SOTTORIVA

MIXERS 60/90/130

Safe Operating Procedures

TRAINING MANUAL



Current January 2004

Contains 22 pages

MOFFRT

Owners and operators of Moffat equipment please note:

The risk ratings and control measures as outlined in this manual must be incorporated into your safety management systems and procedures. Ensure effective risk control by reinforcing these procedures with staff.

CONTENTS

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- Daily cleaning competency
- Trouble shooting
- Risk assessment

Moffat's policy is one of continual improvement and development. We therefore reserve the right to amend the information given in this booklet without prior notice. All sales will be subject to the company's conditions of sale.

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About this instruction manual

This manual contains all the necessary information for the **use, cleaning** and **maintenance** of the machine. The purpose of this booklet is to allow the user to take all measures and set up all the human and material resources needed for safe and long-lasting use of the machine.

This manual should be available for all staff and maintenance personnel authorised to use the machine.

Do not attempt to use this machine in any other way that is not in compliance with the instructions supplied.

Firstly

Please read the instruction book carefully and follow the directions given.

Secondly

If you are unsure of any aspect of the instructions or performance of this equipment, contact your dealer promptly.

The electric power supply

The bakery must be fitted with an electrical system complying with current electrical regulations, in particular the earth connection system and electrical control board must be protected against overload currents and short circuiting. The rated power of the machine is shown on the machine plate. Electrical plant must be properly installed throughout, maintained and regularly inspected by trained electricians issuing certificates of compliance for all jobs carried out, guaranteeing compliance with current Australian legislation and Standards.



User liability

Working Safety

The machine must be used only by personnel suitably trained for the purpose and who have been trained in the contents of this publication.

To ensure safe work, comply with the following instructions:

- Install the machine in compliance with workplace safe work requirements.
- Install the machine in an area out of reach of the personnel not authorised to operate it and especially
 out of the reach of minors.
- Use the machine with great care and never be distracted.
- Do not wear loose fitting clothing or clothing with wide and open sleeves.
- Do not let anyone approach the machine during use.
- Do not remove, cover or modify the identification plates placed on the machine body.
- Work on the products permitted and not on other types.
- Do not use the machine as a working top and do not place any objects on it that are not required for normal working operations.
- Do not use the machine with temporary electrical connections or non-insulated cables.
- Periodically check the state of the power cable and the cable clamp on the machine body. If defective replace immediately by qualified personnel.
- Stop the machine immediately there is defective or abnormal operation, a breakage is suspected, there are incorrect movements or unusual noises.
- · Before cleaning or carrying out maintenance, disconnect the machine from the electricity mains.
- Use protective working gloves for cleaning and maintenance.
- For all extraordinary maintenance consult the manufacturer or qualified or authorised personnel.
- Do not aim high-pressure jets of water at the machine.
- When sharp accessories are manipulated, use cut-resistant gloves.
- Never insert hands or other objects into the product inlet or outlet.

Summary safety notes for owners/operators of this machine

Always operate within the limits of use of the machine.

Always carry out constant and diligent maintenance.

Have the machine used by a single trained person.

Avoid distractions while operating the machine.

The manufacturer declines all direct and indirect liability deriving from:

- Use by untrained personnel.
- Non-observance of the instructions contained in this booklet.
- Unauthorised modifications and/or repairs carried out on the machine.
- The use of accessories and parts that are not genuine.
- Exceptional events.



Safety precautions

To ensure maximum safety and optimum performance from this machine it is essential that you or any other operator of the machine read and understand the contents of this manual before the machine is ever started. Pay particular attention to the SAFETY INSTRUCTIONS highlighted by these symbols.

These safety alert symbols mean CAUTION, WARNING or STOP/DANGER - a personal safety instruction. Failure to comply with the instruction may result in personal injury or death.

WARNING: ELECTRICITY CAN KILL

Test and tag electrical cables to workplace safety standards.



