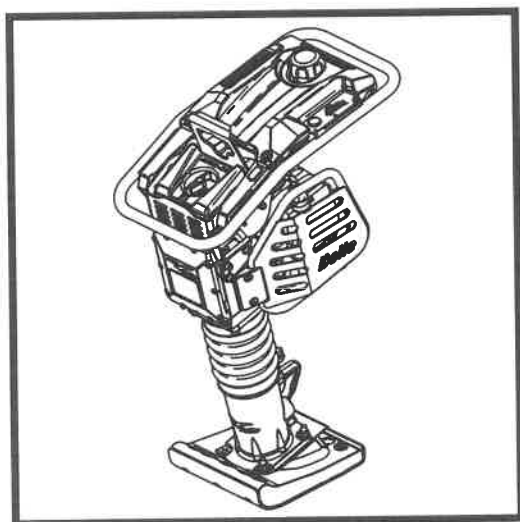


BELLE

RTX 50, 60, 68, 70 & 80D

870/10014/10
08/23



2

UKCA Declaration of Conformity

3 - 13

EC Declaration of Conformity

(GB) Operators Manual	14
(F) Manuel De L'Opérateur	28
(E) Manual del Operador	42
(P) Manual de Operação	56
(NL) Handleiding	70
(D) Bedienungshandbuch	84
(I) Manuale Dell'Operatore	98
(S) Bruksanvisning	112
(PL) Instrukcja Obsługi	126
(RO) Manual de Utilizare	140
(HR) Uputstvo za rukovatelja	154



BELLE
LIGHT
CONSTRUCTION
EQUIPMENT



How To Use This Manual

This manual has been written to help you operate and service the RTX Rammer safely. This manual is intended for dealers and operators of the RTX Rammer.

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 '**Start and Stop Procedure**' helps you with starting and stopping 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 '**Warranty**' section details the nature of the warranty cover and the claims procedure.

