

Model: 01-1325-0100
Sikorsky S-92/H-92
Towbar



02/2010 – Rev. 04

For Spare Parts, Operations & Service Manuals or Service Needs
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REVISION	DATE	TEXT AFFECTED
OR	06/2007	Original Release
01	07/2007	Modified 3.1 Towbar Checklist Warning
02	03/2009	Modified 3.1 Towbar Checklist
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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 01-1325-0100 towbar is for use with S-92/H-92 Aircraft manufactured by Sikorsky.

The remote towbar includes pneumatic tires. There is an eyebolt at the towing end of the towbar. The aircraft attachment is by machined pins on the towing head to the aircraft tow point.

1.1 SPECIFICATIONS

Application: S-92/H-92 Aircraft manufactured by Sikorsky
Maximum Aircraft Gross Weight: 30,000 lbs (13.6 Metric ton)
Dimensions: Length 176 ¼ in (447.7 cm) from eyebolt centerline to end of towbar.
Width 30 7/8 in (78.4 cm)
Height 24 5/8 in (62.5 cm) diameter
Weight: 240lbs (108.9 kg)
Finish: Powder Coat
Material: Steel

2.0 SAFETY INFORMATION

2.1 GENERAL

The Tronair Model 01-1325-0100 remote towbar is used for moving S-92/H-92 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 TOWBAR CHECKLIST

- Check towing eye for bending, excessive wear and/or deformity. Contact Tronair for repair/replacement if towing eye is bent, excessively worn or deformed.
- Check towing eye mounting bolts. Ensure fasteners are not loose or missing. Tighten to 25 ft-lbs or replace as required.
- Ensure that the towing eye does not turn; if the towing eye can turn it indicates that the centering pin within the shock assembly may have been broken and repairs are needed.
- Inspect the towbar tube for cracks, gouges greater than 1/16 inch, and bends or deformities. A damaged or bent towbar should not be used. Contact Tronair for replacement.
- Check the towbar undercarriage. Inflate the pneumatic tires to the proper pressure of 45/50 psi (3.1/3.5 bar); fix any air leaks or replace if needed, ensure the wheels can rotate freely, wheel rims are not bent, and tire axle is not bent. Ensure mounting fasteners are not loose or missing; tighten or replace as required. Grease the tire axle every 90 days to 6 months using multipurpose lithium grease.
- Check the towbar hydraulic system. Close valve on hydraulic pump (clockwise) and raise landing gear of towbar. Open valve on hydraulic pump (counter-clockwise) to lower landing gear. Repair any leaks as needed.



WARNING!

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



WARNING!

Tronair recommends that towbars be used with the same category determined for the tug as the category designated for the aircraft in accordance with AHM 955 "Functional specifications for an aircraft tractor" Using a category 2 tug is permissible but may result in excessive loads and stresses being applied to the towbar and/or the aircraft if appropriate safety and handling precautions are not followed. These excessive loads may cause failure of the towbar which could cause damage to the aircraft or personal injury.

3.0 OPERATION (continued)

3.2 USAGE PROCEDURE

3.2.1 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.

3.2.2 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.**

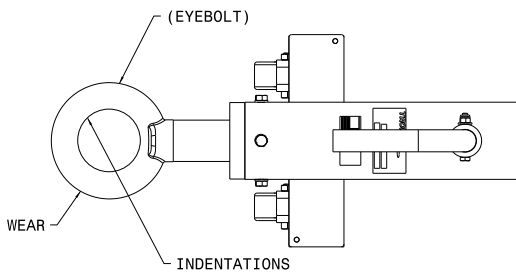


FIGURE 2

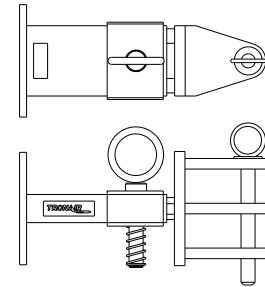


FIGURE 3

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.**

01-1950-5000 Standard Telecoupler

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

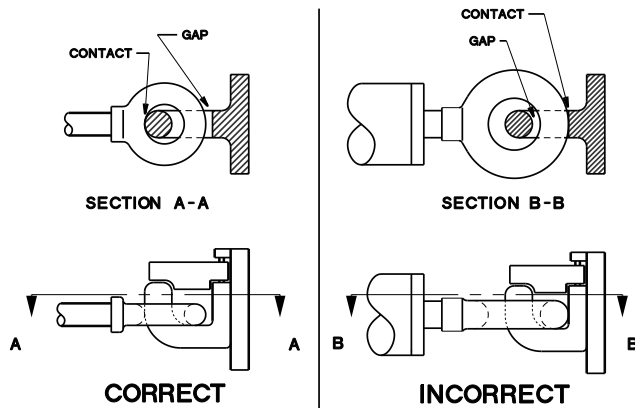


FIGURE 4

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.

