Name: ADM-8 Landmine

Description: This is the Russian ADM-8 (АДМ-8), a High-Explosive-Blast (HE-Blast), landmine and main-charge intended for use against large vehicles, trains and as a demolition main-charge.

The main-charge is 260mm in height and 220mm in diameter.

The associated fuze is located on the top of the main-charge and is 220mm in diameter and has a height of 250mm.

The electronic fuze is battery-powered and can be remotely or manually armed.

The fuze has selective features that allow it to function on Magnetic (MAG) influence, time Delay (DLY), Tilt-Rod-Fuze (TRF) or if an attempt is made to remove the cover via an Anti-Handling-Device (AHD).

Any additional images or technical information are very much appreciated.

Name: AKS Landmine

Description: This is the Russian AKS, a High-Explosive-Blast (HE-Blast), metallic, Tilt-Rod-Fuze (TRF) actuated, Anti-Vehicle (AV), landmine.

The interior of this landmine is similar to that of the Russian TM-38.

When the TRF is added, the overall height of the landmine is 850mm.

One side of the casing has a sliding door that allows access to the fuze.

A safety-pin is inserted in the base of the TRF mast to prevent premature detonation.

The landmine is painted olive drab green.

Any additional images and technical information are very much appreciated.

Name: DKRP-4 Minefield Clearance

Description: This is the Russian DKRP-4 (ДКРП-4), a High-Explosive (HE), minefield clearance and demolition line-charge used with the UR-83P (УР-83П) landmine clearance system and incorporated in various armoured minefield breaching (UR-67 & UR-77) vehicles.

The UR-83P landmine clearing line-charge is a truck-portable, rocket-projected, ground-launch system, capable of clearing a path 115m long by 6m wide through an active Anti-Vehicle (AV) minefield.

The UR-83P set consists of 22 x DKRP-4 Plastic-Explosive (PE) filled line-charge sections, two DM-70 rocket-motors, detonation transmission assembly (UPD), VR-04 fuze, two UZP-77 braking cables, connecting cables, connectors and ignitors required to initiate the rocket-motors.

The DKRP-4 clearing line-charges contain 8kg of PVV-7 Plastic-Explosive (PE) per linear metre, the total length of the clearing line-charges is about 114m, resulting in an explosive weight exceeding 900kg per UR-83P.

The VR-04 mechanical fuze has a built-in locking device, an out-of-line detonator and a firing-mechanism.

The locking device mechanically locks the out-of-line system in a safe position.

Additional images and technical information are available to CAT-UXO members.

Name: Dog Landmine

Description: This is the Russian Dog-Landmine, a High-Explosive-Blast (HE-Blast), dog-delivered, Anti-Vehicle (AV), landmine used against German tanks in WW2.

Initially, dogs were trained to leave a timer-detonated landmine and retreat, but this routine was replaced by an impact-detonation procedure which killed the dog in the process.

The US-Army started training anti-tank dogs in 1943 in the same way the Russians used them, but this training exposed several problems and the program was discontinued.

The anti-tank dog landmine consists of approximately 12kg of TNT carried in two canvas pouches, one strapped on each side of a dog.

The ignition device is a standard MUV pull-fuze inserted in a 200g block of TNT.

This makeshift booster is connected to the two main-charges by lengths of det-cord.

A spring-loaded wooden lever, projecting vertically above the initiating device, is connected to the pull-pin on the MUV fuze.

The pin is pulled when the dog crawls under the target vehicle.

Additional images and technical information are available to CAT-UXO members.

Name: IGS-50 Landmine

Description: This is the Russian IGS-50, a training landmine used to simulate patterns and rates of contamination for various Chemical-Weapon-Agent (CWA).

Personnel are required to be at least 50m (164.04ft) from the landmine when it is detonated.

There is a larger version of this landmine called the IF.

The landmine case is cardboard taped together.

The landmine has some metal content.

Any additional images and technical information are very much appreciated.

Name: KhF-1 Chemical Landmine

Description: This is the Russian KhF-1 and KhF-2, an Anti-Personnel (AP), bounding, Mustard, Command-Initiated (CMD-I), Chemical-Weapon-Agent (CWA) landmine, the two differing only in dimensions.

This CWA landmine produced in WW2 is very similar in size and construction to the German Bu-37.

It was intended as an Area-Denial-Munition (ADM) by contamination with persistent CWA.

The KhF-1 and KhF-2 are electrically Command-Initiated (CMD-I) by a concealed observer at a distance of 200 to 300m.

The firing of the electrical detonator ignites the propellant, which propels the landmine out of the container and simultaneously ignites the Delay (DLY) fuze.

After a DLY of approximately 1.5-seconds, the DLY fuze initiates the explosive-charge, which detonates the landmine and disperses the 4.5ltr of Mustard CWA.

The landmines were normally employed in groups of 10 to 12, connected by cable to a single power source located a minimum of 300m from the grouping of landmines.

If the landmine explodes between 4 to 8m off the ground, the contaminant filling will cover approximately 250 to 300 square metres.

Any additional images and technical information are very much appreciated.

Name: MOB Landmine

Description: This is the Russian MOB (МОБ), a High-Explosive-Fragmentation (HE-Frag), directional, Anti-Personnel (AP), landmine.

This is a new landmine not previously observed in the West.

It is believed to be designated the Modular Fragmentation Munition (МОБ: Модульный Осколочный Боеприпас).

Current observations indicate three MOB landmines are supplied as part of a kit for use in a single, double or triple configuration utilising various mounting brackets, tripods and clamps as supplied within the kit.

In addition, performed fragmentation blocks and various aiming devices are provided.

OLA-8T indicates its composition is Octogen 77%, Aluminium 8% and compound LD-70 (polyacrylic polymer stabiliser) 15%.

The rate of detonation is 8,430 m/s at a density of 1.84g/cm3.

Any additional images, technical information or corrections to current images, landmine configurations or translations are very much welcome.

Together our knowledge saves lives.

Name: MON-100 Landmine

Description: This is the Russian MON-100 (MOH-100), a High-Explosive-Fragmentation (HE-Frag), circular, sheet-metal-bodied, directional, Anti-Personnel (AP) landmine which is designed to wound or kill by its HE-Frag.

MON stands for Minnoye Oskolochonym Napraveniem, meaning Directional-Fragmentation-Anit-Personnel-Landmine.

The landmine body has a smooth, well-finished appearance with a cloth handle mounted on the upper edge.

It is usually attached to a mounting shackle by wingnuts on either side of the landmine body (the shackle is connected to a spike for securing the landmine to buildings, trees, etc).

The concave face of the MON-100 has a detonator cavity in its centre (this is the face aimed at the target).

The landmine contains 2kg of explosive to propel 400 x Chopped-Steel-Rod (CSR) fragments to a Lethal-Range (LR) of 100m, at the maximum range, the spread of the fragmentation is 9.5m

If the landmine is encountered with any type of electrical wires running from it, secure both ends of the wire before approaching the landmine.

Additional images and technical information are available to CAT-UXO members.

Name: MON-200 Landmine

Description: This is the Russian MON-200 (MOH-200), a High-Explosive-Fragmentation (HE-Frag), large, circular, sheet-metal-bodied, directional, Anti-Personnel (AP) landmine that is designed to wound or kill by its HE-Frag.

The MON-200 is an enlarged version of the MON-100 design.

MON stands for Minnoye Oskolochonym Napraveniem, meaning Directional-Fragmentation-Anti-Personnel-Landmine, the figure 200 indicates its effective Lethal-Range (LR) in metres.

The landmine body has a smooth, well-finished appearance and is usually attached to a mounting shackle by wingnuts on either side of the landmine body (the shackle is connected to a spike for securing the landmine to trees, etc).

The concave face of the MON-200 has a detonator cavity in its centre (this is the face aimed at the target).

The landmine contains 12kg of explosives to propel 900 Chopped-Steel-Rod (CSR) fragments to a LR of 200m, at the maximum range the spread of the fragmentation is 10.5m.

If the landmine is encountered with any type of electrical wires running from it, secure both ends of the wire before approaching the landmine.

Additional images and technical information are available to CAT-UXO members

---

Name: MON-50 Landmine

Description: This is the Russian MON-50 (MOH-50), a High-Explosive-Fragmentation (HE-Frag), claymore-shaped, plastic-bodied, Anti-Personnel (AP) directional landmine, which is designed to wound or kill by its HE-Frag, also made in Bulgaria.

MON stands for Minnoye Oskolochonym Napraveniem, meaning Directional-Fragmentation-Anti-Personnel-Landmine and is similar to the American M18A1 Claymore landmine.

It has folding scissor-type legs for supporting and aiming, but it also has an attachment point on the bottom for connecting a special clamp or spike, which can be attached to wood, metal, etc.

It has a peep sight centred on the top, which is flanked by 2 detonator cavities.

