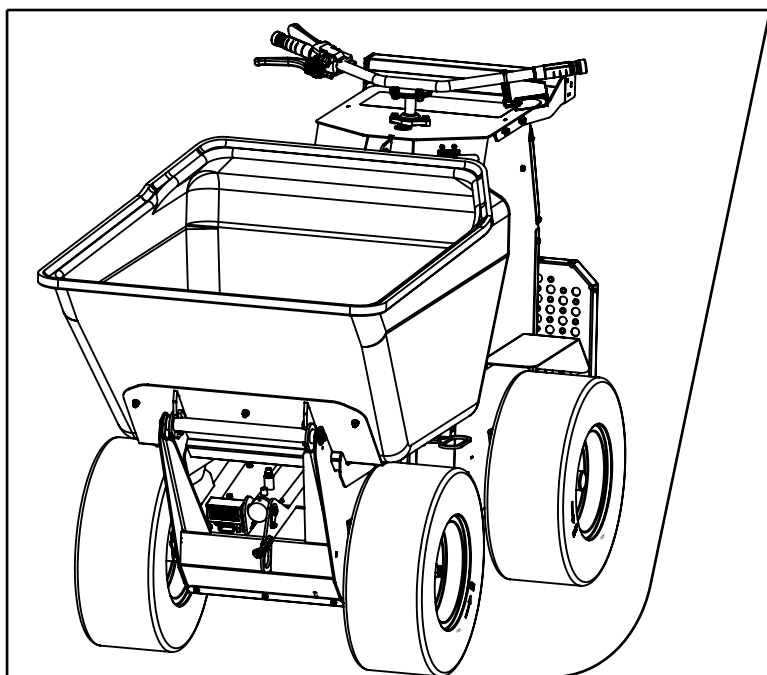


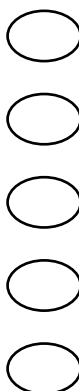
TRUXTA

by Tufftruk Smart Equipment

Tufftruk Battery Powered Concrete BUGGE



GB Operators Manual



Tufftruk
smart equipment





Declaration Of Conformity

GB DECLARATION OF CONFORMITY

We, Tufftruk Ltd, Sheen, nr. Buxton, Derbyshire, SK17 0EU, GB, hereby certify that, if the product described within this certificate is bought from an authorized Tufftruk dealer, it conforms to the following directives (including amendments):

- S1 2008 1597 Machinery Directive
- S1 2016 1091 Electromagnetic Compatibility Regulations
- S1 2013 3113 Waste Electrical and Electronic Equipment Regulations
- S1 2016 1101 Electrical Equipment (Safety) Regulations
- S1 2001 1701 Noise from Equipment for use Outdoor Regulations

Harmonized Standards taken into consideration (including amendments):

- BS EN ISO 12100-1:2010 Safety of machinery
- American National Standards Institute - ANSI B56.8 - Personnel and Burden Carriers.
- Per S1 2001 1701 Noise from Equipment for use Outdoor Regulations
- EN 349:1993 Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body.
- EN ISO 5349-1:2001 Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements
- EN ISO 5349-2:2001 Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace.
- Managing director at the Tufftruk Ltd Head Office address above keeps the technical documentation
- Conformity assessment procedure followed: Schedule 9
- Notified Body: AnP Certification Ltd, 2, Parkfield Str. M14 4PN, Manchester, UK
 - Per S1 2008 1597 Machinery Directive, person authorized within GB to compile the documentation:
Tufftruk Ltd, Sheen, nr. Buxton, Derbyshire, SK17 0EU, GB

Equipment Category: Battery Powered Concrete BUGGE				
TRUXTA Model	Power - kW	Measured Sound Power Level - dB(LWA)	Guaranteed Sound Power Level - dB (LWA)	Serial No
Concrete BUGGE	2.8	80	82	

Place of Declaration	Address	Date	Signed by	Position in Company	
Tufftruk Ltd	See above		Andrew Simpson	Managing Director	

EU DECLARATION OF CONFORMITY

We, Tufftruk Ltd, Sheen, nr. Buxton, Derbyshire, SK17 0EU, GB, hereby certify that, if the product described within this certificate is bought from an authorized Tufftruk dealer, it conforms to the following directives (including amendments):

- 2006/42/CE Machinery Directive
- 2014/30/EU Electromagnetic Compatibility Directive
- 2012/19/UE Waste Electrical and Electronic Equipment (WEEE) Directive
- 2014/35/EU Low Voltage Directive
- 2000/14/EC Outdoor Noise Directive

Harmonized Standards taken into consideration (including amendments):

- BS EN ISO 12100-1:2010 Safety of machinery
- EN 349:1993 Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body.
- ENISO 5349-1:2001 Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements.
- EN ISO 5349-2:2001 Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace.

Per 2000/14/EC Outdoor Noise Directive

info@landgasthof-karner.com

- Managing director at the Tufftruk Ltd Head Office address above keeps the technical documentation
- Conformity assessment procedure followed: Annex VI
- Notified Body: Vinçotte - Jan Olieslagerslaan 35, 1800 Vilvoorde, Belgium
- ANSI: Vinçotte - Jan Olieslagerslaan 35, 1800 Vilvoorde, Belgium

Per 2006/42/CE Machinery Directive, person authorized within EU community to compile the documentation: Tufftruk Ltd, Sheen, nr. Buxton, Derbyshire, SK17 0EU, GB

Equipment Category: Battery Powered Concrete BUGGE				
TRUXTA Model	Power - kW	Measured Sound Power Level - dB(LWA)	Guaranteed Sound Power Level - dB (LWA)	Serial No
Concrete BUGGE	2.8	80	82	

Place of Declaration	Address	Date	Signed By	Position in Company	
Tufftruk Ltd	See above		Andrew Simpson	Managing Director	A. Simpson



How To Use This Manual

This operators manual has been written to help you operate and service the Tufftruk Battery Powered Concrete BUGGE safely.

Foreword

- **Environment** - This section gives instructions on how to handle the recycling of discarded equipment in an environmentally friendly way.
- **Machine Description** - This section helps you to familiarise yourself with the machine's layout and controls.
- **General Safety and Health and Safety** - This section explains how to use the machine to ensure your safety and the safety of others.
- **Decals** - This section gives information regarding the decals which can be found on the machine.
- **Trouble Shooting** - Should help if a problem should occur.
- **Servicing** - A section regarding general maintenance and service.
- **Warranty** - This section details the Warranty cover and claims procedure.

Attention must be shown when text is 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.)

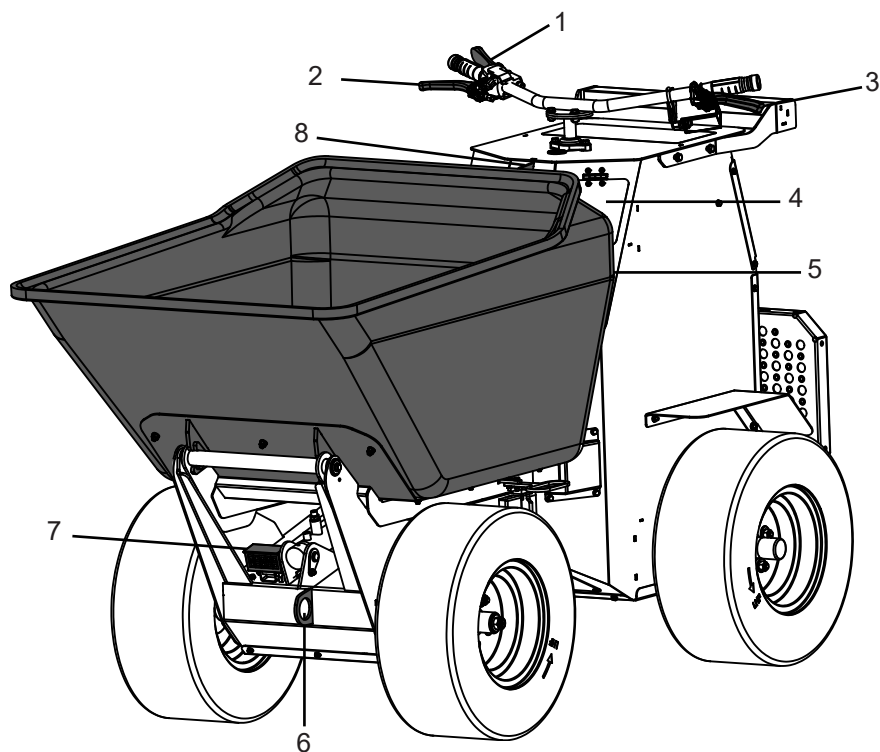
ALWAYS wear or use the proper safety items required for your personal protection.

