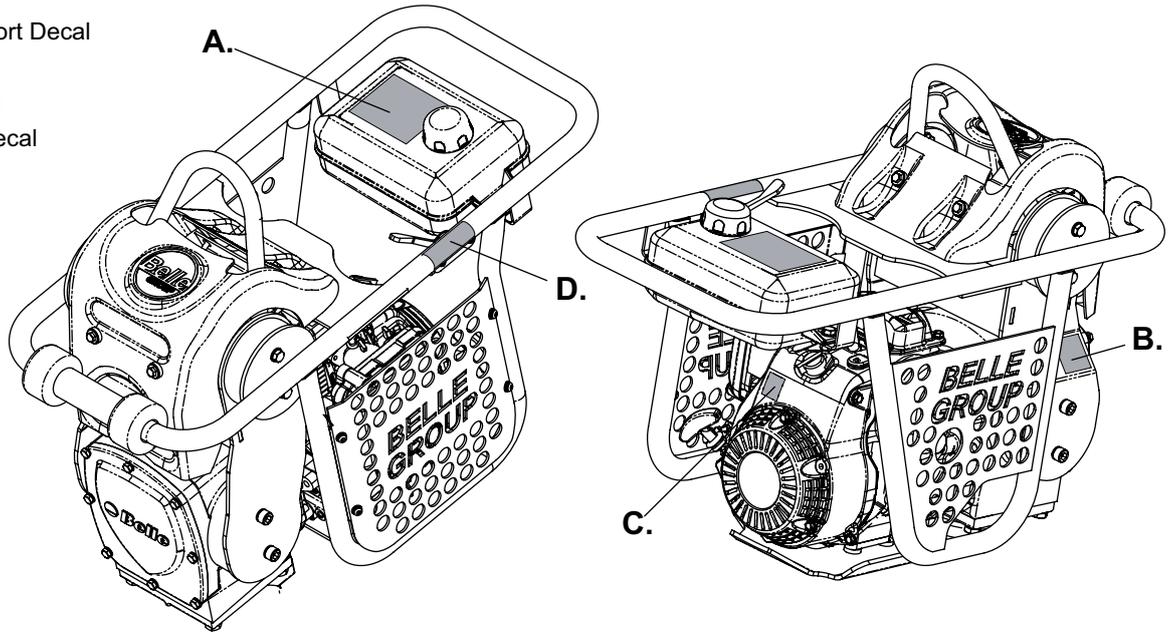


- A. Fuel and Transport Decal
- B. Safety Decal
- C. Fuel Valve Decal
- D. Throttle Lever Decal



**A - Fuel and Transport Decal (Part No. 800-99895)**

Only use 'SP95 Unleaded Petrol'.

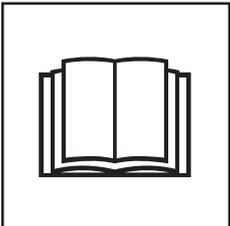
**On Site Transport**

The rammer may be moved vertically by 2 people, or laid only on the Transport Rollers.

**Road Transport**

The 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, in stable position and strongly strapped down to guard against rolling or sliding.

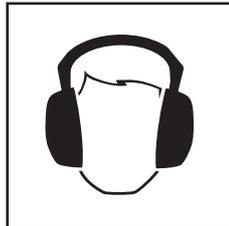
**B - Safety Decal (800-99840)**



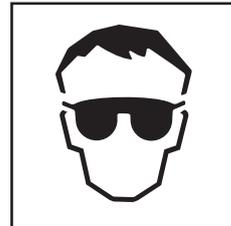
**Please Read  
Operators Manual**



**Wear Protective  
Footwear**



**Wear Ear  
Protection**



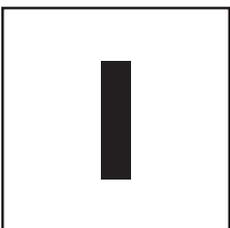
**Wear Eye  
Protection**

**C - Fuel Valve Decal (800-99873)**

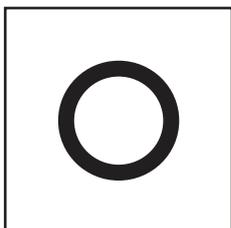
Fuel Valve 'ON' and 'OFF' positions.

- To **START** the machine, the Fuel Valve must be in the 'ON' position.
- To **STOP** the machine, the Fuel Valve must be in the 'OFF' position.

