

THIS MANUAL INCLUDES INFORMATION PROPRIETARY TO AIRGLAS, INC. AND SHALL NOT BE USED TO MANUFACTURE OR REPRODUCE WITHOUT PERMISSION OF AIRGLAS, INC.

# **INSTALLATION, MAINTENANCE, SERVICE INSTRUCTIONS & ILLUSTRATED PARTS LIST**

AIRGLAS MANUAL NO. LH4000-105

MODEL LH4000 Ski Kit  
For  
Cessna 180 & 185 Airplanes

CODE INDENT. NO. 17564

AIRGLAS INC.®

## LOG OF REVISIONS

Revision No.	Pages Affected	Description	Date
Initial Release	ALL	ORIGINAL	JANUARY 25 2005
A	1,3,8,14,16,28,29,37	REVISION	JULY 11 2005

# TABLE OF CONTENTS

	<u>Title</u>	<u>Page</u>
	Equipment and Materials	3
<b>Section 1.0</b>	Fuselage Preparation	4
<b>Section 2.0</b>	Stub Axle Installation (outboard)	12
<b>Section 3.0</b>	Stub Axle Installation (inboard)	13
<b>Section 4.0</b>	Hydraulic Installation	14
<b>Section 5.0</b>	Electrical Installation	18
<b>Section 6.0</b>	Ski Attachment/Installation	21
<b>Section 7.0</b>	Parts List	30
<b>Section 8.0</b>	Maintenance and Inspection Criteria	35

# EQUIPMENT AND MATERIALS

## INITIAL SETUP

### PERSONNEL REQUIRED:

- CERTIFIED A&P MECHANIC
- ASSISTANT

## TOOLS

- HAND TOOLS, SMALL KIT
- #12&13 drill bits and a 1/8 drill bit
- DRILL MOTOR
- FUNNEL
- RAGS

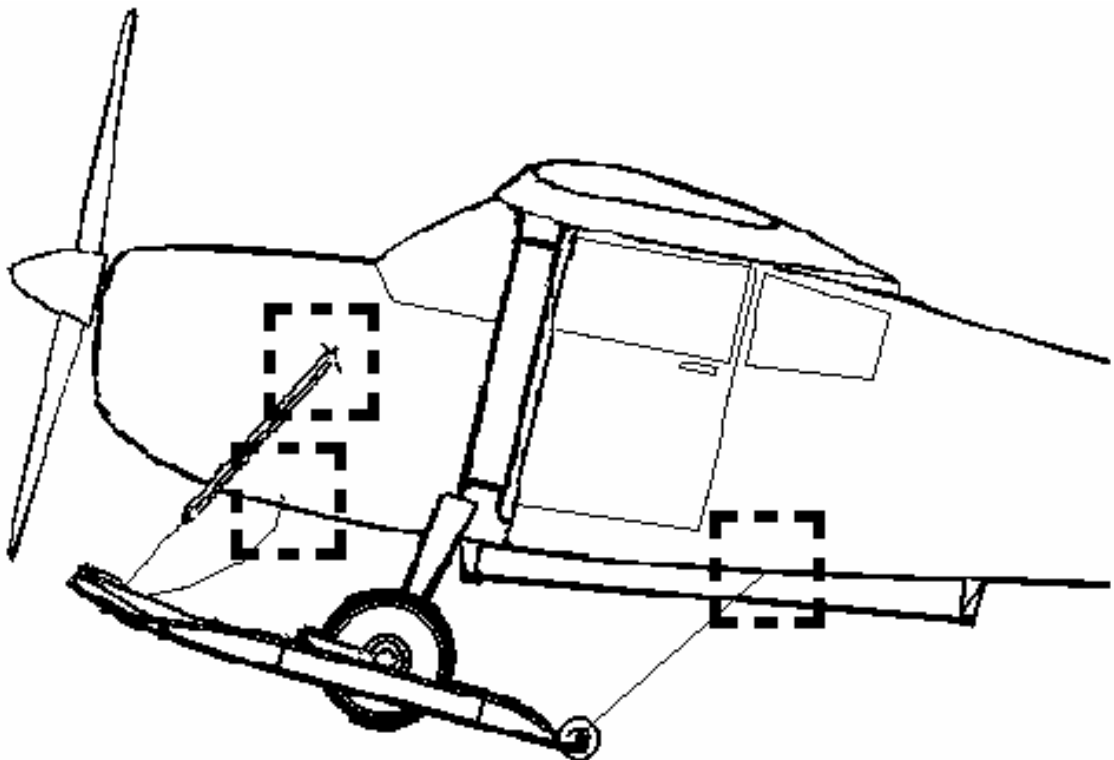
## MATERIALS/PARTS

- 1 OZ. SCOTCH WELD 3M 2216 B/A EPOXY
- 18 EA. THOMAS & BETTS TY527MX TY-WRAPPS
- 80 GRIT SAND PAPER
- 1 GAL. MIL-H-5606 HYDRAULIC FLUID
- LOCTITE (REMOVABLE) THREADLOCKER 242
- 6 EA. AN380-3-2 COTTER PINS
- LPS-2 lubricant
- MULTIPURPOSE HEAVY DUTY GREASE

# 1.0 FUSELAGE PREPARATION

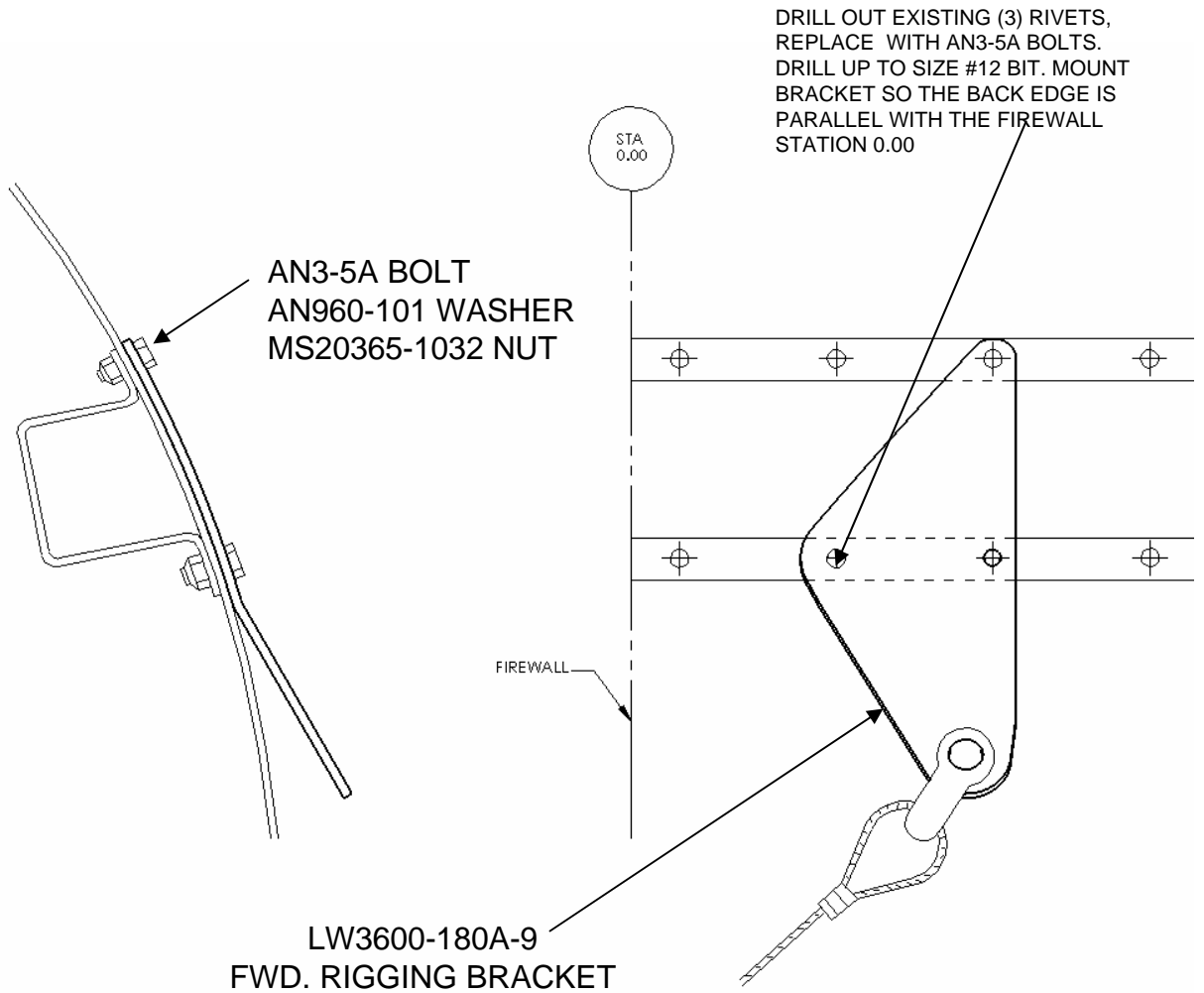
## SKI RIGGING BRACKETS AND ATTACH FITTINGS

The aircraft will require brackets and attach fittings to be installed on the fuselage in order for the rigging to attach. This section of the manual describes and depicts these procedures.



