

Model: 01-1317-0000
Airbus A380
Custom Towbar

11/2022 - Rev. 02

For Spare Parts, Operations & Service Manuals or Service Needs
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01	01/2009	Original Release
02	11/2022	Major revision

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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

This towbar is designed for towing an A380 aircraft. The following operational instructions are only intended to familiarize the operator with the basic functions of the towbar. They are not intended to teach actual pushback procedures or techniques.

2.0 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, or substantial property damage** if the warning notice is ignored.

CAUTION! — Caution is used to indicate the presence of a hazard that **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 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 a skilled and trained technician.

4.0 OPERATION

4.1 PREPARATION FOR USE

The towbar has been lubricated and adjusted at the factory and no additional preparation is required.

A general inspection should be made to determine if any damage was sustained in transit. If any damage was sustained the transportation company should be notified immediately.

4.2 AIRCRAFT ATTACHMENT

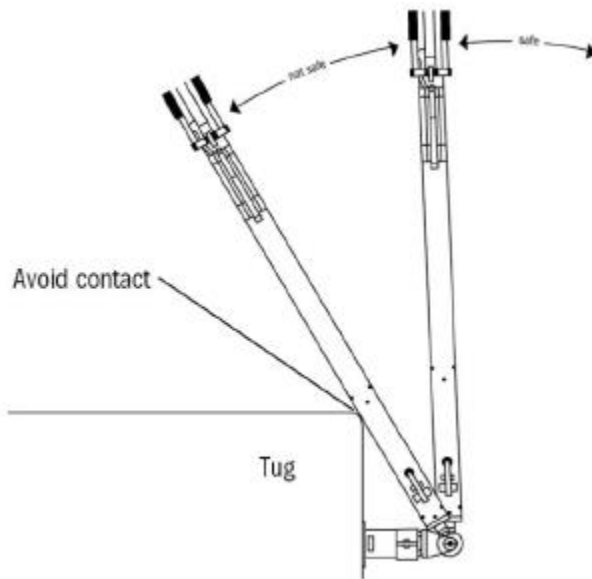
It is recommended that you attach the towbar to the aircraft first, and then connect it to the tug to avoid potential aircraft damage.

4.3 TOWING

Damage to the towbar or aircraft can result from pushing an aircraft at too sharp of an angle between the tug and the aircraft. Contact between the tug and towbar tube must be avoided.



WARNING!
DO NOT EXCEED 90° angle between the tug and towbar.



WARNING!
A damaged or bent towbar should not be used. Towbar should be repaired or replaced. BENT TOWBARS CAN NOT BE REPAIRED AND MUST BE REPLACED.

4.4 TOWING SPEED

A maximum towing speed of 10 mph (16 kph) is recommended.



CAUTION!
Exceeding the maximum towing speed may result in damage to the aircraft, tug, or towbar.

4.5 BOLT TORQUE

Torque Values of Grade 5 Fine Thread (SAE) Fasteners
(all torque specified in ft-lbs)

BOLT DIAMETER	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	5/8-18	3/4-16	7/8-14	1-12
INSTALL TORQUE	9	20	35	55	90	90	90	90	90

Do Not Follow the above torque value chart for **Shear Bolt** and/or **Retention Bolts**.

Replacing Shear Bolt / Retention Bolt Instructions: tighten bolts only enough to remove slack or until nut reaches the end of the threads, and then loosen one half turn. Bolts should turn freely with hand wrench.

5.0 MAINTENANCE

5.1 DAILY INSPECTION

- Visually check towbar for physical damage. Repair or replace parts if necessary.
- Check head for proper operation, damaged parts, binding, etc. Readjust or replace as necessary.

5.2 BI-YEARLY INSPECTION

- Check shear bolts by turning heads with a hand wrench. Any binding indicates a partial sheared bolt, replace if necessary.
- Grease the axle lift pivots with the provided grease zerks.
 - Use Lithium EP2 or equivalent
- Check hydraulic hand pump for proper operation and adequate oil level
 - Add ATF Fluid if necessary
 - For extreme cold 5606 oil is acceptable
- Check tire pressure. Pressure should be 24 psi
- Check lunette ring for excessive wear. Measure ring at the thinnest point, ring cross section should be no less than 1.25 inches. Replace if necessary.
- If so equipped, check lunette and head retention bolt cushions for cracking, replace if necessary.

5.3 YEARLY INSPECTION

- The wheels should be removed and the hub bearings repacked with grease.
 - Use Lithium EP2 or equivalent

5.4 AS REQUIRED

When replacing shear bolts and/or retention bolt, tighten bolts only enough to remove slack and then loosen one half turn. Bolts should turn freely with hand wrench.



