

## SOLAR WINGS

## SERVICE BULLETIN NO. 0034

Date: 14.11.91

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**SUBJECT:** Fitting of 46 litre Polythene Fuel Tank (TRA-17009)

**MODELS AFFECTED:** Pegasus XL-R  
Pegasus XL-Q

**PURPOSE**

The polythene tank may be fitted to the XL-Q as a direct replacement for the original aluminium 47 litre design. The tank can also be fitted to the Pegasus XL-R, giving much greater range and endurance. The XL-R must incorporate Mods 16/17 (strengthened 25 x 30mm cross section front forks with optional brake as per XL-Q) and Mod 0031 (trike basetube sleeved as per XL-Q). Both of these modifications have been standard since March 1989. The tank is more robust, lighter and features:-

1. A built-in sump which reduces the unusable fuel to 500cc, even in a steep climb attitude.
2. A drain valve for fuel water checking.
3. An integral sight gauge.
4. Improved mounting system.
5. Simplified vent system.

**AIRWORTHINESS****PEGASUS XL-Q**

1. The installation must be inspected by a Solar Wings or BMAA inspector and "Modification No. 0043" entered in the aircraft technical log. The fuel quantity placard should be changed to 46 litres.
2. The appendix for the fuel tank must be attached to the Owner's Handbook.

**PEGASUS XL-R**

1. The installation must be inspected by a Solar Wings or BMAA Inspector and signed off in the technical log. *mod 44.*
2. The trike must also be inspected to incorporate Mods 16/17 and 31 as detailed above. Older aircraft can be modified quite simply - parts are available from Solar Wings Plc.
3. The trike must be re-placarded to reflect the increased MAUW of 365Kg and the fuel volume of 46 litres.

**IMPLEMENTATION**

Refer to the attached mounting system drawing for illustration.

1. Removal of the existing tank.

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- 1.1. Syphon out the majority of the fuel.
  - 1.2. Detach the fuel feed pipe from the fuel line.
  - 1.3. Remove the entire vent pipe system from the trike.
  - 1.4. Release the apron strap which runs around the pylon.
  - 1.5. Undo the rear tank strap and remove the tank.
- 2. Fitting of the rotamoulded tank.**
- 2.1. Supporting the pylon, remove the pylon hinge bolt.
  - 2.2. Reassemble as shown in the attached drawing, using the new, long M8 pylon hinge bolt (15), mounting bobbins left hand (17) and right hand (23), and washers etc.
  - 2.3. Inspect all mountings and fasteners for condition and security.
  - 2.4. Slide the tank onto the bobbins, and push the tank into position. The tank will snap into position on the upper rear locators.
  - 2.5. Fit the rear location strap (25) with the two drawbars (29) and M6 nuts (1), bolts (26) and washers (2). Tension to a snug fit.
  - 2.6. Fit the drain valve (28) with the fibre washer (32) located centrally so as to seal directly on the plastic tank wall. Wirelock the drain valve to the tank strap tab (30). This secures the tank strap as well as the drain valve.
  - 2.7. Carefully mark and drill the lower engine mounting cross brace to receive the front tank mounting angle (4) as shown. Use a wood block behind the plate to prevent damage to the engine mounting whilst drilling.
  - 2.8. Fit the front tank mounting angle and buffer strip (4). Adjust to press snugly downwards on the tank top surface.
  - 2.9. Fit the fuel cap with lanyard (14) to the rear offside engine mounting bolt as on previous installation.
  - 2.10. Fit the vent pipe (12) as shown, routing around the side of the gearbox. Wire lock between the two small lugs on top of the gearbox. Secure the vent tube to this wire with tiewraps (13). Ensure there are no kinks.
  - 2.11. Fit the fuel feed pipe and a new fuel filter, if necessary. Ensure there are no air leaks.
  - 2.12. In the case of the XL-R, fit the apron tensioning extender strap (6), to allow for the wider tank.
  - 2.13. Inspect the whole installation, checking for security, leakage and freedom of operation whilst rigging and de-rigging.

