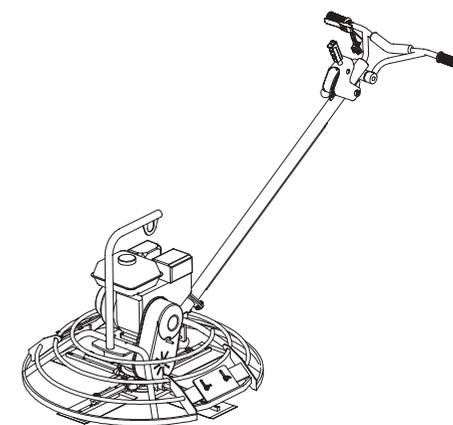




# PRO & PRO TILT 900 & 1200mm

**GB** WALK BEHIND POWER  
TROWELS 900 / 1200mm  
OPERATOR MANUAL



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160.2.001.7  
06/5



# How To Use This Manual

This manual has been written to help you operate and service thePro & Pro Tilt Trowel safely. This manual is intended for dealers and operators of the Pro & Pro Tilt Trowel.

## Foreword

The '**Machine Description**' section helps you to familiarise yourself with the machine's layout and controls.

The '**Environment**' section gives instructions on how to handle the recycling of discarded apparatus in an environmentally friendly way.

The '**General Safety**' and '**Health and Safety**' sections explain how to use the machine to ensure your safety and the safety of the general public.

The '**Operating Instructions**' section helps you with the setting up and use of the machine.

The '**Trouble Shooting**' guide helps you if you have a problem with your machine.

The '**Service & Maintenance**' section is to help you with the general maintenance and servicing of your machine.

The '**Replacement Parts**' section provides instructions on how to order and specify replacement parts, if the need arises.

## Directives with regard to the notations.

Text in this manual to which special attention must be paid are shown in the following way:



CAUTION

The product can be at risk. The machine or yourself can be damaged or injured if procedures are not carried out in the correct way.



WARNING

The life of the operator can be at risk.

## EC DECLARATION OF CONFORMITY / DECLARATION CE DE CONFORMITE / DECLARACION DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE / EG-VERKLARING VAN OVEREENSTEMMING



We, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, hereby certify that if the product described within this certificate is bought from an authorised Belle Group dealer within the EEC, it conforms to the following EEC directives: 98/37/EC (This directive is a consolidation of the original machinery directive 89/392/EEC), Electromagnetic Compatibility Directive 89/336/EEC (as amended by 92/31/EEC & 93/68 EEC). The low voltage directive 73/23/EEC, EN 292 Safety of machinery and associated harmonised standards, where applicable. Noise emissions conform to directive 2000/14/EC Annex VI, the notified body being **AV Technology Limited, AVTECH house, Birdhall Lane, Cheadle Heath, Stockport, Cheshire, SK3 0XU, GB**.



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|   |                                   |  |                                   |                              |
|---|-----------------------------------|--|-----------------------------------|------------------------------|
| PRODUCT TYPE .....                            | TYPE DE PRODUIT .....             | TIPO DE PRODUCTO .....                       | TIPO DE PRODUTO .....             | PRODUCTTYPE .....            |
| MODEL .....                                   | MODELE .....                      | MODELO .....                                 | MODELO .....                      | MODEL .....                  |
| SERIAL No. ....                               | N° DE SERIE .....                 | N° DE SERIE .....                            | NO. DE SÉRIE .....                | SERIENUMMER .....            |
| DATE OF MANUFACTURE .....                     | DATE DE FABRICATION .....         | FECHA DE FABRICACIÓN .....                   | DATA DE FABRIC .....              | FABRICAGEDATUM .....         |
| SOUND POWER LEVEL MEASURED (GUARANTEED) ..... | NIVEAU DE MESURE (GARANTIE) ..... | POTENCIA ACUSTICA MEDIDO (GARANTIZADO) ..... | NIVEL DE MEDIDO (GARANTIDO) ..... | GEMETEN (GEGARANDEERD) ..... |

Signed by:  
Signature:  
Medido por:  
Assinado por:  
Gerekend door:

Ray Neilson

Managing Director - On behalf of BELLE GROUP (SHEEN) UK.  
Le Directeur Général - Pour le compte de la SOCIÉTÉ BELLE GROUP (SHEEN) UK.  
Director Gerente - En nombre de BELLE GROUP (SHEEN) UK.  
Director-Geral - Em nome de BELLE GROUP (SHEEN) UK.  
Algemeen Directeur - Namens BELLE GROUP (SHEEN) UK.