CAUTION!

Over tightening of shear bolts and/or retention bolt will cause bolts to shear at a higher load than desired.

5.5 PLACARDS



6.0 PROVISION OF SPARES**6.1 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

**6.2 RECOMMENDED SPARE PARTS LISTS**

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

7.0 IN SERVICE SUPPORT

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

8.0 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:

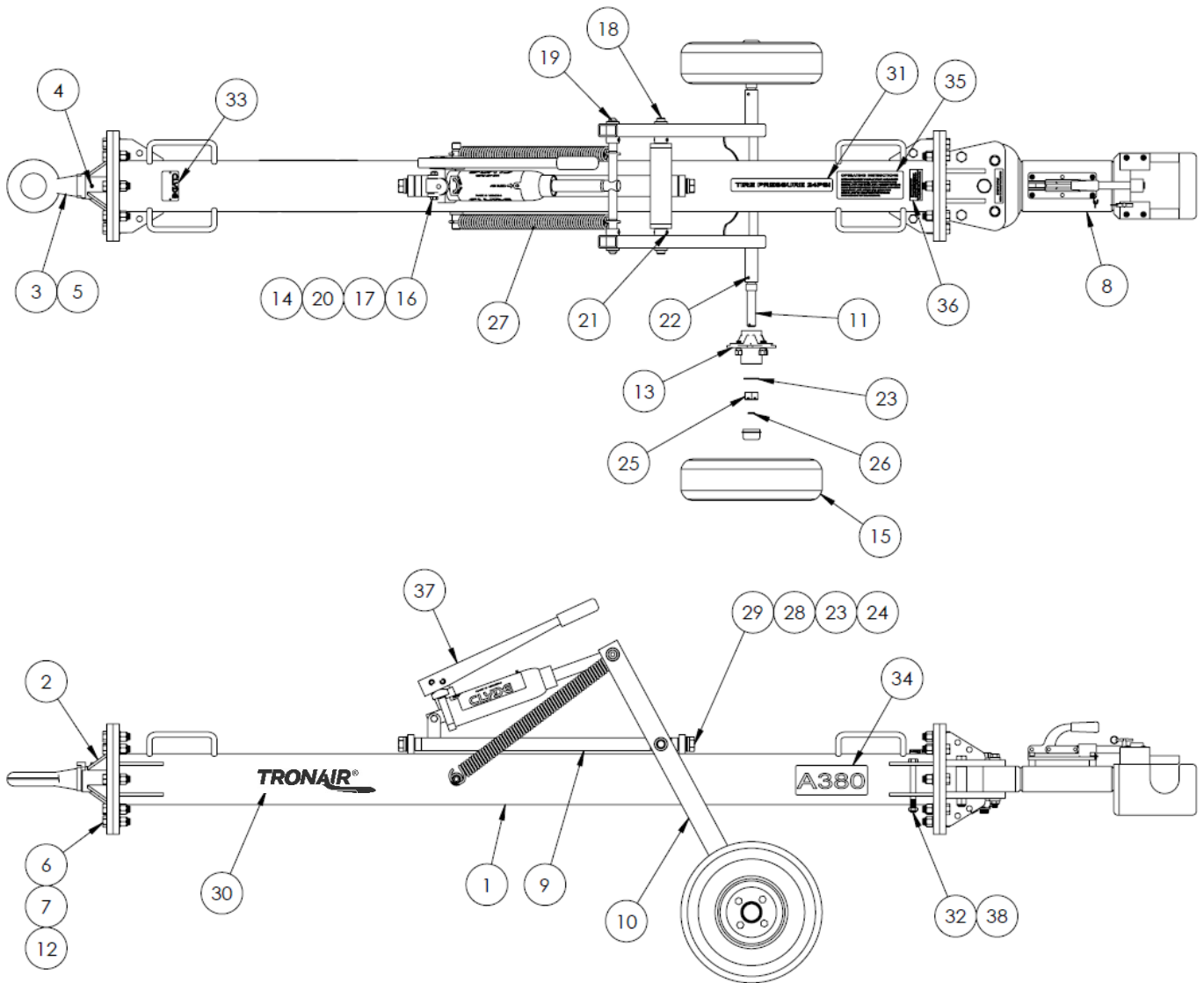
- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

