



Maintenance Manual  
**APC9**

manufactured by B&T Switzerland



**SM-29513.08**

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# Maintenance Manual APC9

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## Related documents:

<b>APC9 Illustrated Parts Catalogue .....</b>	<b>Ref PC-29513-X</b>
<b>APC9 Operator Manual .....</b>	<b>Ref TM-29513-1</b>

## Abbreviations and terms:

POA:	Point of Aim
POI:	Point of Impact
MPI:	Mean Point of Impact
SMG:	Submachine gun

Left/right side: Defined in firing direction.

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## 1 General Rules

### 1.1 Safety rules

1. Consider every weapon loaded until checked personally by the individual operator.
2. Always keep the finger off the trigger and outside the trigger guard until the sights are on target.
3. Always point the weapon in a safe direction.
4. Verify your target and the area behind the target.
5. Before firing always verify the serviceability and condition of both the weapon and ammunition.
6. Hearing and eye protection are mandatory.
7. Be sure to use CIP certified cartridges of correct caliber only.
8. If a cartridge fails to ignite, keep the muzzle in a safe direction and open the chamber only after a minimum of 30 seconds.
9. Live fire training should be carried out in open or well-ventilated areas to prevent excessive exposure to toxic gases.
10. Operate your weapon consciously and do not use excessive force.

### 1.2 Maintenance rules

1. Clean the weapon after each deployment or firing.
2. Report malfunctions to unit armourer or manufacturer.
3. Present the weapon to the armourer for inspection after each mission or at least once a year.

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## 2 Technical Specifications

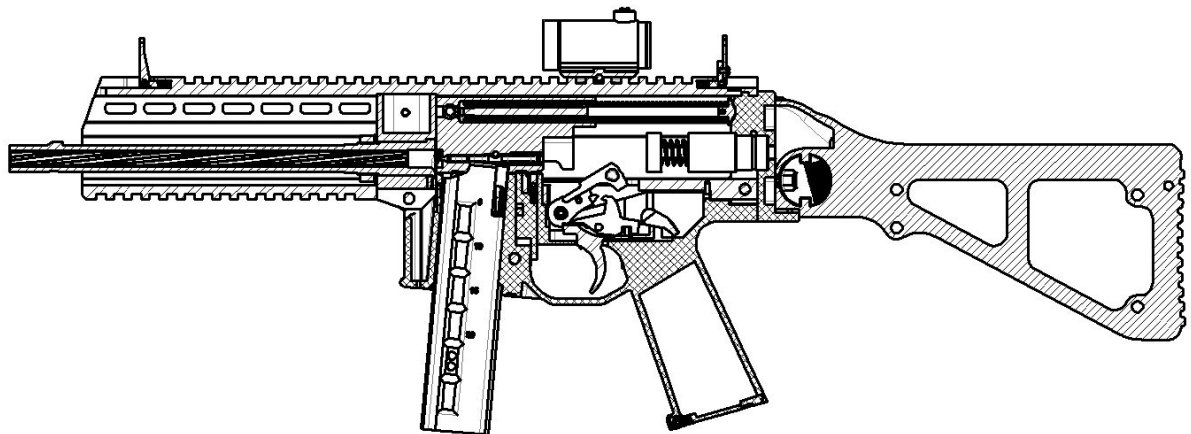
### 2.1 General description

The APC9 is a long arm for use with pistol cartridges. It is available in fully automatic configuration as a "SMG" (submachine gun) or in semi-automatic configuration as a "carbine".

The working principle is recoil operation: The recoil of a fired projectile is driving the bolt rearward. When traveling back, the bolt extracts and ejects the shell of the fired cartridge, compresses the mainspring and cocks the internal hammer of the single action trigger group. At the very end of the bolt's travel, a hydraulic recoil buffer is stopping it gently and the compressed mainspring drives the bolt back against the barrel. While traveling forward, the bolt feeds a new cartridge out of the double stack magazine into the chamber of the barrel. After completion of such a cycle, the weapon is loaded and armed. The next shot is released by pulling the trigger (single fire) or by the automatic sear as long as the trigger is pulled (burst fire).

The weapon features an optical reflex sight as a main sight while iron sights are included for back up use.

All manual operating elements such as bolt catch, magazine retainer and fire selector are ambidextrous; the charging handle can be set for left or right operation.



