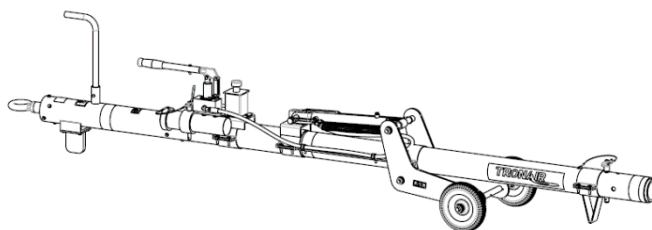




OPERATION & SERVICE MANUAL



**Models: 01-1290-0100
01A1290-0100
01B1290-0100**

**Multi-Head Towbar
Multiple Aircraft**



10/2023 – Rev. 06

REVISION	DATE	TEXT AFFECTED
01	04/2009	Original release
02	04/2011	Modified Parts List
03	03/2015	Major revision
04	11/2016	Modified Parts List
05	02/2023	Added 1.5.1 Landing Gear Adjustability, Modified Parts List
06	10/2023	Major Revision



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

This product 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 PRODUCT INFORMATION

1.1 DESCRIPTION

The Tronair Model 01-1290-0100, 01A1290-0100 and 01B1290-0100 Multi-Head Towbars are towbars for multiple aircraft applications.

The Multi-Head Towbar includes hydraulic operated landing gear to raise and lower the towing head and accepts Tronair Series 500, 600 and 800 Multi-Heads. Additionally, there is a handle and an eyebolt at the end of the towbar for towing. The eyebolt incorporates a compression spring to dampen shock loads during towing.

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

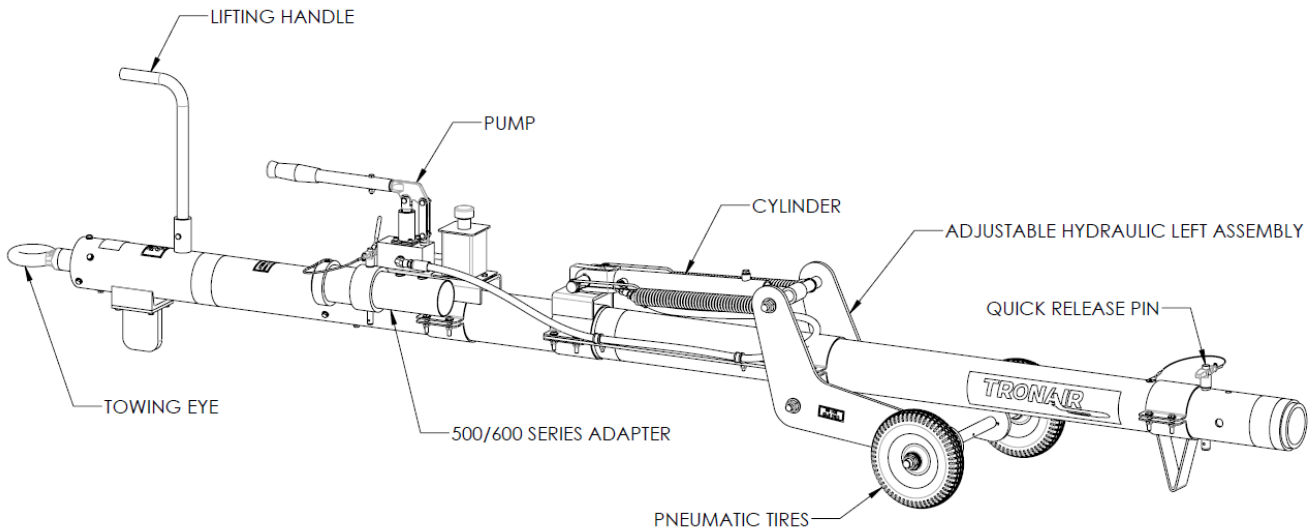
TRONAIR, Inc.
 1 Air Cargo Pkwy East
 Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301
 Fax: (419) 867-0634
 E-mail: sales@tronair.com
 Website: www.tronair.com

1.4 SPECIFICATIONS

Aircraft Application	Multiple Aircraft (See Tronair Catalog or www.tronair.com)
Maximum Aircraft Gross Weight.....	125,000 lbs (56.69 metric tons)
Length	127 5/8 in (324.2 cm) Overall
Width	24 3/16 in (61.4 cm)
Height.....	22 1/8 in (56.2 cm)
Weight.....	173 lbs (78.5 kg)
Finish.....	Powder Coat

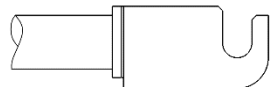
1.5 FEATURES



1.5.1 Towbar Balance

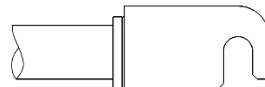
Towbars must remain balanced to allow safe, controlled handling. The use of different heads may cause the towbar center of gravity to shift laterally. When installing a new head, assess the balance of the towbar and adjust it per the instructions below.

Tronair recommends that the center of gravity be adjusted based on the style of the head installed. See the diagram below to determine the best balance for your towbar/head combination.



