three-stage, telescoping rams
- Quick action mechanical extension
- Two speed, manually operated pump
- Uses standard MIL-H-5606 hydraulic fluid
- The jack is specifically designed for use on Learjet 45 aircraft.

2.0 USAGE

The purpose of this jack is to lift aircraft for maintenance. It has a maximum capacity of (12) tons (10.9 metric tons).

3.0 SPECIFICATIONS

- Vertical capacity: 24,000 lbs. (10,886 kg)
- Minimum closed height: 5.88 in. (14.92 cm)
- Mechanical extension: 1.57 in. (3.97 cm)
- Hydraulic extension: 5.75 in. (14.61cm)
- Maximum height obtainable: 13.13 in. (33.34 cm)
- Weight:37 lbs. (27.22 kg)
- BUNA ‘N’ Seals

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4.0 ASSEMBLY INSTRUCTIONS

4.1 GENERAL INFORMATION

This product should be assembled and/or repaired using good workmanship practices and proper tools.

All replacement parts must be the same as or equal to the original parts supplied.

4.2 PRE-USE CHECKS

Refer to the Jack Illustrated Parts Breakdown to identify and assure that all parts are present.

Generally check over unit to assure the tightness of all nuts, bolts and screws.
With rams completely collapsed, check hydraulic fluid level; between .50 and .75 inches from top of reservoir fitting. Replenish with MIL-H-5606 fluid as required.

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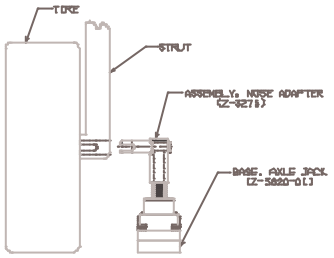
5.0 OPERATING INSTRUCTIONS

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

CAUTION!
1. Jacking adapters must be fully seated on mechanical extension.
2. Never put hands between aircraft and jack pad.
3. Always open reservoir vent screw before operating.

5.1 JACK INSTRUCTIONS

To Raise Nose Gear:



1. Place jack on hard level surface.
2. Connect pump hose.
3. Open reservoir vent screw.
4. Screw out mechanical extension.
5. Place nose (Z-3275) adapter over mechanical extension.
6. Align horizontal slot in pin with front axle by adjusting mechanical extension.
7. Slide pin into axle until pin shoulder rests against the axle.
8. Close pump release valve and operate pump.

WARNING! This jack must be used with either a main gear pad or nose adapter. Damage may occur or aircraft may fall off if pad or adapter are not used.

5.0 Operating Instructions continued on following page.

5.0 OPERATING INSTRUCTIONS, Continued . . .

To Raise Main Gear:

1. Place jack on hard level surface.
2. Connect the pump hose.
3. Open the reservoir vent screw.
4. Place main gear pad R-1820 over mechanical extension.
5. Adjust mechanical extension so the pad is approximately one-quarter inch (¼") below the bottom of the jack pad on the aircraft.

6. Place the jack between the tires and check the clearance between the mechanical extension and the bottom of the jack pad.
   Measurement should be approximately one-quarter inch (¼").

7. Close pump release valve and slowly begin to pump the jack to raise the aircraft wheel. Verify that there is clearance between the jack cylinder assembly and the brake casting.

6.0 MAINTENANCE

GENERAL

- All maintenance and/or repair work should be done using good workmanship practices and proper tools.

- The work area should be clean and free of dirt.

- When O-rings and backup rings are removed, every effort should be made to avoid the contact of tools with the critical surfaces of parts. Surface deformities could cause degradation of seals and failure.

- It is good practice to replace all O-rings and backup rings once removed. Cut and damaged rings normally result in fluid leakage.

- At this time flush old hydraulic fluid and dirt from overall system and replenish with new, clean MIL-H-5606 hydraulic fluid.

6.0 Maintenance continued on the following page.

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6.0 MAINTENANCE, Continued . . .

6.1 SERVICING JACK

To Disassemble Jack:

1. Collapse jack ram.

2. Remove cap screws (Item 9) surrounding jack cylinder, then remove retaining ring, (Item 2).

3. Lift cylinder from axle jack base weldment (Item 12). Operate jack hand pump to help remove cylinder.

- Separate rams by removing internal rings (Items 22, 23 and 24).

To Re-assemble Jack:

1. Replace all seals including internal rings.
2. Re-assemble in reverse order of above.
3. Torque each cap screw (Item 1) to 75-85 ft-lb using standard cross torque procedure.

To Bleed Jack for Air:

1. Open reservoir vent screw on hand pump.
2. Pump unit to fully extended position.
3. Turn jack upside down.
4. Push jack back to fully collapsed position.

