

1. General.

The tow system has been designed and tested for use with the Pegasus XL-R 462 H.P. The H.P. engine installation is necessary to provide an adequate climb rate when towing. The towing system comprises the tow release, towing mirror and trim system for the wing. The towing mirror is a convex type providing a good view of the glider under tow. The trim system enables the XL wing, on the rear hang point, to be trimmed over a range 40-32 mph IAS. The variable trim speed allows the tug pilot to trim at the best towing speed for the hang glider, which is generally between 32-36 mph. The placarded towing speed range is between 28 and 46 MPH IAS.

2. Operations.

For towing hang gliders, the hangpoint should be set on the rear hole, giving a 32-40mph trim range using the trim system. For towing light sailplanes, the middle or forward hole may be more appropriate.

The flight limitations of the aircraft **MUST NOT BE EXCEEDED**. See the main Aircraft Operators Manual. Do not be tempted into aerobatic manoeuvres in the interest of getting down for the next tow. Harsh on/off operation of the throttle should also be avoided - allow the engine to warm up and cool down smoothly.

- The procedures described in the current issue of the BHPA Aerotowing Manual must be applied during aerotowing operations.
- Aerotowing is an advanced skill and pilots of both the tug and the glider must have the necessary capabilities.
- Initial aerotows must be in smooth conditions, preferably with 5-10 mph of wind straight up the runway.
- Remember the release at the tug end is designed to be used. The release action must be practised so that it is automatic by the pilot in an emergency. Operation of the release must be checked regularly.

3. Limitations.

- 3.1. Maximum weak link strength 100kg.
- 3.2. The correct type of release ring is the TOST release ring pair, TOST part number 102000. This type **MUST** be used and is available from the Factory or RD aviation, Kidlington.
- 3.3. Aerotowing must be with a solo pilot in the front seat only.
- 3.4. Maximum towing speed 46 mph.
- 3.5. Maximum glider weight 150kg max all up weight. (215kg MAUW when operated in accordance with **BHPA Aerotow Manual Appendix 3**).

4. Fitting.

4.1 Towframe.

The tow frame is mounted on the trike by means of four brackets. These four brackets are at the top of the pylon, on each undercarriage leg and on the engine head steady (see drawing). The tow frame is mounted onto the brackets by means of shear loaded pins secured by split rings. The release cable is threaded between a bracket on the front strut and a bracket on the pylon. The cable is attached to the pylon bracket by a quick release clip. The cable should be covered with a PVC tube to allow more comfortable operation.

The aircraft should be rigged as normal without the towframe, and the towframe then fitted. For de-rigging, the towframe should be removed first.

4.2 Tow mirror.

The tow mirror should be clamped securely in position as shown in the drawing. The mirror should be adjusted to give the pilot a view over the top of the radiators when strapped in. The full range of wing control movements must be checked to ensure there is no possibility of fouling on the control frame or rigging wires.

4.3 Trim system.

The trim system should be fitted as shown in the drawing. Takeoff should be with the trimmer slack (fast), the pitch force being trimmed out by the pilot in steady climbing flight after takeoff.

4.4 Inspection.

The towframe, tow mirror and trimmer systems must be inspected by a Pegasus Aviation or BMAA inspector before initial use. The technical log must be signed "Modification 102 (tow frame) incorporated".

For Permit Renewals, TADS BM9 Issue 8 Appendix 5 Issue 1 applies.

4.5. Test.

The aircraft must be check flown and all systems tested before aerotowing operations commence each day.