



PRODUCT BULLETIN 36138

Predator Front Frame Lifting Modification

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Prepared for: Predator owners and end users

Prepared by: Cougar Mining Equipment

Revision: A

Communication: Predator Front Frame lifting modification

The Predator is a repowered driftrunner and has a modified front chassis frame assembly to accept the new MWM engine.

The load factors of the front chassis frame have been reviewed for the load case of lifting the front of the vehicle onto stands. After detailed analysis, it has been established there may be a fatigue concern in the main side plates of the front frame, when subjected to ongoing lifting and lowering. No incidents or fatigue cracking have yet been observed or reported in the front frame.

Front Frame Fatigue Life Improvement

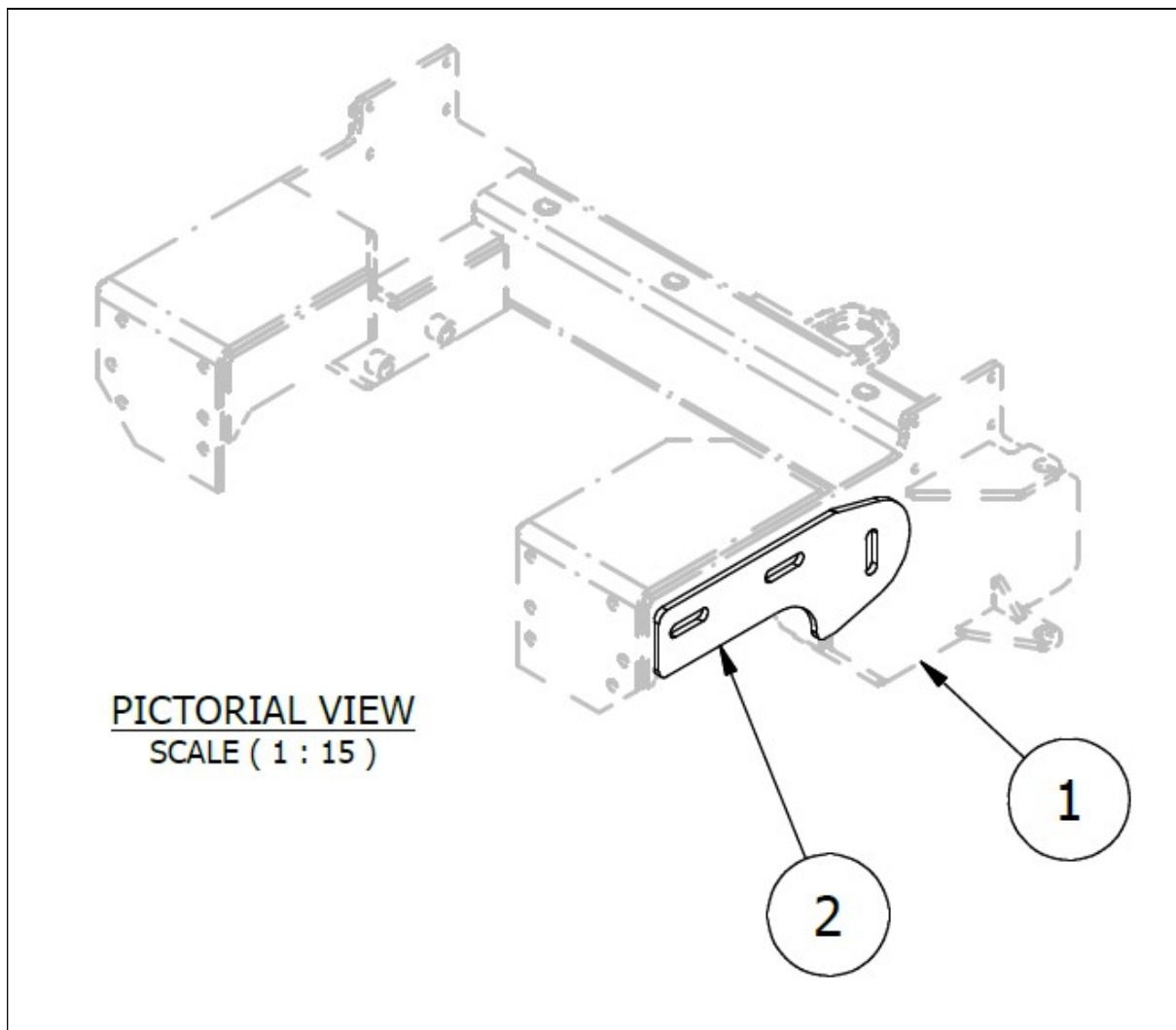


Figure 1: Front Frame Fatigue Life Improvement

To address concerns with potential fatigue cracking in the future, a strengthening doubler plate design has been developed and analysed as shown in **Figure 1**. The addition of the doubler plate reduces bending stress by approximately 40%

