



# OPERATION & SERVICE MANUAL



**Model: 08-2001-0000**  
**Universal Engine Stand**

10/2004 – Rev. 04

The Tronair Group of Companies: Tronair | DatcoMedia | Columbus Jack | Eagle | DAE | Malabar International

**Tronair, Inc.**  
1 Air Cargo Pkwy East  
Swanton, OH 43558

Phone: (419) 866-6301 | 800-426-6301  
Web: [www.tronair.com](http://www.tronair.com)  
Email: [sales@tronair.com](mailto:sales@tronair.com)

REVISION

DATE

TEXT AFFECTED

04

10/2004

Modified 4.2  
Modified Parts List  
Added PT6A-65B to chart



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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

The Tronair Universal Engine Stand incorporates the following quality features:

- Heavy steel construction
- Easily maneuverable
- Can be fixed into static position with floor locks

### 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

### 1.4 USAGE

The purpose of this stand, equipped with proper engine sling and support, is to hold engine during component changes and minor maintenance work.

See Engine Application Chart, for specific support and sling required for each engine.

### 1.5 SPECIFICATIONS

- Weight: 350 lbs (158.8 kg)
- Height: 73 in (185.4 cm)
- Width: 52 in (132.1 cm)
- Length: 49 in (124.5 cm)

## 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 ASSEMBLY INSTRUCTIONS

#### 3.1 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.

The 3/8-24 bolts should be tightened to 35 ft-lbs.

#### 3.2 ASSEMBLY STEPS

1. Refer to **Figure 1**, the parts list, and Engine Application Chart. The 08-2001-0000 Engine Stand base has (six) 6 locations for mounting engine supports and upright posts. These positions are listed "A through F" Reference **Figure 1**. For proper assembly, installation and engine stand configuration, reference engine application chart for specific aircraft engines.
2. Attach upright assembly to frame with 1/2-20 x 1-1/2 inch long hex head bolts, washers and elastic stopnuts. Refer to Engine Application Chart for proper location of upright assembly.

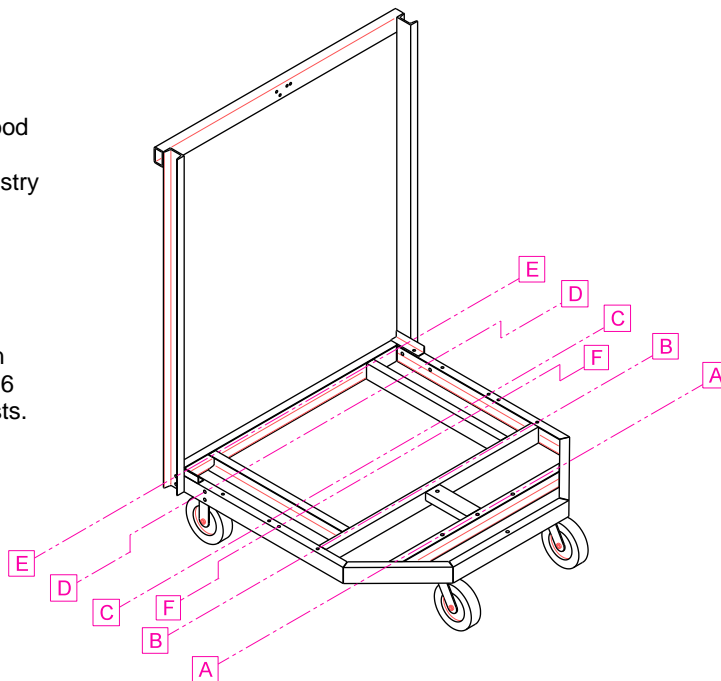


Figure 1 – Engine Stand Assembly Locations

#### ENGINE APPLICATION CHART

Engine	Support Adapters	Support Mounting Base Locations	Sling	Upright Assembly Base Location
Garrett TFE-731	K-2112	B	08-0102-4000	D
GE CR-700	K-2113	N/A	08-0100-4000	D
GE CJ-610	K-2114	N/A	08-0100-4000	D
GE Denali	K-5281	C, F	08-0102-4010	N/A
PT6-A36	K-2115	N/A	08-0100-4000	E
PT6-A38, A41 through A65, <b>except</b> A-50	K-2116	C	08-0102-4000	E
PT6A-65B	K-2116	C	08-0102-4000	F
P & W JT-15D	K-2117	A	08-0114-4010	E