## SOLAR WINGS

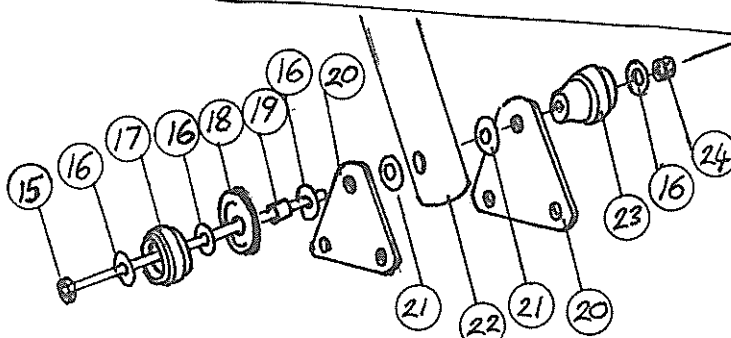
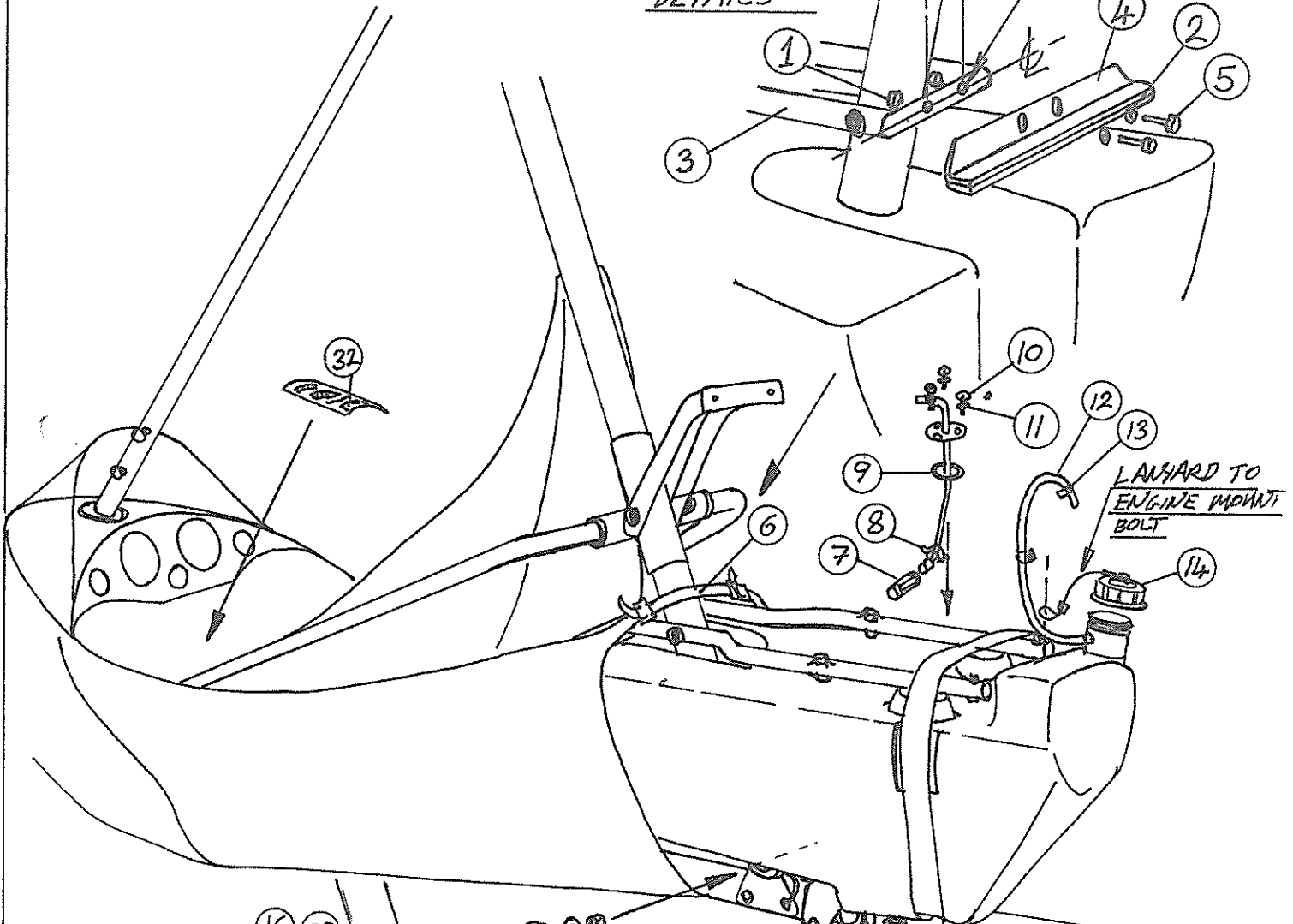
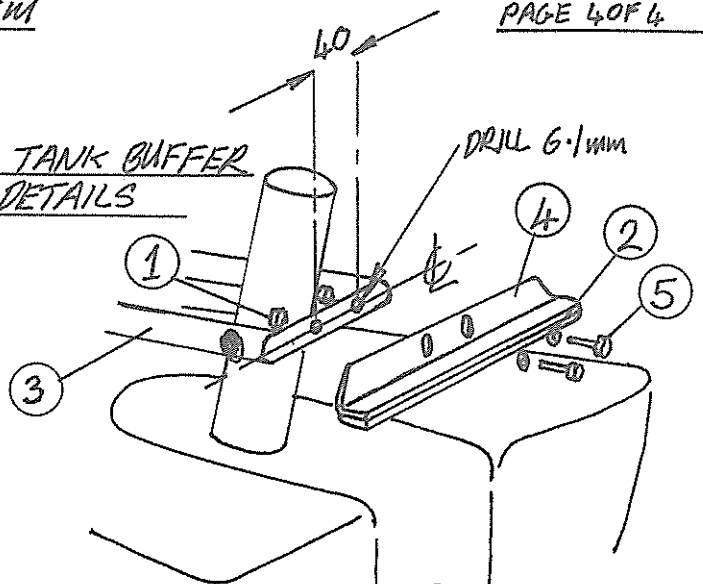
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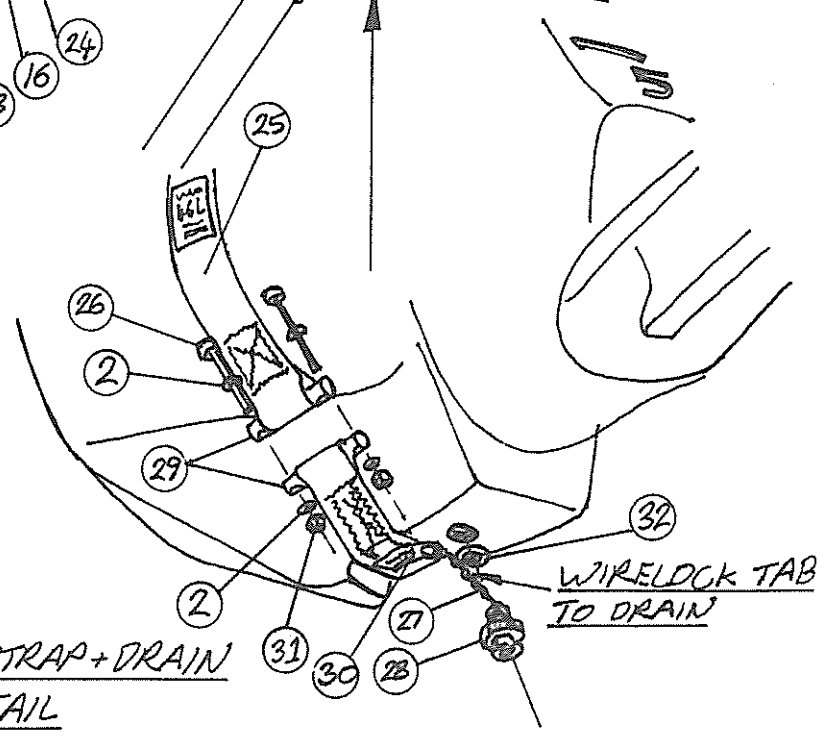
Key to Tank Mounting System Drawing.

