727, 737, A319, A320 TOWBAR
Towbar Specifications, Usage, Preventive Maintenance, and Parts
MANUAL
(Includes Optional Hydraulic Lift, Soft Start, & Handle Latches)

For ordering New Towbars or Replacement Parts Please Contact:

Towbar Parts  @  724-752-2000
Or Fax  @  724-758-1558
Or Email  service@hallindustries.com

Hall Industries, Inc.
514 Mecklem Lane
Ellwood City, PA 16117
724-752-2000

July 1, 2013
Revision 04
0. Index

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<th>Description</th>
<th>Page</th>
</tr>
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1. Specifications

1.1. Physical Specifications

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<tr>
<th>Part Number</th>
<th>Description</th>
<th>Weight</th>
<th>Length</th>
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<tbody>
<tr>
<td>TB-8898-TE</td>
<td>Tube &amp; Eye with Hardware</td>
<td>116 lb</td>
<td>13’-3 5/8”</td>
</tr>
<tr>
<td>TB-8312</td>
<td>Towbar Head with Adapter</td>
<td>60 lb</td>
<td>20 11/16”</td>
</tr>
<tr>
<td>TB-9267</td>
<td>Full Assembly (27” Height x 20” Wide)</td>
<td>208 lb</td>
<td>15’-5/16”</td>
</tr>
<tr>
<td></td>
<td>With Fixed Wheel Carriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB-9267-HL</td>
<td>Full Assembly (27” Height x 20.5” Wide)</td>
<td>272 lb</td>
<td>15’-5/16”</td>
</tr>
<tr>
<td></td>
<td>With Lift Kit Wheel Carriage</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.2. Shear Pin Info

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Shear Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear Pin</td>
<td>TB-8312-B6</td>
<td>18,900 lbs</td>
</tr>
</tbody>
</table>

NOTE: Shear pins are produced in controlled batches; only use Hall Industries replacement shear pins. Shear pin testing and manufacturing records are permanently kept on file for reference.

1.3. Warranty:

All parts are guaranteed against manufacturing defects for one year. If at any time this manual is not followed it will void the warranty (preventive maintenance logs are required for all warranty replacement parts). All replacement parts must be genuine Hall Industries parts.
2. Operating Procedures

NOTE: This must be done in accordance with the aircraft manual.

2.1. Inspect the Towbar (Prior to hooking up the towbar to the tug visually inspect):

   2.1.1. Check for a bent or damaged frame and for worn or missing parts.
   2.1.2. Check tires for damage.
   2.1.3. Check that you have the correct towbar.
   2.1.4. Check the shear pin to see if it is the correct pin for the towbar. Also check that
           the shear pin is fully seated with washers and a nut securing it in place.

NOTE: DO NOT attempt to tow any aircraft with a damaged or incorrect towbar.

2.2. Responsibility

Operator of the tug must understand that it is his/her responsibility to move the aircraft
safely the entire time that they are connected to the plane.

NOTE: No speeding during push and pull.

2.3. Hooking Up to the Plane ~ Checks:

   2.3.1. You are using the proper tug and towbar for the size aircraft being moved.
   2.3.2. The towbar you are using is approximately level between the aircraft and the tug.
   2.3.3. The eye end of the towbar must move freely on the hitch mounted on the tug.

2.4. Attach the Towbar to the Aircraft

   2.4.1. First check that the towbar head latch is in the open position.
   2.4.2. Line up towbar to nose pin of aircraft and slide head under the nose pin.
   2.4.3. Lower the handle and lock the jaw to the nose pin. Due to the over-center
           arrangement of the clamping mechanism, the jaws remain closed until the handle
           is released by the operator. The head can only be disengaged by operation of the
           handle. (If equipped make sure that the latch stop locking pin is inserted and is
           keeping the latch in the forward position. Or if equipped make sure the automatic
           stop latch is functional.)

2.5. Attach the Towbar to the Tow Tractor

   2.5.1. Lift to the level of the push backs hitch.
   2.5.2. Position the push back tractor and install the hitch pin.
   2.5.3. Tow or push the aircraft only if the tow bars tires are not touching the ground.
2.6. Push the Aircraft

NOTE: This must be done in accordance with the aircraft manual.

NOTE: If at any time the shear pin yields or breaks, carefully bring the aircraft to a stop. Before pushing or towing can be continued a new shear pin must be inserted. Use only Hall Industries shear pin (Part number ~ TB-8312-B6).

