

HFT 500



USERS HANDBOOK

THIS HANDBOOK REFERS TO THE HFT 500 MODELS

PLEASE READ THIS MANUAL BEFORE USING YOUR HFT 500 FOR THE FIRST TIME. IT CONTAINS IMPORTANT SAFETY INFORMATION AND INSTRUCTIONS ON USE, ADJUSTMENT AND MAINTENANCE.



Shown with optional scope

***** SAFETY CODE *****

1. *TREAT THIS AIR RIFLE AS IF LOADED.*
2. *NEVER POINT IT AT ANYONE, EVEN IF UNLOADED.*
3. *NEVER LEAVE THIS AIR RIFLE UNATTENDED WHEN COCKED OR LOADED.*
4. *ALWAYS BE SURE OF WHAT LIES BEYOND YOUR TARGET.*
5. *ALWAYS CONDUCT YOURSELF IN A SPORTSMAN LIKE MANNER.*

ALWAYS BE AWARE THAT YOUR ACTIONS WILL BE UNDER THE SCRUTINY OF OTHER MEMBERS OF THE PUBLIC WHO MAY NOT SHARE YOUR ENTHUSIASM FOR AIR RIFLES. BAD PRACTICES PROMOTE BAD PUBLICITY. DO NOT JEOPARDISE YOUR FUTURE ENJOYMENT BY MISUSING THIS RIFLE.

WARNING - UNAUTHORIZED DISASSEMBLY OF THIS PRODUCT WILL INVALIDATE THE MANUFACTURERS WARRANTY.

Gun security

It is important to make sure that your gun is always kept in a safe and secure fashion when not in use.

For rifles purchased in the UK and that are NOT FAC rated (high power) a free gun lock and mounting eyes are supplied. Please follow the simple fixing instructions and keep our sport safe.

Note: If there is no gun lock in the box please contact the dealer you purchased the rifle from.



IMPORTANT INFORMATION, PLEASE READ

Before leaving the factory this rifle was Q.A, inspected and test fired using Air Arms pellets to check operation and final adjustment.

It was dispatched in a sealed purpose designed box. Air Arms may not be responsible for any damage to the contents or missing items if the box is not original, if it is damaged or the tape is not intact.

Air Arms cannot be held responsible for damage or missing items due to transit damage, mishandling or being tampered with after leaving the factory.

If this rifle is not received in the original box with the tape intact, please examine carefully for any damage, missing tools or documentation.

In the first instance any problems or complaints regarding this product should be referred to the supplier.

The air cylinder is a highly pressurised unit that must **not** be modified in any way. Serious personal injury may result if this, and the advice below is not followed.

Do **not** pressurize the cylinder if there are any surface abrasions or dents. Contact Air Arms for advice.

Do **not** store the rifle in places with, or near sources of high temperature such as fires or boilers.

Do **not** attempt to dismantle when pressurised.

Do **not** pressurize beyond the stated filling pressure (see filling instruction section). Damage caused by such action is **not** covered by the manufacturers warranty.

Only use clean, filtered and dry compressed air. **Never** use any other gas, particularly industrial or welding gases such as oxygen, carbon dioxide, acetylene, hydrogen, argon, etc.

If compressed air is being used other than from a diving shop, the inside of the cylinder should be inspected for corrosion at least annually. If in doubt contact Air Arms for advice.

In any event the cylinder should be inspected every two to three years depending upon usage. Air Arms can provide this service at a reasonable cost.

To maintain this rifle in good working order it should be serviced annually by a competent gunsmith, your supplier may be able to provide this service or contact Air Arms.

A reasonable amount of advice will be provided to enable the end user to service their own rifle, however this is at the discretion of Air Arms and may not be given in all cases.

The velocity of this rifle has been set using Air Arms field pellets. If any other make or type of pellet is to be used the rifle must be re-tested with the pellet that is to be used, to ensure the muzzle energy is within the limits determined by current legislation.

Due to the nature of hand pumps and their relative inefficiency in removing moisture from the compressed air, the chances of corrosion damage to the cylinder and other internal components are increased. Therefore the rifle should be regularly serviced and/or checked for any signs of damage by a competent gunsmith. Air Arms recommend using a dry pack filter kit on any hand pumps used to fill our air rifles.