## 2.2 Nomenclature

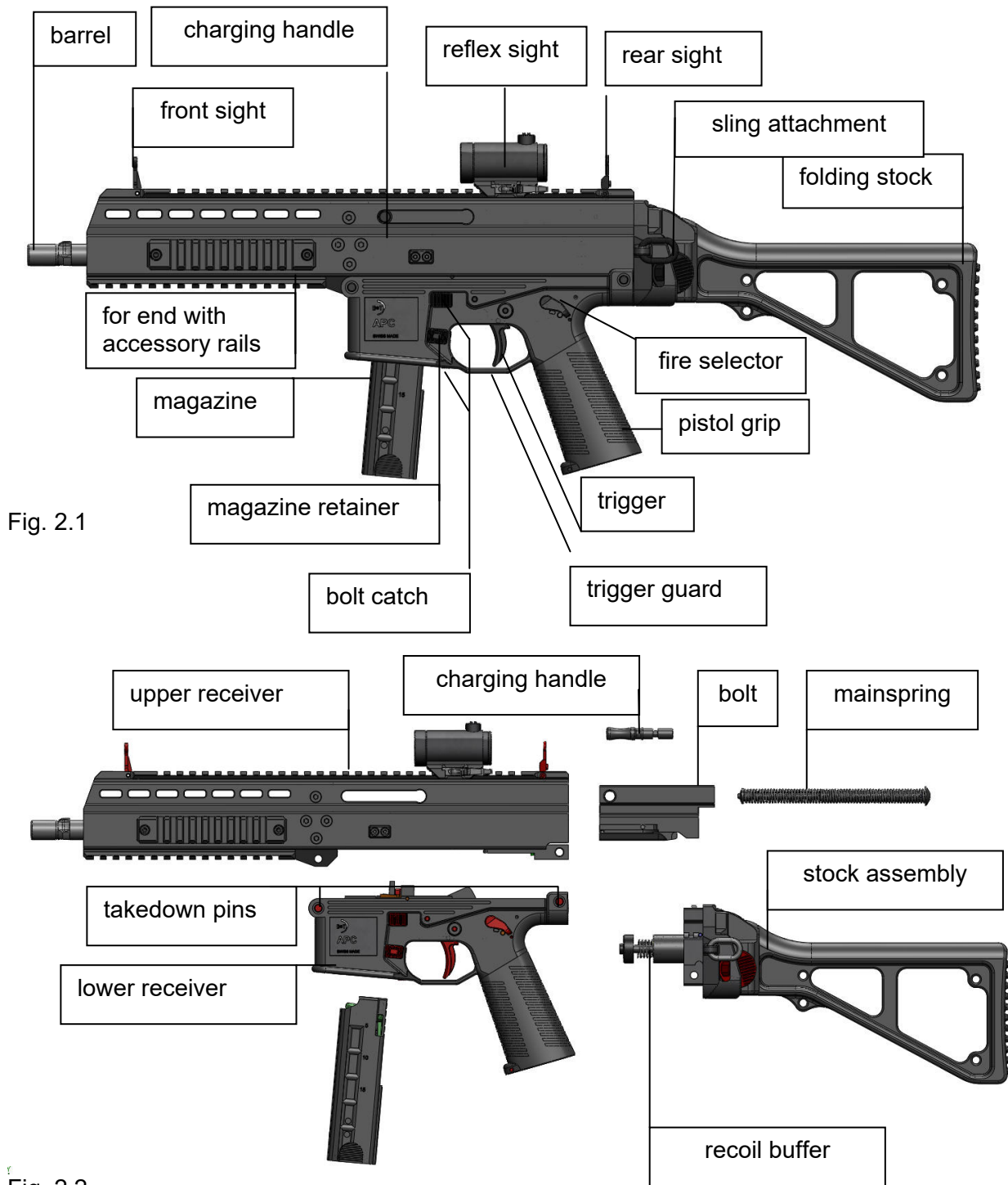


Fig. 2.2

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## Technical data

Designation:	<b>APC9 SMG</b>	
Manufacturer:	B&T AG, Switzerland	
Product ID:	BT-36000	
Caliber:	9x19 mm	
Magazine capacity:	15/30 rounds	
System:	Blowback operated automatic weapon, closed bolt	
Firing rate [rpm]:	1080	
Barrel length [mm]:	175	
Twist rate [mm per turn]:	254	
Rifling:	6 grooves, right hand	
Overall length [mm]:	597 (stock unfolded)	379 (stock folded)
Overall width [mm]:	70 (stock unfolded)	102 (stock folded)
Overall height [mm]:	237 (15 rds magazine)	290 (30 rds magazine)
Weight [kg]:	2.5 (empty 15 rds magazine inserted)	
Sights:	Aimpoint Micro TL reflex sight, dot size 4 MOA, integrated back up iron sights	
Bore height [mm]	65	
Battery (sight):	3V cell type 2032	
Battery lifetime:	50'000 hrs (intensity 8, 20°C)	
Interfaces:	4 NATO accessory rails	
Standard supply:	Weapon complete with spare magazines, carrying sling and cleaning kit, packed in a hardcase	

<b>Designation:</b>	<b>APC9 Carbine</b>	
Manufacturer:	B&T AG, Switzerland	
Product ID:	BT-36001	
Caliber:	9x19 mm	
Magazine capacity:	15/30 rounds	
System:	Blowback operated semi-automatic weapon, closed bolt	
Firing rate [rpm]:	single fire only	
Barrel length [mm]:	175	
Twist rate [mm per turn]:	254	
Rifling:	6 grooves, right hand	
Overall length [mm]:	597 (stock unfolded)	379 (stock folded)
Overall width [mm]:	70 (stock unfolded)	102 (stock folded)
Overall height [mm]:	237 (15 rds magazine)	290 (30 rds magazine)
Weight [kg]:	2.5 (empty 15 rds magazine inserted)	
Sights:	Aimpoint Micro TL reflex sight, dot size 4 MOA, integrated back up iron sights	
Bore height [mm]:	65	
Battery (sight):	3V cell type 2032	
Battery lifetime:	50'000 hrs (intensity 8, 20°C)	
Interfaces:	4 NATO accessory rails	
Standard supply:	Weapon complete with spare magazines, carrying sling and cleaning kit, packed in a hardcase	

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<b>Designation:</b>	<b>APC9 Sporting Carbine</b>	
Manufacturer:	B&T AG, Switzerland	
Product ID:	BT-36004	
Caliber:	9x19 mm	
Magazine capacity:	15/30 rounds	
System:	Blowback operated semi-automatic weapon, closed bolt	
Firing rate [rpm]:	single fire only	
Barrel length [mm]:	420	
Twist rate [mm per turn]:	254	
Rifling:	6 grooves, right hand	
Overall length [mm]:	832 (stock unfolded)	614 (stock folded)
Overall width [mm]:	70 (stock unfolded)	102 (stock folded)
Overall height [mm]:	237 (15 rds magazine)	290 (30 rds magazine)
Weight [kg]:	3.0	
Sights:	Aimpoint Micro TL reflex sight, dot size 4 MOA, integrated back up iron sights	
Bore height [mm]:	65	
Battery (sight):	3V cell type 2032	
Battery lifetime:	50'000 hrs (intensity 8, 20°C)	
Interfaces:	4 NATO accessory rails	
Standard supply:	Weapon complete with spare magazines, carrying sling and cleaning kit, packed in a hardcase	

<b>Designation:</b>	<b>APC9-P Carbine</b>	
Manufacturer:	B&T AG, Switzerland	
Product ID:	BT-36005	
Caliber:	9x19 mm	
Magazine capacity:	15/30 rounds	
System:	Blowback operated automatic weapon, closed bolt	
Firing rate [rpm]:	single fire only	
Barrel length [mm]:	240	
Twist rate [mm per turn]:	254	
Rifling:	6 grooves, right hand	
Overall length [mm]:	662 (stock unfolded)	444 (stock folded)
Overall width [mm]:	70 (stock unfolded)	102 (stock folded)
Overall height [mm]:	237 (15 rds magazine)	290 (30 rds magazine)
Weight [kg]:	2.8	
Sights:	Aimpoint Micro TL reflex sight, dot size 4 MOA, integrated back up iron sights	
Bore height [mm]:	65	
Battery (sight):	3V cell type 2032	
Battery lifetime:	50'000 hrs (intensity 8, 20°C)	
Interfaces:	4 NATO accessory rails	
Standard supply:	Weapon complete with spare magazines, carrying sling and cleaning kit, packed in a hardcase	

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## 3 Troubleshooting Table

#	Observation	Operator Action	Armorer Action
1	No red dot in reflex sight	First inspect proper direction of sight (adjustment turrets on rear end). Second increase intensity level. Third engage back up sights, change battery at first opportunity. In case of failure, address to armourer.	Provide failure report to manufacturer and follow his instructions.
2	Inconsistent impacts	Engage back up sights. Present weapon at first opportunity to armourer for inspection of quick detachable mount.	Precision check (6.1.3) with stated corrective actions.
3	Failure to feed	Pull charging handle to the rearmost position and release. Inspect visually if a cartridge is chambered. In case of jam, remove magazine, clear and switch to other magazine.	Inspect moving parts for excessive fouling and proper lubrication. Inspect magazines (10) and magazine retainer (11.2.2).
4	Failure to eject	Pull charging handle to the rearmost position and observe for ejected shell or cartridge. Inspect barrel to be clear. Load a fresh cartridge. Present weapon for inspection of extractor and ejector to an armourer at the first opportunity.	Inspect moving parts for excessive fouling and proper lubrication. Inspect extractor (9.2.1) and ejector (8.2.1).
5	Failure to strike	Pull charging handle to the rearmost position and remove eventual obstructions captured in the upper receiver. Load a fresh cartridge. If failure repeats, clean weapon or present it to an armourer.	Inspect weapon for proper lubrication and execute function check (6.1.1). Pay special attention to trigger action (11.2.5) and bolt (9).
6	Failure to ignite	Wait 30 seconds with the muzzle pointing to a safe direction. Then pull charging handle to the rearmost position and observe for ejected cartridge. Collect cartridge for later analyse. Load a fresh cartridge. Present weapon and ejected cartridge to an armourer at the first opportunity.	If the indent on the failed cartridge is regular, most likely the failure is due to the cartridge. Otherwise inspect firing pin (9.1.2) and trigger action (11.2.5).