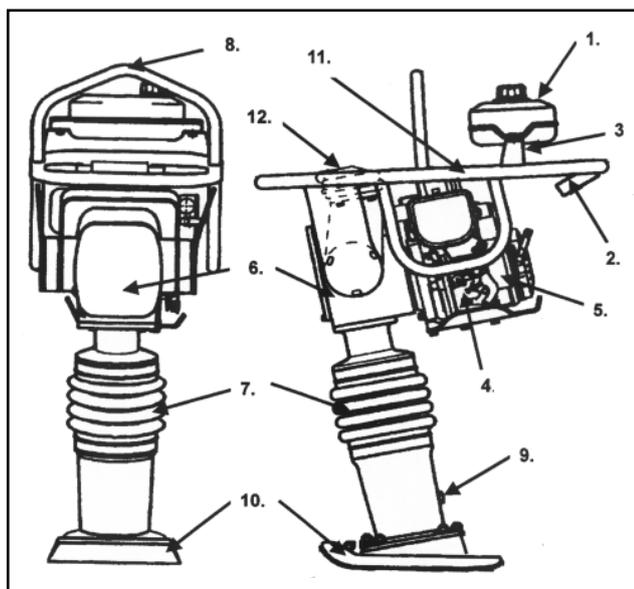
**D - Fuel Valve Decal (800-99843)**



**Max. RPM  
Position**



**'OFF' Position**



1. Fuel Tank.
2. Throttle Lever.
3. Fuel ON / OFF lever.
4. Engine.
5. Engine ON / OFF Switch.
6. Crankcase.
7. Bellows.
8. Lifting Point.
9. Oil Plug.
10. Ramming Shoe.
11. Operating Handle.
12. Primary Air Cleaner  
(For RT50 with Primary Air Cleaner).

## 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
Handle	Steel
Ramming Shoe	Plywood and Steel
Rubber Isolators	Rubber and Steel
Bellows	Urethane
Crankcase	Aluminium
Crankcase Cover	Aluminium
Gears	Steel
Engine	Steel and Aluminium
Various Parts	Steel and Aluminium

## Technical Data

Model	RT50	RT65
Engine Models	Honda GX100 & Robin EH09D	Honda GX100
Engine Type (Honda)	4 Stroke, OHC, Air Cooled	4 Stroke, OHC, Air Cooled
Engine Type (Robin)	4 Stroke, OHV, Air Cooled	N/A
Maximum Output (Honda)	2.3 kW	2.3 kW
Maximum Output (Robin)	N/A	N/A
Fuel Type	Unleaded Petrol	Unleaded Petrol
Fuel Tank Capacity	2.0 Litres	2.0 Litres
Starting Mechanism	Recoil Starter	Recoil Starter
Operational Weight	50Kg	67Kg
Overall Dimensions (LxWxH)	705 x 380 x 990mm	705 x 345 x 1090mm
Ramming Shoe Size (WxL)	250 x 332mm	250 x 332mm
Vibration Frequency	570-635 v.p.m	620 v.p.m
Noise Level	108 dB(A) (Robin) / 104 dB(A) (Honda)	108 dB(A)
3 Axis Vibration	13.82 m/sec <sup>2</sup>	10.04 m/sec <sup>2</sup>
Usage Time (Mins)		
- EAV 2.5m/s <sup>2</sup>	-	30.55
- ELV 5.0m/s <sup>2</sup>	-	122.19

# Technical Data



Model	RT66	RT74
Engine Models	Honda GX120K1 & Robin EH12-2D	Honda GX120K1
Engine Type (Honda)	4 Stroke, OHV, Air Cooled	4 Stroke, OHV, Air Cooled
Engine Type (Robin)	4 Stroke, OHV, Air Cooled	N/A
Maximum Output (Honda)	2.6 kW	2.8 kW
Maximum Output (Robin)	2.8 kW	N/A
Fuel Type	Unleaded Petrol	Unleaded Petrol
Fuel Tank Capacity	3.0 Litres	3.0 Litres
Starting Mechanism	Recoil Starter	Recoil Starter
Operational Weight (Honda)	69Kg	77Kg
Operational Weight (Robin)	66Kg	N/A
Overall Dimensions (LxWxH)	763 x 420 x 1045mm	755 x 420 x 985mm
Ramming Shoe Size (WxL)	280 x 332mm	300 x 335mm
Vibration Frequency	550-620 v.p.m	550-620 v.p.m
Noise Level	107 dB(A) (Robin) / 108 dB(A) (Honda)	108 dB(A)
3 Axis Vibration	22.63 m/sec <sup>2</sup>	13.54 m/sec <sup>2</sup>