If accessories not manufactured by Air Arms are used on this rifle, Air Arms can not be held responsible for any loss of performance. Contact your supplier or Air Arms for any advice on this matter.

Do **not** store this rifle in a damp place such as garden shed or garage.

Do **not** store this rifle in a plastic or PVC gun bag without first applying a surface corrosion inhibitor.

Always ensure the loading bolt is fully closed before firing.

On rifles manufactured for use in the U.K. anti tamper devices will be fitted during assembly. If the rifle is returned to Air Arms at any time and these devices have been removed or are damaged, Air Arms reserves the right to refit the devices to factory standards.

IMPORTANT INFORMATION - Continued

CHECKING VELOCITY

- 1 Use a reliable chronograph to check velocity, (the formula below requires the reading to be in feet per second - FPS)
- 2 Use fine measurement scales to weigh the pellet, If scales are unavailable the pellet weight may be stated on the pellet container lid or contact the supplier. (The formula requires the weight to be in grains). To convert from grams to grains multiply by 15.432, i.e. 0.69 grams x 15.432 = 10.65 grains.
- 3 To find the muzzle energy in ft/lbs., use the formula $(FPS \times FPS \times Grains) / 450240$, i.e. $(700 \times 700 \times 10.65) = 5218500$ divide by 450240 = 11.59.

CURRENT UK LEGISLATION LIMITS NON-FAC HOLDERS TO AIR RIFLES WITH A MAXIMUM OF 12ft/lbs MUZZLE ENERGY.

WARNING ! IT IS A VERY SERIOUS OFFENCE TO BE IN POSSESSION OF AN AIR RIFLE THAT YOU ARE NOT CERTIFICATED FOR. CONVICTION CAN RESULT IN CONFISCATION OF YOUR RIFLE, A HEAVY FINE OR IMPRISONMENT, EVEN A COMBINATION OF ALL THREE.

******* LIMITED LIABILITY WARRANTY *******

This product is warranted to the retail customer for 12 months from date of purchase against defects in materials and workmanship and is transferable to any subsequent owner.

Proof of purchase is required to receive warranty repairs, retain your purchase invoice and return the warranty registration card as soon as possible after purchase. The warranty card must show the dealer/supplier name and address and date of purchase.

What is covered

Replacement parts & labour on a 'back to base' basis, return transportation to the consumer (mainland UK only).

What is not covered

Transportation from the consumer to Air Arms.

Damage caused by misuse, abuse, lack of routine maintenance, transit damage between the dealer/supplier and the consumer or unauthorized disassembly.

Parts subject to normal wear and tear.

Any other consequential cost incurred by the consumer.

Return transportation to consumers outside mainland UK.

No warranty is implied as to the fitness for any particular purpose.

AIR ARMS RESERVE THE RIGHT TO ALTER THE CONSTRUCTION, APPEARANCE OR PERFORMANCE OF ANY PRODUCT WITHOUT PRIOR NOTIFICATION. ALL ILLUSTRATIONS ARE FOR INFORMATION PURPOSES ONLY AND DO NOT NECESSARILY HOW THE EXACT MODEL THAT WAS PURCHASED.

FILLING INSTRUCTIONS

NOTE ! ONLY USE CLEAN, DRY AND FILTERED COMPRESSED AIR, PREFERABLY FROM A DIVING SHOP. OVER PRESSURIZATION MAY DAMAGE THE CYLINDER BEYOND REPAIR.

First the female part of the filling kit (this was supplied with the rifle) must be fitted to your filling equipment. The female part (S475) has a 1/8th BSP male thread that screws directly into the hose of your pump or bottle.

Next remove the dust cover from the end of your rifle.



This achieved by unscrewing the cover in an anti-clockwise direction.

Once the connector is exposed the female part of the filling kit can be place on the male and press all the way on making sure that the 'O' rings on the male part are covered. Once the female part is pushed on to the male, twist it to lock it into place.



USING HAND PUMPS

The procedure for using hand pumps is the same as for bottle. It is more important to turn the female on the gun to lock it in place.