Z/10004/2



## Warranty

Your new Belle Group Pro & Pro Tilt Trowel is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase.

The Belle Group warranty is against defects in design, materials and workmanship. The following are not covered under the Belle Group warranty:

1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
2. Alterations, additions or repairs carried out by persons other than Belle Group or their recognized agents.
3. Transportation or shipment costs to and from Belle Group or their recognized agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labor costs to renew, repair or replace components due to fair wear and tear.

The following components are not covered by warranty.

- Drive belt
- Engine air filter
- Engine spark plug

Belle Group and/or their recognized agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

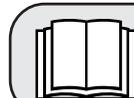
### Warranty Claims

All warranty claims should firstly be directed to Belle Group, either by telephone, by Fax, or in writing.

Tel: +44 (0)1538 380000 Fax: +44 (0)1538 380038  
Email : [Warranty@belle-group.co.uk](mailto:Warranty@belle-group.co.uk)

Write to:  
Belle Group Warranty Department,  
Bode Business Park  
Ball Haye Green,  
Leek,  
Staffordshire ST13 6BW,  
England

## Warning



Before you operate or carry out any maintenance on this machine **YOU MUST READ** and **STUDY** this manual.

**KNOW** how to safely use the unit's controls and what you must do for safe maintenance.

(NB Be sure that you know how to switch the machine off before you switch on, in case you get into difficulty.)

**ALWAYS** wear or use the proper safety items required for your personal protection.

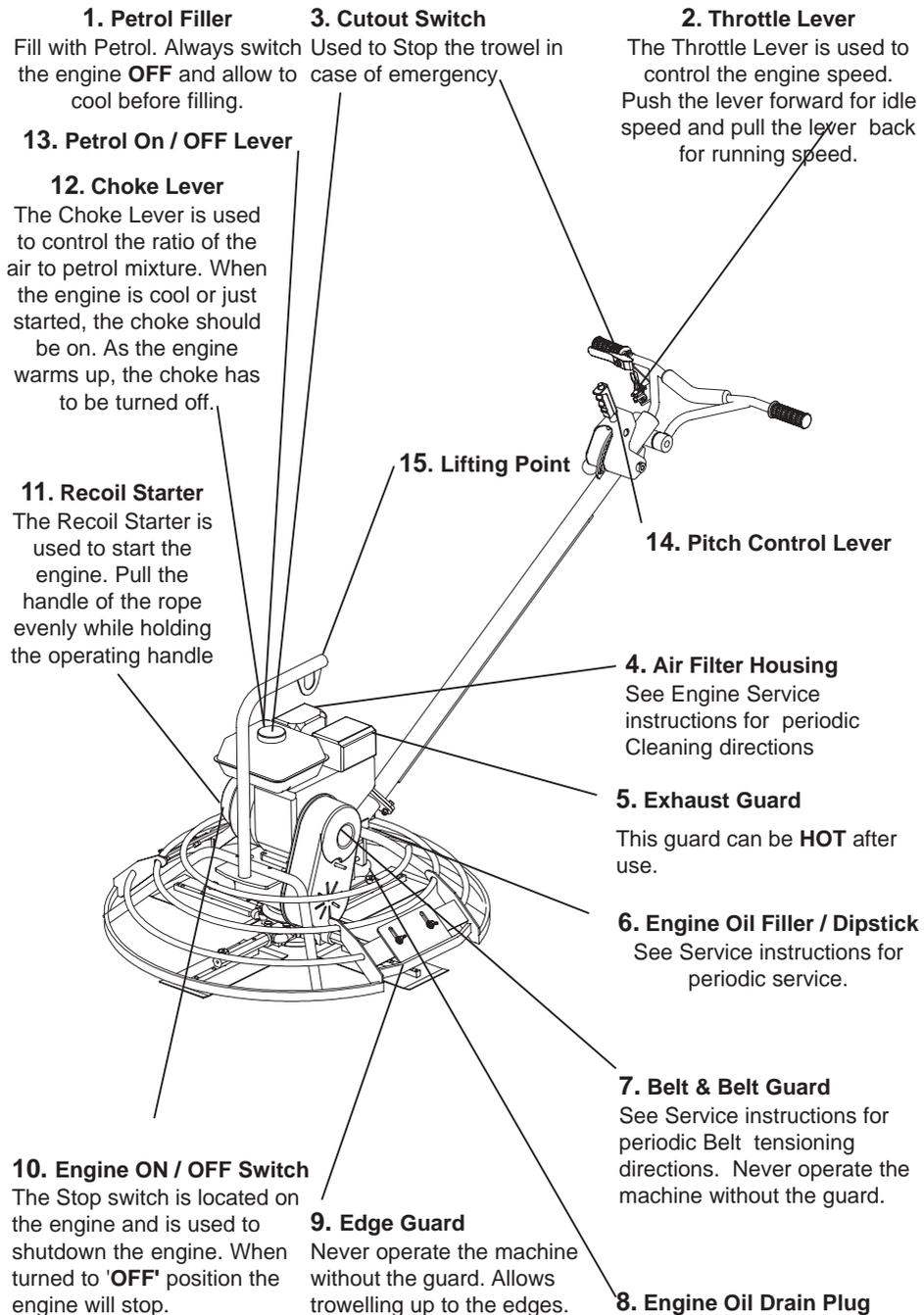
If you have **ANY QUESTIONS** about the safe use or maintenance of this unit, **ASK YOUR SUPERVISOR OR CONTACT THE BELLE GROUP +44 (0)1298 84606**