NOTE: A FAILURE REPORT TO THE MANUFACTURER MUST INCLUDE THE SERIAL NUMBER OF THE WEAPON, THE TYPE OF AMMUNITION, THE HISTORY OF THE FAILURE AND THE HISTORY OF THE ATTEMPTED CORRECTIVE ACTIONS. THE REPORT CAN BE SENT BY E-MAIL (SECTION 15) ALONG WITH PICTURES.

## 4 Maintenance Procedures

NOTE: DO NOT OPERATE THE TRIGGER WHEN THE WEAPON IS DISASSEMBLED!

### 4.1 Disassembly

- a. Clear weapon according to section 3.1 of APC 9 Operator Manual (doc TM-29513-1)
- b. Close the bolt according to section 3.5.2 of APC 9 Operator Manual (doc TM-29513-1)
- c. Press rear takedown pin from left side to right side (Fig. 4.1) and pull it out from right side (Fig. 4.2) until the lower receiver comes loose (Fig. 4.3).



Fig. 4.1



Fig. 4.2



Fig. 4.3

- d. Grab stock assembly (Fig. 4.4), pull it down and out of the upper receiver (Fig. 4.5).



Fig. 4.4



Fig. 4.5

- e. Pull charging handle rearward until you can grab the mainspring and remove it rearward.
- f. Remove charging handle by lifting it out (Fig. 4.6).



Fig. 4.6



Fig. 4.7

- g. Release front takedown pin (same procedure as 4.1c) and separate from lower receiver.

The weapon is now disassembled as in Fig. 4.7 and ready for cleaning.

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## 4.2 Cleaning and inspections

- a. Use a fix rod of suitable length with a copper brush on top to clean the barrel from the rear side (Fig. 4.8).

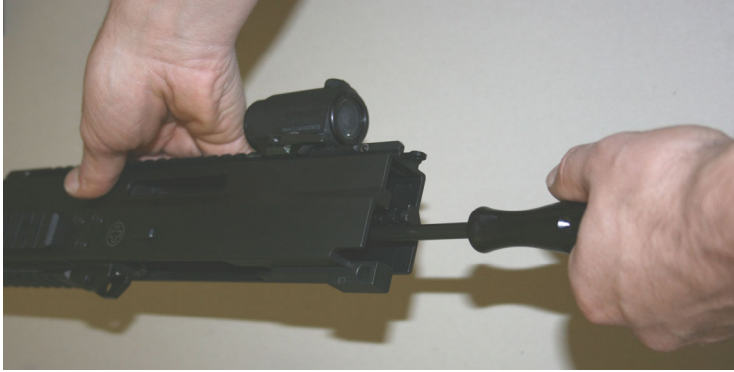


Fig. 4.8



Fig. 4.9

- b. Use a small brush to remove particles captured in the cavities of lower and upper receiver.
- c. Use an oily rag to wipe clean all accessible surfaces.
- d. Inspect all components and accessible parts for cracks, deformations or other signs of deterioration.
- e. Apply a slight film of oil to all accessible surfaces of steel parts.

## 4.3 Reassembly

- a. Set the burst locking device (only available on SMGs) to the desired position (pushing outside to engage as in Fig. 4.9, pushing inside to disengage).
- b. Connect the lower receiver to the upper receiver by installing the front takedown pin.
- c. Slide the bolt into the receiver until the charging handle bore matches the fitting aperture. Install the charging handle either from the left or right side (Fig. 4.10, Fig. 4.11).
- d. Insert the mainspring with the waved end ahead (directed as shown in fig. Fig. 4.7).



Fig. 4.10



Fig. 4.11

- e. Install the stock assembly in reverse of 4.1d.
- f. Lock the lower receiver to the upper receiver in reverse of 4.1c.
- g. Execute function check (section 6.1.1).

## 4.4 Intervals

- a. Section 1.2 applies.
- b. The unit armorer shall execute a deep cleaning on the weapon every 10'000 rounds fired. This includes a complete disassembly of the weapon and washing all of its parts.
- c. In order to reduce the probability of failures during a mission, preventive replacement of below listed parts is recommended (refer to PC-29513-0):

Part Number	Description
BT-36254	Firing pin
BT-36255	Firing pin spring
BT-36260	Extractor spring
BT-36257	Extractor
BT-36259	Extractor plunger
BT-36262	Shock buffer
BT-36297	Disconnecter
BT-36228	Hammer axle pin
BT-36249	Hammer spring
BT-36232	Disconnecter spring
BT-36375	Trigger spring

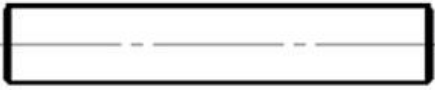

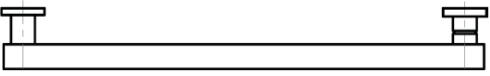
- d. Always apply a slight film of oil to metallic parts before installation. Observe special requirements for lubrication stated in sections 6 to 13.

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## 5 Gauges

### 5.1 Inventory of gauges

Below listed gauges are required to inspect the APC9:

 <p style="text-align: center;">Fig. 5.1</p>	Plug gauge NO-GO 8.89 mm
 <p style="text-align: center;">Fig. 5.2</p>	Firing pin protrusion gauge
 <p style="text-align: center;">Fig. 5.3</p>	Extractor gauge

### 5.2 Gauge condemnation criteria

Gauges must be condemned if

- a. they are rusty
- b. they are dented, scratched or otherwise deformed
- c. they do not comply with below indicated tolerances:

Plug gauge diameters (Fig. 5.1):

Pos.	Nominal [mm]	Minimal [mm]	Maximal [mm]
1	8.890	8.885	8.894

Firing pin protrusion gauge (Fig. 5.2):



Fig. 5.4

Extractor gauge (Fig. 5.3):

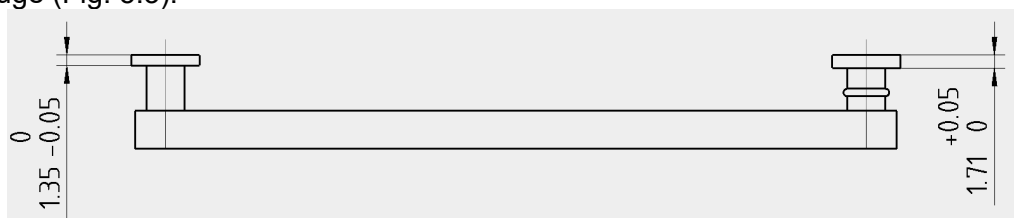


Fig. 5.5

## **6 Inspections and Measures on Weapon complete**

### **6.1 Inspections**

#### **6.1.1 Function Check**

NOTE: REFER TO OPERATOR MANUAL FOR OPERATIONS.