# 1.0 FUSELAGE PREPARATION – FORWARD RIGGING BRACKET

## FWD. RIGGING BRACKET

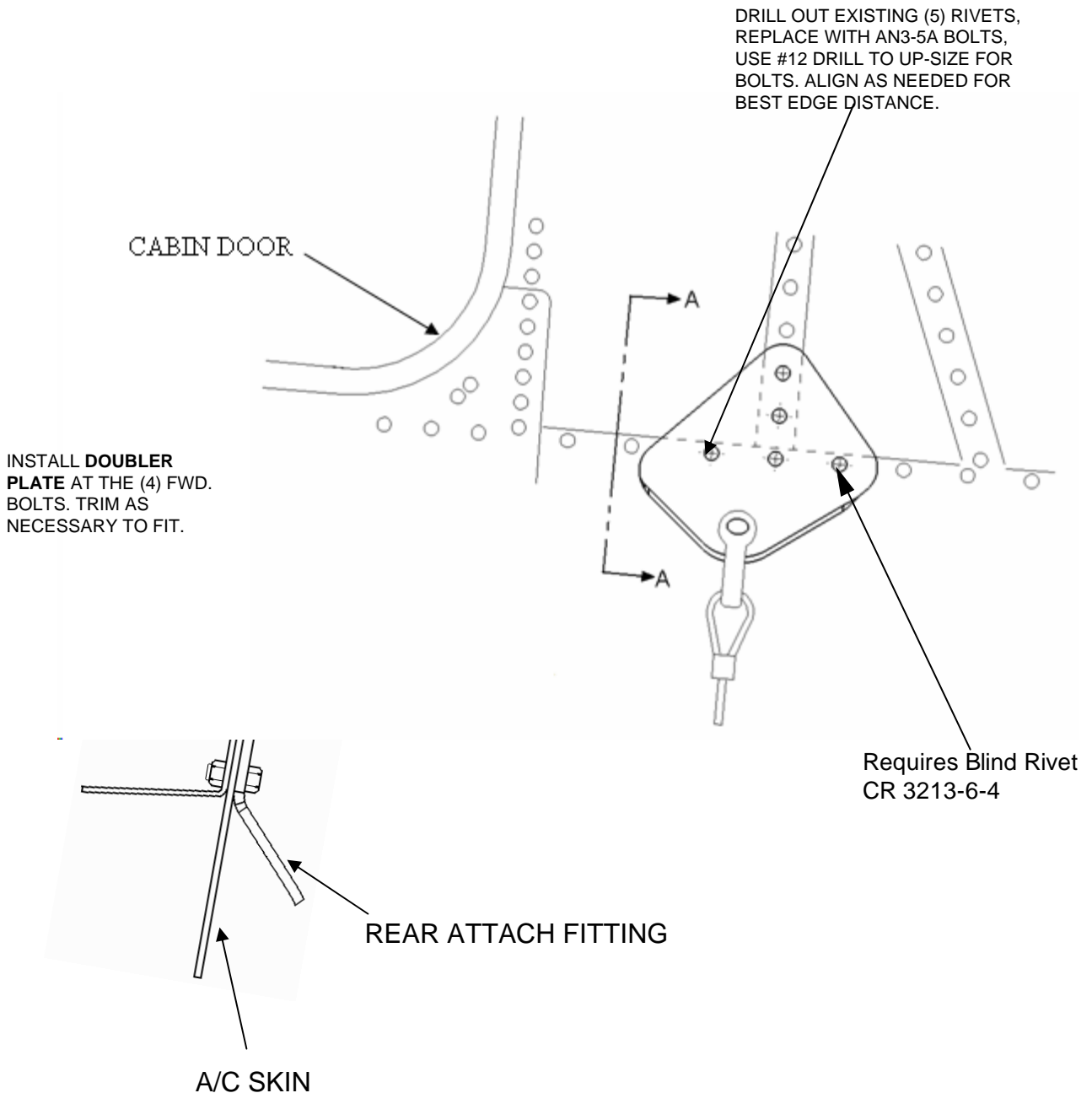


## 1.0 FUSELAGE PREPARATION – FORWARD RIGGING BRACKET



# 1.0 FUSELAGE PREPARATION – REAR ATTACH FITTING

## REAR ATTACH FITTING





# 1.0 FUSELAGE PREPARATION – REAR ATTACH FITTING



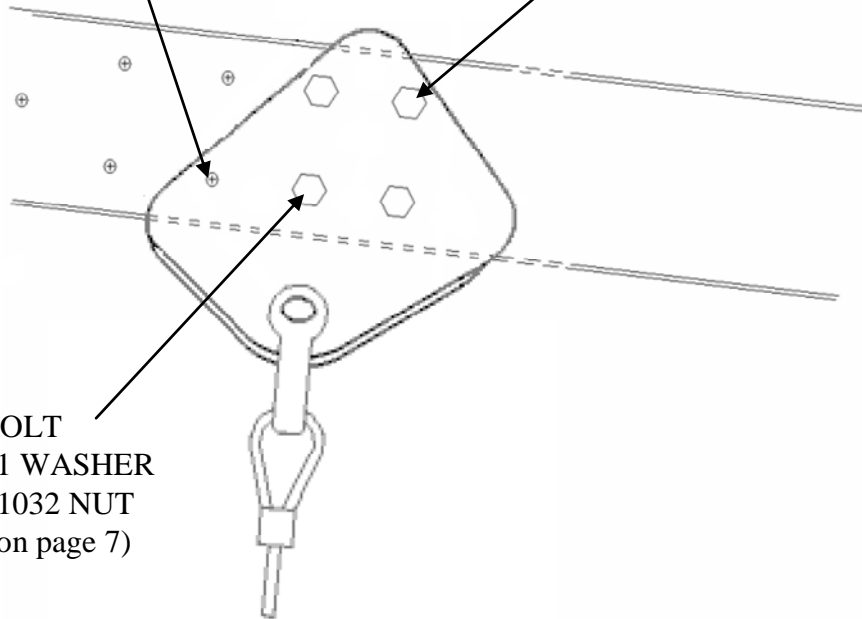
# 1.0 FUSELAGE PREPARATION – REAR ATTACH FITTING

REAR ATTACH FITTING:

## Hole Pattern For Older C-180's & 185's

Requires Blind Rivet  
CR 3213-6-4

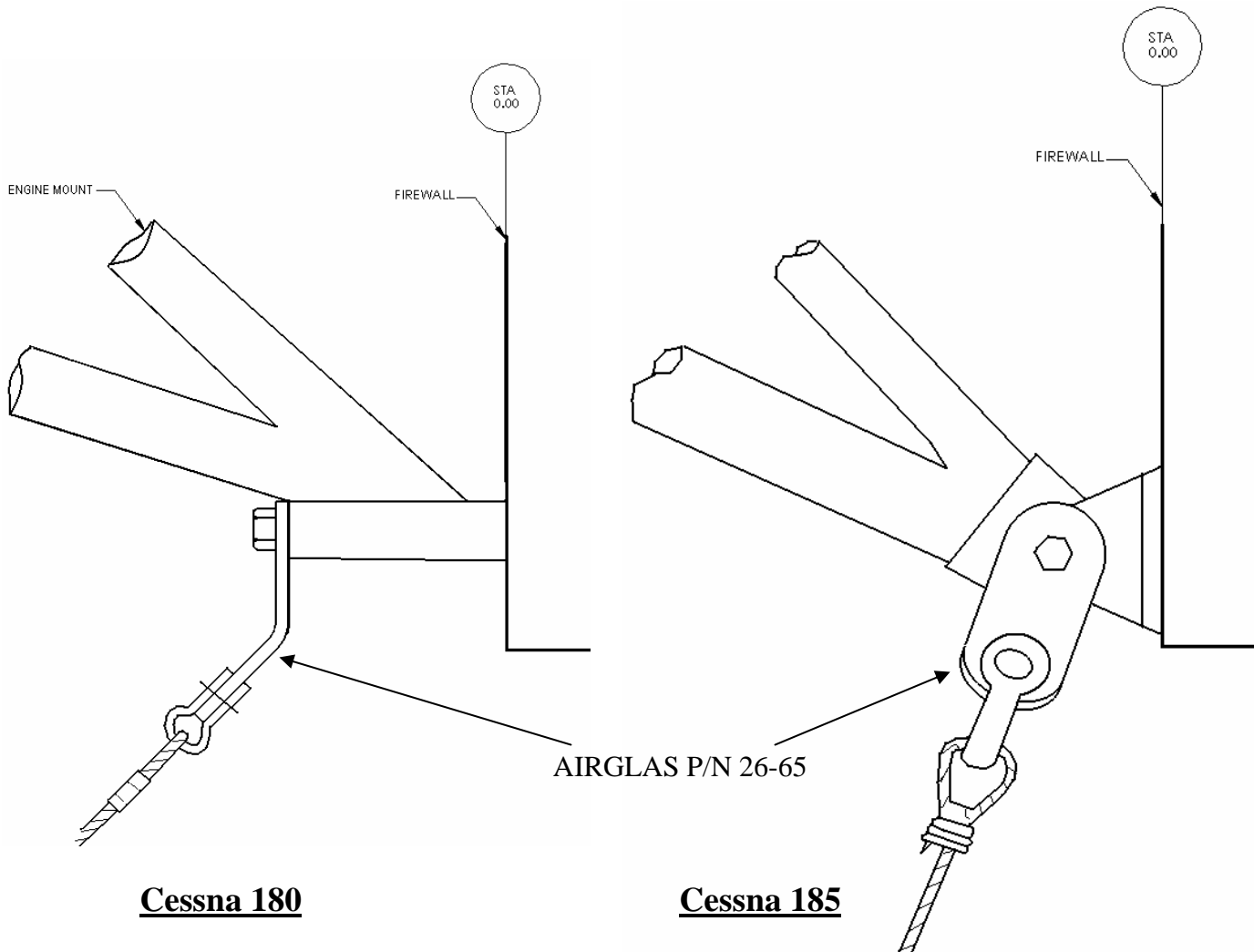
DRILL OUT EXISTING (5) RIVETS,  
REPLACE WITH AN3-5A BOLTS, USE  
#12 DRILL TO UP SIZE FOR BOLTS.  
ALIGN AS NEEDED FOR BEST EDGE  
DISTANCE.



AN3-5A BOLT  
AN960-101 WASHER  
MS20365-1032 NUT  
(as shown on page 7)

# 1.0 FUSELAGE PREPARATION – FRONT SAFETY CABLE ASSEMBLY

## FRONT SAFETY CABLE ASSY.



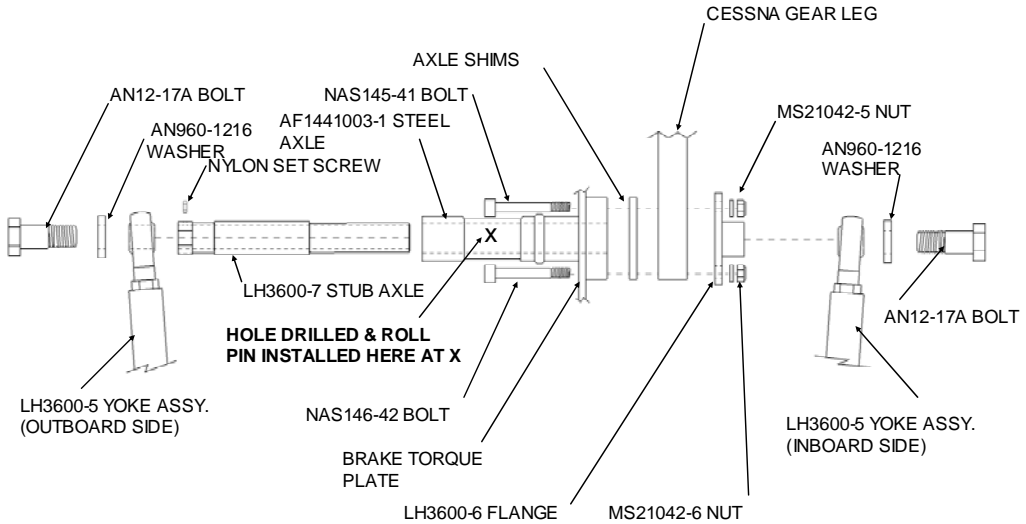
Note: Lower cowl will need to be notched to allow for bracket installation.

