# **Sky International Inc.**

dba/Aviat Aircraft Inc P.O. Box 1240 Afton, WY 83110 USA Tel: 307-885-3151 Fax: 307-885-9674 e-mail: aviat@aviataircraft.com

# **SERVICE LETTER NO. 3** Engineering Aspects are FAA Approved

# Kits available for the Husky A-1B Increased Gross Weight to 2200Lbs. with additional propellers

# MODELS EFFECTED: S/N 2285, 2288, and up

DATE: 11 June 2008 **REVISION:** В

**ACTIVE PAGES** 

Pg	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Rev	В	В	В	В	В	В	В	В	В	В	В	В	В	В
Pg	15	16	17	18	19	20	21	22	23	24	25	26	A-1	
Rev	В	В	В	В	В	В	В	В	В	В	В	В	В	

REV	DESCRIPTION	DATE	BY
IR	Initial Release	February 7, 2008	A. McMurdo
A	Page 1 Changed revision to A. Changed active pages 1,5,6,21,23 in chart to A. Page 5 Changed bolt 51426 to 51443. Page 6 Changed bolt 51426 to 51443. Page 21 Changed bolt 51426 to 51443. Page 23 Changed bolt 51426 to 51443.	April 28, 2008	A. McMurdo
B	Title page changed to Revision B Page 1 Updated Log of Revisions Page 2 changed font in table on contents and page numbers from added pages. Renumbered pages in document. Page 3 updated List of Tables and List of Figures. Added two new pages for Kit A-1B522A and A-1B522F and renumbered pages Changed Table 2-2 to Kit A-1B-522A Changed Table 2-3 to Kit A-1B-522F Added Table 2-3 to Kit A-1B-523 Table 3-1 changed verbage pertaining to 80 Hartzell Prop. From: "The prop angle modification should be done by authorized prop repair station" To: " The prop angle modification must be accomplished by authorized government repairmen compliant to FAA regulations and per manufacturers instructions. Page 9,10 and 11 added A-1B-522A and A-1B-522F to verbage.	June 11, 2008	A. McMurdo

# LOG OF REVISIONS

1

# **TABLE OF CONTENTS**

LO	G OF REVISIONS	1
TA	BLE OF CONTENTS	2
LIS	T OF TABLES	3
LIS	T OF FIGURES	3
1.	DESCRIPTION	4
2.	STRUCTURAL MODIFICATIONS REQUIRED	5
3.	PROPELLER AND ENGINE RPM INDICATION REQUIREMENTS	9
4.	INSTALLATION INSTRUCTIONS	12
4.1	Removal of Old Tail Wheel Spring	12
4.2	Installation of New Tail Wheel Spring	14
4.3	Removal of Old Main Landing Gear	16
4.4	Installation of New Main Landing Gear	20
4.5	Removal of Old Horizontal Stabilizer Support (See also Figure 4.6-2)	
4.6	Installation of New Horizontal Stabilizer Support(See also Figure 4.6-2)	23
4.7	Removal and Installation of Propellers	26
API	PENDIX A Compliance Letter	A-1

2

# LIST OF TABLES

SA10463SC	TABLE 2-1 - KIT A-1B-522	5
TABLE 2-4 - KIT A-1B-523.	TABLE 2-2 - KIT A-1B-522A	6
<ul> <li>TABLE 3-1 - HUSKY A-1B EQUIPPED WITH LYCOMING O-360-A1P (180 HP) ENGINE</li></ul>	TABLE 2-3 - KIT A-1B-522F	7
<ul> <li>TABLE 3-2 - HUSKY A-1B EQUIPPED WITH LYCOMING O-360-A-1P (180 HP) ENGINE</li></ul>	TABLE 2-4 - KIT A-1B-523	8
<ul> <li>TABLE 3-3 - HUSKY A-1B'S EQUIPPED WITH LYCOMING IO-360-A1D6 (200 HP) ENGINE PER STC SA10463SC</li></ul>	TABLE 3-1 - HUSKY A-1B EQUIPPED WITH LYCOMING O-360-A1P (180 HP) ENGINE	9
SA10463SC	TABLE 3-2 - HUSKY A-1B EQUIPPED WITH LYCOMING O-360-A-1P (180 HP) ENGINE	10
TABLE 3-4 - HUSKY A-1B'S EQUIPPED WITH LYCOMING IO-360A-1D6 (200 HP) ENGINE PER STC	TABLE 3-3 - HUSKY A-1B'S EQUIPPED WITH LYCOMING IO-360-A1D6 (200 HP) ENGINE PER STC	
	SA10463SC	11
G + 10 + 60 G (	TABLE 3-4 - HUSKY A-1B'S EQUIPPED WITH LYCOMING IO-360A-1D6 (200 HP) ENGINE PER STC	
SA10463SC	SA10463SC	11

# LIST OF FIGURES

IL WHEEL SPRING
AIL WHEEL SPRING15
OCATION
FICATION
DING GEAR19
NDING GEAR
AL STABILIZER SUPPORT
TAL STABILIZER SUPPORT24
TABILIZER SUPPORT TUNBE LOCATION
TAL STABILIZER SUPPORT24

#### 1. DESCRIPTION

#### MODELS AFFECTED: S/N 2285, 2288, and up

Husky A-1B's, **S/N 2285, 2288, and up,** equipped with Lycoming O-360-A1P (180 HP) engine or Lycoming IO-360-A1D6 (200 HP) engine, are eligible for a gross weight increase from 2000 lb. to 2200 lb. with the replacement of certain structural components. These include:

- New horizontal stabilizer support tube
- New main landing gear
- New 5 leaf tail wheel spring

In addition to the structural components, except for aircraft equipped with a 76" Hartzell propeller, the engine RPM indicator must be replaced. On a standard instrument panel, the horizon tachometer must be replaced; on the VM 1000 instrument panels, the software must be updated. A new Airplane Flight Manual is required for each specific engine configuration.