- a. Clear weapon according to section 3.1 of operator manual (doc TM-29513-1).
- b. Open folding stock ⇒ shall lock firmly.
- c. Push on right side bolt catch ⇒ bolt shall snap into closed position.
- d. Pull charging handle to its rearmost position and push bolt catch upward ⇒ bolt shall stay in open position.
- e. Push on left side bolt catch ⇒ bolt shall snap into closed position.
- f. Engage safety and pull trigger ⇒ hammer shall not strike.
- g. Rotate right side fire selector to single fire position and back to safe position ⇒ shall snap audibly in both positions.
- h. Rotate left side fire selector to single fire position, pull trigger and hold ⇒ hammer shall strike audibly.
- i. Pull charging handle to the rearmost position and slide it to forward position. Release trigger and pull it again ⇒ hammer shall strike audibly.

IF YOUR WEAPON IS A CARBINE OR IF THE BURST LOCKING DEVICE IS ENGAGED, JUMP TO STEP m.

- j. Rotate left side fire selector to burst fire position and back to single fire ⇒ shall snap audibly in both positions.
- k. Rotate left side fire selector to burst fire. Pull charging handle to rearmost position and slide it back to foremost position. Pull trigger and hold ⇒ hammer shall strike audibly.
- l. Pull charging handle to the rearmost position and slide it to forward position. Release trigger, pull it and hold ⇒ hammer shall not strike. Repeat once, then release trigger.
- m. Engage safety, insert an empty magazine and pull downward ⇒ magazine retainer must hold securely.
- n. Pull charging handle to rearmost position and release ⇒ bolt shall stay open.
- o. Push left magazine retainer and pull magazine downward ⇒ magazine shall come loose.
- p. Reinsert empty magazine, push right magazine retainer and pull magazine downward ⇒ magazine shall come loose.
- q. Pull charging handle to the rearmost position and release ⇒ Bolt shall run to closed position. Repeat steps m to q with all available magazines.
- r. Engage back up sights ⇒ both shall audibly snap in open position and point straight upward.
- s. Close back up sights ⇒ both shall audibly snap in closed position.
- t. Set reflex sight to intensity level 8 ⇒ red point shall be clearly visible. Unengage reflex sight.
- u. Grab reflex sight with a firm grip and attempt to move it ⇒ shall not move.
- v. Push on folding stock release knob ⇒ stock shall unlock with ease.

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- w. Close folding stock ⇒ stock shall lock firmly in closed position.
- x. Straighten carrying sling ⇒ hook and emergency release shall lock.
- y. Push on emergency release buckle while stretching sling ⇒ shall open easily.
- z. Inspect installed accessories for function and tight mounting.

In case of any failure, disassemble weapon according to the following procedures and inspect for proper assembly or wear out. Adjust or replace failing part.

## 6.1.2 Zero Check

- a. Fire five rounds at sight-in distance (25 m recommended).
- b. Determine covering rectangle of group as shown in Fig. 6.1

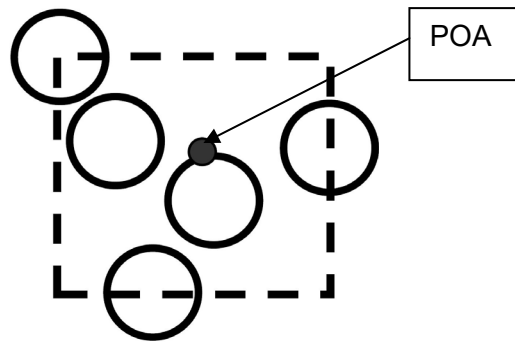


Fig. 6.1

- c. If covering rectangle includes point of aim, the sight setting is correct.
- d. If test fails, execute sight adjustment procedures (section 6.2).

## 6.1.3 Precision Check

- a. Collect reference data using the Figure of Merit (FM): Fire 10 rounds with 10 randomly selected weapons, determine the FM of each group according to Fig. 6.2 and calculate the average as reference value for the precision.
- b. In order to inspect a weapon with doubtful precision, determine its Figure of Merit with 10 rounds at the same distance as the reference value above.
- c. If the actual value is more than 1.5x larger than the reference value, precision is irregular.
- d. Execute inspections and measures on reflex sight according to section 7. Repeat test b with criterion c.
- e. In case of repeated failure, execute inspections and measures on barrel according to section 8.
- f. If test b with criterion c still fails, condemn weapon. Otherwise execute procedure 6.1.2.

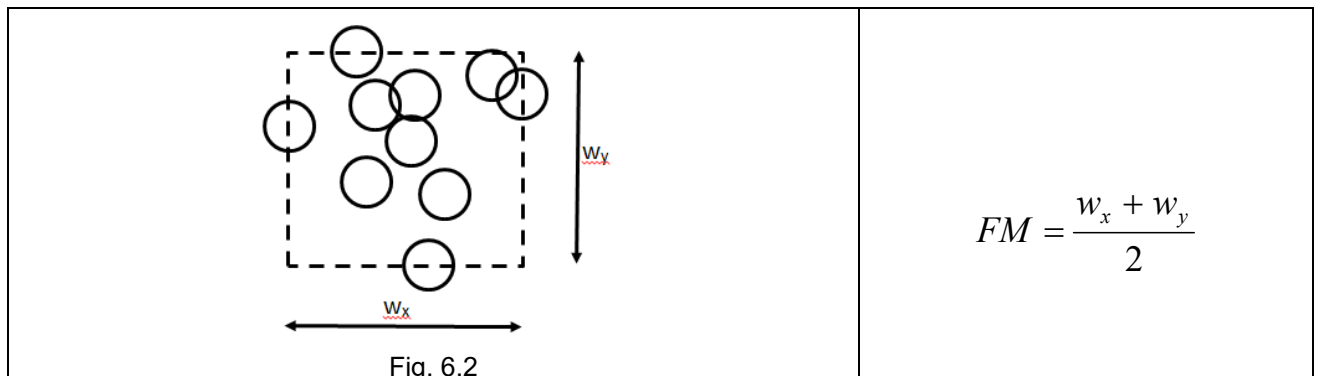


Fig. 6.2

## 6.2 Measures: Sight Adjustment

### 6.2.1 Reflex Sight Adjustment

- In order to adjust elevation, remove the cap of the small upright turret (Fig. 6.3).
- Use the cap as a pin wrench and rotate in the engraved direction to move the MPI.
- In order to adjust windage, remove the cap of the small lateral turret and proceed as above.
- Reinstall caps.
- Execute inspection 6.1.2 to verify proper setting.



