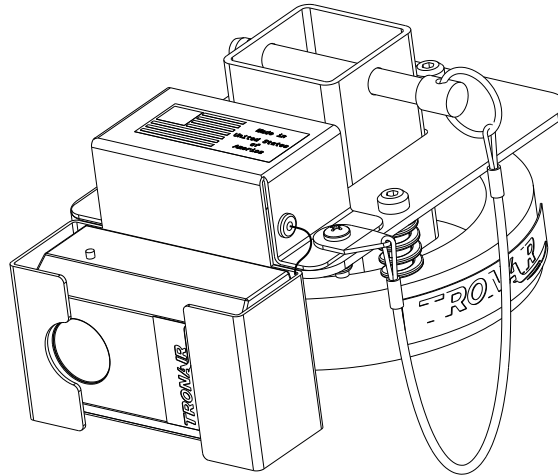




OPERATION & SERVICE MANUAL



Model: K-3864
2 1/4 " Load Alarm Kit

07/2023 – Rev. 02

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REVISION	DATE	TEXT AFFECTED
OR	06/2004	Original Release
01	02/2014	Modified 5.0 Assembly, and Parts List
02	07/2023	Major revision

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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 device is used in conjunction with Tronair stabilizing stands and is designed to alert the operator when a load is being applied to the top of the stabilizing stand.

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

TRONAIR, Inc.
1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

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

2.0 SAFETY INFORMATION

2.1 USAGE AND SAFETY INFORMATION

To ensure 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, and/or substantial property damage** if the Warning Notice is ignored.



CAUTION!

Caution is used to indicate the presence of a hazard, which will or can cause **minor personal injury or property damage** if the Caution Notice is ignored.

2.2 ALARM and WARNING SYSTEMS

The alarm system alerts the operator that a force of 100 to 150 lbs (45.36 to 68.04 kg) is being applied to the top of a stabilizing stand. The unit is attached to a stabilizing stand and sounds a loud 85 db pulsating alarm until the force is reduced.

2.3 COMPONENT SAFETY FEATURES

Extension Pin provides a visual check that the pin is fully inserted to meet the rated load capacity of the tailstand.

2.4 ENVIRONMENTAL SAFETY FEATURES

Load Alarm is non-polluting.

2.5 CLOSED CIRCUITS

Reference Illustration 2.8

2.6 NECESSARY PERSONAL PROTECTIVE EQUIPMENT



CAUTION!

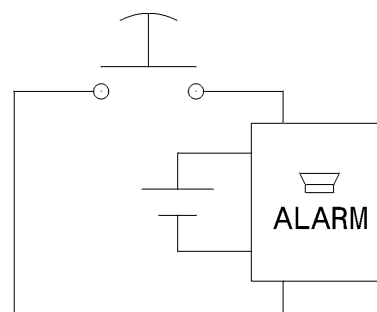
Always wear safety glasses.

2.7 SAFETY GUIDELINES



CAUTION!

1. **DO NOT** place hands near the die springs on the load alarm kit while the stabilization stand is in use. Pinch point exists on the die springs and between the top plate and the base of the load alarm kit.
2. **ALWAYS** be sure the load alarm extension pin is fully locked and inserted through the tube.
3. **DO NOT** allow prolonged exposure to the sounding of the alarm. The alarm sound may cause permanent hearing loss.
4. **DO NOT** place objects in the path of the alarm's horn opening that may limit the audible range and reduce the effectiveness of the alarm.
5. **DO NOT** turn setscrew located under the plunger switch. The distance between the setscrew and plunger switch is pre-set by the factory.



Closed Circuits

2.8 CONDITIONS FOR SAFE USE

- Use in a clean dry environment
- Operate between +4° C and 38° C/+40° F and 100° F

2.9 OPERATOR QUALIFICATIONS

This load alarm is intended to be used by a skilled and trained aircraft technician. The operator must be familiar with the jacking procedures for the aircraft to be raised, and the operation of a stabilizing stand.

Installation/Maintenance/Dismantling Qualifications: This load alarm is to be installed, maintained, and dismantled by qualified technicians familiar with aircraft maintenance systems.