FIXED JAW BELOW

For towbar heads with the fixed jaw below the latch, balance towbars so the center of gravity is located away from the towbar head



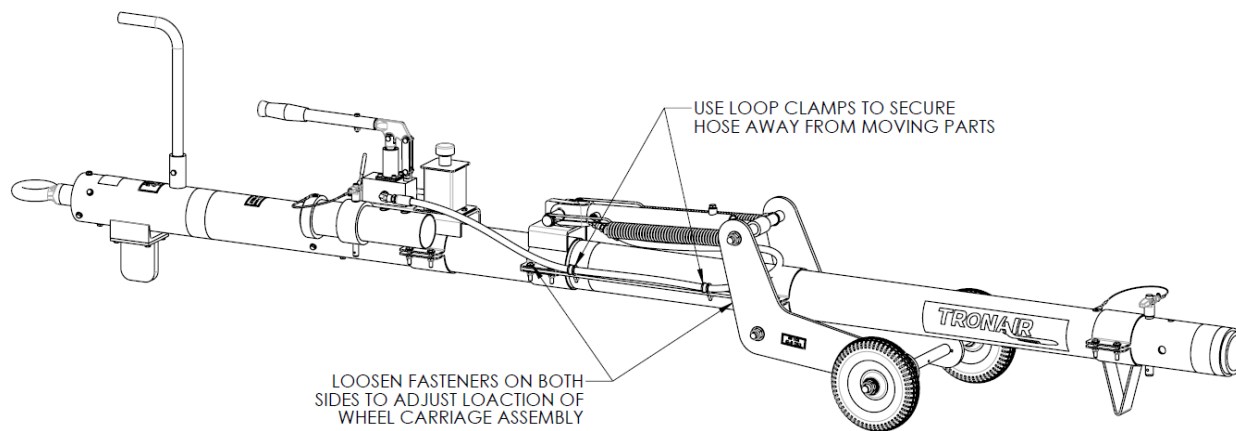
FIXED JAW ABOVE

For towbar heads with the fixed jaw above the latch, balance towbars so the center of gravity is located toward the towbar head

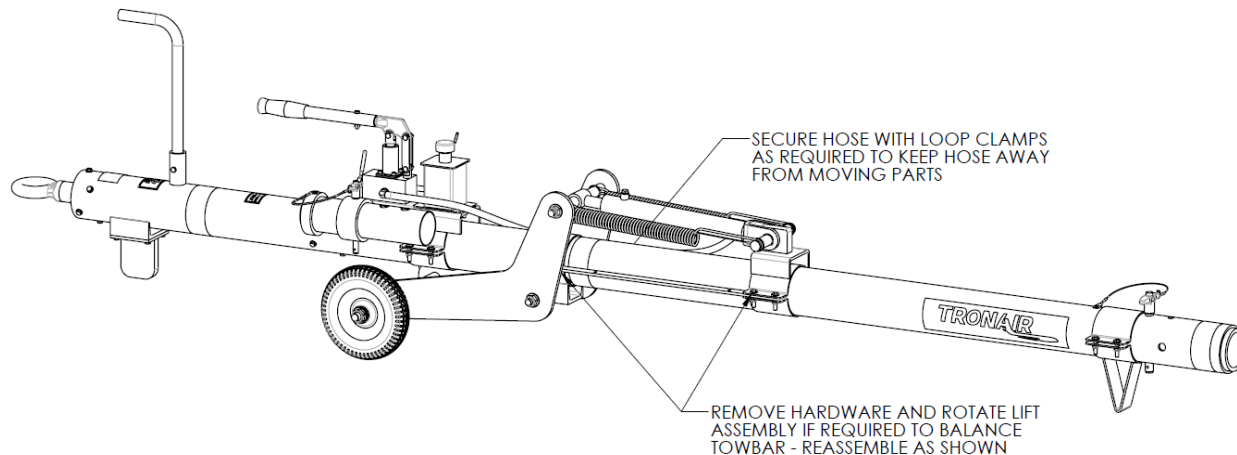
1.5.2 Landing Gear Adjustability

To adjust the center of gravity of the towbar, adjust the position and/or orientation of the landing gear. Additionally, the pump remains independent allowing for easier operation and adjustability when the landing gear is relocated.

To slide the lift assembly, loosen the mounting fasteners on both sides – in 8 places total. Slide the towbar or lift assembly to desired location and tighten fasteners.



Alternatively, the landing gear assembly may be flipped to improve downward force at the head end of the towbar. Remove the hydraulic hose from the loop clamps, and remove the fastening hardware from both sides – 8 places total. Rotate the towbar or lift assembly 180° and reinstall. Adjust and relocate the loop clamps as needed to restrain the hydraulic hose.



2.0 SAFETY INFORMATION

2.1 USAGE AND SAFETY INFORMATION

The Tronair Model 01-1290-0100, 01A1290-0100 and 01B1290-0100 Multi-Head Towbars are used in tandem with Tronair series 500, 600 and 800 Multi-Heads for towing 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. Also refer to the Operation and Service Manual for the installed head and follow all instructions and warnings found there.



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.



WARNING!

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

2.2 PRECAUTIONS

- Keep feet clear of the towbar during all operations
- Keep hands and feet clear of moving parts during all operations
- Walk around the towbar, never over it
- Never crawl under a towbar that is loaded
- Observe appropriate towing speeds

2.3 PERSONAL PROTECTION EQUIPMENT

Tronair recommends the use of safety glasses and safety shoes when using this equipment.

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 PRELIMINARY CHECKLIST****4.1.1 Towbar**

- Check eyebolt for bending, excessive wear, and deformity.
- Check shock mounting bolts. Ensure shock mounting bolts are not loose or missing.
- Check hydraulic lines. Ensure hydraulic fluid is not leaking from fitting connections or hose.
- Check all fastener connections. Ensure fasteners are not loose or missing.
- Check pneumatic tires. Ensure pneumatic tires are not flat or over-inflated. Inflate or deflate as required.
- Check ball lok-T pins. Ensure ball lok-T pins are attached via their lanyards.