The landmine contains 712g of RDX (or PVV-5A) to propel HE-Frag to a Lethal-Range (LR) of 50m in a 54° arc (a spread of 45m at a 50m range).

The HE-Frag can be steel ball-bearings (540) or Chopped-Steel-Rod (CSR) x 485, depending on the variant.

The MON-50 is usually Command-Initiated (CMD-I) actuated using an NM manual inductor and an EDP-r electric detonator.

Additional images and technical information are available to CAT-UXO members.

Name: MON-90 Landmine

Description: This is the Russian MON-90 (MOH-90), a High-Explosive-Fragmentation (HE-Frag), claymore-shaped, plastic-bodied, directional, Anti-Personnel (AP) landmine that is designed to wound or kill by its HE-Frag, also made in Bulgaria.

The landmine is similar in appearance to the MON-50 but is almost twice the size with a much greater depth.

It has an attachment point on the bottom for connecting a special clamp which can be attached to wood, metal, etc, but it has no scissor-type legs.

It has a sight centred on the top, which is flanked by two detonator cavities.

The landmine contains 6.2kg of RDX (PVV-5A) to propel approximately 2000 Chopped-Steel-Rod (CSR) fragments to a Lethal-Range (LR) of 90m in a 54° arc (spread of 60m at a 90m range).

The MON-90 is usually Command-Initiated (CMD-I) actuated using an NM manual inductor and an EDP-r electric detonator.

It can also be actuated by a variety of boobytrap (BTP) switches, including the MUV series pull, the MVE-72 electric Break-Wire (BW) or the VP-13 Seismic (SIS) controller.

Additional images and technical information are available to CAT-UXO members.

Name: MZM-2 Landmine

Description: This is the Russian MZM-2, a High-Explosive-Blast (HE-Blast) landmine and main-charge intended for use against large vehicles and trains.

It is also used as a demolition main-charge.

The main-charge is designated the MZM-2, which is 385mm in height and 205mm in diameter.

The associated fuze is designated the VMZM-2, which is located on the top of the main-charge and is 205mnm in diameter and has a height of 120mm.

The fuze is battery-powered and has an arming Delay (DLY) of 10 to 180-mins and has a firing DLY of 1 to 180-days.

The landmine can be remotely or manually armed and functions by DLY, vibration, tilt or attempting to open the cover.

Any additional images and technical information are very much appreciated.

Name: MZU-2 Landmine

Description: This is the Russian MZU-2 (МЗУ-2), a High-Explosive-Blast (HE-Blast), electronic, Delay (DLY) action (30-minutes to 144-hours), Seismic (SIS) or Anti-Disturbance-Device (ADD) actuated landmine, which is intended to be used in the mining of roads and railroads, against structures and as a boobytrap (BTP).

It is used in conjunction with a PD-420 Radio-Controlled (RC) device or with a VZD-144Ch timer.

The landmine is reported to have a functional life of 10-days and can be expected to be with an auxiliary explosive-charge.

Prior to arming the landmine, the correct function setting is made and if required, a RC cable or the VZD-144Ch timer are added.

The batteries, MD-5M detonator and the explosive-charge are now installed and the landmine is ready for arming.

To arm the landmine the arming-pin is removed, starting the arming DLY which runs for 60 to 70-seconds.

At the end of this time, electrical circuits are closed and power is applied to the landmine.

The Anti-Removal-Device (ARD) circuit is also activated.

Additional images and technical information are available to CAT-UXO members.

Name: MZU-S Landmine

Description: This is the Russian MZU-S, a High-Explosive-Blast (HE-Blast), Anti-Vehicle (AV) landmine used against rail lines, highways and other military or industrial installations.

The landmine contains a large explosive-charge in the bottom portion of the cylinder, with the small upper cylinder containing the landmine's electronics.

The method of firing the landmine is possibly Seismic (SIS) or Magnetic (MAG), or a combination of both.

An Anti-Removal-Device (ARD) actuates the main-charge in the event that there are attempts to neutralise or disarm the landmine.

The landmine has a Self-Destruct (SD) Delay (DLY) time of 1 to 60-days.

Any additional images and technical information are very much appreciated.

Name: OZM Landmine

Description: This is the Russian OZM (O3M), a High-Explosive-Fragmentation (HE-Frag), cylindrical, Anti-Personnel (AP), bounding landmine that is designed to wound or kill by its HE-Frag using the UVK-1 propellant chamber.

During WW2, Russia employed the improvised OZM bounding HE-Frag landmine with several mortar-bombs and artillery projectiles.

These included the 120mm mortar-bombs and the 122 and 152mm artillery projectiles.

The munitions were buried in the ground nose down.

Under the nose was an electrically or mechanically initiated UVK-1 (YBK-1) or an electrically initiated UVK (YBK-1) Pyrotechnic-Delay (P-DLY) propelling-charge with a flash-tube leading to the ground surface.

Initiation was accomplished by remote electrical firing, pressure or tripwire (TPW) activation.

This initiation continued along the flash-tube, which, in turn, ignited the propellant and DLY element.

The munition was ejected from the ground and simultaneously the DLY element burned.

Additional images and technical information are available to CAT-UXO members.

Name: OZM-160 Landmine

Description: This is the Russian OZM-160 (O3M-160), a High-Explosive (HE), electrically-initiated, cylindrical, Anti-Personnel (AP), bounding landmine designed to be buried and Command-Initiated (CMD-I) that is designed to wound or kill by its HE-Frag.

The landmine is a development of the WW2 OZM which was designed to fire a mortar-bomb or artillery projectile out of the ground (using a UVK-1 propellant assembly) and then detonate it.

OZM-160 consists of a tubular steel barrel, a propellant and fuze assembly and a purpose-built projectile.

The projectile is made from thick cast-iron, with a blunt nose and a felt sealing ring around the ogive.

TNT is cast into the nose of the projectile with a pressed TNT slab behind, sealed into position with a base-plug.

The projectile alone weighs 45kg and is screwed onto the propellant and fuze assembly inside the tube.

The propellant and fuzing assembly contain a 200g black-powder propelling-charge and a coiled tether-wire attached to the fuze.

Additional images and technical information are available to CAT-UXO members.

Name: OZM-3 Landmine

Description: This is the Russian OZM-3 (O3M-3), a High-Explosive-Fragmentation (HE-Frag), cylindrical, cast-iron, Anti-Personnel (AP), bounding landmine made of cast-iron without any pre fragmentation, that is designed to wound or kill by its HE-Frag.

On the top of the landmine in the centre is a detonator retaining plug, besides this is a threaded fuze adapter that will accept any fuze with an 8mm coarse thread.

On the other side of the detonator retaining plug are 2 wires which can be used for Command-Initiation (CMD-I) detonation.

The detonation height is controlled by a Pyrotechnic-Delay (P-DLY) element which detonates the landmine at approximately 1.5m high.

The OZM-3 normally uses a MUV series pull-fuze although it has been encountered with the Czech Republic RO-8 pressure-fuze.

The landmine can be located visually or with metal-detectors under most field conditions.

The OZM-3 has been copied by North-Korea and is similar in appearance to the Chinese Type 69.

Additional images and technical information are available to CAT-UXO members.

Name: OZM-4 Landmine

Description: This is the Russian OZM-4 (O3M-4), a High-Explosive-Fragmentation (HE-Frag), cylindrical, cast-iron, Anti-Personnel (AP), bounding landmine which is designed to wound or kill by its HE-Frag.

It is basically an enhanced model of the OZM-3 with a more rounded appearance on the top edges and is made of cast-iron without any pre fragmentation.

On the top of the landmine in the centre is a detonator retaining plug with a T-shaped handle for easy removal and carrying.

Besides this is a threaded fuze adapter that will accept any fuze with an 8mm coarse thread.

The landmine contains 170g of TNT to propel HE-Frag to a Lethal-Radius (LR) of 13m.

The detonation height is controlled by a lanyard that is 0.8m long.

The landmine can be actuated with a MUV series pull-fuze attached to a 10m long tripwire (TPW) or the Czech Republic RO-8 pressure-fuze.

The landmine can be located visually or with metal-detectors under most field conditions.

Additional images and technical information are available to CAT-UXO members.

Name: OZM-72 Landmine

Description: This is the Russian OZM-72 (O3M-72), a High-Explosive-Fragmentation (HE-Frag), large, bounding, Anti-Personnel (AP) landmine developed from the OZM-3 and OZM-4 for greater efficiency.

In Russian landmine nomenclature, O indicates a HE-Frag effect and the ZM denotes an obstacle landmine, 72 indicates the year of introduction.

The casing is sheet-steel with a removable plug in the centre of the top surface covering the detonator-tube with the stab-sensitive igniter spigot set to one side.

The threaded spigot is designed primarily for mechanical fuzes but is also capable of accepting the NM electro-mechanical initiator.

