



F2000 Tactical & F2000 Tactical TR

Caliber 5.56 x 45 mm NATO



Maintenance Manual

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Catalog n° 3480084010

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TABLE OF CONTENTS

CHAPTER 1: GENERALITIES

1.1.	Introduction	9
1.2.	Description	9
1.3.	Technical data	10
1.3.1.	Dimensions and weight	10
1.3.2.	Functional data	10
1.3.3.	Ballistics	10
1.3.4.	Sight	10
1.4.	Accessories	11
1.5.	Abbreviations	11

CHAPTER 2: IDENTIFICATION OF THE PARTS

2.1.	How to order parts	13
2.2.	Parts lists	13
2.2.1.	Barrel support assembly	15
2.2.2.	Receiver assembly	21
2.2.3.	Handguard and handguard tri-rail	25
2.2.4.	Moving parts assembly	27
2.2.5.	Hammer group assembly	31
2.2.6.	Magazine	33
2.2.7.	Plug, flash hider	35

CHAPTER 3: OPERATING PRINCIPLES

3.1.	Gas operation	37
3.2.	Rotating bolt	37
3.3.	Forward ejection	38
3.4.	Fire selector (255) featuring 3 positions	39
3.5.	Safety devices	41
3.6.	Hammer group assembly (510) principle	41
3.6.1.	Releasing the hammer when pulling the trigger	41
3.6.2.	Recocking the hammer after the first shot if the fire selector (255) is set on '1'	43
3.6.3.	Recocking the hammer after the first shot if the fire selector (255) is set on 'A'	43

CHAPTER 4: SAFETY INFORMATION

4.1.	Warnings and cautions	45
4.2.	Safety checks	47

CHAPTER 5: RECEPTION OF THE WEAPON

.....	51
-------	----

**CHAPTER 6: USING THE WEAPON**

6.1.	Loading the magazine (601)	53
6.2.	Loading and cocking the weapon	53
6.2.1.	Loading the weapon	53
6.2.2.	Cocking the weapon	53
6.3.	Firing the weapon	55
6.4.	Unloading the weapon	55

CHAPTER 7: FIELD STRIPPING

7.1.	Field stripping	57
7.1.1.	Safety handling	57
7.1.2.	Barrel support assembly (110)	57
7.1.3.	Moving parts assembly (410)	59
7.1.4.	Plug, gas (191) and piston assembly (180)	61
7.1.5.	Hammer group assembly (510)	65
7.2.	Complementary disassembly	67
7.2.1.	Handguard (280) or handguard tri-rail (280/1)	67
7.2.2.	Magazine (601)	67
7.3.	Complementary reassembly	69
7.3.1.	Handguard (280) or handguard tri-rail (280/1)	69
7.3.2.	Magazine (601)	69
7.4.	Reassembly of the weapon	71
7.4.1.	Hammer group assembly (510)	71
7.4.2.	Plug, gas (191) and piston assembly (180)	71
7.4.3.	Moving parts assembly (410)	73
7.4.4.	Barrel support assembly (110)	77

CHAPTER 8: CLEANING AND LUBRICATION

8.1.	Lubricant specification	79
8.2.	Cleaning and lubrication tools	81
8.2.1.	Tactical, complete tools roll 940	81
8.3.	Cleaning and lubrication before firing	83
8.4.	Cleaning and lubrication after firing	86
8.4.1.	Barrel support assembly (110)	86
8.4.2.	Moving parts assembly (410)	87
8.4.3.	Hammer group assembly (510)	87
8.4.4.	Receiver (210) and handguard (280) / handguard tri-rail (280/1)	88
8.4.5.	Magazine (601)	88

**CHAPTER 9: DISASSEMBLY AND REASSEMBLY**

9.1.	Barrel support assembly	91
9.1.1.	Removal and reassembly of the barrel support assembly (110)	91
9.1.2.	Removal and reassembly of the flash hider (151)	93
9.1.3.	Removal and reassembly of the piston assembly (180)	97
9.1.4.	Removal and reassembly of the plunger, plug, gas (163)	99
9.1.5.	Removal and reassembly of the screw, gas control (144)	101
9.1.6.	Removal and reassembly of the barrel, support group (120), the the barrel group assembly (150) and the rail assembly (175)	103
9.1.7.	Removal and reassembly of the case anti-return (178)	109
9.1.8.	Removal and reassembly of the plunger, switch (124)	111
9.1.9.	Removal and reassembly of the handle, cocking group (140)	113
9.1.10.	Removal and reassembly of the cover, ejection opening (107)	115
9.2.	Moving parts assembly	117
9.2.1.	Removal and reassembly of the spring, bolt (423)	117
9.2.2.	Removal and reassembly of the extractor (454)	119
9.2.3.	Removal and reassembly of the ejector (464)	121
9.2.4.	Removal and reassembly of the spring, return (435), the spring, return, housing, front (436) and the spring, return, housing, rear (438)	123
9.2.5.	Removal and reassembly of the rod, slide (434)	125
9.2.6.	Removal and reassembly of the release unit (442)	129
9.3.	Receiver assembly	133
9.3.1.	Removal and reassembly of the receiver assembly (201)	133
9.3.2.	Removal and reassembly of the catch, magazine (241) and the button, catch magazine (247)	135
9.3.3.	Removal and reassembly of the cover (271)	139
9.3.4.	Removal and reassembly of the body, trigger (261)	141
9.3.5.	Removal and reassembly of the fire selector (255)	143
9.3.6.	Removal and reassembly of the rod, trigger (269)	145
9.3.7.	Removal and reassembly of the pin, stripping, assembly (230)	147
9.3.8.	Removal and reassembly of the lip, receiver, left (222), and the lip, receiver, right (223)	149
9.4.	Plug, flash hider	151
9.4.1.	Removal and reassembly of the plug, flash hider (460)	151

**CHAPTER 10: INSPECTIONS AND ADJUSTMENTS**

10.1. Adjustment of the mechanical sight	153
10.1.1. Determine of the mean point of impact (MPI) on the target	153
10.1.2. Setting of the mechanical sight	155
10.2. Checking and gauging the barrel	157
10.2.1. Preparation	157
10.2.2. Gauging the barrel bore	157
10.2.3. Checking the straightness of the barrel	157
10.3. Checking and gauging the headspace	159
10.4. Checking and gauging the extractor (454)	161
10.4.1. Checking and gauging the engagement of the extractor (454)	161
10.4.2. Checking and gauging the axial clearance of the extractor (454)	163
10.5. Checking and gauging the protrusion of the firing pin (427)	165

CHAPTER 11: TROUBLESHOOTING

11.1. Immediate action	168
11.2. Typical problems	170

CHAPTER 12: ACCESSORIES

12.1. Accessories	175
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CHAPTER 13: TOOLS AND GAUGES

13.1. Tools	179
13.1.1. List of OREA	179
13.1.2. List of UT	179
13.2. Gauges	181

CHAPTER 14: NOTES

.....	182
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FN Herstal F2000 Tactical - left hand view



FN Herstal F2000 Tactical TR - left hand view



CHAPTER 1: GENERALITIES

CAUTION

This Maintenance Manual is dedicated to the FN Herstal F2000 Tactical/Tactical TR even if the illustrations show only one model.

1.1. INTRODUCTION

This Maintenance Manual (MM) is intended for the personnel responsible for the maintenance of the FN Herstal F2000 Tactical/Tactical TR.

The purpose of the manual is to familiarize the personnel with the operation and the maintenance of the weapon, to explain the removal, the reassembly, the repair and/or the replacement of components and to supply the appropriate inspection, gauging and adjustment procedures.

1.2. DESCRIPTION

The F2000 Tactical/Tactical TR is a bullpup integrated weapon system. Its outer shape has been designed with rounded contours without any protruding parts even when equipped with accessories. The innovative design is focused on firing and carrying comfort.

The F2000 Tactical/Tactical TR is fully ambidextrous without any modification due to the potential ejection. The fire selector, the magazine catch and the cocking handle are easily reachable by either hand.

The basic caliber of the F2000 Tactical/Tactical TR is the 5.56 x 45 mm NATO standard ammunition.

The standard F2000 Tactical/Tactical TR can be reconfigured to specific mission requirements. Any standard sighting system can be fixed on the upper MIL-STD-1913 Picatinny rail. The F2000 Tactical/Tactical TR is provided with a backup adjustable sight.

The handguard can be replaced by accessories such as a 40 mm LV grenade launcher, a tri-rail handguard (only for the F2000 Tactical), a handguard (only for the F2000 Tactical TR), a laser designator, a flashlight, ... Any configuration of the F2000 Tactical/Tactical TR respects the original ergonomics of the weapon. The natural balance and the carrying comfort are never downgraded.

The F2000 Tactical/Tactical TR features two firing modes: single shot and full automatic.



1.3. TECHNICAL DATA

*The specifications and other figures are given for indication only and have no contractual value.
FN Herstal S.A. reserves the right to modify or to change the specifications at any time without prior notice.*

1.3.1. Dimensions and weight

Overall length:	688 mm
Width:	F2000 Tactical: 80 mm F2000 Tactical TR: 85 mm
Height:	259 mm
Weight:	F2000 Tactical: 3.4 kg (with empty magazine) F2000 Tactical TR: 3.5 kg (with empty magazine)

1.3.2. Functional data

Operating principle:	Gas operated, rotating bolt
Calibre:	5.56 x 45 mm NATO
Firing modes:	Single shot, full automatic
Magazine:	M16 Type
Magazine capacity:	30 rounds
Barrel length:	400 mm
Number of grooves:	6
Twist and direction:	180 mm (7") right hand
Cyclic rate:	850 rpm
Ejection:	Forwards
Safety:	Manual safety, drop safety, automatic safety

1.3.3. Ballistics

The following data apply to a F2000 Tactical/Tactical TR firing 5.56 x 45 mm NATO ammunition.

Muzzle velocity:	900 m/s
Effective range:	500 m
Safety range:	3,000 m
Lethality:	1,300 m

1.3.4. Sight

- Mechanical sight:
- front sight: adjustable in elevation
 - rear sight: foldable and adjustable in windage
- Interface for sight:
- Picatinny rail (MIL-STD-1913): 254 mm (10").

**1.4. ACCESSORIES**

- Tactical, complete tools roll
- Bayonet F2000 multipurpose
- Complete bayonet
- Blank firing device assembly
- Sling, tactical, assembly
- Tactic sling, tactical, assembly
- Handguard, triple rail (only for F2000 Tactical)
- Handguard (only for F2000 Tactical TR)
- Pistol grip for Picatinny rail (only with handguard, tri-rail)
- Aimpoint COMPM2
- Aimpoint COMPM3

1.5. ABBREVIATIONS

Ammo	Ammunition
Assy	Assembly
CAT n°	Catalog number
Fig.	Figure or illustration
NATO	North Atlantic Treaty Organisation
OREA	"Outil de Réparation et d'Entretien Armes" (special tool for weapon repair and maintenance)
Qty	Quantity
TR	Triple rail
UT	Universal Tool (commercial tool not considered as a FN Herstal product, but which can be supplied on special request)

Units of measure

"	Inch
mm	Millimeter
ft lb	Foot pounds
g	Gram
kg	Kilogram
lb	Pound
m	Meter
Nm	Newton-Meter
fps	Feet per second
in lb	Inch pounds
rds	Rounds
rpm	Rounds per minute

Note: A vertical line at the left side of a paragraph, an illustration, a table, ... indicates that (a part of) the latter has been changed compared to the previous 'change' version.

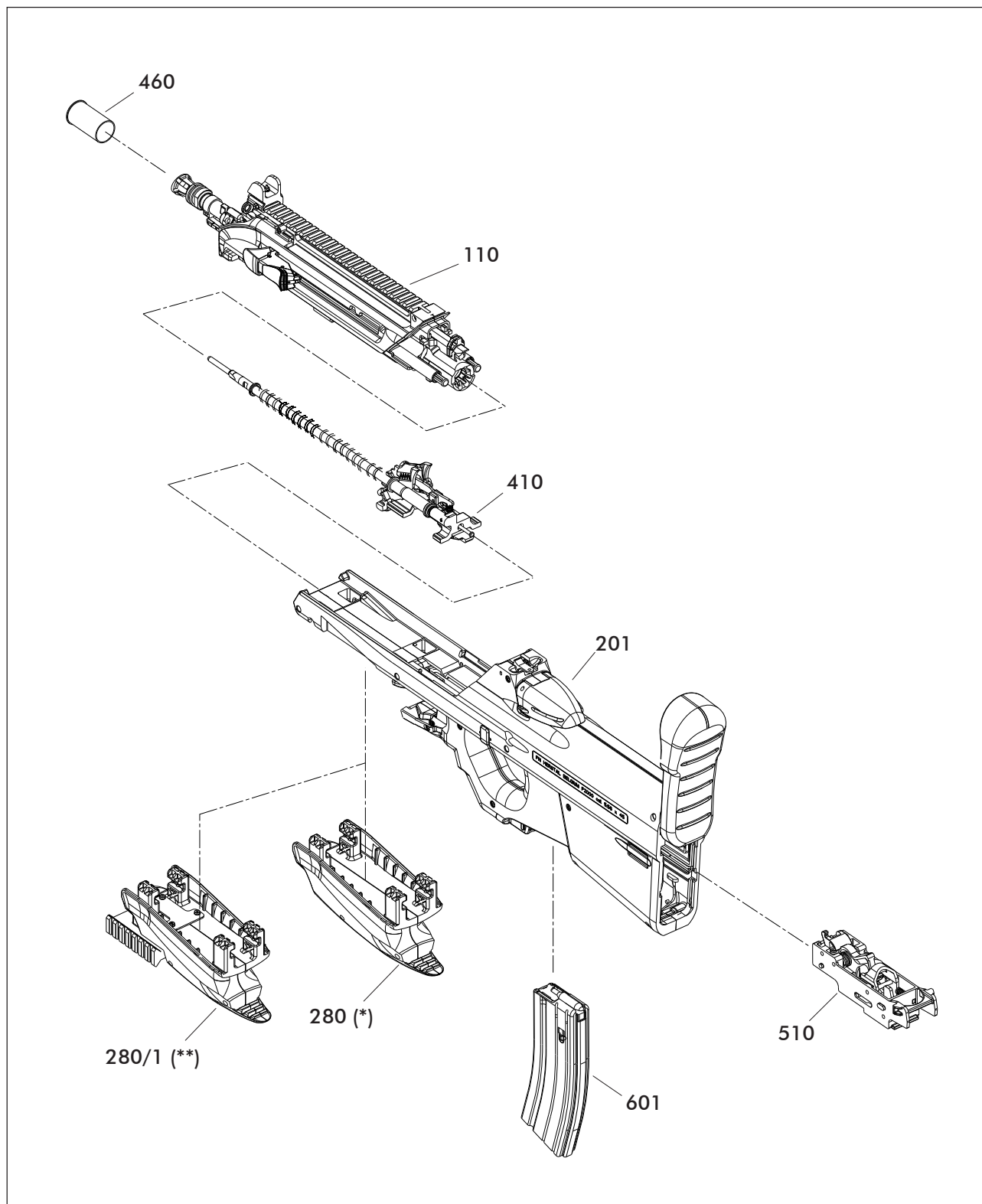


Fig. 2.a - The 7 main groups of the F2000 Tactical/Tactical TR



CHAPTER 2: IDENTIFICATION OF THE PARTS

2.1. HOW TO ORDER PARTS

For ordering parts, refer to the 'Catalog of Parts and Accessories' of the F2000 Tactical/Tactical TR.

2.2. PARTS LISTS

The F2000 Tactical/Tactical TR is subdivided into 7 groups (Fig 2.a):

CAT n°	Description	Fig.	Paragraph
110	Barrel support assembly	2.b	2.2.1
201	Receiver assembly	2.c	2. 2.2
280 (*)	Handguard	2.d	2. 2.2
280/1 (**)	Handguard, tri-rail	2.d	2. 2.2
410	Moving parts assembly	2.e	2. 2.4
510	Hammer group assembly	2.f	2. 2.5
601	Magazine 30 cartridges	2.g	2. 2.6
460	Plug, falsh hider	2.h	2. 2.7

(*) Only for the F2000 Tactical

(**) Only for the F2000 Tactical TR

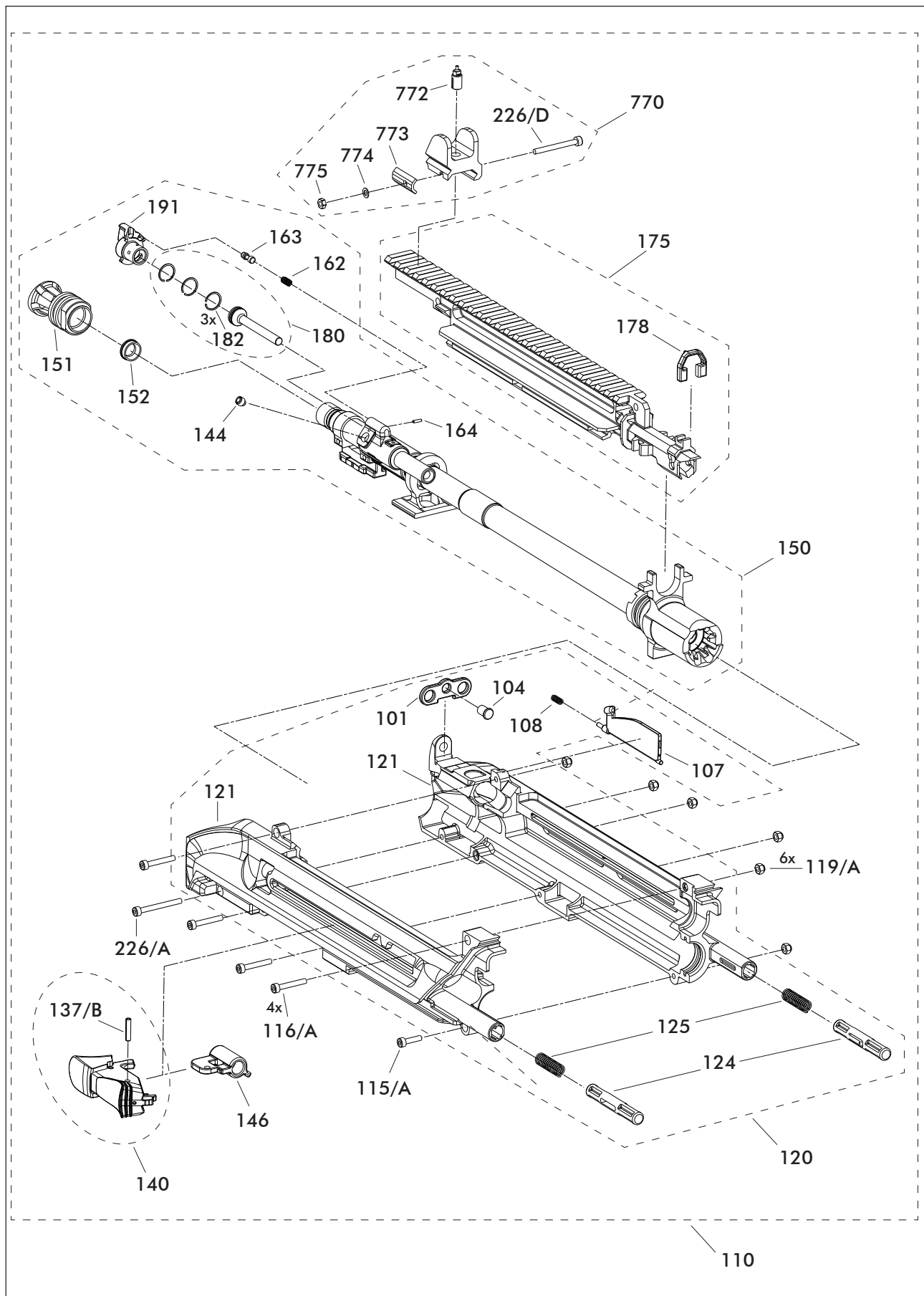


Fig. 2.b - Barrel support assembly (110)

**2.2. PARTS LISTS (CONTINUED)****2.2.1. Barrel support assembly**

(a) List of parts (Fig. 2.b)

CAT n°	Description	Qty per unit
110	Barrel support assembly	1
115/A	> Hexagonal socket head cap screw	1
116/A	> Hexagonal socket head cap screw	4
119/A	> Prevailing torque-type hex nut, PA insert	6
120	> Barrel, support group	1
101	> > Swivel, sling	1
104	> > Axis swivel sling	1
107	> > Cover, ejection opening	1
108	> > Spring, cover, ejection opening	1
121	> > Pair of side plates, support, barrel	1
124	> > Plunger, switch	2
125	> > Spring, plunger, switch	2
140	> Handle, cocking group	1
137/B	> > Spring-type straight pin, coiled, std duty	1
146	> Guide, cocking handle	1
150	> Barrel group assembly	1
144/1	> > Screw, gas control dia 1.9	1*
144/2	> > Screw, gas control dia 1.95	1*
144/3	> > Screw, gas control dia 2	1*
144/4	> > Screw, gas control dia 2.05	1*
144/5	> > Screw, gas control dia 2.1	1*
144/6	> > Screw, gas control dia 2.15	1*
144/7	> > Screw, gas control dia 2.20	1*
144/8	> > Screw, gas control dia 2.25	1*
144/9	> > Screw, gas control dia 2.30	1*
144/10	> > Screw, gas control dia 2.35	1*
144/11	> > Screw, gas control dia 2.40	1*
151	> > Flash hider	1
152	> > Washer, flash-hider	1
162	> > Spring, plunger, plug, gas	1
163	> > Plunger, plug, gas	1

* There is only 1 screw 144 fitted in the barrel support assembly. It is chosen in the list 144/1 to 144/11 according to the expected cycling rate of fire.

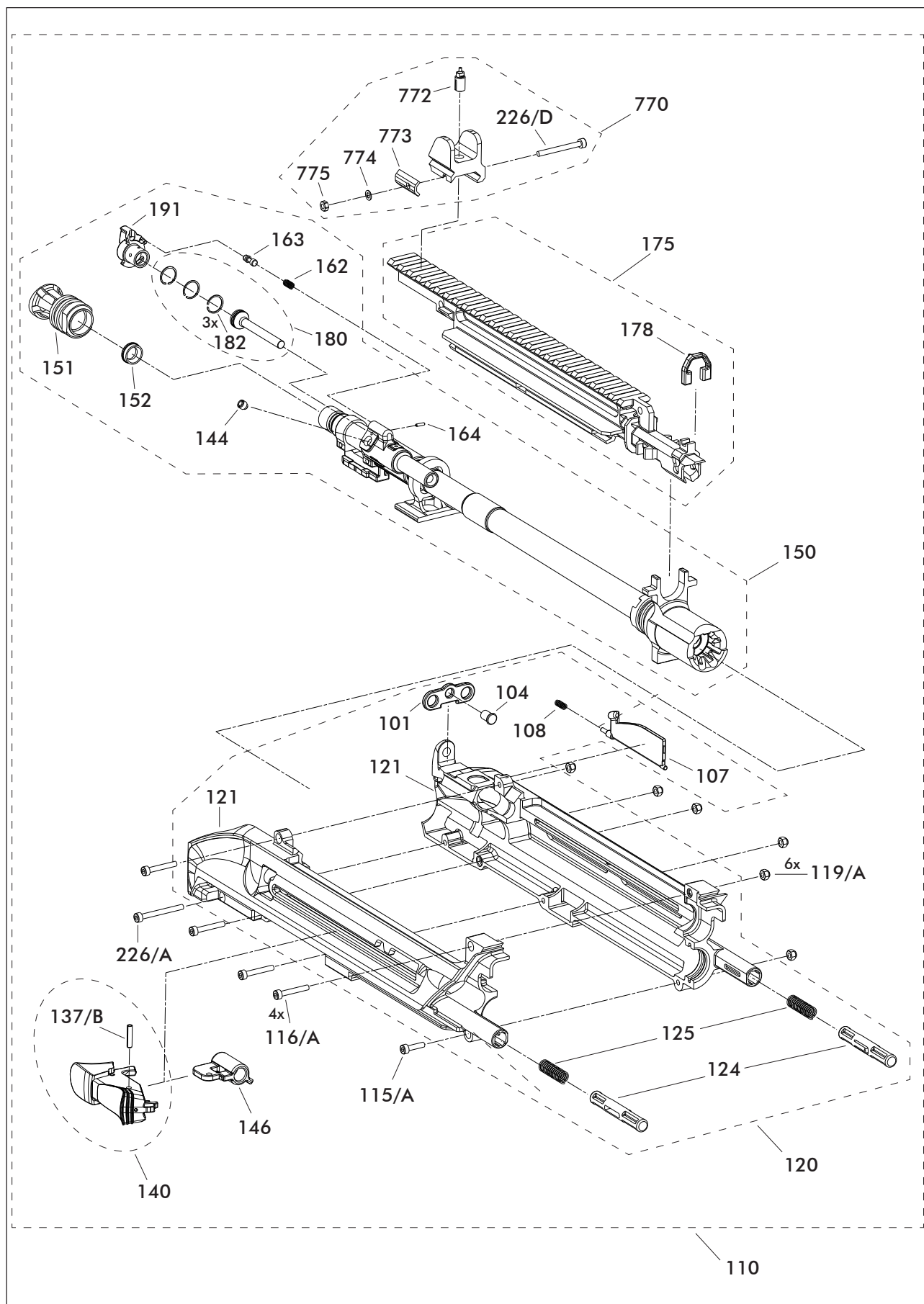


Fig. 2.b - Barrel support assembly (110)

**2.2. PARTS LISTS (CONTINUED)****2.2.1. Barrel support assembly (continued)****(a) List of parts (continued)**

CAT n°	Description	Qty per unit
164	> > Spring type straight pin, slotted	1
180	> > Piston assembly	1
182	> > > Ring, piston	3
191	> > Plug, gas	1
175	> Rail assembly	1
178	> > Case anti-return	1
226/A	> Hexagonal socket head cap screw	1
770	> Front sight assembly	1
226/D	> > Hexagonal socket head cap screw	1
772	> > Front sight	1
773	> > Front sight plate	1
774	> > Serrated lock washer	1
775	> > Hexagonal nut, style 1	1

(b) Description

The barrel support assembly (110) is composed of:

- The barrel, support group (120) consisting of a pair of side plates onto or into which the following assemblies and components have been installed:

The pair of side plates (121) is fixed together by means of the screw (115/A), the screws (116/A), the screw (226/A) and the nuts (119/A).

- The cover, ejection opening (107) located on the right plate.

The cover, ejection opening (107) is held on the right plate by means of its lugs and of the spring, cover, ejection opening (108).

If closed, the cover, ejection opening (107) opens automatically when the cases are ejected through the ejection opening.

- The plungers, switch (124) located at the rear part of the pair of side plates (121).

The plungers, switch (124) are equipped with the springs, plunger, switch (125).

The plungers, switch (124) are pushing onto the switch (411) by means of the springs, plunger, switch (125).

- The swivel, sling (101) located at the front part of the pair of side plates (121).

The swivel, sling (101) is used to hook the snap-hook of a sling (accessory).

The swivel, sling (101) is secured to the pair of side plates (121) by means of the axis swivel sling (104).

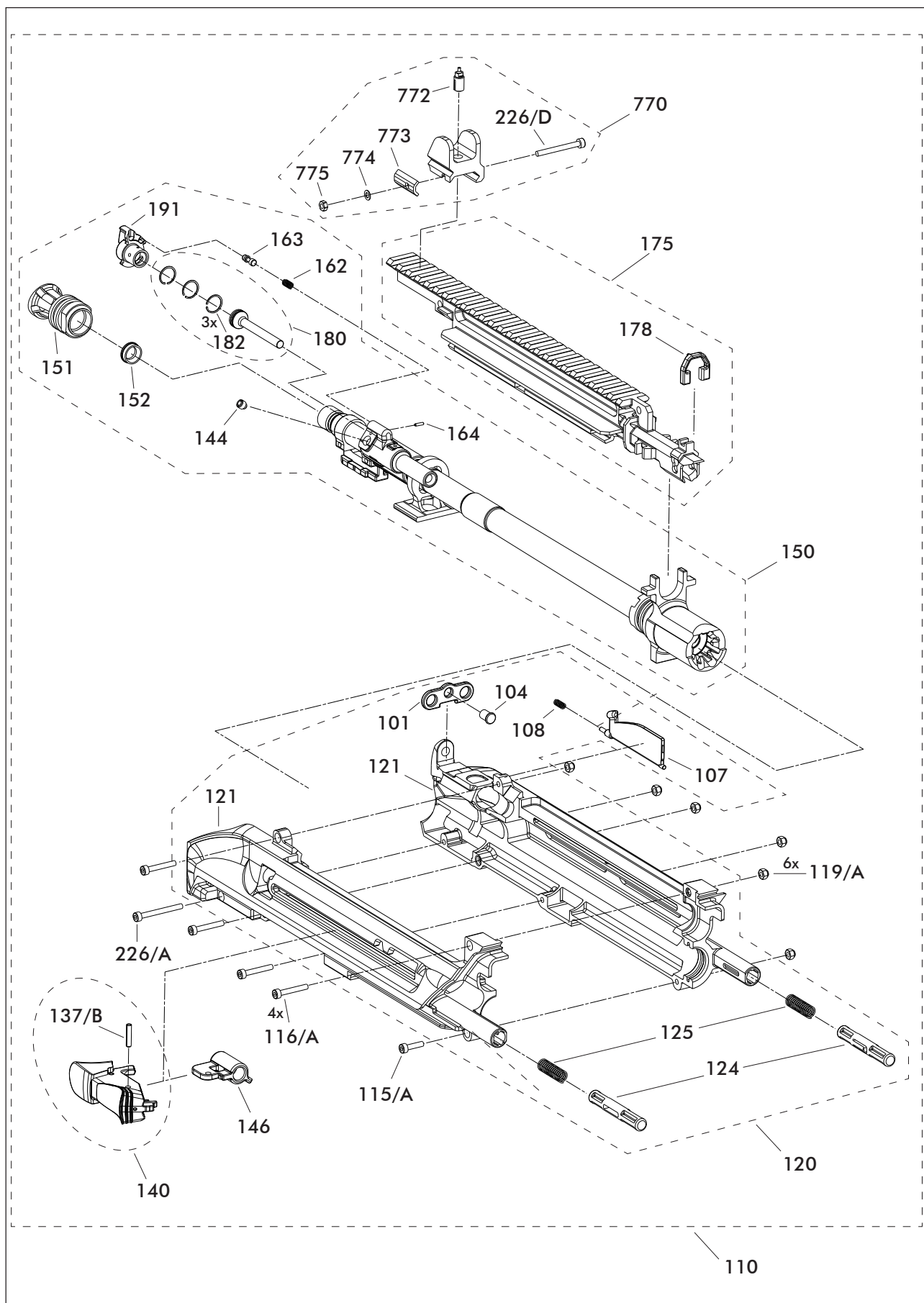


Fig. 2.b - Barrel support assembly (100)

**2.2. PARTS LISTS (CONTINUED)****2.2.1. Barrel support assembly (continued)****(b) Description (continued)**

- The barrel group assembly (150), located between the pair of side plates (121), which consists of a barrel onto which the following components are assembled:

- The flash-hider (151) located on the front of the barrel.

The flash-hider (151) is screwed onto the barrel and is used in combination with the flash-hider washer (152).

- The plug, gas (191) which closes the housing of the piston assembly (180).

The plug, gas (191) is retained onto the barrel by the plunger, plug, gas (163).

- The plunger, plug, gas (163) located on the gas block.

The plunger, plug, gas (163), equipped with the spring, plunger, plug, gas (162), is secured onto the barrel by means of the spring pin (164).

The plunger, plug, gas (163) engages into the notches of the plug, gas (191) to position this one at the 'normal' or the 'adverse conditions' position.

- The screw, gas control (144) screwed inside the gas block.

The screw, gas control (144) controls the cyclic rate of fire.

The larger the inner diameter of the screw, gas control (144), the higher the cyclic rate of fire.

- The piston assembly (180) located in the housing in the gas block.

The piston is equipped with 3 rings, piston (182).

- The lug of the bayonet located between the flash hider (151) and the gas block.

The lug of the bayonet is secured onto the barrel by means of two pins.

- The handle, cocking group (140) located onto the left side plate in front of the guide, cocking handle (146) located inside the left side plate.

The handle, cocking group (140) is secured to the guide, cocking guide (146) by means of the spring pin (137/B).

The handle, cocking group (140) is used to pull the moving parts assembly (410 - see figure 2.e) to the rear in order to cock the weapon.

- The rail assembly (175) located between the pair of side plates (121).

The rail assembly (175) is equipped with the case anti-return (178).

The rail assembly (175) is composed of a Picatinny rail (MIL-STD-1913) used to fit optical accessories.

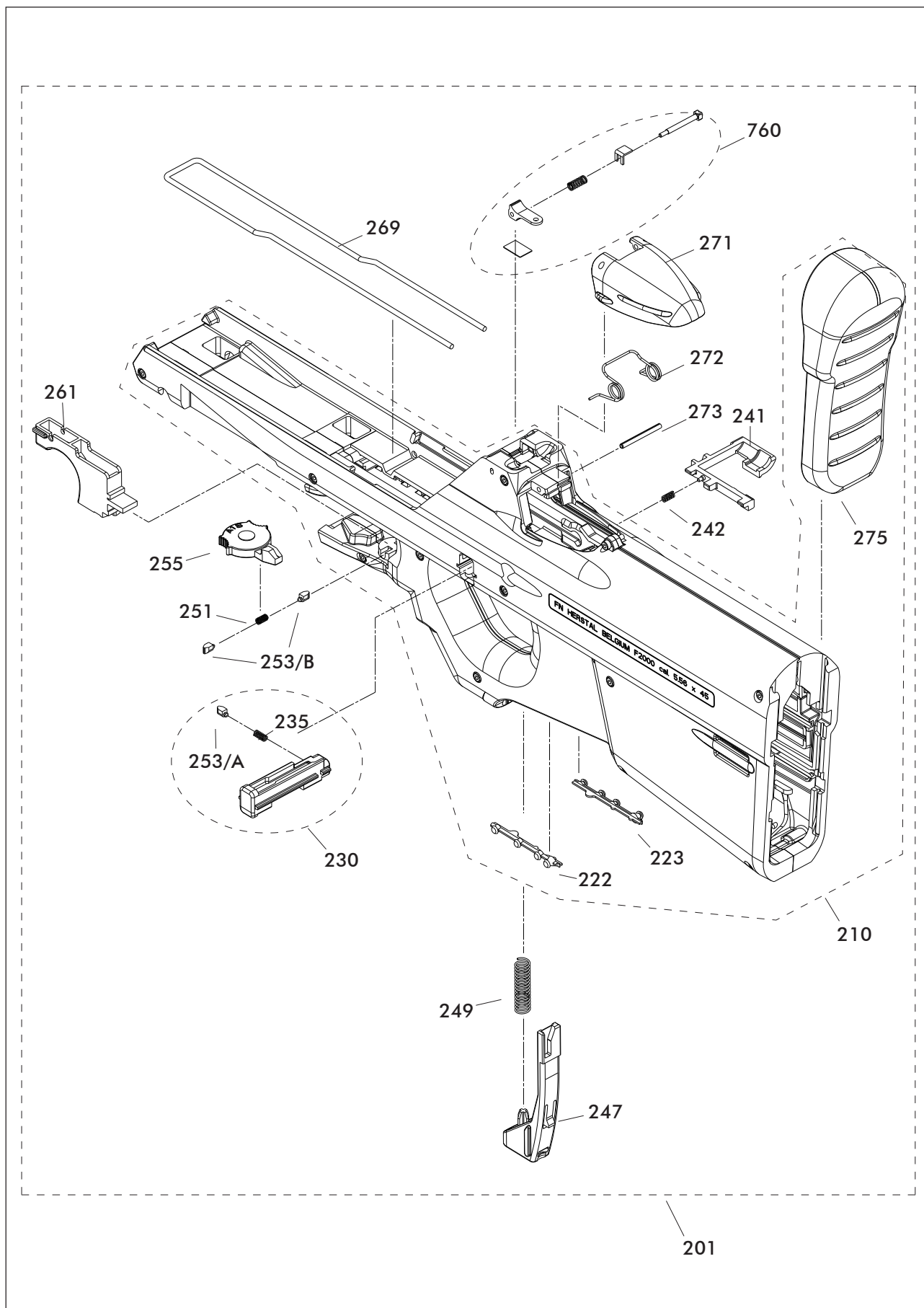


Fig. 2.c - Receiver assembly (201)

**2.2. PARTS LISTS (CONTINUED)****2.2.2. Receiver assembly****(a) List of parts (Fig. 2.c)**

CAT n°	Description	Qty per unit
201	Receiver assembly	1
210	> Receiver	1
222	> > Lip, receiver, left	1
223	> > Lip, receiver, right	1
275	> > Butt plate	1
230	> Pin, stripping, assembly	1
235	> > Spring, pin, stripping	1
253/A	> > Plunger, selector	1
241	> Catch, magazine	1
242	> Spring, magazine catch	1
247	> Button, catch magazine	1
249	> Spring, button, catch magazine	1
251	> Spring, plunger selector	1
253/B	> Plunger, selector	2
255	> Fire selector	1
261	> Body, trigger	1
269	> Rod, trigger	1
271	> Cover	1
272	> Spring, cover	1
273	> Grooved pin, third-length centre grooved	1
760	> Rear sight, group	1

(b) Description

The receiver assembly (201) is composed of a receiver (210) onto or into which the following parts are assembled:

- The pin, stripping, assembly (230) located at the left side of the receiver (210).

The pin, stripping, assembly (230) is equipped with the plunger, selector (253/A) and the spring, pin, stripping (235).

The stripping pin is used to lock the barrel support assembly (110 - see figure 2.b) onto the receiver assembly (201).

- The catch, magazine (241) located at the right side of the receiver (210).

The catch, magazine (241) is equipped with the spring, magazine catch (242).

The catch, magazine (241) locks the magazine (601 - see figure 2.g) into the receiver assembly (201).

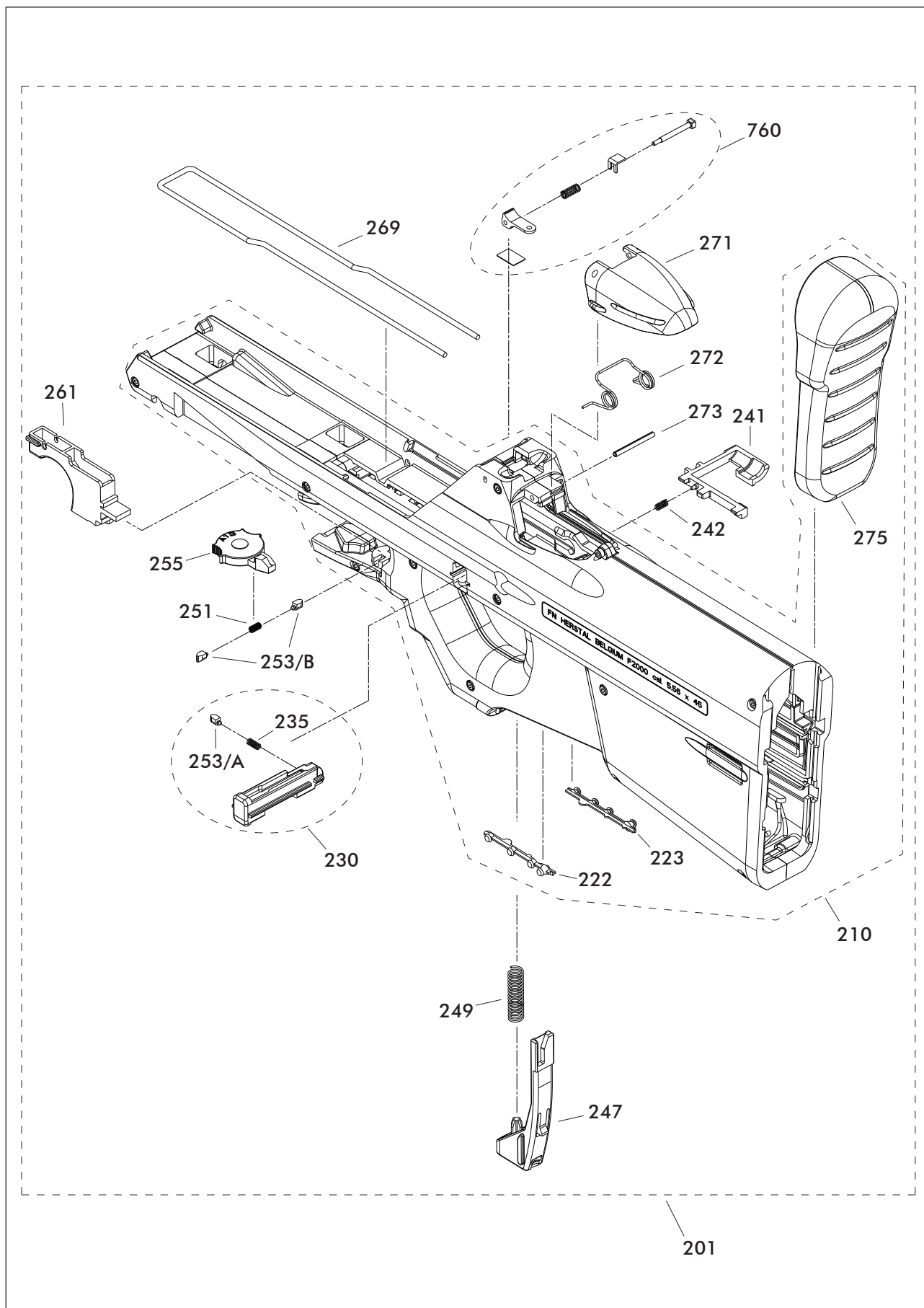


Fig. 2.c - Receiver assembly (201)

**2.2. PARTS LISTS (CONTINUED)****2.2.2. Receiver assembly (continued)****(b) Description (continued)**

- The button, catch magazine (247) located below the receiver (210).

The button, catch magazine (247) is equipped with the spring, button, catch magazine (249).

The button, catch magazine (247) actuates the catch, magazine (241) into the receiver (210).

- The body, trigger (261) located on the fire selector (255).

The body, trigger (261) is secured into the receiver (210) by the rod, trigger (269).

When the trigger is pulled, it pushes the rod, trigger (269).

- The fire selector (255) located under the body, trigger (261).

The fire selector (255) is secured onto the receiver (210) by the body, trigger (261).

*The fire selector (255) is used to set the weapon either to the position **SAFETY** ('S') or to a fire mode: **SINGLE SHOT** ('1') or **AUTOMATIC** ('A').*

The 2 plungers, selector (253/B) engages into internal notches of the fire selector (255) to position this one at one of the positions featuring the fire selector (255).

The 2 plungers, selector (253/B) are equipped with - and maintained into the receiver (201) by - the spring, plunger selector (251).

- The rod, trigger (269) located inside the receiver (210) and fixed to the body, trigger (261).

The rod, trigger (269) is guided in grooves of the receiver (210).

The rod, trigger (269) is pushed as the trigger is pulled. The rod, trigger (269) actuates a sear posterior in the hammer group assembly (510) to release the hammer.

- The cover (271) located at the top of the receiver (210).

The cover (271) is secured onto the receiver (210) by means of the grooved pin (273) and the cover spring (272).

The cover (271) is used to check visually the chamber.

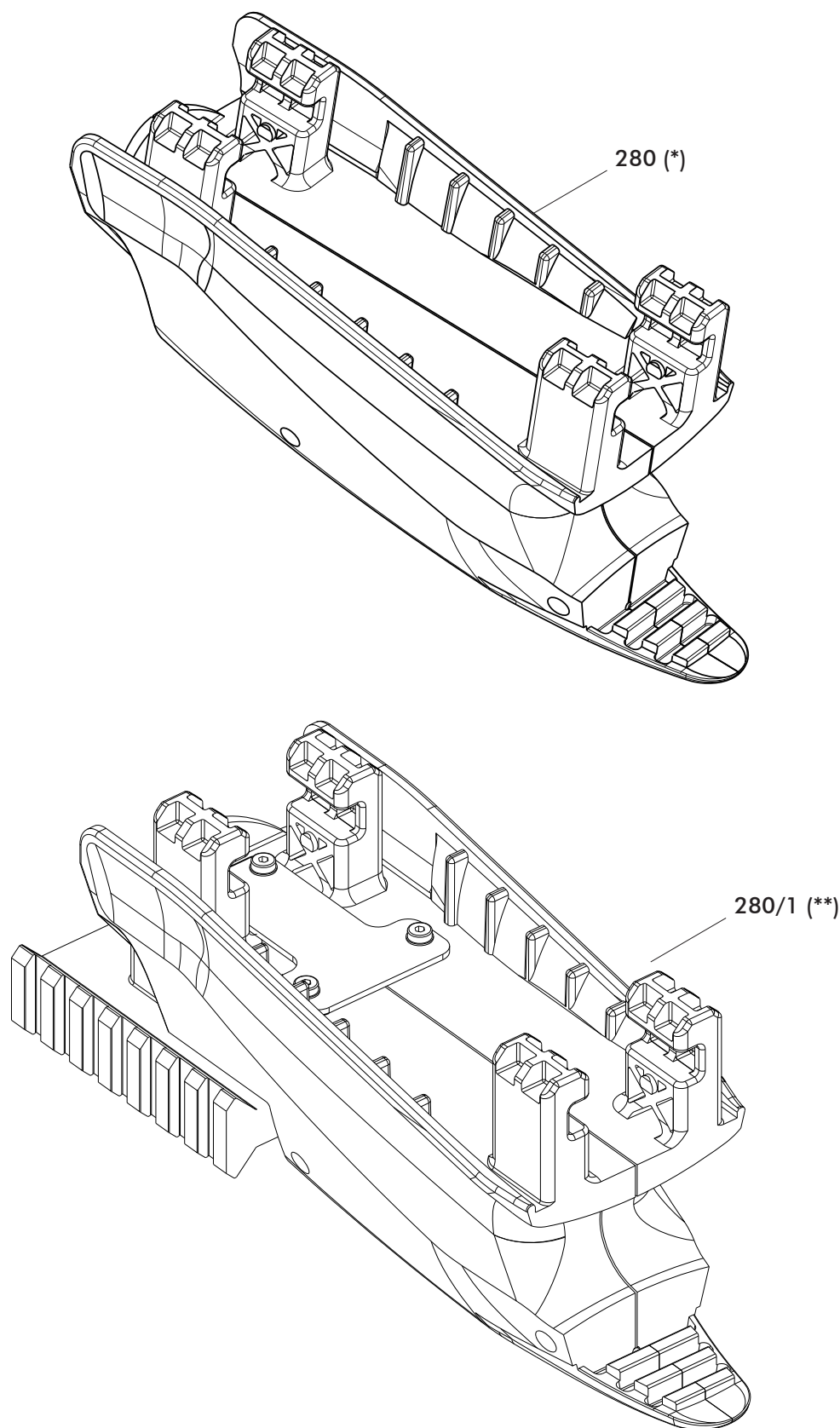


Fig. 2.d - Handguard (280) and handguard tri-rail (280/1)

**2.2. PARTS LISTS (CONTINUED)****2.2.3. Handguard and handguard tri-rail****(a) List of parts (Fig. 2.d)**

CAT n°	Description	Qty per unit
280 (*)	Handguard	1
280/1(**)	Handguard, tri-rail	1

(*) Only for the F2000 Tactical

(**) Only for the F2000 Tactical TR

(b) Description

The handguard/handguard tri-rail (280)/(280/1) located below the receiver assembly (201 - see figure 2.c).

The handguard/handguard tri-rail (280)/(280/1) is locked onto the receiver assembly (201 - see figure 2.c) by the barrel support assembly (110 - see figure 2.c).

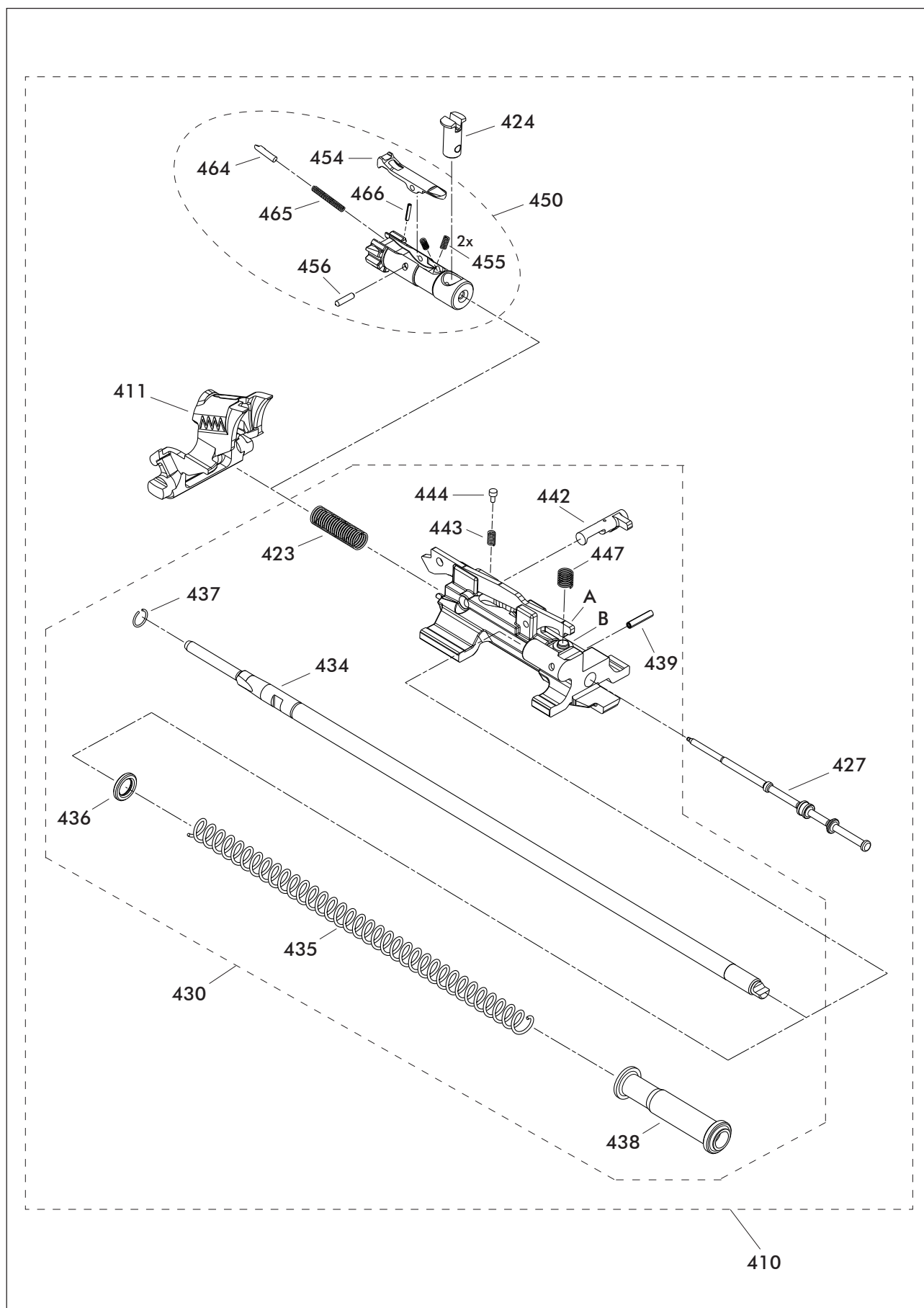


Fig. 2.e - Moving parts assembly (410)

**2.2. PARTS LISTS (CONTINUED)****2.2.4. Moving parts assembly**

(a) List of parts (Fig. 2.e)

CAT n°	Description	Qty per unit
410	Moving parts assembly	1
411	> Switch	1
424	> Cam, locking	1
427	> Firing pin	1
430	> Slide, assembly	1
423	> > Spring, bolt	1
434	> > Rod, slide	1
435	> > Spring, return	1
436	> > Spring, return, housing, front	1
437	> > Snap ring, round wire	1
438	> > Spring, return, housing, rear	1
439	> > Spring-type straight pin, coiled, std duty	1
442	> > Release unit	1
443	> > Spring, release unit, plunger	1
444	> > Plunger, release unit	1
447	> > Spring, lever, alignment, bolt	1
450	> Bolt assembly	1
454	> > Extractor	1
455	> > Spring, extractor	2
456	> > Axis, extractor	1
464	> > Ejector	1
465	> > Spring, ejector	1
466	> > Spring type straight pin, slotted	1

The following assembly cannot be ordered (separately): a number has however been attributed in order to facilitate the descriptions throughout this Maintenance Manual:

N°	Description	Qty per unit
A	Bolt alignment lever	1
B	Firing pin retaining plunger	1

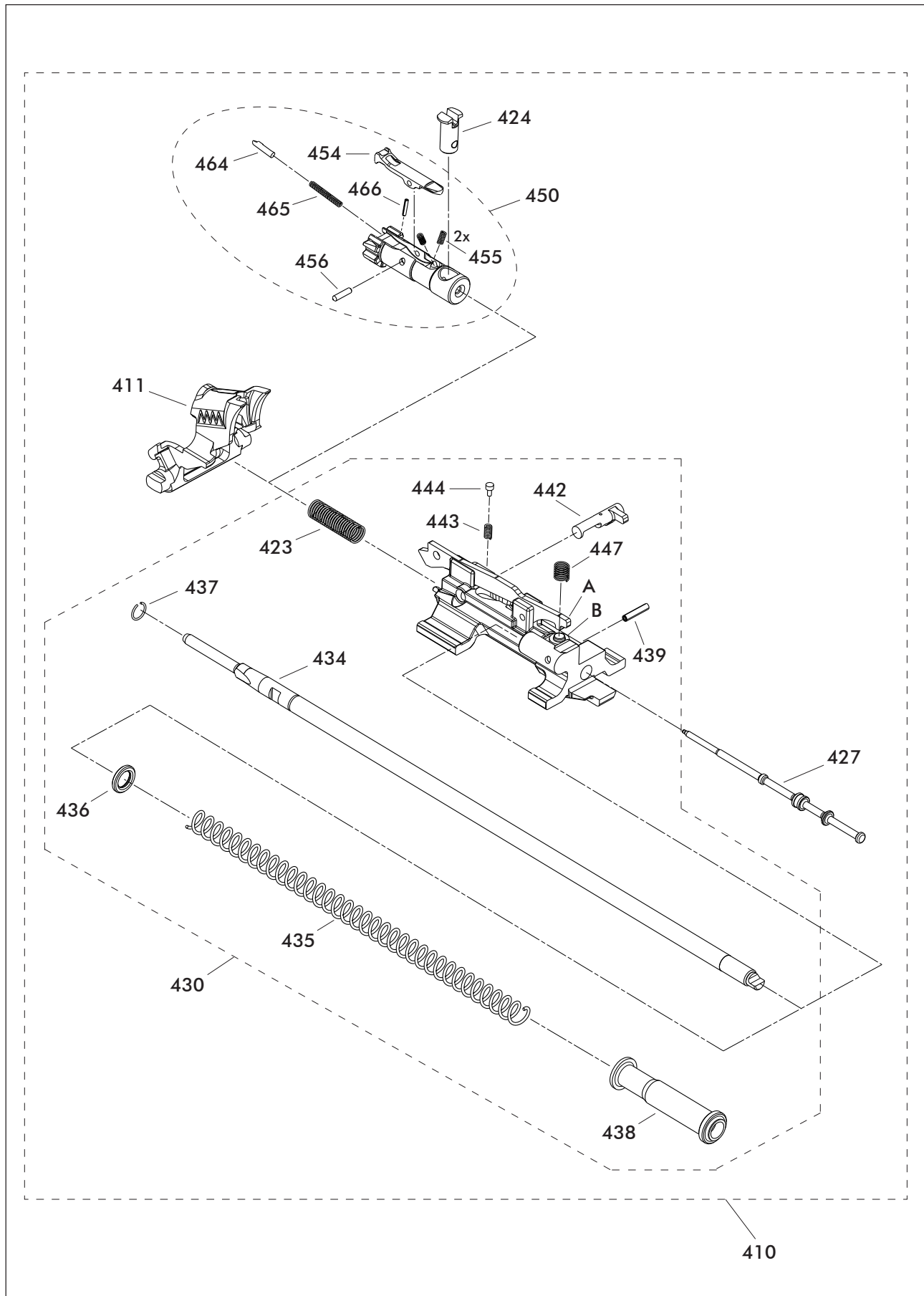


Fig. 2.e - Moving parts assembly (410)



2.2. PARTS LISTS (CONTINUED)

2.2.4. Moving parts assembly (continued)

(b) Description

The moving parts assembly (410) is composed of:

- The slide, assembly (430) which consists on a slide body onto which the following parts are assembled:
 - The rod, slide (434), equipped with the snap ring, round wire (437), onto which are assembled the spring, return, housing, front (436), the spring, return (435) and the spring, return, housing, rear (438).

