

7.62mm Kalashnikov Modernized Automatic Rifle (AKM)

Purpose and Basic Characteristics

The 7.62m modernized Kalashnikov automatic rifle (AKM) is an individual weapon and is intended for destruction of enemy personnel. The rifle is equipped with a bayonet-knife for destruction of the enemy in hand-to-hand combat.

Caliber, mm.....	7.62mm
Magazine capacity, rounds	
Weight of rifle without bayonet-knife with loaded magazine, kg.....	3.6
Length of rifle, mm:	
with bayonet-knife.....	1023
without bayonet-knife.....	900
Range of direct shot at chest-high figure (50 cm height), m.....	350
Maximum range, m.....	1000
Rate of fire, rounds/minute.....	approx. 600
Combat rate of fire, rounds/minute	
Semiautomatic fire.....	up to 40
Burst fire.....	up to 100
Muzzle velocity of bullet, m/sec.....	715
Weight of bayonet-knife, kg	
with scabbard.....	.45
without scabbard.....	.26



Nomenclature



Cartridges and Bullets



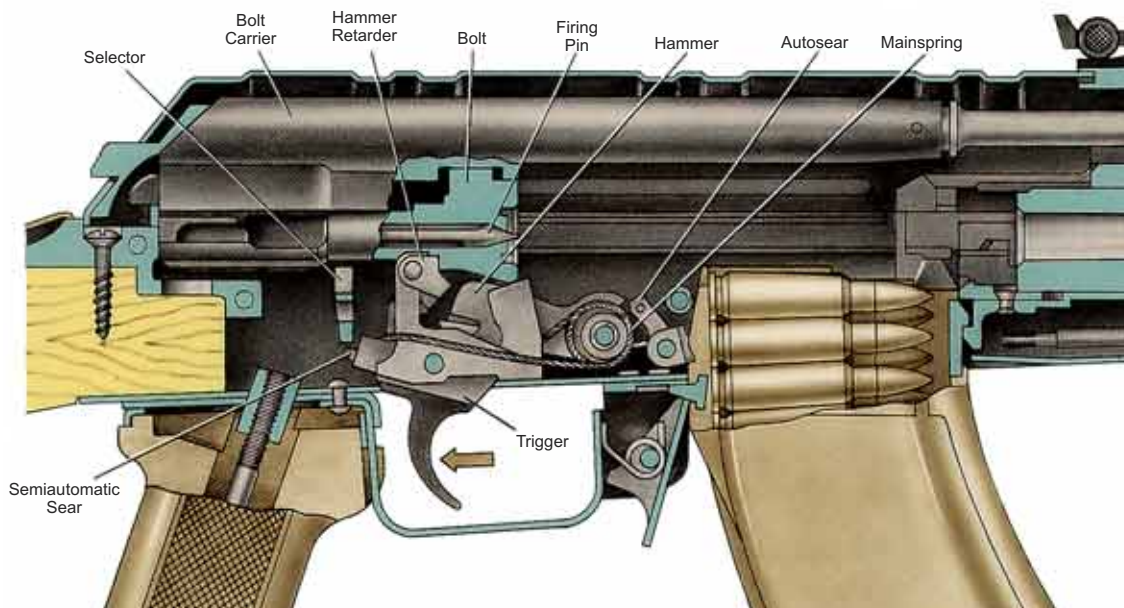
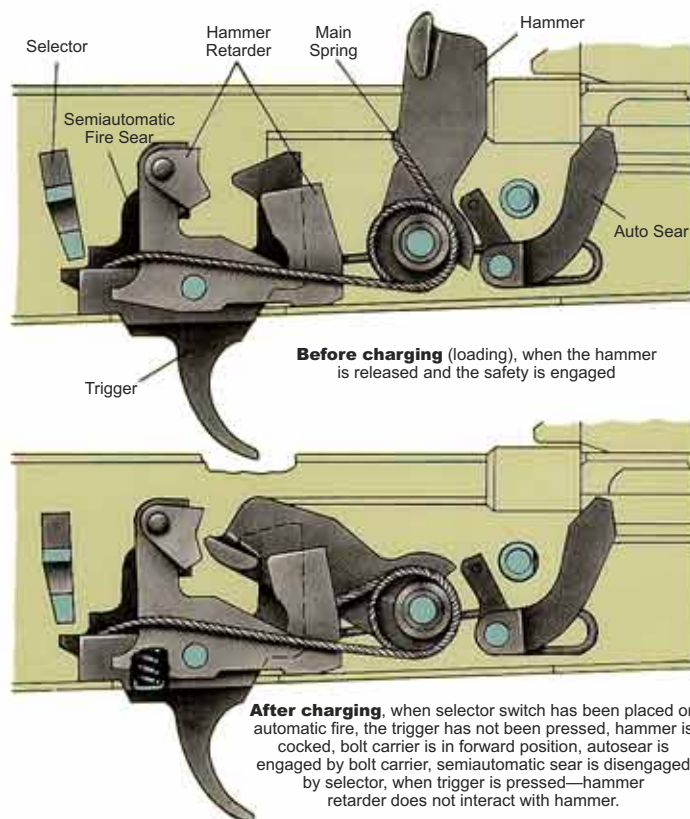
Accessories



7.62mm Kalashnikov Modernized Machine Gun (AKM)

Interaction of Components and Mechanisms

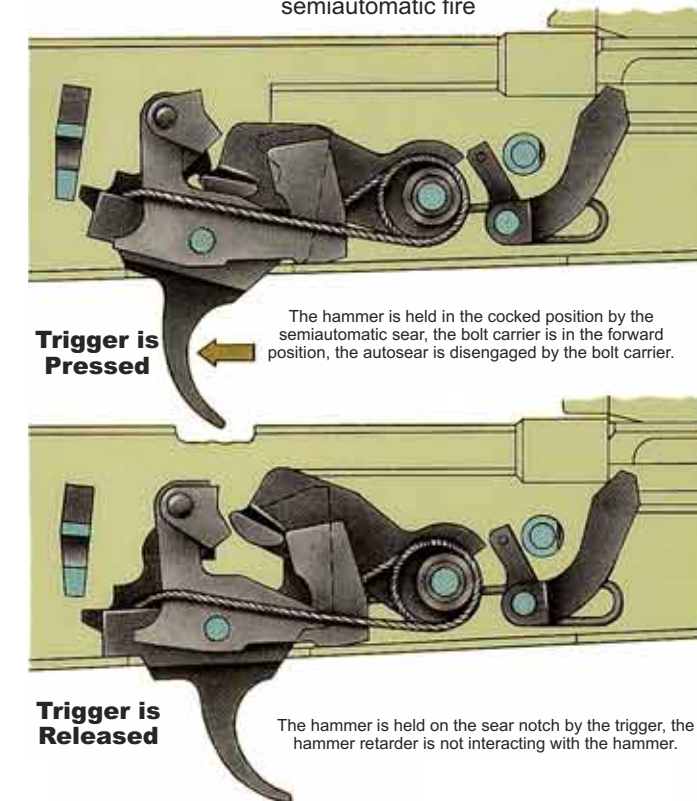
Position of Components of Trigger Mechanism



Position of Components and Mechanisms During Automatic Fire
at moment when bolt carrier with bolt is located in rear position.

The trigger is pressed, the semiautomatic sear is disengaged by the selector, the hammer is cocked by the bolt carrier; during movement of the bolt carrier to the forward position, the hammer is held by the auto sear before its disengagement by the bolt carrier; after disengagement of the auto sear, under the impulse of the mainspring the hammer interacts with the retarder and then strikes the firing pin.

