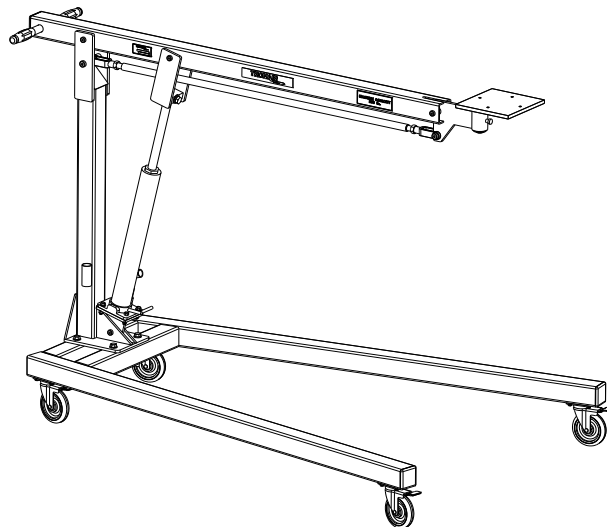




Operation & Service Manual



Model: 04-6054-0000
Universal Lift



08/2016 – Rev. 01

Includes Illustrated Parts Lists

REVISION
01

DATE
08/2016

TEXT AFFECTED
Original release

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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., its 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

This Tronair Universal Lift, Model 04-6054-0000, is designed to aid in the installation and removal of various aircraft components.

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

TRONAIR, Inc.
1740 Eber Road
Holland, Ohio 43528-9794 USA

Telephone: (419) 866-6301 or 800-426-6301
Fax: (419) 867-0634
E-mail: sales@tronair.com
Website: www.tronair.com

1.4 SPECIFICATIONS

- Maximum Capacity: 500 lbs (Vertical Lift)
- Height, Collapsed: 13 5/16 in (33.8 cm)
- Height, Extended: 85 1/16 in (216 cm)
- Length: 84 ¼ in (214 cm)
- Width: 50 9/16 in (128.4 cm)
- Weight: 265 lbs (120 lbs)

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.

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 OPERATING INSTRUCTIONS



CAUTION!

Operator injury and/or component damage can result.

- Do not transport components on this lift.
- This lift is designed to only lift or lower components at aircraft.

4.1 TO RAISE LIFT ARM

1. Place Universal Lift on hard level surface.
2. Close release valve.
3. Pump jack until desired height is reached.
4. If binding occurs, lubricate linkage.

4.2 TO LOWER LIFT ARM

Slowly open release valve.



CAUTION!

Component damage and/or operator injury could result if release valve is opened too quickly.

4.3 FILLING THE RESERVOIR

1. Remove reservoir plug.
2. Open release valve.
3. Fill reservoir with hydraulic jack oil, MIL-PRF-5606 or equivalent Mineral Base Fluid.
4. Stand unit on its base and let excess oil run out. Replace reservoir plug.
5. Pump operating handle rapidly with release valve open to exhaust any air in system.
6. Close release valve and pump operating handle.
7. Repeat above instructions if plunger fails to advance.

5.0 ADAPTER LISTING

Part Number

Design Intent

Z-4082.....Universal Flat Platform for installing/removing battery, APU, air conditioning unit, etc.
K-3057.....Converts the lift into a light duty crane.
K-3189.....Installation/Removal of Lear 45 flaps.
K-3712.....Installation/Removal of Embraer ERJ-145 battery.
K-3853.....Installation /Removal of Horizon APU
Additional kits are available upon request.

6.0 INSPECTION/MAINTENANCE:

To keep your Tronair equipment fully operational and last for years you should adhere to the following suggestions:

1. Before each use:
 - a. Visually inspect unit to ensure all components are present and functional
 - All pivot bolts & nuts are secure
 - Cylinder is free of leaks & relief valve is operational
 - All casters & locks are operational
 - No bent or, broken components



WARNING!

Ensure lift components are free of damage and or excessive wear. Never use lift if any component is bent or broken

2. Periodically:
 - a. Lubricate lift
 - All pivot points
 - Threaded adjustment areas
 - b. Check cylinder reservoir level. Replenish with MIL-PRF-5606
 - Ensure Fluid is at acceptable level
 - Flush reservoir if fluid is contaminated
3. Annually:
 - a. Ensure lift has been load certified. Check for applicable codes for requirements on annual load testing/certifications.

7.0 PROVISION OF SPARES

7.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

TRONAIR, Inc.

1740 Eber Road

Holland, Ohio 43528-9794 USA

Telephone: (419) 866-6301 or 800-426-6301

Fax: (419) 867-0634

E-mail: sales@tronair.com

Website: www.tronair.com

7.2 RECOMMENDED SPARE PARTS LISTS

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

8.0 IN-SERVICE SUPPORT

Contact Tronair, Inc. for technical services and information. See Section 1.3 – Manufacturer.

