



Operation & Service Manual

**Models: 01-1215-0000
01A1215-0000
Portable Towbar**



09/2013 – Rev. 08

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

REVISION	DATE	TEXT AFFECTED
02	08/2006	Major Revision
03	03/2007	Added CE marking
05	07/2007	Modified Parts List
06	09/2010	Modified 1.0 Description and 1.1 Specifications
07	01/2012	Modified Parts List
08	09/2013	Updated 1.1 Specifications



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

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 DESCRIPTION

The Tronair Model 01-1215-0000 (2 3/16 eyebolt) and 01A1215-0000 (2 7/8 eyebolt) Portable Towbars are lightweight, carry-on, multiple aircraft towbars for use with the Tronair Series 500 and 600 Multi-Heads.

The portable towbar includes two collapsible sections for compact storage. There is a standard eyebolt at the towing end of the 01-1215-0000 towbar and a three inch eyebolt at the towing end of the 01A1215-0000 towbar.

1.1 SPECIFICATIONS

Application: Designed for use with Tronair Series 500 and 600 Multi-Heads

Maximum Aircraft Gross Weight: 75,000 lbs (34,019 kg)

Dimensions:

Collapsed Length: From eyebolt centerline to end of towbar
55 in (139.7 cm) 01-1215-0000
56 in (142.24 cm) 01A1215-0000

Extended Length: From eyebolt centerline to end of towbar
120.5 in (306 cm) 01-1215-0000
121.5 in (308.61 cm) 01A1215-0000

Tube Diameter: 3.5 in (8.87 cm)

Weight: 40 lbs (18 kg) 01-1215-0000
47 lbs (21.3 kg) 01-1215-0000

Finish: Blue Powder Coat

Material: Aluminum

2.0 SAFETY INFORMATION

2.1 GENERAL

The Tronair Model 01-1215-0000 and 01A1215-0000 Portable Towbars are to be used with the Tronair Series 500 and 600 Multi-Heads for moving 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.

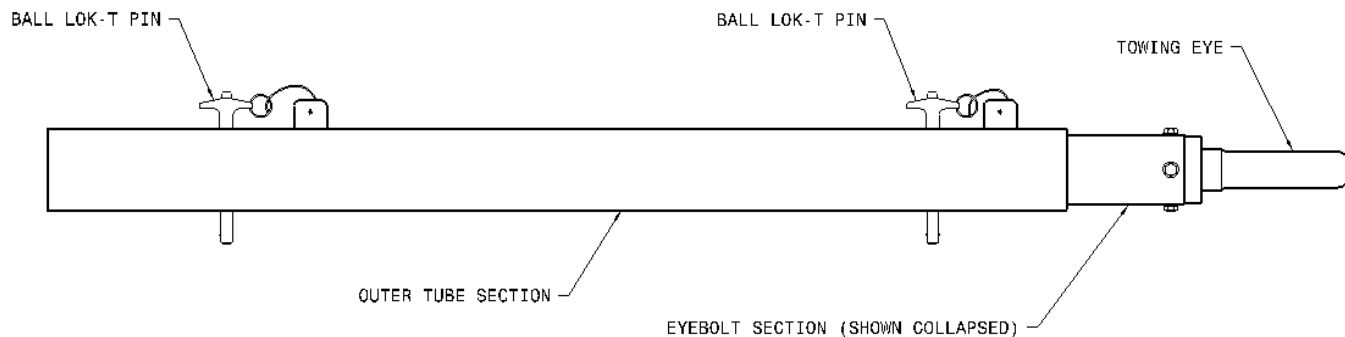


WARNING! Warning is used to indicate the presence of a hazard that can cause **severe personal injury, death, and/or substantial property damage** if the Warning Notice is ignored.

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 OPERATION

3.1 FEATURES



3.2 PRELIMINARY CHECKLIST

3.2.1 Towbar

- Check towing eye mounting bolts. Ensure the fasteners are not loose or missing.
- Check towing eye for bending, excessive wear and deformity.
- Check the ball lok-T pin. Ensure ball lok-T pin is securely attached to towbar via its lanyard. Ensure ball lok-T pin is not missing.

WARNING!



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

3.3 USAGE PROCEDURE

3.3.1 Aircraft Attachment

CAUTION!



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

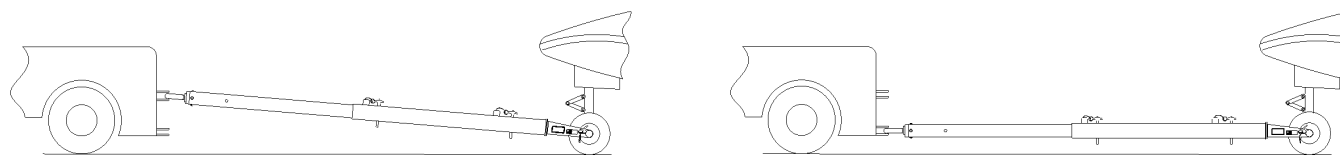
3.3.2 Tug Attachment

CAUTION!



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



Incorrect
Excessive Towbar Angle

FIGURE 1

Correct

3.3 Usage procedure continued on following page.

3.3 USAGE PROCEDURE (continued)

3.3.3 Couplers



CAUTION!

