

NOTE: The wing trestle must not obstruct the movement of the aileron!

5. Insert left wing and watch again the alignment of the automatic control linkage connectors (see above point 4.). Then line up main rigging pin bushes. Insert and lock main pins. Only at this point - and not before - may the wing weight be relaxed. If the aircraft is still supported in a fuselage cradle, it is recommended that the landing gear should be extended at this stage, and rigging completed with the aircraft standing on its wheel.

Only at this stage the winglets - if available - are rigged.

NOTE: The correct and secure engagement of the winglets or of the short wing tip respectively must be checked.

6. After cleaning and lightly lubricating the elevator studs and sockets, the tailplane is pushed on to the fin from the front. Each half-elevator must be guided into the elevator connectors. The elastic lip seal covering the elevator gap must be placed on top of the elevator control tongue. Now push the tailplane home until the hexagon socket head bolt at the leading edge will engage its thread. The bolt must be fully and firmly tightened; it is secured by means of a spring ball catch, whose ball must engage in the grooves on the side of the bolt head.
7. A considerable performance improvement can be achieved with little effort by taping all gaps between wing junctions with plastic self-adhesive tape (on the non moving parts only). The fin-tailplane junction should also be taped up. The canopy rim must not be taped over, so as not to impair bail-out.

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It is recommended that areas to be taped up should be thoroughly waxed beforehand, so that the adhesive tape can afterwards be cleanly removed without lifting the paint finish.

8. If flexible fuel tanks are fitted in the wings, their fuel hoses should now (or, at the latest, after filling up) be connected to that from the fuselage tank. The end of this hose is located in the baggage compartment in front of the spar.

WARNING: If the wing tank vent is returned into the fuselage tank (optional modification), then in any case the vent tube must always be connected at the fuselage-to-wing separation joint already during the rigging. This applies even if the wing tanks are not used !

9. Now use the Check List (see the following para. 4.4) to carry out a pre-flight check. Under point 3. "Control surface clearances at trailing edge min. 1.5 mm = 1/16 in!" check that the wing control surfaces have that minimum clearance from each other and from the inboard and outboard wing cut-out edges. This clearance is necessary to ensure that these surfaces do not foul each other or the wing cut-out edges when deformed under load in flight.

De-rigging

To de-rig, proceed in the reverse order of rigging. We would add the following suggestions:

1. Drain all water ballast. Ensure that all the water has emptied out by putting down alternate wing tips several times. If fuel tanks are fitted in the wings, these must be emptied before transporting the aircraft.
2. If the tailplane is very firmly located in its rear seating, it will be more easily dismantled by two people alternately pushing it forwards by the tips.

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Further power-plant controls in the cockpit:

Power-plant main switch:

This is an additional main switch for the power-plant electrical circuit and is fitted in the instrument panel. The Main Switch for the Power-Plant electric system is also an automatic circuit breaker. Pressing the black push-button switches on the power-plant circuit: the ILEC is illuminated. Next to the black push button of the main switch there is a red lever, which if pressed towards the push button will unlatch it and interrupt the circuit: ILEC must go out. If the electrical circuit of the power-plant is overloaded, the black push button will be automatically unlatched. The circuit breaker is re-set by pressing the black button.

Fuel valve:

The fuel valve is next to the seat pan at the left cockpit wall.



In the forward position the fuel valve is open. Rear position is shut.

CAUTION:

Prior to attempting to start the engine the position of the fuel valve must be checked and where necessary moved to its foremost position.

Fire warning light:

A temperature sensor is fitted in the engine compartment which triggers the fire warning at a temperature above 140 °C. The fire warning is a red blinking diode in the instrument panel with the

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with the following placard:

FIRE

If a fire warning is given, proceed as per Section 3 "Emergency Procedures" under para 3.8.

Rear view mirror for propeller setting:

This mirror is fitted at the right on the instrument panel cover within the pilot's view. By means of this mirror the vertical position of the propeller must be checked prior to retracting it.

