



How To Use This Manual

This manual has been written to help you operate and service the Altrad Belle Lightweight Trowel safely. This manual is intended for dealers and operators of the Altrad Belle Lightweight 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.

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.



WARNING



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: **Altrad Belle (UK): +44 (0) 1298 84606**

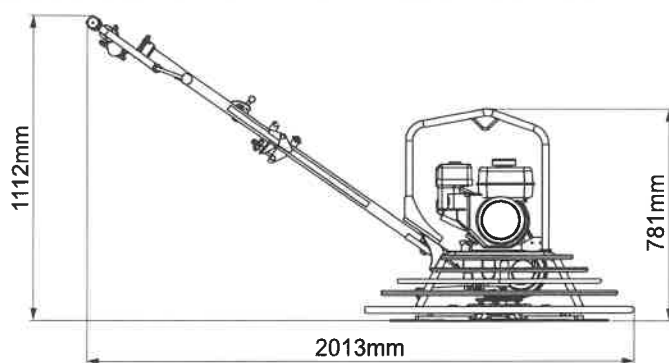


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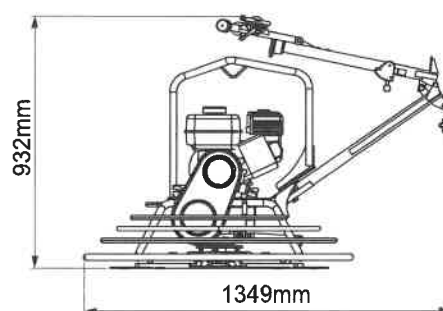
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Altrad Belle reserves the right to change machine specification without prior notice or obligation.

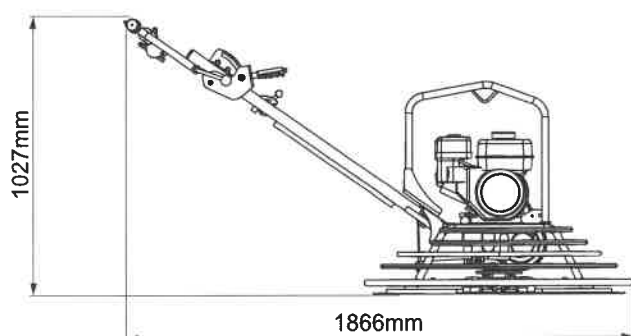
Technical Data



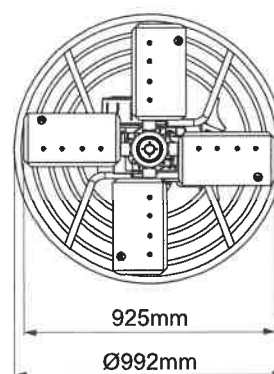
FOLDING HANDLE



STORAGE POSITION



STANDARD HANDLE



**TROWELLING DIAMETER
& RING DIAMETER**

Model	Honda GX200	Honda GX270
Engine Power (Hp / kW)	5.8 / 4.3	8.6 / 6.3
Weight - Standard Manual Clutch (Kg)	79.5	88.0
Weight - Standard Centrifugal Clutch (Kg)	77.5	86.0
Weight - Folding Handle Manual Clutch (Kg)	81.0	89.5
Weight - Folding Handle Centrifugal Clutch (Kg)	79.0	87.5
Troweling Area (mm)	925	925
Troweling Speed (rpm)	65 - 131	65 - 131
Vibration Level (m/sec ²)	7.09	11.68
Sound Power Level (dB L _{WA})	107	107