Basic Rules:
2.6.1. Prior to moving, make sure that the hydraulic steering bypass pin is engaged (if applicable). Also double check that all the tie downs and chocks are removed and aircraft brakes are released.

NOTE: This must be done in accordance with the aircraft manual.

2.6.2. Tow Slow, max speed is a brisk walk (Approximately 5 MPH). This will help to minimize the chance of a jack-knife.

2.6.3. Do not exceed Aircraft nose wheel angle of towing limits. If not marked or not known, do not exceed 30° from center. Be extra cautious on snow and ice.

2.6.4. If you are driving make sure that you have plenty of help; “wing walkers” are helpful.

2.6.5. Make sure the operator / driver has direct contact with the pilot at all times while moving the aircraft.

NOTE: Thousand of dollars in damage can occur in a few seconds while towing. It is estimated that 90% of towing damage is due to operator negligence / error. Accidents can be fatal.

2.7. Disconnect the Towbar from the Tug

2.8. Disconnect the Towbar from the Aircraft

If equipped pull the locking pin or ASL and move the handle into the open position.

Carefully lower the tow bar to the ground (use hydraulic lift if installed), and then move push back tractor and towbar clear of the aircraft.

3. Preventive Maintenance

NOTE: Hall Industries recommends using this maintenance procedure monthly (or as required in your airlines maintenance procedure if sooner). Replace worn or damaged parts as needed.
3.1. Check Pivot, Capture, and Shear bolts (Part numbers TB-8312-B11 or B12, B6, B7); they should be snug but not tight. They should not spin freely, but should be able to spin with the aid of a wrench. Over-tightening will clamp the adapter to the head, and the shear pin will not provide adequate safety protection. With the shear bolt removed, the head must be able to slide within the adapter plates.

NOTE: Do not over-tighten adapter bolts.

3.2. Check wheels and wheel carriage for bent, broken, or worn parts and security. Lubricate pivot points using Hall lubricant (Part number TB-LUBE).

3.3. Check head assembly for operation of lock mechanism; look for bending, security, etc. Lubricate pivot points using Hall lubricant (Part number TB-LUBE).

3.4. Inspect jaw assembly for worn or damaged parts and security.

3.5. Check latch mechanism to ensure proper travel back and forth. If equipped check stop latch locks. Lubricate pivot points.

3.6. Check latch mechanism locking force. The release force on the handle is set at the factory to a minimum of 20 pounds when clamped to an aircraft replacement Nose Pin. When performing PM you can lock it on to one of your Aircraft and/or a Test Pin (Part number SS-8312) supplied by Hall Industries (do not use a regular hot rolled bolt as a test pin). To adjust the pressure, remove TB-8312-J4, turn the Swing Bolt TB-8312-J2 half of a revolution (clockwise to decrease pressure, counter-clockwise to increase pressure), and replace and retighten TB-8312-J4. Check the release force and repeat if necessary. With daily use, the some wear / increased clearances will be noticed the components of this adjustment are available as a kit (see kit section).

NOTE: When closing/locking of the handle force is too light, the attachment to the aircraft nose pin will be sloppy and excessive play will result. This can result in the handle opening during a push and loss of aircraft control.

3.7. Check tow eye and hardware (tug attachment) for condition and security. If the drag plate is worn and towbar head or eye is dragging purchase replacement drag plate kit (Part
3.8. Check main body tube for bending or cracking.

3.9. Check shear pin and bushings for breakage, wear and security.

   NOTE: If bushings are to be replaced, replace them as a set. Never replace only one bushing.

3.10. Clean, repaint or touch-up paint as required.

3.11. Inspect tags and labels; if damaged or missing replace (see the drawings in the attachment section for labels and placements).

3.12. If the towbar is equipped with a hydraulic lift; check the fluid reservoir (in the down / collapsed position). Add fluid if necessary (Part number TB-LUBE-L).