3.2.3 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.**

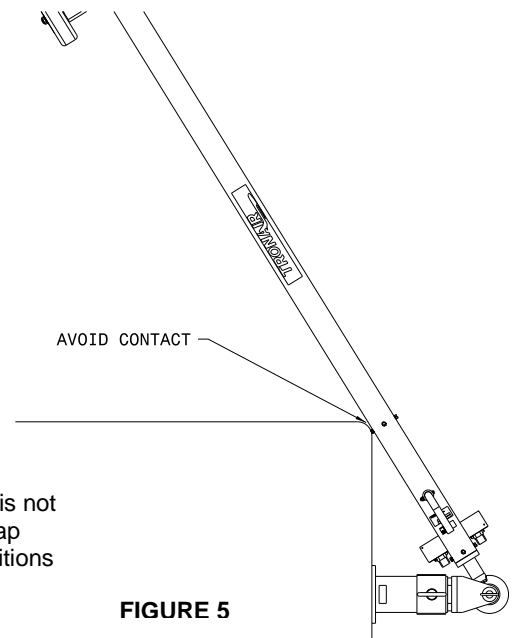


FIGURE 5

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.

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 PARTS LIST

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

Recommended Spares to be kept on hand:

H-3013Shear Pin

R-2134Sliding Pin

R-2295Cylinder Pin

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:

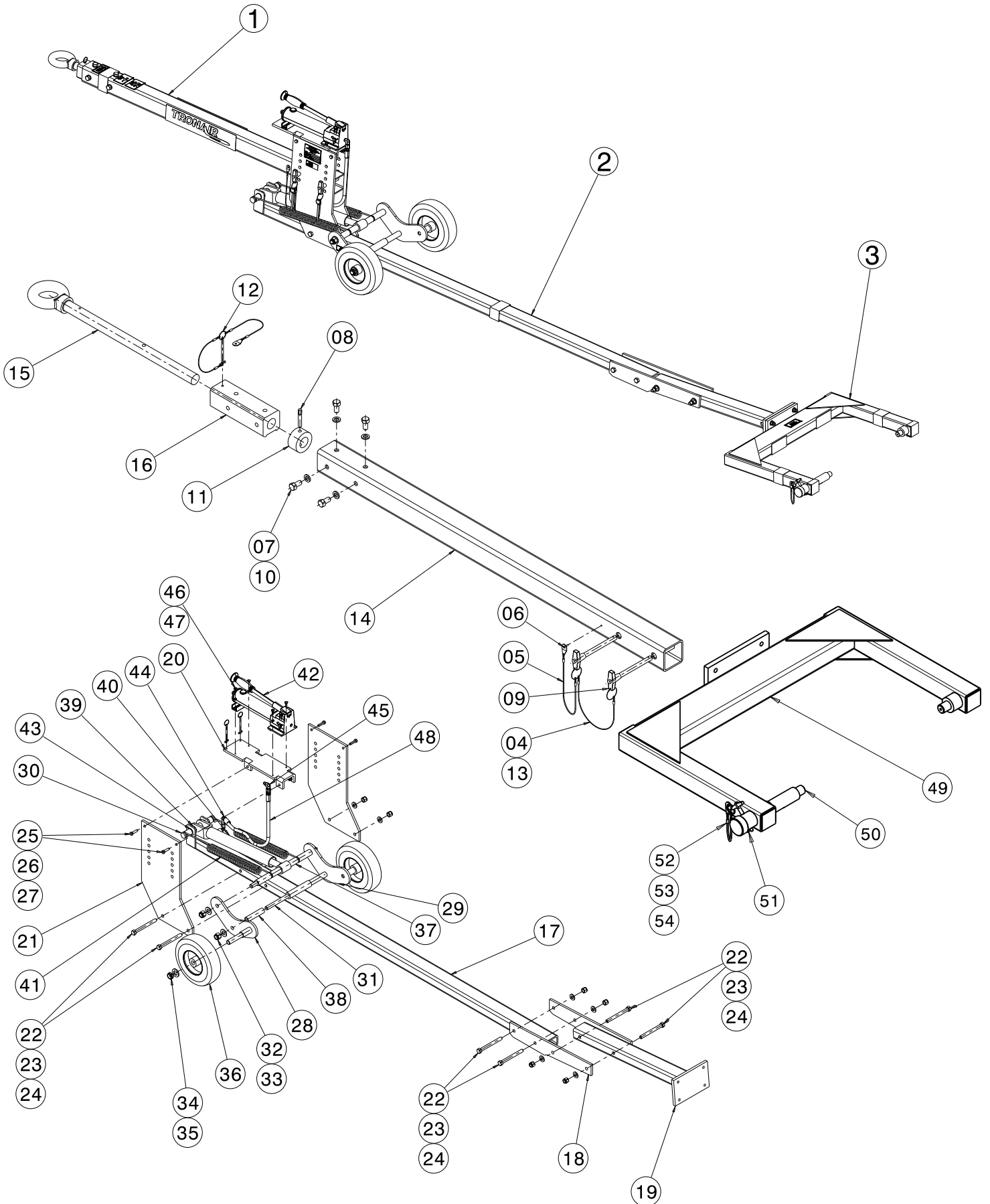
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