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.**

Parts List

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



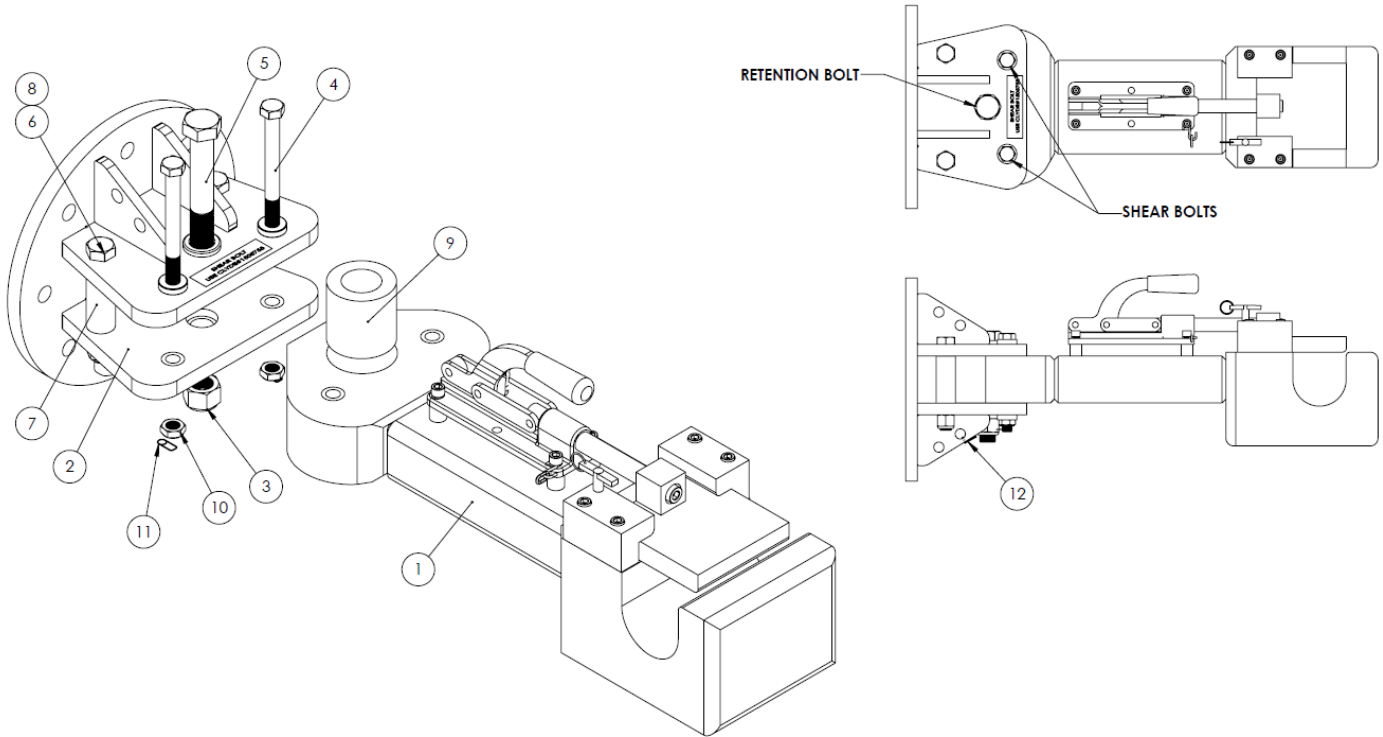
Parts List

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

Item	Part Number	Description	Qty
1	15W5924	TOWBAR TUBE WELD	1
2	15W5691	LUNETTE MOUNT WELD	1
3	15O6040	TOWING EYE	1
4	15O5865	ZERK, GREASE	1
5	15O4693	5/16" X 2-1/2" LG. ROLL PIN	1
6	15O3579	3/4"-16 X 2-3/4" LG. C.S	16
7	15O321	3/4" AN WASHER	16
8	15F2758	HEAD ASSEMBLY	1
9	15W5926	CYLINDER MOUNT	1
10	15W5925	RUNNING GEAR	1
11	15L21303	AXLE	2
12	15O320	3/4-16 NYLOK NUT	16
13	15O5507	HUB ASSEMBLY	2
14	15L506	CYLINDER END SLEEVE	1
15	15O4553	WHEEL ASSEMBLY	2
16	15O592	1/2-20 x 3" LG. C.S.	1
17	15O302	1/2" AN WASHER	1
18	15L18806	CYLINDER PIN	1
19	15L23877	CYLINDER PIN, UPPER	1
20	15O660	1/2-20 NYLOK JAM NUT	1
21	15O318	1/4 x 1-3/4" LG. ROLL PIN	4
22	15O590	1/4 x 1-1/2" LG. ROLL PIN	2
23	15O4722	1" AN WASHER	4
24	15L23856	LIFT MOUNT MUSHING	2
25	15O5509	1-14 CASTLE NUT	2
26	15O269	1/8" x 1-1/2" LG. COTTER KEY	2
27	15L2726	EXTENSION SPRING	2
28	15O3584	1" SPRING LOCK WASHER	2
29	15O4951	1-14 x 2-1/2" LG. C.S.	2
30	V-1033	TRONAIR LOGO	2
31	15L18769	PLACARD, TIRE PRESSURE	1
32	15O5755	SHEAR BOLT	2
33	15O4099	SERIAL NUMBER PLATE	1
34	15O5759	A380 PLACARD	2
35	15O5878	OPERATING INSTRUCTIONS/TOWBAR	1
36	15O5751	PLACARD, SHEAR BOLT REPLACEMENT	1
37	15O6016	HYDRAULIC COMBO PUMP	1
38	15O3190	5/8-18 NYLOK JAM NUT	2
N/S	K-5583	KIT, SHEAR BOLT REPLACEMENT	