OZM-72 is normally operated by a tripwire (TPW) connected to a VPF or MUV series fuze but may use the MVN-2M or Czech Republic RO-8 fuze for pressure-actuated instead.

Inside the casing, the Chopped-Steel-Rod (CSR) HE-Frag is held in a polyethene matrix.

A stab-sensitive detonator assembly is placed (open end down) in the central tube and the sealing plug is replaced.

Additional images and technical information are available to CAT-UXO members.

Name: PFM-1 Landmine

Description: This is the Russian PFM-1 (ПФМ-1), a liquid-explosive filled High-Explosive-Blast (HE-Blast), plastic, scatterable, Anti-Personnel (AP), landmine sometimes known as the Butterfly, Birdmine, the Green Parrot in Afghanistan and the Petal (Lepestok) landmine in Ukraine.

The PFM-1 has a plastic body and is filled with approximately 37g of liquid HE.

The fuze is hydraulic pressure-actuated and incorporates an arming Delay (DLY).

The landmine is normally coloured green, Khaki brown or sand-brown.

The landmine has a thin wing and a thicker wing, with the thicker wing containing the liquid-explosive.

The PFM-1 landmine is a reverse-engineered copy of the American BLU-43 without the sensitised mixing of the liquid-explosive.

A Self-Destruct (SD) variant of this landmine, the PFM-1S, is intended to randomly SD over a period of time.

A PFM-1 training landmine is distinguishable from the live version by the presence of the Cyrillic character У cut into the plastic.

Additional images and technical information are available to CAT-UXO members.

Name: PKM-1 Portable Mining Kit

Description: This is the Russian PKM-1, a portable, remote launched, landmine dispenser used to create Anti-Vehicle (AV) and Anti-Personnel (AP) minefields.

The PKM-1 portable mining kit can be used by infantry and armoured personnel to install AV and AP landmines before their front lines, both ahead of time and in direct combat.

The kit is composed of a primitive base-plate, a PM-4 demolitions device, two cable lengths (50m each) and a bag.

The base-plate is a small sheet of metal with a launch base attached to it at 45° and equipped with an electric contact.

Attached to this will be containers with AV and AP landmines for firing.

Once the landmine casing is attached, the metal contacts are linked between the base-plate and the casing.

An electric signal is sent from the Firing-Device (FD) or other current source, a powder-charge is ignited in the casing and the landmines are thrown out to 30 - 35m.

Additional images and technical information are available to CAT-UXO members.

Name: PMD-6 & 7 Landmine

Description: This is the Russian PMD-6 (ПМД-6), a High-Explosive-Blast (HE-Blast), rectangular, wooden, Anti-Personnel (AP), landmine that is designed to wound or kill by its HE-Blast effect also copied in China.

The upper portion of the box overlaps the lower portion which contains the fuze and explosive-charge.

The fuze is one of the MUV series fitted with a winged-pin.

The pin supports the weight of the upper portion of the box until a pressure of 1 to 10kg is added and forces the pin out of the fuze.

The specifications for this landmine are not fixed because it is often produced in the field using locally available materials.

The PMD-6 can be located using metal-detectors under most field conditions.

It can be defeated by blast-overpressure from explosive-breaching-systems.

A Chinese produced wooden box landmine designated the Type 59 is similar to the Russian PMD-6 wooden box AP landmine, except the entire fuze is contained within the box.

Additional images and technical information are available to CAT-UXO members.

Name: PMK-40 Landmine

Description: This is the Russian PMK-40, a High-Explosive-Blast (HE-Blast), Anti-Personnel (AP) landmine.

The PMK-40 is a small, round, waxed cardboard case landmine that resembles a shoe polish can in shape and size.

Its fuze is a simple mechanical Firing-Device (FD) that is activated by pressure on the lid.

This causes a lever to rotate, which releases the spring-loaded striker against the percussion-cap.

It was first used against the Germans in 1941 and although it is no longer in production and has been replaced by the plastic PMN, it may still be found.

Any additional images and technical information are very much appreciated.

Name: PMM-3 Landmine

Description: This is the Russian PMM-3, a High-Explosive-Blast (HE-Blast), pressure-actuated, Anti-Personnel (AP), landmine.

This metallic landmine consists of a main-charge container (bottom) and a pressure-plate lid (top).

An oval carrying handle is affixed to the centre of the lid.

A safety-pin projects through a hole in the side of the lid and charge container and into the fuze assembly.

This pin separates the striker and the percussion detonator.

The fuze, which is screwed into the centre of the main-charge container, consists of an inverted U-shaped metal leaf spring, a striker and a percussion detonator.

The landmine is painted olive drab green.

Any additional images and technical information are very much appreciated.

Name: PMM-5 Landmine

Description: This is the Russian PMM-5, a High-Explosive-Fragmentation (HE-Frag), metallic, pressure-actuated, Anti-Personnel (AP), landmine.

This box landmine is divided into two compartments.

One compartment houses a built-in spring-loaded striker-pin and the other a 200g block of TNT.

One end of the metallic case is open so that the main-charge and percussion detonator can be inserted.

The top and side surfaces of the main-charge compartment are covered with a serrated HE-Frag jacket.

Pressure on the U-shaped pressure bar releases the spring-loaded striker and allows it to impinge on the MD-type detonator.

The landmine is painted olive drab green.

Any additional images and technical information are very much appreciated.

Name: PMN Landmine

Description: This is the Russian PMN (ПМН), a High-Explosive-Blast (HE-Blast), Delay (DLY) armed, pressure-actuated, circular, bakelite bodied, Anti-Personnel (AP), landmine which is designed to wound or kill by its HE-Blast effect, commonly nicknamed the Black Widow and was introduced into service in the early 1960s.

The landmine body has a smooth appearance on the sides and the top is covered by a black rubber cover which is held in place by a thin metal band.

The band is retained by a simple fastener incorporating a split-pin, which is used to tension it during assembly.

Although a HE-Blast landmine, the thick bakelite walls of the PMN produce a substantial secondary fragmentation hazard within a few meters.

It has a detonator cavity-cap on one side and a DLY arming mechanism on the other.

It can be used in wet ground conditions with no adverse effects on its performance.

The PMN can be located using metal-detectors under most field conditions.

Additional images and technical information are available to CAT-UXO members.

Name: PMN-2 Landmine

Description: This is the Russian PMN-2 (ПМН-2), a High-Explosive-Blast (HE-Blast), circular plastic-bodied, Delay (DLY) armed, pressure-actuated, Anti-Personnel (AP), landmine which is designed to wound or kill by its HE-Blast effect.

It has a distinct cruciform rubber pressure-plate designed to limit the susceptibility of the landmine to blast-overpressure.

The landmine is the replacement for the PMN with the biggest enhancement being it is highly resistant to blast-overpressure from explosive-breaching-systems.

The most obvious external differences are the colour which is generally light green, however, brown ones have been observed and the cross-shaped pressure-plate on the top.

The body also has a number of screw caps visible on the outside which are sealed with epoxy or silicone and are un-removable.

The PMN-2 has a complex internal mechanism that houses a DLY arming system and the blast-overpressure resistance system.

The arming DLY is between 30 and 300-seconds.

Additional images and technical information are available to CAT-UXO members.

Name: PMN-3 Landmine

Description: This is the Russian PMN-3 (ПМН-3), a High-Explosive-Blast (HE-Blast), circular plastic-bodied, Delay (DLY) armed, battery-powered, electronic, Anti-Disturbance-Device (ADD), Self-Destruct (SD), pressure or tilt-actuated, Anti-Personnel (AP), landmine which externally looks like the PMN-2 AP landmine and is intended to impede landmine clearance.

The landmine is not a replacement for the PMN-2 but an upgrade with the addition of an ADD and SD 12-hrs to 8-days feature, to be used in association with the PMN-2.

The most obvious external difference is the addition of the SD setting knob.

Prior to arming a battery is installed in the landmine.

To arm the landmine the safety-pin is pulled, closing the switch which applies power to the safe separation timer and the SD time is selected.

The safe separation timer LED now flashes for 4.5-mins +/- 1.5-mins then goes out.

The DLY continues until the safe separation time of 8.5-mins +/- 1.5-mins has expired.

Any additional images and technical information are very much appreciated.

Name: PMN-4 Landmine

Description: This is the Russian PMN-4 (ПМН-4), a High-Explosive-Blast (HE-Blast), circular, plastic, Anti-Personnel (AP), Delay (DLY) armed, pressure-actuated, landmine that is designed to wound or kill by its HE-Blast effect.

The black rubber pressure-plate has a metal pressure-spider concealed underneath, shaped like flower petals.

The landmine body has a rough texture and rounded edges to aid in camouflage.

The upper surface of the landmine is a flexible rubber cover that covers a large pressure-plate.