The original "stock" propeller is compatible with the gross weight increase, but may require alteration of the existing blade stop settings or blade length (See acceptable engine/propeller combinations shown in Table 3-1 and 3-3).

It is also acceptable to install a different propeller other than the one currently installed as long as it is accomplished in accordance with the criteria listed in Table 3-2 and 3-4.

Read thru Service Letter thoroughly before performing any work. If there are any questions on a procedure please contact Sky International Inc./Aviat Aircraft Inc. Phone 307-885-3151 or email engineering@aviataircraft.com or aviat@aviataircraft.com.

# **GENERAL NOTES:**

- Only government authorized repairmen should perform kit installations.
- The Service Letter DOES NOT apply to aircraft with floats at the higher gross weight unless there is an applicable STC.
- This Service Letter can be installed on aircraft using ski gear but skis CANNOT be installed for use at the higher gross weight unless there is an applicable STC.
- When this Service letter is applied to an aircraft with wheel gear, floats and skis CANNOT be installed later for use at the higher gross weight unless there is an applicable STC.

# NOTE 1:

It is the responsibility of the owner/operator to have government-authorized repairmen perform this work.

# Sky International Inc.

# 2. STRUCTURAL MODIFICATIONS REQUIRED

Serial Numbers 2285, 2288, thru 2378 for standard landing gear require installation of Kit A-1B 522, which is described in Table 2-1.

# Table 2-1- Kit A-1B-522

	TALL NEW HORIZONTAL STA	
Part	Part Number	Quantity
Stabilizer Support	38086-501	1
Bolt	50880	2
Bolt	50151	2
Bolt	51126	1
Bolt	51443	2
Self-Locking Nut	55392	2
Self-Locking Nut	55400	7
Washer	58740	4
Washer	58760	10
PK Screw	59105	4
Hole Cover	61659	2
	TO INSTALL NEW MAIN LAN	DING GEAR
Part	Part Number	Quantity
Wire	1-0231-026	4
Safety Cable	37527-001	2
Landing Gear, LH	45017-501	1
Landing Gear, RH	45017-502	1
Bolt	50851	8
Bolt	52625	4
Castle Nut	54450	4
Self-Locking Nut	55400	8
Plate nut	55625	16
Cotter Key	55750	5
Cotter Key	55870	2
Washer	58760	16
Washer	58790	16
Nico Presses	62272	4
Pop Rivets	62662	32
Pop Rivets	62669	36
Shock Cord	62990	6 (3 pkgs
Safety Wire	65520	36 Inches
	INSTALL NEW 5 LEAF TAIL W	
Part	Part Number	Quantity
Tail Wheel Spring	37319-011	1
Bolt	51176	2
Bolt	52512	1
Bolt	52880	1
Castle nut	54475	1
Self-Locking Nut	55400	2
~	55450	1
Castle nut		
Cotter Key	55750	2
Washer	58760	4
Washer	58790	2
Washer	58800	1
Washer	60020	1

5

Serial Numbers 2285, 2288, thru 2378 for installation of Aero Ski landing gear require installation of Kit A-1B 522A, which is described in Table 2-1. \*See General Note page 4.

#### Table 2-2 – Kit A-1B-522A

HARDWARE TO INSTA	ALL NEW HORIZONTAL STA	BILIZER SUPPORT
Part	Part Number	Quantity
Stabilizer Support	38086-501	1
Bolt	50880	2
Bolt	50151	2
Bolt	51126	1
Bolt	51443	2
Self-Locking Nut	55392	2
Self-Locking Nut	55400	7
Washer	58740	4
Washer	58760	10
PK Screw	59105	4
Hole Cover	61659	2
	O INSTALL NEW MAIN LAN	
Part	Part Number	Quantity
Wire	1-0231-026	4
Safety Cable	37527-001	2
Landing Gear, LH(Aero Ski)	45017-503	1
Landing Gear, RH(Aero Ski)	45017-504	1
Bolt	50851	8
Bolt	52625	4
Castle Nut	54450	4
Self-Locking Nut	55400	8
Plate nut	55625	16
Cotter Key	55750	5
Cotter Key	55870	2
Washer	58760	16
Washer	58790	16
Nico Presses	62272	4
Pop Rivets	62662	32
Pop Rivets	62669	36
Shock Cord	62990	6 (3 pkgs)
Safety Wire	65520	36 Inches
	NSTALL NEW 5 LEAF TAIL W	
Part	Part Number	Quantity
Tail Wheel Spring	37319-011	Quantity
Bolt	51176	2
Bolt	52512	
Bolt	52880	<u> </u>
		1
Castle nut	54475	
Self-Locking Nut	55400	2
Castle nut	55450	1
Cotter Key	55750	2
Washer	58760	4
Washer	58790	2
Washer	58800	1
Washer	60020	1

Serial Numbers 2285, 2288, thru 2378 for installation of Fluidyne Ski landing gear require installation of Kit A-1B 522F which is described in Table 2-3. \*See General Note page 4.