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**



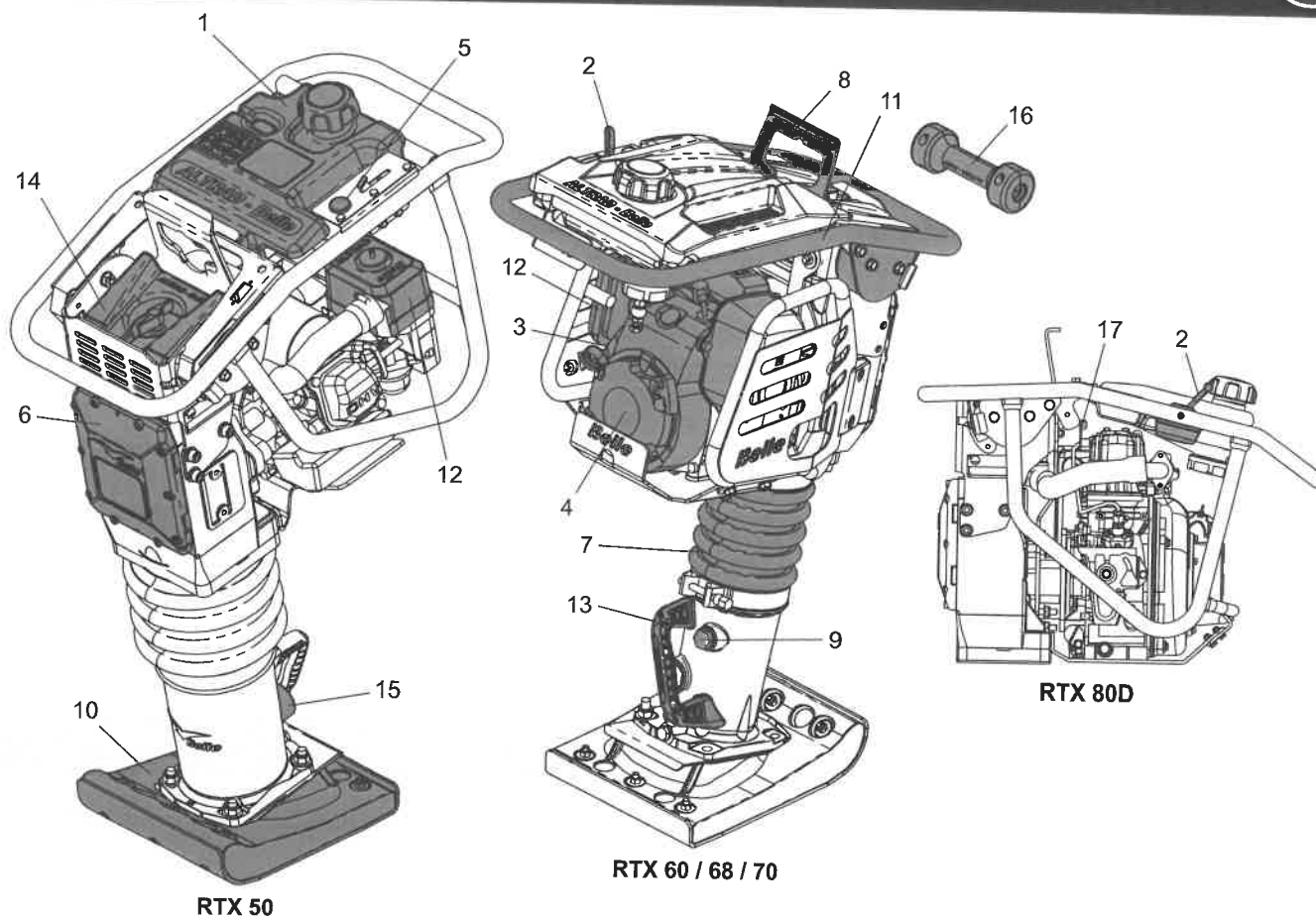
Contents

How to use this manual.....	14
Warning	14
Machine Description.....	15
Environment	15
Intended Use	15
Decals.....	16 - 18
Technical Data.....	19
General Safety	20
Health and Safety.....	20
Pre-Start Safety Checks.....	21
Long Term Storage.....	21
Start & Stop Procedure	22 - 23
Operation.....	23
Trouble Shooting Guide	24
Service & Maintenance	24 - 25
Transport	26
Replacement Parts	27
Warranty	27
UKCA Declaration of Conformity.....	2
EC Declaration of Conformity.....	3

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

Machine Description

GB



- | | | |
|-------------------------|-------------------------|----------------------------------|
| 1. Fuel Tank. | 7. Bellows | 13. Lifting Handle |
| 2. Throttle Lever. | 8. Lifting Eye. | 14. Secondary Air Cleaner (Dual) |
| 3. Fuel ON / OFF Lever. | 9. Leg Oil Plug. | 15. Leg Oil Sight Glass |
| 4. Engine. | 10. Ramming Shoe. | 16. Transport Roller (Optional) |
| 5. Stop Button. | 11. Operating Handle. | 17. Decompression Lever |
| 6. Crankcase. | 12. Primary Air Cleaner | |

Environment

GB

Safe Disposal



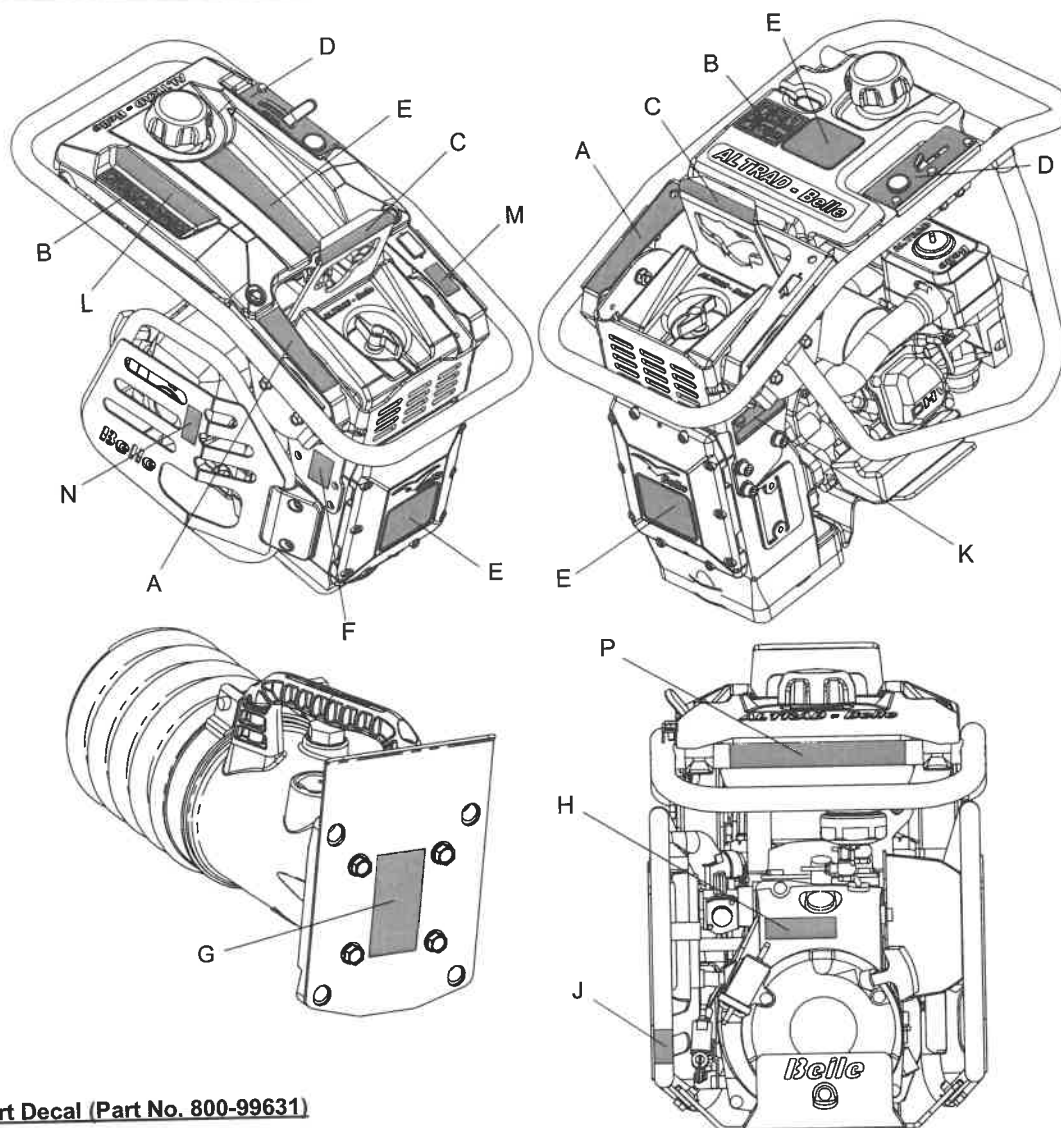
Instructions for the protection of the environment. The machine contains valuable materials. Take the discarded apparatus and accessories to the relevant recycling facilities.