Parts List

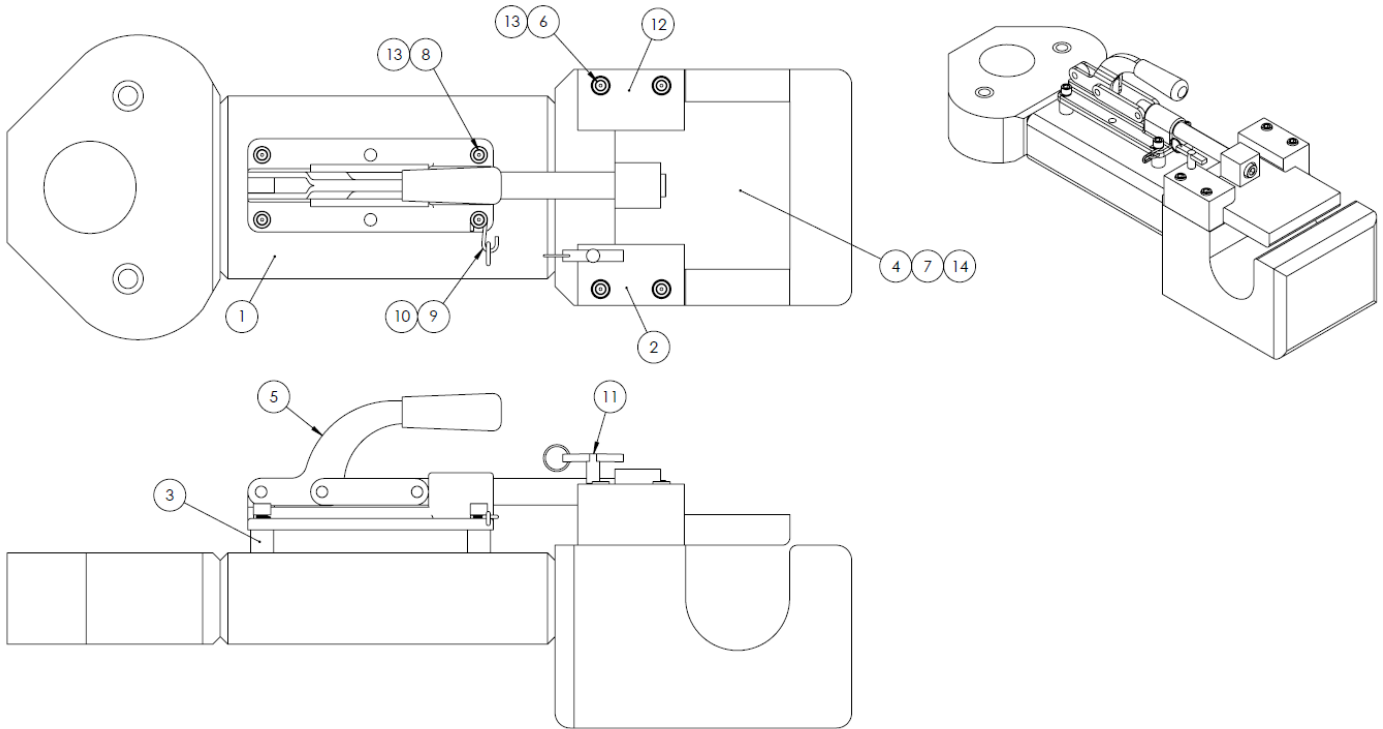
When ordering replacement parts/kits, please specify model, serial number and color of your unit.



