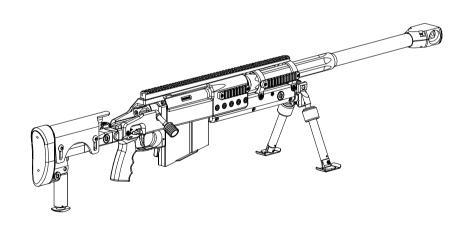


# User Manual OM 50 NEMESIS

12.7x99mm / 50Bmg 460 Steyr 416 Barrett



# User Manual OM 50 NEMESIS

Models: Mk4, Mk5, Mk5-NV

# **TABLE OF CONTENTS**

Chapter	Subject (s)	Page Number
	Safety rules Clearing the weapon Blast effect safety rules	4 4 5
Α	Introduction	6
В	Technical information	8
C C.1. C.2. C.3.	Models & variants Mk4 Mk5 Mk5-Nv	9 9 9
D D.1. D.2. D.3. D.4. D.5. D.6. D.7.	Standard equipment 5rds box mag. & manual feeding block Field cleaning kit Bolt tool MilDial carrying case, Negrini 1640 wrench set, PB 211H6 Scope ring set, (Ø30, 34, 35)	10 10 11 11 11 11
E E.1 E.2 E.3 E.4 E.5 E.6 E.7 E.8 E.9 E.10 E.11 E.12 E.13 E.14 E.15. E.16.	Accessories, basic spare parts & tools Armory, bolt tool Armory, bolt head repair kit Armory, cleaning kit Armory, gauges kits Broken case / shell extractor X-tra large bipod skids kit Field, firing pin kit Saddle / top rail kit with low saddle rail Saddle rail, raised Top rail, long Top rail, short Side rail short, low or raised Side rail long, low or raised Slings Stuck case / shell extractor Sound suppressor	12 12 13 14 14 14 15 15 15 15 15 16 16
1 1.1. 1.2.	Weapon setup Bolt storing setup Bolt check	17 17
2.	Arming the firing pin	18
3.	Bolt lubrication	20

# **OM 50 NEMESIS**

Chapter	Subject (s)	Page Number
4.	Firing pin and shroud removal	22
5.	Bolt insertion	25
6.	Stock setup	28
7.	Loading the magazine	30
8.	Loading the rifle	31
9.	Unloading the rifle	33
10.	Barrel change, switch or removal	34
11. 11.1. 11.3.	Muzzle brake & suppressor Muzzle brake removal Suppressor assembly	39 40
12.	Stock length adjustment	42
13.	Stock comb high adjustment	43
14.	Ground spike adjustment	44
15.	Bipod adjustment	45
16. 16.1. 16.2. 16.3. 16.4.	Preventive maintenance procedures General maintenance Specific maintenance Rifle cleaning schedules Component service / replacement intervals	48 48 50 50
17.	Troubleshooting	51
18.	Broken shell extractor	52
19.	Stuck case extractor	56
20.	Mildial	58
21. 21.1.	Zeroing the rifle Zeroing target	66 67
22.	Limited warranty	68
23.	Limitation of warranty	68

# **SAFETY RULES**

### Rule N°1

Treat every weapon as if it is loaded.

#### Rule N°2

Never point a weapon at anything or anybody that you do not intend to harm or destroy or in a direction where an unintentional discharge may result in damage to property, injury or death.

#### Rule N°3

Never place your finger into the trigger guard until you are ready to fire the weapon.

#### Rule N°4

Be sure of your target and of what's behind it before firing

#### Rule N°5

Always wear eye & ear protection when firing a weapon.

#### Rule N°6

Clear every weapon before handling it.

# **CLEARING THE WEAPON**

- A.) Rotate the safety lever to "SAFE"
- B.) Open the bolt
- C.) Remove the magazine
- D.) Inspect the chamber for the presence of a live round or empty case

Visually:

look at the chamber through opened ejection port **Physically:** 

Insert index finger through ejection port to feel the presence of a round or empty case in the chamber.

E.) Empty live rounds from the magazine.

Remove and store any live rounds and/or empty cases from whiting the weapon or magazine before handling the weapon further.

# **BLAST EFFECT SAFETY RULES**

To reduce the recoil felt by the shooter this rifle is equipped with a high efficiency muzzle brake.

In order to reduce the recoil, a major part of the gases released when firing a round create a reverse thrust in the muzzle brake. This generates "THRUST ZONES", also called "BLAST." Avoid these zones while weapon is in use.

Debris from the ground could be projected at high speed and could cause injuries to bystanders. Therefore, it is important to clear the surface of small objects prior to shooting.

There should be a minimum of 2m between teams shooting in line. Shooting in closer position will place shooters in the Blast zone.

When shooting as a team, the spotter must have his shoulders at the level of the shooter's hips and be as close as possible to him to be in the SAFE ZONE.

SHORT BARREL: TRUST PATTERN

# MASSEPPESSON FABLE DANGER LOW THRUST MILD DANGER | LOW THRUST MILD DANGER BASSE PRESSION - MILL WAVIGER FAIBLE DANGER SAFE ZONE HIGH THRUST - DANGER ZONE DE SECURITE HAUTE PRESSION - DANGER A LINE STATE OF THE STATE OF TH LOW THRUST - MILD DANGER LUM I THEOS I - MILL UMNUER LUM I THEOS ON - FABLE DANGER BASSE PRESSION - FABLE

LONG BARREL: THRUST PATTERN

# A.) INTRODUCTION

## A.1.) GENERAL INFORMATION

### PREPARATION FOR STORAGE OR SHIPMENT.

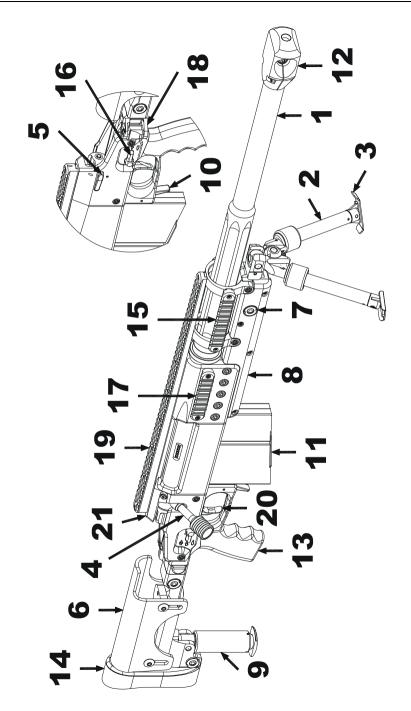
Except in extreme situations, the rifle should always be stored and transported only in an airtight, watertight carrying case.

#### RIFLE REPAIRS

Rifles should only be repaired by A.M.S.D. SA or by a qualified professional that has been approved by A.M.S.D. SA. If you must ship your weapon to be repaired remember to send the whole weapon assembly (not just the damaged part) and to use an airtight, waterproof carrying case as described above.