2.10 ADDITIONAL SAFETY MEASURES

This load alarm must be used in accordance with this Operation and Service Manual, and in accordance with the aircraft manufacturer's jacking and stabilizing procedures.

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. This load alarm must be used in accordance with aircraft manufacturer's instructions.

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 ASSEMBLY

4.1 GENERAL INSTRUCTIONS

1. 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.
2. All replacement parts must be the same as or better than the original parts supplied.
3. No modifications are allowed as they may adversely affect the load alarm's safety performance.

4.2 PRE-USE CHECKS

- Refer to the Illustrated Parts List to identify and ensure that all parts are present.
- Generally, check over unit and ensure the tightness of all nuts and bolts.

4.3 PERSONNEL REQUIREMENTS

This jack is to be assembled by qualified technicians familiar with aircraft maintenance systems.

4.4 ASSEMBLY STEPS

1. Assemble the load alarm kit over the outer extension tube. The base of the load alarm kit will rest on the stabilizing stand's top plate. (see Figure 1)
2. Assemble the center extension through the center of the load alarm kit. Pin the center extension to the desired height with the extension pin. (see figure 1)
3. Install a 9-volt battery in the alarm by removing back cover.

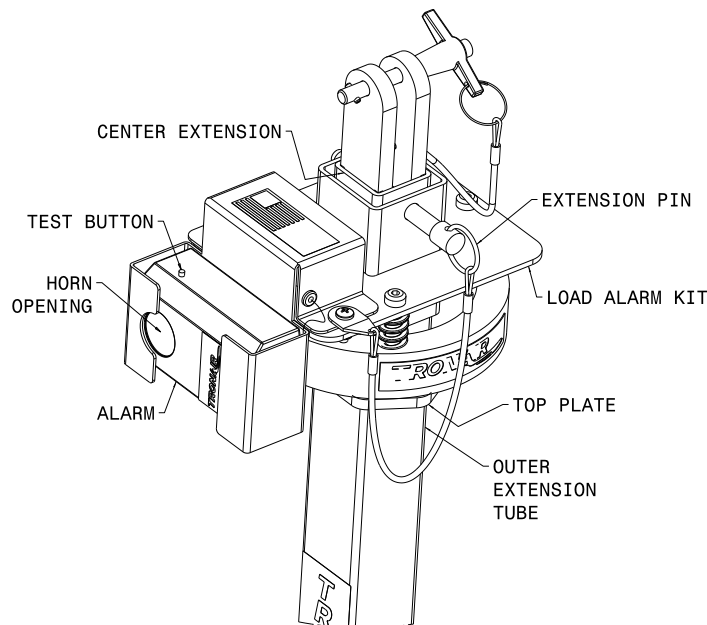


Figure 1

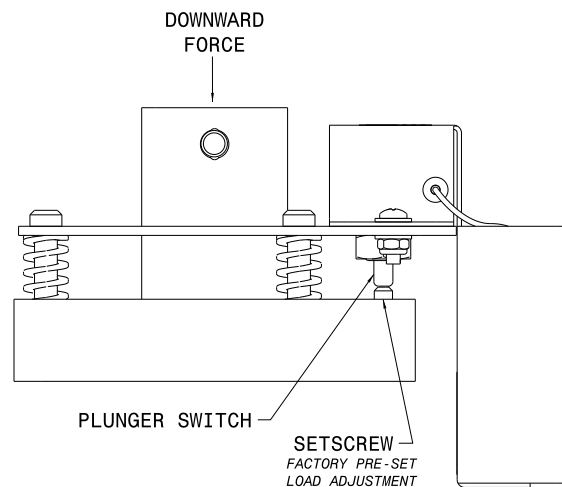


Figure 2

4.5 INSPECTION AND TEST PROCEDURES

1. Depress test button on alarm to test battery is installation. (see Figure 1)
2. Depress the plunger switch to check electronic circuit. The alarm will sound when the switch is engaged. (see Figure 2)
3. Test alarm by slowly applying an evenly distributed force of 100 to 150 lbs across the top of the load alarm. The top plate of the load alarm kit will lower and engage the plunger switch. A loud pulsating alarm will then sound. If alarm does not sound, refer to the Troubleshooting section. (see Figure 2)