Component	Material
Handle	Steel
Ramming Shoe	Plywood and Steel or Nylon and Steel
Rubber Isolators	Rubber and Steel
Bellows	Urethane
Crankcase	Aluminium
Crankcase Cover	Aluminium
Gears	Steel
Engine	Steel and Aluminium
Transport Roller	HDPE
Miscellaneous Plastic Parts	Polypropylene
Various Parts	Steel and Aluminium

Intended Use

GB

This machine is intended for base preparation, driveways, foundations, kerbs, and footings. It can also be used for repair work on streets, highways and/or sidewalks/pavements.



A - Transport Decal (Part No. 800-99631)

On-Site Transport

The RTX Rammer may be moved vertically by 2 people, laid on the Transport Roller (if fitted) and pulled using the Lifting Handle or by using a Sling or Hoist on the Lifting Eye. **NOTE:-** A sling or hoist must not be used on the Lifting Handle.

Road Transport

The RTX Rammer must be transported as far as possible standing up, strapped to the body side board of the truck, or strapped inside a lorry (panel truck). If not possible, it may be laid down only on the Transport Rollers or front bar of the Operating Handle, in stable position and strongly strapped down to guard against rolling or sliding.

B - Safety Symbols



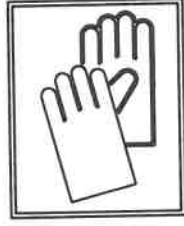
Wear Ear Protection



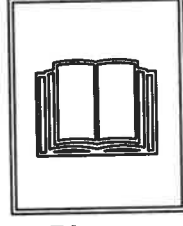
Wear Eye Protection



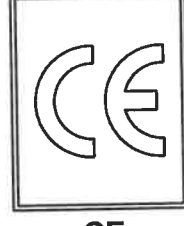
Wear Protective Footwear



Wear Protective Gloves



Please Read Operators Manual



CE Compliant

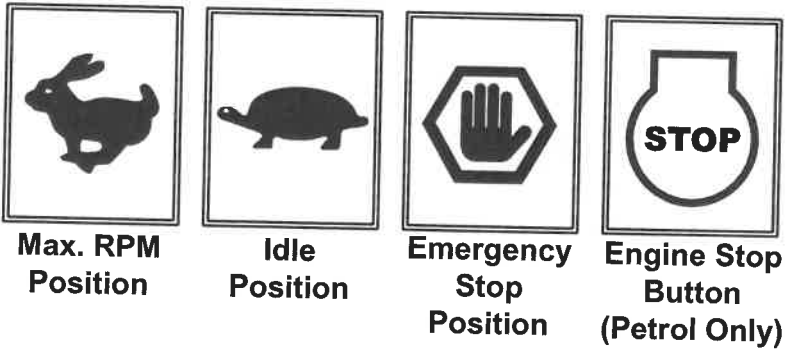


Please Recycle

C - Lifting Eye Decal (Part No. 800-99630)

Lifting Eye for use with a Sling or Mechanical Hoist.

D - Throttle Decal (Part No. 800-99628)



E - Branding Decal

Branding Decal to identify the Model of RTX Rammer.

F - Noise Decal

Guaranteed Sound Power Level of the machine in dB(A).

G - Spring Safety Decal (Part No. 800-99619)

DO NOT loosen or remove any of the Screws from the underside of the Rammer Leg. The Rammer Leg contains a highly compressed Spring which may cause serious injury if released by loosening or removing any of the Screws. Contact dealer for more information.

H - Engine Start Decal (Part No. 800-99625)

To Start the Engine, push the Carburettor Primer Bulb 4 times and then pull the Recoil Handle until the Engine fires.

J - Fuel Valve Decal (800-99634-0)

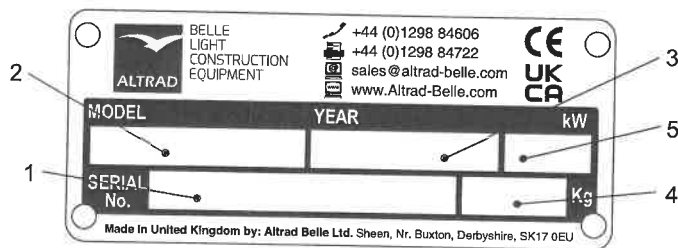
Fuel Valve 'ON' and 'OFF' positions.

