



Model: 175FX
Aircraft Wheel/Brake Changer

10/2024 – Rev. 04

For Spare Parts, Operations & Service Manuals or Service Needs
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The Tronair Group of Companies: Tronair | EBIS | Columbus Jack | Eagle | DAE | Malabar International

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REVISION	DATE	TEXT AFFECTED
01	04/2019	Original release
02	05/2022	Modified Parts List
03	11/2023	Modified Parts List
04	10/2024	Added 5.3 Operating Instructions for Brake Cradle, Modified 6.1 Servicing, 6.2 Inspection, and Optional Equipment Parts List

TABLE OF CONTENTS

PAGE

1.0	PRODUCT INFORMATION	1
1.1	DESCRIPTION.....	1
1.2	MODEL & SERIAL NUMBER.....	1
1.3	MANUFACTURER.....	1
1.4	SPECIFICATIONS	1
2.0	SAFETY INFORMATION.....	1
2.1	USAGE AND SAFETY INFORMATION	1
3.0	PREPARATION PRIOR TO FIRST USE	1
4.0	TRAINING	2
4.1	TRAINING REQUIREMENTS	2
4.2	TRAINING PROGRAM	2
4.3	OPERATOR TRAINING	2
5.0	OPERATION.....	2
5.1	PRIOR TO USE	2
5.2	OPERATING INSTRUCTIONS	2
5.3	OPERATING INSTRUCTIONS FOR BRAKE CRADLE	2
6.0	MAINTENANCE.....	3
6.1	SERVICING	3
6.2	INSPECTION	3
6.3	REPAIR AND REPLACEMENT	3
7.0	PROVISION OF SPARES.....	3
7.1	SOURCE OF SPARE PARTS.....	3
7.2	RECOMMENDED SPARE PARTS LISTS	3
8.0	IN SERVICE SUPPORT.....	3
9.0	GUARANTEES/LIMITATION OF LIABILITY	4

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.



CAUTION!

Aircraft manufacturer's specifications and instructions must be followed. In the event of contradiction between aircraft manufacturer's specifications and Malabar's, aircraft manufacturer's will prevail.

1.0 PRODUCT INFORMATION

1.1 DESCRIPTION

The Malabar Aircraft Wheel/Brake Changer Model 175FX is capable of changing aircraft tires and wheel assemblies from 34 to 56 in (86 to 142 cm) O.D. The Brake Cradle (BC300, BC400, BC500) is required for brake change operations. The Brake Changer consists of a Bottle Jack, Tilt Adjustment Screw, Towbar, Inner and Outer Frames, Rigid Rear Casters and Wheel Hold Down steel Chain.

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

Tronair / Malabar International
1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

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

1.4 SPECIFICATIONS

Wheel Changer Rated Capacity 700 lb (318 kg)
Wheel Changer Proof Load 900 lb (409 kg)
Total Lift 4.75 in (121 mm)
Tilt Fore and Aft ±3°
Ground Clearance 1.75 in (44.5 mm)
Approximate Wheel Changer Net Weight 300 lb (136 kg)
Optional Brake Cradle Rated Capacity 600 lb (272 kg)
Approximate Brake Cradle Net Weight 40 lb (18 kg)
Standard Paint Skydrol Resistant Yellow

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, 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 PREPARATION PRIOR TO FIRST USE

The Wheel/Brake Changer is shipped fully assembled. The steel chain is always required when transporting an aircraft wheel.

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

5.1 PRIOR TO USE

Each time the wheel/brake changer is to be used, inspect the following:

1. Check the structure for rigidity. Make sure all bolts are tightened.
2. Check for oil leaks around the bottle jack.

5.2 OPERATING INSTRUCTIONS

1. To raise the load:
 - a. Close release valve located on the bottle jack.
 - b. Operate the hand pump handle to raise the load to a desired position.
 - c. Do not raise a load greater than the rated capacity of 700 lb (317.5 kg) for the wheel changer.
 - d. Do not raise the inner frame more than 4.75 in (12 cm).
 - e. Keep the release valve closed when the inner frame is raised.
2. To lower the load:
 - a. Open the release valve located on the bottle jack to lower the load.



CAUTION!

Always use steel chain to securely tie down the aircraft wheel. To prevent damage to aircraft wheel hub, chain should never contact wheel hub.

3. Position chain above the final chain position. Pull chain slightly (while maintaining position) and connect chain to chain snap. Chain must not contact wheel hub after tightening.

5.3 OPERATING INSTRUCTIONS FOR BRAKE CRADLE

Inspect cradle before every use. Do not use if the strap is damaged, torn, or missing. Do not use if the weldment is visibly damaged.

