

SCATTERBIRD



See the troubleshooting video at www.scatterbird.co.uk

## Servicing & Repair

### Scatterbird Mk3 Birdscarer

portek.co.uk

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If you are having trouble with your Scatterbird MK3 this guide will help you determine the problem and remedy any issues to get your Gas Gun up and running again. Please refer to the operating instructions in conjunction with this guide.



See the troubleshooting video at www.scatterbird.co.uk

### Most problems can be tracked down to:

- 1. Hose damage
- 2. Blocked barrel
- 3. Battery low
- 4. Low gas pressure
- 5. Corroded earth connections
- 6. System in wrong mode after storage
- 7. Circuit board alignment
- 8. Spark plug gap
- 9. Blocked jet
- 10. Failed circuit board

Guidelines in this publication will help you to troubleshoot these issues.

#### Safety note:



Before testing your Scatterbird, always turn off and disconnect the gas supply and make sure all residual gas has been expelled from the barrel. If you intend to test fire in the yard, remove the barrel first to avoid a loud bang.

#### ALWAYS USE THE APPROPRIATE SAFETY AND PROTECTION EQUIPMENT



## **Initial checks**

# Just as with any mechanical device, it's best to eliminate simple problems before digging further into the technical details - carry out these simple checks first

- **1. Hose damage:** Check the gas hose for damage and replace if needed as vermin do damage hoses through chewing.
- **2. Blocked barrel:** Look for foreign material such as a bird's nest or dead vermin in the barrel which are commonly found. Remove obstruction and clean barrel as required.
- **3. Battery condition:** Ensure your battery is fully charged and delivering 12 volts. Old tractor batteries lose their charge very quickly; a deep cycle leisure battery (caravan battery) is ideal.

#### 4. Make sure the Controls Panel is switched on:

#### Turning on the Scatterbird.

Connect the power supply - using either external battery or Portek internal battery accessory.



#### Make sure all the contacts are clean and free from corrosion



**5. Corroded earth:** Remove the back plate and unscrew the earth wires. Clean the connectors and the earth point with emery cloth and reassemble, using Vaseline (petroleum jelly) to protect against future corrosion.

**6. Spark plug maintenance:** Remove the rubber cap and unscrew the plug lead followed by the spark plug. Clean the thread, reset the gap using a £1 coin and reassemble making sure you replace the rubber cap.





7. Spark generator contacts:

Take the spade terminals off the spark generator, clean the contacts, and replace using petroleum jelly to protect if needed.

The spark generator may be green in colour and not white as shown.

If the gun still does not fire after these simple contact cleaning procedures, move onto the next stage of this guide.

#### **TESTING THE CONTROL PANEL AND SYSTEM**

To set up the control panel for **testing the firing mode**, connect to a fully charged battery and allow all the lights to go out. The Scatterbird will only run through the test sequence if it is in **DAY MODE**. The Scatterbird may be in the wrong mode after a period of storage and will need to be "trained" to work correctly in **DAY** and **NIGHT MODE**. To enable the unit to learn, you can do either:

1. Leave unit outside for 24 hours switched on OR

2. If you cannot wait, the Circuit Board can be forced to reset by:

Disconnecting the battery, press button A several times to clear the memory.

Ensure that the unit is in bright light, then reconnect the battery. Once the lights on the unit have gone out it should be in **DAY MODE**. The Scatterbird can only be tested in DAY MODE.

If the unit will not go into **DAY MODE** it will probably be a fault with the circuit board. Go to page 7 for more information.





#### LOW BATTERY WARNING

If there are **4 lights** across the **FIRE** line this will indicate a low battery. Charge to **12 volts** or replace if the battery is not holding the correct charge. Old tractor batteries do not hold their charge and can drop their voltage within hours, so always use either a Portek internal battery or a deep cycle leisure battery.

#### **TESTING THE FIRING SYSTEM**

#### Turn the gas supply off before the following tests

To eliminate other components and to establish if the gas will fire.

With no lights showing, (wait for lights to go out) press and hold Button **B**, and then press Button **A** at the same time. The control panel lights will illuminate in succession from right to left. There will then be a audible 'click', which is the sound of the solenoid opening to let gas into the chamber. After **three (3) seconds**, a series of soft ticks will follow as the spark generator fires the spark plug to ignite the gas. **(All these sounds and functions will happen without the gas turned on).** 

If any of the above do not occur, it could be down to an issue with either the control panel, the spark plug, the spark generator or low battery.



#### **CIRCUIT BOARD - TESTING AND REPLACEMENT**

If there are no lights, check the wiring to the battery is not damaged and there are no loose connections, and check for a faulty or dead battery. Charge or replace as required.



If the lights do not move it could be down to a **poorly fitting board.** To fix this, remove the steel cover and try to operate the circuit board without this cover by pressing button **A** and **B**. If this works, make sure the board is seated in the moulding correctly.