4. Replacement Part Kits / Assemblies  (Many kits are available that are not listed please call for details)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>QTY (in Kit)</th>
<th>Description</th>
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<tbody>
<tr>
<td>4.1. TB-8312-B6-KIT</td>
<td>Shear Pin Kit</td>
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<td>4.1.1. TB-8312-B6</td>
<td>1</td>
<td>Shear Pin</td>
</tr>
<tr>
<td>4.1.2. TB-8312-B9</td>
<td>1</td>
<td>Nut</td>
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<tr>
<td>4.1.3. TB-8312-B10</td>
<td>2</td>
<td>Washer</td>
</tr>
<tr>
<td>4.2. TB-9267-WL-BSH-KIT</td>
<td>Bushing and Shear Pin Kit</td>
<td></td>
</tr>
<tr>
<td>4.2.1. TB-8312-B3</td>
<td>2</td>
<td>Shear Pin Bushing Adapter</td>
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<tr>
<td>4.2.2. TB-8312-MB6</td>
<td>1</td>
<td>Shear Pin Bushing Head</td>
</tr>
<tr>
<td>4.2.3. TB-8312-B6</td>
<td>1</td>
<td>Shear Pin</td>
</tr>
<tr>
<td>4.2.4. TB-8312-B9</td>
<td>1</td>
<td>Nut</td>
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<tr>
<td>4.2.5. TB-8312-B10</td>
<td>2</td>
<td>Washer</td>
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<tr>
<td>4.3. TB-8312-J2-J3-KIT</td>
<td>Swing Bolt / Toggle Hinge Kit (For Lock Mechanism)</td>
<td></td>
</tr>
<tr>
<td>4.3.1. TB-8312-J2</td>
<td>1</td>
<td>Swing Bolt</td>
</tr>
<tr>
<td>4.3.2. TB-8312-J3</td>
<td>1</td>
<td>Toggle Hinge</td>
</tr>
<tr>
<td>4.3.3. TB-8312-J2-N</td>
<td>1</td>
<td>Coupling Nut</td>
</tr>
<tr>
<td>4.4. TB-8312-BSH-KIT</td>
<td>Bushing Kit</td>
<td></td>
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</table>
### 4.4.1. TB-8312-B3
2
Shear Pin Bushing Adapter

### 4.4.2. TB-8312-MB6
1
Shear Pin Bushing Head

### 4.5. SS-8312
1
Pin for Checking Clamp Force

### 4.6. TB-8898-EYE-KIT
Eye Bolt Assembly (Single Bolt)

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<tr>
<td>WH0110000SS0000</td>
<td>1</td>
</tr>
<tr>
<td>Curved Washer</td>
<td>1</td>
</tr>
<tr>
<td>Shoulder Bolt</td>
<td>1</td>
</tr>
<tr>
<td>Castle Nut</td>
<td>1</td>
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<tr>
<td>Cotter Pin</td>
<td>1</td>
</tr>
<tr>
<td>Eye Bolt</td>
<td>1</td>
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### 4.7. TB-8898-12-19
Eye Bolt Assembly (OLD VERSION ~ 4 Bolt)

<table>
<thead>
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<tbody>
<tr>
<td>HRJ-145-12-7</td>
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</tr>
<tr>
<td>Tug Eye Retainer Bar</td>
<td>1</td>
</tr>
<tr>
<td>Tug Eye Collar</td>
<td>1</td>
</tr>
<tr>
<td>Nordlock Washer</td>
<td>4</td>
</tr>
<tr>
<td>Drilled Head Bolt</td>
<td>4</td>
</tr>
</tbody>
</table>
5. Ordering Info

5.1. Accepted Payments Include (but not limited to):
   5.1.1. Visa
   5.1.2. MasterCard
   5.1.3. American Express
   5.1.4. Company Check Wire Transfer

5.2. Standard terms ~ NET 30 with approved credit

5.3. Minimum Orders ~ $50

5.4. The Order Form is listed in the attachments of this document.

6. How to find the part you need

6.1. What towbar head do I need?
   6.1.1. What size landing gear hookup pin do you have? ¾” or 1.5”
   6.1.2. Most planes are ¾” nose pins, measure the nose pin of the aircraft to confirm.

6.2. What pushbar do I need?
   6.2.1. Fixed Eyelet or Soft Start Eyelet (user preference)

6.3. What wheel carriage do I need?
   6.3.1. Fixed or Hydraulic lift (user preference)

6.4. What handle restraint do I need?
   6.4.1. The handle latch is optional. You can choose not to have one at all, to have a automatic latch, or a pinned latch.