**Vibration Level:** Minimum Level - EN500 Part 4.

# 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 RT, consult your supervisor or Belle Group 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. When working near the rim of excavated trenches, use the machine properly so that the machine may not collapse or fall down.
- 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 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 RT until the guard has been replaced or repaired.
- Do not operate the RT 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 Belle Group RT 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 RT Rammer indoors or in a confined space, make sure the work area is adequately ventilated.



## Intended Use

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

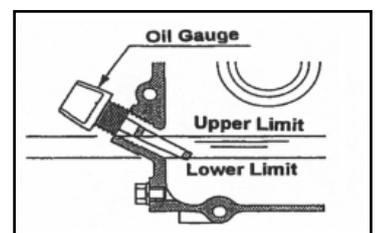


## Pre-Start Checks

### 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 RT must not be used until the fault is rectified.

1. Thoroughly inspect the RT 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 Place the machine on a level surface, and check the oil level in the engine.
  - 3.2 Remove the oil gauge, and observe that the oil is up to the rim of the filler port. Use proper engine oil with the proper viscosity. SAE 10W-30 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).

# Start & Stop Procedure



## **CAUTION**

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

1. Open the fuel cock.
2. Set the engine switch to the ON position.
3. Set the speed control lever to the STARTING position (Halfway between HIGH and LOW position).
4. Move the choke lever to the CLOSED position.
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 let starter return.
6. Taking care not to pull the starters 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. Let 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 'H' 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. Set the engine switch to the OFF position. Do not touch the HOT engine part at this time.
16. Close the fuel cock.
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.

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

Model	Engine	Maximum RPM	
		Optimum	Upper Limit
RT50	Robin EH09D	3,800 +/- 50	4,000
RT50	Honda GX100	3,800 +/- 50	4,000
RT65	Honda GX100	3,750 +/- 50	4,000
RT66	Robin EH12-2D	3,650 +/- 50	3,700
RT66	Honda GX120	3,400 +/- 50	3,450
RT74	Honda GX120	3,400 +/- 50	3,450

The Max rpm as shown above is the number of ignitions per minute. GX120K1 engine for RT66 and RT74 have the final gears at the ration of 17/16, and the number of ignitions per minute is different from the number of rotations of the engines Power Take-Off Shaft.



## **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 RT, check and confirm that the rubber isolators on the operation handle is not damaged or cracked. If they are cracked or damaged, replace the rubber isolators before attempting to lift the machine. Also make sure that the lifting equipment has a WLL (Working Load Limit) suitable for the RT's weight (See specification chart on page 5 or the machine number plate). Attach suitable chains or slings ONLY to the lifting point on top of the RT's operating handle.

- NEVER leave the engine running whilst transporting or moving the RT, even if it is only a short distance.
- The height of the operating handle can be adjusted within the range of 850 ~ 880 mm. Loosen three bolts at each side of the operating handles base, and retighten them at the desired handle height. Note, that when the handle is set too high, excessive vibration may be transmitted through the handle.

## Having carried out the checks listed in the 'pre-start' section, you may start the engine.

The Belle Group RT 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. 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.
- Make certain 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 the unsatisfactory compaction due to the fact that the jumping action is hindered.

## 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 lay 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 to 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.

Please contact BELLE group companies for details.



# Trouble Shooting Guide

Problem	Cause	Remedy
Engine will not start	No fuel	Fill Fuel Tank
	Fuel Tap has been closed	Open fuel tap.
	Engine turned OFF	Turn engine ON
	Spark Plug contaminated or damaged.	Replace spark plug.
	Faulty Carburettor	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	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	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 Belle Group 'RT' 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 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.

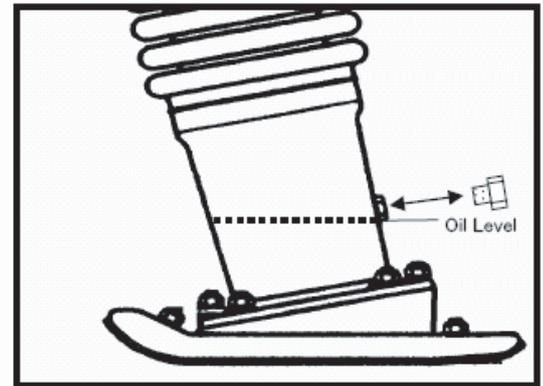
Always set the RT on level ground to ensure any fluid levels will be correctly read. Only use recommended oils (see chart).