Item	Part Number	Description	Qty
	15F2758	HEAD ASSEMBLY ; consists of:	
1	15F2763	HEAD ASSEMBLY	1
2	15F2762	HEAD MOUNT ASSEMBLY	1
3	15O597	1-14 NYLOK NUT	1
4	15O5755	SHEAR BOLT	2
5	15O3063	1-14 x 6-1/2" LG. C.S.	1
6	15O1616	3/4"-16 X 5-1/2" LG. C.S	2
7	15L22273	SPACER MOUNT	2
8	15O320	3/4-16 NYLOK NUT	2
9	15L22275	SHOCK ABSORBER	1
10	15O3190	5/8-18 NYLOK JAM NUT	2
11	15O6042	CLIP RETAINING PIN	2
12	16O6041	NYLON LANYARD	2
N/S	K-5583	KIT, SHEAR BOLT REPLACEMENT	

Parts List

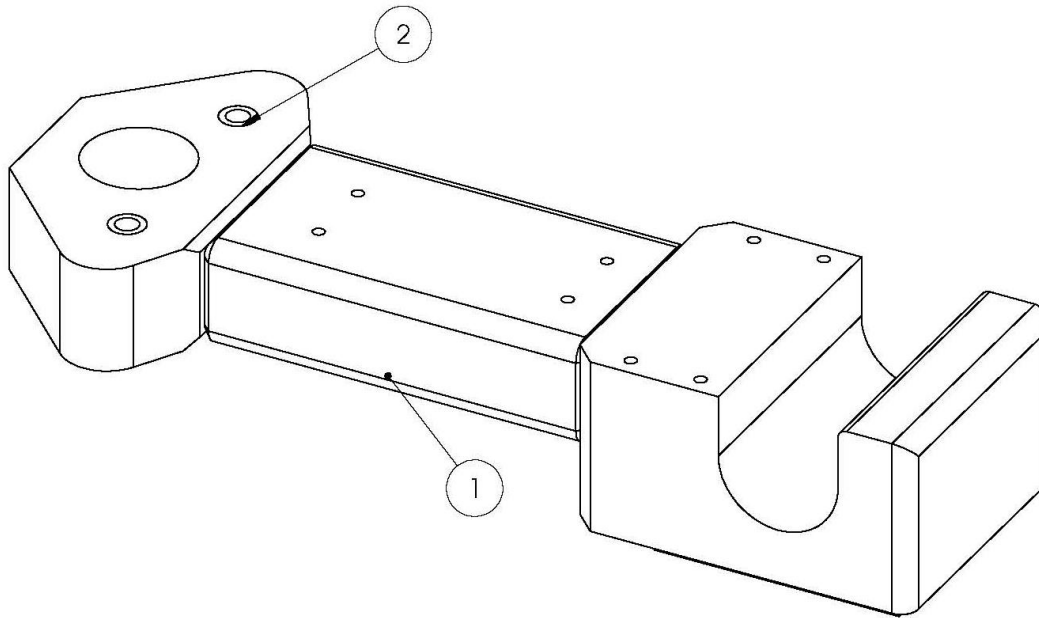
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Item	Part Number	Description	Qty
	15F2763	HEAD ASSEMBLY ; consists of:	
1	15F2761	HEAD PRESS ASSEMBLY	1
2	15L22271	HOLD DOWN BLOCK	1
3	15L22272	SPACER LOCKING CLAMP	4
4	15W5590	SLIDING BLOCK	1
5	15O5733	SLIDING HANDLE	1
6	15O5735	3/8-24 X 2-1/4" LG. SOCKET HEAD C.S	4
7	15O1914	1/2-13 X 1-1/2" LG. SOCKET HEAD C.S	1
8	15O5734	3/8-24 X 1-1/2" LG. SOCKET HEAD C.S	4
9	15O5375	S HOOK	1
10	15L21886	CHAIN	1
11	15O5416	BALL LOCK PIN	1
12	15L22282	HOLD DOWN BLOCK	1
13	15O6037	3/8" HIGH COLLAR LOCK WASHER	8
14	15O6534	1/2" HIGH COLLAR LOCK WASHER	1

