

Technical Note 09.30 / 05

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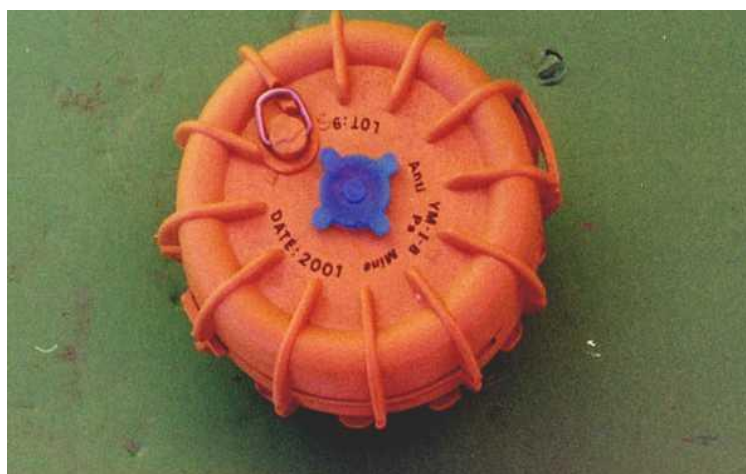
Amendment 1, July 2013

Technical notes
for mine action



TNMA

YM-1(B) anti-personnel mine - Technical Description



Warning

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation. Comments should be sent to mineaction@un.org with a copy to imas@gichd.org.

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Foreword

Management practices and operational procedures for humanitarian mine action are constantly evolving. Improvements are made, and changes are required, to enhance safety and productivity. Changes may come from the introduction of new technology, in response to a new mine or UXO threat, and from field experience and lessons learned in other mine action projects and programmes. This experience and lessons learned should be shared in a timely manner.

Technical Notes provide a forum to share experience and lessons learned by collecting, collating and publishing technical information on important, topical themes, particularly those relating to safety and productivity. Technical Notes complement the broader issues and principles addressed in International Mine Action Standards (IMAS).

Technical Notes are not formally staffed prior to publication. They draw on practical experience and publicly-available information. Over time, some Technical Notes may be 'promoted' to become full IMAS standards, while others may be withdrawn if no longer relevant or if superseded by more up-to-date information.

Technical Notes are neither legal documents nor IMAS. There is no legal requirement to accept the advice provided in a Technical Note. They are purely advisory and are designed solely to supplement technical knowledge or to provide further guidance on the application of IMAS.

Technical Notes are compiled by the Geneva International Centre for Humanitarian Demining (GICHD) at the request of the United Nations Mine Action Service (UNMAS) in support of the international mine action community. They are published on the IMAS website at www.mineactionstandards.org.

Introduction ¹

The YM-1(B) APM has been recovered from munitions caches in the Middle East. Externally, it appears very similar to the earlier Iranian-produced YM-1 antipersonnel mine, which itself is a copy of the Italian (Tecnovar Italiana SpA produced) TS-50 antipersonnel mine.

However, the YM-1(B) incorporates an apparent safe-arm mechanism heretofore not encountered by most demining organizations. Distribution and employment of both the YM-1 and the YM-1(B) beyond the Middle East is presently unknown.

This information is being provided because the modified YM-1(B) may be encountered during demining and mine clearance operations currently being conducted in Afghanistan². The modifications may lead many demining organizations to believe that the YM-1 (B) incorporates an antihandling feature.

¹ All information in this Technical Note was kindly provided by the U.S. Department of Defense.

² The Mine Action Centre for Afghanistan (MACA) has already been informed of this threat under separate cover.

YM-1(B) - Technical Description

1. Scope

This Technical Note provides “First Look” information on a possible new variant of the YM-1 APM.

2. Background

From initial technical exploitation the YM-1(B) appears to be a variant of the YM-1 antipersonnel mine. This initial exploitation indicates that the switch, located on the bottom of the YM-1(B) – see attached picture – is an additional safety mechanism, offering a positive block of the internal firing components.

WARNING: Until further technical information becomes available mine action personnel should NOT consider moving the switch as part of a render safe procedure. Current technical advice is that destruction in situ is the preferred option.