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*Belle Group reserves the right to change machine specification without prior notice or obligation.*



## MAINTENANCE

The Belle Group 'Pro & Pro Tilt' Trowels are designed to give many years of trouble free operation. It is, however, important that the simple regular maintenance listed in this section is carried out. It is recommended that an approved Belle Group dealer carries out all major maintenance and repairs. Always use genuine Belle Group replacement parts, the use of spurious parts may void your warranty. Before any maintenance is carried out on the machine, switch off the engine. If working on a petrol engine machine, disconnect the HT lead from the sparkplug.

### Running In Period

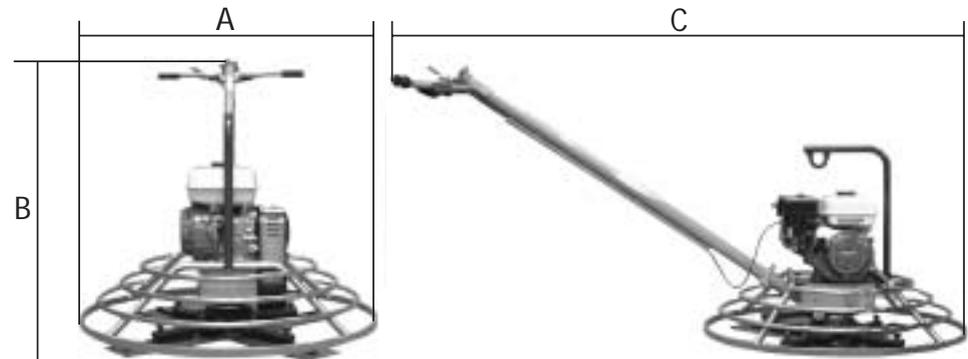
When the trowel is first used from new, the engine oil must be changed after the initial running in period (see engine manual for full detail).  
The belt tension should be checked after 4 hours use.

| Routine Maintenance |                 | after first 4 hours | first month / 20 h | 3 month / 50 h | 6 month / 100 h |
|---------------------|-----------------|---------------------|--------------------|----------------|-----------------|
| Engine Oil          | Check Level     | ✓                   |                    |                |                 |
|                     | Change          |                     | ✓                  |                | ✓               |
| Air Filter          | Check Condition |                     | ✓                  |                | ✓               |
|                     | Clean / Replace |                     |                    | ✓              |                 |
| Spark Plug          | Check / Clean   |                     |                    |                | ✓               |
| Drive Belt          | Tension         | ✓                   | ✓                  | ✓              |                 |

| Oil/Fuel Type & Quantity - Spark Plug Type |       |            |          |          |          |                 |               |
|--|-------|------------|----------|----------|----------|-----------------|---------------|
|  |       | Oil Type   | Quantity | Fuel Typ | Capacity | Spark Plug Type | Electrode Gap |
| Petrol Engine                              | GX160 | SAE 10W-30 | 0.6ltr   | Unleaded | 2.5ltr   | BM4A or BMR4A   | 0.6 - 0.7mm   |
| Petrol Engine                              | EX17  | SAE 10W-30 | 1.1ltr   | Unleaded | 3.6ltr   | NGK BR-6HS      |               |