The landmine has a solid lower half which is attached to the upper cover with a plastic O-ring.

The PMN-4 is actuated by the pressure of 20kg and it contains 55g of explosive.

The actuating force is much higher and the explosive content is much lower than the earlier landmines in the PMN series.

The diameter of the landmine is 95mm and the height is 46mm.

Additional images and technical information are available to CAT-UXO members.

Name: PMP Landmine

Description: This is the Russian PMP, a High-Explosive-Fragmentation (HE-Frag), pressure-actuated, Anti-Personnel (AP), landmine that utilises a bulleted factory-installed 7.62mm round to cause the fragmentation damage.

The 7.62mm (0.30-calibre) cartridge contains a percussion-primer and less than 1g of Double-Base (DB) propellant.

A hole is punched into the ground using a punch stake that is shipped with the landmine.

The landmine is then inserted into the hole until the coupling nut rests against the ground surface.

In this position, the coupling nut and the plunger are exposed approximately 30 to 40mm (1.18 to 1.57") above ground level.

If the landmine is to be planted in soft earth, mud, or snow, the 100 x 100mm (3.94 x 3.94") piece of plywood that is supplied with each landmine, is used to increase the surface area for the coupling nut.

The 7.62mm (0.30-calibre) cartridge is installed in the landmine at the manufacturing facility.

Additional images and technical information are available to CAT-UXO members.

Name: PMZ-40 Landmine

Description: This is the Russian PMZ-40, a circular, metal, High-Explosive-Blast (HE-Blast), pressure-operated, Anti-Vehicle (AV) landmine using a MV-3 fuze or as an Anti-Personnel (AP) landmine using a MV-5 fuze.

The PMZ-40 shear-bolts are used to make the PMZ-40 an AV landmine.

When the pressure-plate is rotated so that the shear-bolts do not come into play, the pressure-plate rests directly on the fuze and the landmine is an AP landmine.

This landmine was thought too dangerous for use and was replaced by the TM-41 AV landmine.

With a MV-3 fuze, pressure is applied on the plunger bolt approximately 150lbs (68.04kg).

The plunger bolt crushes the soft sheet-metal head.

The plunger and striker are depressed.

The striker retaining-balls move into the main recess.

The striker is driven into the percussion-primer where the primer initiates the explosive-train.

Additional images and technical information are available to CAT-UXO members.

Name: POB-Pilka Landmine

Description: This is the Russian POB-Pilka (ПОБ-Пилка), a High-Explosive-Fragmentation (HE-Frag), Anti-Personnel (AP), bounding fragmentation landmine.

The landmine is used both independently and can also be included as an explosive device as part of the NVU-P landmine control system.

The POB-Pilka can be fuzed and initiated by any of the MUV series of landmine fuzes.

With the use of the NM electrical Firing-Device (FD), the FOB-Pilka can be actuated by Command-Initiation (CMD-I) or alternatively, as part of the penalty when used within a NVU-P type system.

The landmine is installed on the surface or buried in the ground so that the upper plane of the main-body is flush with the ground.

The landmine was commissioned by the Russian-Army in 2005 and should gradually replace the OZM-72 landmine, which was discontinued.

There is a training version of the landmine designated U-POB, in which, instead of explosives, inert materials, similar in mass and volume to the real landmine are used.

Additional images and technical information are available to CAT-UXO members.

Name: POM-1 Landmine

Description: This is the Russian POM-1 (ПОМ-1) and POM-1S (ПОМ-1S), a High-Explosive-Fragmentation (HE-Frag), ground or aircraft-dispensed, scatterable, electro

and hydromechanically armed, Anti-Disturbance-Device (ADD), Anti-Personnel (AP) landmine.

The POM-1 and POM-1S are identical in external appearance, however, the POM-1S also incorporates a Self-Destruct (SD) feature.

Both landmines deploy eight, 6m (19.69ft) long tripwire (TPW).

As the landmines are ejected from the dispenser module, pyrotechnic locks ignite, safety-pins are withdrawn (safety-pins are part of the module) and mechanical locks are released.

When the pyrotechnic mixture has burned, the safety-rod is pushed outward by a spring, ejecting the mechanical lock and clearing a path for the remote arming mechanism (MDV).

The MDV housing is then moved by a compressed spring, slowly overcoming the resistance of the liquid silicone surrounding it.

The arming time varies from 1 to 10-mins depending on the ambient temperature.

Additional images and technical information are available to CAT-UXO members.

Name: POM-2 Landmine

Description: This is the Russian POM-2 (ПОМ-2) Protivopekhotnaya Oskolochnaya Mina, meaning Anti-Personnel-Fragmentation-Mine, a High-Explosive-Fragmentation (HE-Frag), scatterable, tripwire (TPW) actuated, Anti-Personnel (AP), Self-Destruct (SD) landmine designed to be dispersed or ejected from a variety of airborne and ground delivery systems.

It has a cylindrical cast-steel body with TPW dispensers and a central fuzing system.

The carrier munition KPOM-2 is a tubular metal canister containing 4 x landmines and a Pyrotechnic-Delay (P-DLY), which is ignited to begin the landmine arming sequence and the deployment of the streamer drogues.

Once dispensed from the delivery system, the landmine is armed and various components are ejected.

After landing 6 spring-loaded metal fins bring the landmine into an upright position.

After a few seconds, the top is ejected, allowing the release of 4 spring-loaded spools of plastic TPW.

The TPWs are attached to an arm on the striker release mechanism.

Additional images and technical information are available to CAT-UXO members.

Name: POM-3 Landmine

Description: This is the Russian POM-3 (ПОМ-3) Medallion (Медальон), a High-Explosive-Fragmentation (HE-Frag), scatterable, Anti-Personnel (AP), bounding, Self-Destruct (SD) landmine designed to be dispersed or ejected from a variety of airborne and ground delivery systems, including the multi-launch Zemledeliye landmine delivery system.

On dispersal from its container, the landmine is orientated by the use of a parachute.

If it lands on soft ground, it is intended to position itself in the ground to a depth of its body height, if it lands on hard ground, six spring-loaded feet deploy and position the landmine in an upright position.

Once in a suitable position, a Seismic (SIS) rod sensor is forced into the ground.

The POM-3 uses a Proximity (PRX) SIS fuze with a Self-Destruct (SD) time of either 8 or 24-hrs.

On sensing a suitable SIS signature, the base unit ejects a HE-Frag charge into the air that contains metal rings that detonate, sending HE-Frag out to a Lethal-Radius (LR) of 16m.

It is reported that the electronic microprocessor-based SIS detector can differentiate between the amplitude of a typical human and other false positives, such as a wild animal or vehicle.

Additional images and technical information are avaiable to CAT-UXO members.

Name: POMZ-2 Landmine

Description: This is the Russian POMZ-2, a High-Explosive-Fragmentation (HE-Frag), tripwire (TPW) actuated, stake-mounted, Anti-Personnel (AP), landmine, which has been extensively copied by other countries.

The main portion of the cast-steel body is externally grooved to enhance fragmentation.

The POMZ-2 has 6 rows of HE-Frag whereas its successor, the POMZ-2M has 5.

The hollow body houses the cylindrical main-charge, which has a central detonator cavity.

The top surface of the landmine body is raised into a fuze-well, which accepts a mechanical fuze of the MUV family.

The open end of the cylindrical body sits on a short wooden stake, held in place by a wooden wedge.

The fuze has a tubular steel or plastic body with a spring-loaded striker retained by a pin and may incorporate an arming Delay (DLY) or an upper hole in the striker for a safety-pin.

A stab-sensitive detonator assembly screws into the threaded end of the fuze.

Additional images and technical information are available to CAT-UXO members

---

Name: POMZ-2M Landmine

Description: This is the Russian POMZ-2M, a High-Explosive-Fragmentation (HE-Frag), cylindrical, cast-iron body, Anti-Personnel (AP), stake-mounted, landmine which is designed to wound or kill by its fragmentation also made in North-Korea and has been widely copied being one of the most common fragmentation landmines encountered worldwide.

It is produced with slight modifications in China as the Type 59 fragmentation landmine, the Czech Republic as the PP Mi-Sk and Yugoslavia as the PMR.

The POMZ-2M is the most current in a long line of Russian stake landmines.

One of the major improvements in the POMZ-2M over the original POMZ-2 is that the fuze-well cavity is threaded and has a gasket to prevent water from entering the landmine body.

The POMZ-2M has 5 fragmentation rows while the POMZ-2 has 6 and is most commonly found with the MUV series of pull-fuzes.

The POMZ-2M contains 75g of TNT to propel fragmentation to a Lethal-Radius (LR) of 10m on actuation, it is often found in rows or clusters of 4.

Additional images and technical information are available to CAT-UXO members.