## A.2.) IDENTIFICATION OF MAJOR COMPONENTS

- (1) BARREL
- (2) BIPOD
- (3) BIPOD SKID PLATE
- (4) BOLT
- (5) BOLT STOP
- (6) COMB
- (7) FLUSH CUPS
- (8) FOREND
- (9) GROUND SPIKE
- (10) MAG. CATCH LEVER
- (11) MAGAZINE / MANUAL FEEDING BLOCK
- (12) MUZZLE BRAKE
- (13) PISTOL GRIP
- (14) RECOIL PAD
- (15) SADDLE RAIL
- (16) SAFETY LEVER
- (17) SIDE RAIL
- (18) STOCK JOINT
- (19) TOP RAIL
- (20) TRIGGER SHOE
- (21) UPPER RECEIVER



# B.) **SPECIFICATIONS**

Cal		

Calibers	12.7x99mm	50 Bmg 460 Steyr 416 Barrett
Overall length, stock collapsed Overall length, stock fully extended Overall length, stock folded	1338mm 1413mm 1092mm	52.7" 55.6" 43"
Barrels length (w/o muzzle brake)	900mm 800mm 700mm 600mm 450mm	35.5" 31.5" 27.5" 23.5" 17.75
Twist 50Bmg 460 Steyr 416 Barrett	381mm 356mm 279mm	15" 14" 11"
Twist direction Nbr of lands & grooves		Right 6
Weight with 700mm / 27.5" barrel Mk4 Mk5 Mk5-Nv	11.4Kg 13.4Kg 13.8Kg	25Lbs 29.5Lbs 30.4Lbs

# **B.1.) CAPABILITIES**

Ammunition type: Standard M33 ammunition Muzzle velocity: Standard M33 ammunition with 700mm / 27.5" barrel

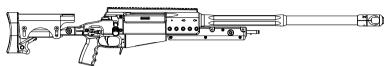
850 m/s - 2800 f/s

Energy: 15250 joules

Effective range: approximately 1850m / 2000 yards Maximum range: approximately 6500m / 7000 yards

# C.) MODELS & VARIANTS

# C.1.) MK4



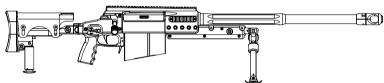
Fixed fully adj. stock, 700mm Barrel.

1x Field cleaning kit

1x Bolt tool

1x Manual feeding block
1x Negrini, 1640 carry case
1x PB 211H6, wrench set

## C.2.) MK5



Folding fully adj. stock, 700mm Barrel, Bipod & ground spike.

1x 5rds Box mag.

1x Field cleaning kit

1x Bolt tool

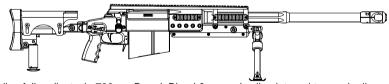
1x Manual feeding block

1x MilDial

1x Negrini, 1640

1x PB 211H6, wrench set

# C.3.) MK5-NV



Folding fully adj. stock, 700mm Barrel, Bipod & ground spike, integral tapered rail.

2x, 5rds Box mag.

1x, Field cleaning kit

1x, Bolt tool

1x, Manual feeding block

1x. MilDial

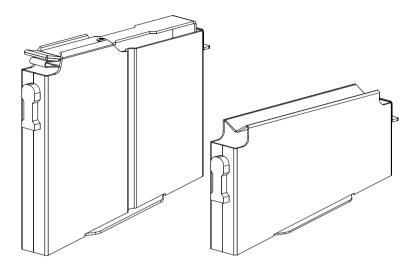
1x, Negrini, 1640

1x, PB 211H6, wrench set

1x, Scope ring set (choice : Ø30, 34, 35)

# STANDARD EQUIPMENT'S Equipment may vary depending on purchased model D.)

#### D.1.) 5rds box mag. & manual feeding block



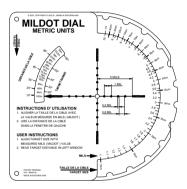
#### D.2.) Field cleaning kit



# D.3.) Bolt tool



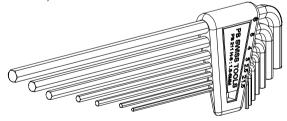
# D.4.) MilDial



D.5.) Carrying case, Negrini1640

# **Not Illustrated**

D.6.) Wrench set, PB 211H6



D.7.) Scope ring set (Ø30, 34, 35)

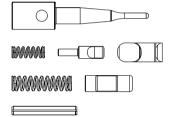
# Not Illustrated

# E.) ACCESSORIES, BASIC SPARE PARTS & TOOLS

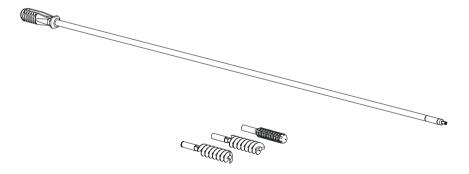
E.1.) Armory, bolt tool



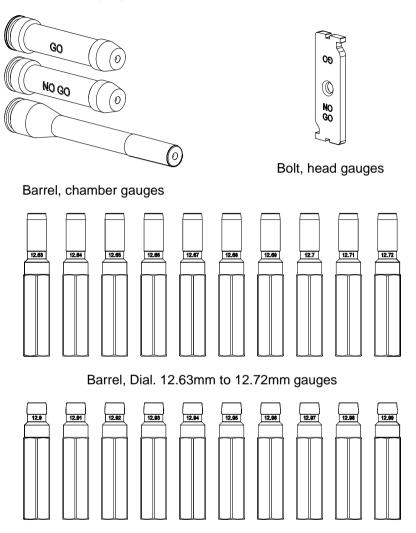
E.2.) Armory, bolt head repair kit



E.3.) Armory, cleaning kit

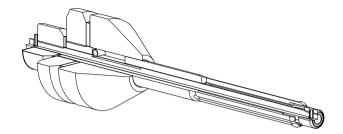


# E.4.) Armory, gauges kits



Barrel, 12.9mm to 12.99mm rifling gauge

# E.5.) Broken case / shell extractor



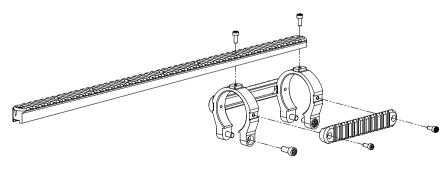
# E.6.) X-tra large bipod skids kit



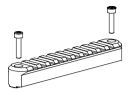
# E.7.) Field, firing pin kit



# E.8.) Saddle / top rail kit with low saddle rail.



# E.9.) Saddle rail, raised.



E.10.) Top rail, long.



E.11.) Top rail, short.



Top rails could be ordered either with 30Moa or 45Moa depression.

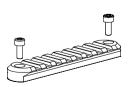
- 2 dots at rear = 30Moa
- 3 dots at rear = 45Moa

# E.12.) Side rail short, low or raised.





E.13.) Side rail long, low or raised.

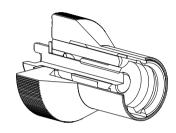




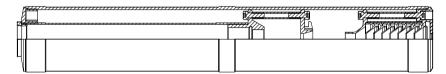
# E.14.) Slings, NOT ILLUSTRATED

- a.) Biathlon type
- b.) Standard single strap type
- c.) Standard double strap type

# E.15.) Stuck case / shell extractor



# E.16.) Sound suppressor



# **Dimensions**

Calibers	12.7x99mm	50 Bmg	
		460 Steyr	
		416 Barrett	
Overall diameter	80mm	3.15"	
Overall length	513mm	20.2"	
Weapon length addition	163mm	6.4"	
Weight	2.74Kg	6Lbs	
Threads	M30x1.5 Left ha	M30x1.5 Left hand twist	

# 1.) WEAPON SETUP

# 1.1.) Bolt storing setup

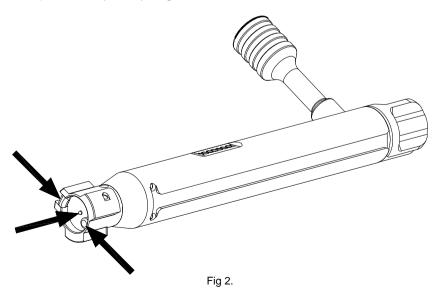


Fig 1.