## 1.0 FUSELAGE PREPARATION – FRONT SAFETY CABLE ASSEMBLY



Note: Lower cowl will need to be notched to allow for bracket installation.

## 2.0 STUB AXLE INSTALLATION - OUTBOARD

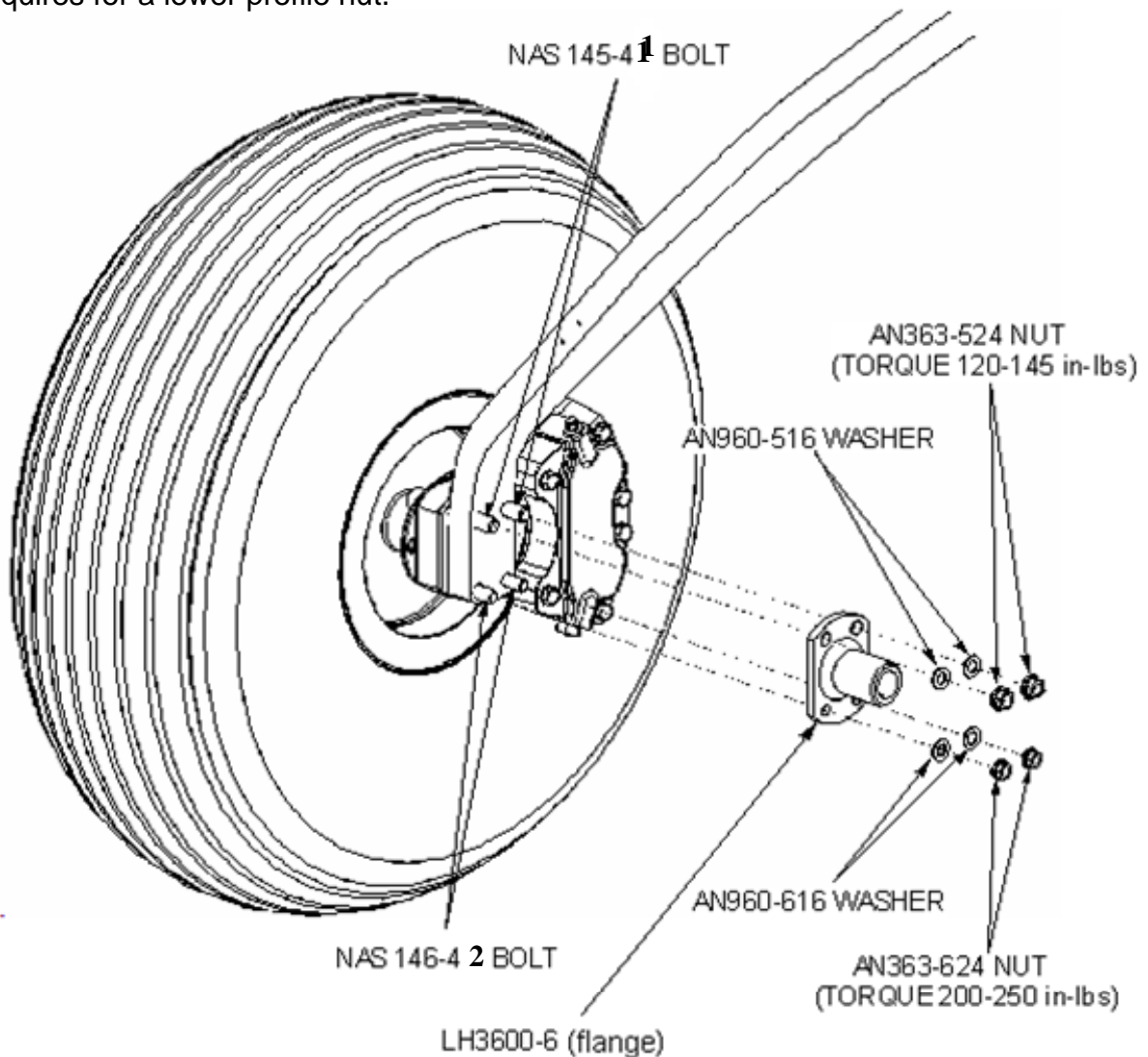


### STUB AXLE (OUTBOARD) LH3600-7 INSTALLATION

The outboard stub axle installation requires that the aircraft axles are steel p/n AF1441003-1 or Cessna part. Use of an aluminum axle will be considered an unapproved installation. The LH3600-7 will be inserted into the outboard end of the axle until it butts up firmly to the AF1441003-1 aircraft axle. Next a hole will be drilled with a # 13 bit all the way through both parts at the same time. The location of the hole will be midpoint between the two shoulders on the AF1441003-1. The hole should be drilled straight through without angling or tipping the hole. Next a 3/16 x 1 3/8 roll pin shall be driven flush into the two parts. Next carefully drill the cotter pin hole through using a 1/8 drill bit. It is helpful to drill this hole from both sides to reduce the chance of misalignment. Deburr and smooth any rough edges left from drilling. Repeat these steps on the other side.

### 3.0 STUB AXLE INSTALLATION - INBOARD

The inboard stub axle is installed with the hardware that is called out in this diagram, however, the AN363 nuts may be substituted for MS21042 nuts if the shim stack requires for a lower profile nut.



## 4.0 HYDRAULIC INSTALLATION

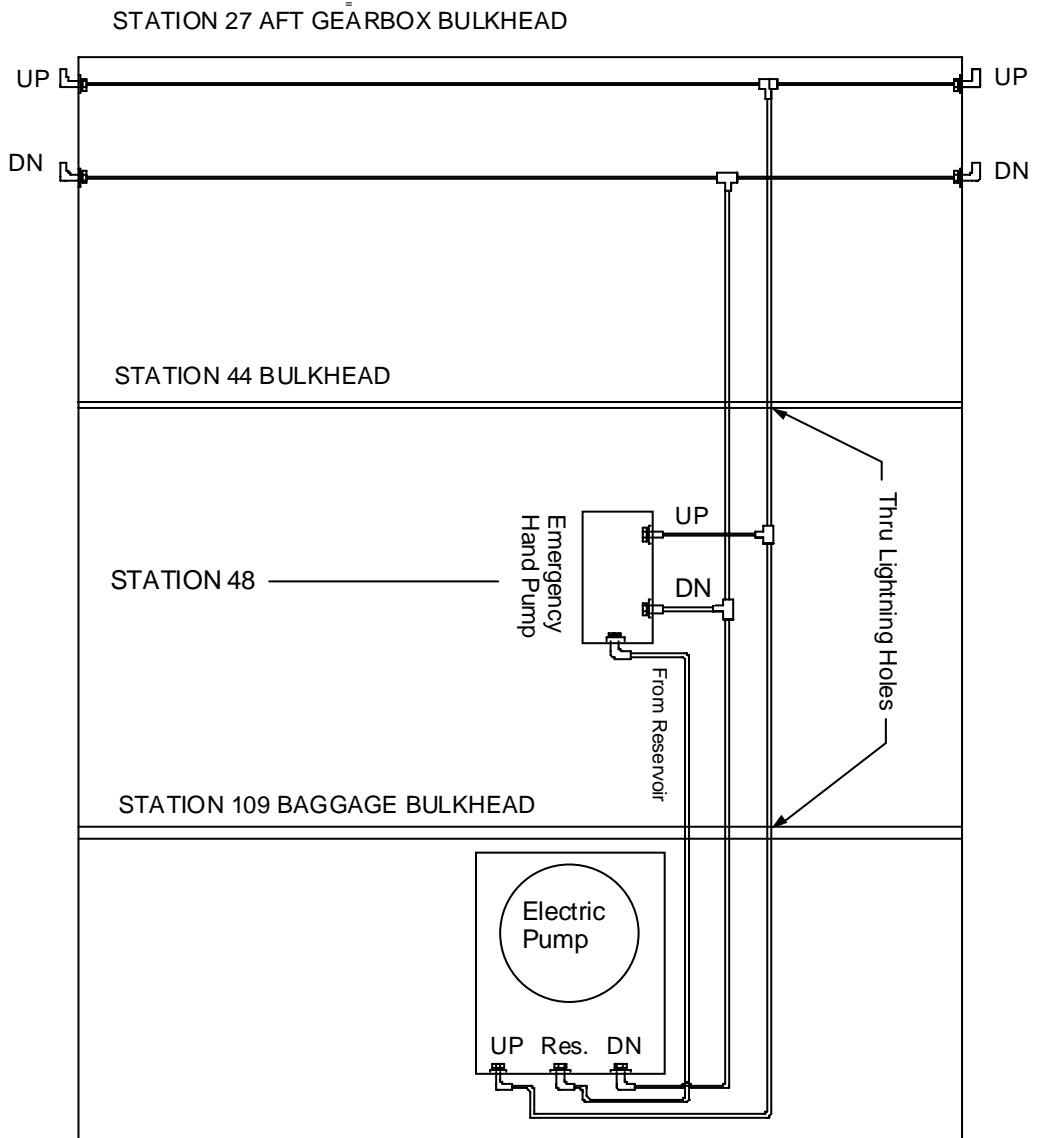
### HYDRAULIC LINE & PUMP LOCATIONS IN FUSELAGE

The electro/hydraulic pump will be mounted aft of station 109 (the baggage bulkhead) by means of two (2) 3/8 dia. bolts that mount through the belly skin approximately 5.5" right of center. The bulkhead is reinforced at this location with a piece of 2024-T3 .091" aluminum that is bolted to the bulkhead and through the belly skin. See the hydraulic diagram. The hydraulic lines will run crossways aft of station 27 (gearbox bulkhead) from the AN833-4D fittings to two (2) AN824-4D tees located at station 31 (inspection hole co-pilot's side floorboard). From this point the lines travel aft through a lightening hole at station 44 (bulkhead) to station 55 (inspection hole co-pilot's side floorboard) to two (2) more AN824-4D tees. These tees are for an optional hand pump, and can be capped off if no hand pump is installed. From this point the lines will continue aft through lightening holes through remaining bulkheads to the baggage bulkhead, where they will pass through and up to the pump. If a hand pump is installed, a third line will be required to run from the pump reservoir port to the supply inlet on the hand pump.

Special attention must be given to the routing of the lines through the aircraft. All lines must be supported in areas where there may be interference with cables, chains, pulleys or any moving parts. Lines that pass through bulkheads must either be sheathed or the bulkheads must be grommeted at the lightening holes to protect from abrasion and chafing. Allow for proper bend allowances in the hose when necessary.

