



EV2 USERS HANDBOOK

THIS HANDBOOK REFERS TO THE EV2 MODEL

PLEASE READ THIS MANUAL BEFORE USING YOUR NEW RIFLE, IT CONTAINS IMPORTANT SAFETY INFORMATION AND INSTRUCTION ON ADJUSTMENT AND MAINTENANCE.



Rifle illustrated is the coated version 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 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 WEAPONS. BAD PRACTICES PROMOTE BAD PUBLICITY. DO NOT JEOPARDISE YOUR, OR OTHERS FUTURE ENJOYMENT BY MISUSING THIS WEAPON.

WARNING ! - UNAUTHORISED DISASSEMBLY OF THIS RIFLE WILL INVALIDATE THE MANUFACTURERS WARRANTY

Manufacturers Warranty

This product has a limited 12 month back-to-base warranty commencing from the date of purchase and is transferable. The warranty is limited to defects in materials and/or workmanship. Proof of purchase is required to receive warranty repairs. The most effective way to prove date of purchase is to get the warranty registration card supplied with every rifle stamped or signed by the supplier and post it. Failing that you may be asked to produce a copy of the purchase receipts.

WHAT IS COVERED:

- 1> Replacement of parts and labour.
- 2> Return transportation to the consumer (mainland UK only).

WHAT IS NOT COVERED:

- 1> Transportation from consumer to Air Arms.
- 2> Damage caused by misuse, abuse, lack of routine maintenance or disassembly.
- 3> Parts subject to normal wear and tear.
- 4> Any consequential costs to the consumer.

Checking Performance

The current laws on ownership and use of air rifles make it very difficult for manufacturers to satisfy both the shooter and legislation. The shooter wants maximum power, legislation demands an upper limit. Pellets vary in size, weight and design; every rifle performs slightly differently; this results in a performance variable that can in some cases make a 12ft/lb rifle into a firearm just by a pellet change.

Air Arms have adopted the principle of setting up all rifles on AA brand pellets only. The most important factors behind this decision are that the pellets are made to our design parameters in respect of weight and size thus removing the major variables. It is still essential that regular velocity checks are made particularly in the first year of ownership.

EV2 models are set up using Air Arms Field pellets to produce between 11.3 and 11.5ft/lbs. This is to allow for a normal increase in performance during the running in period, approximately 2000 shots.

With access to a reliable chronograph it is possible to check velocity and calculate the muzzle energy in ft/lbs. Calculate using the following formula applying the constants, V = velocity in feet per second. W = weight of pellet in grams. Check that the chronograph readings are in feet per second.

$$V \times V \times W \times 15.432$$

Example: V = 800fps, W = 0.52grams therefore $800 \times 800 \times 0.52 \times 15.432 = 5135769.6$
divide by 450240 = 11.4067ft/lbs.

This Air Rifle is not a toy and may cause death or serious injury if used incorrectly or carelessly.

Read all instructions before use.

The user has the responsibility to conform to all legislation relating to the ownership and use of air weapons within the country of use.

In the United Kingdom of Great Britain, the use of this air rifle requires adult supervision if the user is under the age of 14 years. The supervisor must be at least 21 years old.

1> Before leaving the factory this rifle was inspected and test fired using Air Arms Field pellets to check operation and final adjustments.

It was dispatched in a sealed purpose designed box. Air Arms will not be responsible for any damage to the contents or missing items if the box is not original or has been opened between dispatch from the factory and receipt by the end user.

In the event of any complaint regarding this product the supplier should be informed. The consumers rights are with the supplier not the manufacturer.

2> The air cylinder fitted to this product will have very high internal pressure when ready for use and must **not** be modified in any way. Serious personal injury may result if this and the advise below is not followed.

a> Only use clean, filtered and dry compressed air. **NEVER** use any other gas particularly industrial or welding gases such as Oxygen, Acetyline, Hydrogen etc.

b> Do **not** fill the cylinder if there are any surface abrasions or dents. Contact Air Arms for advise if you have any doubts on the suitability of the cylinder to be filled.

c> Do **not** store the rifle in a place or near sources with high temperatures such as fires or boilers.

d> Do **not** dismantle when filled.

e> Do **not** fill beyond the stated filling pressure (see filling instructions section). Damage caused by over filling is not covered by the manufacturers warranty and in any case is potentially very dangerous.

3> If the rifle is being filled by a hand pump it is essential to prevent the ingress of water. The compression of air always results in the separation of water, the higher the pressure the greater the effect. Air that is put into scuba tanks by the likes of diving shops is filtered to a high level and therefore helps to keep the internals of the rifle in good condition. Most hand pumps do not have filtration to match that of diving air compression systems and as a consequence may result in internal corrosion. Internal corrosion caused by the use of unfiltered air is **not** covered by the

manufacturers warranty. Some hand pumps have a purpose designed filtration system that work almost to the levels of divers air, it is highly recommended that this type of pump/filter combination is used at all times.