4.2 USAGE PROCEDURE**4.2.1 Aircraft Attachment****CAUTION!**

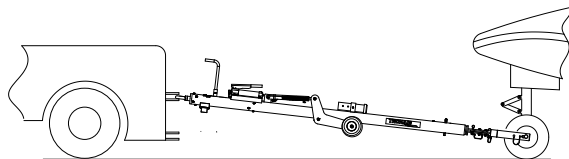
It is recommended that your towbar be attached to the aircraft first, and then connected to the tug to avoid possible aircraft damage.

1. Disconnect the towbar from the tow tractor.
 2. Ensure the towbar head is ready to connect to the aircraft tow fitting (see towbar head operations manual).
 3. Operate the hydraulic hand pump to raise the towbar, including the head assembly to locate nearer to the landing gear tow fitting. Open the hydraulic pump release valve to lower the towbar.
 4. Manually adjust the towbar head assembly until it is directly in contact with the aircraft tow fitting.
 5. Connect the towbar head to the aircraft tow fitting (see towbar head operations manual).
 6. Raise or lower the towbar using the hydraulic pump so the towbar lunette eye bolt is aligned with the tow tractor hitch. Connect the tow tractor hitch to the towbar lunette eye hook.
 7. Retract towbar wheels by opening the release valve on the hydraulic hand pump.
- Ensure landing gear or towbar wheels are fully retracted during push back operations to prevent damage.
 - Ensure the multi-head is locked in place using its locking mechanism.

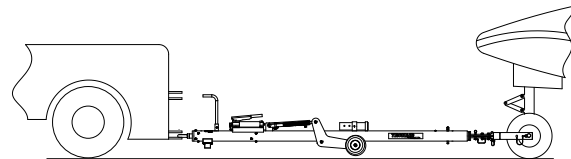
4.2.2 Tug Attachment**CAUTION!**

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)**



Correct

FIGURE 1

4.2.3 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.**

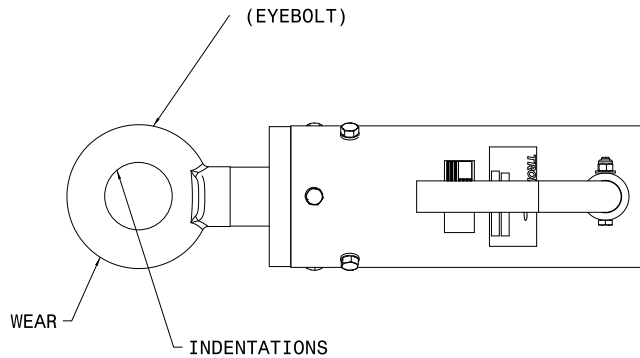


FIGURE 2

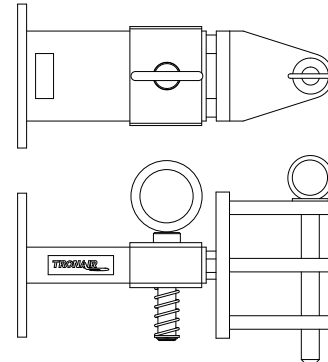


FIGURE 3
01-1950-5000 Standard Telecoupler

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 (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.

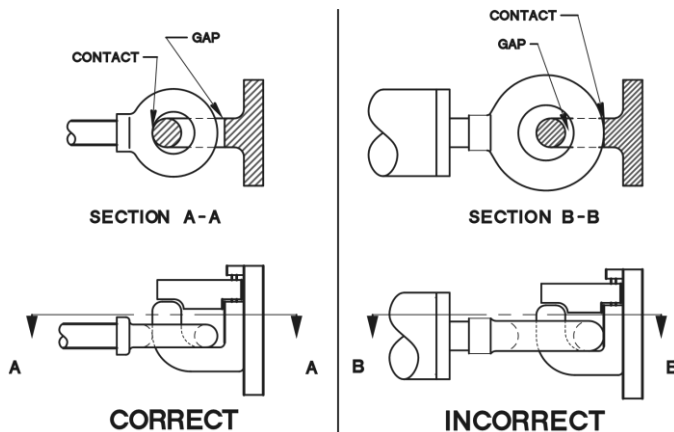


FIGURE 4

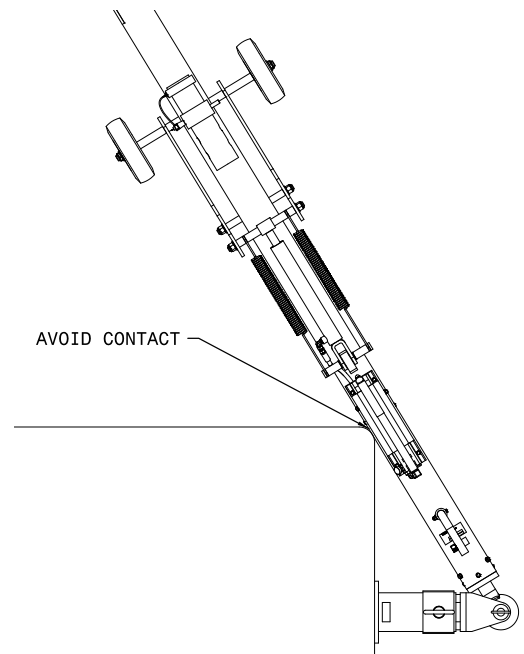


FIGURE 5

4.2.4 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.**
- Towing speed:
 - 6.2 mph (10 kmph) max - forward towing - day/good weather
 - 3.1 mph (5 kmph) max - forward towing - night/inclement weather
- Operate between -4° and 122° F (-20° and 50° C)



4.2.5 Aircraft Disengagement

1. Ensure hydraulic hand pump release valve is closed.
2. Operate the hydraulic hand pump to lower the landing gear towbar wheels until weight is removed from the towbar.
3. Disconnect the lunette eye bolt from the tow tractor. Move the tow tractor away from the towbar.
4. Release the towbar head from the aircraft tow fitting and move towbar clear of the aircraft.

