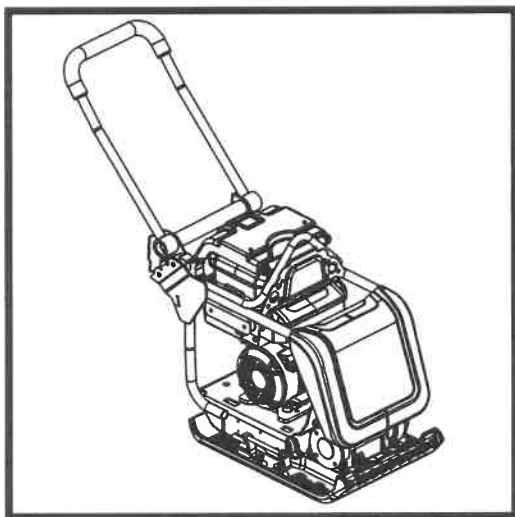




BELLE PCX 13/40E+

870/10026/4
03/25



- ⒸGB Operators Manual
- ⒸF Manuel De L'Opérateur
- ⒸE Manual del Operador
- ⒸD Bedienungshandbuch
- ⒸPL Instrukcja Obsługi

8

32

56

80

104

2

UKCA Declaration of Conformity

3 - 7

EC/EU Declaration of Conformity



BELLE
LIGHT
CONSTRUCTION
EQUIPMENT

Declaration Of Conformity (DOC)

We, **Altrad Belle, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB** declare that the DoC is issued under our sole responsibility and belongs to the followings product(s):



PRODUCT TYPE

MODEL.....

SERIAL No.....

DATE OF MANUFACTURE

SOUND POWER LEVEL
MEASURED /
.....(GUARANTEED)

WEIGHT.....



Object of the Declaration:

Battery powered single-direction plate compactor used for soil compaction on new developments, repairs and maintenance jobs with large aggregates, cohesive material or moist content.

The object of the declaration described above is in conformity with the relevant **Statutory Requirements**:

- | | |
|-----------------|---|
| - 2008 No. 1597 | Supply of Machinery (Safety) Regulations 2008 |
| - 2001 No. 1701 | Noise Emission in the Environment by Equipment for use
Outdoors Regulations 2001 |
| - 2016 No. 1091 | Electromagnetic Compatibility Regulations 2016 |
| - 2012 No. 3032 | The Restriction of the Use of Certain Hazardous Substances in
Electrical and Electronic Equipment Regulations 2012 |

The following designated standards and technical specifications have been applied:

- | | |
|---------------------|--|
| - EN ISO 12100:2010 | Safety of machinery |
| - EN 500-4:2011 | Mobile road construction machinery. Safety. |
| - ISO 3744:2010 | Acoustics — Determination of sound power levels and sound energy
levels of noise sources using sound pressure |

ANP CERTIFICATION LTD. (Approved Body, number 8500) 2 Parkfield Street, Manchester, M14 4PN, UK carried out Internal Control of Production with Assessment of Technical Documentation and Periodical Checking as per Schedule 9 of SI 2001 1701

Technical Files are held by **Ray Neilson** at the Altrad Belle address stated above:-

Place of Declaration:-

Sheen,
Nr. Buxton,
Derbyshire,
SK17 0EU,
UK

Signed by:

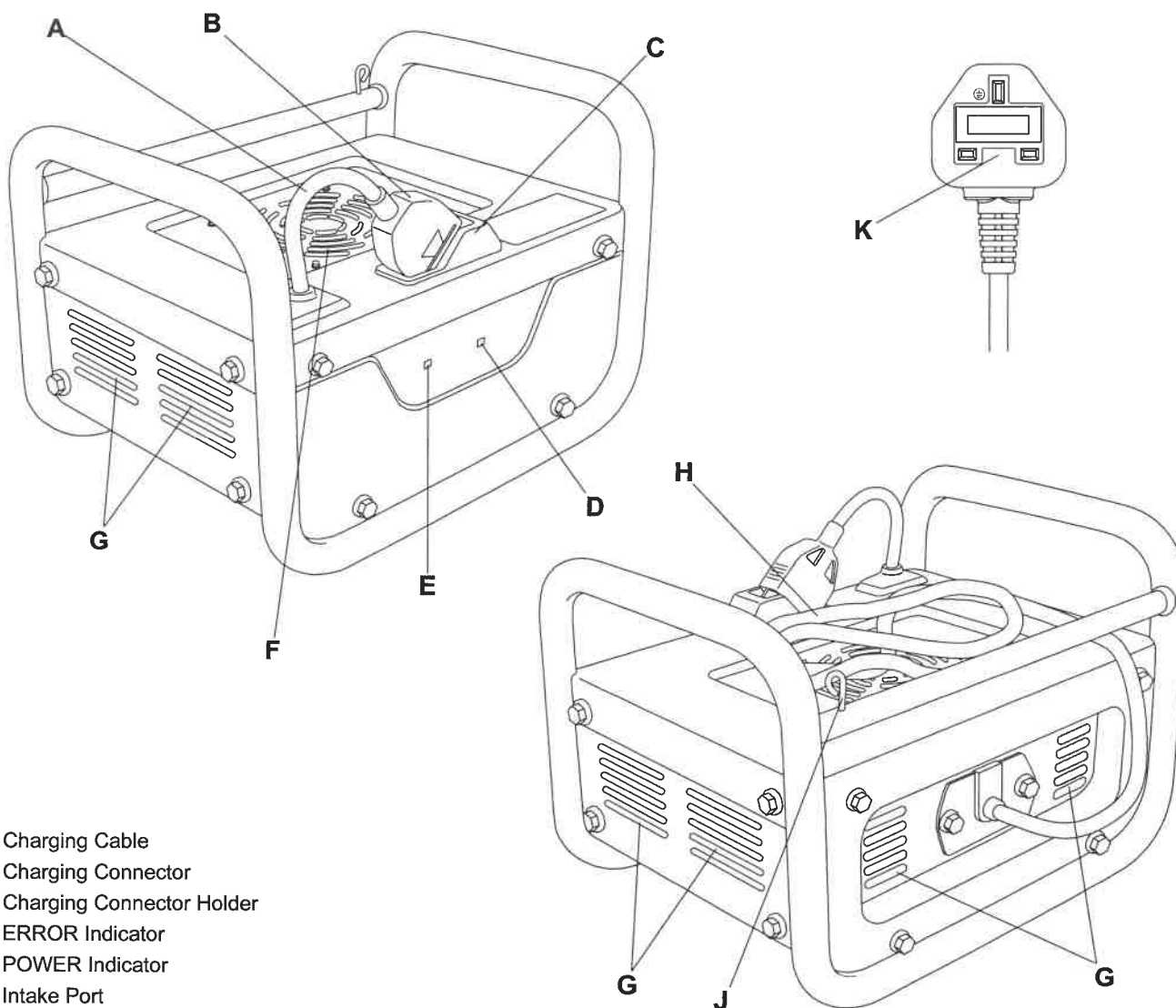
Ray Neilson

Date of Declaration:-

February 2022

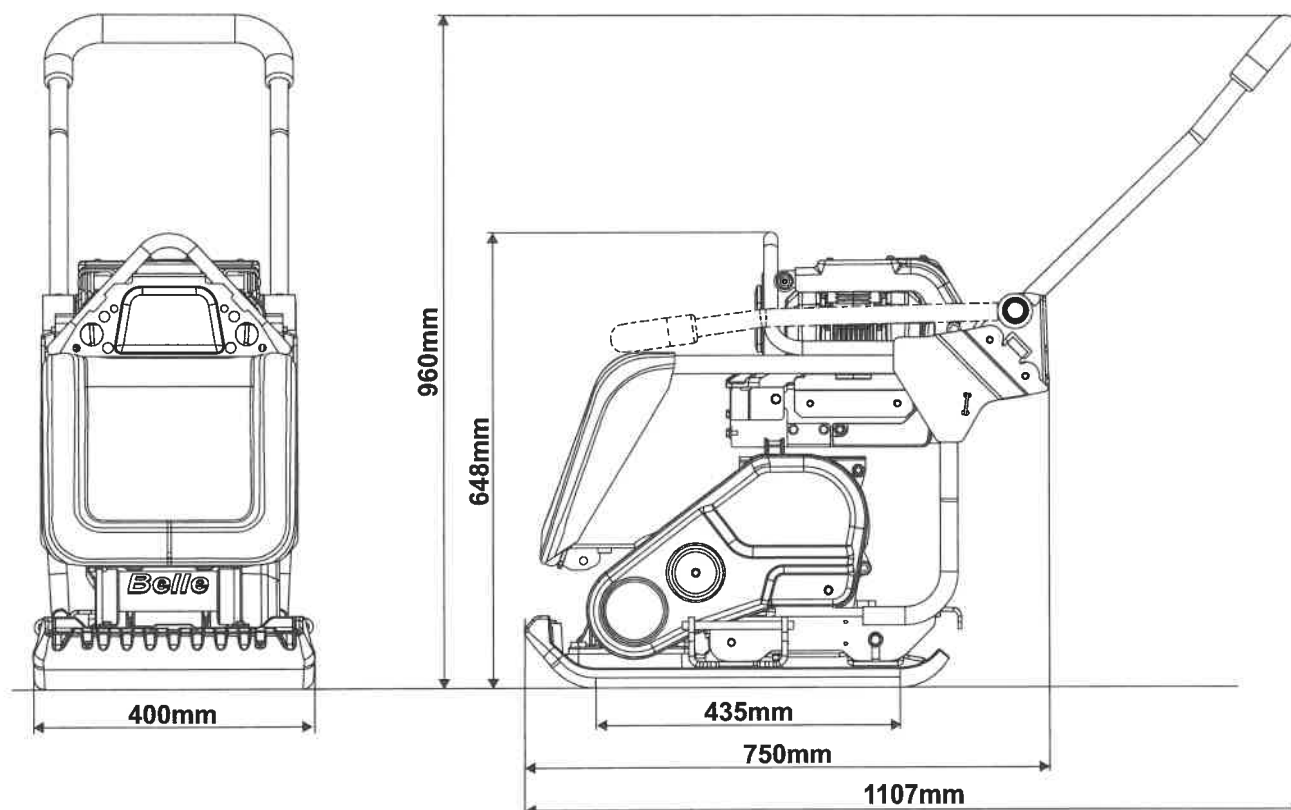
Managing Director
*On behalf of Altrad Belle
Sheen, Derbyshire, UK*

BATTERY CHARGER



- A. Charging Cable
- B. Charging Connector
- C. Charging Connector Holder
- D. ERROR Indicator
- E. POWER Indicator
- F. Intake Port
- G. Exhaust Port
- H. AC Cable
- J. AC Plug Holder
- K. AC Plug

STATIC DIMENSIONS



Model	PCX 13/40E+
** Motor (Hp / kW)	2.2 / 1.6
Vibrator Force (KN)	13
Frequency (Hz)	101
Static Pressure (kg/m ²)	560
Max Gradient (°)	20
Travel Speed (m/min)	20
* HAV Level (m/s ²)	<2.5
Weight (kg)	89
Motor RPM:	3600 / 3000 / 2800
Sound Power Level (dB(A))	101

* Minimum level to EN500 Part 4.

** 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.



Technical Data

Model	Honda eGX Battery
Battery Type	Li-Ion
Weight (kg)	6.4
Dimensions LxWxH (mm)	268 x 233 x 150
Voltage: (V)	72
Energy Rating (Wh)	720
Energy Capacity (Ah)	10
Charge Time (Hr)	1.10

Model	Honda eGX Battery Charger
Dimensions LxWxH (mm)	266 x 352 x 247
Weight (kg)	11
Input Voltage AC (v)	100 to 240
Input Frequency (Hz)	50 / 60
Output voltage DC (v)	82.8
Output current (A)	8.5
Batteries that can be charged	DP72104Z
Charging temperature range (°C / °F)	5 to 30 / 41 to 86

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 the machine, consult your supervisor or Altrad Belle.



WARNING

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

This machine is designed to eliminate the possible risks arising from the use of it. However, risks **DO** reside, and these residual risks are not clearly recognizable, and may cause personal injury or property damage, and possible death. If such unpredictable and unrecognizable risks become apparent, the machine must be stopped immediately, and operator or his supervisor must take appropriate measure to eliminate such risks. It is sometimes necessary that the manufacturer must be informed of such event for future counter measuring.

ALWAYS keep the Operator's Manual and any other manuals that accompany this machine to hand. Immediately replace any manuals that may have been lost or are now illegible.

PRE-START CHECKS

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 machine must not be used until the fault is rectified.

1. Thoroughly inspect the machine for signs of damage. Check components are present and secure.
2. **ENSURE** there is no debris or excessive dirt present on the machine.
3. **ENSURE** the battery pack is securely attached to power unit and the power cable is connected.
4. **ENSURE** the battery pack is sufficiently charged.

Once all the above checks have been made, test run the machine checking that all switches function correctly and all indicators light when the power unit is turned on.