Environment



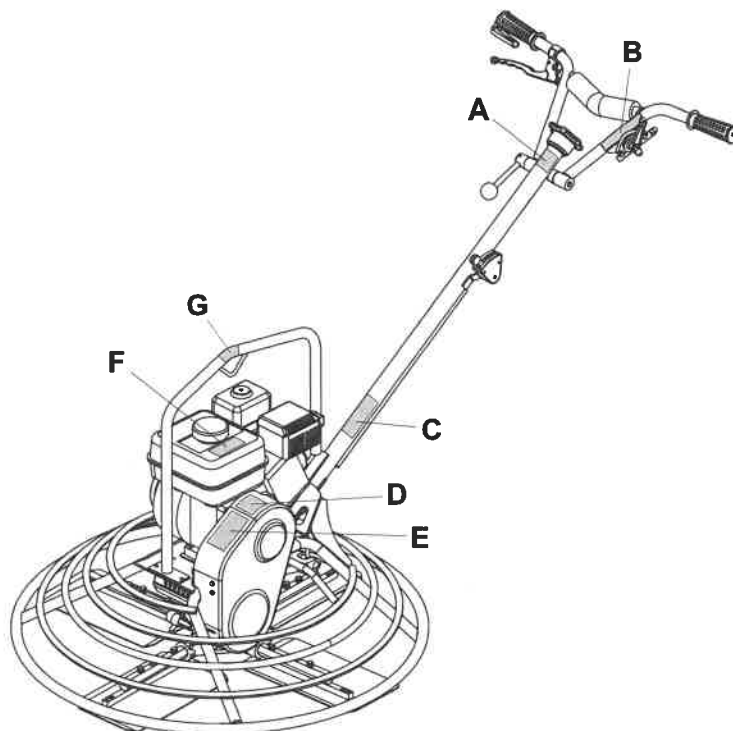
Safe Disposal.



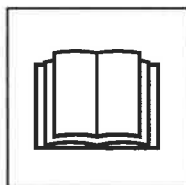
Instructions for the protection of the environment.
The machine contains valuable materials.
Take the discarded apparatus and accessories to the relevant recycling facilities.

Component	Material
Operator Handle	Steel
Belt Guard	Glass Fibre
Guard Ring	Steel
Bedplate	Steel
Hand Grips	Rubber
Engine	Aluminium & Steel
Gearbox	Aluminium, Steel & Phosphor Bronze
Spider Assembly	Cast Iron & Steel & Phosphur Bronze
Various Parts	Steel & Aluminium

- A. Safety Decal
- B. Throttle Decal
- C. Safe Start Decal
- D. Noise Decal
- E. Manual Clutch Setting Decal
- F. Manual Clutch Lever Decal
- G. Lifting Point Decal



A - Safety Decal



**Please Read
Operators
Manual**



**Wear Protective
Footwear**



**Wear Ear
Protection**



**Wear Eye
Protection**

B - Throttle Decal



**Fast Engine
Speed Position**



**Slow Engine
Speed Position**

C - Safe Start Decal

The Operating Handle must be held when starting the Engine.

NOTE:- Failure to hold onto the Handle in this situation could cause serious injury!

D - Noise Decal

The Noise Level of the machine during operation.

E - Manual Clutch Setting Decal

Guide to how the Manual Clutch should be set.