#### Table 2-3- A-1B-522F

HARDWARE TO INSTA	LL NEW HORIZONTAL STA	BILIZER SUPPORT
Part	Part Number	Quantity
Stabilizer Support	38086-501	1
Bolt	50880	2
Bolt	50151	2
Bolt	51126	1
Bolt	51443	2
Self-Locking Nut	55392	2
Self-Locking Nut	55400	7
Washer	58740	4
Washer	58760	10
PK Screw	59105	4
Hole Cover	61659	2
	INSTALL NEW MAIN LAN	
Part	Part Number	Quantity
Wire	1-0231-026	4
Safety Cable	37527-001	2
Landing Gear, LH(Fluidyne Ski)	45017-505	1
Landing Gear, RH(Fluidyne Ski)	45017-506	1
Bolt	50851	8
Bolt	52625	4
Castle Nut	54450	4
Self-Locking Nut	55400	8
Plate nut	55625	16
Cotter Key	55750	5
Cotter Key	55870	2
Washer	58760	16
Washer	58790	16
Nico Presses	62272	4
	62662	32
Pop Rivets		36
Pop Rivets	62669	
Shock Cord	62990	<u>6 (3 pkgs)</u>
Safety Wire	65520 STALL NEW 5 LEAF TAIL W	36 Inches
Part HARDWARE IO IN	<b>STALL NEW 5 LEAF TAIL W</b> Part Number	
Tail Wheel Spring	37319-011	Quantity 1
		2
Bolt	51176	
Bolt	52512	1
Bolt	52880	
Castle nut	54475	1
Self-Locking Nut	55400	2
Castle nut	55450	1
Cotter Key	55750	2
Washer	58760	4
Washer	58790	2
Washer	58800	1
Washer	60020	1

Serial Numbers 2379 and up require installation of Kit A-1B 523 which is described in Table 2-2.

#### Table 2-4 – Kit A-1B-523

HARDWARE TO INST.	ALL NEW HORIZONTAL S	TABILIZER SUPPORT
DESCRIPTION	PART NUMBER	QUANTITY
Stabilizer Support	38086-501	1
Bolt	51126	1
Bolt	50880	2
Bolt	50151	2
Bolt	51443	2
Self-Locking Nut	55392	2
Self-Locking Nut	55400	5
PK Screw	59105	4
Hole Cover	61659	2
Washer	58760	8
Washer	58740	4

# 3. PROPELLER AND ENGINE RPM INDICATION REQUIREMENTS

The installed engine model determines the applicability and required modifications as described in Table 3-1. Requirements for both the Standard Instrument panel (SIP) and the VM1000 Instrument Panel (VIP) are listed together in the tables for simplicity. Additional kits required for use with **EXISTING** propellers and Kit A-1B-522, A-1B-522A, A-1B-522F or A-1B-523 are listed in Table 3-1.

EXISTING INSTALLED PROP	DESCRIPTION OF CHANGE	REQUIRED KIT#
76" Hartzell HC-C2YK-1BF/F7666A	No change to tachometer, VM1000, or prop limitations.	NA
HC-C21K-1BF/F/000A	New A-1B 180 Airplane Flight Manual	A-1B-529
80" Hartzell	Propeller pitch stop angles must be checked to meet Low Pitch Blade Angle 10.3+/-0.2 deg. and High Pitch Blade Angle 30.9+/-1.0 deg. Any adjustment required to meet the above Low Pitch/High Pitch stop angles must be accomplished by government authorized repairmen compliant to FAA regulations and manufacturers instructions.	Note 1
HC-C2YR-1BF/F8477A Installed per	Tires must be at least 8:50 x 6 with minimum tire pressure of 25 PSI maximum 30 PSI	Note 1
STC SA01446SE	Prop governor must be adjusted to meet RPM limits of 500-2600 green 2600 red line	Note 1
	New tachometer required (SIP) and New A-1B 180 Airplane Flight Manual	A-1B-525
	VM 1000 DPU removed and sent to Aviat Aircraft Inc to update unit (VIP) and New A-1B 180 Airplane Flight Manual	A-1B-532
	Any prop blade longer than 205 cm requires blades to be shortened or prop changed to meet 205cm MAX. The prop blades should be shortened by authorized prop repair station.	Note 1
MTV-15-B/210-205-58	Tires must be at least 8:50 x 6 with minimum tire pressure of 29 PSI maximum tire pressure 30 PSI	Note 1
Installed per STC SA02023CH	Prop governor must be adjusted to meet RPM limits of 500-2600 green, 2600 red line	Note 1
	Remove existing prop limitation placard	Note 1
	New tachometer required (SIP) and New A-1B Airplane Flight Manual	A-1B-526
	VM 1000 DPU removed and sent to Aviat Aircraft Inc to update unit (VIP) and New A-1B 180 Airplane Flight Manual	A-1B-533

#### Table 3-1 - Husky A-1B Equipped With Lycoming O-360-A1P (180 HP) Engine

Additional kits required for use with **NEW** propellers and Kit A-1B-522, A-1B-522A, A-1B-522F or A-1B-523 are listed in Table 3-2.