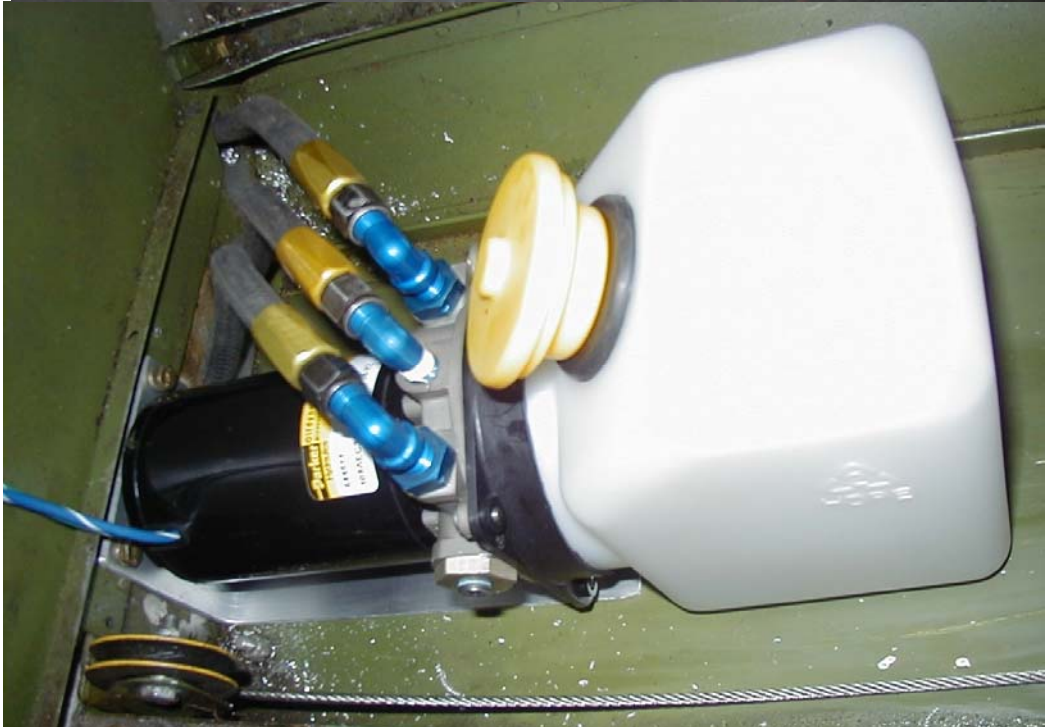
The optional hand pump installation location may vary from aircraft to aircraft. Some will mount at the seatbelt bracket location others may require additional structural enhancement to support the pump. Aircraft with preexisting pumps will tap into the AN824-4D tees or otherwise operate on manual only.

# 4.0 HYDRAULIC INSTALLATION





## 4.0 HYDRAULIC LINE ROUTING & HYDRAULIC PUMP MOUNTING

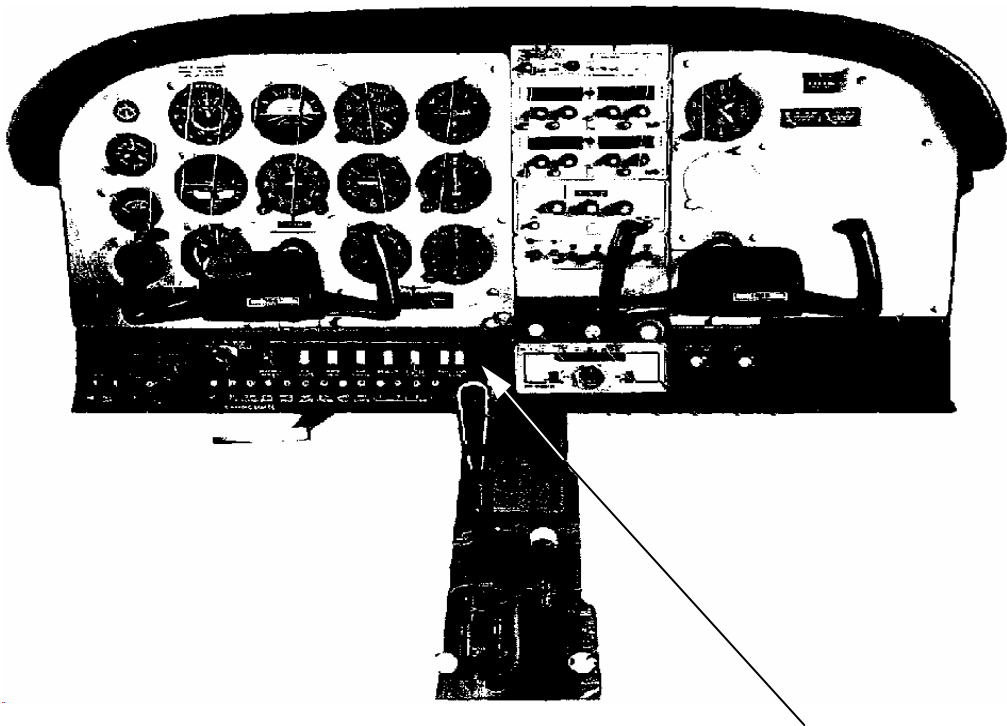


## 4.0 OPTIONAL HAND PUMP LOCATION & MOUNTING



## 5.0 ELECTRICAL INSTALLATION

The electrical components must be installed and connected by a certified mechanic in accordance with FAR part 43 and at least CAR 3 regulations. This section describes and depicts the operation and general layout of the system components.



Location of the operating  
switch & indicator lights.

## 5.0 ELECTRICAL INSTALLATION



**\*SWITCH-UP**

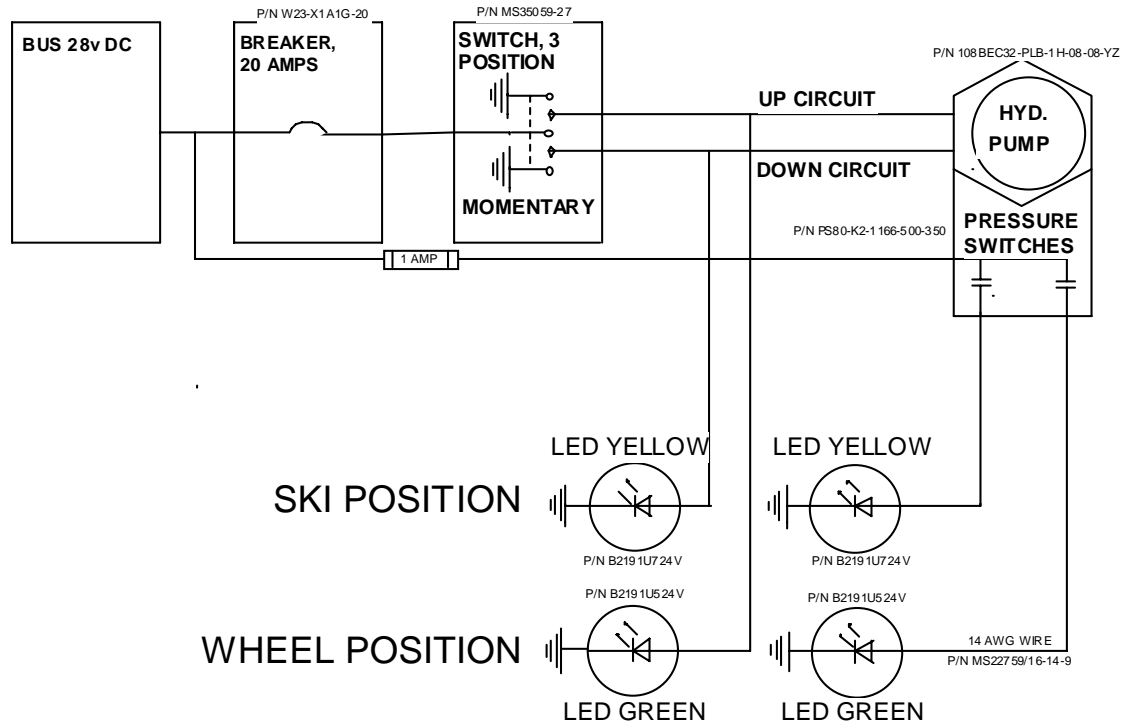
**SKIS-YELLOW**

**\*SWITCH-DOWN**

**WHEELS-GREEN**

# 5.0 ELECTRICAL SCHEMATIC

## LH4000 ELECTRICAL SCHEMATIC



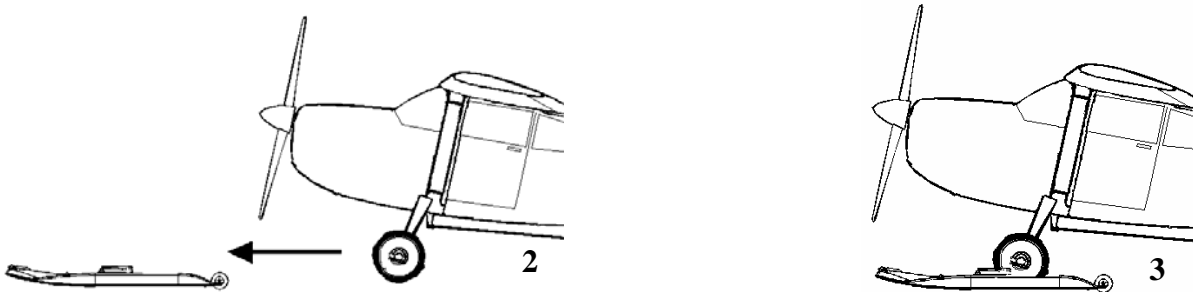
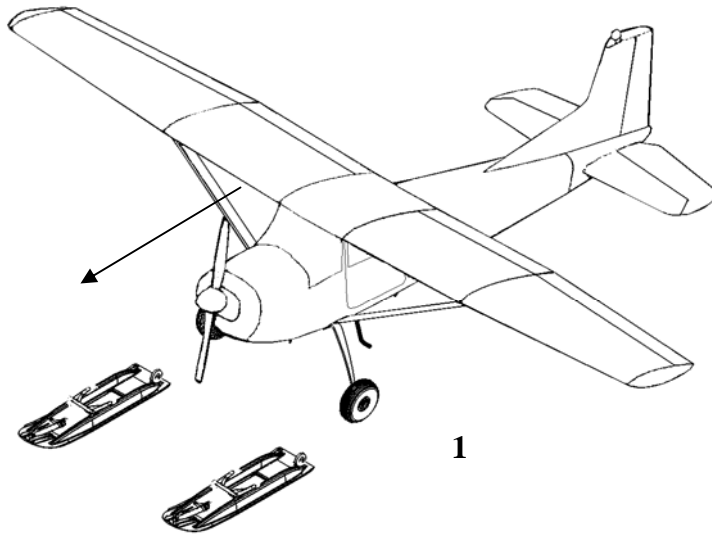
### SWITCH AND INDICATOR LIGHT OPERATION

The left hand yellow indicator light will illuminate while the skis are in transit to deployment. When the skis are fully deployed, the right hand yellow light will illuminate. When the operator releases the switch, the left hand yellow light will extinguish. The right hand yellow light will remain on as long as the skis are deployed.

