TRONAIR

OPERATION & SERVICE MANUAL

Models:

02-0520-0100 02-0526-0100 02-0532-0100
02-0524-0100 02-0530-0100 02-0536-0100

5 TON SINGLE STAGE JACKS

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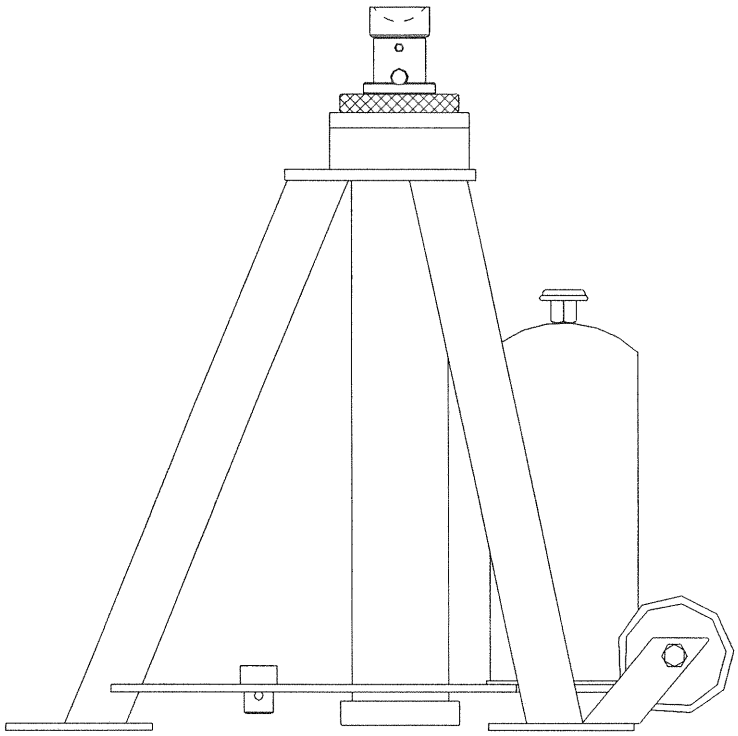

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5 TON SINGLE STAGE JACKS

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1.0 DESCRIPTION

The Tronair Single Stage Jack incorporates the following quality features:

- Steel Construction
- Mechanical ram lock nut that prevents lowering of jack under load
- Quick action mechanical extension
- Single speed, manually operated pump with pressure relief
- Uses standard MIL-H-5606 hydraulic fluid

2.0 USAGE

The purpose of the following jacks are to lift the aircraft for maintenance. See specifications for capacity of each jack.

3.0 SPECIFICATIONS

Model	Capacity (lbs.)	Closed Height	Mechanical Extension	Hydraulic Extension	Fully Extended	Weight (lbs.)
02-0520	10,000	20"	6"	12"	38"	38
02-0524	10,000	24"	8"	16"	48"	98
02-0526	10,000	26"	8"	16"	50"	100
02-0530	10,000	30"	10"	22"	62"	105
02-0532	10,000	32"	10"	22"	64"	108
02-0536	10,000	36"	10"	22"	68"	110

4.0 ASSEMBLY INSTRUCTIONS

4.1 GENERAL INFORMATION

This product should be assembled and/or repaired using good workmanship practices and proper tools. Bolts and elastic stopnuts should be tightened to a torque not to exceed industry standards for grade '5' bolts. 3/8-24 bolts should be tightened to 35 ft. lbs.

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 fittings.
- With rams completely collapsed, check hydraulic fluid level; 1.5 inches below vent. Replenish with MIL-H-5606 fluid as required.

5.0 OPERATING INSTRUCTIONS

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

CAUTION:

1. Never put hands between aircraft and jack pad, as after aircraft has been lowered, struts may have hung up.
2. Never align jack under aircraft by pounding on jack legs. Dented legs may lead to jack collapse.
3. Always lower ram locking nut(s) after jack is under load. Be sure ram nut(s) is seated fully after jacking.
4. Always raise and lower jacks simultaneously, so that aircraft remains level.
5. Always use a tail or nose stand, as applicable, for additional stability.

JACK INSTRUCTIONS

TO RAISE AIRCRAFT:

1. Place jack on a hard level surface.
2. Raise mechanical extension as close to aircraft jack pad as possible.
3. Close pump release valve and operate pump.
4. Lower ram locknuts as aircraft is raised.

5.0 OPERATING INSTRUCTIONS (Continued)

TO LOWER AIRCRAFT:

1. Lower all jacks simultaneously.

2. If ram locking nut(s) is tight, raise jack slightly to release nut(s).

3. Loosen pump release valve slightly to slowly lower aircraft. Raise locking nut(s), as jack ram(s) lower.

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 both O-rings and backup rings once removed. Cut and damaged rings normally result in fluid leakage.

- If cylinder bore is found to be rusty, it may be honed to a maximum diameter of 2.629" and a surface finish of 16 micro inches. If pitting in the bore cannot be removed by this process, the jack cylinder must be replaced before the jack can be returned to service.