Fig. 6.3

### 6.2.2 Back Up Sight Adjustments

- Prepare the rear sight for adjustments by folding it up (section 3.8.1 of Operator Manual).
- In order to adjust elevation, untighten the Allen head screw using a 1.5 mm Allen key (Fig. 6.4).
- Shifting the rear sight upward will move the MPI upward; use the stamped marks (Fig. 6.5) for proper positioning (refer to Table 6.1).
- Tighten Allen head screw.



Fig. 6.4

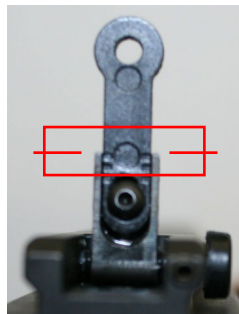


Fig. 6.5



Fig. 6.6

- Use a screwdriver no. 4 to adjust windage (Fig. 6.6).
- Rotate the lateral slotted screw clockwise to move the MPI to the right; refer to Table 6.1 to determine the proper angle of rotation.

Elevation by one mark	approx. 10 cm
Windage by one full turn	approx. 4 cm

Table 6.1: Sight adjustments at 25 m

- Execute inspection 6.1.2 to verify proper setting.

NOTE: RECOMMENDED SIGHT-IN DISTANCE IS 25 METERS.

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## 7 Inspections and Measures on Reflex Sight

### 7.1 Inspections

- a. Visually inspect sight for signs of mechanical impacts or any exposure to excessive force; reject if any.
- b. Clean lenses and inspect them to be free of scratches; reject if any.
- c. Inspect red dot to be visible under daylight conditions at level 8. In case of failure, remove battery cover using a coin and inspect contacts to be clean and free of corrosion; clean if possible. Replace battery and inspect dot visibility – reject in case of failure.
- d. Inspect sight for proper installation to weapon – correct according to section 7.2 if necessary.
- e. Execute zero check according to section 6.1.2.

### 7.2 Measures: Proper Installation to Weapon

- a. Use screw of clamping assembly to adjust clamping force (Fig. 7.1).
- b. Set reflex sight complete on top accessory rail of weapon and push it against firing direction to rearmost position (Fig. 7.2; see note below).
- c. Rotate clamping lever fully rearward while still pushing sight in rearmost position.
- d. Adjust clamping force as above if excessive.
- e. Grab reflex sight with a firm grip and attempt to move it. Repeat above procedure if any play is detectable.



Fig. 7.1



Fig. 7.2

NOTE: DUE TO ITS RECOIL ABSORBING HYDRAULIC BUFFER, THE REARWARD IMPACT WHEN FIRING IS LOWER THAN THE FORWARD IMPACT OF THE CLOSING BOLT!

## 8 Upper Receiver complete

### 8.1 Inspections

#### 8.1.1 Barrel caliber inspection

- Disassemble weapon as outlined in section 4.1.
- Clean barrel according to section 4.2 and wipe it dry with a cotton rag.
- Try to insert the plug gauge to the barrel from the muzzle side (Fig. 8.1): If the gauge intrudes, reject the barrel for being too wide.



Fig. 8.1

### 8.2 Measures

#### 8.2.1 Replacing ejector

- Disassemble weapon as outlined in section 4.1.
- Apply heat to the ejector screws using a heat gun.
- Remove the ejector screws using a Torx key no. 10 (Fig. 8.2).
- Remove ejector and ejector plate (Fig. 8.3).
- Replace worn out parts.
- Reassemble ejector inverse to above; observe for proper direction as highlighted in fig. Fig. 8.3. Lock the screws with Loctite 243.



Fig. 8.2

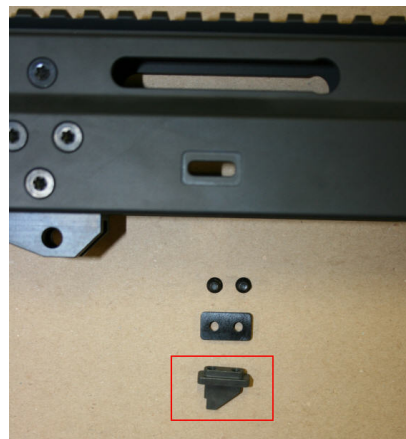


Fig. 8.3



Fig. 8.4

#### 8.2.2 Replacing barrel

- Remove ejector according to 8.2.1a-d
- Apply heat to the ramp screws using a heat gun.
- Untight screws using an Allen key 2 mm (Fig. 8.4); remove screws and ramp.
- Apply heat to barrel bearing area using a heat gun.
- Fix upper receiver in a bench vise.

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- f. Use barrel key and torque wrench to untight barrel nut and barrel washer (Fig. 8.5); rotate wrench counterclockwise.
- g. Remove barrel nut and washer forward and remove the barrel rearward (Fig. 8.6).
- h. Replace worn out parts.
- i. Insert barrel and observe for proper positioning (flush with bearing block).
- j. Install barrel washer and barrel nut. Rotate barrel key and torque wrench clockwise and apply a torque of 60 Nm. Lock barrel screw with Loctite 603.
- k. Install ramp inverse to above. Lock the screws with Loctite 243.
- l. Install ejector according to section 8.2.1.



Fig. 8.5

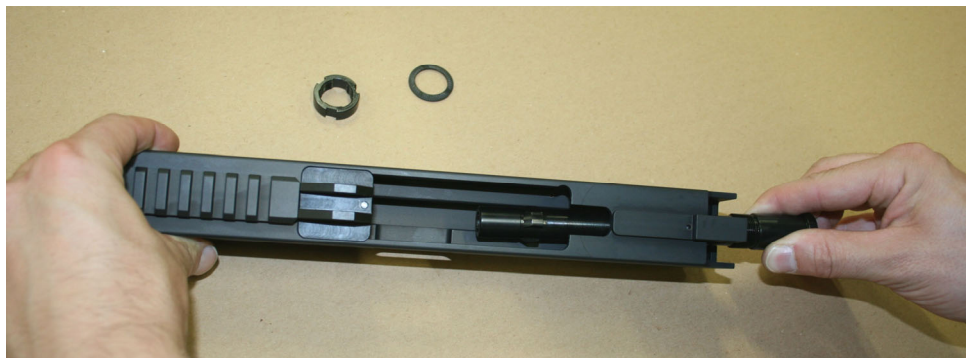


Fig. 8.6

## 8.2.3 Replacing back up sights

- a. Fix upper receiver (or weapon) in a bench vise and lift up back up sights.
- b. Use pin driver 2.5 mm to drive out the front sight axle pin either in left or right direction (Fig. 8.7).
- c. Remove front sight with lock and spring.
- d. Replace worn out parts and assemble in inverted order to above.
- e. Remove rear sight blade by untightening rear sight blade screw (Fig. 6.4). Replace worn out parts and reassemble in inverted order.