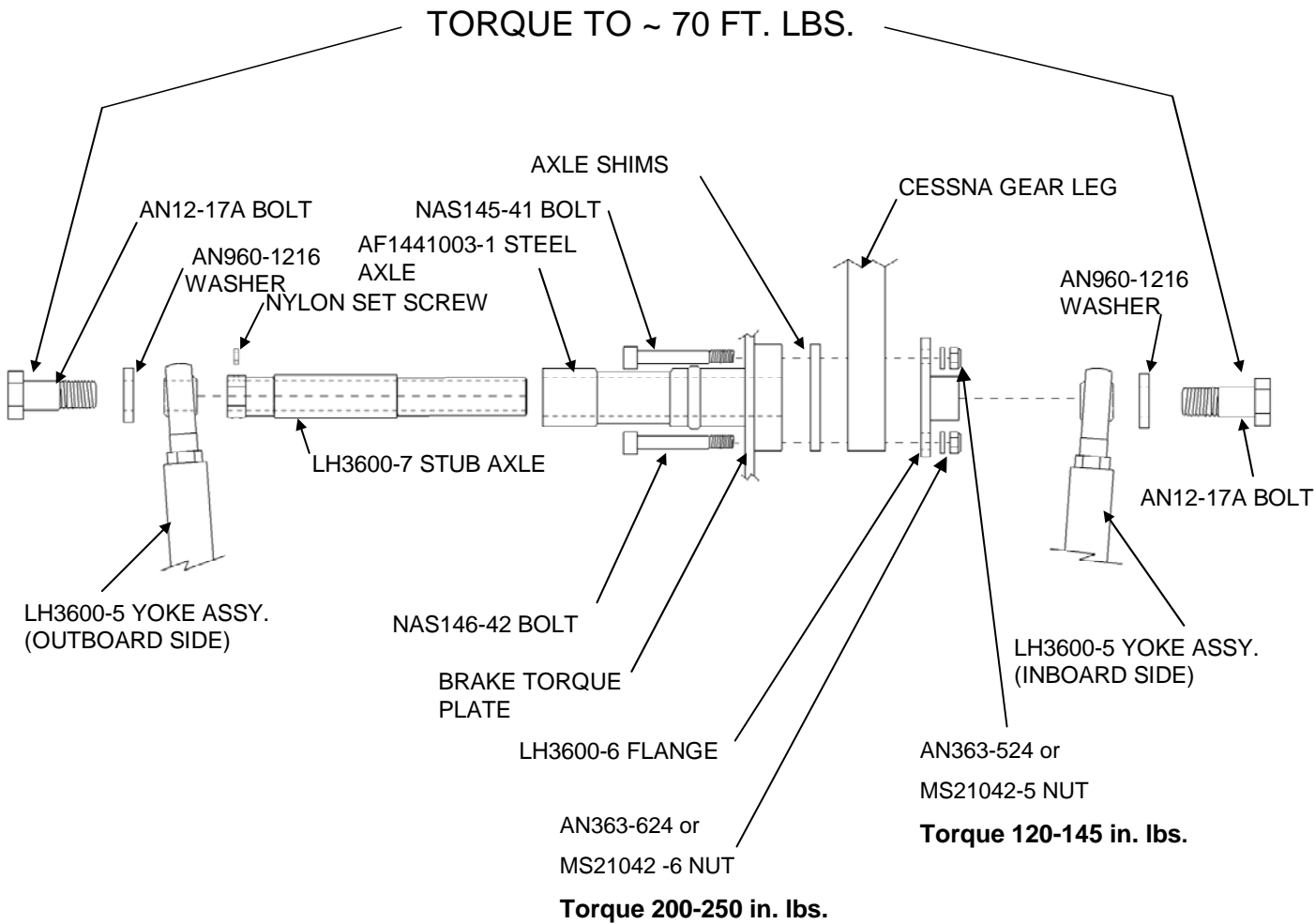
When the operator selects the wheel position, the left hand green light will illuminate while the skis are in transit to the retracted position. When the skis are fully retracted the right hand green light will illuminate and stay on as long as the ski is retracted. When the operator releases the switch, the left hand green light will extinguish.

## 6.0 SKI ATTACHMENT INSTALLATION

This section describes the attachment of the skis to the Aircraft. Unlike some skis, with the LH4000 Ski Kit the aircraft requires no jacking or the removal of any parts. Once the sub axles, fittings, brackets, and hydraulics are in place, the aircraft can simply roll up onto the skis. After the skis are in position, the yoke, hydraulic lines and rigging may be attached.



# 6.0 YOKE ATTACHMENT



This is the layout and relationship between the yoke, the stub axles, and the landing gear leg. Torque values must be adhered to.



# 6.0 SKI ATTACHMENT INSTALLATION – RIGGING BUNGEE & SAFETY CABLE



Install LH3600-15 Safety Cable onto LH3600-19 Tab using AN395-19 Clevis pin and AN380-3-2 Cotter pin

Install LH3600-14 Forward bungee onto LW3600-180A-9 Cowling bracket using AN395-19 Clevis pin and AN380-3-2 Cotter pin



THIS PAGE, INTENTIONALLY LEFT BLANK

## 6.0 HYDRAULIC LINES - EXTERNAL

Routing and securing of external hydraulic lines will be explained in this section. It is necessary to install and secure the owner supplied hydraulic lines to the fuselage and the gear legs.

1. The gear legs will need additional brake-line clamps bonded to the legs similar to the factory clamps. The location of the clamps are shown in photos on the next two pages .
2. The leg will have to be prepped in these areas for bonding of the clamps.
  - a. Tape off an area the same size as the clamp on both sides of the leg.
  - b. Rough-up the surface with 80 grit sandpaper inside the taped area. Remove any corrosion, loose paint, grease, oil, etc.
  - c. Slightly rough-up the inner surface of the clamps.
  - d. Mix and apply Scotch Weld 3M 2216 B/A grey epoxy to the leg and to the inside of the clamp.
  - e. Push the clamp onto the leg and wipe off the excess with acetone.
  - f. Tape the clamp to the leg to prevent any creep while curing.
  - g. Allow to cure for 24 hours at room temp, before employing the clamps.
  - h. Follow these steps for all 4 locations on the gear leg. Remove tape when finished.
  - i. If the preexisting brake line clamps are loose, it is recommended that they be re-secured in the same fashion.
3. Attach the hose ends to the AN833-4D fittings on the fuselage and to the AN832-4D fittings on the skis.
4. Make sure that there are no twists in the hoses and that they travel in sweeping arcs.
5. Route the lines along the trailing edge of the gear leg.
6. Bend the tangs on the added brake line clamps with a duckbill pliers, until they just make contact with the leg.
7. Attach lines to clamps as shown in the photo with Thomas & Betts TY527MX Ty-Wraps.
8. Check for ample slack at lower end of hoses to allow motion of the ski without pulling on the hoses.
9. Cycle skis in both directions when finished and check for leaks at the fitting connections.

## 6.0 HYDRAULIC LINE ROUTING - EXTERNAL



Additional clamp location.

## 6.0 HYDRAULIC LINE ROUTING - EXTERNAL



Add clamp in this area.

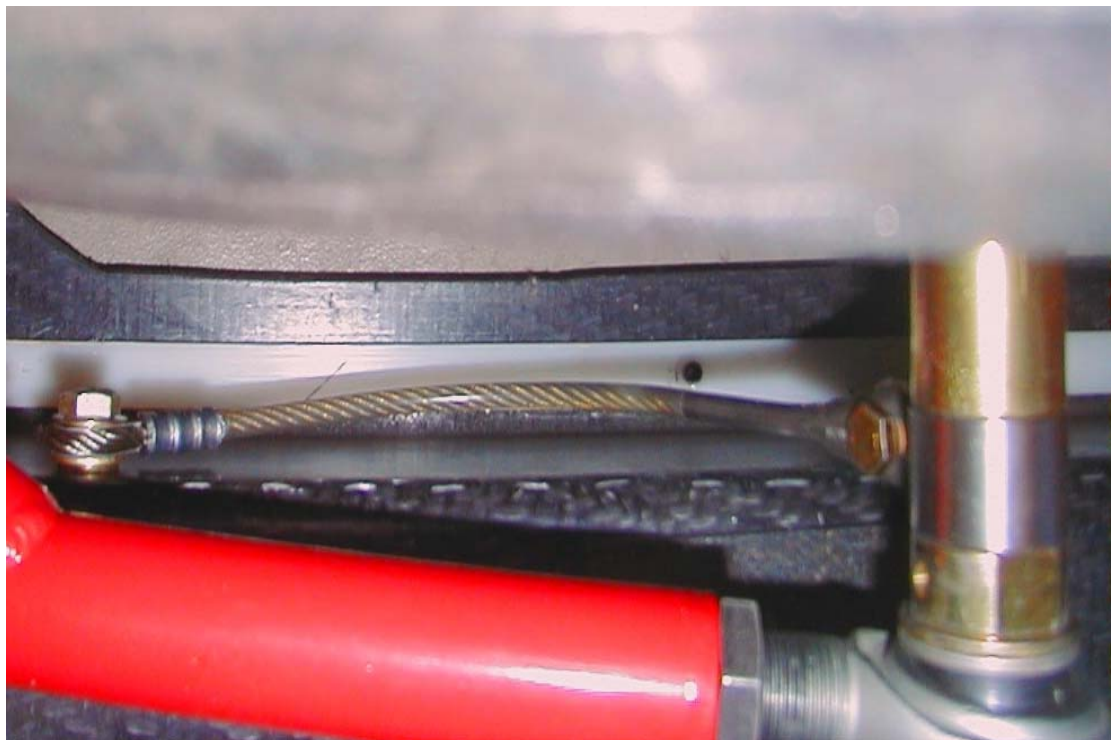
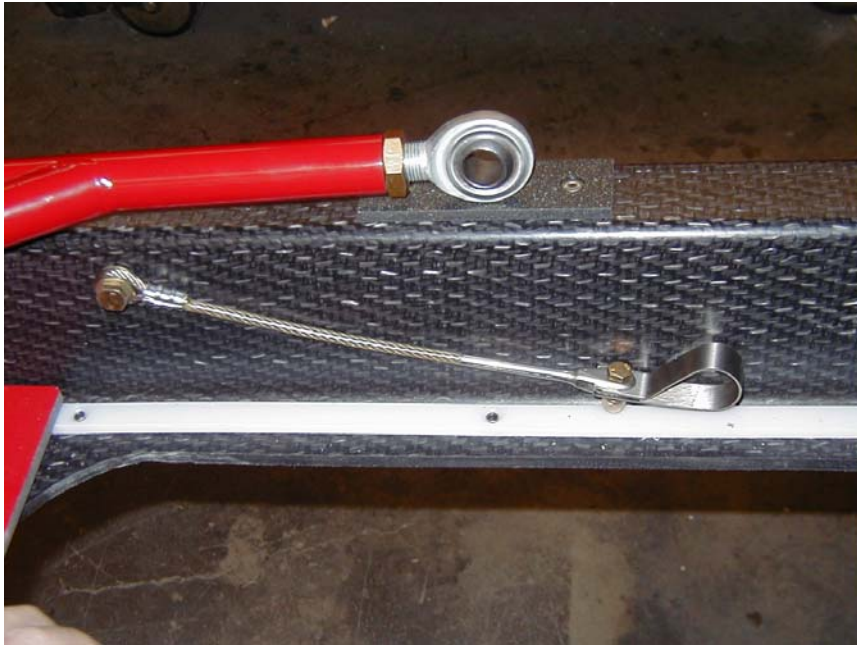
## 6.0 INSTALLATION - SKI AXLE RESTRAINING STRAP ASSEMBLY LH3600-10

