

Model: 01-1305-0000
Custom Steel Towbar
Canadair RJ-700



11/2007 – Rev.03

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REVISION	DATE	TEXT AFFECTED
02	11/2007	Added CE marking and Declaration of Conformity, Modified Parts List
03	03/2023	Major revision

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Tronair towbars/heads must only be used with matching Tronair heads/towbars, and Tronair shear pins.

This product cannot 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 Model 01-1305-0000 Custom Steel Towbar is designed for towing the Canadair RJ-700 aircraft.

The towbar head interfaces with the aircraft using sliding pins. There is both radial and axial shear protection for the landing gear.

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 SPECIFICATIONS

Application.....Canadair RJ-700 Aircraft.
Maximum Aircraft Gross Weight.....75,000 lbs (34 metric ton)
Length 149 ¾ in (380 cm) From eyebolt centerline to aircraft interface
Width 35 3/16 in (89.4 cm) From end of sliding pins
Height.....5-13/16 in (14.7 cm) From ground to aircraft interface
Tube3-1/4 in (8.26 cm) diameter
Weight 145 lbs (65.8 kg)
Finish.....Blue Powder Coat
MaterialSteel

2.0 SAFETY INFORMATION

2.1 USAGE AND SAFETY INFORMATION

The Tronair Model 01-1305-0000 Custom Steel Towbar is used for towing Canadair RJ-700 aircraft only.

To ensure safe operation, please read the following statements and understand their meaning. This manual contains safety precautions which are explained as follows. 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.

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 towbar.

3.2 TRAINING PROGRAM

The employer provided operator training program should cover safety procedures concerning use of the towbar in and around the aircraft at the servicing location.

3.3 OPERATOR TRAINING

The operator training should provide the required training for safe operation of the towbar.

NOTE: Maintenance and Trouble Shooting are to be performed by the skilled and trained technician.

4.0 OPERATION

4.1 LANDING GEAR ASSEMBLY

Place landing gear assembly about 15" from towing head end of towbar. Torque clamp nuts to 35 ft-lbs (47.5 N-m).

4.2 TOWING HEAD ASSEMBLY

Slide towing head assembly into the end of the towbar. Fasten in place using the provided hardware.

4.3 PRELIMINARY CHECKLIST

4.3.1 Towbar

- Check towing eye mounting bolts. Ensure the fasteners are not loose or missing.
- Check towing eye for bending, excessive wear and deformity.

4.3.2 Towbar Head

- Check weld between connector tube and head plate for cracks.
- Check welds between head plate and outer shear plate for cracks.
- Check shoulder bolt connections. Ensure they are not loose or missing.
- Check outer shear plates. Ensure they are not bent.
- Check shear pin. Replace if broken.
- Check shear pin bushings. Replace if cracked or chipped.
- Check weld between inner shear plate and head tube for cracks.
- Check weld between head tube and side rails for cracks.
- Check weld between sliding pin wear sleeves and side rails for cracks.
- Check sliding pins for bending or excessive wear. Ensure sliding pins slide freely.
- Check sliding pin retaining pins. Ensure pins engage on the sliding pins locking them in the closed position.



WARNING!

A damaged or bent towbar should not be used. Towbar should be repaired or replaced.



WARNING!

Towbars should be used with category 1 tugs ONLY in accordance with AHM 995 "Functional specifications for an aircraft tractor" Using a category 2 or higher tug may result in excessive loads and stresses being applied to the towbar and/or the aircraft. These excessive loads may cause failure of the towbar which could cause damage to the aircraft or personal injury.

4.4 USAGE PROCEDURE

4.4.1 Aircraft Attachment



CAUTION!

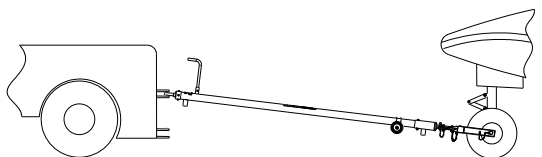
It is recommended that your towbar to attached to the aircraft first, and then connected to the tug to avoid possible aircraft damage.