5.0 OPERATION

5.1 NUMERICAL VALUES

Weight	4 lbs (1.8 kg)
Width	5 ½ in (13.97 cm)
Length	7 ½ in (19.05 cm)
Height	5 3/16 in (13.18 cm)
Alarm (Battery Powered)	9 vdc
Alarm Horn	85 db

5.2 OPERATING INSTRUCTIONS

The user should be familiar with the following statements prior to using the load alarm kit:



CAUTION!

1. **DO NOT** place hands near the die springs on the load alarm kit while the stabilization stand is in use. Pinch point exists on the die springs and between the top plate and the base of the load alarm kit.
2. **ALWAYS** be sure the load alarm extension pin is fully locked and inserted through the tube.
3. **DO NOT** allow prolonged exposure to the sounding of the alarm. The alarm sound may cause permanent hearing loss.
4. **DO NOT** place objects in the path of the alarm's horn opening that may limit the audible range and reduce the effectiveness of the alarm.
5. **DO NOT** turn setscrew located under the plunger switch. The distance between the setscrew and plunger switch is pre-set by the factory.

5.2.1 Rules For Operating

- The user shall work in accordance with the Operation and Service Manual
- The employer of the operator shall provide all necessary training
- Operate between +4° C and 38° C/+40° F and 100° F
- Load alarm is designed as an add-on kit for Tronair stabilizing stands only
- Extension pin included with the load alarm kit replaces the use of the existing extension pin on the stabilizing stand



WARNING!

Extension pin shall not be used in the center tube section of the welded tripod stand. The load alarm kit will not operate if the adjustable extension tube is pinned in this area of the stand. (see Figure 5)

5.2.2 Alarm Operation and Test

1. When a force of 100 to 150 lbs (45.36 to 68.04 kg) is applied to the top of the cradle, the alarm unit sounds a loud 85 db pulsating alarm until the force is reduced.
2. Press test button on the alarm and hold for a minimum of five 5 seconds. This will sound alarm if the electronic circuitry, horn and battery are operating correctly.
3. Depress plunger switch under the load alarm's top plate and hold for a minimum of 2 seconds. This will sound the alarm if the switch is operating correctly.

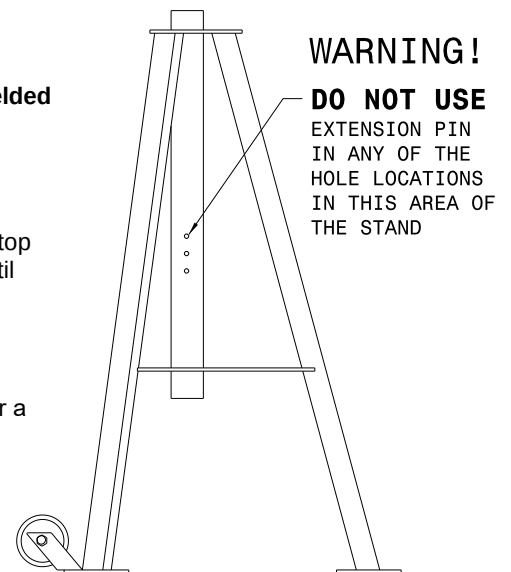


FIGURE 5

6.0 PACKAGING AND STORAGE

6.1 PACKAGING REQUIREMENTS

Load alarm is to be packaged as required to prevent damage to the electronic circuits. Battery must be removed from unit and shipped separately.

6.2 HANDLING

Load alarm can be carried by hand.

6.4 PACKAGING PROTECTION

No special packaging material for cushioning or suspension is required.

6.5 LABELING OF PACKAGING

Packaging should be labeled **DO NOT DROP**.

6.6 STORAGE COMPATIBILITY

No special considerations.