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.**

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Parts List Illustrations



Parts List

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

Item	Part Number	Description	Qty
1	Z-6403	Assembly, Towbar Extension; consists of:	1
4	H-1389	Cable, Nylon Coated	1
5	H-1026*12.0	Assembly, Cable	2
6	G-1351-07	Rivet, Open End Steel, 1/8"	1
7	G-1251-1090R	Lockwasher, 1/2 " Regular	8
8	G-1322-08	Pin, Driv-Lok Groove	1
9	G-1310-0845	Pin, T-Handle, 1/2 " Ball Lok x 4.5" Grip	2
10	G-1100-109510	Bolt, HH, GR 5, 1/2 - 20 x 1" LG	8
11	B-224-02	Sleeve, Guide	1
12	H-3013	Pin, Shear	1
13	H-1390	Ferrule	2
14	Z-6404-01	Weldment, Towbar Extension	1
15	Z-6528	Machining, Eyebolt	1
16	J-4064	Sleeve, Inner	1
2	Y-1102	Assembly, Towbar; consists of:	1
12	H-3013	Pin, Shear	2
17	Z-6402	Assembly, Towbar	1
28	Z-6531-01	Weldment, Landing Gear	1
29	Z-6532-01	Weldment, Landing Gear	1
30	R-2295	Pin, Cylinder	1
31	R-2293	Axle, Landing Gear	1
32	G-1250-1100N	Flatwasher, 5/8 ID Narrow	4
33	G-1202-1105	ESN, 5/8 - 18	4
34	G-1250-1110N	Flatwasher, 3/4 ID Narrow	2
35	G-1303-1115	ESN, 3/4 - 16	2
36	U-1096	Wheel, Pneumatic Tire	2
37	R-2292	Pin, Pivot	1
38	TR-1982-01	Spacer, Cylinder	2
39	TR-1984-01	Spacer, Axle	2
40	HC-2342	Cylinder, Hydraulic	1
41	H-2664	Spring, Extension	2
42	H-2945	Pump, Hydraulic	1
43	G-1392-100-S	Ring, Ext. Retaining	2
44	N-2005-04-S	Elbow, Male #4-6	1
45	N-2001-03-S-B	Elbow, Straight Thread	1
46	G-1251-1050R	Lockwasher, 1/4 ID Regular	4
47	G-1100-105006	Bolt, HH, GR 5, 1/4 - 20 x 3/4 " LG	4
48	TF-1043-18*24.0	Assembly, Hose #4 MB	1
3	K-4788	Kit, Towbar Head; consists of:	1
49	Z-6283-01	Weldment, Head	1
50	R-2134	Pin, Sliding	1
51	G-1150-103503	Screw, HH, Machine, #10 - 32 x 3/8" LG	1
52	G-1310-0415	Pin, T-Handle, 1/4 Ball Lok x 1.5 Grip	2
53	H-1026*07.0	Assembly, Cable	1
54	G-1351-04	Rivet, Open End, Steel	1
17	Z-6402	Assembly, Towbar Extension; consists of:	
18	Z-6529-01	Weldment, Tube	1
19	Z-6530-01	Weldment, Tube	1
20	J-4065-01	Plate, Mounting	1
21	J-4066-01	Plate, Slide	2
22	G-1420-109550	Bolt, HH, GR 8, 1/2 - 20 x 4 1/2 " LG	6
23	G-1202-1095	ESN, 1/2 - 20	6
24	G-1250-1090N	Flatwasher, 1/2 ID Narrow	6
25	G-1100-107512	Bolt, HH, GR 5, 3/8 - 24 x 1 1/4 "LG	4
26	G-1250-1070N	Flatwasher, 3/8 ID Narrow	4
27	G-1202-1075	ESN, 3/8 - 24	4