When using the pump it must be remembered that the first few pump are filling the hose and NOT the gun. When the pressure in the hose equalizes to that in the gun, the gun will start to fill.

It can take some effort to fill the gun using a pump and we recommend using the pump to top up instead of filling from empty.

With the female in place the gun can now be filled. If the rifle is empty the mechanism will need to be cocked to allow the firing valve to close. If the rifle is not cocked when the bottle is opened or the pump used, the air will past the valve and exhaust through the barrel.

Check that the bleed valve on the filling equipment is closed (turn clockwise to close) then **slowly** open the main valve on bottle or start using the pump. The pressure in the hose will equalise and then the rifle will start to fill.

If you are filling your rifle from empty there may be some air exhausted through the barrel until the air pressure is sufficient to over come the firing valve spring (S306) this will happen at approximately 50 bar (750psi).

The filling pressure of the HFT 500 is 190 bar (2755psi). Filling to a higher pressure will not increase either power or number of shots. Over filling will lower the power and may cause irreparable damage to the cylinder or valve.

Once the filling pressure has been reached, close the valve on the bottle or stop pumping, open the bleed valve on the filling kit (to vent the hose, if you do not vent the hose you will not be able to remove the female from the rifle). Now the female connector can be removed from the rifle and end cap (S483) can be replaced over the male connector ensuring not to overtighten.



The HFT 500 range of rifles are fitted with a pressure indicator mounted on the underside of the rifle just in front of the stock screw. This provides the user with a visual check on the amount of air remaining in the cylinder this indicator should not be used during the filling process as the needle reaction speed has been slowed to prevent damage whilst filling. After filling the needle can take several seconds to synchronize with the air in the cylinder. The picture below shows a rifle with just over 150 bar of pressure. Although every gun is slightly different the recommended refill pressure for the HFT 500 is between 100 and 110 bar. **Always use the gauge on the filling kit.**



NOTE: On the front of the cylinder is an engraved warning reading....

READ MANUAL. MFP 200bar. MSP 200bar. DOM **/**/** **, INSPECT BI-ANNUALLY.

MFP = Maximum Filling Pressure. The pressure is stated.

MSP = Maximum Safe Pressure. The pressure is stated.

DOM = Date of Manufacture. The date is stated.

WARNING NOTE CONCERNING 300 BAR BOTTLES.

WITH THE ADVENT OF THE 300 BAR BOTTLE IT SHOULD BE NOTED THAT CARE HAS TO BE TAKEN WHEN FILLING YOUR RIFLE.

THE FILLING PROCEDURE DESCRIBED IN THIS MANUAL MUST BE FOLLOWED TO AVOID DAMAGE TO THE RIFLE, PARTICULARLY THE SLOW OPENING OF THE VALVE ON THE BOTTLE. OPENING THE VALVE QUICKLY WILL ALLOW UP TO 300 BAR OF PRESSURE INTO THE CYLINDER AT ONCE, THIS COULD CAUSE SERIOUS PERSONAL INJURY OR IRREPARABLE DAMAGE TO THE CYLINDER.

COCKING AND LOADING THE RIFLE

COCKING

Hold securely in one hand and with the other pull the cocking lever out and to the rear. At the end of the stroke the trigger mechanism will engage. This can be determined by the trigger blade 'kicking' forward at the end of the cocking stroke and a quiet 'click'.

The effort required to cock the gun is quite low so minimal force should be used.



Once the rifle is cocked, a pellet can be placed into the loading bolt trough. The cocking lever can now be pushed forward to locate the pellet into the barrel. This is achieved by simply closing the lever. Once the lever is closed fully the rifle is ready to fire.

WARNING. Extra care must now be taken as the rifle is now cocked, loaded and ready to fire.



DE-COCKING

To de-cock the rifle first pull the cocking lever all the way to the rear as if cocking the rifle, now holding the lever in one hand and pointing the gun to the ground pull the trigger. You will feel the load on the lever increase and you can let it go forwards in a controlled fashion to the closed position.

WARNING. The rifle is now de-cocked but, there is still a pellet in the barrel. It is recommended that if you feel you have to de-cock, a better course of action is to fire the rifle into a soft area of ground or other suitable target.