The rod, slide (434) is screwed into the slide body and is secured by means of the spring pin (439).
 - The release unit (442) located in the slide body.

The release unit (442) is retained into the slide body by the plunger, release unit (444) equipped with the spring, release unit, plunger (443).
When pivoting, the release unit (442) actuates the extractor (454).
 - The spring, bolt (423) located inside the housing of the bolt assembly (450) in the slide body.
 - The spring, lever, alignment, bolt (447) located below the lug of the bolt alignment lever.

The spring, lever, alignment, bolt (447) hold the bolt alignment lever (A) and the firing pin retaining plunger (B).
- The bolt assembly (450) consisting on a bolt body onto which the following parts are assembled:
 - The extractor (454) located inside a housing of the bolt body.

The extractor (454) is secured onto the bolt body by means of the axis, extractor (456) and is held in place by the 2 springs, extractor (455).
The extractor (454) is used to extract the case after firing.
 - The ejector (464) located inside the front housing of the bolt body.

The ejector (464) is secured onto the bolt body by means of the spring pin (466) and is held in place by the spring, ejector (465).
The ejector (464) is used to eject the case into the switch (411) in order to introduce it into the tube.
- The switch (411) located at the front of the slide body.

The switch (411) is held in place by the spring, return, housing, rear (438).
- The firing pin (427) located inside the slide body and the bolt assembly (450).

The firing pin (427) is actuated by the hammer when the trigger is pulled. It strikes then the primer of the cartridge.
- The cam, locking (424) located inside the rear housing of the bolt.

The cam, locking (424) is held in place by the firing pin (427) and guides by the bolt alignment lever (A).
The cam, locking (424) is used to lead the bolt for locking or unlocking operation.

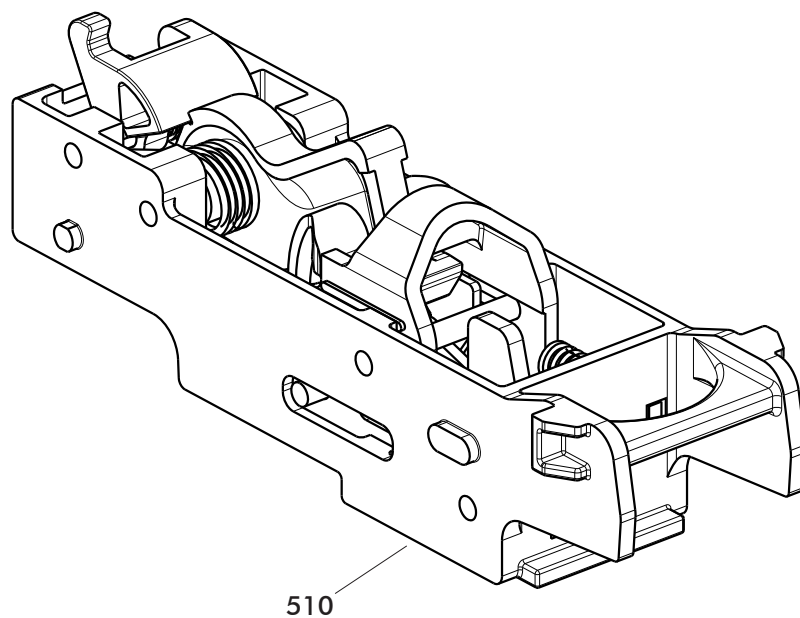


Fig. 2.f - Hammer group assembly (510)

**2.2. PARTS LISTS (CONTINUED)****2.2.5. Hammer group assembly**

(a) List of parts (Fig. 2.f)

CAT n°	Description	Qty per unit
510	Hammer group assembly	1

(b) Description

The hammer group assembly (510) is located inside the receiver assembly (201 - see figure 2.c).

The hammer group assembly (510) contains the hammer which actuates the firing pin (427 - see figure 2.e) when the trigger is pulled.

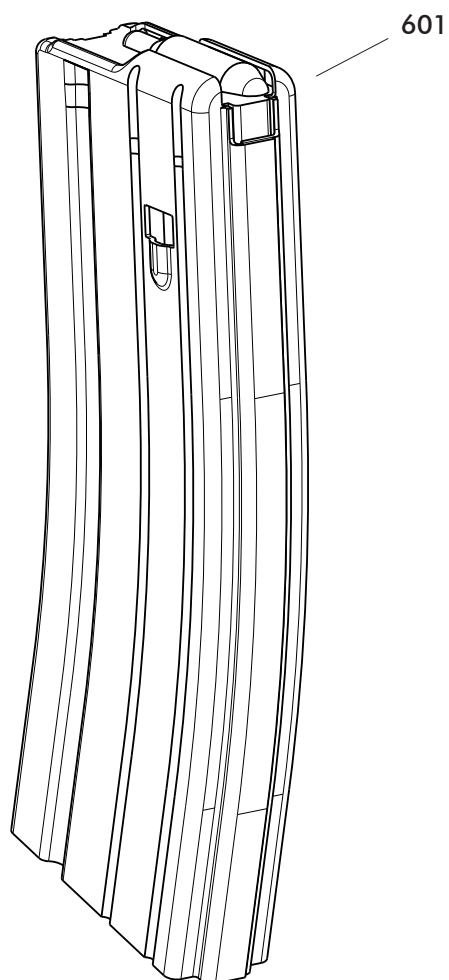


Fig. 2.g - Magazine 30 cartridges (601)

**2.2. PARTS LISTS (CONTINUED)****2.2.6. Magazine****(a) List of parts (Fig. 2.g)**

CAT n°	Description	Qty per unit
601	Magazine 30 cartridges	1

(b) Description

The magazine (601) can be fitted into the receiver assembly (201 - see figure 2.c).

The magazine (601) is held into the receiver assembly (201 - see figure 2.c) by the catch, magazine (241 - see figure 2.c).

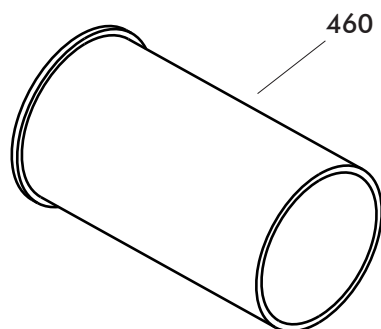


Fig. 2.h - Plug, flash hider (460)

**2.2. PARTS LISTS (CONTINUED)****2.2.7. Plug, flash hider**

(a) List of parts (Fig. 2.h)

CAT n°	Description	Qty per unit
460	Plug, flash hider	1

(b) Description

The plug, flash hider (460) is fitted onto the flash hider (151 - see figure 2.b).

The plug, flash hider (460) is used to protect the inside of the barrel (from dust, sand or water,...).



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CHAPTER 3: OPERATING PRINCIPLES

3.1. GAS OPERATION

- Percussion of the primer ignites powder inside the cartridge case.
- Powder combustion produce gas which expands rapidly creating high pressure inside the chamber.
- Gas pushes the bullet down the barrel at high speed.
- Just before the bullet leaves out the barrel, some of this gas pressure is taken through a small hole in the barrel (gas port).
- The gas pushes a piston in the gas block.
- The piston causes the moving parts to move backwards.

3.2. ROTATING BOLT

- The bolt rotates into the barrel extension and locks the chamber by means of its lugs.
- When the backward movement of the slide begins, the latter drives the rotation of the bolt by means of the cam, locking (424), following a ramp in the slide body.
- The bolt rotation releases its lugs from the barrel extension.
- The slide drives the bolt rearwards by means of the cam, locking (424) stopped at the end of the ramp.
- During the backward movement, the bolt extracts the case from the chamber by means of the extractor (454) gripping the case on its rim.

**3.3. FORWARD EJECTION (PATENTED SYSTEM BY FN HERSTAL)**

- After extraction of the case, this one remains held on the bolt by the extractor (454).
- So the case follows the bolt during its backward movement and a part of its forward movement (in opposite to usual systems where ejection follows extraction).
- During the forward movement of the bolt and slide (bolt and slide pushed forwards under the force of the spring, return (435)), the release unit (442) raises the extractor (454) which releases the case.
- The case is then propelled into the switch (411) by the action of the ejector (464).
- During the following of the forward movement of the bolt and slide, the switch (411) is raised and drives the case into the ejection tube.
- The case is then propelled through the case anti-return (178) and is pushed by the bolt alignment lever.
- The case continues going forwards and goes out of the weapon by the ejection opening located at the front right side of the weapon.

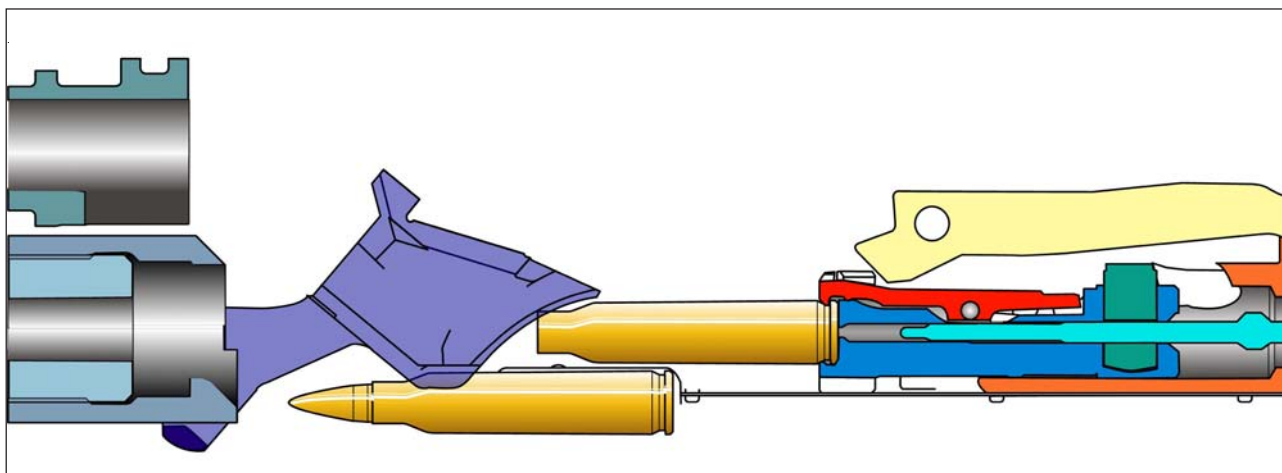


Fig. 3.3.a - Rearward movement of the moving parts

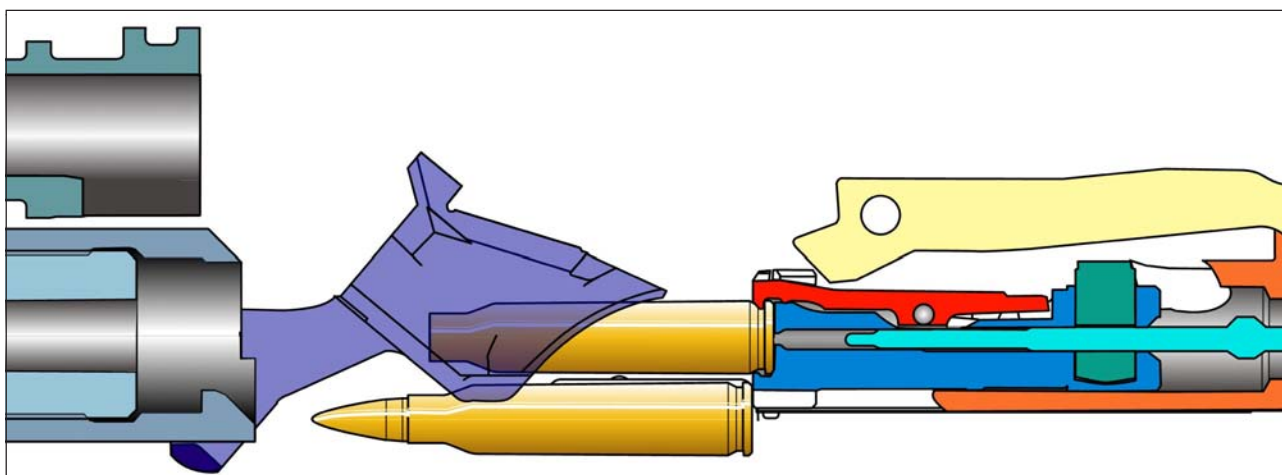


Fig. 3.3.b - Forward movement of the moving parts



3.3. FORWARD EJECTION (CONTINUED)

- The ejection opening can be protected by the manual locking of the cover, ejection opening (107):
 - Closing is recommended in order to limit entry of sand, etc in adverse conditions operation.
 - Opening is automatic after the case(s) thrust: it should not be opened before firing.
 - If after some short firing, the cover, ejection opening (107) is still closed, it can be opened manually in order to make the ejection tube empty.

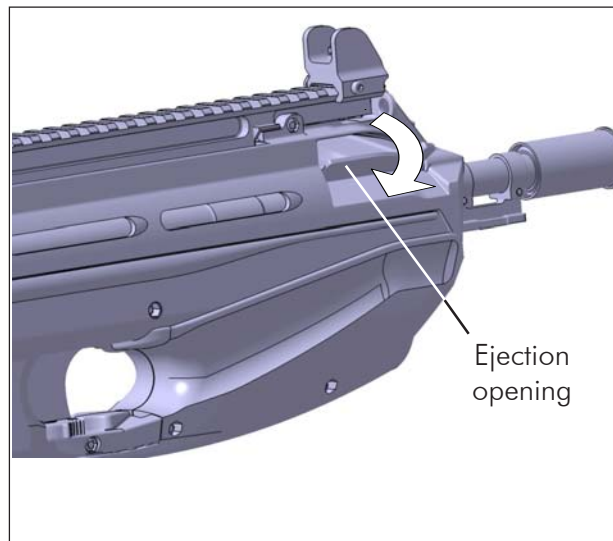


Fig. 3.3.c - Opening the ejection opening

3.4. FIRE SELECTOR (255) FEATURING 3 POSITIONS

- Position 'S' (SAFE):
 - The trigger is blocked and firing is impossible.
- Position '1' (SINGLE SHOT):
 - Pulling the trigger will fire one shot.
 - In order to fire the following shot, the trigger should be released and pulled again (this firing mode is then called semi-automatic).
- Position 'A' (FULL AUTOMATIC):
 - Pulling the trigger will fire a burst.
 - Releasing the trigger will stop the burst.
 - If the trigger is only pulled halfway rearwards, the weapon will fire semi-automatically.
 - Going on pulling the trigger until it goes no further will then fire the burst.

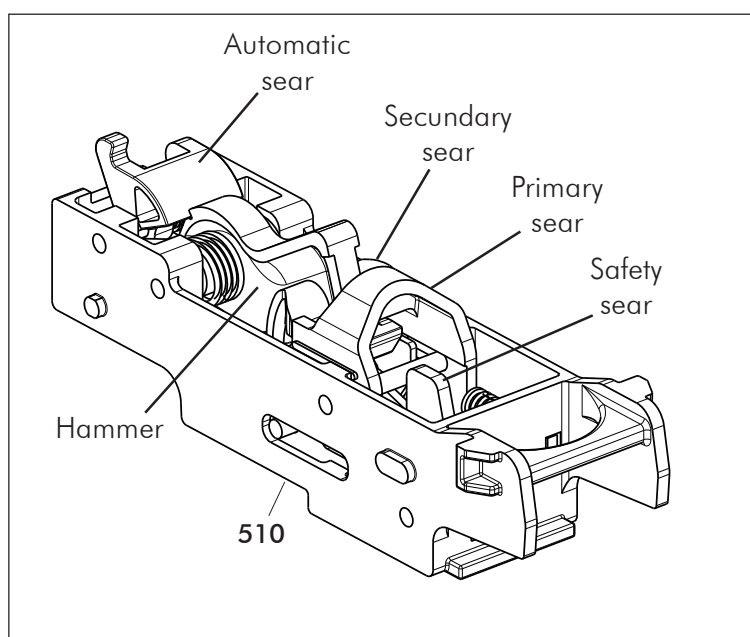


Fig. 3.6.a - Hammer group assembly

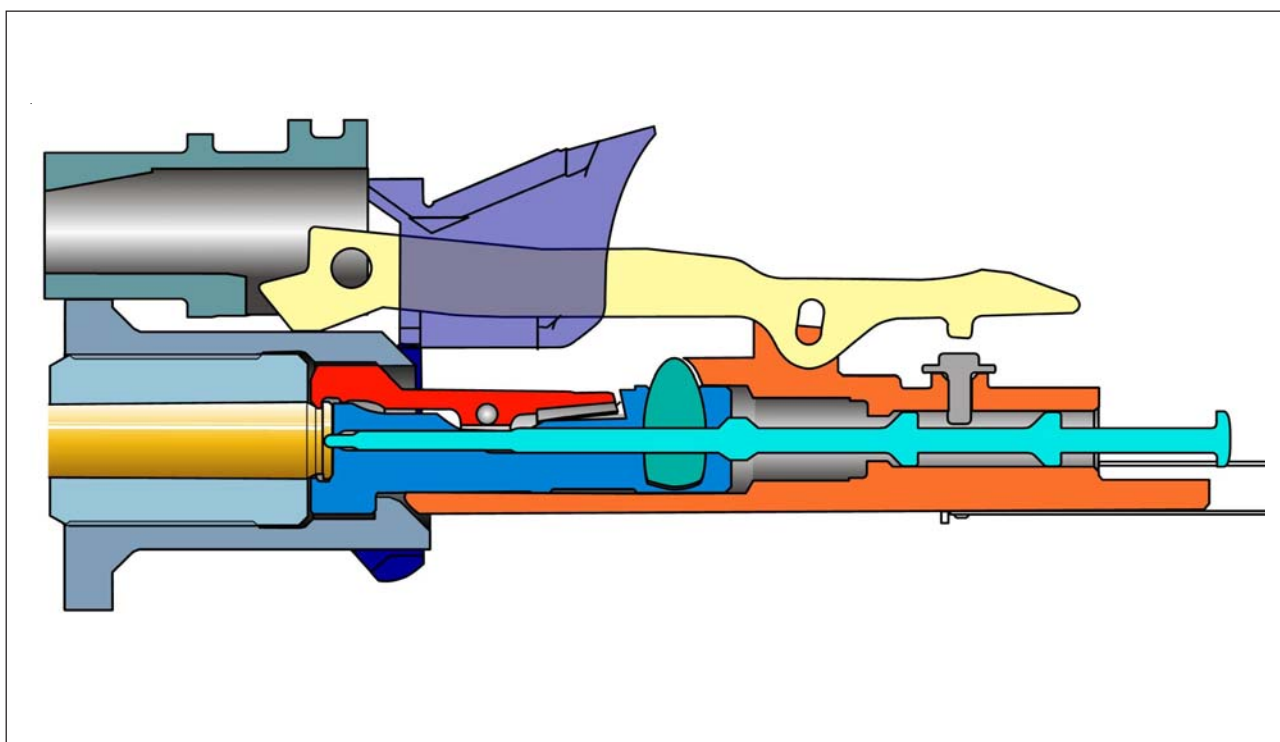


Fig. 3.6.b - Firing the first cartridge



3.5. SAFETY DEVICES

➤ Manual safety:

Fire selector (255) at 'S' position blocks the trigger.

➤ Locking safety:

Percussion is impossible if the bolt is not completely locked. Moreover, the automatic sear retains the hammer as long as the slide is not in its forward position.

➤ Drop safety:

The safety sear blocks the primary sear in case of accidental drop of the weapon.

3.6. HAMMER GROUP ASSEMBLY (510) PRINCIPLE

3.6.1. Releasing the hammer when pulling the trigger

- As reminder, in order to feed a cartridge into the chamber, a loaded magazine has been fitted into the weapon and the cocking handle has been completely pulled to the rear and then released.
- During the backward movement of the cocking handle and the moving parts, the slide has cocked the hammer: that means the hammer is in quasi-horizontal position and under the pressure of the 2 hammer springs.
- When the moving parts are in the forward position, the hammer remains in this position (cocked position) held by the primary sear.
- As the trigger is pulled, it moves the rod, trigger (269) which actuates the primary sear: pulling the trigger moves back the primary sear which releases the hammer.
- The hammer is released under the action of its springs and strikes the firing pin (427).
- The firing pin (427) strikes then the primer; following see § 3.1.

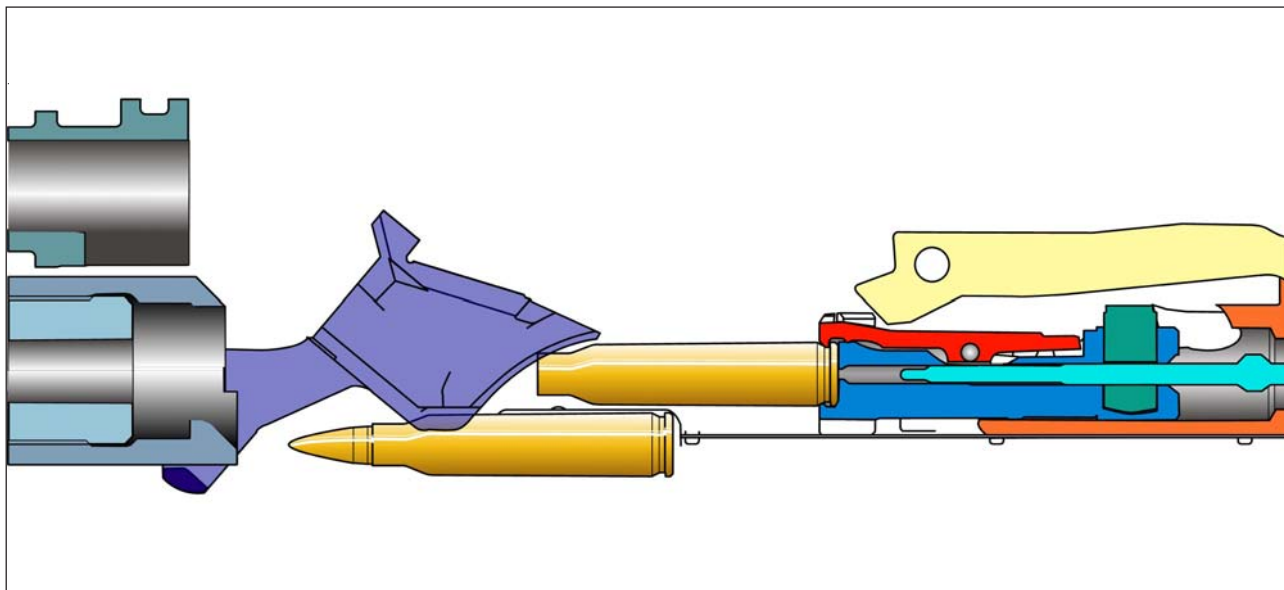


Fig. 3.6.c - Rearward movement of the moving parts

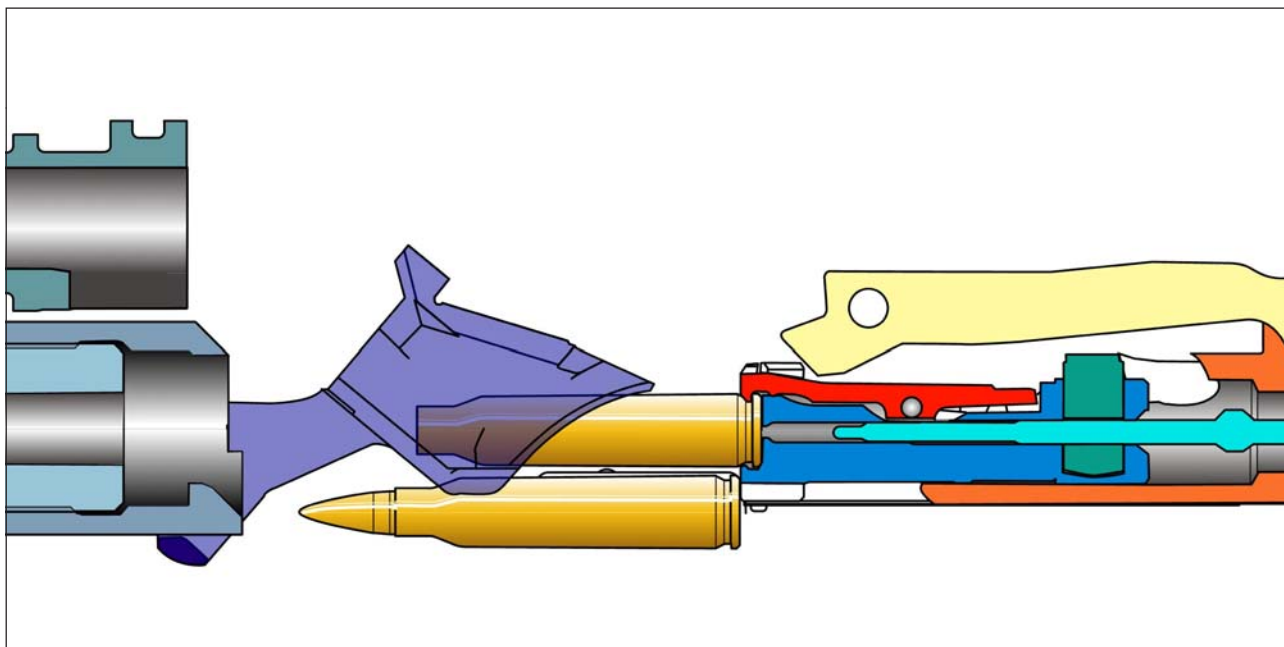


Fig. 3.6.d - Forward movement of the moving parts

**3.6. HAMMER GROUP ASSEMBLY (510) PRINCIPLE (CONTINUED)****3.6.2. Recocking the hammer after the first shot if the fire selector (255) is set on '1'**

- During its rearwards movement, the slide has cocked the hammer again.
- Under the pressure of the return spring, the moving parts are sent back forward.
- When the slide is at the forward position, the automatic sear is actuated by the slide and now the secondary sear retained the hammer.
- As long as the operator has not released the trigger, the primary sear does not retain the hammer, this one is then held by the secondary sear. The hammer strikes the firing pin (427).
- When the trigger is released the primary sear moves forward and the secondary sear releases the hammer which is caught by the primary sear.
- The hammer will be released again by pulling the trigger.
- The hammer strikes the firing pin (427).
- The firing pin (427) strikes then the primer; following see § 3.1.

3.6.3. Recocking the hammer after the first shot if the fire selector (255) is set on 'A'

If there is only one shot after having pulled the trigger, the trigger has only been pulled halfway: the secondary sear could hold the hammer and the operation is the same as in § 3.6.2.

If there is a burst, the operation is the following:

- During its rearwards movement, the slide has cocked the hammer again.
- As long as the operator has not released the trigger, neither the primary sear nor the secondary sear locks the hammer, this one is locked by the automatic sear.
- When the slide is at the forward position, the automatic sear is actuated by the slide and releases the hammer.
- The hammer strikes the firing pin (427).
- The firing pin (427) strikes then the primer; following see § 3.1.
- The full automatic operation continues until the trigger is released (and as long as the magazine is not empty).
- The operator releases the trigger and the primary sear comes back into its initial position and holds the hammer in cocked position.



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CHAPTER 4: SAFETY INFORMATION

4.1. WARNINGS AND CAUTIONS

The following instructions should be understood before loading and firing the weapon and before any intervention (disassembly, maintenance, ...) on it:

- ✓ The F2000 Tactical/Tactical TR can cause injury or death up to 3,000 m.
- ✓ Always handle the F2000 Tactical/Tactical TR, like any other weapon, with extreme care and with the respect due to a loaded weapon, even though you are certain the weapon is unloaded. Never touch the trigger unless you are ready to fire.
- ✓ Never modify parts of the weapon. Repairs and disassembly exceeding the basic field stripping may only be carried out by armorers.
- ✓ If the weapon has been heavily oiled or greased for shipment or storage, clean it thoroughly and lightly lubricate the metal parts before firing.
- ✓ The barrel should be perfectly dry before firing.
- ✓ Never try to clear a barrel obstruction by firing.

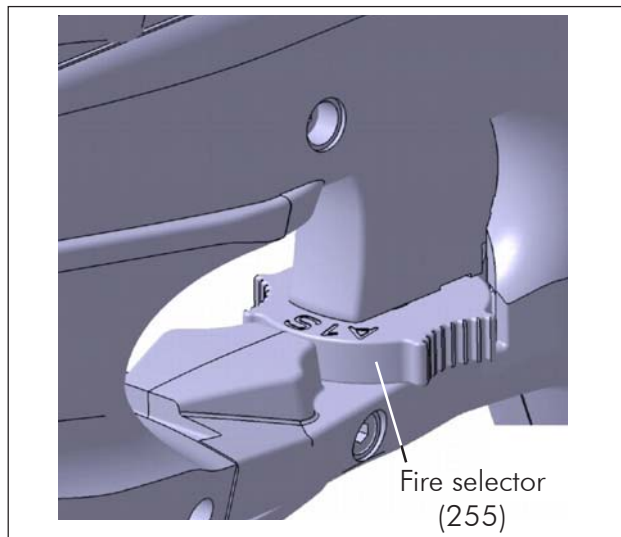


Fig. 4.2.a - Fire selector (255) at position 'S'



Fig. 4.2.b - Removal of the magazine (601)

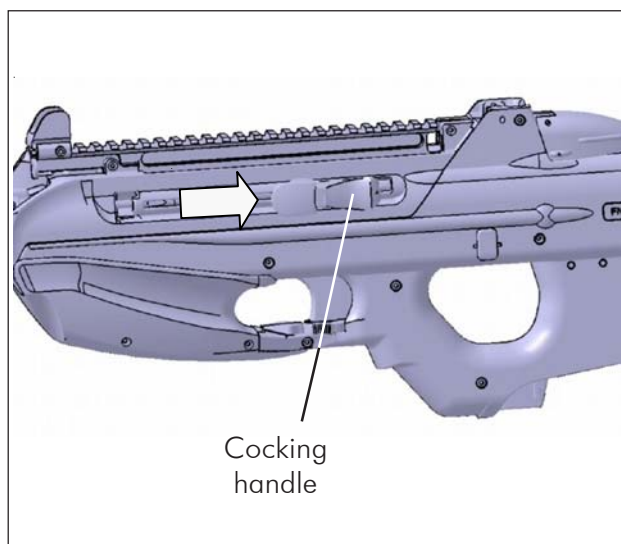


Fig. 4.2.c - Cocking handle to the rear

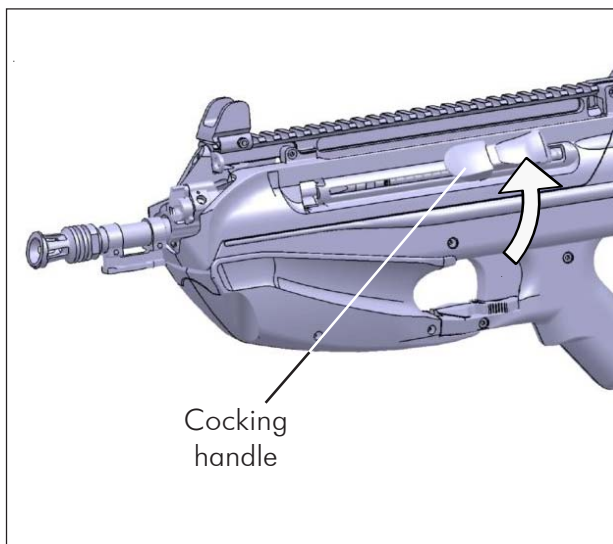


Fig. 4.2.d - Locking the cocking handle

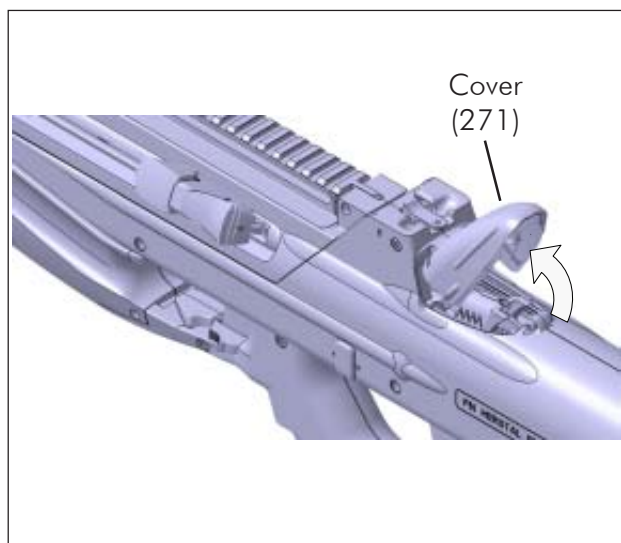


Fig. 4.2.e - Opening the cover (271)

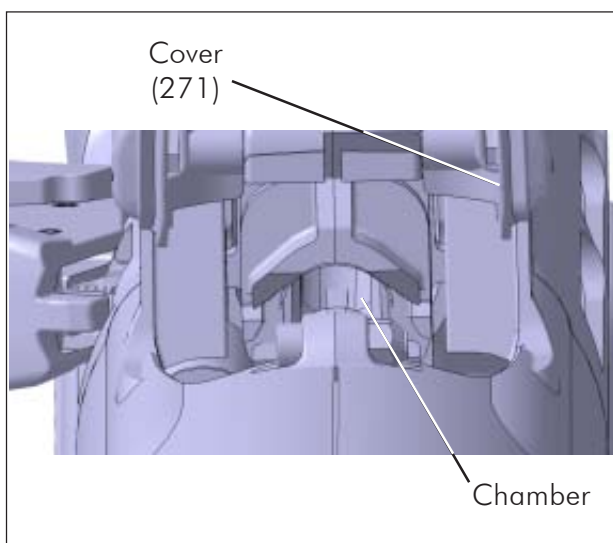


Fig. 4.2.f - Checking the chamber is empty



4.2. SAFETY CHECKS

Before any handling, shipment and/or storage of the F2000 Tactical/Tactical TR, carry out this procedure .

- Keep weapon pointed in a safe direction.
- Set the fire selector (255) to the position 'S' (**SAFETY**) (Fig. 4.2.a).
- If the magazine (601) is still present in the weapon, (1) push the button, catch magazine (247) and then (2), by using the same hand, remove the magazine out of the weapon pulling it downwards (Fig. 4.2.b).
- Pull the cocking handle completely rearwards and then let it move freely to the front (Fig. 4.2.c).
- Pull the cocking handle completely rearwards and then push it upwards to lock it at its rear position (Fig. 4.2.d).

Note: When taking its place into the locking notch, the cocking handle has a short back movement to the front.

- Raise the cover (271) (Fig. 4.4.e) and looking through the opening of the cover (271), check that the chamber is empty (Fig. 4.2.f) and the bolt free of cartridge or empty case.

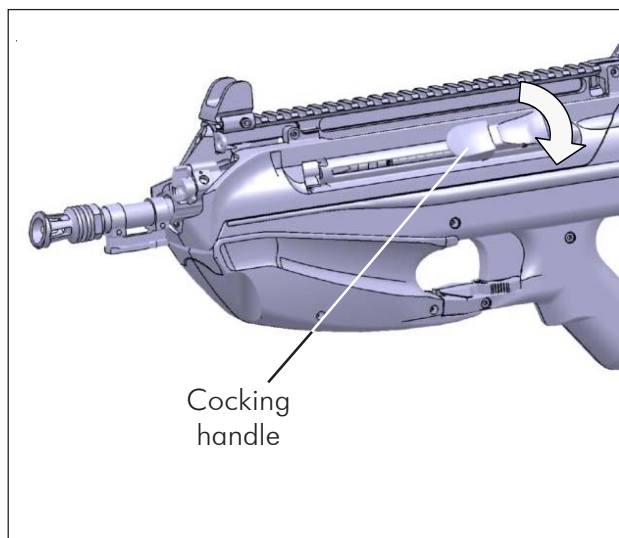


Fig. 4.2.g - Unlocking the cocking handle

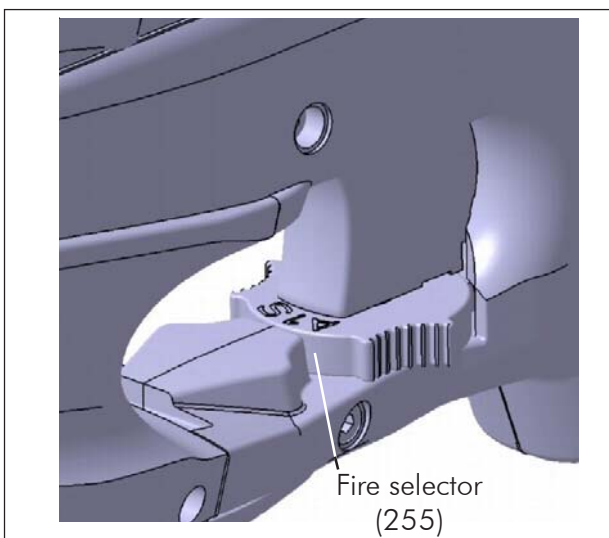


Fig. 4.2.h -Fire selector (255) at position 'I'

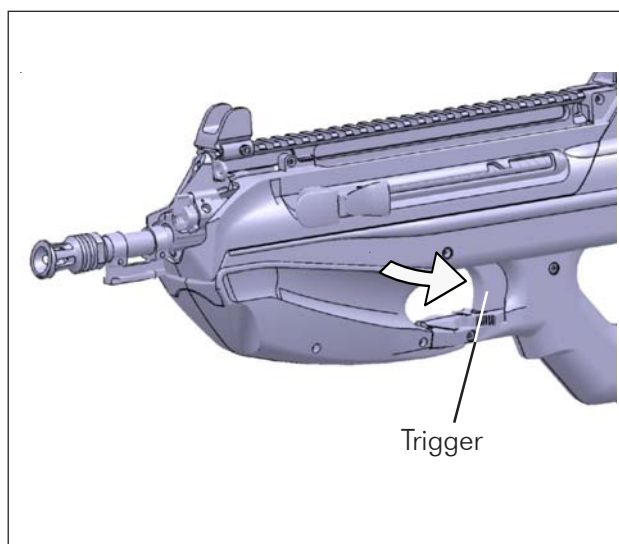


Fig. 4.2.i - Pulling the trigger

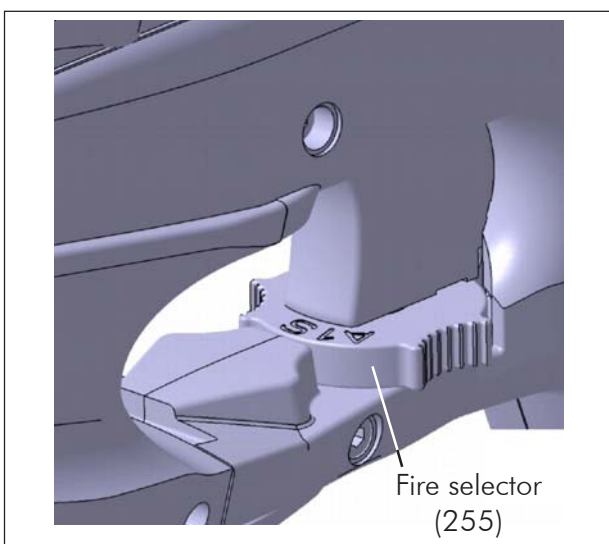


Fig. 4.2.j - Fire selector (255) at position 'S'

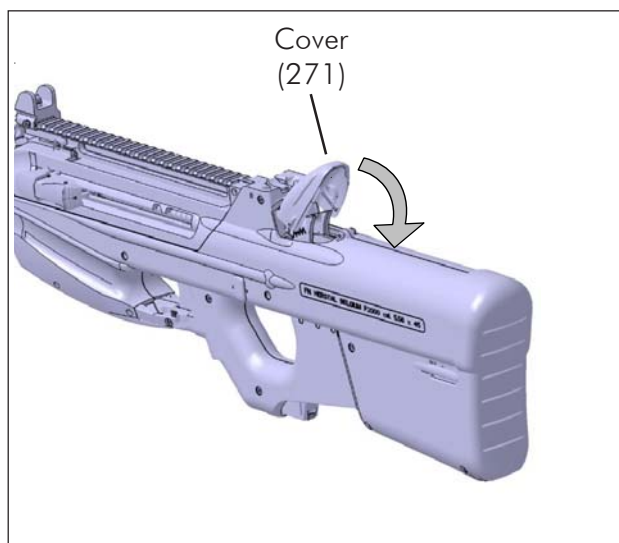


Fig. 4.2.k - Closing the cover (271)

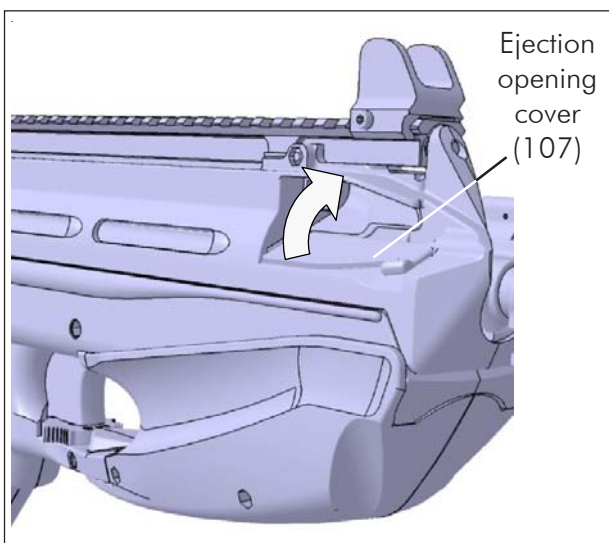


Fig. 4.2.l - Closing the ejection opening cover (107)



4.2. SAFETY CHECKS (CONTINUED)

- Push down the cocking handle to unlock it and let it move to the front (Fig. 4.2.g).
- Set the plug, gas (191) into 'normal position (see § 6.3).
- Point the weapon in a safe direction and set the fire selector (255) to the position '1' (**SINGLE SHOT**) (Fig. 4.2.h).
- Press the trigger to release the hammer (Fig. 4.2.i).
- Set the fire selector (255) to the position '**S**' (**SAFETY**) (Fig. 4.2.j).
- Close the cover (271) (Fig. 4.2.k).
- Close the ejection opening cover (107) until it clicks (Fig. 4.2.l).

Note: Be sure to initially clean the weapon before use.



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CHAPTER 5: RECEPTION OF THE WEAPON

Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

- Take the packing case and inspect it for damage.

If the packing case shows traces of deterioration, take note of them (detailed description or photo) and report it to FN Herstal.

- Open the packing case and check its contents according to the packing list.

If there is a problem, report it to FN Herstal.

- Carry out the field stripping procedure (see § 7.1) and the complementary disassembly (see § 7.2).

If something seems abnormal, report it to FN Herstal.

- Clean the bore of the barrel to remove the existing preservation lubricant. Remove the preservation lubricant from the moving parts assembly (401).

For more detailed cleaning instructions, refer to chapter 8.

- Lubricate the barrel extension and the moving parts assembly (401) with a maintenance or functional lubricant.

For more detailed lubrication instructions, refer to chapter 8.

At this stage the other component parts of the F2000 Tactical/Tactical TR do not need lubrication.

- Reassemble the weapon (see § 7.3 and § 7.4).

CAUTION

Never lubricate components of the magazine (601).

The barrel should not be oiled before firing.



Fig. 6.1.a - Removal of the magazine (601)

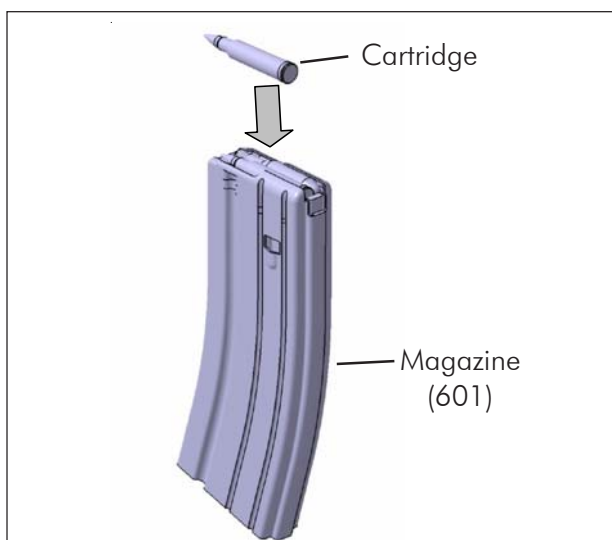


Fig. 6.1.b - Loading the magazine (601)

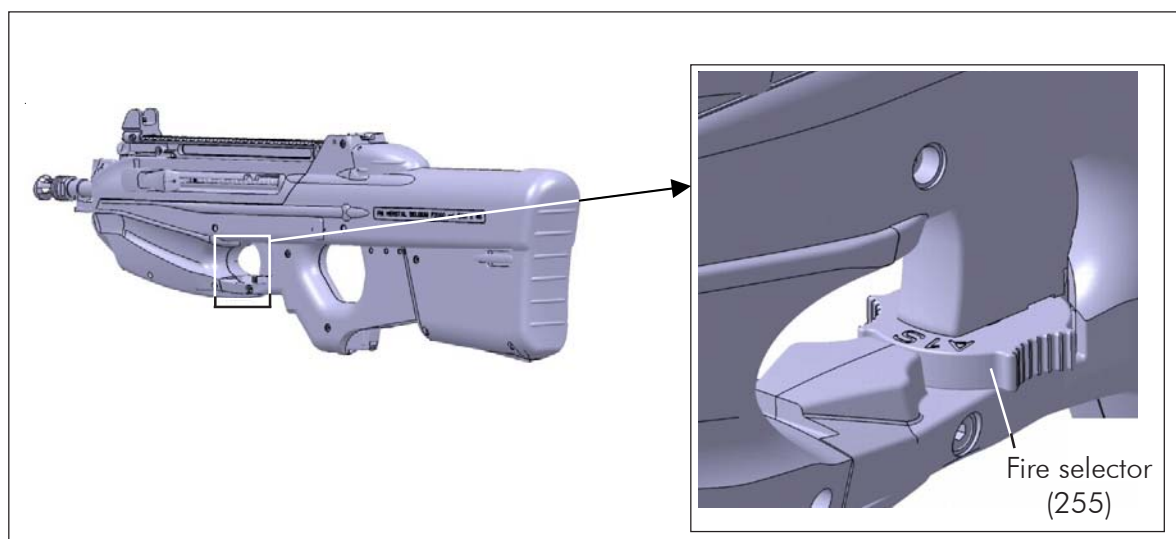


Fig. 6.2.a - Fire selector (255) at position 'S'

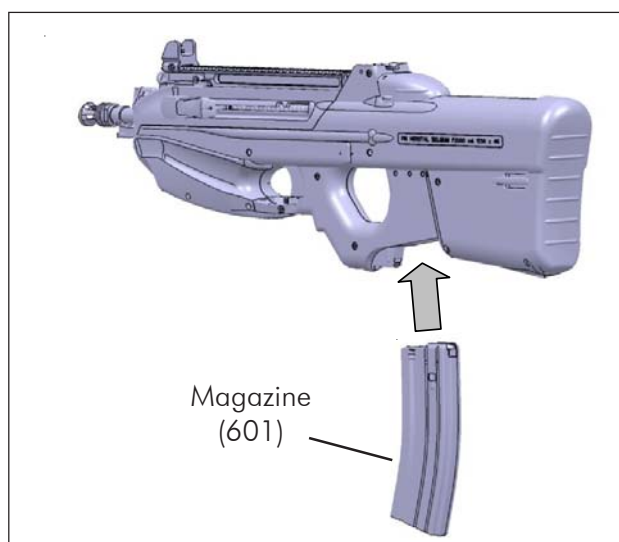


Fig. 6.2.b - Installation of the magazine (601)

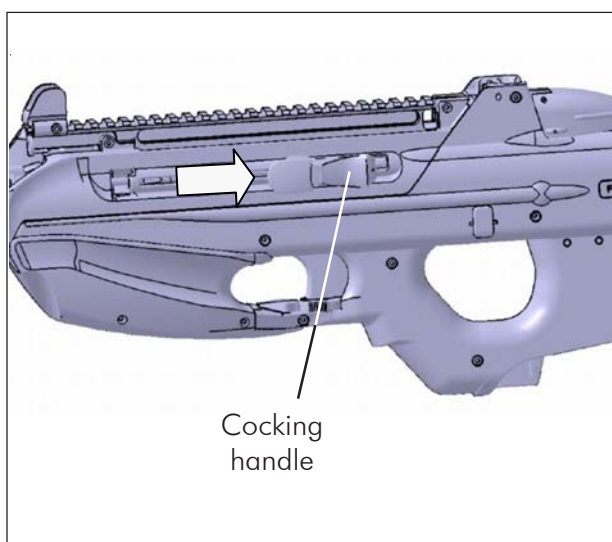


Fig. 6.2.c - Cocking handle to the rear (601)



CHAPTER 6: USING THE WEAPON

Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

6.1. LOADING THE MAGAZINE (601)

- If the magazine (601) is still in the weapon, (1) press the button, catch magazine (247) and (2) remove the magazine (601) from the weapon by pulling it downwards (Fig. 6.1.a).
- Fill cartridges into the magazine (601) proceeding as follows (Fig. 6.1.b):
 - Keep the magazine (601) orientating its feeding lips upwards.
 - Using thumb, push the ammunition, one by one, into the magazine (601).

