FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT

GippsAero Pty Ltd GA-8, GA-8-TC-320
Equipped with

AIRGLAS GLH3000 Nose Ski and LH4000 Main Ski Hydraulic Wheel Skis

Registration Number: _____

Serial Number: _____

This supplement must be attached to the appropriate FAA Approved Airplane Flight Manual and must be carried in the airplane when the *Airglas, Inc.* **LH4000-GA8** hydraulic wheel ski kit is installed in accordance with Supplemental Type Certificate SA02516AK.

The information contained in this document supplements or supersedes the basic manual and applicable appendices only in those areas listed. For limitations, procedures, and performance information not contained in this supplement, consult the basic FAA Approved Airplane Flight Manual.

ALAN W WILSON
Digitally signed by ALAN W WILSON
Date: 2019.04.04 11:25:33 -08'00'

FAA Approved: _____ Date: 03 Apr 19

Manager, Northwest Flight Test Section, AIR-715
Federal Aviation Administration
Seattle, WA

LOG OF REVISIONS

Revision	Pages Affected	Description	FAA Approval Signature	Date
Original	All	Original Document	See Cover	03 Apr 19

SECTION 1. General

This airplane is equipped with *Airglas Inc.*, LH4000-GA8 hydraulic wheel ski kit on 8.50 x 6 tires. These skis permit operations on snow as well as hard surface and gravel runways. Landings on ice or snow are recommended to be limited to prepared surfaces, to limit wear and tear on aircraft. The skis are operated from inside the cockpit by the pilot via a control switch's that commands electric/hydraulic pumps to actuate from wheel position to skis and back to wheel position.

SECTION 2. Limitations

2.1. Airspeeds:
1. Vne: 171 KIAS
2. Vno: 143 KIAS

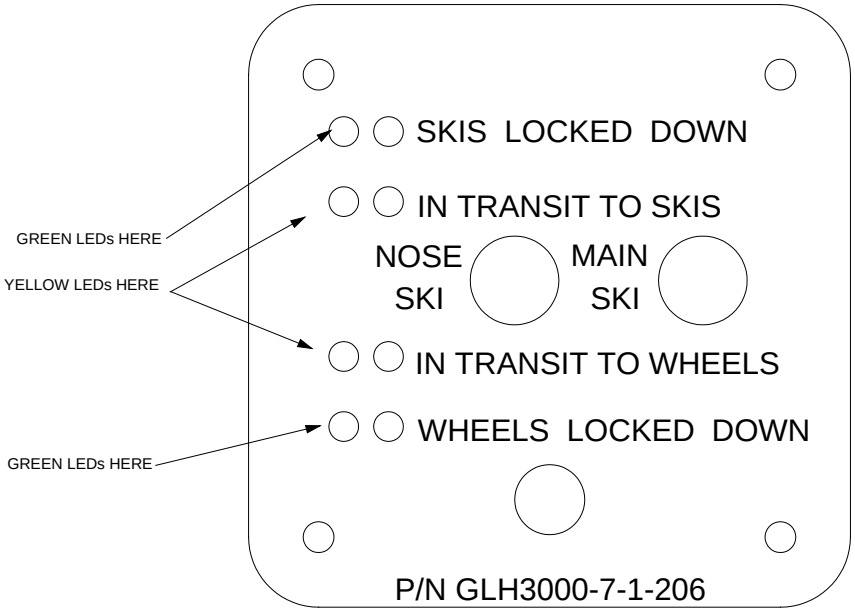
2.2. Airspeed Indicator Markings:
1. Redline: 171 KIAS
2. Yellow arc: 143 to 171 KIAS.