Position of Components of Trigger Mechanism After the Shot, when the selector is placed on semiautomatic fire

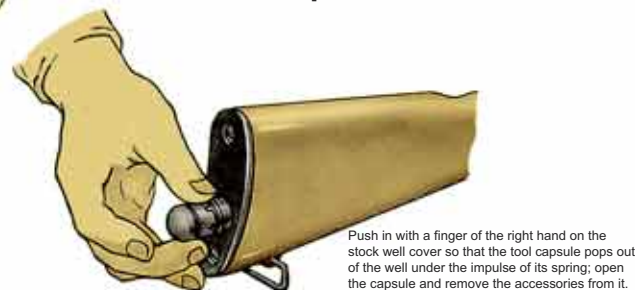


Partial Disassembly of the AKM

1 Removing the Magazine



2 Extraction of the Tool Capsule with Accessories



3 Removing the Cleaning Rod



4 Removing the Receiver Cover



5 Removing the Recoil Mechanism



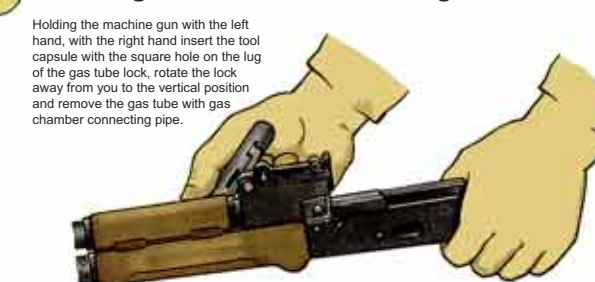
6 Removing the Bolt Carrier with Bolt



7 Removing the Bolt from the Bolt Carrier



8 Removing the Gas Tube with Handguard



1. Install the gas tube with handguard.
2. Install the bolt to the bolt carrier.
3. Install the bolt carrier with bolt into the receiver.

Sequence of AKM Assembly After Partial Disassembly

4. Install the recoil mechanism.
5. Install the receiver cover.
6. Release the hammer from the sear notch and place the weapon on safe.

7. Install the cleaning rod.
8. Place the tool capsule in the stock well.
9. Install the magazine in the machine gun.

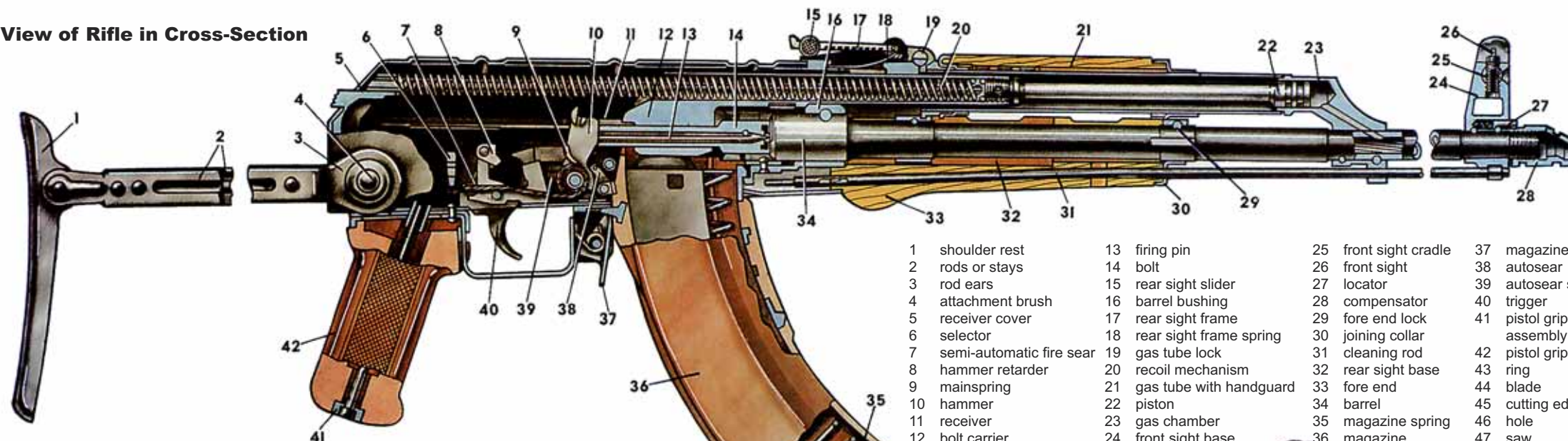
Kalashnikov Automatic Rifle AKMS



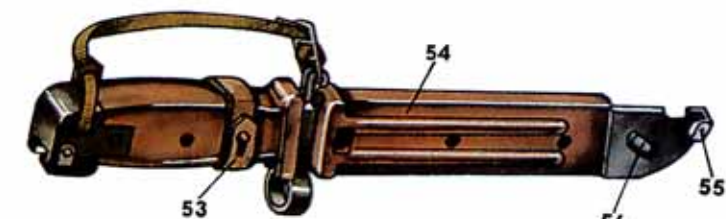
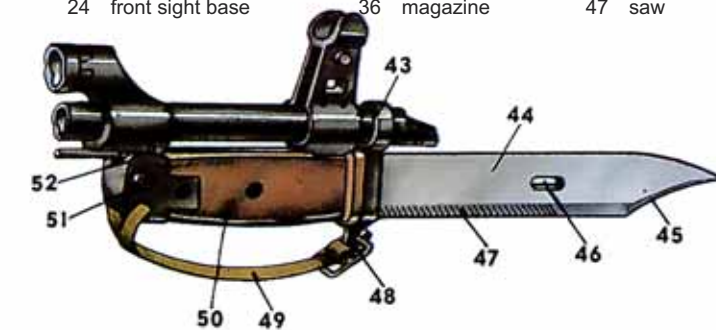
Basic Tactical Technical Characteristics

Caliber of barrel, mm.....	7.62	Rate of fire, rounds/min.....	600
Maximum firing range, m.....	up to 1000	Combat rate of fire, rounds/min	
Range of direct-fire shot, m:		When firing in bursts.....	up to 100
At chest-high figure.....	350	When firing in single shots.....	up to 40
At running figure.....	525	Dimensions of rifle, mm	
Mass (weight) of rifle without bayonet-knife, with loaded magazine, kg.....	3.8	Length with folded bayonet-knife.....	1010
Magazine capacity, rounds.....	30	Length without bayonet-knife.....	880
		Length with folded stock.....	640

View of Rifle in Cross-Section



- | | | | | |
|----------------------------|----------------------------|-----------------------|--------------------|-----------------|
| 1 shoulder rest | 13 firing pin | 25 front sight cradle | 37 magazine latch | 48 buckle |
| 2 rods or stays | 14 bolt | 26 front sight | 38 autosear | 49 strap |
| 3 rod ears | 15 rear sight slider | 27 locator | 39 autosear spring | 50 handle |
| 4 attachment brush | 16 barrel bushing | 28 compensator | 40 trigger | 51 latch |
| 5 receiver cover | 17 rear sight frame | 29 fore end lock | 41 pistol grip | 52 safety lug |
| 6 selector | 18 rear sight frame spring | 30 joining collar | assembly screw | 53 hanger |
| 7 semi-automatic fire sear | 19 gas tube lock | 31 cleaning rod | 42 pistol grip | with hooks |
| 8 hammer retarder | 20 recoil mechanism | 32 rear sight base | 43 ring | 54 plastic body |
| 9 mainspring | 21 gas tube with handguard | 33 fore end | 44 blade | 55 stop |
| 10 hammer | 22 piston | 34 barrel | 45 cutting edge | 56 lug pin |
| 11 receiver | 23 gas chamber | 35 magazine spring | 46 hole | |
| 12 bolt carrier | 24 front sight base | 36 magazine | 47 saw | |



The automatic rifle is an individual rifled weapon for defeat of the enemy in close combat by bursts of fire or in single shots.

The automatic action of this weapon is based on the utilization of energy of propellant gases. A portion of these gases during firing exit the barrel into the gas chamber and is harnessed for re-charging: it drives the bolt carrier to the rear, which is then returned to the start position under the impulse of the recoil mechanism. The complete cycle of function of all parts during the shot takes up to 0.1 seconds, which also determines the rate of fire - 600 rounds/minute.

The AKMS - Kalashnikov modernized automatic rifle - is folding, simple in use, reliable, and comfortable in combat. Peculiarities that make this weapon stand out from other similar

individual weapons are its light weight, the capability for ease in transportation and carry, reduced dimensions that permit its use in tight battle conditions (in trenches, forests, and buildings); and its folding stock, which has significance, for example, to parachutists.

The AKMS is well suited for night combat, for which it is equipped with self-illuminating inserts, attached to the rear-sight aperture piece and the front sight, and also by use of a night sight.

Special cartridges and simple attachments permit the conduct of flashless and soundless firing, when such is required to ensure the concealment and surprise of combat actions.