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

- Lift Head
- Vertical Side Swing Latch
- Standard Duty 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.**

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.**

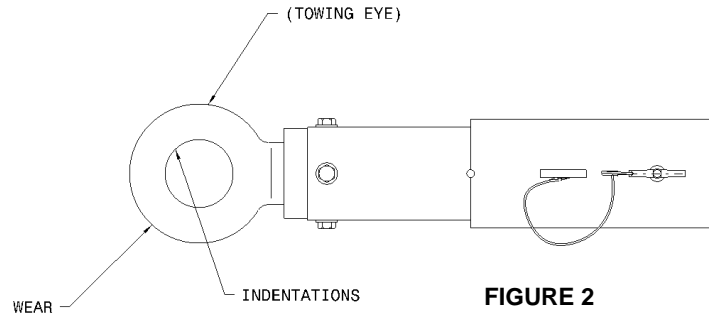


FIGURE 2

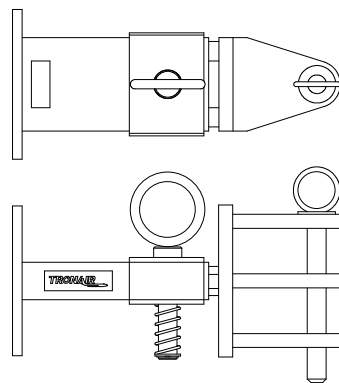


FIGURE 3

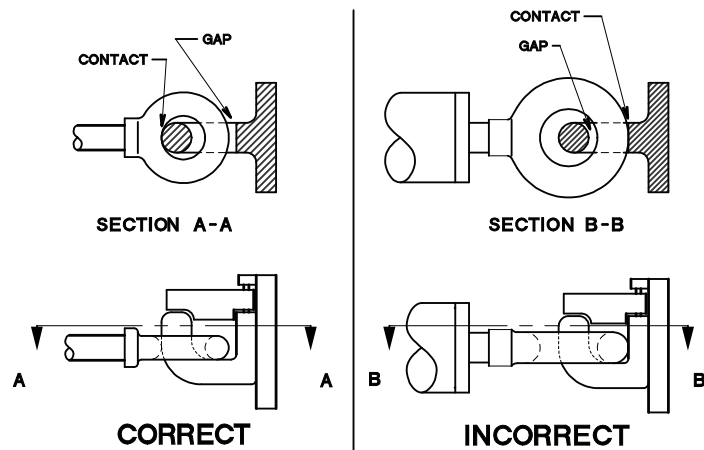


FIGURE 4

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 (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.

3.3.4 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 degrees. **Reference Figure 5.**

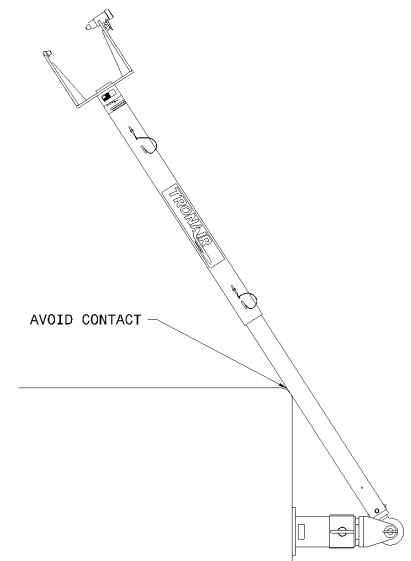


FIGURE 5



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 towbar.

4.2 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.

4.3 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.

5.0 PROVISION OF SPARES

5.1 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

5.2 PARTS LIST

Reference following pages for ordering information of Replacement Parts and Kits.

6.0 IN-SERVICE SUPPORT

Contact Tronair for technical services and information.