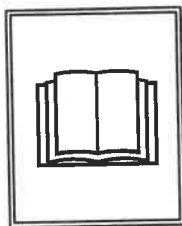
- To **START** the machine, the Fuel Valve must be in the 'ON' position.
- When the machine is not in use or being transported, the Fuel Valve must be in the 'OFF' position.

K - Serial Plate (Part No. 800-99844)

The Serial Plate contains the machine Serial Number and all other information that you may require when contacting Altrad Belle regarding your machine.

1. Serial Number.
2. RTX Rammer Model.
3. Year of Manufacture.
4. Machine Weight.
5. Machine Power.



L - Safety Decal (Part No. 800-99831)**WARNING!****Please Read
Operators
Manual****Wear
Protective
Footwear****Wear Ear
Protection****Wear Eye
Protection****M - Exhaust Fumes Warning Decal (Part No. 800-99520)**

Engines emit carbon monoxide; operate only in well-ventilated areas.

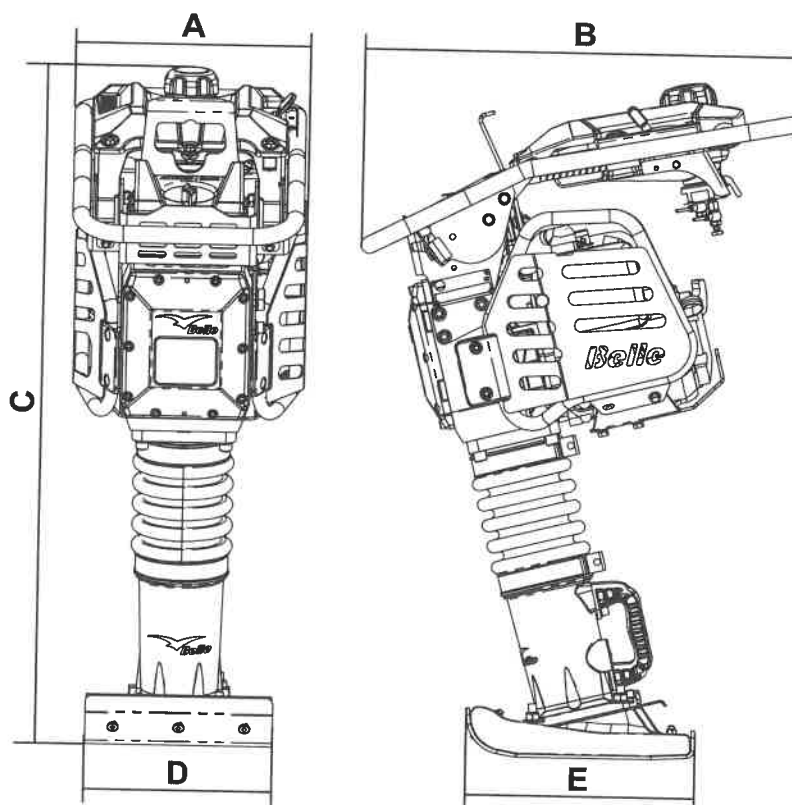
N - Hot Surface Decal (Part No. 800-99520)

CAUTION! Beware of hot surfaces around the Engine and Exhaust area.

P - Diesel Only Decal (Part No. 800-99524)

CAUTION! Only Diesel must be used in this machine (Diesel models only).

Technical Data



Model	RTX 50	RTX 50R	RTX 60C	RTX 60	RTX 60R	RTX 68	RTX 68R	RTX 70	RTX 70R	RTX 80D
A - Width (mm)	345	345	345	345	345	345	345	345	345	425
B - Length (mm)	670	670	705	705	705	705	705	714	714	700
C - Height (mm)	975	975	975	975	975	1040	1040	1040	1040	1081
D - Shoe Width*** (mm)	230	230	165	165	165	280	280	280	280	280
E - Shoe Length*** (mm)	335	335	335	335	335	335	335	335	335	335
Engine Models	Honda GX100	Honda GXR120	Honda GX100	Honda GX100	Honda GXR120	Honda GX100	Honda GXR120	Honda GX100	Honda GXR120	Yanmar L48
Engine Type	4 Stroke, OHC, Air Cooled									Single Cylinder
Maximum Output (kW)	*2.3	*2.7	*2.3	*2.3	*2.7	*2.3	*2.7	*2.3	*2.7	3.4
Fuel Type	Unleaded									Diesel
Fuel Tank Capacity (Ltrs)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Carburettor Type	Diaphragm									Injection
Starting Mechanism	Recoil									
Operational Weight (kg)	57.7	57.7	60	60	60	70	70	72	72	86
Vibration Frequency (Hz)	11	11	11	11	11	11	11	11	11	10
Impact Force (kN)	12.5	12.5	13.6	13.6	13.6	16	16	17	18	20.5
Blows Per Minute (bpm)	450 - 660					450 - 660		450 - 700		450 - 600
Stroke (mm)	52	52	52	52	52	52	52	52	52	52
Sound Power Level (dB LWA)	108	104	108	108	104	108	108	108	108	108
3 Axis Vibration** (m/s ²)	9.82	9.82	7.25	7.25	7.25	7.45	7.45	7.49	7.49	11.8