#### 3.3 PRE-USE CHECKS

Refer to the Parts List and illustrations to identify and assure that all parts are present.

- Generally check over unit to assure the tightness of all nuts and bolts.

### 4.0 TRAINING

#### 4.1 TRAINING REQUIREMENTS

The employer of the operator is responsible for providing a training program sufficient for the safe operation of the unit.

#### 4.2 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.

#### 4.3 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.**

**5.0 OPERATION**

1. Attach appropriate sling (not included with stand) to engine and remove from aircraft according to manufacturer's instructions.
2. Lower engine into engine work stand.
3. Remove hoist from work area.
4. Actuate floor locks.
5. To remove engine, reverse the above operational steps.

**6.0 MAINTENANCE****6.1 PERIODIC INSPECTION**

A qualified inspector shall perform a complete inspection at the following intervals

SERVICE	INTERVAL	
Normal	Yearly	Inspect equipment at site of use. Operation with various weights within the rated load limit, or uniform loads less than 65 percent of rated load.
Heavy	Semi-Annual	Inspect equipment at site of use unless external conditions indicate that disassembly should be done to permit detailed inspection. Operation within the rated load limit that exceeds normal service.
Severe	Quarterly	Inspect equipment at site of use unless external conditions indicate that disassembly should be done to permit detailed inspection. Operation at normal or heavy service under abnormal operating conditions.
Special/ Infrequent	As recommended by a qualified person before the first such use and as directed by the qualified person for any subsequent uses	

1. Before each use visually inspect unit to ensure all components are present and functional
  - All bolts & nuts are secure
  - Check for wear on t-handle ball-lok pins. Replace as necessary
  - All casters & locks are operational
  - No bent or, broken components

**WARNING!**

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

2. Periodically:
  - Lubricate swivel caster bearing race and caster wheels with multi-purpose grease
  - Lubricate flange bearing assembly with multi-purpose grease
  - Adjust toggle clamp spindles as required to ensure clamping
3. Annually:
  - a. Safely perform load test

**6.2 LOAD TEST**

**It is recommended to send Equipment to Manufacturer or Authorized Service Center for Recertification.**

The rated capacity shall not be more than 80 percent of the maximum load sustained during the test. Test loads shall not be more than 125 percent of the rated capacity unless otherwise recommended by the manufacturer. Test weights shall be accurate to within -5 percent, +0 percent of stipulated values.

1. Overall visual inspection.
2. Install test weight equivalent to 500 lbs
3. Hold the load for two (2) minutes.
4. Remove load and visually inspect stand for any signs of wear or failure

**7.0 PROVISION OF SPARES****7.1 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

**7.2 RECOMMENDED SPARE PARTS LISTS**

Reference the following page for Replacement Parts available.



## 8.0 IN SERVICE SUPPORT

Contact Tronair, Inc. for technical services and information. See Section 1.1– Manufacturer.