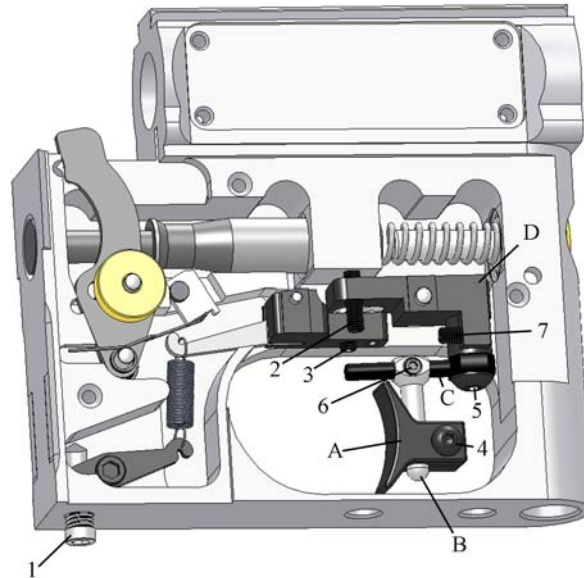
4> The cylinder should be inspected for internal corrosion at least every 2 years. Normally a divers shop will have the equipment to inspect the cylinder but some may not be prepared to give this service to anything other than a scuba tank. Air Arms can provide this service at the factory.

5> To maintain this rifle in good working order it should have an annual inspection/service. Your supplier may be able to provide this service or contact Air Arms.

6> 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 it will need testing on a chronograph to establish whether the velocity needs adjusting to ensure the muzzle energy is within the limits determined by current legislation. Contact your supplier or Air Arms for any advise on this matter.

7> Do **not** store the rifle in a damp place such as garden shed also storage in unlined plastic or pvc type gun bags should be avoided. The surface treatments applied to the parts of this rifle are not intended to protect the surfaces from corrosion if left in such conditions. External corrosion caused by poor storage conditions or accidental contact with corrosive substances is not covered by the manufacturers warranty. It should be noted that many substances found in the average household are sufficiently corrosive to effect the surface finish of this rifle i.e. vinegar, orange juice and many cleaning products.

Trigger Adjustments



Anotation

- 1> Weight of pull adjuster.*
- 2> 1st Stage length of pull adjuster.*
- 3> 2nd Stage adjuster.*
- 4> Trigger Shoe locking screw.*
- 5> Trigger Bar locking screw.*
- 6> Trigger Pillar locking screw.*
- 7> Follow-through adjuster.*

- A> Trigger Shoe*
- B> Trigger Pillar*
- C> Trigger Bar*
- D> Trigger Pivot Block*

The position of the Trigger Shoe (A) can be adjusted in four planes as below:

- i: Radially around B - Loosen screw 4, move to required angle and tighten.
- ii: Vertically - Loosen screw 4, slide Shoe up/down B to required position and tighten.
- iii: Axially - Loosen screw 6, slide B forward/backward along C to required position and tighten.
- iv: Radially around D - Loosen screw 5, move to required angle and tighten.

The weight of pull may be adjusted with screw 1. Turn clockwise to increase or anticlockwise to decrease the weight of pull. Access to this screw is through the bottom of the stock.

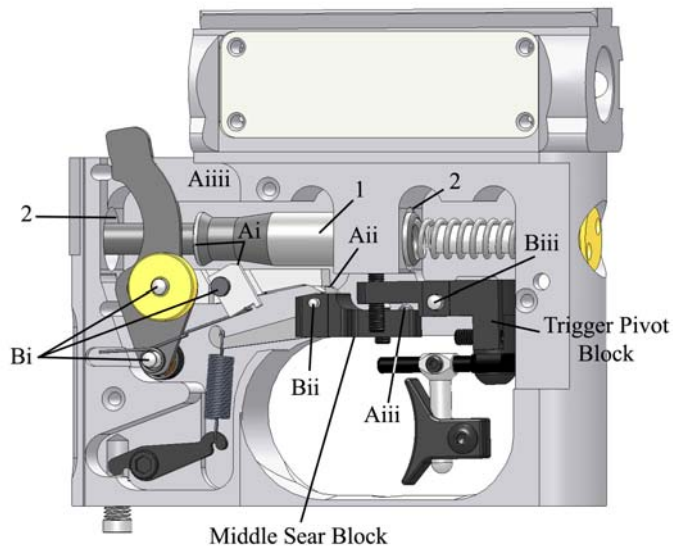
1st Stage travel may be adjusted with screw 2. Turn clockwise to decrease and anticlockwise to increase travel.

2nd Stage may be adjusted with screw 3. Turn clockwise to decrease and anticlockwise to increase the travel between the end of 1st travel and beginning of 2nd stage. If this screw is turned too far clockwise the rifle will fire before the end of the 1st travel is reached.

