RECOMMENDED INSTRUCTIONS

FOR ASSEMBLING AND MOUNTING

PUDDLEJUMPER FLOAT KIT

ON JABIRU CALYPSO

PUDDLEJUMPER FLOAT KITS FOR NON CERTIFIED ULTRALIGHT AIRCRAFTS

FLOAT KIT PURCHASE AGREEMENT

FLOAT KIT DESIGN, ASSEMBLING AND INSTALLATION INTEGRITY

Purchaser understands and agrees that many factors affect the design integrity of the float kit, including the design requirements for structural integrity of attachment to aircraft and aquadynamic, aerodynamic and center-of-gravity characteristics. Assembling and installation is the sole responsibility of Purchaser.

PUDDLEJUMPER FLOATS (1991) INC. reserves the right to make revisions in the Design and Construction of the Float kits at any time without liability to PUDDLEJUMPER FLOATS (1991) INC., as such revisions or changes may be deemed advisable from time to time.

ACCIDENT LIABILITY

Purchaser understands and agrees that many factors beyond the control of PUDDLEJUMPER FLOATS (1991) INC. significantly affect the operational safety of the Float kit including the quality of the aircraft as constructed by Purchaser or others, the attachment of the Float kit to the aircraft as undertaken by the Purchaser or others, the performance by Purchaser or others of inspections, maintenance procedures, and repairs, or the operation of the aircraft, including high impact, rough water, excessive weight, high take off or landing speeds, etc. by Purchaser or others.

Purchaser also understands and agrees that the installation, maintenance, and/or repair of any aircraft or Float kit may involve use of tools, equipment, and construction methods which may present safety hazards which are beyond the control of PUDDLEJUMPER FLOATS (1991) INC.

PUDDLEJUMPER FLOATS (1991) INC. does not warrant the integrity of the Float kits after they have been shipped from the factory.

Purchaser agrees to inspect the Floats and all component parts, prior to installation, for shipping or other damage.

The entire risk as to the quality and performance of the Float kit is with the Purchaser. Float kits are provided "**AS IS**" without express or implied warranty of any kind, including merchantability and fitness for a particular purpose. Should the float kit or installation prove defective, the Purchaser and not PUDDLEJUMPER FLOATS (1991) INC. assumes the entire cost of all necessary servicing, repair, or correction.

YOU ARE THE FINAL INSPECTOR

PUDDLEJUMPER FLOATS (1991) INC. is very conscientious to assure that the proper items are delivered. It is your responsibility, however, to inventory the parts supplied with the Float kit. If there are any discrepancies in your order, PUDDLEJUMPER FLOATS (1991) INC. must be notified within 30 days of receiving your Float kit for any necessary adjustments.

If damage has occurred to your Float kit during shipment, please call your trucking company and PUDDLEJUMPER FLOATS (1991) INC. immediately. It is our intent to assure the delivery of quality Float kits. If you have any problems, please contact PUDDLEJUMPER FLOATS (1991) INC. for any necessary corrections.

GENERAL INFORMATIONS

1. The initial installation requires that instructions be fully understood before any bolting or drilling of holes be accomplished. As most hardware will remain permanently fixed either to the floats or plane, subsequent removal or installation of the floats should take less than one hour.

2. It is suggested that on initial installation the plane be raised freely off the ground, preferably suspended at the center of gravity.

3. For those who use the floats seasonally, it is easier to remove or install the complete float assembly as one unit; wires are disconnected, lateral braces removed from the plane, and dowels disconnected from the airframe. All other components remain intact.

4. Floats can be painted at will with any good quality polyurethane paint normally found in marine supply stores or marinas.

5. If the plane is to remain out in warm sunshine, some pressures will build-up in the floats. Although this pressure has no adverse effect on the floats, it may render opening the inspection hatches difficult. Pinholes may be drilled in the center of the access hatch cover to release the pressure. 1/32" holes will not let water in the floats.

6. All parts bolted to the floats should not be over tightened, for hairline cracks may appear in the gel coat. Bolts cannot loosen as they are nylocks.

7. Caulking (silicone or goop) must be used under all accessories bolted to the floats, such as mounting blocks and hatch covers. Failure to do this will let water leak into the floats.

8. It is imperative that the bushings and shaft of the nose gear assembly be kept clean and lubricated with a silicone lubricant or light oil. Mechanism operation and steering function should be part of preflight inspection.

   The S.S. shaft should be wiped with a lightly oiled rag as required to keep the shaft clean and free.

   To insure that nose wheel assembly lowers and locks properly, a lubricant in the form of a spray or light oil should be poured in the void of the nose wheel fork. The emergency down push rod is highly recommended as a back-up.

   Be sure to allow 1" free play in the retract cable. If the cable is taunt in the wheel down configuration, the normal wheel movement on a grass field can pull the lock-key in the open position and collapse the front wheel.