The Ski Axle Restraining Strap Assembly is intended to keep the Yoke Assembly (LH3600-5) from traveling over-center in the unlikely event of a rigging failure. During normal operations of the ski this component does no work. It is important upon installation of the ski to attach this part to the ski and to the Stub Axle (LH3600-7). The clamp end is held in place with an AN4-7A Bolt, two AN960-4 Washers and an AN365-428 Nut. (This end must be allowed to pivot on the axle.) The pivoting attach point is held to the ski by an AN6-10A Bolt. When this bolt is installed it is imperative that it is installed with **REMOVEABLE** thread locking compound. (This part must be allowed to pivot.) Failure to follow these instructions may result in damage to the skis.

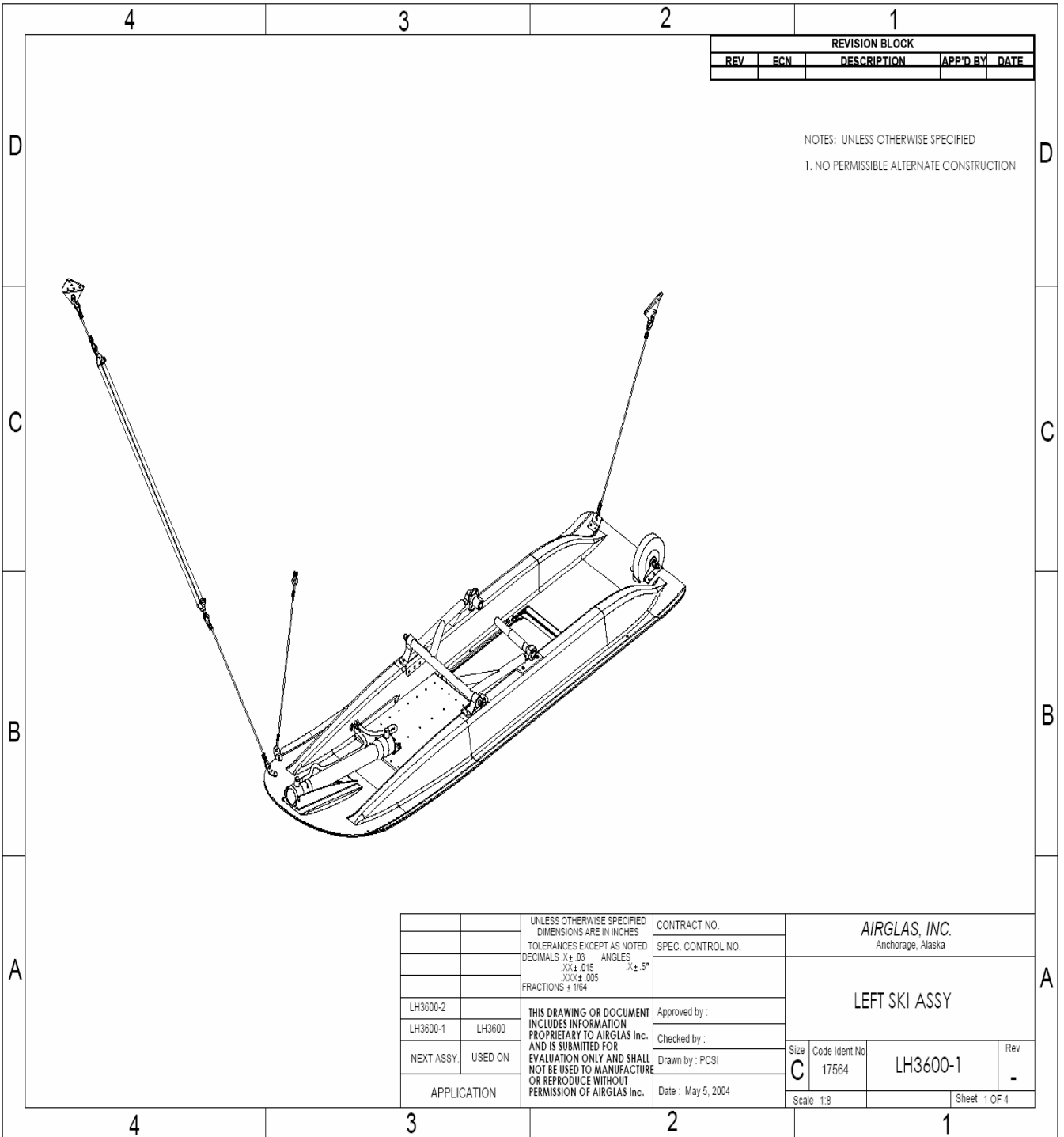
### WARNING

Aircraft shall not be operated without the (LH3600-10) Ski Axle Restraining Strap Assembly properly installed. Operation without the (LH3600-10) properly installed will be considered an unapproved ski installation.

## 6.0 INSTALLATION - SKI AXLE RESTRAINING STRAP ASSEMBLY LH3600-10



# 7.0 PARTS LIST



REVISION BLOCK				
REV	ECN	DESCRIPTION	APP'D BY	DATE

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. NO PERMISSIBLE ALTERNATE CONSTRUCTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	AIRGLAS, INC. Anchorage, Alaska	
TOLERANCES EXCEPT AS NOTED		SPEC. CONTROL NO.	LEFT SKI ASSY	
DECIMALS .XX ± .015    ANGLES    ° ± .5°		Approved by :	Size	Code Ident.No
XXX ± .005		Checked by :	C	17564
FRACTIONS ± 1/64		Drawn by : PCSI	LH3600-1	
LH3600-2		Date : May 5, 2004	Rev	-
LH3600-1	LH3600		Scale 1:8	
NEXT ASSY	USED ON		Sheet 1 OF 4	
APPLICATION				

# 7.0 PARTS LIST

4

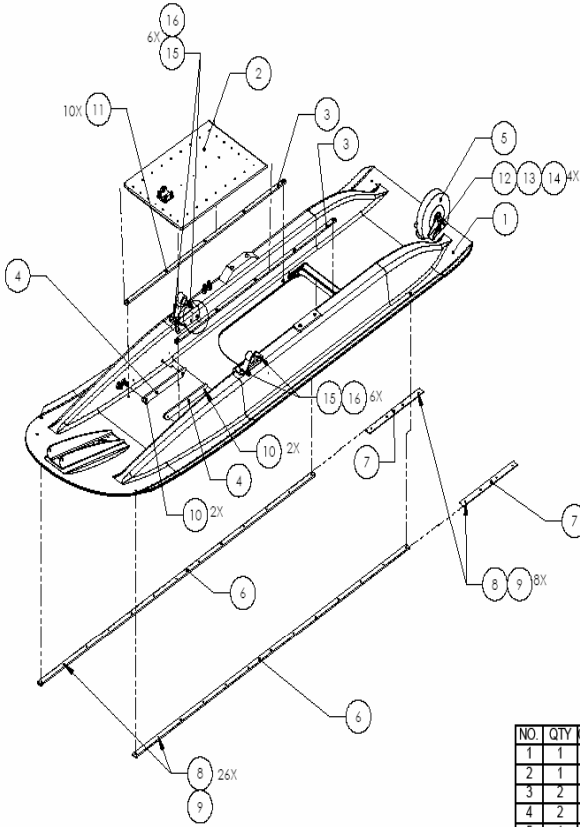
3

2

1

REVISION BLOCK				
REV	FCN	DESCRIPTION	APP'D BY	DATE

NOTES: UNLESS OTHERWISE SPECIFIED  
1. NO PERMISSIBLE ALTERNATIVE CONSTRUCTION



NO.	QTY	CODE-IDENT-NO	PART NO.	DESCRIPTION	STOCK-SIZE	MATERIAL	MATERIAL-SPEC	WEIGHT-LBS	FINISH	ZONE
1	1	17564	LH3600-01-1	SKI MOLDING ASSY				21		
2	1	17564	LH3600-8	DOOR ASSY						
3	2	17564	LH3600-01-6	WEAR STRIP						
4	2	17564	LH3600-01-2	DOOR GUIDE						
5	1	17564	LH3600-12	TAIL WHEEL ASSY						
6	2	17564	LH3600-01-3	SKI RUNNER						
7	2	17564	LH3600-01-11	REAR SKI RUNNER						
8	34		AN50910R-12	SCREW						
9	34		MS21042-3	NUT						
10	4		SSB6-6	RIVET						
11	12		SSB6-8	RIVET						
12	4		AN4-7A	BOLT						
13	4		AN960-416	WASHER						
14	12		AN365-428A	NUT						
15	14		AN5-7A	BOLT						
16	14		AN960-516	WASHER						