If you have ANY QUESTION about the safe use or maintenance of your machine. Please contact your Local Dealer or Tufftruk Ltd: +44 (0) 1298 84687

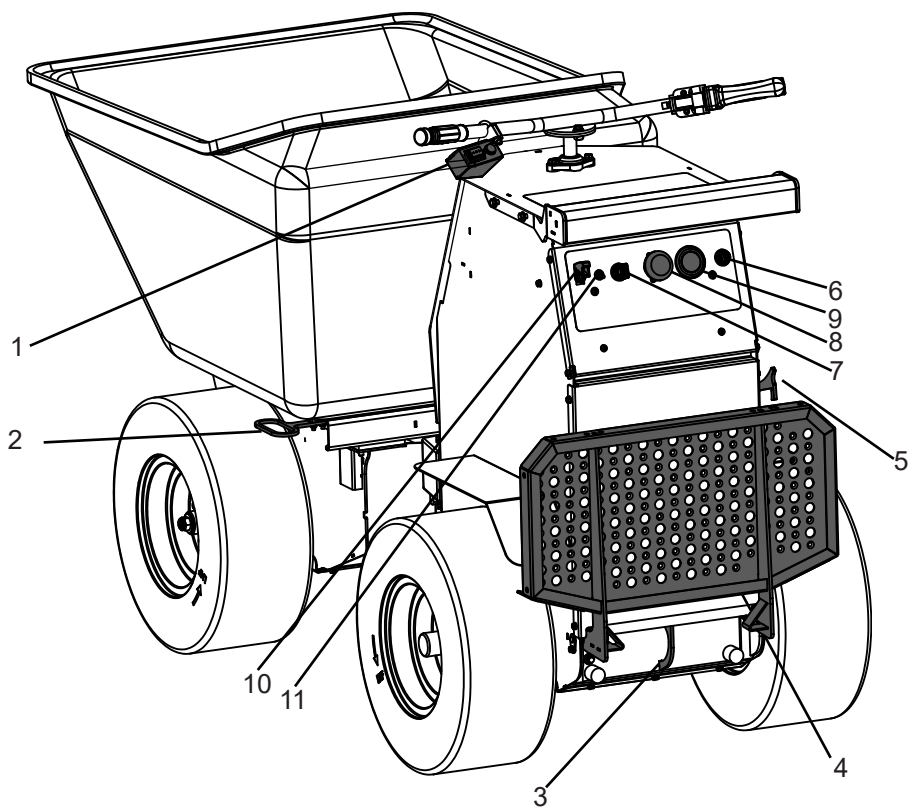


Contents

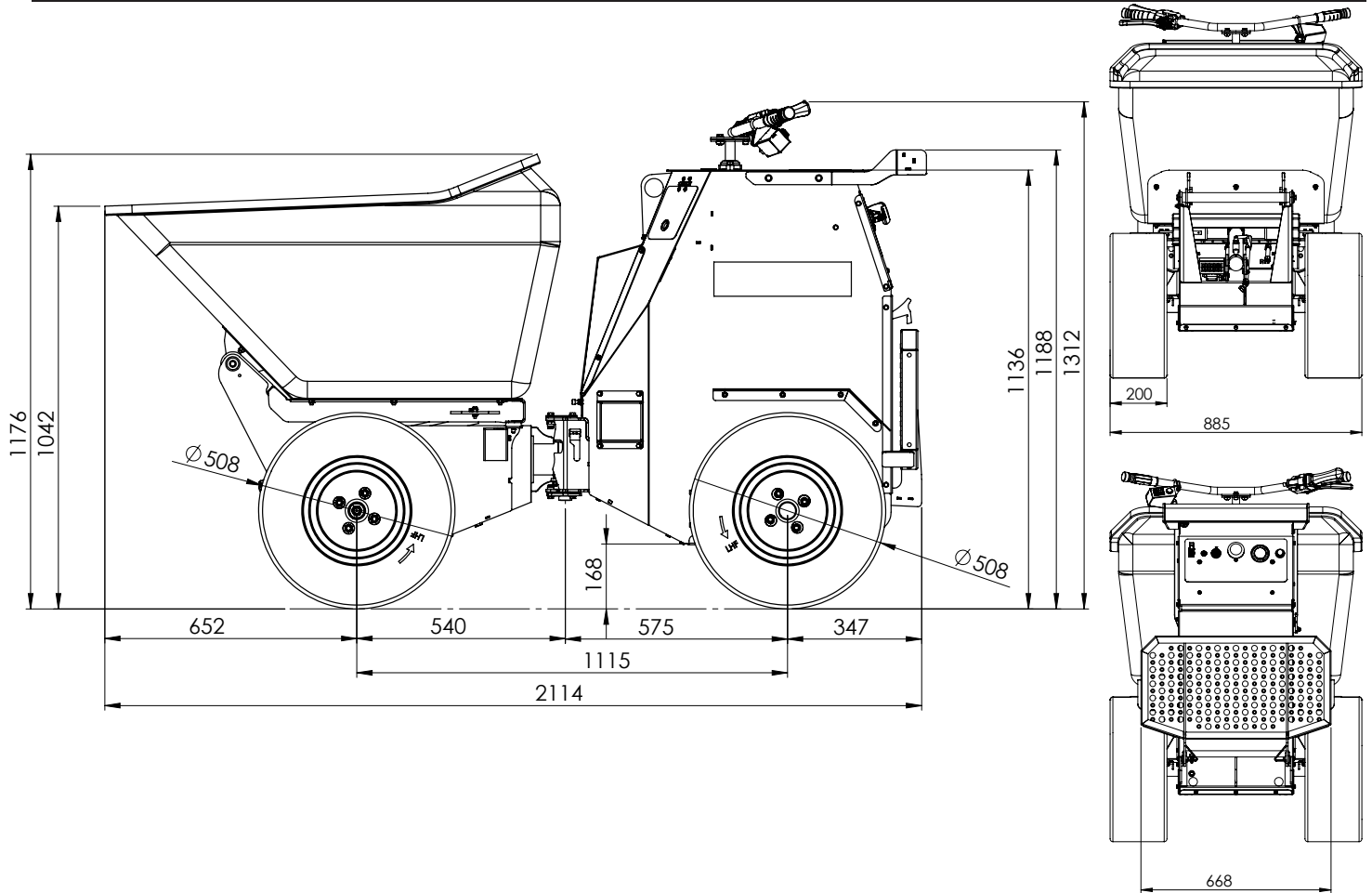
Declaration Of Conformity.....	1
How to use this manual.....	2
Warning.....	2
Machine Description.....	3
Technical Data.....	4
Decals.....	5
General Safety.....	7
Health and Safety.....	7
Environment.....	8
Pre Start Checks.....	8
Start and Stop Procedure.....	9
Operating Instructions.....	9
Trouble Shooting Guide.....	12
Service And Maintenance.....	13
Wiring Schematics.....	14
Warranty.....	16
Attachments.....	17



1. Deadman Lever
2. Forward Drive Lever
3. Reverse Lever
4. Charging Point
5. Poly Moulded Skip
6. Front Tie Down Point
7. LED Light
8. Lifting Point