Fig. 8.7

Apply heat to setscrew and remove it using an Allen key 1.5 mm (Fig. 8.8).

- f. Remove rear sight ball, spring and pin.
- g. Remove rear sight washer (Fig. 8.9) and rear sight adjustment screw (Fig. 8.10) turning it counter clockwise with a screwdriver no. 4.
- h. Remove rear sight body, sight lock and spring.
- i. Replace worn out parts and reassemble in inverted order to above. Lock setscrew with Loctite 243.

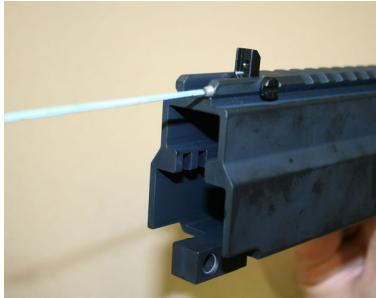


Fig. 8.8



Fig. 8.9

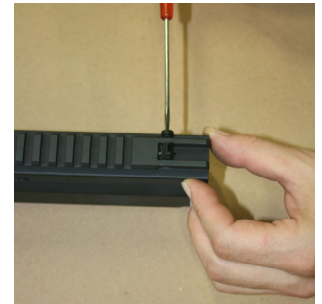


Fig. 8.10

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## 9 Inspections and Measures on Bolt complete

### 9.1 Inspections

#### 9.1.1 Extractor inspection

- Disassemble weapon as outlined in section 4.1.
- Visually inspect extractor for wear out and replace if necessary according to section 9.2.1.
- Use extractor gauge to inspect proper space between extractor and bolt face (Fig. 9.1): GO side shall slide under extractor claw, NO-GO shall not.
- In case of failure, repeat with cleaned parts or replace extractor (section 9.2.1).



Fig. 9.1



Fig. 9.2

#### 9.1.2 Firing pin inspection

- Disassemble weapon as outlined in section 4.1
- Press bolt with protruding rear end of firing pin on multi-tool (Fig. 9.2) and hold while inspecting.
- Inspect tip of firing pin for wear out and replace if necessary according to section 9.2.2.
- Use firing pin protrusion gauge to inspect firing pin protrusion: While holding bolt as in Fig. 9.2, the GO side shall slip over the firing pin's tip (Fig. 9.2), the NO-GO side shall not.
- In case of failure, replace firing pin according to section 9.2.2.

## 9.2 Measures

### 9.2.1 Replacing extractor

- Disassemble weapon as outlined in section 4.1.
- Place bolt on a hard surface with extractor downside and use multi-tool to push extractor out (Fig. 9.3).
- Remove extractor plunger and spring with shock buffer.
- Replace worn out parts.
- Insert extractor spring with shock buffer and plunger into their bearing hole. Observe proper orientation of the plunger as highlighted in Fig. 9.4
- Hold extractor with multi-tool (Fig. 9.5) and push it on the plunger until the extractor's pintle hooks into its bearing hole in the bolt body.
- Slightly rotate the extractor against the breech face until it snaps into final position.

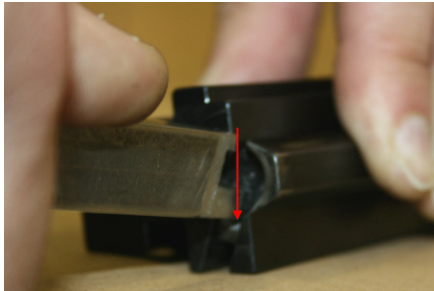


Fig. 9.3



Fig. 9.4

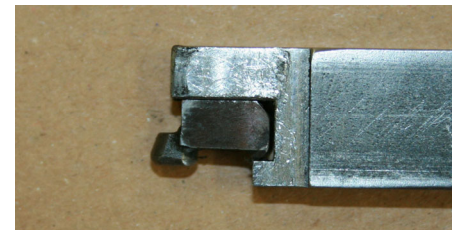


Fig. 9.5

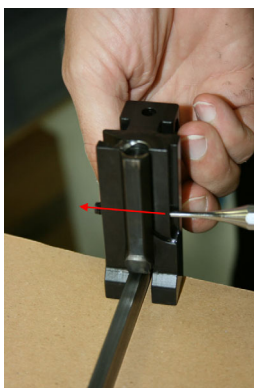


Fig. 9.6

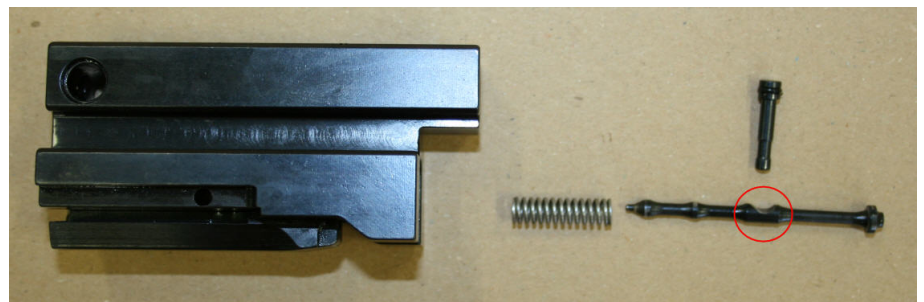


Fig. 9.7

### 9.2.2 Replacing firing pin

- Disassemble weapon as outlined in section 4.1.
- Press bolt with protruding rear end of firing pin on multi-tool and hold while driving the firing pin retainer with a pin driver 2.5 mm out to the left side (Fig. 9.6).
- Remove firing pin retainer, firing pin and firing pin spring.
- Replace worn out parts.

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- e. Insert firing pin spring and firing pin into firing pin hole. Observe firing pin to be oriented as highlighted in Fig. 9.7.
- f. Press bolt with protruding rear end of firing pin on multi-tool and hold while inserting the firing pin retainer. Assure that the retainer is not protruding the bolt's surface.

## **10 Inspections and Measures on Magazine complete**

### **10.1 Inspections**

- a. Inspect magazine visually to be clean and free of cracks and fissures.
- b. Clean interior of magazine body (procedure 10.2).
- c. Replace worn-out, lost or defective parts.

### **10.2 Measures**

- a. Use pin punch and screwdriver as outlined in Fig. 10.1.
- b. Push simultaneously on magazine plate retentions until magazine plate comes loose. Attention: Force of magazine spring will catapult magazine plate off!
- c. Clean parts, replace defective parts.
- d. Put follower, follower spring, magazine spring and magazine plate together and slide them into magazine body.
- e. Push magazine plate into position until retentions audibly snap into magazine body.
- f. Check that all parts are held securely in place.