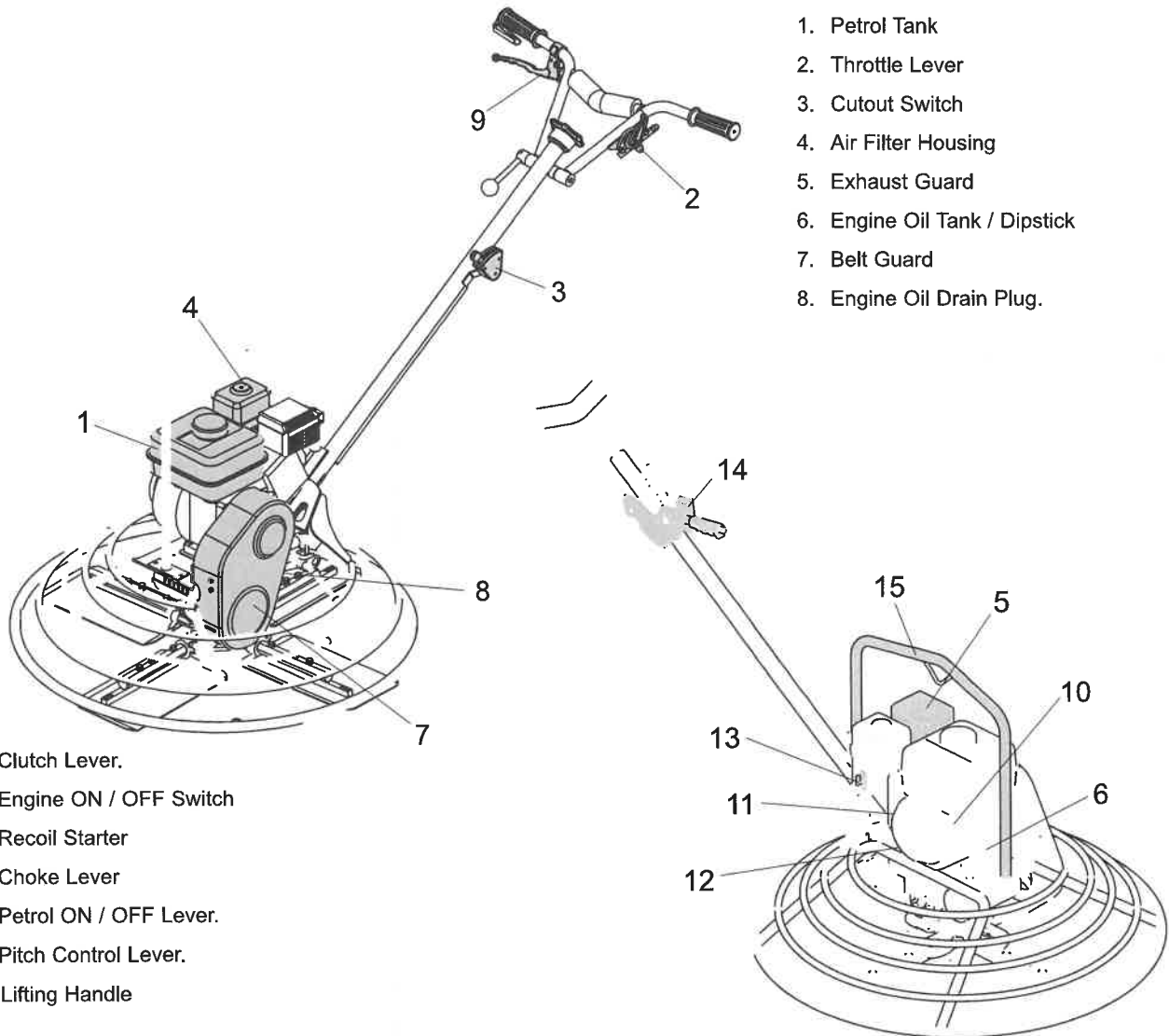
F - Manual Clutch Lever Decal

The Manual Clutch Lever must be fully engaged at all times during operation of the Trowel.

G - Lifting Point Decal

Identifies the position of the Lifting Point.

Machine Description



Health and Safety



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 Lightweight 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!

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 Altrad Belle Lightweight Trowels, consult your supervisor or Altrad Belle.



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.

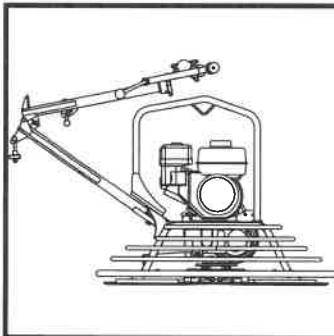


WARNING

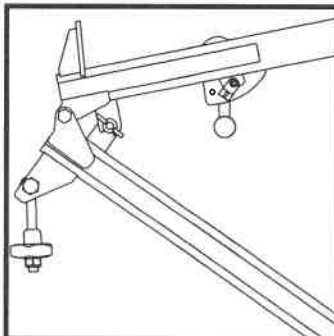
Fuel is flammable. It may cause injury and property damage. Shut down the engine, extinguish all open flames and do not smoke while filling the fuel tank. Always wipe up any spilled fuel.

- 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.

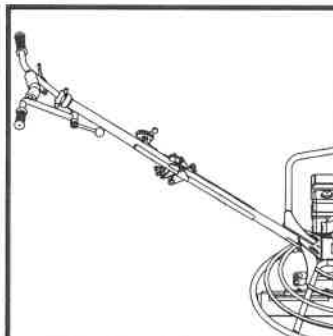
Foldable Handle Option



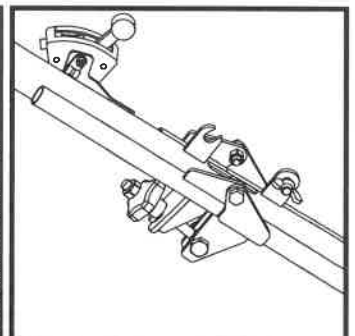
The machine will arrive in the storage position with the handle folded inwards.



Unscrew the Wing Nut and fold out the operating handle.



The handle is now in the operating position, and the trowel is almost ready for use.