9. The area behind the wheel well is an absolute "no step" zone when the floats are on ground. Try to avoid stepping there at anytime even in the water.

Warranty

There is no warranty on this product. Floats and hardware have been designed so that they will absorb energy and collapse before the airframe does in the event of serious impact.

Proper training for float operation is indispensable. Take-offs and landings on water, if not properly initiated, can put greater strain on the airframe than landing across a ploughed field on wheels.

INSTRUCTIONS JABIRU CALYPSO

1. Mount wheel lock 3" x 3" aluminium main gear pedestal (diagonally cut) on float, at the step, using pre-drilled holes, and install compression wood block. Holes for wood block installation are already drilled in the main gear 3" x 3" mounting pedestal. Compression block must be snug at the top of the main mounting pedestal (Fig.1).

2. Install Morse cables and locking plate on floats. Plastic support and Morse clamp should be installed in pre-drilled holes at this point (Fig.1). Make sure that lock plate slides to middle of middle bolt in wheel down lock position.

3. Install 3” x 3” rear mounting pedestal (rectangular cut) behind wheel well in pre-drilled holes.

4. Install rear wheels retract cables and attach to rear wheel fork as shown in Fig.1. Cut cables long enough to be able to complete installation in aeroplane cabin later. Do not forget that you also need cable length for front nose gear retraction.

5. Install rear wheels, cut spacers to appropriate length to center wheel in fork. If you have the brake system wheels, the spacers are pre-cut and packed with the wheels.

6. Insert rear spreader bar through one rear mounting pedestal and attach gear leg axle "sandwich bracket" to mounting pedestal and spreader bar. "Sandwich bracket" must be snug to pedestal (Fig.2).

7. Measure distance "A" between ends of aircraft gear leg axles (Portion of 20mm) (Fig.3).

   This distance will determine the minimum distance between the two "sandwich brackets". You must be careful when you measure this distance. The gear legs of a new aircraft are cambered. On used aircrafts, the camber is virtually non-existent in most cases. You will need to add to the distance “A” some length to compensate for the camber. The gear axles will need to rest flat in the “sandwich brackets” thus spreading the gear legs. We will explain further along how to proceed. Just make sure that you have allowed enough length in your measurements to bring the axles horizontal.

8. Once distance “A” has been measured, it will be the distance between the inside ends of the "sandwich brackets". Proceed to passing the spreader bar through the second float rear mounting pedestal and deposit other "sandwich bracket". Slide the spreader bar (with bracket over pedestal) until you get distance "A".

Once the distance is established drill holes through spreader bar and bolt "sandwich bracket" to mounting pedestal. At this point spreader bar will extend towards the exterior. Excess length will be cut once the floats installation is completed.

9. Remove the screw connecting the nose wheel to the rudder pedals.

10. Raise the aircraft if possible to remove main wheels and install the aircraft axles in the "sandwich brackets". When “dropping” the aircraft axles in the “sandwich brackets”, depending on the gear leg camber, they will not lay flat. You will need to spread the gear legs so that the axles lay flat in the brackets. The weight of the aircraft will help but you can try sitting two people in the aircraft to make it easier. If they are still not flat at this point, you will need to take a large wood block and hit the inside of the bottom of the gear leg to spread it. Once it is quite flat install top part of “sandwich bracket” and bolt it down but do not tighten too much as aircraft needs to rotate within the brackets to obtain proper angle later on (Fig.4). If you are not able to raise the aircraft you can use long wood planks resting from the back of the rear mounting pedestal to roll up the aircraft and then remove the wheels one by one and insert the axles in the brackets (Fig.5). (You will need to be at least five people to do this securely) Also, if you proceed this way you must be very careful to support the back of the floats and avoid putting to much weight on the back of it so that you do not crush it. The back of the floats is not made to receive major weight, as it is a no step zone at all times.

11. Once the aircraft is resting on the floats, tie down the tail. Level the floats on wood blocks high enough so that the rear wheels will clear the ground comfortably in the down position (Fig.6).

12. Remove aircraft front wheel tubing. gear tubing. Insert float nose wheel tubing into aircraft housing.

13. Connect the floats nose wheel section to the spreader bar. Install front mounts assembly (front spreader) onto float deck, making sure that they are flat and centered on deck

14. Make sure that floats are parallel to each other by measuring distance between axles and center of floats aft and forward: measure should be the same.

15. Make sure floats are still fully levelled and parallel to the airframe and to each other. Pull or release the rope holding the tail until you attain the right angle of incidence. Use a protractor to measure 5^{o} between the floats (levelled) and the underside of the wing. The main nose tubing might need to be cut to avoid hitting the engine carburettor.

16. Remove nose gear section if the length is too long once you have the right angle. You will need to cut the top of the nose tube. Insert a small piece of rag down the tubing of the nose gear before cutting. After cutting, remove rag and make sure that no aluminium shavings went down the tube. Repeat step 15 and 16 until you obtain the right length of tubing at the 5 degree angle.
17. Once you have the right angle repeat step “13” because while obtaining your angle everything has moved. Align front nose wheels and rudder.