Future releases of the front frame will be installed with an improved side plate design to eliminate the need for the doubler plate. The depth of section of the side plates for future versions is 125mm. Later versions will not require the doubler plate.

Ongoing Front Frame inspection

Cougar Mining Equipment recommend weekly visual inspection of the front frame and chassis rails with magnetic particle inspection to be performed on lift points on an annual basis, and the entire frame on a maximum of 4 yearly basis. Particular attention should be paid to the underside of the front frame side plate in the vicinity of the front axle as indicated in **Figure 2**.

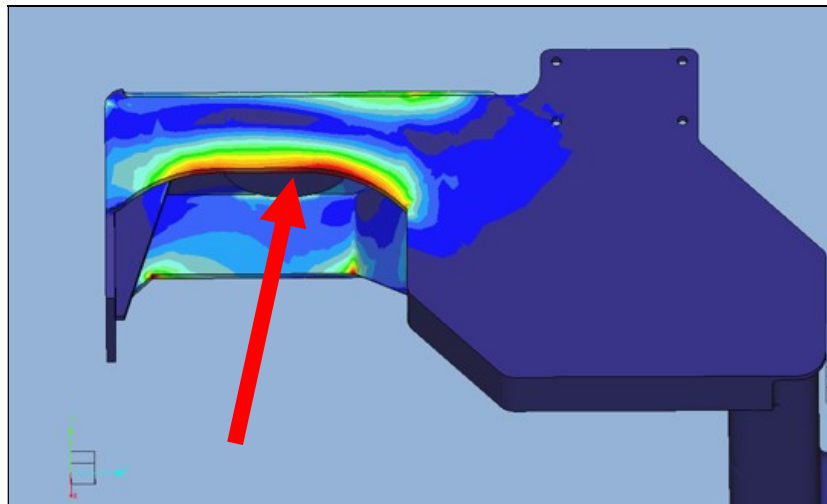


Figure 2: Front Frame Area of Concern

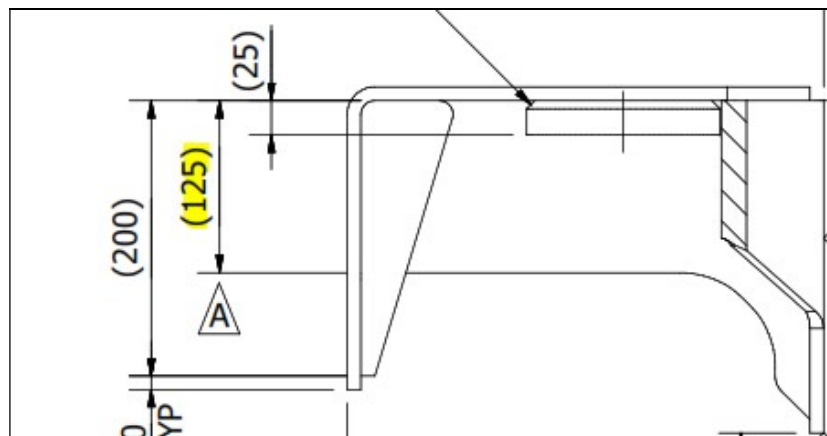


Figure 3: Depth of section increase for all new frames

Future releases of the front frame will be installed with an improved side plate design to eliminate the need for the doubler plate. The depth of section of the side plates for future versions is 125mm as indicated in **Figure 3**. Later versions do not require the doubler plate.

Recommended Action:

- Implement ongoing inspection on predator front frames if not already in the mines maintenance schedule
- Where the machine is lifted onto stands via the front frame, make arrangements with Cougar Mining Equipment for installation of doubler plate addition as per the depiction in figure 1. A lifting procedure for performing this task is also available from CME.

Please distribute this bulletin to all relevant personnel

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