

**Model: 08-2018-0000  
Pratt & Whitney PW305  
Engine Work Stand**

11/1993 – Rev. OR

REVISION  
OR

DATE  
11/1993

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

The Tronair engine work stand incorporates the following quality features:

- Heavy duty steel construction
- Easily maneuverability
- Can be fixed into static position with rigid caster wheel brakes
- Dual oil pans to capture excess fluid
- Easily converted to accept left or right hand engines

### 1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

### 1.3 MANUFACTURER

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

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

### 1.4 USAGE

The purpose of this engine stand is to allow mechanics easy access to any part of the engine system during engine inspection and maintenance procedures. A "three-point" mounting system via EM1 and EM2 into the engine stand make access to the engine possible.

### 1.5 SPECIFICATIONS

Weight: 730 lbs  
Length: 105 inches  
Width: 49 inches  
Height: 63 inches

## 2.0 ASSEMBLY INSTRUCTIONS

### 2.1 GENERAL INFORMATION

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

### 2.2 ASSEMBLY STEPS

1. The 08-2018-0000 PW305 engine stand is designed to handle either right hand or left hand mounted engines. The main post is mounted in the front end of the engine stand base for use with a left hand engine, Reference Figure 1. The front and rear mounting posts are reversed for right hand mounted engines.
2. Position both upright post assemblies onto engine stand base at proper locations and secure with mounting hardware provided.
3. For each post, use one (1) flatwasher, one (1) lockwasher, and one (1) 1/2-20 Grade 8 bolt at each of the eight locations. Reference Figure 2. Screw all bolts in finger tight, and gradually torque each bolt to 300 inch pounds. The engine stand is now ready to accept a PW305 engine.

### 2.3 PRE-USE CHECKS

Refer to the parts list and illustration attached to identify and ensure that all parts are present.

Generally, check the entire unit to assure the tightness of all nuts and bolts, etc.