LH3600-2		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES EXCEPT AS NOTED DECIMALS $\times \pm .03$ ANGLES $\times \pm .015$ $\times \pm .5^\circ$ $\times \pm .005$ FRACTIONS $\pm 1/64$	CONTRACT NO.	<b>AIRGLAS, INC.</b> Anchorage, Alaska		
LH3600-1			SPEC. CONTROL NO.			
NEXT ASSY. USED ON			Approved by: WKL	<b>LEFT SKI ASSY</b>		
APPLICATION			Checked by: GL			
		THIS DRAWING OR DOCUMENT INCLUDES INFORMATION PROPRIETARY TO AIRGLAS Inc. AND IS SUBMITTED FOR EVALUATION ONLY AND SHALL NOT BE USED TO MANUFACTURE OR REPRODUCE WITHOUT PERMISSION OF AIRGLAS Inc.	Drawn by: PCSI Date: JUNE 1, 2004	Size <b>C</b>	Code Ident.No. 17564	Rev -
		Scale 1:16		Sheet 2 OF 4		

4

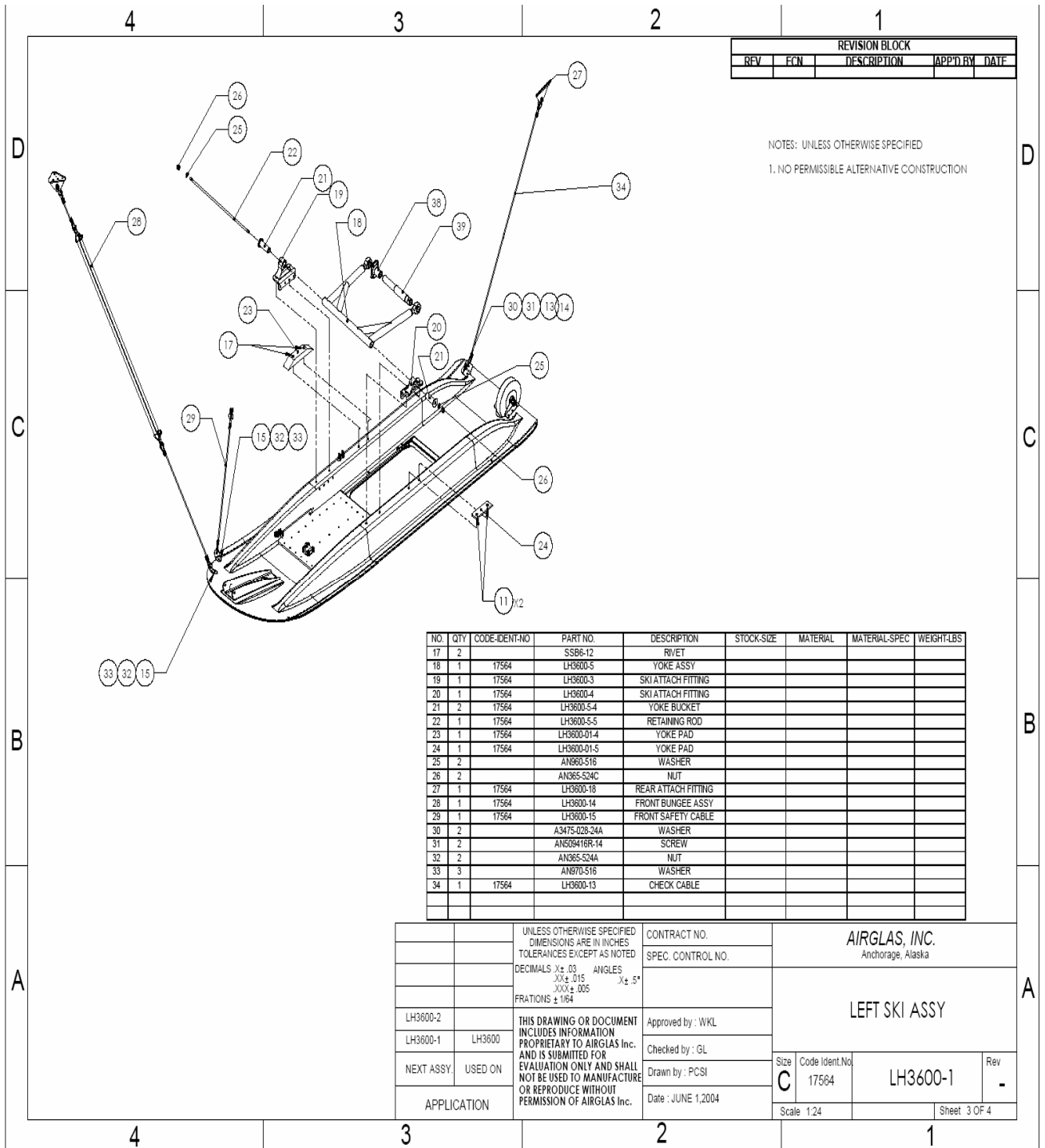
3

2

1



# 7.0 PARTS LIST



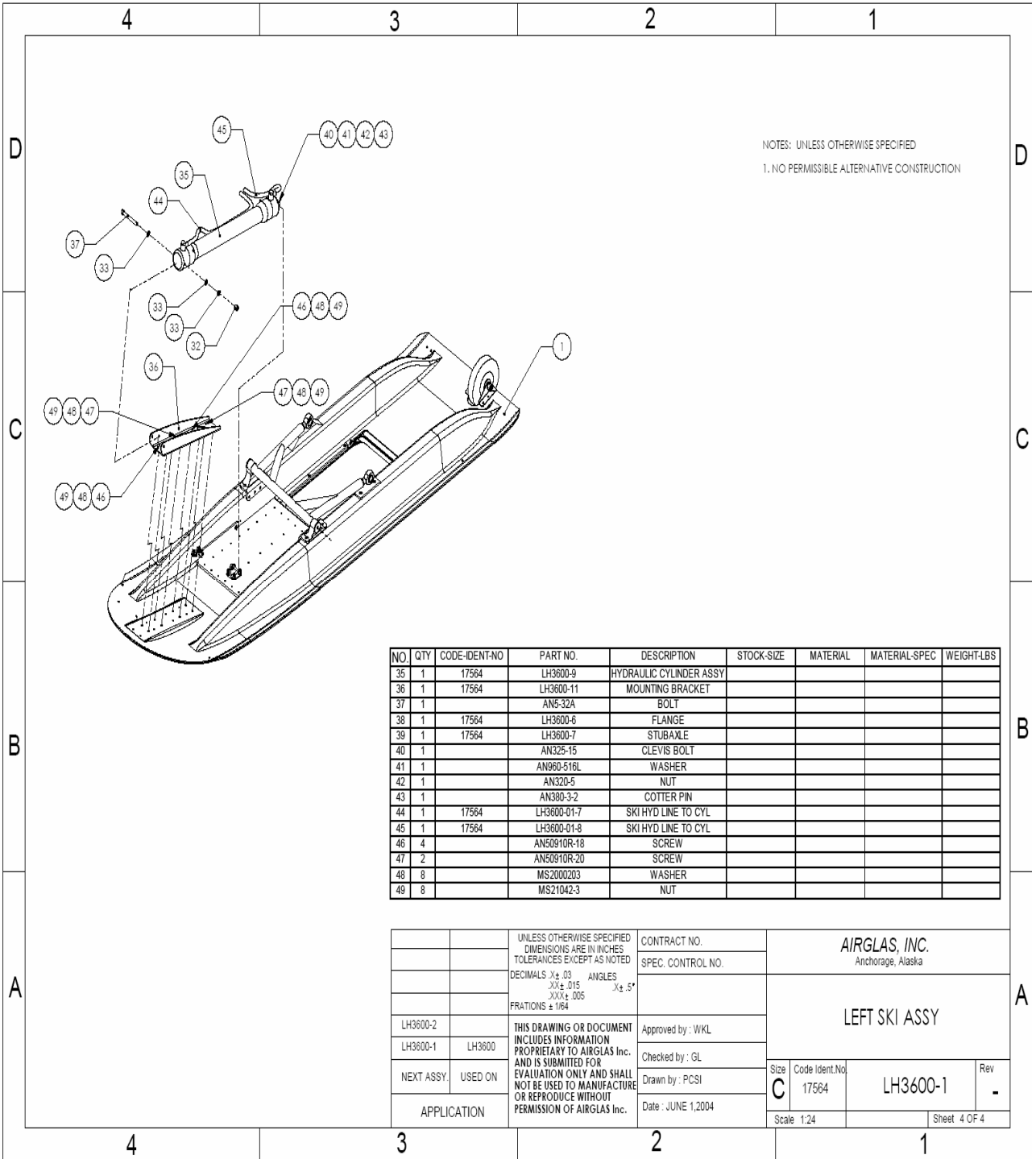
REVISION BLOCK				
REV	FCN	DESCRIPTION	APPD BY	DATE

NOTES: UNLESS OTHERWISE SPECIFIED  
1. NO PERMISSIBLE ALTERNATIVE CONSTRUCTION

NO.	QTY	CODE-IDENT-NO	PART NO.	DESCRIPTION	STOCK-SIZE	MATERIAL	MATERIAL-SPEC	WEIGHT-LBS
17	2		SSB6-12	RIVET				
18	1	17564	LH3600-5	YOKE ASSY				
19	1	17564	LH3600-3	SKI ATTACH FITTING				
20	1	17564	LH3600-4	SKI ATTACH FITTING				
21	2	17564	LH3600-5-4	YOKE BUCKET				
22	1	17564	LH3600-5-5	RETAINING ROD				
23	1	17564	LH3600-01-4	YOKE PAD				
24	1	17564	LH3600-01-5	YOKE PAD				
25	2		AN860-516	WASHER				
26	2		AN865-524C	NUT				
27	1	17564	LH3600-18	REAR ATTACH FITTING				
28	1	17564	LH3600-14	FRONT BUNGEE ASSY				
29	1	17564	LH3600-15	FRONT SAFETY CABLE				
30	2		A3475-028-24A	WASHER				
31	2		AN509416R-14	SCREW				
32	2		AN365-524A	NUT				
33	3		AN870-516	WASHER				
34	1	17564	LH3600-13	CHECK CABLE				

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES EXCEPT AS NOTED		CONTRACT NO.		AIRGLAS, INC. Anchorage, Alaska	
		DECIMALS: $X \pm .03$ ANGLES: $\times \pm .015$ $\times \pm .5^\circ$ $\times \times \times \pm .005$ FRACTIONS: $\pm 1/64$		SPEC. CONTROL NO.		LEFT SKI ASSY	
LH3600-2		THIS DRAWING OR DOCUMENT INCLUDES INFORMATION PROPRIETARY TO AIRGLAS Inc. AND IS SUBMITTED FOR EVALUATION ONLY AND SHALL NOT BE USED TO MANUFACTURE OR REPRODUCE WITHOUT PERMISSION OF AIRGLAS Inc.		Approved by : WKL			
LH3600-1	LH3600	NEXT ASSY. USED ON		Checked by : GL			
APPLICATION				Drawn by : PCSI		Size <b>C</b>	Code Ident.No 17564
				Date : JUNE 1,2004		LH3600-1	Rev -
						Scale 1:24	Sheet 3 OF 4