CAUTIONSerious injury possible



WARNINGElectric shock



STOP DANGER

User instructions and precautions

The manufacturer declines all responsibility for any injury to persons or animals or damage to objects resulting from the failure to observe any of the previous or following information and instructions on the use or maintenance of the machine:

- Do not use the equipment for any purposes and / or loads different to those stated by the manufacturer;
- Every day, check the safety devices and general state of the equipment;
- · Every day clean the equipment thoroughly;
- Take all the necessary precautions and safety measures when loading, adjusting, changing parts or carrying out repair or maintenance work on the machine, to make sure that the machine or any parts of it are not accidentally started up by other persons;
- Do not tamper with the guards and safety devices on the machine;
- Do not remove the guards and safety devices on the machine unless actually necessary for work
 purposes and without adopting the measures designed to reduce the risk to the minimum possible, as
 described fully and frequently in this manual;
- Put back all the guards and safety devices as soon as the reason for their temporary removal no longer exists;
- All operators must comply with applicable workplace safety procedures.

Definitions

According to this manual, the following definitions are used:

- 1. "Danger area" any area inside or near a machine which might be dangerous for a bystander.
- 2. "Bystander" any person entirely or partly situated in a danger area.
- **3. "Operator"** the person or persons installing, running, adjusting, cleaning, repairing, transporting or performing maintenance work on a machine.

Before you start the SOTTORIVA 60/90/130

Before starting undertake a General Safety check

- Area clean and free from obstructions, e.g. nothing placed on top of the machine such as a dough knife, etc.
- Operator not wearing loose fitting clothing etc.

The key safety and hygiene features are:

Safety:

- 1 Emergency stop button. A red mushroom safety switch.
- 2 Inbuilt safety microswitch into the lid hinge mechanism.
- **3** Gas assisted struts to assist lid lift and to hold lid in open position.
- 4 Two lock down feet for extra stability and levelling.

Hygiene:

- **1** Bearings below the bowl are enclosed to ensure no water etc. affects the machine during the cleaning process and to allow easier cleaning.
- 2 The guard over the bowl is enclosed to reduce any possibility of foreign matter being able to fall into the bowl and transparent for quality and contamination checks during operation.
- **3** The top cover is an industrial plastic moulding and not fibreglass to reduce potential contamination issues.
- 4 All areas around the spiral hook are stainless steel for easy cleaning and sanitation.

Machine in use:

Please note when using the following functions of the Control Panel:

1. Slow Bowl will rotate anti clockwise

Dough Hook will rotate clockwise - direction of arrow

Auto start in these directions

Operator can choose to reverse this direction.

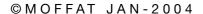
2. High Bowl will rotate clockwise

Dough Hook will rotate clockwise

3. Bowl Jog Rotates the bowl only either way in order to enable dough to be pulled out - Dough Hook

does not rotate.

