

**Daystate** 



**PULSAR & RENEGADE**  
OFFICIAL HANDBOOK

## GENERAL INFORMATION

Congratulations on choosing a Daystate precharged pneumatic (PCP) air rifle. Both the Pulsar and Renegade are bullpup style air rifles, made in the UK to the highest quality standards. Before leaving the factory, each rifle is tested for power, consistency and pellet-grouping accuracy to ensure it meets the performance and reliability expected of an air rifle carrying the prestigious Daystate marque. We also ensure your rifle complies with the latest PCP safety and product-testing protocols.

**The Pulsar** is an electronic PCP bullpup utilising cutting edge technology such as MCT (Mapped Compensated Technology) to digitally regulate its power and output and an electronic trigger. It is also equipped with a revised version of the Harper Patent valve system for increased efficiency and high shot capacity from its aluminium air cylinder. It is available in standard and High Power 'HP' models, with various stock options.

**The Renegade** is a mechanical PCP bullpup incorporating a ground-breaking mechanical-electronic Hybrid Trigger Unit (HTU). It is equipped with the patented Slingshot hammer and valve system for greater shot consistency and output. The HR variant of the Renegade and Renegade HP is fitted with a Huma Air Regulator to further improve shot-to-shot consistency.



## SAFETY

- **Never point your airgun at anyone, nor at anything other than a legitimate target**
- **Always check your airgun is not loaded when you first pick it up**
- **Always treat your airgun as if it was loaded, even if you know it is not**
- **Never shoot on land where you do not have permission to shoot**
- **Always use a safe, large backstop to catch your pellets – and pay due attention to what is behind, should you miss**
- **Never leave your airgun unattended**
- **Always store your airgun and pellets securely and separately, so that no unauthorised person can access or use them**
- **Know and abide by the airgun laws in your country/state**

## CONTENTS

3	Filling the rifle with compressed air
4	Loading the rifle
6	Pellets
6	Slidelever position
7	Trigger adjustment
7	Safety catch
8	Stock
8	Laser adjustment (Pulsar)
8	User Programs (Pulsar)
9	Batteries
10	Fitting a riflescope
11	Recommended maintenance
12	Pulsar diagram
13	Renegade diagram
14	Warranty Information
15	Notes



## FILLING YOUR AIR RIFLE WITH COMPRESSED AIR

Your Daystate PCP is filled with compressed air from a separate charging unit, either a scuba tank or manually operated stirrup pump. **RENEGADE** The rifle should be refilled when the needle on the rifle's main reservoir pressure gauge falls below the regulator pressure as indicated on the HUMA gauge or the red area on unregulated rifles. **PULSAR** has a low-pressure indicator which will flash up when the rifle needs repressuring. It is important to monitor this. The Pulsar and Renegade are filled via a Foster quick-couple connection. The Renegade HR is filled via a plug-in probe. The correct charging connector will be supplied with the rifle.

The Renegade HR has two pressure gauges – one for the air reservoir and one for the regulator. The main air reservoir pressure gauge is located at the front of the air cylinder – use this to monitor the rifle's charge state. The gauge behind the pistol grip is the regulator pressure gauge. This is fixed at the factory and should not be used to determine the pressure of the rifle's main air reservoir.

- To access the rifle's filling valve:
  - **PULSAR/RENEGADE** – unscrew and remove the dust cover at the end of the main air reservoir to expose the male connector
  - **RENEGADE HR** – rotate the dust cover at the end of the main air reservoir to expose the filler port
- To connect the charging unit to the rifle:
  - **PULSAR/RENEGADE** – pull back the outer sleeve of the charging connector

and push it over the male connector on the rifle. Secure it in place by ensuring the outer sleeve is returned to the fully-forward position

- **RENEGADE HR** – push the charging probe fully into the filler port
- To fill the rifle's main air reservoir with compressed air, either:
  - SLOWLY open the unit's main valve (scuba tank)
  - Begin pumping (manual stirrup pump)
- *Note the pressure indicated by the rifle's main reservoir pressure gauge. You should fill the rifle to the following charging pressures:*
  - Maximum 230BAR (3,340psi)  
– for Pulsar/Renegade/Renegade HR
  - Maximum 250BAR (3,625psi)  
– for Pulsar HP

