



**BERMUDA SAFETY BULLETIN**

**Failure of Large Planetary / Reduction Gear Components of LSA Winch Equipment**

Notice to all Ship and Vessel Owners, Ship Operators and Managers, Masters and Officers of Bermuda Registered Ships Incorporating Davit Launched Lifeboats and Rescue Boats

This Bermuda Safety Bulletin is issued to raise awareness of failed fill plugs and seals on the large Planetary Gears incorporated into the W-Winch series of lifeboat winches produced by UMOE Schat-Harding (now Palfinger Marine), Inc.

The following W-Winches manufactured between 1997-2000 may be affected.

W50 L	W 50RS	W80R2	W120RLD	W 120 OLLD	W120LLDG20
W50LLD	W50OL	W80R2LD	W 120 R2	W120TM	W120TLDG20
W 50R	W80L	W 80OL	W120R2LD	W 120LM	W120MLDG20
W 50 R LD	W80LLD	W120L	W 120T	W120LM	W150 L
W 50 R2	W 80R	W120LLD	W 120 T LD	LD W120	W150O
W 50 R2 LD	W 80 R LD	W 120R	W 120 OL	LF LD	W150H
				W120TFLD	

**THE DANGERS OF LARGE PLANETARY GEAR / REDUCTION GEAR FAILURE**

Failure of the Planetary Gear/Reduction Gear will result in the winch losing the capability to control the descent of the lifeboat/rescue boat causing the boat to descend rapidly and uncontrollably. If this happens it will cause the Planetary Gear/Reduction gear in the winch drum to operate at speeds far higher than it was designed for, subjecting the parts to tremendous fiction which may cause the gear box to rupture. Such failure may occur within seconds of overspeed operation.

The reason for this is understood to be due to the planetary gear fill plug either falling out or leaking, leading to the gears running in a dry condition. These large Planetary/ Reduction gears are located in an inaccessible area and oil levels can only be monitored by either fully dismantling the winch or performing an internal video inspection of the drum.

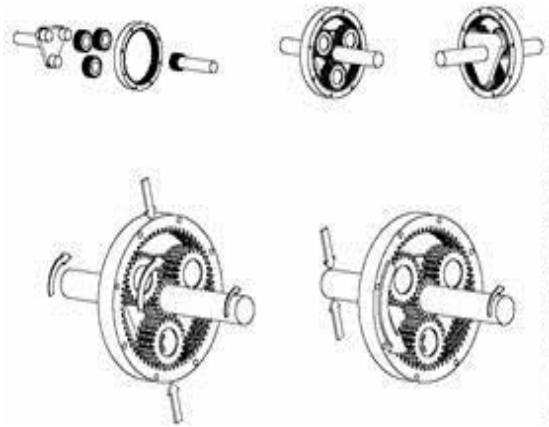


Fig. 1: Planetary Gear Schematic

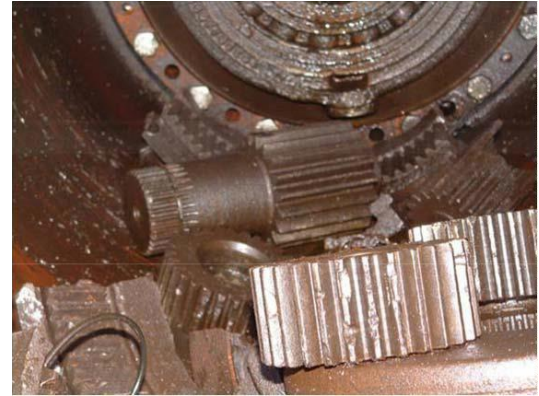


Fig. 2: Planetary Gear after excessive running speed



Figs. 3 and 4: Interior of winch drum showing ordinarily inaccessible planetary gear and filling plugs that have fallen out. Note that there was no external indication of an oil leak.



**Figs. 5 and 6: Interior of above reduction gears after running in a dry condition leading to overspeed damage**

BSMA is aware of an instance where this failure occurred on a Bermuda flagged vessel, resulting in the rapid descent of one of the rescue boats. It is also understood that this has occurred on many other vessels around the world over the last few years.

Ship Owners/Operators whose ships are fitted with the above listed winch model numbers should ensure that the winches are inspected and maintenance carried out in accordance with OEM's instructions.

For more information please contact: [survey@bermudashipping.bm](mailto:survey@bermudashipping.bm)

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