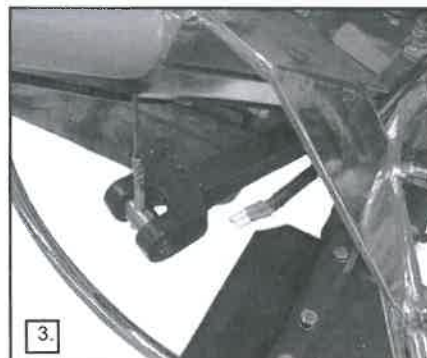
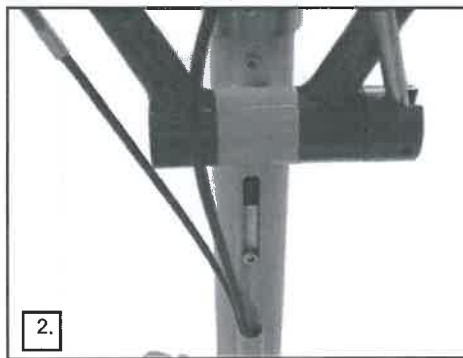
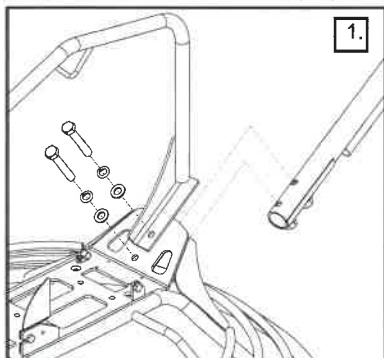
Ensure the handle is securely in place by tightening the screw. The trowel is now ready for use.

Assembly Instructions



Handle Assembly

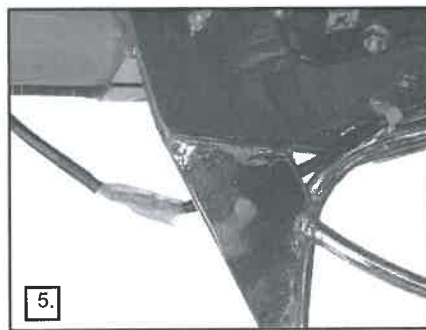
1. Secure handle in place using M12 x 70 (x1) and M12 x 75 (x1) bolts. (See Diagram 1) Tighten the bolts to a torque setting of 30Nm.
2. Screw the cable down to it's maximum length so the bolt is at the bottom of the slot. (See diagram 2)
3. Fit the threaded end of the cable through the hole in the yoke arm boss. Secure in place using M8 washer and nut. (See diagram 3)
Tighten the M8 nut until all play has been removed from the yoke arm.



4. Connect the electrical cable for the centrifugal clutch cutout switch, ensuring the coloured connectors match up. Red-red, blue-blue (See diagram 4) Ensure the electrical cable is routed through the guard ring as shown in diagram 5.

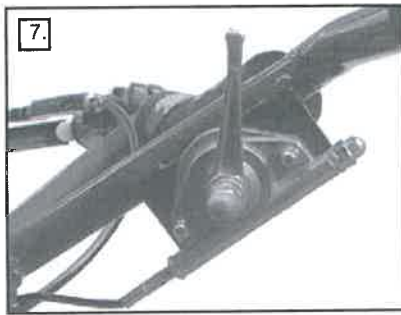


WARNING **IMPORTANT SAFETY DEVICE** - Not connecting the Clutch Cutout Switch could result in serious injury.

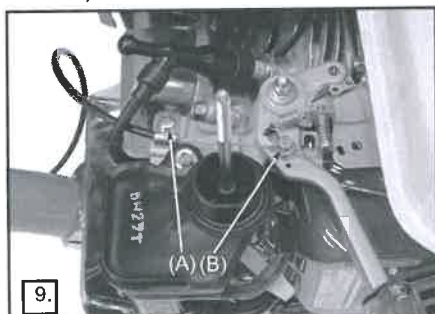


Throttle Cable Assembly

1. Remove Air Filter Assembly from the engine (See Diagram 6)
2. Set the Throttle Lever on the handle to the idle position. The lever should be in it's lowest possible position. (See diagram 7)
3. Also set throttle lever on the engine to the idle position. (See diagram 8)