9mm Makarov Pistol (PM)

Components of the pistol



Safety



Basic Characteristics

Caliber, mm.....	9
Muzzle velocity of projectile, m/sec.....	315
Combat rate of fire, rounds/min.....	30
Magazine capacity, rounds.....	8
Length of pistol, mm.....	161
Mass, grams (g)	
Pistol with empty magazine.....	730
Pistol with loaded magazine.....	810
Cartridge.....	10
Projectile.....	6.1

Sequence of disassembly of pistol

- Partial disassembly**
1. Remove magazine from handgrip and check to ensure there is no cartridge in the chamber.
 2. Remove slide from frame.
 3. Remove return spring from barrel.
- Complete disassembly**
1. Conduct partial disassembly of pistol.
 2. Remove sear and slide stop from frame.
 3. Remove handgrip and mainspring from frame.
 4. Remove hammer from frame.
 5. Remove trigger bar with cocking lever from frame.
 6. Remove trigger piece from frame.
 7. Remove safety and firing pin from slide.
 8. Remove extractor from slide.
 9. Disassemble magazine.
- Note:** Conduct complete disassembly only for exchange of unserviceable components or in the event of heavy contamination of pistol (weapon is exceptionally dirty).
- Conduct assembly in reverse order.

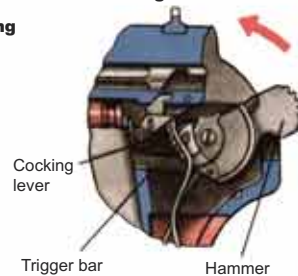
Position of pistol's components and mechanisms before shot at moment of hammer release from cock



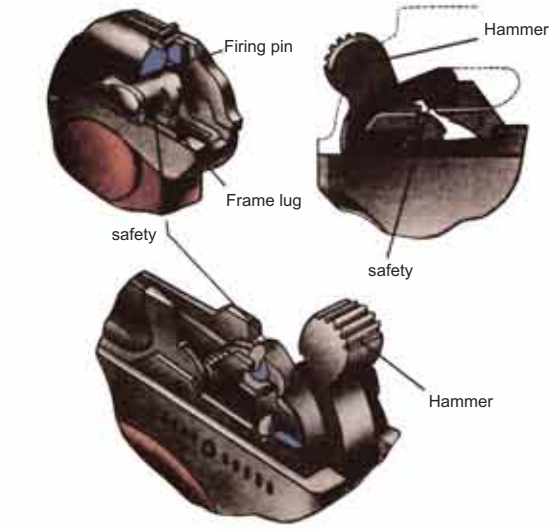
Position of pistol during inspection after firing



Position of pistol's components before shot fired by self-cocking double-action



Position of pistol's components and mechanisms when safety is placed on



Caution!

Upon pressure on the trigger piece, the trigger bar is displaced forward; the cocking lever, rotating, lifts the sear and disengages it from the hammer's sear notch; upon which the disconnecting lug of the cocking lever enters a recess of the slide. The hammer is freed from the sear and under the impulse of the broad leaf of the mainspring strikes the firing pin. The shot is fired. Under the impulse of the propellant gases, the slide is moved rearward and with its lug deflects to the right the disconnecting lug of the cocking lever, releasing it with the sear, permitting the hammer again to position in the sear notch.

If the shot is fired without first cocking the hammer, then upon pressing on the trigger piece, the trigger bar is displaced forward; the cocking lever, engaging the cam by the self-cocking tooth on the hammer, produces cocking and release of the hammer. The shot is fired. Upon firing by self-cocking (double-action), the hammer does not stop on the sear, and separates from the self-cocking lug of the cocking lever.

Caution! During installation of the trigger bar with cocking lever into the pistol, it is necessary to ensure that its front trunnion (pin) is inserted into the hole in the trigger piece.

When installing the main spring in the pistol, its broad leaf should fit into the recess on the hammer, and its narrow leaf on the heel of the cocking lever. The hammer and cocking lever should be rotated upward. If light pressure on the trigger piece causes the hammer to withdraw rearward, the spring has been installed correctly.

Fit the return spring onto the barrel by the end of lesser diameter, using modest effort to accomplish this.

For assembling the slide to the pistol, position it over the barrel and in a tilted position (rear portion upward) draw it rearward to stop; then press it toward the frame and release it forward. The safety should be "off" during this process.

When placing the safety in the "fire" or "safe" position, the thumb piece must be placed in the extreme downward (fire) or upward (safe) position. It is not permitted to fire the weapon with the safety placed in the intermediate position.

Upon expenditure of all cartridges from the magazine, its follower presses upward with its lug on the front end of the slide stop. The slide, resting with its lug on the upraised lug of the slide stop, stops in the rear position; after removal of the magazine from the handle, it remains in that position. The hammer has been placed on the sear notch (cocked). The spring of the magazine follower is under least tension.

The slide is freed from the slide stop by pressure of the thumb on the slide stop release.

To engage the safety, rotate its flange to the extreme upward position. The safety lug is lowered, blocking the path of the hammer so that the releases hammer cannot strike the firing pin. When the safety flange raises the sear, the hammer is engaged with the safety lug so that it is not possible to cock it.

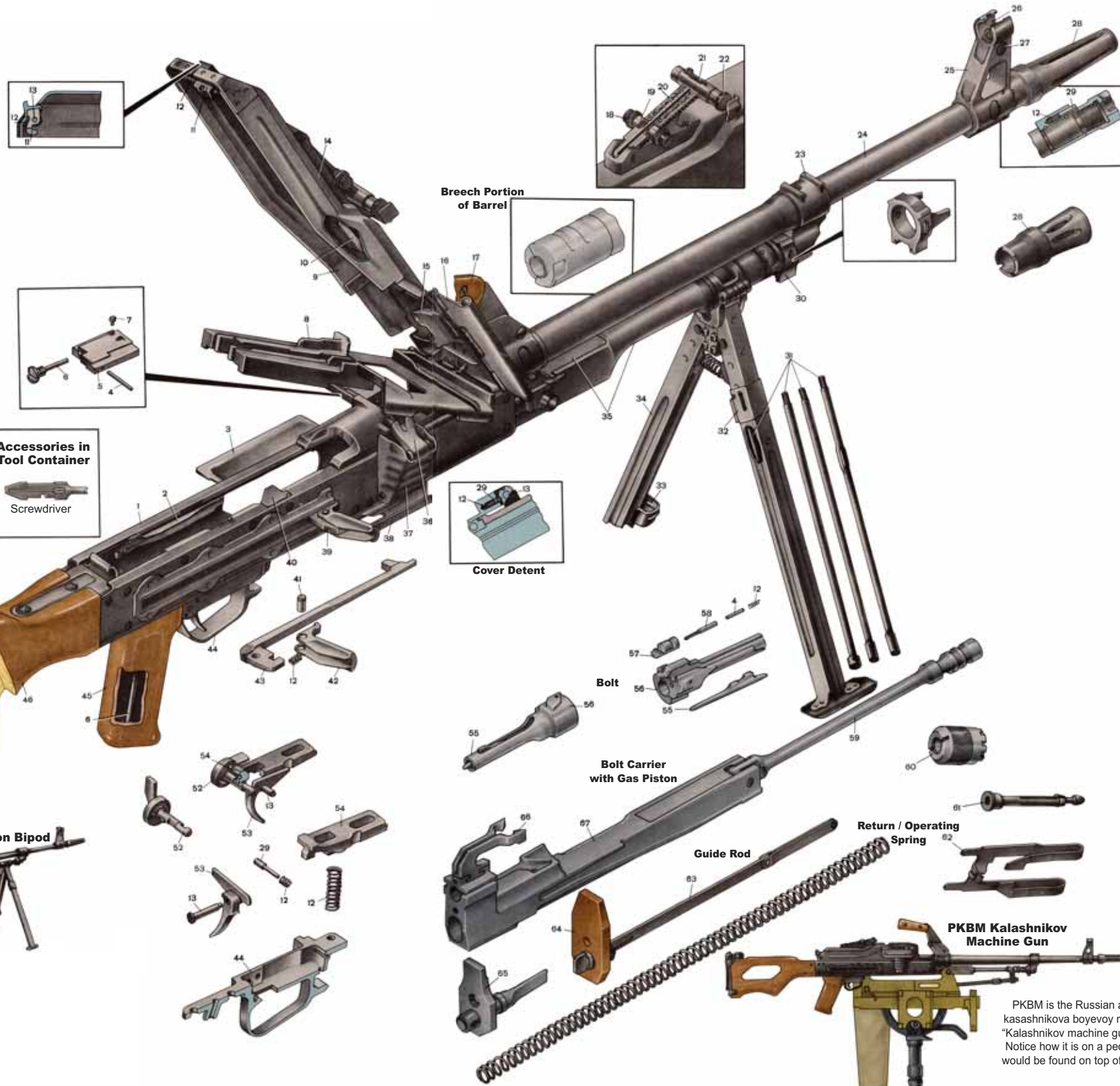
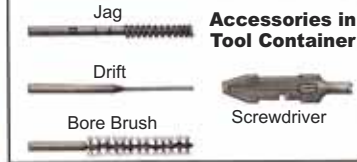
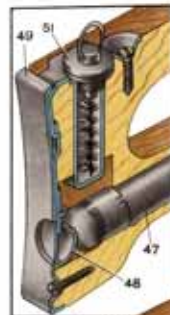
7.62mm Kalashnikov Machine Gun (PKM)