**IMPORTANT: Use ONLY clean, dry, compressed air**

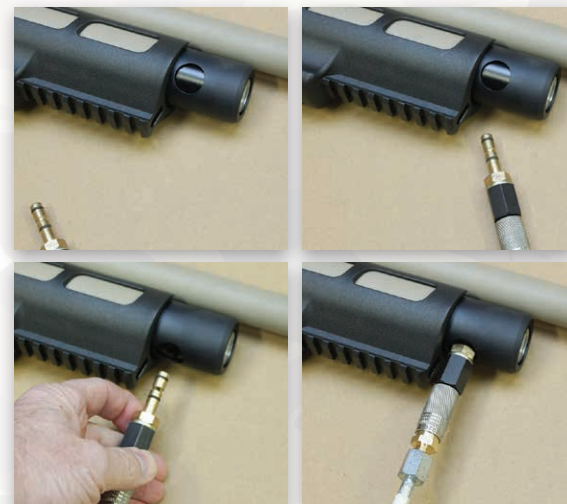
**Do NOT charge the rifle with more than the stated amount**

- Once the correct pressure has been reached, either:
  - Fully close the main valve (scuba tank)
  - Stop pumping (manual stirrup pump)
- Then open the charging unit's bleed valve to rapidly bleed off the remaining air in the filler hose
- Disconnect the charging connector to disengage it from the rifle and then refit/rotate the inlet valve's protective dust cover

## PULSAR AND RENEGADE



## RENEGADE HR & RENEGADE HP HR



## LOADING YOUR RIFLE

The Pulsar and Renegade air rifles can be fired in single- or multi-shot modes. In single-shot mode, a loading tray is placed in the breech to facilitate hand-loading into the breech for each shot. Multi-shot mode uses a removable, spring-operated, rotary magazine to automatically present pellets to the breech, and therefore allows quicker shooting. You will need to remove the one system in order to fit the other.

### IMPORTANT:

- To prevent damage to the rifled barrel, only use soft metal pellets
- Keep the muzzle of your air rifle pointing in a safe direction at all times
- Always ensure the last shot has been fired from the barrel before finishing the shooting session, especially when multi-shot mode has been deployed

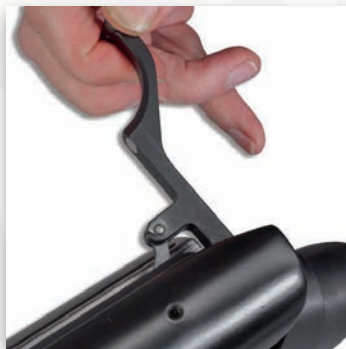
## SINGLE-SHOT MODE

### PULSAR/PULSAR HP

- Engage the safety catch button
- Fully open the sidelever\*
- Insert the magnetic single-shot tray into the breech block
- Check that the pellet is not deformed and manually seat it, nose first, in the rifling
- Return the sidelever to the fully closed position to fully breach the pellet
- **THE RIFLE IS NOW COCKED AND LOADED**
- Disengage the safety catch – a red LED will illuminate at the rear of the action and

the integral laser will project a beam onto the target\*\*

- Squeeze the trigger to fire the rifle
  - Reapply the safety catch after each shot
- \*Note: With the sidelever open, the trigger is disengaged, and the rifle cannot fire*
- \*\*Note: The rifle will go into standby mode if not fired within 5 minutes. The laser will automatically switch off 2 seconds after firing. The laser unit can also be manually switched off in the user program mode; this will not affect the operation of the push-button safety catch.*



## SINGLE-SHOT MODE

### RENEGADE/RENEGADE HR

- Engage the safety catch button
  - Fully open the sidelever\*
  - Insert the magnetic single-shot tray into the breech block
  - Check that the pellet is not deformed and manually seat it, nose first, in the rifling
  - Return the sidelever to the fully closed position to fully breach the pellet
  - **THE RIFLE IS NOW COCKED AND LOADED**
  - Disengage the safety catch
  - Squeeze the trigger to fire the rifle
  - Reapply the safety catch after each shot
- \*Note: With the sidelever open, the trigger is disengaged, and the rifle cannot fire*

## MULTI-SHOT MODE

### PULSAR/PULSAR HP

- Engage the safety catch button
- Fully open the sidelever\* and lift out the single-shot tray (if fitted) or remove the magazine
- **MAGAZINE – REMOVAL AND LOADING**
  - Extract the magazine from the left- or right-hand side of the breech (dependent to its stop-pin placement – see below)
  - Push a pellet, nose first, into the empty chamber at the base of the magazine. Press it in place fully, so that the pellet's head seats past the O-ring gripper and its skirt does not protrude
  - Rotate the magazine drum anti-clockwise to expose the next empty chamber and





load another pellet. Repeat until all chambers are loaded

- Slide a loaded magazine into the breech
- Return the sidelever to the fully closed position to breech the first pellet
- **THE RIFLE IS NOW COCKED AND LOADED**
- Disengage the safety catch – a red LED will illuminate at the rear of the action and the integral laser will project a beam onto the target\*\*
- Squeeze the trigger to fire the rifle
- To fire subsequent shots, repeat the cycling of the sidelever
- When the last shot is chambered, a colour dot is visible on the left side of the magazine drum to indicate the final chamber. Additionally, a red LED at the end of the action will pulsate when the magazine is empty\*\*\*
- Reapply the safety catch as soon as shooting pauses or ceases