# 1.2.) Bolt Check

# Prior to inserting the bolt in the rifle

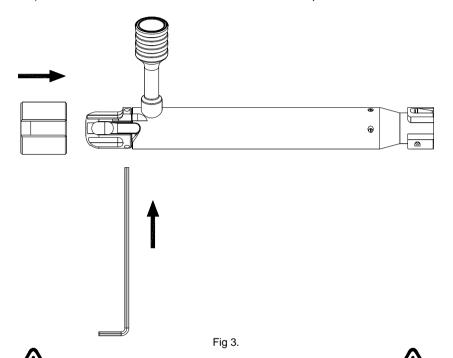
- 1.2.1.) Check Extractor function
- 1.2.2.) Visually inspect firing pin for erosion or wear marks
- 1.2.3.) Check Ejector plunger function



# 2.) ARMING THE FIRING PIN

# Prior to inserting the bolt in the rifle firing pin must be armed

2.1.) Use either bolt tool or 3mm Hex wrench to proceed



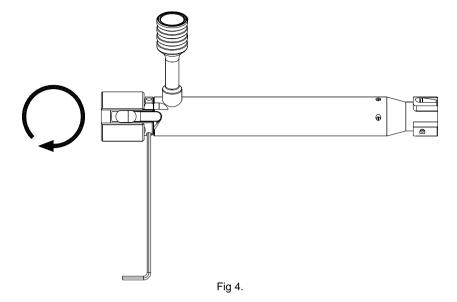
# IMPORTANT NOTICE

# BOLT MUST BE STORED WITH FIRING PIN SPRING IN RELEASED STATE

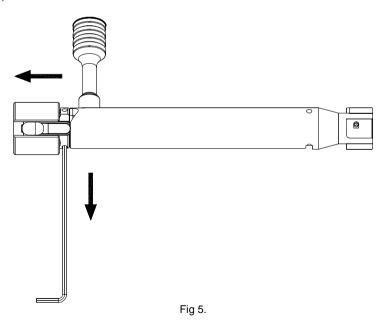
Weapon may fail to fire may result if not stored as per Fig. 1.

If the bolt is not stored properly, firing pin spring will need to be replaced more frequently to ensure proper function.

# 2.2.) Rotate the firing pin shroud 60° clockwise.



# 2.3.) Bolt is now set



# 3.) BOLT LUBRICATION

# Prior to inserting the bolt in the rifle.

# 3.1.) Lubricate firing pin cam path

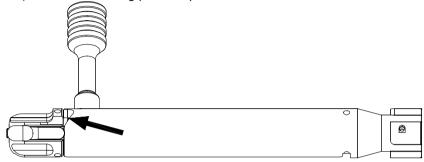
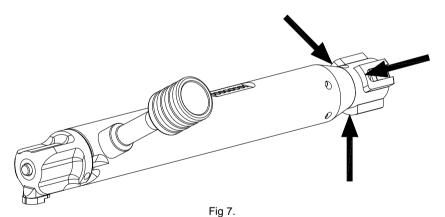


Fig 6.

# 3.2.) Lubricate bolt lugs



# 3.3.) Lubricate guiding slot

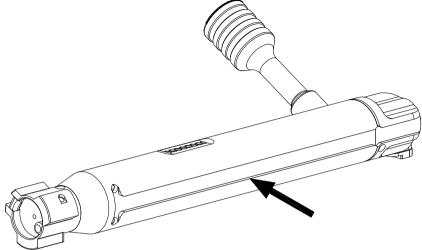


Fig 8.



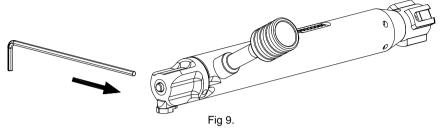
# **IMPORTANT NOTICE**

# Grease must be used for bolt lubrication

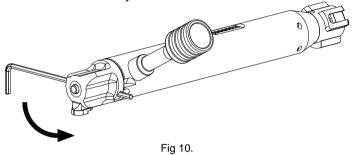
Bolt lubrication process must be repeated every 25 to 50 rounds, depending on weather and/or environmental conditions.

# 4.) FIRING PIN AND SHROUD REMOVAL

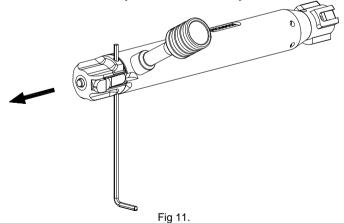
4.1.) Insert the 3mm Hex wrench through the shroud.



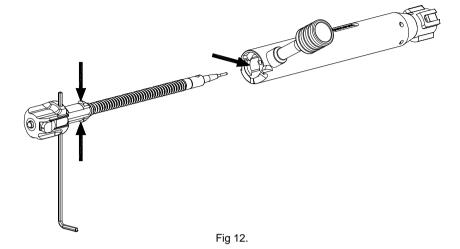
4.2.) Rotate the assembly 90° counter clockwise.



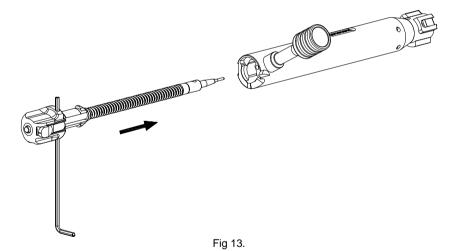
4.3.) Extract the assembly from the bold body.



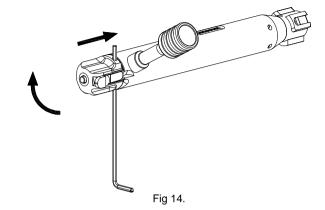
4.4.) Lubricate the contact surfaces with grease.



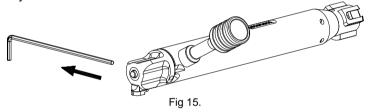
4.5.) Insert the firing pin assembly back in the bolt body.



4.6.) Push the assembly forward and rotate 90° clockwise.



4.7.) Once the shroud is in the proper position, you should be able to extract the wrench without force.



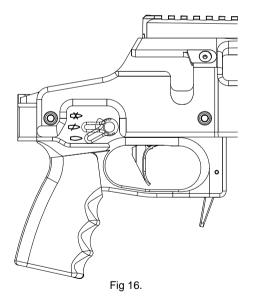
# 5.) BOLT INSERTION



# PRIOR TO INSERTION

Safety lever **MUST** be set to either **FIRE** or **SAFE**, as per shown in fig. 16, prior to introducing the bolt into the receiver.

Trying to insert the bolt by force with safety lever set to **SAFE – BOLT LOCKED** will permanently damage the trigger system and will **void the warranty.** 



# 5.1.) To insert the bolt in the weapon:

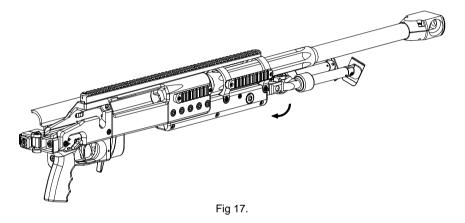
If the weapon is on a flat surface, a stand or a table: Pull down bipod legs for steady handling.