TRIGGER ADJUSTMENT

The HFT 500 has a two stage trigger. This means that as the trigger is pulled the bottom sear gradually disengages with the top sear until the two disengage completely and the rifle fires. If the pressure on the trigger is released before firing, the sears return to their first fully engaged position.

This type of trigger allows a very fine but safe operation because it is the release of the second stage that actually fires the gun. This arrangement is vastly superior to single stage trigger, however it must be stated that adjustment of a two stage unit is more difficult than the adjustment of a single stage trigger.

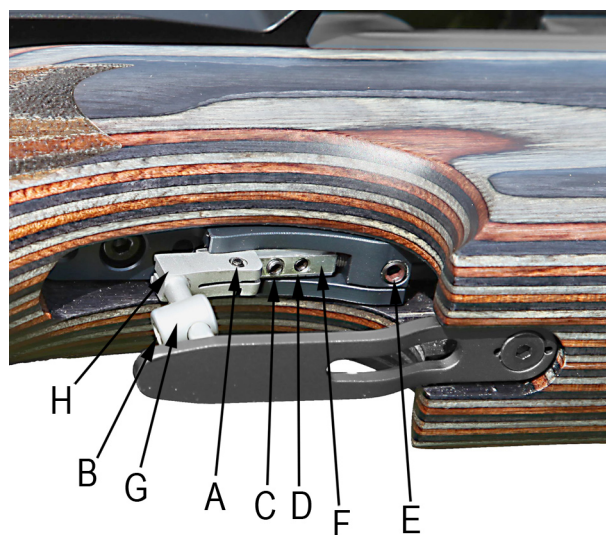
TRIGGER POSITIONING

The trigger on the HFT 500 can be adjusted in a variety of ways to make the trigger as efficient as possible. First, the trigger button can be rotated around the trigger pillar, this allows the finger to sit perfectly on the centre of the button.

The button can be raised or lower on the pillar to make sure that it is in line with the shooters finger. The whole trigger button and pillar assembly can also slide forwards and backwards along the trigger bar to increase or decrease the length of pull.

These adjustments will allow the gun to be tailored the individual shooter.

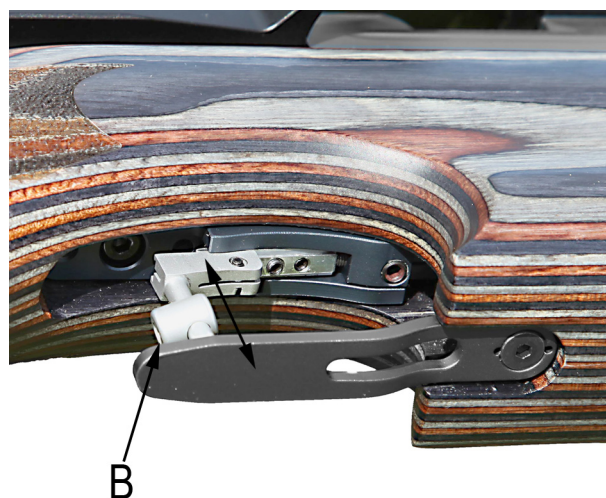
- A - Pillar screw.*
- B - Blade screw.*
- C - Second stage adjuster.*
- D - First stage adjuster.*
- E - Weight of pull adjuster.*
- F - Trigger bar.*
- G - Trigger button..*
- H - Trigger pillar.*



ROTATING, RAISING & LOWERING THE TRIGGER BUTTON

The trigger button can be rotated and moved up and down on the trigger pillar by loosening the screw in the blade 'B' (use the 2mm Allen key supplied.). Once in position the screw can be re-tightened.

WARNING. Over tightening screws or bolts mounted into plastic may cause damage.



MOVING THE PILLAR ON THE TRIGGER BAR

Loosening screw 'A' with the 1.5mm Allen key (supplied) will allow the trigger pillar to be moved forwards and backwards along the trigger bar.

TRIGGER ADJUSTMENT

The operation of the trigger is controlled by 3 screws C, D & E.