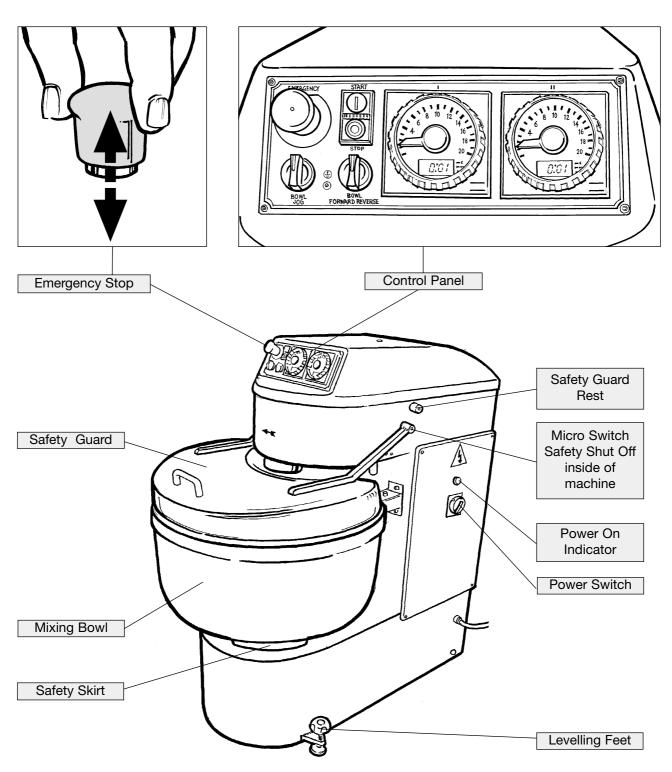








Names of parts



Sottoriva 90 pictured above.

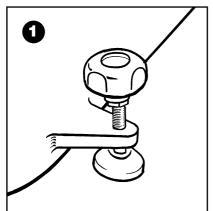


Hazard Risk Analysis

Installation:

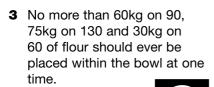
1 The stabilising screw at the front of the machine should be used to level the machine.





Daily checks:

2 The safety guard microswitch should be checked for correct operation.

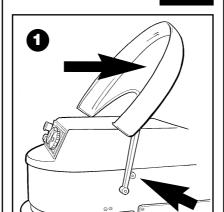


4 Minimum dough capacity 5kg. Maximum dough capacity 60kg, 90kg and 130kg. Note: Overloading of the machine will void warranty.



Machine in use:

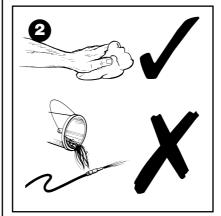
1 Guard should be raised and pushed back fully against stops to avoid injury. Do not throw guard back against the stops.



2 Cleaning machine should only be carried out with a damp cloth. Buckets of water or a hose should not be used





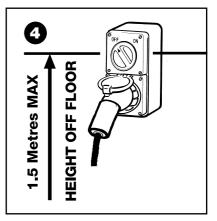


3 The internal microswitch on lid mechanism should never be removed or tampered with in any way.



- **4** Electrical isolation switch should be fully accessible to the operator.
 - 1.5 metres above the floor is a recommended height.







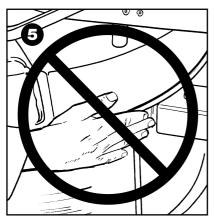
Hazard Risk Analysis

- **5** Hands or arms should not be placed behind bowl whilst machine is in operation.
- 8 Hands should never be placed near Dough Hook whilst in motion (only possible if lid is opened quickly with no product in the bowl).
- 11 The machine must be connected to the correct designated power outlet.

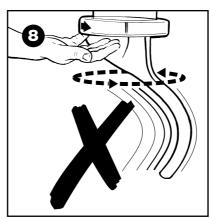




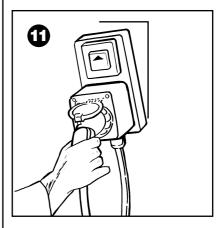




6 The safety guard should not be removed.



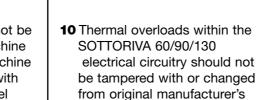
9 Cleaning of machine should not take place whilst it is in operation







7 Service panels should not be removed whilst the machine is in operation. The machine must not be operated with any service access panel removed.







setting.







Safe Operating Procedures

NOTE:

It is recommended that the following procedure is carried out before starting work to ensure that all safety features are working.

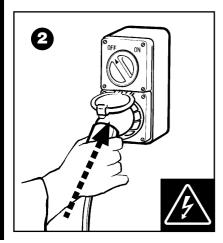
1 Check the machine is clear of all objects, all switches are off and any danger area clear of all bystanders.

WARNING:



The operator should never tamper with or make repairs to this machine. All maintenance other than approved cleaning operations to be carried out by trained technicians **only**.