2.3. Powerplant limits: NO CHANGE
2.4. Engine Instrument Markings: NO CHANGE
2.5. Weight Limits: NO CHANGE
2.6. Center of Gravity Limits: NO CHANGE
2.8 Maneuver Limits: NO CHANGE
2.10 Flight Crew Limits: NO CHANGE
2.11 Kinds of Operation Limits: NO CHANGE
2.12 Fuel Limitations: NO CHANGE
2.13 Maximum Passenger Seating Limits: NO CHANGE
2.14 Other Limitations: NO CHANGE

2.15 Placards:

Adjacent to airspeed indicator and in full view of the pilot:

DO NOT EXCEED 171 KIAS
WITH AIRGLAS LH4000-GA8 SKIS
INSTALLED



Located at the ski selector switch.

CAUTION- IT IS POSSIBLE TO EXCEED THE FORWARD CG LIMITATION WITH AIRGLAS SKIS INSTALLED AND MINIMUM FUEL. OPERATIONS OUTSIDE THE CG LIMITATIONS ARE PROHIBITED.

Place Placard on instrument **in full view of pilot**. (All Models)

CAUTION- IT IS POSSIBLE TO EXCEED THE MAXIMUM WEIGHT LIMITATION WITH AIRGLAS SKIS INSTALLED AND ALL SEATS OCCUPIED. OPERATIONS OUTSIDE THE MAXIMUM WEIGHT LIMITATIONS ARE PROHIBITED.

Place Placard on instrument **in full view of pilot**. (All Models)

AVOID SLIPS WITH FLAPS EXTENDED WHILE ON SKIS

Place Placard on instrument **in full view of pilot**. (All Models)

DO NOT EXTEND OR RETRACT SKIS WHILE IN MOTION ON THE GROUND.

Place Placard on instrument **in full view of pilot**. (All Models)

SECTION 3. Emergency Procedures

If it is ascertained that a mechanical failure has occurred, the recommended procedure in this case is to retract the other tire(s), if extended, and land on snow. If either of the skis does not deploy to the full up or down configuration, avoid landing on non-frozen surfaces. High friction contact on the ski bottoms may cause high drag and reduced control.

SECTION 4. Normal Procedures

A. Pre-flight:
   1. CHECK – Bungees, cables, clevis pins, cotter pins, nuts, bolts and attach fittings for security.
   2. CHECK – Cylinders for leaks at the seals and fittings.
   3. CHECK – Hydraulic pump fluid level and inspect for leaks, and wiring connections.
   4. CHECK – Ski Kit for cracks, excessive wear, fractures, abrasions, and delamination.
   5. CHECK – Door Guides for wear and security. Lube with silicone spray or wax.
   6. CHECK – Tires for proper pressure- 35 psi minimum.
   7. CHECK – 25 hour servicing has been performed within last 25 hours of operation.

B. Starting the engine: Hand propping of engine is not recommended.

C. Before Takeoff: Ensure the skis are locked in the desired configuration. Prepare for longer takeoff distances.

D. Before landing: Ensure the skis are locked in the desired configuration. Ensure planned landing area is free of logs, rocks, snowdrifts or other obstacles. Prepare for longer landing distances.

SECTION 4. Normal Procedures-Continued

A. **Control and Operation Information:** The doors for the skis are actuated by electric/hydraulic pumps located in the fuselage aft of the baggage compartment. The main skis are actuated by one pump and then nose ski by another pump. Each electric/hydraulic pump is controlled via a 3 position toggle switch and indicator lights that are located on the instrument panel.

PROCEDURES FOR RETRACTION AND EXTENSION OF WHEEL SKIS:

1. When the switch is lifted up, the cylinder will extend and slide the door under the tire. While the switch is held up a yellow indicator light will illuminate ("IN TRANSIT TO SKIS") showing the ski position has been selected and the pump is energized. When the pump pressure reaches 500 psi, a green light ("SKIS LOCKED DOWN") will illuminate and stay on to confirm adequate pressure for deployment of the skis has been reached. The switch is released, the IN TRANSIT TO SKIS light will extinguish, but the SKIS LOCKED DOWN light will remain lit as long as the pressure remains above 350 psi. Visual confirmation of the ski position is required of the operator to confirm ski position.

