

PRE-SURF CHECKLIST

Always undertake pre-surf checks, whatever your level of experience. These shouldn't take more than 15 minutes to complete and will keep your board in good shape, keep you safe and ultimately protect your warranty.



BEFORE UNDERTAKING THE REQUIRED PRE-SURF CHECKS PLEASE REMOVE THE ENGINE SHUT-OFF PIN FROM THE HAND CONTROL UNIT AND REMOVE THE BATTERY PACK FROM ITS HOUSING. DISREGARDING THESE PRECAUTIONS COULD RESULT IN SERIOUS INJURY.



1. Ensure the centre and side fins are attached to the board, locked securely in place.



2. Inspect hull for damage and remove any obstructions from the jet-drive inlet.



3. Ensure battery has enough charge. A full charge provides 4 hours ride time depending on age & condition of battery.



4. Ensure adequate fuel mixed 50:1 [20ml 2-stroke oil for each 1ltr high octane unleaded fuel]. Don't over fill. Clean spillages.



5. Check coolant hoses for any damage. Ensure secure connection to engine and exhaust using a slight pull.



6. Push cap onto the spark plug and press firmly into place with an audible click.



7. Ensure throttle operates smoothly with full range of movement and free from twists.



8. Check foot straps for wear and adjust for comfortable fit using the Velcro straps.



9. Insert battery into housing and ensure the screw cap is securely tightened.



10. Check life jacket for wear or damage. Ensure straps and buckles are fastened and secure.

STARTING YOUR ENGINE

1 Insert engine shut-off pin, battery and fuel into jetboard. Ensure jet-drive free from obstructions.

2 Cover carburettor air intake with hand and press START button. This will prime and draw fuel into the engine.

3 Remove hand from inlet as fuel enters carburettor or immediately after the engine has started to avoid flooding.

4 Operation out of water for longer than 10 secs will lead to damage. DO NOT continue to crank starter if engine fails to start.

TROUBLE STARTING YOUR ENGINE? PLEASE SEE TROUBLESHOOTING OVERLEAF, READ THE MANUAL OR CONTACT YOUR LOCAL MAKO REPRESENTATIVE. HEAD TO OUR YOUTUBE CHANNEL FOR HOW-TOS AND GUIDES
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!! WARNING !! PLEASE READ BEFORE USE



READ MANUAL BEFORE USING JETBOARD



ALWAYS WEAR AN APPROVED LIFE VEST (PFD)



WEAR PROTECTIVE CLOTHING TO AVOID INJURY



CHARGE BATTERY WITH CHARGER PROVIDED



KEEP FUEL AWAY FROM OPEN FLAMES & SPARKS



ALWAYS REMAIN OBSERVANT TO AVOID COLLISIONS



DO NOT SUBMERGE. DRAIN IMMEDIATELY



KEEP AWAY FROM MOVING PARTS WHILE RUNNING



ALWAYS CLEAN AFTER USE TO AVOID DAMAGE



DO NOT LEAVE JETBOARD IN DIRECT SUNLIGHT



RAISE NOSE UP TO AVOID FUEL LEAKAGE



DO NOT TRANSPORT WITH FUEL IN TANK




ALWAYS STORE JETBOARD WITH LID REMOVED



ALWAYS REMOVE BATTERY BEFORE MAINTENANCE

POST-SURF CHECKLIST

Thoroughly inspect your jetboard and flush clean your engine to keep your Mako in good shape and protect your warranty.

 **BEFORE UNDERTAKING THE REQUIRED POST-SURF CHECKS PLEASE REMOVE THE ENGINE SHUT-OFF PIN FROM THE HAND CONTROL UNIT AND REMOVE THE BATTERY PACK FROM ITS HOUSING. DISREGARDING THESE PRECAUTIONS COULD RESULT IN SERIOUS INJURY.**



1. Ensure jetboard is placed flat on the ground with the nose elevated above 30 degrees.



2. Connect a fresh water supply to cooling outlet using the engine flush adaptor provided. **DO NOT turn on water supply.**



3. Crank engine by depressing START button. Wait for engine to start and idle for 5 seconds.



4. **Immediately turn on water supply.** Run the engine for 90 seconds at idle speed.



5. **Close off the water supply** and idle for 5 seconds, then stop engine immediately.



6. Rinse hull, engine bay and jet-drive with running fresh water. Allow to dry completely.



7. Remove battery. Fully charge battery pack using the charger supplied.



8. Spray engine bay, battery housing and jet-drive thoroughly with penetrating oil [WD-40] to avoid damage.



9. Remove side and centre fins from their quick release apertures. Store in board bag.




10. Place jetboard inside bag for safe transport and storage. Do not store with engine bay closed or in direct sunlight.



11. Ensure jetboard is stored securely with the nose elevated above 30 degrees.

TROUBLESHOOTING

If your engine fails to start, **STOP!** Read the following troubleshooting tips and refer to the how-tos on our YouTube channel. Failing to start your board after multiple attempts may lead to permanent engine damage.