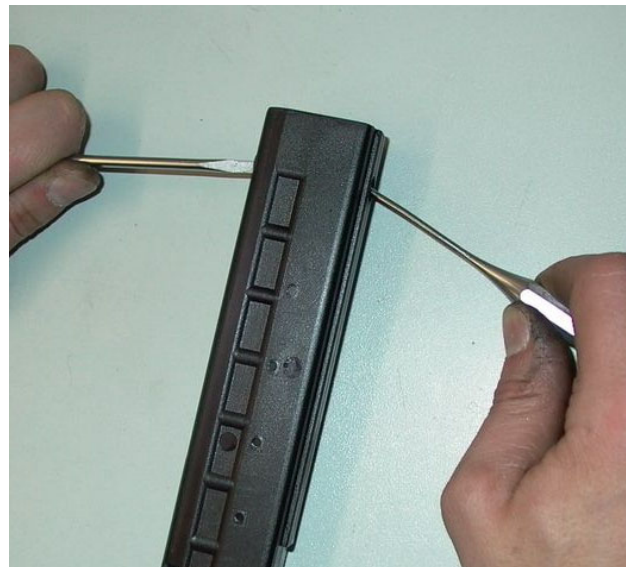


Fig. 10.1

## 11 Inspections and Measures on Lower Receiver complete

### 11.1 Inspections

- Visually inspect lower receiver for dirt or rusty parts.
- Disassemble to appropriate level by following procedures of section 11.2.
- Clean interior of lower receiver frame, replace rusty or worn out parts.
- Reassemble weapon and execute function check section 6.1.1.

### 11.2 Measures

#### **11.2.1 Replacing takedown pins**

- Use pointed tool to remove takedown pin spring (Fig. 11.1).
- Completely remove takedown pin.
- Replace worn out parts.
- Reassemble in inverted order.

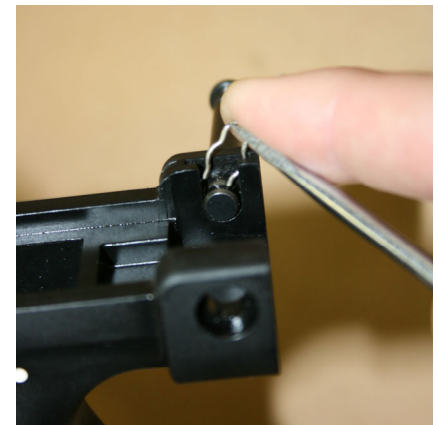


Fig. 11.1

#### **11.2.2 Magazine retainer**

- Press the left magazine retainer knob.
- Press the right magazine retainer knob, lift it out of the lower receiver frame and rotate it upwards (Fig. 11.2).
- Rotate the magazine retainer to fully upright position and remove (Fig. 11.3).
- Remove magazine retainer knob and springs.
- Remove dirt and foreign particles, replace worn out parts.
- Prepare springs as in Fig. 11.4. Place magazine retainer knob on top and fix with finger. Install magazine retainer reverse to above.
- Inspect subassembly for proper motion.



Fig. 11.2



Fig. 11.3



Fig. 11.4

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## 11.2.3 Bolt catch

- a. Press left bolt catch slide, use lifting point to press bolt catch knob retainer on right side and slide off right bolt catch knob rearwards (Fig. 11.5).
- b. Remove bolt catch knob plate, bolt catch slide reset springs, bolt catch knob retainer spring, bolt catch knob retainer and bolt catch slide (Fig. 11.6).
- c. Use screwdriver to push the pin to the left side out of the frame (Fig. 11.7) until it protrudes enough to catch it with flat nosed pliers and remove. Attention: The spring loaded bolt catch retainer may fly away!
- d. Remove bolt catch retainer and bolt catch reset spring.
- e. Push bolt catch fully downwards and unscrew bolt catch button (counterclockwise). Remove bolt catch and bolt catch lever (Fig. 11.8).



Fig. 11.5



Fig. 11.6

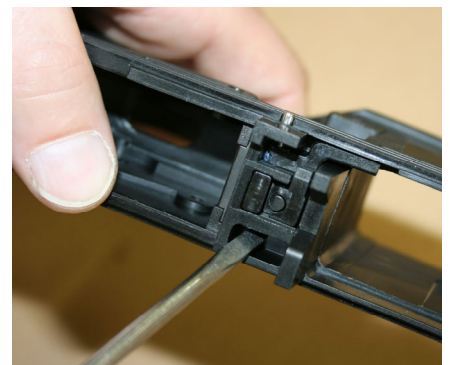


Fig. 11.7

- f. Remove dirt and foreign particles, replace worn out parts.
- g. Place bolt catch lever in lower receiver frame and bolt catch, spring and bolt retainer on top.
- h. Set pin from left side. Inspect parts for proper motion and make sure that the pin does not protrude the lower receiver frame (Fig. 11.9 & Fig. 11.10).



Fig. 11.8

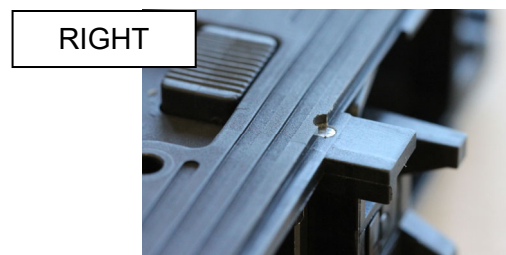


Fig. 11.9

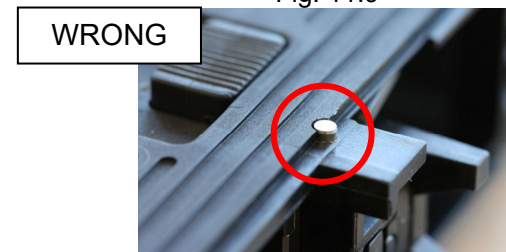


Fig. 11.10

- i. Apply Molykote PG-21 to the cut-out area of the bolt catch slide. Place bolt catch slide reset springs to left side of lower receiver frame and slide in bolt catch slide with its cut-out downwards.

- j. Place bolt catch reset springs to right side of lower receiver, insert the bolt catch knob retainer spring, put the bolt catch knob plate on top.
- k. Prepare the right bolt catch knob, insert the bolt catch knob retainer and slide the knob in final position (reverse to step a).
- l. Inspect subassembly for proper motion.

## 11.2.4 Fire selector

- a. Make sure hammer is cocked.
- b. Rotate fire selector to single fire position.
- c. Use lifting point to press selector lever retainer on right side and slide off right selector lever (Fig. 11.11). Remove selector lever retainer and spring.
- d. Rotate fire selector to a position halfway between “safe” and “single fire” (Fig. 11.12) and pull it out of the lower receiver frame.
- e. Remove fire selector, remove selector position locks with springs (Fig. 11.13)



Fig. 11.11



Fig. 11.12



Fig. 11.13

- f. Remove dirt and foreign particles, replace worn out parts.
- g. Apply Molykote PG-21 to selector position locks with springs and insert to lower receiver frame.
- h. Install selector lever (reverse to step d) and rotate to single fire position.
- i. Install selector lever retainer with spring and slide on right selector lever until it audibly clicks into proper position.
- j. Inspect subassembly for proper motion.