4.4.2 Tug Attachment

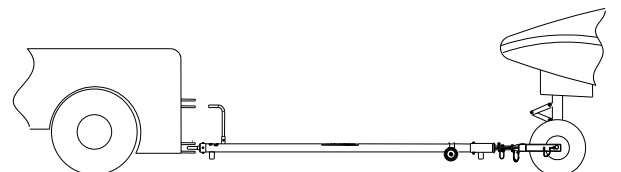


CAUTION!

Damage to the towbar or aircraft can result from an excessive towbar angle during towing operations. Reference Figure 1.



**Incorrect
 (Excessive Towbar Angle)**



Correct

FIGURE 1

- Use a pintle height so that the towbar is as level as possible during towing. Also, the pintle hook height should prevent contact of the towbar with the ground during towing.

4.4.3 Couplers



CAUTION!

Damage to the towbar or aircraft can result while towing with the following types of couplers:

- Lift Head
- Standard Duty Latch
- Vertical Side Swing Latch
- Swivel Hook

The couplers listed above are known to cause binding and failure in the lunette eye. Indicators of binding are wear on outside diameter of the eyebolt and indentation on the inside diameter of the eyebolt. **Reference Figure 2.**

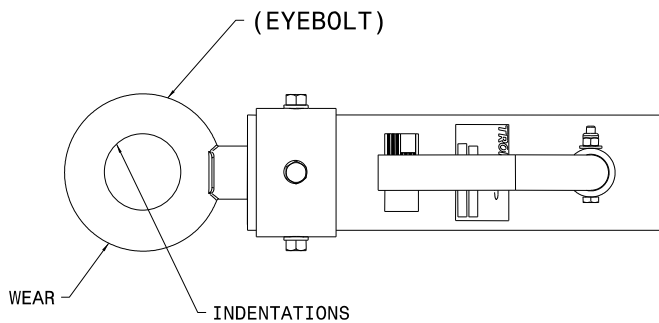


FIGURE 2

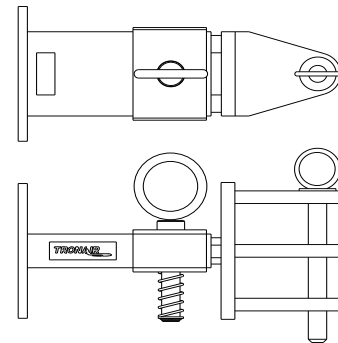


FIGURE 3
01-1950-5000 Standard Telecoupler

Tronair recommends a telecoupler pintle hook arrangement. This arrangement is known to eliminate binding. Tronair offers a Standard Telecoupler, Model Number 01-1950-5000, for use on tugs. **Reference Figure 3.**

Damage to the towbar and/or aircraft can result by towing or pushing an aircraft with an incorrect size eyebolt or pintle pin. A correct size eyebolt will make contact with the pintle pin. A gap between the eyebolt outside diameter and the coupler face plate should be easily seen. An eyebolt which is too large will cause the eyebolt to make contact with the face plate of the coupler. When the eyebolt is too large for the coupler, a gap between the inside diameter of the eyebolt and the coupler face plate will be seen. **Reference Figure 4.**

To ensure proper towing and pushing, check to make sure the pintle pin diameter is not too long for the eyebolt's inside diameter. An approximate one-half inch ($\frac{1}{2}$ ") gap between the pin diameter and the eyebolt should be seen. If any of these conditions are not met, please contact Tronair for information to obtain a new coupler.