The weight of pull adjustment is controlled by screw 'E', and is located in front of the trigger, housed in the trigger guard. Clockwise rotation will increase the pull weight and counter-clockwise will decrease the weight. If the screw is over adjusted in the clockwise direction the spring will become coil-bound and may prevent operation of the trigger.

The first stage adjuster 'D' is the first screw in the trigger bar looking from the front of the gun. This screw determines the length of first stage travel before the second stage engages. Clockwise adjustment reduces the first stage travel.

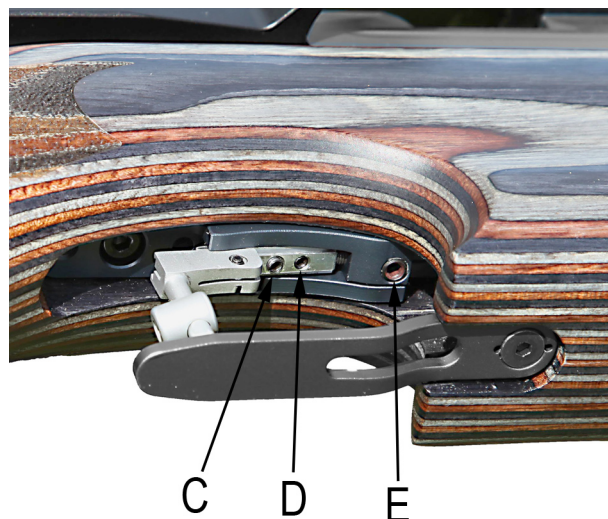
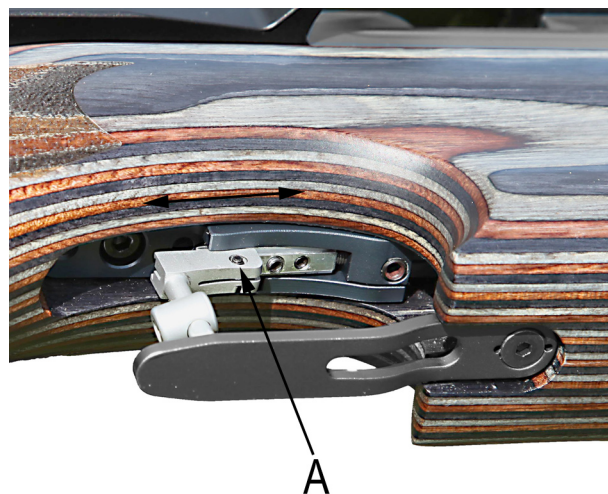
The second stage adjuster 'C' is located next to the first stage screw. This screw determines the exact pull-off point of the trigger.

WARNING. Adjustment of a two-stage trigger can be difficult and should be left to experienced and trained technicians. Adjustment to any one of the screws will have a direct effect on the other two screws and could make the gun unsafe.

If you have no experience of adjusting a two-stage trigger it is highly recommended that you seek guidance or leave the trigger on the factory settings.

TIP

When adjusting the trigger write down on a piece of paper the number of turns and direction of each adjuster screw. This will make it easier to recover the original settings if required.



STOCK ADJUSTMENTS

CHEEK PIECE

There are two adjustments available to the cheek piece. The whole assembly can be raised or lower by loosening the screw in the side on the butt stock using a 4mm allen key. This allows the cheek piece to be positioned at the perfect height for the shooter and scope they are using.

The cheek piece is also mounted on a ball joint at the top of the shaft. Loosening the two screws (accessed through the slots in the side of the cheek piece) allows the piece to be adjusted by minuet amounts to make the cheek piece as comfortable and exact as possible. Do not over tighten the screws.