1. Receiver
2. Cover Plunger
3. Cover or Shield
(Items 4-7 are components of barrel lock, shown to the right of the projectile row.)
4. Pin
5. Base
6. Screw
7. Base Pin
8. Feed Assembly Base
9. Receiver Cover
10. Feed Lever
11. Cover Latch/Catch
12. Cover Latch Spring
13. Pin
14. Rear Sight
15. Upper Feed Pawls
16. Cover or Shield
17. Carrying Handle
(Items 18-22 shown in detail in box labeled "Rear Sight" above barrel)
18. Rear Sight Slider Latch
19. Rear Sight Slider
20. Rear Sight Leaf
21. Aperture Piece
22. Aperture Piece Adjustment Screw
23. Gas Chamber
24. Barrel
25. Front Sight Base
26. Front Sight
27. Front Sight Guide or Cradle
28. Flash Suppressor
29. Detent
30. Regulator
31. Cleaning Rod Sections
32. Movable Slider (permits access to cleaning rod sections)
33. Spring Latch (Secures bipod legs together)
34. Bipod
35. Gas Tube with Spring Latch / Catch

Projectiles for 7.62mm Rifle Cartridge



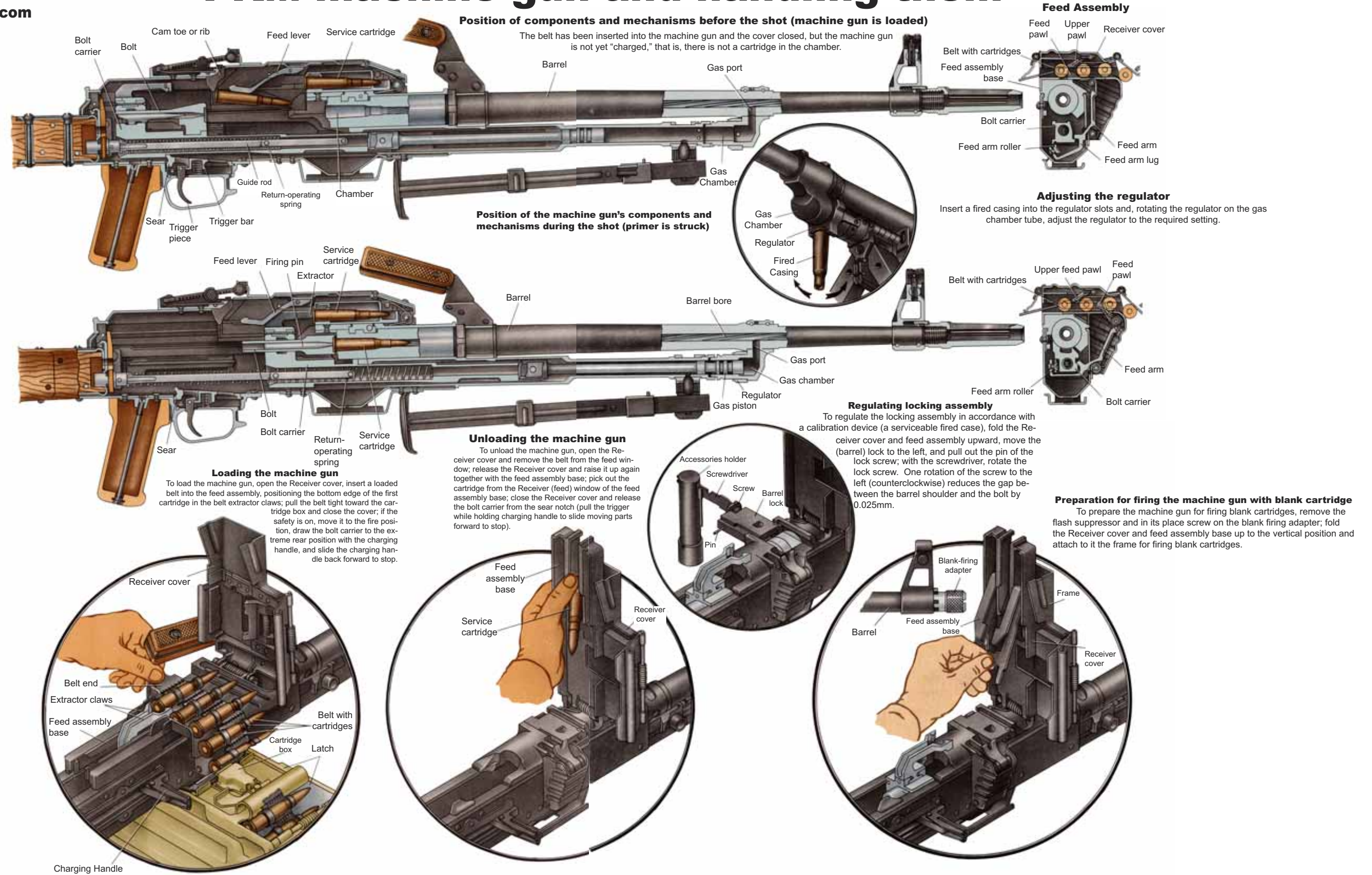
Rear Portion of Stock for PKM Machine Gun



36. Feed Lever / Feed Arm
37. Cover or Shield
38. Mount for Cartridge Box
39. Charging Handle (This component also shown in greater detail with label "Charging Handle")
40. Ejector Lug
41. Charging Handle Pin
42. Handle
43. Lever / Bar
44. Trigger Guard and Trigger Mechanism
45. Pistol Grip
46. Stock
47. Tool Container
48. Cover
49. Butt Plate
50. Shoulder Rest
51. Oiler
52. Safety
53. Trigger Piece
54. Trigger Bar
55. Firing Pin
56. Bolt Body
57. Extractor
58. Extractor Pin
59. Gas Piston
60. Adaptor for Firing Blank Cartridges
61. Ruptured Case Extractor
62. Frame for Firing Dummy Cartridges
63. Front and Rear Portions of Guide Rod
64. Bolt Carrier Limiter (Buffer)
(Plastic Material for PKM Machine Gun)
65. Bolt Carrier Limiter (Buffer)
(Steel for PK Machine Gun)
66. Belt Extractor with Claws (This extractor pulls cartridges from the belt for feeding into feed assembly)
67. Bolt Carrier

PKBM is the Russian acronym for pulemet kasashnikova boyevoy mashiny, which means "Kalashnikov machine gun for fighting vehicle." Notice how it is on a pedestal mount, such as would be found on top of a BTR-60 or BTR-80.