Follow through distance can be adjusted with screw 7. Turn clockwise to decrease and anticlockwise to increase the follow through distance. The mechanism on the EV2 requires the trigger to follow-through a small amount to allow the sears to reset.

Lubrication

Trigger Mechanism:



Anotation:

Correct types of lubricant:

For Points A: Molybdenum Disulphide based grease. B: Low viscosity mineral oil.

Points A:

i: Cocking Plate to Striker contact point and Striker Plate to Striker contact point.

ii: Top Sear to Middle Sear contact point.

iii: Trigger Pivot Block to Middle Sear Block contact point.

iiii: Main Body face to Cocking Plate.

Points B:

i: Cocking Plate, Striker Plate and Main Sear pivots.

ii: Middle Sear pivot.

iii: Trigger Pivot Block pivot.

The trigger mechanism has been designed to require minimal lubrication during normal use. The lubrication applied during assembly at the factory is normally sufficient for 10000 shots, however any roughness of operation may indicate that re-lubrication is necessary prior to this usage.

If you have limited knowledge of the workings of a precision mechanism, maintenance and lubrication is best left to an experienced gunsmith or preferably the factory.

Do **not** allow any lubricant to come into contact with the Striker (1) in the area of the Striker Bushes (2) or else the shot-to-shot velocity consistency may be effected. It is strongly advised that the EV2 is only serviced by Air Arms or a competent gunsmith. The frequency of servicing is determined by the amount of use but should be at least once a year.

Under and/or over lubrication will effect the operation of this rifle.

SILICONE OR SYNTHETIC BASED OILS SHOULD NOT BE USED FOR THE TRIGGER MECHANISM.

FILLING INSTRUCTIONS

NOTE ! ONLY USE CLEAN, DRY AND FILTERED COMPRESSED AIR, PREFERABLY FROM A DIVING SHOP.

OVER PRESSURISATION 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.



Removing the end cap is achieved by unscrewing 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.

It is a wise precaution to twist the female part of the connector, during the filling procedure, locking the tee slot in place as this will stop the connector being pulled off by accident. This will also ensure the female adaptor is located completely over the male part and prevent any accidental dislodging of the connector before you start to refill the cylinder.

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, this will happen at approximately 50 bar (750psi).

The filling pressure of the EV2 is 200 bar. 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.

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 (E483) can be replaced over the male connector ensuring not to overtighten.

The EV2 is 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 synchronise with the air in the cylinder.



This picture shows a guns with just over 100 bar of pressure.

Although every gun is slightly different the recommended refill pressure for the EV2 is between 100 and 110 bar.

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

*READ MANUAL. MFP 200bar. MSP 200bar. DOM **/**/** **, INSPECT 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 AVOIDED 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/Loading Instructions



Hook your fore finger under or over the cocking arm.



Load pellet into the barrel and return Cocking Lever to fully closed position.

Stock and Butt Adjustments

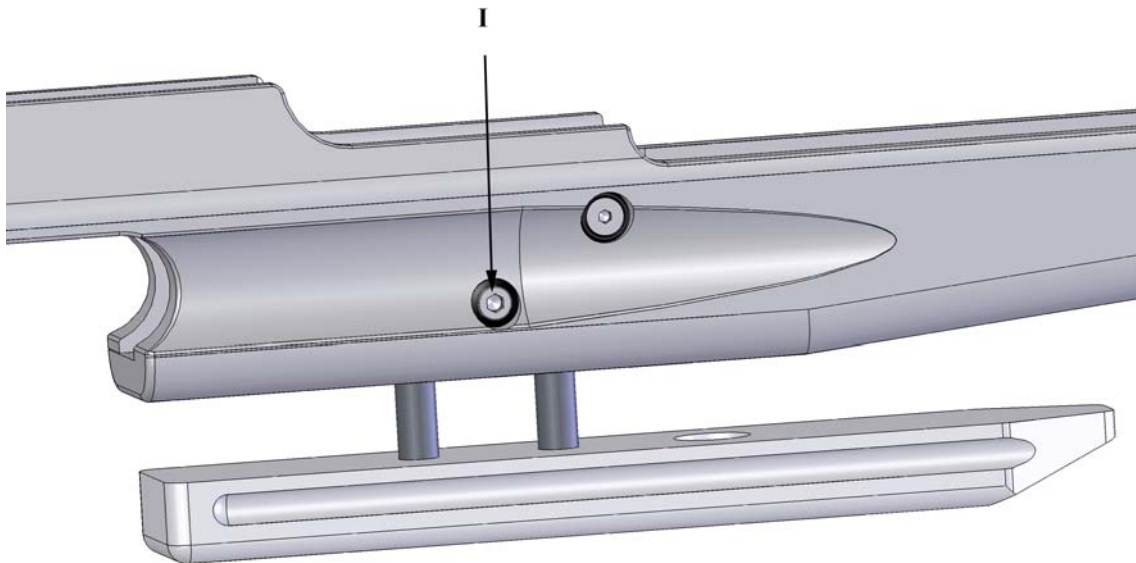
The main cheek piece and butt assemblies on the EV2 are mounted on ball joints. This allows movement and adjustment in all planes.