WORKSITES

- **ENSURE** the operator is familiar with the working surroundings. Worksites can be hazardous.
- **ALWAYS** keep the work area tidy and clear of any obstructions that may lead to accidents and/or injuries.
- Cordon off the work area and keep members of the public and unauthorized personnel at a safe distance.
- This machine is heavy and must not be lifted single-handedly, either **GET HELP** or use suitable lifting equipment. A Wheel Kit Transport option is also available for this machine (see our website Altrad-Belle.com)

OPERATING THE MACHINE

- **ENSURE** the operator has had adequate training prior to use, is familiar with all controls and knows how to safely switch the machine **OFF** before it is switched **ON** in case you get into difficulty.
- 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 and **DO NOT** wear loose jewellery that could be caught in moving parts
- **ALWAYS** inform colleagues of what you will be doing and where you will be working.
- **DO NOT** operate the machine when you are ill, feeling tired, or when under the influence of drugs / alcohol.
- **NEVER** leave the power unit 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.
- When working on a gradient **ALWAYS** work up and down the slope, not across.
- **ALWAYS** proceed with caution when working around utilities (gas, water pipes electrical lines)
- **ENSURE** extra care is taken when working near to banks or trenches where there is a danger of the material collapsing.
- When working within trenches or pits **ALWAYS** pay attention to the side walls as the vibration from the machine could cause them to collapse.
- Some vibration from the compaction operation is transmitted through the handle to the operator's hands. The Altrad Belle Plate Compactor range has been specifically designed to reduce hand/arm vibration levels. Refer to the Technical Data section for vibration levels and usage times (recommended maximum daily exposure time). **DO NOT** exceed the maximum usage times.
- The compacting process will occasionally produce dust, which may be hazardous to your health. Always wear a mask that is suited to the type of dust being produced.



Safety Instructions

BATTERY CHARGER

- To reduce risk of injury, charge **ONLY DP72104Z** type rechargeable batteries. Other types of batteries may burst causing personal injury and damage.
- This Battery Charger is not intended for use by children or persons with physical, sensory or mental limitations or a lack of experience or knowledge. **DO NOT** allow children to play with this Battery Charger - **IT IS NOT A TOY!**
- Charge only Li-ion Honda Battery Packs that have a capacity of 10 Ah with 80 battery cells. The battery voltage must match the battery charging voltage of the Battery Charger. **DO NOT** charge non-rechargeable Battery Packs, otherwise there is danger of fire and explosion.
- Continued use of the Battery Charger under unusual conditions could result in fire or electric shock, which may kill or seriously hurt you.
- **DO NOT** modify the Battery Charger. Modifying, disassembling or repairing the Battery Charger could result in fire or electric shock, which can cause death or serious injury. Disassembly and repairs require specialized knowledge, contact your servicing dealer.
- Before using the Battery Charger / charging a Battery Pack, people who are using an electronic medical device must confirm how their device might be affected. The electromagnetic radiation produced during charging may affect the operation of electronic medical devices, which may kill or seriously hurt you.
- If the Battery Pack leaks fluid or smells strangely, stop using it and contact your servicing dealer. Battery Pack contains combustible organic solvents as an electrolyte solution. Mistakenly handling them may result in burns or serious injuries.

DO NOT use the Battery Charger in the following situations.

- Locations where the Battery Charger becomes unstable.
- Locations where there is flammable gas or combustible materials
- Locations that are very cold or very hot, such as in direct sunlight or near a heater
- Locations exposed to water or excessive humidity
- Locations where children or pets might play with it

ALWAYS follow the rules below.

- **DO NOT** charge Battery Packs if there is the risk of a lightning storm.
- **DO NOT** charge if the electric outlet is loose.
- **DO NOT** charge if the Battery Charger, AC cable, or the electric outlet is damaged or deformed, dusty, dirty, or rusty.
- **DO NOT** plug too many power cords into one electric outlet.
- **DO NOT** charge while the AC cable is wound up.
- **DO NOT** stand on or place heavy objects on the Battery Charger or AC cable.
- **DO NOT** pull or repeatedly bend the AC cable or charging cable with an excessive force.
- **DO NOT** touch the Battery Charger or AC cable if your hands are wet.
- **DO NOT** splash or submerge the Battery Charger or AC cable in water.
 - If the Battery Charger or AC cable is submerged in water while you are charging, do not touch the Battery Charger or AC cable. Contact your servicing dealer.
- **DO NOT** leave the AC plug plugged into the electric outlet after you finish charging.
- **DO NOT** pull on the cable when you pull out the AC plug.
- **DO NOT** subject the Battery Charger to excessive physical shock, such as by dropping or hitting it.
- **DO NOT** use the Battery Charger to charge anything except Honda Battery Packs. Use only authentic Battery Packs. Charging a non-authentic Battery Pack could damage it and the charger because of poor protection functions, etc.
- **DO NOT** touch the Battery Pack terminals with metal. Mishandling them could result in electric shock or fire, which may kill or seriously hurt you. Follow the procedures and instructions provided in the manufacturers manual.

