



SwiftMelt Mastic Asphalt Mixer

500 – 1000kg Capacity

Operating & Maintenance Instructions



March 2025

Office 020 8539 8746 | Terry 0894 7876203

**CE UK
CA**

Contents

Page 1	Introduction
Page 2/2a	Pre-checks before use, and general information.
Page 3/3a	Thermostat Control Gas System Lighting Instructions.
Page 4	Shutting down and making machine safe.
Page 5	Hydraulic Operation
Page 6/6a/6b	Engine Operating.
Page 7	Lubrication and General Maintenance.
Page 8	Machine Handling/usage/ Transport Operations.
Page 9	Engine Troubleshooting.
Page 10	Health & Safety.
Page 11	Left Blank for Operatives Notes.



Introduction

Thank you for choosing to purchase a new W.J. Horrod Ltd SwiftMelt Mastic Asphalt Mixer.

All our products are made to a very high, and recognised engineering standard, and if used correctly by a trained, certificated operative, to our operating and maintenance instructions increases the machines longevity.

Operatives must always read the manufacturers operating instructions before attempting to use the machine.

No attempt must be made to carry out any repairs or maintenance whilst equipment is in operation. Safe working practise is a legal requirement and must always be adhered to.

Protective clothing should always be worn when operating this equipment.

Faulty equipment should be immediately shut down and reported directly to the supervisor/person in charge and not used again until the fault has been rectified.

PLEASE NOTE

This unit was designed and manufactured for use with asphalt-based materials (please enquire if you are unsure of the content of the material you will be using within it). Using any other material goes against its intended use.

Using this unit for any other material is done so at your own risk and could nullify the manufacturer's warranty.

Pre-checks before use, general information, and safe working practises.

- 1 Always check the engine fuel, oil, and hydraulic oil levels are correct before starting engine.**
- 2 Start and run the engine before loading the material, to make sure the engine is running correctly and then switch the engine off.**
- 3 Lubrication Regularly checking the moving parts where necessary will ensure the machine operates at its best and prolongs its service life. Always check before starting (see page 5) regular maintenance will prevent excessive wear on moving parts and prolong the machines life.**
- 4 GAS SYSTEM PRE-CHECKS**

For machines using LPG propane gas heating systems, all fixtures and fittings MUST be checked prior to every use for any damage or excessive wear & tear. All joints should be leak tested using leak detector spray. Never use a naked flame to leak test.

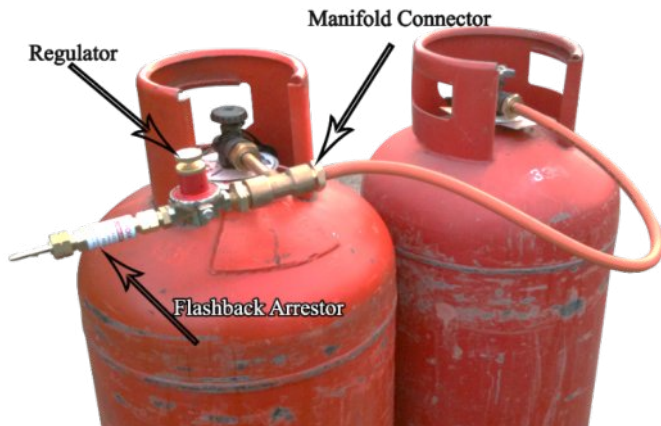
- 5 Before loading commences, check for water in the pan and remove (if materials are in the pan remove any water prior to heating) the engine must be switched off. Always ensure that the material is broken into small pieces. Filling voids with the material, from a cold light up, this will increase efficiency and reduce pan distortion.**
- 6 Agitate the material as soon as it is becoming fluid, without causing damage to machine.
Do not continually agitate until the material is ready. Please note: the material should be agitated at intervals to prevent burning. Do not engage hydraulic forward drive permanently unless the material is ready to be fully agitated 360° (1 full turn) this will cause a loss of viscosity in the hydraulic oil resulting in damage to hydraulic parts. Agitators will only operate in reverse mode whilst lever is held in reverse position. (This mode should only be used in emergencies and never held in that position for any length of time). Once the material is ready, it can be continually agitated.
PLEASE NOTE Once the material is at the correct laying temperature, replace any used material with new blocks. Permitting the machine to run low/empty, will increase the reheating period.**
- 7 Overheating the machine will cause excessive pan and cladding distortion.**
- 8 Should machine become 'burnt in' – the following procedure should be implemented.**
 - 1 Turn gas off at the cylinder.**
 - 2 Close lid(s) if open.**
 - 3 Switch off engine.**
 - 4 Drain out as much material as possible.**
 - 5 Allow machine to go cold. Clean out the 'burnt in' material before attempting to run the machine again.**