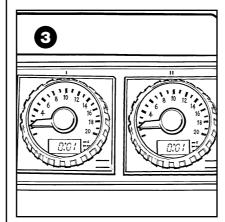
2 Check or place the electrical cord in the appropriate socket and turn power on.



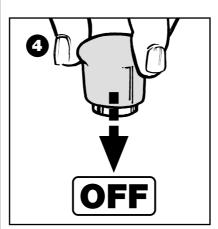
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3 Push start button with both timers off zero to start the mixer.

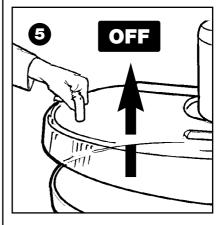


4 Test red safety emergency stop button by pushing the mushroom button in. (See below)



The machine must **stop** operating immediately. If not, **do not use** the machine,call supervisor and advise Moffat service agent.

5 Test the micro switch on the guard by **restarting** the machine (with both timers off zero) and lifting the guard.



The machine must **stop** operating immediately. If not, **do not use** the machine,call supervisor and advise Moffat service agent.

6 During normal mixing operation, do not place any instruments or fingers under the guard into the bowl section (danger area).

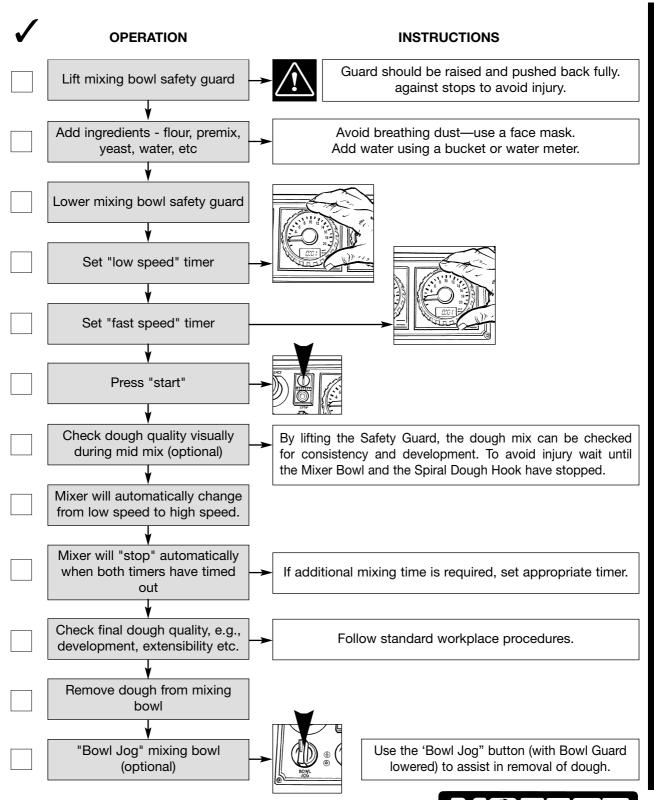


7 Mix dough according to workplace procedures. (see Operations Overview pages 12, 13 and 14)

MOFFAT SUGGESTS — Use this form to train staff, copy and laminate for your workplace.

SOTTORIVA MIXERS 60/90/130

Standard Operations Checklist

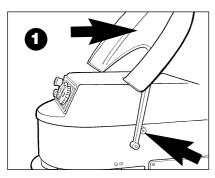


Operations Overview

PREPARATION:

1 Lift bowl safety guard

Safety guard should be raised and pushed back fully against stops to avoid injury.



Mixer has safety interlocks to prevent mixer operation when guard is lifted.

2 Ingredient Check

Complete ingredient check to ensure accuracy in scaling.

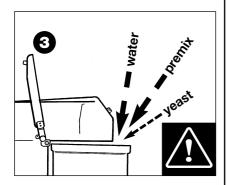
3 Add Ingredients

for example for a Soft White mixture you could use the following:

Premix 60 kg
Water 29.5 Litres
Yeast 600 g

For a final dough yield 90 kg.