CAUTION

The magazine (601) has a maximum capacity of 30 cartridges.
Never try to load more than 30 cartridges into the magazine (601).

6.2. LOADING AND COCKING THE WEAPON

Preliminary note: It is assumed that the safety checks have been carried out (see § 4.2) and that the weapon has been correctly cleaned and lubricated (see chapter 8).

6.2.1. Loading the weapon

- Keep the weapon pointed in a safe direction.
- Set the fire selector (255) to the position 'S' (**SAFETY**) (Fig. 6.2.a).
- Taking the loaded magazine by its bottom part install it and push it firmly to lock it (Fig. 6.2.b).

Notes: - To lock the magazine (601), push it firmly on its bottom part.
- Check the magazine (601) is locked on the weapon by pulling it downwards.

6.2.2. Cocking the weapon

- Pull the cocking handle completely rearwards and then release it (Fig. 6.2.c).

Note: This causes the hammer to be cocked and the first cartridge to be chambered.

Caution: Do not hold back the cocking handle during its forwards motion.

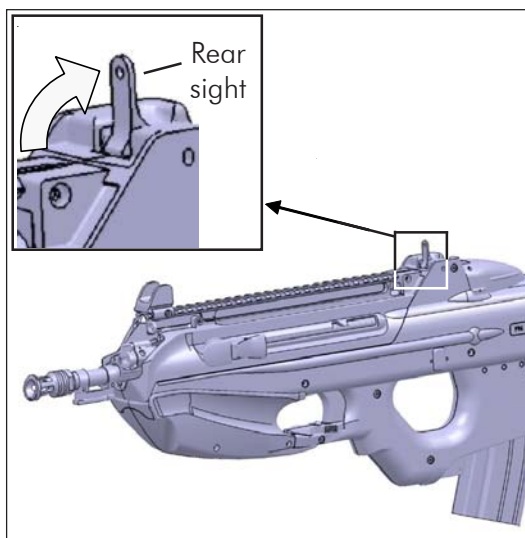


Fig. 6.3.a - Raise the back-up rear sight

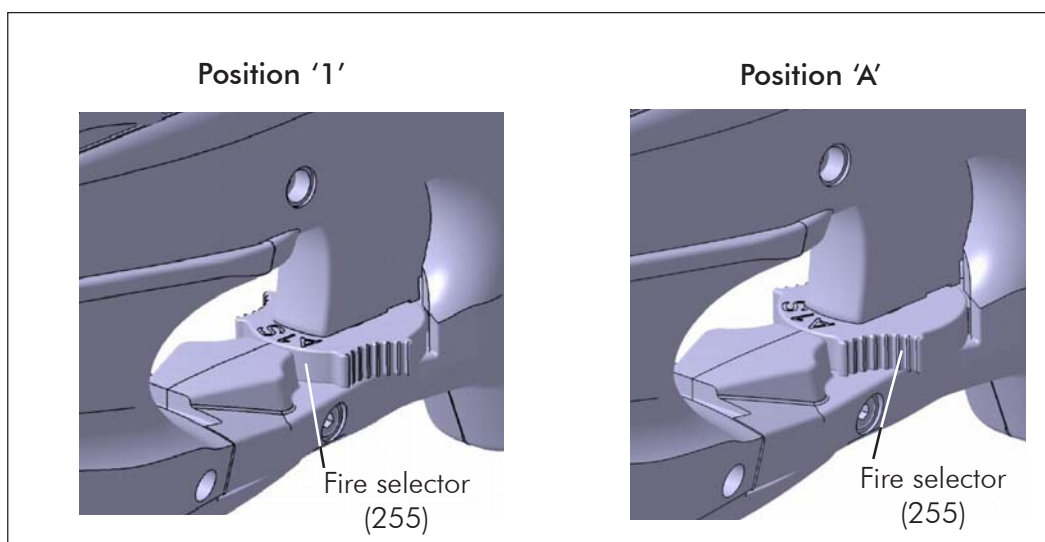


Fig. 6.3.b - Positioning the fire selector (255)

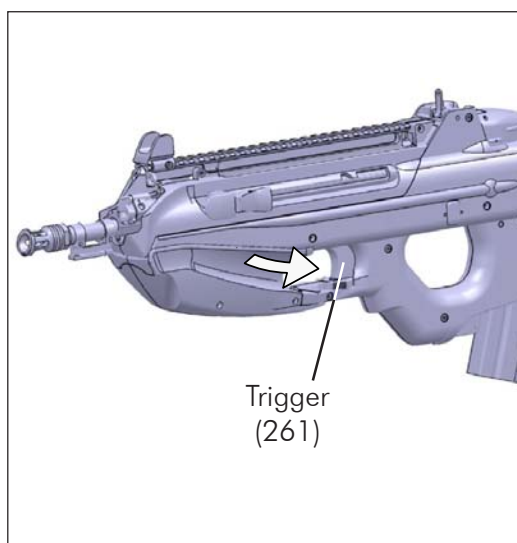


Fig. 6.3.c - Pulling the trigger (261)

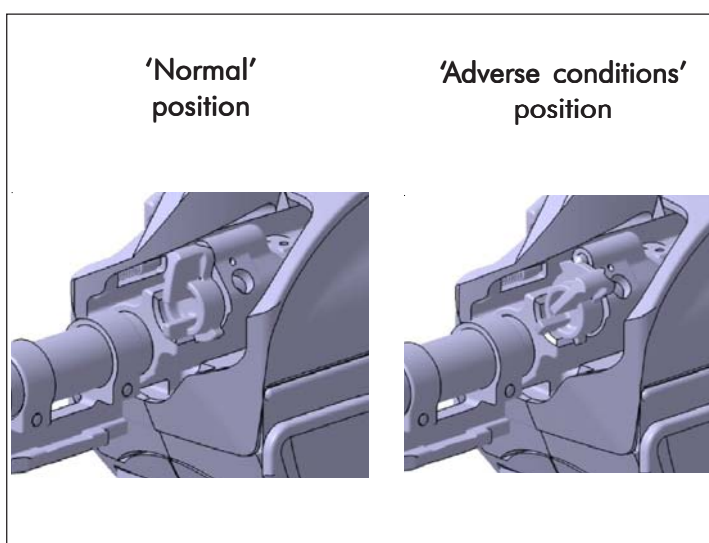


Fig. 6.3.d - Positioning the plug, gas (191)



6.3. FIRING THE WEAPON

- If there is not scope sight, raise the mechanical rear sight (Fig. 6.3.a).
- Aim the weapon at the target.
- Set the fire selector (255) to the position '1' (**SINGLE SHOT**) or 'A' (**AUTOMATIC**) (Fig. 6.3.b).
- Pull the trigger (Fig. 6.3.c):
 - If the "**single shot**" mode has been selected, the rearward movement of the trigger is restricted: one shot will be fired for each trigger pull.
 - If the "**automatic**" mode has been selected, the trigger should be pulled completely rearwards and held there ; the weapon will then start firing a burst.

Note: In the "**automatic**" mode, if the trigger is only pulled halfway rearwards, the weapon will only fire a single shot. In that conditions, to fire a burst, do not release the trigger but go on pulling it all the way rearwards until the burst starts.

Cyclic rate of fire

The cyclic rate of fire (in the "**automatic**" mode) is about 850 rpm in normal firing conditions.

The F2000 Tactical/Tactical TR is equipped with a plug, gas (191), which is a regulator featuring two positions:

- The 'normal' position (Fig. 6.3.d)
This position is used in normal firing conditions.
- The 'adverse conditions' position (Fig. 6.3.d)
This position should only be used if the firing conditions are adverse (mud, sand, frost,...)
If this position is used in normal conditions, the cyclic rate of fire is higher than the normal one and the control of the weapon becomes more difficult.

6.4. UNLOADING THE WEAPON

- Carry out the safety checks (see § 4.2).

Note: When the cocking handle is pulled completely rearwards and then released, if a cartridge or a case was in the chamber, it will be ejected through the ejection tube and will go out by the ejection opening, if needed by opening the ejection opening cover (107) and by pointing the barrel downwards.

Note: When the cocking handle is pushed down to unlock it and moves freely to the front, the moving parts are brought back to the front and release the tension of the return spring.

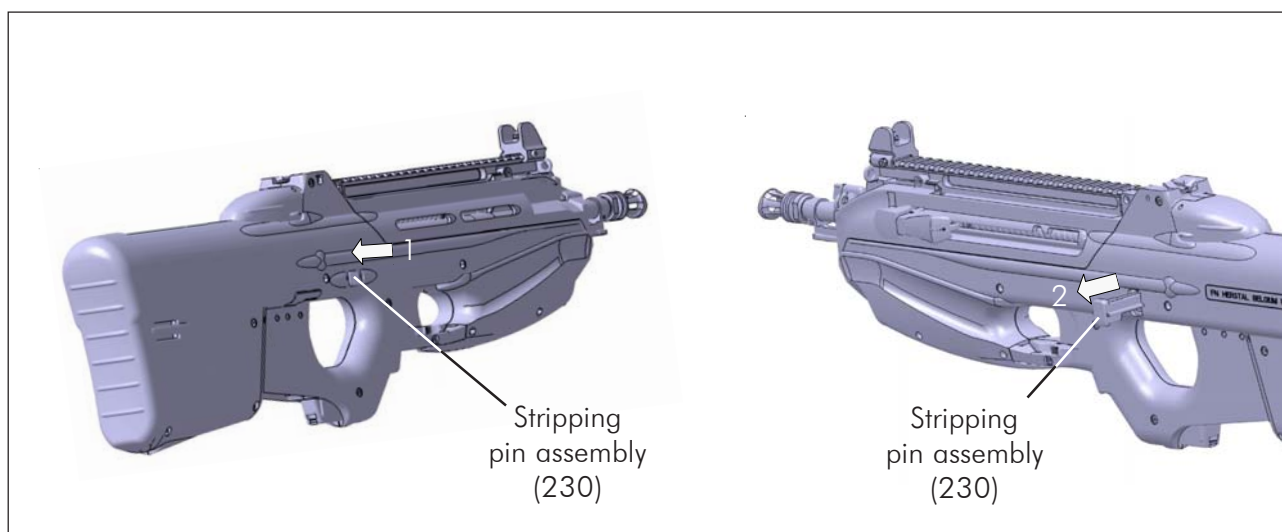


Fig. 7.1.a - Releasing of the stripping pin assembly (230)

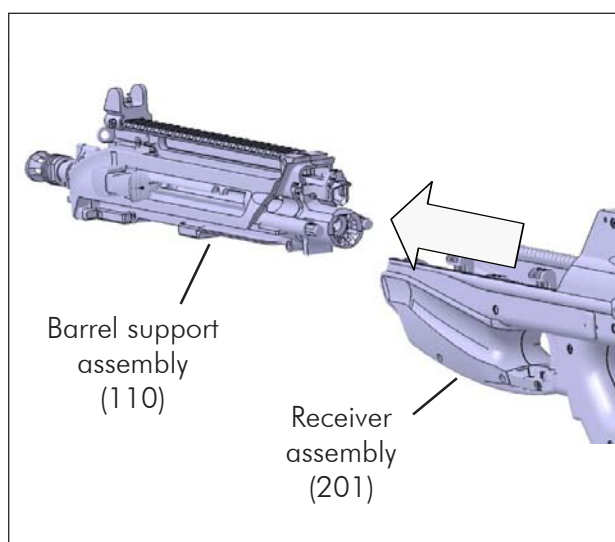


Fig. 7.1.b - Removal of the barrel support assembly (110)



CHAPTER 7: FIELD STRIPPING

Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

It is very important to become familiar with the field stripping procedure of the weapon as it is required during the cleaning procedure which ensures reliable operation of the F2000 Tactical/Tactical TR.

7.1. FIELD STRIPPING

7.1.1. Safety handling

- Carry out the safety checks (see § 4.2).
- Pull the cocking handle completely rearwards and release it.

Note: The hammer is then cocked to facilitate the removal of the hammer group assembly (510).

7.1.2. Barrel support assembly (110)

Warning: After firing, the barrel can be hot.

- Push the stripping pin assembly (230) located at the right side of the weapon (Fig. 7.1.a).

The stripping pin assembly (230) will then go out at the left side of the weapon.

- Pull the stripping pin assembly (230) at the left side of the weapon until it stops (Fig. 7.1.a).
- Remove the barrel support assembly (110) out of the receiver assembly (201) by pushing it forwards (Fig. 7.1.b).

Note: The last step will be facilitated by pulling the cocking handle completely rearwards and then by releasing it once or twice.

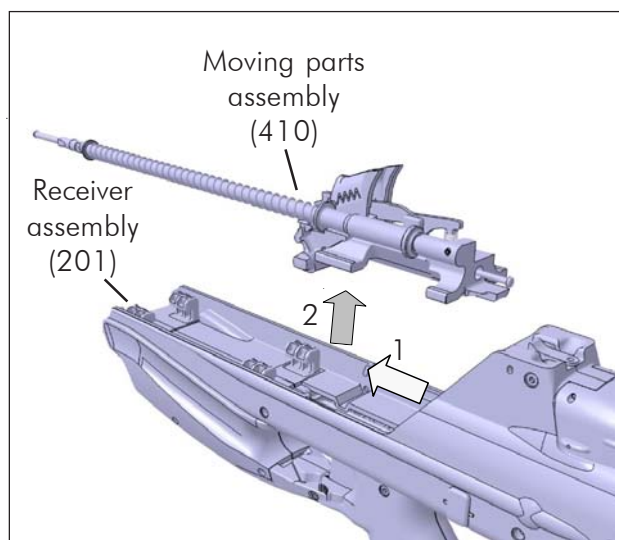


Fig. 7.1.c - Removal of the moving parts assembly (410)

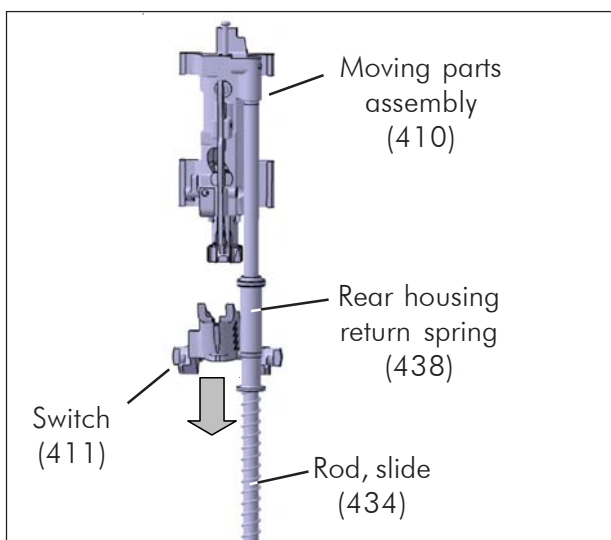


Fig. 7.1.d - Removal of the switch (411)

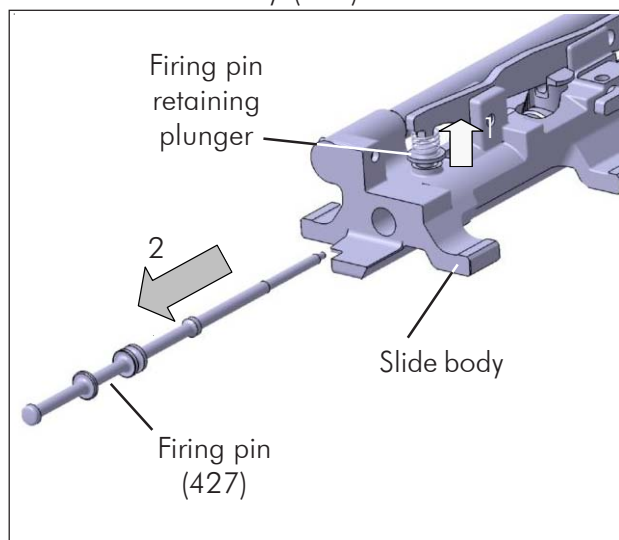


Fig. 7.1.e - Removal of the firing pin (427)

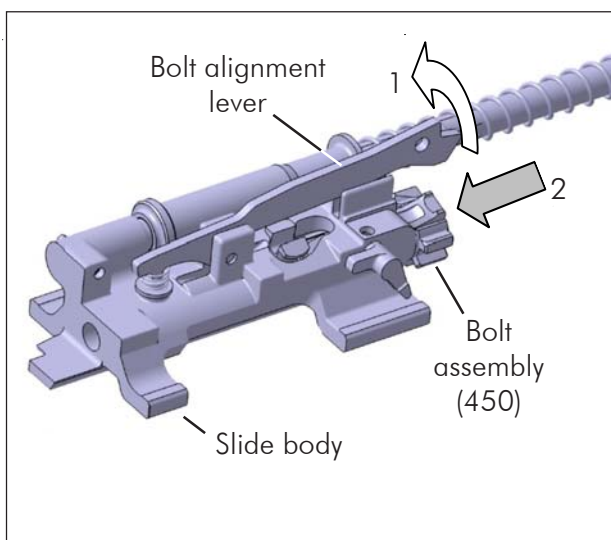


Fig. 7.1.f - Raising the bolt alignment lever and pushing the bolt assembly (450)

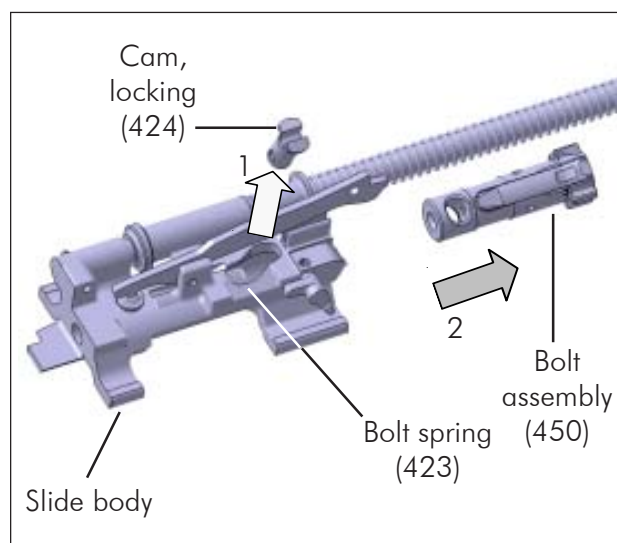


Fig. 7.1.g - Removal of the bolt assembly and the cam, locking (424)

**7.1. FIELD STRIPPING (CONTINUED)****7.1.3. Moving parts assembly (410)**

- Slide the moving parts assembly (410) forward as far as possible and then (2) pulling it upwards to remove it out of the receiver assembly (201) (Fig. 7.1.c).
- Position the moving parts assembly (410) vertically by supporting it on the tip of the rod, slide (434). Slide the rear housing return spring (438) downwards against the spring to release the switch (411). Remove then the switch (411) from the moving parts assembly (410) (Fig. 7.1.d).
- (1) Slightly raise the firing pin retaining plunger located on the upper part of the moving parts assembly (410) and (2) pull the firing pin (427) out of the slide body (Fig. 7.1.e).
- (1) Raise the tip of the bolt alignment lever and (2) push the bolt assembly (450) to the bottom of its housing (Fig. 7.1.f).
- (1) Keeping the bolt alignment lever raised and the bolt assembly (450) pushed, pivot the cam, locking (424) (1/4 of turn) and remove it. (2) Remove then the bolt assembly (450) out of the slide body (Fig. 7.1.g).
- Release the bolt alignment lever if necessary.

Note: Do not remove the bolt spring (423).

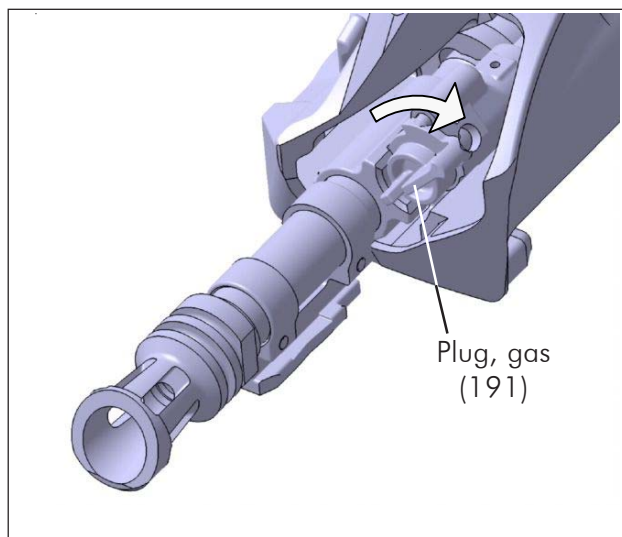


Fig. 7.1.h - Plug, gas (191) at 'adverse conditions' position

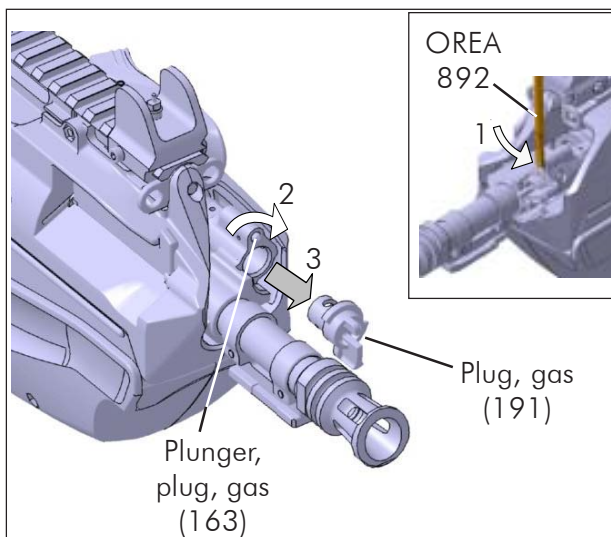


Fig. 7.1.i - Removal of the plug, gas (191)

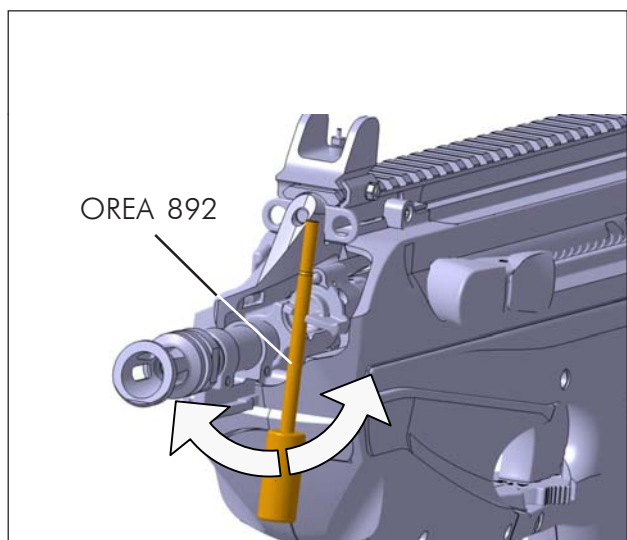


Fig. 7.1.j - Using OREA 892 as lever

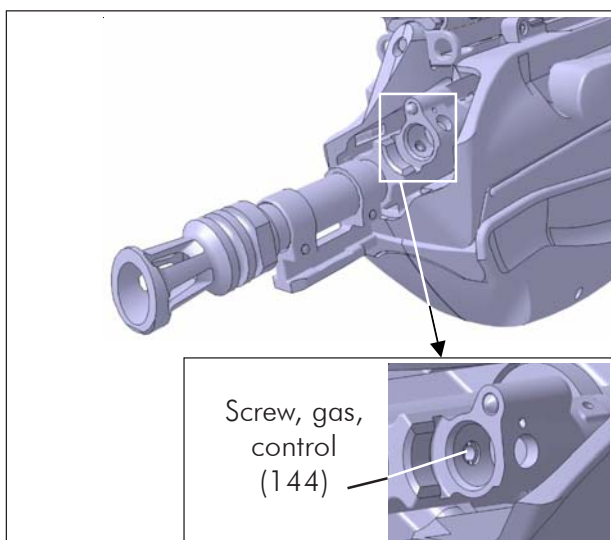


Fig. 7.1.k - Checking of the screw, gas control (144) and of the housing of the plug, gas

**7.1. FIELD STRIPPING (CONTINUED)****7.1.4. Plug, gas (191) and piston assembly (180)**

Warning: After firing, the plug, gas (191) can be hot.

- Turn the plug, gas (191) clockwise until it stops (in 'adverse conditions' position) (Fig. 7.1.h).
- (1) Using the scraper tip of the tool OREA 892 or another tool, push the plunger, plug, gas (163) into its housing to unlock the plug, gas (191). (2) Turn then the plug, gas (191) clockwise and (3) remove it out of the barrel support assembly (110) (Fig. 7.1.i).

Note: The accumulated residues on the plug, gas (191) could prevent its removal. In this case, use OREA 892 as lever to turn the latter (Fig. 7.1.j).

- If necessary, remove the gas residues from the inner diameter of the plug, gas (191) housing using the scraper of the OREA 892 (Fig. 7.1.k).

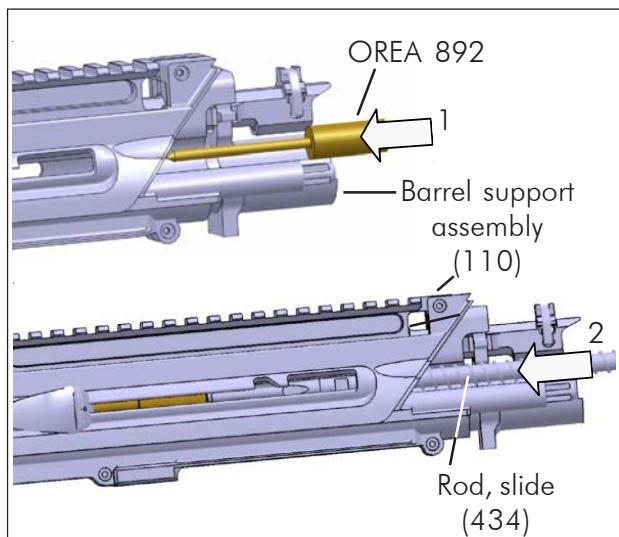


Fig. 7.1.l - Introduction of the OREA 892 and of the rod, slide (434)

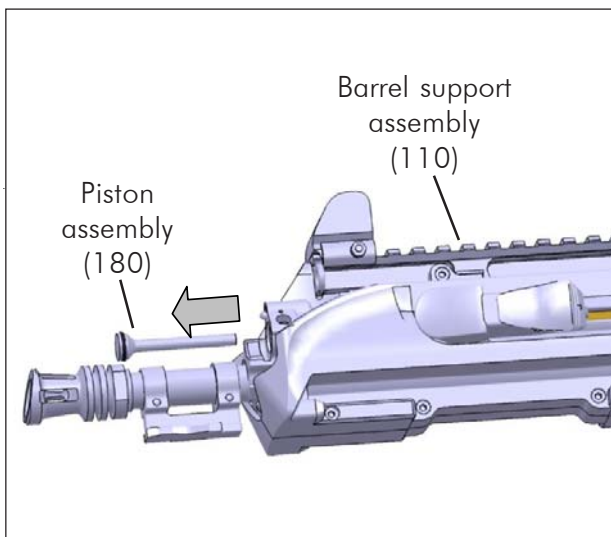


Fig. 7.1.m - Removal of the piston assembly (180)

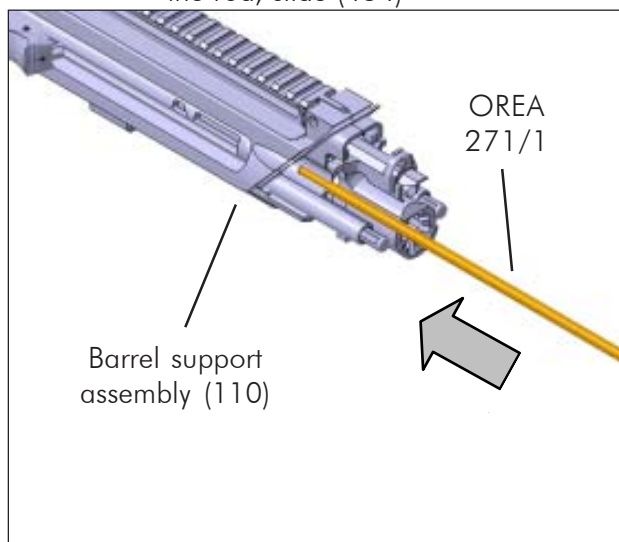


Fig. 7.1.n - Introduction of the OREA 271/1

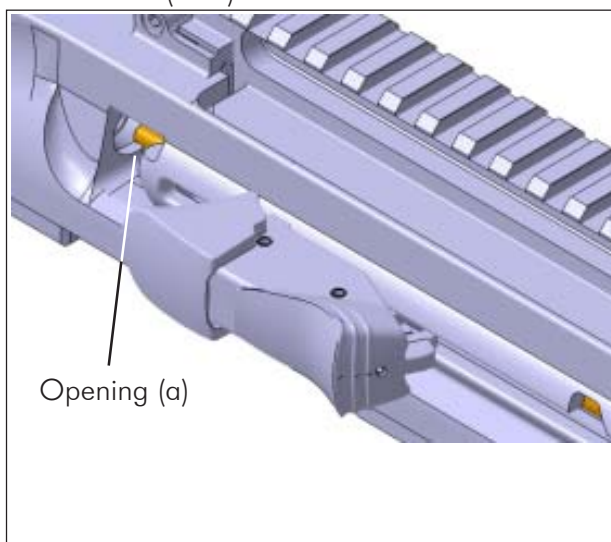


Fig. 7.1.o - Introduction into the piston rod housing

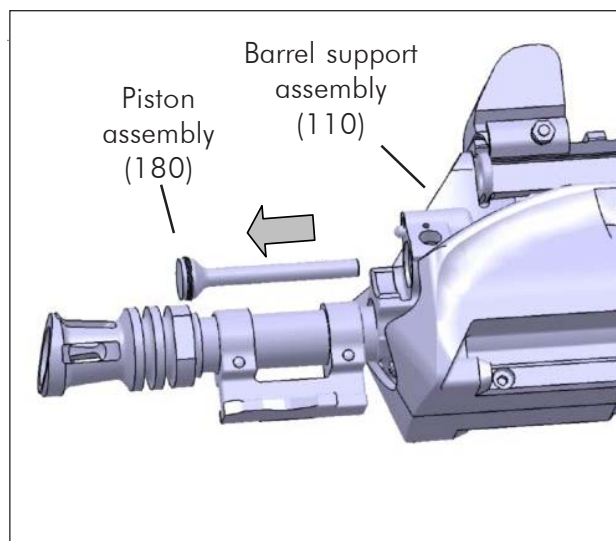


Fig. 7.1.p - Removal of the piston assembly (180)

**7.1. FIELD STRIPPING (CONTINUED)****7.1.4. Plug, gas (191) and piston assembly (180) (continued)**

Use only OREA 892 or OREA 271/1 for this operation:
do not introduce any other tools into the slide rod housing.

Method 1

- (1) Introduce the OREA 892 into the slide rod housing of the barrel support assembly (110) (Fig. 7.1.l).

Caution: Use only OREA 892 for this operation: do not introduce any other tools into the slide rod housing.

- (2) Introduce the rod, slide (434) after the OREA 892 into the slide rod housing of the barrel support assembly (110) (Fig. 7.1.l).
- Push the rod, slide (434) until the piston assembly (180) is ejected out of its housing (Fig. 7.1.m).

Caution: Do not remove the rings, piston (182) out of the piston assembly (180).

- Remove the rod, slide(434) and the tool OREA 892 out of the barrel support assembly (110).

Method 2

- Push the threaded part of the OREA 271/1 into the bottom of the slide rod housing of the barrel support assembly (110) (Fig. 7.1.n).
- Pull the cocking handle rearwards and by the opening (a), ensure that the threaded part of the OREA 271/1 goes in the piston rod housing (Fig. 7.1.o).
- Push the OREA 271/1 until the piston assembly (180) is ejected out of its housing (Fig. 7.1.p).

Caution: Do not remove the rings, piston (182) out of the piston assembly (180).

- Remove the OREA 271/1.

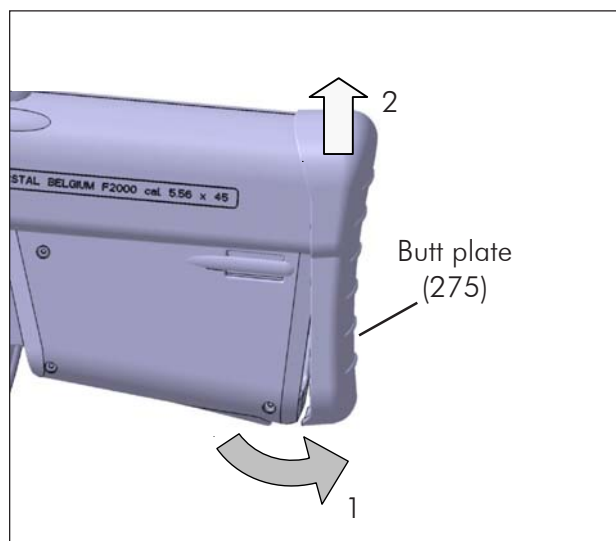


Fig. 7.1.q - Removal of the butt plate (275)

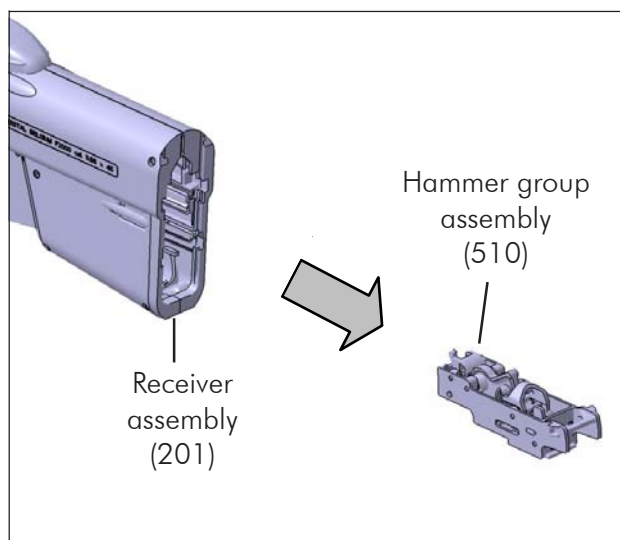


Fig. 7.1.r - Removal of the hammer group assembly (510)

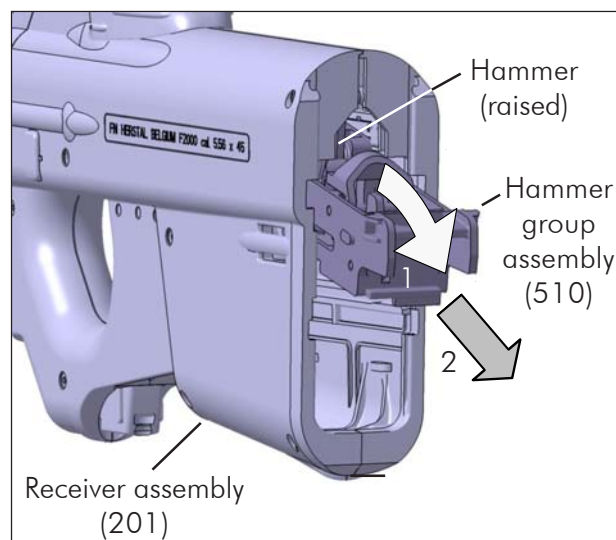


Fig. 7.1.s - Inclining the hammer group assembly (510) downwards

**7.1. FIELD STRIPPING (CONTINUED)****7.1.5. Hammer group assembly (510)**

- Remove the butt plate (275) proceeding as follows:
 - (1) Pull the lower flexible part of the butt plate (275) rearwards (Fig. 7.1.q);
 - (2) Slide the butt plate (275) upwards and remove it out of the receiver (210) (Fig. 7.1.q).
- Remove the hammer group assembly (510) by pulling it out of the receiver assembly (201) (Fig. 7.1.r).

Note: If the hammer is raised, (1) incline slightly the hammer group assembly (510) downwards before (2) removing it out of the receiver assembly (201) (Fig. 7.1.s).

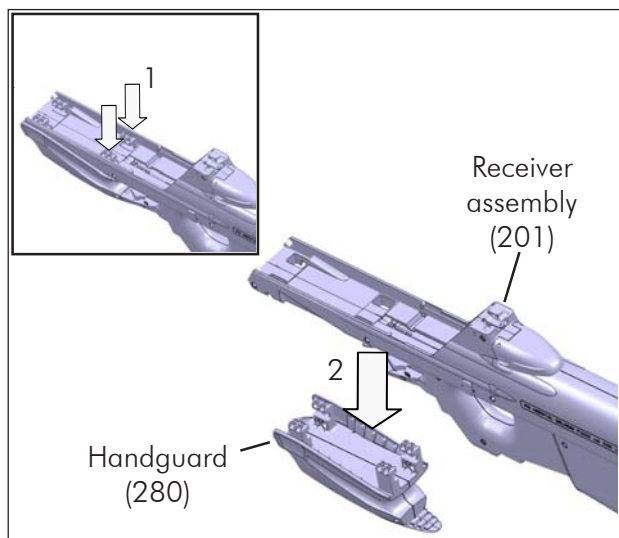


Fig. 7.2.a - Removal of the handguard (280)



Fig. 7.2.b - Disassembly of the magazine (601)



7.2. COMPLEMENTARY DISASSEMBLY

7.2.1. Handguard (280) or handguard tri-rail (280/1)

- Push (1) on the rear lugs of the handguard/handguard tri-rail (280)/(280/1) and (2) remove the handguard/handguard tri-rail (280)/(280/1) out of the receiver assembly (201) by pulling it downwards (Fig. 7.2.a).

7.2.2. Magazine (601)

- Using any tool push the coil of the spring visible from the opening of the bottom plate.
- Slightly rotate the magazine bottom plate, withdrawing it from its housing taking care to hold the magazine platform spring at the same time so that it does not expand suddenly (Fig. 7.2.b.).
- Remove the magazine platform spring assembled with the magazine platform (Fig. 7.2.b.).

This level of disassembly is sufficient to perform thorough cleaning:
further disassembly should only be carried out by a qualified armourer.

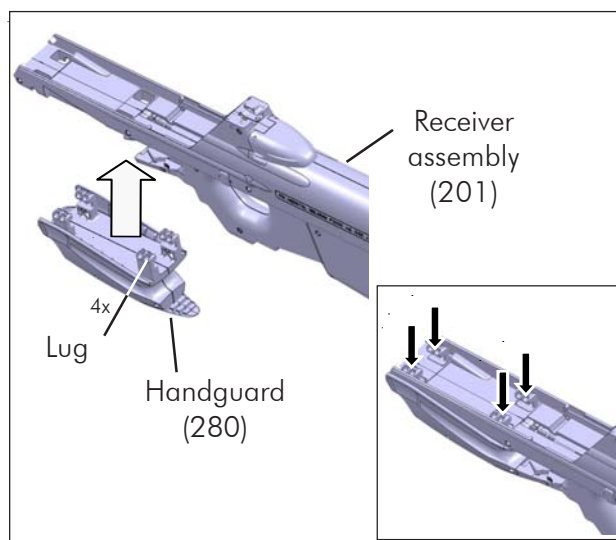


Fig. 7.3.a - Reassembly of the handguard (280)



7.3. COMPLEMENTARY REASSEMBLY

- Ensure the component parts have been correctly cleaned and lubricated, see chapter 8.

7.3.1. Handguard (280) or Handguard tri-rail (280/1)

- Position the handguard/handguard tri-rail (280)/(280/1) below the receiver assembly (201) so that it is aligned with the tip of the receiver (210). Install the handguard/handguard tri-rail (280)/(280/1) against the receiver assembly (201) and firmly push it upwards (Fig. 7.3.a).

Note: Check that the lugs of the handguard/handguard tri-rail (280)/(280/1) are parallel to the top edges of the receiver (210) (Fig. 7.3.a).

7.3.2. Magazine (601)

- Introduce the magazine platform equipped with the magazine platform spring into the magazine.
- Compress the magazine platform spring inside the magazine body and slide the magazine bottom plate in the magazine body until the last coil of the spring becomes visible from the opening of the magazine bottom plate.
- Check that the magazine platform can move freely by pushing and then releasing it.

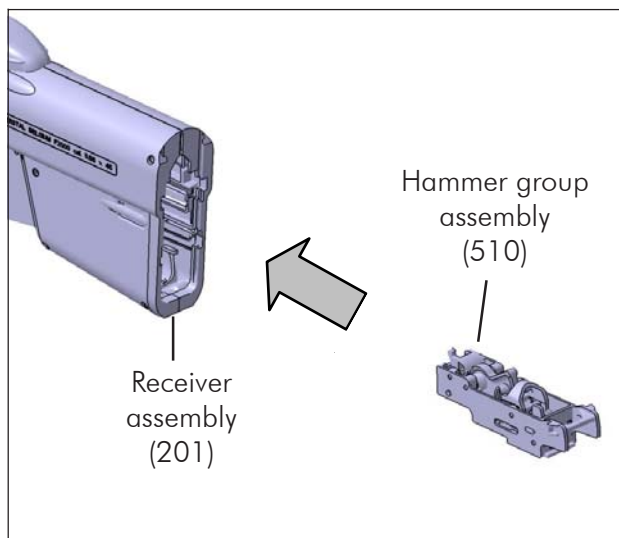


Fig. 7.4.a - Reassembly of the hammer group assembly (510)

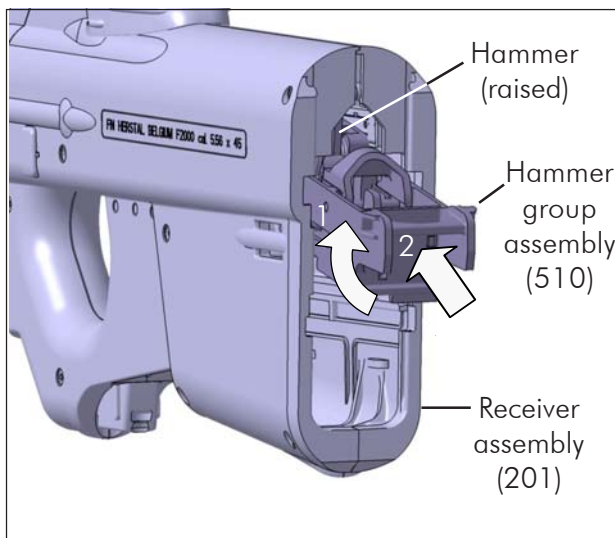


Fig. 7.4.b - Inclining the hammer group assembly (510) downwards

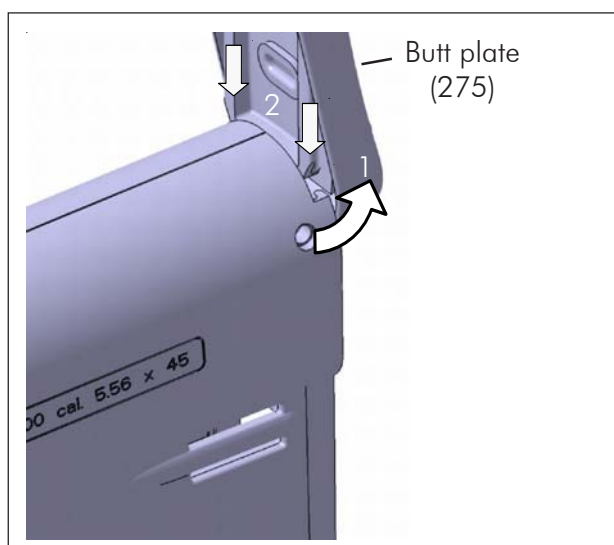


Fig. 7.4.c - Reassembly of the butt plate (275)

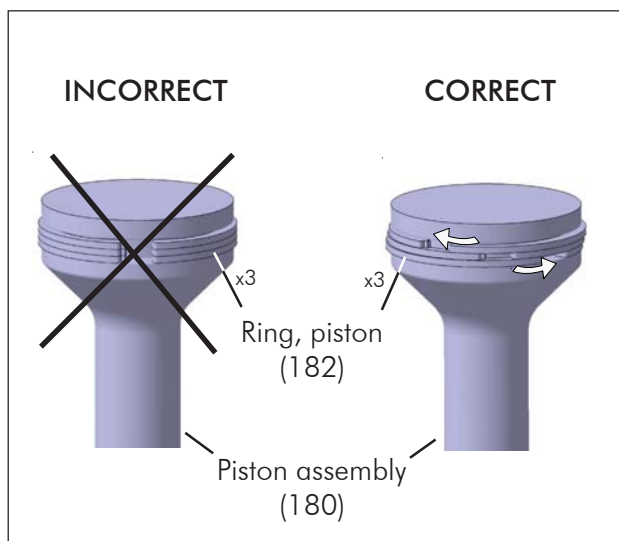


Fig. 7.4.d - The notches of the 3 rings, piston (182) must not be aligned

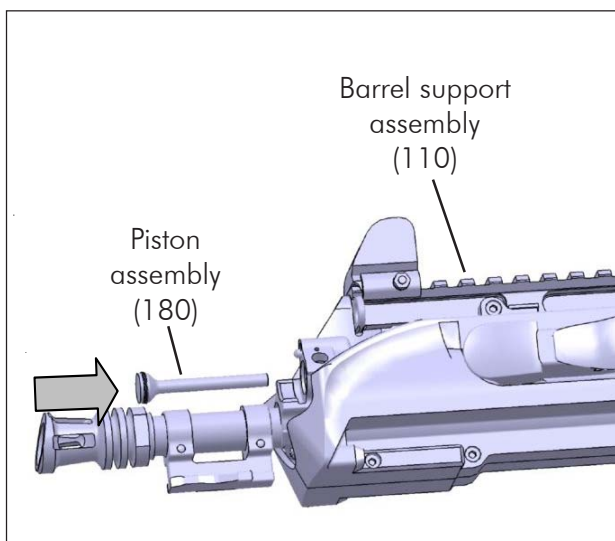


Fig. 7.4.e - Reassembly of the piston assembly (180)



7.4. REASSEMBLY OF THE WEAPON

7.4.1. Hammer group assembly (510)

- Install the hammer group assembly (510) into the receiver assembly (201) taking care to introduce it along the corresponding notches of the receiver (210) (Fig. 7.4.a).

Note: If the hammer is raised, (1) incline slightly the hammer group assembly (510) downwards before (2) reassembling it into the receiver assembly (201) (Fig. 7.4.b) or cock the hammer before reassembling it into the receiver assembly (201).

Note: Check that the hammer group assembly (510) does not protrude out of the receiver assembly (201) once reassembled.

- Install the butt plate (275) proceeding as follows:
 - (1) Pull the lower flexible part of the butt plate (275) rearwards (Fig. 7.4.c);
 - (2) Introduce the 2 guides of the butt plate (275) and not only one into the corresponding notches of the receiver (210) (Fig. 7.4.c);
 - Slide the butt plate (275) into position.

Check that the 2 guides of the butt plate (275) is correctly introduced into the corresponding notches of the receiver.

7.4.2. Plug, gas (191) and piston assembly (180)

- Check that the notches of the 3 rings, piston (182) are not aligned to avoid a gas leak (Fig. 7.4.d).

Reminder: Do not remove the rings, piston (182) during the field stripping.

- Install the piston assembly (180) into its housing (Fig. 7.4.e).

Caution: Check that the plug, gas (191) and the plug, gas housing are clean. The remaining impurities could damage the rings, piston (182) when the piston assembly (180) will be reassembled.