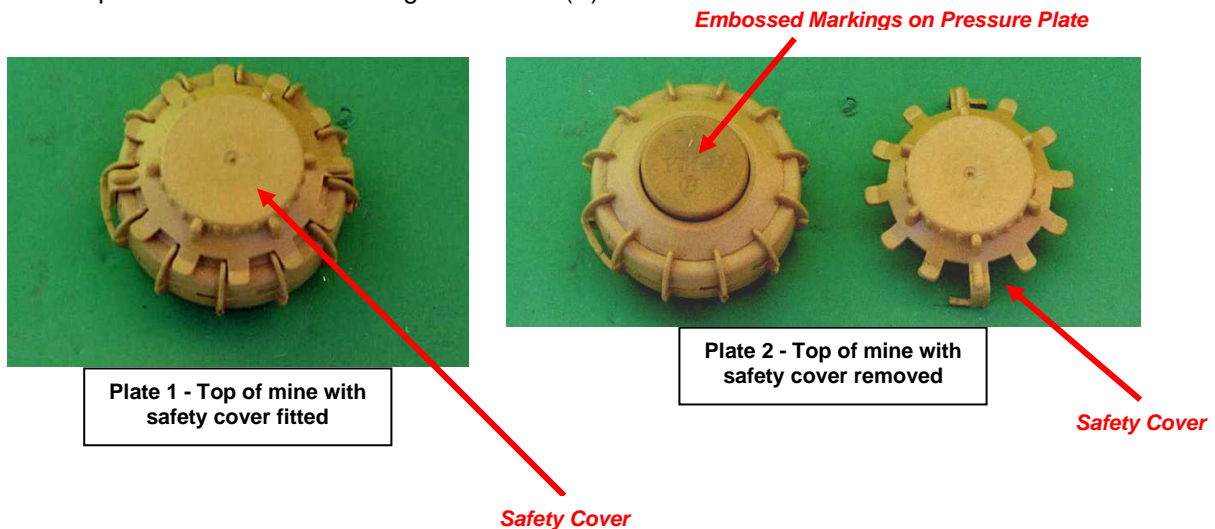
3. Description

The YM-1(B) appears to use the same casing as the earlier Iranian-produced YM-1, but there is not yet any information as to the full range of colours used for the mine body. The mines recovered to date are coloured as in the below photographs. Based on experience with the YM-1 in Afghanistan, this variant should also be considered as a minimum metal mine for detection purposes.

Externally, both mines appear the same, with the exception of a switch on the bottom of the YM-1(B) mine next to the detonator assembly, and embossed markings on the pressure plate of the mine with the nomenclature “**YM-1**” and the letter “**B**” in a circle. Stenciled markings on the bottom of the mine include the nomenclature “**YM-1-B**”, the date of manufacture and the lot number. No further details are currently available.

4. Mode of operation

Until recovered samples of the YM-1(B) can be fully evaluated and tested, no definitive information can be provided on the functioning of the YM-1(B).



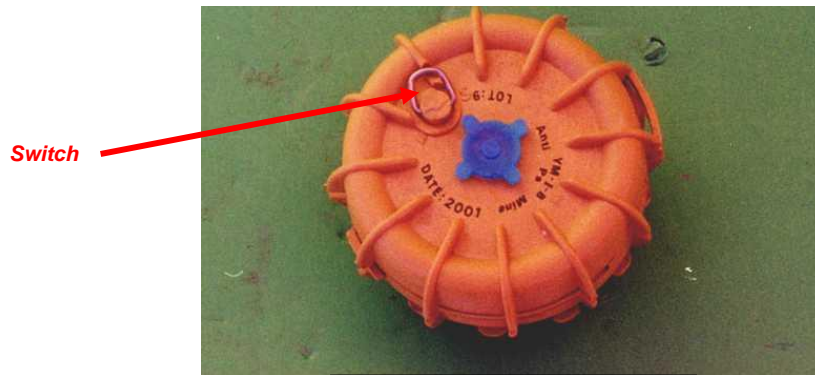


Plate 3 - Bottom of mine
showing safety switch

Amendment record

Management of Technical Notes amendments

Technical Notes (TN) are subject to review on an 'as required' basis. As amendments are made to this TN they will be given a number, and the date and general details of the amendment shown in the table below. The amendment will also be shown on the cover page of the TN by the inclusion under the version date of the phrase '*incorporating amendment number(s) 1 etc.*'

As reviews of TN are made new versions may be issued. Amendments up to the date of the new version will be incorporated into the new version and the amendment record table cleared. Recording of amendments will then start again until a further version is produced.

The most recently amended TN will be the versions that are posted on the IMAS website at www.mineactionstandards.org.

Number	Date	Amendment Details
01	01 Jul 2013	1. Inclusion of amendment No, date in the title and header 2. Updated links and email addresses. 3. Minor text changes in fifth paragraph of foreword. . 4. Inclusion of amendment record.