



弥勒浩翔科技有限公司
Mile Hao Xiang Technology Co., Ltd

DLE106CC JETBOARD USER MANUAL

Please keep this manual in a safe place.

If the Jetboard is resold, please transfer this manual to the new user.



1. User Notice

DLE powered Jetboard is one of extreme sports equipment. The User of jetboard must be over 16 years old. Pregnant women, the elderly, and people who has hypertension and heart conditions are prohibited from using this product. The Jetboard is made from a carbon fiber body and a two-stroke engine. Please read this manual carefully before use. This manual provides basic information of the Jetboard, which includes the structure of the board, operation and control guide, maintenance advice, inspection and safety instructions.

Reading this manual carefully can help users to avoid safety hazards and damage to the surfboard and personal safety, etc., also can help users to operate the Jetboard correctly. This product is not included liability insurance or any kind of insurances. Due to user group differences, DLE powered Jetboard will have some potential dangers during use, such as property damage, physical injury or even death. If you are unwilling to bear all the risks in use, please do not start engine!

If you have any questions about DLE Jetboard or need repair services, please don't hesitate to call our after-sales service number (400-100-6090) or email us at: dle@dlengine.com, we will serve you wholeheartedly.

2. Safety Instruction

1、 Surfing Area

As a Jetboard owner, please choose the proper surfing area. This product shall only be used in waters permitted by the local government and administrations.

2、 Collision avoidance

- The most common accident is a collision when surfing the Jetboard. Collision can cause safety accidents and personal injury or death. Practised surfing skill is the most effective way to avoid collisions.
- Power Jetboard has no brake. If you want to slow down and stop, you must be prepared in advance. Slow deceleration can prevent users falling into the water from inertance.
 - If you are on a collision course, you should plan the route in advance and avoid the collision actively.

3、 Wear a life vest

- When using the Jetboard, you need to understand the importance of life vest and other protective equipment. You must wear a certified life vest any time when surfing, to ensure the personal safety.
- Choose a fit life vest with bright-colored and larger uplift
- Surfers should wear protective gears, such as diving suits, shoes, gloves, etc.

4、 Wear a helmet

- Choose the helmet for water sports.
- In the event of a collision, the helmet can protect our head. When surfing, always wear a certified water sports helmet.

5、 Surfing at the certain speed range that you can control



- When surfing, never exceed your control limit or the limit speed, otherwise it will increase the risk of losing control and cause a collision.
- It is strictly forbidden to use it when users under the influence of alcohol, drugs, excessive fatigue, or lack of concentration.

6、 Ensure the Jetboard can work properly

- Check your surfboard before each use, and maintenance the board according to the guidelines.
- Keep the Jetboard in good condition. Regular overhaul and maintaining works can increase stability and durability of the board.
- It is strictly prohibited to exceed the load limit, do not remove or modified the original parts from Jetboard, otherwise it will change its original performance.

3. Product Technical Specification

1、 Engine

Displacement	106CC
Type	2T water-cooled
Weight	19.5KG
Bore*Stroke	52*50
Compression Ratio	13:1
Fuel(Unleaded)	Mixed fuel (gasoline and 2T motor oil)
Mixture Ratio	30:1
Motor oil	2T Fully Synthetic
Power	8KW/7500rpm
Suggested RPM	6700 ~ 7800rpm



Maximum Speed	55KM/H
Starting Mode	Electrical
Spark plug	NGK BPMR8Y
Ignition/Power	CDI ignition/6W

2、Body

Hull	Carbon fiber
Size	1800*600*150MM
Maximum Speed	55KM/H
Minimum Water Depth	50CM
Maximum Load	100KG
Packing Size	1900*700*300MM

3、Controller

Model	DLE-ECU
Size	Φ82*125MM
Battery capacity	65Wh
Output voltage	12V
Low-voltage warning	8.5V

4、Starter Motor

Motor power	12V/400W
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4. Parts description and Precautions

When you received the Jetboard, please take out the stand and place the board on the stand, and then charge the controller (water pump and charging are share same connector), you can start to install the tail/side fin during the charging.

1、 How to use the stand:

- fold the stand.
- Hold the middle tube and rotate the top of the stand counterclockwise.
- Pull the diagonal stand tube and open the stand.
- Wrong rotation will damage to the stand.