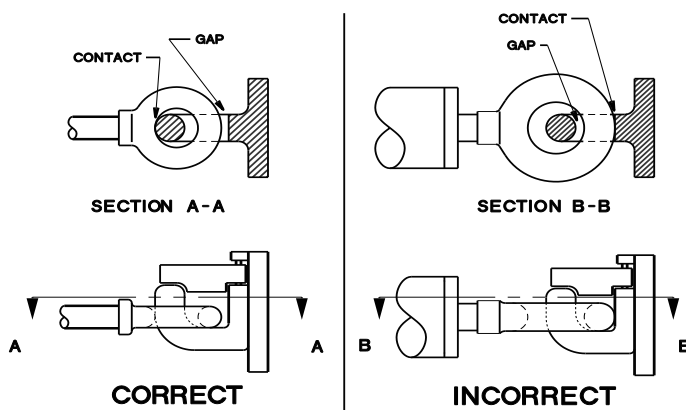


FIGURE 4

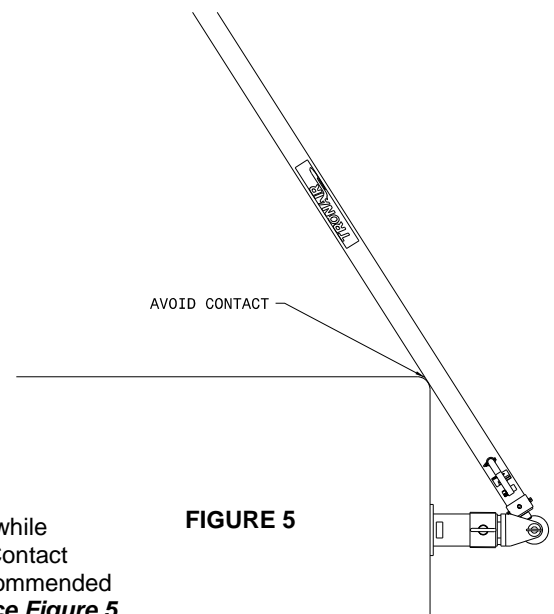


FIGURE 5

4.4.4 Towing Operation

Damage to the towbar or aircraft can result from pushing an aircraft while maintaining too sharp of an angle between the tug and the aircraft. Contact between the towbar weldment and the tug must be avoided. It is recommended that the angle between the tug and towbar not exceed 90° . **Reference Figure 5.**

5.0 PROVISION OF SPARES

5.1 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



5.2 RECOMMENDED SPARE PARTS LISTS

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

Recommended Spares to be kept on hand:

U-1073 Wheel, 6 inch diameter

K-2660..... Kit, Handle

K-2958..... Kit, Shear Pin (qty 3)

6.0 IN-SERVICE SUPPORT

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

7.0 GUARANTEES

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:

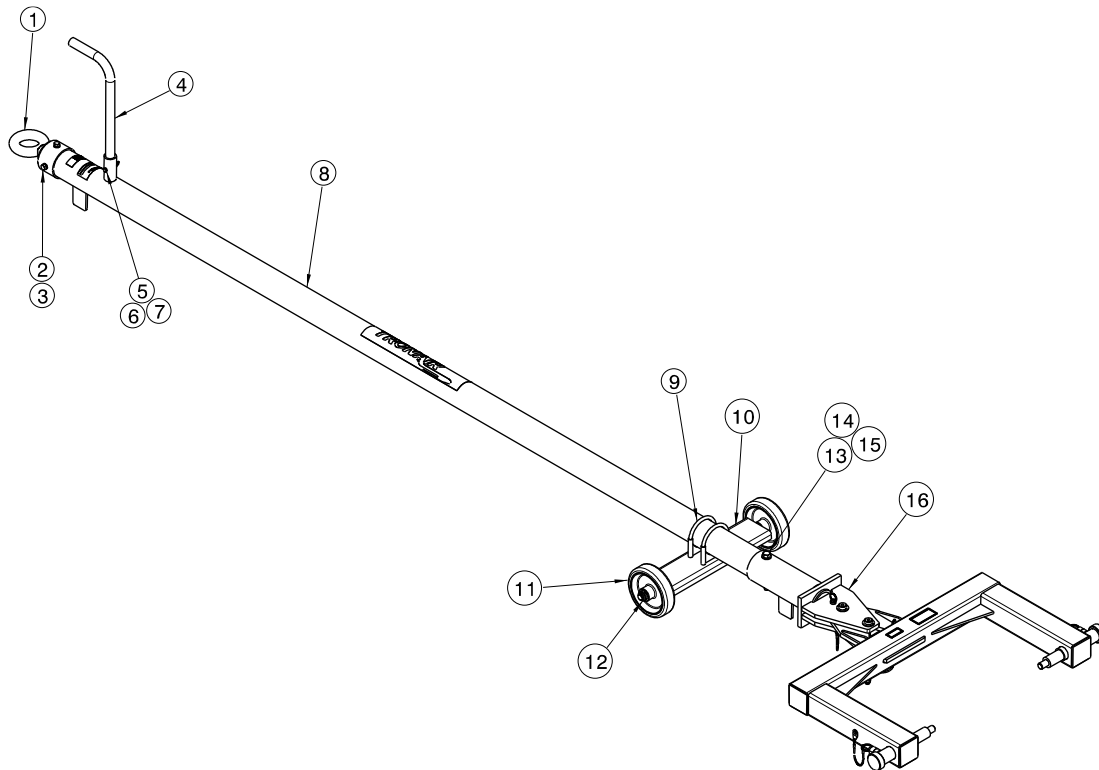
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