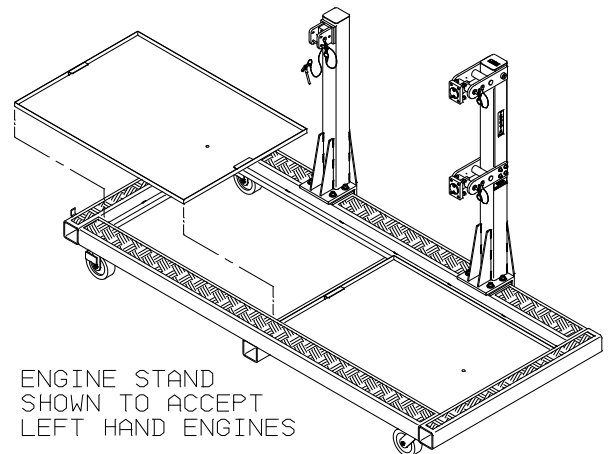


FIGURE 1

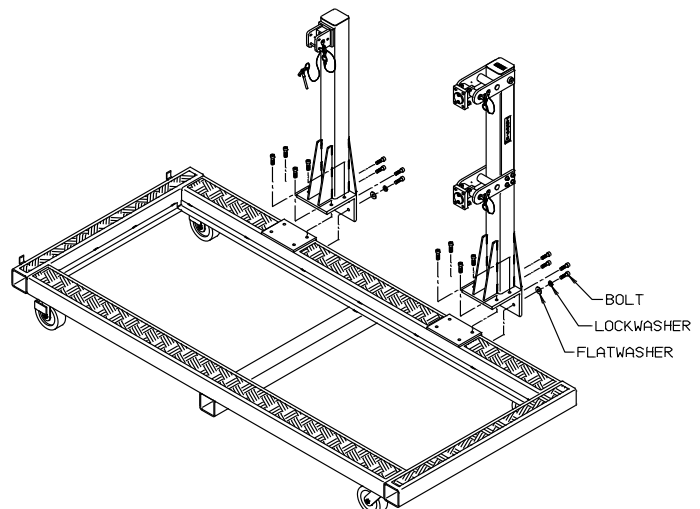


FIGURE 2

### 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.

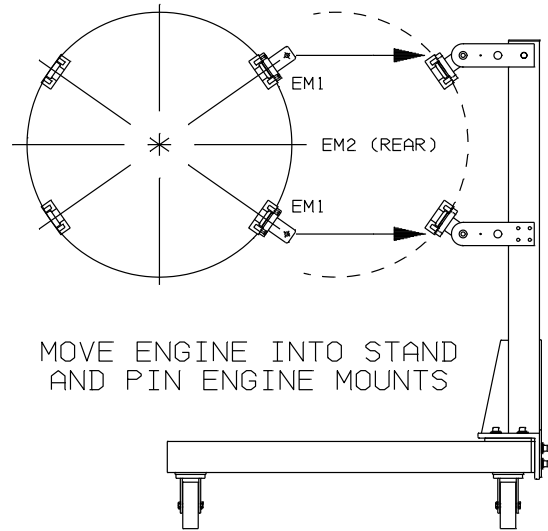
#### 3.3 OPERATOR TRAINING

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 OPERATION

1. Attach appropriate sling (not included with stand) to engine and remove from aircraft according to the manufacturer's instructions.
2. Remove the two engine mounting pads from the main post assembly of the engine stand and bolt them to appropriate EM1 locations on the PW305 engine.
3. Lock caster brakes on stand.
4. Align the PW305 engine parallel with the front and rear post assemblies on the engine stand. Be sure that the front of the engine is positioned towards the main post assembly.
5. Carefully move engine into stand and pin engine mounts to the arms on the main post assembly. **Reference Figure 3.**
6. Carefully position the rear engine mount EM2 into the rear post assembly and pin.



**FIGURE 3**

**NOTE: If the rear mount position of the engine stand does not line up with the rear engine mount, EM2, loosen the rear mounting block bolts on the rear post assembly and align the mounting block to match the engine EM2 position. Re-tighten both bolts after alignment.**

7. Remove hoist from work area.
8. Reverse steps G through A to remove engine.

### 5.0 MAINTENANCE

#### 5.1 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**

5.1 Periodic inspection continued on following page.

## 5.1 PERIODIC INSPECTION *(continued)*

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

## 5.2 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

## 6.0 PROVISION OF SPARES

### 6.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

<b>TRONAIR, Inc.</b>	Telephone: (419) 866-6301 or 800-426-6301
1 Air Cargo Pkwy East	E-mail: sales@tronair.com
Swanton, Ohio 43558	Website: www.tronair.com

### 6.2 RECOMMENDED SPARE PARTS LISTS

Reference the following page for Replacement Parts available.

## 7.0 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

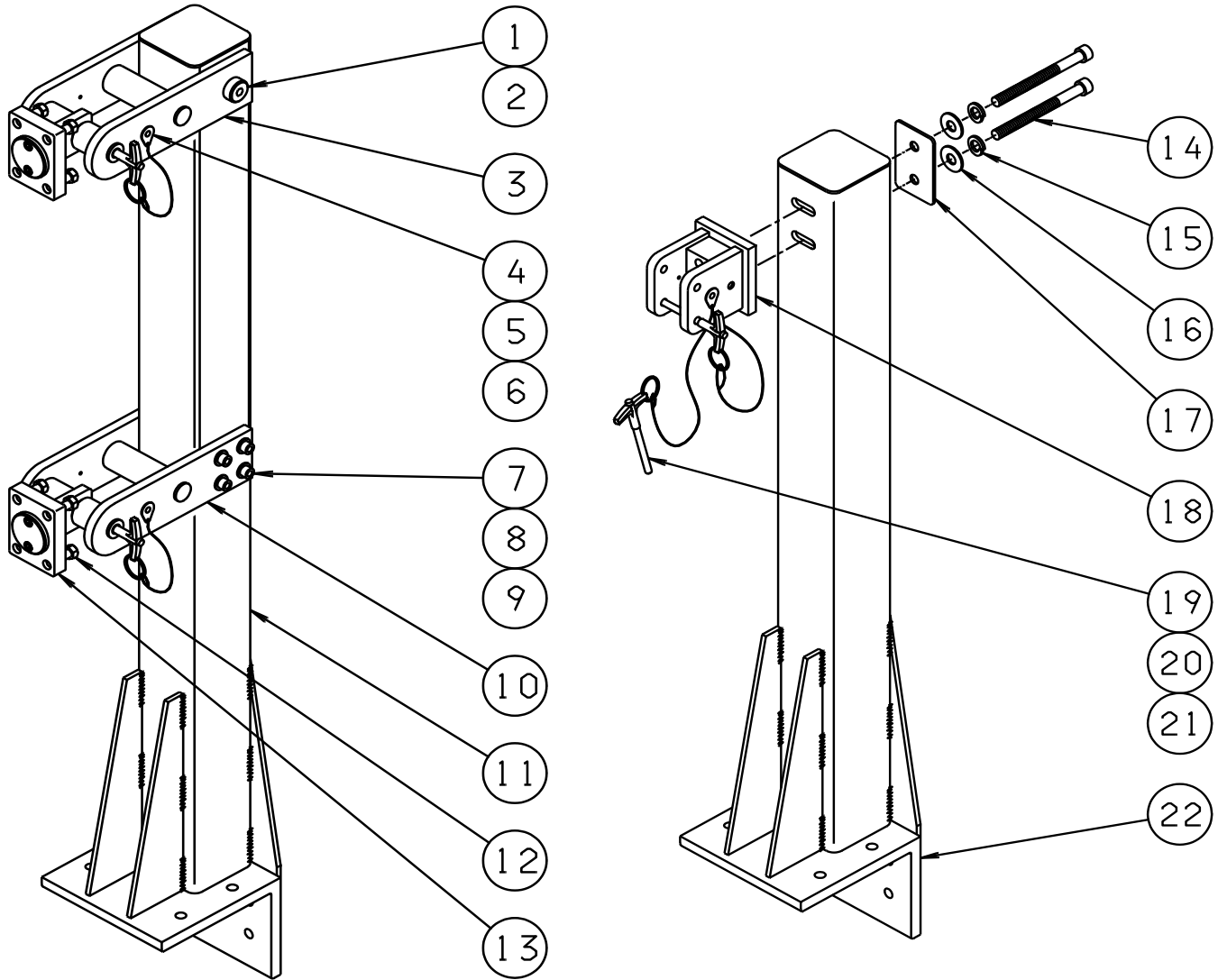
If warranty coverage is approved, either replacement parts will be sent or the product will have to be returned to Tronair for repairs. If the product is to be returned, a Return Material Authorization (RMA) number will be issued for reference purposes on any shipping documents. Failure to obtain a RMA 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.**

