

## **8.0 NEW GENERATION OF LANDMINES AND SPECIAL FEATURES**

This section presents current trends in the new generation of landmines equipped with self destruct, self neutralizing and passive self deactivation devices. The new electronic mine fuses provide the capability for the mine to destruct, neutralize or passively deactivate itself in a given time period. Sometimes a combination of mechanical and programmable electronic devices are used in the fuse mechanism to achieve these special features.

### **8.1 Safety and Arming Devices**

Almost all new generation of anti-personnel and anti-tank landmines are now equipped with a transportation safety pin and an arming lever that the operator must remove and rotate before starting the activation procedure. The transportation safety pin prevents accidental removing of the mine arming lever and allows on anti-tank mines a visual check of the mine status by an indicator. The status of the mine can also be checked electronically by means of a remote control equipment (status detector) receiving a particular signal sent from the mine (see Figure 41). The release of the safeties in a predetermined sequence is necessary to arm the mine, otherwise any different operational sequence will lock the mechanism.

The safety and arming device makes the mine safe in all operational conditions. When the mine is not armed, it maintains the explosive train misaligned and locks the contact barrier slide which keeps the firing electric lines of the electro-explosive actuators short circuited. This device is capable of preventing the detonation of the mine, even if the detonator is fired in a misaligned position. This allows the mine to be stored with the detonator inside and to be ready for deployment.

The power supply feeds the electronic circuit when the mine is in the armed position. The subsequent activation given with a programmer remote control device, starts in most fuse designs both an electronic delay and successively a mechanical arming delay. Such anti-personnel and anti-tank mines are radio programmable on a field basis and it is possible only when the mines are in a storage mode with safety on. The programming is mainly performed by induction on either a unitary basis, in the case of a manual laying, using a pocket size single mine programmer or a complete magazine or box of mines all