7.10 Fuel and Oil Tank System

See also Fig.7.10-1 at the end of this Section.

The fuel system consists of a fuselage tank, mounted in the wheel well, with a fuel capacity for about a one-hour's operation.

As an optional extra the ASH 26 E may also be ordered with one or two fuel tank(s) fitted in the wing(s).

The fuel drainer is located at the rear end of the left fuselage tank and is easily accessible when the landing gear is down. The fuselage fuel tank vent is fitted at the left-hand side of the fin, above the tail wheel. The wing tank(s) is/are vented through the vent hole in the lower wing surface, near the wing root rib; else - if this option has been ordered - the wing tank vent is returned into the fuselage tank.

The tank of the total loss oil lubrication is fitted in the engine compartment between engine block and exhaust silencer and is accessible when the propeller is extended.

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WARNING: The rotary engine uses a total loss oil lubrication. If no oil is refilled into the oil tank or if the oil supply gets interrupted, this will inevitably destroy the engine.

Avgas 100 LL or Car Super
min.94 RON/ROZ

Tankage:
Fuselage = 16 liters
if installed:
wing fuel tank, right = 15 liters
wing fuel tank, left = 15 liters
non-usable = 0.7 liters

CAUTION:
check engine oil tank level!

Engine Oil: ➔
Silkolene Comp 2 Pre-mix
Castrol Aviation A545 or
Spectro Oils of America
"Golden Spectro"
Top up with each refuelling!

Oil usage must be checked. The following values may be given as an indication (consumption is RPM sensitive):

- a) 0.2 liters oil/h with an RPM of 6900.
- b) or slightly more than 0.015 liters oil per liter fuel.

(1) Fuel Filling Systems

Filling of the fuel tanks in fuselage and wings must be carried out only either by means of the fuel refilling equipment available as optional extra or by means of a funnel with corresponding connecting hose and filter. The electric refueling equipment mainly comprises the fuel hose connectors, a fuel pump with electrical plug, a fuel filter and a hose which is inserted into a fuel container when filling-up. The electrical plug fits the socket mounted in the instrument panel for this purpose.

(2) Filling of Fuselage and Wing Fuel Tanks

The optional wing fuel tanks are connected to each other and to the fuselage tank by their filling hose couplings in the baggage compartment in front of the main spar. These couplings are fuel tight, even if they are disconnected one from the other with the tanks full.

To fill up, the adaptor of the tank to be filled is connected with the appropriate adaptor of the filling system outside the fuselage - the fuel hoses are long enough - and the electrical plug is inserted into the socket in the instrument panel.

For filling the fuel tank(s) it is recommended to use the electric refueling system (optional extra). When all connections have been coupled up, the filling equipment is switched on by means of the plug switch.

WARNING: If the wing tank vent is returned into the fuselage tank (optional modification), then in any case the vent tube must always be connected at the fuselage-to-wing separation joint already during the rigging !

CAUTION: Filling of fuel may only be carried out either by means of the optional electric refueling pump system or by means of a funnel. More powerful pumps could burst the wing shell in the course of filling the wing tanks!
The fuel filter in the filling hose must not be removed.

The fuel hoses from the tanks must be connected with the re-fuelling system only outside the fuselage. This will prevent fuel dripping into the fuselage.

When filling the fuselage tank, monitor the fuel level indicator and switch off the electric filling system at the latest when 16 liters are indicated. When filling the fuselage tank via a funnel, the funnel must not be placed higher than the capacity reservoir mounted in the fuselage (see Fig.7.10-1). This will prevent the capacity reservoir from being filled inadvertently.

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SECTION 9

9. Supplements

9.1 Introduction

9.2 List of Ancillary Equipment

9.3 Description of Ancillary Equipment

9.1 **Introduction**

This Section contains additional information to facilitate safe and effective operation of the powered sailplane, if equipped with various ancillary systems and equipment not included as standard equipment.