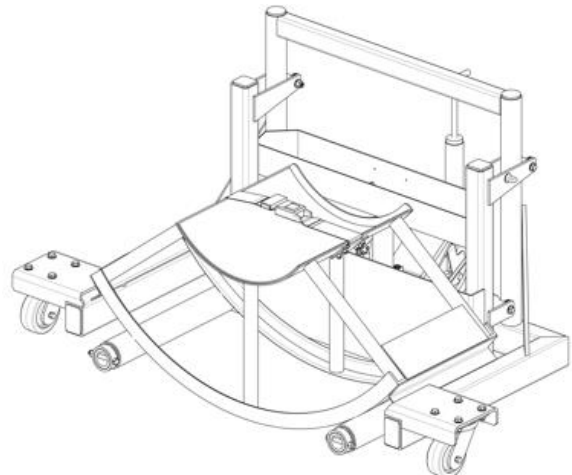
Ensure that the brake cradle is located against the mast of the dolly while on the dolly.

Follow manufacturer's instructions for proper brake handling procedures.



WARNING!

Always use the included strap to secure the brake while a brake is in the brake changer cradle. Failure to do so may result in crush injuries and/or damage to brake and surrounding equipment.



6.0 MAINTENANCE

6.1 SERVICING

Refer to Figure 1 for the following service procedures of the wheel/brake changer:

Quarterly:

- Check for proper operation of the bottle jack (item 3) and the inner frame operation (item 1)
- Check for proper operation of the tilt adjustment screw (item 7)
- Check condition of tow handle (item 26) and connecting hardware (items 27-30)
- Check condition of tire restraint chain (item 8) and swivel snap (item 9)
- Check condition of wheel rollers (item 12) to ensure free rotation
- Check condition of caster hardware and free rotation of casters (items 4 & 5)

Note: Replace any worn-out parts.

Annually:

- Casters (items 4 & 5): lubricate axles and swivel bearings with water resistant grease at the installed zerk fittings
- Separate the spindle (item 6) from outer frame (item 2) and apply water resistant grease to the spindle
- Apply LPS or WD40 to tilt adjustment screw (item 7)
- Inspect for rust and structural damage. Repair and repaint as required

6.2 INSPECTION

Each time the wheel/brake changer or brake cradle is to be used, inspect the following:

1. Check the structure for rigidity. Make sure all bolts are tightened.
2. Check for oil leaks around the bottle jack.
3. Damaged or missing parts must be replaced before use.

6.3 REPAIR AND REPLACEMENT

No definite time schedule can be established for the overhaul of the wheel/brake changer for replacement of the various moving parts. The number of times raised and the amount of load applied at each operation materially affect the life of the working parts. Do not overload the wheel/brake changer. Overloading is dangerous, will hasten the need for overhaul and may damage the wheel/brake changer. During overhaul, replace all parts that do not pass disassembly inspection requirements. To reorder parts, see figure 1 for parts breakdown.

7.0 PROVISION OF SPARES

7.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

Tronair / Malabar International

1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301

E-mail: sales@tronair.com

Website: www.malabar.com

Website: www.tronair.com

For Spare Parts, Operations & Service Manuals or Service Needs:

Scan the QR code or visit Tronair.com/aftermarket



7.2 RECOMMENDED SPARE PARTS LISTS

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

8.0 IN SERVICE SUPPORT

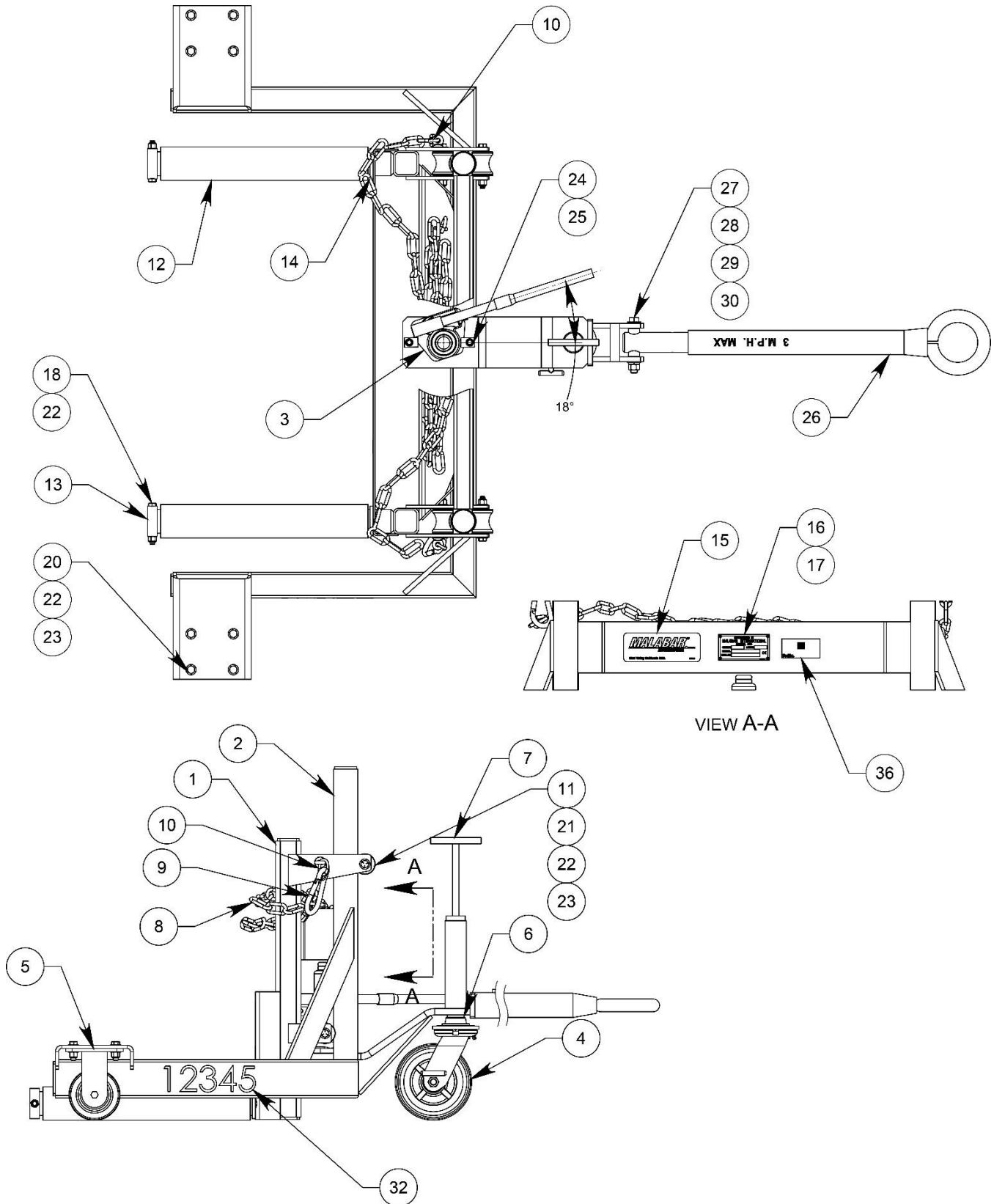
Contact Malabar, Inc. for technical services and information. See Section 1.3 – Manufacturer.

9.0 GUARANTEES/LIMITATION OF LIABILITY

- I. Seller warrants each new product of its manufacture to be free from defects in material or workmanship, under proper, reasonable, and normal use and service.
- II. The warranty period shall be as follows:
 - A. For Malabar equipment, with the exception of Tripod Jacks, the warranty period is one (1) year after date of shipment.
 - B. For Malabar Tripod Jacks, the warranty period is three (3) years after date of shipment.
- III. Where Buyer claims an alleged defect in material or workmanship and so advises Seller in writing within ten (10) days after discovery thereof, then and in such event, Buyer shall return said equipment, transportation prepaid, to the Seller, provided such return is timely and within the above-mentioned warranty period. This warranty and liability of the Seller is expressly limited solely to replacement or repair of defective parts or goods, and return at Buyer's expense to Buyer after finding by Seller the product was defective prior to original shipment or, at the option of Seller, to providing refund to Buyer of the purchase price for said product.
- IV. It is further expressly understood and agreed that:
 - A. THERE IS NO WARRANTY, REPRESENTATION OF CONDITION OF ANY KIND, EXPRESS OR IMPLIED, (INCLUDING NO WARRANTY OF MERCHANTABILITY OR OF FITNESS) EXCEPT THAT THE MATERIAL SHALL BE OF THE QUALITY SPECIFIED IN APPLICABLE SPECIFICATIONS, AND NONE SHALL BE IMPLIED BY LAW. Except as otherwise provided herein, quality shall be in accordance with Seller's specifications. Final determination of the material for the use contemplated by Buyer is the sole responsibility of Buyer and Seller shall have no responsibility in connection with such suitability, and
 - B. Buyer's sole and exclusive remedy shall be repair or replacement of defective parts or goods by the Seller. Should the goods, in the judgment of Seller, preclude the remedying of the warranted defects by repair or replacement, the Buyer's sole and exclusive remedy shall be the refund of the purchase price, and
 - C. Seller shall not be liable for prospective profits or special, indirect or consequential damages, nor shall any recovery of any kind against Seller be greater in amount than the purchase price of the specific material sold and causing the alleged loss, damage or injury. Buyer assumes all risk and liability for loss, damage or injury to persons or property of Buyer or others arising out of use or possession of any product or part sold hereunder, and
 - D. Seller shall in no way be deemed or held to be obligated, liable or accountable upon or for any guarantees or warranties, express or implied, or created by statute or by operation of law or otherwise, in any manner of form beyond its express agreement above set forth, and
 - E. No warranty herein shall apply to any product which shall have been repaired or altered, unless such alteration or repair has been made by Seller or if, after return to and inspection by Seller, the product is found by Seller to have been subject to misuse, negligence or accident, and
 - F. No warranty of any nature is made by Seller as to any component forming a part of the product sold and Buyer shall receive only such warranties offered by such other manufacturer of such component, and
 - G. Seller does not assume nor does Seller authorize any other person to assume for it any other liability or make any warranty in connection with the sale of its products.