If you are in the field:

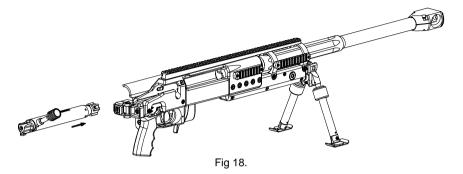
Hold weapon vertical while keeping muzzle brake on your shoe to prevent barrel obstruction.

To open the bipod:

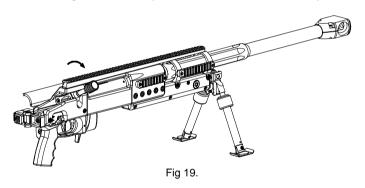
Squeeze both legs together and turn clockwise.



5.2.) Push the bolt in to the receiver, a slight up or down rotation of the bolt handle will help bolt stop to engage the guiding slot.



5.3.) Lock the bolt and dry fire to check proper function of trigger, fully open the bolt until the bolt stop engages and close the bolt again, either dry fire or set the rifle on safety.



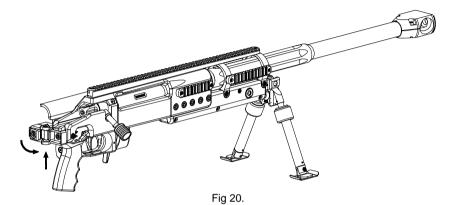
Your rifle is now ready for operation.

# 6.) STOCK SETUP

6.1.) To open the stock:

Pull or push up the stock

holding it as close as possible from stock joint
and rotate counter clockwise, until it locks in position.



6.2.) To open the ground spike:
Pull forward and rotate clockwise,
until it's locked in position.

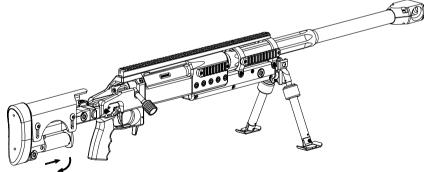


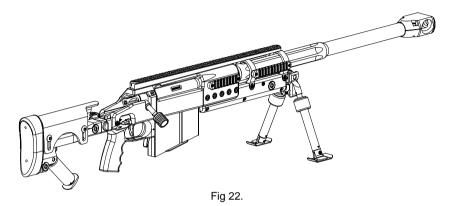
Fig 21.



Ground spike must only be used in the vertical position when shooting on a flat surface and when used as a rear support.

# 6.3.) Using the ground spike for target follow-up

The ground spike can be used at a 45° angle to shoot from shoulder to follow up moving target or from high grounds down.

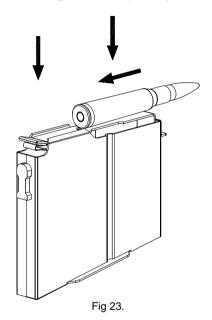


# 7.) LOADING THE MAG

# 7.1.) To load the magazine:

Push on both sides while introducing cartridges from the front to the back, repeat until desired amount of rounds is reached.

# Maximal magazine capacity: 5 rounds





DO NOT LEAVE ROUNDS IN THE MAGAZINE FOR AN EXTENDED PERIOD OF TIME AS THIS MAY CAUSE THE SPRING TO LOSE TENSION LEADING TO MALFUNCTION.

# 8.) LOADING THE RIFLE

# 8.1.) To Load the rifle:

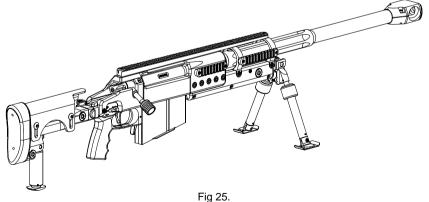
Insert loaded magazine, front end first as shown Rotate clockwise until it locks Check if magazine is properly locked

During magazine insertion Bolt can either be closed or opened.



Fig 24.

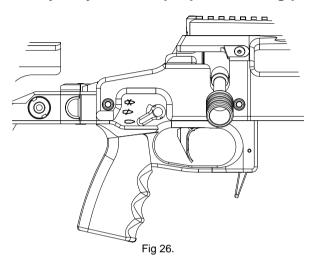
# 8.2.) Loaded weapon handling.



31 - 68 19/02/2011

# 8.3.) Removing the safety: From either "SAFE" or "SAFE BOLT LOCKED" Turn safety lever to "FIRE" as shown in Fig. 26

# Remove safety only when in proper shooting position.





# OM 50 NEMESIS Weapon system has a built-in passive safety measure.

All the trigger parts are dynamically balanced to sustain a 6-axis drop with a live round in the chamber & safety lever on **FIRE** position.

Nevertheless, an operator should not rely soley on the mechanical safety devices

Use extreme caution while handling the weapon loaded or not.

# 9.) UNLOADING THE RIFLE

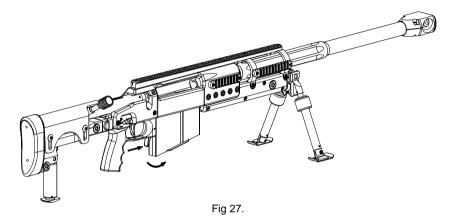
# 9.1.) To unload the rifle:

Turn safety lever to "SAFE".

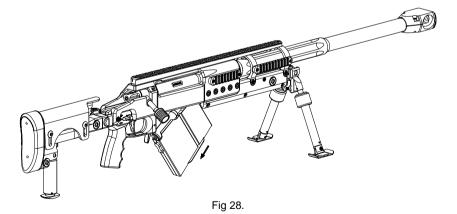
Open the bolt.

Check if the chamber is empty.

Push on Latch and pull down the magazine.



9.2.) Pull out the magazine from the rifle.



33 - 68 19/02/2011

# 10.) BARREL CHANGE, SWITCH OR REMOVAL

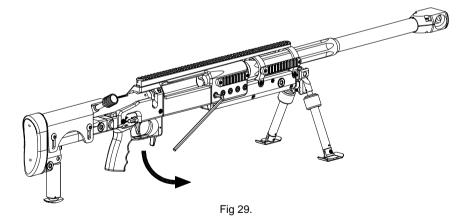


# Prior to proceeding.

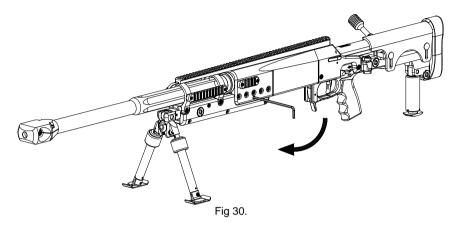
Safety lever must be set on the **SAFE** position Check that rifle is properly unloaded Open the bolt & check if barrel chamber is empty visually & manually

# Barrel switch has to be made in a clean as possible environment

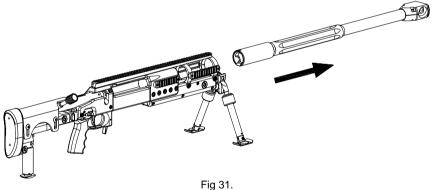
- 10.1.) To take the barrel of the receiver
- A.) Use a 6mm Hex wrench to unlock the five (5) screws on the right side of the rifle, once screws are running free rotate each of them one (1) turn to give enough play space.



B.) Use a 3mm Hex wrench to activate the inner pusher Rotate clockwise until resistance is encountered Rotate ½ to ¾ of a turn to free the barrel.



C.) Slide out the barrel from the receiver



1.19.0

Check all contact surfaces on the receiver & the barrel **Action**: Clean if required.

If the rifle is to be stored w/o barrel:

**Action:** Release the left side screw for long term storage.

If bolt has to stay in the receiver during storage: **Action:** Close bolt while pressing on the trigger shoe

#### 10.2.) Reassembly of the barrel:

Hold the rifle in a vertical position.

