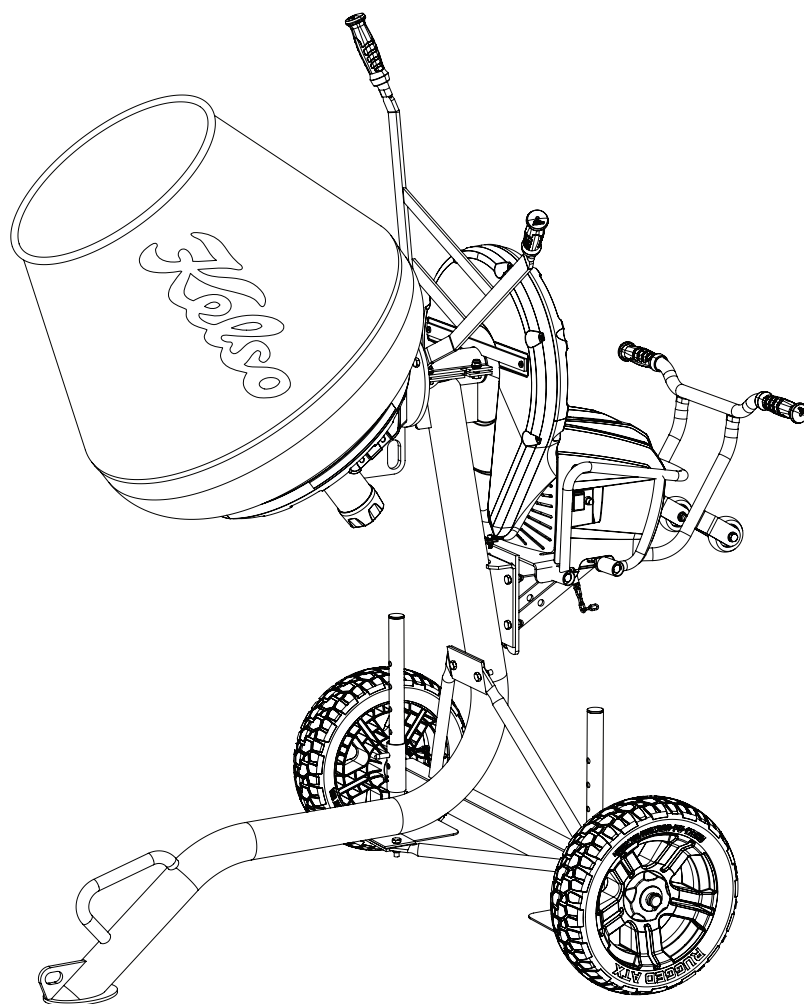


Kelso

PRODUCT MANUAL

KCM65 / KCM100



Read the manual carefully and make sure that you understand the instructions before you use the product.



WARNING: Work with concentration and care. Keep your workplace clean and avoid hazardous situations. This product could cause serious injury to the operator or others.



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		KCM65-S	KCM100-S
Voltage	AC	240V	240V
Frequency	Hz	50	50
Power	W	450	750
Power	HP	0.5	1.0
Rated Current	A	1.92	5.35
Rated Speed	RPM	1400	1400
Bowl Speed	RPM	30	30
Protection Rating		IP44	IP44
Weight	kg	85	110
Capacity (Mixed Wet)		65L (2.2CF)	100L (3.5CF)
Capacity (Unmixed Dry)		85L (3CF)	130L (4.5CF)
Gross Drum Volume		110L (4CF)	184L(6.5CF)
Bowl Mouth Diameter	mm	385	440

Naming Convention

KCM65-S

K: Kelso

CM: Cement Mixer

65: 65 Litre Drum Capacity

S: Stabilizers

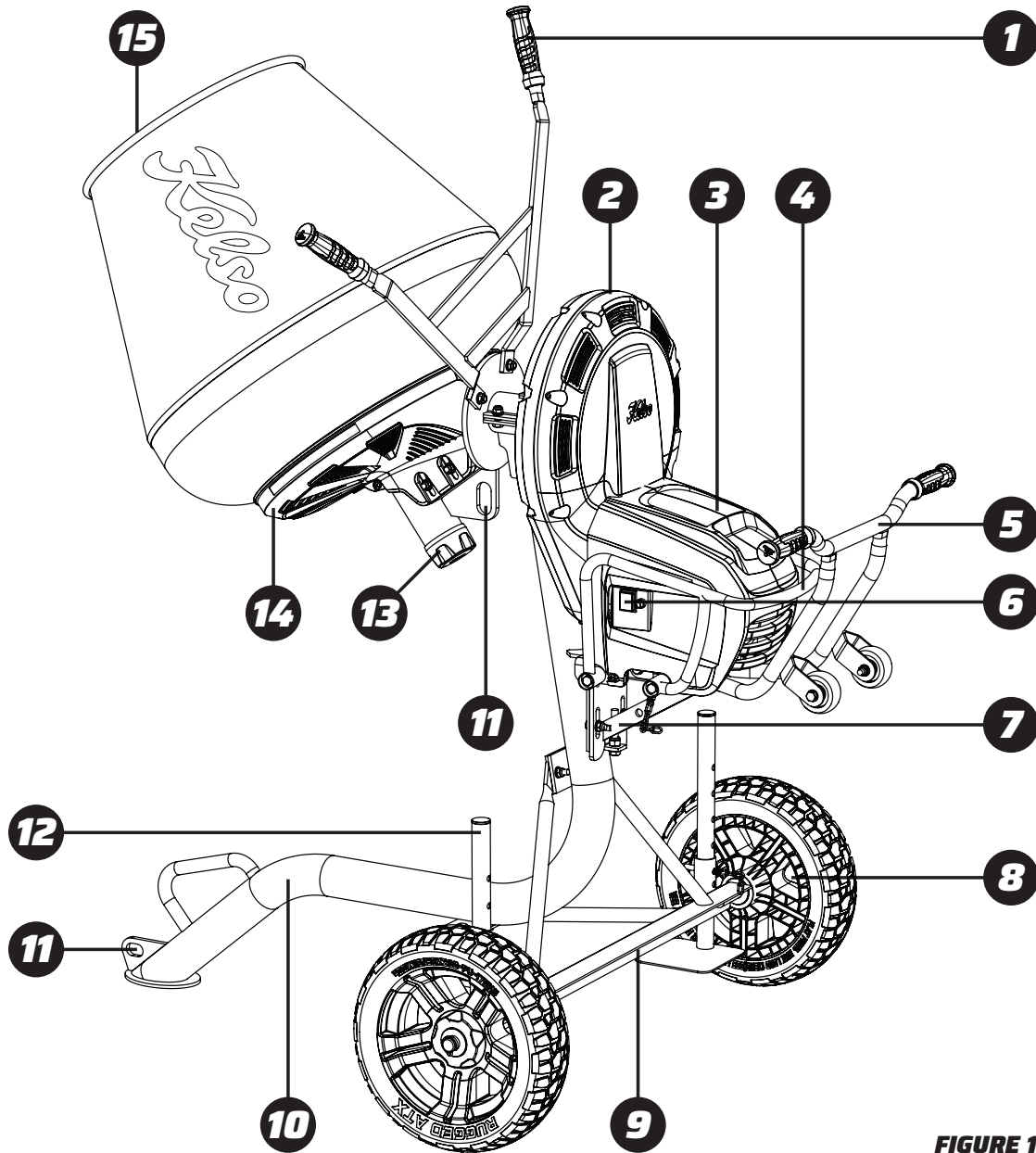


FIGURE 1









- 1. Tipping Handle
- 2. Pulley Cover
- 3. Motor Cover
- 4. Motor Guard
- 5. Rear Grab Handle

- 6. On/Off Switch
- 7. Adjustable Motor Mount
- 8. Wheels
- 9. Axle
- 10. L-Frame

- 11. Lifting Points
- 12. Adjustable Leg Stand
- 13. Drum Shaft Cap
- 14. Drum Safety Guard
- 15. Mixing Drum

SYMBOLS ON THE PRODUCT

	Read the manual carefully and make sure that you understand the instructions before you use the product.
	WARNING: Work with concentration and care. Keep your workplace clean and avoid hazardous situations. This product could cause serious injury to the operator or others.
	Risk of electric shock
	Wear eye protection!
	Wear ear protection!
	Wear a dust mask!
	Wear protective gloves!
	Wear protective boots!