Name: PTKM-1R Landmine

Description: This is the Russian PTKM-1R (ПТКМ-1Р), a High-Explosive (HE), top-attack, Shaped-Charge (SC), Anti-Vehicle (AV) landmine that, after deployment and arming, unfolds in an upright position, first unveiled in November 2021.

The landmine is planted manually and remains armed for 10-days at a temperature from -40 to +30°C and can Self-Destruct (SD) to prevent a threat to the civilian population.

Electronic sensors allow the smart landmine to independently monitor a target and attack it with a top-attack submunition.

Its combined Acoustic (ACC), Seismic (SIS) and IR heat sensor detects a target at a distance of 150-200m.

The landmine slightly inclines towards a tank or armoured vehicle and when the target enters the landmine's destruction range, the top-attack submunition is launched.

It jumps several metres into the air, where its IR heat seeker sensor locates the target and fires into the turret with a SC, Explosively-Formed-Projectile (EFP).

A big thanks to Jip McTavish-Foxall for his extensive contributions.

Additional images and technical information are available to CAT-UXO members.

Name: PTM-1S Landmine

Description: This is the Russian PTM-1S (ПТМ-1С), also known as the PGMDM (ПГМДМ) Protivo-Gutsenitsnaja Mina Distantsionava Minirovanija, a dispenser ejected scatterable, High-Explosive-Blast (HE-Blast), Anti-Vehicle (AV), with Self-Destruct (SD), in a green plastic casing landmine.

The landmine can be scattered from helicopters or submunition warheads from the BM-21 (122mm) or the Uragan (220mm) rocket systems.

After ejection from the scattering system, a pyrotechnic element arms the landmine (following a 30-second DLY), initiates a clockwork SD DLY timer and releases a safety-block enabling the landmine pressure-sensor to function.

Longitudinally inside the landmine is a pressure-tube that transmits pressure to the fuze.

The landmine is 338mm long and is made of very thin flexible plastic containing approximately 1.5kg of liquid-explosive (PVV-12S).

A cylindrical housing at one end of the landmine contains the clockwork SD timer (2-hrs increments to a maximum of 24-hrs).

Additional images and technical information are available to CAT-UXO members.

Name: PTM-25 Landmine

Description: This is the Russian PTM-25 (ПТМ-25), a High-Explosive-Blast (HE-Blast), Anti-Vehicle (AV) landmine designed to damage or destroy light or heavy armoured

vehicles consisting of two stacked main-charges with integrated Seismic (SIS) and Magnetic (MAG) sensors.

The fuze FPTM-25 is a non-contact fuze with a two-stage safety mechanism (electronic and mechanical).

The fuze is programmable by the programming unit NV-PTM-2P.

During programming, the duration of the armed state, the target counter and the sensor sensitivity level can be set.

The fuze is activated, only if the presence of the target vehicle above the landmine is confirmed from both sensors.

Any additional images or technical information are very much appreciated.

Name: PTM-3 Landmine

Description: This is the Russian PTM-3 (ПТМ-3), a High-Explosive (HE), scatterable, Magnetic (MAG) influenced, Anti-Vehicle (AV) landmine that uses its Misnay-Schardin (MS) linear Shaped-Charge (SC) effect against armoured targets and has a Self-Destruct (SD) feature.

The landmine is olive drab, has black painted markings and an unpainted metal fuze, with the training version having a red stripe around the body.

The PTM-3 is a rectangular landmine with a concave SC surface on each side and on the bottom.

The VT-06 (BT-06) fuze, which protrudes from the top of the landmine, has a battery-well on the side.

The top of the fuze has a slot on one side and a large, off-centre opening that houses the Delay (DLY) arming assembly.

The PTM-3 is used with the KPTM-3 man-portable landmine dispenser (1 x landmine), the UMZ multi-purpose minelayer (180 x landmines) and the VSM-1 dispensing system (116 x landmines).

The landmine is also used in the 122mm 9M22K and the 220mm 9M59 rocket warheads (3 x landmines and 9 x landmines respectively).

Additional images and technical information are available to CAT-UXO members.

Name: PTM-4 Landmine

Description: This is the Russian PTM-4 (ПТМ-4), Protivo Tankovaya Mina, meaning Anti-Tank-Mine-4, a High-Explosive (HE), scatterable, Linear-Shaped-Charge (LSC), Magnetically (MAG) influenced, Anti-Vehicle (AV) landmine using a programmable VT-14 Self-Destruct (SD) fuze with a 40 to 80-second Delay (DLY) arming mechanism and SD times varying from 8, 12, 24, 48-hrs to 120-days.

Two PTM-4 landmines are delivered within the KPTM-4 cassette (9.6kg) via various landmine laying systems, including helicopters.

The PTM-4 landmine consists of a steel elongated casing in the form of a semi-cylinder, that includes a non-contact fuze with a Magnetic-Target-Sensor (MTS), a pyrotechnic retardation ring, an executive detonating mechanism, a programmable electronic SD and the explosive main-charge.

It has a fabric spring-loaded cover for orientation in flight and correct orientation once on the ground.

During the movement of an armoured vehicle, it causes a MAG disturbance that the PTM-4 perceives and classifies as the movement of heavy equipment and initiates the fuze.

A big thanks to John Monty and Ivan Medvediev for their contributions.

Additional images and technical information are available to CAT-UXO members.

Name: PVM Landmine

Description: This is the Russian PVM (ПВМ), a High-Explosive (HE), Shaped-Charge (SC), combined Acoustic-Infrared (ACC-IR) actuated, Anti-Helicopter (AH) landmine designed to attack helicopters and low-flying aircraft.

The sensitivity of the Acoustic (ACC) sensor is no more than 0.6 decibels, which makes it possible to detect and confidently select the noise of the motors of a motor-hang-glider at a distance of 0.6km, a helicopter up to 3.2km.

The noise selection system makes it possible to distinguish the sound of an aeroplane engine or a helicopter against the background noise of ground-based engines, explosions and firing.

If the noise is recognised as the noise of an airborne motor, then when the target approaches a distance of less than 1km, the warhead turns toward the target and the Infrared (IR) sensors of the target (4-6 sensors) are activated, which determine the exact direction and distance to the target.

The combination of simultaneous operation of ACC and IR sensors eliminates the response of landmines to thermal anti-missile traps fired by the target.

When a target enters the affected area (a hemisphere with a radius of 150m), the landmine detonates producing a SC moving at a speed of about 2500km/h hits the target.

Additional images and technical information are available to CAT-UXO members

---

Name: SM-320 Signal Flare

Description: This is the Russian SM-320 (CM-320), a pyrotechnic signal-flare activated by a tripwire (TPW) and used within defensive positions or minefields to indicate persons or vehicles entering the minefield.

This is an audible, visual signal-flare that is used as an intrusion warning device or to simulate an Anti-Personnel (AP) landmine.

The flare is initiated by a TPW actuated pull on the MUV, MUV-2, MUV-3 or MUV-4 mechanical fuzes.

Around the bottom of the flare is painted a white, green, or red band, which designates the colour of the flares employed.

The flare consists of a metallic case sealed at the top by a rubber ring.

The fuzes are unpainted and unmarked.

The MUV, MUV-2, MUV-3 fuzes are steel and the MUV-4 can be plastic.

The flare contains an expelling-charge, an igniting charge, 3 sound-charges, 12 flares and 12 flare propellant-charges.

A pull of approximately 500g (1.1lbs) or more on the TPW withdraws the P-shaped striker retaining-pin from the MUV fuze

Additional images and technical information are available to CAT-UXO members.

Name: TEMP-30 Landmine

Description: This is the Russian TEMP-30, a High-Explosive (HE), Shaped-Charge (SC), top-attack, off-route landmine.

The entire system is mounted in a steel box that is placed or buried adjacent to the target's path.

With the lid opened, Acoustic (ACC) sensors are positioned at the front end while the rocket assembly is raised into the armed position.

Both ACC and Seismic (SIS) sensors are used to identify the target and launch the fin-stabilised rocket.

The munition is ejected vertically before the rocket-motor burns to propel it over the target.

The warhead section contains two SC Misnay-Schardin (MS) warheads of the same type used in the TEMP-20 Anti-Helicopter (AH) landmine.

These are angled at 10º to one another and initiated by a 2-channel Infrared (IR) sensor to project Explosively-Formed-Projectiles (EFPs) down onto the target.

The purpose of the system is to attack armoured vehicles where they are most vulnerable, through the thin top armour.

Any additional images and technical information are very much appreciated.

Name: TM-35 Landmine

Description: This is the Russian TM-35, a High-Explosive (HE), metal-cased, pressure-actuated, Anti-Vehicle (AV) landmine, that uses the Russian MUV fuze.

The TM-35 landmine is one of the earliest Russian metallic landmines.

Unlike the upgraded TM-38, the previous TM-35 did not have the 4 diagonal raised ridges on the pressure-plate running from corner to corner to add rigidity.