7.0 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

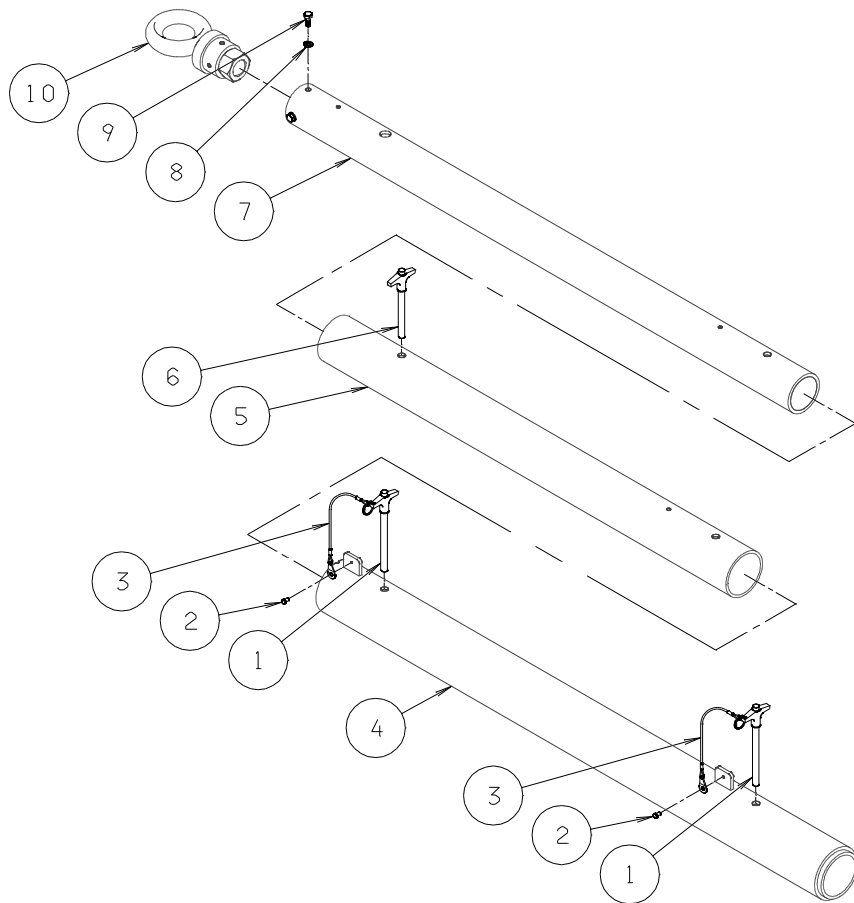
If you have a problem that may require service, contact Tronair immediately. Do not attempt to repair or disassemble a product without first contacting Tronair, any action may affect warranty coverage. When you contact Tronair be prepared to provide the following information:

- 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.

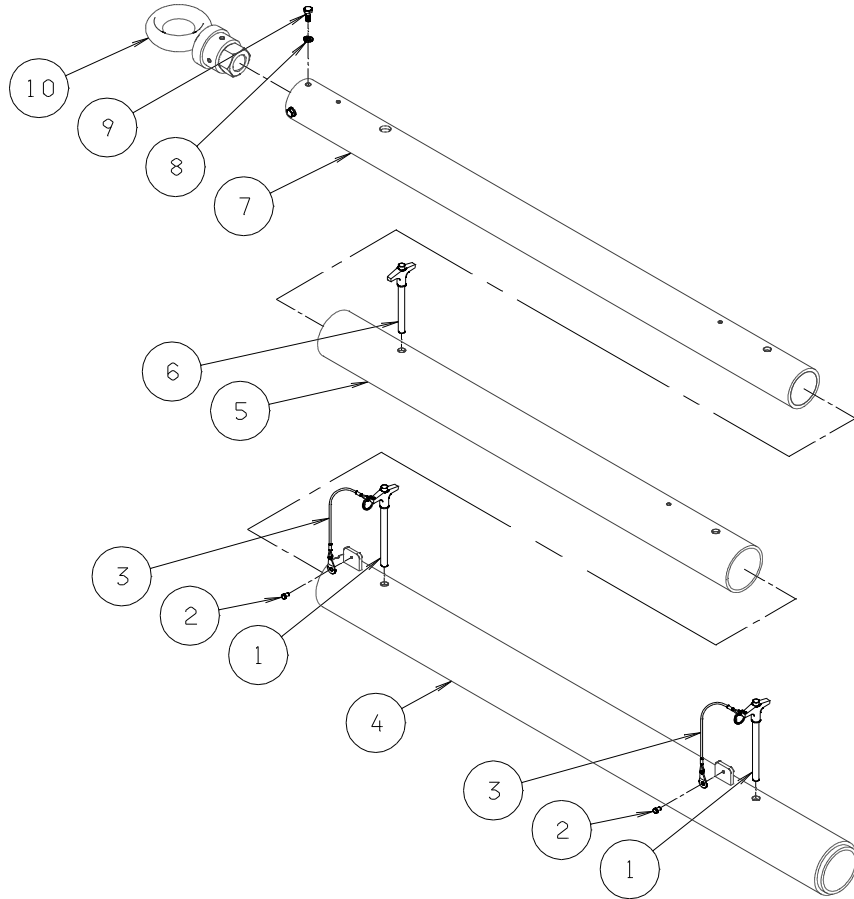
The obligations of Tronair expressly stated herein are in lieu of all other warranties or conditions expressed or implied. **Any unauthorized modification of the Tronair products or use of the Tronair products in violations of cautions and warnings in any manual (including updates) or safety bulletins 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 - 01-1215-0000



Item	Part Number	Description	Qty
4	Z-1536-01	Assembly, Outer Tube	1
5	TR-1148-01	Tube, Middle	1
6	G-1310-0835	Pin, Ball Lok-T	1
7	TR-1149-01	Tube, Inner	1
	K-1174	Kit, Shock Replacement; consists of:	
8	G-1420-106006	Bolt, Hex Head, Grade 8, 5/16 -18 x 3/4" long	4
9	G-1251-1060R	Lockwasher, 5/16" Regular	4
10	Z-1537	Weldment, Eyebolt	1
	K-1401	Kit, Ball Lok-T Pin Replacement; consists of:	
1	G-1310-0845	Pin, Ball Lok-T, 1/2" diameter x 4.5" Grip	1
2	G-1351-04	Rivet, 1/8 Open-End Steel	1
3	H-1026*07.0	Assembly, Lanyard	1
	K-1548	Kit, Shear Bolt Replacement; consists of:	
8	G-1420-106006	Bolt, Hex Head, Grade 8, 5/16 -18 x 3/4" long	4
9	G-1251-1060R	Lockwasher, 5/16 Regular	4