9.2 **List of Ancillary Equipment**

- Oxygen system installation
- Re-fuelling system, fixed installed

9.3 **Description of Ancillary Equipment**

Oxygen system installation:

When flying at greater heights while using the oxygen installation, it should be borne in mind that any particular system may only be suitable for a limited altitude range.

The makers' instructions should be complied with.

Re-fuelling system, fixed installed

The components of the external re-fuelling system may also be installed fixed in the fuselage; this is offered as an optional extra.

Two versions are available:

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1. Fuel pump behind barograph box in the fuselage

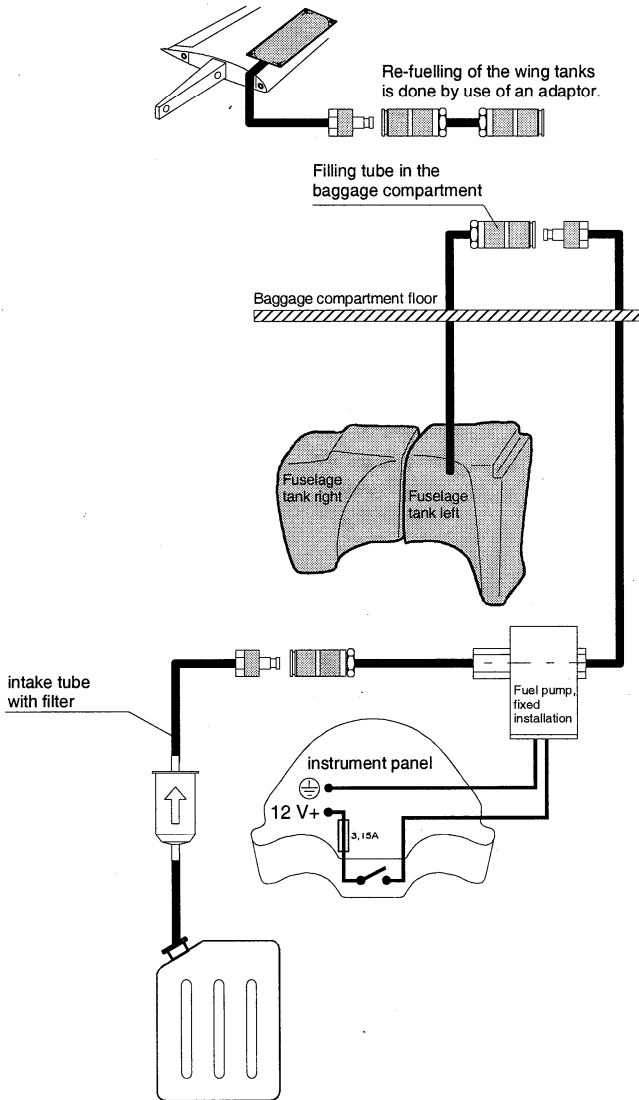
The fuel pump is located behind the barograph box. The fuel line runs (fire-protected behind the engine bay side wall) forwards to the baggage compartment. Here the re-fuelling system can be connected to the filling tube which is supplied as standard equipment item. The connecting coupling for the external intake tube with filter is located in the barograph box.

2. Fuel pump in front of fire bulkhead

The fuel pump is fitted in front of the fire bulkhead in the area of the control linkage system. The fuel line runs to the baggage compartment. Here the re-fuelling system can be connected to the filling tube which is supplied as standard equipment item. The connecting coupling for the external intake tube with filter is located at the rear shut-off wall of the landing gear compartment; it can be accessed from below through the landing gear box. There is a cover to protect the connecting coupling from dirt; and additionally it is closed by a dust plug.

The fuel pump is actuated via a switch in the instrument panel. Re-fuelling the wing tanks is done by use of an adaptor (see also Fig.9.3-1 on the next page).

Fig. 9.3-1 System circuit
fuel pump, fixed installation



leading edge of each inboard wing.