Insert barrel with locking ring notch toward top picatinny rail. Close the bolt to ensure proper positioning of the barrel.



#### **IMPORTANT NOTICE**

Bolt has to be opened prior to barrel insertion

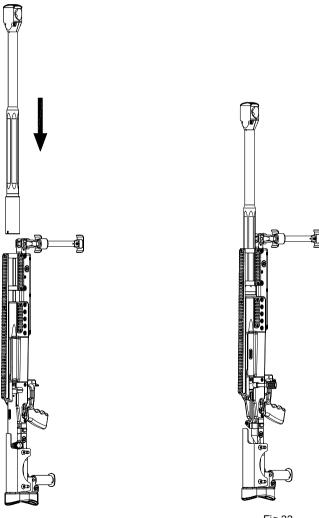


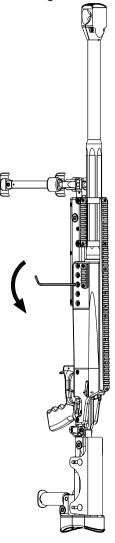
Fig 32.

Fig 33.

A.) Unscrew the left pusher screw.

In a "**DOWN**" to "**UP**" order turn the five (5) screws on the right side until resistance is felt on each on of them, then start applying torque to each screw, following the same "**DOWN**" to "**UP**" order.

Proper torque is reached when supplied 6mm Hex wrench starts bending 15 to 20 mm / 9/16" to 3/4".





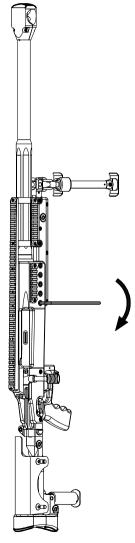
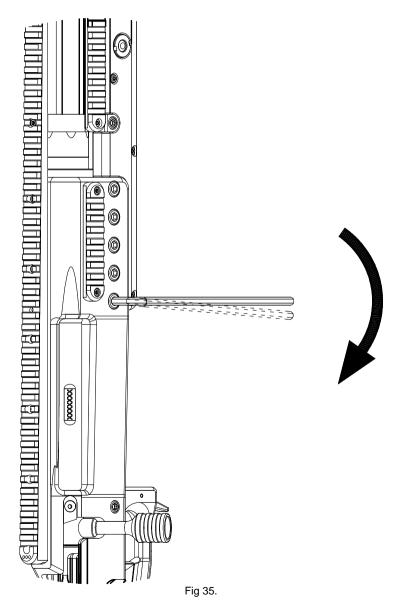


Fig 35.

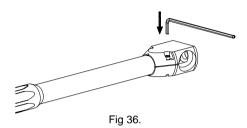
B.) Double check screw torque following order pattern.

### FAILURE TO COMPLY MAY RESULT IN POOR ACCURACY

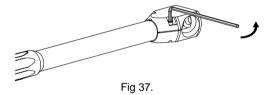


#### 11.) MUZZLE BRAKE & SUPPRESSOR

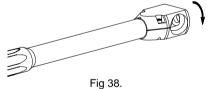
- 11.1.) Muzzle brake removal:
- a.) Use supplied 4mm Hex. Wrench.



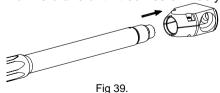
b.) Unscrew both retaining screws on muzzle brake.



c.) Unscrew muzzle brake counter-clockwise.



d.) Turn until muzzle brake until it comes off freely.



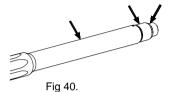
11.2.) Prior to assembly of either muzzle brake or suppressor.

Check both Ø and threads.

Fig. 40

Threads must be kept Clean.

Lubricate with grease to avoid seizing.



11.3.) Suppressor assembly.

a.) Slide muzzle brake over barrel.

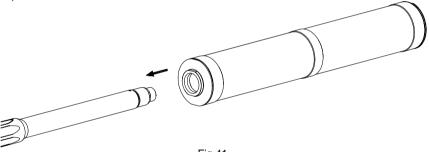


Fig 41.

b.) Until contact with threads is felt roughly at 25mm / 1" from barrel recess.

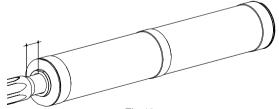
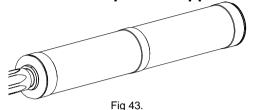


Fig 42.

c.) Screw counterclockwise until resistance is felt.

Do not over torque the suppressor.





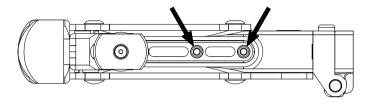
THE RIFLE MUST NOT BE FIRED WITHOUT THE MUZZLE BRAKE OR THE SUPPRESSOR FIRMLY IN PLACE ON THE BARREL

SERIOUS INJURY
OR
DEATH MAY RESULT

#### 12.) Stock length adjustment

Use supplied 5mm Hex. Wrench. Unlock the two screws on the stock slider. Set stock to required length. Lock both screws.

Over all length adjustment is 75mm / 3"



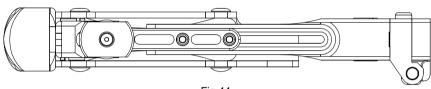
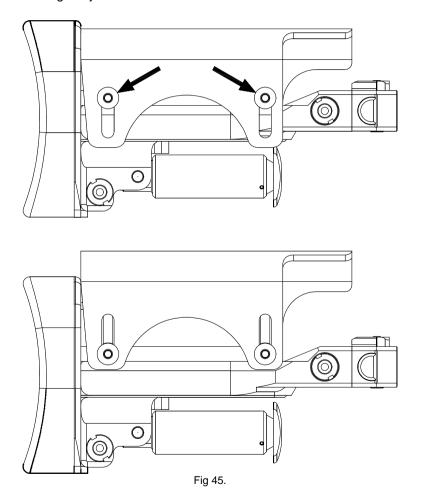


Fig 44.

#### 13.) Stock comb high adjustment

Use supplied 5mm Hex. Wrench. Unlock the two screws on the comb. Set comb to required high. Lock both screws.

Over all high adjustment is 25mm / 1"



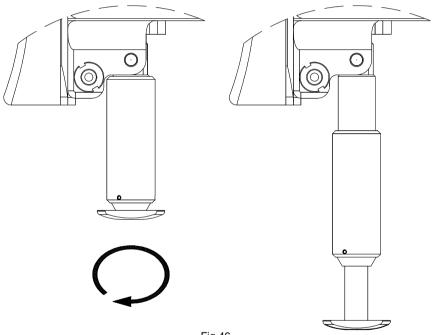
#### 14.) **Ground spike adjustment**

Down: Clockwise.

Rotation = Left to Right

UP: Counter clockwise. Rotation = Right to Left

Over all high adjustment is 75mm / 3"



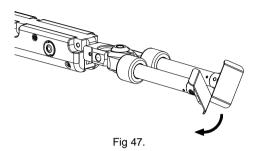




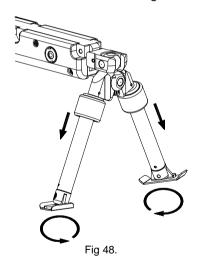
Ground spike must only be used in the vertical position when shooting on a flat surface and when used as a rear support.