Parts List - 01A1215-0000



Item	Part Number	Description	Qty
4	Z-1536-01	Assembly, Outer Tube	1
5	TR-1148-01	Tube, Middle	1
6	G-1310-0835	Pin, Ball Lok-T	1
7	TR-1149-01	Tube, Inner	1
	K-2290	Kit, Shock Replacement; consists of:	
8	G-1420-106006	Bolt, Hex Head, Grade 8, 5/16 -18 x 3/4" long	4
9	G-1251-1060R	Lockwasher, 5/16" Regular	4
10	Z-2902	Weldment, Eyebolt	1
	K-1401	Kit, Ball Lok-T Pin Replacement; consists of:	
1	G-1310-0845	Pin, Ball Lok-T, 1/2" diameter x 4.5" Grip	1
2	G-1351-04	Rivet, 1/8 Open-End Steel	1
3	H-1026*07.0	Assembly, Lanyard	1
	K-1548	Kit, Shear Bolt Replacement; consists of:	
8	G-1420-106006	Bolt, Hex Head, Grade 8, 5/16 -18 x 3/4" long	4
9	G-1251-1060R	Lockwasher, 5/16 Regular	4
	K-4575	Kit, Shear Bolt Replacement; consists of:	
5	TR-1148-01	Tube, Middle	1



APPENDIX - I

**Towbar Usage
Instructions**



INS-1582 Towbar Usage Instructions

11/2003 – Rev. 03

1740 Eber Rd
Holland, OH 43528-9794
USA

Tronair, Inc.
www.tronair.com
Email: sales@tronair.com

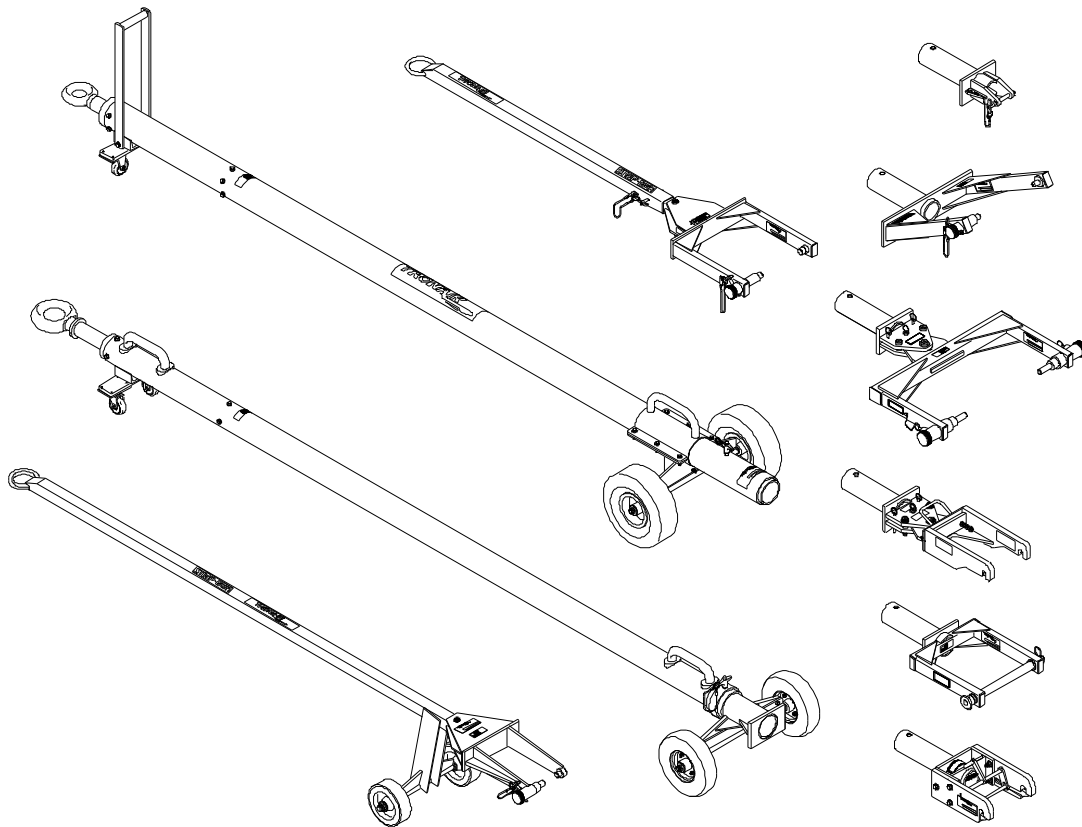
Phone: (419) 866-6301
800-426-6301
Fax: (419) 867-0634

REVISION
03

DATE
11/25/03

TEXT AFFECTED
pg 1 Warning added

Your Tronair towbar is engineered and built to the highest standards of quality and workmanship. Under normal usage and with minimal maintenance this towbar will provide exceptional service.