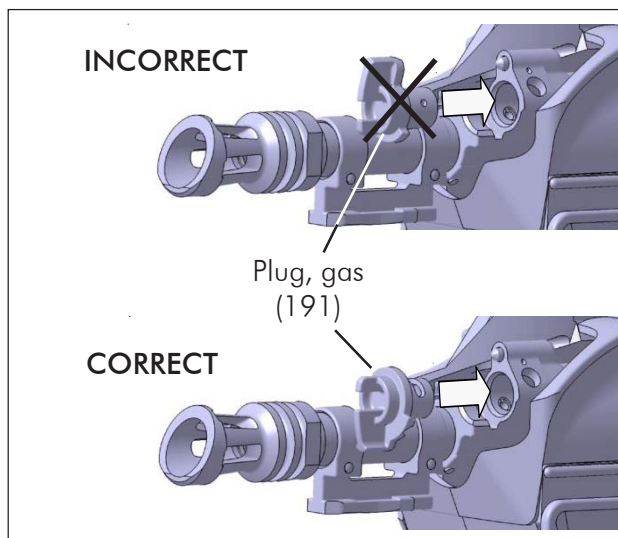


Fig. 7.4.f - Reassembly of the plug, gas (191)

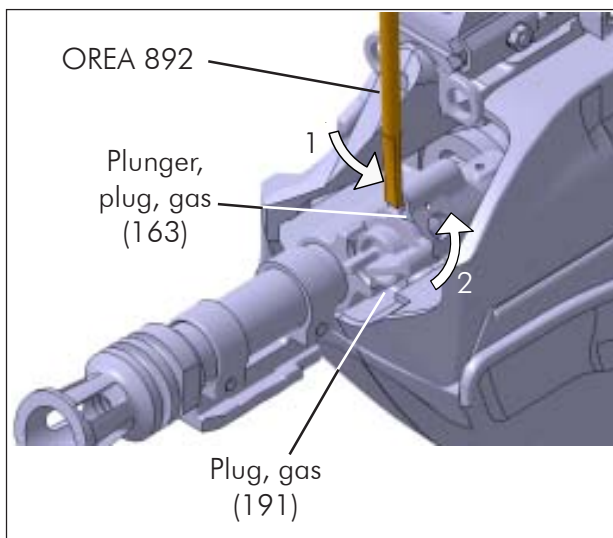


Fig. 7.4.g - Positioning of the plug, gas (191)

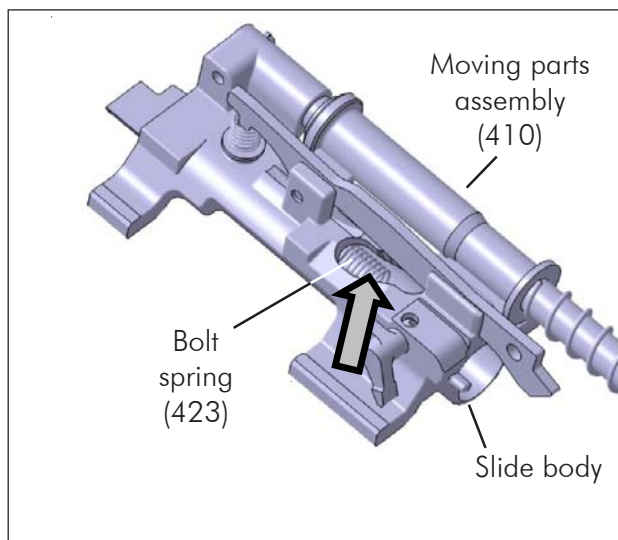


Fig. 7.4.h - Bolt spring (423) inside the bolt body

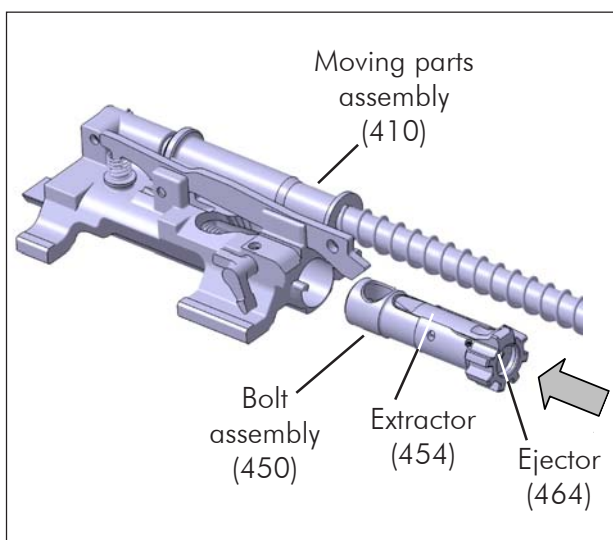


Fig. 7.4.i - Reassembly of the bolt assembly (450)

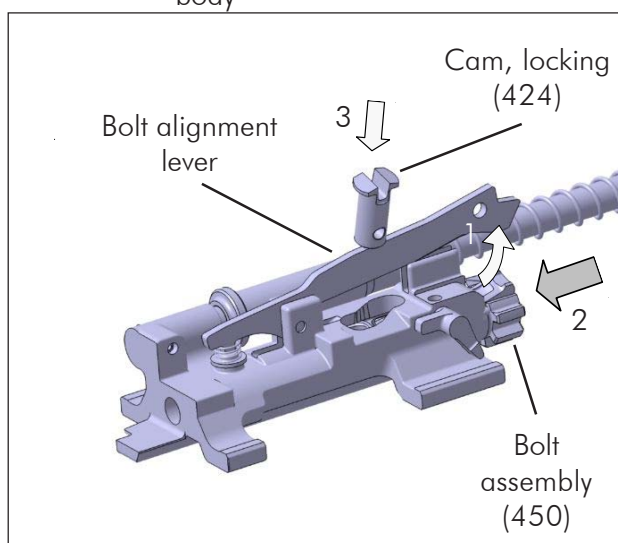


Fig. 7.4.j - Reassembly of the cam, locking (424)

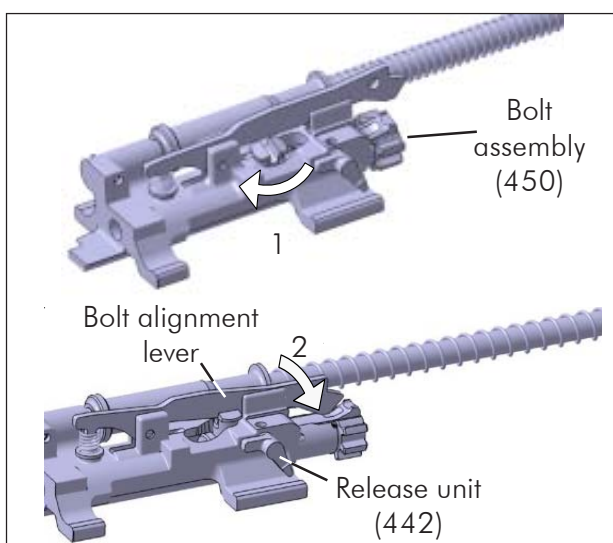


Fig. 7.4.k - Engaging the bolt alignment lever

**7.4. REASSEMBLY OF THE WEAPON (CONTINUED)****7.4.2. Plug, gas (191) and piston assembly (180) (continued)**

- Install the plug, gas (191) in such a way that it does not cover the plunger, plug, gas (163) (Fig. 7.4.f).
- (1) Using the scraper tip of the tool OREA 892 or another tool, push the plunger, plug, gas (163) into its housing and (2) turn the plug, gas (191) counterclockwise until the plunger, plug, gas (163) is locked onto a notch of the plug, gas (191) (Fig. 7.4.g).
- Turn the plug, gas counterclockwise until it stops. The plug, gas (191) is then positioned at the 'normal' position.

7.4.3. Moving parts assembly (410)

Caution: Before reassembling the bolt assembly (450), check the mobility of the ejector (464) by pushing and then releasing it.

- Check that the bolt spring (423) is present inside the slide body (Fig. 7.4.h).
- **Note:** If the bolt spring (423) should be reassembled, introduce it into its housing of the slide body, push it using the bolt assembly (450) to the housing bottom until it is locked.
- Introduce the bolt assembly (450) into its housing taking care that the extractor (454) is orientated upwards (Fig. 7.4.i).
- (1) Raise the tip of the bolt alignment lever and hold it in this position (Fig. 7.4.j).
- (2) Push the bolt assembly (450) into its housing to align the hole of the bolt assembly (450) with the slot of the slide body (Fig. 7.4.j).
- Holding the bolt assembly (450), introduce the cam, locking (424) (Fig. 7.4.j).
- (1) Still holding the bolt assembly (450), align the slot of the cam, locking (424) parallel to the bolt alignment lever (Fig. 7.4.k).
- (2) Release the bolt assembly (450) and the bolt alignment lever and check that the alignment lever engages in the slot of the cam, locking (424) (Fig. 7.4.k).
- Check if the extractor (454) works correctly by turning the release unit (442) clockwise (1/4 of turn): the extractor (454) should raise.
- **Note:** If the extractor (454) does not raise when the release unit (442) pivots clockwise, consult a qualified armorer.

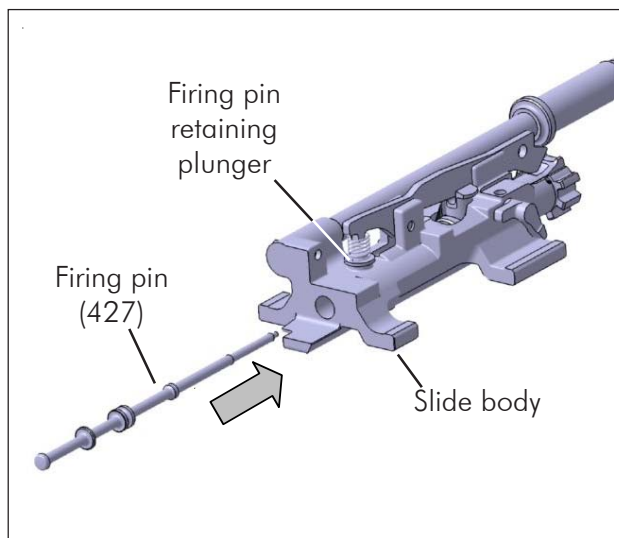


Fig. 7.4.l - Reassembly of the firing pin (427)

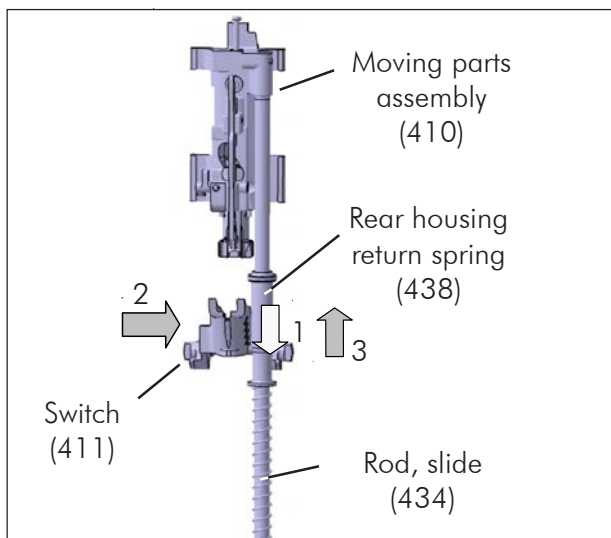


Fig. 7.4.m - Reassembly of the switch (411)

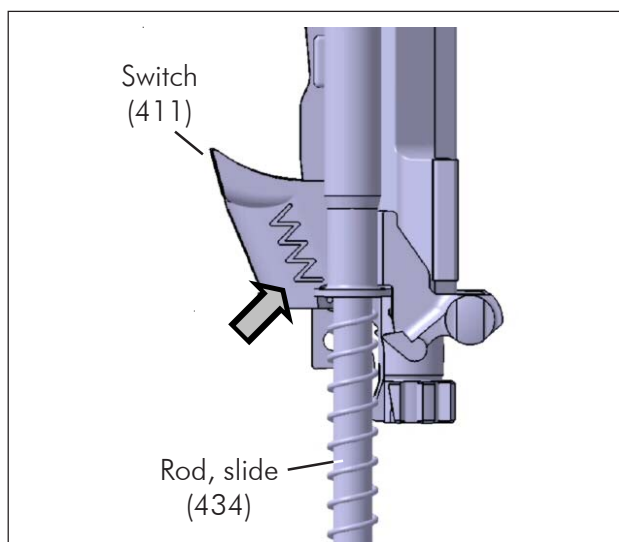


Fig. 7.4.n - The face illustrated with a spring in front of the rod, slide (434)

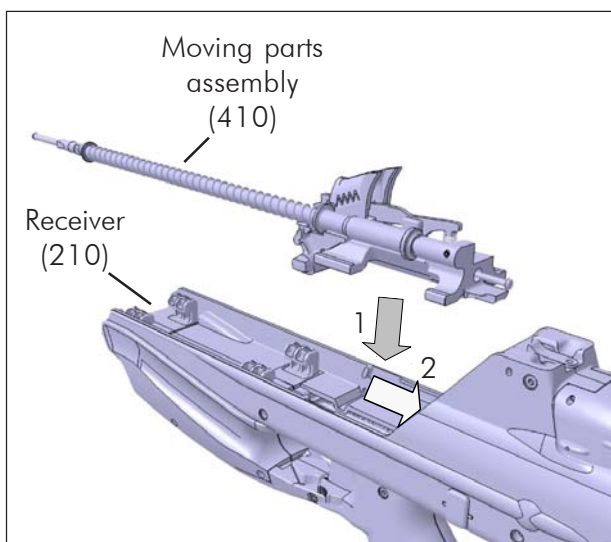


Fig. 7.4.o - Reassembly of the moving parts assembly (410)

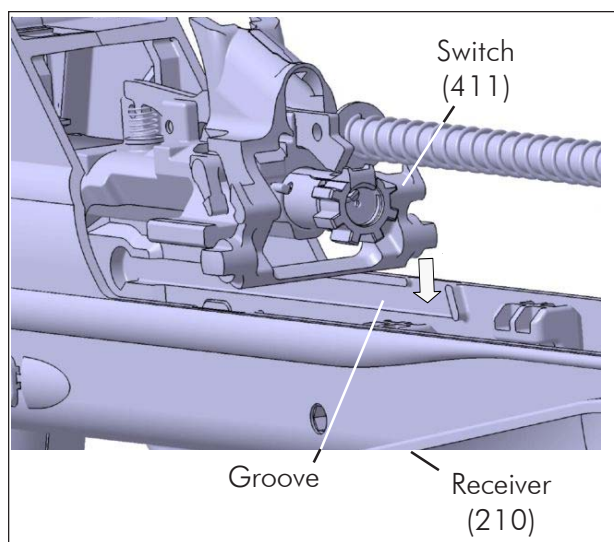


Fig. 7.4.p - Engaging the switch (411) in the grooves of the receiver (210)

**7.4. REASSEMBLY OF THE WEAPON (CONTINUED)****7.4.3. Moving parts assembly (410) (continued)**

- Introduce the firing pin (427) into its housing of the slide body until it is locked by the firing pin retaining plunger. Check that the firing pin (427) is locked in its housing by pulling it (Fig. 7.4.l).
- Position the moving parts assembly (410) vertically by supporting it on the tip of the rod, slide (434). (1) Slide the rear housing return spring (438) downwards against the spring to allow the reassembly of the switch (411) (Fig. 7.4.m).
- (2 and 3) Position the switch (411) on the slide body and progressively release the rear housing return spring (438) which is going to its place due to the tension of the return spring (435) (Fig. 7.4.m).

Caution: There is a way to reassemble the switch (411): the face of the switch (411) illustrated with a spring should be placed in front of the rod, slide (434) (Fig. 7.4.n).

- Introduce the moving parts assembly (410) into the receiver (210) (Fig. 7.4.o) taking care to install the switch (411) into the corresponding guides of the receiver (210) (Fig. 7.4.p).

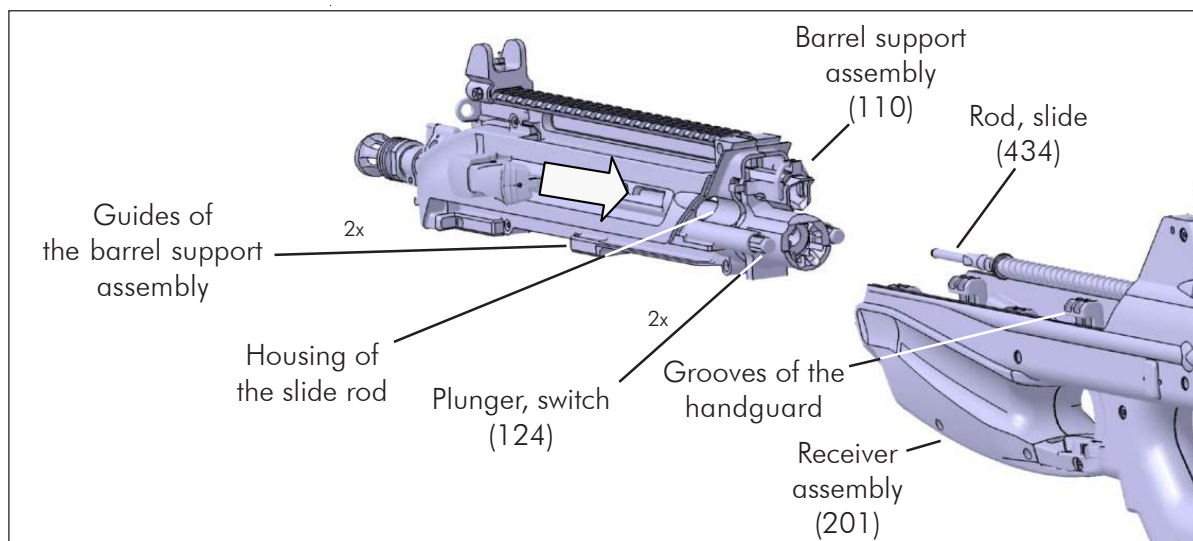


Fig. 7.4.q - Reassembly of the barrel support assembly (110)

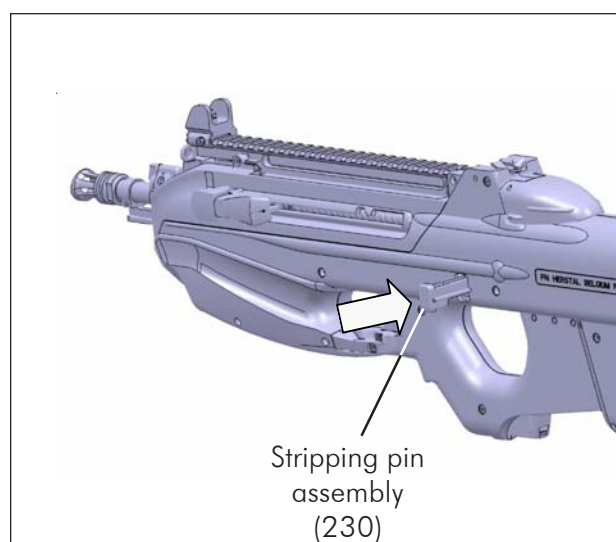


Fig. 7.4.r - Pushing on the stripping pin assembly (230)

**7.4. REASSEMBLY OF THE WEAPON (CONTINUED)****7.4.4. Barrel support assembly (110)**

Caution: Before reassembling the barrel support assembly (110), ensure that the plungers, switch (124) work correctly by pushing and then releasing them (Fig. 7.4.q).

- Introduce the barrel support assembly (110) on the receiver (210) by sliding it along the receiver (210) taking care to introduce the sliding rod (434) into its housing and the guides of the barrel support assembly into the grooves of the handguard/handguard tri-rail (280)/(280/1) (Fig. 7.4.q).
- Firmly push the barrel support assembly (110) until it stops (Fig. 7.4.q).
- Press the stripping assembly (230) pin to lock the barrel support assembly (110) on the receiver (210) (Fig. 7.4.r).

Caution: If the stripping pin assembly (230) could not be pressed, remove the barrel support assembly (110) and ensure that the switch (411) is correctly reassembled.

- Examine the outer shape of the weapon and ensure it is correctly reassembled.
- Aiming in a safe direction
 - pull the cocking handle completely rearwards and then release it.
 - set the fire selector (255) to the position "1" (**SINGLE SHOT**).
 - pull the trigger.
 - set the fire selector (255) to the position "S" (**SAFETY**).



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CHAPTER 8: CLEANING AND LUBRICATION

Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

The frequency at which the F2000 Tactical/Tactical TR should be cleaned and lubricated depends on the ammunition used, the weather, the shooting conditions and other external factors.

When using normal ammunitions under normal conditions, it is a good rule to clean and lubricate the F2000 Tactical/Tactical TR after every use or, in case of intensive shooting, after each 2,000 rounds. If the using conditions are adverse (mud, sand, frost, heat,...), clean and lubricate regularly the F2000 Tactical/Tactical TR. Correct maintenance will enhance the longevity of the weapon and will ensure the good operation of the weapon.

Before cleaning the F2000 Tactical/Tactical TR,
ALWAYS ensure that it is unloaded (see § 6.4.).

8.1. LUBRICANT SPECIFICATION

Lubrication: MIL-PRF 63460 (NATO S-758)

Preservation: MIL-PRF 63460 (NATO S-758)

Never use ammonia: it could cause damage to the weapon !



Fig. 8.2.a - Tactical, complete tools roll 940



8.2. CLEANING AND LUBRICATION TOOLS

8.2.1. Tactical, complete tools roll 940

The tactical, complete tools roll 940 includes an user maintenance kit (maintenance roll OREA 885) composed of the following cleaning tools (Fig. 8.2.a):

- A cleaning handle, complete (OREA 271/1),
- A cleaning brush assembly (OREA 184),
- A chamber cleaning brush assembly (OREA 258),
- A cleaning brush (OREA 895),
- An oil can (OREA 700).

The tactical, complete tools roll 940 also includes 3 tools needed for the field stripping and for the settings of the weapon (Fig. 8.2.a):

- A tool for adjusting optical sight screw (OREA 893),
- A tool and combination scraper (OREA 892),
- A wrench, front sight (OREA 255).

(a) Maintenance roll OREA 885

The cleaning handle complete OREA 271/1 contains 4 pieces to assemble end to end.

Depending of the clening needs, several cleaning tools can be assembled to the cleaning handle: the swab, the chamber cleaning brush assembly and the cleaning brush assembly.

The cleaning handle OREA 271/1 can be used in 2 ways:

- either folded on the cleaning handle to allow good holding of the cleaning handle for rotational motions;
- or unfolded at 90° to allow good holding of the cleaning handle for backward and forward motions.

(b) Tool and combination scraper OREA 892 (optional)

The tool and combination scraper OREA 892 contains the following tools (Fig. 8.2.a):

- A scraper (OREA 892A),
- A plug (OREA 892B).

The scraper OREA 892A is used to scrape the residues stuck on the plug, gas, the piston and the gas plug housing.

To use it easily, the scraper OREA 892A is fitted into the plug OREA 892B.

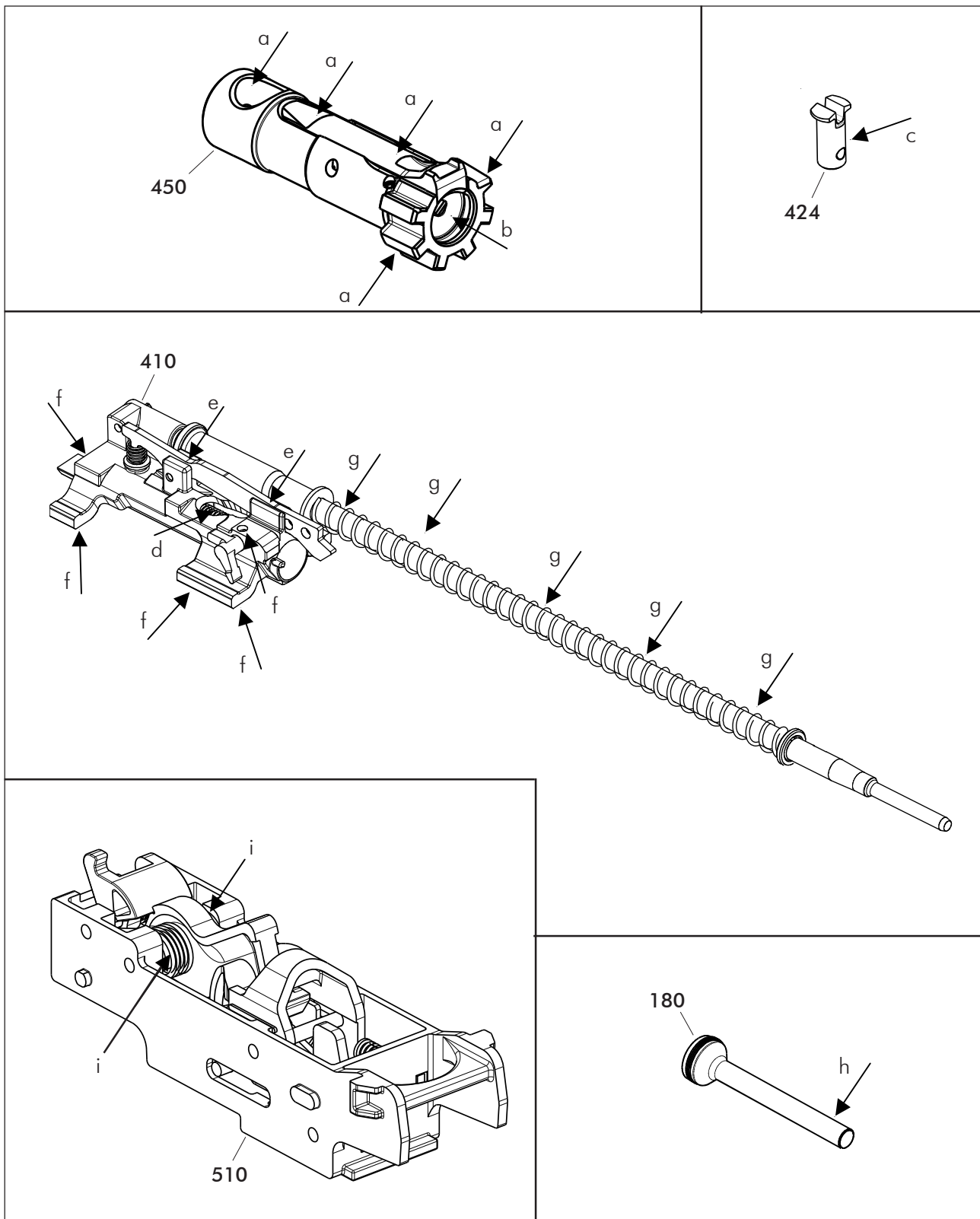


Fig. 8.3.a - Points to be lubricated before firing

**8.3. CLEANING AND LUBRICATION BEFORE FIRING**

The following procedure assumes that the F2000 Tactical/Tactical TR has correctly been cleaned and lubricated the last time it has been used (see § 7.4).

If the F2000 Tactical/Tactical TR is used for the first time upon purchase, it is assumed that the procedure described in Chapter 5 has been carried out.

- Carry out the field stripping procedure (see § 7.1) and the complementary disassembly procedure (see § 7.2).
- Equip the cleaning handle OREA 271/1 with the swab.
- Introduce the cleaning handle OREA 271/1 into the barrel from the chamber through the barrel extension. Fit a clean rag (a piece of flannel) into the swab and then pull out the cleaning handle OREA 271/1 to remove the maintenance lubricant. Repeat this handling until the piece of flannel goes clean out of the barrel.
- Using a soft cloth, clean the moving parts proceeding as follows:
 - Wipe the external surfaces of the moving parts clean.
 - Wipe the return spring (435) clean.
 - Compress the return spring (435) and wipe the liberated part of the rod, slide (434) clean.
 - Push the rear housing return spring (438) against the compressed return spring (435) and wipe the liberated part of the rod, slide (434) clean.
- Lubricate the moving parts proceeding as follows:
 - Oil the bolt body (refer to arrows 'a').
 - Oil the ejector (464) and ensure it is completely lubricated by pushing and then releasing it several times (refer to arrow 'b').
 - Oil the cam, locking (424) (refer to arrow 'c') and the unlocking ramp (refer to arrow 'd').
 - Oil the bolt alignment lever (refer to arrows 'e').
 - Oil the guides of the slide body and the hole of the release unit (refer to arrows 'f').
 - Oil the rod, slide (434) on its overall length (refer to arrows 'g').
 - Push the rear housing return spring (438) to compress the return spring (435) and oil the visible part of the rod, slide (434) (refer to arrows 'g').
- Slightly oil (1 drop of oil) the piston rod (refer to arrow 'h').
- Slightly oil (1 drop of oil) the 2 hammer springs (refer to arrows 'i').

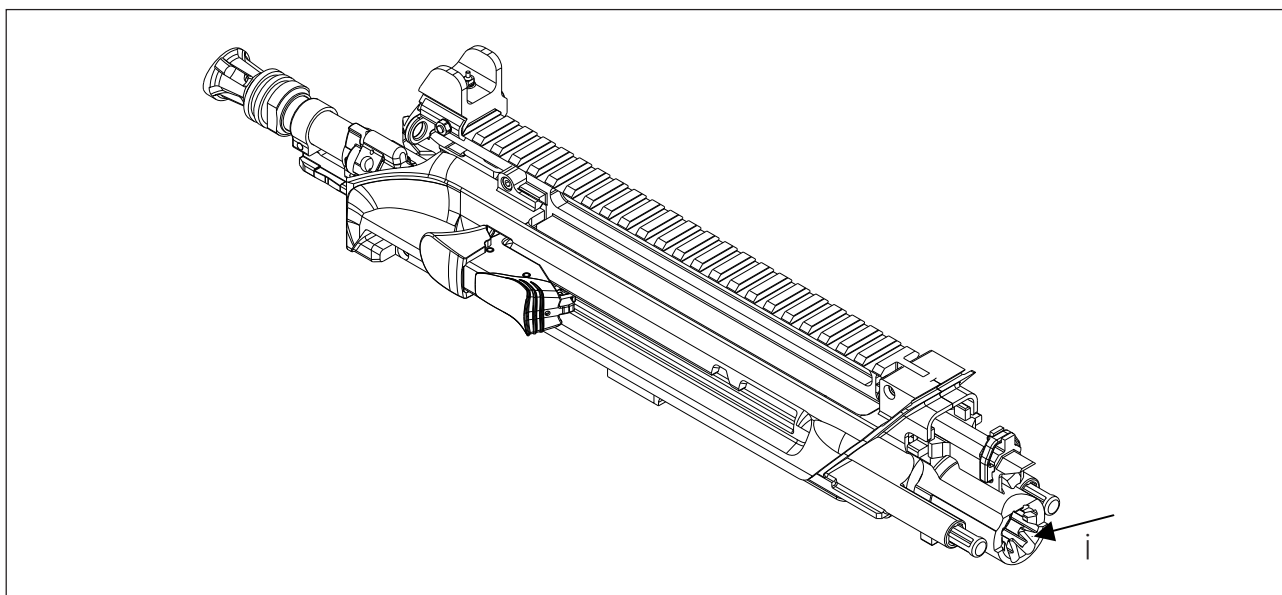


Fig. 8.3.b - Points to be lubricated before firing



8.3. CLEANING AND LUBRICATION BEFORE FIRING (CONTINUED)

- Oil the teeth of the barrel extension (refer to arrow 'j').
- Oil the metallic rails located inside the receiver assembly (201).
- Reassemble the weapon (see § 7.3 and § 7.4).



8.4. CLEANING AND LUBRICATION AFTER FIRING

- Carry out the field stripping procedure (see § 4.1) and if necessary some parts of the complementary disassembly (see § 4.2).

8.4.1. Barrel support assembly (110)

- Clean the chamber proceeding as follows:
 - Equip the cleaning handle OREA 271/1 with the chamber cleaning brush assembly OREA 258.
 - Introduce the chamber cleaning brush assembly OREA 258 into the chamber.
 - Clean the chamber by turning the chamber cleaning brush assembly OREA 258.

Caution: Do not force during the introduction of the chamber cleaning brush assembly OREA 258 into the chamber and do not go beyond the chamber.

- Remove the chamber cleaning brush assembly OREA 258 from the chamber.
- Using the chamber cleaning brush assembly OREA 258, clean the piston housing of the gas block proceeding the same way as for the chamber (see upper).
- Using the scraper OREA 892A, scrape the front face and the rod of the piston to remove the residues.

Caution: Do not scrape the rings, piston (182).

- Using the scraper OREA 892A, scraper the plug, gas (191) to remove the residues until having a smooth surface.
- Equip the cleaning handle OREA 271/1 with the cleaning brush assembly OREA 184.
- Introduce the cleaning brush assembly OREA 184 from the chamber through the barrel extension and clean the inside of the barrel on its overall length with backward and forward motion until it is visually clean.
- Equip the cleaning handle OREA 271/1 with the swab.
- Introduce the cleaning handle OREA 271/1 into the barrel from the chamber through the barrel extension. Fit a clean rag (piece of flannel) into the swab and then pull out the cleaning handle OREA 271/1 to remove the maintenance lubricant. Repeat this handling until the piece of flannel goes clean out of the barrel.
- Once the inside of the barrel is clean, to protect it until the next use, carry out this handling one more time using a flannelette slightly oiled.
- Slightly oil (1 drop of oil) the piston rod (refer to arrow 'h') and oil the 2 plungers, switch (124).

**8.4. CLEANING AND LUBRICATION AFTER FIRING (CONTINUED)****8.4.2. Moving parts assembly (410)**

- Using the cleaning brush OREA 895, remove the copper particles stuck on the bolt.
- Using the cleaning brush OREA 895 and, if necessary the cleaning brush assembly OREA 184, remove the particles stuck on the extractor.
- Using a soft cloth, wipe the cam, locking (424) and the firing pin clean.
- Using a soft cloth, clean the moving parts proceeding as follows:
 - Wipe the external surfaces of the moving parts clean.
 - Wipe the return spring clean.
 - Compress the return spring and wipe the liberated part of the rod, slide (434) clean.
 - Push the rear housing return spring against the return spring and wipe the liberated part of the rod, slide (434) clean.
- Lubricate the moving parts assembly (410) proceeding as follows:
 - Oil the bolt body.
 - Oil the ejector (464) and ensure it is completely lubricated by pushing and then releasing it several times.
 - Slightly oil the cam, locking (424) and the unlocking ramp.
 - Slightly oil the bolt alignment lever.
 - Oil the guides of the slide body.
 - Oil the rod, slide (434) on its overall length.
 - Push the rear housing return spring (438) to compress the return spring (435) and oil the liberated part of the rod, slide (434).

8.4.3. Hammer group assembly (510)

- Check the general cleanness of the hammer group assembly. If necessary, use a soft cloth to clean it.
- Slightly oil (1 drop of oil) the 2 hammer springs (refer to arrows 'i').

**8.4. CLEANING AND LUBRICATION AFTER FIRING (CONTINUED)****8.4.4. Receiver (210) and handguard/handguard tri-rail (280)/(280/1)**

- Check the general cleanness of the receiver (210) and the handguard/handguard tri-rail (280)/(280/1). If necessary, use a soft cloth to clean it.
- Check the general cleanness of the 2 metallic rails located inside the receiver (210). If needed, equip the cleaning handle OREA 271/1 with the cleaning brush assembly OREA 184 and clean the 2 metallic rails and then dry them using a soft cloth.
- Oil the 2 metallic rails located inside the receiver.

Note: To allow a good oil flow on the overall length of the metallic rails, position the weapon vertically and wait some minutes for the completed oil flow.

8.4.5. Magazine (601)

- Check the general cleanness of the magazine (601). If necessary, use a soft cloth to clean it.
- The inside of the magazine (601) could slightly be oiled and then directly dried using a soft cloth.
- Reassemble the weapon (see § 7.3 and § 7.4).



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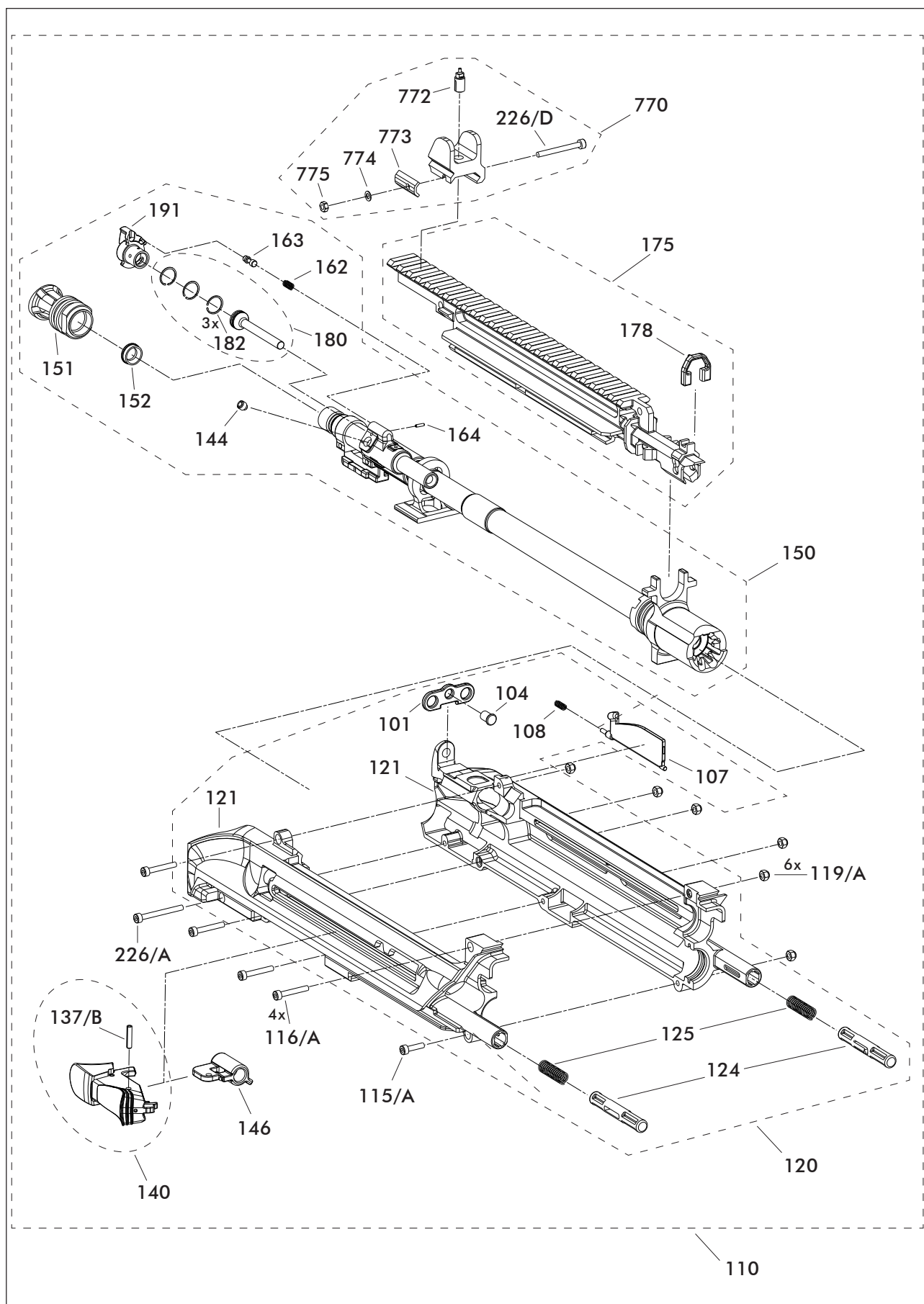


Fig. 9.1.a - Barrel support assembly (110)



CHAPTER 9: DISASSEMBLY AND REASSEMBLY

Before any intervention on the F2000 Tactical/Tactical TR ensure to be familiar with the safety information given in chapter 1 of this Maintenance Manual.

9.1. BARREL SUPPORT ASSEMBLY

9.1.1. Removal and reassembly of the barrel support assembly (110)

Removal

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.

Reassembly

- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.

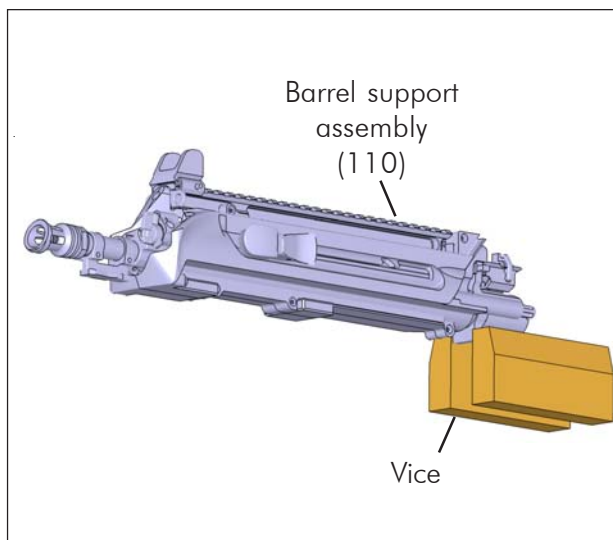


Fig. 9.1.b - Installation of the barrel assembly (110) into a vice

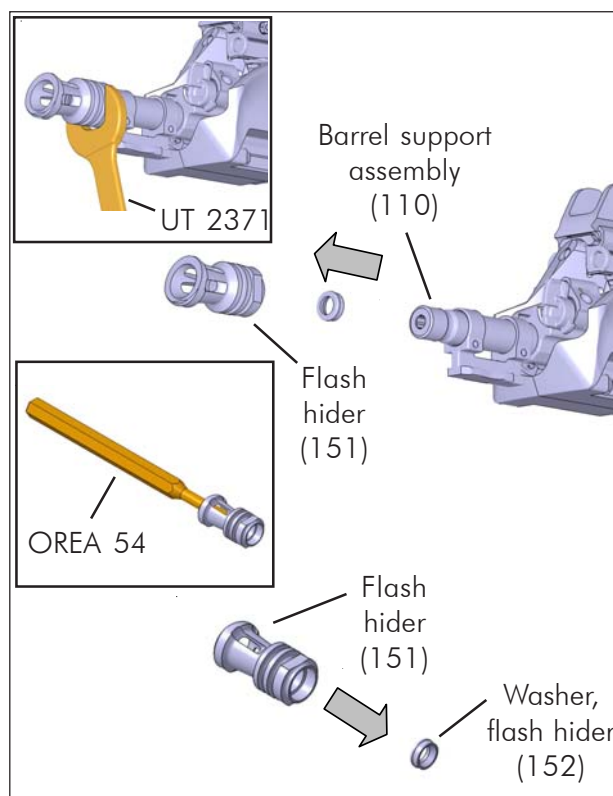


Fig. 9.1.c - Removal of the flash hider (151)



9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)

9.1.2. Removal and reassembly of the flash hider (151)

Removal

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Place the barrel support assembly (110) into a vice equipped with a soft cloth (Fig. 9.1.b).
- Using the torque wrench UT 2370 and the adapter UT 2371, unscrew the flash hider (151) and remove it from the barrel support assembly (110) taking care not to lose the washer, flash hider (152) (Fig. 9.1.c).

Caution: The flash hider (151) is left-hand threaded: it must then be unscrewed clockwise as viewed from the front.

- Using the tapered side of the OREA 54 from the outside of the flash hider (151), push the washer, flash hider (152) and remove it from the flash hider (151).

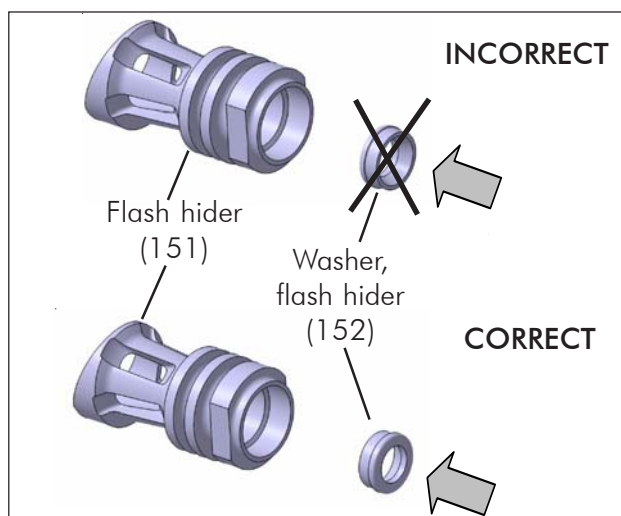


Fig. 9.1.d - Reassembly of the washer, flash hider (152)

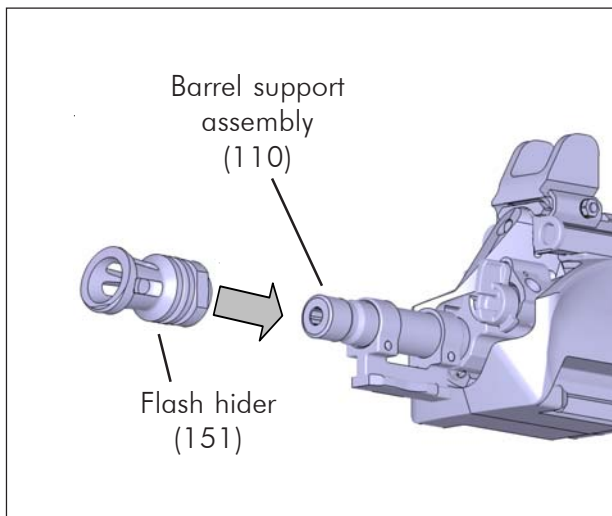


Fig. 9.1.e - Reassembly of the flash hider (151)

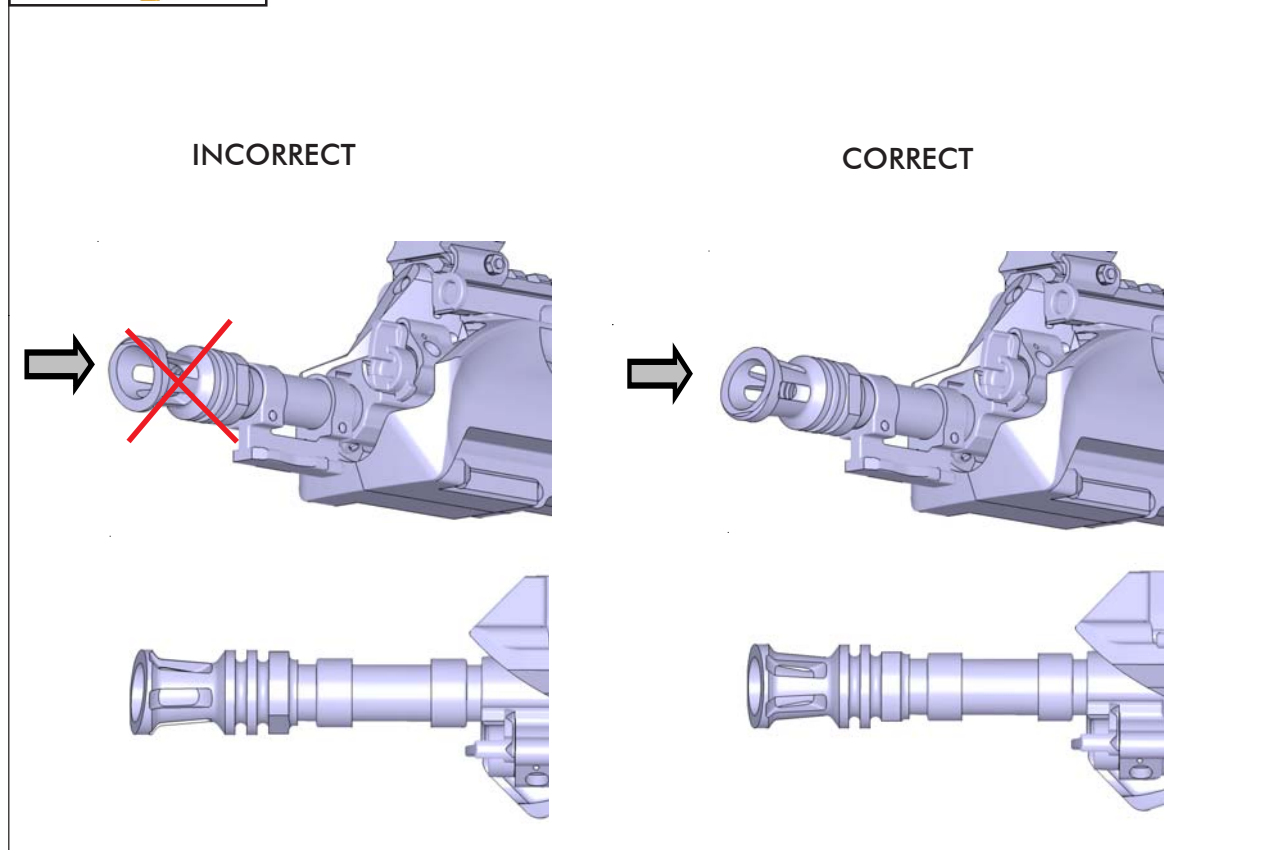
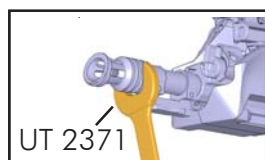


Fig. 9.1.f - Positioning the flash hider (151)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.2. Removal and reassembly of the flash hider (151) (continued)***Reassembly*

- If not already done, place the barrel support assembly (110) into a vice equipped with a soft cloth.
- Install a new washer, flash hider (152) into the flash hider (151) taking care to insert its rounded side first (Fig. 9.1.d).
- Install the flash hider (151) onto the end of the barrel (Fig. 9.1.e).

Caution: The flash hider (151) is left-hand threaded: it must then be screwed counterclockwise as viewed from the front.

- Using the torque wrench UT 2370 and the adapter UT 2371, screw the flash hider (151) onto the barrel support assembly (110) proceeding as follows:
 - Tighten the flash hider (151) with a torque of 30 Nm.
 - Carry on tightening the flash hider (138) until its inclined face is positioned upwards and centred (Fig. 9.1.f).

Caution: After this operation the flash hider (151) may not have been tightened more than one turn.

- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.

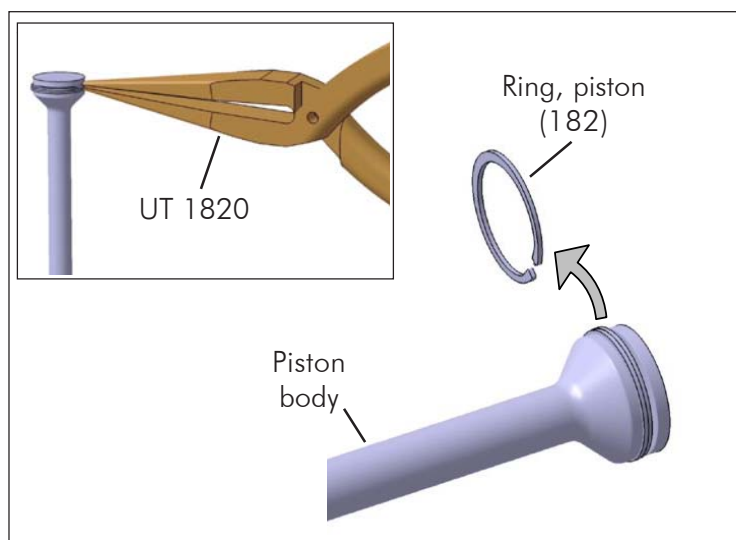


Fig. 9.1.g - Removal of a ring, piston (182)

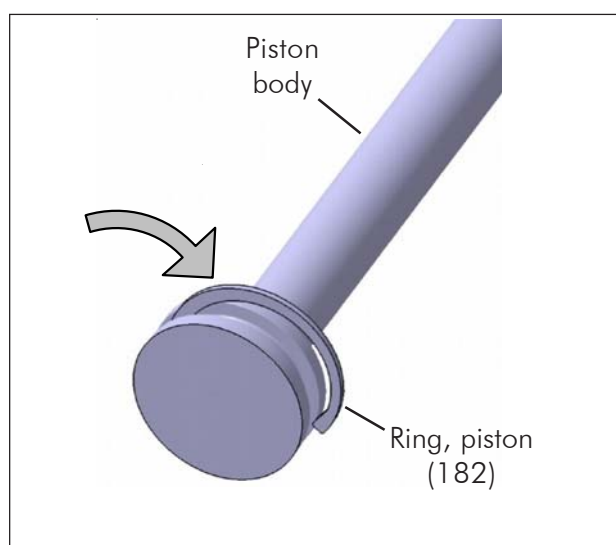


Fig. 9.1.h - Reassembly of a ring, piston (182)

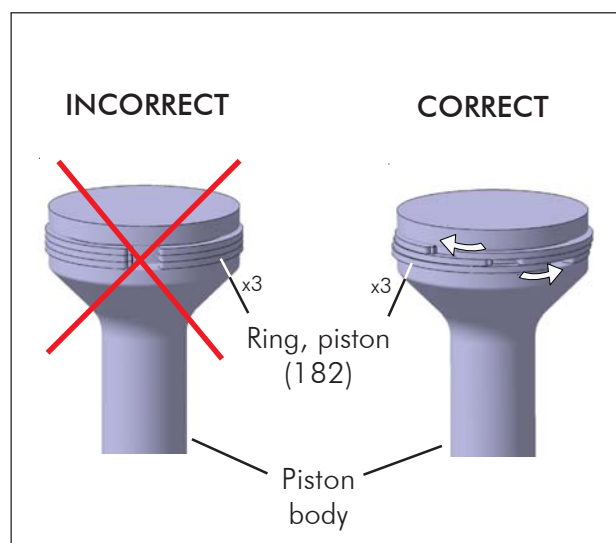


Fig. 9.1.i - Positioning the 3 rings, piston (182)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.3. Removal and reassembly of the piston assembly (180)***Removal*

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Remove the piston assembly (180) as described in § 7.1.4.
- If necessary, remove the ring, piston (182) one by one from the piston body by using the bent-nose UT 1820 (Fig. 9.1.g).

Caution: Once removed, the rings, piston (182) can not be reused and should be replaced by new ones.

Reassembly

- If necessary, install new rings, piston (182) as described below:
 - Install an end of a new ring, piston (182) from the rear into the corresponding groove of the piston body (Fig. 9.1.h).
 - Fit in completely the ring, piston (182) by pushing and turning it progressively from the end already installed (Fig. 9.1.h).
 - Proceed the same way to install the 2 other rings, piston (182).
- Using the OREA 892, position the 3 rings, piston (182) in such a way that their notches are not aligned (Fig. 9.1.i).

Warning: The notches of the 3 rings, piston (182) must not be aligned at the risk of causing a gas leak.

- Reassemble the piston assembly (180) as described in § 7.4.2.
- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.