#### 15.) Bipod adjustment

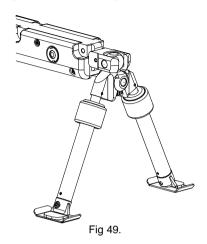
15.1.) Setting up bipod in firing position: Squeeze both legs and pull down



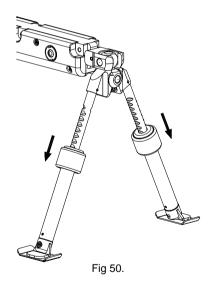
Rotate both legs & pull down Left leg turn clockwise – Left to Right Right leg turn counter clockwise – Right to Left.



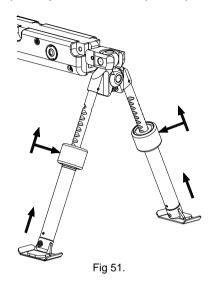
#### Pull down legs to required height



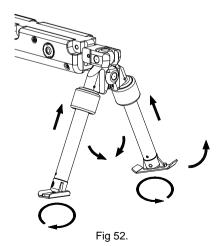
#### Over all high adjustment is 63mm / 2.5"



## 15.2.) Setting bipod in stored position: Push ring up with your thumb and push up.



Rotate both legs & pull up Left leg turn counter clockwise – Right to Left Right leg turn clockwise – Left to Right Squeeze both legs together Push legs up to the horizontal position



#### 16.) PREVENTIVE MAINTENANCE PROCEDURES

#### 16.1.) GENERAL MAINTENANCE

a.) Ensure that all bearing surfaces, particularly those listed below are clean and properly lubricated.

Bipod legs & slider
Bolt race track
Bolt ejector
Bolt extractor
Firing pin cam path
Ground spike
Stock joint axle & lock lug
Trigger

b.) Inspect all parts for looseness and tighten or replace, if necessary

Each time the rifle is setup for firing, ensure:
That barrel and chamber are clean and free of lubricant.
Proper function of bipod.
Proper function of ground spike.
Proper function and locking of stock joint.

c.) When possible:

An operational check using dummy rounds should be performed.

Insert 5 dummy rounds into the magazine. Load the magazine into the rifle. Operate the bolt to the rear and forward, making sure the cartridges feed, extract and eject properly.

If the rifle is not functioning correctly, refer to the "TROUBLESHOOTING" section of this manual.

#### 16.2.) SPECIFIC MAINTENANCE

- a.) BEFORE FIRING:
- a.1.) After long term storage or armory cleaning: Thoroughly clean and dry the bore and the chamber.
- a.2.) After copper fouling removal:
   Thoroughly clean and dry the bore and the chamber.
   Fire at least 10 to 20 rounds to reset barrel to normal.
- a.3.) In the field deployment:
  If applicable, bore snake shall be used prior each shooting engagement or at least once a day.
- a.4.) Check muzzle brake for possible obstructions
- b.) AFTER FIRING:
- b.1.) The rifle should be cleaned and lubricated as soon as possible after each shooting session to prevent the corrosive effect of powder and buildup of debris in the action and barrel.
- b.2.) After each 50 rounds shot it is recommended that the bore and the chamber be scrubbed with a copper brush.
- b.2.1.) After each 100 rounds it is recommended that the bore and the chamber be scrubbed with a nylon brush and solvent.

This will maintain accuracy and insure proper functioning.

- b.3.) Clean the muzzle brake at the same time as the barrel.
- b.4.) Clean the bolt face.
   Check both ejector and extractor
   Depress the ejector and extractor to test smooth motion.



DO NOT INSERT CLEANING ROD OR OTHER DEVICE TROUGH THE MUZZLE END OF THE BARREL. BE ESPECIALLY CAREFUL NOT TO DAMAGE THE MUZZLE CROWN AS IT COULD AFFECT THE ACCURACY OF THE RIFLE.

#### 16.3.) RIFLE CLEANING SHEDULE

#### a.) Daily Service:

As part of daily service, inspect the bore and chamber, and clean components parts of bolt, mag. and receiver. Lubricate as required.

#### b.) Weekly Service:

As part of weekly service, inspect the bore and chamber, and clean components parts of bolt, mag. and receiver. Check bipod, ground spike and stock joint. Lubricate as per required.

c.) 250 to 500 rounds Service. (Depending upon accuracy) Copper fouling removal and breaking.

#### 16.4.) COMPONENT SERVICE / REPLACEMENT INTERVAL

a.) every 250 rounds.

Check bolt lugs wear, replace bolt head if needed.
Check ejector functioning, clean and lubricate if needed.
Check ejector wear, replace if needed.
Check extractor functioning, clean and lubricate if needed.
Check extractor wear, replace if needed.
Check firing pin tip wear, replace if needed.

#### b.) 2500 rounds.

Check barrel chamber wear (head space), replace if needed. Check muzzle brake wear, replace if needed.

c.) Yearly.

Check retaining O-ring on both bipod legs, replace if needed. Check recoil pad wear, replace if needed. Check polymer parts for cracks, replace if needed.

#### 17.) TROUBLESHOOTING

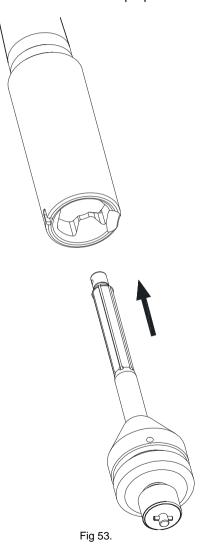
#### 17.1.) MALFUNCTION AND IMMEDIATE ACTION

MALFUNCTION	CAUSE	CORRECTIVE ACTION
Failure to Feed	Bent magazine lips	Repair or replace magazine body
	Magazine not seated	Reinsert properly
	Weak magazine spring	Replace follower
Failure to chamber	Damaged cartridge	Remove and recharge / reload
	Dirty chamber	Clear and clean
Failure to Lock	Barrel not seated properly	Re-seat and tighten properly
	Excessive dirt, sand, etc in locking area	Clear and clean
	Oversized cartridge	Remove and recharge / reload
Hard to Unlock / Open	Barrel moved forward	Re-seat and tighten properly
	Dry or out of lubricant cam path	Clean and lubricate
	Over pressure	Check ammunition
		Keep ammunition cooler
Failure to Fire	Bolt not fully locked	Rearm bolt w/o ejecting
	Broken firing pin tip	Replace
	Faulty ammunition	Replace ammunition and recharge / reload
Failure to Extract	Broken extractor	Remove and replace
	Broken shell	Use broken shell extractor
	Dirty chamber	Clean
	Extractor not moving freely in slot	Remove, clean and reassemble
	Stuck cartridge	Use stuck case extractor
Failure to Eject	Frozen or damaged	Remove and replace
	ejector or spring	
Very hard recoil	Broken damaged or missing muzzle brake	Inspect and replace if needed
	Faulty / Hot ammunition	Replace or cool ammunition
	Over loaded ammunition	Replace ammunition

#### 18.) BROKEN SHELL EXTRACTOR

In case of broken shell stuck in the chamber use factory extractor.

a) Insert extractor as per sown
 Diameter to allow extractor to work is 14mm minimum,
 if diameter is smaller increase to proper diameter by drilling.



52 - 68 19/02/2011

#### b.) Push extractor until it "clicks" into the chamber.

Fig. 54. & Fig. 55.

Turning knurled wheel "N°1":

Tighten until resistance is encountered.

Your extractor is now firmly locked on brass mouth.

Fig. 56.