Parts List

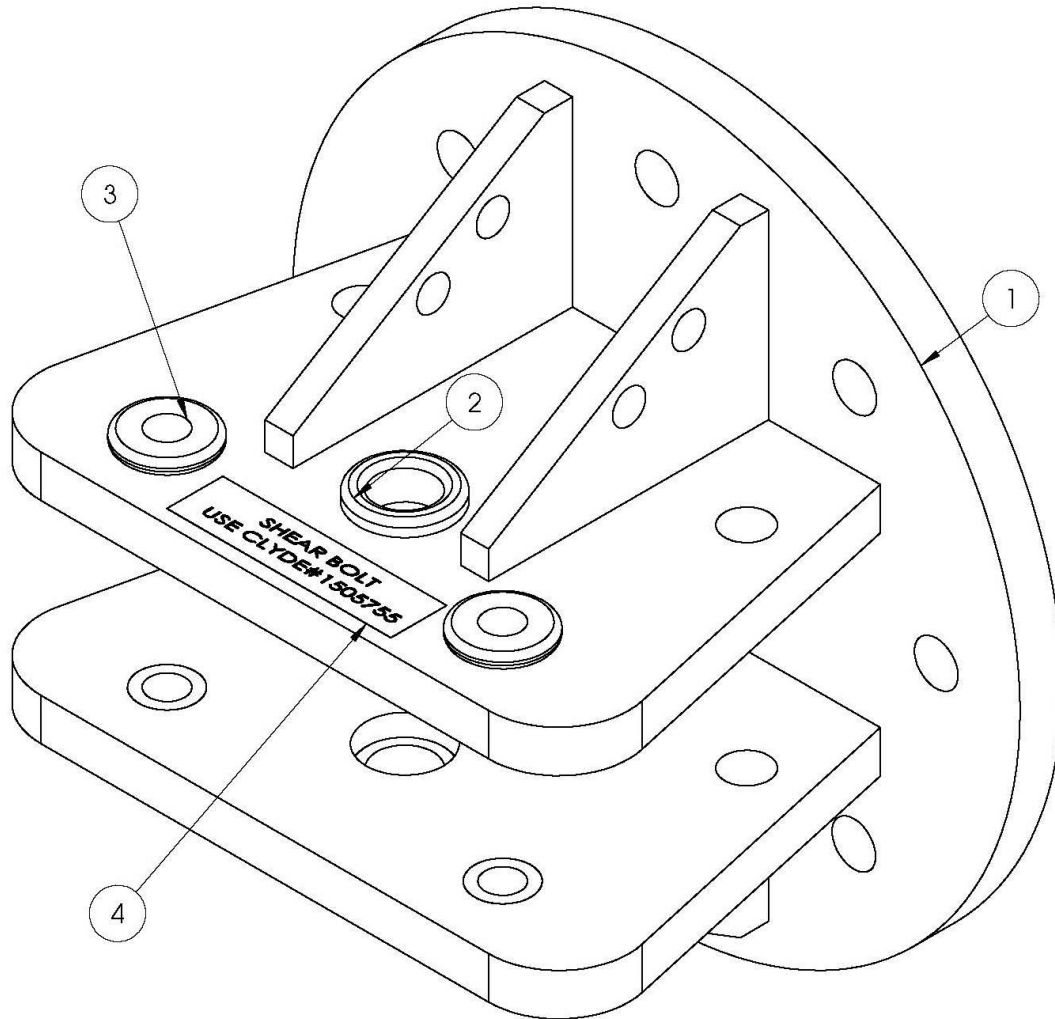
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Item	Part Number	Description	Qty
	15F2761	HEAD PRESS ASSEMBLY ; consists of:	
1	15W5582	HEAD WELD A-380	1
2	1505757	BUSHING	2

Parts List

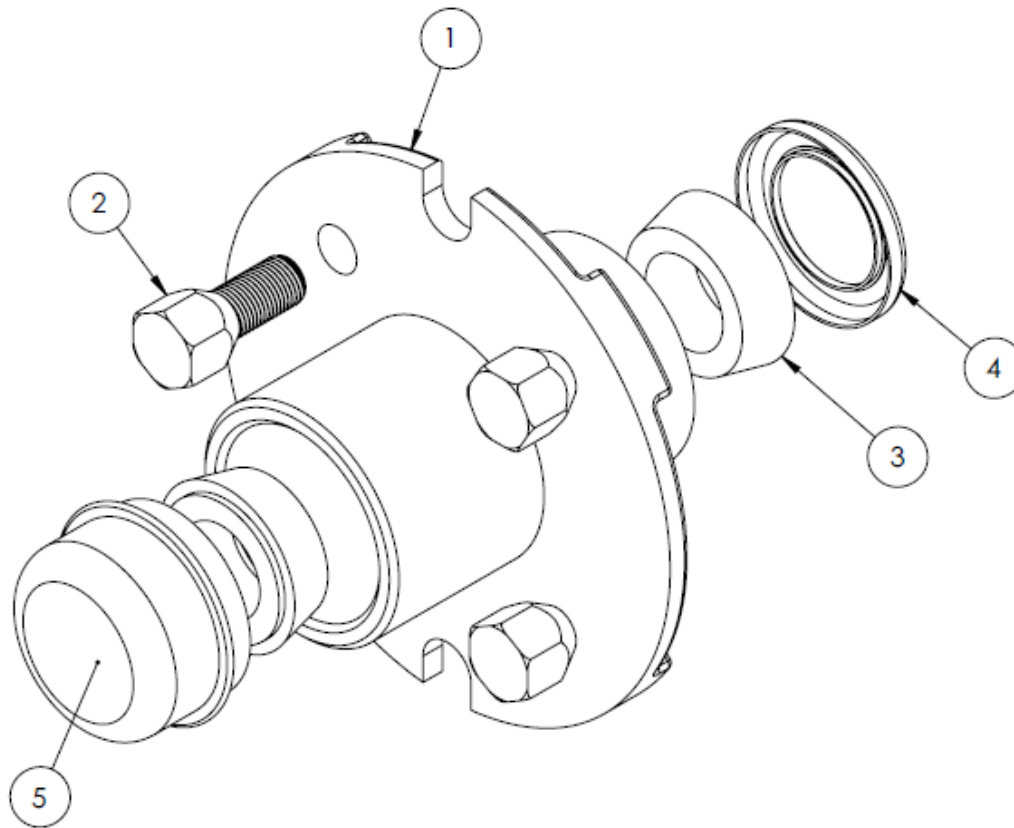
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Item	Part Number	Description	Qty
	15F2762	HEAD MOUNT ASSEMBLY ; consists of:	
1	15W5583	HEAD MOUNT WELD	1
2	1504571	PRESS FIT BUSHING	2
3	1505756	DRILL BUSHING	4
4	1505758	PLACARD	1