*\*\*Note: With the sidelever open, the trigger is disengaged, and the rifle cannot fire*

*\*\*Note: The rifle will go into standby mode if not fired within 5 minutes*

*\*\*\*Note: It is possible to remove and 'top-up' the magazine should you wish. In this event, on Pulsar, you will need to reset the magazine counter (if set) in the user programmable shooting mode (see page 8/9)*

Additional Information:

The Pulsar can be 'dry fired' (ie no pellet in the breech) without any mechanical damage occurring provided there is pressure in the air reservoir.

## MULTI-SHOT MODE

### RENEGADE/RENEGADE HR

- Engage the safety catch button
- Fully open the sidelever\* and lift out the single-shot tray (if fitted) or remove the magazine
- MAGAZINE – REMOVAL AND LOADING
  - Extract the magazine from the left- or right-hand side of the breech (dependent to its stop-pin placement – see below)
  - Push a pellet, nose first, into the empty chamber at the base of the magazine. Press it in place fully, so that the pellet's head seats past the O-ring gripper and its skirt does not protrude
  - Rotate the magazine drum anti-clockwise to expose the next empty chamber and load another pellet. Repeat until all chambers are loaded
- Slide a loaded magazine into the breech
- Return the sidelever to the fully closed position to breech the first pellet

## • THE RIFLE IS NOW COCKED AND LOADED

- Disengage the safety catch
- Squeeze the trigger to fire the rifle
- To fire subsequent shots, repeat the cycling of the sidelever\*\*
- When the last shot is chambered, a colour dot is visible on the left side of the magazine drum to indicate the final chamber\*\*\*
- Reapply the safety catch as soon as shooting pauses or ceases

*\*Note: With the sidelever open, the trigger is disengaged, and the rifle cannot fire*

*\*\*Note: The magazine will not rotate unless the rifle has fired the previous pellet*

*\*\*\*Note: It is possible to remove and 'top-up' the magazine should you wish*

## DAYSTATE 10-SHOT MAGAZINE

The magazine is normally configured to be loaded from the left side. It is possible to order a magazine that can be inserted from the right side. In the case of all the Pulsar and Renegade models, the pin must be in the upper and outermost hole position.



## PELLETS

The power, accuracy and consistency of your Daystate air rifle relies on the quality of the pellets used, so inferior brands should be avoided. Additionally, the Daystate 10-shot magazine has been specifically engineered to operate with waisted roundhead pellets. If other pellet shapes are used, it may not index properly and could possibly jam.

## RECOMMENDED PELLETS

Rangemaster Kaiser; Rangemaster Sovereign; Rangemaster Emperor; Rangemaster Monster; Exact King

### KAISER

Precision-made (by H&N) hunting and target pellet. Waisted roundhead

.177 – 8.64 grains (for use in models with up to 18ft/lbs muzzle energy)

.22 – 14.66 grains (for use in models with up to 25ft/lbs muzzle energy)

### SOVEREIGN

Precision-made (by JSB) hunting and target pellet. Waisted roundhead

.177 – 8.44 grains (for use in models with up to 12ft/lbs muzzle energy)

.22 – 15.9 grains (for use in models with up to 30ft/lbs muzzle energy)

### EMPEROR

Precision-made (by JSB) hunting pellet. Semi-waisted roundhead

.303 – 50.15 grains (for use in HP models)

### MONSTER

Precision-made (by JSB) hunting pellet. Semi-waisted roundhead

.25 – 25.4 grains (for use in 'hi-power' models up to 40ft/lbs)

### EXACT KING

Precision-made (by JSB) hunting pellet. Waisted roundhead

.25 – 25.4 grains (for use in 'hi-power' models up to 40ft/lbs)



## SIDELEVER POSITION

Operation of the sidelever can be set to the right- or left-hand side of the breech.