6.5. Only one handle is available, our standard fixed handle.
## 7. Attachment List

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<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>7.1</td>
<td>TB-9267</td>
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<td>7.2</td>
<td>TB-8312</td>
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<td>7.3</td>
<td>TB-8898-TE</td>
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<td>7.4</td>
<td>TB-8898-TE-SS</td>
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<td>7.5</td>
<td>TB-SS4-8898</td>
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<td>7.6</td>
<td>TB-8898-2</td>
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<tr>
<td>7.7</td>
<td>LIFT-15</td>
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<td>7.8</td>
<td>TB-8898-10</td>
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<td>7.9</td>
<td>TS-737-ASL</td>
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<td>7.10</td>
<td>TB-8312-LHA</td>
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<td>7.11</td>
<td>TB-8312-LHA-A</td>
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<tr>
<td>7.12</td>
<td>AV1009-0001</td>
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<tr>
<td>7.13</td>
<td>Soft Start Brochure</td>
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<tr>
<td>7.14</td>
<td>Order Form</td>
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<tr>
<td>7.15</td>
<td>Other Products and Custom Design Services</td>
</tr>
</tbody>
</table>
NOTES:

1. USE ANTI-SEIZE ON ALL NUTS.

ORDERING INFO:

USE NUMBERS BELOW WHEN ORDERING FOR AN AIRBUS WITH A NOSE PIN
1.5" IN DIAMETER

1. TO PURCHASE A COMPLETE TOWBAR 1.5" DIA NOSE PIN WITH FIXED
   WHEELS AND LATCH TB-9267-ABASL-INT
2. TO PURCHASE A REPLACEMENT MAIN BODY WITH A 1.5" DIA NOSE PIN
   (REPLACEMENT FOR PART 22 SHOWN BELOW) TB-8312-MB1-AB
3. TO PURCHASE A REPLACEMENT MAIN JAW WITH A 1.5" DIA NOSE PIN
   (REPLACEMENT FOR PART 17 SHOWN BELOW) TB-8312-J1-AB
1. **REVISIONS**

| REV | DESCRIPTION                         | DATE   | BY | CHK 
|-----|-------------------------------------|--------|----|-----
| 1   | UPDATE / CHANGE PART NUMBERS        | 6/24/13| BJE| VTM |

**NOTES:**

1. TAGS MUST BE INSTALLED.
2. EYEBOLT & NECESSARY HARDWARE IS SOLD AS A KIT: TB-8898-EYE-KIT 4" TUBE-TOWEYE KIT W/HRDWR

**ITEM** | **QTY** | **PART NUMBER** | **DESCRIPTION**
--- | --- | --- | ---
1 | 1 | TB-8898-21 | SHOULDER BOLT
2 | 1 | TB-8898-20 | CURVED WASHER
3 | 1 | HRJ-145-12-7 | EYEBOLT
4 | 1 | TB-8898-1 | 4" TUBE W/TAG&DECAL B737/A320
5 | 1 | WH0110000SS0000 | WASHER SS
6 | 1 | CN08C0000SS0000 | CASTLE NUT SS
7 | 1 | CP4280048SS0000 | PIN COTTER

**DIMENSIONS**

- **TOLERANCES**
  - ANGLE X ± .005
  - X=12"±1/32" X=12"=±1/16"

**PROJECT**

- **FILE NAME**: TB-8898-TE 4 INCH TUBE & EYE W HD
- **SCALE**: 1:5
- **WEIGHT**: 115.66 LBS

**CHECK**: 11/18/2010
**DRAWN**: 11/17/2010

© 2013 HALL INDUSTRIES, INC. ALL RIGHTS RESERVED.
1. ANTI-SIEZE ALL THREADS & WIRE TIE BOLTS.
1. USE ANTI-SEIZE ON ALL THREADED HARDWARE.

### Parts List

<table>
<thead>
<tr>
<th>ITEM</th>
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<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>2</td>
<td>TB-SS4-02</td>
<td>STOP</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>TB-SS4-04</td>
<td>END GUIDE</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>TB-SS4-05</td>
<td>TUBING</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>TB-SS4-06</td>
<td>END GUIDE NO HOLE</td>
</tr>
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<td>5</td>
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<td>DOWEL PIN 1/4&quot; DIA. x 2&quot; LONG SS</td>
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<tr>
<td>6</td>
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<td>TB-SS4-09</td>
<td>NUT 1-1/4&quot;-7 THREAD GR5 ZP</td>
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<td>WASHER NORDLOCK</td>
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<td>DRILLED HEAD BOLT</td>
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<td>1</td>
<td>TB-SS4-11</td>
<td>EYE &amp; SHAFT</td>
</tr>
</tbody>
</table>

**Tolerances**

- Angle: ± 0.5°
- Dimension: ± 0.01 ± 0.005
- X<12" = ± 1/32"
- X>12" = ± 1/16"