	Wear protective clothing!
	Risk of injury. Do not touch moving parts.
	CAUTION: Electrical cables are a trip hazard.
	Do not expose electrical components to water.
	Do not throw in the household waste!
	Electromagnetic Compatibility (EMC) tested to comply with electrical regulatory standards.
 	DANGER! CAN CAUSE SKIN BURNS & EYE DAMAGE: Avoid contact with the eyes and skin from both wet and dry cement.

INTENDED USE

The power tool is designed for mixing of dry or wet materials such as concrete, mortar, plaster, cement render, sand and fine aggregate. Do not mix food. The power tool is not designed for processing food. Do not use this tool to mix flammable or explosive materials. Fire or explosion can cause severe burns or death.



The manufacturer accepts no liability for possible damage or accidents caused by using or operating the device inappropriately or incorrectly.

The manufacturer is not liable for damages that the product causes if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.

POWER SUPPLY

The product shall only be connected to the voltage stated on the type plate and it only works with single-phase AC voltage. It is provided with double protective insulation in accordance to AS/ NZS 3000:2018 Standards Australian and thus, it may be also connected to sockets without ground cable.

Do only use extension cables with insufficient cross section. A cross section that is too small may lead to excessive loss of power and overheating of the tool and the cable. Connections must be made with protected material suitable for outdoor use.

Ensure the power outlet is protected by residual current device (RCD) with a rated residual current of 30mA or less before connecting the power plug of the power tool.

SAFETY DEFINITION

WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.



CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

NOTE: Used to give more information that is necessary in a given situation.

GENERAL SAFETY INSTRUCTIONS

WARNING! Read the warning instructions that follow before you use the product.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool. This product is a dangerous tool if you are not careful or if you use the power tool incorrectly. This power tool can cause serious injury or death to the operator or others. Before you use the power tool, you must read and understand the contents of this operator's manual.

- Save all warnings and instructions.
- Comply with all applicable laws and safety regulations in force in your area as well as all other generally recognised rules of safety.
- The operator and the employer of the operator must know and control the risks during operation of the power tool.
- Do not let a person operate the power tool unless they read and understand the contents of the operator's manual.
- Do not operate the power tool unless you receive training before use. Make sure that all operators receive training.
- Do not let a child (below 14 years of age) or untrained person operate the power tool.
- This power tool is not intended for use by persons with reduced physical, sensory or mental capabilities, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Only let approved persons operate the power tool.
- The operator is responsible for accidents that occur to other persons or their property.
- Do not use the power tool if you are tired, ill, or under the influence of alcohol, drugs or medicine.
- Always be careful and use your common sense.
- This power tool produces an electromagnetic field during operation. This field can under some circumstances interfere with active or passive medical implants. To decrease the risk of serious injury or death, we recommend persons with medical implants to speak to their physician and the medical implant manufacturer before operating this power tool.
- Keep the power tool clean. Make sure that you can clearly read signs and decals.
- Do not use the power tool if it is defective.
- Do not do modifications to this power tool.

- Do not operate the power tool if it is possible that other persons have done modifications to the power tool.
- Do not access the rotating parts without stopping the machine.
- Ensure power is isolated and power cord unplugged before performing maintenance work on the machine.
- Ensure the machine is empty and power isolated during transport of the machine.

WORK AREA SAFETY

WARNING! Read the warning instructions that follow before you use the product.

- Make sure that only approved persons are in the work area.
- Keep children and bystanders away while operating a power tool.
- NEVER leave the power tool running unattended. Before you leave the work area, stop the power tool and make sure that there is no risk of accidental start.
- Only work in a safe and stable position during operation. The power tool should only be operated on a level ground.
- Make sure that there is no risk that you or the power tool can fall from a height.
- Keep the work area clean and well lit.
- Keep the work area free of tripping hazards.
- Do not operate the power tool in explosive atmospheres, such as the presence of flammable liquids, gases or dust.

SAFETY INSTRUCTIONS FOR OPERATION

WARNING! Read the warning instructions that follow before you use the product. Read all safety instructions before operating the power tool.

- Before starting up any power tool, you must check the flexible power cable and the plug. Do not work with the power tool if the connecting cable is damaged.
- If the connecting cable is damaged or cut during work, do not touch it and immediately disconnect the power plug.
- The switch must be in the OFF position before you connect it to the mains.
- The power tool shall always be supplied via residual current device (RCD) with a rated residual current of 30mA or less.
- Do not use any adaptor plugs with earthed (grounded) power tools.
- Do not expose the power tool to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Always guide the flexible power cable from the power tool to the rear. Never pull hard on the flexible power cable and never set it on or guide it over any sharp edges.
- Always arrange a 'drip loop' in the power cable below the level of any power plugs.
- Make sure that you know how to stop the power tool quickly in an emergency.
- Do not operate the power tool without all protective covers installed. Keep guards in place and in working order.
- Use personal protective equipment. Refer to section '**Personal Protective Equipment**' in this manual.
- Make sure that there is no grease or oil on handles.

- The operator must have the physical strength that is necessary to operate the power tool safely.
- Keep hands out of the way of all moving parts.
- Do not place the shovel or other tools or objects into the mixing bowl while it is rotating.
- Do not reach into the mixing bowl with your hands or access the rotating parts without stopping the machine.
- Do not mix any solvents or solvent containing substances with a flash point of below 21°C.
- Don't use the mixer for a purpose for which it was not intended.

PERSONAL PROTECTIVE EQUIPMENT



WARNING! Read the warning instructions that follow before you use the product. Always use approved personal protective equipment.

NOTE: Personal protective equipment cannot fully prevent injury but it decreases the degree of injury if an accident does occur.

- Always use approved personal protective equipment when you operate the power tool.
- Regularly do a check of the condition of the personal protective equipment.
- Use approved hearing protection.
- Use approved respiratory protection. Repeated inhalation of the dust containing crystalline silica may cause bronchitis, silicosis (scarring of the lung) and the risk of scleroderma.
- Use approved eye protection with side protection. Don't wear contact lenses when handling cement or cement products.
- Use thick, waterproof alkali-resistant protective gloves.
- Use boots with steel toe-cap and non-slip sole.
- If you must stand in wet concrete, be sure to wear rubber boots that are long enough to keep the concrete from flowing in and being trapped against your skin.
- Use approved work clothing or equivalent closefitting clothing that has long sleeves and long legs. Pull sleeves down over gloves and tuck pants inside boots and duct-tape at the top to keep mortar and concrete out.
- Remove jewellery such as rings and watches because wet cement can collect under them.
- Keep your hair, clothing and gloves away from moving parts.

Australian and New Zealand Standards:

AS 2161: Industrial Safety Gloves and Mittens (excluding electrical and medical gloves).

AS/NZ 1336: Recommended Practices for Occupational Eye Protection.

AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.

AS/NZS 1716: Respiratory protective devices.

AS/NZS 4501: Occupational protective clothing.

WORKING WITH WET CONCRETE



DANGER! Read the warning instructions that follow before you use the product.
CAN CAUSE SKIN BURNS & EYE DAMAGE: Avoid contact with the eyes and skin from both wet and dry cement.



