474.

Galloper crank failure

A UK registered inspection body has reported the failure of a Galloper crank (as per images 1-3) manufactured by John H. Rundle, on a ride built by another manufacturer.

The crank design incorporated welded washers on either side of the horse pole bearing to keep the bearing in position during operation.

The failure occurred directly under the bearing side washer. It is understood that the cranks had been subjected to annual inspection, but due to the washer being welded to the crank the critical area directly under the washer cannot be subjected to inspection. The manufacturer has been contacted and informed of this failure/design issue.

Following their investigation into the cause of the failure, the manufacturer has redesigned the way the bearing is held in position by using clamps (image 5) either side of the bearing instead of the welded washer to retain the bearing in position.

As this is a change to the original design this modification should be subjected to pre-use inspections.

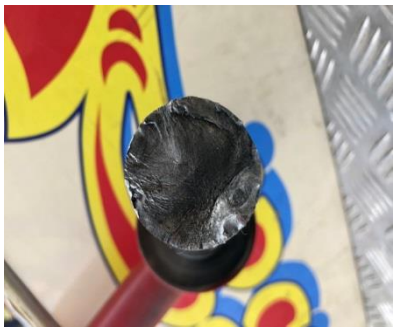

Figure 1

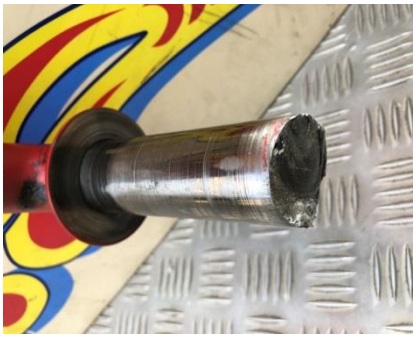

Figure 2

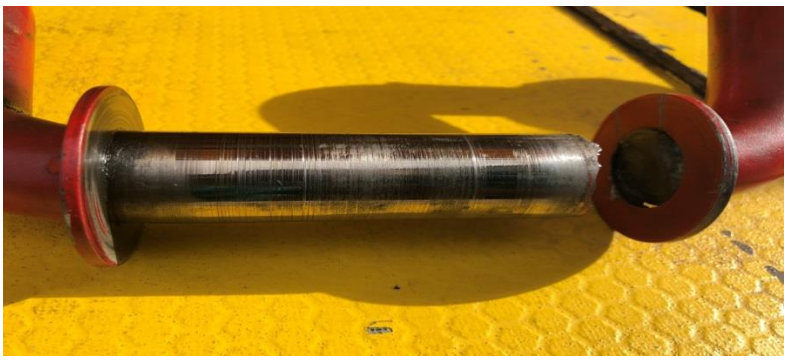

Figure 3

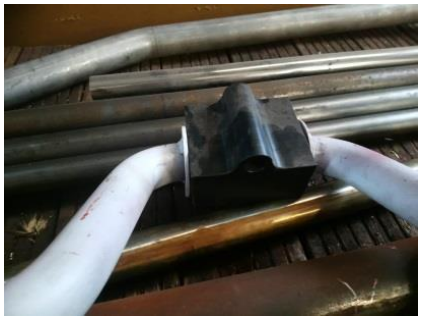

Figure 4
Bearing assembly

Figure 5
New clamp design