- 9 Never clean the mixer pan by heating it up and applying cold water. This is a practise called 'blowing' and is occasionally employed by some operatives. This practise will harden the pan steel, causing distortion, reducing the pan life and is extremely dangerous to operate safely.
- 10 The correct method of cleaning the pan; Empty the material and switch the engine off, rake out as much of the remaining material as is possible, and allow machine to go cold overnight. You can then clean out, carefully with a compressed air/electric mechanical chisel.
- 11 Regular servicing and maintenance is not only necessary but a legal requirement. Service agreements are available for all types of machines. For further details on service agreements and mixer man training contact the office.
- 12 Please make sure that the area around and under either static or trailer mounted machines is free of combustibles.
- 13 The engine should always be running when the burner is in use. The battery powering the thermostat unit can only be charged with the engine running. If the engine is switched off, the solenoid valve and thermostat will deplete the battery below the voltage required for the engine to keep the battery charged.

Thermostat Control Gas System Lighting Instructions

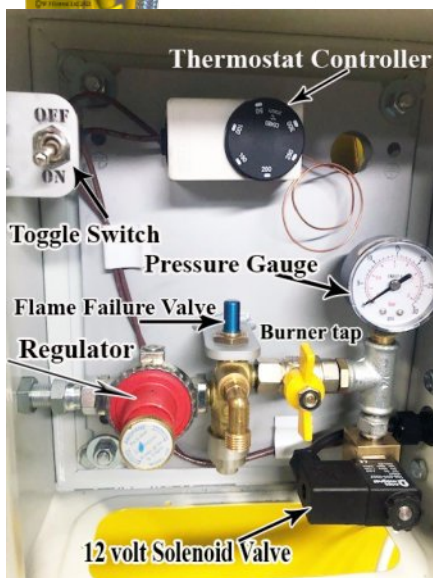
- 1 Connect 2 No. 19kg propane gas cylinders via a manifold connector (see below left). Connect the auto-torch to the quick release connector.

Propane Bottles Correctly Coupled together



- 2 Open burner control box and ensure that all gas valves are in the 'OFF' position.

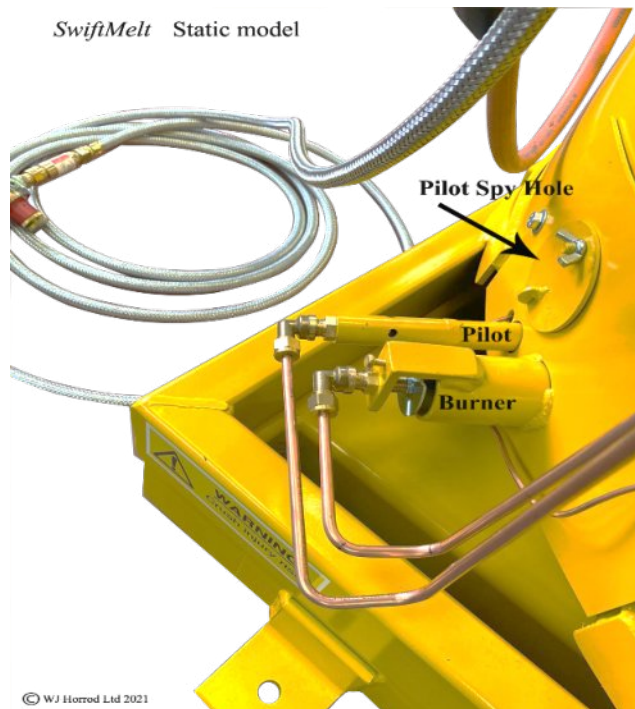
- 3 Turn on gas cylinder.