4.2.6 Transportation of Towbar Without Aircraft

Connect the towbar lunette eye hook to the tow tractor hitch and adjust the towbar landing gear wheels by operating the hydraulic hand pump so the towbar is at level height for transportation.

- Ensure towbar head does not interfere with ground during transportation

5.0 MAINTENANCE

5.1 SERVICE

To ensure efficient and reliable operation, the towbar must be maintained through regular preventive maintenance practices. These practices include inspection, cleaning, and lubrication. All preventive maintenance must be performed at least once every six months. More frequent maintenance is recommended in conditions of heavy service or extreme weather. Replace any parts that do not meet inspection standards and cannot be repaired in the field.

1. Clean towbar assembly per section 5.1.1 Cleaning
2. Inspect towbar using the included maintenance schedule (INS-1792)

5.1.1 Cleaning

1. Clean complete assembly with mild detergent solution, followed by clean water rinse
2. Dry all parts using clean cloth or low pressure compressed air

5.1.2 Lubrication

- Every 6 months grease wheel axle in axle lift assembly
- Every 90 days grease axle pivot tie-rod in wheel assembly

6.0 PROVISION OF SPARES

6.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

TRONAIR , Inc.	Telephone: (419) 866-6301 or 800-426-6301
1 Air Cargo Pkwy East	Fax: (419) 867-0634
Swanton, Ohio 43558 USA	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 pages for ordering information of Replacement Parts and Kits.

Part Number	Description
K-2304	KIT, REPL. BALL LOK PIN
K-3524	KIT, BALL LOK-T PIN REPL.
K-3414	KIT, WHEEL (SINGLE) REPL.
K-3733	KIT, REPL. CYLINDER SEAL