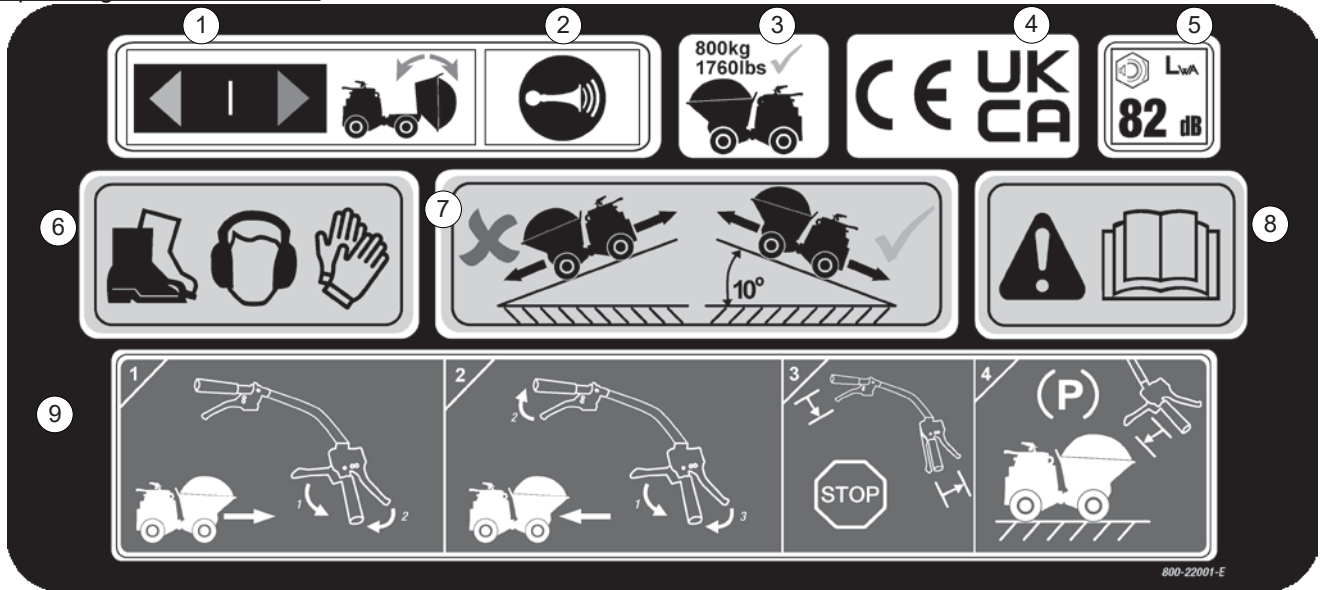
1. Tip Control & Horn
2. Skip Locking
3. Rear Tie Down Point
4. Foot Stand
5. Foot Stand Catch
6. Battery Charging Gauge
7. Ignition Switch
8. Emergency Stop Button
9. Display
10. Manual Override
11. Light Switch



Model	Tufftruk Battery Powered Concrete BUGGE (4x4) 'Stand -On'
Motor/Power (kw)	DC Motor 2 x 1400w /24v
Power Type	4 x 6v AGM Batteries
Max Payload (Sand)	800kg / 1800lbs / 15.5 ft ³ / 0.43m ³
Payload Concrete	720kg / 1600lbs / 12.5 ft ³ / 0.35m ³
Unladen / Weight	550kg / 1212lbs
Working Width	885mm
Working Gradient	10° Constant Use / 15° Intermittent Use
Drive & Controls	2 x 24v Transaxle
Brake System	Electrically operated brake system with fail-safe dead-man handle
Standard Fitment Tyres	Flotation with option of turf tyres
Forward Travel	6.2 kph / 3.8 mph
Reverse Travel	3.8 kph / 2.4 mph
Noise Level (dB)	< 82

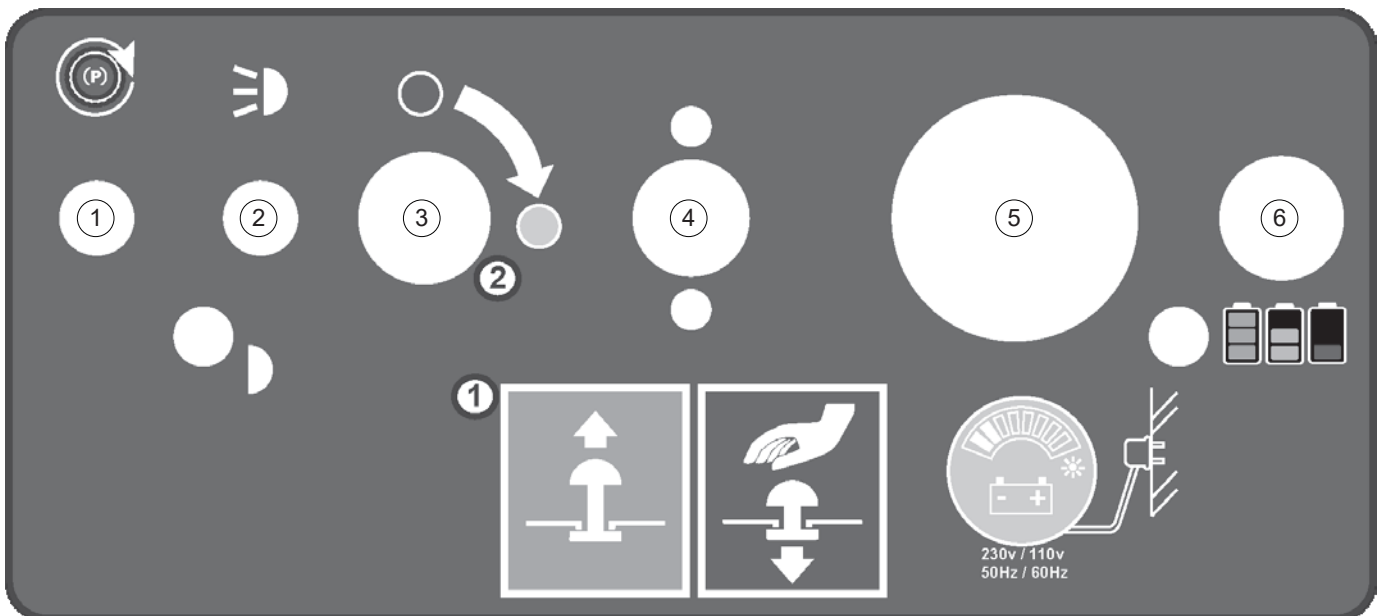
- A. Operating Instruction Decal
- B. Control Panel Decal
- C. Safety / Warning Decals

A. Operating Instruction Decal



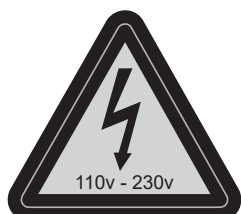
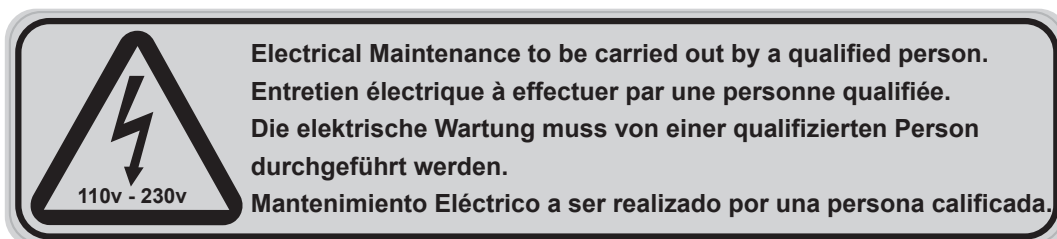
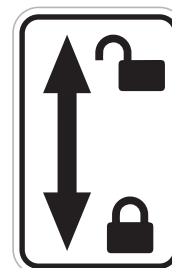
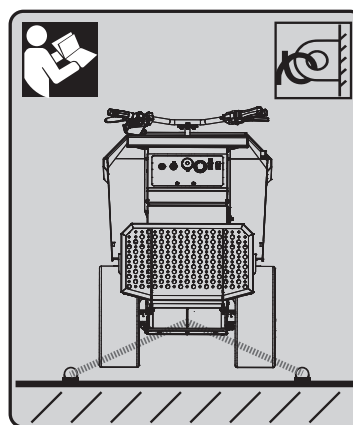
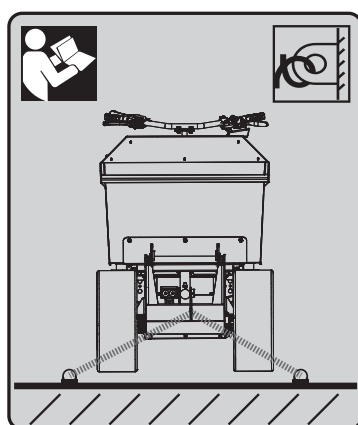
- 1. Power Tip Control
- 2. Horn
- 3. Max Payload
- 4. CE / UKCA
- 5. Sound Level
- 6. Personal Protective Equipment Requirement
- 7. Working Gradient
- 8. Read Operators Manual
- 9. Handlebar Controls / Instructions

B. Control Panel Decal



- 1. Brake Manual Over-ride
- 2. Lights On / Off
- 3. Ignition Switch
- 4. Emergency STOP Switch
- 5. Electrical Display
- 6. Battery Charge Indicator

C. Safety / Warning Decals

Warning And Crush DecalsPersonal Protective Equipment Requirement DecalsElectric DecalsNo Jet WasherLifting PointSkip Carrier LockTyre PressuresTie Down Point

For your own personal protection and those around you, please ensure that you have fully read, understood and following the safety information provided in the manual.