WARNING! A damaged or bent towbar should not be used, but should be repaired or replaced.

Using a damaged or bent towbar can result in aircraft or equipment damage and possible personal injury.



WARNING! Towbars With Hydraulic Lifting Mechanism:

The hydraulic lift mechanism (on those towbars so equipped) should only be used to raise the towbar to facilitate connection to the aircraft or tug.

Release any hydraulic pressure when towing aircraft or moving towbar.



WARNING! Towbars Should be Used with Category 1 Tugs:

Tronair recommends the use of a towbar with a category 1 or category 2 tug and aircraft not exceeding 75,000 lbs gross weight. Using the towbar with aircraft weighing in excess of this specific limitation 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 (INCLUDING WITHOUT LIMITATION to the aircraft) and/or personal injury OR DEATH. **TRONAIR MAKES NO REPRESENTATION, WARRANTY OR GUARANTEE AS TO SUCH MISUSE AND DISCLAIMS ANY AND ALL LIABILITY FOR INJURY, LOSS OR DAMAGE ARISING FROM OR RELATING TO SUCH MISUSE.**

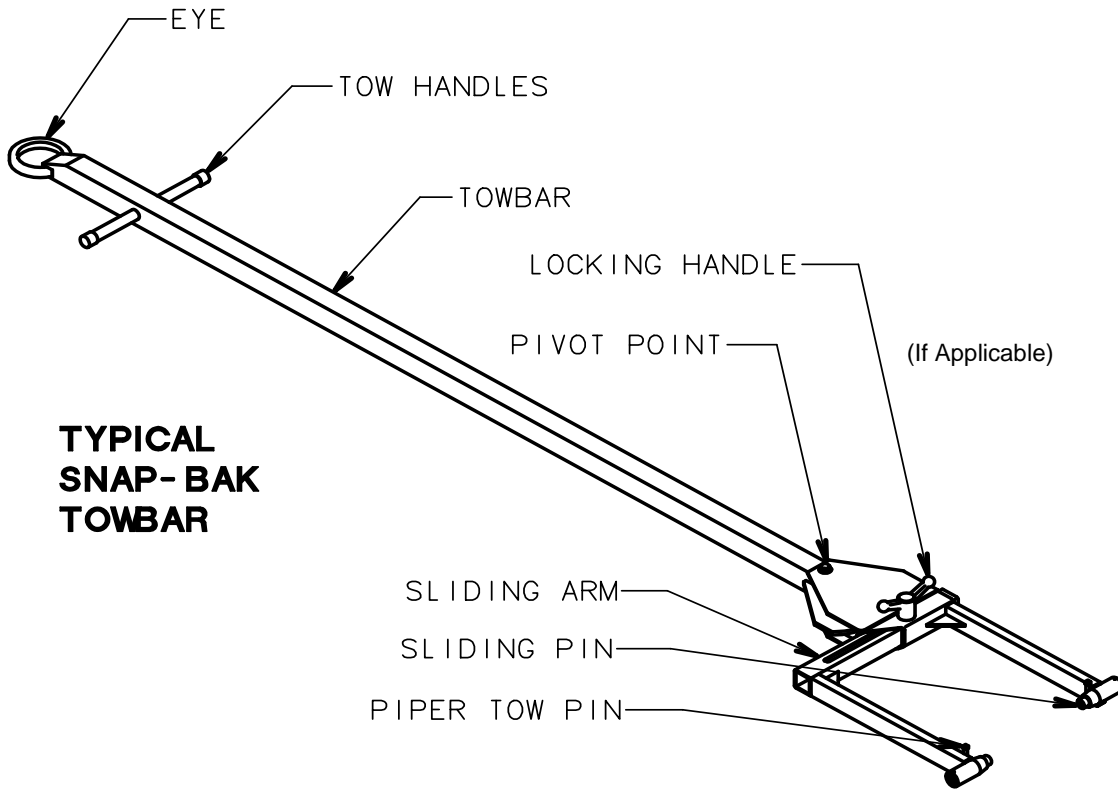


FIGURE 2

NOTE: Typical towbar. Your towbar and/or head may not have all of the features shown