## 9.0 GAURANTEES/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:

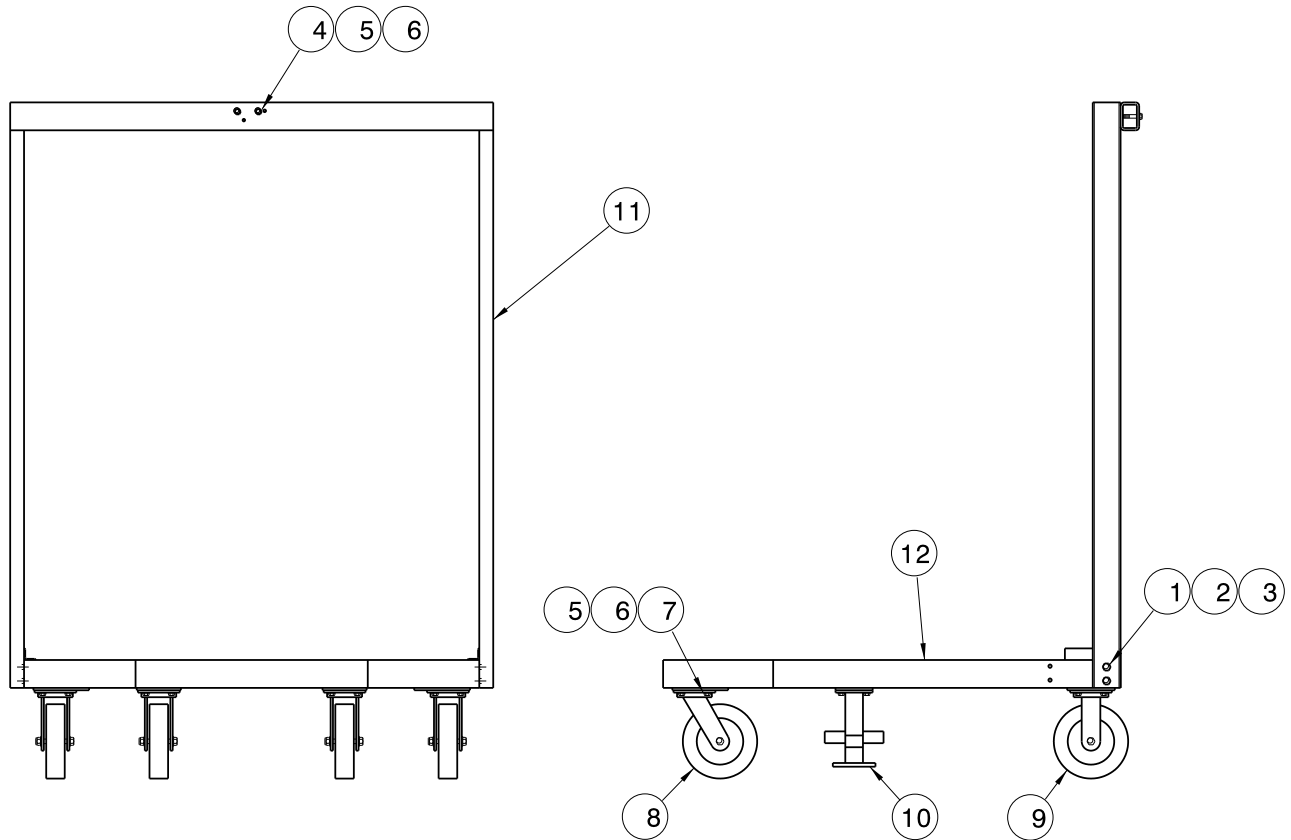
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

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.



Item	Part Number	Description	Qty
1	G-1100-109514	Bolt, Hex Head 1/2-20 x 1-1/2" long	4
2	G-1202-1095	Stopnut, 1/2-20 Elastic	4
3	G-1250-1090N	Flatwasher, 1/2 Narrow	4
4	G-1100-107534	Bolt, Hex Head, 3/8-24 x 3-1/2" long	2
5	G-1202-1075	Stopnut, 3/8-24 Elastic	28
6	G-1250-1070N	Flatwasher, 3/8 Narrow	28
7	G-1100-107512	Bolt, Hex Head, 3/8-24 x 1-1/4" long	24
8	U-1094	Caster, Swivel	2
9	U-1093	Caster, Rigid	2
10	H-1142	Lock, Floor	2
11	Z-0073	Upright	1
12	Z-0038	Base	1

K-1243 – Denali Beechcraft Kit