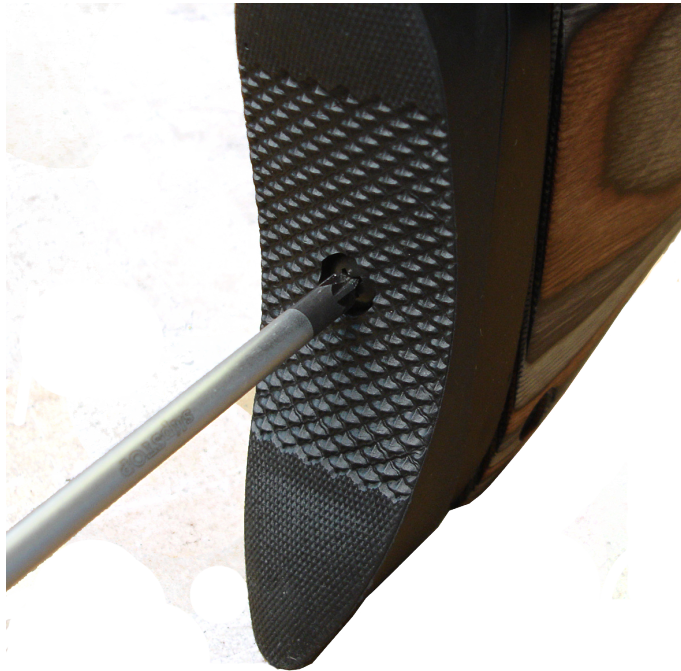


BUTT PAD

The butt pad has two adjustments available.

It can be adjusted to allow up and down movement for a higher or lower head position. This is done by loosening the screw in the middle of the pad and sliding into place then retightening the screw.

The second adjustment allows the length of the butt to be extended, this is achieved by adding spacers between the butt pad and the stock. With the pad slid up and down the screws that fix it to the wood can be accessed to allow extra spacers to be fitted. Please note that depending on the number or size of spacers required you may have to obtain longer screws.



MAINTENANCE

FIXINGS

Regularly check the tightness of all fixings. However do not be tempted to over tighten as some parts are made from aluminium and stripped threads may result. Stripped threads are not covered by the manufacturers warranty.

BARREL

For ultimate accuracy, clean and re-lube the barrel frequently. It is difficult to advise how often is best for every circumstance, but every 250 shots is not too often if the desire is to keep the barrel in the best possible condition.

The correct materials are very important. Air arms only uses products made by Napier. Listed below is the Napier product and a more generally available alternative. If possible use Napier for the best results.

CLEANER:	‘NAPIER GUN CLEANER’, ALTERNATIVELY WHITE SPIRIT.
OIL:	‘NAPIER GUN OIL’, ALTERNATIVELY ‘3 IN 1’ OIL.
PULL-THROUGH PAD:	‘NAPIER RIFLE CLEAN’, ALTERNATIVELY SOFT COTTON CLOTH.
PULL-THROUGH LINE:	‘NAPIER PULL THROUGH KIT’, ALTERNATIVELY 20lb FISHING LINE

As a rule cleaners and oils intended for shotguns and small/full-bore weapons are not suitable.

1. Cut a piece of line three times the length of your barrel, fold in half and tie ends together. Remove silencer if fitted. Open loading bolt.
2. Feed un-knotted end down barrel from the muzzle end until folded end protrudes out 50mm.
3. Cut a 100mm length of ‘rifle clean’ or 100 x 50mm piece of cloth and pass it between the protruding loop. Spray the pad with ‘gun cleaner’ or white spirit, turn the rifle upside down and pull the line back through the barrel slowly.
4. Repeat steps 2&3 until the pad is clean.
5. Repeat steps 2&3 once more without any cleaner on the pad to dry the barrel.
6. Repeat steps 2&3 once more with the pad sprayed with ‘gun oil’ or 3 in 1 oil.

IMPORTANT : THE REASON FOR TURNING THE RIFLE UPSIDE DOWN IS TO PREVENT EXCESS CLEANER/OIL FROM PASSING DOWN THE TRANSFER PORT INTO THE FIRING VALVE CHAMBER.

LUBRICATION

Lubrication of the internal mechanism is not covered in this handbook. This is best performed by a competent gunsmith or the factory and in any case should not be required until the annual service.

Apply a small dab of grease or oil, on the two pivot points shown in the diagram, and work-in by moving the bolt forwards and backwards. Wipe off excessive grease. Preferred grease is ‘Napier g95 gun grease’ On return from every shooting session, wipe all over the exterior with an oily rag to preserve the surface finish during storage.