It is the responsibility of the operator to ensure that they understand how to operate the equipment safely.

If you are unsure about the safe and correct use of the Tufftruk Battery Powered Concrete BUGGE contact you line manager, Tufftruk Dealer or Tufftruk Ltd direct.



WARNING

Incorrect maintenance can be hazardous.

Read and Understand this section before carry out any maintenance, service or repairs.

This equipment is heavy and must not be lifted single-handedly, **GET HELP** and 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.
- Never remove or tamper with any guards fitted, they are there for your protection.
- Always check guards for condition and Security, if any is damaged or missing, **DO NOT USE THE Tufftruk Concrete BUGGE** 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.
- Do not use the Tufftruk Concrete BUGGE to transport people.
- Do not release the brake suddenly when travelling forward at speed with a heavy load as the machine may topple forward.
- (Brake off). Close the throttle if necessary, so that motor controls the speed. Always ensure that when moving downwards on a hill, the machine is travelling in reverse.

STEERING THE TUFFTRUK CONCRETE BUGGE ON GRADIENTS.

DO NOT steer the Tufftruk Concrete BUGGE left or right when travelling up or down a gradient.

Always travel in a straight line. When travelling across a graduated slope, always travel in a forward direction, maximum working gradient 5 degrees when travelling across a gradient with a Tufftruk Concrete BUGGE.

TRANSPORTATION.

The Tufftruk Concrete BUGGE is heavy. Use suitable lifting equipment to lift the machine using designated lifting point.

Always ensure that the machine is switched off before transporting and servicing.

DO NOT use the Tufftruk Concrete BUGGE to transport people.

Always use the tie down points, to secure the Tufftruk Concrete BUGGE for transit. (See Machine Description)

ENVIRONMENTAL — 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.

WEATHER CONDITIONS.

Lightning can kill - DO NOT use the Tufftruk Concrete BUGGE if there is lightning in the area.

Weather can alter the condition of the worksite surface area. ALWAYS be aware of the condition of the surface before and during operation of the Tufftruk Concrete BUGGE, adapt you're travelling speed to the prevailing surface conditions.

Operating the Tufftruk Concrete BUGGE in poor visibility can result in serious injury or even death. ALWAYS use your light to improve the visibility of the area.

DO NOT charge a frozen battery. If you charge a frozen battery, the battery may explode.

VIBRATION.

Some vibration from the operation is transmitted through the handle to the operator's hands. DO NOT exceed the maximum usage times. (See Technical Data section)

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. 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.

Electric.

Do not attempt to charge the electric machine if cable or connectors are damaged.

Do not connect or disconnect the machine with wet hands immediately replace damaged charging parts.

Do not charge the machine in wet conditions or wet weather.



Environment



Safe Disposal

Instruction for the protection of the environment.

The machine contains valuable materials.

Discarded machines and accessories at the relevant recycling facilities.

Component	Material
Handle	Steel
Handle Grips	Rubber
Chassis	Steel
Transaxle	Cast Steel Body / Steel Gears
Transaxle Motor	Steel / Copper
Skip	HPDE
Various Parts	Steel / Plastic / Rubber
Battery	Steel / Plastic (ABS) / Lead / Acid / Fibreglass



Pre-Start Checks and Charging

Prestart Checks.

The following prestart checks must be performed before the start of each work session.

Please refer to the service section for detailed guidance. If any fault is discovered, the Tufftruk Concrete BUGGE must not be used until the fault is rectified.

1. Check mains lead is stored correctly and is secured to the machine.
2. All control levers are free from damage and operational.
3. All fasteners are tight and present.
4. Wheel Nuts are tight and present.
5. All tyres pressures are correct.



WARNING

Please read the following instructions:

Charging.

To maximize the life of your AGM battery, it is important that it is properly charged. As with all lead-acid batteries, both over- and under-charging an AGM battery will result in shortened service life.

The Tufftruk Concrete BUGGE are fitted with an on-board SMART charger which maintains the battery full charge condition without resulting in over charging.

The AGM batteries are sealed for life units and do not require any fluid top up.

Please read the following instructions:

Charging system Inspection.

The charger's AC (mains) cord should be free of breaks or cuts and the wall plug socket should be clean and free from debris.

The cable connectors from the on-board charger should be clean and properly mate with the battery terminals to ensure a sound connection.

Battery Inspection

- Check battery cables are not damaged.
- Connectors should be free of corrosion.
- DC Cable post or eyelet connectors are tight to avoid arcing.

Charging Guidelines

• **FULLY** charge batteries after batteries have been dis-charged to ¼ full on battery gauge. The on-board charger mains cord should be plugged into the mains AC supply. The RED light on the panel indicates the unit is charging.

Leave batteries to complete full charge and do not disconnect until fully charged. Once fully charged the on-board SMART battery charger will maintain the battery fully charged status.

• **DO NOT** opportunity charge batteries i.e. if the batteries have only dis-charged to ¾ full on the battery gauge, there is no need to connect the charger to the AC supply. It is recommended to use the dumper until the batteries have dis-charged to ¼ full on the battery gauge, then place the dumper onto a full charge cycle.

- Charge in a ventilated area as gasses may be released through the pressure relief valve if the batteries are excessively over-charged.
- Never charge a frozen battery.
- Ideal charging temperatures: (0°C to 40°C) 32°F to 104°F
- Do not attempt to charge the electric machine if cable or connectors are damaged.
- Do not connect or disconnect the machine with wet hands immediately replace damaged charging parts.
- Do not charge the machine in wet conditions or wet weather.



Start and Stop Procedure

OPERATING THE TUFFTRUK CONCRETE BUGGE

- Pull out large red button. (DEADMAN SWITCH)
- Turn ignition key on and allow the machines controller to run its checks.

STOPPING THE TUFFTRUK CONCRETE BUGGE

- Release the right hand lever to stop the machine.
- Release the dead man red lever to engage the parking brake.
- In emergencies hit the large red button (DEADMAN SWITCH).
- When machine is not in use, always push in the large red button and turn the machine ignition key to the OFF position and remove the key.



Operating Instructions

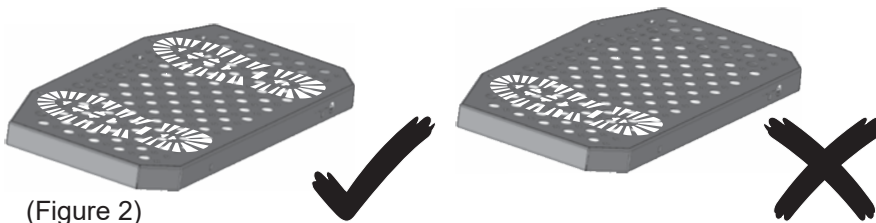


CAUTION

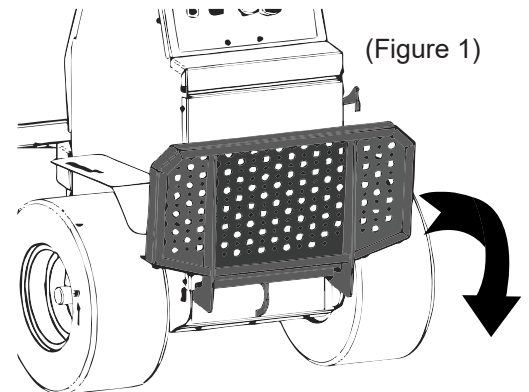
When travelling across a graduated slope, always travel in a forward direction, always travel in a straight line. Maximum working gradient 10 degrees when travelling across or up a slope with a Tufftruk Concrete BUGGE.