* The power rating of the petrol engines indicated in this document is the net power tested on a production petrol engine for the petrol engine model and measured in accordance with SAE J1349 at a specified rpm.
Mass production petrol engines may vary from this value. Actual power output for the petrol engine installed in the final machine will vary depending on numerous factors, including the operating speed of the petrol engine in application, environmental conditions, maintenance and other variables. Honda reserves the right to modify its specifications at any time and without notice.

** Minimum level to EN500 Part 4.

*** Other Shoe options are available. Sizes are:- 165mm (W) x 335mm (L), 230mm x 335mm & 280mm x 335mm.



General Safety

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 your **RTX**, consult your supervisor or Altrad Belle of companies.



CAUTION

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

- This machine must only be used for its intended purpose. This machine must be operated only by well trained personnel.
- The owner of this machine must observe, and train the user of the machine to observe, the effective Labour Protection Regulation in the country of application.
- This equipment is heavy and must not be lifted single-handedly, either **GET HELP** or use suitable lifting equipment.
- This machine must be operated on ground where stability is guaranteed.
- Cordon off the work area and keep members of the public and unauthorised personnel at a safe distance.
- Personal Protective Equipment (PPE) must be worn by the operator whenever this equipment is being used (See Health & Safety Section).
- 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 and **CLOSE** the fuel tap 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 RTX** until the guard has been replaced or repaired.
- Do not operate the **RTX** when you are ill, feeling tired, or when under the influence of alcohol or drugs.
- This machine is designed to eliminate the possible risks arising from its use. However, risks **DO** reside, and these residual risks are not clearly recognisable and may cause personal injury, property damage and possible death. If such unpredictable and unrecognisable risks become apparent, the machine must be stopped immediately, and the operator or his supervisor must take the appropriate measures to eliminate such risks. It is sometimes necessary for the manufacturer to be informed of such an event for future counter measuring.



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.
- When refuelling, use a proper funnel, and avoid spilling fuel over the engine.
- 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.



Health & Safety

Vibration

Some vibration from the machines operation is transmitted through the handle to the operator's hands. The Altrad Belle **RTX** range has been specifically designed to reduce hand/arm vibration levels. Refer to specifications & technical data for vibration levels and usage times (recommended maximum daily exposure time). **DO NOT** exceed the maximum usage times.

PPE (Personal Protective Equipment)

Personal injury or property damage may be caused by knocks, crushing, slipping, tripping, falling, or by flying chips due mainly to the improper or careless handling of the machine, or working in a confined area. Suitable PPE must be worn when using this equipment i.e. Safety Goggles, Gloves, Ear Defenders, Dust Mask and Steel Toe capped footwear.

Wear clothing suitable for the work you are doing. Tie back long hair and remove any jewellery which may catch in the equipment's moving parts.

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

Oil and fuel used in this machine may cause the following hazards.

- Poisoning if the fuel or oil vapour is inhaled.
- Allergies if the fuel or oil spills on the skin.
- Fire and explosion if the fuel and oil is handled near smoking or open fires.
- Do not ingest fuel or inhale fuel vapours 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



WARNING

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

Do not operate your **RTX** Rammer indoors or in a confined space, make sure the work area is adequately ventilated.

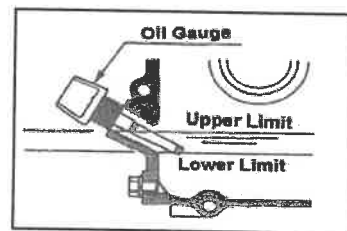
Pre-Start Checks



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 **RTX** must not be used until the fault is rectified.

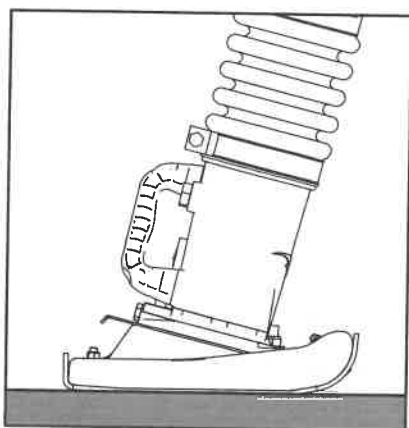
1. Thoroughly inspect the **RTX** for signs of damage.
2. Check Hoses, filler openings, Drain Plugs and any other areas for signs of leakage. Fix any leaks before operating.
3. Check the Engine Oil level and top up as necessary.
- 3.1 To check the Engine Oil level, place the machine on a flat surface ensuring the Engine is level. To achieve this place the Rammer in the position shown below.
- 3.2 Remove the Oil Gauge, and observe that the Oil is up to the rim of the filler port. Use Engine Oil with the correct viscosity. (SAE 10W-30 Mineral Oil recommended)
4. Check the Engine Fuel level and top up as necessary. Use clean Fuel. Use of contaminated Fuel may damage the Fuel system.