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

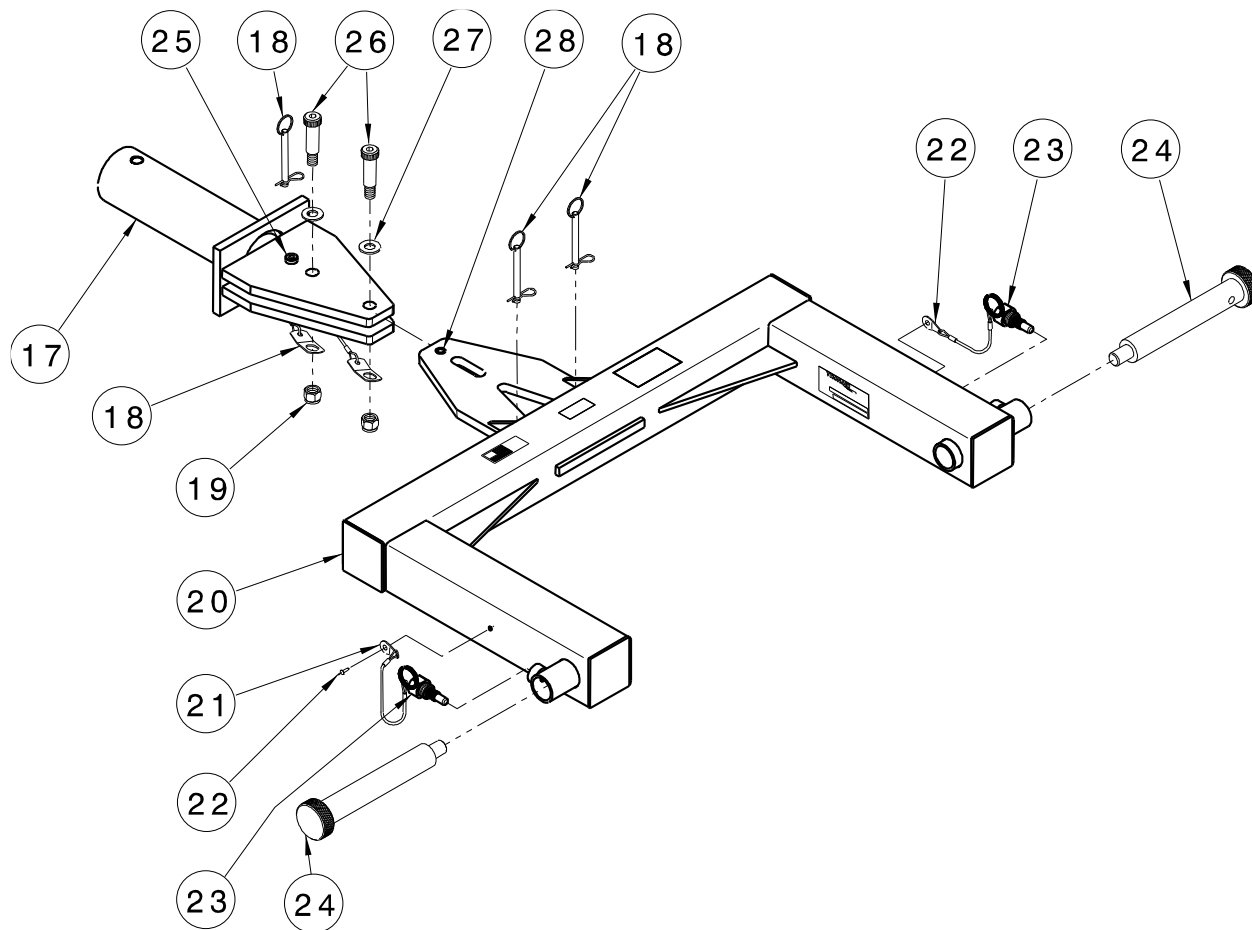
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	PART NUMBER	DESCRIPTION	Qty
1	Z-5900	WELDMENT, EYEBOLT	1
2	G-1420-107510	BOLT, HEX HEAD, GRADE 8, 3/8 -34 X 1" LONG	4
3	G-1251-1070R	LOCKWASHER, 3/8 REGULAR	4
4	TR-1857-01	TUBE. HANDLE	1
5	G-1100-10520	BOLT, HEX HEAD, GRADE 5, 1/4 -28 X 2" LONG	1
6	G-1250-1050N	FLATWASHER, 1/4 NARROW	1
7	G-1202-1055	ELASTIC STOPNUT, 1/4 - 28	1
8	Z-5898-01	MACHINING, TOWBAR	1
9	H-1537-06	CLAMP, MUFFLER	2
10	Z-5902	WELDMENT, AXLE MOUNTING	1
11	U-1073	WHEEL	2
12	G-1203-1115	ELASTIC JAMNUT, 3/4 - 16	2
13	G-1420-109544	BOLT, HEX HEAD, GRADE 8, 1/2 -20 X 4 1/2" LONG	1
14	G-1250-1090N	FLATWASHER, 1/2 NARROW	2
15	G-1203-1095	ELASTIC JAMNUT, 1/2 - 20	1