| Problem  | Cause                | Remedy  |
|--|----------------------|---|
| Engine will not start.   | No fuel.             | Open fuel tap.<br>Fill fuel tank .  |
|  | Engine switched off. | Switch engine on.   |
|  | Spark plug fouled.   | Clean and reset plug gap.   |
|  | Engine cold.         | Close choke.  |
|  | Engine flooded.      | Open choke, fully open throttle,<br>pull recoil starter until engine<br>fires.                            |
| Cutout Switch wire disconnected  |                      | Reconnect Wire  |
| Leaving Swirls in Concrete<br>Rolling Concrete<br>Bouncing                 |                      |   |
| If some of the above mentioned problems occur, please check the following: |                      |   |
| Main Shaft   |                      | When the machine has a rolling motion, check the main shaft of the gearbox.                               |
| Spider Plate   |                      | Check Spider plate for bent trowel arms. If one is bent replace it.                                       |
| Blades   |                      | Check the adjustment on trowel arms at adjustment lever, and ensure all trowel arms are adjusted equally. |
|  |                      | Blades should be of the same measurement / dimension and designed to fit the machine.                     |
|  |                      | Excessively worn blades should not be used.   |

| Model                            | Pro Tilt 900             | Pro Tilt 1200              |
|----------------------------------|--------------------------|----------------------------|
| A - Height (mm)                  | 980                      | 980                        |
| B - Length (mm)                  | 2050                     | 2200                       |
| C - Width (mm)                   | 975                      | 1205                       |
| Weight Honda 5.5Hp 900mm         | 93Kg                     | -                          |
| Weight Honda 8.0Hp 900mm         | 104Kg                    | -                          |
| Weight Honda 8.0Hp 1200mm        | -                        | 111Kg                      |
| Troweling Area                   | 065m <sup>2</sup> /900mm | 1.02m <sup>2</sup> /1200mm |
| Troweling Speed (Varies with HP) | 65 - 155 RPM             | 65 - 155 RPM               |



**Safe Disposal.**

Instructions for the protection of the environment.

The machine contains valuable materials. Take the discarded apparatus and accessories to the relevant recycling facilities.

| Component       | Material                           |
|-----------------|------------------------------------|
| Operator handle | Steel                              |
| Belt Guard      | ABS                                |
| Blade Guard     | Steel                              |
| Bedplate        | Steel                              |
| Hand Grips      | Rubber                             |
| Engine          | Aluminium & Steel                  |
| Gearbox         | Aluminium, Steel & Phosphor Bronze |
| Spider Assembly | Cast Iron & Steel                  |
| Various Parts   | Steel & Aluminium                  |

**Pitch Adjustment - Pro Tilt Trowel**

The pitch control lever is in easy reach of the operator. The pitch can be controlled in small increments and this can be undertaken whenever it is necessary.

**Pitch Adjustment - Pro Trowel**

The pitch control knob is in easy reach of the operator. The pitch adjustment has an unlimited pitch variation and this can be undertaken whenever it is necessary.

During finishing the setting up/hardening may vary from area to area across the floor, so the pitch adjustment can be changed to suit accurately, when required, while the machine is in operation.

**Spider Plate**

By experience we know the major problem on the trowel arm is lack of lubrication. We have therefore incorporated composite bushes to complement the greasing facility. During mounting we undertake the greasing and sealing the Pro trowel arms on the spider plate, Greasing to be carried out on a weekly basis using the grease point provided. If an arm becomes jammed, this is probably due to the arm being bent and will require replacement.

**Machine Cleaning**

Clean the machine after it has been used to prevent the collection of hardened cement. Hard concrete/cement paste is very difficult to remove.

**Changing Blades**

Be sure spark plug is disconnected before changing the blades.

Make certain the machine is on a flat surface; adjust pitch control so that the blades are flat on the surface.

**CAUTION**

Be careful when hanging old blades for new. Due to the way the blades wear, the old blades become very sharp like a knife blade. As a safety precaution, wear heavy duty gloves during this operation to prevent the hands being cut.

Remove bolts and lock washers on each trowel arm and remove the blades.