WARNING! Read the warning instructions that follow before you use the product. Wear suitable personal protective equipment.

UNDERSTANDING THE RISKS

- Concrete and other cement mixtures are strongly basic (pH of 12 to 13), the extreme alkaline end of the scale. Strong bases, like strong acids are harmful, or caustic to skin. Depending on how long your skin is in contact with concrete, the result can range from minor irritation to third degree burns and skin ulcers. If you experience irritation that persists, call your doctor. If you experience deep burns, or burns over a large area, seek immediate medical attention.
- Concrete and other substances mixed with cement are hygroscopic, meaning that they draw water from any material it contacts - including skin.
- Abrasive sand contained in fresh concrete is abrasive to bare skin.
- Avoid allowing your clothing to become soaked with concrete, as it will then trap the concrete against your skin, potentially resulting in irritation or burns. If you do get concrete or concrete bleed water on your clothing, remove the clothing promptly and rinse the skin with large amounts of cool clean water.
- If you're finishing concrete, be sure to use waterproof pads between fresh concrete surfaces and your knees, elbows, hands, or any other part of your body that might come into contact with the concrete. About half of all concrete burns occur to the lower legs during this part of the process.
- Don't wash your hands with water from buckets used for cleaning tools.
- Provide adequate hygiene facilities on site for workers to wash hands and face at the end of a job and before eating, drinking, smoking, or using the toilet. Facilities for cleaning boots and changing clothes should also be available.

FIRST AID



DANGER! Read the warning instructions that follow before you use the product.
CAN CAUSE SKIN BURNS & EYE DAMAGE.

Skin Sensitization: Category 1B
Skin Corrosion/Irritation: Category 2
Serious Eye Damage / Eye Irritation: Category 1
Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Carcinogenicity: Category 1

NOTE: first aid instructions outlined below are to be used as a guide in absence of other information. The person administering first aid should always refer the material safety data sheet provided by the manufacturer of the material being used. The manufacturer accepts no liability for possible damage or injury caused by referencing these instructions.

EYES: Flush thoroughly with flowing water for 15 minutes to remove all traces. If symptoms such as irritation or redness persist, seek medical attention. If wet cement is splashed in the eye, always treat as above, and seek urgent medical attention.

SKIN: Remove heavily contaminated clothing immediately. Wash off skin thoroughly with water. Use a mild pH neutral soap if available. Open sores or cuts should be thoroughly flushed and covered with suitable dressings. Shower if necessary. Seek medical attention for persistent irritation or burning of the skin.

INHALED: Remove to fresh air, away from dusty area and keep at rest in a comfortable position for breathing. If symptoms persist, seek medical attention.

INGESTION: Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents. If symptoms persist, seek medical attention. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).

FIRST AID FACILITIES: Eye wash facilities and safety shower should be available.

FIRST AID: If any above symptoms persist, seek medical attention or contact Poisons Information Centre on 13 11 26 (Australia wide).

DUST SAFETY



WARNING! Read the warning instructions that follow before you use the product. Always use a dust mask. Always use eye protection.

- Operation of the power tool can cause exposure to airborne dust. Dust may cause immediate or delayed irritation of the eyes. Depending on the level of exposure, effects may range from redness to chemical burns and blindness. Dust can cause serious injury and permanent health problems.
- Silica dust is regulated as harmful by several authorities. These are examples of such health problems:
 - The fatal lung diseases chronic bronchitis, silicosis and pulmonary fibrosis
 - Cancer
 - Birth defects
 - Skin inflammation
- Use correct equipment to decrease the quantity of dust and fumes in the air and to decrease dust on work equipment, surfaces, clothing and body parts. Examples of controls are dust collection systems and water sprays to bind dust. Decrease dust at the source where possible. Make sure that the equipment is correctly installed and used and that regular maintenance is done.
- Use approved respiratory protection. Make sure that the respiratory protection is applicable for the dangerous materials in the work area.
- Make sure that the airflow is sufficient in the work area.
- If possible, point the exhaust of the power tool where it cannot cause dust to go into the air.

NOISE SAFETY



CAUTION! The noise produced during work can damage your hearing. Always use ear protection.

- High noise levels and long-term exposure to noise can cause noise-induced hearing loss.
- To keep the noise level to a minimum, do maintenance on and operate the power tool as given in the operator's manual.
- Use approved hearing protection while you operate the power tool.
- Listen for warning signals and voices when you use hearing protection. Remove the hearing protection when the power tool is stopped, unless hearing protection is necessary for the noise level in the work area.

VIBRATION SAFETY



CAUTION! Excessive or abnormal vibrations may cause damage to equipment.

- Stop the product immediately if strong vibrations suddenly occur.
- Do not continue the operation before the cause of the increased vibrations is removed.

SAFETY INSTRUCTIONS FOR MAINTENANCE



WARNING! Read the warning instructions that follow before you use the product.

- If the maintenance is not done correctly and regularly, the risk of injury and damage to the power tool increases.
- Use personal protective equipment. Refer to section '**Personal Protective Equipment**' in this manual.
- Stop the power tool and make sure that all parts of the power tool are cool before you do the maintenance.
- Clean the power tool to remove dangerous material before you do the maintenance.
- Ensure power is isolated and power cord unplugged before maintenance work on the machine.
- Do not change the power tool. Modifications that are not approved by the manufacturer, can cause serious injury or death.
- Always use original accessories and spare parts. Accessories and spare parts that are not approved by the manufacturer, can cause serious injury or death.
- Replace damaged, worn or broken parts.
- Only do the maintenance as given in this operator's manual. Let an approved service center do all other servicing.
- Remove all tools from the power tool before turning the power tool on after maintenance. Loose tools or tools attached to rotating parts can eject and cause injury.

OPERATING THE POWER TOOL



WARNING! Read and understand the safety instructions before you use the product.



Read the operator's manual carefully and make sure that you understand the instructions.

Before you operate this power tool:

- Read the safety instructions carefully and make sure that you understand all risks.
- Read the operating manual carefully and make sure that you understand the instructions.
- Do the daily maintenance. Refer to maintenance schedule.

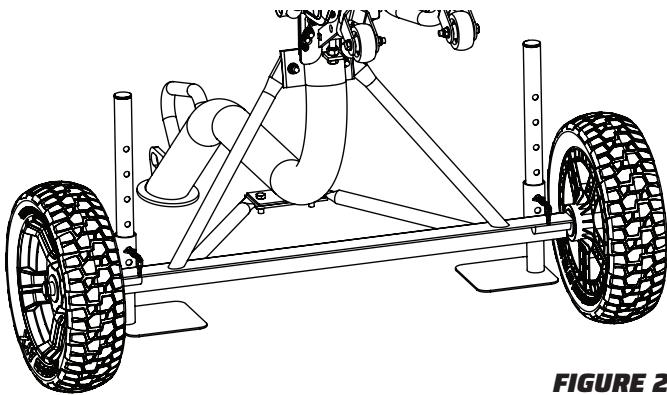


FIGURE 2

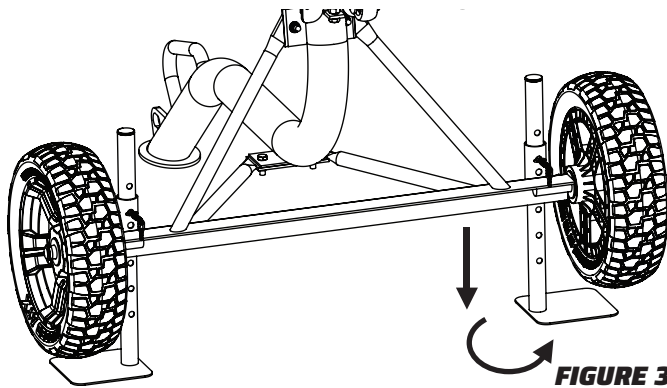


FIGURE 3

SWITCHING THE POWER TOOL ON & OFF



WARNING! Risk of accident if the machine is operated using unauthorised voltages or frequencies. The mains voltage and the frequency of the power source must correspond with the specifications on the machine's name plate.