INSTALL NEW PROP	DESCRIPTION OF CHANGE	REQUIRED
	Dropollor with toohomotor limitation placed	<b>KIT#</b> A-1B-537
	Propeller with tachometer, limitation placard and new A-1B Airplane Flight Manual	A-1D-337
	Propeller, VM1000 DPU removed and sent to	A-1B-530
	Aviat Aircraft for update (if applicable),	A-1D-330
	limitation placard and New A-1B 180	
76" Hartzell (metal)	Airplane Flight Manual.	
HC-C2YK-1BF/F7666A	Prop governor must be adjusted to meet RPM	Note 1
	Limits of 500-2000 green	
	2000-2250 red	
	2250-2700 green	
	2700 red line	
	Propeller with tachometer and new A-1B	A-1B-538
	Airplane Flight Manual	
76" Hartzell (composite)	Propeller, VM1000 DPU removed and sent to	A-1B-531
HC-C2YR-1N/N7605	Aviat Aircraft for update (if applicable) and	
	New A-1B 180 Airplane Flight Manual	
	Prop governor must be adjusted to meet	Note 1
	RPM limits of 500-2700 green	
	2700 red line	
	Propeller with tachometer and new A-1B	A-1B-539
	Airplane Flight Manual	
	Propeller, VM1000 DPU removed and sent to	A-1B-536
80" Hartzell	Aviat Aircraft for update (if applicable) and	
HC-C2YR-1BF/F8477A	New A-1B 180 Airplane Flight Manual	NT ( 1
	Prop governor must be adjusted to meet RPM	Note 1
	limits of 500-2600 green	
	2600 red line Tires must be at least 8:50 x 6 with minimum	Note 1
	tire pressure of 25 PSI maximum 30 PSI	Note 1
	Propeller with tachometer and new A-1B	A-1B-540
	Airplane Flight Manual	11-1D-540
	Propeller, VM1000 DPU removed and sent to	A-1B-524
	Aviat Aircraft for update (if applicable) and	
MTN 15 D 205 50	New A-1B Airplane Flight Manual	
MTV-15-B/205-58	Prop governor must be adjusted to meet RPM	Note 1
	limits of 500-2600 green	
	2600 red line	
	Tires must be at least 8:50 x 6 with minimum	Note 1
	tire pressure of 29 PSI maximum tire pressure	
	30 PSI	

# Table 3-2 - Husky A-1B Equipped With Lycoming O-360-A1P (180 HP) Engine

Additional kits required for use with **NEW** propellers and Kit A-1B-522, A-1B-522A, A-1B-522F or A-1B-523 are listed in Table 3-3.

Table 3-3 - Husky A-1B's Equipped With Lycoming IO-360-A1D6 (200 HP) Engine per
STC SA10463SC.

EXISTING INSTALLED PROP	DESCRIPTION OF CHANGE	REQUIRED KIT#
	Verify prop blade length is 205 cm. Longer than 205cm requires the blades to be shortened or prop changed to meet 205cm The prop blades should be shortened by authorized prop repair station.	Note 1
MTV 15 D/205 59	Prop governor must be adjusted to meet RPM limits of 500-2650 green, 2650 red line	Note 1
MTV-15-B/205-58	Tires must be at least 8:50 x 6 with minimum tire pressure of 29 PSI maximum tire pressure 30 PSI	Note 1
	New tachometer required and New A-1B 200 Airplane Flight Manual	A-1B-527
	VM1000 DPU removed and sent to Aviat Aircraft for update (if applicable) and New A- 1B 200 Airplane Flight Manual	A-1B-534

Additional kits required for use with **NEW** propellers and Kit A-1B-522, A-1B-522A, A-1B-522F or A-1B-523 are listed in Table 3-4.

# Table 3-4 - Husky A-1B's Equipped With Lycoming IO-360-A1D6 (200 HP) Engine per STC SA10463SC.

INSTALL NEW PROP	DESCRIPTION OF CHANGE	REQUIRED KIT#
	Propeller with tachometer and new A-1B 200 Airplane Flight Manual	A-1B-541
80" Hartzell HC-C2YR-1BF/F8477A	Propeller, VM1000 DPU removed and sent to Aviat Aircraft for update (if applicable) and New A-1B 200 Airplane Flight Manual	A-1B-535
	Prop governor must be adjusted to meet RPM limits of 500-2700 green, 2700 red line	Note 1
	Tires must be at least 8:50 x 6 with minimum tire pressure of 25 PSI maximum 30 PSI	Note 1

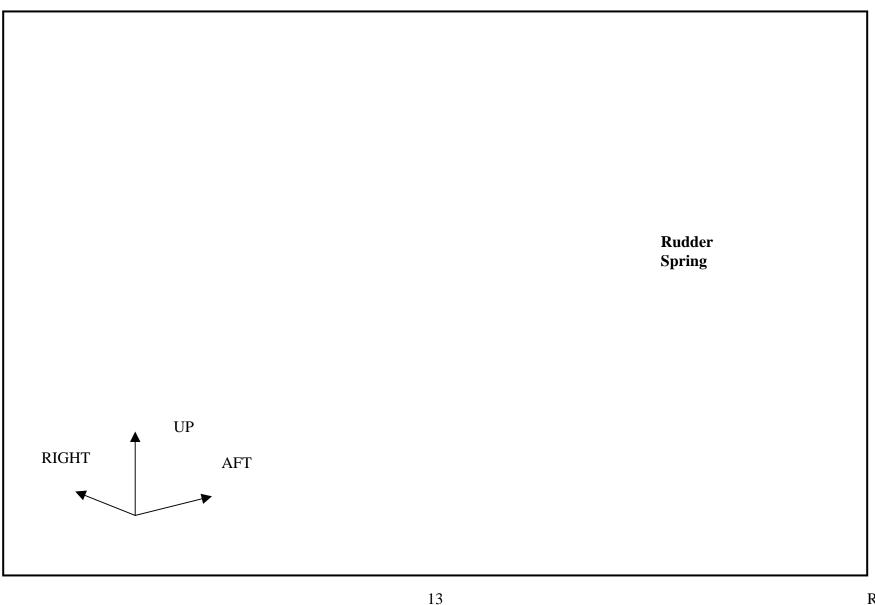
These kits are optional and may be installed at any time. Once the applicable kits have been installed, a Compliance Letter must be sent to Sky International Inc. and the Denver Aircraft Certification Office. (See APPENDIX A.)