Function of components and mechanisms of PKM machine gun and handling them



RPG-7D Launcher

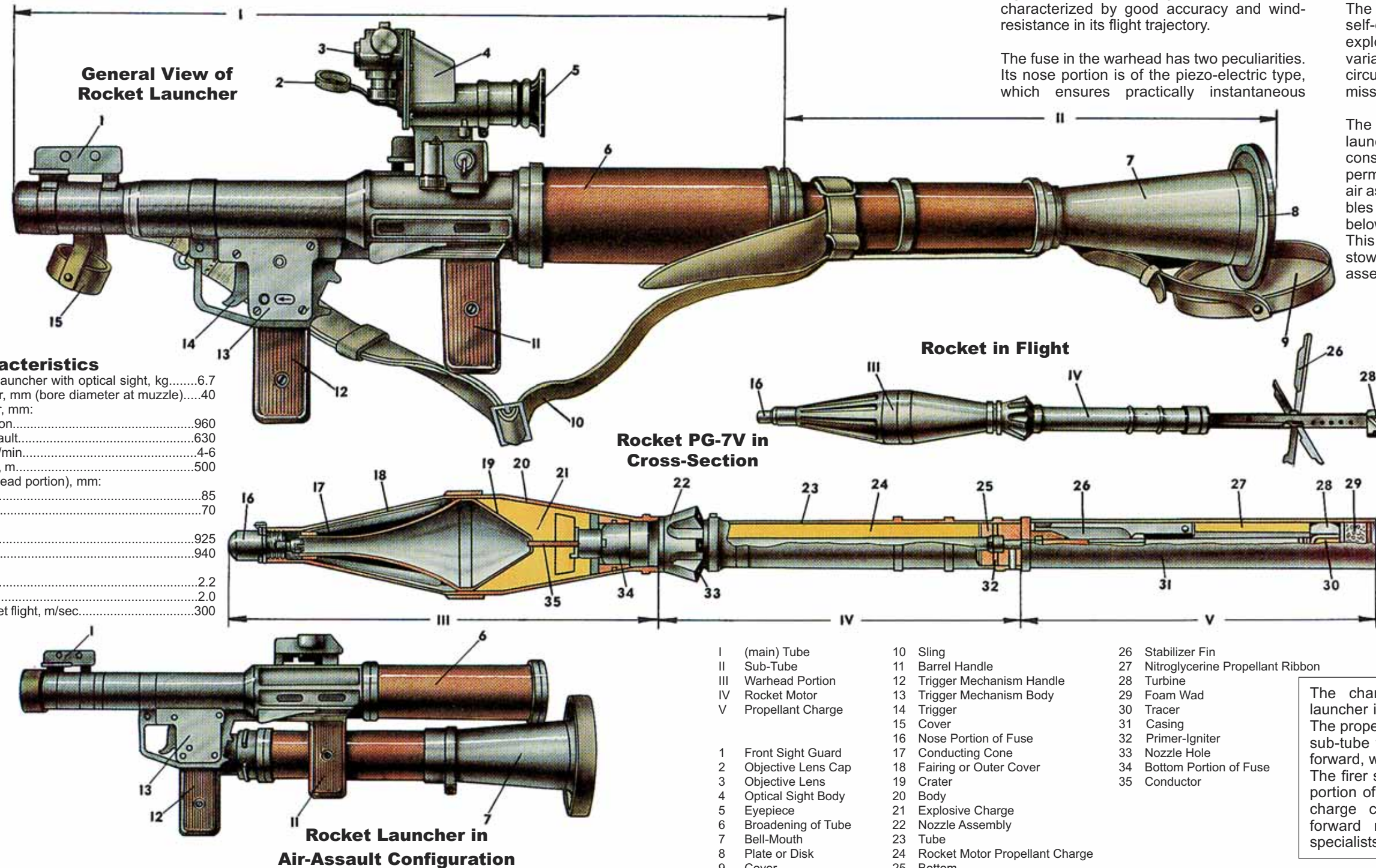
The RPG-7D rocket launcher is a standard weapon in airborne units and is used to combat tanks and self-propelled artillery pieces, and for destruction of enemy personnel located behind light cover and fortifications such as would be found in an urban area.

Defeat of the target is accomplished by PG-7V and PG-7VM rockets with antitank shaped-charge warheads. Armor penetration is achieved by detonation of the shaped charge, which is contained in the warhead portion of the rocket. This design provides for high precision in firing. The rocket is characterized by good accuracy and wind-resistance in its flight trajectory.

The fuse in the warhead has two peculiarities. Its nose portion is of the piezo-electric type, which ensures practically instantaneous

detonation of the shaped charge. ("Piezo-electric" defines the principle of generation of an electrical charge by crushing a crystalline substance. In the case of this fuse, the charge is transmitted to the rear (bottom) of the explosive charge, where it sets off a detonator, which in turn detonates the explosive charge.) The bottom portion of the fuse contains a self-destruct device, which guarantees the explosion of the rocket under two possible variants: first - upon failure of the electrical circuit of the fuse, and second - if the rocket misses the target.

The primary advantage of the RPG-7D rocket launcher is the take-down barrel, which consists of a main tube and sub-tube. This permits simple preparation of the RPG-7D for air assault configuration: the barrel disassembles into two parts, then the sub-tube is joined below the main tube and secured by a latch. This results in a compact unit that can be stowed in a bag. The rocket launcher can be assembled in mere seconds.



Basic Tactical Technical Characteristics

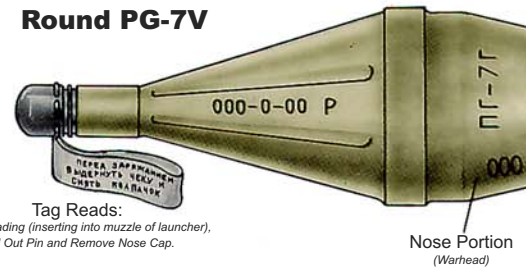
Mass (Weight) of rocket launcher with optical sight, kg.....	6.7
Caliber of rocket launcher, mm (bore diameter at muzzle)....	40
Length of rocket launcher, mm:	
In combat configuration.....	960
In position for air assault.....	630
Combat rate of fire, shots/min.....	4-6
Maximum effective range, m.....	500
Caliber of rocket (at warhead portion), mm:	
PG-7V.....	85
PG-7VM.....	70
Length of rocket, mm:	
PG-7V.....	925
PG-7VM.....	940
Mass of rocket, kg:	
PG-7V.....	2.2
PG-7VM.....	2.0
Maximum velocity of rocket flight, m/sec.....	300

- | | | |
|----------------------|-----------------------------------|-------------------------------------|
| I (main) Tube | 10 Sling | 26 Stabilizer Fin |
| II Sub-Tube | 11 Barrel Handle | 27 Nitroglycerine Propellant Ribbon |
| III Warhead Portion | 12 Trigger Mechanism Handle | 28 Turbine |
| IV Rocket Motor | 13 Trigger Mechanism Body | 29 Foam Wad |
| V Propellant Charge | 14 Trigger | 30 Tracer |
| | 15 Cover | 31 Casing |
| | 16 Nose Portion of Fuse | 32 Primer-Igniter |
| 1 Front Sight Guard | 17 Conducting Cone | 33 Nozzle Hole |
| 2 Objective Lens Cap | 18 Fairing or Outer Cover | 34 Bottom Portion of Fuse |
| 3 Objective Lens | 19 Crater | 35 Conductor |
| 4 Optical Sight Body | 20 Body | |
| 5 Eyepiece | 21 Explosive Charge | |
| 6 Broadening of Tube | 22 Nozzle Assembly | |
| 7 Bell-Mouth | 23 Tube | |
| 8 Plate or Disk | 24 Rocket Motor Propellant Charge | |
| 9 Cover | 25 Bottom | |

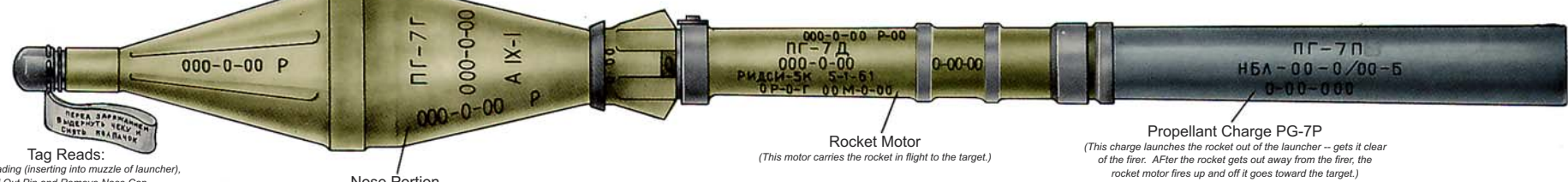
The characteristic quality of this rocket launcher is the absence of recoil upon firing. The propellant gases that escape through the sub-tube form a jet (rocket) power, directed forward, which is equal to the forces of recoil. The firer senses (feels) the impulse of some portion of the gases on the front wall of the charge chamber as a barely noticeable forward movement of the barrel, which specialists call "roll-out."