BATTERY PACK

- **ALWAYS** use a genuine battery pack that is intended for this machine.
DO NOT touch the Battery Pack's connectors with metal objects or insert metal objects through openings into the Battery Pack.
- **ALWAYS** keep the battery pack clean and dry.
- **NEVER** allow the battery pack to come into contact with water.
- If the Battery Pack leaks fluid or smells strangely, **IMMEDIATELY** move it away from any heat sources or flame. There is a risk of fire or rupturing if the leaked liquid or gas ignites.
- The Battery Pack contains combustible organic solvents as an electrolyte solution. If the liquid gets into your eyes, rinse them with plenty of water. After that, **IMMEDIATELY** seek medical care.
- **DO NOT** allow children to use the Battery Pack. Store the Battery Pack out of the reach of children.
- **DO NOT** store the Battery Pack in a damp location. Doing so can cause a malfunction.
- When the Battery Pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- In case of fire, **STOP** using the machine immediately and extinguish with dry chemical, sandy soil, carbon dioxide or appropriate foam.
- The Battery Pack will deteriorate if it is repeatedly charged and discharged, as well as if it is stored and not used.
- As the Battery Pack deteriorates, its full-charge capacity decreases and the length of time it can be used shortens. Once the full-charge capacity is reduced by deterioration, it cannot be recovered and cannot reach the charging capacity of a new Battery Pack.
- **ALWAYS** remove the battery pack from the power unit when carrying or checking it.
- **ONLY** charge the battery pack in a recommended charging unit.
- **DO NOT** expose the battery pack to extreme temperatures (below 5°C (41°F) or above 40°C (104°F))
- **NEVER** attempt to service a damaged battery pack.
- **WORK ON THE BATTERY PACK OR POWER UNIT MUST ONLY BE CARRIED OUT BY QUALIFIED PERSONNEL.**

WEATHER CONDITIONS

- We recommended that this machine not be used in heavy rain.
- Rain can alter the condition of the worksite surface area. **ALWAYS** be aware of the condition of the surface after it has rained.
- Operating the machine in poor visibility can result in serious injury or even death. **ALWAYS** use your lights to improve the visibility of the area.
- **NEVER** operate the machine in temperatures below 5°C (41°F) or above 40°C (104°F)

DURING MAINTENANCE

- **ALWAYS** remove the battery before carrying out any maintenance on the machine.
- Carry out maintenance and repair work only if the machine is positioned on stable and level ground and has been secured against inadvertent movement.
- **NEVER** service the machine while the power unit is running, always switch **OFF**.
- Clean the machine, especially connections and threaded unions, before carrying out maintenance/repair.
- When dismantling assemblies containing components under pressure from springs, always wear suitable PPE. This will protect against eye injuries from accidental flying components.
- When handling oil, grease and other chemical substances, observe the product related safety regulations.