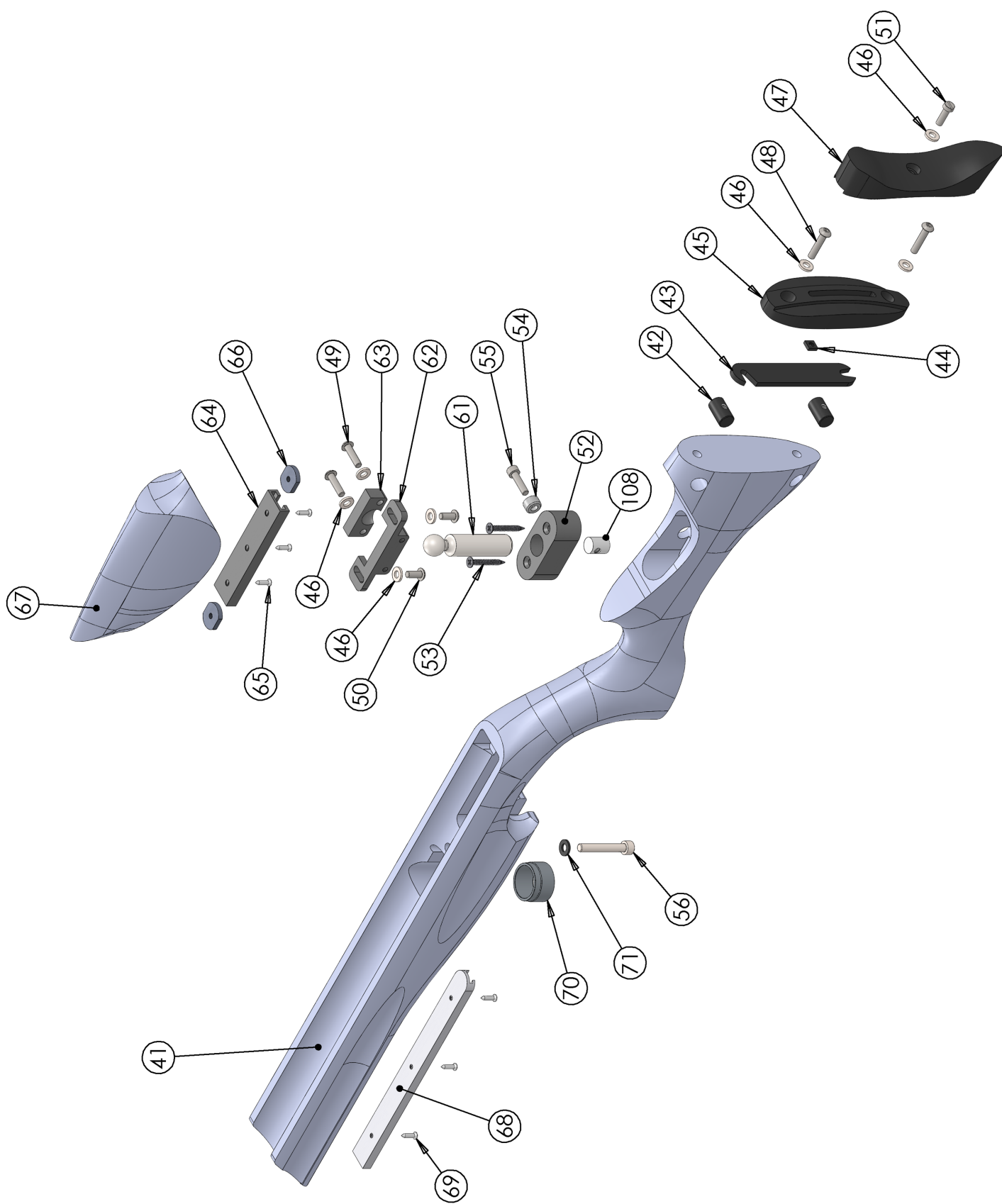
A small drop of oil should be applied to the magazine O ring to keep it moist, and increase its life span.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	S507-SL	FIRING VALVE BODY	1	31	E113	M4 X 4 SOC SET CONE PT ST/ST	1
2	JT400-SL	HFT BOLT HOUSING	1	35	TX228	M4 X 4 SKT SET FL PT	2
3	E700	BARREL	1	36	E122	M4 X 4 SKT SET FL PT ST/ST	1
4	FP121	4.5 X 1.5 NBR70	1	37	S340	STRIKER ROD	1
5	S540A-SL	.177 LOADING BOLT STEM	1	38	S520-SL	STRIKER	1
6	JT335FT	FT CYLINDER	1	39	S520-1	BUSH	2
7	RN234	BS213 O RING	2	40	S370	FIRING VALVE ASSY	1
8	S491	FILLING VALVE BODY	1	49	JT416	M5 X 18 SKT BTN HD	1
9	S472	MALE CONNECTOR	1	57	TX236	M4 X 16 SKT CAP	2
10	S474	MALE CONNECTOR O RING	2	58	RN102A	M3 X 16 SKT CAP	4
11	S327	BS005 O RING 90 SHURE	1	60	RN135	M6 X 12 SOC CAP	1
12	S473	FILLING VALVE	1	72	E483BK	END CAP - BLACK	1
13	S319	FILLING VALVE SPRING	2	74	JT486	BUFFER SUPPORT	1
14	S484	12x1.5 O RING 70 SHURE	1	75	E870	GROMMET	1
15	S471	SINTERED FILTER	1	76	S306	FIRING VALVE SPRING	1
16	S130	COCKING ARM PIVOT BLOCK	1	77	S365	POT SPRING GUIDE	1
17	S125	COCKING ARM	1	78	S360	STD POWER POT ASSY	1
18	E160	M3 CRINKLE WASHER	2	79	E146	COCKING ARM FRICTION PAD	1
19	E144	3 X 24 ROLLER	1	80	S427	6 X 1 O RING	2
20	E127	3 X 8 ROLLER	1	81	S640AT	GAUGE MOUNT	1
21	S264	COCKING LINK	1	82	S536	BS008	1
22	S541-1	BEARING SHIM	2	83	RN219-9	BS 011 O RING	1
23	S541	LOADING BOLT BEARING	1	84	S645	INDICATOR GAUGE	1
24	S542	SIDE LEVER BUSH	1	85	S356H	STRIKER SCREW	1
25	S355H-SL	M4 X 16 SCREW	1	99	HFT 500 CHASSIS ASSEMBLY		1
26	S322	M4 X 12 CSK SKT	2	103	S530	MAIN SPRING GUIDE	1
28	S142	1.24 X 2.62 NBR 70 (BS102)	1	104	S331	MAIN SPRING	1
29	TX227	BUFFER	1	105	JT453	FT MUZZLE END ASSEMBLY	1
30	E281	M4 X 6 SKT SET CONE PT ST/ST	2				