 **READ AND FOLLOW THE OPERATOR'S GUIDE THOROUGHLY BEFORE UNDERTAKING ANY CORRECTIVE MAINTENANCE. A WARRANTY CLAIM MAY BE DENIED IF, AMONG OTHER THINGS, THE PROBLEM WAS CAUSED THROUGH IMPROPER MAINTENANCE, SERVICE OR REPAIR.**

STARTER MOTOR draws a lot of current from the battery when starting and will get hot. Do not try and start the engine more than 5 times without checking the temperature of the starter. If the starter casing is hot to touch then allow it to cool before attempting to start engine again. Continuing to crank the engine can result in permanent damage to the starter.

FUEL OR WATER FLOODING can happen when water ingresses the engine through the carburettor air intake. Alternatively, you have flooded your engine with fuel during the priming procedure by covering the air intake for too long.

In such cases you'll need to drain and dry out your engine as soon as possible. Don't continually try to start the engine as you'll just compound the damage.

1. Disconnect shut-off pin from hand control. Remove spark plug from cylinder head. Moisture or milky residue on the spark plug is a good sign of flooding.

2. Tilt jetboard onto its right-hand side. Place a cloth underneath the spark plug hole to aid catchment of any expelled liquid.

3. Press and hold the START/STOP button for more than five [5] seconds to engage the drainage procedure. Hold the button for upto ten [10] seconds or until no further fuel or water is being expelled.

4. Re-insert a new spark plug, or clean and dry the existing one. Ensure a tight and secure fit. Push spark plug cap over the exposed plug terminal and press firmly into place with an audible click. Repeat engine start procedure again.

SPARK PLUG REPLACEMENT Spark plugs ignite compressed fuel from an electric spark generated by the plug. During this process, slight carbon deposits of a brown, grey or tan colour are normal.

But excessive carbon deposits, oil deposits, wet, burned, scratched, chipped or otherwise damaged spark plugs are not and the plug should be replaced before further use to avoid engine damage.








PERFORMANCE Your jetboard left the factory with its carburettor settings optimised for responsive acceleration and peak performance. If you are unable to start your engine, check the carburettor settings section on the back of the LED indicator card in your parts case.

IF PROBLEMS PERSIST and engine fails to start after 5 attempts, do not continue to crank engine and cease all operation to avoid permanent damage. Check out our Engine Start Issues guide on YouTube or contact your local Mako Representative as soon as possible for assistance.

LED STATUS INDICATOR

The LED Status Indicator light provides run-time, error/warning and diagnostic information about your jetboard.

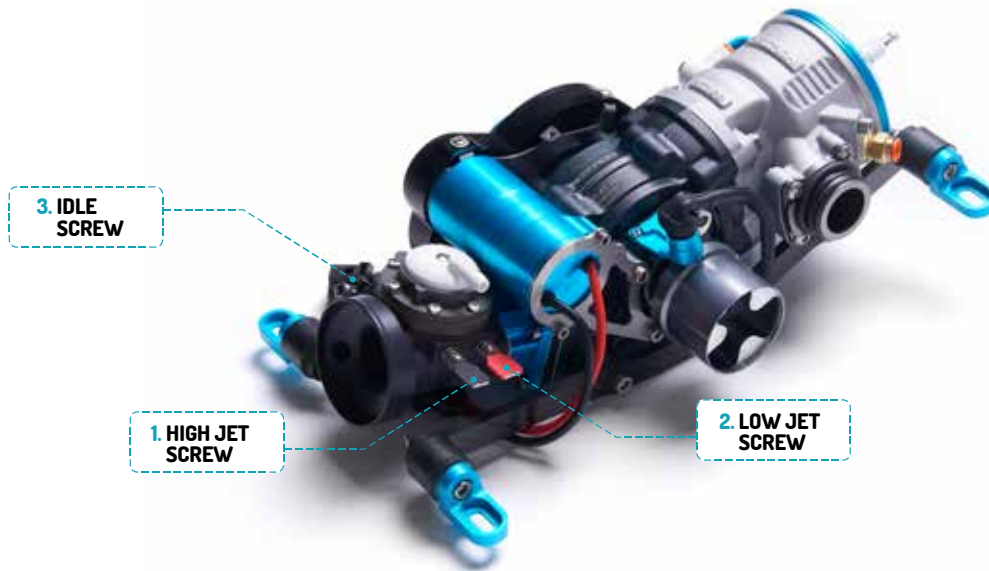
The table below outlines the course of signalling for each status of the LED indicator light. Should the LED status indicator light on the deck of the board become faulty, refer to the backup red-coloured status light located directly on the Engine Control Unit, inside the engine compartment.

