LINDSTRAND HOT AIR BALLOONS LTD

SERVICE BULLETIN NO. 11

ISSUE 1 – DATED 24.09.07

TITLE:	3/8” BORE FUEL HOSE FAILURES
Classification:	This Service Bulletin is mandatory.
Applicability:	All Lindstrand supplied 3/8” bore hoses supplied between 6 September 1998 and 5 September 2001 which have been manufactured by Flexquip Ltd. This Service Bulletin supersedes SB7 and SB8.
Serial Numbers Affected:	All burners with serial numbers between BU502 and BU792 inclusive, except the following: BU507, BU511, BU512, BU614, BU643, BU655, BU656, BU719, BU723, BU746, BU749, BU752, BU754, BU762, BU779, BU781, BU785, BU787, BU789
Background:	Subsequent to Service Bulletins Number 7 and Number 8 there have been four reported incidents of fuel hoses failing in a similar fashion to the batches of hoses identified in SB7 and SB8. These hose failures are from hose manufactured in 1999 and 2000. The typical failure observed is of liquid fuel escaping at any position along the length of the hose through the pin pricking on the outer surface. The rate of leakage observed can vary between the creation of small bubbles when leak detecting fluid is used on the surface up to substantial visible jets of liquid propane, which constitute a major hazard during flight. Given the lack of clarity from the hose manufacturer regarding when the manufacturing specifications were changed it is now required to replace all hoses supplied by this manufacturer that are still in service.

Accomplishment Instructions:

Inspection

All Lindstrand supplied hoses used within the hot air balloon, including burner supply hoses, basket manifolds and refuelling hoses must be inspected in the following manner:

1. Look for a hose identification label which is normally situated close to one end of the hose (see Photo 1). It is a white label which is sealed under a clear protective coating and contains various identifiers as described in Photo 1.

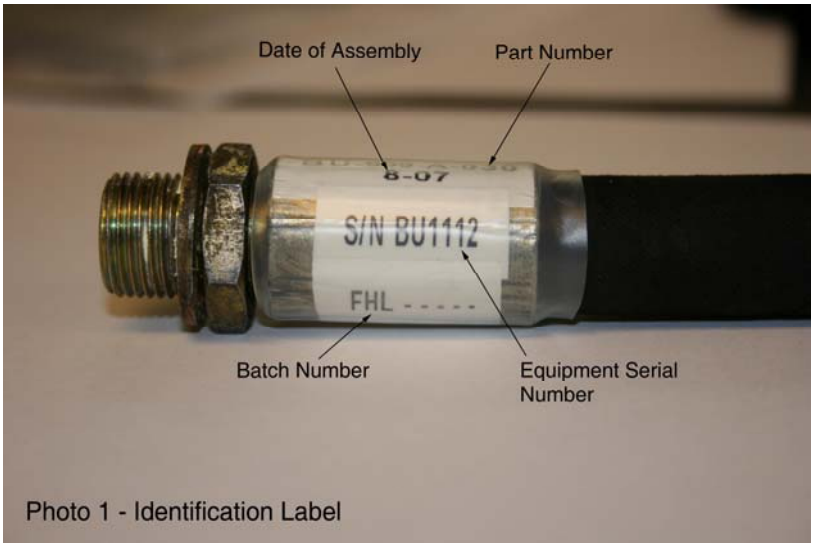
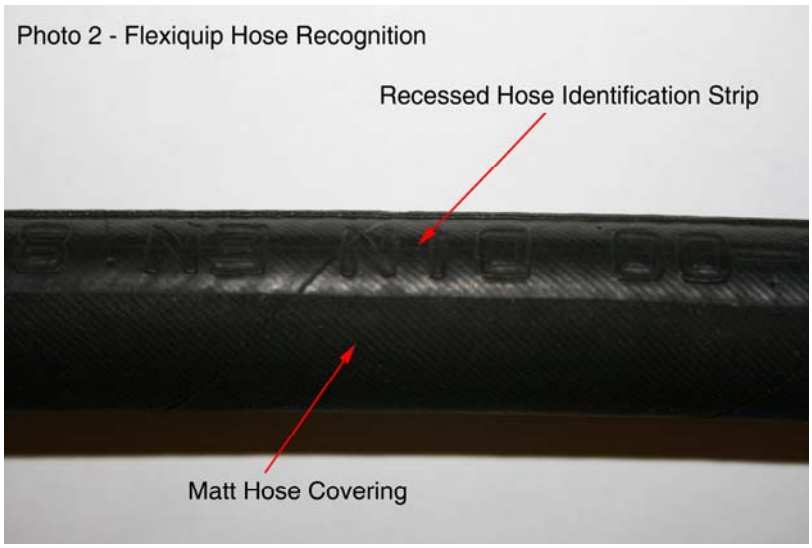


Photo 1 - Identification Label

If the batch number begins with the three letters FHL then the hose must be inspected in accordance with the instructions under part 4. below.

2. Hoses supplied or installed before January 2001 will not be identified with the hose identification label. In this situation the Flexquip manufactured hose may be identified by the appearance of the outer covering (see Photo 2).



The outer covering is generally matt in appearance with a slightly shiny recessed strip which runs the full length of the hose. Within this strip there are a series of raised letters and numbers which will be in the following format:

SL1 EN 853 1SN DN10 2Q99

Note that these letters and numbers are quite often grouped in a different order.

3. Hoses That Are Acceptable

Given that all of the hoses affected by this Service Bulletin are over five years old it is recommended that this inspection is conducted to establish that the hoses are ones manufactured by Flexquip.