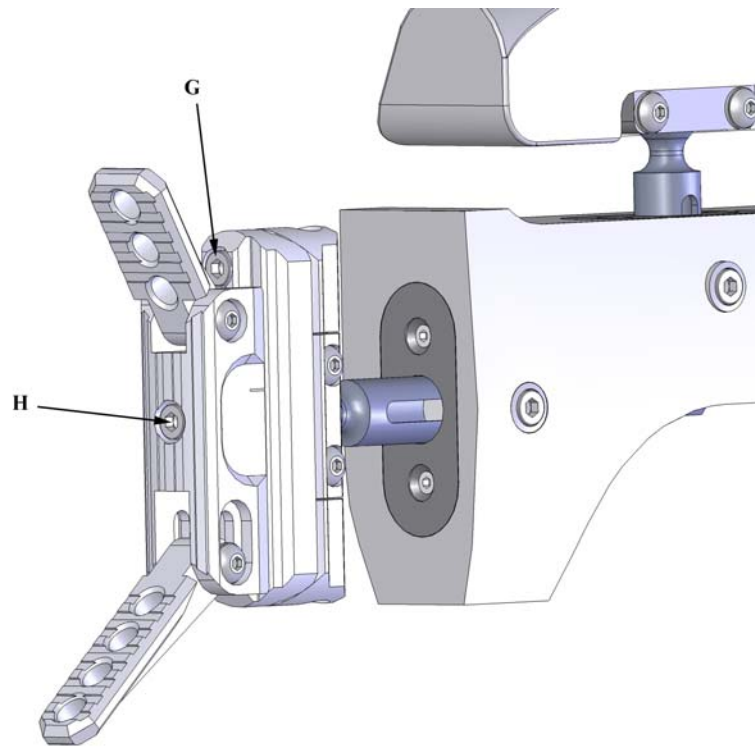
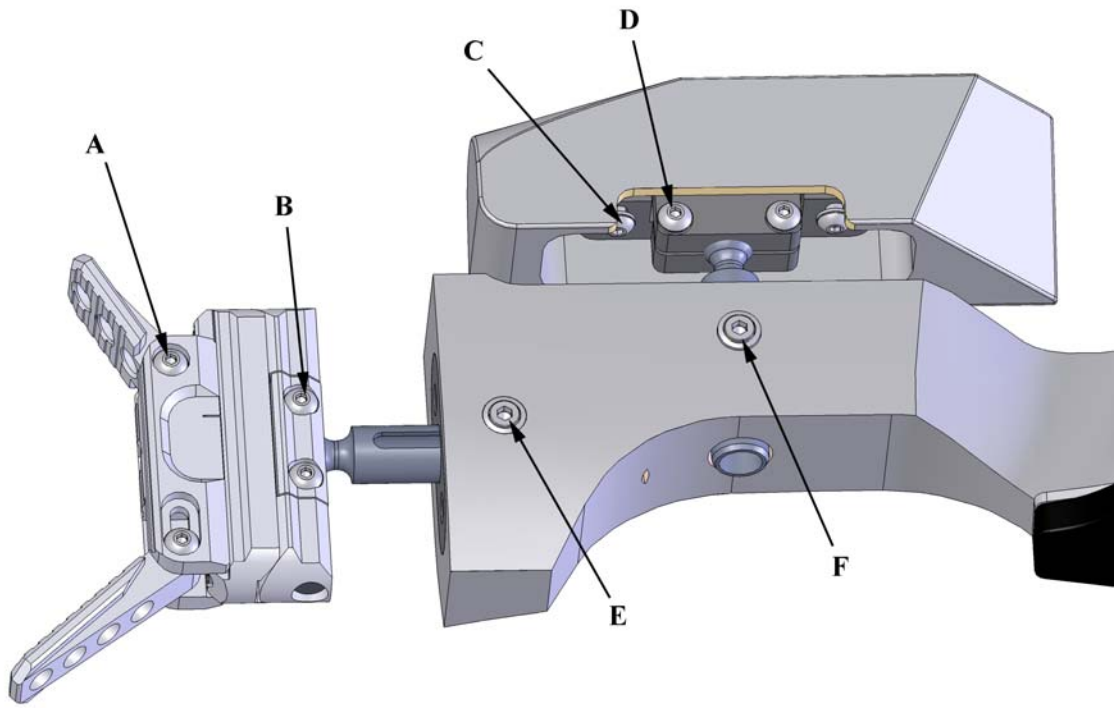
The cheek piece adjustment is achieved using 3 screws 'C, D and F' these allow adjustment up, down, forwards, backwards, sideways and a small amount of rotary movement. These screws should be loosened enough so that a small amount of resistance from the clamping mechanism can be felt, this will allow accurate placement of all components.