- 4 Light auto-torch. Depress blue flame failure valve button and light through inspection (spy) hole located above pilot burner. Hold the flame failure button down for approximately 15 seconds then release, after which the pilot will stay alight. If in the unlikely event that the pilot should fail to stay alight, repeat the lighting procedure above.



Thermostat Control Gas System Lighting Instructions continued



- 5 Turn off auto-torch and disconnect from gas supply.
- 6 Switch main burner toggle switch to the 'ON' position, slowly open main burner gas valve situated to the right of the flame failure valve, main burner will now ignite. Now check all gas connections using a leak detector spray.
- 7 Adjust regulator to the required gas pressure i.e., 10-PSI. Set thermostat to the required material working temperature. When the material has reached the set temperature the main burner will automatically switch off and re-light when the temperature drops.
- 8 We recommend that the machine should not be operated above 10 PSI from a cold light. each machine is designed around heat input and flue output, increasing pressure will cause excessive heat, which will distort the pan bottom and inner casing.

S h u t t i n g D o w n a n d M a k i n g S a f e

- 1 Turn gas off at the cylinders.
- 2 When the pilot and main burner has both gone out, turn off all gas valves and switches then lock the burner control box.
- 3 Turn regulator pressure control anticlockwise to relieve pressure.
- 4 Always remember to remove engine ignition key and keep in a safe place. **IMPORTANT** you must turn off toggle switch and ignition key otherwise if left on they will discharge the battery.



H y d r a u l i c O p e r a t i o n

- Ensure both levers and in a neutral position.
- Load the material and start the engine.
- Wait for 15-20 minutes and then pull the right-hand lever for forward paddle rotation.
- When materials are ready to decant, please see instructions which are applied below the levers on the machine to operate the tipping action.
- If you are unsure, please contact us.

H Y D R A U L I C O I L F I L L E R



E N G I N E O P E R A T I O N

Yanma Engine – Operation Manual is supplied with all new machines:

Machines on hire should adhere to the following.

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

- Explosion hazard – keep the area around the battery well-ventilated. While the engine is running or the battery is charging, hydrogen gas is produced which can easily be ignited.
- Keep sparks, open flame and any other form of ignition away while the engine is running, or battery is charging.
- Never short out battery terminals, including when checking the remaining battery charge. This will result in a spark and may cause an explosion or fire. Use a hydrometer to check the remaining charge.
- If the electrolyte is frozen, slowly warm the battery before you recharge it.
- Do not loosen the high-pressure pipe while the engine is running, even in low idle. This is dangerous because fuel under high pressure will blow out.
- Do not start the engine by shorting across starter terminals. The machine will start in gear if safety circuitry is bypassed.
- Diesel fuel is extremely flammable and explosive under certain conditions.
- When you remove any fuel system component to perform maintenance (such as changing the fuel filter) place an approved container under the opening to catch the fuel.
- Never use a shop rag to catch the fuel. Vapors from the rag are flammable and explosive.
- Wipe up any spills.
- Wear eye protection. The fuel system is under pressure and fuel could spray out when you remove any fuel system component.
- Only use the key switch to start the engine.
- Never jump start the engine. Sparks caused by shorting the battery to the starter terminals may cause a fire or explosion.
- Only fill the fuel tank with diesel fuel.
- Never refuel with the engine running.
- Keep sparks, open flames or any other form of ignition (match, cigarette, static electric source) well away when refueling.
- Never overfill the fuel tank.
- Be sure to place the diesel fuel container on the ground when transferring the diesel fuel from the pump to the container. Hold the hose nozzle firmly against the side of the container while filling it. This prevents static electricity build-up which could cause sparks and ignite fuel vapor.
- Before you operate the engine, check for fuel leaks. Replace rubberized fuel hoses every two years or every 2000 hours of engine operation, whichever comes first, even if the engine has been out of service. Rubberized fuel lines tend to dry out and become brittle after two years or 2000 hours of engine operation.
- Do not let fuel exceed the fuel level mark on the fuel filter (inlet) of the fuel tank filler port. The fuel oil may expand when the ambient temperature is high, and overflow the fuel tank cap.