Note: Operators should check and use their own workplace recipes.



4 Lower the safety guard

SET TIMING:

5 To set timing:

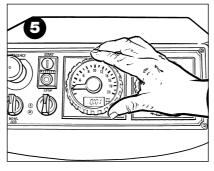
slow or fast mix times. The red LED indicators around the knob will illuminate and the corresponding numeral will be displayed in the two-digit display directly above the knob.

Turn the Timer Dials to set the

Pressing the START button will initiate the mixing process in low speed, reverse direction assuming the mix time incorporates slow mixing.

If the preset value in the low display is zero, the mixer will automatically start mixing in high speed providing time has been entered in the fast speed display. The mixer will not start if both timers are set to zero.

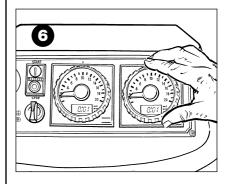
For example; as guide only: **3 minutes** for Soft White mix.



Note: Bowl Reverse *is* possible on Slow Speed only.

Note: Mixing time will vary depending on flour quality and workplace procedures.

6 Set the High Speed timerFor example; as guide only:9 minutes for Soft White mix.



Note: Mixing time will vary depending on flour quality and workplace procedures.



Operations Overview

7 Bowl Reverse



Use only when rapid or comprehensive blending of ingredients is desired.

Bowl Reverse

The 'Bowl Reverse' option only works on "Low Speed'. The mixing bowl is driven in the opposite direction of rotation to the spiral dough hook. This facilitates the rapid and complete incorporation of the ingredients. Standard or correct bowl direction is resumed when the 'Fast Speed' timer commences.

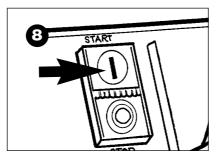
USES:

The bowl reverse action is very useful when blending fruit etc. into fruit bread dough at the end of a mix.

STARTING:

8 Press Start

The SOTTORIVA 60/90/130 will commence to blend all ingredients on 'Slow Speed'. When the mixer commences the 'Fast Speed' cycle, the mixing bowl will change direction and proceed to develop the dough.



9 Mid mix check

At any time during the mix cycle (Slow or Fast Speed) the mixer can be stopped by lifting the Guard, and the dough mix checked for consistency and development.

Mix cycle times will not be cancelled and will resume at the time at which they were interrupted.

WARNING

The SOTTORIVA 60/90/130 is equipped with an overload mechanism.

If the bread dough is too tight/tough/stiff the Overload switch will activate.
The SOTTORIVA 60/90/130 will automatically re-set within 10 minutes.

Refer to Trouble Shooting section **pages 19 and 20** if correction is necessary.

10 Finish

The mixer will stop automatically when the pre-set mix cycle is complete.

11 Check final dough quality

Check the **key elements** in dough quality ie:

- Development.
- · Extensibility.
- · Consistency.
- Final dough temperatures.

Additional mixing may be required to enhance final dough quality: If so, re-set timers for estimated additional mixing times then press 'Start'.

12 Prior to removing the dough

Food grade oil can be added between the dough and the mixing bowl just prior to the finish of the mix cycle. This will aid in the removal of the dough from the mixing bowl.





Operations Overview

13 Removing the dough

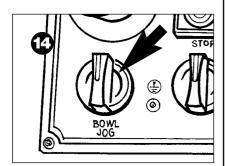
Wait until Mixer Bowl stops turning.

Use care when cutting the dough.

Observe appropriate workplace manual handling procedures when removing dough from Mixer Bowl.

14 Inch bowl

Use the "Bowl Jog" button to assist in removal of dough.



Pressing the Bowl Jog rotates the bowl either way in order to enable dough to be pulled out. **Note:** the Dough Hook does not rotate.



DANGER

Make sure the Mixing Bowl and Dough Hook have **stopped** before lifting the Safety Guard.