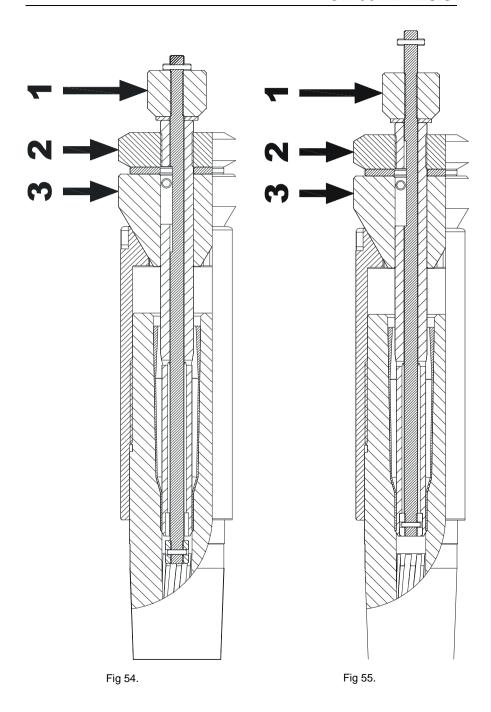
Turning knurled wheel "N°2":

Tighten until resistance is encountered, hold on knurled wheel "N°3" while turning wheel "N°2".

After a few turns Brass should come out and clear the chamber.

Using the broken shell extractor will solve 99% of broken case problems.

Chamber polishing should be considered after extraction.



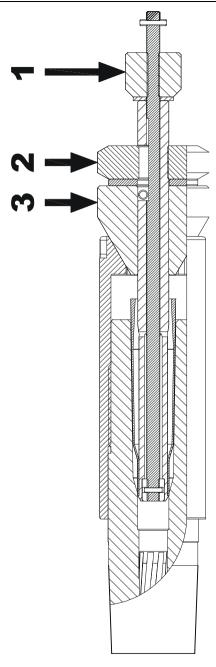


Fig 56.

#### 19.) STUCK CASE EXTRACTOR

In incident of a stuck case or full round in the chamber use factory extractor.

Insert extractor as per shown
First insert extractor head over the shell / case
Insert pulling body over pulling head aligning the steady pin,
until resistance is encountered on hexagonal screw, turn until
shell / rounds is cleared of the chamber.



DUE TO THE SPECIFICS
OF 50BMG AMMUNITIONS, A
STUCK CASE EXTRACTOR MUST BE USED EVERY
TIME A LIVE ROUND IS STUCK IN A BARREL.
TRYING TO PUSH A LIVE ROUND
FROM THE MUZZLE WITH A ROD
COULD RESULT IN

# SERIOUS INJURY OR DEATH

Since ammunition with active payload may have been chambered w/o operator knowledge.

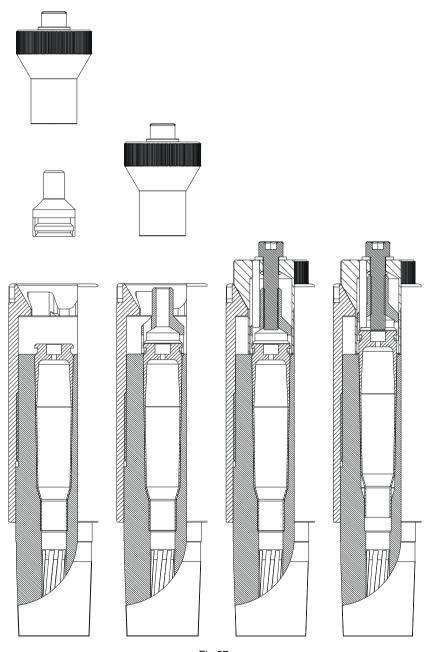


Fig 57.

#### 20.) MILDIAL

A MILDOT reticule is a simple, reliable and an accurate way of finding out target range without a laser range finder or as a Back-up to a laser range finder.

It also allows the operator to make corrections w/o adjusting the scope.

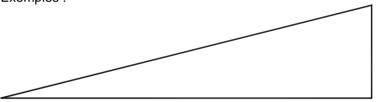
Your rifle is supplied with a MILDIAL which allows you to calculate your target range faster by using an analog calculator.

Shooter shall train them selves to use both MILDOT and MILDIAL.

#### **Theory of MILDOT**

By multiplying the measured known dimension "B" of target by one thousand and dividing it by the number of measured "MILS", the shooter get a direct reading of distance / range "A" of target.

Exemples:





Standard building Door width:

Measured MILS in the scope:

2

Result:  $0.8 \times 1000 = 800 / 2 = 400 \text{m}$ 

Average truck facing forward: 2.5 m
Measured MILS in the scope: 4

Result:  $2.5 \times 1000 = 2500 / 4 = 625 \text{m}$ 

Average wheeled armored vehicle length: 6 m Measured MILS in the scope: 3

Result:  $6 \times 1000 = 6000 / 3 = 2000 \text{m}$ 



# Prior to using your MILDOT & MILDIAL check if your reticule is on first or second focal plane.

If the rifle is fitted with a first focal plane reticule scope: Measures are valid at any magnifications.

If the rifle is fitted with a second focal plane reticule scope: your measures are valid only at a determined magnifications, in this case, make sure that you set scope at proper magnification.

#### IMPORTANT NOTICE.

Illustrations may not be to scale or may not be as per your hardware.

Dimensions used for calculation are for demonstration purposes only, and shall not be used in the field unless double checked & confirmed by operator.

Mildot & Mildial are not as precise then modern Laser range finders but prove to be accurate enough in the field for operation.

They are to be used as a backup system and for training purpose.

Mildial is water proof, shock proof, dust proof, etc .and does not need battery to work so may save your life in the field.

#### a.) Example

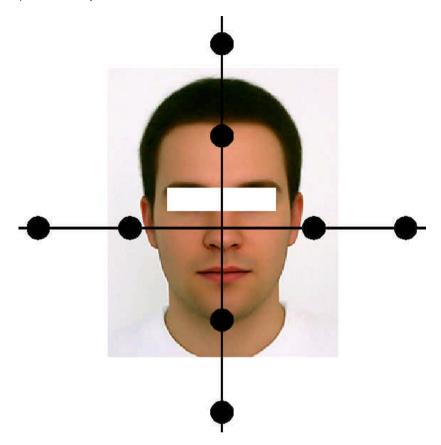


Fig 58.

a.1.) As per illustration
Human head from ear to ear:
Measured MILS in the scope:
Result:

0.2 m 2 0.2 x 1000 = 200 / 2 = 100m

a.2.) Not shown

Human head from thin to top of head: Measured MILS in the scope: 0.25 m

Result:

0.2 x 1000 = 200 / 2 = 125m

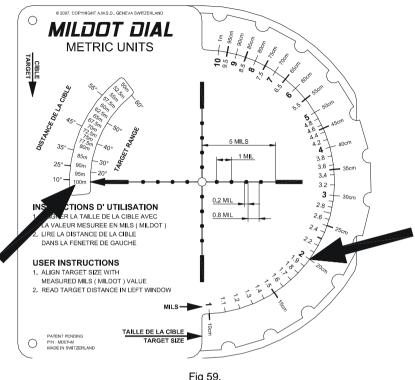


Fig 59.