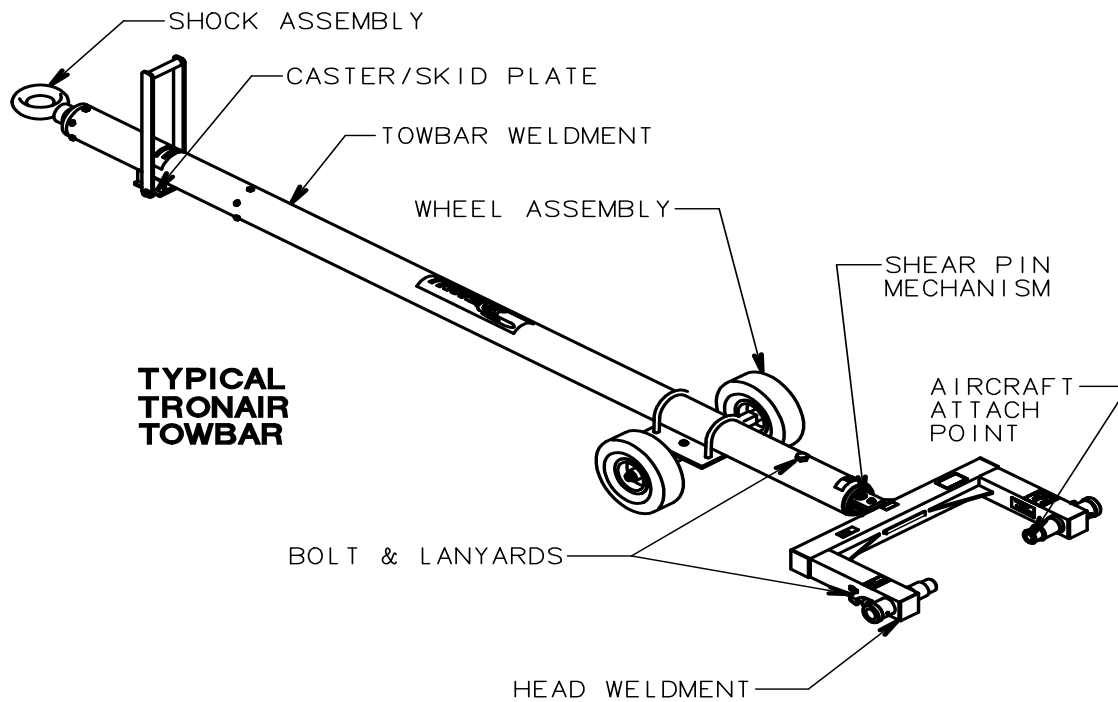


FIGURE 1

NOTE: Typical towbar. Your towbar and/or head may not have all of the features shown

BEFORE USING TOWBAR, COMPLETE THE FOLLOWING CHECKLISTS:

 Reference **Figures 1 & 2** on Page 2.

TOWBAR:
Area of Towbar:

Shock Assembly:

Check:

1. Weld between eye and tube (Are there cracks?)
2. Bolts attaching shock to towbar (Loose, missing, stripped, etc.)
3. Eyebolt (Is it bent, worn down, or deformed?)

Towbar Weldment:

2.

1. Tube (Is it bent, dented, bowed, and/or have cracks?)
- Weld at head end (Are there any cracks in the welds?)
3. Head hole (Is it elongated? Is the ball lok pin attached to the towbar?)

Caster/Skid Plate:

1. Casters (Are they missing or bent?)
2. Handles (Are they broken, bent, or missing?)
3. Bolts (Are they missing or loose?)

Wheel Assembly:

1. Wheels (Are they flat? Is the rim bent?)
2. Axle (Is it bent?)

HEAD:
Area of Head:

Bolts & Lanyards:

Check:

1. Are they loose, missing, or stripped? Are they attached to the head?

Weldment:

1. Welds holding side rails to head rail (Are there any cracks?)
2. Shear Plates (Are there cracks in welds? Are the plates bent?)

Shear Pin Mechanism:

1. Shear Pin (Is it bent or deformed? Are there spares?)
2. Bushings (Are they cracked, chipped, secure?)
3. Pivot Bolt (Are the nuts tight? Are there washers present?)

Area of Head:

Aircraft Attach Point:

Check:

1. Sliding Pin(s) (Are they bent, cracked? Do they slide freely?)
2. Locking Pin (Are they loose? Do they hold the sliding pins securely?)
3. Wear sleeves (Are the welds cracked?)
4. Roll Pins(s) (Are they rusted? Are they missing? Are they loose?)
5. Ball Lok Pin (Is it attached to head? Is it rusted? Is it bent?)
6. Axle Adapter (Is it bent? Is the slot deformed? Are bolts tight?)

SNAP-BAK AND UNIVERSAL TOWBARS:
Area of Towbar:

Towbar:

Check:

1. Spring (Has it taken a set? Loose in the assembly?)
2. Eyebolt (Is it bent, worn down, or deformed?)
3. Tube (Is it bent, dented, bowed, or cracked? Is it rusted badly?)
4. Welds (Are there any cracks in the welds?)
5. Head Hole (Is it elongated? Is the bolt attached correctly?)

Function:

1. Does it snap back?

Head:

1. Pivot Bolt (Is it present along with washers? Is the nut tight? Is it rusted?)
2. Roll Pin(s) (Are they rusted? Are they missing? Are they loose?)
3. Weldment (Is it deformed, bent, or rusted beyond reasonable use?)
4. Lanyard (Is it attached to weldment?)
5. Sliding Pin(s) (Are they bent, cracked or rusted? Does it slide?)