16	X-1147	ASSEMBLY, HEAD	1

Parts List

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



Item	PART NUMBER	DESCRIPTION	Qty
17	Z-5928-01	WELDMNT, SHEAR PLATE	1
18	G-1444-25	PIN, SHEAR	1
19	G-1202-1090	STOPNUT, 1/2 -13 ELASTIC	1
20	Z-5925-01	WELDMNT, HEAD	1
24	R-1855	PIN, SLIDING	2
25	H-1724-06	BUSHING, HEAD PRESS FIT	2
26	G-1155-109220	SCREW, SOCKET HEAD SHOULDER, 5/8 " DIAMETER	1
27	G-1250-1100N	FLATWASHER, 5/8 NARROW	1
28	H-1725-17	BUSHING, HEADLESS PRESS FIT	1
	K-2660	KIT, HANDLE REPLACEMENT ; consists of:	
21	H-1443*07.0	ASSEMBLY, LANYARD 7" LONG	1
22	G-1351-18	RIVET, 3/16 OPEN END STEEL	1
23	Z-2626	ASSEMBLY, HANDLE	1
	K-2958	KIT, SHEAR PIN ; consists of:	
18	G-1444-25	PIN, SHEAR	3
	K-4032	KIT, SHEAR PLATE ASSEMBLY ; consists of:	
17	Z-5928-01	WELDMNT, SHEAR PLATE	1