## Servicing the Engine

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

### Maintenance : 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.
  - Make sure that the machine has not been run in the last 10 minutes.
  - Set the machine on a level surface and remove the oil plug.
  - 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.

### Maintenance : First 20 hours of operation

1. Replace the Oil in the Ramming Cylinder

### Maintenance : Every 50 hours or weekly

2. Check for loose bolts and nuts. Retighten if necessary.

### Maintenance : 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
RT50	Unleaded Petrol	2.0 Litres	SAE	EH09D	0.3 Litres	SAE	0.7 Litres
RT50		2.0 Litres	10W-30,	GX 100	0.6 Litres	10W-30,	0.7 Litres
RT65		2.0 Litres	API,	GX 100	0.6 Litres	API,	0.7 Litres
RT66		3.0 Litres	SG,	EH12-2D	0.6 Litres	SG,	0.8 Litres
RT66		3.0 Litres	SF/CC,	GX120 K1	0.6 Litres	SF/CC,	0.8 Litres
RT74		3.0 Litres	CD	GX120K1	0.6 Litres	CD	0.8 Litres

## Long Term Storage

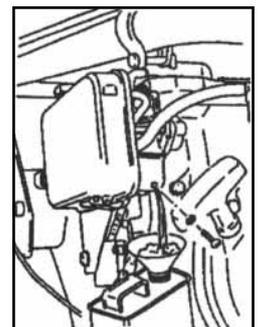
For long term storage, empty the fuel in the carburettor by running the engine with the fuel tap being closed.

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).

Clean up oil and dust accumulation on rubber parts.

Clean the base plate and apply a light coating of oil to prevent rust formation.

Cover the machine and store in a dry place.



**CAUTION**

Please ensure that you have read and fully understand the information below before attempting to transport the RT Rammer.

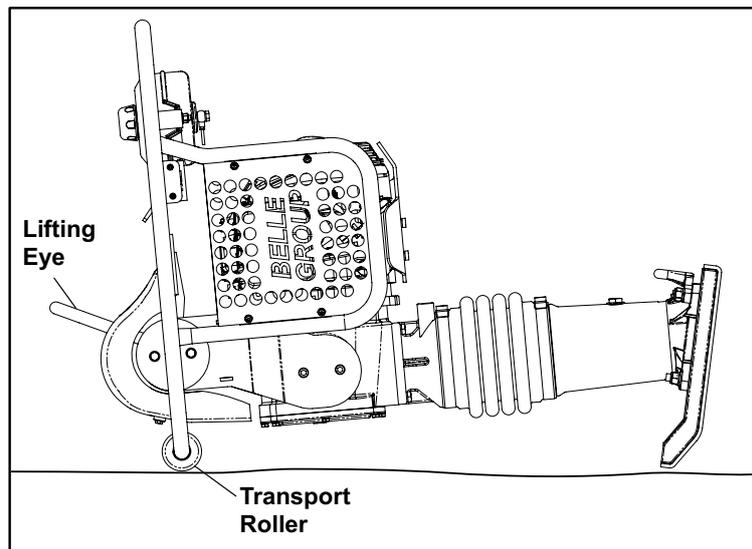
**ON SITE TRANSPORT**

The rammer may be moved vertically by 2 people, or laid only on the Transport Rollers (See Image Below)

**ROAD TRANSPORT**

The 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, in stable position and strongly strapped down to guard against rolling or sliding.



Your new Belle Group Rammer Tamper 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 recognised agents.
3. Transportation or shipment costs to and from Belle Group or their recognised agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

The following components are not covered by warranty.

- Engine air filter
- Engine spark plug

Belle Group 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 Belle Group, either by telephone, by Fax, by Email, or in writing.

**For warranty claims:**

Tel : +44 (0)1538 380000,

Fax : +44 (0)1538 380038,

Email : [Warranty@belle-group.co.uk](mailto:Warranty@belle-group.co.uk)

**or Write to:**

Belle Group Warranty Department,  
Unit 5 Bode Business Park,  
Ball Haye Green,  
Leek,  
Staffordshire,  
ST13 8BW,  
England