**Hall Industries, Inc.**

514 Mecklem In Ellwood City, PA 16117
1. TAGS MUST BE INSTALLED.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
<td>1</td>
<td>LIFT-15</td>
<td>PUMP MOUNTING BRACKET</td>
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<tr>
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<td>LOWER PIVOT SHAFT</td>
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<td>WHEEL ARM WELDMENT</td>
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<td>1</td>
<td>LIFT-2R</td>
<td>WHEEL ARM PIVOT SHAFT/ W 2 COLLARS</td>
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<td>WHEEL ARM PIVOT WELDMENT</td>
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<td>TB-8898-7</td>
<td>WHEEL 10&quot;</td>
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<td>HYDRAULIC PUMP ASSEMBLY</td>
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<td>TB-8898-4</td>
<td>HANDLE/WHEEL ASSY CLAMP</td>
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<td>TB-8898-5</td>
<td>HEX BOLT GRS ZP</td>
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<td>8</td>
<td>TB-8898-6</td>
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<td>LOCK WASHER ZP</td>
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<td>22</td>
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<td>TB-8714-10</td>
<td>EXTENSION SPRING</td>
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<td>TB-TAG-METAL IDENTIFICATION TAG (NOT SHOWN)</td>
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<td>24</td>
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</table>
ORDERING INFO:
1. TO ADD TO EXISTING BAR YOU WILL NEED TO PURCHASE KIT TS-737-ASL-HW (THIS KIT INCLUDES AUTOMATIC LATCH TS-737-ASL, BOLT TB-8312-B11, NUT TB-8312-B5, AND WASHER TB-8312-B13).
2. TO PURCHASE A NEW TOWBAR HEAD WITH THIS KIT ALREADY INSTALLED IT WILL BE A TB-8312-ASL.
3. TO PURCHASE A NEW COMPLETE TOWBAR WITH THIS KIT & FIXED WHEELS, IT WILL BE A TB-9267-ASL.

NOTES:
1. USE NEVERSIEZE WHEN INSTALLING NUT.
NOTES:

1. ORDERING INFO:

1. TO ADD TO EXISTING BAR YOU WILL NEED TO PURCHASE KIT TB-8312-LHA-HW (THIS KIT INCLUDES LATCH TB-8312-LHA, BOLT TB-8312-B11, NUT TB-8312-B5, AND WASHER TB-8312-B13).
2. TO PURCHASE A NEW TOWBAR HEAD WITH THIS KIT ALREADY INSTALLED IT WILL BE A TB-8312-WL.
3. TO PURCHASE A NEW COMPLETE TOWBAR WITH THIS KIT & FIXED WHEELS, IT WILL BE A TB-9267-WL.
4. TO PURCHASE JUST A LANYARD IT WILL BE PART NUMBER TB-8312-LHA-L.
5. TO PURCHASE JUST A RING FOR THE LANYARD IT WILL BE PART NUMBER TB-9205-AT-1003.

REVISIONS

<table>
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<th>BY</th>
<th>CHK</th>
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<td>3/5/2013</td>
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<td>1/8&quot; HEIGHT INCREASE</td>
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<td>ADD NOTES</td>
<td>6/24/2013</td>
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TO ORDER REPLACEMENT LANYARD KIT
ORDER PART NUMBER: TB-8312-LHA-LK
THIS KIT INCLUDES A LANYARD AND TWO KEYRINGS FOR ATTACHMENT

LANYARD KIT NOT SHOWN BUT IS INCLUDED

厅 Industries, Inc.

514 Mecklem ln Ellwood City, PA 16117

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SOLIDWORKS

Hall Industries, Inc.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES

ANGLE  ± 0.5° ± .01 ± .005

THIRD ANGLE PROJECTION

PROJECT AV

DESCRIPTION LATCH HANDLE ASSEMBLY

FILE NAME TB-8312-LHA LATCH HANDLE ASSEMBLY

CHECK DC

DATE: 6/27/2012

DRAWN BJE

DATE: 9/28/2011

SIZE: A

DWG/PART NO: TB-8312-LHA

SHEET 1 OF 1

SCALE 1:2

WEIGHT: 0.91 LBS

REV 3

厅 Industries, Inc.

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SOLIDWORKS

厅 Industries, Inc.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES

ANGLE  ± 0.5° ± .01 ± .005

THIRD ANGLE PROJECTION

PROJECT AV

DESCRIPTION LATCH HANDLE ASSEMBLY

FILE NAME TB-8312-LHA LATCH HANDLE ASSEMBLY

CHECK DC

DATE: 6/27/2012

DRAWN BJE

DATE: 9/28/2011

SIZE: A

DWG/PART NO: TB-8312-LHA

SHEET 1 OF 1

SCALE 1:2

WEIGHT: 0.91 LBS

REV 3

厅 Industries, Inc.