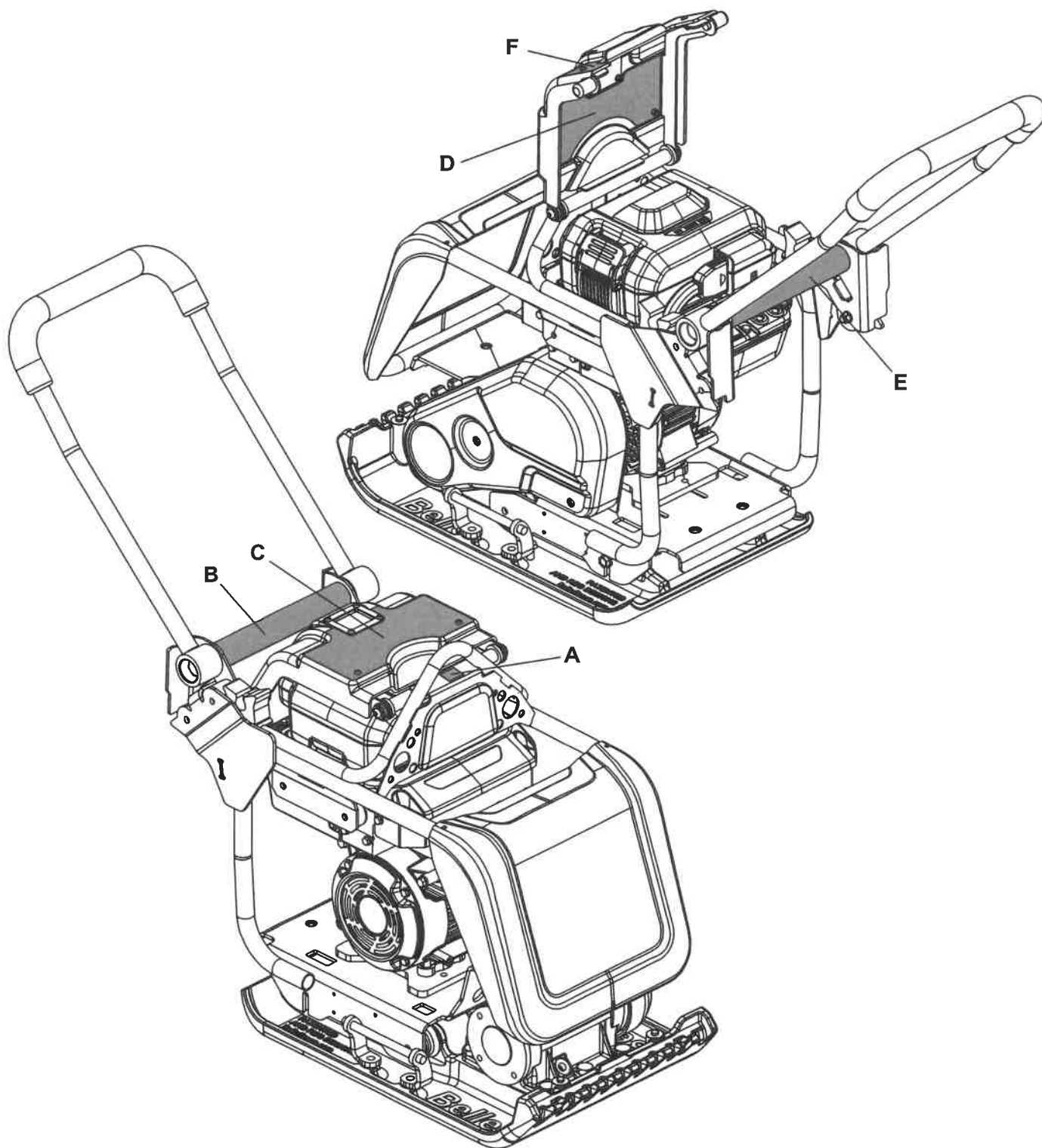
AFTER MAINTENANCE

- **ALWAYS** tighten any screwed connections that have been loosened during maintenance and repair.
- Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work.
- **ENSURE** that all consumables and replaced parts are disposed of safely and with minimum environmental impact.

MODIFICATIONS & REPLACEMENT PARTS

- **NEVER** make any modifications or additions to the machine without the prior approval of Altrad Belle. Any unapproved modifications may affect the performance and safety of the machine. This may also void the Warranty.
- **ALWAYS** use genuine Altrad Belle replacement parts. Use of non-genuine replacement parts may affect the performance and safety of the machine. This may also void the Warranty.

Genuine Altrad Belle replacement parts can be purchased online at www.Altrad-Belle247.com

SAFETY DECALS

- A. Lifting Point Decal
- B. Low HAV Decal.
- C. General Safety / Info Decal.
- D. Operating Instructions Decal.
- E. Handle Latch Decal
- F. Speed Setting Decal

SAFETY DECALS

A - Lifting Point Decal

Lifting point for use with a Sling or Mechanical Hoist.

B. Low HAV Decal.

Highlights that the machine has a HAV level low enough that it can be used for more than 8hrs.

C. General Safety / Info Decal.



**Read the
Operators
Manual**



**Wear Ear
Protection**



**Wear Eye
Protection**



**Wear Protective
Footwear**



***Indicates the
Noise Level
of the
Machine**

** Also see Technical Data section for Noise Level for this machine.*

D. Operating Instructions Decal.

Includes information on how to Start and Stop the Power Unit.