The following hose types are **NOT** covered by this Service Bulletin and do **NOT** require testing and / or replacement:

a. Any hose that has a batch number beginning with the letters “CB” (see Photo 3).

Photo 3. Acceptable Hose Recognition

b. Any hose which is identified with the following manufacturers names:

i) **ITEC**

The ITEC manufactured hose has a shiny outer covering and is printed with the letters ITEC followed by the hose specification details in white lettering (see Photo 4).

Photo 4. ITEC Manufactured Hose Example

ii) **ITR**

The ITR hose has a matter outer covering with the letters “ITR” followed by the hose specification printed in dull white lettering (see Photo 5).

Photo 5. ITR Manufactured Hose Example

iii) **Parker**

The Parker hose has a matt outer covering with the name “Parker” followed by the hose name and description printed in dull white lettering (see Photo 6).

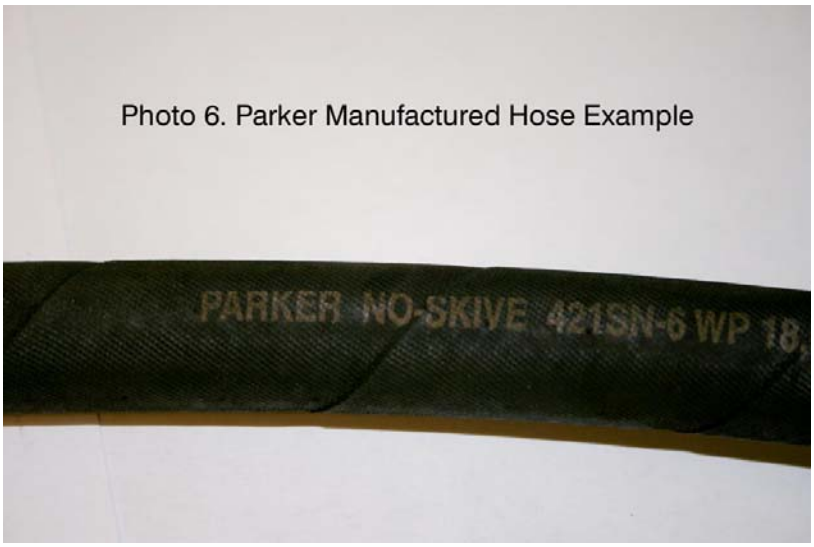


Photo 6. Parker Manufactured Hose Example

c. Any replacement hoses which have been supplied by other manufacturers or maintenance organisations.

If there is any doubt regarding the identification of any hose assemblies, please contact your local Lindstrand Dealer or the factory.

4. Hoses which are identified as Flexquip manufactured hose must be pressure tested for leaks using leak detection fluid or soapy water. Pressure testing may be achieved by connecting the hose to a full fuel cylinder and opening and closing the liquid withdrawal valve. This introduces pressure into the hose. Ensure all normal safety precautions are undertaken whilst testing the hose. Inspect the exterior surface of the hose for any evidence of leakage, especially close to the pin-pricked holes in the outer covering. Once the inspection has been completed the pressure must be vented to atmosphere through the burner.

5. If no leaks are detected the hose may be returned to service for a further ten flight hours and the aircraft log book completed with the following comment “Service Bulletin Number 11 accomplished and no leaks detected. Next test due when aircraft hours are “current + 10”. All Flexquip hoses must be replaced at or before the next annual / 100 hour inspection.

6. If any leaks are detected withdraw the item from use and contact the factory or your repair station for new hoses.

Supply of New Hoses

If the hoses fitted to your system require replacement then please contact the factory, your local dealer or your maintenance organisation with the following information:

1. For each hose required please supply the overall length of the hose required and the type of end fitting you need.

2. The serial number of the burner or if replacing a refuelling line or manifold section then supply the serial number of the balloon system to which it was fitted.

Installation of New Hoses

Pre-fabricated fuel hoses may be installed by the owner / operator or pilot following the instructions contained within the Lindstrand Balloons Maintenance Manual. Alternatively your equipment may be returned to your local maintenance organisation for installation. The installation of new parts must be noted within the aircraft log book.

Hoses identified as being manufactured by Flexquip and leaking must be made unusable.

Design Organisation Approval

Statement of Compliance Verification

I hereby confirm that the instructions identified in this Bulletin provide for practical and well defined installation / inspection methods and when accomplished the product is in conformance with approved design data.

Signed for and on behalf of Lindstrand Hot Air Balloons Ltd

.....
Head of Airworthiness

Date: ..... Name: .....

Approval Statement

I hereby confirm that these instructions are in compliance with all the applicable airworthiness requirements. The technical content of this document is approved under the authority of DOA nr. EASA.21J.175.

Signed for and on behalf of Lindstrand Hot Air Balloons Ltd

.....
Head of Airworthiness

Date: ..... Name: .....

LINDSTRAND HOT AIR BALLOONS LTD

SERVICE BULLETIN NO. 11

INSPECTION REPORT FORM

Owners Name: .....

Equipment Ser.No.: .....

Type of Installation: .....

1. Burner Ser.No.: .....
2. Refuelling Hose (Balloon Ser.No.): .....
3. Manifold (Balloon Ser.No.): .....

Number of Hoses Inspected: .....

a. I can confirm that I have inspected the above hoses and found that they are NOT Flexquip manufactured hoses.

b. I can confirm that I have inspected the above hoses, they are manufactured by Flexquip and that I have tested them for leaks and have found none.

c. I can confirm that I have inspected the above hoses, they are manufactured by Flexquip and they have been replaced.

Delete if applicable

Signed: .....

Date: .....