#### 4. INSTALLATION INSTRUCTIONS

#### 4.1 Removal of Old Tail Wheel Spring

- 1. Properly position a floor jack on the fuselage just in front of the tail spring attach bolt and place a sandbag or other appropriate padding between the jack and the tail. (This will prevent denting of the tubes.)
- 2. Remove the left rear fuselage inspection hole cover and lift the plane up to reduce the pressure on the wheel.
- 3. Unhook the rudder springs at the tail wheel by turning rudder full travel to left. Use left shoulder to hold rudder at full travel. Reach down with both hands and turn tail wheel to right, which will slacken chain on rudder spring on right side. Rotate clip thru chain to release the right side. Turn rudder full travel to right. Use right shoulder to hold rudder at full travel. Reach down with both hands and turn tail wheel to left. Rotate clip thru chain to release left side. Pull the cotter key and remove the front spring bolt on the fuselage. Dispose of hardware.
- 4. Remove the bracket connecting the bottom of the tail spring to the rear of the fuselage (there are 2 bolts). Keep tail spring bracket to be reinstalled. Dispose of other hardware.
- 5. Remove the tail wheel spring and tire assembly.
- 6. Remove the cotter key, nut, and bolt that hold the tire assembly to the tail wheel spring. Keep tail wheel spacer. Dispose of other hardware.
- 7. Remove the tail wheel spring.

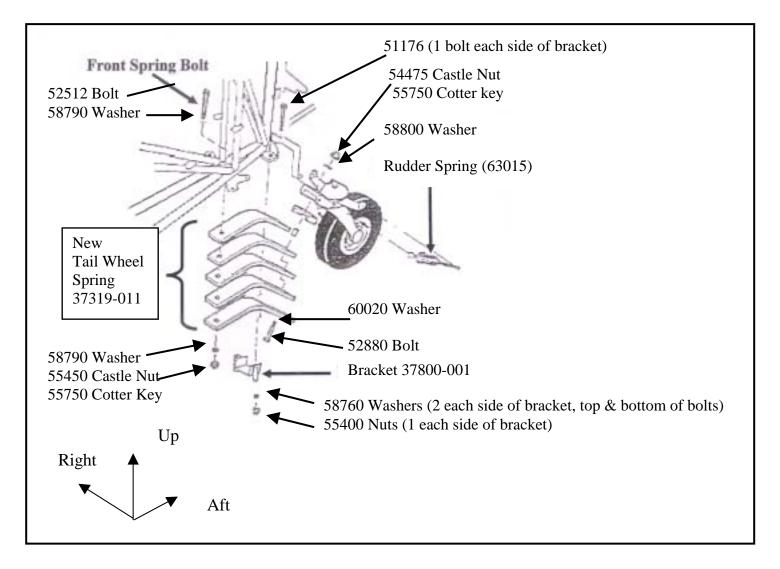
Figure 4.1-1 Old 4-Leaf Tail Wheel Spring



#### 4.2 Installation of New Tail Wheel Spring

- 1. Attach the new tail wheel spring (part number 37319-011) to the fuselage by installing washer (58790) under head of bolt (52512). Insert bolt and washer (bolt direction is down refer to figure 4-1.2) thru hole in covered fuselage to be inserted thru butterfly bracket and front bolt hole of tail wheel spring. Install washer (58790) onto bolt and then castle nut (55450). Do not fully tighten the bolt. Tighten it only enough to keep the tail wheel spring in place.
- 2. Loosely attach the tail spring bracket (37800-001) connecting the bottom of the tail spring to the rear of the fuselage. Install washers (58760) on bolt heads (51176 one on each side of bracket) Insert bolts up thru bracket and thru plate on fuselage. Install washers (58760) on bolt on each side) and then nuts (55400). Do not tighten all the way.
- 3. Attach the tail wheel assembly to the tail wheel spring. Install washer (60020) under head of bolt (52880). Insert bolt and washer through rear hole of tail spring, tail wheel spacer, tail wheel bracket and through tail wheel assembly. Bolt direction is up. (Refer to illustration 4-1.2) Put washer (58800) and nut (54475) onto bolt and attach loosely. Do not tighten all the way.
- 4. Tighten the front bolt and install a new cotter key (part number 55750). Use torque value from AC43.13.
- 5. Tighten the bracket bolts to fully attach the bracket. Use torque value from AC43.13.
- 6. Tighten the tail wheel bolt to fully attach the tail wheel and install a new cotter key (part number 55750). Use torque value from AC43.13.
- 7. Attach the rudder springs (63015). With rudder at full travel to right. Use right shoulder to hold in position. With both hands reach down and turn tail wheel to left and attach clip to chain on left side. Repeat for right. Rotate rudder to full travel to left. Use left shoulder to hold rudder in position. Reach down with both hands and turn tail wheel to right and attach clip to chain on right side.

# Figure 4.2-1 New 5-Leaf Tail Wheel Spring



15

This document is proprietary to Sky International, Inc. and may not be used or copied without permission.