- Never remove the fuel cap with the engine running.
- Never use diesel fuel as a cleaning agent.
- Failure to comply with any of the above may result in death or serious injury.

WARNING indicates a hazardous situation which, if not avoided, will result in death or serious injury.

- Wear tight clothing and keep your hair short or tie it back while the engine is running.
- Remove all the jewelry before you operate or service the machine.
- Never operate the engine without the guards in place.
- Before you start the engine make sure that all bystanders are clear of the area.
- Never operate the engine when you are feeling unwell.
- Never operate the engine while wearing a headset to listen to music or radio because it will be difficult to hear the warning signals.
- If you must drain the engine oil while it is still hot, stay clear of the hot engine oil to avoid being scalded. Make sure you wear eye protection.
- Keep your hands and other body parts away from hot engine surfaces such as the muffler, exhaust pipe, and engine block during operation and shortly after you shut the engine down. These surfaces are extremely hot while the engine is operating and could seriously burn you.
- Burn hazard, batteries contain sulfuric acid. Never allow battery fluid to come in contact with clothing, skin or eyes. Severe burns could result. Always wear safety goggles and protective clothing when servicing the battery. If battery fluid contacts the eyes and/or skin, immediately flush the affected area with a large amount of clean water and obtain prompt medical treatment.
- Check the electrical harnesses for cracks, abrasions, and damaged or corroded connectors. Always keep the connectors and terminals clean.

NOTICE indicates a situation which can cause damage to the machine, personal property and/or the environment or cause the equipment to operate improperly.

- Diesel fuel – poor quality fuel can reduce engine performance and cause damage. Only use diesel fuels recommended by YANMAR for the best engine performance.
- Only use clean diesel fuel.
- Never remove inlet strainer from the filler from the filler port. If removed, dirt and debris could get into the fuel system causing it to clog.
- Keep the fuel tank and fuel handling equipment always clean.
- Only use the engine lubricating oil specified. Other oils may affect warranty coverage, cause internal engine components to seize and/or shorten engine life.
- Prevent dirt and debris from contaminating the engine lubricating oil. Carefully clean the oil cap/dipstick and the surrounding area before you remove the cap.
- Always keep the oil level between the upper and lower lines on the oil cap/dipstick.
- Never overfill the engine with engine lubricating oil. Overfilling may result in white exhaust smoke, engine overspeed or internal damage.

- Be sure to use YANMAR genuine filter for replacing the engine lubricating oil filter.
- Never hold the key in the start position for longer than 15 seconds or the starter motor will overheat. After 2 unsuccessful attempts allowing the starter motor to cool down for 2 minutes.
- After you start the engine, we recommend you warm up the engine for 5 to 10 minutes without load. This will prevent the wearing of engine components.
- For maximum engine life, YANMAR recommends that when shutting the engine down, you allow the engine to idle, without load for 5 minutes. This will allow the engine components that operate at high temperatures, such as exhaust system, to cool slightly before the engine itself is shut down.

For further information please contact YANMAR dealer.

F I L L E R C A P F O R D I E S E L



Lubrication & General Maintenance

Lubrication Checks Daily:

Top stirrer shaft 4 bolt flange bearing (grease nipple)



Engine oil level – see manufacturers handbook. (Dipstick)



Left Oil Filler Breather - inlet.

Below: Oil filler indicator. Located on the opposite side to the filler breather.



The cap should be unscrewed and outlet monitored, as when oil seeps through the outlet it confirms the oil level is correct.

Maintenance Monthly:

- Stirrer arm bolts – checked and tightened.
- Engine holding down bolts – checked and tightened.
- Gearbox fixing bolts – checked and tightened.
- Gearbox stirrer shaft coupling – checked and tightened.
- Clean burner housing and burners.