PG-7V 85mm Anti-Tank Hollow Charge Rocket

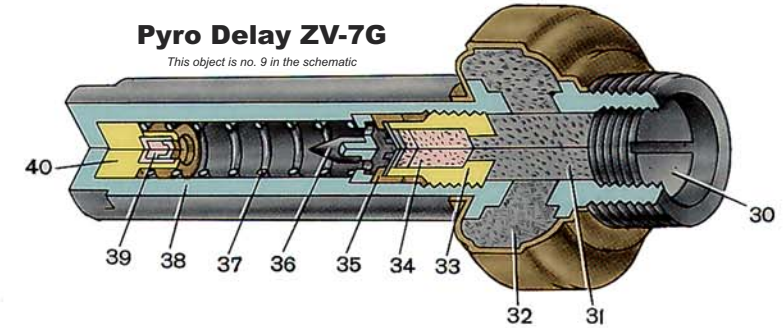
Round PG-7V



General View of PG-7V

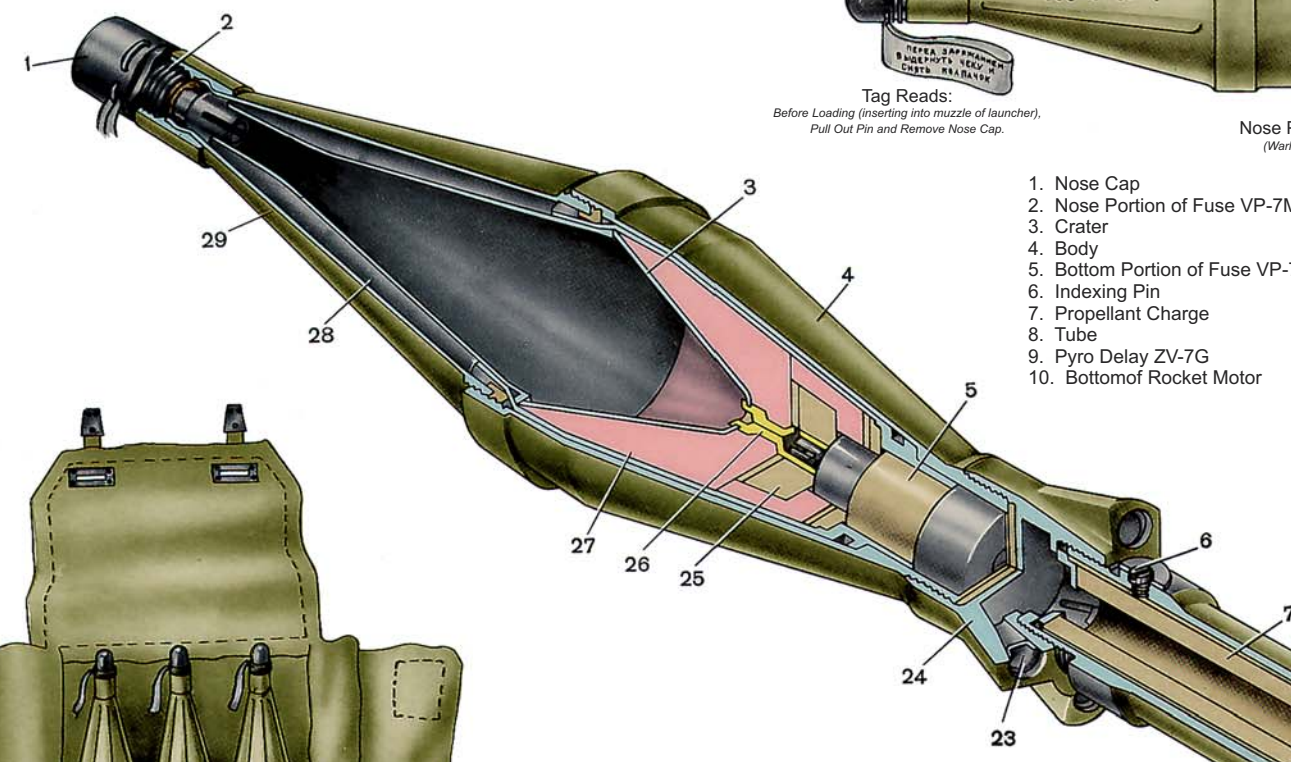


Pyro Delay ZV-7G

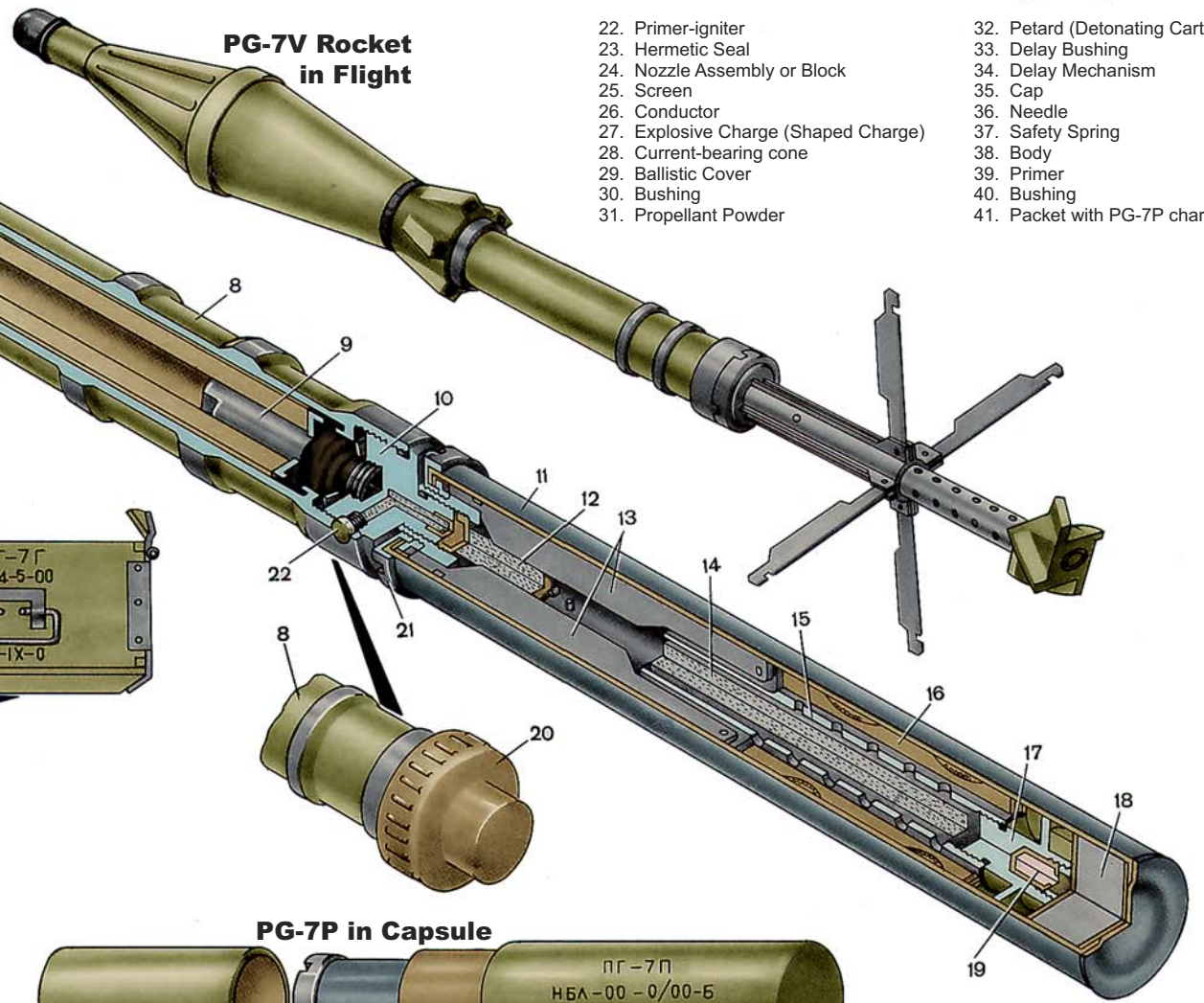


- Nose Cap
- Nose Portion of Fuse VP-7M
- Crater
- Body
- Bottom Portion of Fuse VP-7M
- Indexing Pin
- Propellant Charge
- Tube
- Pyro Delay ZV-7G
- Bottom of Rocket Motor
- Casing
- Supplementary Igniter
- Stabilizing Fins (Folded Up)
- Primary Igniter
- Stabilizer Frame
- Ribbon (Propellant) Charge
- Turbine
- Foam Rubber Wad
- Tracer
- Safety Cap
- Cap (threaded)