Parts List

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



Item	Part Number	Description	Qty
	1505507	HUB ASSEMBLY ; consists of:	
1	1505335	HUB HOUSING WITH CUPS	1
2	1505657	WHEEL BOLTS	4
3	1505655O	BEARING CONE	2
4	1505654	GREASE SEAL	1
5	1505656	GREASE CAP	1

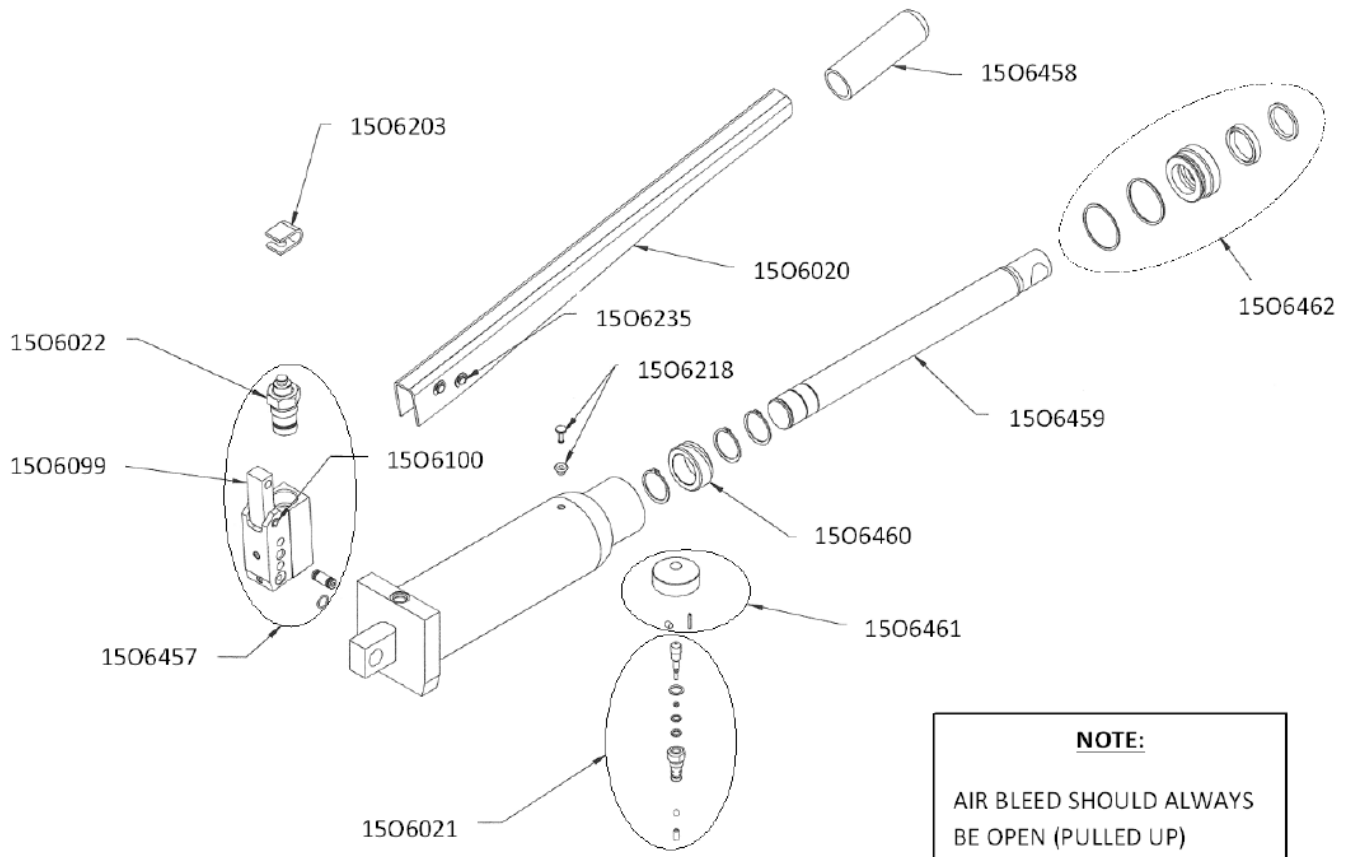
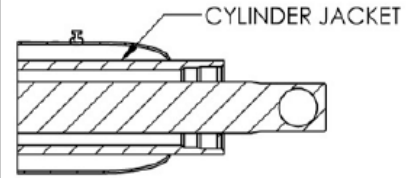
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Parts List