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
41	S676-PT1	MAIN STOCK	1
42	S685	ROLLER NUT - BLACK	2
43	CZ028-1	4mm SPACER	1
44	CZ080-4	LOCKING PLATE	1
45	CZ080-2	BUTT PAD BACKING PLATE	1
46	RN431	M5 WASHER	7
47	CZ080-1	BUTT PAD	1
48	S641	M5 X 25 SKT BTN	2
49	JT416	M5 X 18 SKT BTN HD	2
50	RN430	M5 X 12 SKT BTN	2
51	CZ080-3	M5 X 16 CHEESE HD	1
52	S775	CHEEK PIECE PILLAR BOTTOM PLATE	1
53	S780	No6 X 1/2" POZI C/SUNK - BLACK	2
54	E425	ADJUSTER LOCKING BUSH	1
55	PS418	M5 X 20 SKT CAP	1
56	S625	M6 X 40 SKT CAP	1
61	S740	CHEEK PIECE PILLAR	1
62	S770-PT1	CHEEK PIECE TOP CLAMP - PT1	1
63	S770-PT2	CHEEK PIECE TOP CLAMP - PT 2	1
64	E335	CHEEK PIECE RAIL	1
65	KS445	No 6 3/8" POZI CSK	3
66	E340	RAIL NUT	2
67	S676-PT2	CHEEK PIECE	1
68	JT745	RAIL - HFT500	1
69	S750	No 6 3/8" POZI CSK	3
70	JT640R	STOCK RING - HFT500	1
71	S655	6 X 12 X 1.5 WASHER	1
108	E320	PILLAR NUT	1



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