### PULSAR

This can be undertaken by the user. Swap the sidelever from the right- to the left-hand side of the breech as follows:



- Loosen the two retaining screws on the cheekpiece and slide it rearwards, off the dovetail
- Remove sidelever pivot bolt and then slide out the complete lever assembly
- Loosen the two blanking plate securing screws and slide it out
- Replace the blanking plate on the opposite side of the breech block
- Re-insert the lever assembly on the opposite side and replace the





sidelever pivot bolt. Do not overtighten

- Reverse the cocking lever handle to the underside of the lever
- Refit the cheekpiece

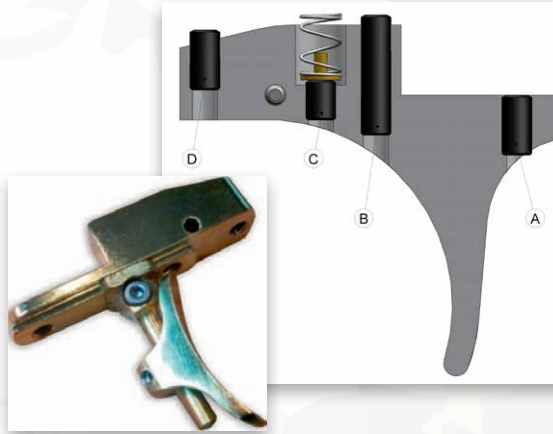


## RENEGADE

This must be carried out at the Daystate factory, or by an authorised agent.

## TRIGGER ADJUSTMENT

All models are fitted with a two-stage, electronic match trigger unit which has been set at the factory for a safe, crisp let-off. However, the end-user can adjust the trigger to personal preference using a 1.5mm hex tool if required. ALWAYS ensure the rifle is uncocked, unloaded and the safety engaged before altering the trigger.



Screw A: Second stage contact screw (factory-set)

Screw B: Second stage pull weight screw (turn clockwise for a heavier trigger release)

Screw C: First stage pull weight screw (turn clockwise for a heavier first pull weight)

Screw D: First stage travel screw (turn clockwise to reduce initial trigger movement)

*Notes: The Pulsar's electronic trigger is powered from the its main battery. The Renegade's electronic trigger is powered by its own battery. (For battery replacement see page 9).*

*Some models feature a match trigger blade. Use the supplied 0.9mm hex tool to adjust the position of the shoe*

## SAFETY CATCH

All models of the Pulsar and Renegade are fitted with a manual push-button safety catch located behind the trigger. Push this to the right to engage the safety catch. Push to the left to disengage it.

*Notes:*

- *In the case of the Pulsar models, disengaging the safety catch will turn on the laser. If the laser function has been disabled in the user program mode, the safety catch will still engage/disengage when the button is pushed*
- *The trigger is disabled and the rifle thus made safe when the sidelever is fully opened*



## STOCK

All Pulsar and Renegade models are fitted with a two-piece ambidextrous stock. Additionally, the butt pad can be adjusted for height and cast:

To remove the stock from the action (to replace the batteries), use a 5mm hex tool to undo and remove the bolt behind the



pistol grip. The rear section of the stock can now be lifted clear of the action. If required, the polymer forestock can

be removed by sliding it away from the main air reservoir.

Always ensure the rifle is uncocked, unloaded and the safety engaged before working on the stock.



## LASER ADJUSTMENT (PULSAR)

The Pulsar's integral laser can be adjusted to coincide with the point of aim using a 2mm hex tool. There are two holes in the forestock which provide access to the laser unit's adjustment screws. The direction of the laser beam is adjusted by slackening off one screw and tightening the opposite screw.



### Notes:

- Clamp the rifle in a bench to set up the laser
- Use only small increments when adjusting the grubscrews
- Over-adjusting the grubscrews may lead to the beam being obscured by the stock
- Do not overtighten the grubscrews



## USER PROGRAMS (PULSAR)

The Pulsar / Pulsar HP is a highly sophisticated electronic PCP and offers various user-programmable shooting modes. Before entering any of the program modes, ALWAYS unload the rifle and engage the safety catch (button pushed to the right).

### Programming

Selecting the desired mode is done by pressing the trigger, once the rifle has been put into Program Mode, as follows:

- Fully open the sidelever\*
- Pull back on the trigger for five seconds
- Release the trigger – the rifle is now in Program Mode

Pressing the trigger in Program Mode will scroll through the various program options



available, shown in the LCD display window. Release the trigger to select the desired mode; according to the mode you have selected pressing the trigger lets you toggle through further options within that mode:

- **Power adjustment**

Low, Medium or High. Actual output is dependent on calibre, pellet type and factory-set power output level (determined by local legislation)

- **Magazine**

On – Counter resets to 10 and will count down to 0, when the rifle will pulsate four times and stop firing. To reset the counter and resume firing, open the bolt for five seconds/replace the magazine

Off – The rifle will fire in a single-shot mode; the sidelever will need to be reopened for each subsequent shot

- **Laser (Pulsar only)**

On – Enable the laser function

Off – Disable the laser function.