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

FILL PROCEDURE:

- REMOVE THE BRASS VENT PLUG THEN THE RUBBER GROMMET.
- FILL TILL THE ATF FLUID JUST COVERS THE CYLINDER JACKET.
- DO NOT OVER FILL. OVER FILLING WILL
- CAUSE OIL TO LEAK OUT THE AIR BLEED.
- REPLACE THE RUBBER GROMMET
- THEN THE BRASS VENT PLUG.



1506017 SEAL KIT

NOTE:

AIR BLEED SHOULD ALWAYS BE OPEN (PULLED UP) **EXCEPT** DURING SHIPPING

AIR BLEED PROCEDURE

1. Elevate the towing eye end of towbar until combo pump is pointing downward (handle end raised).
2. Extend cylinder fully by pumping handle.
3. Retract cylinder **SLOWLY** by opening release knob **SLIGHTLY**.
4. Repeat step 3 until no sign of air is noticeable.

Parts List

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

Part Number	Description	Qty	Part Number	Description	Qty
15O6017	CYLINDER SEAL KIT ; consists of:		15O6457	PUMP KIT ; consists of:	
	SPRING	1		PUMP BLOCK	1
	O-RING	1		CHECK VALVE	3
	O-RING	4		EXPANDER PLUG	2
	B/U WASHER	4		HANDLE LINK	1
	BALL	1		SPRING PIN	1
	O-RING	1		PISTON RETAINER	1
	O-RING	1		PISTON	1
	B/U WASHER	1		O-RING	1
	O-RING	1		B/U WASHER	1
	SCREEN	1		WIPER	1
	ROD SEAL	1		SEAL, U-CUP	1
	ROD WIPER	1		PLUG SAE	1
	O-RING	1		RELIEF VALVE TUBE	1
	B/U WASHER	1		RELIEF VALVE SEAT	1
	RETAINING RING	3		BALL	1
	WIPER	1		RELIEF VALVE GUIDE	1
	SEAL, U-CUP	1		WASHER	1
15O6020	REPLACEMENT HANDLE KIT ; consists of:			COMPRESSION SPRING	1
	HANDLE	1		B/U WASHER	3
	PIN	2		O-RING	3
	RETAINING RIN	4		BUSHING	1
	GRIP	1	15O6464	RELEASE KNOB KIT ; consists of:	
15O6021	RELEASE VALVE KIT ; consists of:			KNOB	1
	SPRING			PIN	1
	RELEASE VALVE BODY			SET SCREW	1
	O-RING		15O6462	RETAINER NUT KIT ; consists of:	
	O-RING			RETAINER NUT	1
	B/U WASHER			ROD SEAL	1
	BALL			ROD WIPER	1
	O-RING			O-RING	1
	RELEASE VALVE SCREW			B/U WASHER	1
15O6022	PUMPING STATION KIT ; consists of:		15O6235	HANDLE PIN KIT ; consists of:	
	B/U WASHER	1		PIN	1
	O-RING	1		RETAINING RING	2
	PISTON	1	15O6099	HANDLE LINK	1
	PISTON RETAINER	1	15O6100	SLOTTED SPRING PIN	1
	WIPER	1	15O6203	U-CLIP PISTON TAB	1
	SEAL, U-CUP	1	15O6458	HANDLE GRIP	1
15O6218	VENT VALVE/FILL PULG KIT ; consists of:		15O6459	PISTON ROD	1
	VENT PLUG	1	15O6460	PISTON, CYLINDER BEARING	1
	VENT VALVE	1	15O6015	PLACARD	1