Parts List – Figure 1

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



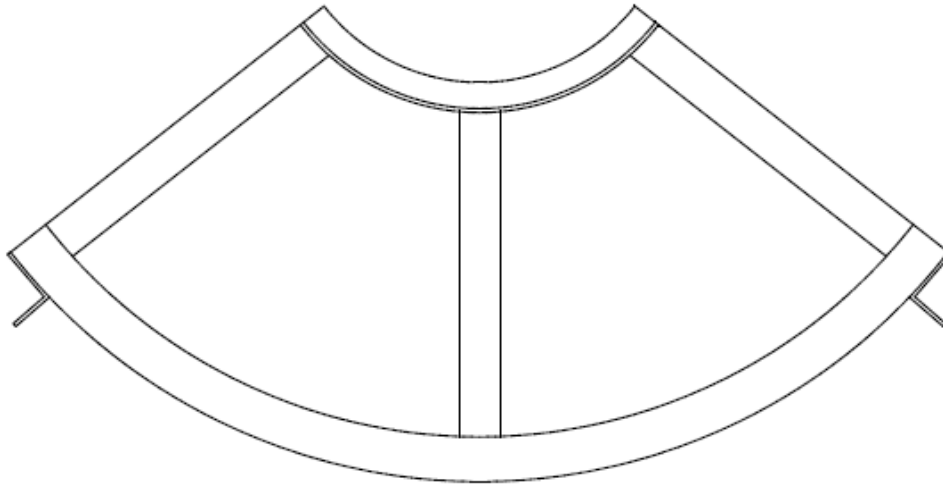
Parts List – Figure 1

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

Item	Part Number	Description	Qty
1	17801	INNER FRAME	1
2	17810FX	OUTER FRAME	1
3	17715	HAND PUMP KIT (INCLUDES HARDWARE)	1
4	492-240	CASTER, 6" DIA	1
5	492-260	CASTER, RIGID, 4" DIA	2
6	17824	SPINDLE WELDMENT	1
7	17505	SCREW, TILT ADJUST	1
8	491-063-121.50	STRAIGHT CHAIN (79 LINKS)	1
9	491-022	CARBINE SNAP HOOK	1
10	491-012	OPEN END LINK	2
11	17825	ROLLER	4
12	17507A	WHEEL ROLLER ASSEMBLY	2
13	17507	RETAINING RING	2
14	17826	ROLLER BUSHING	2
15	55998	STICKER, MALABAR	1
16	55997-1	NAME PLATE	1
17	397-016	SELF TAPPING SCREW, #4 x 3/16 LG	4
18	321-052	HHCS, 3/8-16 x 3" LG	2
20	321-008	HHCS, 3/8-16 x 1-1/4 LG	8
21	321-007	HHCS, 3/8-16 x 3 1/4 LG	4
22	355-001	HEX LOCKNUT, 3/8-16	14
23	362-003	FLAT WASHER, 3/8 SAE	24
24	323-092	SHCS, 3/8-24 x 3/4 LG	2
25	363-012	SPLIT LOCKWASHER, HI-COLLAR, 3/8	2
26	17631	TOW HANDLE	1
27	321-057	HHCS 1/2-13 X 4 LG	1
28	362-005	FLATWASHER, 1/2 SAE	2
29	363-004	SPLIT LOCKWASHER, 1/2	1
30	351-003	HEX NUT, 1/2-13	1
N/S	603193	HANDLE, TWO PIECE	1