2. When the switch is pressed down, the door will retract and expose the tire. While the switch is held down a yellow indicator light ("IN TRANSIT TO WHEELS") will illuminate showing the wheel position has been selected and the pump is energized. When the pump pressure reaches 500 psi, a green light ("WHEELS LOCKED DOWN") will illuminate and stay on to confirm adequate pressure for deployment of the wheels has been reached. The switch is released, the IN TRANSIT TO WHEELS light will extinguish, but the WHEELS LOCKED DOWN light will remain lit as long as the pressure remains above 350 psi. Visual confirmation of the ski position is required of the operator to confirm ski position.

CAUTION:

The "Locked" lights only indicate that a preselected hydraulic pressure has been met, not that the skis are in proper configuration. Always visually confirm correct configuration before take-off or landing.

SECTION 5. Performance Information

1. *TAKEOFF:* Under the most favorable conditions of smooth packed snow at temperatures approximating 32°F, the ski-plane takeoff distance is approximately 30 percent greater than that shown for the land plane.

Warning

In estimating distances for other conditions, caution should be exercised in making provision for other temperatures or other snow conditions that may **significantly** affect or increase these distances.

2. *CLIMB:* Climb performance with the skis installed will be approximately 100 feet per minute less than that shown for the landplane with the wheels up/skis down and 170 feet per minute less than that shown for the landplane with wheels down/skis up.

3. *CRUISE:* Cruise speed may be decreased as much as 15% Cruise TAS is approximately 10% slower with the wheels up and 15% slower with the wheels down. Maximum range will also be reduced.

SECTION 5. Performance Information-Continued

4. *LANDING:* Under the most favorable conditions of smooth packed snow at temperatures approximating 32°F, the ski-plane landing distance is approximately 20% greater than that shown for the land plane on a hard surface.

Warning

In estimating distances for other conditions, caution should be exercised in making provision for other temperatures or other snow conditions that may **significantly** affect or increase these distances.

SECTION 6. Loading Information

The equipment added to this airplane by this modification consists of the LH4000-GA8 hydraulic wheel ski kit. See the airplane's current weight and balance report for determining exact weight and balance calculations.

SECTION 7. Systems Descriptions

This airplane is equipped with an *Airglas, Inc.*, LH4000-GA8 hydraulic wheel ski kit, with associated attachment rigging.
The LH4000-GA8 ski installation consists of essentially 3 systems;

1. The Mechanical System – This includes the ski with all attaching hardware (interface to the gear leg) and the rigging components.
2. The Hydraulic System – This includes hydraulic lines (both onboard and external), hydraulic actuating cylinders (on the skis), all the hydraulic fittings on the skis, and the hydraulic pumps.
3. The Electrical System – This includes pressure switches, a circuit breaker, wiring, control switches and indicator lights (the electric pumps are covered under the hydraulic system).

Two, two-position gear selector toggle switches labeled "Nose Ski" and "Main Ski" provide for either extending or retracting the wheels. The wheel up position, retracts the wheels for ski operation, and the wheels down position, extends the wheels for landplane operations.

Hydraulic pump operation occurs when the gear selector switch is held in the desired position and pump operation is indicated by an "In Transit" indicator light. "Skis Locked Down" and "Wheels Locked Down" indicator lights indicate that the pump pressure is adequate to move the skis to that position.

Visual confirmation of the ski position is required of the operator to confirm ski position.

SECTION 8. Servicing and Maintenance

All servicing procedures for this installation are standard. The LH4000-GA8 hydraulic wheel skis may be maintained and inspected in accordance with Part 43 of the Federal Aviation Regulations (FAR 43). Servicing and maintenance in accordance with FAR 43 is adequate to insure the continued airworthiness of this modification. Preferred information on installing, removing, maintaining, and insuring continued airworthiness of the LH4000-GA8 hydraulic wheel ski kit is detailed in the Instructions for Continued Airworthiness Including Installation, Maintenance and Service Instructions Manual No. LH4000—GA8-105, Rev (-) dated September 23, 2017 or later FAA approved revision.

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