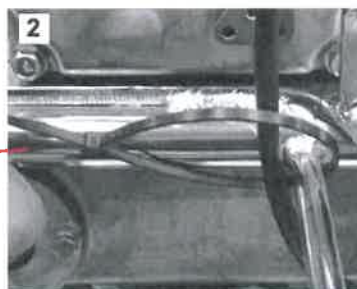
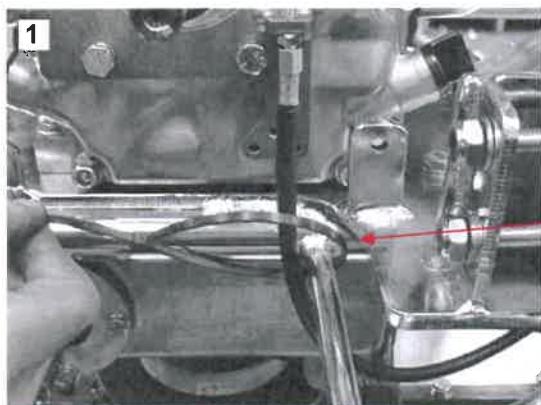


4. Thread the throttle cable through the cable clamp (A) so that the metal area located on the end of the cable is gripped. (See diagram 9)
5. Loosen the screw on the cable clamp (B) and slide the throttle cable through the hole. Re-tighten the screw so that it grips the cable. (See diagram 9 & 10)



Clutch Cable Assembly - Manual Clutch

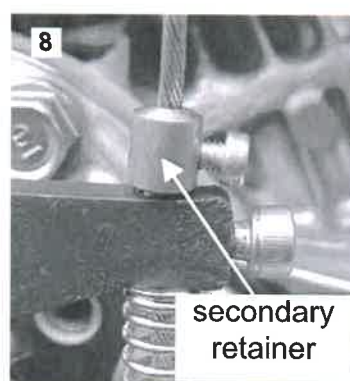
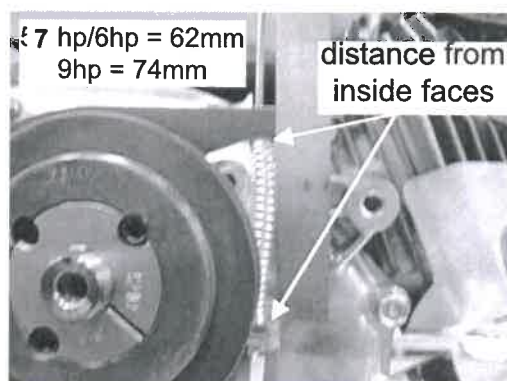
1. Position the cable through the cable retainer (Check that the outer cable is fully engaged into the cable retainer), then fasten a cable tie to hold the outer cable in place. Ensure the cable is routed as Diagrams 1 & 2 show. Now fit the 75mm long spring onto the cable. (See diagram 3)



2. Fit the cable through the hole in the end of the Pivot Arm then screw the 5/16" UNF bolt in to the side of the engine (See diagram 4). Tighten up the locking nuts on the back of the Pivot Arm, making sure that there is no more than 1mm of play either side of the centre at the top end where the cable comes through, but so as it still remains to be able to Pivot freely (See diagram 5). Fit the M6 x 60mm cap head with a locking nut to the Tensioner Bracket, the cap head should be screwed in a maximum of 5mm. (See diagram 6)



3. Fit M5 x 12 Caphead into lever, pull the cable tight and push tensioner arm down with correct distance of 62mm and tighten grub screw to 6Nm, then place the secondary cable retainer onto the cable so it is sat up to the arm with no slack. (See diagrams 7 & 8)



- 3a. Once the distance has been set (62mm) apply the Belt. After first 4 Hours or week, whichever comes first, check the Belt Tension.

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 Lightweight Trowel must not be used until the fault is rectified.



WARNING

The machine and components must be checked prior to use to avoid injury.

1. Thoroughly inspect the Lightweight Trowel for signs of damage. Make sure that the belt guard is secure before using the machine.
2. Check 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.
6. Check Handle to Ring Guard fixing bolts are tight. In case of folding handle variants, check centre Wing Nut is tight.
Check Handle Bar height adjustment is set correctly for the operator and secure in it's selected position.
7. Check that the blade fixing screws are tight. Also check that the blades are not loose on their individual mounting bars.