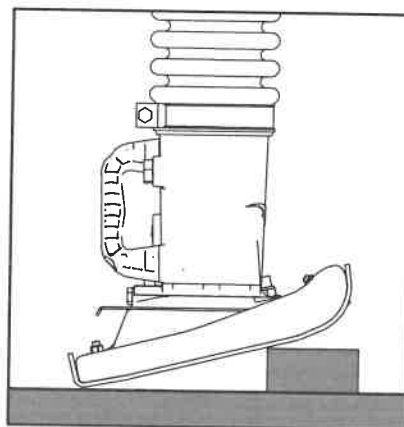
CAUTION

NOTICE: This machine uses Unleaded Gasoline/Petrol.
NEVER fill the fuel tank with a mixture of Oil and Gasoline/Petrol.

5. Check that the Air Filter is clean. Excessive dust/dirt accumulation within the filter element will cause erratic Engine operation. Clean the Air Filter element when it is contaminated (See Maintenance section).
6. Check the Rammer Leg Oil level and top up as necessary (Rammer must have been idle for at least 10 minutes before checking)
- 6.1 To check the Rammer Leg Oil level, place the machine on a flat surface ensuring the Foot is flat to the ground, as shown below.
- 6.2 The minimum level is shown by the Red Dot on the Oil Sight Glass within the Rammer Leg. (SAE 10W-30 Mineral Oil recommended)



**Rammer Leg Oil
Check Position**



**Engine Oil
Check Position**

Long Term Storage



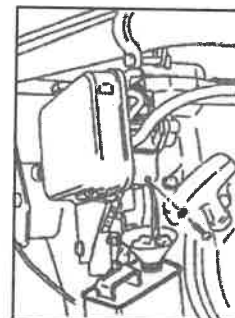
For long term storage, empty the fuel in the carburettor by running the engine with the fuel tap being closed (**Petrol Only**)

The chemical composition of fuel will deteriorate after prolonged storage. When the machine needs to be stored for a long time, remove all fuel from the fuel tank. Also remove the fuel from the float chamber of the carburettor by draining the fuel out from the drain plug (see diagram) (**Petrol Only**)

Clean up oil and dust accumulation on rubber parts.

Clean the ramming shoe and apply a light coating of oil to prevent rust formation.

Cover the machine and store in a dry place.





CAUTION *Improper operation can be hazardous. Read and understand this section before you start the machine.*



WARNING *To stop the machine in an emergency, move the Throttle Lever to the Emergency Stop position. This will immediately stop the machine from vibrating.*

Honda GX100, GX120 & GXR120

1. Open the fuel cock/tap.
2. Set the speed control lever to the **STARTING** position (Halfway between **HIGH** and **LOW** position).
3. Move the choke lever to the **CLOSED** position.
4. Push the Carburettor Primer Bulb 4 times (or at least 10 times when the machine is new or after machine has had the fuel drain).
5. Taking a firm hold of the Operating handle with one hand, grasp the recoil starter handle with the other, Pull the recoil starter handle until engine resistance is felt, then allow the starter to return.
6. Taking care not to pull the starter 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 **OPEN** position.
9. Allow the engine run at idle for a few minutes to warm up.
10. After the engine has warmed up, the machine is ready for operation.
11. Move the throttle lever to the high speed position quickly to prevent damage from occurring to the clutch. The 'Full Throttle' position of this machine has been preset at the factory to achieve optimum machine performance.
12. With the engine running in the full throttle position, the machine will move forward and compact loose 'lifts'
13. In preparation for stopping the engine, move the throttle lever to the **LOW** position.
14. Allow the engine to idle for 1-3 minutes.
15. Push and hold the **RED** Engine Stop button.
16. Close the fuel cock/tap.
17. Pull the recoil starter slowly until you feel resistance. Then release your hand from the starter knob to set it back to its original position. This will prevent any air or humidity from entering into the cylinder.

Yanmar L48

1. Slide the Engine Speed Control Lever to the **RUN** position.
2. Taking a firm hold of the Operating handle with one hand, grasp the recoil starter handle with the other, Pull the recoil starter handle until engine resistance is felt, then allow the starter to return.
3. Push the decompression lever down and release it. The decompression lever will automatically return to the original position when the engine starts.
4. Taking care not to pull the starter rope fully out, pull the starter handle briskly.
5. Repeat until the engine fires.