OPERATIONAL ISSUES:

 Pressing the STOP button during a mix pauses the mixer and the LED indicators will flash.

Pressing the start button at this stage will restart the mixer at the mix time remaining when it was paused. Pressing the STOP button a second time will reset the timers and the LEDs will stop flashing.

- Extra time may be added to the mix times in either the paused state or the fully stopped state.
- At the end of the mix, the timers will reset to the initial set time, disregarding any extra time that may have been added if the mixer was paused.
- Pressing the BOWL
 REVERSE button changes the
 direction of the bowl while
 the mixer is operating in slow
 speed. It will have no effect
 at any other time.

STOP BUTTON:

Pressing the STOP BUTTON or lifting the guard while the mixer is running stops the mixer and places it into the paused state, with the LED indicators flashing.

To restart the mixer, lower the guard and press Start Button.

EMERGENCY STOP

If the EMERGENCY STOP is pressed, the machine stops immediately. The Timers need to be reset.

Note:

There is no Re-set Button to reset times to original position. Let the Timers time out.

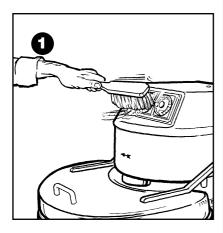
Daily Cleaning Procedure

WARNING

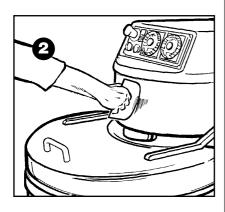
Electrically isolate Dough Mixer.



1 Brush off all external surfaces Use a bannister brush and work from top to bottom.



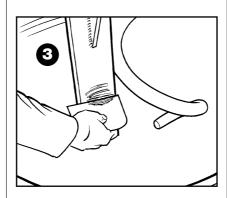
2 Remove all old dough/built up deposits using a plastic scraper.

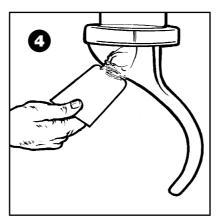


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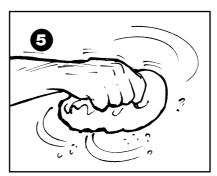
3 Scrape the Mixing Bowl, the Breaker Bar, the Dough Hook, the upper inside mixing bowl cowling and behind the mixing bowl.

(see illustrations 3 and 4)

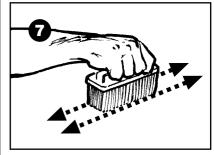




5 Wipe all surfaces with warm water.



6 Apply a detergent/sanitiser and leave on all surfaces (for length of time specified by the supplier and/or manufacturer). **7** Scrub to loosen and remove residues.



- **8** Rinse Bowl and Dough Hook thoroughly with hot water.
- 9 Remove excess moisture with clean squeegee or paper towels. Dry all surfaces.
- **10** Re-examine all surfaces to evaluate whether cleaning has been effective.
- **11** If further cleaning required, start from step **3.**



GUIDE SHEETS for Staff Training

Pages in the following section of this manual should be copied and used when training staff to operate the SOTTORIVA 60/90/130 MOFFAT suggests that competency assessment check lists be completed, signed and a copy kept in the personnel files for future reference.

SUPERVISORS TO ENSURE

- competency check lists are copied and completed as part of the training of staff
- correct training of staff to the required competency expectations
- the verification section of the competency check list is signed off
- a copy of the completed and signed competency check list is placed in personnel records as evidence of operator competence



MOFFAT SUGGESTS— Use this form to train staff, and place a copy in personnel file.