The butt hook is adjusted using 'A, B, E, G and H' again this will allow movement in, out, up, down, the ears can be opened or closed and the bottom ear can slide up and down. The butt can twist on the ball but also has movement to curve the back of the hook left or right using screw 'G'. The whole assembly pivots on the ball joint and slides in and out of the stock.

The fore end rest can slide in and out of the stock using screw 'I'.

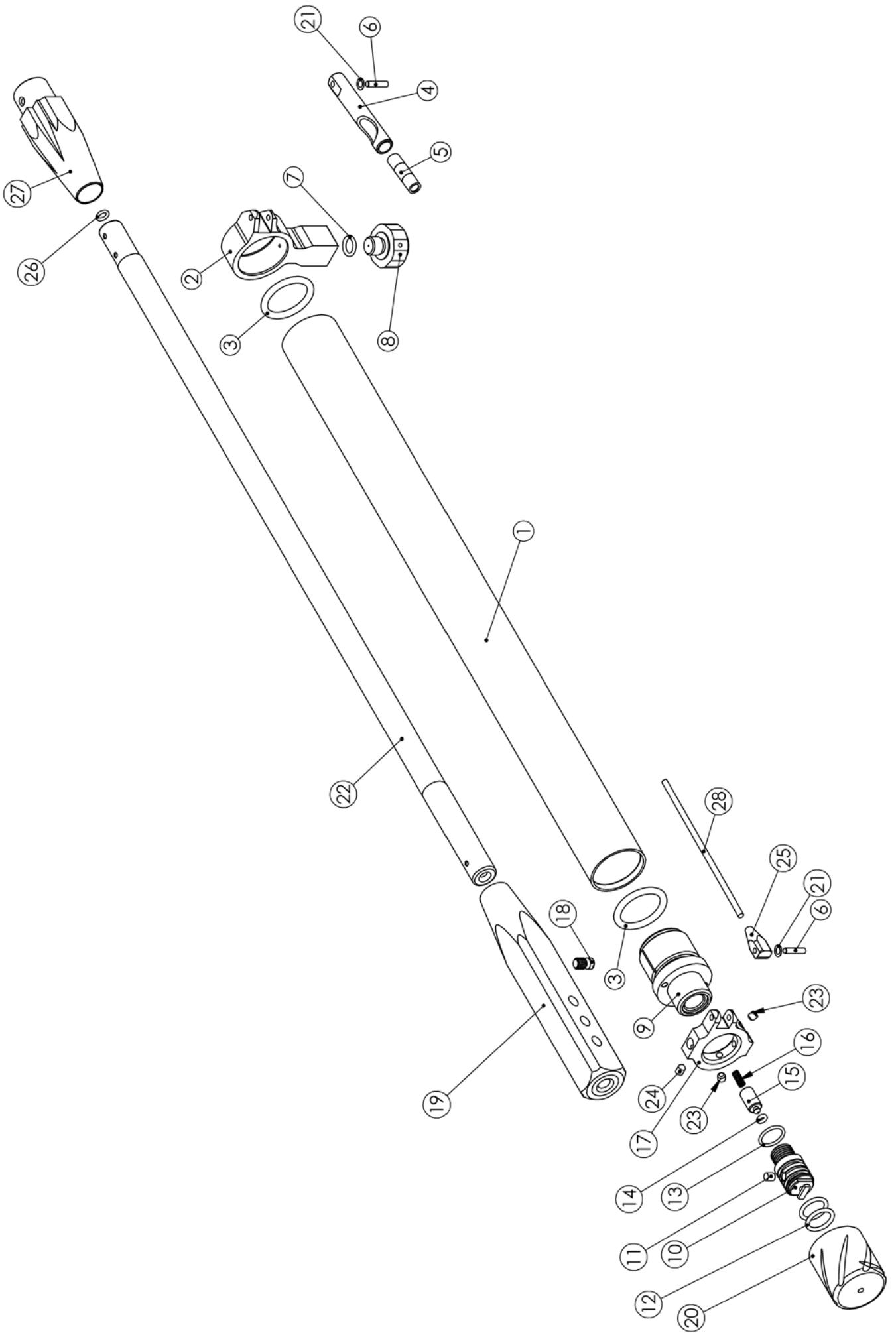
Many of the components on the EV2 are made from aerospace standard aluminiums for lightness and strength. The screws on the EV2 should not be over tightened so as not to cause any damage to the threads.





