



ref SB144 Split Rings

**SERVICE BULLETIN NUMBER 144, issue 3.**

<b>TITLE</b>	Split Rings
<b>CLASSIFICATION</b>	P&M Aviation have classified this service bulletin essential.
<b>COMPLIANCE</b>	Inspection before further flight.
<b>APPLICABILITY</b>	All Pegasus, Mainair and P&M types including

<b>BM2</b>	Gemini Sprint
<b>BM3</b>	Tri-Flyer Sprint
<b>BM4</b>	Gemini Flash
<b>BM5</b>	Panther XL-S
<b>BM9</b>	Pegasus XL-R
<b>BM10</b>	Pegasus Flash
<b>BM17</b>	Pegasus Flash 2
<b>BM14</b>	Gemini Flash 2
<b>BM16</b>	Scorcher
<b>BM17</b>	Pegasus Flash 2
<b>BM23</b>	Gemini Flash 2 Alpha
<b>BM25</b>	Pegasus XL-Q
<b>BM27</b>	Chaser S
<b>BM28</b>	Pegasus Photon
<b>BM31</b>	Chaser S 1000
<b>BM33</b>	Chaser S 508
<b>BM37</b>	Chaser S 447
<b>BM38</b>	Pegasus Quasar
<b>BM42</b>	Pegasus Quasar - TC
<b>BM43</b>	Mainair Mercury
<b>BM44</b>	Pegasus Quasar 2 TC
<b>BM45</b>	Cyclone AX3/503
<b>BM46</b>	Pegasus Quantum 15 (Rotax 2-stroke engines)
<b>BM47</b>	Mainair Blade
<b>BM50</b>	Pegasus Quantum 15-912
<b>BM51</b>	Mainair Blade 912
<b>BM53</b>	Cyclone AX2000
<b>BM54</b>	Mainair Rapier
<b>BM56</b>	Pegasus Quantum 15-HKS
<b>BM60</b>	Mainair Blade 912S
<b>BM65</b>	Flight Design CT2K ( rudder control )
<b>BM66</b>	Pegasus Quik
<b>BM70</b>	Quik GT450
<b>BM72</b>	Flight Design CTSW (rudder control)
<b>BM77</b>	QuikR
<b>BM80</b>	Quik GTR
<b>BM81</b>	PulsR
<b>BM83</b>	Flight Design CTSL (Rudder control)

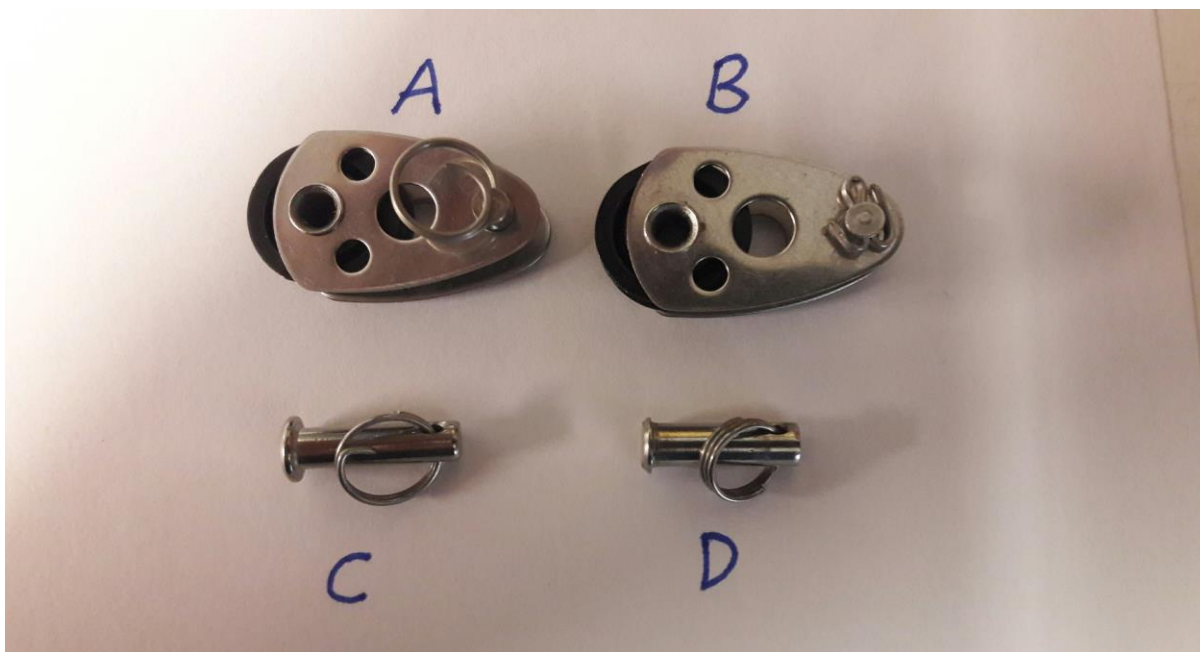
**1) INTRODUCTION**

Following maintenance, a clevis pin came out of the RP-4 roll trim system pulley on a QuikR causing a left turn. The split ring securing the clevis pin had come out. It is not known if the ring was disturbed during the maintenance.

ref SB144 Split Rings

The split ring which came out was the same “spiral start” pattern as that which has caused trouble before (see Service Bulletin 139). This pattern of ring has no positive stop, so that simple rotation of the ring (e.g. caused by it getting caught on something) will cause it to disengage. See A below, showing the ring starting to disengage.

Type C is better having a 90 degree positive stop. Type D is used on the QuikR and GTR washout rod universal joints and the most secure type of ring, having no starting ramps and 2 complete turns through the hole. Split pins may be fitted as an alternative to split pins, see B below. All type A split rings have been discarded at the Factory



**2) ACTION**

Split rings of the spiral start pattern “A” above must be removed in all locations and be replaced with stainless steel split rings to pattern C or D. Alternatively, split pins may be fitted. The small 4mm clevis pins used in the RP-4 pulley above take a 1/16” split pin, part no. FPSP-002. Larger clevis pins take 5/64” stainless steel 316 split pins, part no. FPSP-005.

The ends of the split pin should be trimmed and curled over so as to minimise the possibility of snagging.

**3) Documentation**

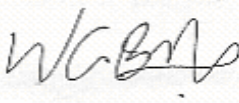
The aircraft technical log must be signed “ Service bulletin SB144 (split rings) carried out” by a qualified inspector and/or an owner/operator.

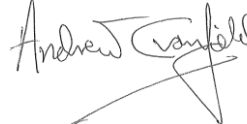
**4) Continued Airworthiness**

At each permit revalidation, the inspector must check the service bulletin has been carried out, that there are no split rings of the “spiral start” type on the airframe and that the correct split rings or pins have been installed securely.

ISSUED BY W.G.Brooks

DATE

Approved		Date 19/10/16
----------	---	------------------

Checked		Date 27/10/16
---------	---	------------------