(Functionality of the safety catch button will not be affected)

In addition to the user programs, automated programs also apply and will be indicated in the LCD display when applicable:

- Low Pressure – refill the rifle's main air reservoir with air up to the stated pressure
- Low Battery – main power unit's batteries need changing

*\*Note: If the rifle is in 'standby' (see under 'Batteries' section), either cycle the sidelever twice, or push the safety catch button off and back on again*



## BATTERIES

### PULSAR

From the factory, the Pulsar is powered by a 9-volt pack of non-rechargeable alkaline AA cell batteries, which will last many thousands of shots. When the power supply drops to around 7v, the LCD display will indicate 'Low Battery'\* and the batteries will need changing. The stock will need to be removed to access the battery compartment (see page 8).

### Standby (Power Save Mode)

If the safety catch is left in the 'Fire' position (pushed to the left) for five minutes without the rifle being fired, the rifle automatically switches to standby in order to conserve the battery. To take the rifle out of standby mode, re-apply the safety catch or open-and-close the sidelever. For this and safety reasons, it is advisable to apply the safety catch as soon as shooting stops.

### Battery options

The Pulsar has been designed to work with batteries of a different capacity/type. It is possible to use disposable lithium, rechargeable Lithium-ion and high-capacity 9v

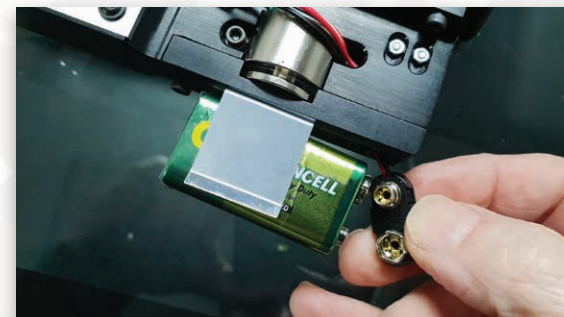
Lithium PP3 batteries; these connect directly into the battery box terminals. However, a reduced shot count and battery life should be expected when using lower capacity primary, or secondary batteries.

*\* Note: The Low Battery indicator is calibrated for the standard Alkaline batteries, and may give a misleading reading when used with other types.*

## RENEGADE

The Renegade's electronic HTU trigger system is powered by a 9v alkaline battery (PP3 type) which will last for many thousands of shots. When the battery needs changing, the rifle is automatically programmed to give an audible 'double click' after the shot is released. To change the battery, it is necessary to remove the stock (see page 8).

IMPORTANT: Before changing the batteries, ensure the rifle is unloaded, uncocked and the safety catch is engaged.



## FITTING A RIFLESCOPE



For maximum accuracy, your Daystate rifle requires a separate riflescope (telescopic sight) to be mounted, although other sights (eg: red-dot, reflex, night-vision) may also be used. Daystate recommends riflescopes from MTC Optics ([www.mtcoptics.com](http://www.mtcoptics.com)) and two-piece Blueprint mounts. You should choose your scope and mounts with due consideration to the rifle and your shooting needs.

### Attaching the mounts

Note: Select a scope mount with the correct clamp/height/ring size

- With the top straps removed to expose the mount cradles, position the mounts on the rifle's dovetails in a position that allows the correct eye-relief of the scope when you are aiming the rifle
- Ensure the saddle of the scope does not interfere with the magazine when it is

inserted into the breech

- Attach the top straps, but only nip-up their bolts finger tight; just enough to stop the scope turning freely, but still allow it to be rotated by hand

### Aligning the crosshair

- Using a gun-vice or similar, place spirit level across the rifle's breech block to ensure it is level
- Look through the scope and rotate it until the crosshairs are perfectly vertical and horizontal. You can use a plumb line downrange as an aid
- Once the crosshairs are aligned to the rifle, tighten all the mount ring bolts to their recommended torque

### Zeroing the scope to the rifle

- In front of a safe, suitable backstop, set up a large paper target with a visible mark in

the centre around 10 metres (12 yards) away. This may be closer than the distance you prefer to shoot at, but it is a method used to initially zero your rifle/scope