#### 4.3 Removal of Old Main Landing Gear

- 1. Access the bungee box underneath the pilot's seat and remove the bungee box cover. First remove top cover plate. Second remove all screws on front half of bungee box. Careful when removing this section. Next undo all screws on rear half of bungee box and remove rubber grommets that the brake hoses go thru. Remove rear half. Careful when removing this section. Label and keep all hardware and rubber grommets for reinstallation.
- 2. Drain all brake fluid from the brake calipers.
- 3. Remove the upper gear fairings. First remove front fairing then inner and outer upper side fairings. Label and keep hardware for reinstallation.
- 4. Disconnect the brake lines located at top of gear.
- 5. Remove the bungee doors. Label and keep hardware for reinstallation.
- 6. Remove lower cowling. Open both cowl doors and remove any screws attaching lower to firewall and nosebowl. Label and keep hardware for reinstallation.
- 7. Remove the front belly panel. Label and keep hardware for reinstallation.
- 8. Remove necessary screws from short fuselage belly panels located between front and second full size belly panel and remove the short fuselage belly panels. Label and keep hardware for reinstallation.
- 9. Loosen the front bulkhead and slide it forward. Label and keep hardware for reinstallation.
- 10. Hoist the plane using the lifting rings or engine mount. Also, it is recommended that the plane be stabilized in order to prevent it from swinging and tipping during the removal of the landing gear. To do this, use a rope and attach a sandbag (or other counterweight) to the wing tie-down opposite the side on which you are removing the gear.

#### NOTE: STEPS 1-8 ARE TO BE DONE ONE SIDE AT A TIME. WHEN YOU HAVE FINISHED REMOVING THE GEAR FROM ONE SIDE, MOVE THE SANDBAG TO THE OTHER SIDE OF THE PLANE AND THEN PROCEED TO REMOVE THE REST OF THE LANDING GEAR.

- 11. Remove the safety wire from the brake caliper.
- 12. Remove the 4 bolts that attach the brake pad to the caliper. Label and keep hardware for reinstallation.

16

- 13. Remove the brake pad and caliper. Remove the hubcap.
- 14. Remove the cotter key from the axel nut and remove the axel nut. Discard cotter key.
- 15. Remove the tire and wheel assembly.
- 16. Remove the caliper plate. Discard hardware.
- 17. Loosen and remove the brake hose.
- 18. Cut the safety cable and shock cords.
- 19. Remove both front and rear gear bolts. Discard bolts.
- 20. Remove the landing gear.
- 21. Remove the gear cover (18 pop rivets).
- 22. Remove the bumper block and 2 wires.
- 23. Remove brake line and fittings. Label and keep hardware to reinstallation.
- 24. Remove duct tape on front reinforcement edge. Keep for reinstallation.
- 25. Move the sandbag to the other wing and repeat steps 9-25 for the opposite side.

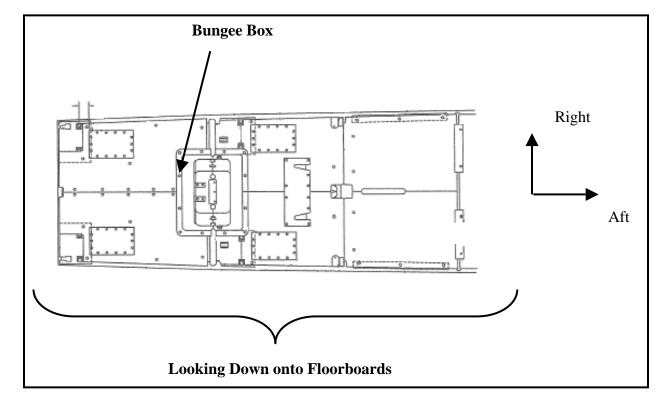
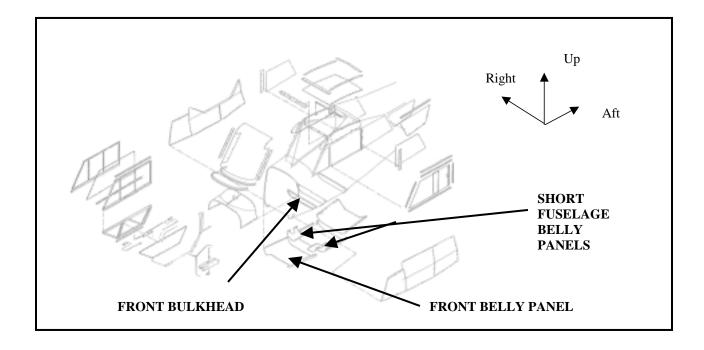
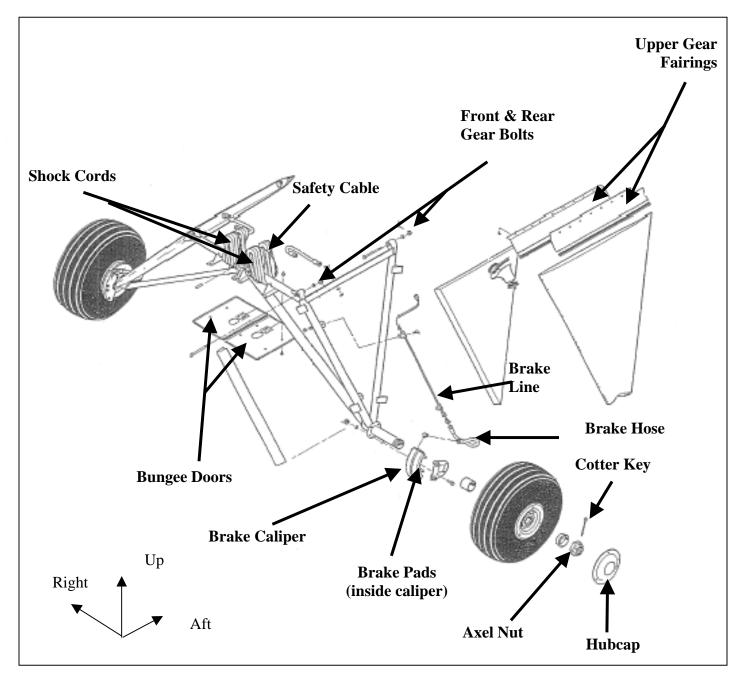