18. Bring “stop ring” of nose gear to top of aircraft housing (Fig 8). Mark the hole in the nose gear where the bolt for the rudder pedals will go. Mark holes for front mounting block on float deck. (Fig.7)

19. Remove nose gear section. Insert a small piece of rag down the tubing of the nose gear passed the location of the holes to be drilled. Attach a pull rope to it so you can remove it after having drilled the holes. Drill hole in nose gear tubing to attach rudder pedals connector. Drill another hole through the “stop ring” and tubing to pass a bolt through it so that the stop ring is completely secured and will not allow tubing to slide up and damage the engine in case of major impact (Fig.8). Remove rag and make sure that no aluminium shavings went down the tube.

20. Reinsert nose gear in aircraft housing and bolt into position. Pass bolt through “stop ring” (Fig. 8), (Pict. # 1).

21. Verify once again that you have the right angle between the floats and the aircraft. Tighten down the “sandwich brackets” onto the axles. Drill the holes in the floats for the front mounting blocks and bolt front mounting blocks.

22. Install stainless steel "U" bracket on top of block (Fig. 7).

23. Install front stabilizer struts from front block "U" bracket to other "U" bracket attached to aircraft structure. You will need to cut the stabilizer strut tubing to obtain the required length. You must bend the aluminium plates to be inserted as backing for bracket inside the cabin. Build up a bit of fibreglass on the interior and then bend the plates according to the shape of the cabin at the junction of the firewall. You then need to drill the plates to attach through the firewall and to bolt the “U” bracket. (Pict. # 2).

24. Once you have the "U" brackets in position, tighten the bolts, drill the stabilizer struts and bolt.
25. Install crosstubes from nose gear to gear legs. Drill front spreader bar to pass ¼” bolt for “U” bracket on each side of nose gear (Pict. # 3). Install other “U” bracket at base of bolt holding the main gear leg (Pict. # 4). Cut crosstubes to appropriate length, drill and bolt.

26. Install hatch covers. Place covers with rings over holes on top of floats and drill 3/32” holes about ¼" deep into float top. Apply a complete coat of silicone or goop to the mating surface of hatch cover ring. Insert screws and tighten gently, just enough to squeeze out some silicone and make a gentle contact between the ring and float.

27. Install front nose gear retraction cable. Make loop and nicopress. Attach to bolt at base of nose wheel shaft. Pass through "lock key" (Fig 8). Run cable sheave and cable inside cabin. Install plastic guide under dash (Pict. # 5). Install hook on side of centre console as shown in picture # 6. Make sure that when you attach the ring to the hook the nose gear shaft is at maximum up travel. To lower nose gear unhook ring and let go. Do not "baby" it. Let gravity do the pull down. Do not forget to allow minimum 1" loose cable with gear down.

28. Install main gear retraction cables. Start by installing cable splitter and pulley as shown in Fig.9. Drill hole in base of pilot seat in alignment with location of cable splitter. Pass cables through splitter, measure length of travel to bring wheels at maximum height. Install hook on backing at a position that when the handle is inserted on the hook the wheels must be at their maximum up position to be able to push the lock plates through the fork easily. The cable is what holds the wheels up. The forks must not rest on the lock plates in the up position. If the forks rest on the lock plates, a torque is applied to the Morse cable and it will eventually be damaged or break. The lock plate is slid through the fork, in the up position, only as a safety precaution so that if for any reason the handle is released accidentally during a water landing, the forks will come to rest on the lock plates and avoid the wheels going down.

29. Install Morse cables in cabin. You will need to make two holes in the fibreglass to bring the cable inside. Do not make a tight turn in the Morse cable. Attach the cables onto the sides of the centre console using the plastic spacers and Morse clamps as shown on pictures # 6 & 7.

30. Complete the installations of all retract cables and Morse cables before lowering the aircraft. Practice release of lock plates and bringing up the wheels and locking them in the up position. Make all necessary adjustments while the floats are mounted on the blocks so that you are comfortable with the procedure. You will have to operate this in flight so make sure that the positioning and mechanism operation is satisfactory to you.

31. Water take-offs are initiated with stick pulled to the maximum and then applying full power. Nose of aircraft will come up. Once the nose is up you will need to push the stick back down to bring the aircraft level on water (getting on the step). You must then learn to balance the aircraft on the step until you reach the required take off air speed. Once this speed is attained, a very slight pull on the stick will release the aircraft from the water. Trying to rotate too early will only

allow the back of the floats to dig in the water thus slowing you down and rendering take off impossible.

32. Remember to have your wheels down for ground landing and your wheels up for water landing. We strongly recommend that you make some kind of checklist that you can stick on the dash to avoid forgetting the wheels.

33. Enjoy float flying.