CAUTION *In cold weather if you have trouble starting the engine, remove the Oil Plug and add 2cc of engine oil to the oil port and reinsert the oil plug.*

6. Allow the engine run at idle for a few minutes to warm up.
7. After the engine has warmed up, the machine is ready for operation.
8. Move the throttle lever to the high speed position quickly to prevent damage from occurring to the clutch. The 'Full Throttle' position of this machine has been preset at the factory to achieve optimum machine performance.
9. With the engine running in the full throttle position, the machine will move forward and compact loose 'lifts'
10. In preparation for stopping the engine, move the throttle lever to the **LOW** position.
11. Allow the engine to idle for 1-3 minutes.
12. To stop the engine, set the engine speed lever to the slide the Engine Speed Control Lever to the **STOP** position

Start & Stop Procedure



NOTICE: The optimum maximum engine revolution has been set at the factory as follows:

Model	Engine	Maximum RPM	
		Optimum	Upper Limit
RTX 50	Honda GX100	3,800 +/- 50	3,850
RTX 50R	Honda GXR120	3,800 +/- 50	3,850
RTX 60	Honda GX100	3,800 +/- 50	3,850
RTX 60R	Honda GXR120	3,800 +/- 50	3,850
RTX 68	Honda GX100	3,800 +/- 50	3,850
RTX 68R	Honda GXR120	3,800 +/- 50	3,850
RTX 70	Honda GX100	4,050 +/- 50	4,100
RTX 70R	Honda GXR120	4,050 +/- 50	4,100
RTX 80D	Yanmar L48	3,400 +/- 50	3,450



CAUTION

DO NOT alter this setting since irregular vibration or damage to the gear transmission mechanism can result, and both engine and machine warranties will be automatically voided.

Operation



Lifting

Where it is necessary to use lifting equipment to position the **RTX**, check and confirm that the rubber mounts on the operation handle are not damaged or cracked. If they are damaged or cracked, replace the rubber mounts before attempting to lift the machine. Also make sure that the lifting equipment has a WLL (Working Load Limit) suitable for the **RTX's** weight (See specification chart or the machine Serial Plate). Attach suitable chains or slings **ONLY** to the lifting point on top of the **RTX's** operating handle.

- **NEVER** leave the engine running whilst transporting or moving the **RTX's**, even if it is only a short distance.

Once the checks listed in the 'Pre-Start' section have been carried out, you may start the engine.

The Altrad Belle **RTX** range of tampers are fitted with a centrifugal clutch, this allows the engine to run at idle without driving the crank mechanism. As the engine speed is increased the clutch will engage and the engine will drive the crank mechanism.

- To avoid damage to the centrifugal clutch, move the throttle lever quickly from the L to H position.



CAUTION

For correct operation, the engine speed should be set to maximum.

- Avoid operating the machine on a fully compacted, hard, or non-yielding surface. Otherwise, the gear transmission mechanism will be damaged, and the life of the machine will be greatly reduced.
- When working in a narrow trench, if the ramming shoe should get caught between the walls of the trench, the rammer may miss-strike and can be severely damaged. The ramming shoe may especially be damaged severely.
- Ensure that the rammer is steered only by using the handle grip. It should only be pushed. The rammer must not be pressed into the materials being compacted. Excessive pressure on the operating handle will lead to unsatisfactory compaction due to the fact that the jumping action is reduced.

Transportation.

When transporting or storing the machine, place the machine in an upright position if at all possible. Should the machine be required to be laid down, **NEVER** attempt to transport the machine in a manner that the air cleaner faces downwards. Otherwise, the oil in the cylinder may get into the combustion chamber or in the air cleaner, which may result in starting difficulties. Laying the machine forwards (The crankcase cover of the rammer facing downwards) may not cause any spill of the engine oil into the cylinder or air cleaner of the engine. However, if the engine is still hot, spilt fuel on the engine may cause fire. Lay the machine after the machine is completely cooled.

The machine fitted with the transporting roller on the operating handle may be easily loaded and unloaded from a vehicle. Tilt the machine forwards until the transporting roller touches the floor of the vehicle. Lift the lower part of the machine using the grab handle provided at the ramming shoe, and push forward to load the machine. During transportation, the machine should be tied firmly, and placed in an upright position if at all possible. To unload the machine, tilt the machine forward, until the roller touches the floor. Slightly lift the lower part of the machine, and pull the machine out.

Operation at High Altitude

For continuous High-Altitude operation above 1,000m (3,000FT), it will be necessary to change the engine main jet to a type that will allow for correct fueling of the engine. Otherwise, the unit will suffer from a lack of engine power and not work correctly (**Petrol Only**)

Problem	Cause	Remedy
Engine will not start	No fuel	Fill Fuel Tank
	Fuel Tap has been closed	Open fuel tap.
	Engine not primed. (GX100 Only)	Push the Carburettor Primer Bulb 4 times and pull the Recoil Handle until the Engine fires
	Engine not primed. (Diesel Only)	See the Service & Maintenance section of this Manual.
	Spark Plug contaminated or damaged. (Petrol Only)	Replace spark plug.
	Faulty Carburettor. (Petrol Only)	Service the Carburettor
Engine stops suddenly, or stops when the engine rpm is increased.	See Above	See Above
	Main jet of the Carburettor clogged with dirt. (GX120 Only)	Take out the main jet of the Carburettor and clean with Compressed air.
	Air filter element dirty.	Clean the element.
	Spark plug cap is loose. (Petrol Only)	Tightly fit cap to plug.
Engine runs, but machine does not produce impact.	Lack of engine power	See above.
	Clutch is slipping	Dismantle clutch assembly, Clean shoe and drum with proper solvent. Replace clutch shoe if necessary.
	Crank mechanism is damaged	Contact Dealer.