Figure 4.3-1 Bungee Box Location

**Figure 4.3-2 Panel Identification** 



# Figure 4.3-3 Old Main Landing Gear



#### 4.4 Installation of New Main Landing Gear

- 1. Attach the bumper block to the gear using 2 wires (part number 1-0231-026).
- 2. Reinstall brake line and fittings.
- 3. Reinstall front reinforcement edge with duct tape.
- 4. Drill and countersink for installation of plate nuts (part number 55625) with pop rivets (part number 62662) on bungee door brackets on gear.
- 5. Attach the front and rear gear bolts (part number 52625) and nuts (part number 54450) and install the new landing gear (part numbers 45017-501 and 45017-502). Washer bolts as needed (part number 58790).
- 6. Install new safety cable (part number 37527-001) with Nico presses (part number 62272) (2 per cable). Leave <sup>1</sup>/<sub>4</sub> inch of cable protruding past nico press also leave <sup>1</sup>/<sub>4</sub> inch of cable between nico presses.
- 7. Install new shock cords (part number 62990) Tool T-1280 (Contact Aviat Aircraft Inc for purchase or rental of tool).
- 8. Attach the caliper plate with bolts (part number 50851), washer (part number 58760) and nut (part number 55400). Washer installs under nut.
- 9. Attach the tire wheel assembly.
- 10. Use a new cotter key (part number 55870) and attach the axel nut.
- 11. Attach the hubcap.
- 12. Attach the brake pad and caliper (4 bolts).
- 13. Connect the brake line.
- 14. Attach a new safety wire (part number 65520) on the caliper.
- 15. Refill the fluid in the calipers and bleed the brakes.
- 16. Attach the belly panel, bulkhead, and bungee doors.
- 17. Attach the gear cover using 18 pop rivets (part number 62669) and upper gear fairings.
- 18. Repeat steps 1-17 for the other side.

**REV B** 

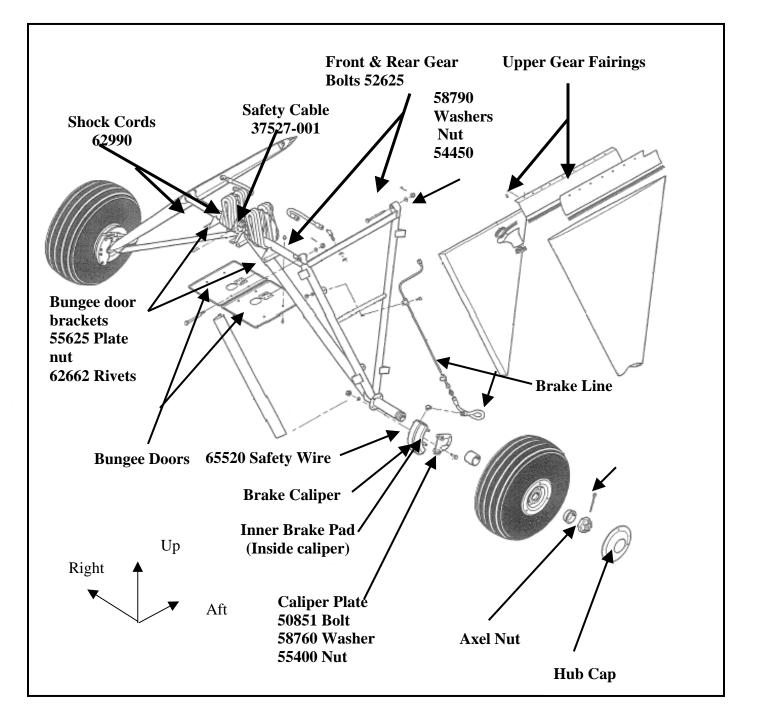
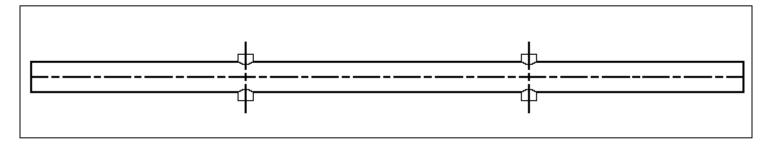


Figure 4.4-1 New Main Landing Gear

#### 4.5 Removal of Old Horizontal Stabilizer Support (See also Figure 4.6-2)

- 1. Loosen the top rudder bolts.
- 2. Place sawhorses, tables, or other suitable supports underneath the elevators to hold them in position.
- 3. Remove the bolts and washers from the tail wires where they attach the elevators to the stabilizers. Discard hardware.
- 4. Remove both stabilizer struts. Remove bottom bolt that attaches strut to front of butterfly fitting. Next remove nut that attaches thru bolt thru the stabilizers leaving thru bolt in place. Remove stabilizer struts. Discard hardware.
- 5. Remove both of the inner bolts that connect the stabilizers to the stabilizer support and fuselage. Discard hardware.
- 6. Remove the stabilizers.
- 7. Remove or cut out the hole cover openings in the fuselage just below the stabilizer support.
- 8. Free existing stabilizer "H" tube from fabric on both sides.
- 9. Have 2 people, one on each side of the plane, each with a 7/16 wrench. Using the wrench, have one person hold the bolt on top of the stabilizer support while the other person unscrews the nut on the bottom of the stabilizer support. Discard Hardware.
- 10. Repeat step 8 for the bolt on the other side.
- 11. Slide the stabilizer support as far as possible to one side. Bring it down and work it slowly through the hole-cover opening. Be very careful not to tear the fabric any more than necessary.