Before installing new blades, clean all concrete/cement from bottom and sides of the trowel; be sure trowelling edge of the blade is behind trowel arm.

Install bolts and lock washers on each trowel arm and fasten them.

**Liability**

**Belle Group.** declines any liability for possible damages to persons and / or things, which might arise from improper or wrong use of the machine or nonobservance of the operating instructions contained in this manual.

### Using The Trowel

Guiding the trowel on the slab is very simple. Get into operator's position behind the centre of handle with good footing and apply the throttle slowly until desired speed is obtained.

Push handle down and machine will move to the right.

Lift handle up and machine will move to the left.

Slightly twist to the right and the machine will move forward.

Slightly twist to the left and the machine will move backward.

Holding the handle in neutral position the machine will remain stationary.

### Preparation Of Concrete Surface

Use of a mechanical or air vibrating screeding machine to strike the concrete surface to level will provide good compaction to the slab and produce an ideal surface for finishing. It should be remembered floating/finishing machines will not repair or correct a poorly screeded slab.

### Floating Operation

Before starting the floating operation be sure that the floating blades are correctly mounted on the finishing blades. Be aware that with the blades arm turning clockwise, the floats should be positioned the same way. The slab will be ready to work for the first floating operation when the heel of your shoes leave a print of 2-3mm on the surface of the slab. On all other floating operations the blades should be almost flat. After the floated slab has set and your footprint is slightly visible, it is ready to start the finishing operation. The timing of all these operations is dependent on weather conditions. On average the machine will take about 10 minutes to float 100m<sup>2</sup>. After each operation the engine should be stopped.

Never park the machine with the engine running, especially during the floating operation when the concrete is relatively soft. Considering the machine is heavy, should it be left running on the soft concrete in the same spot, this will cause damage to the finished floor tolerances.



CAUTION

Never lift the machine by the guard ring.  
Lift from the lifting point provided.

### Finishing Operation

After the floating operation the first thing to do is to remove the floats from the finishing blades and clean the blades, spider plate and protection ring of cement/concrete paste collected during the floating operation. Increase the blade pitch up to 10mm for the first finishing operation and then continue to increase the pitch on the following finishing operations.

Continue the finishing passes until you obtain the desired finished floor surface. The time required between each finishing pass is dependent on the weather conditions, cement and water content of the concrete. If some areas of the concrete set harden too fast you may apply a small amount of water with a brush to aid achieving a finish. Be careful when running the trowel on areas where water has been applied because the machine will tend to skate away. Be sure to maintain control at all times.

For your own personal protection and for the safety of those around you, please read and ensure you fully understand the following safety information. It is the responsibility of the operator to ensure that he/she fully understands how to operate this equipment safely. If you are unsure about the safe and correct use of the Pro & Pro Tilt Trowels, consult your supervisor or Belle Group.



CAUTION

Improper maintenance can be hazardous. Read and Understand this section before you perform any maintenance, service or repairs.

- This equipment is heavy and must not be lifted single-handedly, either **GET HELP** or use suitable lifting equipment.
- Cordon off the work area and keep members of the public and unauthorized personnel at a safe distance.
- Personal Protective Equipment (PPE) must be worn by the operator whenever this equipment is being used (see Health & Safety).
- Make sure you know how to safely switch this machine **OFF** before you switch it **ON** in case you get into difficulty.
- Always switch **OFF** the engine before transporting, moving it around the site or servicing it.
- During use the engine becomes very hot, allow the engine to cool before touching it. Never leave the engine running and unattended.
- Never remove or tamper with any guards fitted, they are there for your protection. Always check guards for condition and security, if any are damaged or missing, **DO NOT USE THE MACHINE** until the guard has been replaced or repaired.
- **DO NOT** operate the machine when you are ill, feeling tired, or when under the influence of alcohol or drugs.

### Fuel Safety.



WARNING

Fuel is flammable. It may cause injury and property damage. Shut down the engine, extinguish all open flames and do not smoke while filling the fuel tank. Always wipe up any spilled fuel.

- Before refuelling, switch off the engine and allow it to cool.
- When refuelling, **DO NOT** smoke or allow naked flames in the area.
- Spilt fuel must be made safe immediately, using sand. If fuel is spilt on your clothes, change them.
- Store fuel in an approved, purpose made container away from heat and ignition sources.