WARNING! Risk of accident, electric shock. 10 amp heavy duty safety extension cord must be used.



WARNING! Risk of accident, electric shock. Always pull the plug out of the socket before performing any type of work on the machine.

NOTE: The ON/OFF switch for the power tool is located on the side of the motor cover. Check the mixer and environment to ensure it is safe to turn the mixer on.

1. To START the power tool, press the portion of the switch marked "I".
2. To STOP the power tool, press the portion of the switch marked "O".
3. If the ON/OFF switch at any time fails to operate correctly as above, turn off and disconnect the power supply and have the mixer checked by an authorised service centre.

Temperature-dependent overload protection:

To protect the motor from overheating at extreme permanent load, the power tool will be automatically switched off by the protective electronic system when a critical temperature is reached.

Run Time: This is dependent on many factors including: mix type, mix volume, air temperature & idle time between each mix. The temperature overload protection may engage earlier based on these variables.

LOADING THE MIXING BOWL



WARNING! Never place your hand or any other object inside the mixing bowl while it is rotating.



CAUTION! Always start the motor and ensure bowl is rotating before adding any material into the mixing bowl.



CAUTION! Check the tyre air pressure corresponds with tyre markings and are both adequately and evenly inflated before loading.

- Ensure when loading the mixing bowl the shovel or any other tool DOES NOT enter the mouth of the turning bowl.
- NEVER place your hand inside the rotating bowl.
- NEVER use any implement to free clogged mixture inside a rotating mixing bowl.
- ALWAYS turn off the mixer prior to clearing any unmixed or clogged mixture in the mixing bowl.
- ALWAYS ensure the power tool on level ground and is stable.

Leg stands must be rotated with feet facing outwards. (Figure 3)

1. Ensure the mixing bowl is in the upwards position and the mixer is on a stable and relatively level surface.
2. With your hands, and bystanders well away from all moving parts, press the 'ON' button to start the cement mixer.
3. Load the mixing bowl with the correct mixture ratio and method as stated on the product being mixed.
4. Gradually add mixture into the mixing bowl in such a way that the speed does not decrease or the machine is forced to stop.

- Do not overload the mixing bowl. Overloading the mixing bowl may damage the power tool, cause the power tool to tip over or cause injury to the user.

EMPTYING THE MIXING BOWL



WARNING! Never attempt to empty the bowl from the left-hand side (when facing the mouth of the bowl) of the power tool.

- To ensure correct control, the operator should stand on the right-hand side of the bowl (when facing the mouth of the bowl) so as to pull the handles towards the operator when emptying the mixing bowl.
 - NEVER attempt to lift and push the handles away from the opposite side.
 - NEVER leave the power tool on when unattended.
 - ALWAYS turn off the power tool when not attended.
- The power tool must remain on while tipping the mixing bowl so that the rotating bowl ejects the mixture.
 - Slowly tip the mixing bowl by holding the near side (closest) tilting handle and with a pulling action start rolling the mixing bowl towards the tipping position.
 - NEVER lean over the power tool to grasp both tilting handles.
 - As the second handle comes into reach hold both handles firmly to continue rolling the mixing bowl to the tipping position.
 - Ensure the power tool is turned off and the mixing bowl is stationary before reaching into or placing any objects into the bowl.

TRANSPORTATION



WARNING! Be careful during transportation. The product is heavy and can cause injury or damage if it falls or moves during transportation.



CAUTION! Ensure the power tool is safely restrained during transportation to the work site.



CAUTION! Do not tow the power tool behind a vehicle.

- Ensure the mixer is switched off and power cord unplugged and coiled up to minimise trip hazard.
- The cement mixing bowl should be empty during transportation.
- Ensure the mixing bowl is in the full tipping position before attempting to transport the power tool.
- Transport wheels let you move the product manually for shorter distances. For longer distances, put the product on a vehicle.
- The mixer may be pushed or pulled along the ground by holding the rear handles.
- Ensure the locking pin is secure before using rear handle to move mixer. (Figure 4)

- The mixer should not be manually pushed or pulled on a steep incline or slippery ground.
- The power tool is classed as very heavy and oversized, and should be lifted only with a mechanical lifting device.
- The rear handle bars can be folded down once loaded for transportation. (Figure 5)
- Ensure locking pin is secure before transporting mixer. (Figure 6)

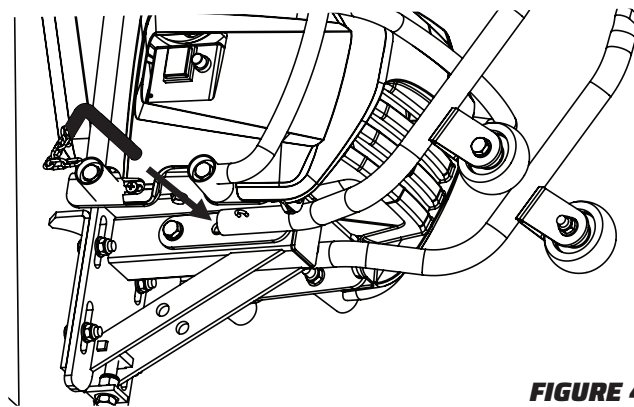


FIGURE 4

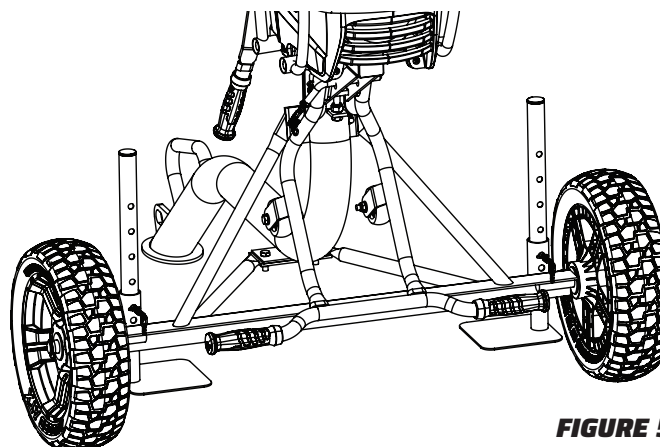


FIGURE 5

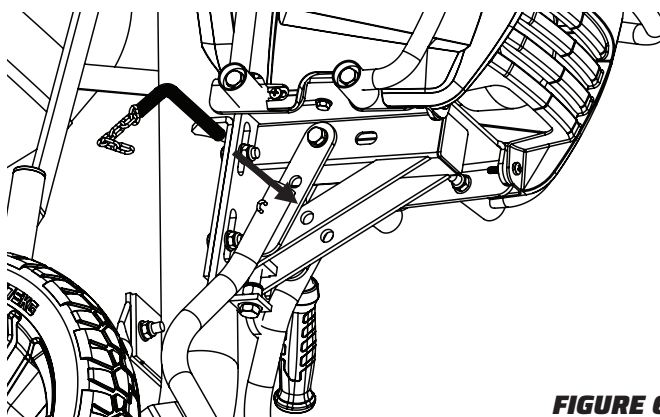


FIGURE 6

STORAGE

- Clean the product before storage.
- Ensure the mixing bowl is in the full tipping position.
- Put a protective cover on the product.
- Keep the product in a dry and frost-free area.
- Keep the product away from direct exposure to the sun.
- Keep the product in a locked area to prevent access for children or persons that are not approved.