OPERATING THE TUFFTRUK CONCRETE BUGGE

1. Take the foot plate from the stowed position into the Stand On position. (Figure 1)
2. Stand On the foot plate with both feet. (Figure 2)



(Figure 2)



3. Pull out large red E Stop button. (DEADMAN SWITCH)
4. Turn ignition key on and allow the machines controller to run its checks.
5. Hold the handles with both hands.
6. Depress dead man lever (RED) on right hand controls.
7. To Move Forward — squeeze right hand lever to move forward. The more you squeeze the faster the machine will travel.
8. To Reverse — squeeze and hold left hand lever, then squeeze the right hand lever to move the machine in reverse.

STOPPING THE TUFFTRUK CONCRETE BUGGE

1. Release the right hand lever to stop the machine
2. Release the dead man red lever to engage the parking brake
3. In emergencies hit the large red E Stop button (DEADMAN SWITCH)

When machine is not in use, always push in the large red E Stop button and turn the machine ignition key to the OFF position and remove the key.

PARKING BRAKE - The Parking Brake operates automatically when the deadman lever (RED) is in the upright position. The brake is on until the dead-man (RED) lever is compressed to release it.

MOVING the TUFFTRUK CONCRETE BUGGE with NO POWER.

For manual brake release when the machine has no power.

Push brake release lever forward and hold the dead-man lever down, the Tufftruk Concrete BUGGE can now be moved manually.

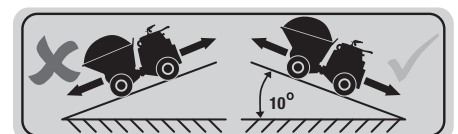
ON INCLINES.

Do not use TUFFTRUK CONCRETE BUGGE on inclines / ramps above 10°
Do NOT travel forwards down inclines when loaded.

LOADING SKIP.

When loading the TUFFTRUK CONCRETE BUGGE the machine must be in a stationary on stable ground, with the machine in a safe position.

The operator must **ALWAYS** leave the TUFFTRUK CONCRETE BUGGE and stand clear of the machine during loading. ALWAYS follow the SWL (Safe Working Load) / Payload. (See Technical Data)



UNLOADING SKIP

ALWAYS Stop the machine before unloading the skip.

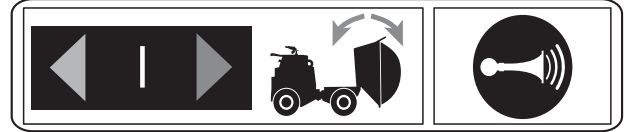
ALWAYS place the TUFFTRUK CONCRETE BUGGE in a straight position when unloading.

As the center of gravity will change, which may affect the stability of the TUFFTRUK CONCRETE BUGGE

ENSURE unloading zone is clear.

Depress dead man lever (RED) on right hand controls.

Tip skip with handle tip switch.



WARNING

ALWAYS ensure the lift equipment being used is suitable for lifting the TUFFTRUK CONCRETE BUGGE. Inadequate or damaged equipment could result in serious injury or death.

LIFTING THE TUFFTRUK CONCRETE BUGGE

Before lifting your TUFFTRUK CONCRETE BUGGE, ensure the below is followed:-

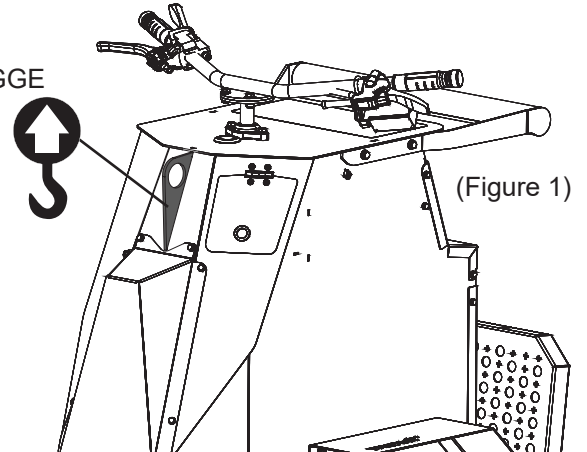
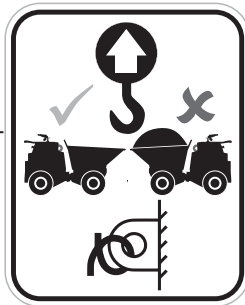
- **ENSURE** the TUFFTRUK CONCRETE BUGGE skip is empty and lowered.
- **ENSURE** there are no loose items within the operator's area.
- The dumper **MUST** be parked on stable, level ground with the machine switch off and ignition key removed
- **ALWAYS** use the articulation locking pin to lock and stop any unwanted movement. (Figure 2)
- **ENSURE** there are no unauthorised personnel are near to the TUFFTRUK CONCRETE BUGGE or where the TUFFTRUK CONCRETE BUGGE is being transported to.
- **ENSURE** the chains / straps are suitably size for the TUFFTRUK CONCRETE BUGGE and the correct length for a safe, level lift.

There is 1 designated point for lifting the TUFFTRUK CONCRETE BUGGE (See Below)

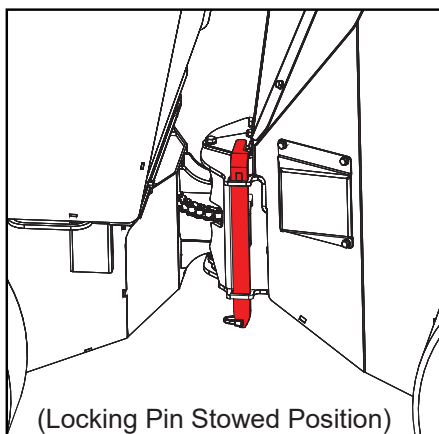
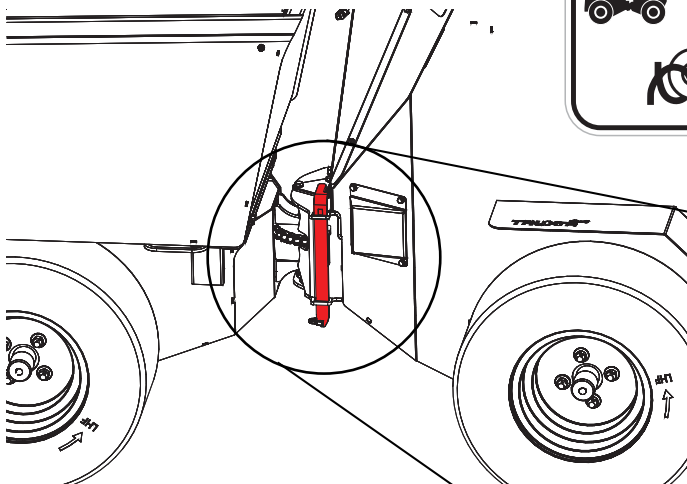
DO NOT use any other are of the TUFFTRUK CONCRETE BUGGE as a lifting point. (Figure 1)

The lifting points are highlighted with a lifting point decal.