7.0 IN-SERVICE SUPPORT

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



8.0 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.**

9.0 APPENDICIES

APPENDIX I Safety Data Sheet – MIL-PRF-5606 Hydraulic Fluid

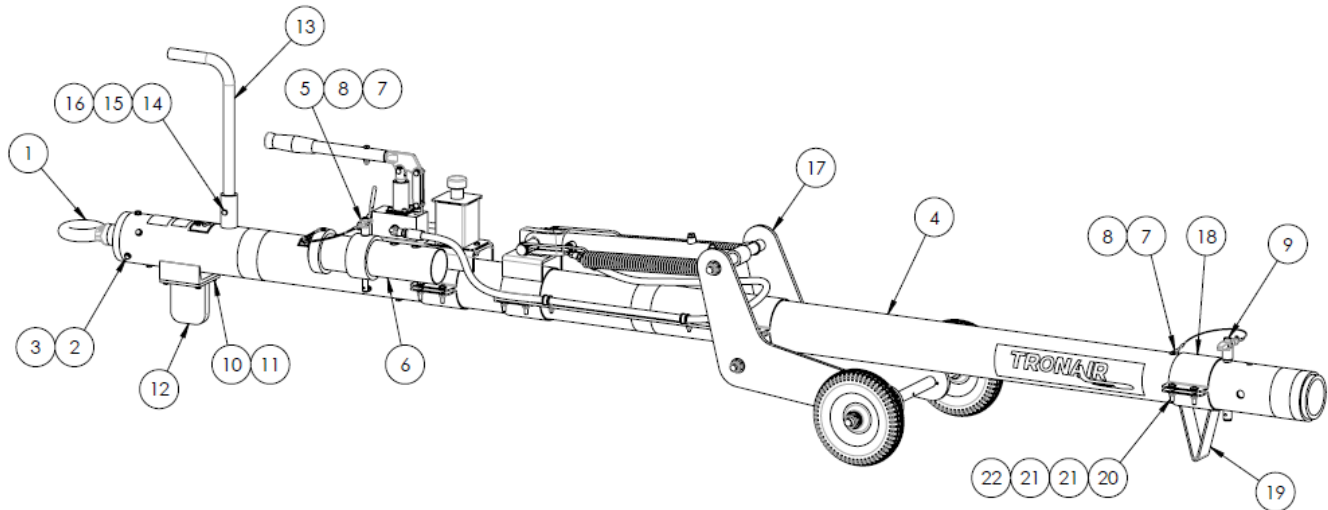
APPENDIX II Maintenance Schedule



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Parts List

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



Item	Part Number	DESCRIPTION	Qty
1	Z-4753	ASSEMBLY, SHOCK (01-1290-0100)	1
	Z-4752	ASSEMBLY, SHOCK (01A1290-0100)	1
	Z-6355	ASSEMBLY, SHOCK (01B1290-0100)	1
2	G-1420-106012	BOLT, HEX HEAD, GRADE 8, 5/16 -18 X 3/4" LONG	16
3	G-1251-1060R	LOCKWASHER, 5/16 REGULAR	16
4	Z-7025-00	MACHINING, TOWBAR	1
5	G-1300-25340	PIN, ROLL, 1/4 X 3-1/2 LONG	1
6	Z-5630	HEAD ADAPTER ASSEMBLY	1
7	G-1352-07	RIVET, 1/8 OPEN-END ALUM	2
8	H-1026*12.0	ASSEMBLY, LANYARD	2
9	G-1310-1250	PIN, BALL LOK-T, 3/4" DIAMETER X 5" GRIP	1
10	G-1100-105006	BOLT, HEX HEAD, GRADE 5, 1/4-20 X 3/4" LONG	4
11	G-1251-1050R	LOCKWASHER, 1/4 REGULAR	4
12	Z-12250	ASSEMBLY, SKID	1
13	TR-1857-00	TUBE, HANDLE	1
14	G-1100-105520	BOLT, HEX HEAD, GRADE 5, 1/4-28 X 2" LONG	1
15	G-1202-1055	STOPNUT, 1/4-28 ELASTIC	1
16	G-1250-1050N	FLATWASHER, 1/4 NARROW	1
17	Z-8372	ASSEMBLY, HYDRAULIC LIFT	1
18	H-3294-00	CLAMP, Ø 4.55 STRAP	1
19	Z-12101-00	WELD, SKIT, TOWBAR HEAD	1
20	G-1100-106514	BOLT, 5/16-24 X 1-1/2 LG, HEX HD GR 5	4
21	G-1250-1060N	FLATWASHER, 5/16 NARROW	8
22	G-1202-1065	STOPNUT, 5/16-24 ELASTIC	4
	K-2304	KIT, REPLACEMENT BALL LOK PIN; consists of:	
5	G-1310-0848	PIN, BALL LOK-T, 1/2" DIAMETER X 4.8" GRIP	1
7	G-1351-04	RIVET, 1/8 OPEN-END STEEL	1
8	H-1026*12.0	ASSEMBLY, LANYARD	1