- Primer-igniter
- Hermetic Seal
- Nozzle Assembly or Block
- Screen
- Conductor
- Explosive Charge (Shaped Charge)
- Current-bearing cone
- Ballistic Cover
- Bushing
- Propellant Powder
- Petard (Detonating Cartridge)
- Delay Bushing
- Delay Mechanism
- Cap
- Needle
- Safety Spring
- Body
- Primer
- Bushing
- Packet with PG-7P charges



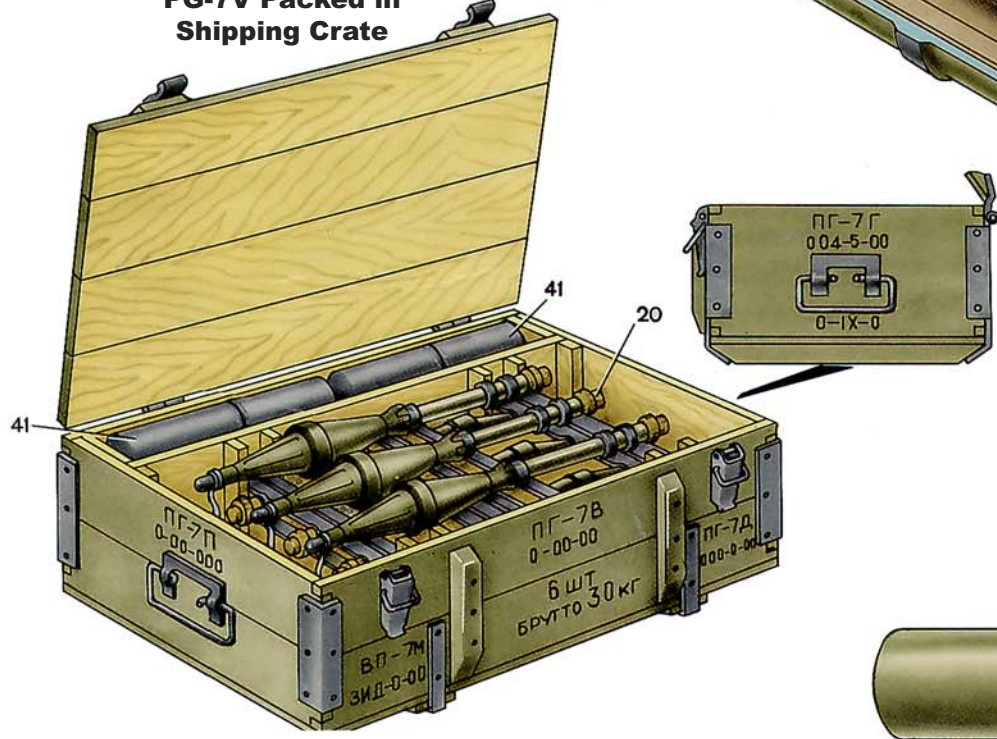
PG-7V Rocket in Flight



PG-7P in Capsule



PG-7V Packed in Shipping Crate



Bag with Three Rounds carried by assistant gunner

What does R.P.G. stand for:
'R' is ruchnoy, which means "shoulder-fired"
'P' is protivotankovyy, which means "anti tank"
'G' is granomet, which means "rocket launcher"
RPG does not stand for Rocket Propelled Grenade.

7.62mm Kalashnikov Light Machine Gun (RPK)

Purpose and Basic Characteristics

The 7.62mm Kalashnikov light machine gun (RPK) is the most powerful automatic weapon of the squad rifleman and is intended for destruction of enemy personnel and defeat of enemy firing positions. Box as well as drum magazines with cartridges can be used during firing.

Caliber, mm.....	7.62mm
Magazine capacity, Box.....	40
Drum.....	75
Mass of weapon, kg with loaded box magazine.....	5.6
with loaded drum magazine.....	6.8
Length of weapon, mm.....	1040
Length of sight line, mm.....	555
Range of direct shot at chest-high figure (height 50cm) meters (m).....	365
Maximum range, m.....	1000
Rate of fire, rds/minute.....	Approx 600
Combat rate of fire firing in bursts.....	Up to 150
Muzzle velocity, m/sec.....	745