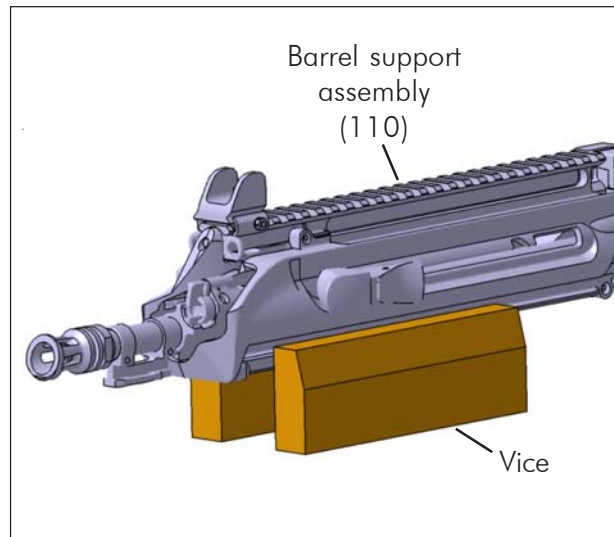


Fig. 9.1.j - Installation of the barrel support assembly (110)

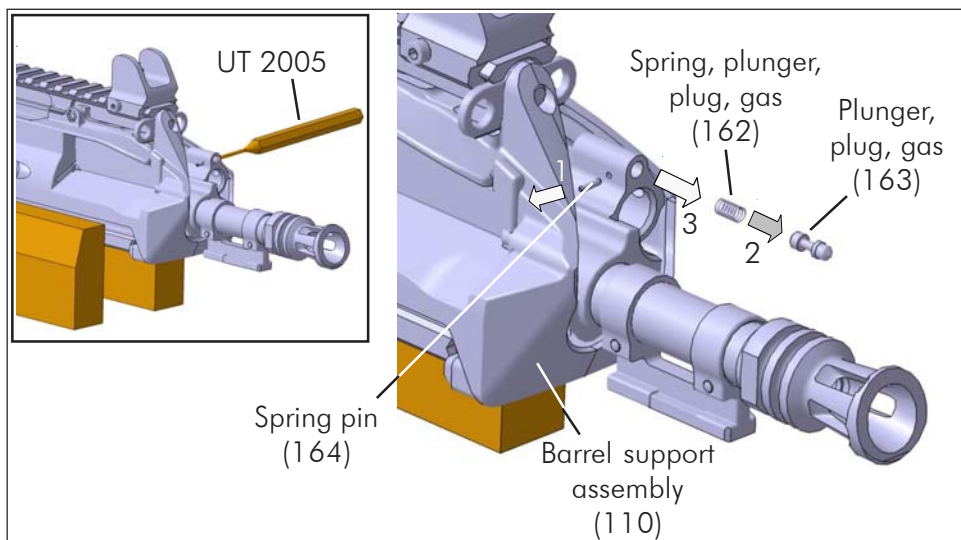


Fig. 9.1.k - Removal of the plunger, plug, gas (163)

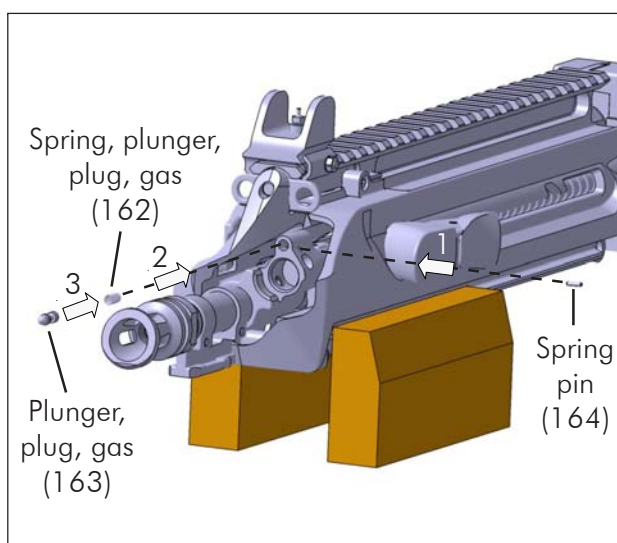


Fig. 9.1.l - Reassembly of the plunger, plug, gas (163)

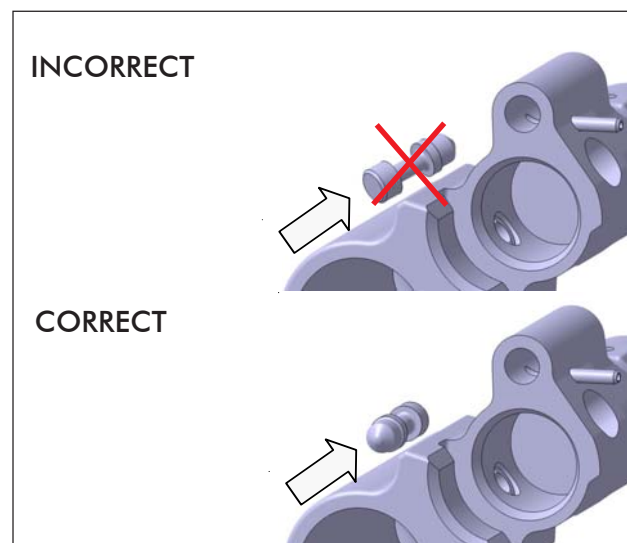


Fig. 9.1.m - Orienting the plunger, plug, gas (163)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.4. Removal and reassembly of the plunger, plug, gas (163)***Removal*

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Remove the plug, gas (191) as described in § 7.1.4.
- Place the barrel support assembly (110) into a vice equipped with a soft cloth (Fig. 9.1.i).
- Maintaining the plunger, plug, gas (163) and using the drift punch UT 2005, (1) drive the spring pin (164) out of the barrel support assembly (110) (Fig. 9.1.k).

Caution: Maintain the plunger, plug, gas (163) otherwise it will be ejected because of the spring, plunger, plug, gas (162).

Caution: Once removed, the spring pin (164) cannot be reused and must be replaced by a new one.

- (2) Remove the plunger, plug, gas (163) and (3) the spring, plunger, plug, gas (162) from the barrel support assembly (110) (Fig. 9.1.k).

Reassembly

- If not already done, place the barrel support assembly (110) into a vice.
- (1) Install a new spring pin (164) into its housing taking care not to insert it completely in: it must not protrude inside the housing of the plunger, plug, gas (163) (Fig. 9.1.l).

Note: Do not insert the spring pin (164) completely at this stage otherwise the reassembly of the plunger, plug, gas (163) will be impossible.

- (2) Install the spring, plunger, plug, gas (162) into its housing (Fig. 9.1.l).
- (3) Install the plunger, plug, gas (163) into its housing taking care to insert its flat face first (Fig. 9.1.m).
- Maintaining the plunger, plug, gas (163), fit in completely the spring pin (164) (Fig. 9.1.l).

Note: The spring pin (164) should not protrude once reassembled.

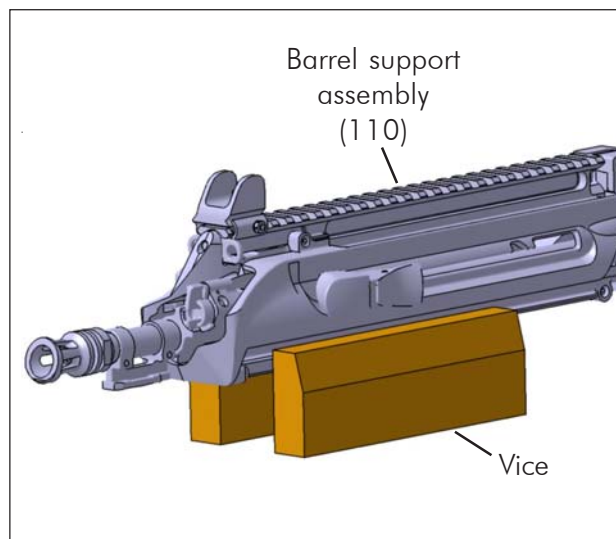


Fig. 9.1.n - Installation of the barrel support assembly (110) into a vice

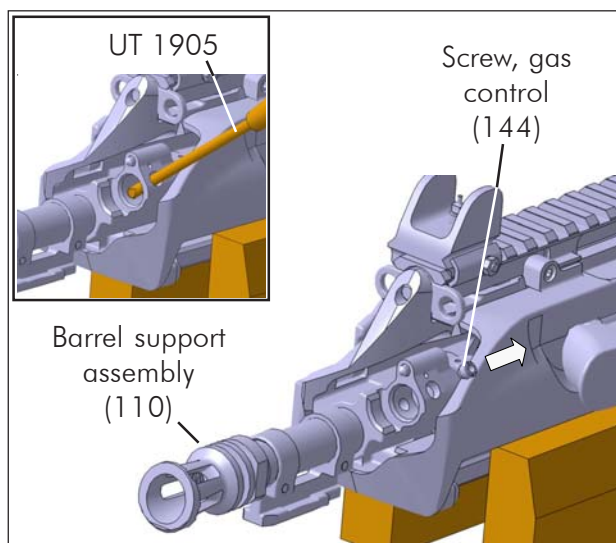


Fig. 9.1.o - Removal of the screw, gas control (144)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.4. Removal and reassembly of the plunger, plug, gas (163) (continued)***Reassembly (continued)*

- Check the correct operation of the plunger, plug, gas (163) by pressing and then releasing it.
- Reassemble the plug, gas (191) as described in § 7.4.2.
- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.

9.1.5. Removal and reassembly of the screw, gas control (144)

Note: The screw, gas control (144) is used to set the cyclic rate of fire of the rifle. The larger the inner diameter of the screw, gas control (125), the higher the cyclic rate of fire.

Removal

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Place the barrel support assembly (110) into a vice equipped with a soft cloth (Fig. 9.1.n).
- Remove the plug, gas (191) as described in § 7.1.4.
- Push the piston assembly (180) inside and using the screwdriver UT 1905, unscrew the screw, gas control (144) (Fig. 9.1.o).
- Remove it from the barrel support assembly (110) (Fig. 9.1.o).
The removal procedure is completed if the screw, gas control (144) has been removed. Otherwise go on carrying the following steps.
- Using the twist drill dia 3 mm UT 2421, enlarge the upper part of the screw, gas control (144) 3 to 4 mm deep.
- Using the stud extractor UT 2824 mounted on the adjustable bar-type tap wrench UT 2601, extract the screw, gas control (144) from the barrel support assembly (110).
If the screw, gas control (144) is blocked, proceed as follows:
 - Tapping slightly with a hammer, drive the stud extractor UT 2824 into the screw, gas control (144).
 - Unscrew the screw, gas control (144) from its housing.
 - Clean all residues from the housing of the screw, gas control (144) by using compressed air.

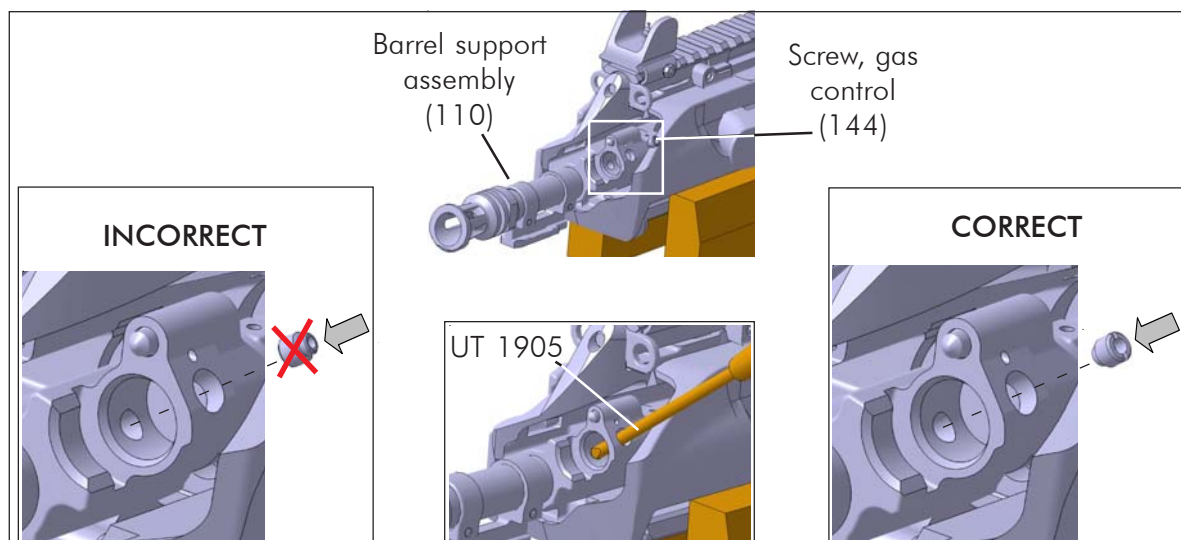


Fig. 9.1.p - Reassembly of the screw, gas control (144)

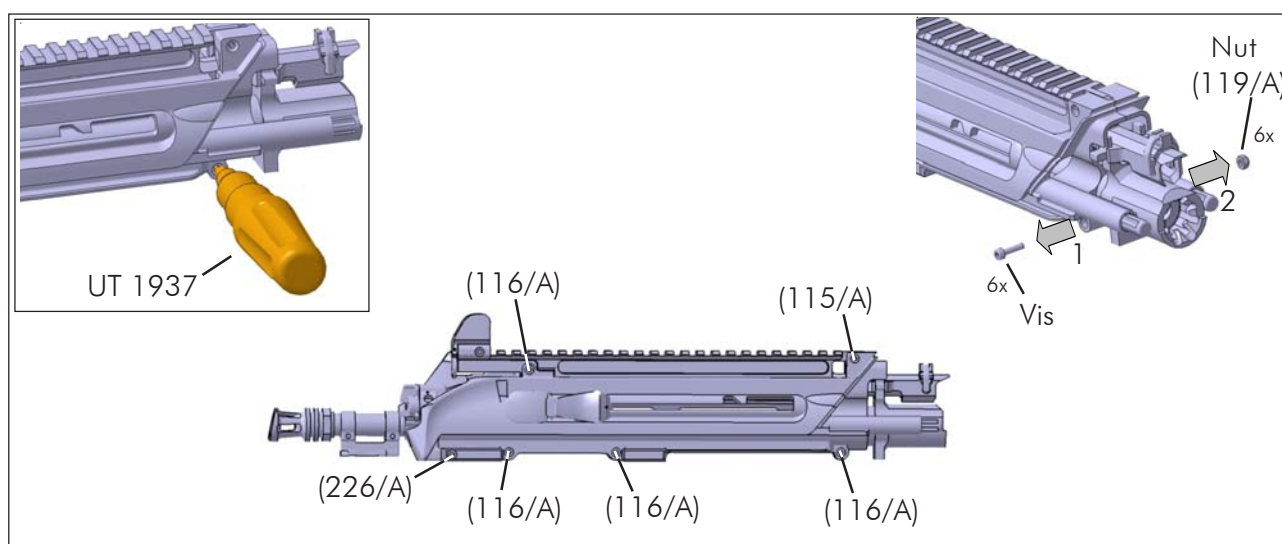


Fig. 9.1.q - Removal of the 6 securing screws (115/A), (116/A) and (226/A)

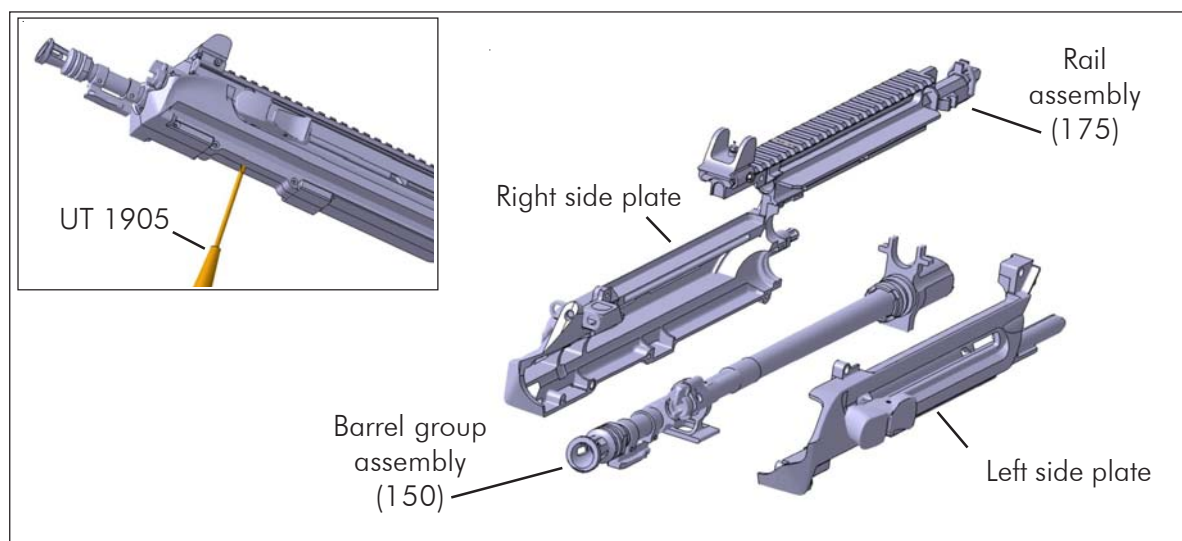


Fig. 9.1.r - Removal of the barrel group assembly (150) and the rail assembly (175)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.5. Removal and reassembly of the screw, gas control (144) (continued)***Reassembly*

- According to the expected cyclic rate of the fire, select the correct screw, gas control (144).

Note: The cyclic rate of fire is about 850 rpm in normal conditions even if the operation of the weapon is ensured in a range of cyclic rate of fire.

Note: Generally, a 0.05 mm change of the diameter of the screw, gas control (144) corresponds to a 50 rpm change of the cyclic rate.

- Fit the screw, gas control (144) into the corresponding housing of the barrel support assembly (110) taking care to insert its tapered tip first (Fig. 9.1.p).
- Using the screwdriver UT 1905, screw the screw, gas control (144) fully home (Fig. 9.1.p).
- Reassemble the plug, gas (191) as described in § 7.4.2.
- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.
- Check the cyclic rate of fire. If it is not the expected cyclic rate of fire, reassemble another screw, gas control (144) referring to the above note.

9.1.6. Removal and reassembly of the barrel, support group (120), the barrel group assembly (150) and the rail assembly (175)*Removal*

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Using the screwdriver UT 1937 and the adapter UT 2372, unscrew the screw (115/A), the 4 screws (116/A) and the screw (226/A) (Fig. 9.1.q).
- Remove the 6 screws (115/A, 116/A and 226/A) and the 6 nuts (119/A) (Fig. 9.1.q).

Caution: The lengths of the screws (115/A, 116/A and 226/A) are not the same: they are not interchangeable.

Caution: Once removed, the nuts (119/A) cannot be reused and must be replaced by new ones.

- Using the screwdriver UT 1905, separate the pair of side plates, support, barrel (121) (Fig. 9.1.r).
- Remove the barrel group assembly (150) and the rail assembly (175) (Fig. 9.1.r).

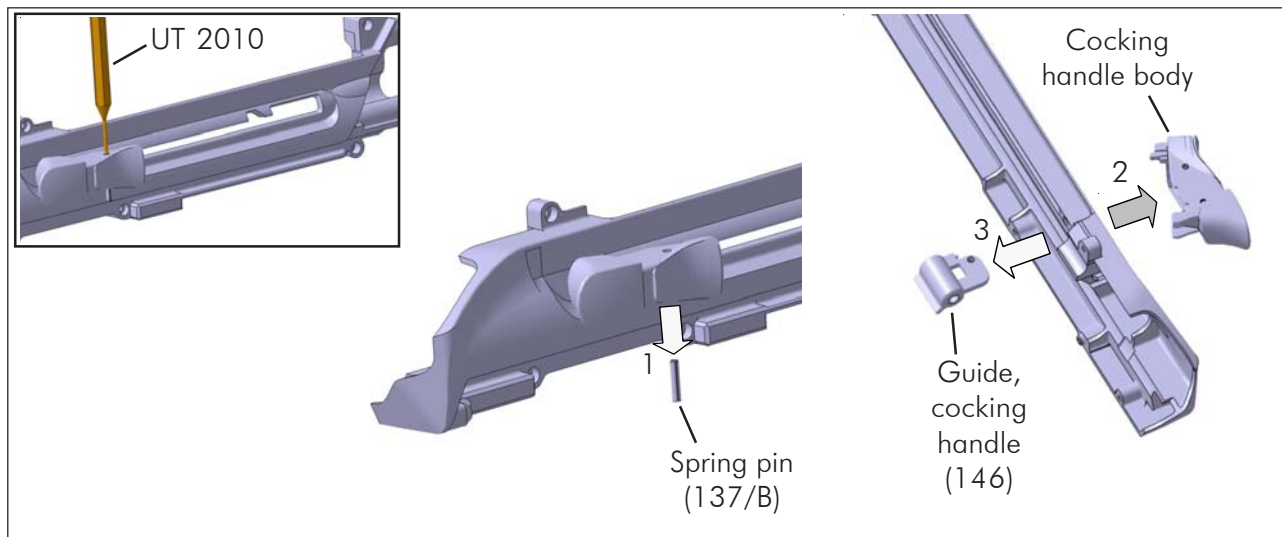


Fig. 9.1.s - Removal of the cocking handle body and the guide, cocking handle (146)

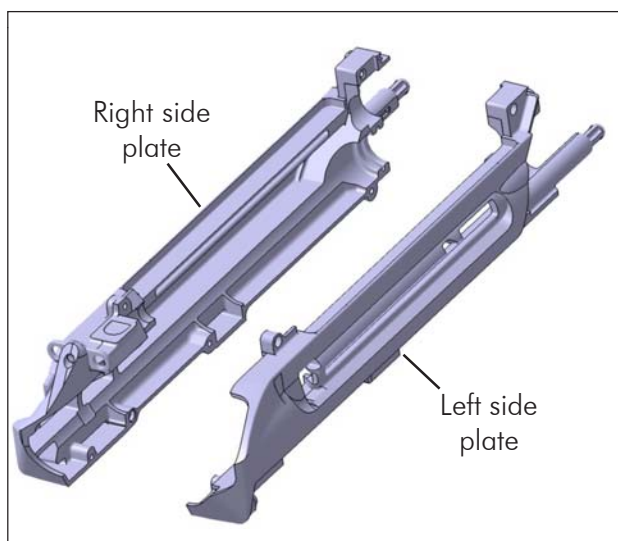


Fig. 9.1.t - The left side plate and the right side plate (121)

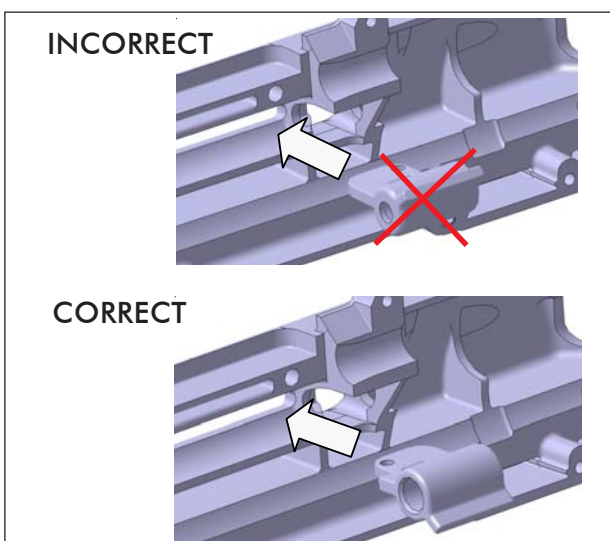


Fig. 9.1.u - Reassembly of the guide, cocking handle (136)

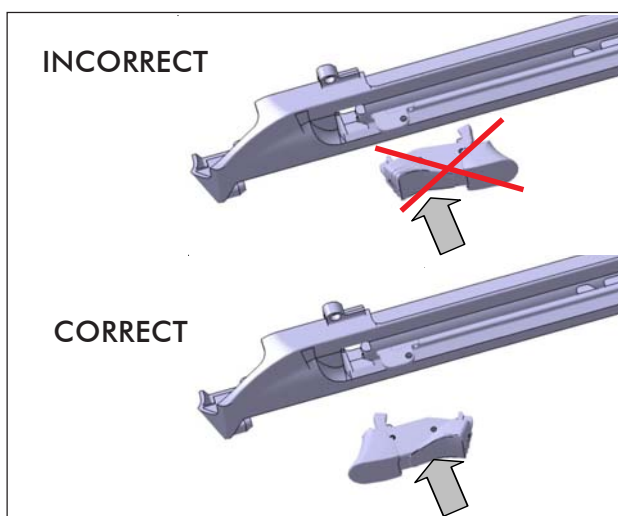


Fig. 9.1.v - Reassembly of the cocking handle body

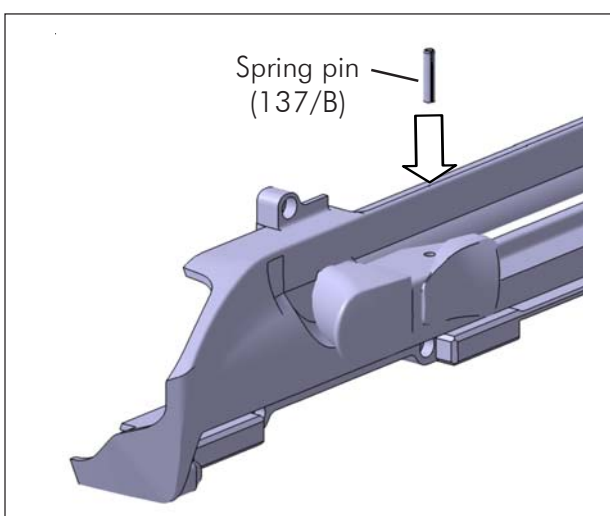


Fig. 9.1.w - Reassembly of the spring pin (137/B)

**9.1. BARREL ASSEMBLY (CONTINUED)****9.1.6. Removal and reassembly of the barrel, support group (120), the barrel group assembly (150) and the rail assembly (175) (continued)***Removal (continued)*

- (1) Maintaining the cocking handle body and using the drift-punch UT 2010, drive the spring pin (137/B) out of the cocking handle body (Fig. 9.1.s).

Caution: If the cocking handle body is not maintain, it will be ejected because of the spring of the cocking handle.

Caution: Once removed, the spring pin (137/B) cannot be reused and must be replaced by a new one.

- Remove (2) the cocking handle body and (3) the guide, cocking handle (146) (Fig. 9.1.s).

Reassembly

- Install the guide, cocking handle (146) into the left side plate (Fig. 9.1.t) taking care that the pin hole should be positioned to the back (Fig. 9.1.u).
- Install the cocking handle body onto the guide, cocking handle (146) from the outside of the left side plate (Fig. 9.1.u).

Caution: There is a way to instal the cocking handle body (Fig. 9.1.v).

- Align correctly the pin holes of the cocking handle body and of the guide, cocking handle (146) and fit in a new spring pin (137/B) (Fig. 9.1.w).

Note: The spring pin (137/B) should not protrude once reassembled.

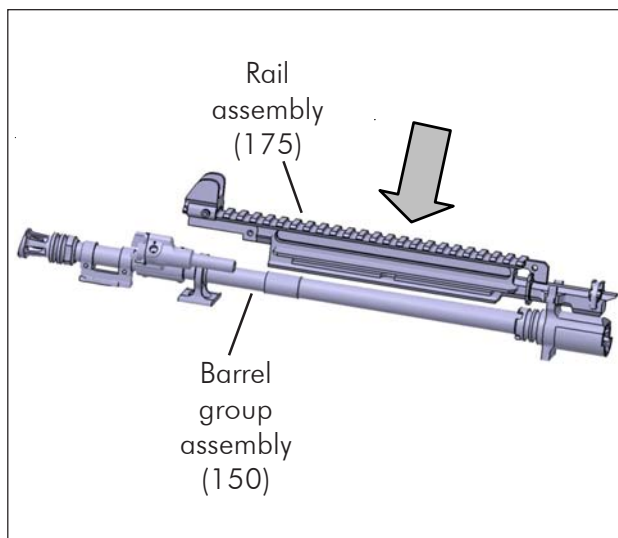


Fig. 9.1.x - Reassembly of the rail assembly (175) in the barrel group assembly (150)

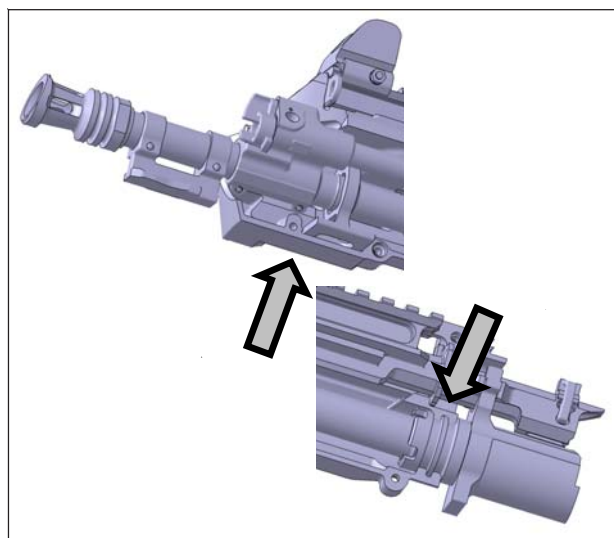


Fig. 9.1.y - Positioning the barrel group assembly in the right side plate

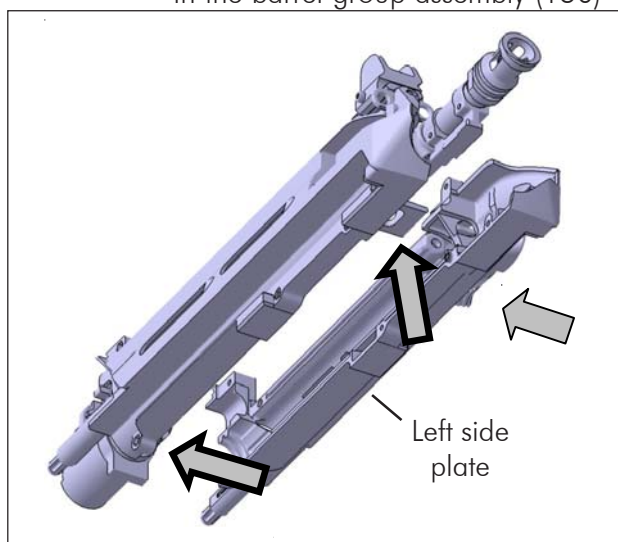


Fig. 9.1.z - Positioning the rail assembly (175) in the notch of the right side plate (121)

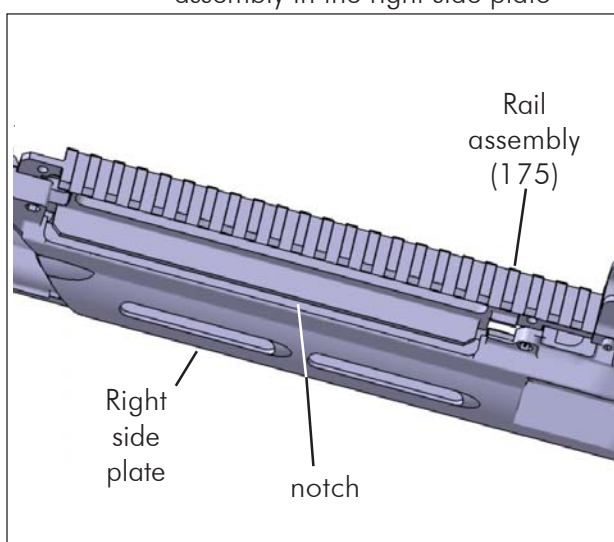


Fig. 9.1.aa - Reassembly of the left side plate (121)

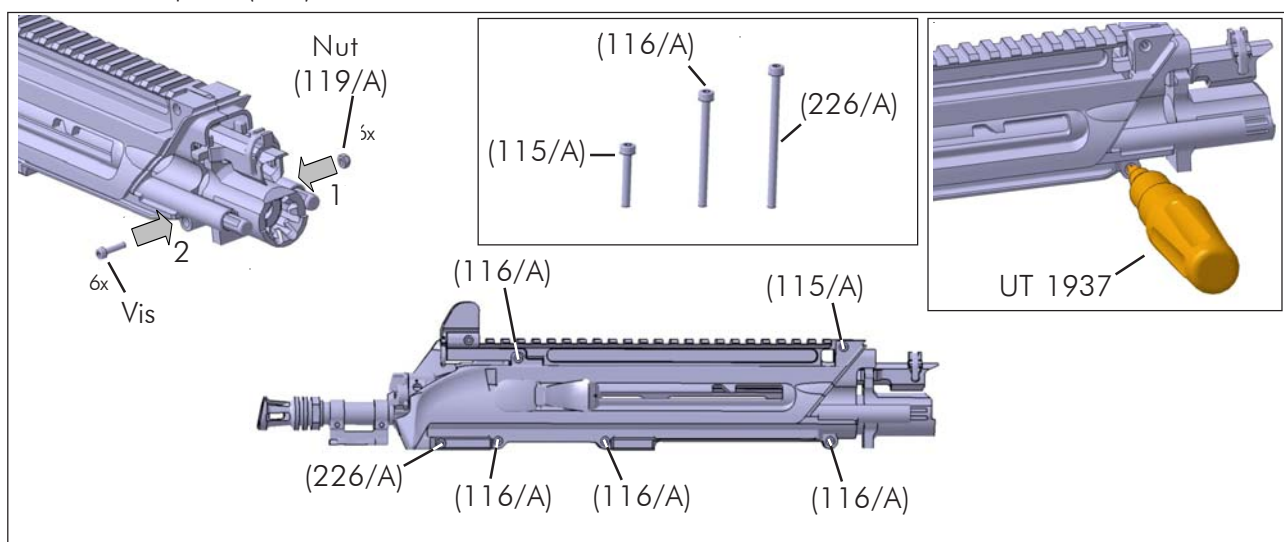


Fig. 9.1.ab - Reassembly of the 6 securing screws (115/A), (116/A) and (226/A)

**9.1. BARREL ASSEMBLY (CONTINUED)****9.1.6. Removal and reassembly of the barrel, support group (120), the barrel group assembly (150) and the rail assembly (175) (continued)***Reassembly (continued)*

- Reassemble the rail assembly (175) onto the barrel assembly group (150) (Fig. 9.1.x).
 - Install the barrel group assembly (150) into the right side plate of the pair of side plates, support, barrel (121) taking care to:
 - position the bearing located at the front of the barrel group assembly (150) into the corresponding housing of the right side plate (Fig. 9.1.y);
 - introduce the back of the barrel group assembly (150) into the corresponding notch of the right side plate (Fig. 9.1.y).
 - Using the plastic hammer UT 2114 lightly, fit in completely the barrel group assembly (150) into the right side plate.
 - Position the rail assembly (175) into the corresponding notch of the right side plate (Fig. 9.1.z).
 - Once the rail assembly (175) is correctly positionned, fit it in completely into the right side plate of the pair of side plates, support, barrel (121).
 - Reassemble the left side plate against the right side plate taking care to:
 - position the bearing located at the front of the barrel group assembly (150) into the corresponding housing of the left side plate (Fig. 9.1.aa);
 - introduce the back of the barrel group assembly (150) into the corresponding notch of the left side plate (Fig. 9.1.aa).
 - (1) Install 6 new nuts (119/A) into their corresponding housing of the right side plate (Fig. 9.1.ab).
 - (2) Install the 6 screws (115/A, 116/A and 226/A) into their corresponding housing of the left side plate (Fig. 9.1.ab).
- Caution:** The lengths of the screws (115/A, 116/A and 226/A) are not the same: they are not interchangeable.
- Using the torque screwdriver UT 1937 and the adapter UT 2372, tighten the screws (115/A, 116/A and 226/A) (Fig. 9.1.ab).
- Note:** The 6 screws (115/A, 116/A and 226/A) must be tightened with a torque of 0.65 Nm.
- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.
 - Check the accuracy as described in § 10.1.

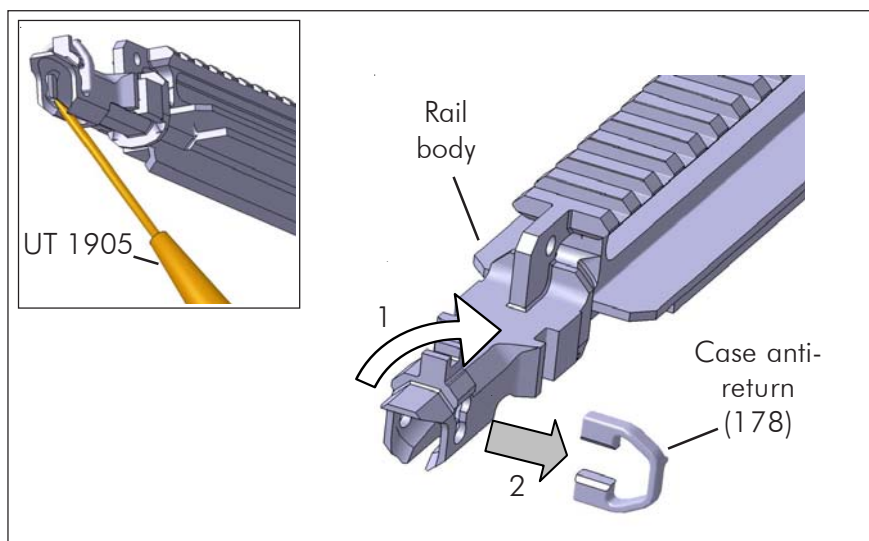


Fig. 9.1.ac - Removal of the case anti-return (178)

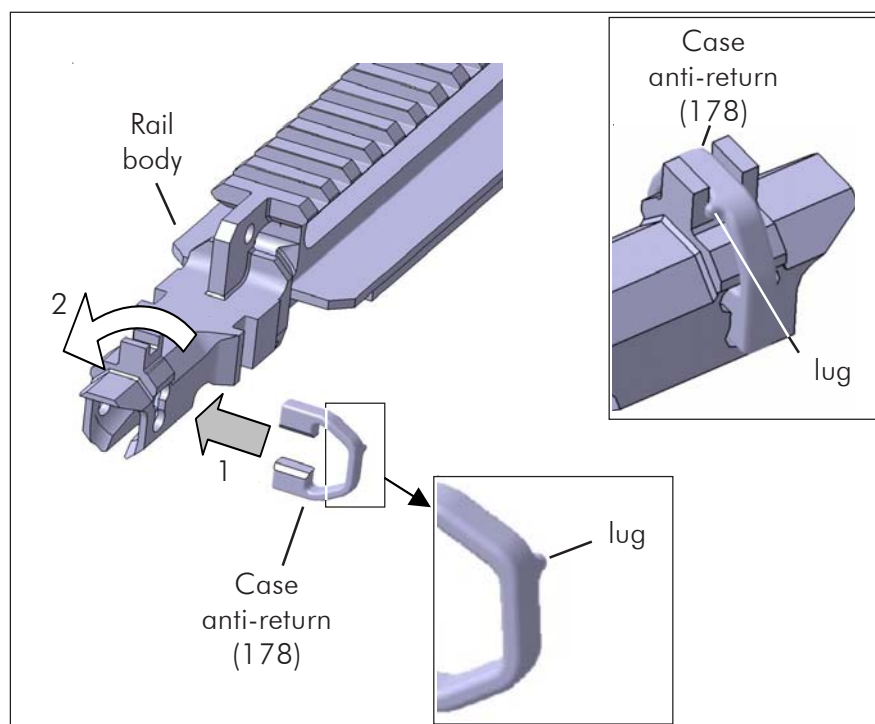


Fig. 9.1.ad - Reassembly of the case anti-return (178)



9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)

9.1.7. Removal and reassembly of the case anti-return (178)

Removal

- Introducing the screwdriver UT 1905 at the back of the rail body, push the left arm of the case anti-return (178) to release it from its notch (Fig. 9.1.ac).
- (1) Pivot the case anti-return (178) around the rail body and (2) remove it from the rail body (Fig. 9.1.ac).

Reassembly

- (1) Positioning the lug of the case anti-return (178) towards the front of the rail body, introduce its right arm into the corresponding notch of the rail body (Fig. 9.1.ad).
- (2) Pivot the case anti-return (178) around the rail body and introduce the left arm of the case anti-return (178) into the rail body (Fig. 9.1.ad).

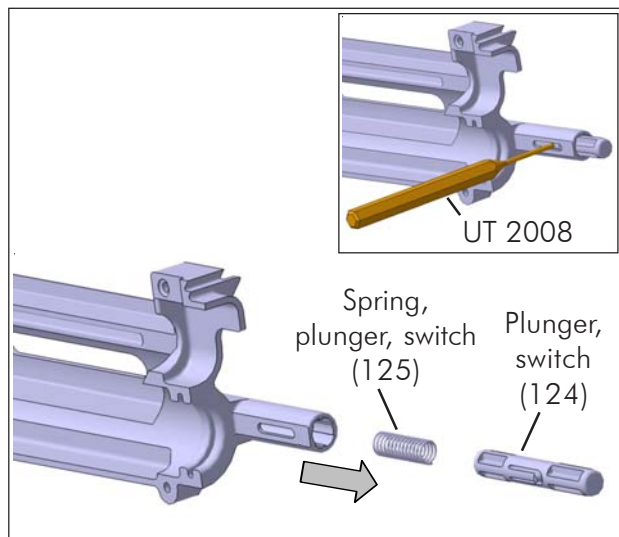


Fig. 9.1.ae - Removal of the plunger, switch (124)

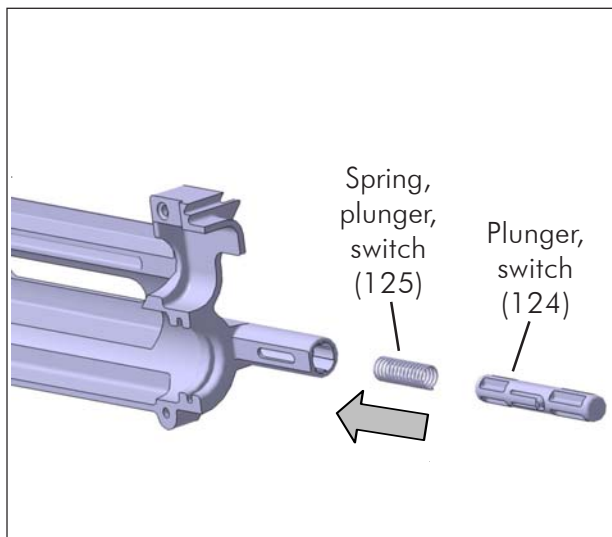


Fig. 9.1.af - Reassembly of the plunger, switch (124)

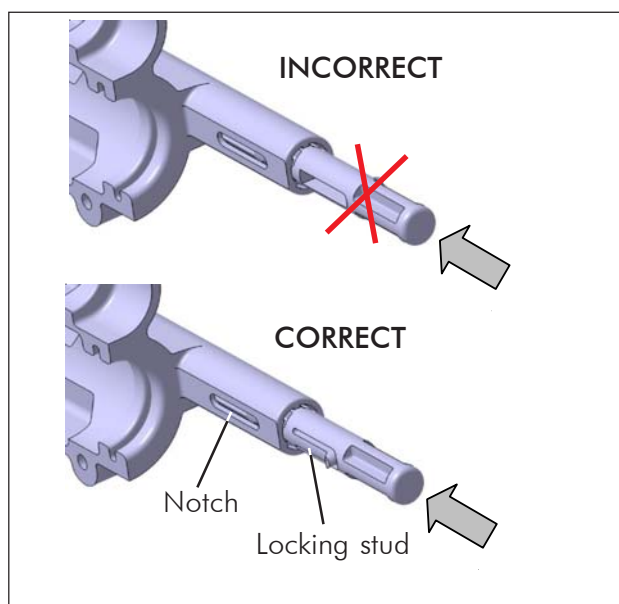


Fig. 9.1.ag - Orienting the plunger, switch (124)

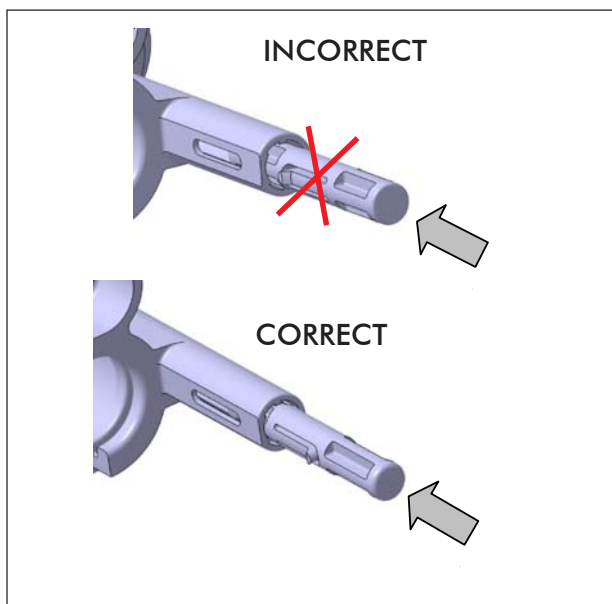


Fig. 9.1.ah - Positioning the tip of the locking stud

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.8. Removal and reassembly of the plunger, switch (124)***Removal*

Note: The plunger, switch (124) can be removed without removing the barrel group assembly (150). The figures opposite are simplified to facilitate the visibility .

- Remove the barrel support assembly (110) as described in the field stripping procedure from § 7.1.1 to § 7.1.2.
- Maintaining the plunger, switch (124) and using the drift-pin UT 2008, push the locking stud of the plunger, switch (124) in and then release it slightly (Fig. 9.1.ae).

Caution: If the plunger, switch (124) is not maintained, it will be ejected because of the spring, plunger, switch (125).

- Remove the plunger, switch (124) and the spring, plunger, switch (125) from the barrel, support group (120) (Fig. 9.1.ae).
- Carry out the same procedure to remove the second plunger, switch (124).

Reassembly

- Fit the spring, plunger, switch (125) into the corresponding housing of the barrel, support group (120) (Fig. 9.1.af).
- Fit the plunger, switch (124) into the corresponding housing of the barrel, support group (120) taking care that:
 - the locking stud should be oriented towards the notch of the barrel, support group (120) (Fig. 9.1.ag);
 - the locking stud should be positioned to the back (Fig. 9.1.ah).
- Carry out the same procedure to reassemble the second plunger, switch (124).
- Reassemble the barrel support assembly (110) as described in the field stripping procedure in § 7.4.4.

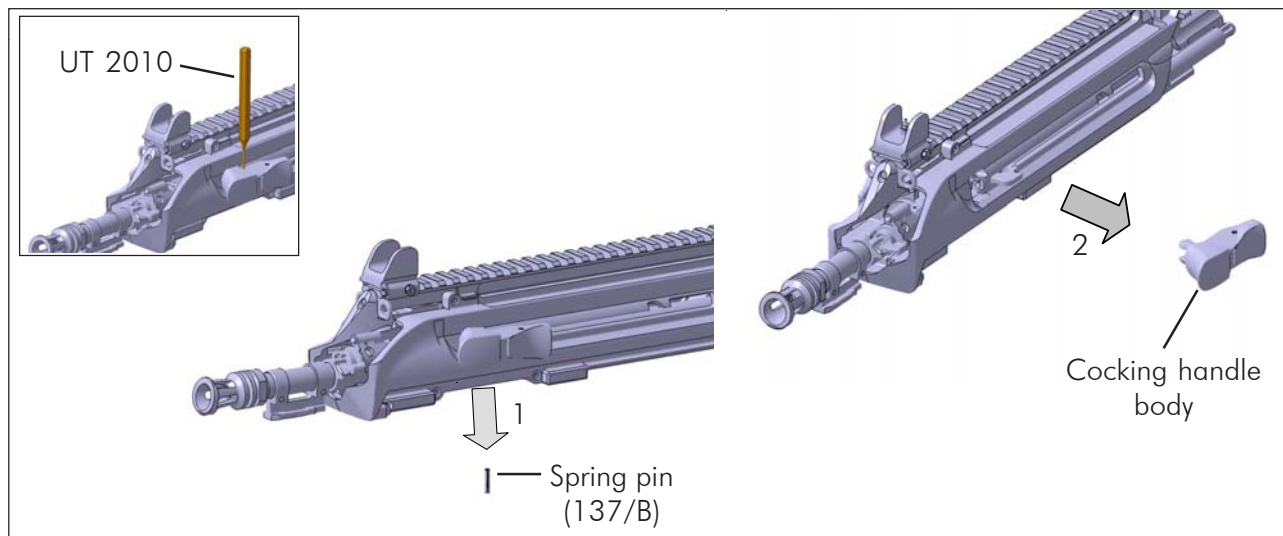


Fig. 9.1.ai - Removal of the cocking handle body

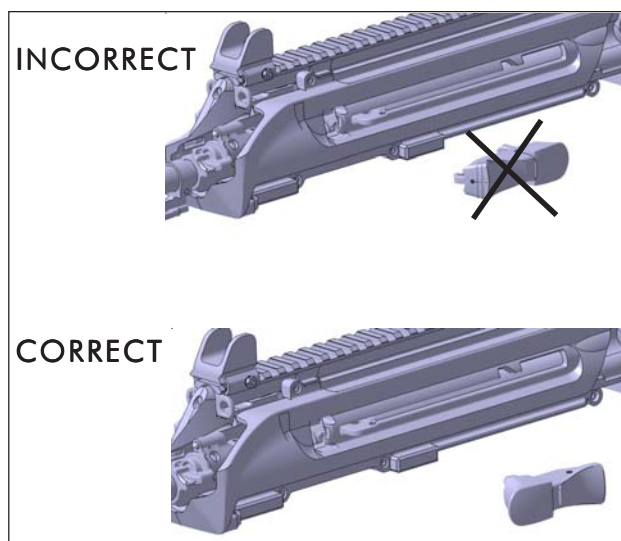


Fig. 9.1.aj - Reassembly of the cocking handle body

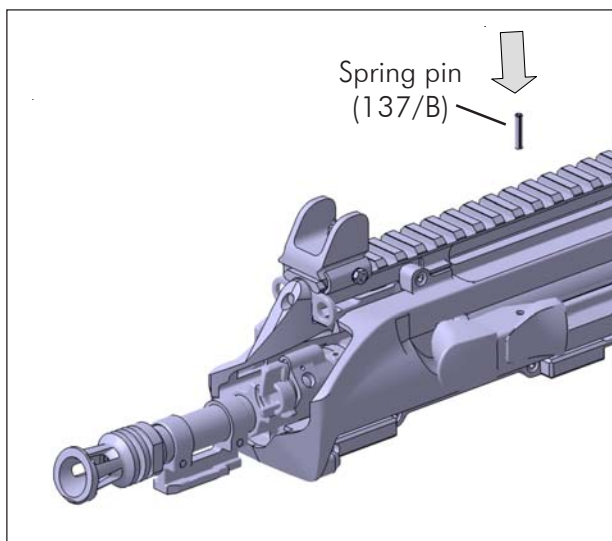


Fig. 9.1.ak - Reassembly of the spring pin (137/B)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.9. Removal and reassembly of the handle, cocking group (140)***Removal*

Note: It is not necessary to carry out the field stripping procedure described in the § 7.1.1.

- (1) Maintaining the cocking handle body and using the drift-punch UT 2010, drive the spring pin (137/B) out of the cocking handle body (Fig. 9.1.ai).

Caution: If the cocking handle body is not maintain, it will be ejected because of the spring of the cocking handle.

Caution: Once removed, the spring pin (137/B) cannot be reused and must be replaced by a new one.

- (2) Remove the cocking handle body (Fig. 9.1.ai).

Reassembly

- Install the cocking handle body onto the guide, cocking handle (146) from the outside of the left side plate (Fig. 9.1.aj).

Caution: There is a way to reassemble the cocking handle body (Fig. 9.1.aj).

- Using the drift punch UT 2010 from the opposite side, align correctly the pin holes of the cocking handle body and of the guide, cocking handle (146) and fit in a new spring pin (137/B) (Fig. 9.1.ak).

Note: The spring pin (137/B) should not protrude once reassembled.