- Aiming at the mark, fire a few pellets and note where they land\*
- Turn the scope's elevation and windage turrets the required amount to move the group toward the aiming mark, and repeat the procedure until the shots impact roughly at the aim point
- Then move the target to your primary zero distance and fine-tune the scope's elevation and windage turrets until the combo is precisely zeroed-in

*\* Note: If the initial shots group more than 13cm (5ins) below the aim point, then the REAR mount may need to be 'shimmed' to provide enough adjustment on the scope's elevation turret. In this instance, place a sliver of silver foil, folded to a maximum thickness of 0.3mm, between the scope and the mount's lower cradle. Do not over-pack the mount, however, as this may damage the scope.*



## RECOMMENDED MAINTENANCE

Precharged pneumatic (PCP) air rifles operate under extremely high pressures of compressed air, so can potentially become dangerous if not serviced correctly. There are no user-serviceable parts on a Daystate PCP, so any gunsmith work should ALWAYS be carried out by a factory-trained technician. Correct and regular maintenance also ensures your rifle will operate at peak performance. We therefore recommend that the rifle be returned to the factory or a Daystate-approved agent for a routine service every three years.

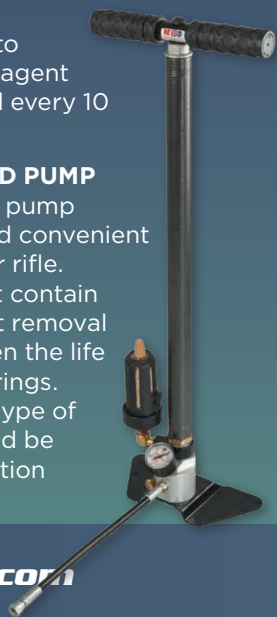
Between service intervals, however, you can keep your rifle shooting trouble-free by paying due attention to the following areas:

### AIR RESERVOIR

The aluminium under-barrel air cylinders of the Pulsar and Renegade models will withstand pressures many times the working pressure of the rifle. However, the rifle should be returned to the factory or approved agent for them to be inspected every 10 years.

### CHARGING UNIT - HAND PUMP

A hand-operated stirrup pump offers an inexpensive and convenient method of charging your rifle. However, as most do not contain water extraction and dirt removal systems, they can shorten the life of sealing valves and O-rings. If you regularly use this type of charging unit, care should be taken to avoid condensation



build-up from inside the pump being transferred to the rifle. The pump should not be used in sandy or dusty conditions. Always refer to the pump manufacturer's operating instructions.

### CHARGING UNIT - SCUBA TANK

If you use a scuba tank to charge your rifle with compressed air, make sure you open its main valve slowly when transferring air from the tank to the rifle's cylinder/bottle. Keep all charging connectors clean and free from oil. Handle the charging unit with care at all times, and NEVER blast high pressure air directly onto your skin.

### CHARGING UNIT - COMPRESSOR

There are now electric and petrol-engine compressors that can deliver breathing quality air. While these are suitable to directly fill your Daystate PCP, ensure that you do not inadvertently fill your rifle's cylinder/buddy-bottle with more than the recommended pressure.



### ACTION

After every shooting session, protect your rifle's metal parts with a corrosion inhibitor specifically for gun use. Apply the oil to a cloth and wipe over the gun. NEVER pour oil into the rifle's filler valve/port/connector.

### LUBRICATION

Daystate recommends Ballistol lubricants, which are ecologically and dermatologically

safe. To maintain smooth cocking, sparingly lubricate the shaft of the bolt with a light grease periodically, but do not allow any grease to get into the barrel. The snap-on filling connector (Pulsar/Pulsar HR/Renegade) is lubricated at the factory with a special non-combustible grease; it should be maintained by wiping over with light oil, but must then be left dry. Wipe over the action with an oily rag (see above), but never oil any internal parts.

### BARREL CLEANING

For optimum performance, the barrel rifling should be periodically cleaned using felt cleaning pellets lubricated with a light-grade oil. Avoid the use of nitro-based cleaners as their chemicals can damage seals. The cleaning frequency depends on the pellets used and the individual barrel, but as general rule, do it each time you begin a new tin of pellets.

### STOCK

According to model specification, the stock may combine wood and synthetic materials. To keep it free of dirt or grime, rub over synthetic areas with a lightly-soaped, damp cloth. Maintain wood with a suitable walnut stock oil or boiled linseed oil.