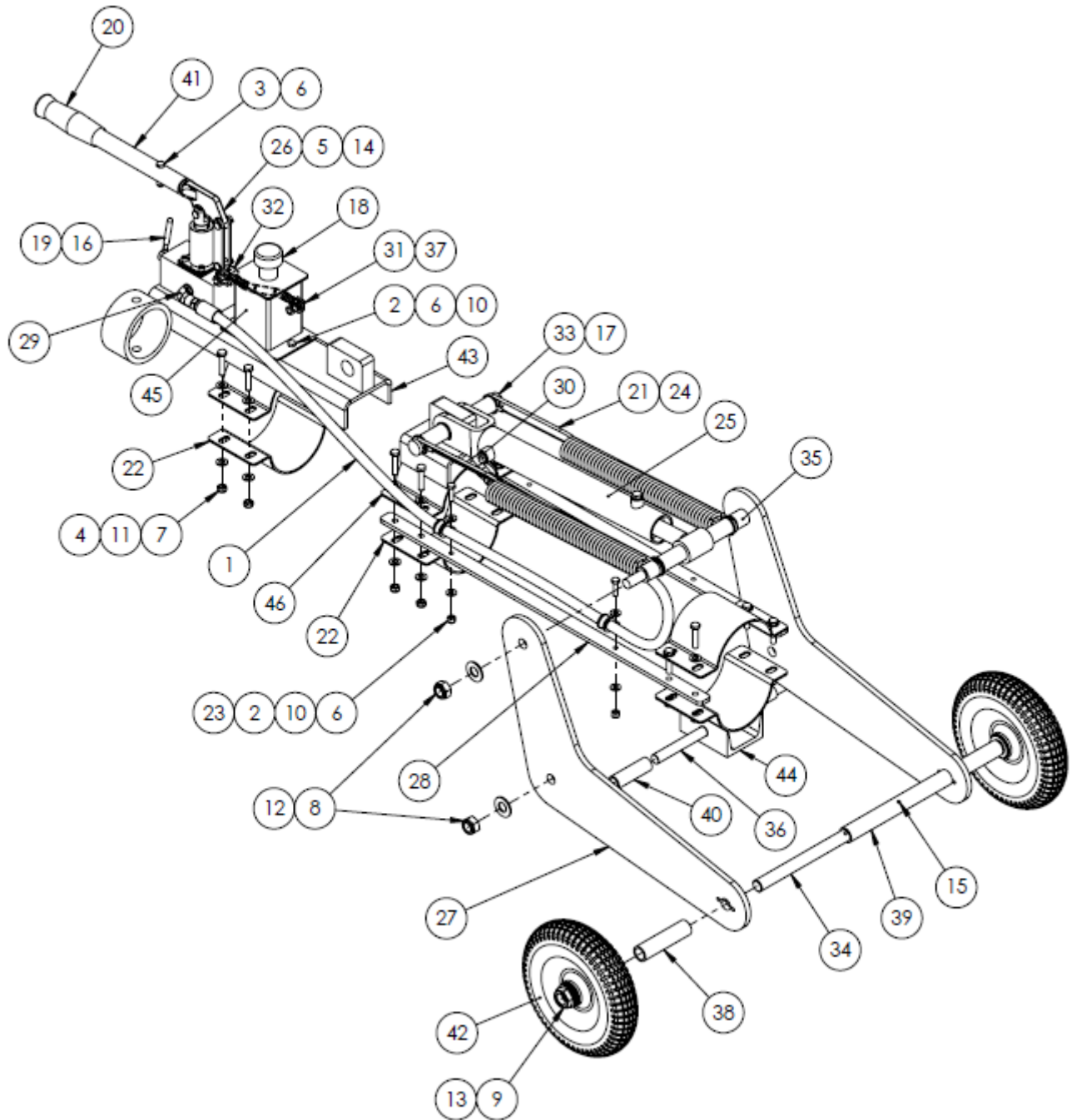
Parts List

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

Item	Part Number	Description	Qty
	K-3273	KIT, SHOCK ASSEMBLY; consists of:	
1	Z-4752	ASSEMBLY, SHOCK (01A1290-0100)	1
2	G-1420-106012	BOLT, HEX HEAD, GRADE 8, 5/16 -18 X 1-1/4" LONG	12
3	G-1251-1060R	LOCKWASHER, 5/16 REGULAR	12
	K-3274	KIT, SHOCK ASSEMBLY; consists of:	
1	Z-4753	ASSEMBLY, SHOCK (01-1290-0100)	1
2	G-1420-106012	BOLT, HEX HEAD, GRADE 8, 5/16 -18 X 1-1/4" LONG	12
3	G-1251-1060R	LOCKWASHER, 5/16 REGULAR	12
	K-3524	KIT, BALL LOK-T PIN REPLACEMENT; consists of:	
7	G-1351-04	RIVET, 1/8 OPEN-END STEEL	1
8	H-1026*12.0	ASSEMBLY, LANYARD	1
9	G-1310-1250	PIN, BALL LOK-T, 3/4" DIAMETER X 5" GRIP	1
	K-4743	KIT, TOWBAR TUBE; consists of F:	
4	Z-7025-01	MACHINING, TOWBAR	1
7	G-1351-04	RIVET, 1/8 OPEN-END STEEL	1
8	H-1026*12.0	ASSEMBLY, LANYARD	1
9	G-1310-1250	PIN, BALL LOK-T, 3/4" DIAMETER X 5" GRIP	1

Parts List

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



Item	Part Number	Description	Qty
1	TF-1043-06-60.0	ASSEMBLY, HOSE	1
2	G-1100-105010	BOLT, 1/4-20 X 1.0" LG HEX HD GR 5	4
3	G-1100-105014	BOLT, 1/4-20 X 1-1/2" LG HEX HD GR 5	1
4	G-1100-106514	BOLT, 5/16-24 X 1-1/2" LG. HEX HD GR 5	12
5	G-1100-107006	BOLT, 3/8-16 X 3/4" HEX HD GR 5	5
6	G-1202-1050	STOPNUT, 1/4-20 ELASTIC	5
7	G-1202-1065	STOPNUT, 5/16-24 ELASTIC	12
8	G-1202-1105	STOPNUT, 5/8-18 ELASTIC	4
10	G-1250-1050N	FLATWASHER, 1/4 NARROW	6



Parts List

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

Item	Part Number	Description	Qty
11	G-1250-1060N	FLATWASHER, 5/16 NARROW	24
13	G-1250-1110N	FLATWASHER, 3/4 NARROW	2
14	G-1251-1070R	LOCKWASHER, 3/8 REGULAR	4
15	G-1300-19100	PIN, 3/16" X 1.0" LG ROLL	1
16	G-1300-25340	PIN, ROLL 1/4 X 3-1/2 LONG	1
17	G-1392-100-S	RING, EXTERNAL RETAINING	2
18	H-1045	BREATHER	1
19	H-1205	COVER, RED HANDLE	1
20	H-1223	GRIP, HANDLE	1
21	H-2664	SPRING, EXTENSION	2
22	H-3294-00	CLAMP, Ø 4.55 STRAP	3
23	H-3521-05	CLAMP, CUSHIONED LOOP 5/8"	2
24	H-3784	CABLE, SPRING SAFETY	2
25	HC-2119	CYLINDER, HYDRAULIC	1
26	HC-2995	PUMP, HAND	1
27	J-3435-00	PLATE, LANDING GEAR (P)	2
28	J-8375-00	BAR, CONNECTOR (P)	2
29	N-2001-08-S-B	ELBOW, STRAIGHT THREAD	1
30	N-2001-35-S-B	ELBOW 90, -06 M JIC X -04 M ORB	1
31	N-2410-04	ELBOW, 90° MALE 3/8 BARB X 1/4 NPT	1
32	N-2410-05	ELBOW, 90° MALE 3/8 BARB X 3/8 NPT	1
33	R-2084	PIN, CYLINDER	1
34	R-2086	AXLE, LANDING GEAR	1
35	R-2097	PIN, PIVOT	1
36	R-2099	AXLE, LANDING GEAR	1
37	TF-1047-04*05.5	HOSE, 3/8 GRAY	1
38	TR-1795-01	SPACER, WHEEL (P)	2
39	TR-1796-01	TUBE, LANDING GEAR (P)	1
40	TR-1819-00	SPACER, WHEEL	2
41	TR-2770-00	PUMP HANDLE (P)	1
43	Z-12100-00	WELDMENT, PUMP MOUNT (P)	1
44	Z-6535	BRACKET, AXLE (P)	1
45	Z-7166-00	WELDMENT, RESERVOIR (P)	1
46	Z-7232-00	WELDMENT, CYLINDER MOUNT	1
47	Z-5630	ASSEMBLY, HEAD ADAPTER	1
	K-3414	KIT, WHEEL (SINGLE) REPLACEMENT; consists of:	
42	U-1096	WHEEL, PNEUMATIC TIRE	1
12	G-1250-1110N	FLATWASHER, 3/4 NARROW	1
22	G-1203-1115	JAMNUT, 3/4-16 ELASTIC	1
	K-3733	KIT, CYLINDER SEAL REPLACEMENT	



APPENDIX I

Safety Data Sheet MIL-PRF-5606 Hydraulic Fluid



Product Name: MOBIL AERO HFA
Revision Date: 01 Oct 2015
Page 1 of 12

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL AERO HFA
Product Description: Base Oil and Additives
Product Code: 201550401020, 490110-00, 970584
Intended Use: Aviation hydraulic oil

COMPANY IDENTIFICATION

Supplier: EXXON MOBIL CORPORATION
22777 Springwoods Village Parkway
Spring, TX. 77253 USA

24 Hour Health Emergency 609-737-4411
Transportation Emergency Phone 800-424-9300 or 703-527-3887 CHEMTREC
Product Technical Information 800-662-4525
MSDS Internet Address <http://www.exxon.com>, <http://www.mobil.com>

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see (M)SDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 4.
Aspiration toxicant: Category 1.