In the baggage compartment, the fuel hoses of both wing tanks are coupled-up to the fuselage tank by means of quick-release connectors.

A solenoid valve operated from the cockpit controls fuel flow into and out of the tanks. From this valve a fuel hose runs to the fuselage tank.

For filling the wing tanks, the external filling equipment is also coupled up to these same quick-release connectors. At the outer end of the plastic bags the venting hose is connected to a pressure relief valve. This venting hose is ducted downwards out of the wing at the end rib; or back into the fuselage tank.

In order to facilitate maintenance works the pressure relief valve of the venting hose may be moved optionally into the wing root rib area.

It is also possible to equip the ASH 26 E with only one wing tank (asymmetrically).

2.4.2 Dismantling and Re-fitting of the Wing Fuel Tanks

The following paras describe how to remove and re-fit the wing fuel tanks. This may become necessary to facilitate maintenance, repairs or the fitting of water ballast tanks in the inboard wings.

The relevant installation drawing is included under Fig.2.4-2 in the rear part of this Section.

Dismantling the Wing Fuel Tanks:

- Refer to Fig.2.4-2.
- Remove the guide plate at the wing root rib, undoing the ground connection of the fuel tank.

IF WATER BALLAST IS INSTALLED:

Pull the actuating rod out of the water ballast valve (see Fig.2.6-2).

- Pull the vent hose off the elbow at the root rib (not applicable for the option "return of vent hose into fuselage tank") and untie fixing cords.

NOTE: Tie the end of the long cord back to the root rib so that it cannot inadvertently be pulled out of the wing.

- Cut the cable ties which are holding the hose (at the root rib).

IF WATER BALLAST IS INSTALLED:

On the lower wing skin, remove the safety screws of the valve retaining screws; the latter are then undone by means of a caliper face spanner - e.g: Gedore No.44/7". (When re-fitting, do not forget to replace the Teflon sealing tape which becomes visible on removal).

- Now pull wing fuel tank out through the root rib by means of the fixing cord (slightly folding the tank in the process).

IF WATER BALLAST IS INSTALLED:

Pull the wing fuel tank out together with the water ballast bag until the fuel tank can be loosened from the water bag.

- The fixing cord remains in the wing after dismantling the tank and will be needed for pulling the fuel tank back into place. It is fixed inside the wing.

IF WATER BALLAST IS INSTALLED:

Pull the water ballast bag back home, and re-attach the fixing cord and the water ballast valve. Push the actuating rod back into the valve (see Fig.2.6-2 and point 2.6 "Water Ballast System").

- Screw the guide plate back to the wing root rib.

Re-fitting Wing Fuel Tanks:

- Refer to Fig.2.4-2.
- Remove the guide plate at the wing root rib.

IF WATER BALLAST IS INSTALLED:

Pull the actuating rod out of the water ballast valve (see Fig.2.6-2). On the lower wing skin, remove the safety screws of the valve retaining screws; the latter are then undone by means of ...

a caliper face spanner - e.g: Gedore No.44/7". (When re-fitting, do not forget to replace the Teflon sealing tape which becomes visible on removal).

Untie the fixing cord at the root rib and tie its end back to the root rib so that it cannot inadvertently be pulled into of the wing.

Pull out the water bag so far that the fuel tank with its rear fixing cords can be attached to the water bag.

- Tie the cord in the wing to the outer retaining eyes of the fuel tank (watch correct order of attachment of cord) and pull fuel tank through the rib up the specified length of 850 mm into the wing (slightly folding the tank in the process).