Start and Stop Procedure

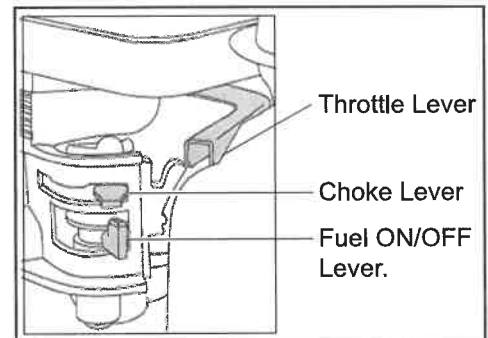


WARNING

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

Honda GX200 & GX270 Petrol Engines

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 switch safety switch. Alternatively turn the engine **ON / OFF** switch anti clockwise to the 'O' position.
11. Turn the petrol off.





Operating Instructions

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 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 100m². 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.

Pitch Adjustment

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. During mounting we undertake the greasing and sealing the Lightweight 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 changing 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

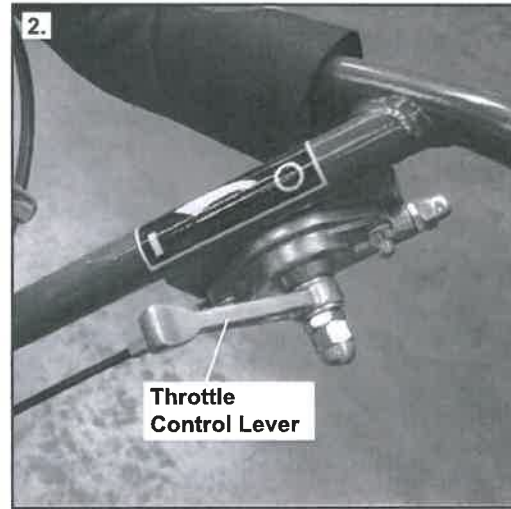
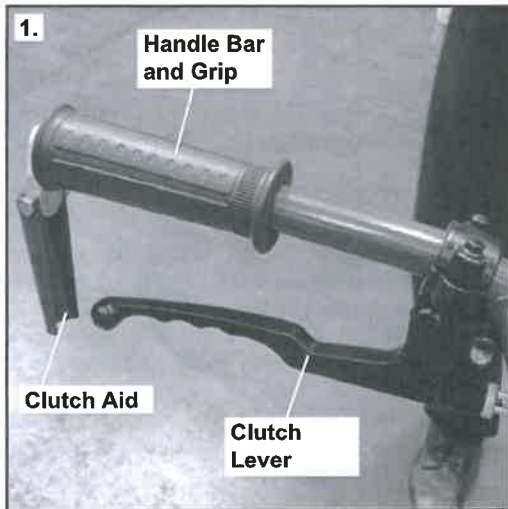
Altrad Belle declines any liability for possible damages to persons and / or things, which might arise from improper or wrong use of the machine or nonobservance of the operating instructions contained in this manual.

Lightweight Trowel Manual Clutch Controls

The controls shown below in Diagram 1. are use Engage and Disengage the Manual Clutch.

Lightweight Trowel Throttle Control Lever

The Throttle Lever shown below in Diagram 2. is used to control the Engine RPM and the Blade RPM. This can also be seen in Figure 2 of the Decal shown below.

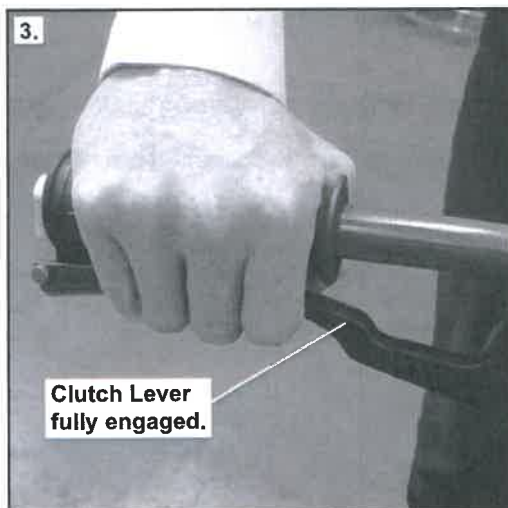


Correct Manual Clutch Engagement Method

Diagram 3 below, shows the correct engagement method for the Lightweight Trowel Manual Clutch. The Manual Clutch must be fully engaged at all times during the use of the Trowel. This can also be seen in Figure 1 of the Decal shown below.