**DO NOT
Jetwash the
Machine**

E. Handle Latch Decal.

The Handle Latch is not required when the Wheel Kit is not in use.

1. Disengage the Wheel Kit.
2. Pull the plunger and rotate the latch anti-clock wise to its stop position. Release the plunger to lock the latch in the unlock position.

The Handle Latch is **ALWAYS** required when the Wheel Kit is engaged.

1. Pull the plunger and rotate the latch clock wise until it locates over the handle tube. Release the plunger to lock the latch in the lock position.
2. Engage the Wheel Kit.

F. Speed Setting Decal.

Highlights that the compactor has 3 speed settings which can be altered by pressing the 'Speed Chage' button on the power unit.



CAUTION

*The compactor **ALWAYS** starts on the fastest speed when the power unit turned ON.*

REASONS FOR COMPACTION

Soil, which has been disturbed or new infill, subbase and blacktop, will have small voids or air pockets which, if not compacted, will lead to one or more problems occurring.

1. As traffic crosses the surface of an uncompacted area, the material is compressed. This leads to subsidence of the top surface as the material fills the voids.
 2. A similar situation occurs with static loads on uncompacted ground. The load (e.g. a building) will sink.
 3. Materials with voids are more susceptible to water seepage, leading to erosion. Water ingress may also cause the soil to expand during freezing temperatures and contract during dry spells. Expansion and contraction is a major cause of damage to building foundations and normally leads to the structure requiring underpinning.
- Compaction increases the density of the material and therefore increases its load bearing capacity. Reduces air voids and therefore reduces the risk of subsidence, expansion and contraction, due to ingress of water.

APPLICATIONS

Applications/materials fall into three categories:

1. Cohesive materials (less than 20% granular) e.g clay, silt & heavy soils.
2. Granular materials (more than 20% granular) e.g hard core, sand & light soils.
3. Bituminous materials e.g asphalt (tarmac), cold lay (bitumin emulsion products).

The chart shows the HAUC specifications for layer depth and number of passes for Dual Force' plates. If standard machines are used, optimum compaction can not be guaranteed, however, if layer depths are reduced and number of passes increased, results can be improved.

Moisture content of cohesive & granular materials is critical to effective compaction. If granular material is too dry it will flow around the plate instead of compacting. If the moisture content is too high the material may dry out after compaction and shrinkage will occur.

1400 - 1800 kg/m ²	COMPACTION PASSESS REQUIRED PER LAYER OF COMPACTED THICKNESS UP TO.				
	40mm	60mm	80mm	100mm	150mm
Cohesive Materials**	2**	4**	5**	6**	Reduce Layer Thickness
Granular Materials	2*	3*	4*	5	9
Bituminous	6	10	12		Reduce Layer Thickness

* Usually placed in 100mm minimum layer so not specified by HAUC.

** The nature of cohesive materials makes plate compaction difficult. Optimum compaction is not guaranteed and not recommended by HAUC.

CHARGING THE BATTERY PACK

Refer to the Battery Charger manual for instructions on how to charge the Battery Pack.

ATTACHING THE BATTERY PACK



CAUTION *ALWAYS make sure to use a genuine, recommended Battery Pack.*

Refer to the Machine Description section to identify the components.

1. Make sure there is no debris or dirt on the battery tray.
2. Tilt the Battery Pack and insert its claw into the battery hook.
3. Push down the Battery Pack and hook the battery fastener to it.
4. Push the battery fastener lever up and lock the Battery Pack. Be careful not to catch your fingers.
5. Remove the battery connector cap from the power cable. Connect the power cable to the battery connector of the Battery Pack.

STOPPING THE POWER UNIT

Refer to the Machine Description section to identify the components.

1. Press the **START/STOP** switch to the **STOP** position. The DC Power Unit will stop and the **POWER** indicator turns off.

STARTING THE POWER UNIT

Refer to the Machine Description section to identify the components.

1. Press **STOP** on the **START/STOP** switch.
2. Press the **POWER** button.

All the indicators should illuminate for a few seconds, and then only the **POWER** indicator remains illuminated.
3. Press the **START/STOP** switch to the **START** position to start the Power Unit.
4. Push the **SPEED CHANGE** button to set the Power Unit speed as required.
 - If the **POWER** button is pressed when the **START/STOP** switch is in the **START** position, the **POWER** indicator remains off and the **ALERT** indicator flashes. In this case, the Power Unit cannot start. Press the **START/STOP** switch to the **STOP** position and then press the **POWER** button.
 - It may take some time for the indicators to light after the **POWER** button is pressed. If the indicators do not light, press the **POWER** button again.
 - If the Power Unit is not operated for about one minute after the **POWER** button is pressed, the **POWER** indicator turns off. Press the **POWER** button again to start the Power Unit.