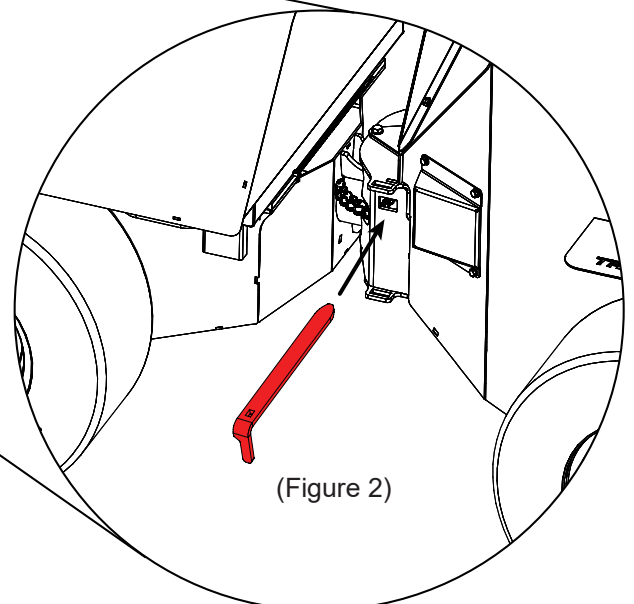
Lifting Point



(Figure 1)



(Locking Pin Stowed Position)



(Figure 2)

(Articulation locking Pin For Transport / Lifting)



WARNING

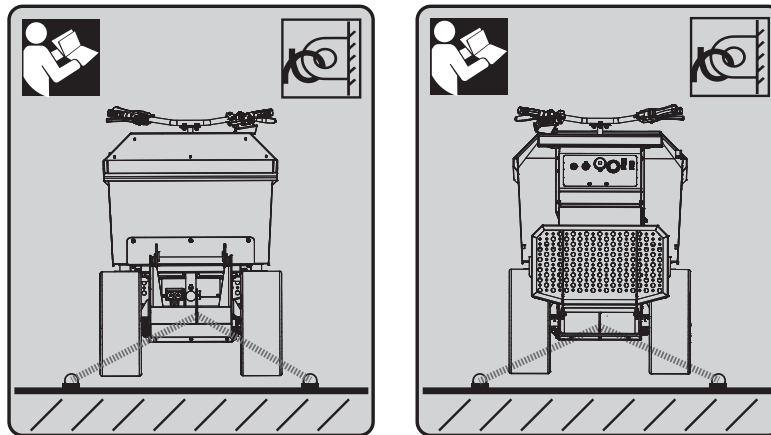
The driver and transport contractor are responsible for the safe transport of the TUFFTRUK CONCRETE BUGGE

LOADING & TRANSPORTING

Before loading and transporting your TUFFTRUK CONCRETE BUGGE, ensure the below is followed:-

- ENSURE the transport vehicle is adequate size. Dimensions and weights of the TUFFTRUK CONCRETE BUGGE can be found in the Technical Data.
 - ENSURE the loading area is clear of all obstructions.
 - Secure the transport vehicle with chocks to prevent any movement.
 - Ramps should be used at the smallest angle possible. No greater than 10°.
 - ENSURE the TUFFTRUK CONCRETE BUGGE skip is empty and lowered.
 - ENSURE there are no loose items within the operators area.
 - ENSURE the loading ramps are free of any ice, snow, grease, mud and or oil.
 - ENSURE there are no unauthorised personnel are near to the TUFFTRUK CONCRETE BUGGE or where the TUFFTRUK CONCRETE BUGGE is being loaded.
1. Position the TUFFTRUK CONCRETE BUGGE at the foot of the ramps, so that the TUFFTRUK CONCRETE BUGGE can be reversed onto the transport vehicle.
 2. Step off the machine and place foot stand in the upright stowed position.
 3. Slowly reverse machine up the ramps.
 4. Stop the TUFFTRUK CONCRETE BUGGE at the required loading position for securing.
 5. Switch the TUFFTRUK CONCRETE BUGGE off, by pressing the red EStop button and turning the machine ignition key to the OFF position and remove the key.
 6. Fit the articulation locking pin to lock and stop any unwanted movement. (Figure 2 - Page 10)

ALWAYS use the tie down points, to secure the TUFFTRUK CONCRETE BUGGE for transit. (See Machine Description)



Before unloading your TUFFTRUK CONCRETE BUGGE, ensure the below is followed:-

- ENSURE the loading area is clear of all obstructions.
 - Secure the transport vehicle with chocks to prevent any movement.
 - Ramps should be used at the smallest angle possible. No greater than 10°.
 - ENSURE the TUFFTRUK CONCRETE BUGGE skip is empty and lowered.
 - ENSURE there are no loose items within the operators area.
 - ENSURE the loading ramps are free of any ice, snow, grease and or oil.
 - ENSURE there are no unauthorised personnel are near to the TUFFTRUK CONCRETE BUGGE or where the TUFFTRUK CONCRETE BUGGE is being unloaded.
1. Remove and straps that have been used to secure the TUFFTRUK CONCRETE BUGGE.
 2. Remove the articulation locking pin to lock and refit into the stowed position. (Figure 2 - Page 22)
 3. Switch the TUFFTRUK CONCRETE BUGGE on and slowly drive down the ramps off the transport vehicle.

DO NOT use the foot plate until the TUFFTRUK CONCRETE BUGGE, is safely on the ground and away from the transport vehicle.



Troubleshooting Guide

ERROR CODES

The machine controller detects a wide variety of faults or errors.

Diagnostic information can be obtained on the gauge display where an error code in the format "Err ###".

The troubleshooting chart below describes the Error code faults and their possible causes.

Whenever a fault is encountered the first action should be to turn off the ignition and push in the E stop button. Then pull out the E stop button and turn the ignition back on to see if the fault clears.

This is the RESET procedure.

If the Error code does not clear after the machine RESET, turn off the ignition switch and refer to the Error code below. If the error hasn't cleared, then remove the 35-pin connector on the controller and check the connector for damage or corrosion and repair /clean it if necessary and reinsert it.

If the Error is still seen then the wiring and connections on the machine should be checked for breakages or loose connections.

Error Code	Fault Name	Possible Causes	Repair
12	Controller Overcurrent	1. External short of phase U,V, or W motor connections. 2. Controller Defective.	Ensure that there is no shorts present between the U, V, or W motor connections. Replace controller.
13	Current Sensor	1. Leakage to vehicle frame from phase U, V, W motor connections. 2. Controller Defective.	Ensure that there are no shorts between the motor terminals and the machine metal work. Replace controller.
15	Controller Severe Undertemperature	1. Controller is operating in an extreme environment. Heatsink temperature is below -40 Degrees Celsius	Bring the heatsink temperature above -40 Degrees Celsius
16	Controller Severe Overtemperature	1. Controller is operating in an extreme environment, +95 Degrees Celsius. 2. Excessive load on vehicle.	Bring the heatsink below 95 Degrees Celsius. If vehicle is overloaded, remove load and allow cooling before resuming operation.
17	Severe B+/KSI Undervoltage	1. Non controller system drain on battery. 2. Battery cables damaged or terminals loose. 3. Blown Fuse	Ensure that there is no loads independent of the controller causing a voltage drop over the batteries. Check battery cables for damage and ensure that terminals are tight. Check fuses.
18	Severe B+/KSI Overvoltage	Battery cables damaged or terminals loose.	Check battery cables for damage and ensure that terminals are tight.
22	Controller Overtemperature Cutback	1. Controller is operating in an extreme environment, heatsink temperature exceeded 85 degrees celsius. 2. Excessive load on vehicle.	Reduce controller heatsink temperature to below 85 Degrees Celsius. Remove excess load and allow machine to cool before resuming operation.
23	Undervoltage Cutback	1. Batteries need recharging. 2. Non-controller system-drain on battery. 3. Battery disconnected whilst driving.	Ensure that batteries are charged before operation. Ensure that there is no loads independent of the controller causing a voltage drop over the batteries. Ensure that battery leads are connected and that terminals are tight.
24	Overvoltage Cutback	1. Batteries disconnected with regen braking.	Ensure that battery leads are connected and that terminals are tight.
28	Motor Temp Hot Cutback	1. Motor temperature is above temperature limit, possibly due to operating in high ambient temperatures or overloading machine.	Ensure that machine is not overloaded.