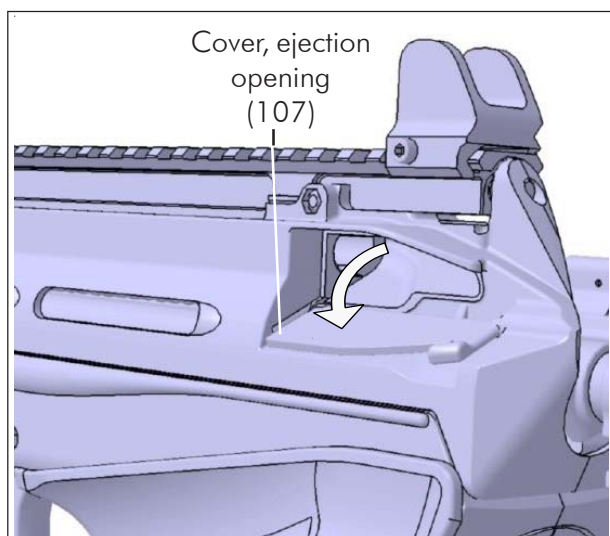


Fig. 9.1.al - Opening the cover, ejection opening (107)

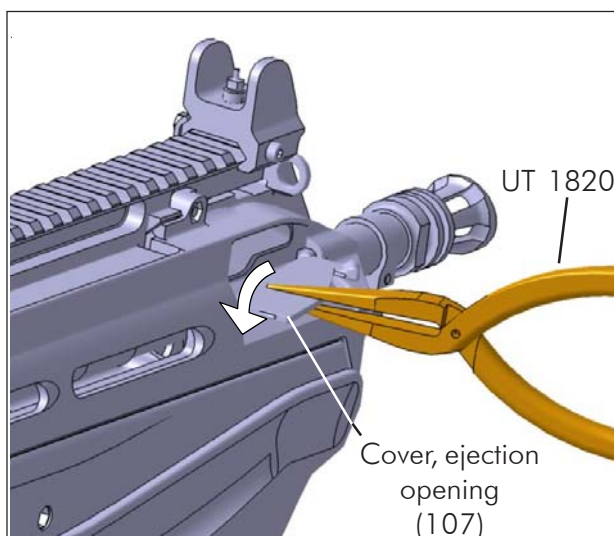


Fig. 9.1.am - Removal of the cover, ejection opening (107)

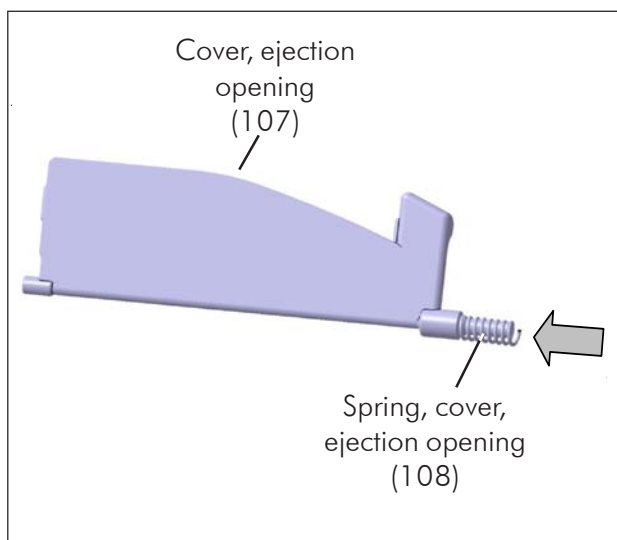


Fig. 9.1.an - Reassembly of the spring, cover, ejection opening (108)

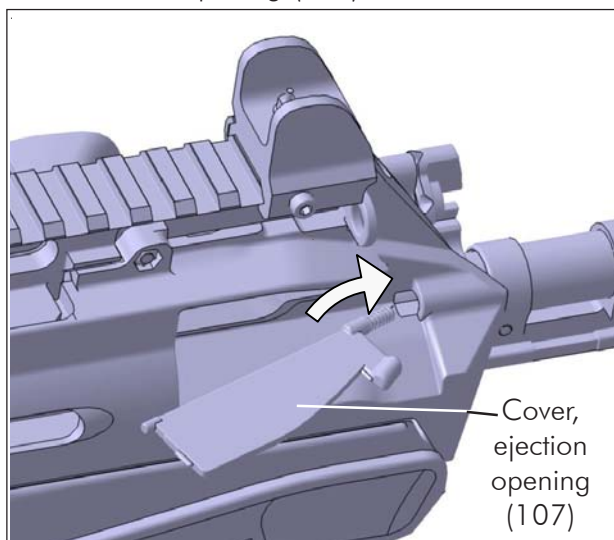


Fig. 9.1.ao - Positioning the cover, ejection opening (107)

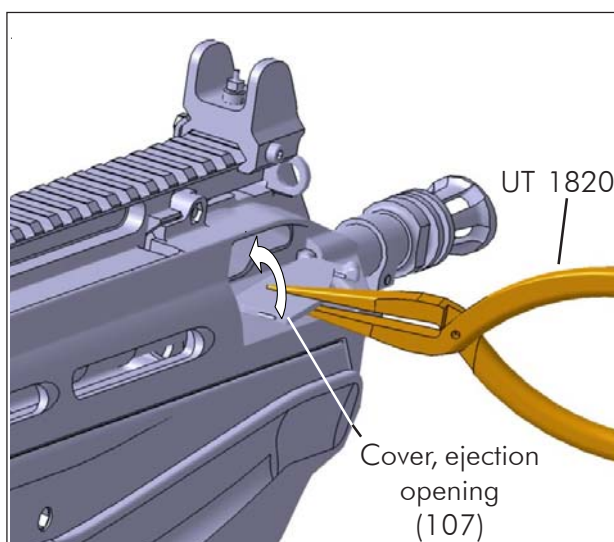


Fig. 9.1.ap - Reassembly of the cover, ejection opening (107)

**9.1. BARREL SUPPORT ASSEMBLY (CONTINUED)****9.1.10. Removal and reassembly of the cover, ejection opening (107)***Removal*

Note: Carry out the safety checks as described § 4.2.

- Open the cover, ejection opening (107) (Fig. 9.1.al).
- Using the bent-nose UT 1820, push the cover, ejection opening (107) to the top of the weapon by bending it slightly and remove it from the barrel support assembly (110) taking care not to lose the spring, cover, ejection opening (108) (Fig. 9.1.am).
- Remove the spring, cover, ejection opening (108) from the cover, ejection opening (107).

Reassembly

- Reassemble the spring, cover, ejection opening (108) onto the corresponding front lug of the cover, ejection opening (107) (Fig. 9.1.an).
- Install the the cover, ejection opening (107) equipped with its spring (108) into the corresponding notch located at the front of the weapon (Fig. 9.1.ao).
- Using a bent-nose UT 1820, bend slightly the cover, ejection opening (107) to allow the introduction of the rear lug of the cover, ejection opening (107) into its housing. The cover, ejection opening (107) is then completely reassembled (Fig. 9.1.ap).
- Close the cover, ejection opening (107) and check that it locks correctly.

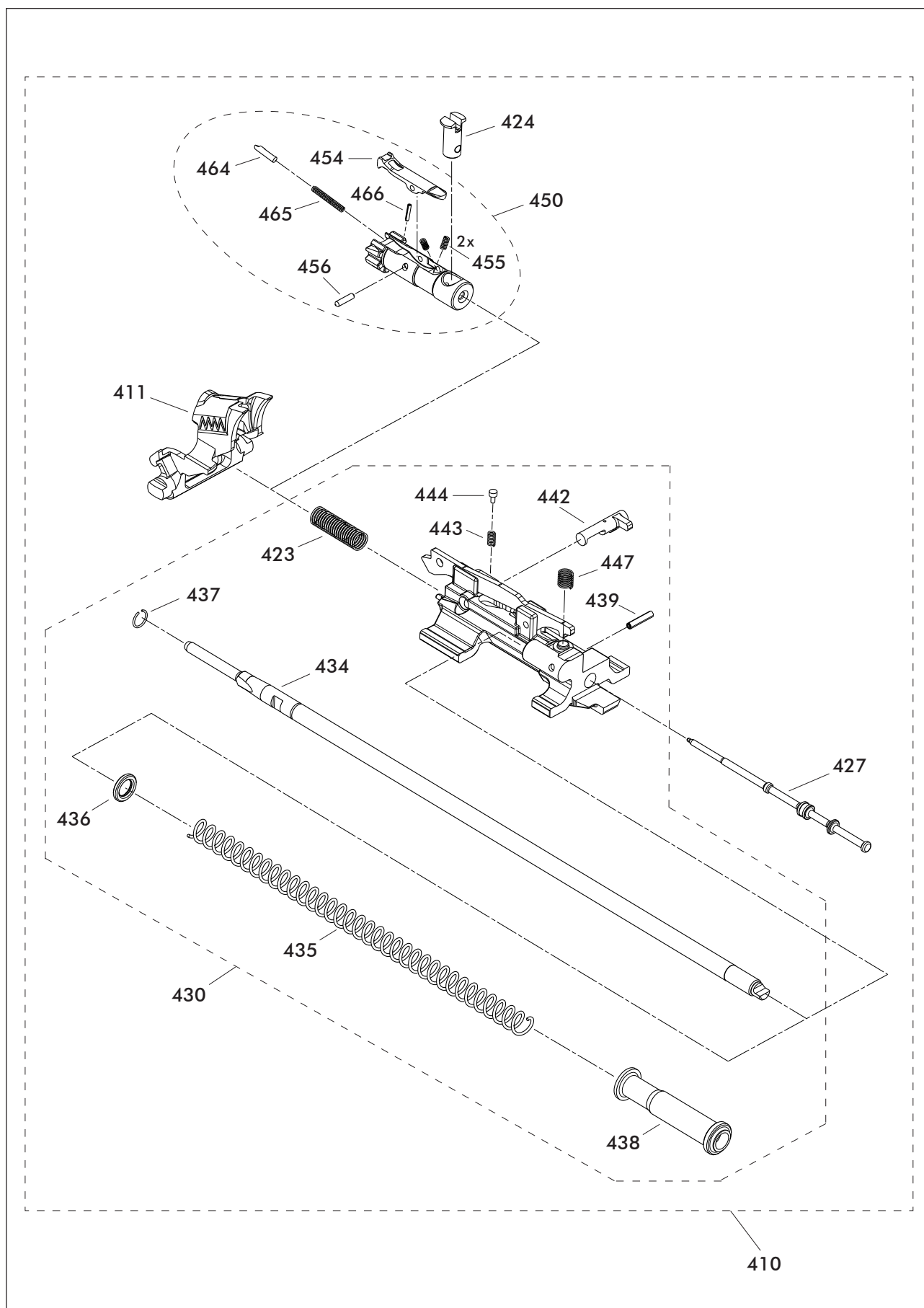


Fig. 9.2.a - Moving parts assembly (410)



9.2. MOVING PARTS ASSEMBLY

9.2.1. Removal and reassembly of the spring, bolt (423)

Removal

- Carry out the field stripping procedure as described from § 7.1.1 to § 7.1.3.
- Remove the spring, bolt (423) out of the slide body by using any tool (by example, a small screwdriver) and taking care not to scratch the inside of the housing (Fig. 9.2.b).

Reassembly

- (1) Reassemble the spring, bolt (423) it into the slide body and (2) push it using the bolt assembly (450) to the housing bottom until it is locked (Fig. 9.2.c).
- Carry out the field stripping procedure as described from § 7.4.3 to § 7.4.4.

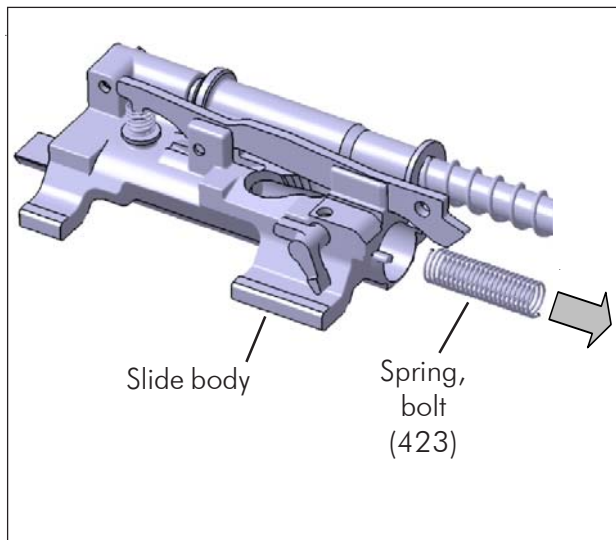


Fig. 9.2.b - Removal of the spring, bolt (423)

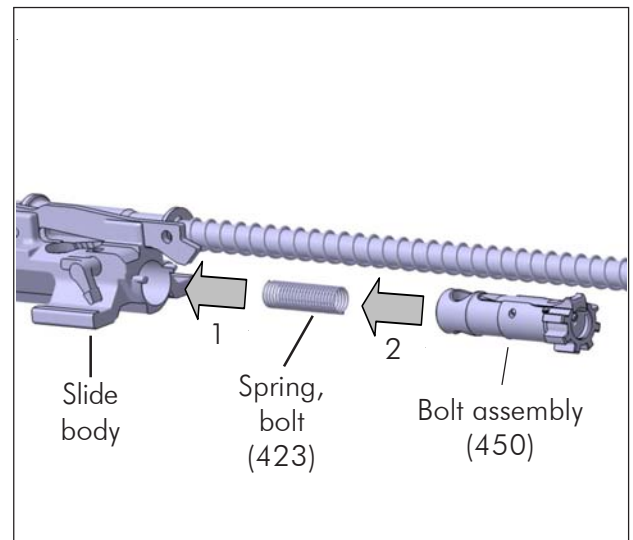


Fig. 9.2.c - Reassembly of the spring, bolt (423)

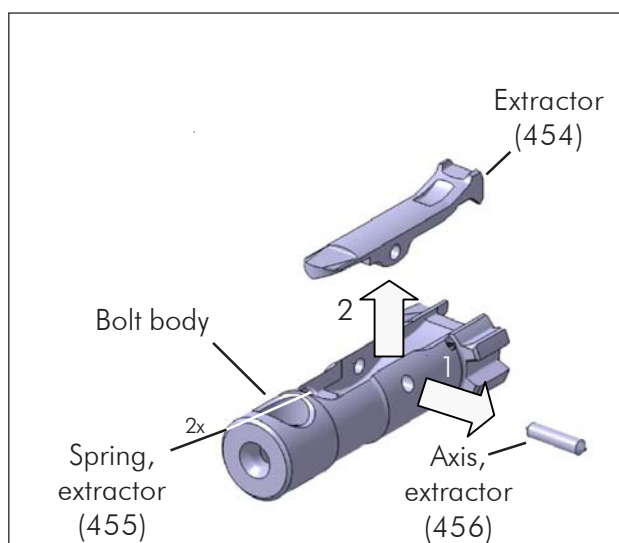


Fig. 9.2.d - Removal of the extractor (454)

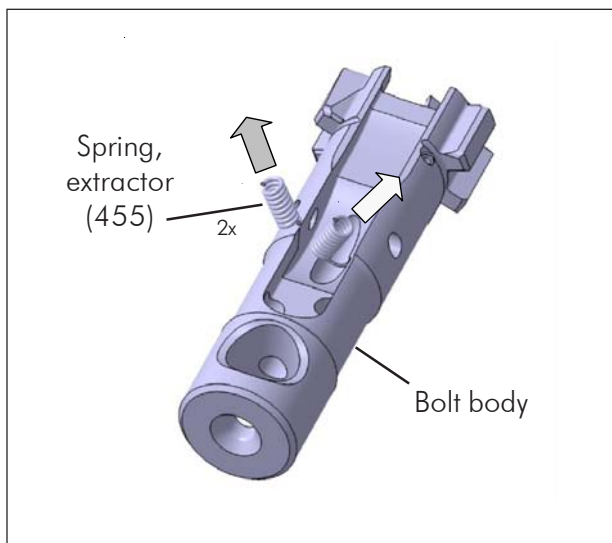


Fig. 9.2.e - Removal of the springs, extractor (455)

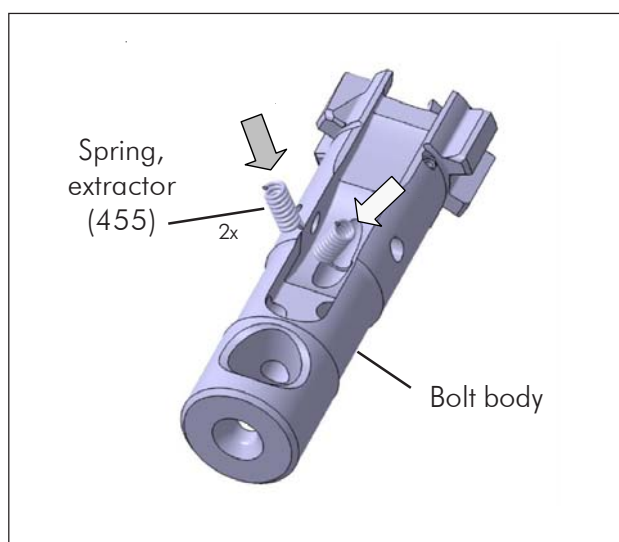


Fig. 9.2.f - Reassembly of the springs, extractor (455)

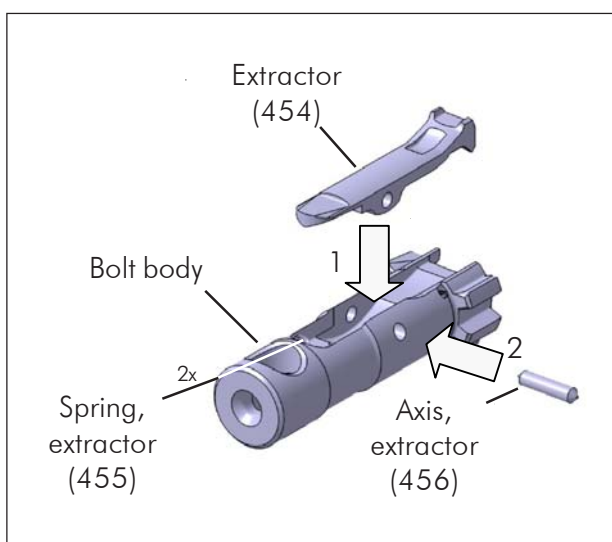


Fig. 9.2.g - Reassembly of the extractor (454)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.2. Removal and reassembly of the extractor (454)****Removal**

- Remove the bolt assembly (450) as described in § 7.1.3.
- (1) Using the drift punch UT 2008, drive the axis, extractor (456) out of the bolt body (Fig. 9.2.d).
- (2) Remove the extractor (454) from the bolt body taking care not to lose the 2 springs, extractor (455) (Fig. 9.2.d).
- Remove the 2 springs, extractor (455) from the bolt body (Fig. 9.2.e).

Reassembly

- Install the 2 springs, extractor (455) into their notches of the bolt body (Fig. 9.2.f).
- Install the extractor (454) on the bolt body taking care to position its claw in front of the ejector (464) (Fig. 9.2.g).

Caution: Check that the 2 springs, extractor are installed in their notches of the bolt assembly (450).

- (1) Press the extractor (454) to slightly compress the 2 springs, extractor (455) and align the hole of the extractor (454) and those of the bolt body (Fig. 9.2.g).
- (2) Introduce the axis, extractor (456) into the corresponding hole of the bolt body (Fig. 9.2.g).

Note: The axis, extractor (456) should not protrude after it has been reassembled.

- Once reassembled, check the correct operation of the extractor (454) by pressing and then releasing it.
- Check if the extractor (454) works correctly by turning the release unit (442) clockwise (1/4 of turn): the extractor (454) should raise.

Note: If the extractor (454) does not raise when the release unit (442) pivots clockwise, consult a qualified armoured.

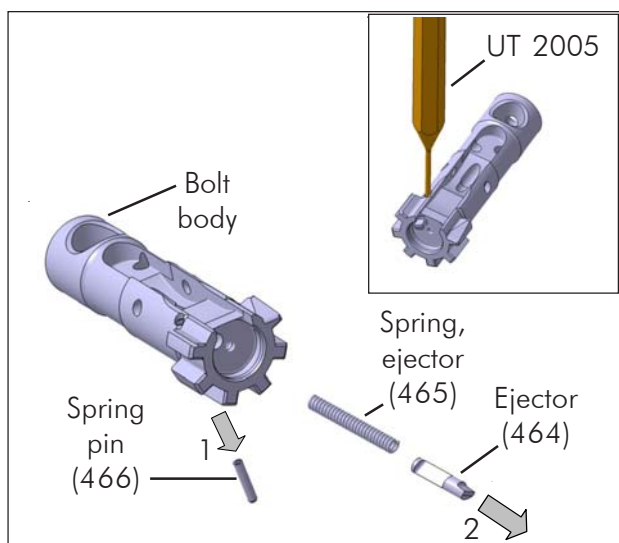


Fig. 9.2.h - Removal of the ejector (464)

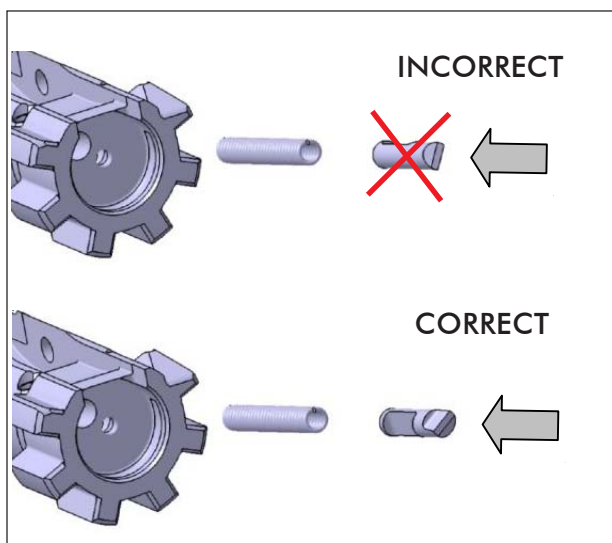


Fig. 9.2.i - Reassembly of the spring, ejector (465) and the ejector (464)

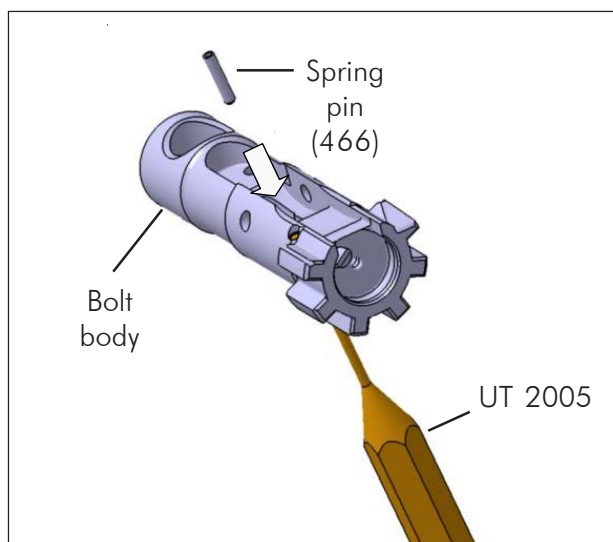


Fig. 9.2.j - Reassembly of the spring pin (466)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.3. Removal and reassembly of the ejector (464)***Removal*

- Remove the bolt assembly (450) as described in § 7.1.3.
- Remove the extractor (454) as described in § 7.2.1.
- (1) Using the drift punch UT 2005, drive the spring pin (466) out of the bolt body and leave into position the drift punch into the hole (Fig. 9.2.h).
- (2) While maintaining the ejector (464), carefully remove the drift punch UT 2005 from the hole, and let go slowly the ejector (464) and the spring, ejector (465) out of the bolt body (Fig. 9.2.h).

Caution: If the ejector (464) is not maintained during the removal of the spring pin (466), it will be ejected by the action of the spring, ejector (465).

Caution: Once removed, the spring pin (466) can not be reused and should be replaced by a new one.

Reassembly

- Lubricate the spring, ejector (465)
- Introduce the spring, ejector (465) into its housing of the bolt body (Fig. 9.2.i).
- Introduce the ejector (464) into its housing of the bolt body taking care to position its bevelled edge towards the outside and its notch against the pin hole of the bolt body (Fig. 9.2.i).
- Compress the spring, ejector (465) by pushing the ejector (464) and introduce the drift punch UT 2005 from the bottom of the bolt body into the pin hole.
- Fit a new spring pin (466) from the top of the bolt body into the corresponding pin hole by pulling slightly the drift punch UT 2005 out (Fig. 9.2.i).

Note: The spring pin (466) should not protrude once reassembled.

- Check that the ejector (464) operates correctly by pressing and the releasing it.
- Reassemble the extractor (454) as described in § 9.2.2.
- Before the reassembly of the bolt assembly (450), lubricate it as described in § 8.3.
- Reassemble the bolt assembly (450) as described in § 7.4.3.

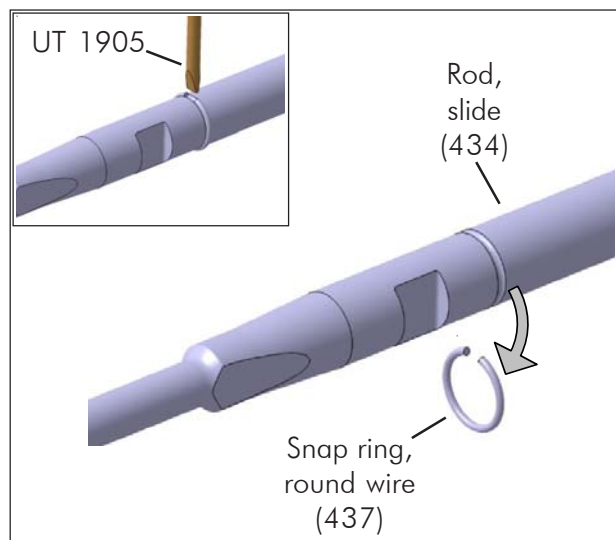


Fig. 9.2.k - Removal of the snap ring, round wire (437)

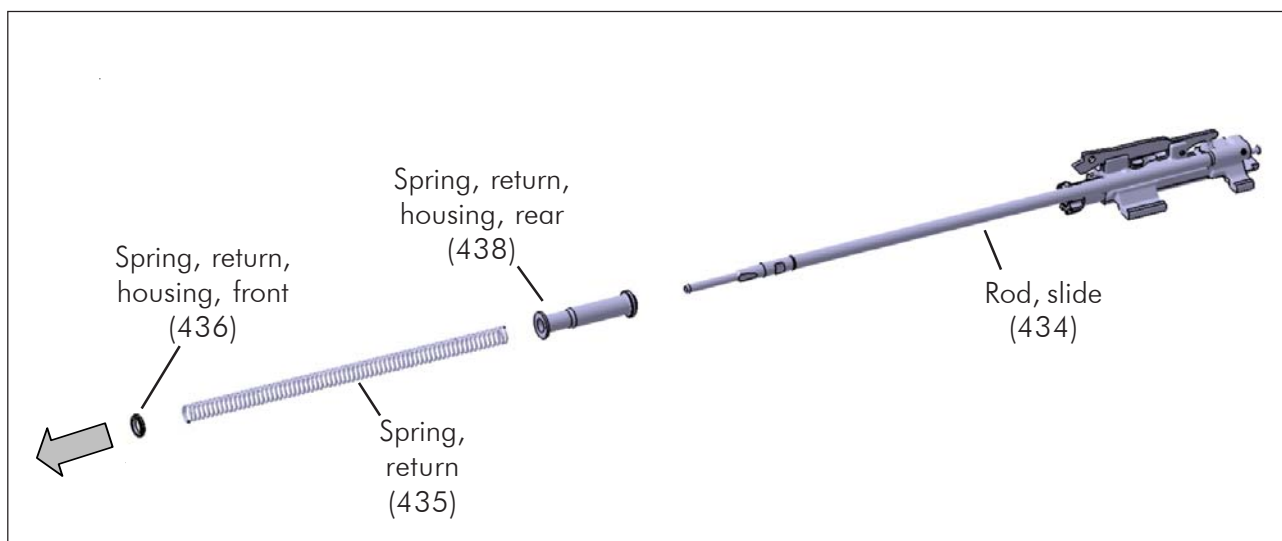


Fig. 9.2.l - Removal of the spring, return, housing, rear (438), the spring, return (435) and the spring, return, housing, front (436)

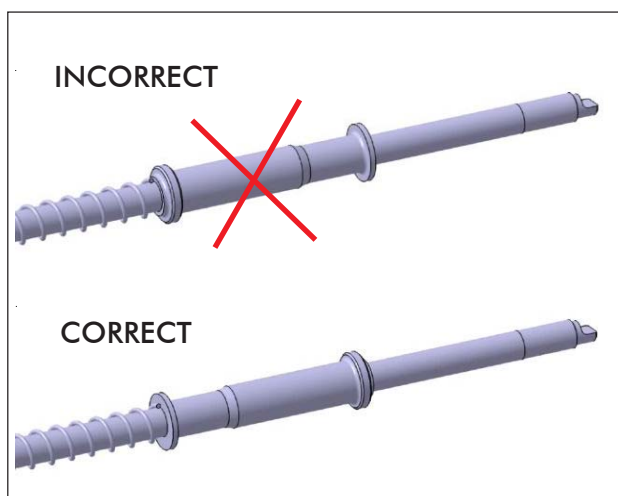


Fig. 9.2.m - Way to reassemble the spring, return, housing, rear

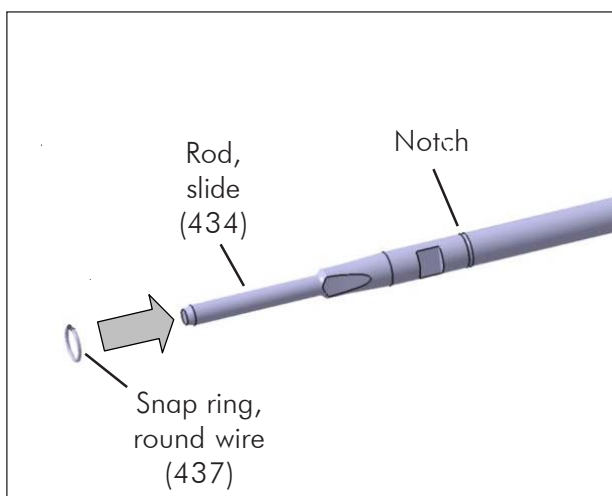


Fig. 9.2.n - Reassembly of the snap ring, round wire (437)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.4. Removal and reassembly of the spring, return (435), the spring, return, housing, front (436) and the spring, return, housing, rear (438)****Removal**

- Remove the moving parts assembly (410) as described in § 7.1.3.
- Remove the switch (411) as described in § 7.1.3.
- While maintaining the spring, return (435) under tension by pushing on the spring, return, housing, front (436) and using a screwdriver UT 1905, remove the snap ring, round wire (437) from its groove of the rod, slide (434) (Fig. 9.2.k).

Caution: If the spring, return, housing, front (436) is not maintained, it will be ejected because of the spring, return (435).

Caution: Once removed, the snap ring, round wire (437) can not be reused and should be replaced by a new one.

- Remove the spring, return, housing, rear (438), the spring, return (435) and the spring, return, housing, front (436) from the rod, slide (434) (Fig. 9.2.l).

Reassembly

- Reassemble the spring, return, housing, front (436), the spring, return (435) and the spring, return, housing, rear (438) onto the rod, slide (434).

Caution: There is a way to reassemble the spring, return, housing, rear (438): its most narrow part should be positioned against the spring, return (435) (Fig. 9.2.m).

- While maintaining the spring, return (435) under tension by pushing on the spring, return, housing, front (436), insert a new snap ring, round wire (437) into its groove of the rod, slide (434) (Fig. 9.2.n).

Caution: If the spring, return, housing, front (436) is not maintained, it will be ejected because of the spring, return (435).

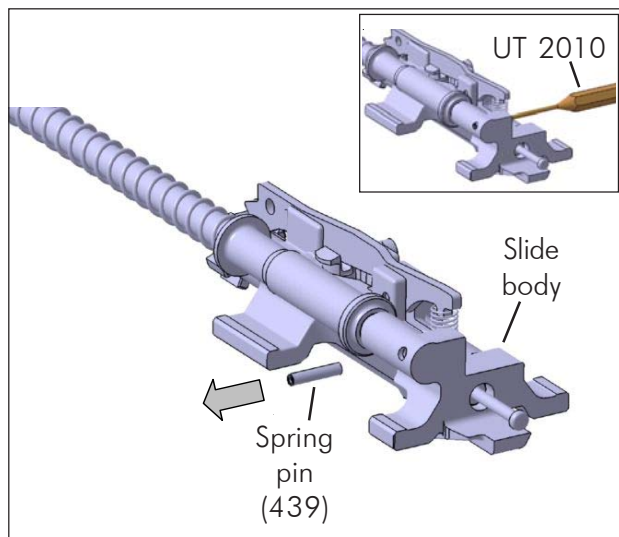


Fig. 9.2.o - Removal of the spring pin (439)

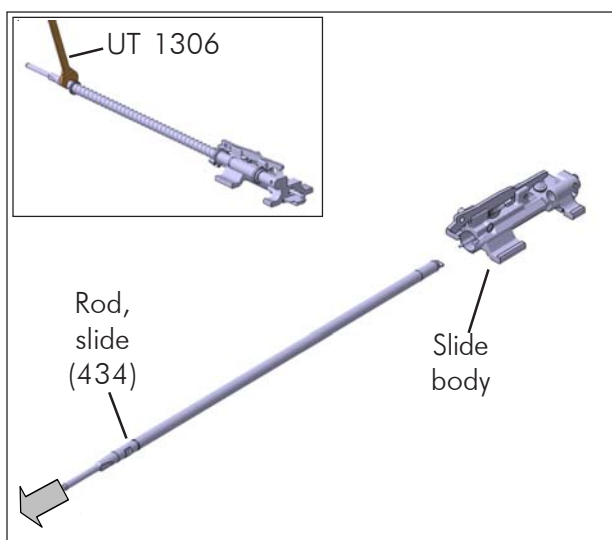


Fig. 9.2.p - Removal of the rod, slide (434)

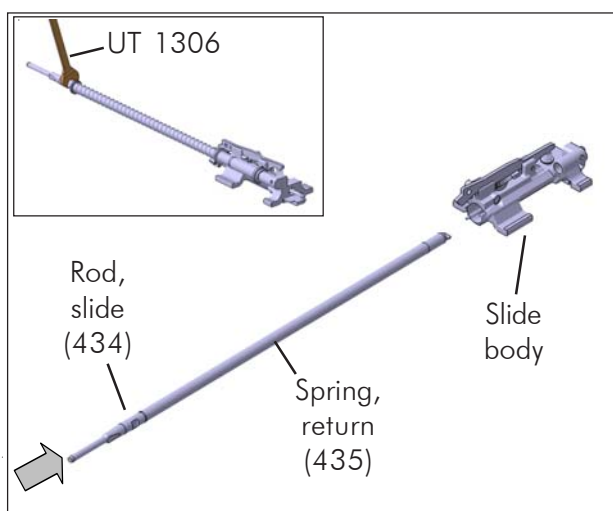


Fig. 9.2.q - Reassembly of the rod, slide (434)



Fig. 9.2.r - Slide rod inspection gauge G114

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.5. Removal and reassembly of the rod, slide (434)****Removal**

- Remove the moving parts assembly (410) as described in § 7.1.3.
- Remove the switch (411) as described in § 7.1.3.
- Remove the bolt assembly (450) as described in § 7.1.3.
- Remove the spring, return (435), the spring, return, housing, front (436), the snap ring, round wire (437) and the spring, return, housing, rear (438) as described in § 9.2.4.
- Using the drift punch UT 2010, drive the spring pin (439) out of the slide body (Fig. 9.2.o).

Caution: Once removed, the spring pin (439) can not be reused and should be replaced by a new one.

- Using the open-end wrench UT 1306 on the flat part of the rod, slide (434), unscrew and remove it from the slide body (Fig. 9.2.p).

Reassembly

- Using the open-end wrench UT 1306 on the flat part of the rod, slide (434), introduce the rod, slide (434) into the slide body and screw it until it goes no further (Fig. 9.2.q).
- As the rod, slide (434) goes no further, unscrew the rod, slide (434) one turn at the most and align its pin hole with the pin hole of the slide body.
- Gauge the length of the rod, slide (434):

Note: The purpose of this procedure is to check that the distance between the front tip of the rod, slide (434) and the front face of the slide body is in the required tolerance.

- Holding the moving parts assembly (410) with the rod, slide (434) pointing upwards, rest the slide body against a flat surface.
- Using the slide rod inspection gauge G114 (Fig. 9.2.r), check the length of the rod, slide (434) proceeding as follows:
 - Whilst holding the slide rod inspection gauge G114 vertically, rest the rotating lug on the front face of the slide body.
 - Rotate the 'NO GO' end of the slide rod inspection gauge G114 to the rod, slide (434) upper end. The 'NO GO' end of the gauge must be blocked by the rod, slide (434) upper end.

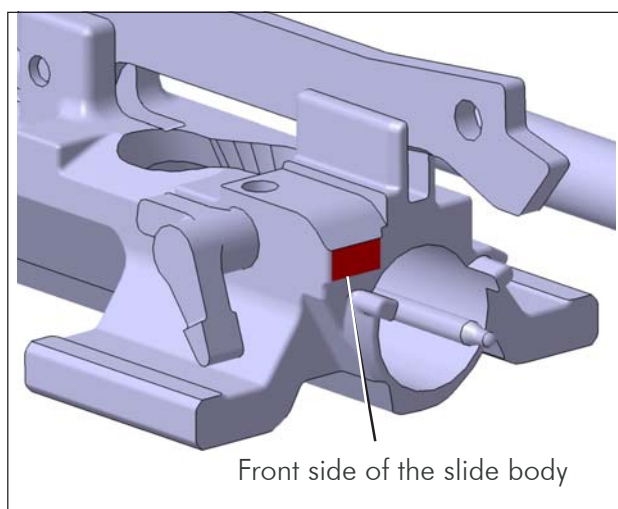


Fig. 9.2.s - Front side of the slide body

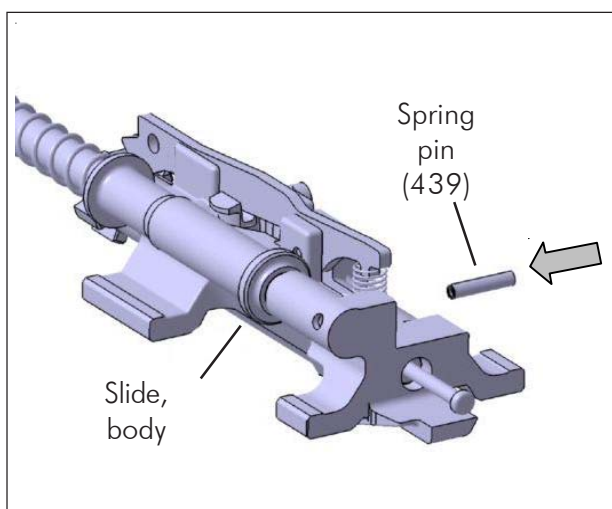


Fig. 9.2.t - Reassembly of the spring pin (439)

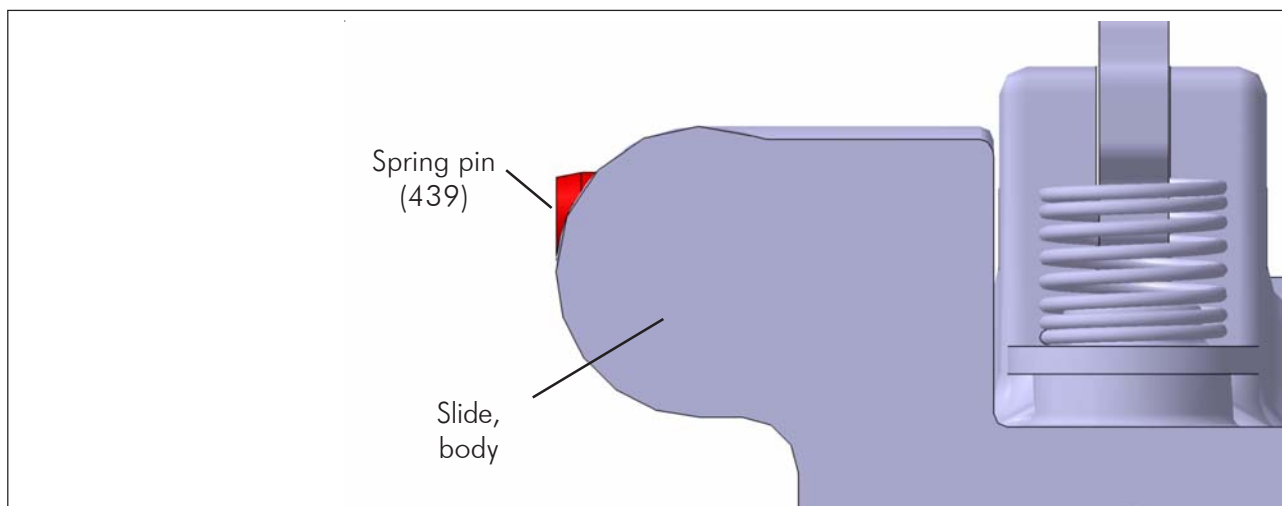


Fig. 9.2.u - Position of the spring pin (439)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.5. Removal and reassembly of the rod, slide (434) (continued)***Reassembly (continued)*

- Rotate the 'GO' end of the slide rod inspection gauge G114 to rod, slide (434) upper end. The 'GO' end of the gauge must pass above rod, slide (434) upper end.
 - If the 'NO GO' and 'GO' checkings are positive the length of the rod, slide (434) is correct.
 - If not, the length of the rod, slide (434) is not correct and must be adjusted by tightening or loosening the rod, slide (434) in the slide body.
 - Using the open-end wrench UT 1306 on the corresponding flat part of the rod, slide (434), tighten or loosen the rod, slide (434) of 1 turn.
 - Once the rod, slide (434) has been tightened or loosened, the checking and gauging procedure should be repeated.

Note: Alternative procedure: metrologically check that the tip of the rod, slide (434) is at 284 ± 0.4 mm from the front side of the slide body (Fig. 9.2.s).

- Fit a new spring pin (439) from the plane face of the slide body (Fig. 9.2.t).

Caution: There is a way to reassemble the spring, pin (439): its left plane face should be tangential to the round face of the slide, body when positioned (Fig. 9.2.u).

- Reassemble the spring, return (435), the spring, return, housing, front (436), the snap ring, • round wire (437) and the spring, return, housing, rear (438) as described in § 9.2.4.
- Reassemble the bolt assembly (450) as described in § 7.4.3.
- Reassemble the switch (411) as described in § 7.4.3.
- If necessary, clean the moving parts assembly (410) as described in chapter 8.
- Reassemble the moving parts assembly (410) as described in § 7.4.3.

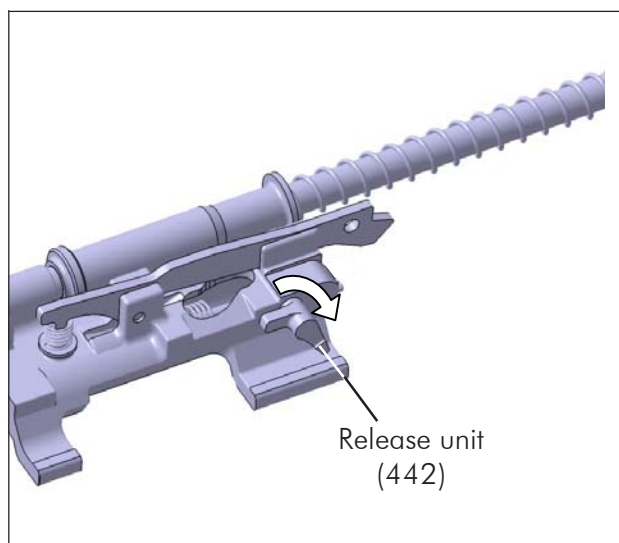


Fig. 9.2.v - Positioning the release unit (442) in neutral position

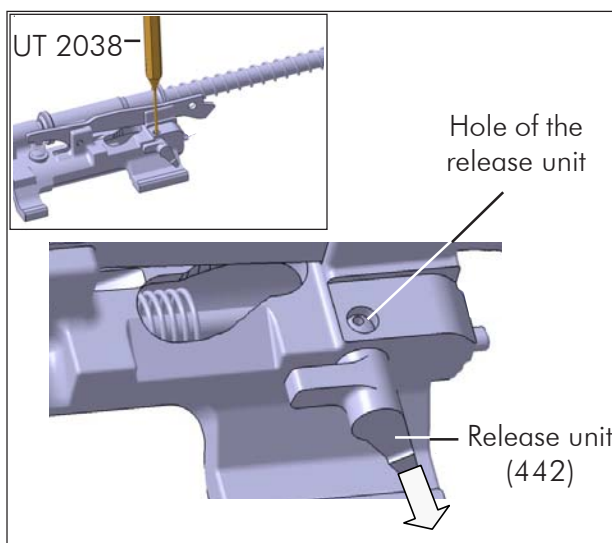


Fig. 9.2.w - Pulling the release unit (442)

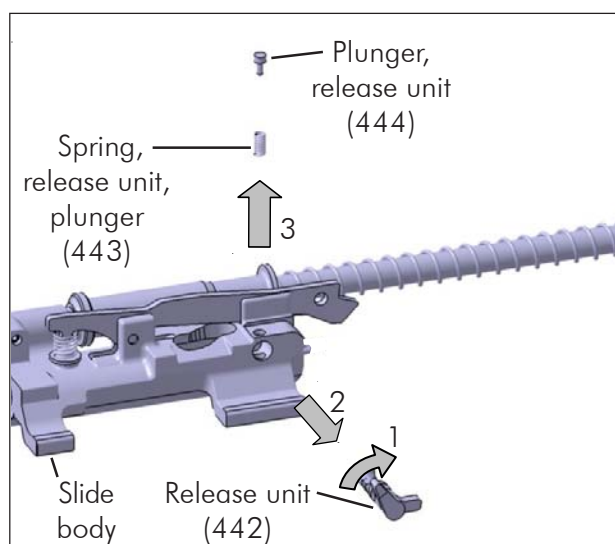


Fig. 9.2.x - Removal of the release unit (442)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.6. Removal and reassembly of the release unit (442)***Removal*

- Remove the moving parts assembly (410) as described in § 7.1.3.
- Remove the switch (411) as described in § 7.1.3.
- Remove the bolt assembly (450) as described in § 7.1.3.
- Turn the release unit (442) clockwise until it goes no further (neutral position) (Fig. 9.2.v).
- Using the drift punch UT 2038 into the hole of the release unit (442), push firmly the plunger, release unit (444) (Fig. 9.2.w).
- Maintaining the plunger, release unit (444) with pressure, pull the release unit (442) about 1 mm out of the slide body (Fig. 9.2.w).
- Remove the drift punch UT 2038 from the release unit (442).
- (1) Turn the release unit (442) clockwise until it stops and (2) remove it from the slide body (Fig. 9.2.x).

Caution: The plunger, release unit (444) will be expelled out of the slide body by the action of the spring, release unit, plunger (443).

- (3) Remove the plunger, release unit (444) and the spring, release unit, plunger (443) from the slide body (Fig. 9.2.x).

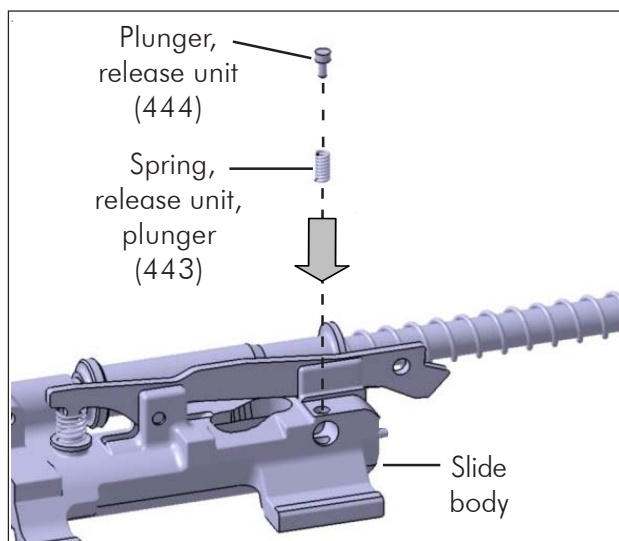


Fig. 9.2.y - Reassembly of the spring, release unit, plunger (443) and the plunger, release unit (444)

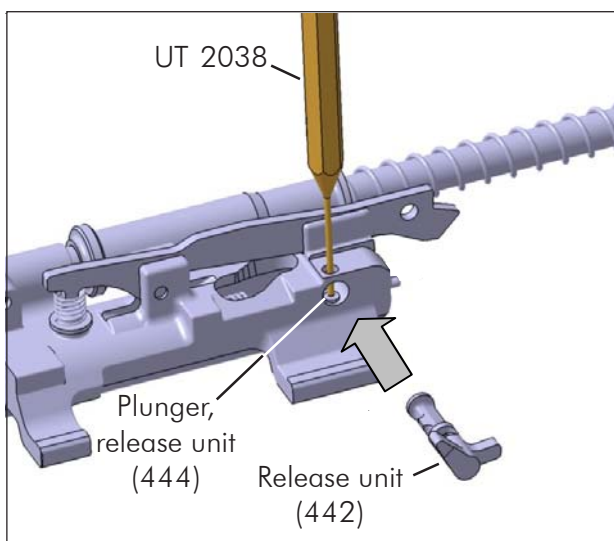


Fig. 9.2.z - Introducing the release unit (442)

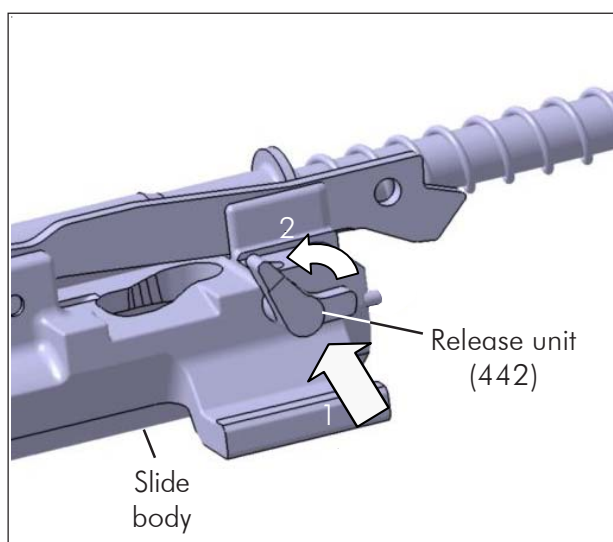


Fig. 9.2.aa - Locking the release unit (442)

**9.2. MOVING PARTS ASSEMBLY (CONTINUED)****9.2.6. Removal and reassembly of the release unit (442) (continued)***Reassembly*

- Introduce the spring, release unit, plunger (443) into its housing of the slide body (Fig. 9.2.y).
- Install the plunger, release unit (444) into its housing of the slide body taking care that it engages into the spring, release unit, plunger (443) (Fig. 9.2.y).
- Using the drift punch UT 2038, push the plunger, release unit (444) in such a way that it does not protrude into the housing of the release unit (442) (Fig. 9.2.z).
- Maintaining the plunger, release unit (444), install the release unit (442) taking care to position its external notch upwards and push it into its housing (Fig. 9.2.z).
- (1) Going on pushing the release unit (442), remove the drift punch UT 2038. The release unit (442) will then be positioned in the bottom of its housing (Fig. 9.2.aa).
- (2) Turn the release unit (442) counterclockwise until it goes no further and ensure the release unit (442) has been locked on the plunger, release unit (444) (Fig. 9.2.aa).
- Before the reassembly of the bolt assembly (450), lubricate the moving parts, the plunger, release unit (444), the spring, release unit, plunger (443) and the release unit (442) as described in § 8.3.
- Reassemble the bolt assembly (450) as described in § 7.4.3.
- Reassemble the switch (411) as described in § 7.4.3.
- Reassemble the moving parts assembly (410) as described in § 7.4.3.