General View



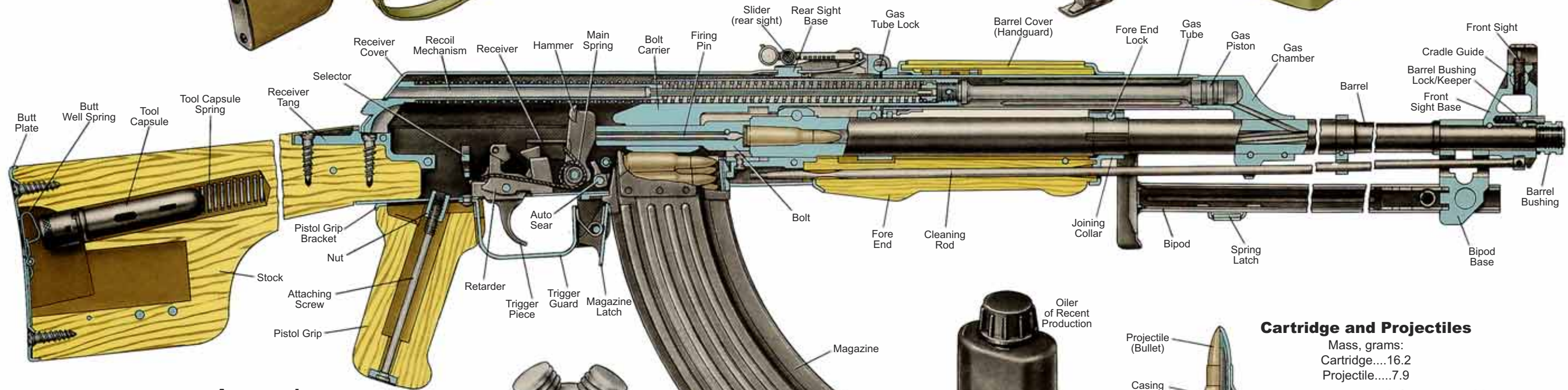
Pouch With Magazines



Pouch With Oiler



Nomenclature

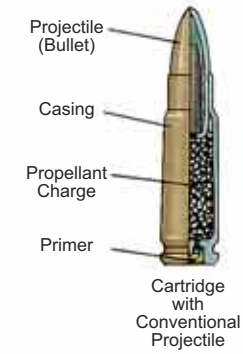


Accessories



Cartridge and Projectiles

Mass, grams:
Cartridge.....16.2
Projectile.....7.9



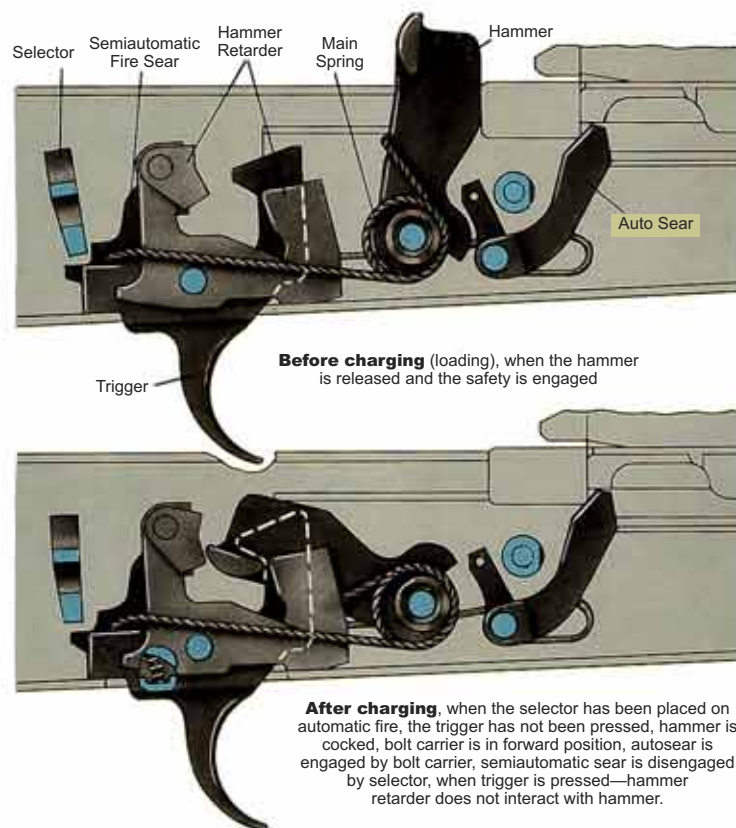
Incendiary Projectile

Tracer Projectile

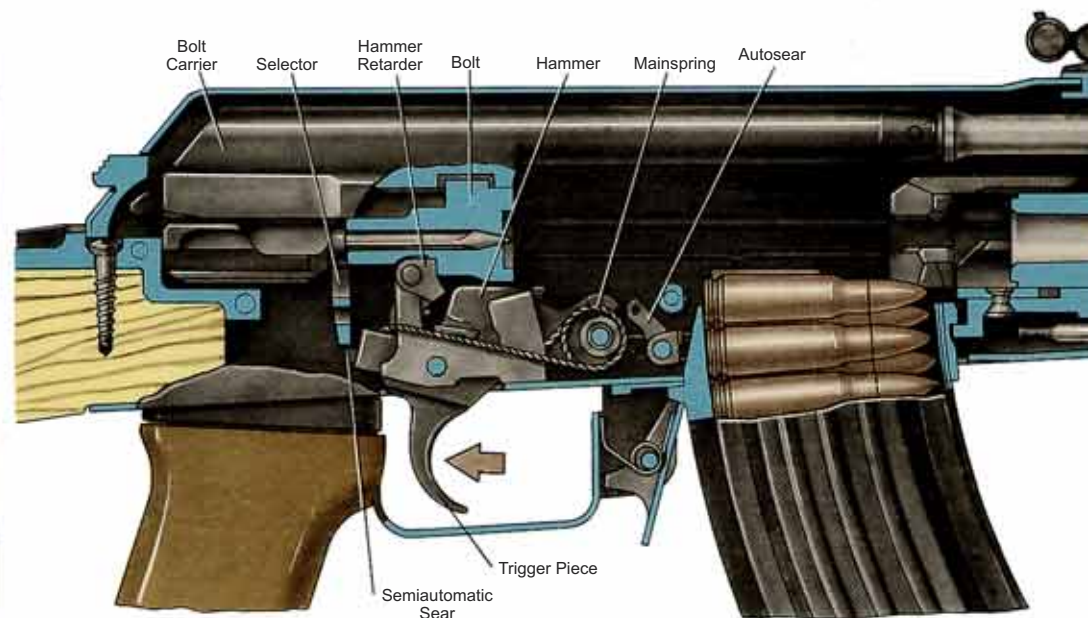
Armor-Piercing Tracer Projectile

7.62mm Kalashnikov Light Machine Gun (RPK)

Position of Components of Trigger Mechanism



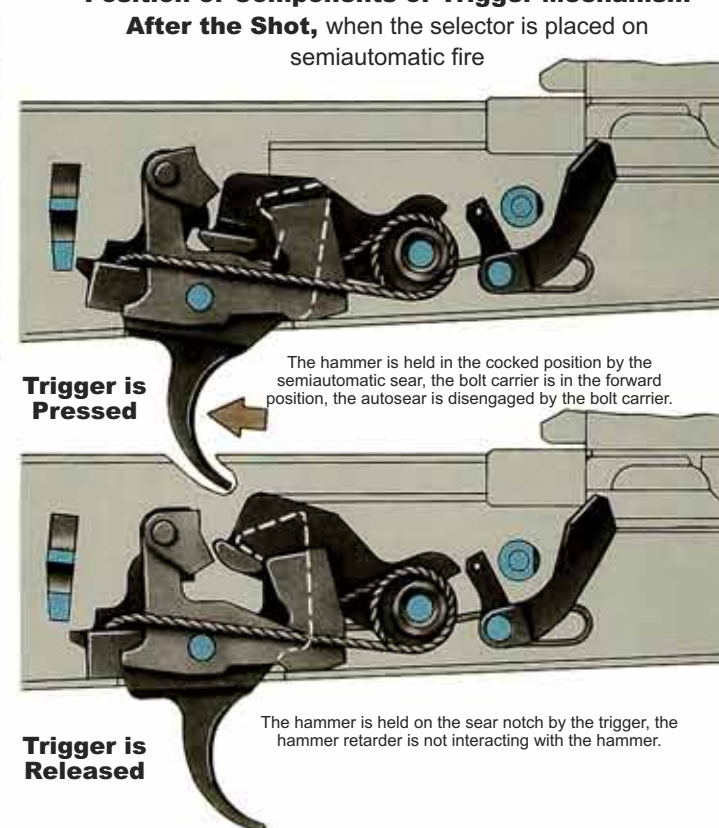
Interaction of Components and Mechanisms



Position of Components and Mechanisms During Automatic Fire at moment when bolt carrier with bolt is located in rear position.

The trigger is pressed, the semiautomatic sear is disengaged by the selector, the hammer is cocked by the bolt carrier; during movement by the bolt carrier to the forward position, the hammer is held by the autosear until its disengagement by the bolt carrier; after disengagement of the autosear, under the impulse of the mainspring the hammer interacts with the retarder and then strikes the firing pin.

Position of Components of Trigger Mechanism



Partial Disassembly of the RPK

1 **Setting the Machine Gun on the Bipod**

Holding the machine gun in the left hand by the fore end in the vertical position, with the right hand free the bipod legs from the spring catch, draw the bipod away from the barrel so that its legs take up a fixed position; place the machine gun down on the bipod.



2 **Removing the Magazine**

Holding the machine gun with the left hand by the small of the stock, with the right hand grasp the magazine. Pressing with the thumb on the latch, deliver the lower portion of the magazine forward and remove it. Check to ensure there is not a cartridge in the chamber by moving the selector downward, draw the bolt carrier handle to the rear, look into the chamber, release the bolt carrier handle, and release the hammer from cock (pull the trigger).



3 **Extraction of the Tool Capsule with Accessories**

Push in with a finger of the right hand on the stock well cover so that the tool capsule pops out of the well under the impulse of its spring, open the capsule and remove the accessories from it.



4 **Removing the Cleaning Rod**

Pull the end of the cleaning rod away from the barrel so that its head comes out of the holder on the front sight base (during removal of the cleaning rod, it is permitted to use the drift), and remove the cleaning rod forward.



5 **Removing the Receiver Cover**

Grasp the small of the stock with the left hand, and with the left thumb press on the guide-rod lug of the recoil mechanism, with the right hand lift the rear portion of the receiver cover upward and remove the cover.



6 **Removing the Recoil Mechanism**

Holding the machine gun with the left hand by the small of the stock, with the right hand deliver the guide rod of the recoil mechanism forward until its heel comes out of the longitudinal slot of the receiver. Lift up the rear end of the guide rod and remove the recoil mechanism from the channel of the bolt carrier.



7 **Removing the Bolt Carrier with Bolt**

Continuing to hold the machine gun with the left hand, with the right hand draw the bolt carrier rearward to stop, lift it up together with the bolt, and remove it from the receiver.



8 **Removing the Bolt from the Bolt Carrier**

Grasp the bolt carrier in the left hand with the bolt upward; with the right hand, draw the bolt rearward, rotate it so that the guide lug of the bolt comes out of the shaped recess of the bolt carrier, and remove the bolt forward.



9 **Removing the Gas Tube with Handguard**

Holding the machine gun with the left hand, with the right hand insert the tool capsule with the square hole on the gas tube lock, rotate the lock away from you to the vertical position and remove the gas tube with the gas chamber connecting pipe.



Sequence of RPK assembly after partial disassembly

1. Install the gas tube with handguard.
2. Install the bolt to the bolt carrier.
3. Install the bolt carrier with bolt into the receiver.
4. Install the recoil mechanism.
5. Install the receiver cover.
6. Release the hammer from the sear notch and place the weapon on safe.
7. Install the cleaning rod.
8. Place the tool capsule in the stock well.
9. Install the magazine in the machine gun.
10. Fold and secure the bipod legs.

KD-RPK2

©English translations James F. Gebhardt 2007

Posters sold exclusively through Kiesler Defense

Unauthorized copies will be pursued for copyright infringement.