### MORE INFORMATION

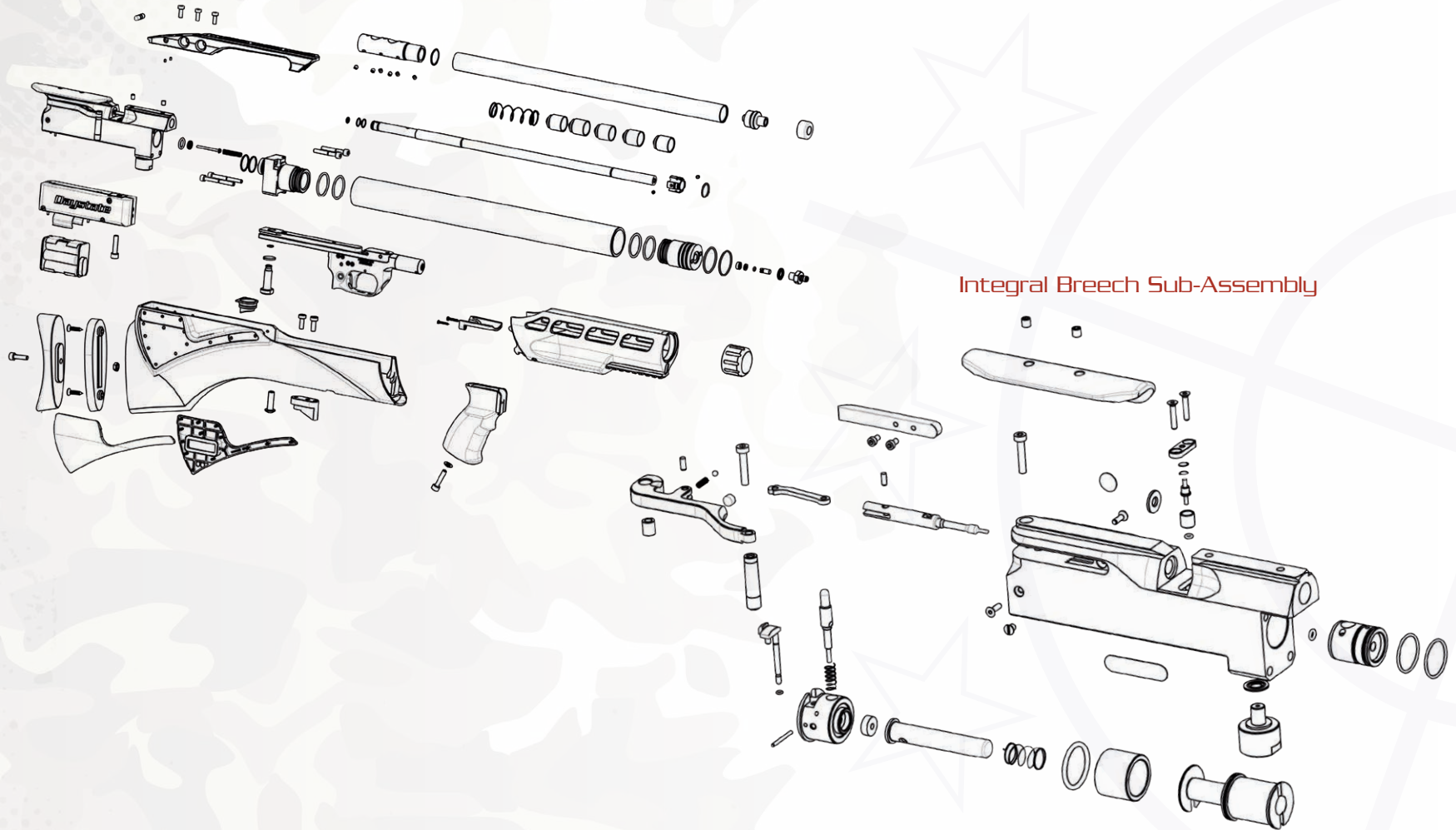
More servicing information can be found online at:

[www.daystate.com](http://www.daystate.com)

[www.daystateownersclub.com](http://www.daystateownersclub.com)