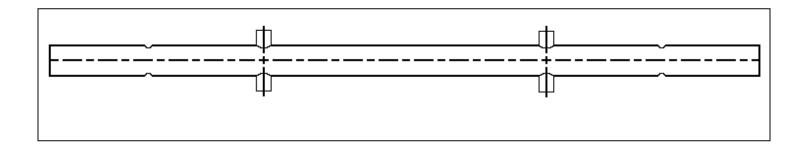
#### Figure 4.5-1 Old Horizontal Stabilizer Support



#### 4.6 Installation of New Horizontal Stabilizer Support (See also Figure 4.6-2)

- 1. Slide the new stabilizer support (part number 38086-501) through the hole-cover openings. Be very careful not to tear the fabric any more than necessary.
- 2. Use 2 people to attach the stabilizer support (one person on each side of the plane). Have one person hold the stabilizer support while the other screws on the nut (part number 55400) to the bolt (part number 51443). Washers (part number 58760) are placed under bolt and on nut on each side. Repeat for the bolt on the opposite side. Tighten hardware.
- 3. If done carefully enough, the fabric will not have to be repaired. If however, it does need repairing, see Chapter 2, Section 4 of the AC 43.13 for repair instructions. Typically, the fabric will need to be repaired only if the holes that were made are not covered up by the stabilizer fairing.
- 4. Attach the stabilizers to the stabilizer support with bolts (part number 50151) washers (part number 58740) are placed under bolt head and on nut (part number 55392). Tighten the inner bolts.
- Attach the stabilizer struts on both sides. Bottom hardware is: Bolt (part number 50880) washer (part number 58760) under bolt head and on nut (part number 55400). Top hardware for thru bolt: washer (part number 58760) and nut (part number 55400). Attach hardware loosely at this time.
- 6. Attach the stabilizers to the elevators by installing bolts (part number 50880), washer (part number 58760) under bolt head and on nut (part number 55400) to the tail wires. Tighten hardware.
- Install the top rudder bolt (part number 51126), washer (part number 58760) under bolt head and on nut (part number 55400). Attach hardware loosely at this time. Remove the supports from underneath the elevators.
- 8. Tighten stabilizer struts hardware in a sequential order.
- 9. Tighten top rudder bolt and top stabilizer bolts attaching tail wires to stabilizer in a sequential order.
- 10. Check the tail wire tensions to make sure they are between 100 and 125 lbs.
- 11. Install hole covers with PK screws (part number 59105). Align screw holes and screws horizontally with fuselage.

Figure 4.6-1 New Horizontal Stabilizer Support



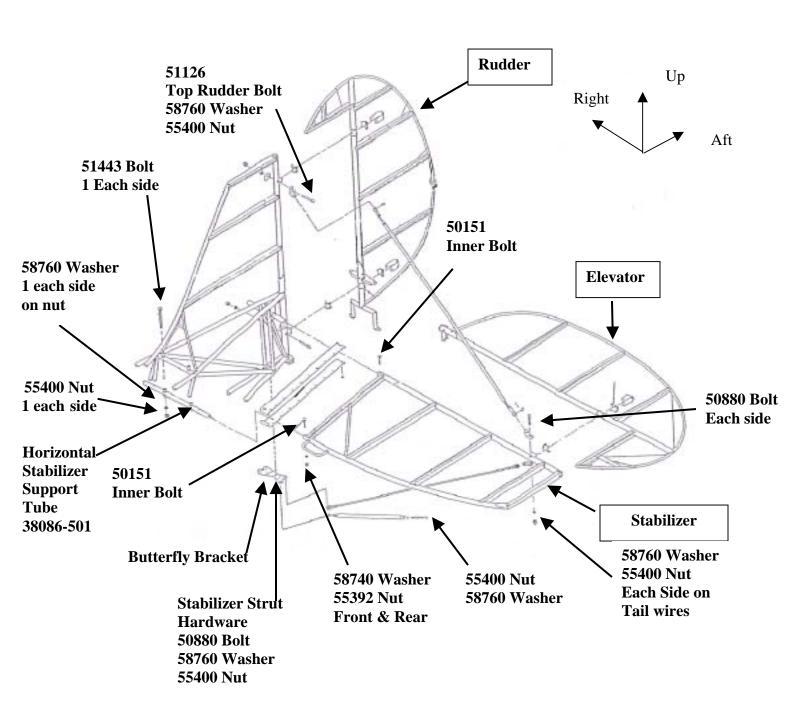


Figure 4.6-2 Horizontal Stabilizer Support Tube Location

# 4.7 Removal and Installation of Propellers

Refer to Specific Propellers Owners' Manual

APPENDIX A Compliance Letter

This is to certify that I have installed the optional applicable Aviat Aircraft Kits # (list

kits installed)\_\_\_\_\_

in accordance with Service Letter No. 3 to increase the gross weight.

Aircraft: Husky A-1B

Serial Number: \_\_\_\_\_

Registration Number: \_\_\_\_\_

Date: \_\_\_\_\_

Aircraft Hours: \_\_\_\_\_

Engine: Lycoming O-360-A1P Lycoming IO-360-A1D6 (Circle applicable engine)

Signed: \_\_\_\_\_

Return completed letter to:

Engineering Sky International Inc. P.O. Box 1240 Afton, WY 83110 Fax: 307-885-9674

Send a copy to: Federal Aircraft Administration Denver Aircraft Certification Office Attn: Roger Caldwell 26805 East 68<sup>th</sup> Avenue, Room 214 Denver, CO 80249-6361Fax: 303-342-1088