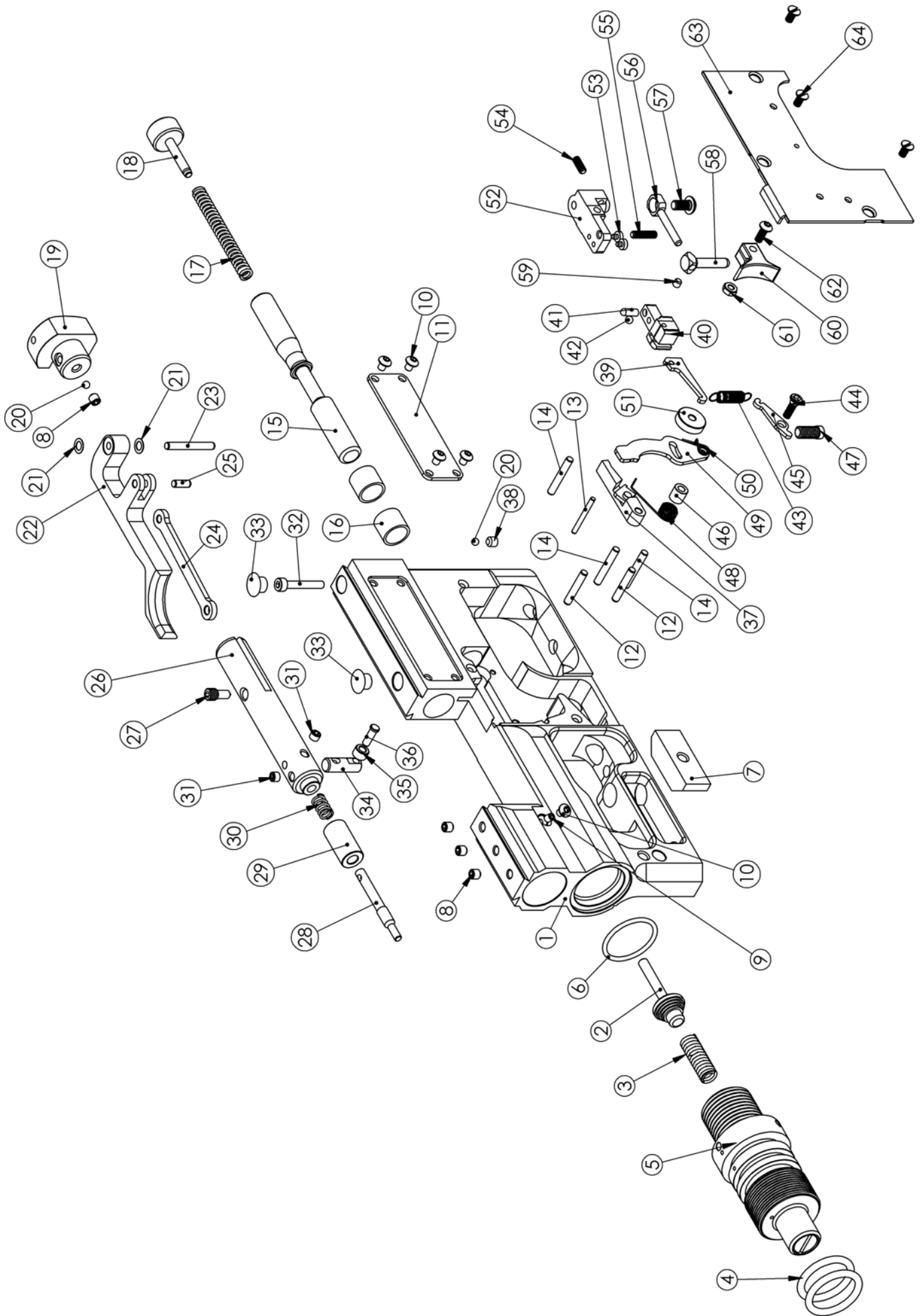
PLEASE QUOTE COLOUR WHEN ORDERING PARTS

ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	S335N	CYLINDER	17	1	E282	FRONT CLAMP
2	1	E440	GAUGE MOUNT	18	1	E460A	LOCKING STUD
3	2	RN234	BS213 O RING	19	1	E460-2BK-A	MUZZLE END ASSY
4	1	E445	LEVEL HOUSING		1	E460-2B-A	MUZZLE END ASSY
5	1	E445V	LEVEL	20	1	E460-2R-A	MUZZLE END ASSY
6	2	TX297	3 X 13.8 ROLLER		1	E483	END CAP
7	1	RN219-9	BS011 O RING	21	2	E160	M3 CRINKLE WAS
8	1	S645	INDICATOR GAUGE	22	1	E112N	BARREL - NICKEL
9	1	E491	FILLING VALVE BODY	23	2	E122	BARREL SUPPORT
10	1	S472	MALE CONNECTOR	24	1	E281	FRONT CLAMP SC
11	1	S471	SINTERED FILTER	25	1	E283B	WIND INDICATOR
12	2	S474	12 X 2 O RING 70 SHURE	26	1	FP121	4.5 X 1.5 NBR70
13	1	S484	12 X 1.5 O RING 70 SHURE	27	1	E120-2	BARREL SUPPORT
14	1	S327	FILLING VALVE O RING	28	1	E283A	WIND INDICATOR
15	1	S473	FILLING VALVE				
16	1	S319	WEIGHT OF PULL SPRING				