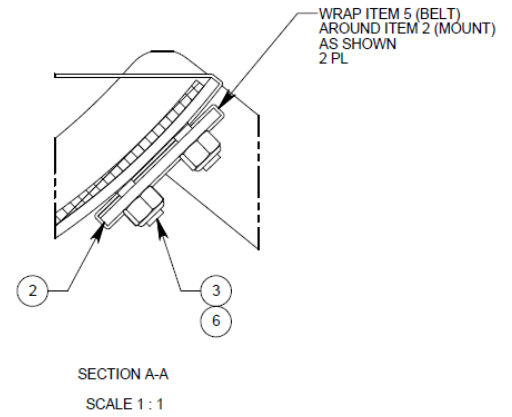
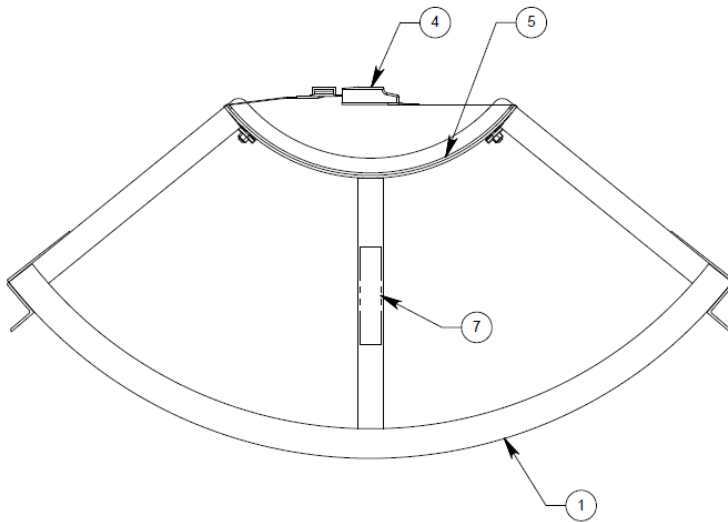
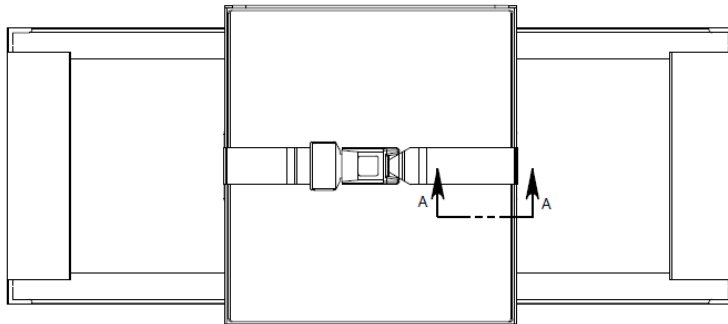
MALABAR BRAKE CRADLES – Figure 2

The Malabar Brake Cradle models BC400 and BC500 are included in the 175FX for brake installation and removal. Brake Cradle model BC300 may be purchased separately.



Parts List - Brake Cradles

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



	871000P BC-500P	871100P BC-400P	871200P BC-300P		
Item	Part Number	Part Number	Part Number	Description	Qty
1				BRAKE CHANGER CRADLE WELDMENT	REF
2	871020	871020	871020	MOUNT	2
3	325-016	325-016	325-016	FHSCS, 82°, ¼-20 X ¾ LG	8
4	491-049	491-049	491-049	SAFETY BELT	1
5	871025	871125	871225	SADDLE PAD	1
6	353-001	353-001	353-001	HEX LOCKNUT, ¼-20	8
7	871213-6	871213-5	871213-4	STICKER	1



EU Declaration of Conformity

Model Number(s) 175FX
Product Type/Name: Aircraft Wheel and Brake Changer
Serial Number(s): Click or tap here to enter serial number(s)

Declaration: Tronair has assessed the equipment described above against the Essential Health and Safety Requirements of one or more Directives. Based on this assessment, the equipment described above is deemed to comply with the directive(s) listed below.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Directives: European Machinery Directive 2006/42/EC

Markings:



The technical documentation for the machinery is available from:

RAUH Hydraulic GmbH
Hallstadtler Straße 63
Email: tronair@rauh-hydraulik.de

Location of Issue: Tronair, 1 Air Cargo Parkway East, Swanton, OH 43558

Identification of person empowered to sign on behalf of the Manufacturer:


Patrick Finch
Quality Assurance Representative

Click or tap to enter a date.

Date