Check the **4 spade terminals** at the rear of the panel for corrosion also by undoing the **3 screws** (circled in white) and inspecting and cleaning. Re-connect and try again.

If no lights are showing after these tests you will need to fit a new circuit board.

Undo the three screws, remove the board and disconnect the wiring. Replace the wires on the new board in the same sequence as they were disconnected, applying Vaseline (petroleum jelly) to stop corrosion and then re-test.



#### **SPARK PLUG**

If gas is being delivered, but there is no ignition then check the following:

Firstly, remove the back plate and disconnect the wiring from the spark generator to ease access. Take off the spark plug lead and unscrew the spark plug.

The scatterbird uses only **NGK BR6S spark plugs**. Change if the wrong spark plug is fitted. Next check the gap.

It must be between **2 to 3 mm**. Use a £1 coin to measure the gap.

## **Spark Generator and Gas Delivery**



#### **2 TYPES OF GAS JET**

Early Scatterbirds were fitted with a **single piece jet (B)** which was later superseded by the **two part jet (A)**.

We recommend replacing the **single piece jet** with the **two piece jet** for faster and more convenient maintenance. For removing the **one piece jet** please contact technical services on **01234 889 454**.

Note: If the Scatterbird is fitted with the two part jet, ensure that the rubber cap is fitted to the top of the spark plug (see page 4) to make sure it is not shorting against the solenoid housing.

#### **SPARK GENERATOR**

If your Scatterbird is still not working, check and clean the wiring to the spark generator and test again.



You will hear an initial click of the solenoid opening to allow the gas in, followed **3 seconds** later by the rapid clicking of the spark generator firing the spark plug. If you cannot hear a rapid clicking and all the spade contacts have been thoroughly cleaned, then the spark generator will have to be replaced. If you do not hear the initial click then the issue may be with the solenoid.

The spark generator may be green in colour and not white as shown.

#### **GAS DELIVERY**

To check for problems with gas delivery, check the bottle is turned on and contains gas. Try to avoid completely emptying the bottle as it contains sediment which can block jets and regulators. Next, check that the correct regulator is



Next, check that the correct regulator is fitted. Use only a **One Bar Regulator**. If the correct one is fitted, check the connections for damage or loose fitting. Replace or tighten as necessary. When changing the regulator make sure it does not come into contact with the ground as soil particles can block or damage the unit.

## **Setting up**

#### **CLEANING THE JET**

If there is gas getting to the Scatterbird but there are no bangs or intermittent bangs, it could be a blocked jet. The symptoms of this are only 1 or 2 successful ignitions in a series of 4 or 5, due to insufficient gas being delivered each time.



3. Pull out the complete jet assembly.



5. Clean carefully using a 1.0mm drill or an appropriate jet cleaner and re-assemble and test

- 1. To access the 2 piece jet, loosen the screw from the solenoid that retains the connector. **2.** Remove the split pin.





4. Hold the jet and solenoid firmly and unscrew the jet from the housing with a  $\frac{7}{16}$ " spanner **NOTE:** it is a tapered thread.

If your Scatterbird comes with the **one piece jet** which was fitted only to early models of the MK3, we recommend replacing it with the **two piece** version for faster and more convenient maintenance. For removing **one piece** jets please contact technical services on 01234 889 454.

## <sup>10</sup> Solenoid

#### **SOLENOID**

Finally, it may be an issue with the solenoid not working, but this is very rare. If you do not hear the initial click of the solenoid during testing, this could be a problem related to the wiring, the control panel, or the solenoid itself may have a fault, in which case it will need replacing. Our advisors can help you diagnose this issue as it requires more in-depth testing.



If you require further information or parts, please contact one of our Technical Advisors. Portek will also repair or service your Scatterbird if required. Please contact your local dealer for details.



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# Scatterbird Parts<sup>11</sup>



ltem No.	Description	Part No.
1	Moulding Inner Barrel/Jet	032/01
2	Plastic Barrel Outer with Screws + Label	032/02
3	Hinged Back Plate + Screws	032/03
4	Control Panel Steel Cover + Screws	032/04
5	Side Plate with Fasteners	032/05
6	Spark Plug (short reach) NGK BR6S	032/06
6а	Spark Plug Insulator Cap	032/18A
7	Two Piece Jet (7/8" BSF)	032/18
8	Solenoid and Filter	031/08
9	Regulator	031/54
10	Gas Hose	031/55
11	Spark Generator	031/10/10A
12	High Tension Lead	031/11A
13	Long Battery Lead	031/12B
14	Short Battery Lead	031/12C
15	Earth Lead   Earth Lead 2 part	031/12D 031/12E
16	Main Wiring Harness	032/07
17	Circuit Board (new)	031/50
-	Circuit Board (service exchange)*	033
18	Instruction Book	032/08
19	Extension Legs (set of 4)	032/09
20	Internal Battery* + Lead for Scatterbird	034
21	Scatterbird Battery Charger	035

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