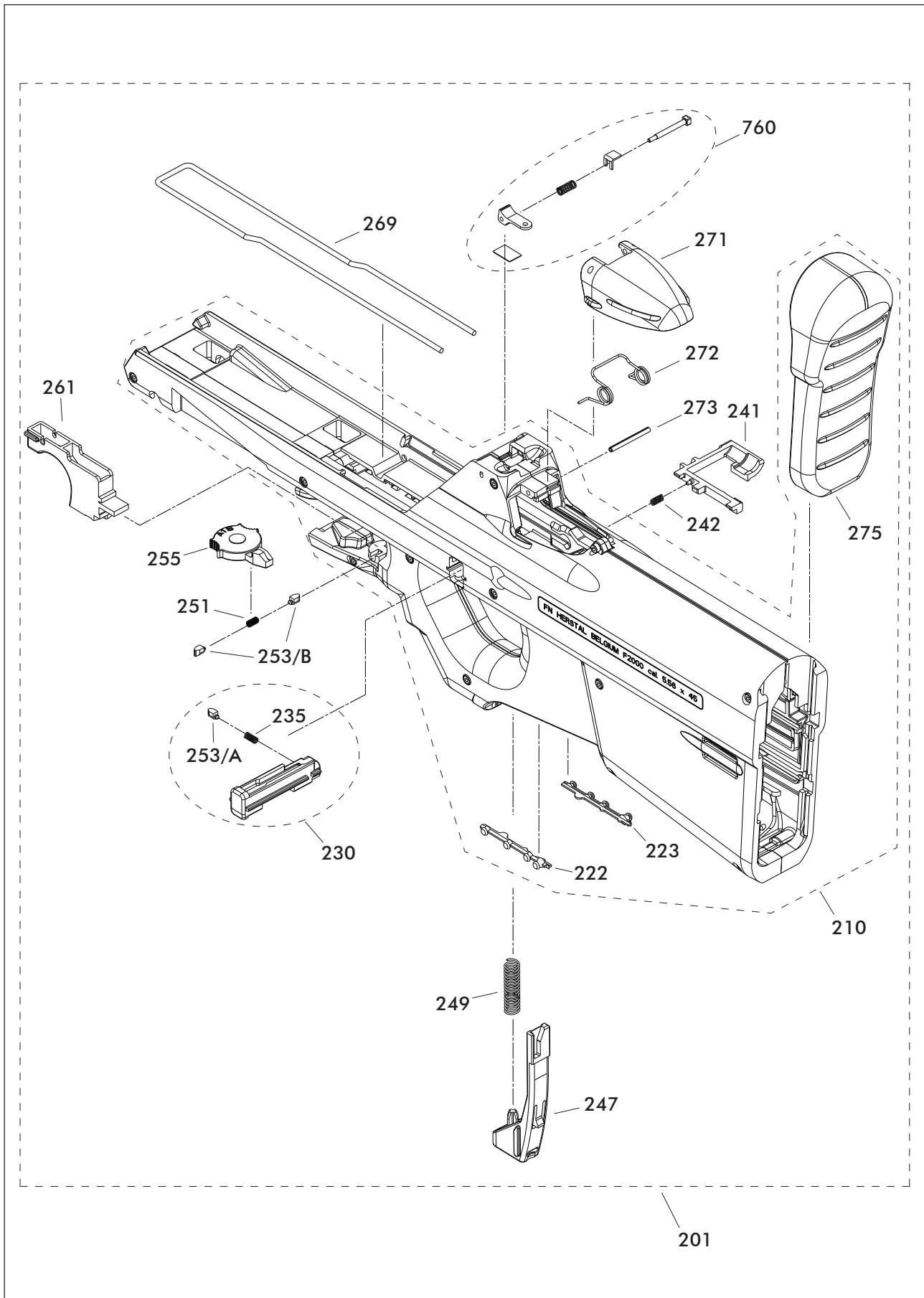


Fig. 9.3.a - Receiver assembly (201)



9.3. RECEIVER ASSEMBLY

9.3.1. Removal and reassembly of the receiver assembly (201)

Removal

- Remove the moving parts assembly (410) as described in the field stripping procedure from § 7.1.1 to § 7.1.3.
- Remove the hammer group assembly (510) as described in § 7.2.1.
- Remove the handguard (280) as described in § 7.1.5.

Reassembly

- Reinstall the handguard (280) as described in § 7.3.1.
- Reinstall the move the hammer group assembly (510) as described in § 7.4.1.
- Reinstall the moving parts assembly (410) as described in the field stripping procedure from § 7.4.3 to § 7.4.4.

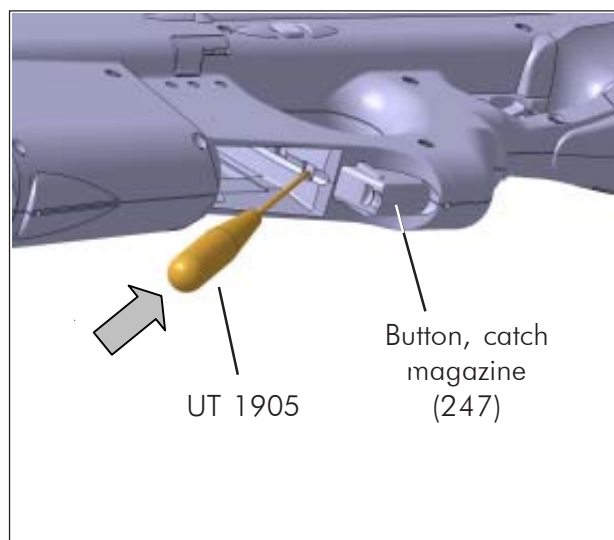


Fig. 9.3.b - Unlocking the button, catch magazine (247)

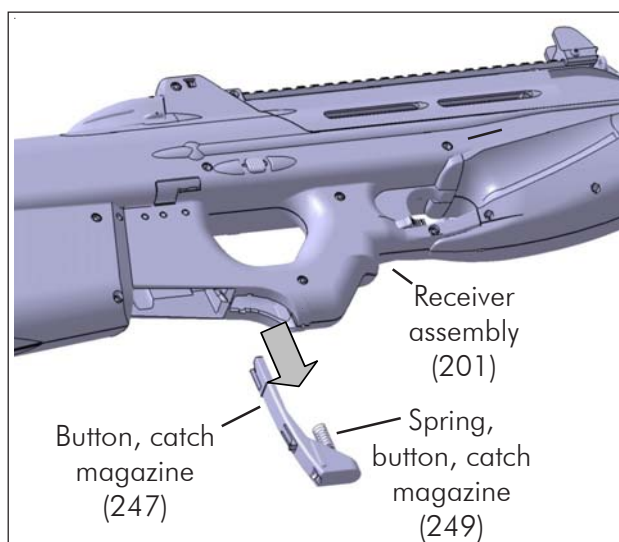


Fig. 9.3.c - Removal of the spring, button, catch magazine (249)

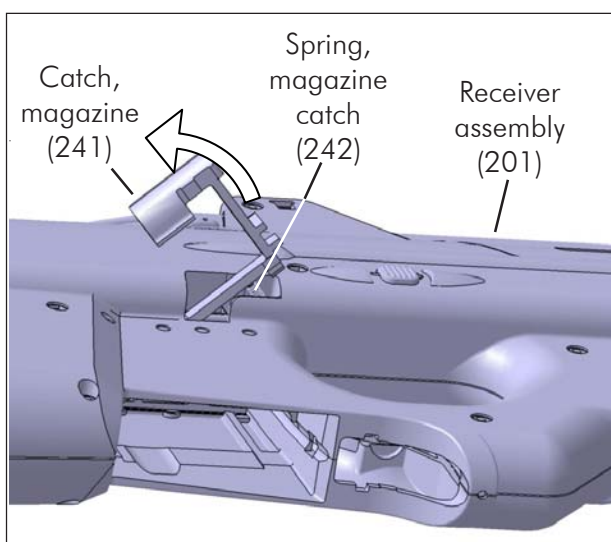


Fig. 9.3.d - Removal of the catch, magazine (241)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.2. Removal and reassembly of the catch, magazine (241) and the button, catch magazine (247)***Removal*

- Hold the button, catch magazine (247) and, using the screwdriver UT 1905, push on the locking stud of the button, catch magazine (247) in order to unlock it (Fig. 9.3.b).

Caution: The button, catch magazine (247) will be ejected by the action of the spring, button, catch magazine (249).

- Remove the button, catch magazine (247) out of the receiver assembly (201) taking care not to lose the spring, button, catch magazine (249) (Fig. 9.3.c).
- If necessary, remove the spring, button, catch magazine (249) from the button, catch magazine (247).
- Remove the catch, magazine (241) out of the receiver assembly (201) taking care not to lose the spring, magazine catch (242) (Fig. 9.3.d).
- If necessary, remove the spring, magazine catch (242) from the catch, magazine (241).

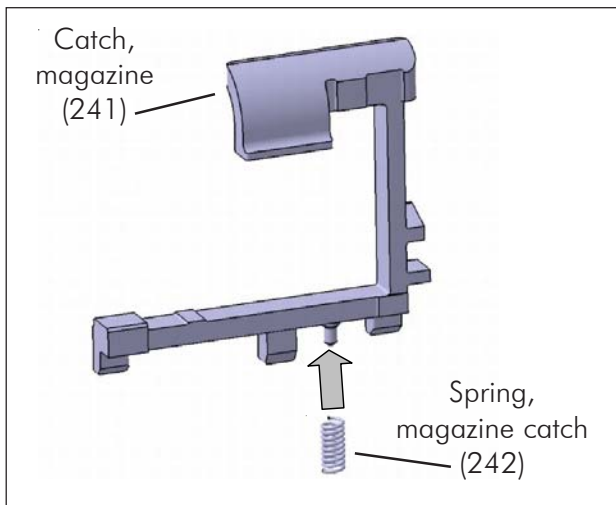


Fig. 9.3.e - Reassembly of the spring, magazine catch (242)

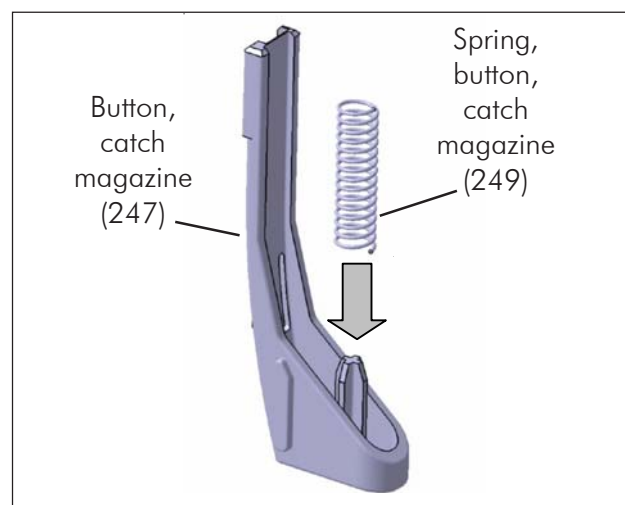


Fig. 9.3.f - Reassembly of the spring, button, catch magazine (249)

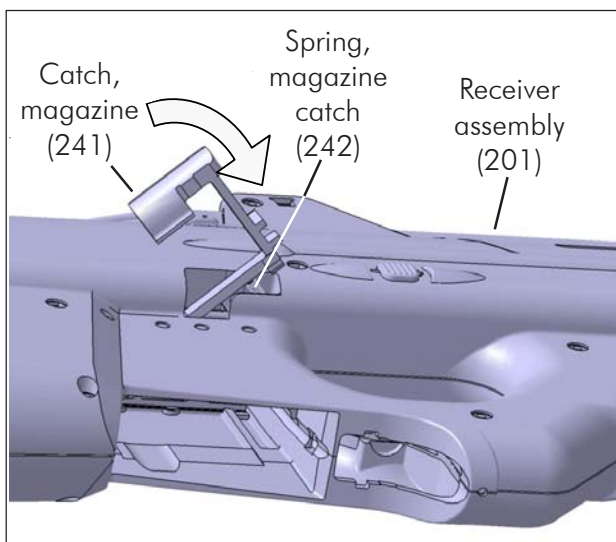


Fig. 9.3.g - Reassembly of the catch, magazine (241)

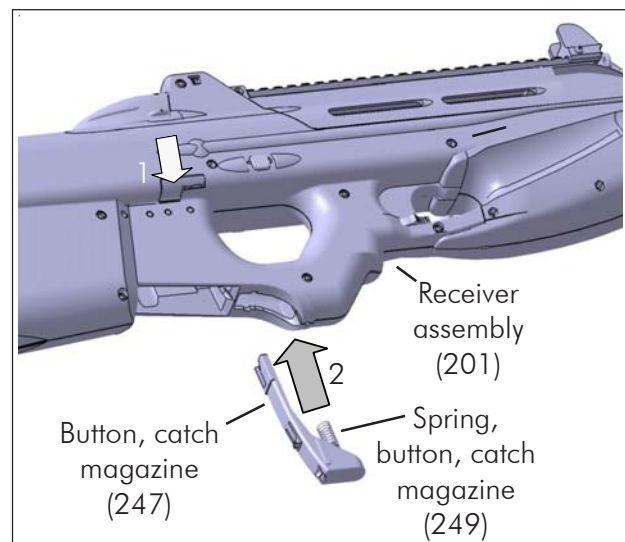


Fig. 9.3.h - Reassembly of the spring, button, catch magazine (247)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.2. Removal and reassembly of the catch, magazine (241) and the button, catch magazine (247) (continued)****Reassembly**

- If the spring, magazine catch (242) has been removed, reinstall it onto the catch magazine (241) (Fig. 9.3.e).
- If the spring, button, catch magazine (249) has been removed, reinstall it onto the button, catch magazine (247) (Fig. 9.3.f).
- Introduce the catch, magazine (241) into its housing of the receiver assembly (201), its face equipped with the spring, magazine catch (242) first (Fig. 9.3.g).
- Push on the catch, magazine (241) to verify the free movements of it.
- (1) Holding the catch, magazine (241), (2) introduce the button, catch magazine (247) into the receiver assembly (201) and lock it (Fig. 9.3.h).
- Push on the button, catch magazine (247) to verify the free movements of it.

Note: All the slipping parts must be lubricated

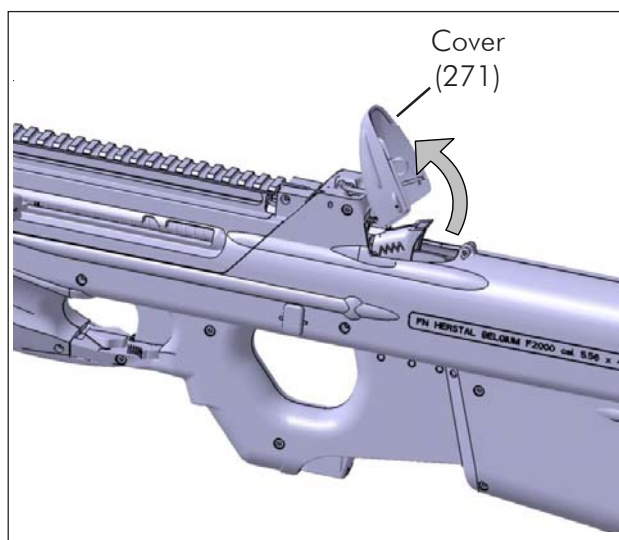


Fig. 9.3.i - Opening the cover (271)

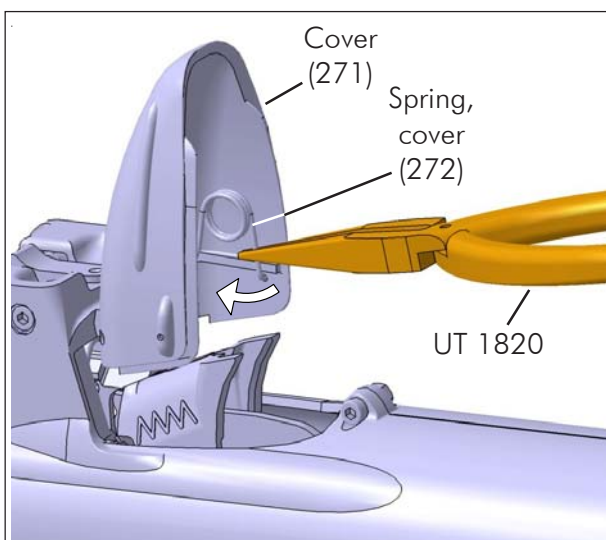


Fig. 9.3.j - Releasing the legs of the spring, cover (272)

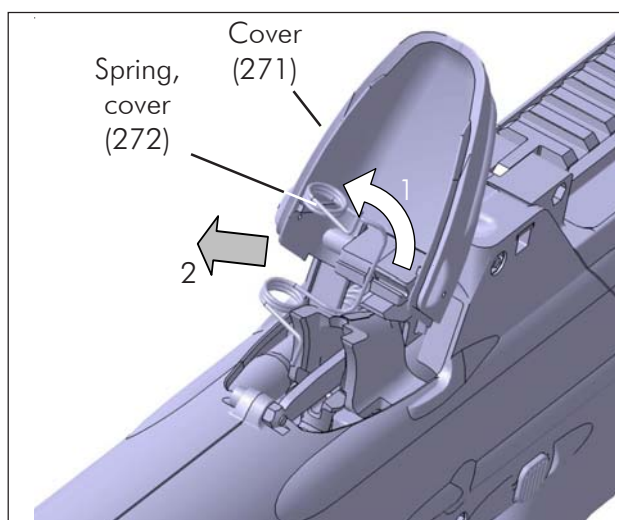


Fig. 9.3.k - Removal of the spring, cover (272)

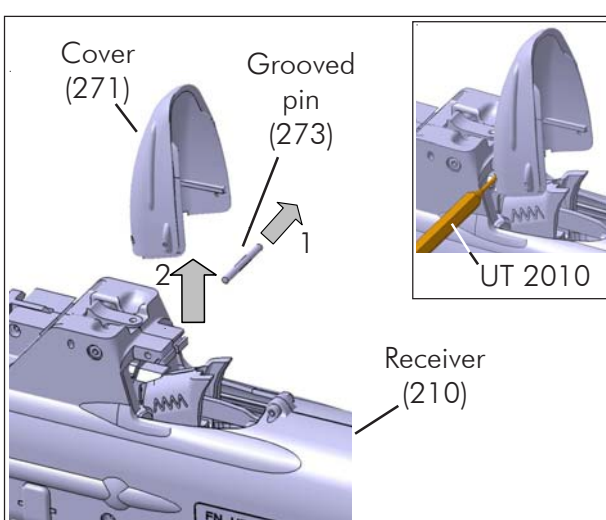


Fig. 9.3.l - Removal of the cover (271)

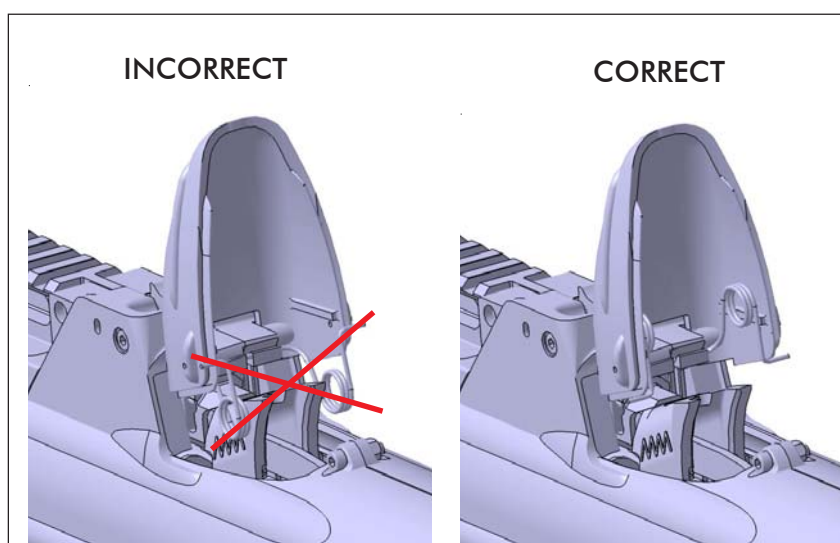


Fig. 9.3.m - Reassembly of the spring, cover (272)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.3. Removal and reassembly of the cover (271)***Removal*

- Open the cover (271) (Fig. 9.3.i).
- Using the bent-nose UT 1820, remove the spring, cover (272) proceeding as follows:
 - release the 2 legs of the spring, cover (272) from their housing of the cover (271) (Fig. 9.3.j);
 - (1) pivot the spring, cover (272) 1/4 of turn counterclockwise and (2) remove it from the cover (271) (Fig. 9.3.k).
- (1) Using the drift punch UT 2010, remove the grooved pin (273) out of the receiver (210) (Fig. 9.3.l).
- (2) Remove the cover (271) (Fig. 9.3.l).

Reassembly

- Make the same operations in reverse order taking into account the following points:
 - there is a way to reinstall the spring, cover (272) into the receiver (210) (Fig. 9.3.m);
 - the grooved pin (273) must not protrude.

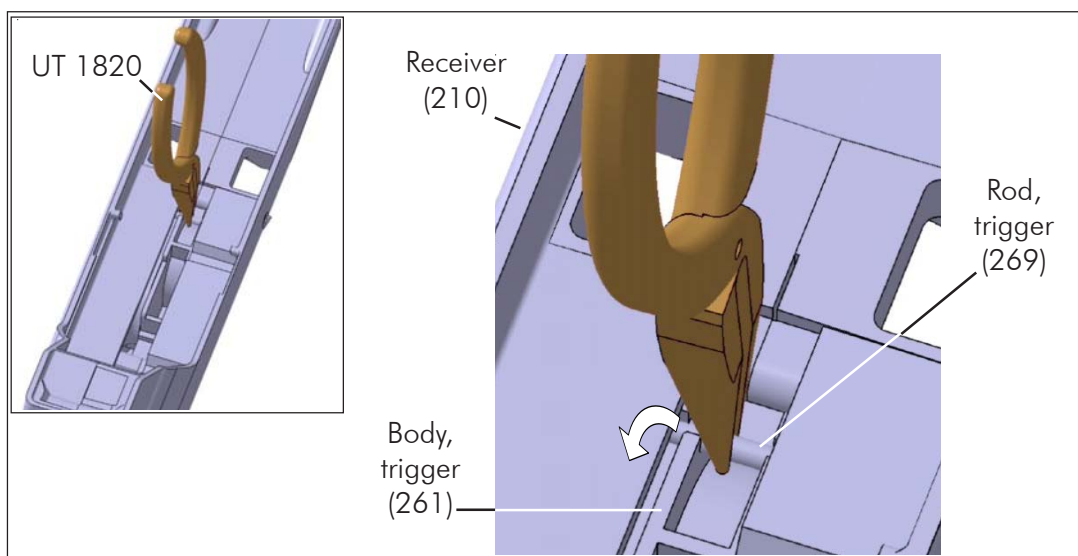


Fig. 9.3.n - Releasing the rod, trigger (269) out of the body, trigger (261)

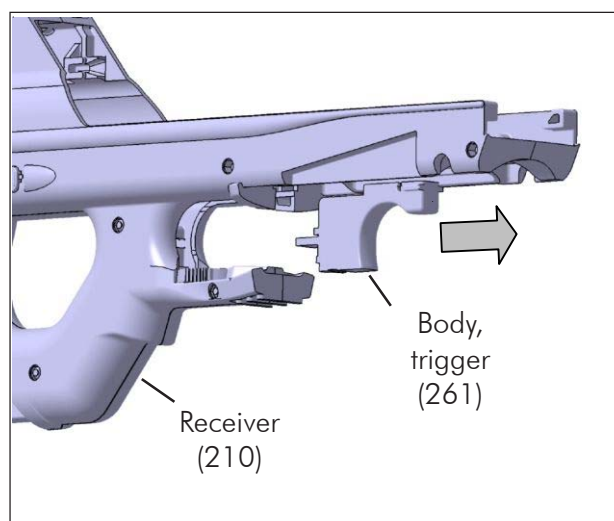


Fig. 9.3.o - Removal of the body, trigger (261)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.4. Removal and reassembly of the body, trigger (261)****Removal**

- Remove the moving parts assembly (410) as described in the field stripping procedure from § 7.1.1 to § 7.1.3.
- Remove the hammer group assembly (510) as described in § 7.1.5.
- Remove the handguard/hadguard tri-rail (280)/(280/1) as described in § 7.2.1.
- Using the bent-nose UT 1820 at the top of the receiver (210), release the rod, trigger (269) from the notch of the body, trigger (261) (Fig. 9.3.n).
- Remove the body, trigger (261) from the receiver (210) by pulling it to the front of the receiver (210) (Fig. 9.3.o).

Reassembly

- Make the same operations in reverse order taking into account to introduce the rod, trigger (269) into its notch of the body, trigger (261) using the bent-nose UT 1820 (Fig. 9.3.p).

Note: Once the body, trigger (261) reinstalled, ensure it can move freely backwards and forwards.

- Reinstall the handguard/hadguard tri-rail (280)/(280/1) as described in § 7.3.1.
- Reinstall the move the hammer group assembly (510) as described in § 7.4.1.
- Reinstall the moving parts assembly (410) as described in the field stripping procedure from § 7.4.3 to § 7.4.4.

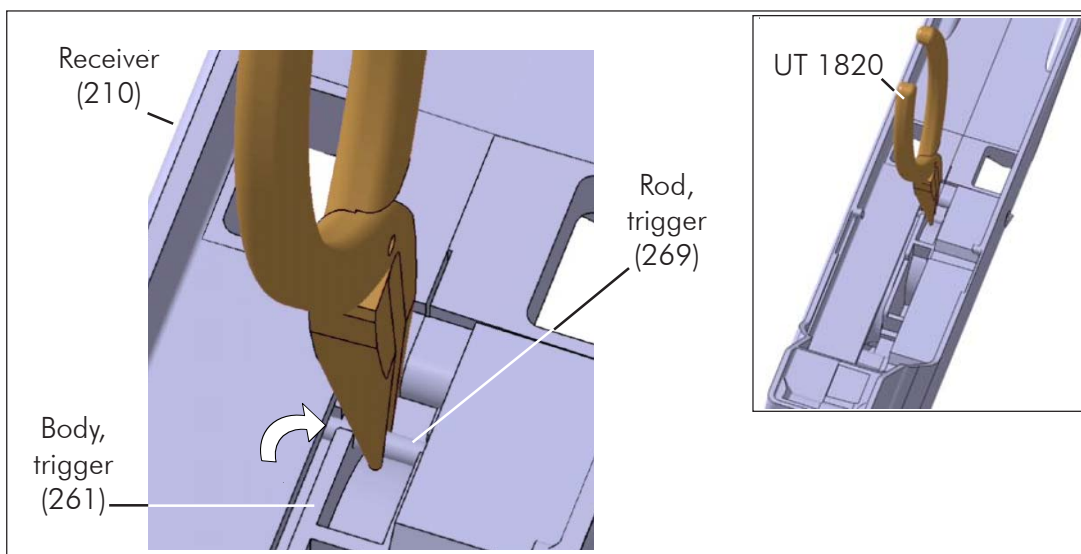


Fig. 9.4.p - Introduction of the rod, trigger (269) into the notch of the body, trigger (261)

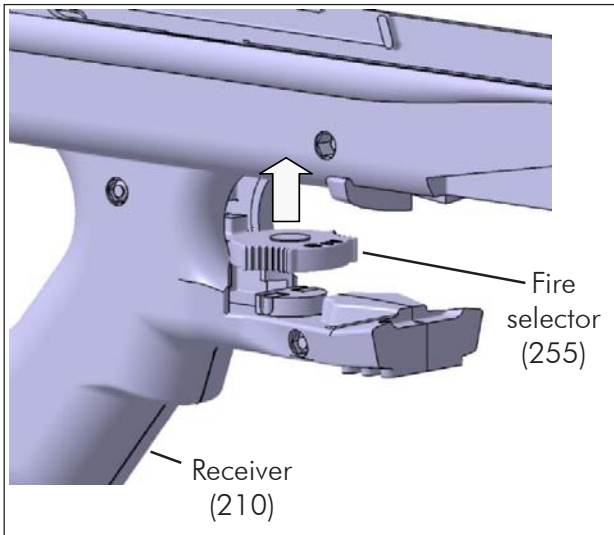


Fig. 9.3.q - Removal of the fire selector (255)

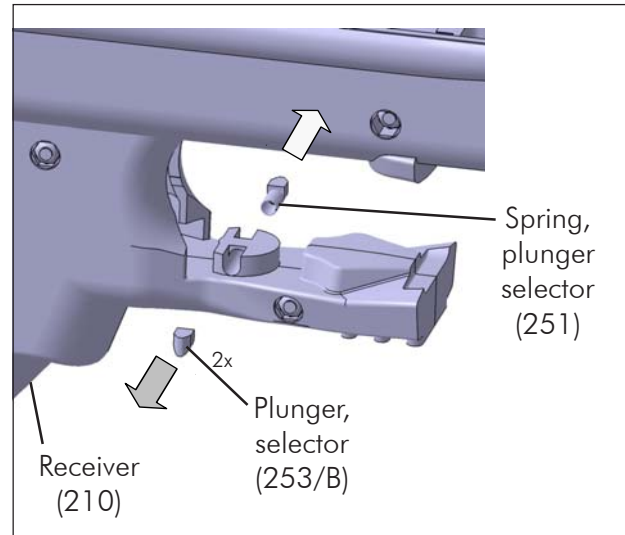


Fig. 9.3.r - Removal of the plungers, selector (253/B) and the spring, plunger selector (251)

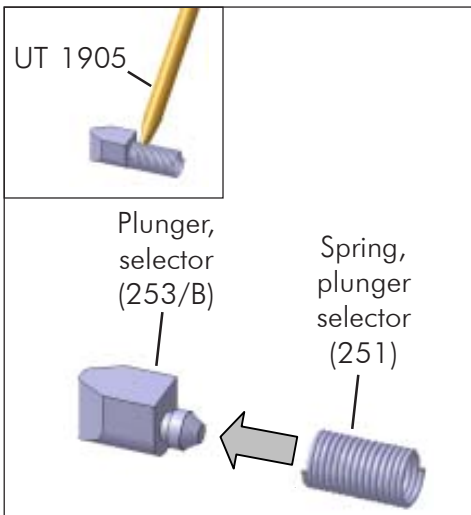


Fig. 9.3.s - Removal of the spring (251) and the plunger, selector (253/B)

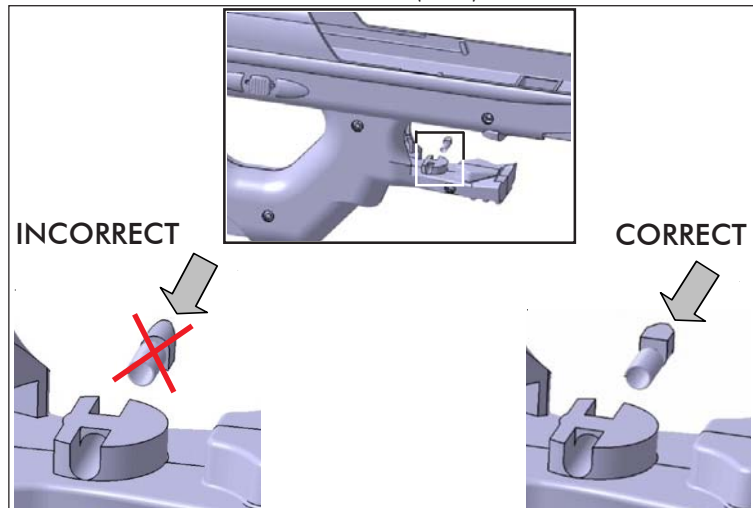


Fig. 9.3.t - Reassembly of the first plunger, selector (253/B)

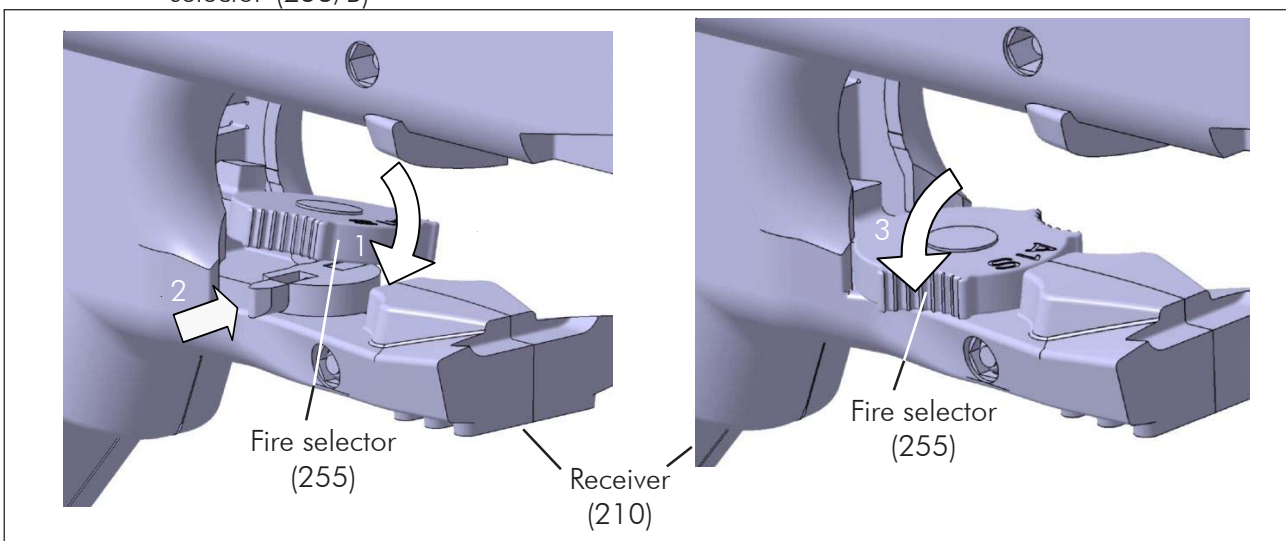


Fig. 9.3.u - Reassembly of the fire selector (255)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.5. Removal and reassembly of the fire selector (255)****Removal**

- Remove the body, trigger (261) as described in § 9.3.4.
- Set the fire selector (255) at the position '**1**' **SINGLE SHOT**.
- Carefully remove the fire selector (255) by lifting it up and off the receiver (210) (Fig. 9.3.q).
- While holding an extremity of the spring, plunger selector (251) in position with the screwdriver UT 1905, carefully remove the corresponding plunger, selector (253/B) from the spring, plunger selector (251) using the pliers UT 1810 (Fig. 9.3.r).
- Remove the remaining plunger, selector (253/B) equipped with the spring, plunger selector (251) (Fig. 9.3.r).
- Maintaining the spring, plunger selector (251) with the screwdriver UT 1905, carefully release the remaining plunger, selector (253/B) from the spring, plunger selector (251) (Fig. 9.3.s).

Reassembly

- Install the spring, plunger selector (251) onto a plunger, selector (253/B).
- Install the plunger, selector (253/B), equipped with its spring, into the corresponding housing of the receiver (210), its rounded face downwards (Fig. 9.3.t).
- While holding the free extremity of the spring, plunger selector (251) in position with the screwdriver UT 1912, carefully install the remaining plunger, selector (253/B) at the other side of the spring, plunger selector (251) by using the pliers UT1810 , its rounded face downwards.
- Install the fire selector (255) (Fig. 9.3.u).

Note: During this operation, hold the fire selector (255) orientated as if it was at the position '**1**' **SINGLE SHOT**.
When fitting the fire selector (255) back into position, first move it slightly sideward so that it engages one of the 2 plunger, selector (253/B). After that, use the screwdriver UT 1912 to push the other plunger, selector (253/B) into position underneath the fire selector (255).

- Check the fire selector (255) operates normaly (a clic should be heard)
- Reinstall the body, trigger (261) as described in § 9.3.4.

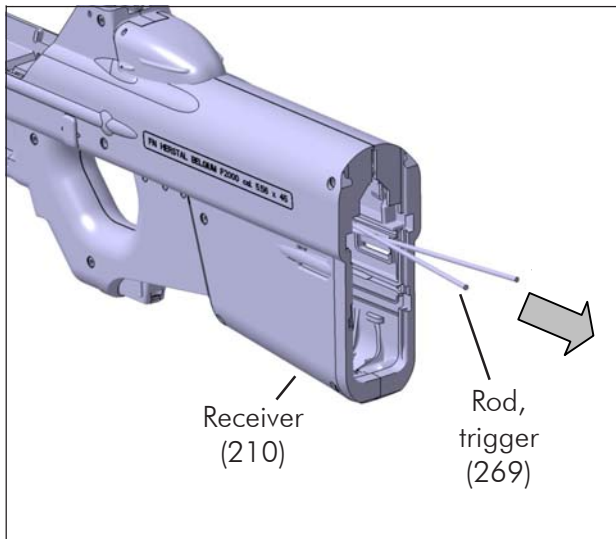


Fig. 9.3.v - Removal of the rod, trigger (269)

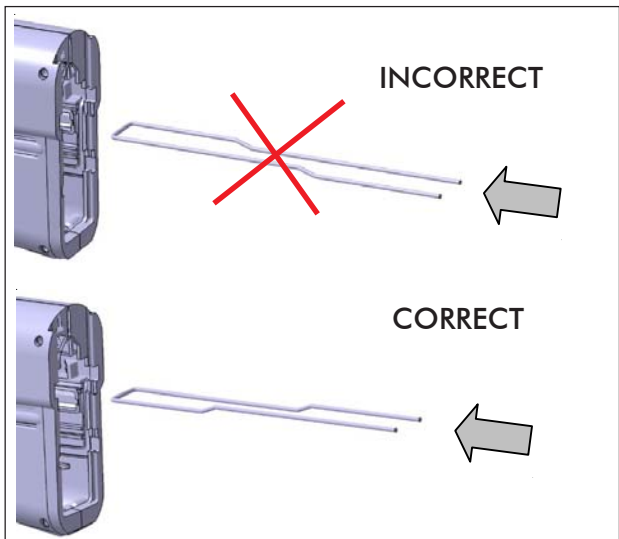


Fig. 9.3.w - Way to reinstall the rod, trigger (269)

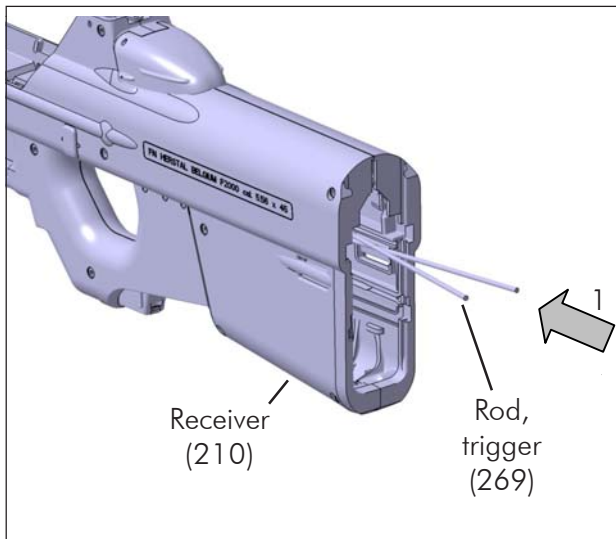


Fig. 9.3.x - Reassembly of the rod, trigger (269)

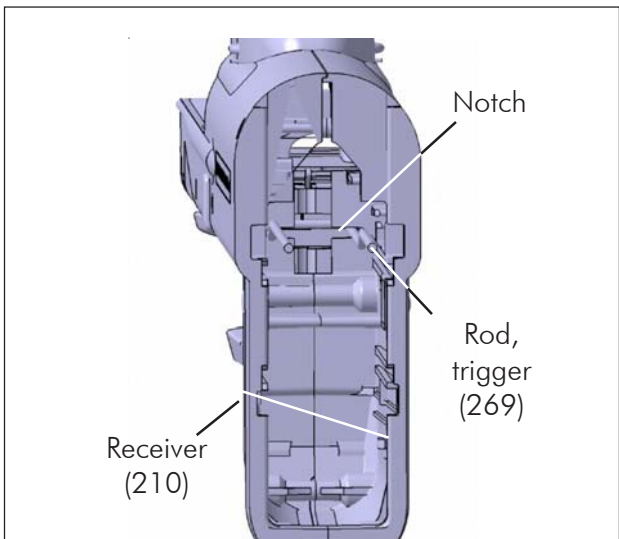


Fig. 9.3.y - Positioning the rod, trigger (269) into the notch

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.6. Removal and reassembly of the rod, trigger (269)***Removal*

- Remove the hammer group assembly (510) as described in § 7.1.5.
- Cross the 2 legs of the rod, trigger (269) from the rear of the receiver (210) (Fig. 9.3.v).
- Remove the rod, trigger (269) out of the receiver (210) from the rear of the receiver (210), (Fig. 9.3.v).

Reassembly

- Introduce the rod, trigger (269) into the receiver (210) (Fig. 9.3.w).

Caution: There is a way to reinstall the rod, trigger (269) into the receiver (210) (Fig. 9.3.w).

- (1) Cross the 2 legs of the rod, trigger (269), introduce it from the rear of the receiver (210) and then release it (Fig. 9.3.x).
- (2) Push the rod, trigger (269) to the front of the receiver (210) until its rear tips do not protrude anymore from the rear of the receiver (210) taking care to introduce the rod, trigger (269) into the corresponding notch of the receiver (210) (Fig. 9.3.y).
- Reinstall the body, trigger (261) as described in § 9.3.4, Fig. 9.3.p, taking care to position the rod, trigger (269) into its notch of the body, trigger (261).
- Reinstall the hammer group assembly (510) as described in § 7.4.1.

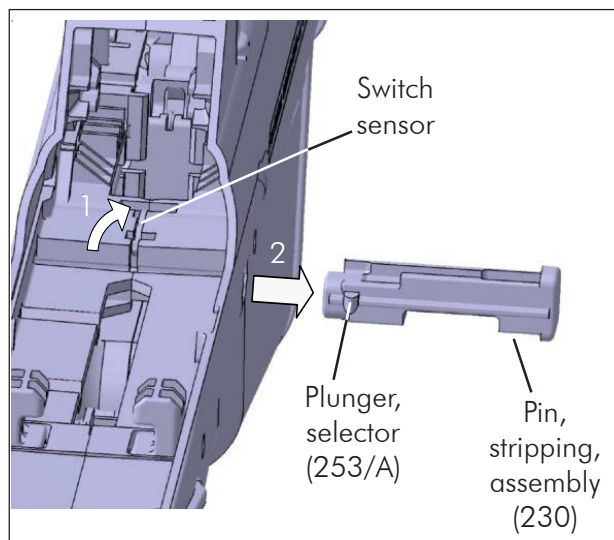


Fig. 9.3.z - Removal of the pin, stripping, assembly (230)

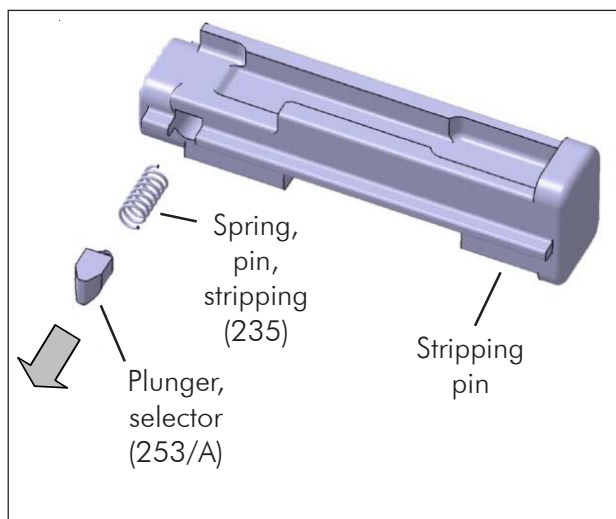


Fig. 9.3.aa - Removal of the plunger, selector (253/A) and the spring, pin, stripping (235)

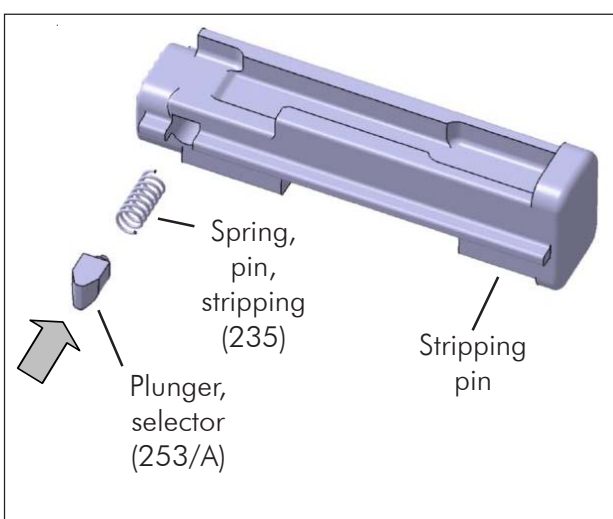


Fig. 9.3.ab - Reassembly of the plunger, selector (253/A) and the spring, pin, stripping (235)

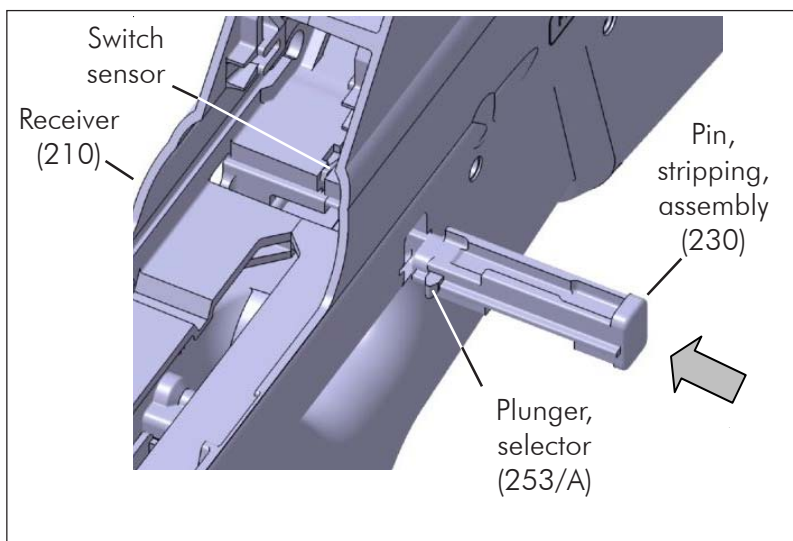


Fig. 9.3.ac - Reassembly of the pin, stripping, assembly (230)

**9.3. RECEIVER ASSEMBLY (CONTINUED)****9.3.7. Removal and reassembly of the pin, stripping, assembly (230)***Removal*

- Remove the moving parts assembly (410) as described in the field stripping procedure from § 7.1.1 to § 7.1.3.
- Remove the hammer group assembly (510) as described in § 7.1.5.
- Remove the rod, trigger (269) as described in § 9.3.6.
- (1) Pushing the switch sensor, (2) remove the pin, stripping, assembly (230) out of the receiver (210) taking care not to lose the plunger, selector (253/A) and the spring, pin, stripping (235) (Fig. 9.3.z).
- If necessary, remove the plunger, selector (253/A) and the spring, pin, stripping (235) from the stripping pin (Fig. 9.3.aa).

Reassembly

- Reinstall the spring, pin, stripping (235) and the plunger, selector (253/A) into the corresponding housing at the front side of the stripping pin (Fig. 9.3.ab).

Note: All the slipping parts must be lubricated.

- Introduce the pin, stripping, assembly (230) at the left side of the receiver (210) taking care the plunger, selector (253/A) is located to the front of the receiver (210) (Fig. 9.3.ac).
- Pushing the switch sensor downwards, insert the stripping pin assembly (230) into the receiver (210) (Fig. 9.3.ac).
- Reinstall the rod, trigger (269) as described in § 9.3.6.
- Reinstall the hammer group assembly (510) as described in § 7.4.1.
- Reinstall the moving parts assembly (410) as described in the field stripping procedure from § 7.4.3 to § 7.4.4.

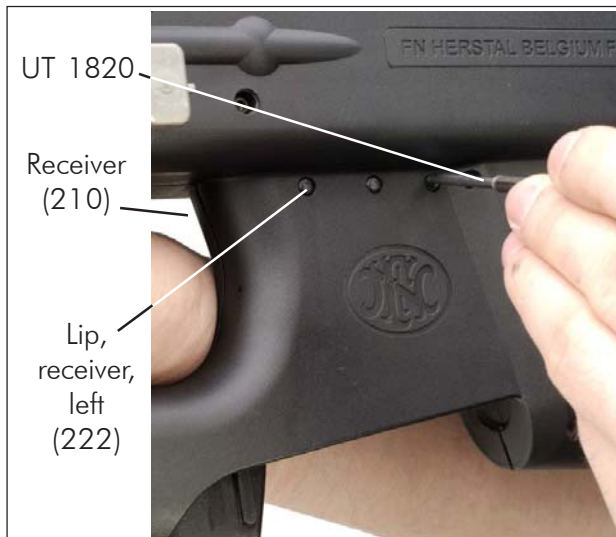


Fig. 9.3.ad - Removal of the lip, receiver, left (222)/right (223)

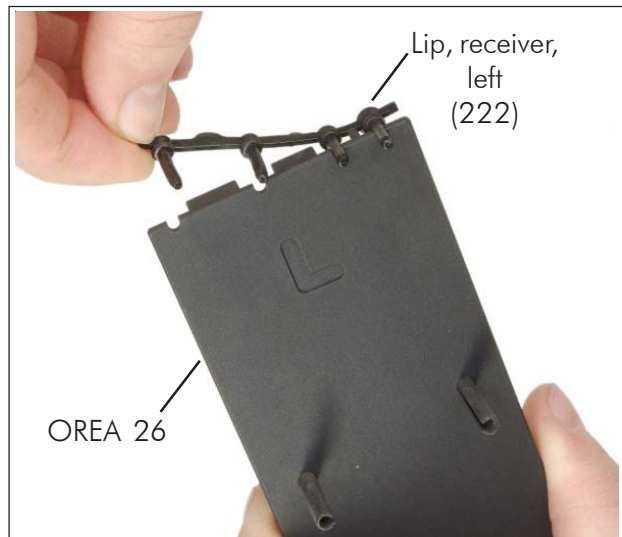


Fig. 9.3.ae - Positioning the lip, receiver, left (222) onto the OREA 26

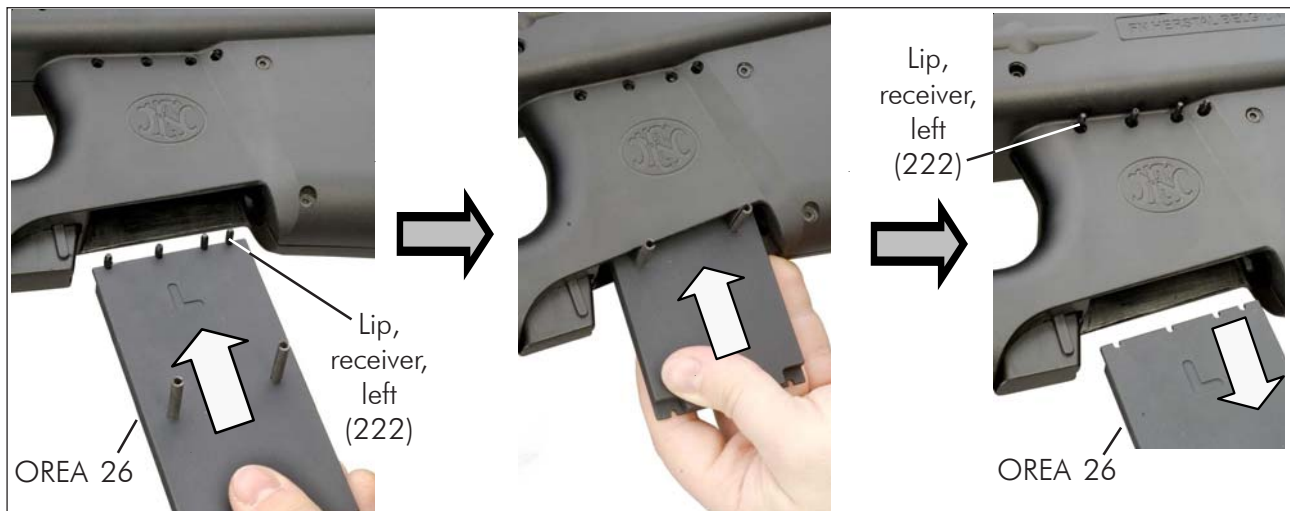


Fig. 9.3.af - Installation of the lip, receiver, left (222)

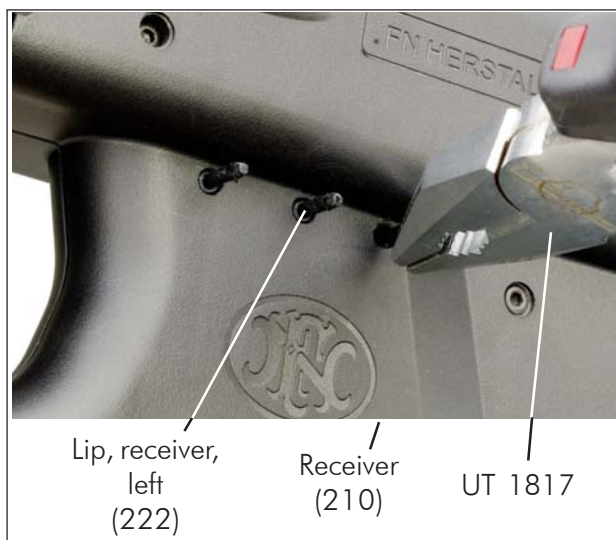


Fig. 9.3.ag - Pulling the lugs of the lip, receiver, left (222)



Fig. 9.3.ah - Cutting the lugs of the lip, receiver, left (222)



9.3. RECEIVER ASSEMBLY (CONTINUED)

9.3.8. Removal and reassembly of the lip, receiver, left (222) and the lip, receiver, right (223)

Removal

- Using the drift punch UT 2008, drive the 4 lugs of the lip, receiver, left/right (222/223) out of the receiver (210) (Fig. 9.3.ad).
- Remove the lip, receiver, left/right (222/223) out of the receiver (210).