# PULSAR PARTS DIAGRAM

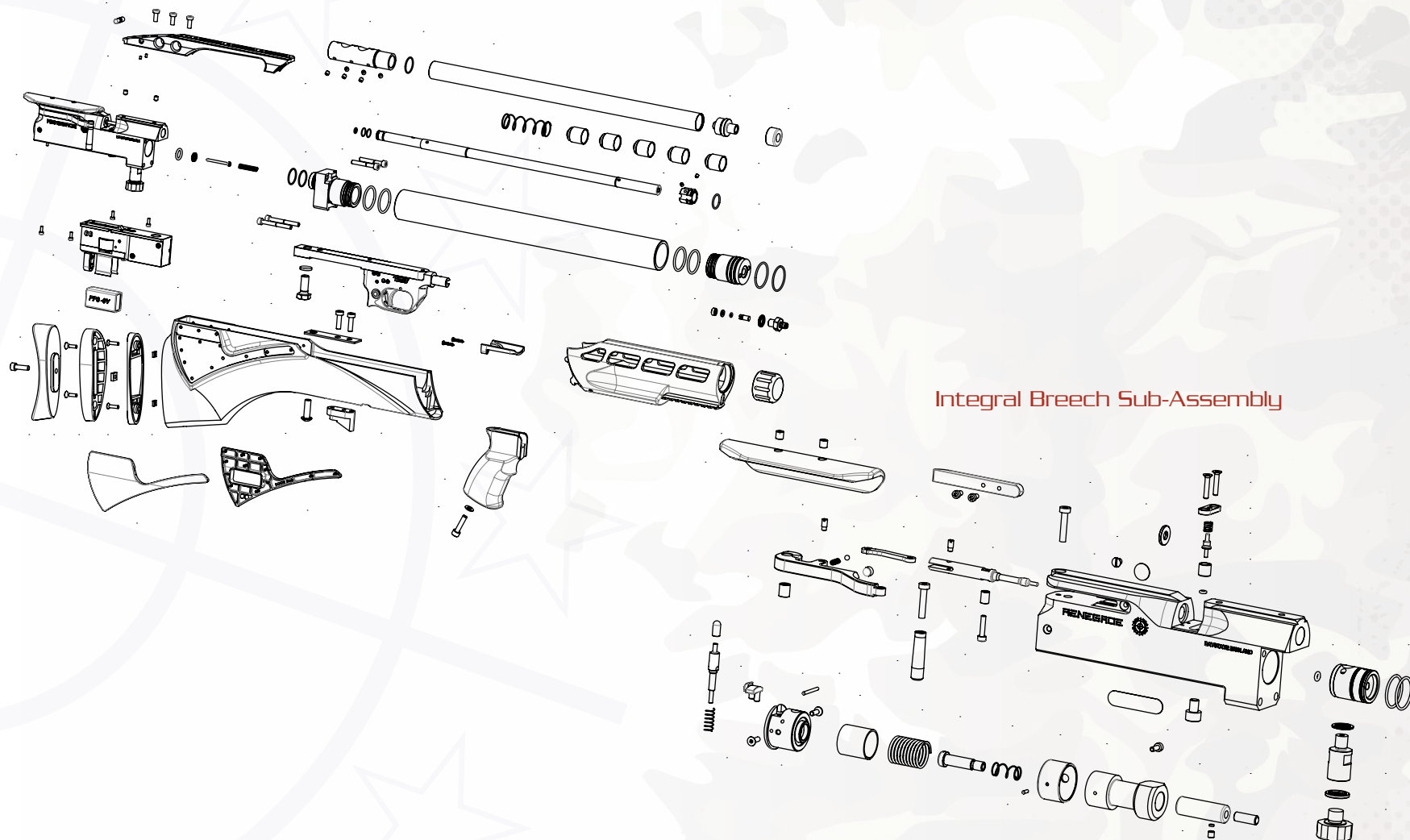
## General Assembly





## RENEGADE PARTS DIAGRAM

### General Assembly



## 3 YEAR WARRANTY

- All new Daystate rifles are guaranteed against faulty parts and labour for a period of three years from date of purchase (proof of purchase required). The warranty applies to the first purchase of a new rifle and is not transferable to subsequent owners
- After three years, it is recommended that the rifle be returned to Daystate or its authorised agent for a service, and subsequently every further three years
- Air reservoirs, regardless of type (eg cylinder/buddy-bottle) should be inspected by Daystate or its authorised agent after 10 years

- Daystate or its approved agent must carry out all maintenance and warranty work. The rifle must be maintained and used as outlined in this handbook
- Should a rifle be returned or collected under warranty, Daystate or its approved agent reserve the right to charge for postage and inspection costs.

Servicing is charged at the prevailing rate

## EXCLUDED FROM WARRANTY

- Failure due to misuse or abuse, the fitting of non-standard parts, springs, seals, damage to stocks, batteries and fair wear and tear



While every effort has been taken to ensure the accuracy of the information in this handbook, Daystate or its agents cannot be held responsible for errors or omissions. Products are continually updated and specification may change without notice.





*Daystate* 



**DAYSTATE LTD.**

Unit 3, Raleigh Hall Industrial Estate, Eccleshall, Staffordshire ST21 6JL.

© Daystate Ltd. 2019 v2019.v1 E&OE