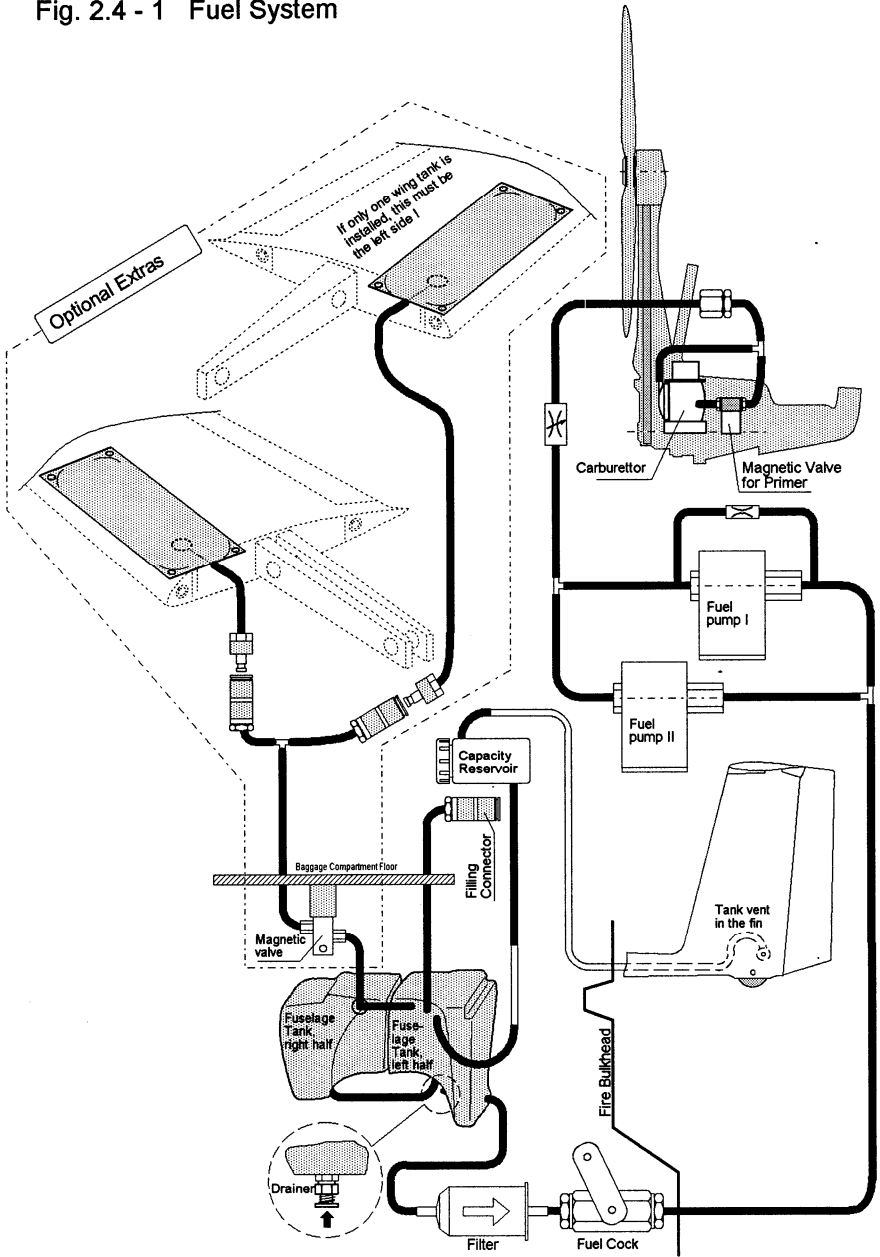
IF WATER BALLAST IS INSTALLED:

Pull the water ballast bag together with the wing fuel tank into the wing; refit the water valve and push the actuating rod back into the valve (see Fig.2.6-2 and point 2.6 "Water Ballast System").

- Attach the pulling cord and the front fixing cord at the root rib.
- Connect vent hose back to the elbow at the wing root rib (not applicable for the option "return of vent hose into fuselage tank").
- Renew cable tie for fixing connecting tube.
- Re-screw the guide plate at the wing root rib, and re-screw the ground connection of the fuel tank at the guide plate.