6.2 JACK FUNCTION LOAD TEST

1. Take all necessary precautions to prevent injury.
2. Always jack against a load and never against the jack itself.
3. Apply a test load equal to the jack rated capacity plus 10%. Do not exceed this load.

7.0 TROUBLE SHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Ram will not rise or rises erratically:	High pressure leaks (at joint, plugs or tubing)	Re-tighten or repair
	Leaky discharge check valve	Open release valve, pump rapidly to dislodge; or repair pump
	Leaky ram O-ring packing	Replace packing
	Leaky release valve	Tighten release valve
	Leaky pump O-ring packing	Repair pump
	Lack of oil	Refill reservoir, check system for leaks
	Sticking inlet check valve	Open release valve, pump rapidly to dislodge; or repair pump
	Closed air vent	Open air vent
	Air under ram	Bleed system
Jack will not lower:	Broken pump release valve	Replace release valve
	Bent ram	Replace suspected ram assembly
	Closed air vent or release valve	Open vent or release valve

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PARTS LIST

REPLACEMENT PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY
9	G-1151-109716	Screw, Socket Head Cap, 1/2-20 x 1-3/4 long	4
11	J-2351	Ring, Retaining	1
27	N-2569-02	Coupler, Female Hydraulic	1
28	Z-3275	Adapter, Nose Gear	1
29	R-1820	Pad, Main Gear	1
30	N-2228-12-S-B	Elbow, Female Pipe	1
31	A-1155-01	Angle, Hose Support	1
32	HC-1551	Link, 4 GPM Fusible	1
42	N-2569-01	Coupler, Male Hydraulic	1
Not Shown	Z-3928	Assembly, Lear Box	1

All other parts are available in Replacement Kits.

REPLACEMENT KITS

PART NUMBER	DESCRIPTION	QTY
K-1508	Hydraulic Pump Seal Kit This kit includes all soft seals, wipers, and gaskets required to reseal the pump	1
K-2890	Replacement Cylinder and Base with Hose Kit; consists of:	
- Item 9	Screw, Socket Head Cap, 1/2-20 x 1-3/4" long	4
- Item 11	Ring, Retaining	1
See Page 9	Replacement Axle Jack Base Kit (K-2888)	1
See Page 8	Replacement Hose Assembly Kit (K-2872)	1
See Page 9	Replacement Cylinder Kit (K-2887)	1
K-2606	Replacement Cylinder Seal Kit; consists of:	
- Item 5	Ring Wiper	1
- Item 6	Ring Wiper	1
- Item 7	Ring Wiper	1
- Item 13	O-Ring	1
- Item 14	O-Ring	1
- Item 15	Backup Ring	1
- Item 16	O-Ring	1
- Item 17	Backup Ring	1
- Item 18	O-Ring	1
- Item 19	Backup Ring	1
- Item 20	O-Ring	1

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REPLACEMENT KITS

PART NUMBER	DESCRIPTION	QTY
K-2872	Replacement Hose Assembly Kit; consists of:	
- Item 34	Assembly, Hose (#4 Mineral Base)	1
- Item 37	Cap, Hose	1
- Item 38	Assembly, Lanyard	1
- Item 39	Rivet	1
- Item 40	Ferrule	1
- Item 41	Connector, Male	1
- Item 42	Coupler, Male Hydraulic	1
K-2873	Replacement Hand Pump Kit; consists of:	
- Item 25	Pump, Hand	1
- Item 26	Reducer, Pipe Thread	1
- Item 27	Coupler, Female Hydraulic	1
K-2887	Replacement Cylinder Kit; consists of:	
- Item 1	Cylinder, Main	1
- Item 2	Cylinder, Stage 1	1
- Item 3	Cylinder, Stage 2	1
- Item 4	Cylinder, Stage 3	1
- Item 8	Extension, Mechanical	1
- Item 10	Pin, 1/4" diameter x 1/2 long, Roll	1
- Item 21	Plug, End	1
- Item 22	Internal Ring	1
- Item 23	Internal Ring	1
- Item 24	Internal Ring	1
See Page 8	Replacement Cylinder Seal Kit (K-2606)	1

Note:It is recommended that cylinders be replaced as a package for proper jack operation.

K-2888	Replacement Axle Jack Base Kit; consists of:	
- Item 12	Weldment, Base Plate (includes labels)	1
- Item 30	Elbow, Female Pipe 1	
- Item 31	Angle, Hose Support	1
- Item 32	Link, 4 GPM Fusible	1
- Item 33	Plug, Hollow Hex	1
- Item 35	Bolt, Hex Head, Grade 5, 1/4-28 x 1/2" long	2
- Item 36	Flatwasher, 1/4	2
K-2889	Replacement Hose Cap Kit; consists of:	
- Item 37	Cap, Hose	1
- Item 38	Assembly, Lanyard	1
- Item 39	Rivet	1
- Item 40	Ferrule	1

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