DISPOSAL

DO NOT throw the power tool in your household waste. Dispose of the machine, accessories and packaging in an environmentally responsible way.

PACKAGING: Please dispose of packaging in an environmentally responsible way.

DISPOSAL OF MIX: Follow safety instructions and collect in containers for disposal as trade waste in accordance with local authority guidelines.

SPILLS / LEAKS: Keep out of sewers and stormwater.

MAINTENANCE SCHEDULE



CAUTION! Perform general maintenance tasks in accordance to this schedule to prolong the life of your power tool.

NOTE: DO NOT apply grease to the gear ring or pinion. Gears should remain dry and kept clean from any foreign material.

GENERAL MAINTENANCE TASK	BEFORE USE	AFTER USE	EACH 100 H	AS REQUIRED
Make sure that nuts and bolts are correctly tightened	X			
Inspect pneumatic tyres and inflate to correct pressure as marked on the wheel	X			
Examine the flexible power cable and the plug for signs of damage	X			
Inspect all safety covers are secured and look for signs of damage	X			
Examine the tension of the V-belt and look for damage (Figure 8)	X			
Clean the product		X		
Clean the gear ring and pinion gear with a stiff brush		X		
Inspect the gear ring and pinion gear for signs of wear (Figure 7)		X		
Lubricate the tilting shaft via the grease nipple			X	
Apply grease to the bearings of the pinion shaft and bowl shaft			X	
Adjust or replace the V-belt				X
Adjust or replace worn pinon gear				X
Replace worn or noisy bearings				X

GENERAL INSPECTION



WARNING! Turn off and unplug the power tool prior to any maintenance or repairs are to be carried out.

Perform all general maintenance tasks as outlined in section 'Maintenance Schedule' of this manual.

- Regularly check that all the bolts and nuts are tight. They may vibrate loose over time.
- Adjustments and cleaning jobs are to be performed only when the motor is switched off and the mains plug removed.
- Ensure tyres are inflated equally and in accordance to the nominal air pressure marked on the tyre.
- Ensure to inspect any extension cables and switches for damage before use with the power tool.
- The power cord and plug must be regularly inspected and tested to meet AS/NZ53760 In-service safety inspection and tests of electrical equipment.
- Make sure that no foreign objects get into any moving parts of the power tool.
- To inspect the gears, tip the bowl into the downward position. Remove the safety guard surrounding the gear ring and check pinion for any signs of wear. Ensure all gear teeth are clean by using a stiff brush to remove any residue. **(Figure 7)**

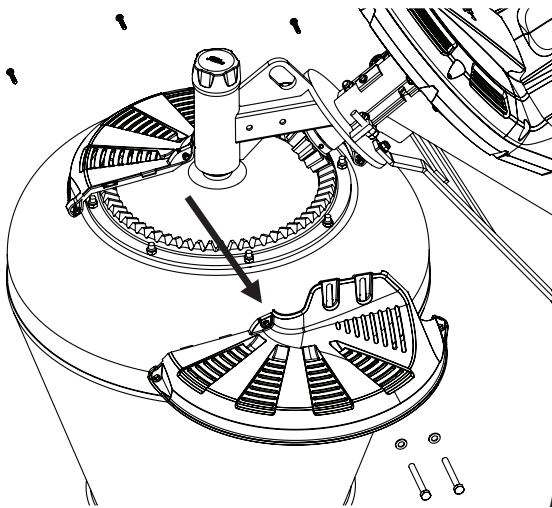


FIGURE 7

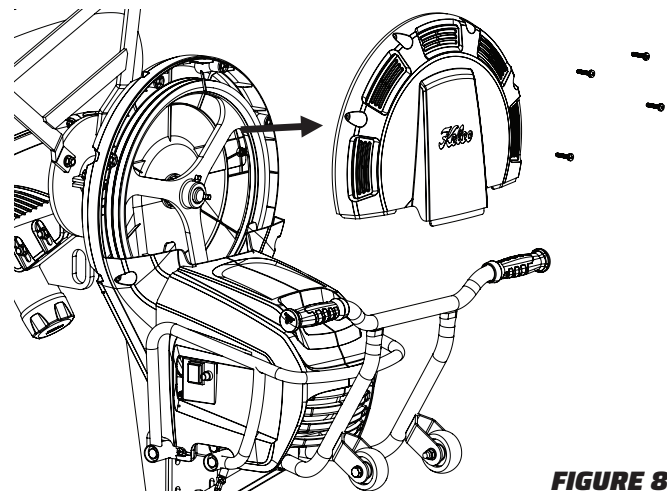


FIGURE 8

- To inspect the V-Belt tension, remove 4 bolts holding the upper pulley cover and remove. Inspect belt is under tension. **(Figure 8)**
- ALWAYS keep the power tool and the ventilation slots clean.
- Replace damaged, missing or failed parts before using it.

REPAIR MAINTENANCE



CAUTION! Repairs shall only be carried out by qualified staff trained and experienced in this area.

- NEVER attempt any repairs yourself, always take it to an authorised service centre for repair or parts replacement.
- If the power tool breaks down, the repair shall only be carried out by an authorised shop.
- Electrical repairs are to be carried out only by qualified electricians at authorised service centres, using original replacement parts.
- If the power cord of this power tool is damaged it must be replaced by an authorised service centre or similarly qualified person to avoid a hazard.
- The two main drive shafts (located in bearing arm housing section) are fitted with pre-packed sealed ball bearings. These should be inspected at regular intervals to ensure free rotation. These bearings should be replaced if the operation becomes noisy or the shafts have lateral movement or do not rotate freely.
- Apply grease to the bearing seals located in the bearing arm assembly prior to the first operation and then at regular intervals. This will protect seals and prolong bearing life.
- Lubricate the tilting shaft with a grease gun via the grease nipple in the frame arm mount.

HOW TO DO A CHECK OF THE V-BELT



WARNING! Do not operate the product without the V-belt cover installed.

NOTE: During run-in of new V-belts, it is important to inspect the drive belt tension every 20 hours of operation to ensure it is tight.

Correct V-Belt tensioning is the single most important factor necessary for long, satisfactory operation. Too little tension results in slippage, excess heat, and premature belt & pulley wear. Too much tension results in excessive stress on belts, bearings, and shafts.

- 1) Stop the power tool and unplug from mains.
- 2) Remove the inspection cover to view the upper pulley and V-belt. **(Figure 8)**
- 3) Examine the V-belt for damage and wear. Replace the V-belt if it is necessary.
- 4) Ensure all grub screws and key-ways on the pulleys are secure
- 5) Examine the tension of the V-belt.
- 6) If the tension is not sufficient, do these steps:
 - a) Slightly loosen the 4 bolts that hold the motor mount assembly to the frame to allow vertical movement. **(Figure 9 - A)**

- b) Use a wrench or socket to adjust the vertical tensioner bolt beneath the motor mount. **(Figure 9 - B)**
- c) Adjust the motor mount position up or down as required. Clockwise lowers the motor mount, increasing belt tension. Anti-clockwise raises the motor mount to decrease belt tension.
- d) Make sure that the V-belt tension is correct and re-tighten the 4 bolts.