This raised pressure-plate is secured to the landmine body by 2 metal tabs on each side of the landmine casing and attached to the landmine base.

The landmine has a metal wire handle fixed to 2 metal tabs welded on one side of the landmine body.

The landmine is usually grey or olive green in colour and being a WW2 model landmine is likely to be heavily corroded but still may be encountered.

The landmine has a single pressure-bolt located in the centre of the pressure-plate and a single fuze-well which is located between the 2 arms of the carrying handle.

The fuze-well is covered with a small pivoting, metal cover.

Additional images and technical information are available to CAT-UXO members.

Name: TM-35M Landmine

Description: This is the Russian TM-35M, a High-Explosive-Blast (HE-Blast), metal-cased, pressure-actuated, Anti-Vehicle (AV) landmine, that uses the Russian MUV fuze.

The TM-35M is a modification and elongated version of the TM-35.

The pressure-lid contains two pressure-bolts, one at each end of the lid, each positioned over a fuze actuating lever.

A sliding door at each end gives access to the fuze-wells.

Any additional images and technical information are very much appreciated.

Name: TM-38 Landmine

Description: This is the Russian TM-38, a High-Explosive-Blast (HE-Blast), metal-cased, pressure-actuated, Anti-Vehicle (AV) landmine, that uses the Russian MUV fuze that is also produced in North-Korea and copied by the Chinese.

The TM-38 was an upgrade of the previous TM-35 having four diagonal raised ridges on the pressure-plate running from corner to corner that added rigidity.

This raised pressure-plate is secured to the landmine body by 2 metal tabs on each side of the landmine casing and attached to the landmine base.

The landmine has a metal wire handle fixed to 2 metal tabs welded on one side of the landmine body.

The landmine is usually grey or olive green in colour and being a WW2 model landmine is likely to be heavily corroded but still may be encountered.

The landmine has a single pressure-bolt located in the centre of the pressure-plate and a single fuze-well which is located between the 2 arms of the carry handle.

The fuze-well is covered with a small pivoting, metal cover.

Additional images and technical information are available to CAT-UXO members.

Name: TM-39 Landmine

Description: This is the Russian TM-39, a High-Explosive (HE), metal-cased, elongated, pressure-actuated, Anti-Vehicle (AV) landmine, that uses the Russian MUV fuze.

The TM-39 is similar to the TM-38 but much longer and narrower.

The case measures 596 x 139 x 101mm.

As pressure depresses the pressure-bolt, the lever see-saws, removing the striker retaining-pin from the MUV fuze.

Access to the fuze-wells is provided by a sliding door at each end.

Any additional images and technical information are very much appreciated.

Name: TM-41 Landmine

Description: This is the Russian TM-41, a High-Explosive-Blast (HE-Blast), circular, metal-cased, pressure-actuated, Anti-Vehicle (AV) landmine used during WW2 and also copied in China.

The landmine case consisted of a short cylinder with the entire top surface being used as a pressure-plate and used with Anti-Handling-Device (AHD).

It was normally painted olive drab and was broadly similar to the larger, later, TM-44 landmine.

The landmine can be waterproofed with washers and laid underwater, where it can remain operational for 2-months.

Pressure on the pressure-plate resulted in lock-balls being forced out of position, releasing a striker, which triggers a detonator, then a booster and then the landmine main charge.

When 180kg of pressure is placed on the landmine body the upper portion collapses onto the MV-5 pressure-fuze and detonates the landmine.

The TM-41 has a folding metal carrying handle spot welded to its side and a filler plug crimped in place on its bottom.

Additional images and technical information are available to CAT-UXO members.

Name: TM-46 Landmine

Description: This is the Russian TM-46 and TMN-46, a High-Explosive-Blast (HE-Blast), large, metal-bodied, Anti-Vehicle (AV), landmine that may be laid mechanically or by hand, also copied in North-Korea as the ATM-46N and China designated the Type 59.

In addition to conventional pressure-fuzes (MV-5 and MVM), the landmine accepts a Tilt-Rod-Fuze (TRF) MVSh-46.

The TRF mast is used to increase reliability in certain ground conditions but is too low to give the landmine a reliable Full-Width-Attack-Mine (FWAM) capability against vehicles.

The cylindrical body has a stepped pressure-plate with a centrally threaded fuze-well.

The lower section of the body contains the main-charge around a central booster, with an air gap between the encased explosive and the pressure-plate.

On the side of the landmine is a steel carrying handle and filler plug, with 6 reinforcing ribs stamped into the base of the landmine.

The landmine is actuated by 200kg of pressure if the MVM or MV-5 fuze is used or by 21kg of lateral force if the MVSh-46 TRF is used.

Additional images and technical information are available to CAT-UXO members.

Name: TM-56 Landmine

Description: This is the Russian TM-56, a High-Explosive-Blast (HE-Blast), circular, sheet-metal-bodied, pressure-actuated, Anti-Vehicle (AV), landmine that is designed to damage or destroy a vehicle by its HE-Blast effect.

The primary fuze used with the landmine is an MV-56, pressure-fuze.

The landmine also uses one of the MUV series of fuzes as a secondary fuze.

The top of the landmine has a stepped appearance with a large diameter fuze protruding from the centre.

The bottom of the landmine is crimped to the rest of the landmine body and has 7 radial strengthening ribs and 1 or 2 filler plugs.

The TM-56 has one Anti-Disturbance-Device (ADD) fuze-cavity located in the side and a metal carrying-handle spot welded to the bottom.

The landmine is implanted in the ground, the fuze cover is removed, the fuze is installed and the cover is replaced.

The secondary fuze is added if necessary and the landmine is camouflaged.

Additional images and technical information are available to CAT-UXO members.

Name: TM-57 Landmine

Description: This is the Russian TM-57, a High-Explosive-Blast (HE-Blast), circular, sheet-metal-bodied, Anti-Vehicle (AV), landmine that is designed to damage or destroy a vehicle by its HE-Blast effect and was designed for mechanical laying.

It is an improvement on the TM-46 and TMN-46 and has a larger charge and improved fuzing.

The top of the landmine has a stepped appearance with a large diameter fuze protruding from the centre.

The bottom of the landmine is crimped to the rest of the landmine body and has 7 radial strengthening ribs and 1 or 2 filler plugs.

The landmine has Cyrillic lettering painted in black on the top and sides and the letters TM-57 embossed on the bottom.

The TM-57 has one Anti-Disturbance-Device (ADD) cavity in the side and a metal carrying handle spot welded to the bottom.

The landmine contains 7kg of cast TNT or Torpex and it can be fitted with either the MVZ-57 DLY arming (45-seconds) pressure-fuze for mechanical laying or the MVSh-57 Tilt-Rod-Fuze (TRF)

Additional images and technical information are available to CAT-UXO members.

Name: TM-62B Landmine

Description: This is the Russian TM-62B, a High-Explosive-Blast (HE-Blast), large, caseless, Anti-Vehicle (AV), landmine, which may be laid mechanically or by hand.

The landmine is part of the TM-62 series, further developed from the TM-46 and TM-57 to offer the improved capability and greater flexibility.

TM-62B is basically a large disc of explosive with a Bakelite fuze-well and booster cast into the centre of the landmine.

The booster is sealed into place with a Bakelite disc and the fuze-well is threaded to accept the MVP-62, MVP-62M and a variety of other TM-62 fuzes.

MVP-62 is a minimum-metal fuze that uses a spring-loaded striker and a bellows-type arming Delay (DLY).

The fuze-well is the same size as the one in the TM-72.

The TM-62 series can therefore also accept the MVN-72 and MVN-80 Magnetic (MAG) influence fuzes.

TM-62B has a loop of webbing running through holes in the landmine body to serve as a carrying-handle.

The landmine is normally painted olive green with stencilled black markings.

Additional images and technical information are available to CAT-UXO members.

Name: TM-62D Landmine

Description: This is the Russian TM-62D (ТМ-62Д), a High-Explosive-Blast (HE-Blast), wooden boxed, pressure-actuated landmine part of the TM-62 series of Anti-Vehicle (AV) landmines.

The TM-62 family of large, AV HE-Blast landmines were designed to be dispersed or ejected from a variety of airborne and ground delivery systems or laid by hand.

The series, which are a further development of the earlier TM-46 and TM-57, consists of the same basic landmine fitted with different cases.

These include TM-62B (caseless), TM-62D (wooden case), TM-62M (metal case), TM-62P, TM-62P2 (red/brown plastic case), TM-62P3 (green plastic case) and the TM-62T (resin/fabric case).

The TM-62D, is a rectangular-shaped, 340mm (13.38") wide, by 178mm (7.01") high, by 295mm (11.61") long wooden box.

Any additional images and technical information are very much appreciated.