**PPE (Personal Protective Equipment).**

Suitable PPE must be worn when using this equipment i.e. Safety Goggles, Gloves, Ear Defenders, Dust Mask and Steel Toe capped footwear (with anti-slip soles for added protection). Wear clothing suitable for the work you are doing. Always protect skin from contact with concrete.

**Dust.**

The compaction process can produce dust, which may be hazardous to your health. Always wear a mask that is suited to the type of dust being produced.

**Fuel.**

Do not ingest fuel or inhale fuel vapors and avoid contact with your skin. Wash fuel splashes immediately. If you get fuel in your eyes, irrigate with copious amounts of water and seek medical attention as soon as possible.

**Exhaust Fumes.**

Do not operate your Pro & Pro Tilt Trowel indoors or in a confined space, make sure the work area is adequately ventilated.



WARNING

The exhaust fumes produced by this equipment are highly toxic and can kill!

## Pre-start Checks

**Pre start-up inspection.**

The following Pre-start-up inspection must be performed before the start of each work session or after every four hours of use, whichever is first. Please refer to the service section for detailed guidance. If any fault is discovered, the Pro & Pro Tilt Trowel must not be used until the fault is rectified.

1. Thoroughly inspect the Pro & Pro Tilt Trowel for signs of damage. Make sure that the belt guard is secure before using the machine.
2. Check hoses, filler openings, drain plugs and any other areas for signs of leakage. Fix any leaks before operating.
3. Check the engine oil level and top up as necessary.
4. Check the engine fuel level and top up as necessary.
5. Check for fuel and oil leaks.

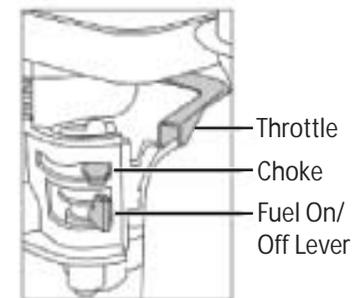


WARNING

Improper maintenance can be hazardous. Read and Understand this section before you perform any maintenance, service or repairs

**Honda GX160**

1. Open the petrol tap by moving the fuel **ON/OFF** lever fully to the right.
2. If starting the engine from cold, set the choke **ON** by moving the choke lever fully to the left. If restarting a warm engine, the choke is usually not required, however, if the engine has cooled to a degree, partial choke may be required.
3. Turn the engine **ON / OFF** switch clockwise to the 'I' position.
4. Set the throttle to the idle position by moving the throttle lever fully to the right. Do not start the engine on full throttle.
5. Taking a firm hold of the control handle and set the centrifugal switch to **ON** if not already, grasp the recoil starter handle with the other. Pull the recoil starter until engine resistance is felt, then let starter return.
6. Taking care not to pull the starter's rope fully out, pull the starter handle briskly.
7. Repeat until the engine fires.
8. Once the engine fires gradually set the choke lever to the **OFF** position by moving it to the right.
9. If the engine fails to fire after several attempts, follow the troubleshooting guide on page 12.
10. To stop the engine, set the throttle to idle and release the control handle safety switch. Alternatively turn the engine **ON/OFF** switch anti clockwise to the 'O' position.
11. Turn the petrol off.

**Robin EX 17 Petrol Engine**

1. Open the fuel cock.
2. Turn the STOP SWITCH to the position 'I' (ON)
3. Set the speed control lever 1/3 of the way towards the high speed position.
4. Close the choke lever.
  - If the engine is cold or the ambient temperature is low, close the choke lever fully.
  - If the engine is warm or the ambient temperature is high, open the choke lever half way, or keep it fully open.
5. Pull the starter handle slowly until resistance is felt. This is the 'compression' point. Return the handle to its original position and pull swiftly. Do not pull out the rope all the way. After starting the engine, allow the starter handle to return to its original position while still holding the handle.
6. After starting the engine, gradually open the choke by turning the choke lever and finally keep it fully opened. Do not fully open the choke lever immediately when the engine is cold or the ambient temperature is low, because the engine may stop.
7. To stop the engine, Set the speed control lever at the low speed position and allow the engine to run at low speed for 1 to 2 minutes before stopping.
8. Turn the STOP SWITCH counter-clockwise to the position 'O' (OFF)
9. Close the fuel cock.
10. Pull the starter handle slowly and return the handle to its original position when resistance is felt. This operation is necessary to prevent outside moist air from intruding into the combustion chamber.