SOTTORIVA MIXERS 60/90/130

OPERATIONS COMPETENCY CHECKLIST

Eler	ment Implement safe work procedur	res for the SOTTORIVA 60/90/130			
/	Assessment Criteria				
	"Can the operator"				
	Identify the purpose and use of: • Equipment guards; • Warning signs; • Safety features; related to this machinery?				
	Identify: • Machine related health and safety risks of this equipment? • Emergency procedures to be used with this equipment?				
	Operate this equipment correctly in normal a	and emergency situations?			
	Identify: • OH&S reporting procedures related to hazard reporting for this machine?				
Con	nments				
-	competency in the use of the Sottoriva 60/90/13 erator has consistently applied the knowledge and				
	This form should be signed off only when t employee/trainee is competent to carry ou				
	Applicant's signature	Date / /			
	Assessor's signature	Date / /			



DAILY CLEANING COMPETENCY CHECKLIST

	Assessment Criteria
	"Can the operator" Maintain sound personal hygiene at all times when working with the SOTTORIVA 60/90/130?
	Use appropriate protective and work clothing while working with the SOTTORIVA 60/90/130?
	 Identify: Product handling requirements during production process? Critical points in the process where contamination can be introduced? Why it is important to monitor hygiene and sanitation performance? The effect of poorly maintained equipment on the control of contamination and spoilage? Company policies and procedures regarding hygiene and sanitation? Actual and potential contamination and spoilage hazards? Solutions to rectify contamination and spoilage problems?
	Use work practices and methods that reduce the risk of product contamination?
	Remove contamination where appropriate in accordance with • Workplace hygiene and sanitation procedures? • Procedures specific to the SOTTORIVA 60/90/130?
Cor	nments
-	competency in the use of the SOTTORIVA 60/90/130, the assessor must be satisfied that erator has consistently applied the knowledge and skills in all of the above elements.
	This form should be signed off only when the assessor is satisfied that the employee/trainee is competent to carry out all of the tasks described above.
	Applicant's signature Date / /



Machine Based Trouble Shooting

Problem	Possible cause	Remedy	
The Sottoriva 60/90/130 does not operate/start.	Not plugged in to socket at main switch.	Plug in and switch on.	
	The main switch is "off".	Turn on.	
	The bowl safety guard is open.	Place in down position.	
	Fuse overload at the power board.	Contact supervisor/Moffat Service Agent.	
	The mixer overload has been activated.	Resets automatically (10 min).	
	Stop button still locked in down position.	Release by rotating and pulling.	
The Sottoriva 60/90/130 starts and then stops.	Both high and low speed timers on zero.	Reset mix cycle on both timers.	
	The mixer overload has been activated.	Resets automatically (10 min) If overload occurs repeatedly Contact supervisor/Moffat Service Agent.	
	Fuse overload at the power board.	Contact supervisor/Moffat Service Agent.	
The Sottoriva Sottoriva 60/90/130 labours under load.	Dough too stiff/tight.	Review and adjust dough consistency, eg: add more liquid.	
	Mechanical malfunction.	Contact supervisor/Moffat Service Agent.	
The Sottoriva Sottoriva 60/90/130 moves or rocks during operation.	Floor not level or the adjustable feet located incorrectly.	Re-adjust level and stablise by means of adjustable foot.	
Excessive flour dust coming from mixer.	First speed timer set too short.	Extend first speed mix/blending cycle.	
The Sottoriva Sottoriva 60/90/130 does not stop.	Electrical/mechanical malfunction.	Switch off power at main switch. Isolate mixer by removing wall plug. Attach danger tag to machine. Contact Moffat Service Agent.	
The Sottoriva Sottoriva 60/90/130 mixer bowl and dough hook operate in wrong direction.	Inserting the Sottoriva 60/90/130 electrical plug into non compatible socket after cleaning.	Return to correct position.	
	Relocating mixer in another position after maintenance.	Consult authorised electrical service to rewire 20 amp 3 phase plug.	
Gas struts on Safety Guard not providing full assistance.	Leaking or worn gas struts.	Contact supervisor/Moffat Service Agent.	