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SOLIDWORKS
ORDERING INFO:

2. TO PURCHASE A NEW TOWBAR HEAD WITH THIS KIT ALREADY INSTALLED IT WILL BE A TB-8312-WL-A.
3. TO PURCHASE A NEW COMPLETE TOWBAR WITH THIS KIT & FIXED WHEELS, IT WILL BE A TB-9267-WL-A.
4. TO PURCHASE JUST A LANYARD IT WILL BE PART NUMBER TB-8312-LHA-L.
5. TO PURCHASE JUST A RING FOR THE LANYARD IT WILL BE PART NUMBER TB-9205-AT-1003.

NOTES:

1. ADDING A REPLACEMENT LANYARD KIT

ORDER PART NUMBER: TB-8312-LHA-LK

THIS KIT INCLUDES A LANYARD AND TWO KEYRINGS FOR ATTACHMENT

REV DESCRIPTION DATE BY CHK
0 ORIGINAL UNK - -
1 UPDATE DESIGN 4/1/2013 BJE DC
2 ADD NOTES 6/4/2013 BJE SAK

TOLERANCES
ANGLE .XX .XXX
± 0.5° ± .01 ± .005

PROJECT AV
THIRD ANGLE PROJECTION ✔ ➥
FILE NAME TB-8312-LHA-A LATCH HANDLE ASSEMBLY
DESCRIPTION LATCH HANDLE ASSEMBLY
DRAWN BY BJE
DATE 4/1/2013
SCALE 1:2
WEIGHT: 0.91 LBS

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1. USE WHEN FACTORY INSTALLED DRAG PLATES HAVE BEEN WORN DOWN.
AIRCRAFT TOWBARS - SOFT START

BENEFITS

- Decreases shear pin failure resulting in lower more reliable pushback times
- Less shock into the nose gear of the plane

FEATURES

- Replaceable spring elements
- Towbar rollover protection
- Approximately one inch of travel during pushing or pulling (2” overall travel)

For more information please visit us online at www.halltechservices.com, call us at 724.824.7100, or email us at info@halltechservices.com

www.halltechservices.com
Hall Industries Equipment Division ~ AIRLINE ORDERS

FAX#: 724 758-1558 PHONE #: 724 752-2000

ORDER DATE: _______________ TAKEN BY: _______________ TIME: _______ AIRLINE CODE: _______________
PERSON CALLING: _______________ PHONE#: _______________ FAX: _______________
E-MAIL ADDRESS: _______________ CUSTOMER P.O.# _______________
MASTER CARD# _______________
EXP. DATE: _______________ CVC# _______________
SHIP DATE: _______________ HOW TO SHIP: UPS: GRD _____ RED _____ OTHER _______
FED EX: GRD _____ O/N _______ O/N P1 _____ OTHER _______ Acct. #: _______________
TRUCKING COMPANY: ____________________________
HUB : _____________________________ EMPLOYEE #: __________________________
BILLING ADDRESS: ____________________________ SHIP TO ADDRESS: ____________________________

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NOTES:______________________________________________________________________________________
____________________________________________________________________________________________
Other Products and Custom Design Services:

Hall Industries provides a number of additional products beyond our towbar line. Some of the custom projects that we have done are shown below. We have our own engineering staff along with machine, fabrication, and GSE maintenance shops. We can design and build your ideas to increase safety, productivity, and profits.

**0017-0001 Custom Towbar (Solve a Problem)**

<<This project involved designing and manufacturing a custom towbar to be used in the Nuclear Industry. This towbar shipped complete with custom shear pins calibrated to the application.>>

**IA-8980 Preconditioned Air Inlet (PCA) Adapters**

<< Our PCA Inlet Adapters are part of our GSE product line. We inventory all of the parts and can ship usually the same day as ordered.>>

**0010-0001 Certified Transmission Lifting Bracket (Meet a Demand)**

A customer came to us with a lifting problem. They needed a tested and certified lifting bracket to prevent them from getting cited by OSHA. We designed, tested, and fabricated a solution. >>

<<1000-3002 Adapter 8312 to Tronair 1000-0001 Hydro Adapter Assembly>>

Hall Industries offers adapters for nearly every towbar (even competitors) that allow you to use our towbar tubes / heads with your existing equipment.

Besides the products listed above some of the other things that we sell include PCA ducting, Solid PBB tires, and baggage cart tires.

Feel free to contact us about your GSE problems; after all we are “The Problem Solvers”.