LABEL:

Pictogram:



Signal Word: Danger

Hazard Statements:

H227: Combustible liquid. H304: May be fatal if swallowed and enters airways.

Precautionary Statements:

P210: Keep away from flames and hot surfaces. -- No smoking. P273: Avoid release to the environment. P280: Wear protective gloves and eye / face protection. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P331: Do NOT induce vomiting. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish. P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents and container in accordance with local regulations.



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Other hazard information:

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1910.1200.

PHYSICAL / CHEMICAL HAZARDS

Material can accumulate static charges which may cause an ignition. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Combustible.

HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

ENVIRONMENTAL HAZARDS

No significant hazards.

NFPA Hazard ID: Health: 1 Flammability: 2 Reactivity: 0
HMIS Hazard ID: Health: 1* Flammability: 2 Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
2,6-DI-TERT-BUTYL-P-CRESOL	128-37-0	0.1 - < 1%	H400(M factor 1), H410(M factor 1)
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	5 - < 10%	H304
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)	64742-53-6	50 - < 70%	H227, H304
HYDROTREATED MIDDLE DISTILLATE (PETROLEUM)	64742-46-7	20 - < 30%	H304
TRIPHENYL PHOSPHATE	115-86-6	0.1 - < 0.25%	H400(M factor 1), H410(M factor 1)

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION



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Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Combustible. Pressurized mists may form a flammable mixture.

Hazardous Combustion Products: Aldehydes, Incomplete combustion products, Oxides of carbon, Phosphorus oxides, Smoke, Fume, Sulfur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >82°C (180°F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 7.0 [Estimated]

Autoignition Temperature: >225°C (437°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable



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regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7	HANDLING AND STORAGE
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HANDLING

Avoid contact with skin. Avoid prolonged breathing of mists and heated vapor. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static



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accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator.

STORAGE

The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit / Standard		NOTE	Source
2,6-DI-TERT-BUTYL-P-CRESOL	Inhalable fraction and vapor	TWA	2 mg/m ³	N/A	ACGIH
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT [total hydrocarbon vapor]	Non-Aerosol	TWA	200 mg/m ³	Skin	ACGIH
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)	Mist.	TWA	5 mg/m ³	N/A	OSHA Z1
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)	Inhalable fraction.	TWA	5 mg/m ³	N/A	ACGIH
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)	Mist.	TWA	5 mg/m ³	N/A	ACGIH
HYDROTREATED MIDDLE DISTILLATE (PETROLEUM)	Mist.	TWA	5 mg/m ³	N/A	OSHA Z1
HYDROTREATED MIDDLE DISTILLATE (PETROLEUM)	Inhalable fraction.	TWA	5 mg/m ³	N/A	ACGIH
TRIPHENYL PHOSPHATE		TWA	3 mg/m ³	N/A	OSHA Z1
TRIPHENYL PHOSPHATE		TWA	3 mg/m ³	N/A	ACGIH

Exposure limits/standards for materials that can be formed when handling this product: When mists/aerosols can occur the following are recommended: 5 mg/m³ - ACGIH TLV (inhalable fraction), 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.



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Control measures to consider:
Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Liquid
Color: Red



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Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.88
Flammability (Solid, Gas): N/A
Flash Point [Method]: >82°C (180°F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 7.0 [Estimated]
Autoignition Temperature: >225°C (437°F)
Boiling Point / Range: N/D
Decomposition Temperature: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: [N/D at 20 °C]
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 13.8 cSt (13.8 mm²/sec) at 40 °C | 5.1 cSt (5.1 mm²/sec) at 100°C [ASTM D 445]
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: N/A
Pour Point: -60°C (-76°F) [ASTM D97]
DMSO Extract (mineral oil only), IP-346: < 3 %wt

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: See sub-sections below.

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Open flames and high energy ignition sources.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.



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Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	May dry the skin leading to discomfort and dermatitis. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

TOXICITY FOR SUBSTANCES

NAME	ACUTE TOXICITY
2,6-DI-TERT-BUTYL-P-CRESOL	Oral Lethality: LD50 0.89 g/kg (Rat)

OTHER INFORMATION

For the product itself:

Repeated and/or prolonged exposure may cause irritation to the skin, eyes, or respiratory tract. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--



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1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

MOBILITY

More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Less volatile component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Components -- Expected to be inherently biodegradable

BIOACCUMULATION POTENTIAL

Majority of components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix used oils with solvents, brake fluids or coolants.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be



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completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14	TRANSPORT INFORMATION
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LAND (DOT)

Proper Shipping Name: COMBUSTIBLE LIQUID, N.O.S. (Distillates (Petroleum), Hydrotreated Light)
Hazard Class & Division: COMBUSTIBLE LIQUID
ID Number: NA1993
Packing Group: III
ERG Number: 128
Label(s): NONE
Transport Document Name: NA1993, COMBUSTIBLE LIQUID, N.O.S. (Distillates (Petroleum), Hydrotreated Light), COMBUSTIBLE LIQUID, PG III

Footnote: This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15	REGULATORY INFORMATION
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OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TCSI, TSCA

EPCRA SECTION 302: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.



