

5.1.2 Pull fused or Pressure fused Anti-Personnel Mine M16

The M16 anti-personnel mine is a jumping, fragmentation type mine which is pull fused or pressure fused, and is shown in Figure 7. The mine consists of an explosive charge contained in a cylindrical metal body which in turn is enclosed in an outer casing. A three prongs pressure fuse and trip wires are attached to the top of the mine. When a trip wire is pulled, the pull ring pulls the release pin outwards against its spring, thus bringing the large hole in line with the firing pin.

Similarly when a desired pressure is applied on any of the three prongs of the fuse, the pressure spring is compressed thereby forcing the trigger pin downward. The wedge shaped tip of the trigger pin forces the release pin thereby aligning the large hole with the firing pin. The firing pin spring forces the firing pin on to a primer, causing it to ignite the delay charge. This ignites the propelling charge which ejects the mine upwards and the wire attached between the body and outer casing of the mine initiates the detonator and therefore the main explosive charge. Figure 8 shows the pull fuse used on mine M16. Details of the anti-personnel mine M16A2 are shown in Figure 9.

The retrofit of the M16 anti-personnel mine with a self destruct or self neutralizing device would require changing the fusing mechanism in order to include a safety and arming device and a redesign to the inside body and outside casing to accommodate a misalignment mechanism. The misalignment mechanism will require modifications to the explosive train located in the inner body. Based on the discussions with other mine manufacturers, it could be possible to incorporate a self destruct device in the existing M16 mine with considerable modifications to the fuse and explosive train. Incorporating a self neutralizing or a passive self deactivation device would be a difficult task and may require a major redesign of the mine.

5.1.3 Remote Command fused Anti-Personnel Mine M18A1

The M18A1 Claymore anti-personnel mine is a directional fragmentation mine and is shown in Figure 10. The mine has a main explosive charge behind the steel balls enclosed in a plastic casing. The mine is deployed above the ground on a support. The mine is command detonated which involves the use of an electrical firing device actuated