INDICATOR	ENGINE SHUT-OFF PIN	START/STOP BUTTON	LED STATUS	STATUS DEFINITION	TROUBLESHOOTING
 ○○○○○○○○○○	Y/N	N	DEFAULT / OFF	The jetboard is powered off and in its inactive configuration.	Faulty, undercharged or flat battery pack. Faulty Engine Control Unit. Unplugged ECU Connectors. Faulty LED or connection.
 ●●●●●●●●●●	Y	Y	SOLID / ON	The jetboard is powered on, ECU is functioning correctly and the starter is cranking the engine for three seconds.	The LED may appear to flash, this is due to engine rotation during starting, this is normal.
 ●●●○○○●●●●	N	Y	SLOW FLASHING FOR 3 SECONDS	The engine shut-off pin is not present or incorrectly located in the hand control unit.	Check for debris in rubber housing on hand control. Re-insert engine shut-off pin.
 ●●●●●●●●●●	Y	N	SOLID / ON	The jetboard is powered on and the engine is running correctly.	---
 ●●○○●●○○●●	Y	Y	RAPID FLASHING FOR 10 SECONDS	Engine failed to start correctly. Starter protection active. Wait ten seconds before attempting another start.	Check spark plug. Ensure engine is primed with fuel. Check jetdrive for obstruction. Ensure drive shaft rotates freely.
 ●●●○○○●●●●	N	Y	SLOW FLASHING AT ENGINE RPM	START/STOP button held for longer than 5 seconds. Engine drain procedure engaged. Engine cranking until START/STOP button released.	Ensure spark plug removed. Process can also be used to test ignition sensor is functioning correctly.
 ●●○○●●○○●●	Y	Y/N	RAPID FLASHING	The battery pack has 20% of its full charge capacity remaining. Return to dry land immediately.	Charge battery pack. Replace battery pack.

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CARBURETTOR SETTINGS

When you receive your Mako jetboard, the carburettor settings have already been optimised for responsive acceleration and peak performance.



NOTICE THE CARBURETTOR IS A VITAL PART OF THE ENGINE AND REQUIRES HIGHLY ACCURATE ADJUSTMENT. IF THE FACTORY CARBURETTOR SETTINGS ARE INTERFERED WITH BY A PERSON WITHOUT THE REQUIRED TECHNICAL KNOWLEDGE, IT CAN RESULT IN POOR OPERATIONAL PERFORMANCE AND MAY CAUSE SEVERE ENGINE DAMAGE.

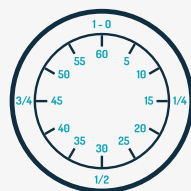
The carburettor fitted to the Rotron XT100 engine has three basic adjusting screws:

1. High jet screw (Black)
2. Low jet screw (Red)
3. Idle screw

The high and low jet screws are typically tuned in minutes, where 60 minutes represents one whole turn or 360 degrees. Tuning these screws requires a high level of accuracy and should be undertaken with great care.

When you receive your Mako jetboard, the carburettor settings have already been optimised for responsive acceleration and peak performance, and therefore need no

adjustment. Carburettor adjustment should only be carried out due to a new or rebuilt carburettor being fitted.



UNDERSTANDING CARB NEEDLE ADJUSTMENT:

Imagine that the head of the needle valve - the part that looks like a screw head - is a clock face. That screw head gives you sixty [60] minutes (one [1] hour) per one [1] complete turn. When tuning, turn the needles in five-minute increments. Always tune from the fully closed position of the needle.


DEFAULT CARBURETTOR SETTINGS

1. Locate the black high-jet adjustment screw and gently turn it clockwise until the needle just touches the stop. Repeat process using the red low-jet adjustment screw.

NOTICE CARE MUST BE TAKEN WHEN TURNING THE HIGH AND LOW JET ADJUSTMENT SCREWS ONTO THEIR SEATS. THE SEATS CAN BE EASILY DAMAGED IF THE ADJUSTMENT SCREWS ARE SEATED TOO HARD. THE SEATS ARE DELICATE AND IF THEY BECOME DAMAGED DUE TO OVER TIGHTENING, THE CARBURETTOR HAS TO BE REPLACED.

2. Back out the black high-jet adjustment screw by turning the screw anti-clockwise 1 and 3/4 turns or 630 degrees (1 hour 45 minutes).
3. Back out the red low-jet adjustment screw by turning the screw anti-clockwise 1 and 1/4 turns or 450 degrees (1 hour 15 minutes).

IF PROBLEMS PERSIST and engine fails to start after 5 attempts, do not continue to crank engine and cease all operation to avoid permanent damage. Check out the troubleshooting leaflet and our Engine Start Issues guide on YouTube, or contact your local Mako Representative ASAP for assistance.

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