Product Based Trouble Shooting

Problem Bread dough too soft.	Excessive water used in dough (human error). Incorrectly metered/measured through water meter (Equipment error).	Review recipe and adjust dough consistency. Contact authorised maintenance.	
	Overmixed dough.	Review/check/change mix cycle.	
Final dough temperature too hot.	Water temperature too warm. Dough mixed too long.	Reduce water temperature. Shorten mix cycle.	
Final dough temperature too cold.	Water temperature too cold. Dough mix too short.	Increase water temperature. Increase mix cycle.	
Foreign matter found/seen in dough.	Mixer not cleaned as per cleaning instructions. Poor ingredient quality.	Thoroughly scrape and check between dough. Review cleaning instructions. Contact ingredient supplier.	
	Poor personal/bakery hygiene.	Review and reinforce correct procedures.	
Dough is difficult to remove from the mixing bowl.	Dough left in bowl too long. Dough too soft.	Remove from bowl earlier. Refer - dough too soft.	
	Dough overmixed.	Run food grade oil between dough and bowl at end of mix cycle to stop dough sticking.	



Risk Assessment for SOTTORIVA 60/90/130

The following risk assessment covers the reasonably foreseeable hazards to health and safety arising from the Sottoriva 60/90/130 and from systems of work associated with this machine.

Hazard identified	Existing controls	Consequences Catastrophic Major injuries Moderate injuries Minor injuries Insignificant injuries	Likelihood Almost certain Likely Possible Unlikely Rare	Risk rating High unacceptable Significant Moderate Low
Cleaning the machine with buckets of water or hoses is potentially dangerous and may lead to electrocution. The machine must be cleaned with a damp cloth only.	Clear warning guidelines on machine. Safe work practices and specific cleaning instructions detailed in this training manual.	Catastrophic	Rare	Significant
Micro switch on Safety Guard should never be removed or tampered with otherwise machine could continue working with moving parts.	Safe work guidelines reinforce non authorised tampering with the machine. Access to micro switches service item only.	Major injuries	Rare	Significant
Electrical isolation switch should be fully accessible to the operator. Recommend no more than 1.5 metres above the floor.	Dependent on bakery electrical policy.	Major injuries	Rare	Significant
Safety guard should not be removed.	Microswitch interlocked with machine-controls will not operate.	Major injuries	Unlikely	Significant
Service panels should not be removed whilst the machine is in operation. The machine must not be operated with any service access panel removed.	Machine designed to be accessed by authorised service technicians only. Warning signs clearly evident.	Major injuries	Unlikely	Significant
Hands or arms should not be placed behind bowl whilst machine is in operation.	Safe operating procedure reinforces this not to be done. Warnings in place.	Minor injuries	Unlikely	Low
Hands should never be placed near Dough Hook whilst in motion.	Bowl guarded during operation. Safe operating procedures highlight safe work.	Major injuries	Unlikely	Significant



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The following risk assessment covers the reasonably foreseeable hazards to health and safety arising from the Sottoriva 60/90/130 and from systems of work associated with this machine.

Hazard identified	Existing controls	Consequences Catastrophic Major injuries Moderate injuries Minor injuries Insignificant injuries	Likelihood Almost certain Likely Possible Unlikely Rare	Risk rating High unacceptable Significant Moderate Low
Cleaning of machine should not take place whilst it is in operation.	Correct cleaning procedure detailed in training procedure.	Major injuries	Unlikely	Significant
The machine should never be connected to alternate power source other than which has been designed for that machine by the store designer.	External plug designed to Australian Standards for the appropriate power supply. Warnings in manual.	Major injuries	Rare	Significant

Risk rating

Extreme risk; immediate action required.

High risk; senior management attention needed.

Moderate risk; management responsibility must be specified.

Low risk; manage by routine procedures.

Based on AS4360 1999 Risk Management.

Owners and operators of Moffat equipment please note:

The risk ratings and control measures as outlined in this manual must be incorporated into your safety management systems and procedures. Ensure effective risk control by reinforcing these procedures with staff. For example: never clean any electrical equipment with buckets of water or pressurised hoses.