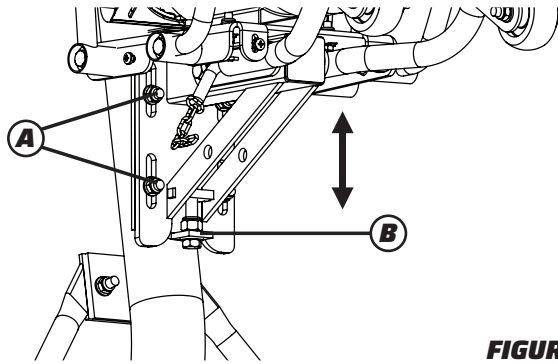


FIGURE 9

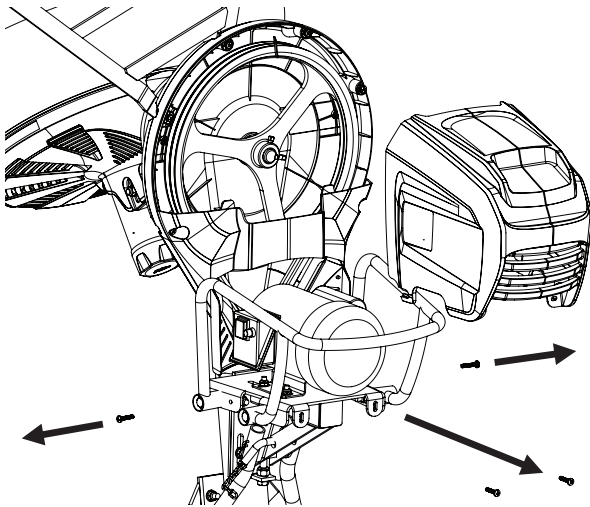


FIGURE 10

- 7) If the V-belt pulleys are mis-aligned, do these steps:
 - a) Remove the motor cover. **(Figure 10)**
 - b) Loosen the 4 bolts that hold the motor to the motor mount. **(Figure 11 - A)**
 - c) Adjust the motor position forwards or backwards. **(Figure 12)**
 - d) Make sure that the V-belt pulleys align and tighten the 4 bolts.

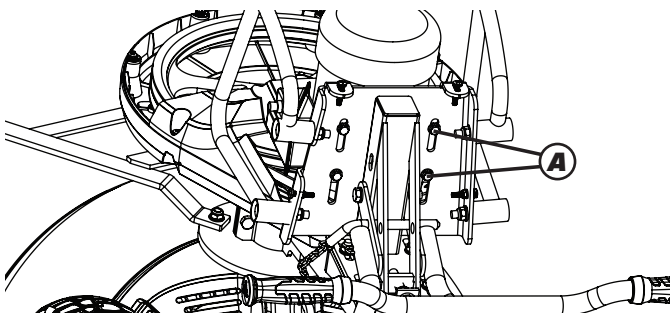


FIGURE 11

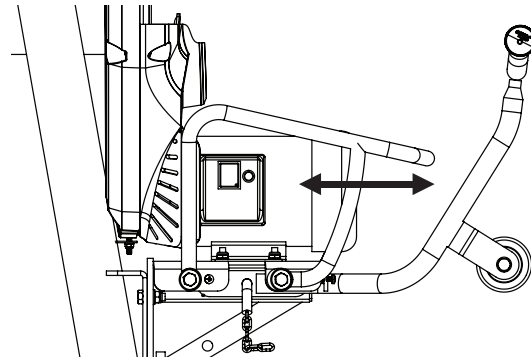


FIGURE 12

- 8) Install the V-belt inspection cover.

HOW TO ADJUST GEAR ENGAGEMENT



WARNING! Do not operate the product without the safety guard installed.

NOTE: Incorrect gear engagement will result in early wear of gear components.

Correct gear engagement is achieved when the teeth of the bowl and the teeth of the pinion are 2/3 engaged upon contact.

(Figure 13)

Adjustments can be made by moving the washers to the upper or lower position on the bowl shaft. **(Figure 14 - A)**

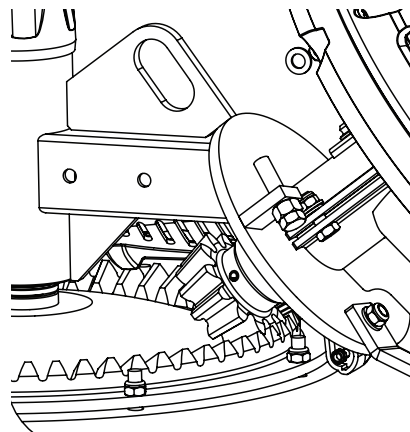


FIGURE 13

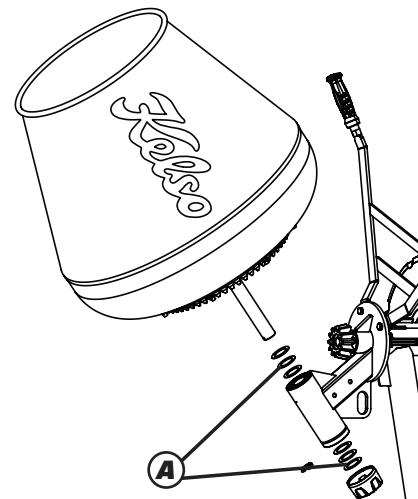


FIGURE 14

- 1) Tip the bowl into the downward position. Remove the shaft endcap and carefully release the split pin.
- 2) Drop the bowl out of the bearing assembly with the shaft still attached.
- 3) Re-position packing washers. To increase gear engagement reduce the amount of washers at the top of the shaft and move to the end of the shaft under the split pin.
- 4) Insert the shaft of the bowl back into the bearing arm assembly.
- 5) Insert more packing washers onto the shaft as required. There should be no vertical movement or gap between the packing washers and split pin.
- 6) Insert split pin and using pliers bend split pin ends to secure.

HOW TO APPLY GREASE TO THE TIPPING ARM



CAUTION! Do not mix grease types. Chemical incompatibility in lubricants can destroy bearings very quickly. It is advised to remove all old grease on the first service change to avoid risk.

NOTE: The grease nipple is a combination ball valve and check valve. The grease gun depresses the ball valve allowing grease to pass. When the gun is removed the valve should close, sealing in the grease. If the valve doesn't close and grease leaks out, there may be particulate matter obstructing its proper operation. You should replace the nipple.

- Always clean off the grease nipple with a rag before attaching the grease gun coupler. This will prevent pumping contamination into the bearing assembly. **(Figure 15 - A)**
- During first service, remove the top mount plate and clean away all old grease. **(Figure 15 - B)**
- After cleaning, reattach the top mount plate and pump in new grease with a grease gun.
- Periodically tip the drum using the tipping handles to help disperse the grease around the shaft.
- Pump enough grease that you hear escaping pressure and see just a little bit of grease movement squeeze out of the assembly.
- DO NOT apply grease to the pinion gear or teeth ring. Grease can attract foreign contaminants leading to premature wear.