Name: TM-62M Landmine

Description: This is the Russian TM-62M, a High-Explosive-Blast (HE-Blast), large, metal-cased, Anti-Vehicle (AV), landmine which may be laid mechanically or by hand.

The landmine is part of the TM-62 series, further developed from the TM-46 and TM-57 to offer improved capability and greater flexibility.

In addition to a conventional pressure-fuze (MVCh-62), the landmine accepts a variety of other fuzes that give it a Full-Width-Attack-Mine (FWAM) capability against vehicles.

The fuze-well is the same size as the one in the TM-72.

The TM-62M will, therefore, accept the MVN-72 and MVN-80 Magnetic (MAG) influence fuzes.

The cylindrical body has a stepped top surface with a centrally threaded fuze-well, sealed with a threaded plug during transit.

At the base of the fuze-well is a large booster in a metal canister.

Unlike previous models, the landmine body is filled to the surface with explosives and does not have a collapsible pressure-plate.

Additional images and technical information are available to CAT-UXO members.

Name: TM-62P Landmine

Description: This is the Russian TM-62P, a High-Explosive-Blast (HE-Blast), pressure-actuated, plastic-casing, Low-Metal-Content (LMC), Anti-Vehicle (AV), landmine designed to render enemy tracked and wheeled vehicles unserviceable by its HE-Blast effect, the Romanian version being called the MAT-62B.

The TM-62 family of large, AV HE-Blast landmines were designed to be dispersed or ejected from a variety of airborne and ground delivery systems or laid by hand.

The series, which are a further development of the earlier TM-46 and TM-57, consists of the same basic landmine fitted with different cases.

These include TM-62B (caseless), TM-62D (wooden case), TM-62M (metal case), TM-62P, TM-62P2 (red/brown plastic case), TM-62P3 (green plastic case) and the TM-62T (resin/fabric case).

The basic landmine has a cylindrical body with a stepped upper surface with a centrally threaded fuze-well, which is sealed with a threaded plug during transit.

These landmines can be fitted with a variety of different fuze systems, including pressure and Magnetic (MAG) influence.

Additional images and technical information are available to CAT-UXO members.

Name: TM-62P2 Landmine

Description: This is the Russian TM-62P2, a High-Explosive-Blast (HE-Blast), pressure-actuated, plastic casing, Low-Metal-Content (LMC), Anti-Vehicle (AV), landmine designed to render enemy tracked and wheeled vehicles unserviceable by its HE-Blast effect.

The TM-62 family of large, AV HE-Blast landmines were designed to be dispersed or ejected from a variety of airborne and ground delivery systems or laid by hand.

The series, which is a further development of the earlier TM-46 and TM-57, consists of the same basic landmine fitted with different cases.

These include the TM-62B (caseless), TM-62D (wooden case), TM-62M (metal case), TM-62P, TM-62P2 (red/brown plastic case), TM-62P3 (green plastic case) and the TM-62T (resin/fabric case).

The basic landmine has a cylindrical body with a stepped upper surface with a centrally threaded fuze-well, which is sealed with a threaded plug during transit.

These landmines can be fitted with a variety of different fuze systems, including pressure and Magnetic (MAG) influence, in the case of a pressure-fuze, the pressure-

plate shears with the weight being transferred to the striker, which in turn activates the detonator.

Additional images and technical information are available to CAT-UXO members.

Name: TM-62P3 Landmine

Description: This is the Russian TM-62P3, a High-Explosive-Blast (HE-Blast), circular, Anti-Vehicle (AV), landmine designed to render enemy-tracked and wheeled vehicles unserviceable by its HE-Blast effect.

The TM-62 family of large, AV HE-Blast landmines was designed to be dispersed or ejected from a variety of airborne and ground delivery systems or laid by hand.

The series, which is a further development of the earlier TM-46 and TM-57, consists of the same basic landmine fitted with different cases.

These include TM-62B (caseless), TM-62D (wooden case), TM-62M (metal case), TM-62P, TM-62P2 (red or brown plastic case), TM-62P3 (green plastic case) and the TM-62T (resin or fabric case).

The basic landmine has a cylindrical body with a stepped upper surface and a centrally threaded fuze-well, which is sealed with a threaded plug during transit.

These landmines can be fitted with a variety of different fuze systems, including pressure and Magnetic (MAG) influence.

In the case of a pressure-fuze, the pressure-plate transfers weight to the striker, which in turn activates the detonator.

Additional images and technical information are available to CAT-UXO members.

Name: TM-62T Landmine

Description: This is the Russian TM-62T, a High-Explosive-Blast (HE-Blast), resin and fabric case, non-metallic, Anti-Vehicle (AV) landmine designed to render enemy tracked and wheeled vehicles unserviceable by its HE-Blast effect.

The TM-62 family of large, AV HE-Blast landmines were designed to be dispersed or ejected from a variety of airborne and ground delivery systems or laid by hand.

The series, which are a further development of the earlier TM-46 and TM-57, consists of the same basic landmine fitted with different cases.

These include TM-62B (caseless), TM-62D (wooden case), TM-62M (metal case), TM-62P, TM-62P2 (red/brown plastic case), TM-62P3 (green plastic case) and the TM-62T (resin/fabric case).

The basic landmine has a cylindrical body with a stepped upper surface with a centrally threaded fuze-well, which is sealed with a threaded plug during transit.

These landmines can be fitted with a variety of different fuze systems, including pressure and Magnetic (MAG) influence.

In the case of a pressure-fuze, the pressure-plate transfers weight to the striker, which in turn activates the detonator.

Additional images and technical information are available to CAT-UXO members.

Name: TM-72 Landmine

Description: This is the Russian TM-72, a High-Explosive (HE), circular, sheet-metal-bodied, Anti-Vehicle (AV), landmine that is designed to damage or destroy vehicles by its Shaped-Charge (SC) Explosively-Formed-Projectile (EFP) effect.

The landmine uses the MVN-72 clockwork Delay (DLY), electrically armed, Magnetic (MAG) influence fuze which is immune to blast-overpressure from explosive-breaching-systems.

It can also use some of the fuzes which were developed for the TM-62 series of landmines, all of those fuzes have a mechanical clockwork arming DLY for safety in mechanical laying operations.

It has a smooth finish with a crimp around the bottom edge.

It has a stepped upper surface with a large diameter fuze and a nylon carrying handle attached to the bottom.

The TM-72 is very similar in appearance to the TM-62M but has a smaller diameter and a greater height.

The TM-72 contains a circular doughnut of heavy metal, this is used as a specially designed waveshaper to create an EFP when actuated.

The landmine can be laid on the ground, under the surface and underwater but only by hand.

Additional images and technical information are available to CAT-UXO members.

Name: TM-83 Landmine

Description: This is the Russian TM-83, a High-Explosive (HE), cylindrical, metal-bodied, off-route, Anti-Vehicle (AV), landmine which is designed to damage or destroy vehicles by its Shaped-Charge (SC) Explosively-Formed-Projectile (EFP) penetrating effect.

The landmine is mounted on an adjustable frame for aiming in any axis.

The landmine has a smooth-painted finish and two small tubes mounted above the body.

These tubes are the VT-02 Seismic (SIS) activator, which senses ground vibration from vehicles and the VT-01 Infrared (IR) actuator, which fires the landmine when a target passes in front of the TM-83 at the optimum range.

It can also be Command-Initiated (CMD-I) from a 100m distance using a NM manual inductor and an EDP-r electric detonator.

The TM-83's Misnay-Schardin (MS) SC EFP will penetrate 100mm of armour at a 50m range.

The landmine is battery-powered and has an average field life of 30-days, it can be located visually and with metal-detectors under most field conditions.

Additional images and technical information are available to CAT-UXO members.

Name: TM-89 Landmine

Description: This is the Russian TM-89, a High-Explosive (HE), Full-Width-Attack-Mine (FWAM), Steel cased, Magnetically (MAG) influenced, Shaped-Charge (SC) Explosively-Formed-Projectile (EFP), Anti-Vehicle (AV), Landmine that uses an electronic fuze.

The two-channel MAG influence fuze is supplied factory-fitted to the Landmine and has a built-in power supply.

It incorporates an arming Delay (DLY) of between 20 and 700 seconds.

The Landmine may be laid either manually or mechanically.

It is supplied with a red protective fuze cover for use with the GMZ-3 minelayer and a black cover for use with the VMR-2 Helicopter Landmine dispenser.

On initiation, a small clearance-charge removes earth and debris from above the Landmine before the warhead is detonated.

Any additional images and technical information are very much appreciated.

Name: TMB-1 Landmine

Description: This is the Russian TMB-1, TMB-2 & TMSB, a High-Explosive-Blast (HE-Blast), Low-Metal-Content (LMC), pressure-actuated, Anti-Vehicle (AV), landmine.

Except for weight and size, the TMB-2 and TMSB are identical to the TMB-1.