9.0 GUARANTEES/LIMITATION OF LIABILITY

Tronair products are warranted to be free of manufacturing or material defects for a period of one year after shipment to the original customer. This is solely limited to the repair or replacement of defective components. This warranty does not cover the following items:

- a) Parts required for normal maintenance
- b) Parts covered by a component manufacturers warranty
- c) Replacement parts have a 90-day warranty from date of shipment

If you have a problem that may require service, contact Tronair immediately. Do not attempt to repair or disassemble a product without first contacting Tronair, any action may affect warranty coverage. When you contact Tronair be prepared to provide the following information:

- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

If warranty coverage is approved, either replacement parts will be sent or the product will have to be returned to Tronair for repairs. If the product is to be returned, a Return Material Authorization (RMA) number will be issued for reference purposes on any shipping documents. Failure to obtain a RMA in advance of returning an item will result in a service fee. A decision on the extent of warranty coverage on returned products is reserved pending inspection at Tronair. Any shipments to Tronair must be shipped freight prepaid. Freight costs on shipments to customers will be paid by Tronair on any warranty claims only. Any unauthorized modification of the Tronair products or use of the Tronair products in violation of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by Tronair will immediately void any warranty, express or implied.

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

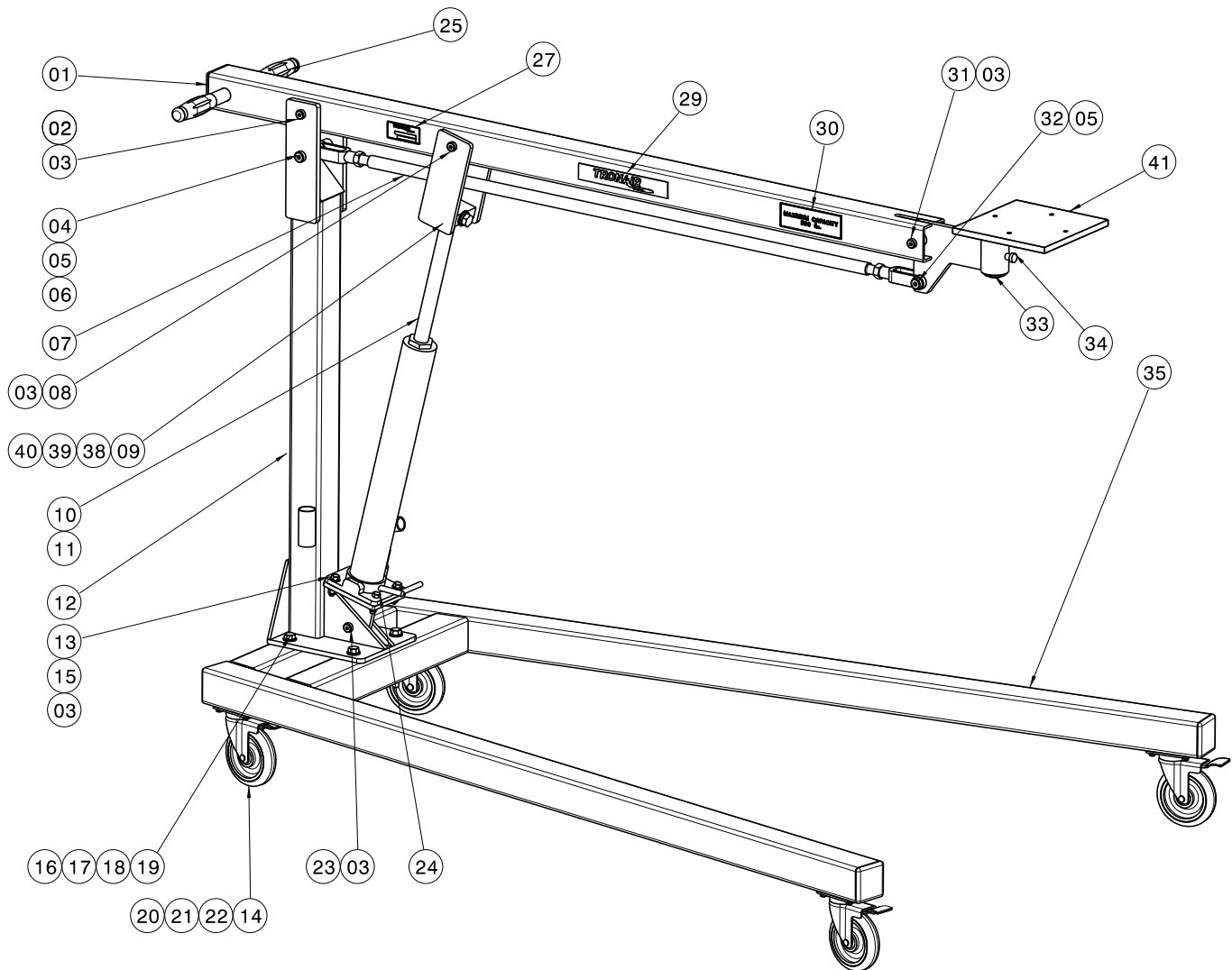
10.0 APPENDICES

APPENDIX I Declaration of Conformity

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Parts List

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



Item	Part Number	Description	Qty
1	H-2649-18	Cap, Plug (3")	3
2	G-1155-107242	Screw, Socket Head Shoulder (½" diameter x 4¼" long)	1
3	G-1202-1070	Stopnut, 3/8-16 Elastic	7
5	G-1202-1090	Stopnut, ½-13 Elastic	2
11	G-1163-11	Screw, Hex Socket Cup Pont Set, 1-4 – 20	1
14	G-1250-1050N	Flatwasher, ¼ Narrow	20
16	G-1420-109544	Bolt, Hex Head, Grade 8 (½-20 x 4½" long)	4
17	G-1250-1090N	Flatwasher, ½ Narrow	4
18	G-1250-1090W	Flatwasher, ½ Wide	4
19	G-1202-1095	Stopnut, ½-20 Elastic	4