We recommend always having the following to hand when using this machine:

Leak Detector Spray

M a c h i n e H a n d l i n g , u s e s , a n d f i t t i n g o p t i o n s .

The *SwiftMelt* mixer is designed as a compact and versatile machine. Available in as static free standing, static truck mounted or trailerised models. Some of the available types are listed below, along with the materials and purposes for which the machine is currently used.

Transporting

Mounting: Truck mounted.
 Conventional trailer mounted (i.e. Ifor Williams).
 Dedicated purpose-built trailer.
 Mounted on 4 No. Heavy-duty swivel brake casters.

Where the *SwiftMelt* is mounted on a purpose-built trailer there are two very IMPORTANT

WARNINGS that must be adhered to;

- 1] Before uncoupling the trailer from towing vehicle apply the handbrake and lower the front jockey wheel.
- 2] Never use the mixer tilting ram without first lowering rear prop stands. **(This only applies if the machine has been un-coupled from the towing vehicle).**

Usage:

Hot charged mastic asphalt transporter.
Specialist Highways machine (Pacopatch System)
Small Quantity restricted access areas (Roofing Contracts)
Small Vehicle axle loads (Transit etc.)

Handling:

Dedicated fork-lifting facility built into base frame as standard.
Optional: Tested crane lifting eyes.

Test certificate available for tested lifting eyes at additional cost if required.

TROUBLESHOOTING

TROUBLESHOOTING CHART

SYMPTOM	PROBABLE CAUSE	ACTION	REFER TO
Indicator Turns On - Engine Running			
Engine oil pressure indicator (If equipped)	<ul style="list-style-type: none"> • Low level of engine oil • Too high an oil level 	<ul style="list-style-type: none"> • Check and adjust oil level as necessary 	<i>Checking Engine Oil on page 23</i>
	<ul style="list-style-type: none"> • Clogged engine oil filter 	<ul style="list-style-type: none"> • Replace engine oil filter element 	<i>Replace Engine Oil on page 48</i>
Battery Indicator	<ul style="list-style-type: none"> • Battery failure 	<ul style="list-style-type: none"> • Check battery condition 	<i>Check Indicators on page 25</i>
	<ul style="list-style-type: none"> • Faulty dynamo 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—
Indicator Does Not Turn On - Key Switch is Turned to ON (OFF → ON)			
	<ul style="list-style-type: none"> • Faulty electrical wiring or faulty indicator 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—
Indicator Stays On - Key Switch is Turned from Start to ON (START → ON)			
<ul style="list-style-type: none"> • Battery indicator stays On 	<ul style="list-style-type: none"> • Faulty alternator 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—
<ul style="list-style-type: none"> • Engine oil pressure indicator stays On 	<ul style="list-style-type: none"> • Faulty engine oil pressure switch 		—
Engine Does Not Start			
<ul style="list-style-type: none"> • Starter motor operates but engine does not start 	<ul style="list-style-type: none"> • No diesel fuel 	<ul style="list-style-type: none"> • Refuel fuel system 	<i>Filling the Fuel Tank on page 21</i>
	<ul style="list-style-type: none"> • Improper diesel fuel 	<ul style="list-style-type: none"> • Replace with recommended diesel fuel 	<i>Diesel Fuel Specifications on page 20</i>
	<ul style="list-style-type: none"> • Clogged fuel filter 	<ul style="list-style-type: none"> • Replace fuel filter 	<i>Drain the Fuel Tank and Replace Outlet Fuel Filter on page 53</i>
	<ul style="list-style-type: none"> • Closed fuel cock 	<ul style="list-style-type: none"> • Check the fuel cock position 	—
	<ul style="list-style-type: none"> • Poor fuel injection 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—
	<ul style="list-style-type: none"> • Compressed air leakage from intake/exhaust valves 		—
	<ul style="list-style-type: none"> • Faulty engine stop solenoid (if equipped) 		—
<ul style="list-style-type: none"> • Starter motor does not operate or rotates too slowly (engine can be turned manually) 	<ul style="list-style-type: none"> • Battery needs charging 	<ul style="list-style-type: none"> • Check electrolyte, recharge 	<i>Check Battery (If Equipped) on page 42</i>
	<ul style="list-style-type: none"> • Faulty cable connection at battery terminals 	<ul style="list-style-type: none"> • Clean terminals, retighten 	—
	<ul style="list-style-type: none"> • Faulty starter switch 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—
	<ul style="list-style-type: none"> • Faulty starter motor 		—
<ul style="list-style-type: none"> • Engine cannot be manually turned 	<ul style="list-style-type: none"> • Inner parts seized or damaged 		—