# 7.0 PARTS LIST



NOTES: UNLESS OTHERWISE SPECIFIED  
1. NO PERMISSIBLE ALTERNATIVE CONSTRUCTION

NO.	QTY	CODE-IDENT-NO	PART NO.	DESCRIPTION	STOCK-SIZE	MATERIAL	MATERIAL-SPEC	WEIGHT-LBS
35	1	17564	LH3600-9	HYDRAULIC CYLINDER ASSY				
36	1	17564	LH3600-11	MOUNTING BRACKET				
37	1		AN5-32A	BOLT				
38	1	17564	LH3600-6	FLANGE				
39	1	17564	LH3600-7	STUBAXLE				
40	1		AN325-15	CLEVIS BOLT				
41	1		AN960-516L	WASHER				
42	1		AN320-5	NUT				
43	1		AN380-3-2	COTTER PIN				
44	1	17564	LH3600-01-7	SKI HYD LINE TO CYL				
45	1	17564	LH3600-01-8	SKI HYD LINE TO CYL				
46	4		AN50910R-18	SCREW				
47	2		AN50910R-20	SCREW				
48	8		MS2000203	WASHER				
49	8		MS21042-3	NUT				

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES EXCEPT AS NOTED		CONTRACT NO.		AIRGLAS, INC. Anchorage, Alaska	
		DECIMALS $\pm .03$ ANGLES $\times \pm .015$ $\times \pm .5^\circ$ $\times \pm .005$ FRACTIONS $\pm 1/64$		SPEC. CONTROL NO.			
LH3600-2		THIS DRAWING OR DOCUMENT INCLUDES INFORMATION PROPRIETARY TO AIRGLAS Inc. AND IS SUBMITTED FOR EVALUATION ONLY AND SHALL NOT BE USED TO MANUFACTURE OR REPRODUCE WITHOUT PERMISSION OF AIRGLAS Inc.		Approved by: WKL		LEFT SKI ASSY	
LH3600-1	LH3600			Checked by: GL			
NEXT ASSY.	USED ON			Drawn by: PCSJ			
APPLICATION				Date: JUNE 1, 2004			
				Size	Code Ident.No.	LH3600-1	Rev
				C	17564		-
				Scale 1:24		Sheet 4 OF 4	

# 7.0 PARTS LIST

REV	ECN	DESCRIPTION	APP'D BY	DATE

NOTES: UNLESS OTHERWISE SPECIFIED  
1. TORQUE END CAPS TO 290 in.-lbs.

NO.	QTY	CODE-IDENT-NO	PART NO.	DESCRIPTION	STOCK-SIZE	MATERIAL	MATERIAL-SPEC	WEIGHT-LBS	FINISH
1	1	17564	LH3600-6-1	TUBE HYDRAULIC CYLINDER					
2	1	17564	LH3600-6-2	FRONT END CAP					
3	1	17564	LH3600-6-3	REAR END CAP					
4	1	17564	LH3600-6-4	PISTON ASSY					
5	2		6452K146	NITRILE O-RING					
6	2		AN7/8-4D	90 DEG. TUBE FITTING					
7	2		AN7/8-4D	BOLY - UNIVERSAL FITTING					
8	4		AN907-4A	SEAL WASHER					
9	2		SAFTEY WIRE	SAFTEY WIRE	0.030				
10	2		AN553-6-4	SCREW		STAINLESS STL			

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES EXCEPT AS NOTED DECIMALS: X: .03 ANGLES XX: .015 X: .5° XXX: .005 X: 1° FRACTIONS: 1/64</p>	<p>CONTRACT NO. SPEC. CONTROL NO.</p>	<p><b>AIRGLAS, INC.</b> Anchorage, Alaska</p> <p><b>HYDRAULIC CYLINDER ASSEMBLY</b></p>
<p>LH3600-2 LH3600-1 LH3600 NEXT ASSY. USED ON</p>	<p>Approved by: Checked by: Drawn by: PCB Date: May 5, 2004</p>	<p>Size Code Ident.No <b>C</b> 17564 <b>LH3600-9</b> Rev Scale: 1:3 Sheet 1 OF 2</p>
APPLICATION		

# 8.0 MAINTENANCE AND INSPECTION CRITERIA

## MAINTENANCE AND GROUND HANDLING RESTRICTIONS

1. **DO NOT** – Push or Pull on skis to move aircraft.
2. **DO NOT** – Subject to flame or high heat.
3. **DO NOT** – Attempt to jack aircraft with skis installed.
4. **DO NOT** – Subject to harsh solvents or caustic chemicals.
5. **DO NOT** – Use skis as a tie down for the aircraft.
6. **DO NOT** – Attempt to change a tire with the skis installed.
7. **DO NOT** – Use standard wheel chocks with skis installed.

## MAINTENANCE OPERATIONAL CHECKS

### 10-14 Check (10 hour or 14 day inspection)

1. **CHECK** – Bungees, cables, clevis pins, cotter pins, nuts, bolts and attach fittings for security.
2. **CHECK** – LH4000 Ski Kit for cracks, excessive wear, fractures and abrasions.

## INSPECTION CRITERIA

### 100-Annual (100 hour or Annual inspection)

1. **INSPECT** – The LH4000 Ski Kit for:  
Excessive cracks, wear, fractures and abrasions. Inspect the bottom for cracks, scratches and excess wear. If damaged consult manufacturer.
2. **INSPECT** – The LH3600-15 safety cable and LH3600-14 bungees for integrity and fraying.  
The LH3600-13 check cable for cracks, wear, fraying and abrasions.  
The LH3600-5 yoke assembly for integrity, cracks, dents and corrosion.
3. **INSPECT** – The main landing gear ski axle assemblies for cracks, fractures and thread integrity and corrosion.
4. **INSPECT** – The LH3600-9 hydraulic cylinder. Disassemble and clean the components, inspect the o-rings for integrity.

# 8.0 MAINTENANCE - INSTRUCTIONS

## TOP SURFACE MAINTENANCE

The surface of the ski has a very durable plastic coating that is not affected by gas or oil or environmental conditions. It may be brightened up with rubbing compound and wax occasionally but should not require painting.

## BOTTOM SURFACE MAINTENANCE

The UHMW bases are very resistant to damage from abrasion and scuffing. The bases will need no maintenance outside of an occasional waxing.

## TYPES OF POSSIBLE DAMAGE

### 1. Negligible damage

- a. Small nicks, scratches or abraded areas in top or bottom of ski.

### 2. Repairable damage

- a. **Cracks or Fractures** – Airglas should be consulted on repairs in this area.
- b. **Delamination** – Airglas should be consulted on repairs in this area.
- c. **Abrasion** – Bottom wear due to contact with rocks etc., bottom surface worn through to fibers.
- d. **Major bottom damage** – Complete new or partial bottom may be factory installed.

### 3. Damage necessitating replacement

- a. Major damage in area of ski fittings or hydraulic cylinder bracket.
- b. Damage to ski structure i.e. The truss area of the top of the ski or in the tail wheel area. This could be a combination of cracks, fractures delamination, and demolished sections. This type of damage would likely be caused in a crash or accident.

## 8.0 MAINTENANCE INSTRUCTIONS

**SKI ASSEMBLY:** The LH4000 Ski has several mechanical aspects to it; the Yoke Assembly, the Door Assembly, the Tail Wheel Bracket and the Rigging components.

1. Yoke Assembly
  - a. The Yoke Assembly P/N (LH3600-5) shall have light grease applied to the Yoke Buckets P/N (LH3600-5-4) every 25 hours. The Rod Ends P/N (CM-12) shall be lightly oiled every 25 hours.
  - b. Inspect the attaching bolts P/N (AN12-17A) x2 and (AN5-7A) x12 for corrosion, fretting and proper torque every 25 hours.
  - c. Inspect the Retaining Rod P/N (LH3600-5-5) attaching nuts for corrosion, fretting and proper torque every 25 hours.
  - d. Inspect the Ski Axle Restraining Strap Assy. P/N (LH3600-10) for **FREEDOM OF MOVEMENT AND SECURITY**. The (AN6-10A) Bolt shall be installed with **REMOVABLE** thread locking compound on the threads.

**WARNING:** The aircraft shall not be operated without the Ski Axle Restraining Strap Assy. P/N (LH3600-10) installed properly on the skis. Failure to comply with the instructions laid out in this manual will be considered an unapproved installation.

2. Door Assembly
  - a. The Door Assy. P/N (LH3600-8) shall be inspected for wear, deformation, loose hardware and delaminations.
  - b. The guides and slides should be lubricated with silicone spray at each preflight.
3. The Tail Wheel Bracket
  - a. The Tail Wheel Bracket P/N (LH3600-12) will require greasing annually.
  - b. Inspect for excess wear of the tire and looseness of the wheel bearings at each preflight.
  - c. Inspect attaching hardware for corrosion and security at each preflight.
4. Rigging

Rigging components shall be inspected for fraying, chafing, kinking and security of hardware, tabs and fittings at each preflight.

## 8.0 MAINTENANCE - INSTRUCTIONS

### CONTINUED

**HYDRAULIC SYSTEM:** The hydraulic system is a closed system that should require very little maintenance. Upon initial installation or at any time the lines have been disconnected, the system will need to be purged of air. The OILDYNE pump is a self bleeding pump and requires no special tools. It can be accomplished by one person in the field.

#### Service Steps:

1. Tighten and secure all fittings and lines.
2. Remove the filler cap from the reservoir and top off with (Texaco 5606) or the equivalent of hydraulic fluid.
3. Cycle ski to full travel in both directions until surging stops. Be sure to monitor the fluid level when cycling. When the level reaches  $\frac{1}{4}$  full, add more fluid and top off. This may require several cycles and re-topping of fluid.

### CAUTION

**Aircraft will move forward when door closes and rearward when the door opens. Allow ample clearance when cycling the skis.**

4. Check the fluid level and look for leaks at the fittings and at both ends of the cylinders at each preflight.
5. Inspect entire system for security and leaks each 100 hours.

**ELECTRICAL SYSTEM:** The electrical system requires inspection every 500 hours or at annual.

1. Inspect for chafing and wearing of wires through lightening holes, near control cables and fluid carrying lines.
2. Inspect for loose terminals and solder joints at the circuit breaker, switch, pump-motor, and indicator lights.
3. If the circuit breaker trips during use, cease operations and inspect system.

**Any unresolved questions, problems or defects should be directed to the manufacturer AIRGLAS, INC.**

# OPTIONS PAGES