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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
Not Shown	Z-2819	Assembly, Base	1
Not Shown	Z-2822	Assembly, Handle	1
	<b>K-2330</b>	<b>Kit, Oil Pan Replacement; consists of:</b>	
Not Shown	N-2206-03-S	Plug, Hex Head	1
Not Shown	Z-2823-01	Weldment, Oil Pan	1
	<b>K-2331</b>	<b>Kit, Engine Mount Replacement; consists of:</b>	
4	G-1310-0855	Pin, 1/2 x 5.5 Ball Lok-T	1
5	H-1026*12.0	Assembly, Lanyard	1
6	G-1351-04	Rivet, 1/8 Open End Steel	1
12	G-1128	Bolt, Modified	4
13	Z-2831	Weldment, Engine Mount	1
	<b>K-2332</b>	<b>Kit, Pivot Arm Replacement; consists of:</b>	
1	G-1155-110250	Screw, 3/4" diameter Socket Head Shoulder	1
2	G-1202-1100	Stopnut, 5/8-11 Elastic	1
3	Z-2829	Weldment, Pivot Arm	1



## Parts List

Item	Part Number	Description	Qty
	<b>K-2333</b>	<b>Kit, Lower Arm Replacement; consists of:</b>	
7	G-1151-107754	Screw, Hex Socket Head Cap, 3/8-24 x 5 1/2" long	4
8	G-1250-1070N	Flatwasher, 3/8 Narrow	8
9	G-1202-1075	Stopnut 3/8-24 Elastic	4
10	Z-2830	Weldment, Lower Arm	1
	<b>K-2334</b>	<b>Kit, Rear Mount Replacement; consists of:</b>	
14	G-1151-109754	Screw, Hex Socket Head Cap, 1/2-20 x 5 1/2" long	2
15	G-1251-1090R	Lockwasher, 1/2 Regular	2
16	G-1250-1090N	Flatwasher, 1/2 Narrow	2
17	J-2183	Plate, Bolt	1
18	Z-2833	Weldment, Rear Mount	1
19	G-1310-0630	Pin, Ball Lok-T	2
20	H-1026*12.0	Assembly, Lanyard	2
21	G-1351-04	Rivet, 1/8 Open End Steel	1
	<b>K-2335</b>	<b>Kit, Rigid Caster (Single) Replacement; consists of:</b>	
Not Shown	G-1100-107506	Bolt, Hex Head, Grade 5, 3/8-24 x 3/4" long	4
Not Shown	G-1250-1070N	Flatwasher, 3/8 Narrow	4
Not Shown	G-1251-1071R	Lockwasher, 3/8 Regular	4
Not Shown	U-1056	Caster, Rigid	1
	<b>K-2336</b>	<b>Kit, Swivel Caster (Single) Replacement; consists of:</b>	
Not Shown	G-1100-107506	Bolt, Hex Head, Grade 5, 3/8-24 x 3/4" long	4
Not Shown	G-1250-1070N	Flatwasher, 3/8 Narrow	4
Not Shown	G-1251-1071R	Lockwasher, 3/8 Regular	4
Not Shown	U-1057	Caster, Swivel	1
	<b>K-2337</b>	<b>Kit, Main Post Assembly Replacement; consists of:</b>	
11	Z-2820	Assembly, Main Post	1
Not Shown	G-1151-109716	Screw, 1/2-20 Hex Socket Head Cap	8
Not Shown	G-1250-1090N	Flatwasher, 1/2 Narrow	8
Not Shown	G-1251-1090R	Lockwasher, 1/2 Regular	8
	<b>K-2338</b>	<b>Kit, Rear Post Assembly Replacement; consists of:</b>	
22	Z-2821	Assembly, Rear Post	1
Not Shown	G-1151-109716	Screw, 1/2-20 Hex Socket Head Cap	8
Not Shown	G-1250-1090N	Flatwasher, 1/2 Narrow	8
Not Shown	G-1251-1090R	Lockwasher, 1/2 Regular	8