The TMB AV landmine is encased in tar-impregnated cardboard, sealed with tape and a coating of asphalt.

The landmines are made of tar-impregnated cardboard, coated with asphalt and have a blue glass pressure-plug.

This landmine is designed to make electronic detection difficult, if not impossible.

This landmine is frequently used along with metal or wooden landmines to remain armed and undetected in a supposedly cleared minefield.

The fuze may be Cadmium steel (MV-5) or plastic (MV-5K).

The TMB-1 weighs 6.6kg (14.5lbs), the TMB-2 7kg (15.4lbs) and the TMSB 8kg (17.5lbs).

Additional images and technical information are available to CAT-UXO members.

Name: TMD-40 Landmine

Description: This is the Russian TMD-40, a High-Explosive-Blast (HE-Blast), elongated, wooden, pressure-actuated, Anti-Vehicle (AV), landmine that is very similar to the TM-39 and TM-40 landmines produced in the 1940s.

Due to a lack of production capacity, a shortage of metal in the country and meagre funding of the engineering troops the designers were given the task of finding non-scarce materials and the possibility of producing landmines without using metal-working industries.

The 3.2kg of TNT is placed in the wooden box in the form of 7 x 400g and 4 x 100g packages of explosive-charges.

The two MUV fuzes are located toward the 2 ends of the landmine case.

Pressure is transmitted to the fuzes by two seesaw devices.

Access to the fuze compartment is provided by sliding doors on both ends of the landmine case.

The TMD-40 pressure-plate has bevelled edges, which collapse under a 250kg load.

Any additional images and technical information are very much appreciated.

Name: TMD-44 Landmine

Description: This is the Russian TMD-44, a High-Explosive-Blast (HE-Blast), square-shaped, wooden-bodied, Anti-Vehicle (AV), landmine that is designed to damage or destroy a vehicle by its HE-Blast effect, similar in appearance to the Russian TMD-B of WW2 and appears to be an updated development, the North-Korean version being designated the ATM-44.

The TMD-44 is constructed using nails or glue and it has a cloth or leather carrying handle screwed or stapled to the side.

The major difference from the TMD-B is that it has a circular bakelite fuze-cavity-cap centred on the top instead of a hinged wooden slat.

The TMD-44 is normally manufactured but field-produced variants have been recovered in different locations.

For this reason, the specifications may vary from place to place.

The landmine is found in a natural wood finish and painted in a variety of colours.

It has no Anti-Disturbance-Device (ADD) cavities but has ample room for fitting boobytraps (BTPs).

The fuze used is the MV-5 mechanical pressure which is made of steel.

Additional images and technical information are available to CAT-UXO members.

Name: TMD-B Landmine

Description: This is the Russian TMD-B, a High-Explosive-Blast (HE-Blast), square-shaped, wooden-bodied, Anti-Vehicle (AV), landmine that is designed to damage or destroy a vehicle by its HE-Blast effect, copied by several other countries such as China as the Model 1951, the Type 51, North-Korea as the ATM-74 and the former Yugoslavia as the TMD-1 and 2.

The box, which forms the body of the landmine, contains the explosive-charge and a central cast TNT block to act as a booster.

The booster has a central detonator-well that accepts an MV-5 pressure-fuze fitted with an MD-2 stab-sensitive detonator assembly.

The TMD-B is constructed using nails or glue and it has a cloth or leather carrying handle screwed or stapled to the side.

The TMD-B is normally manufactured but field-produced variants have been recovered in different locations, the specifications may vary from place to place.

The landmine is found in a natural wood finish and painted in a variety of colours.

It has no Anti-Disturbance-Device (ADD) cavities but has ample room for fitting BTPs.

Additional images and technical information are available to CAT-UXO members.

Name: TMK-2 Landmine

Description: This is the Russian TMK-2, a High-Explosive (HE), steel cased, Shaped-Charged (SC), Anti-Vehicle (AV), landmine, designed to defeat the belly armour of a tank utilising an Explosively-Formed-Projectile (EFP).

The upper half of the landmine is a hollow truncated cone, its only function is to keep earth and debris away from the SC to allow it to function correctly.

The bottom half of the landmine, also a truncated cone, contains the dished charge liner and the explosive.

The charge has a wave-shaper set into the explosive and a detonator-well entering the booster horizontally at the base of the landmine.

The landmine contains either 6.5kg (14.3lbs) TG-50 or a 6.0kg (13.2lbs) of TNT.

On the outside of the lower half are a filler plug and a steel carrying handle.

The landmine uses an MVK-2 Tilt-Rod-Fuze (TRF) system designed to initiate on contact with the belly of an armoured vehicle, giving the landmine a Full-Width-Attack-Mine (FWAM) capability.

Additional images and technical information are available to CAT-UXO members.

Name: UDSh Landmine

Description: This is the Russian UDSh (УДШ), a Smoke (SMK) dispensing landmine used in training to indicate a landmine has functioned or to simulate a Chemical-Weapon-Agent (CWA) landmine.

The SMK pot can be initiated electronically or manually and discharges SMK for 8 to 10-mins.

The UDSh SMK generator or pot can easily be mistaken for a TM-62M Anti-Vehicle (AV) landmine.

The key distinguishing features are the prominent fuze and the green plastic fuze-cap.

There is also a subtle difference on the body of the device.

The UDSh is usually stencilled in black on the side.

UDSh, Unifitsirovannaya Dymovaya Shashka translates as Unified-Smoke-Block.

Any additional images and technical information are very much appreciated.

Name: UR-83P Minefield Clearance

Description: This is the Russian UR-83P (УР-83П), a High-Explosive (HE), truck-portable, rocket-projected, ground-launch, landmine clearing line-charge system, which is composed of a launcher and the rocket-projected UZP-83 (УЗП-83) landmine-clearing line-charge capable of clearing a path 115m long by 6m wide through active Anti-Vehicle (AV) minefields.

The UZP-83 landmine-clearing line-charge comprises twenty-two aluminised Plastic-Explosive (PE) filled DKRP-4 (ДКРП-4) sectional line-charges, a VP-04 (ВП-04) fuze, a UPD (УПД) detonation transmission charge, two DM-70 (ДМ-70) rocket-motors, two braking cables, connecting cables, connectors and ignitors required to initiate the rocket-motors.

A practice version of the UR-83P, designated the UI-UR-83 contains inert-loaded clearing sections designated U-DKRP-4 and has live DM-70 rocket-motors for practice deployments reusable six times.

The DKRP-4 clearing-charges contain 8kg of PVV-7 PE per linear meter, the total length of the clearing line-charges is about 114m, resulting in an explosive weight exceeding 900kg per UR-83P.

The VR-04 mechanical fuze has a built-in locking device, an out-of-line detonator and a firing-mechanism which locks the out-of-line system in a safe position.

Additional images and technical information are available to CAT-UXO members.

Name: YaM Landmine

Description: This is the Russian YaM, a series of High-Explosive-Blast (HE-Blast), non-metallic, wooden box, Anti-Vehicle (AV), landmines that use a MUV pull or pressure-actuated fuze.

The YaM-5 (Anti-Tank Mine 5kg) was first produced, followed by the YaM-10 a scaled-up version of the YaM-5 with other variants including the YaM-5K, 5M and 5U.

The YaM landmine consists of a rectangular wooden box with a hinged lid that overlaps the front of the landmine.

A slot in the hinged lid's side through which a MUV pull-fuze is placed.

A wooden pressure-bar is sometimes used on the edge of the lid above the slot.

A nail is placed horizontally through the loop of the MUV fuze striker retaining-pin and two loops on the bottom of the lid's slot.

The wooden case was normally painted olive green, grey or white and was frequently used with an Anti-Handling-Device (AHD).

Downward pressure on the lid forced the nail downwards, withdrawing the striker retaining-pin and detonating the landmine.

Additional images and technical information are available to CAT-UXO members.

Name: ZRP-2 Minefield Clearance

Description: This is the Russian ZRP-2 Path (ЗРП-2 Тропа), a High-Explosive (HE), man-portable, Explosive Line Minefield Breaching kit designed to create a breach in an Anti-Personnel (AP) minefield under combat conditions.

ZRP-2 is a rocket-propelled line-charge carried packed in a webbing satchel and unpacked for deployment close (100m) to the edge of the minefield to be breached.

The line-charge is an explosive-filled flexible hose (designated DKR-150A) carried by a small rocket (designated UP-60) to a range of between 140 and 160m.

Once the line has been deployed, the crew use the braking cord to pull it straight during the Pyrotechnic-Delay (P-DLY).

The charge then detonates, clearing AP landmines from a path approximately 400mm wide and 54m long.

The system can be assembled by one or two engineers in 5-mins and can be dropped in the GK-30 cargo container or PGS-500 cargo platform when packed in its wooden box.

Additional images and technical information are available to CAT-UXO members.