#### a.1.1.) As per illustration

The analog calculator wheel is set to align 20cm with 2 Mils Direct reading result: 100m

#### a.2.1.) Not shown

The analog calculator wheel is to be set to align 25cm with 2 Mils Direct reading result: 125m

#### b.) Example.

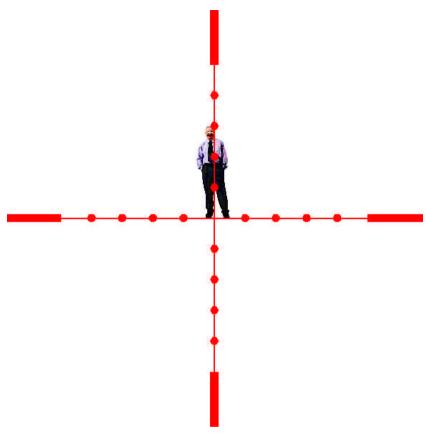


Fig 60.

b.1.) As per illustrationHuman from heel to top of head:Measured MILS in the scope:Result :

1.8 m ( estimated ) 3 1.8 x 1000 = 1800 / 3 = 600m

b.2.) Not shown Human shoulder to shoulder: Measured MILS in the scope: Result:

0.6 m ( estimated ) 1 0.6 x 1000 = 600 / 1 = 600m

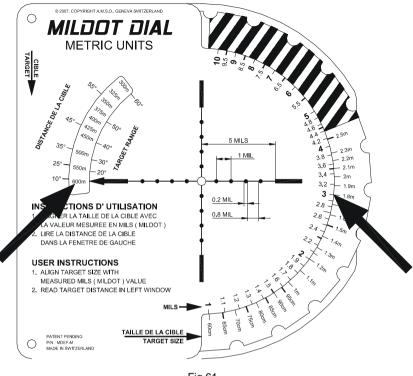


Fig 61.

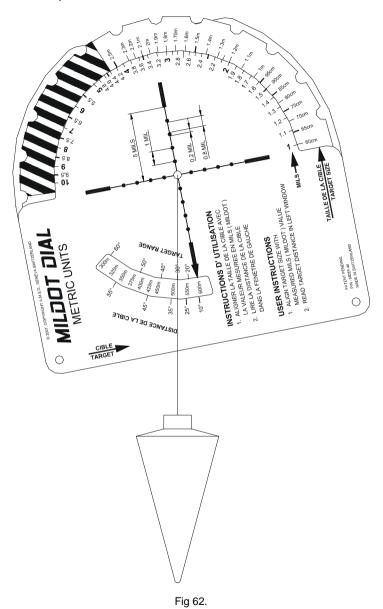
#### b.1.1.) As per illustration

The analog calculator wheel is set to align 18cm with 3 Mils Direct reading result: 600m

#### b.2.1.) As per illustration

The analog calculator wheel is to be set to align 60cm with 1 Mils Direct reading result: 600m

#### c.) Example



Top compensate for topographic correction, use a piece of wire, a cord or fishing line to hang a weight from the center of your MILDIAL.

Put your MILDIAL on a flat surface on the rifle to get angle correction.

c.1.) As per illustration Fig. 60.

Human from heel to top of head:

1.8 m (estimated)

Measured MILS in the scope:

Straight line shooting result:  $1.8 \times 1000 = 1800 / 3 = 600 \text{m}$ 

c.2.) Not shown in Fig. 60

Human shoulder to shoulder: 0.6 m ( estimated )

Measured MILS in the scope: 1

Straight line shooting result:  $0.6 \times 1000 = 600 / 1 = 600 \text{ m}$ 

c.1.1.) As per illustration Fig. 62.

The analog calculator wheel is set to align 18cm with 3 Mils

Direct reading result: 600m

Corrected result with 30° up/down slop: ~520m

c.2.1.) As per illustration Fig. 62.

The analog calculator wheel is to be set to align 60cm with 1 Mils

Direct reading result: 600m

Corrected result with 30° up/down slop: ~520m

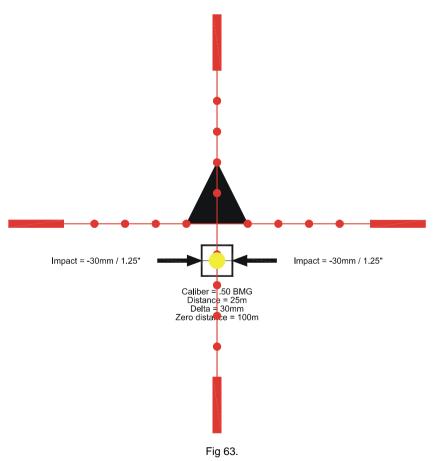
#### 21.) ZEROING THE RIFLE

Printing and using the target on page 67 You can zero your rifle in a fast, ammunition-saving and efficient manner

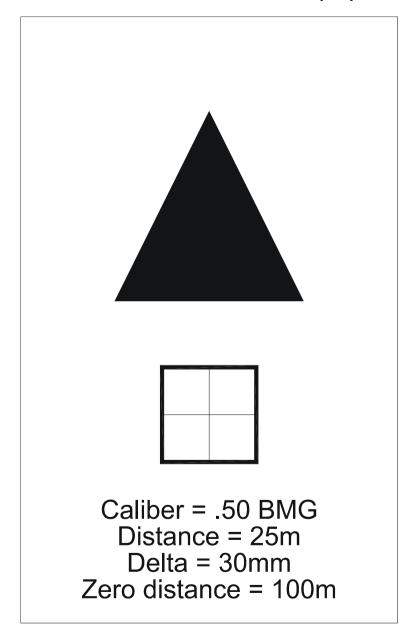
Place target @ 25m Pre zero your rifle using a bore or chamber laser.

First impact should be close to the square on target Adjust scope to obtain group in the square

You will now have to go to 100m to finish zeroing your rifle.



Print @ 1:1 scale on A4 paper



#### 22.) Limited Warranty

The "OM 50 NEMESIS" is warranted by A.M.S.D. SA. to be free from defects in material and workmanship for a period of twelve (12) months from the date of purchase by the original purchaser.

Under this warranty, the obligation of A.M.S.D. SA. is limited to the free replacement (to the original purchaser) of any part which, under normal conditions of use, proves to be faulty because of a defect in material or workmanship.

A.M.S.D. SA. will not be responsible for the results of misuse, neglect, corrosion, unreasonable use, improper or defective ammunition, unauthorized alterations or normal wear and tear.

The use of nonstandard, old, damaged, corroded or re-manufactured, hand-loaded ammunition will void all warranties - expressed or implied.

In order to receive warranty service, the entire firearm and damaged parts must be returned to the factory.

Put warranty claim in writing and include serial number and the nature of the problem.

Shipping charges to the manufacturer must be paid by the purchaser.

If claim is accepted for warranty work, return shipping and insurance charges will be paid by A.M.S.D. SA.

#### 23.) <u>Limitation of Warranty</u>

The liability of A.M.S.D. SA for any and all losses and damages to the purchaser shall in no event exceed the purchase price of the firearm and then only if the firearm is proven to be defective in the material or workmanship.

A.M.S.D. SA. shall under no circumstances be liable for incidental or consequential damages resulting from negligence or misuse of the purchaser.

A.M.S.D. SA provides no other warranties of any kind, expressed or implied with respect to the AMSD "OM 50 NEMESIS"

68 - 68

# **A.M.S.D.**Advanced Military Systems Design

P.o. Box 487 CH – 1214, Vernier – Geneva Switzerland

Office: int + 41 22 349 76 93 Fax: int + 41 22 349 76 91 Workshop: int + 41 22 758 08 88

Website: www.amsd.ch

E-Mail: admin@amsd.ch

clm@amsd.ch contact@amsd.ch sales@amsd.ch