Troubleshooting Guide

31	Main Driver	1. Open or short on driver load.	Test the motors to see if there is a short circuit or an open circuit.
		2. Dirty connector pins at controller or contactor coil.	Ensure that the connector pins in the multiplug and the crimped terminals are clean, free of corrosion and make a good connection.
		3. Bad connector crimps or faulty wiring.	Inspect all motor wiring, checking all terminals are tight and cables are not damaged.
32	EM Brake Driver	1. Open or short on driver load.	Test the brakes to see if there is a short circuit or an open circuit.
		2. Dirty connector pins at controller or contactor coil.	Ensure that the connector pins in the multiplug and the crimped terminals are clean, free of corrosion and make a good connection.
		3. Bad connector crimps or faulty wiring.	Inspect all motor wiring, checking all terminals are tight and cables are not damaged.
37	Motor Open	1. Motor phase is open.	Check motor to ensure that there not an open circuit.
		2. Bad crimps or faulty wiring.	Ensure that the motor wiring is undamaged, the crimps are sound and that the terminals on the controller are tight.
38	Main Contactor Welded	1. Main contactor tips are welded closed.	The contactor is welded closed, audible click will not be heard when operating the deadman lever, contactor will need replacing.
39	Main Contactor Did Not Close	1. Main contactor tips are oxidized, burned or not making good contact.	Contactor will have to be replaced.
		2. Main contactor opened during operation.	Check wiring to contactor is good, ensure that all terminals are making good contact.
		3. Loose connections in wiring supplying contactor.	Check wiring to contactor is good, ensure that all terminals are making good contact.
		4. Defective contactor.	Contactor will have to be replaced.
47	HPD Sequencing	1. Incorrect sequence in application of Keyswitch, Interlock, Direction or Throttle.	Ensure that deadman is operated before forward lever. To clear fault, switch machine off then on.
52	User 2 Fault	1. Deadman or Throttle lever operated before machine is turned on.	Ensure that Deadman or Throttle levers are not operated before switching on machine.
54	Safety Bar Fault	1. Open circuit on Safety Bar Circuit	Contact Tufftruk for further assistance.
55	Platform Proximity Sensors	1. Open circuits on Proximity Sensor Circuit	Contact Tufftruk for further assistance.



Service and Maintenance

Machine Cleaning

Clean the machine after it has been used to prevent the collection of hardened debris. Hardened debris is very difficult to remove.

To clean it use an old brush or hand brush with water.

Do Not pressure wash or hose down the electric motor housing. Clean only with a cloth or compressed air.

Transaxles

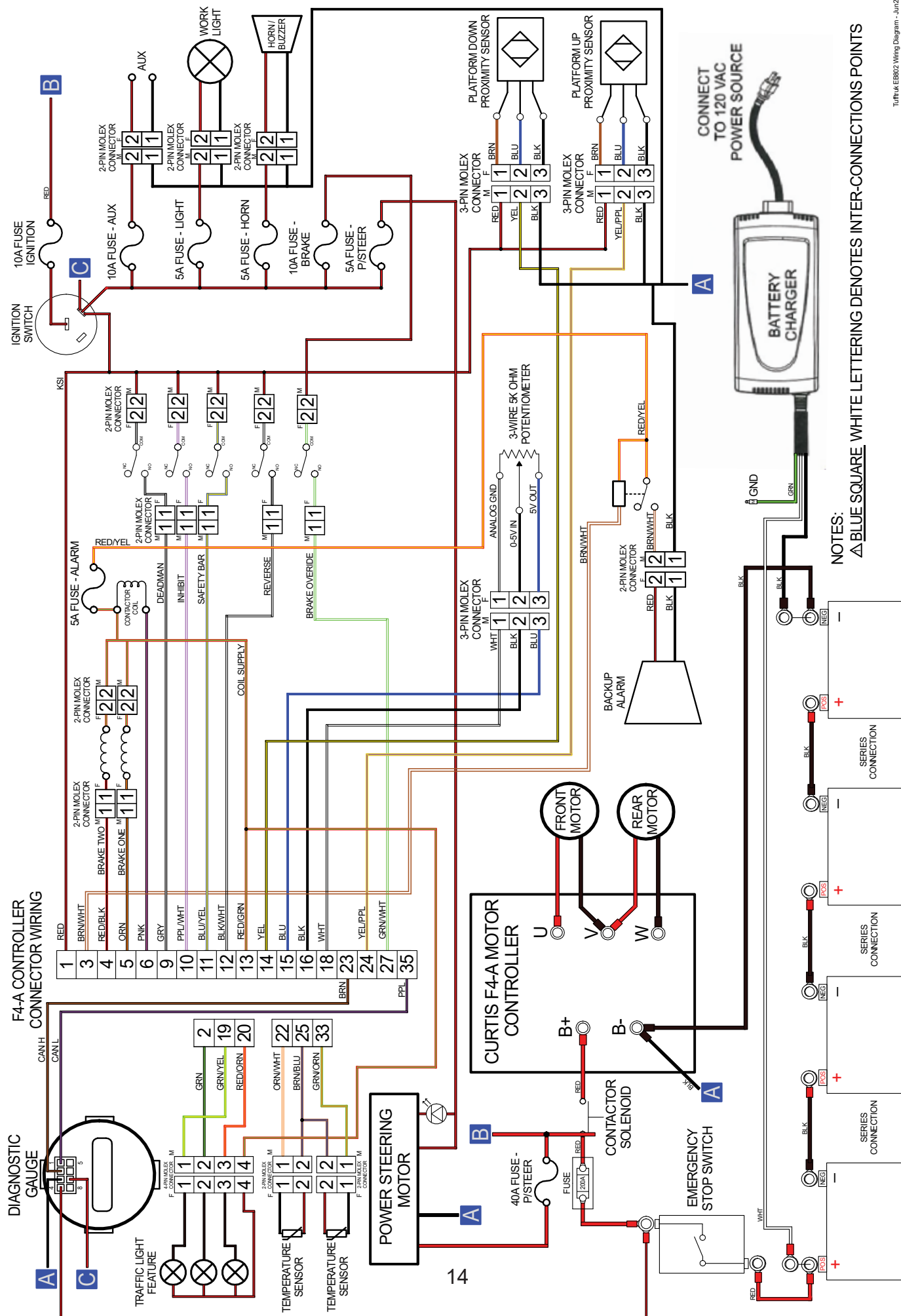
There should be no maintenance required on the transaxles as these are sealed for lift transaxles. If there are any signs of damage or leakage stop using the TUFFTRUK CONCRETE BUGGE and contact your local Tufftruk Dealer or Tufftruk Ltd direct.