20	U-1108	Caster, Swivel	4
21	G-1100-105506	Bolt, Hex Head, Grade 5, (¼-28 x ¾" long)	16
22	G-1251-1050R	Lockwasher, ¼ Regular	16
25	H-1223	Grip, Handle	2

Parts List

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

Item	Part Number	Description	Qty
26	V-1001	Label, Made In USA	1
27	V-1779	Label, Serial Number (CE)	1
28	Z-5718-01	Weldment, Beam	1
29	V-1002	Label, Tronair	2
30	V-1798	Label, Capacity (500 lbs)	2
31	G-1155-107230	Screw, Socket Head Shoulder, ½ x 3 long	1
32	G-1155-109214	Screw, Socket Head Shoulder, ⅝ x 1½ long	1
33	Z-5720	Assembly, End	1
34	H-1645	Knob	1
35	Z-5721-01	Weldment1 Base	1
41	Z-9175	Weldment, Mount	1
	K-3789	Kit, Rod Connector Replacement; consists of:	
4	G-1155-109242	Screw, Socket Head Shoulder, ⅝x 4¼ long	1
5	G-1202-1090	Stopnut, ½-13 Elastic	2
6	TR417-06*000.75	Tubing (1 O.D. X 0.125 wall)	2
7	Z-5716	Assembly, Rod Connector	1
32	G-1155-109214	Screw, Socket Head Shoulder, ⅝x 1½ long	1
	K-4654	Kit, Main Pivot Replacement; consists of:	
3	G-1202-1070	Stopnut, ⅝-16 Elastic	1
8	G-1155-107240	Screw, Socket Head Shoulder, ½" diameter x 4 long	1
9	Z-7840-01	Weldment, Main Pivot	1
38	G-1250-1100N	Flatwasher, ⅝ Narrow	1
39	G-1251-1100R	Lockwasher, ⅝ Regular	1
40	G-1100-110026	Bolt, HH ⅝ - 11 x ¾ Long	1
	K-4655	Kit, Pump Mount Replacement; consists of:	
3	G-1202-1070	Stopnut, ⅝-16 Elastic	1
13	G-1100-107014	Bolt, Hex Head, Grade 5, ⅝ - 24 x 1 ½ long	4
14	G-1250-1050N	Flatwasher, ¼ Narrow	8
15	G-1250-1070N	Flatwasher, ⅝ ID	4
23	G-1155-107214	Screw, Socket Head Shoulder ½ x 1½ long	1
24	Z-7839-01	Weldment, Pump Mount	1
	K-4656	Kit, Pump/Cylinder Replacement; consists of:	
3	G-1202-1070	Stopnut, ⅝-16 Elastic	3
10	HC-2572-01	Jack, Hydraulic	1
13	G-1100-107014	Bolt, Hex Head, Grade 5, ⅝ - 24 x 1 ¼ long	3
15	G-1250-1070N	Flatwasher, ⅝ ID	3
38	G-1250-1100N	Flatwasher, ⅝ Narrow	3



APPENDIX - I

**Declaration
of
Conformity**



DECLARATION of CONFORMITY

The design, development and manufacture is in accordance with European Community guidelines

Universal Lift
04-6054-0000

Relevant provisions complied with by the machinery:
2006/42/EC

Relevant standards complied with by the machinery:
EN ISO 12100-1

Identification of person empowered to sign on behalf of the manufacturer:

A handwritten signature in black ink that reads "David L. Kiehl". The signature is written in a cursive style and is positioned above a horizontal line.

Quality Assurance Representative