SYMPTOM	PROBABLE CAUSE	ACTION	REFER TO	
White or Black Exhaust Smoke				
<ul style="list-style-type: none"> • Black exhaust smoke 	<ul style="list-style-type: none"> • Engine overloaded 	<ul style="list-style-type: none"> • Reduce load 	—	
	<ul style="list-style-type: none"> • Clogged air cleaner element 	<ul style="list-style-type: none"> • Clean element or replace 	<i>Clean Air Cleaner Element on page 52</i>	
	<ul style="list-style-type: none"> • Improper diesel fuel 	<ul style="list-style-type: none"> • Replace with recommended diesel fuel 	<i>Diesel Fuel Specifications on page 20</i>	
	<ul style="list-style-type: none"> • Faulty spraying of fuel injection 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—	
	<ul style="list-style-type: none"> • Excessive intake/exhaust valve clearance 		—	
<ul style="list-style-type: none"> • White exhaust smoke 	<ul style="list-style-type: none"> • Improper diesel fuel 	<ul style="list-style-type: none"> • Replace with recommended diesel fuel 	<i>Diesel Fuel Specifications on page 20</i>	
	<ul style="list-style-type: none"> • Faulty spray pattern of fuel injection 	<ul style="list-style-type: none"> • See authorized Yanmar industrial engine dealer or distributor 	—	
	<ul style="list-style-type: none"> • Fuel injection timing delay 		—	
	<ul style="list-style-type: none"> • Engine burning oil 		—	

TROUBLESHOOTING INFORMATION

If your engine does not operate properly, refer to the troubleshooting chart or consult your authorised Yanmar industrial engine dealer or distributor.

Supply the authorised Yanmar industrial engine dealer or distributor with the following information.

- Model name and serial number of your engine.
- The driven machine type (tractor/generator/skid steer loader *in this case SwiftMelt Mastic asphalt mixer* manufacturer W J Horrod Ltd (02085398746) - Trailer chassis number.
- How long the engine has been in service (Engine operating hours or number of calendar months).
- Operating conditions when the problem occurs.
- Engine RPM.
- Colour of exhaust smoke.
- Type of diesel fuel in use
- Type of engine oil.
- Any abnormal noises or vibration.
- Operating environment - such as high altitude or extreme ambient temperatures, etc.
- Engine maintenance history and any previous issues or problems.
- Other factors that could contribute to the problem.

Health & Safety

- 1] Equipment should only be used by a trained, certified operative.
- 2] Protective clothing and full-face mask should *always be worn* when operating the *SwiftMelt* or when loading any material.
- 3] Never leave the *SwiftMelt* unattended when alight or running.
- 4] If a fault occurs, shut down immediately and report the fault to the person directly responsible.
- 5] Always turn the engine, and the burners off and allow to go cold before maintenance or repairs are carried out.
- 6] When the *SwiftMelt* is being used in an area where the general public may come into contact 'Hot Surface' warnings should be posted on, or around machine.
- 7] Last, but not least, remember that safety is everyone's responsibility, never do anything that is likely to put yourself, or anybody else at risk.
- 8] Please see machine handling uses and fitting options for special instructions for the purpose-built trailers – details page 6.

Regulators must be marked BS:3016 or BS: EN:12864 or BS: EN:16129. Any regulator marked BS:3016 will be over 10 years old and should be replaced.

Use only certified hoses to BS:3212 or BS: EN:1763-1 or BS: EN:16436-1 which bear the year and name of manufacturer or stainless-steel convoluted hoses marked EN:10380 as LPG attacks and erodes natural rubber.

OPERATOR NOTES