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The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	1, 17, 18
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)	64742-53-6	1, 4, 13, 17, 18
HYDROTREATED MIDDLE DISTILLATE (PETROLEUM)	64742-46-7	1, 4, 17, 18

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H227: Combustible liquid; Flammable Liquid, Cat 4
 H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1
 H400: Very toxic to aquatic life; Acute Env Tox, Cat 1
 H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 01: Company Mailing Address information was modified.
 Section 05: Hazardous Combustion Products information was modified.
 Section 15: List Citations Table information was modified.
 Section 15: National Chemical Inventory Listing information was modified.
 Section 14: Marine Pollutant information was modified.
 Composition: Component Table information was modified.
 Section 08: Exposure Limits Table information was modified.
 Section 16: Revision Information - Implementation of GHS requirements phrase. information was deleted.

The information and recommendations contained herein are, to the best of ExxonMobil's knowledge and belief, accurate and reliable as of the date issued. You can contact ExxonMobil to insure that this document is the most current available from ExxonMobil. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law,



APPENDIX II

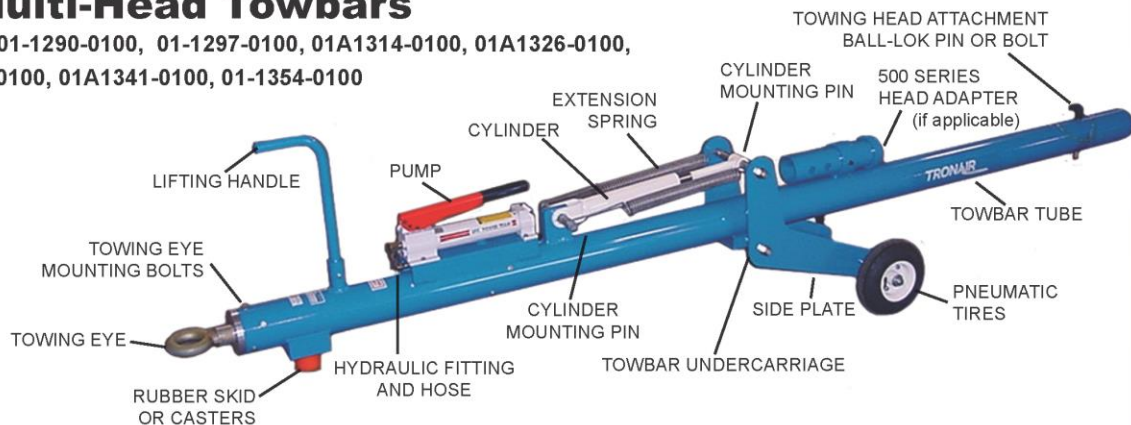
Maintenance Schedule

TRONAIR®

Maintenance Schedule

Heavy Duty Universal Multi-Head Towbars

Models: 01-1290-0100, 01-1297-0100, 01A1314-0100, 01A1326-0100,
01-1336-0100, 01A1341-0100, 01-1354-0100



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.
- Ensure the towing eye does not move or turn by hand; if the towing eye can turn this may indicate that the centering pin within the shock assembly may be broken and repairs are needed. Contact Tronair for repairs.
- Check the shock assembly for preload on the spring by pulling on the towing eye. If the shock can be moved by hand this may indicate the spring is worn out, contact Tronair for repairs.
- Check the rubber skid or casters at the towing eye end. Ensure that all fasteners are tight and not missing. Tighten or replace as required. If the bumper is split or excessively worn, contact Tronair or your Tronair distributor for replacement.
- Inspect the lifting handle for damage. Contact Tronair or your Tronair distributor for repair or replacement if 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.
- Inspect the pump for hydraulic leaks. Replace seals if any leaks exist. Contact Tronair or your Tronair distributor for replacement.
- Inspect the pump fluid level. Before adding MIL-PRF-5606 hydraulic fluid, ensure that the undercarriage is collapsed.
- Inspect hydraulic fittings and hose for leaks. If any hydraulic leaks exist, contact Tronair or your Tronair distributor for replacement.
- Inspect cylinder for hydraulic leaks. If any hydraulic leaks exist, contact Tronair or your Tronair distributor for replacement seals.
- Check extension springs. Extend cylinder to full stroke and open relief valve on pump. The extension springs should retract the cylinder completely. If not, contact Tronair or your Tronair distributor for replacement.
- Inspect cylinder mounting pins for bending or damage. Ensure the springs are engaged on them. If pins are bent or damaged, contact Tronair or your Tronair distributor for replacement.
- The undercarriage allows towing by a tow vehicle of speeds up to 6 mph (10 km/h)
- Check the towbar undercarriage for unusual wear or damage. Inflate the pneumatic tires to the proper pressure; repair any air leaks or replace if needed. Ensure the wheels can rotate freely, and wheel rims and tire axle are not bent. Ensure mounting fasteners are tight and not missing. Tighten or replace as required. Grease tire axle every 90 days.
- Inspect towbar undercarriage side plates for bending or damage. If any exist, contact Tronair or your Tronair distributor for replacement.
- Inspect head adapter (if applicable) for Tronair 500 series towing heads. Ensure it is not damaged or missing. Contact Tronair or your Tronair distributor for replacement if required.
- Inspect towing head attachment ball-loc pin or bolt for bending or unusual wear. Verify the factory supplied pin or bolt is used. Contact Tronair for replacement if required. Use only Tronair specified ball-loc pins/fasteners.
- Ensure the towing head attachment ball-loc pin is connected to the towbar via its lanyard. Replace lanyard if missing.
- Inspect all steel components for signs of rust. Touch up with paint as required.

INS-1792

www.tronair.com

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