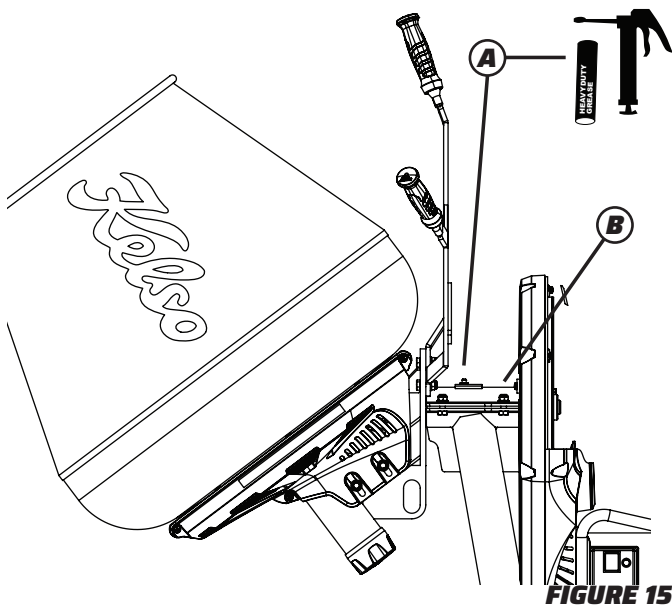


FIGURE 15

CLEANING THE POWER TOOL

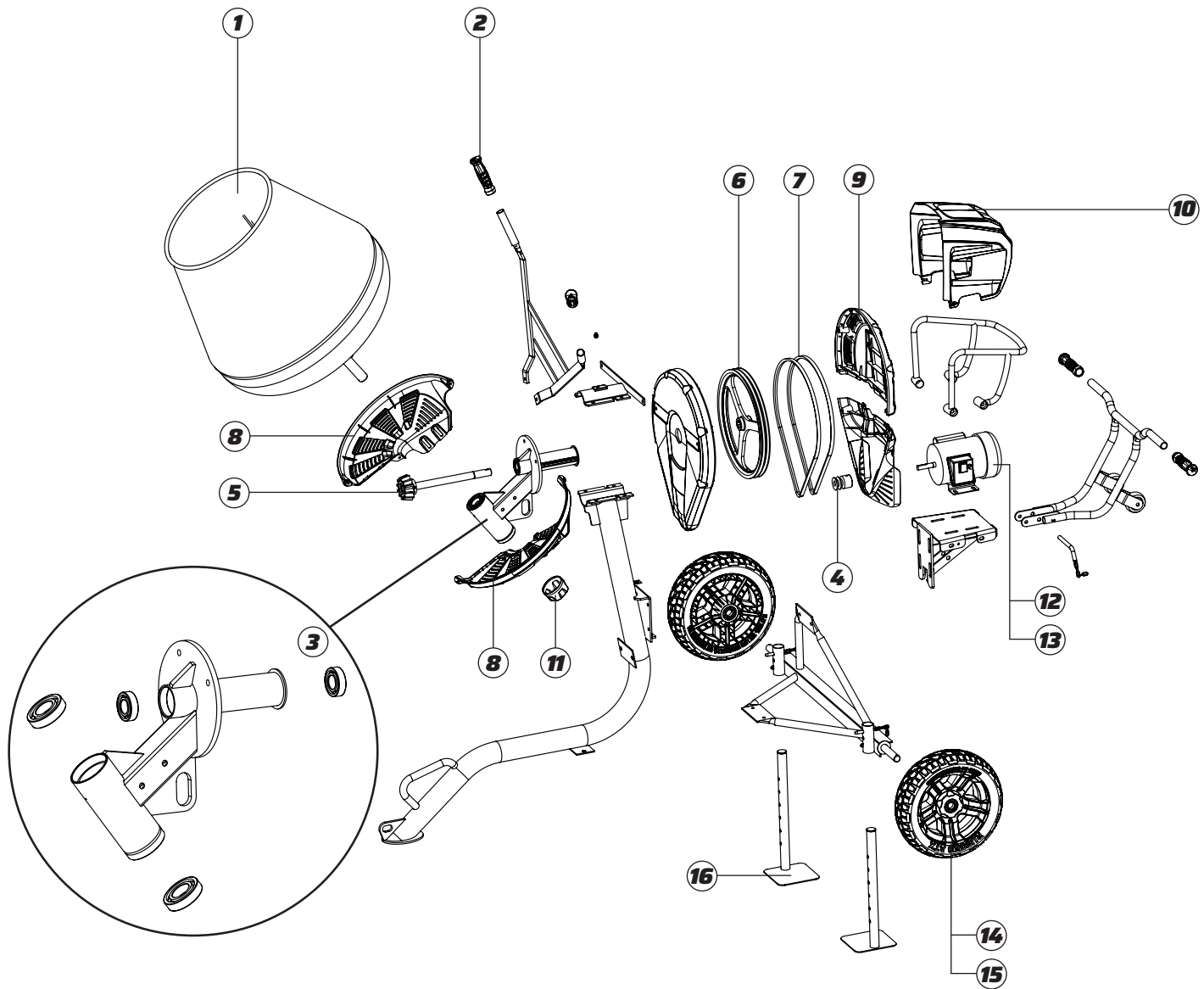


CAUTION! Do not point the water directly at any electrical components.

- Clean the machine during and after every use. Remove any dust, residual mixing material and any other dirt.
- Cleaning is best done with a stiff brush. Wear safety glasses whilst brushing away dust and dirt.
- Use running water from a hose or a high-pressure washer to clean the product.
- After every mix it is advisable to clear any build-up of cement from the mixing paddles inside the mixing bowl. If left to dry the cement can be extremely difficult to remove without damage to the bowl.

TIP: Run the Power Tool with a mixture of screenings and water to remove any dried or clogged cement from inside the mixing bowl.

- After every mix it is advisable to clear any build-up of cement from the gears. If left to dry the cement can lead to premature wear.
- After the last mix wash and clean ALL cement build up from both inside and outside the mixing bowl and any other exposed parts before the cement fully sets.
- Avoid hitting the bowl with any objects.
- After cleaning the mixing bowl, the power tool should be stored with the mixing bowl in the downwards position to ensure all water is drained.
- Remove grease and oil from the handle.
- The ventilation holes on the motor cover must not be blocked.
- NEVER use solvent-based cleaning agents, these may damage the painted surfaces or the plastic parts. If you must use these cleaning agents, test the effect of these agents on a small, concealed area



NO.	DESCRIPTION	KCM65 PART #	KCM100 PART #
1.	Steel Mixing Bowl	40130922	40130946
2.	KCM Hand Grip 2pce	X	X
3.	KCM Tipping Arm Bearing Kit 5pce (4 bearings + grease nipple)	X	X
4.	KCM M16 Pilot Bore V-Pulley	X	X
5.	KCM HSS Co Pinion Gear & Shaft	40131356	40131363
6.	KCM Upper V-Pulley 25mm Bore	X	X
7.	KCM Rubber V-Belt	40131332	40131349
8.	KCM Safety Guard 2pce	40132155	40132162
9.	KCM Pulley Cover Front Upper	40131073	40131073
10.	KCM Motor Cover	40132193	40132193
11.	KCM Bowls Shaft Cap	40130984	40130991
12.	KCM 2.2CF Motor 450W / 0.6HP	40131226	N/A
13.	KCM 3.5CF Motor 750W / 1HP	N/A	40131240
14.	KCM 2.2CF 14" Flat Free Wheel	40132131	N/A
15.	KCM 3.5CF 16" Flat Free Wheel	N/A	40132148
16.	KCM Leg Stand	40132216	40132216

X* - Contact Ames customer service for more information.

Problem	Possible Cause	Solution
The power tool will not start	Power cord not plugged in	Ensure all electrical cords are connected to the mains power.
	Power switch not in the on position	Ensure all switches of the power tool and mains power are on.
	Wrong power source	Ensure power tool is connected to the correct power source as indicated on the name plate.
	Circuit breaker shut off	Check and reset circuit breaker. If tripped: inspect power cords for signs of damage. Electrical switch or motor is damaged.
	Electrical switch is damaged	Repair power tool by a qualified electrician at authorised service centre.
	Motor is damaged	Repair power tool by a qualified electrician at authorised service centre.
The power tool automatically switched off	Power cord not plugged in	Ensure all electrical cords are connected to the mains power.
	Motor is overheated	This is normal: temperature-dependent overload protection has engaged. Wait for the power tool to cool down.
	Circuit breaker has been engaged	Check circuit and switches are active. Then restart.
Power tool does not reach full power	Mixing volume is too large	Reduce the amount of material in the mixing bowl.
	Extension cord not suitable for operation with this product	Use a heavy duty extension cord, <25m.
	Power source voltage is too low	Connect to another power source.
	Motor is worn	Repair / replace the worn motor.
The mixing bowl does not rotate when empty	Motor is not running	Refer problem: The power tool will not start.
	Gears are not engaged	Turn off power tool. Perform visual inspection of pinion gear and correct alignment. If gear is damaged replace part.
	V-Belt is slipping	Turn off power tool. Refer HOW TO DO A CHECK OF THE V-BELT. If belt is damaged replace part.
	Pinion gear not turning	Check connection between pinion shaft and upper pulley. Check connection between pinion gear head and shaft.