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

6.1 SERVICING JACK

TO DIS-ASSEMBLE JACK

1. Remove mounting plate (Item 8) by unscrewing three (3) socket head cap screws (Item 7).

2. Raise ram assembly (Item 10) to the point where it can be lifted from the jack cylinder.

6.1 SERVICING JACK (Continued)

TO RE-ASSEMBLE JACK

1. Re-assemble in reverse order of above.

NOTE: To minimize air entrapment under the ram, raise the oil level in the cylinder to chamfer of the cylinder prior to ram insertion.

6.2 REMOVING AND SERVICING PUMP

NOTE: If pump is found faulty, call the factory for replacement or replace seals as follows:

1. Review Illustrated parts breakdown - Pump.
2. Clamp suction (push on) hose and remove hose from pump.
3. Uncouple fitting of hydraulic hose from pump.
4. Remove pump from jack.
5. Remove cotter pin (Item 32) from clevis pin.
6. Remove four (4) socket head cap screws.
7. Remove flanges.
8. Remove tube assembly (Item 4).
9. Replace o-rings and back-up ring. (See pump parts list for kits available).
10. Re-assemble in reverse order.

6.3 JACK FUNCTION LOAD TEST

If function load testing of this jack is required:

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

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 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.

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REPLACEMENT PARTS

05220	05224	05226	05330	05332	05336	Item Number	Part Number	Component Description	Qty
*	*	*	*	*	*	1	HJ-532-01	Jack Pad	1
*	*	*	*	*	*	2	G-1307-0418	¼ x 1.8 lg Aerofast Pin	1
*						3	HJ-526-01	Extension	1
	*	*					HJ-526-02		
			*	*	*		HJ-526-05		
*	*	*	*	*	*	4	G-1308-0826	½ x 2.6 lg Aerofast Pin	1
*	*	*	*	*	*	5	HJ-536	Ram Protection Ring	1
*	*	*	*	*	*	6	HJ-514	Ram Nut	1
*	*	*	*	*	*	7	G-1151-106205	5/16-18 x ⅝ lg S.H.C.S.	3
*	*	*	*	*	*	8	HJ-513	Mounting Plate	1
*	*	*	*	*	*	9	HJ-512	Guide Ring	1
*						10	HJ-522-01	Ram Assembly	1
	*	*					HJ-522-02		
			*	*	*		HJ-522-03		
*	*	*	*	*	*	11	HJ-532-02	Jack Pad	1
*						14	TF-1043-03*21.0	Hose Assembly	1
	*	*	*	*	*		TF-1043-03*15.0		
*						15	N-2004-06-S	Male Elbow	1
	*	*	*	*	*		N-2003-06-S		
*						16	H-1009-02	Handle Assembly	1
	*	*	*	*	*		H-1009-01		
*	*	*	*	*	*	17	N-2005-10-S	Male Elbow	1
*	*	*	*	*	*	19	G-1100-107010	⅜-16 x 1 lg H. H. Bolt	2
*	*	*	*	*	*	20	G-1251-1070R	⅜ Regular Lockwasher	2
*	*	*	*	*	*	21	N-2410-01	Male Elbow	2
*	*	*	*	*	*	22	TF-1047-01*12.0	Push-On Hose (¼)	1
*	*	*	*	*	*	24	G-1100-109526	½-20 x 2¾ lg H. H. Bolt	2
*	*	*	*	*	*	25	G-1203-1095	½-20 Elastic Jamnut	2
*	*	*	*	*	*	27	H-1045	Breather	1
*	*	*	*	*	*	29	G-1250-1050N	¼ Flatwasher	3
*	*	*	*	*	*	30	G-1202-1050	¼-20 Elastic Stopnut	3

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REPLACEMENT KITS

05220	05224	05226	05230	05232	05236	Kit Number	Component Description	Qty Per Kit
*						K-1334	Jack Weldment Replacement Kit; consists of: - item 26 Jack Weldment w/labels	1
	*					K-1332		
		*				K-1331		
			*			K-1329		
				*		K-1328		
					*	K-1327		
*	*	*	*	*	*	K-1061-04	Reservoir Replacement Kit; consists of: - item 21 Male Elbow - item 22 Push-On Hose (¼) - item 27 Breather - item 28 Reservoir Weldment - item 29 ¼ Flatwasher - item 30 ¼-20 Elastic Stopnut	 1 1 1 1 3 3
*	*	*	*	*	*	K-1049	Seal Replacement Kit; consists of: - item 9 Guide Ring - item 12 O-Ring (2-331) - item 13 Backup (8-331)	 1 1 1
*	*	*	*	*	*	K-1901-01	Pump Replacement Kit; consists of: - item 17 Male Elbow - item 18 Hand Pump - item 19 ⅜-16 x 1" lg H. H. Bolt - item 20 ⅜ Regular Lockwasher - item 21 Male Elbow - item 22 Push-On Hose (¼)	 1 1 2 2 1 1
*	*	*	*	*	*	K-1165	Wheel Replacement Kit; consists of: - item 23 Wheel - item 24 ½-20 x 2¾ lg H. H. Bolt - item 25 ½-20 Elastic Jamnut	 2 2 2

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