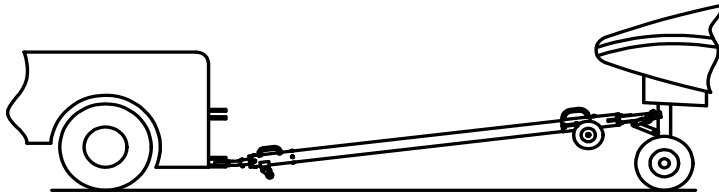
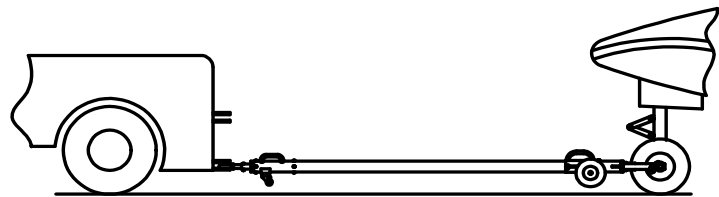
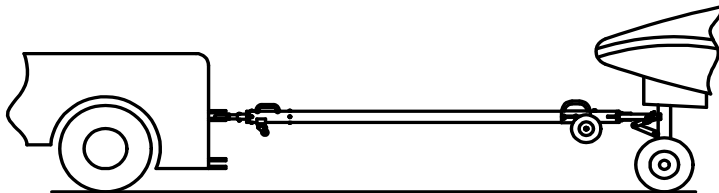
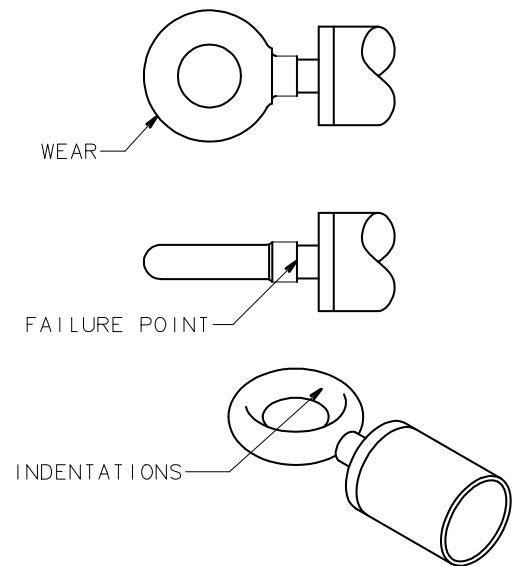
USAGE PROCEDURE**Aircraft Attachment:**

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

Ensure sliding pins are locked in place before towing aircraft.

Tug Attachment:

Damage to the towbar or aircraft can result from an excessive towbar angle during towing operations (Reference to **Figure 3**). If aircraft with both high and low tow points are encountered, consider using two pintle hooks, as shown in **Figures 4 & 5**, so that the towbar is as level as possible during towing. Also pintle hook height should prevent contact of towbar wheels with the ground, during towing. (Reference **Figure 5**).

**FIGURE 3 - INCORRECT****FIGURE 4 - CORRECT****FIGURE 5 - CORRECT****FIGURE 6****Type Of Coupler:**

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

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

These types of couplers are known to cause binding and failure in the eyebolt. Indicators of eyebolt binding are wear on the outside diameter of the eye and indentations on the inside diameter. The failure will begin at the head of the eye. See **Figure 6**.

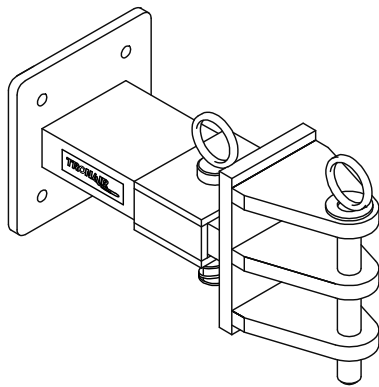
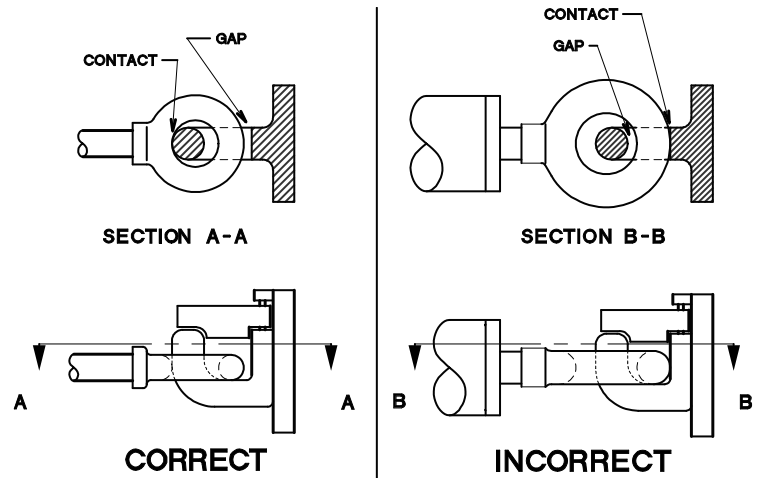
USAGE PROCEDURE *(continued)*
Type Of Coupler:

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

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

These types of couplers are known to cause binding and failure in the eyebolt. Indicators of eyebolt binding are wear on the outside diameter of the eye and indentations on the inside diameter. The failure will begin at the head of the eye. See **Figure 6**.

Figure 7 illustrates a pintle hook arrangement that is known to eliminate eyebolt binding. Tronair recommends using this type of hook on your tug.