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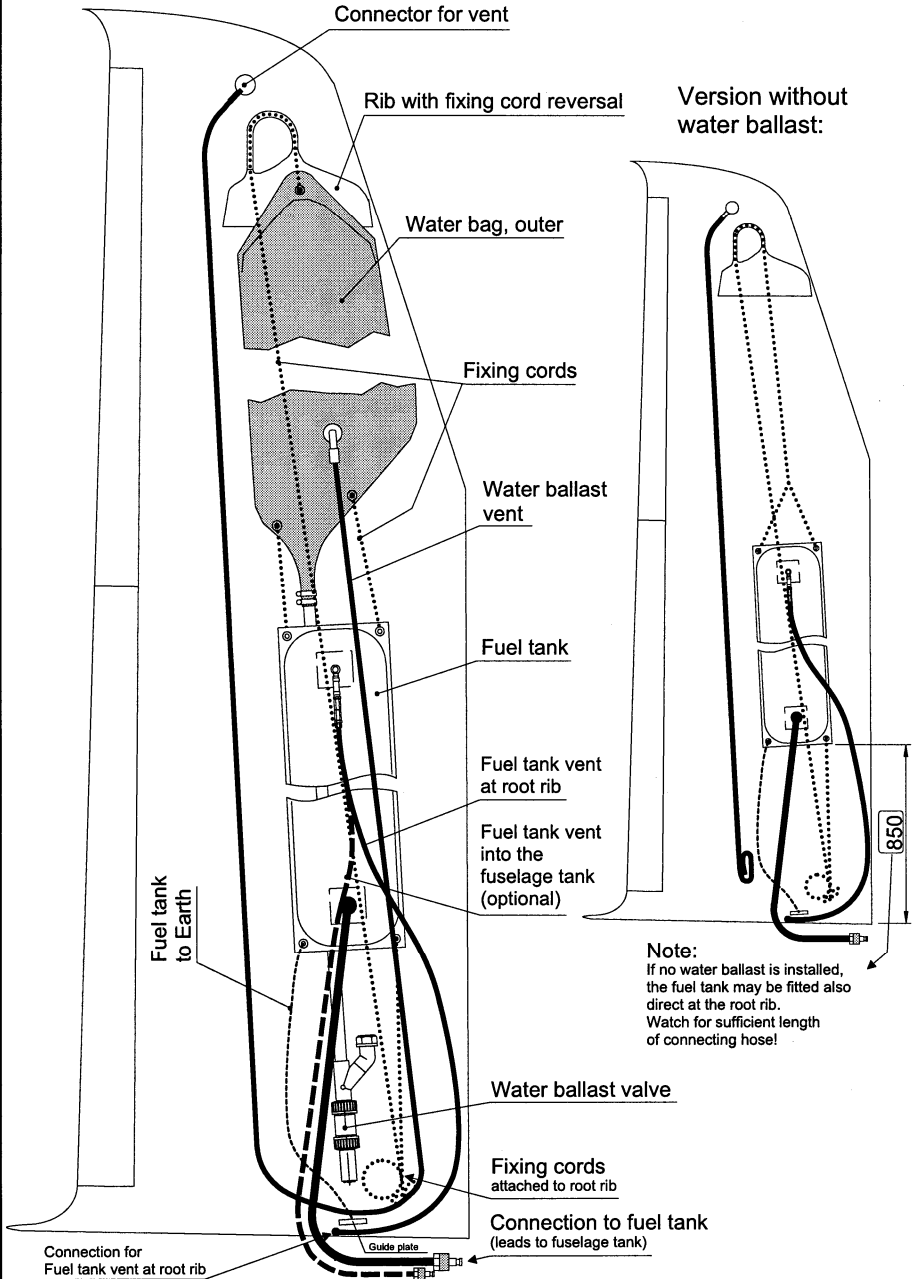
Fig. 2.4 - 1 Fuel System



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Fig. 2.4-2 Fuel Tanks in Wing



Note:
 If no water ballast is installed,
 the fuel tank may be fitted also
 direct at the root rib.
 Watch for sufficient length
 of connecting hose!