Problem	Possible Cause	Solution
The mixing bowl does not rotate under load	Mixing bowl is overloaded	Turn off power tool and completely empty mixing bowl. Turn power tool on and check.
	V-Belt is slipping	Turn off power tool. Refer HOW TO DO A CHECK OF THE V-BELT. If belt is damaged replace part.
	Pinion gear not turning	Check connection between pinion shaft and upper pulley. Check connection between pinion gear head and shaft.
	Gears are not engaged	Turn off power tool. Perform visual inspection of pinion gear and correct alignment. If gear is damaged replace part.
Mixing bowl will not tip	Bearing arm housing is over-tightened	Turn off power tool. Loosen bolts and re-check.
	No lubrication	Turn off power tool. Check and apply grease via grease nipple.
	Bearing arm has interference	Turn off power tool. Perform visual inspection for foreign objects.
Unusual / excessive noise	Fasteners are loose	Check and tighten all bolts and nuts.
	Pulleys not aligned correctly	Turn off power tool. Refer HOW TO DO A CHECK OF THE V-BELT. If belt is damaged replace part.
	No lubrication	Turn off power tool. Lubricate the tilting shaft via the grease nipple. Apply grease to the bowl shaft.
	Gears are not engaged correctly	Turn off power tool. Inspect the gear ring and pinion gear for alignment and signs of wear.
	Bearings are worn	Turn off power tool. Replace worn or noisy bearings.

The KELSO Warranties referred to below are provided by AMES Australasia Pty Ltd ABN 89 169 427 061 (AMES) of Level 1, 660 Doncaster Road, Doncaster, Victoria 3108.

THE 2 YEAR LIMITED WARRANTY

On the terms and conditions set out below, Ames warrants that all Kelso branded products will be free from defects in workmanship and materials for a period of 2 years.

1. General:

- 1.1 The 2 Year Limited Warranty period applies for 2 years from the date of purchase from an authorised Kelso reseller.
- 1.2 If a Kelso branded product fails to meet the 2 Year Limited Warranty during the warranty period, then Ames will repair or replace (at its election) the product at no costs to you. The 2 Year Limited Warranty covers the costs of labour and materials only where they are used to repair a manufacturing or material defect in the product.
- 1.3 Proof of purchase (a copy of the tax receipt detailing the date of the purchase, the product purchased & the place of purchase) from an authorised Kelso reseller is required for all warranty claims.
- 1.4 The 2 Year Limited Warranty period is not extended if the product is replaced as a result of a warranty claim.
- 1.5 The 2 Year Limited Warranty period does not apply to rental / hire of any Kelso branded products.

2. 2 Year Limited Warranty exclusions:

- 2.1. Freight costs between the consumer and the place of purchase, between the consumer and a Kelso company owned centre, are not covered by the 2 Year Limited Warranty. You will be responsible for these costs.
- 2.2. Damage caused directly or indirectly by accident, misuse, use not in accordance with any instructions or directions provided with the product, neglect, abuse or shipping / freight accident is excluded.
- 2.3. Damage caused directly or indirectly by use, misuse or abuse of non-genuine parts, or non-approved accessories or attachments used in connection with the product is excluded. For the purposes of the 2 Year Limited Warranty, non-approved parts, accessories and attachments are those not manufactured by Ames.
- 2.4. Ordinary wear & tear incurred during the course of normal use of the product is excluded. For the purposes of the 2 Year Limited Warranty, ordinary wear & tear includes degradation consistent with that expected for a product of its age, when used in the regular manner and in the normal application the product was designed for, as assessed by Ames.
- 2.5. Failure or damage caused directly or indirectly by excessive use of the product within the 2 Year Limited Warranty period is excluded. For the purposes of this warranty, excessive use is deemed to have occurred when a product is assessed by Ames as displaying wear & tear that is considered abnormal for a product of its age, when used in the regular manner and in the normal application the product was designed for.
- 2.6. Damage caused by the environment, including corrosion and discolouration due to ultraviolet light or improper storage, care or maintenance is excluded.
- 2.7. The 2 Year Limited Warranty does not apply to service or part costs of replacing and maintaining consumable parts which have ceased working due to ordinary wear & tear. These excluded items are:
 - 2.7.1. All accessories (including those sold with the product)
 - 2.7.2. Motors or engines
 - 2.7.3. Wheels, bearings, tires & inner tubes
 - 2.7.4. Axles
 - 2.7.5. Gears, pulleys & belts
 - 2.7.6. All maintenance & wear items
 - 2.7.7. Electrical cords & switches
- 2.8. The 2 Year Limited Warranty does not apply to any Kelso branded product where a modification to the product as originally manufactured has occurred, or where actual or attempted repair work on the product has been carried out by anyone other than an Ames authorised service technician, or where a repair used non-genuine Kelso parts.
- 2.9. The 2 Year Limited Warranty does not apply to products purchased from an unauthorised Kelso reseller, including on-line trading companies or private individuals that are not authorised Kelso resellers in Australia, New Zealand or the South Pacific Islands.

30 DAY LIMITED WARRANTY ON KELSO REPAIRS AND SERVICING

On the terms and conditions set out below, Ames warrants that all Kelso branded products that have undergone a warranty repair or servicing by an authorised Kelso warranty repairer or servicer will be free from defects in workmanship of the repair and parts used in the repair for 30 days from the date of completion of the repair.

3. General:

- 3.1. If a Kelso branded product fails to meet the 30 Day Limited Warranty on Kelso repairs during the 30 day warranty period, then Ames will repair or replace (at its election) the relevant part(s) at no costs to you.
- 3.2. Evidence of the date of the previous repair is required to claim the Kelso limited warranty on a repair.
- 3.3. All other warranty conditions and exclusions that apply to the 2 Year Limited Warranty apply to this 30 Day Limited Warranty on Kelso repairs.

GENERAL MATTERS

4. General Warranty Qualifications:

Kelso reserves the right to inspect any actual or associated products, repairs, service parts or accessories on which a warranty claim is being made, in order to assess eligibility of the actual item for warranty and to ensure appropriate resolution of the warranty claim.

- 4.1. If a claim is made under a Kelso warranty, Kelso may at its discretion only, opt to replace the product (either with the same product or with a similar product(s) up to the same purchase value as the original product), or to refund the purchase price if for any reason an effective repair (as assessed by Kelso), is unable to be achieved.
- 4.2. Kelso reserves the right to review and amend its warranty policies and periods on all products, repairs, service parts & accessories, from time to time as Kelso considers appropriate.

5. Australian Consumer Law:

Our goods and services come with guarantees that cannot be excluded under Australian Consumer Law. For major failures with the service, you are entitled:

- to cancel your service contract with us; and
- to a refund for the unused portion, or to compensation for its reduced value.

You are also entitled to choose a refund or replacement for major failures with goods. If a failure with the goods or service does not amount to a major failure, you are entitled to have the failure rectified in a reasonable time. If this is not done you are entitled to a refund for the goods and to cancel the contract for the service and obtain a refund of any unused portion. You are also entitled to be compensated for any other reasonably foreseeable loss or damage from a failure in the goods or service.

6. How to claim under the warranty:

- 6.1. Take the product back to the place of purchase or contact Kelso customer service within 20 working days of you becoming aware of the relevant defect.
- 6.2. You must provide proof of purchase (as required under the warranty terms) from an authorised Kelso reseller to make a warranty claim.

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