<u>Key</u>	<u>Part</u>	<u>Quantity</u>
1.	6mm half nyloc nut	2
2.	1/4" t3lp washer	6
3.	Lower engine mounting	1
4.	Fuel tank buffer	1
5.	M6*16 hex bolt	2
6.	Apron extender strap (XL only)	1
7.	Fuel strainer	1
8.	1/2" "O" clip	1
9.	O ring seal	1
10.	M6*10 socket screw	3
11.	M6 anti-vibration washer	3
12.	Vent tube	1
13.	Tiewrap	3
14.	Fuel cap, sealing washer and lanyard	1
15.	M8*140 bolt	1
16.	5/16" * 1" washer	4
17.	L.H. Lower fuel tank support with rubber	1
18.	Starter pulley	1
19.	Starter pulley bush	1
20.	Hinge plate	2
21.	Mylar washer	2
22.	Pylon	1
23.	R.H. Lower fuel tank support with rubber	1
24.	M8 nyloc half nut	1
25.	Fuel tank strap	1
26.	M6 * 20 fully threaded bolt	2
27.	Wire lock	1
28.	Fuel tank drain valve	1
29.	Strap tension bar	2
30.	Tank strap tab (part of tank strap)	
31.	M6 nyloc full nut	2
32.	365kg main placard (XL only)	1

FWD. TANK BUFFER  
DETAILS



LOWER FWD TANK  
MOUNTING DETAIL



TANK STRAP + DRAIN  
DETAIL