



## Trial/Test Report Abstract

**Report:**

Pre-Trial Assessment of the Freeland 3000

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[http://www.itep.ws/pdf/SwedecFreeland3000\\_2008.pdf](http://www.itep.ws/pdf/SwedecFreeland3000_2008.pdf)

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## **Executive Summary**

This report details the result of a Pre-trial Assessment (PTA) of Freeland 3000 ground-clearing flail. The PTA is an important part of the testing of a piece of equipment, allowing testing organisations such as those represented by ITEP (International Test and Evaluation Program for Humanitarian Demining) to gather and verify basic data quickly and cost effectively before committing significant time and effort for a full test of the equipment. Although a PTA will not be able to give accurate information on the performance, it has been designed to highlight trends and characteristics of the equipment that can be explored further at a later stage. The machine is still under development, which means that not all have been tested on the field.

### **Positive**

- Flails the ground very effectively to a depth of 30 cm.
- Good engine power for the flail
- The cruise control keeps an even velocity.

### **Negative**

- Limitations in terrain pass ability. It must be possible to raise the flail more than today's 50 cm. At least 100 cm is necessary.
- There is no ground level system.
- No blast tests performed to show what kind of protection the driver has against blast and fragments.
- Has no tracking system today, which means that the machine has a 1 metre overlap.
- There is no remote control for the machine.
- The machine can't do a maximum turn, that because of protecting plate's ion the waistline.

Freeland 3000 has a very good engine capacity for the flail, the machine can penetrate the ground to a depth of 40 cm (Swedish agricultural soil). The machine does not have a ground levelling system, which means that the operator has got difficulties maintaining the clearance depth when the ground isn't completely in level. The machine possibility when driving on ground with low load-bearing is good, the possibility is limited when there is a height difference though. This is due to the fact that in the current configuration the flail unit can't be raised more than 50 cm. This was shown when the machine passed a ditch with a 75 cm depth, the machine didn't make it across.

The clearance speed of the machine is very stable. The machine has a very even speed with stable engine revolutions.

The machine today has a limitation when starting on an upward slope. When tested on a 20 degree upward slope the machine failed, the manufacturer should test this in the future to gain improved capacity.

The Freeland 3000 has the potential to become a valuable tool for the demining community and it is recommended that a prospective user consider it for further testing and/or field trials.

## **1 Introduction**

1:1 Background

1:2 Aim

1:3 Trial Objectives

## **2 Equipment under test**

2:1 Location and personnel

2:2 Test Procedure

## **3 Results**

3.1 Speed

3.2 Slopes and Gradients

3.3 Obstacles and rough terrain

3.4 Vegetation clearance

3.5 Logistics

3.6 Ground Flailing/ Fibreboards

4 Specifications FREELAND 3000