Note: Be care to not pierce the lip, receiver, left/right (222)/(223).

Reassembly

- Steep the lip, receiver, left/right (222/223) in 70-degree centigrade water for min five or max ten minutes.
- Position the lip, receiver, left (222) onto the top of the breech lips assembly plate OREA 26 taking care that the 4 studs of the lip, receiver, left (222) are pointing from the left side of the OREA 26 (side marked with a 'L') (Fig. 9.3.ae).
- Push the breech lips assembly plate OREA 26 into the housing of the magazine until it goes no further and install the lip, receiver, left (222) into the receiver (210) by pushing the OREA 26 against the left side of the receiver (210) (Fig. 9.3.af).

Note: The 4 studs of the lip, receiver, left (222) should point out of the receiver (210).

- Pull firmly the breech lips assembly plate OREA 26 out of the receiver (210) ensuring that the lip, receiver, left (222) is still in place (Fig. 9.3.af).
- Using universal pliers UT 1817, pull firmly the 4 lugs of the lip, receiver, left (222) from the receiver (210) (Fig. 9.3.ag).
- Using cutting pliers UT 1822, cut the 4 studs of the lip, receiver, left (222) (Fig. 9.3.ah).
- Proceed the same way for the lip, receiver, right (223) taking care that the right side of the OREA 26 should be used (side marked with a 'R') (Fig. 9.3.ai).

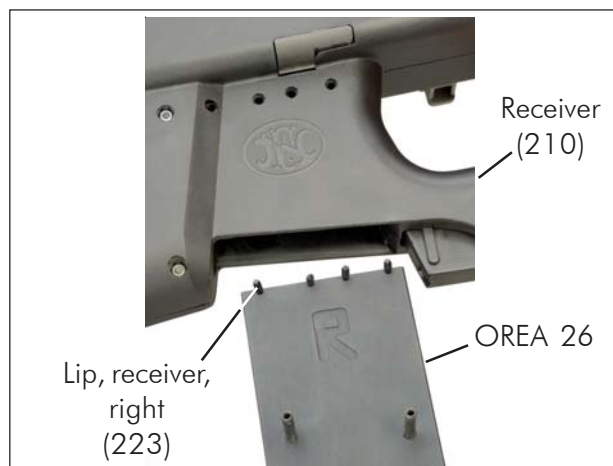


Fig. 9.3.ai - Installation of the lip, receiver, right (223)

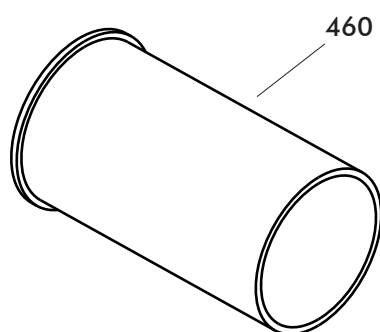


Fig. 9.4.a - Plug, flash hider (460)



9.4. PLUG, FLASH HIDER

9.4.1. Removal and reassembly of the plug, flash hider (460)

Removal

- Remove the plug, flash hider (460) by pulling it forwards (Fig. 9.4.b).

Reassembly

- Place the plug, flash hider (460) onto the flash hider (151).

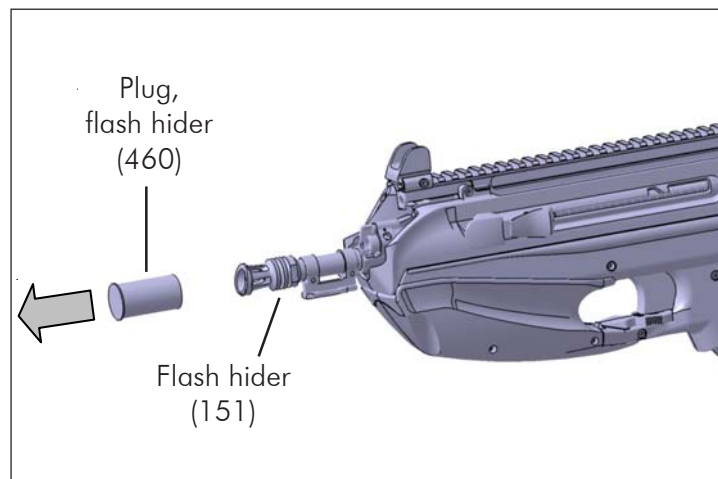


Fig. 9.4.b - Removal of the plug, flash hider (460)

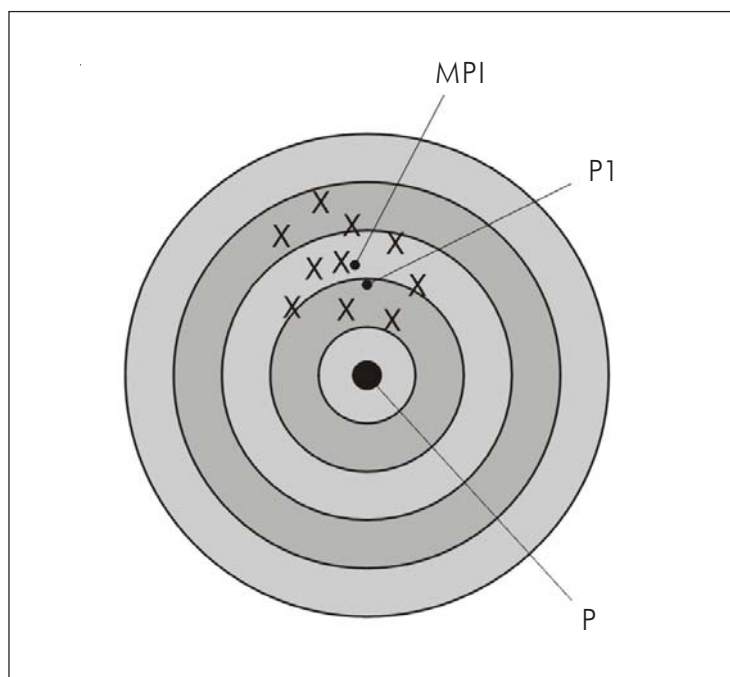


Fig. 10.1.a - MPI

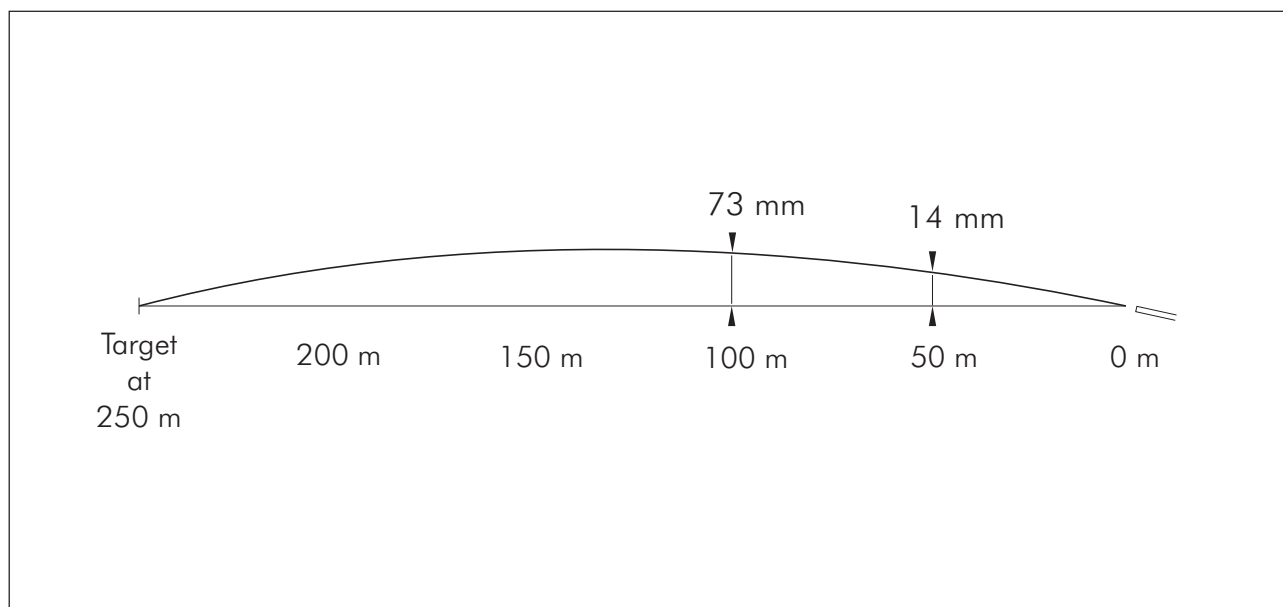


Fig. 10.1.b - Target to check the firing precision



CHAPTER 10: INSPECTIONS AND ADJUSTMENTS

Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

10.1. ADJUSTMENT OF THE MECHANICAL SIGHT

10.1.1. Determine the mean point of impact (MPI) on the target

- Determine the mean point of impact (MPI) on the target located at 50 m / 100 m (Fig. 10.1.a).
- If the MPI corresponds to a point (P1), located 14 mm above the point of aim (P) on a target located at 50 m, or located 73 mm above the point of aim (P) on a target located at 100 m, the firing precision is correct (Fig. 10.1.b).

Using a point (P1) during the checking procedure at 50 m or at 100 m is necessary in order to ensure a correct firing precision at 250 m.

- If not, the firing precision should be adjusted by adjusting the mechanical sight (see § 10.1.2).

Note: It is recommended to determine the mean point of impact (MPI) by firing at least 5 shots, shot by shot as if the weapon was held by the operator and fired in real conditions.

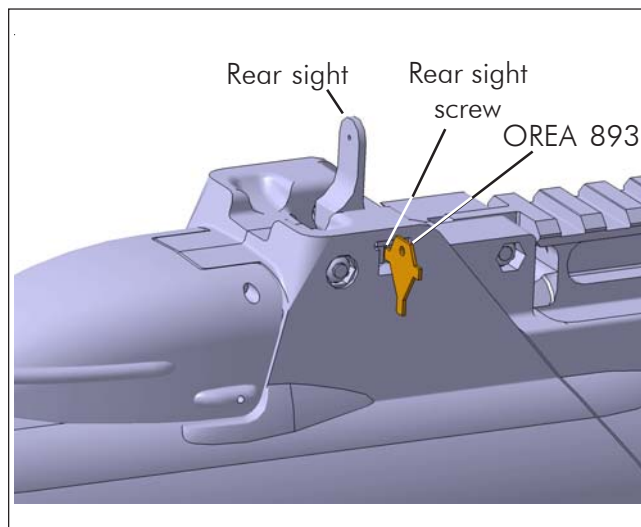


Fig. 10.1.c - Adjustment of the rear sight

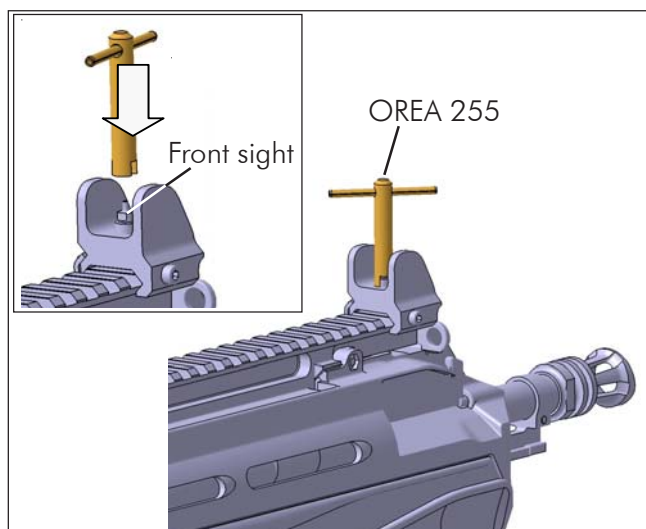


Fig. 10.1.d - Adjustment of the front sight

**10.1. ADJUSTMENT OF THE MECHANICAL SIGHT (CONTINUED)****10.1.2. Setting of the mechanical sight**

- If adjustment of the Mean Point of Impact (MPI) for windage is required, using the OREA 893, turn the square head of the rear sight screw by 1/4 of turn (Fig. 10.1.c).

In order to move the MPI towards the right side, turn the rear sight screw in the clockwise direction.

In order to move the MPI towards the left side, turn the rear sight screw in the counterclockwise direction.

Each 1/4 of turn will change the lateral position of the MPI by 2.25 cm / 4.5 cm / 9 cm / 13.5 cm on a target located at 50 m / 100 m / 200 m / 300 m.

- If adjusting elevation is required, using the tool OREA 255, turn the front sight (Fig. 10.1.d).

In order to raise the MPI, turn the front sight in the counterclockwise direction.

In order to lower the MPI, turn the front sight in the clockwise direction.

Each 1/4 of turn will change the vertical position of the MPI by 4.5 cm / 9 cm / 18 cm / 27 cm on a target located at 50 m / 100 m / 200 m / 300 m.

- Check the adjustment by determining the MPI again by following the procedure described in § 10.1.1.

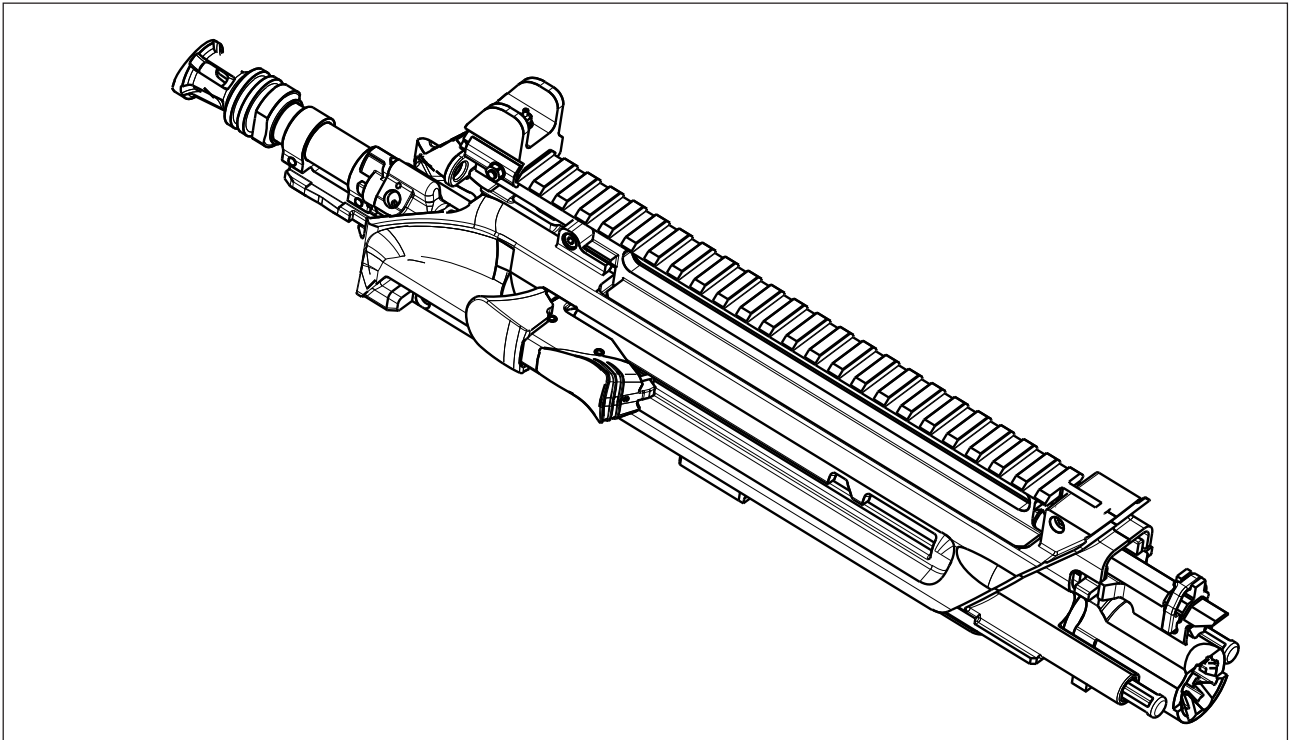


Fig. 10.2.a - Barrel support assembly

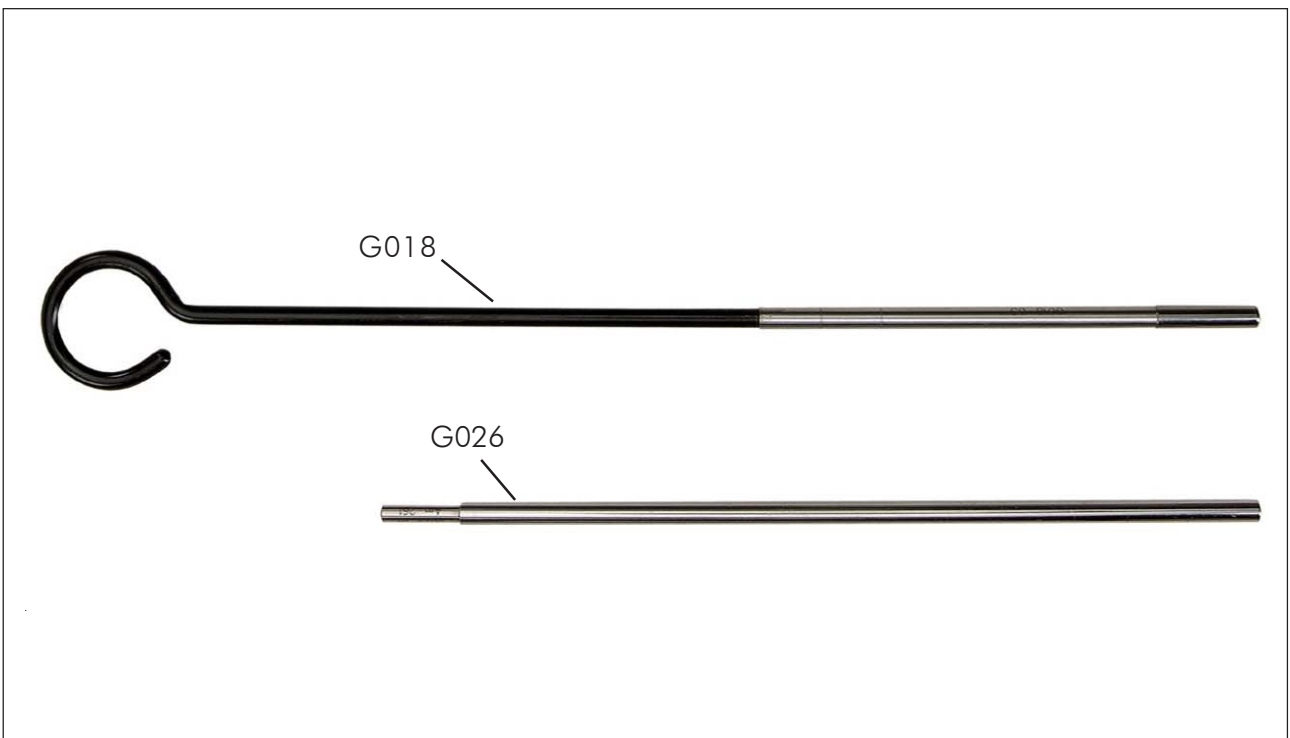


Fig. 10.2.b - Barrel bore gauge G018 and barrel straightness gauge G026



10.2. CHECKING AND GAUGING THE BARREL

10.2.1. Preparation

- Remove the barrel support assembly (110) as described in the field stripping procedure as described from § 7.1.1 to § 7.1.2.
- Thoroughly clean and dry the barrel as described in chapter 8.
- Carry out a visual inspection of the outside of the barrel through the left and right openings (Fig. 10.2.a)
- Carry out a visual inspection of the bore of the barrel.

10.2.2. Gauging the barrel bore

- From the side of the chamber and the extension of the barrel and without applying excessive force, insert the barrel bore gauge G018 into the bore and check that both the 'warning' and 'reject' marks do not pass by the rear face of the barrel extension.
 - If the gauge penetrates into the barrel bore of at least 95 mm (warning), in other words if the first mark of the barrel rod reaches or pass by the rear face of the extension of the barrel, the barrel shows signs of wear and should be replaced as soon as possible.
 - If the gauge penetrates into the barrel bore of at least 110 mm (reject), in other words if the second mark of the barrel rod reaches or pass by the rear edge of the extension of the barrel, the barrel is worn and must be rejected.

10.2.3. Checking the straightness of the barrel

- Put the barrel support assembly (110) vertically and insert the barrel straightness gauge G026 into the bore from the side of the chamber. Check if the gauge is able to pass from one end to the other by its own weight.

Caution: Catch the barrel straightness gauge G026 when it comes out of the barrel to prevent its fall.

- If the barrel straightness gauge G026 pass through the barrel without problem, the straightness of the barrel is correct.
- If not, the barrel should be rejected.



Fig. 10.3.a - Headspace gauges

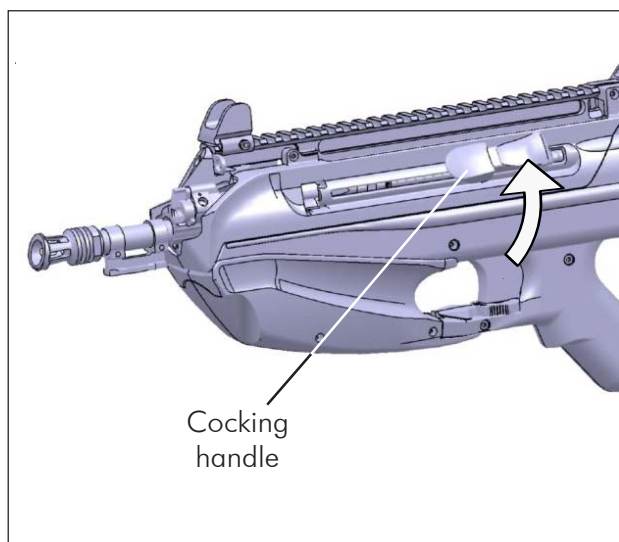


Fig. 10.3.b - Locking the cocking handle

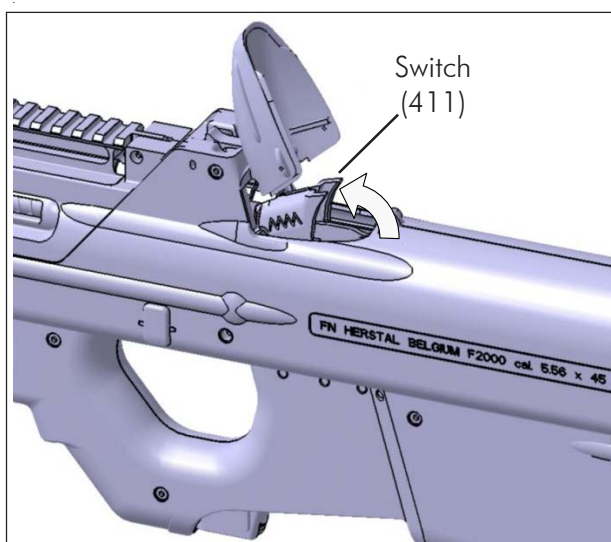


Fig. 10.3.c - Pivoting the switch (411)

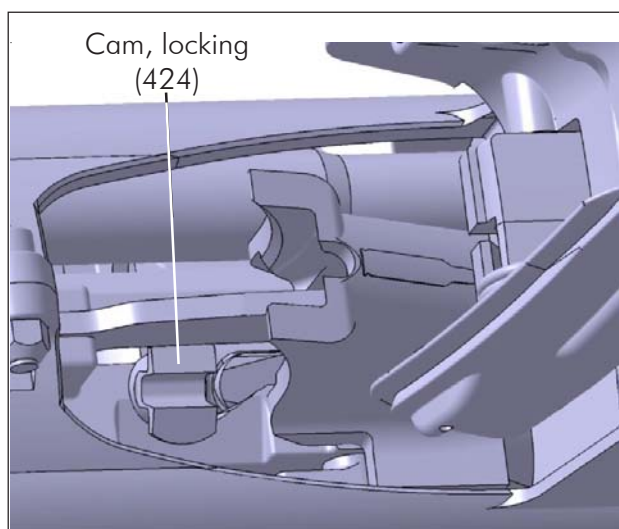


Fig. 10.3.d - The bolt assembly (450) is completely locked

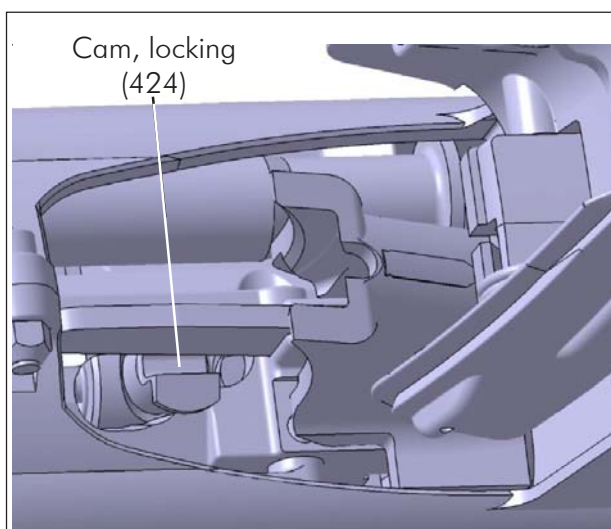


Fig. 10.3.e - The bolt assembly (450) is not completely locked



10.3. CHECKING AND GAUGING THE HEADSPACE

The headspace is the distance between the front face of the bolt assembly (450) and a conventional diameter of the cone of the chamber of the barrel. This distance corresponds to the available space for the cartridge case.

The gauging of the headspace is very important as it determines if the weapon functions correctly and in all safety. This gauging must be carried out during periodic inspections and after each intervention on the barrel support assembly (110) and on the bolt assembly (450).

The checking and gauging procedure consists of the checking the locking of the bolt assembly (450) with different headspace gauges inserted into the chamber of the barrel.

- If necessary, clean the front face of the bolt assembly (450) and the chamber as described in chapter 8.
- Open the cover (271) to access to the chamber.
- Position the weapon in such a way that the barrel is downwards.
- Pull the cocking handle completely rearwards and then push it upwards to lock it at its rear position (Fig. 10.3.b).
- Pivot the switch (411) (Fig. 10.3.c) and insert the 'mini' headspace gauge G115 into the chamber of the barrel.
- To check that the bolt assembly (450) is correctly locked, proceed as follows:
 - Ensure that the bolt assembly (450) is completely locked: the cam, locking (424) must be at the end of the unlocking ramp (Fig. 10.3.d).
- Pull the cocking handle completely rearwards and then push it upwards to lock it at its rear position (Fig. 10.3.b).
- Position the weapon in such a way that the barrel is upward and recover the 'mini' headspace gauge G115 from the housing of the magazine.
- Repeat the upper procedure with the 'reject' headspace gauge G117 and ensure that the bolt assembly (450) is not locked: the cam, locking (424) is not at the end of the unlocking ramp (Fig. 10.3.e).
 - The headspace is correct if the 'mini' headspace gauge G115 allows the bolt assembly (450) to lock and if the 'reject' headspace gauge G117 prevents the bolt assembly (450) to lock.
 - The headspace is not correct for all the other cases.
- If the headspace is not correct, check if the problem can be solved by replacing either the bolt assembly (450) as described in § 7.1.3 and § 7.4.3 or the barrel group assembly (150) as described in § 9.1.5.

Caution: If the barrel support assembly (110) has been replaced, ensure to check the rate of fire and the accuracy (see § 10.1.1) and, if necessary, the adjustment of the mechanical sight (see § 10.1.2).

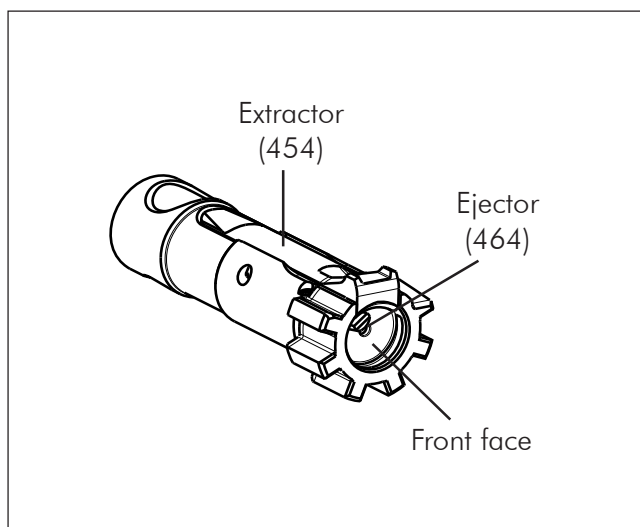


Fig. 10.4.a - Bolt assembly (450)



Fig. 10.4.b - Lateral protrusion extractor gauge
G119

**10.4. CHECKING AND GAUGING THE EXTRACTOR (454)****10.4.1 Checking and gauging the engagement of the extractor (454)**

- Remove the bolt assembly (450) as described in § 7.1.3.
- If necessary, clean the front face of the bolt assembly (450) and the extractor (454).
- Using the lateral protrusion extractor gauge G119, check the engagement of the extractor (454) proceeding as follows:

- Present the flat surface of the end of the lateral protrusion extractor gauge G119 against the front face of the bolt assembly (450) taking care to orientate its notch in front of the ejector (464).

If the notch of the lateral protrusion extractor gauge G119 is not placed in front of the ejector (464), this checking procedure will not be correct because the ejector (464) will hinder the gauge.

- Push the gauge towards the front face of the bolt assembly (450).

- The engagement of the extractor (454) is correct if the end of the lateral protrusion extractor gauge G119 can not reach the bolt front face as it is pushed without forcing.

In such a case, this procedure is completed. Proceed then to the checking and gauging procedure described in § 10.3.2.

- The engagement of the extractor (454) is not correct if the end of the lateral protrusion extractor gauge G119 can reach the bolt front face as it is pushed without forcing.

In such a case, the extractor (454) and the springs, extractor (455) must be replaced as described in § 7.2.1 and § 7.3.1.

Note: Alternative procedure: metrologically check that the bolt assembly (450) and the extractor (454) form a cylinder of 8.86 mm diameter.

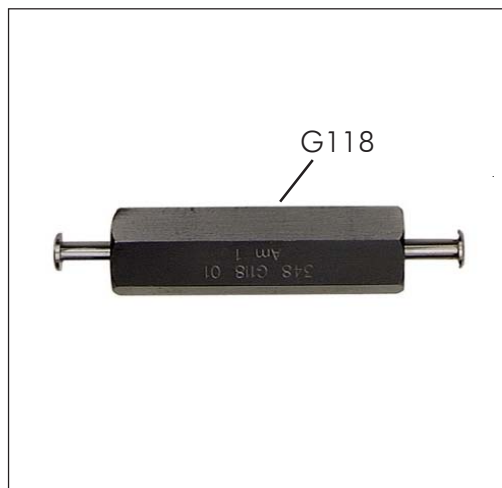


Fig. 10.4.c - Extractor lengthwise
protrusion gauge G118

**10.4. CHECKING AND GAUGING THE EXTRACTOR (454) (CONTINUED)****10.4.2. Checking and gauging the axial clearance of the extractor (454)**

The axial clearance of the extractor (454) is the distance between the internal face of the claw of the extractor (454) and the front face of the bolt assembly (450).

This distance represents the available space into which the rim of the cartridge case can fit.

- If not already done, remove the moving parts assembly (410) as described in § 7.1.3.
- Using the extractor lengthwise protrusion gauge G118, check the axial clearance of the extractor (454) proceeding as follows:
 - Press the flat surface of the MINI end of the gauge correctly against the front face of the bolt assembly (450).
 - Taking care to maintain full contact between the flat surface of the gauge and the front face of the bolt assembly (450), pivot the gauge towards the claw of the extractor (454).
 - Repeat this operation for the MAXI end of the gauge.
- The axial clearance of the extractor (454) is correct if the MINI end of the gauge can pass between the claw of the extractor (454) and the front face of the bolt assembly (450) and if the MAXI end can not pass between them.

In such a case, the procedure is completed.
- The axial clearance of the extractor (454) is not correct if the MINI end of the gauge can not pass between the claw of the extractor (454) and the front face of the bolt assembly (450).

In such a case, the extractor (454) and the springs, extractor (455) must be replaced as described in § 7.2.1 and § 7.3.1.



Fig. 10.5.a - Firing pin protrusion gauge G121 and reference gauge for zeroing G122



Fig. 10.5.b - Fit the firing pin protrusion gauge G121) into the reference gauge for zeroing G122



Fig. 10.5.c - Reset the firing pin protrusion gauge G121

**10.5. CHECKING AND GAUGING THE PROTRUSION OF THE FIRING PIN (427)**

The protrusion of the firing pin (427) is the distance the firing pin (427) protrudes from the bottom of the front face of the bolt assembly (450) when the bolt assembly (450) has been locked into the chamber.

Besides periodic inspections, the firing pin (427) should also be checked and gauged after each intervention (removal, disassembly,...) on it.

- Remove the moving parts assembly (410) as described in § 7.1.3.
- If necessary, clean the bolt assembly (450) as described in chapter 8.
- Gauge the firing pin protrusion gauge G121 proceeding as follows:
 - Fit the pointer of the firing pin protrusion gauge G121 into the corresponding housing of the reference gauge for zeroing G122 (Fig. 10.5.b).
 - Reset gauge G121 so that the needle lines up with dial zero mark by turning the dial (Fig. 10.5.c).



Fig. 10.5.d - Positioning of the firing pin protrusion gauge G121

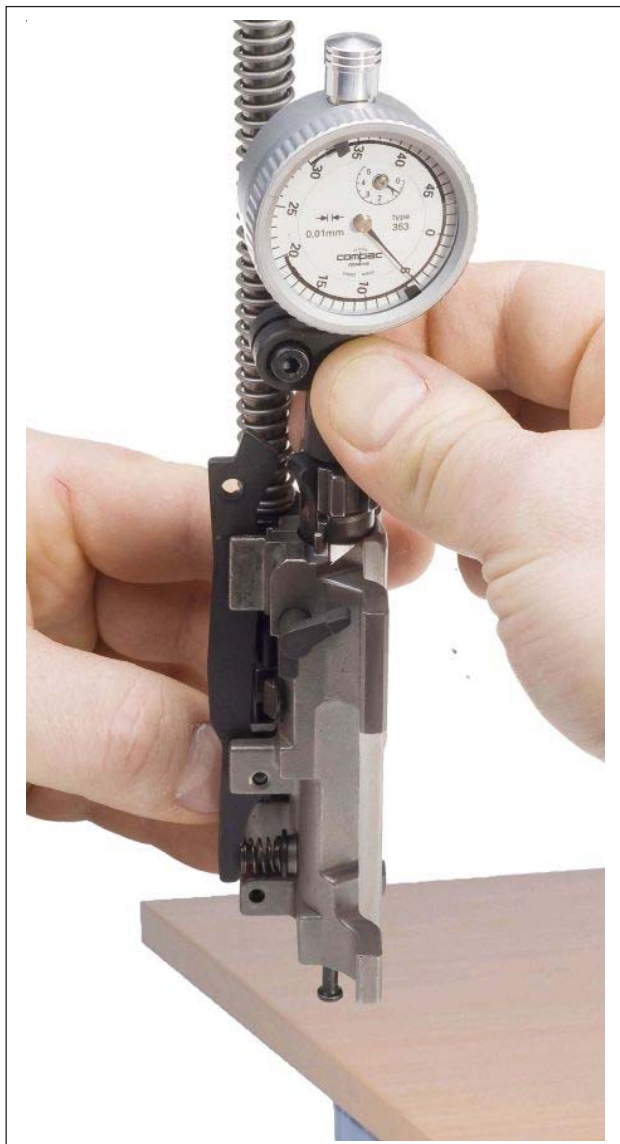


Fig. 10.5.e - Measurement of the firing pin (427)

**10.5. CHECKING AND GAUGING THE PROTRUSION OF THE FIRING PIN (427)
(CONTINUED)**

- Using the firing pin protrusion gauge G121, check the protrusion of the firing pin (427) proceeding as follows:
 - Holding the moving parts assembly (410) with the rod, slide (434) pointing upwards, rest the assembly against a flat support on the rear end of the firing pin (427).
 - Raise the bolt alignment lever and push the bolt assembly (450) fully into its housing of the slide body.
 - With the gauge held in the opposite hand place the pointer of the gauge (Fig. 10.5.d) and press the gauge against the front face of the bolt assembly (450) (Fig. 10.5.e).
 - Read off the firing pin (427) protrusion on the dial of the gauge.
 - If the measure is between -20 and +20, the firing pin (427) protrusion is correct.
 - If not, the firing pin (427) protrusion is incorrect and the firing pin (427) must be replaced as described in § 7.1.3 and § 7.4.3.

After having replaced the firing pin (427), this checking and gauging procedure should be repeated.

Note: Alternative procedure: metrologically check that the firing pin (427) protrusion is 1.02 ± 0.2 mm.

CHAPTER 11: TROUBLESHOOTING

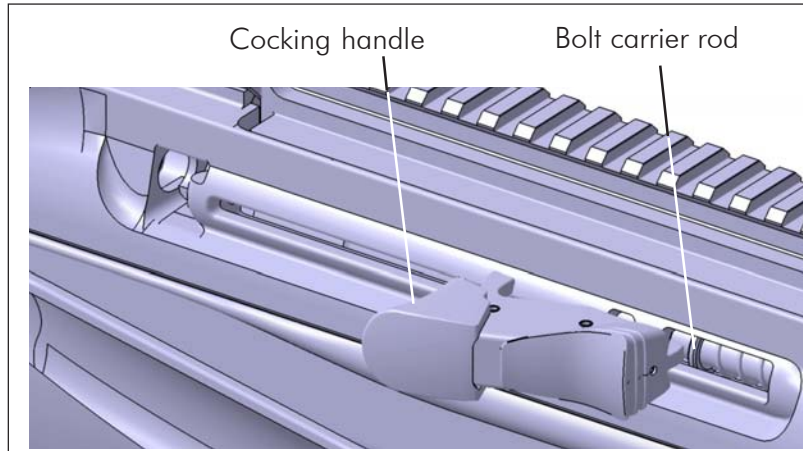
Before any intervention on the F2000 Tactical/Tactical TR, ensure to be familiar with the safety information given in Chapter 4 of this Maintenance Manual.

11.1. IMMEDIATE ACTION

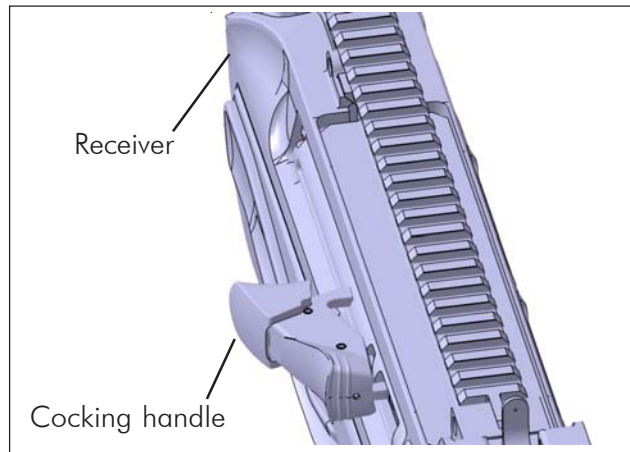
- If the weapon fails to fire:
 - Set the fire selector to position **'S' (SAFE)**.
 - Remove and check the magazine.
 - If the magazine is empty:
 - Insert a loaded magazine.
 - Cock the weapon.
 - Set the fire selector to position **'1' (SINGLE SHOT)** or **'A' (AUTOMATIC)** and resume firing.
 - If there are still rounds in the magazine:
 - Pull the cocking handle fully to the rear and release it.
 - Check that the rounds are correctly positioned in the magazine.
 - Insert the magazine.
 - Cock the weapon.
 - Set the fire selector to position **'1' (SINGLE SHOT)** or **'A' (AUTOMATIC)** and resume firing.
 - If the weapon does still not fire:
 - Set the fire selector to position **'S' (SAFE)**.
 - Remove the magazine.
 - Pull the cocking handle fully to the rear and hold it.
 - Pressing the cocking handle upwards let it move forwards without releasing it, the handle will be held to the rear after a short movement.
 - Open the cover, check that the chamber, the receiver and the bolt are clear, close the cover.
- Warning:**
- Never try to remove a cartridge or a case by hand.
 - Use a tool such a screwdriver.
 - Do not strike the primer of a cartridge with the tool.
- Insert a loaded magazine.
 - Release the cocking handle by pushing it downwards.
 - Set the fire selector to position **'1' (SINGLE SHOT)** or **'A' (AUTOMATIC)** and resume firing.

11.1. IMMEDIATE ACTION (CONTINUED)

- If the moving parts do not return full to the front:
 - Pull the cocking handle back until it contacts the bolt carrier rod.



- Maintaining the cocking handle in its position, rotate it to the receiver.



- Push the cocking handle forwards.
- In case of repeated stoppages:
 - If the weapon is:
 - dirty due to prolonged firing or lack of thorough cleaning.
 - has been exposed to sand, dust or mud.
 - is not well lubricated.
 - Rotate the gas plug to the left.

Warning: After firing, the gas plug will be very hot.

- If stoppages continue, clean and lubricate the rifle.
 - After the rifle has been cleaned and lubricated the gas plug must be rotated to the right.

If this procedure does not solve the problem, check if none of the typical problems given in § 11.2 has occurred.

11.2. TYPICAL PROBLEMS

Problem	Cause	Solution
Problem during the feeding operation of the cartridge	⇒ The cartridge is not pushed out of the magazine (601).	⇒ Check the installation and the correct locking of the magazine (601) into the weapon.
	⇒ The cartridge is pushed out of the magazine (601) but is not fed correctly.	⇒ Check the operation of the magazine (601). If necessary, replace the magazine (601).
		⇒ Clean the chamber.
Failure to lock	⇒ The weapon is soiled.	⇒ Clean the weapon.
Problem during the ignition operation <i>(The slot does not go off; the cartridge is in the chamber but is not fired)</i>	⇒ The cartridge is defective.	⇒ Eject the cartridge immediately.
	⇒ The firing pin (427) is deformed or broken.	⇒ Replace firing pin (427).
	⇒ The firing pin (427) is defective.	⇒ Check and gauge the protrusion of the firing pin (427) as described in § 10.5.
	⇒ The bolt assembly (450) is soiled.	⇒ Clean the bolt assembly (450).
	⇒ The hammer group assembly (510) is defective.	⇒ Check the operation of the hammer group assembly (510). If necessary, replace the hammer group assembly (510).
	⇒ The moving parts assembly (410) is defective.	⇒ Check the mobility of the moving parts assembly (410).

**11.2. TYPICAL PROBLEMS (CONTINUED)**

Problem	Cause	Solution
<i>Operation failure due to an inadequate cyclic rate of fire</i>		
Example: short recoil of the moving parts and failure during the ejection operation.	⇒ Too low rate of fire suspected.	⇒ Set the plug gas (191) for an higher firing rate.
		⇒ Check the cleanness of the inside of the weapon.
		⇒ Check the manual operation of the moving parts without abnormal jamming.
		⇒ Check that the notches of the 3 rings, piston (182) are not aligned and that they are not defective. If necessary, replace the rings, piston (182) as described in § 9.1.2.
		⇒ Check that the chamber is not damaged (not scratched, ...).
Example: failure during the ejection operation with well begun feeding of the next cartridge.	⇒ Too high cyclic rate of fire suspected.	⇒ Check that the plus, gas (161) is set in 'normal' position (see § 6.3.).

11.2. TYPICAL PROBLEMS (CONTINUED)

Problem	Cause	Solution
Problem during the ejection operation <i>(The empty cartridge is not ejected)</i>	⇒ Short recoil of the moving parts.	⇒ Set the plug, gas (191) for an higher firing rate.
	⇒ The ejector (464) and/or its spring (465) are worn and/or broken.	⇒ Replace the ejector (464) and/or its spring (465) as described in § 9.2.2.
	⇒ The moving parts are soiled.	⇒ Clean the moving parts and, if necessary, the inside of the receiver (210).
	⇒ The moving parts are defective.	⇒ Check the operation of all the component parts of the moving parts of assembly (410). If necessary, check the cyclic rate of fire.
Problem during the extraction operation <i>(Failure to extract the cartridge from the chamber)</i>	⇒ The extractor (454) and/or its spring(s) (455) are damaged or broken.	⇒ Replace the extractor (454) and/or its spring(s) (455).
	⇒ The extractor (454) is defective.	⇒ Check and gauge the extractor (454) as described in § 10.4.
	⇒ Short recoil of the moving parts.	⇒ Set the plug gas (191) for higher firing rate.
	⇒ The bolt assembly (450) is soiled.	⇒ Clean.
	⇒ Soiling, oxidation or scratches in the chamber.	⇒ Clean the bolt assembly (450). Clean the chamber. If necessary, replace the barrel group assembly (150) as described in § 9.1.5.



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Fig. 12.a - Accessories

**CHAPTER 12: ACCESSORIES****12.1. ACCESSORIES**

CAT n°	Description	Qty per unit	Remarks
280 (**)	Handguard	1	
280/1 (***)	Handguard, tri-rail	1	
915	Sling, tactical, assembly	1	
920	> Sling assembly	1	
922	> Snap-hook	1	
915/1	Tactic sling, tactical, assembly	1	
920/1	> Tactic sling assembly	1	
922	> Snap-hook	1	
940	Tactical, complete tools roll	1	
OREA 255	> Wrench, front sight	1	
OREA 885	> Maintenance tool	1	
OREA 184	> > Cleaning brush assembly	1	
OREA 258	> > Brush, chamber cleaning assembly	1	
OREA 271/1	> > Cleaning handle, complete	1	
OREA 700	> > Oil can	1	
OREA 895	> > Cleaning brush	1	
OREA 892	> Tool and combination scraper	1	
OREA 892/A	> > Scraper	1	
OREA 892/B	> > Plug	1	
OREA 893	> Tool for adjusting sight screw	1	
945	Carrying bag (Black)	1	
950	Blank firing device assy	1	
ACCE 1	Bayonet F2000 multipurpose	1	
ACCE 1/1	Complete bayonet	1	
ACCE 1/1	Complete bayonet	1	
ACCE 470 (*)	Pistol grip for Picatinny rail	1	

(*) Only for the handguard, triple rail (280/1)

(**) Only for F2000 Tactical TR

(***) Only for F2000 Tactical



Fig. 12.b - Accessories (continued)

**12.1. ACCESSORIES (CONTINUED)**

CAT n°	Description	Qty per unit	Remarks
ACCE 700	Complete sight with ring arms, Aimpoint M2	1	
ACCE 761	> Battery DLI/3N (3000, 5000, COMP, XD, CET mod)	1	
ACCE 762	> Ring arms, Aimpoint	1	
ACCE 764	> Rubber strap	1	
ACCE 765	> Cap, adjusting screw	2	
ACCE 766	> Lenscover, flip-up, front	1	
ACCE 767	> Lenscover, flip-up, rear	1	
ACCE 768	> Battery cap	1	
ACCE 700/2	Red dot sight COMPM3 2MOA assembly with ring	1	
ACCE 762	> Ring arms, Aimpoint	1	

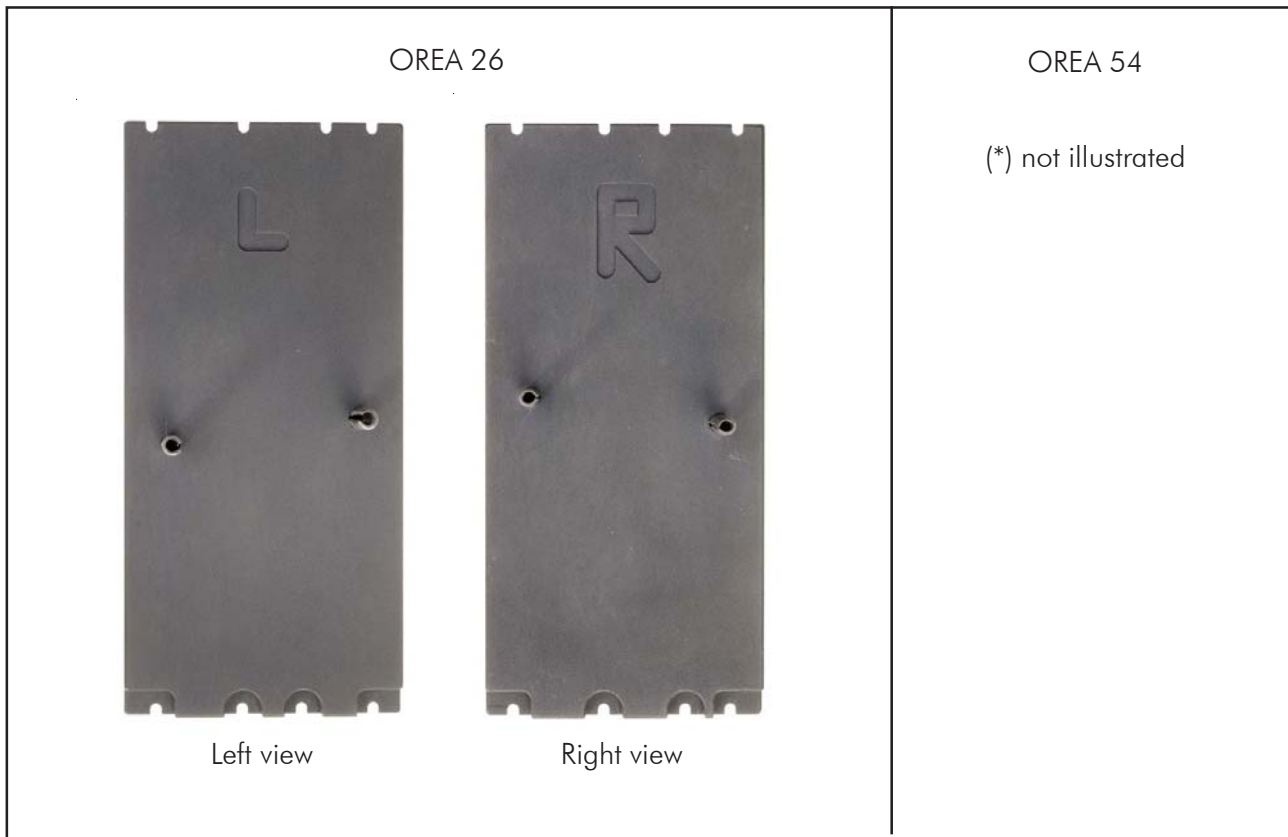


Fig. 13.a - OREA

**CHAPTER 13: TOOLS AND GAUGES****13.1. TOOLS****13.1.1. List of OREA**

CAT n°	Description	Qty per unit	Remarks
OREA 26	Breech lips assembly plate	1	
OREA 54	Drift punch, dia 8.75 mm, lg 55 (*)	1	

(*) not illustrated

13.1.2. List of UT (not illustrated)

CAT n°	Description	Qty per unit	Remarks
UT 1306	Open-end wrench	1	
UT 1817	Universal pliers	1	
UT 1820	Bent-nose	1	
UT 1822	Cutting pliers	1	
UT 1905	Screwdriver 4 x 100 mm	1	
UT 1937	Torque screwdriver	1	
UT 2005	Drift punch, dia 1.4 mm lg 15	1	
UT 2008	Drift punch, dia 1.9 mm	1	
UT 2010	Drift punch, dia 2.9 mm lg 40	1	
UT 2038	Drift punch, dia 0.9 mm	1	
UT 2110	Industrial hammer 100 g	1	
UT 2114	Anti bouncing two-handed hammer with interchangeable tips	1	
UT 2370	Torque wrench	1	
UT 2371	Adapter	1	
UT 2372	Adapter	1	
UT 2421	Twist drill dia 3 mm	1	
UT 2601	Adjustable bar-type tap wrench	1	
UT 2824	Stud extractor	1	



Fig. 13.b - Gauges

**13.2. GAUGES**

CAT n°	Description	Qty per unit	Remarks
G018	CB259 gauge, bore, warning and reject	1	
G026	STD5490R rod, inspection, barrel straightness	1	
G114	0734871137 Inspection, rod, slide, go/no go	1	
G115	Std 10/38.02/7.663 min service, headspace	1	
G117	Std 10/38.35/7.663 service-reject, headspace	1	
G118	0734871139 Extractor lengthwise protrusion	1	
G119	0734871084 Lateral protrusion extractor	1	
G121	0734871138 Inspection firing pin protrusion	1	
G122	0734871089 Ref. gauge for zeroing	1	

CHAPTER 14: NOTES