## 11.2.5 Trigger action



Fig. 11.14



Fig. 11.15



Fig. 11.16

- a. Remove fire selector according to section 11.2.4a-e.
- b. Slightly press down the hammer with your thumb, pull the trigger and allow the hammer to travel into uncocked position.
- c. Use pin driver 2.5 mm to drive the hammer axle pin out of the lower receiver frame either to its left or right side (fig. Fig. 11.14).

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- d. Remove hammer with hammer spring and release lever (SMG only).
- e. Use pin driver 2.5 mm to drive the trigger axle pin out of the lower receiver frame either to its left or right side (Fig. 11.15).
- f. Remove trigger with its spring and with disconnecter with spring and remove the automatic sear (SMG only, Fig. 11.16).
- g. Use a screw driver to lift the plate out of the lower receiver frame.
- h. Remove dirt and foreign particles, replace worn out parts.
- i. Prepare the subassembly trigger/trigger spring/disconnector spring/disconnector as in Fig. 11.17 and place it in the lower receiver frame.
- j. Insert the trigger axle pin to the left side of the lower receiver frame and drive it halfway in (Fig. 11.18)
- k. Place the automatic sear into the lower receiver frame and drive the trigger axle pin in final position.



Fig. 11.17

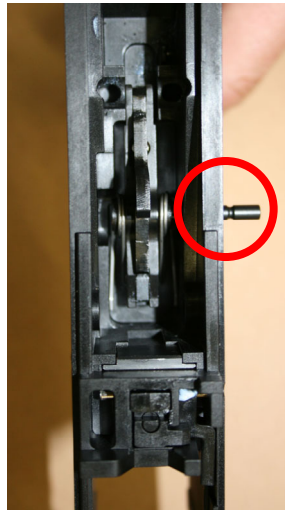


Fig. 11.18



Fig. 11.19

- l. Put the release lever in place with one end under the automatic sear and drive the hammer axle pin halfway in from the right side.
- m. Prepare hammer and spring as in Fig. 11.19. Place the ends of the spring as highlighted in Fig. 11.20, hold the hammer upright in place and drive the hammer axle pin in final position.

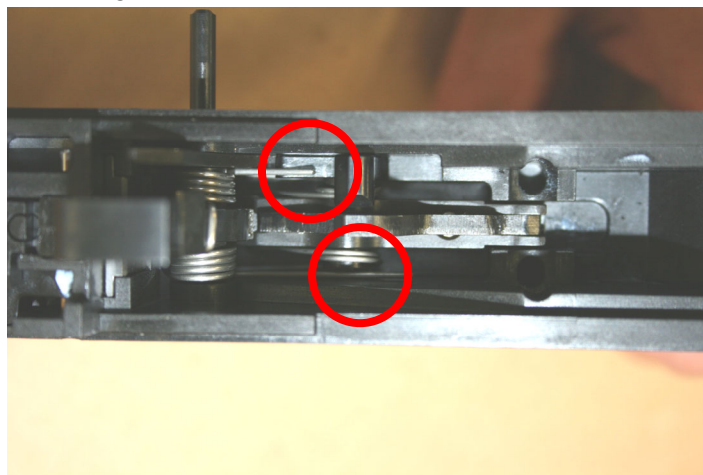


Fig. 11.20

- n. Inspect subassembly for proper motion.
- o. Install fire selector according to 11.2.4g-j.

## 11.2.6 Replacing grip cover

- a. Flip up the grip cover.
- b. Use pin driver 2.5 mm to drive out the grip cover axle pin either in left or right direction (Fig. 11.20).
- c. Separate grip cover, cover axle pin and cover spring (Fig. 11.21).
- d. Replace worn out parts.
- e. Prepare the cover for reassembly by inserting the spring into the cover, pushing it in with the pin driver and holding it compressed using the bolt catch knob retainer or a similar pin (Fig. 11.22) as assembling aid.
- f. Insert the cover axle pin until it rests in middle position. Remove the assembling aid.



Fig. 11.21

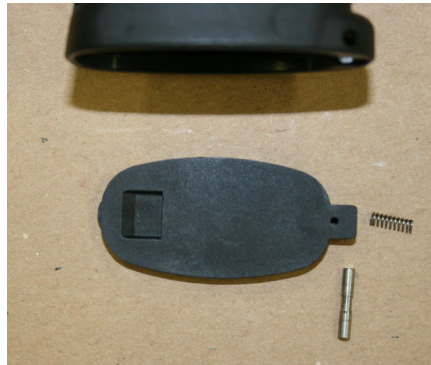


Fig. 11.22



Fig. 11.23

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## **12 Inspections and Measures on Stock complete**

### **12.1 Inspections**

Visual for cracks, breakages or other deteriorations.

### **12.2 Measures**

- a. Disassemble weapon as outlined in section 4.1.
- b. Use Allen key 3 mm to remove folding stock axle screw (Fig. 12.1).
- c. Push on folding stock release knob and rotate folding stock to right side out of hinge (Fig. 12.2).
- d. Separate folding stock and folding stock adaptor.
- e. Replace stock complete if appropriate.
- f. Clamp folding stock in its hinge (refer to Fig. 12.2).
- g. Visually inspect proper alignment of hinge bore holes.
- h. Use torque wrench 3 mm to install stock axle screw; apply momentum of 1.5 Nm.



Fig. 12.1



Fig. 12.2



Fig. 12.3

## **13 Inspections and Measures on Stock adaptor complete**

### **13.1 Inspections**

- a. Inspect the sticker to be present and undamaged – replace in case.

### **13.2 Measures**

- a. Use a pin driver 2.5 mm and a hammer to drive out the recoil buffer pin (Fig. 12.3).
- b. Pull the recoil buffer out of the stock adaptor.
- c. Insert new recoil buffer to the stock adaptor.
- d. Set recoil buffer pin.
- e. Make sure that the pin does not protrude the stock adaptor nor left nor right and inspect the installed recoil buffer for firm seat.

## **14 Warranty Statement**

Warranty claims on behalf of the client are to be explicitly declared as such. During the legal warranty period, B&T provides warranty cover solely for defects that arise as a result of faulty materials, construction errors or poor workmanship. If a warranty claim is justified, B&T will, at its own discretion, either repair or replace the defective good. Costs incurred in transporting the defective good to B&T are borne by the Client. Spare parts fitted and replaced become the property of B&T.

Inasmuch as is legally permitted, any other liability of B&T is excluded, in particular liability for damages arising either directly or indirectly from the delivered good itself, from its use or from its defects.

Merchandise is covered by the warranty provisions of the manufacturer. Parts that are naturally subject to wear and tear, damage arising from insufficient maintenance work, non-compliance with operating regulations and cases of force majeure are all excluded from warranty cover. Warranty claims lapse if the client itself or third parties alter or repair the delivered good without the prior written consent of B&T.

All product specifications are subject to change without prior notice. Published data are mean values and therefore not suitable acceptance criteria.

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