Maintenance

The Altrad Belle **RTX** Range is 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.

Always set the **RTX** on level ground to ensure any fluid levels will be correctly read. Only use recommended oils (see chart).

Servicing the Engine

Service the engine according to the engine manufacturer's specifications. Refer to the engine operation and maintenance manual.

Yanmar L48 Engine Priming

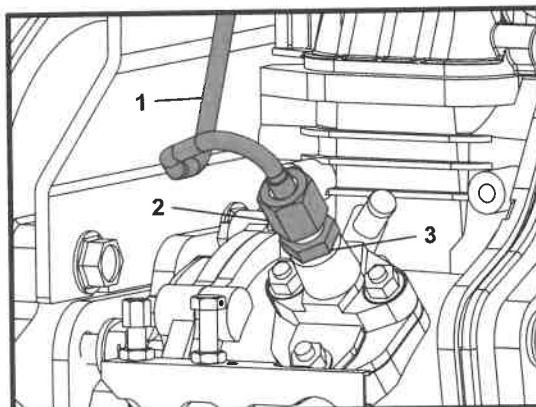
In the event of running out of Diesel or after a change of the Fuel Filter, the Yanmar engine will need to be primed. Please follow the below instructions.



CAUTION

Before starting the Priming procedure, please ensure the Fuel Tank is full and the Fuel Cap is not fitted to the tank.

1. Open the fuel cock/tap.
2. Slide the Engine Speed Control Lever to the **RUN** position.
3. Using 2 x 17mm Spanners, unlock the Injector Pipe (**Item 1**) by loosening the Injector Pipe Nut (**Item 2**).
4. Slacken the Injector Pump Nozzle (**Item 3**) by 2 full revolutions
NOTE:- DO NOT remove the Injector Pump Nozzle.
5. Hold the Injector Pipe away from the Injector Pump Nozzle and wait until Diesel is running freely without any air bubbles.
6. Re-tighten the Injector Pump Nozzle to a setting of 12Nm.
7. Re-fit the Injector Pipe and tighten to 12Nm.
8. Re-fit the Fuel Cap and start the engine using the Start and Stop Procedure section of this manual.



Every 8 Hours or Daily

1. Check for loose bolt and nuts, retighten if necessary.
2. Check and clean air filter element, re-lube the element according to the engine manufacturer's recommendations. If operating conditions are unusually dusty and severe, filter element cleaning should be done more frequently.
3. Check oil level in crankcase of engine and replenish as necessary. Check oil level in the ramming cylinder as per following procedures.
- 3a. Make sure that the machine has not been run in the last 10 minutes.
- 3b. Set the machine on a level surface and remove the oil plug.
- 3c. The top surface of the oil must be seen just below the lower rim of the hole for oil plug. Replenish as necessary.

NOTICE: Care should be taken not to overfill the ramming cylinder with oil. Overfilling will cause excessive load on the engine, which may result in poor or irregular vibration.

First 20 Hours of Operation

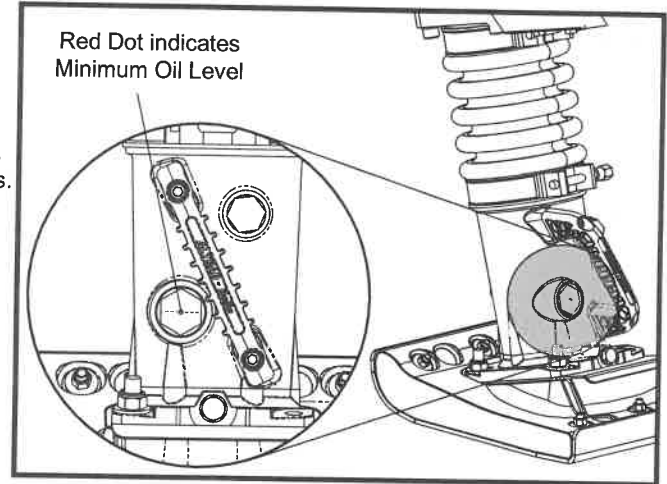
1. Replace the Oil in the Ramming Cylinder

Every 50 Hours or Weekly

2. Check for loose Bolts and Nuts. Retighten if necessary.

Every 200 Hours.

3. Change the Ramming Cylinder Oil. Do not overfill.



Fuel and Lubricant

Model	Fuel		Engine Crankcase			Ramming Cylinder	
	Type of Oil	Capacity	Type Of Oil	Engine	Capacity	Type of Oil	Capacity
RTX 50	Unleaded Petrol	2.5 Litres	10W-30, API, SF/CC, CD	GX100 / GXR120	0.6 Litres	10W-30, API, SF/CC, CD	0.7 Litres
RTX 60							0.8 Litres
RTX 68							
RTX 70							
RTX 80D	Diesel			L48	0.8 Litres		