6.7 STORAGE ENVIRONMENT

- Store load alarm between +4° C and +38° C/+40° F and 100° F
- Load alarm must be stored in a clean and dry environment

6.8 STORAGE SPACE AND HANDLING FACILITIES:

Weight 4 lbs (1.8 kg)
Width 5 1/2 in (13.97 cm)
Length 7 1/2 in (19.05 cm)
Height 5 3/16 in (13.18 cm)

7.0 TROUBLESHOOTING

Alarm will not sound	
Load was on the cradle for a short period of time	Limit switch has to be engaged for a minimum of 2 seconds
Defective Alarm	Replace Alarm
Battery power depleted	Replace Battery
Defective Limit Switch	Replace Limit Switch
Broken wire connection	Check wire connection between limit switch and alarm
Cradle head did not lower far enough to contact limit switch	Adjust the set screw under the plunger switch and test per section 5.5.3
Alarm "chirps"	
Indicates low battery	Replace battery (Alarm will "chirp" every 20 to 30 seconds for a minimum of 7 days until battery is changed)

8.0 MAINTENANCE

- All maintenance and/or repair work should be done using good workmanship practices and proper tools
- Load alarm shall be maintained and repaired in accordance with the manufacturer's instructions. Such maintenance and repair shall be carried out by qualified persons
- No modifications shall be carried out without prior written approval by Tronair

8.1 MAINTENANCE SCHEDULE

Cleaning Annually or as Needed
Lubricate Cradle Stem 3 Months
Lubricate Casters 3 Months

NOTE: Wipe with soft cloth only, do not pressure wash or spray water directly at load alarm.

8.2 CLEANING ALARM

Remove alarm from mounting bracket. The openings around the alarm perimeter may be cleared of debris by using compressed air or a vacuum cleaner hose to blow/suction openings. The outside surface of the alarm unit may be wiped with a damp cloth.

10.0 PROVISION OF SPARES**10.1 SOURCE OF SPARE PARTS**

Spare parts may be obtained from the manufacturer:

TRONAIR, Inc.

1 Air Cargo Pkwy East

Swanton, Ohio 43558 USA

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

Fax: (419) 867-0634

E-mail: sales@tronair.com

Website: www.tronair.com

For Spare Parts, Operations & Service Manuals or Service Needs:

Scan the QR code or visit Tronair.com/aftermarket

**10.2 RECOMMENDED SPARE PARTS LISTS**

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

Recommended Spares to be kept on hand:

EC-1854 Battery, 9 volt

11.0 IN SERVICE SUPPORT

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

12.0 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:

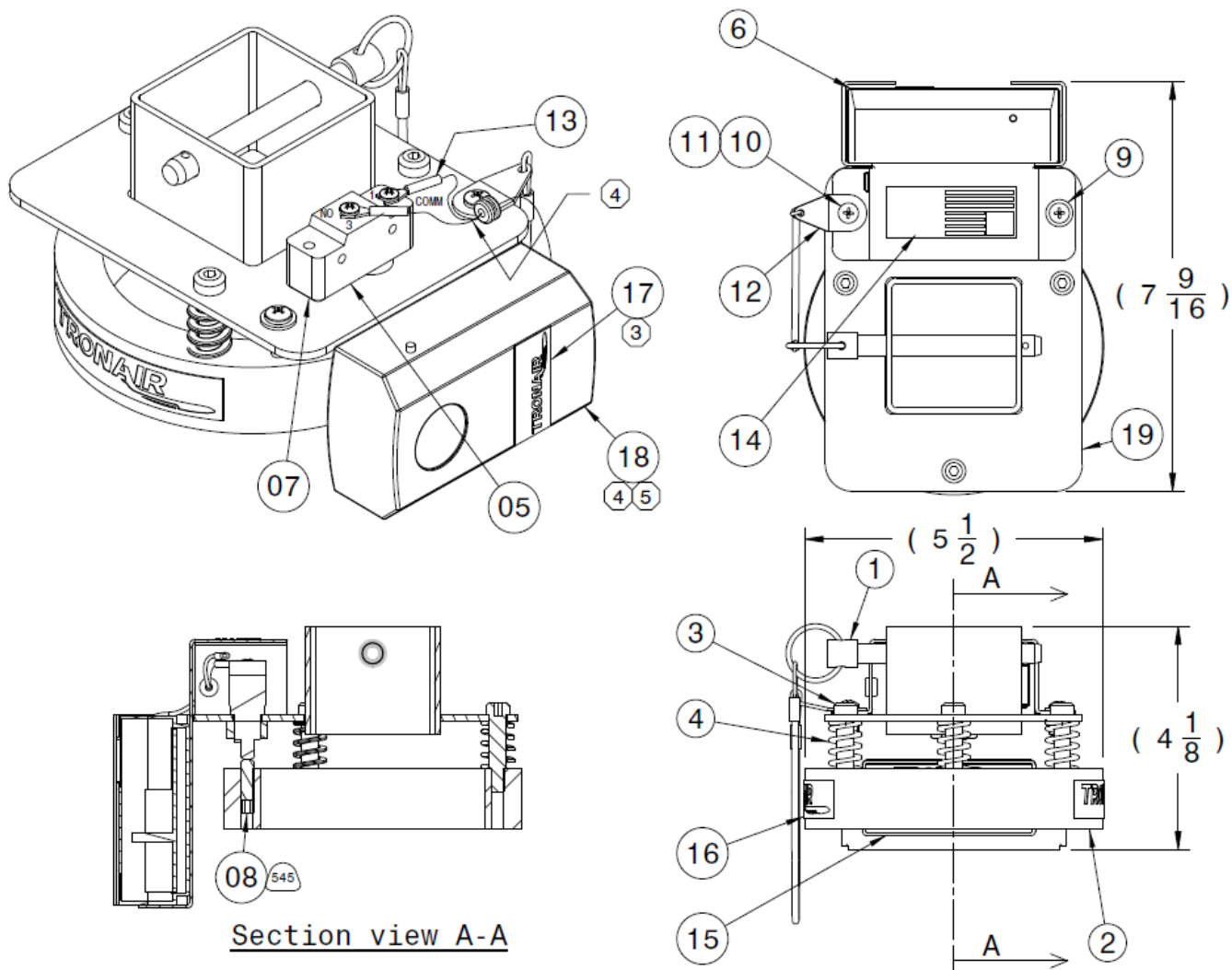
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

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.**

Parts List

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



Section view A-A

Parts List

When ordering Replacement Parts/Kits, please specify Model, Color and Serial Number of your Unit

Item	Part Number	Description	Qty
1	G-1493	PIN, 3/8 X 3 LG	1
2	TR-1883	BASE	1
3	G-1155-105210	SCREW, 5/16 X 1 SOC HD SHOULDER	3
4	H-2762	SPRING, LIGHT DUTY	3
5	EC-1796	SWITCH, LIMIT	1
6	S-1923-00	COVER, SWITCH	1
7	H-1901-01	GROMMET	1
8	G-1163-10	SCREW, 1/4-20 HEX SOC CUP POINT SET	1
9	G-1250-1030N	FLATWASHER, #10 NARROW	3
10	G-1159-103505	SCREW, #10-32 X 5/8 LG ROUND HD CROSS REC	2
11	G-1202-1035	ESN, #10-32	2
12	H-1206*07.0	ASSEMBLY, CABLE	1
13	EC-1180-02	TERMINAL, RING YELLOW #6	2
14	V-1001	LABEL, MADE IN USA	1
15	V-1003	LABEL, SERIAL NUMBER	1
16	V-1197	LABEL, TRONAIR	2
17	V-2065	LABEL, TRONAIR	1
18	H-5136	ALARM	1
19	Z-5962-00	WELDMENT, OUTER TUBE	1
N/S	EC-1854	BATTERY, 9 VOLT	1

WARNING!



- Use only the batteries specified.
- Use of different batteries may have a detrimental effect on the alarm.
- Use only the following 9 volt replacement batteries for alarm:

BATTERY SPECIFICATIONS

Alkaline Type..... EVEREADY 522; DURACELL MN1604, MX1604 GOLD PEAK 1604A, AL9 RAYOVAC



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Fuel Tools

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