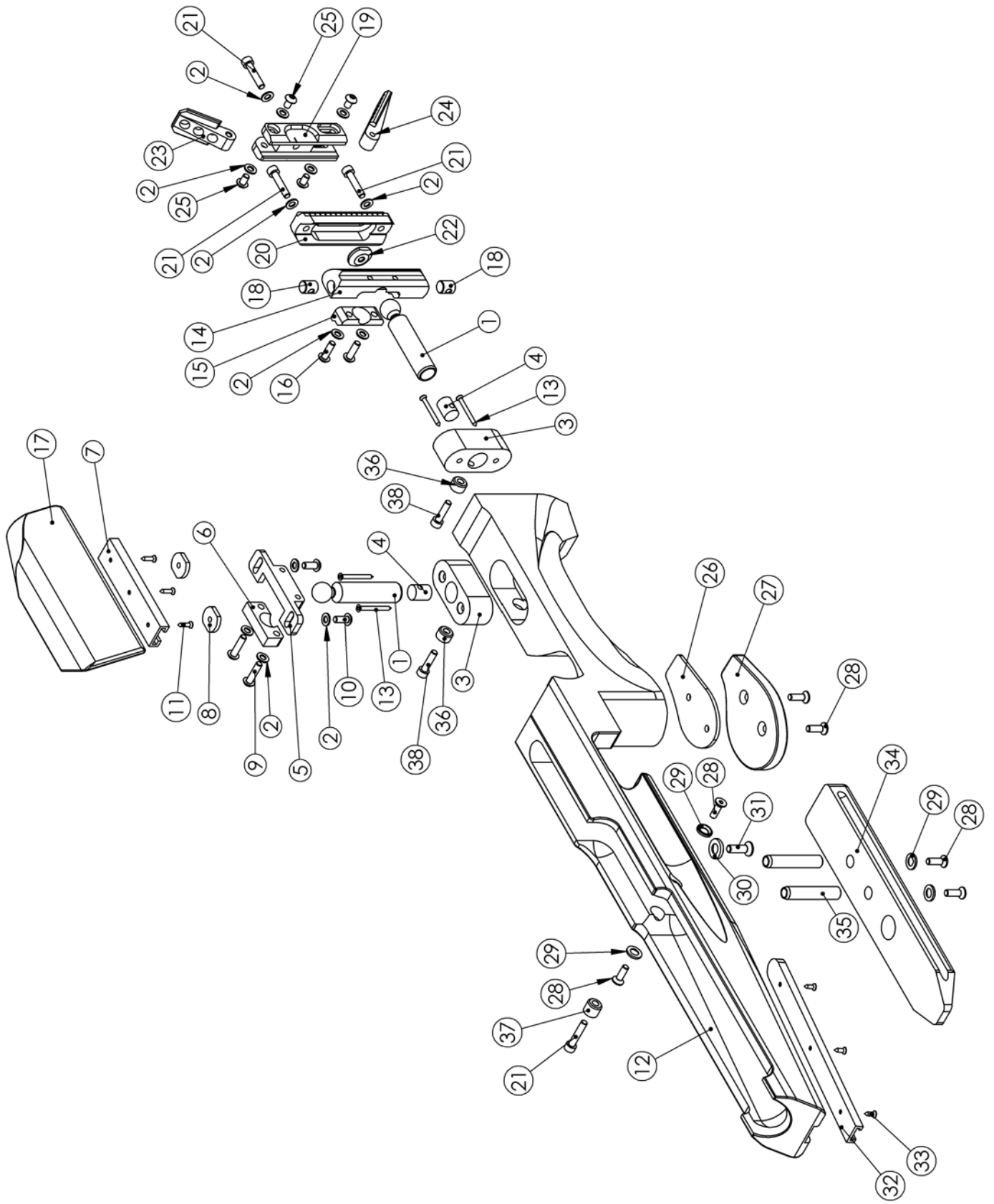
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ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	E101-2	MAIN BODY	33	2	E102	SHORTY PLUG
2	1	RN195	FIRING VALVE ASSY	34	1	E140	LOADING SHAFT POST
3	1	RN198FT	FIRING VALVE SPRING	35	1	E140B	LOADING POST ROLLER
4	2	E234	23X3 O RING	36	1	E140A	LOADING POST ROLLER PIN
5	1	E219	REGULATOR ASSEMBLY	37	1	RN284	TOP SEAR ASSEMBLY
6	1	RN232	BS022 O RING	38	1	TX228	M4 X 4 SKT SET FL PT
7	1	E415	FORE-END LOCKING PLATE	39	1	RN300	MIDDLE SEAR
8	4	E122	M4 X 4 SKT SET FL PT	40	1	RN305	MIDDLE SEAR BLOCK
9	1	RN191	ADJUSTER SCREW	41	1	RN310	MIDDLE SEAR SCREW
10	5	E104	M3 X 4 SOC BTN	42	1	RN311	MIDDLE SEAR BALL
11	1	E103	CHART WINDOW	43	1	RN360	TRIGGER WEIGHT SPRING
12	2	RN357	3 X 17.8 ROLLER	44	1	RN370	ADJUSTER PLATE SCREW
13	1	RN356	2 X 19.8 ROLLER	45	1	RN365	TRIGGER WEIGHT ADJUSTER PLATE
14	3	RN355	3 X 19.8 ROLLER	46	1	RN281	COCKING PLATE INNER SPACER
15	1	RN200FT-AT	STRIKER FT - ANTI TAMPER	47	1	RN375	TRIGGER ADJ SCREW
16	2	RN130	BREECH BLOCK SHAFT	48	1	RN280	TOP SEAR SPRING
17	1	RN205	MAIN SPRING	49	1	RN275FT	COCKING PLATE
18	1	RN210AT	POWER ADJUSTER - ANTI TAMPER	50	1	RN295	COCKING PLATE SPRING
19	1	E143-2	COCKING ARM PIVOT BLOCK	51	1	RN282	COCKING PLATE OUTER SPACER
20	2	E146	COCKING ARM FRICTION PAD	52	1	RN315	TRIGGER PIVOT BLOCK
21	2	E160	M3 CRINKLE WASHER	53	2	RN320	TRIGGER PIVOT BLOCK PAD
22	1	E125	COCKING ARM	54	1	RN321	M3X8 SOC SET FLAT POINT
23	1	E144	3 X 23.8 ROLLER	55	1	RN322	M3X12 SOC SET FLAT POINT
24	1	E110	COCKING LINK	56	1	RN325	TRIGGER BAR
25	1	E127	3 X 7.8 ROLLER	57	1	RN328	M4 X 8 SOC BUTTON HEAD
26	1	E130	LOADING BOLT SHAFT	58	1	RN330	TRIGGER PILLAR
27	1	E115	COCKING LINK PIVOT	59	1	TX239	M3 X 3 SKT SET FL PT
28	1	E135	PELLET PROBE	60	1	RN350	TRIGGER SHOE
29	1	E136	DETENT BUSH	61	1	RN351	M3 NUT
30	1	E137	DETENT SPRING	62	1	RN352	TRIGGER SCREW SHOE
31	2	E113	M4 X 4 SKT SET CONE PT	63	1	RN105N	COVER PLATE
32	1	E145	M3 X 20 SKT CAP	64	3	RN106	M3X6 C/SUNK SLOTTED SCREW