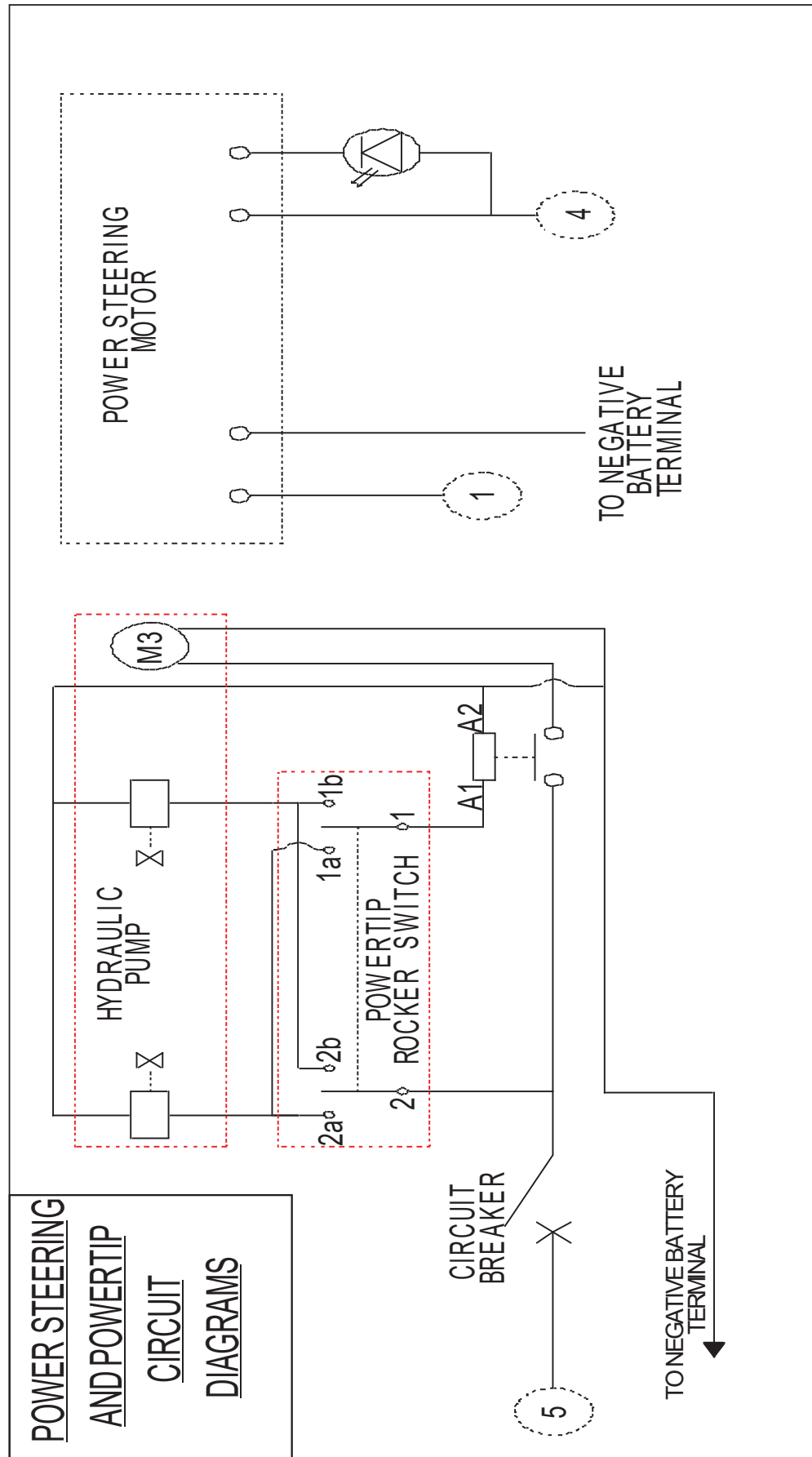
Hydraulic Pump

The hydraulic pump is self contained. If you require replacement oil this is Pro Power Ultra ISO 46.

Tyre Pressure

TUFFTRUK CONCRETE BUGGE tyre pressure should be regularly checked and maintained at 30PSI (flotation and turf tyres).







WARRANTY

Your new TUFFTRUK CONCRETE BUGGE is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase.

The TUFFTRUK CONCRETE BUGGE warranty is against defects in design, materials and workmanship.

The following are not covered under the TUFFTRUK CONCRETE BUGGE 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 Tufftruk or their recognised agents.
3. Transportation or shipment costs to and from TUFFTRUK CONCRETE BUGGE 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 are not covered by warranty. Tufftruk 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 the point of purchase: your TUFFTRUK CONCRETE BUGGE reseller / distributor. Keep a record of the warranty form for your records.

Any warranty issues please do contact your place of purchase:

For warranty claims:

Tel:- +44 (0) 1298 84687

Email:- sales@tufftruk.co.uk

Or Write to:- Tufftruk Ltd Unit 5, Prince Street Business Park, Prince Street, Leek, Staffordshire ST13 6DB

Register your Warranty online at <https://truxta.com/services/register-your-warranty>

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



Please register your Warranty within 14 days of the date of purchase. Warranty period's are not transferrable to subse-



SPARE PARTS

At Tufftruk, we recommend when maintaining your machine only to use the Manufactures original and Genuine spare parts.

Replacement spare parts for the Tufftruk Ltd range can be ordered direct on the below.

For more help and support on your Spare Parts requirements, Please contact Tufftruk Ltd on the below.

Tel:- +44 (0) 1298 84687

Email:- sales@tufftruk.co.uk

Web:- www.truxta.com

**WARNING**

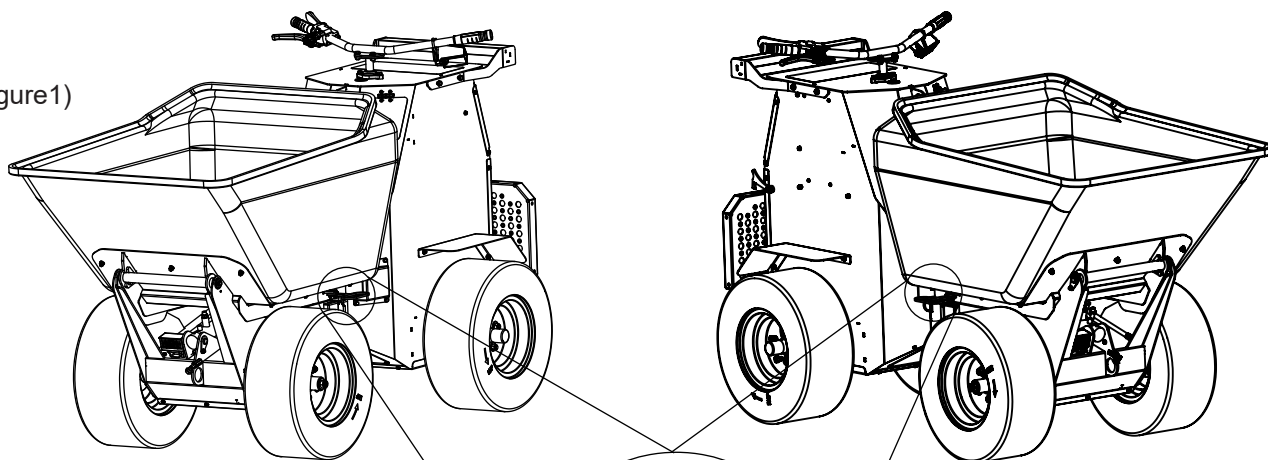
Before you operate or carry out any maintenance on this machine YOU MUST READ and STUDY this manual.

Changing Skip / Attachment

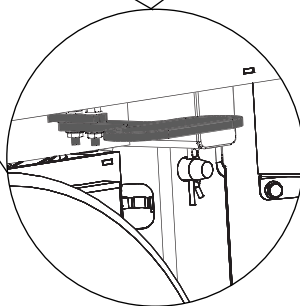
Before changing a skip or attachmentt ENSURE the below is followed:-

- The skip is heavy and must not be lifted single-handedly, get help or use lifting equipment.
 - ENSURE PPE (Personal Protective Equipment) is worn.
 - ENSURE the TUFFTRUK CONCRETE BUGGE skip is empty.
1. Position the skip in the down position. (Figure1)
 2. Pull skip lock handles out. (Figure 2)
 3. Whilst pulling the lock handle, pull towards the front of the skip to lock in unlock position. (Figure 3)
 4. Lift the skip upwards and backwards towards the chassis, to unhook the front carrier.

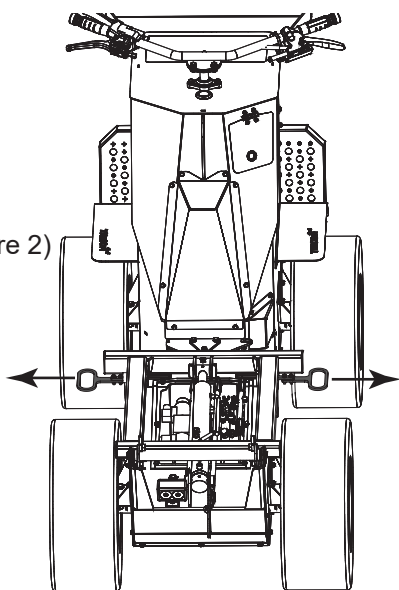
(Figure1)



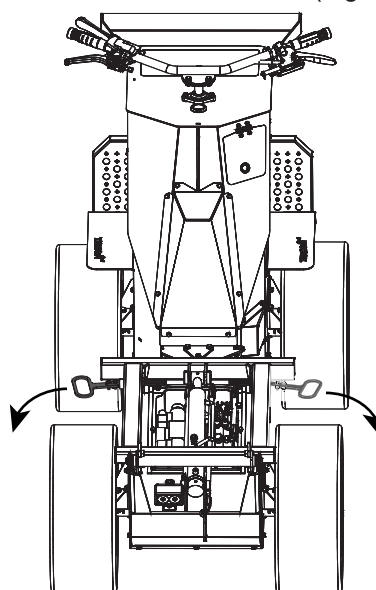
(Figure 2)



(Figure 2)



(Figure 3)





Tufftruk Ltd
Unit 5,
Prince Street Business Park
Leek
Staffordshire
ST13 6DB

T: +44 (0)1298 84687 Email: sales@tufftruk.co.uk

www.truxta.com