Incorrect Manual Clutch Engagement Method

Diagram 4 below, shows the incorrect way to operate the Manual Clutch, as the Clutch Lever is not fully engaged. **The Clutch must never be used to control the Blade Speed.** Doing this may allow the belt to slip and ultimately burn out the belt. This can also be seen in Figure 1 of the Decal shown below.





Service and Maintenance

MAINTENANCE

The Altrad Belle Lightweight 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 Altrad Belle dealer carries out all major maintenance and repairs. Always use genuine Altrad Belle 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 engined 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 details).

Routine Maintenance		Daily	First 4 Hours / Weekly	First Month / 20 Hours	3 Months / 50 Hours	6 Months / 100 Hours
Engine Oil	Check Level		✓			
	Change			✓	✓	
Air Filter	Check Condition / Clean			✓		✓
	Clean / Replace				✓	
Spark Plug	Check / Clean					✓
Cut-Out Switch	Check	✓				
Drive Tension	Check		✓			
Blades	Check Condition	✓				
	Replace	When Necessary				

Oil / Fuel Type & Quantity - Spark Plug Type						
	Oil Type	Quantity (Litre)	Fuel Type	Capacity (Litre)	Spark Plug Type	Electrode Gap (mm)
Petrol Honda GX200	S.A.E. 10W 30	0.6	Unleaded	3.1	BM4A or BMR4A	0.7 - 0.8
Petrol Honda GX270	S.A.E. 10W 30	1.1	Unleaded	6.0	NGK BPR-6HS	0.7 - 0.8
Gearbox	EP90	0.6	N/A	N/A	N/A	N/A

Note:

- Check the gearbox oil at regular intervals and top-up when necessary. Make sure the oil is at the centre of the sight glass. To find out what grade of oil should be used in the gearbox, please contact the Altrad Belle Warranty Department (+44 (0)1298 84606)
- Grease Spider Arm Assembly prior to storage and at regular intervals.



Replacement Parts

When maintaining this product only the manufacturers original, genuine replacement parts may be used.

The user will lose any possible claims if replacement parts used are other than the makers original replacement parts.

Replacement parts for this product can be ordered online 24 hours a day, 7 days a week at www.Altrad-Belle247.com

For more information regarding the availability of replacement parts for this product, please contact Altrad Belle using the following contact details:-

Tel:- +44 (0)1298 84606

Fax:- +44 (0)1298 84073

Email:- sales@altrad-belle.com

Alternatively, please scan the adjacent QR Code (Quick Response Code) using your smartphone to access the Altrad Belle online parts portal.



Troubleshooting Guide



Problem	Cause	Remedy
Engine will not start.	No fuel.	Open fuel tap. Fill fuel tank.
	Engine switched off.	Switch engine on.
	Spark plug fouled.	Clean and reset plug gap.
	Engine cold.	Close choke.
	Engine flooded.	Honda, open choke, fully open throttle, pull recoil starter until engine fires.
	Cut-Out Switch in OFF position.	Move Cut-Out Switch to ON position.
Engine still will not start.	Major Fault	Contact Agent or Altrad Belle.
<ul style="list-style-type: none"> • Leaving Swirls in Concrete. • Rolling Concrete. • Bouncing. 	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.

Warranty



Your new Altrad Belle Lightweight Trowel is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase. The Altrad Belle warranty is against defects in design, materials and workmanship.

The following are not covered under the Altrad Belle 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 Altrad Belle or their recognized agents.
3. Transportation or shipment costs to and from Altrad Belle 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

Altrad Belle and/or their recognised 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 Altrad Belle, either by telephone, by Fax, by Email, or in writing.

For warranty claims:

Tel : +44 (0)1298 84606,

Fax : +44 (0)1298 84073,

Email : Warranty.dept@altrad-belle.com

or Write to:

Altrad Belle Warranty Department, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, England

Warranty Registration:

In the bid for ALTRAD Belle to become greener and more eco friendly, we have now introduced online Warranty registration. To access the registration page of our website, please use the following address:-

http://www.bellegroup.com/index.php?p=warranty_registration

Alternatively, please scan the adjacent QR Code (Quick Response Code) using your smartphone to access the registration page.