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ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	E310	CHEEK PIECE PILLAR	20	1	E457	BUTT PAD SWIVEL PLATE
2	13	RN431	WASHER	21	4	RN420	M5 X 25 SKT BTN
3	2	E315	CHEEK PIECE PILLAR BOTTOM PLATE	22	1	E462	BUTT PAD LOCKING PLATE
4	2	E320	PILLAR NUT	23	1	E455-1	TOP ARM
5	1	E325	CHEEK PIECE TOP CLAMP - PT1	24	1	E455-2	BOTTOM ARM
6	1	E330	CHEEK PIECE TOP CLAMP - PT 2	25	4	E476	M5 X 8 SKT BTN
7	1	E335	CHEEK PIECE RAIL	26	1	E458	PALM REST SPACER
8	2	E340	RAIL NUT	27	1	E454	PALM REST
9	2	E453	M5 X20 SKT BTN	28	6	E456	M5 X 16 CSK STK
10	2	E496	M5 X 12 BTN HD	29	4	RN385	FRONT STOCK WASHER
11	3	KS445	No 6 3/8" POZI CSK	30	1	RN386	REAR STOCK WASHER
12	1	E510-1	EV2 Stock - Main body	31	1	RN380	REAR STOCK SCREW
13	4	RN435	No 6 1 1/4" POZI CSK	32	1	E441	RAIL
14	1	E465-1N	BUTT PAD BACKING PLATE	33	3	RN445	No 6 1 1/4" POZI CSK
15	1	E465-2N	BUTT PAD BACKING PLATE MK3 CLAMP	34	1	E510-2	EV2 STOCK - FORE END
16	2	E463	M5 X 16 SKT BTN	35	2	E155	FORE-END ADJUSTER ROD
17	1	E510-3	EV2 STOCK - CHEEK PIECE	36	2	E425	ADJUSTER LOCKING BUSH - EV2 MK3
18	2	E471	BUTT PAD SWIVEL PIN	37	1	RN425	ADJUSTER LOCKING BUSH
19	1	E467N	SLIDER MK3	38	2	E420	M5 X 20 SCREW



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Notes.