REMOVING THE BATTERY PACK

Refer to the Machine Description section to identify the components.








CAUTION *ENSURE the machine is switched **OFF** before removing the battery.*

1. Remove the power cable from the Battery Pack.
2. Pull the battery fastener down to unlock, tilt the Battery Pack up and pull the Battery Pack claw out from the battery hook, and remove the Battery Pack.
3. Attach the battery connector cap to the power cable.

CHECKING THE CHARGE LEVEL OF THE BATTERY PACK

While the Power Unit is operating, the charge level indicator lights or flashes so you can confirm the charge level of the Battery Pack.

While the Power Unit is stopped, press the charge level check button to confirm the charge level of the Battery Pack.

Indicator Display	Charge Level	
	High ↓ Low	Fully charged.
		Sufficiently charged.
		Remaining battery power is low. Charge the Battery Pack.
		
		

■ : On, ✱ : Flashing, □ : Off

TRANSPORTATION



CAUTION

We **RECOMMEND** removing the battery pack from the power unit before transporting the machine.

Transporting the machine is a 2 person operation. Use the provided Hand Lifting Points (See Machine Description section) **DO NOT** use a Mechanical Hoist on the Hand Lifting Points.

Where it is necessary to use lifting equipment to transport the machine, make sure the lifting equipment has a WLL (Working Load Limit) suitable for the machine's weight (see Technical Data section). Attach suitable chains or slings **ONLY** to the lifting point on the top of the machine.

If using the optional Wheel Kit attachment the handle latch must **ALWAYS** be engaged using the following procedure.

1. Pull the plunger and rotate the latch clock wise until it locates over the handle tube. Release the plunger to lock the latch in the lock position.

The Wheel Kit can now be fitted as per the instructions provided with the Wheel Kit. Then tilt the machine forward to raise the transport wheels off the ground and underneath the baseplate. Then slowly lower the machine on top of the wheels.

To disengage the handle latch when the Wheel Kit is not in use, use the following procedure:-

1. Pull the plunger and rotate the latch anti-clock wise to its stop position. Release the plunger to lock the latch in the unlock position.



CAUTION

ALWAYS pull the machine backwards when using the optional Wheel Kit attachment.

OPERATING THE MACHINE

Having carried out the Pre-Start Checks listed in the Safety Instructions section of this manual, you may start the power unit.

The vibrator will not only cause the baseplate to vibrate but will also cause the machine to travel forward. During normal operation you should not have to push the machine forwards but allow it to travel at its own pace. The speed of travel will be determined by the condition of the surface being compacted.

If the surface to be compacted is on a slope, great care must be taken when controlling the machine's direction of travel. If necessary, use a suitable rope attached to the machine at a low point on the chassis, to allow a helper to take part of the machine's weight. Work up and down a slope not across.

Work the compactor over the surface in an organised pattern until the required compaction has been achieved. Where there are a number of different layers to be compacted on top of each other, compact each layer individually.

If the machine is not to be used for an long period of time it must be stored correctly to prevent deterioration or damage occurring during this period.

Store the machine in a clean dry building with plenty of ventilation if possible. If you can only store outdoors, cover with a waterproof sheet / tarpaulin.

PREPARING THE MACHINE FOR STORAGE

1. Clean the machine and remove all unwanted material / debris (See the Cleaning section on page 23).
2. Dry the machine to remove any moisture.
3. Apply grease to any moving parts / grease points.
4. Examine the machine for any worn / damaged parts. Replace if necessary.

STORING THE MACHINE

1. Place the machine safely on stable, level ground.
ENSURE there is sufficient room around the machine to be able to carry out any service or maintenance procedures during the storage period.
2. Remove the battery pack and store correctly (See page 19)

DURING STORAGE

To prevent the build up of rust and to minimise the risk of seizures, periodically operate all machine functions during storage.

1. Install a fully charged battery.
2. Start the power unit.
3. Operate all machine functions. **ENSURE** they all operate correctly.
4. Re-do storage procedure from above.

REMOVING THE MACHINE FROM STORAGE

1. Install a fully charged battery.
2. Carry out the Pre-Start Check procedure (See page 12)