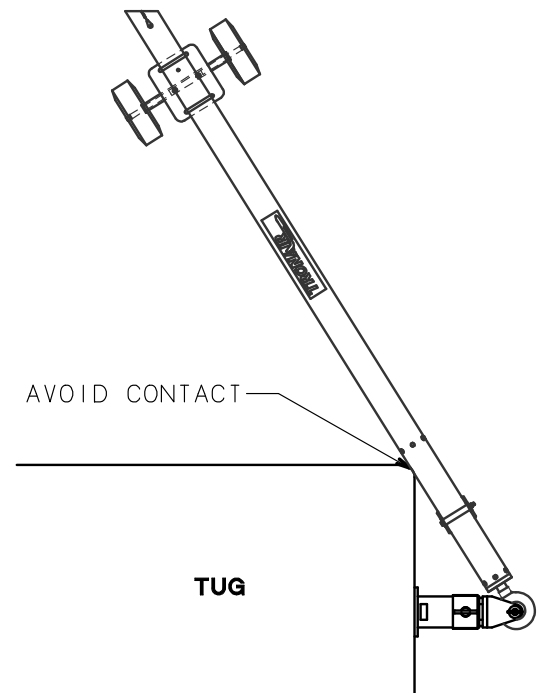

FIGURE 7

FIGURE 8
Eyebolt and Pintle Pin Size:

Damage to the towbar 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. See **Figure 8**.

To ensure proper towing and pushing, check to make sure that the pintle pin diameter is not too large for the eyebolt's inside diameter. Approximately a one-half inch (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.

Towing Angle:

Damage to the towbar or aircraft can result from pushing an aircraft while maintaining too sharp of an angle between the tug and the towbar. Contact between the towbar weldment and tug must be avoided. It is recommended that the angle between the tug and towbar not exceed 90°. See **Figure 9**.


FIGURE 9



APPENDIX - II

**Declaration
of
Conformity**



DECLARATION of CONFORMITY

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

Portable Towbars
01-1215-0000
01A1215-0000

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.

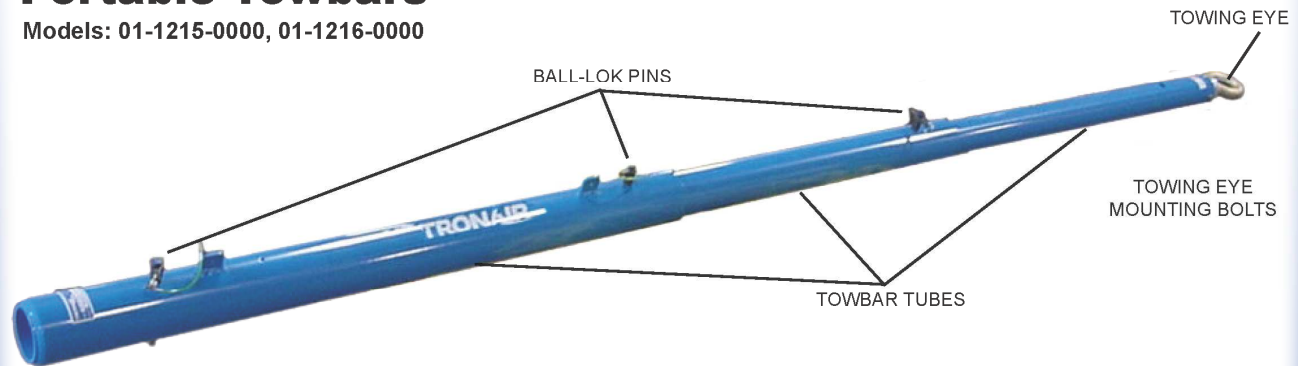
Quality Assurance Representative



Maintenance Schedule

Universal Portable Towbars

Models: 01-1215-0000, 01-1216-0000



Tronair recommends towbar inspections at least once a week.

- Check towing eye for bending, excessive wear and deformity. If any are located, remove towbar from service and contact Tronair for repair.
- Check towing eye mounting bolts. Ensure the fasteners are tight and not missing. Tighten to 25 ft-lbs or replace as required.
- Inspect the towbar tube for cracks, gouges greater than 1/16", and bends or deformities. If any are located, remove towbar from service and contact Tronair for repair.
- Check the towbar tubes to ensure they slide within each other as intended. If the tubes bind, it indicates that bending has occurred. Remove towbar from service and contact Tronair or your Tronair distributor for replacement of bent section(s).
- Inspect ball-loc pins for bending or unusual wear. Verify the factory supplied pin is used. Contact Tronair or your Tronair distributor for replacement if required. Use only Tronair specified ball-loc pins.
- Ensure the ball-loc pins are connected to the towbar via their lanyards (if applicable). Replace lanyard(s) if missing.

INS-1791

www.tronair.com

Tronair • Email: sales@tronair.com • Phone: 419-866-6301 or 800-426-6301 • Fax: 419-867-0634

Asia Sales Offices: China - Email: tronairchina@tronair.com • Phone: 86-592-5560735 • Fax: 86-592-5563132

Asia/Australia - Email: tronairasia@tronair.com • Phone: 66-2665-6511 • Fax: 66-2204-1858

Europe, Middle East & Africa Sales Office • Email: saleseurope@tronair.com • Phone: 44-0-113-245-3300 • Fax: 44-0-113-322-0436