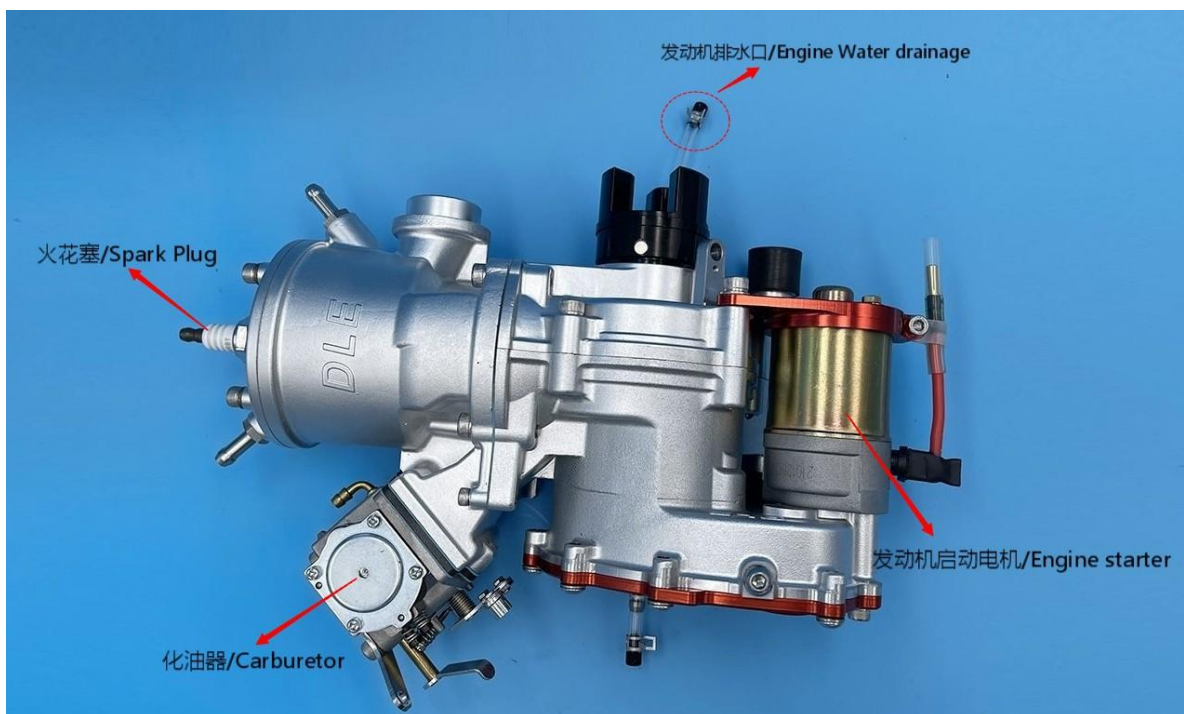
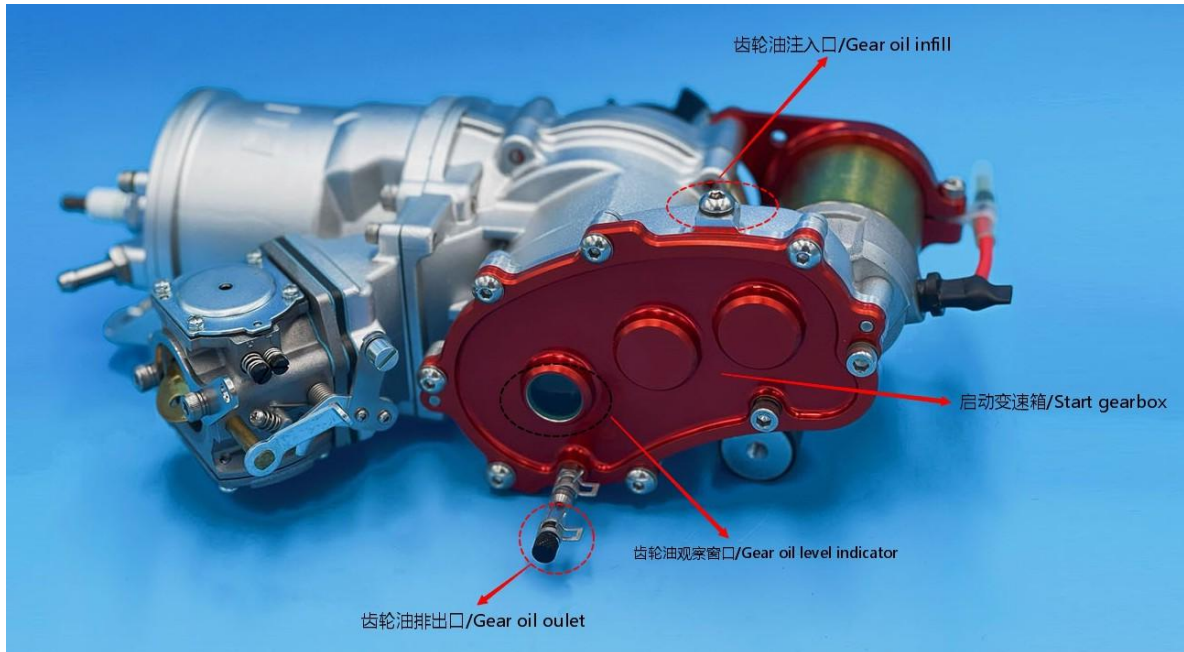
2、 Use of charger

After connect the charger to the socket, please wait till the indicator light shows green, then connect the charger plug to controller.



Note: Make sure the battery is fully charged before use. The charger indicator light is red when charging, and it will turn to green when fully charged. The charger should be kept dry, do not store it in a dark and humid place for a long time.

3、Engine



Precautions of use:

- In order to extend the life-time of the engine, please keep the each start time around 5-10 seconds.

- The starting time should not exceed 10 seconds without cooling water, and the interval time of multiple starts should more than 30 seconds, otherwise the engine will be overheated and damaged due to wrong starting.
 - Please refer to 9.1 for starting gear box motor oil replacement and precautions.
 - Gasoline is flammable and explosive.
 - It is strictly forbidden to refill the fuel and start the engine in a confined space.
 - When refueling the Jetboard, do not smoke or light fire within 5 meters of the fuel area.
 - Be ware not to spill the fuel during the refueling. If there is fuel spillage in the cabin, wipe it clean with a rag.
 - If you smell strong gasoline on the air. Do not start the engine, it might ignite it and results explosion while starting.
- Suggestion:** Open the hatch and move the Jetboard to a ventilated place, and check for oil spills. Avoid explosions during startup.
- When the engine is running, it is strictly forbidden to remove the spark plug cap by hand, to avoid the danger of electric shock and personal injury.
 - If surfer falls into the water, please do not start the engine until the water pump has emptied water in the cabin, this will prevent water floods into the engine.
 - When the Jetboard is still in the water, it is not allowed to lie on the board for a long time, otherwise the engine will not start due to water flooding.

4、 Fuel ratio and notice

4.1 The Fuel is a mixture of gasoline and motor oil ;

- Use 92# gasoline or above , 2T fully synthetic or semi-synthetic motor oil.
- The fuel ratio is 30:1 (30L gasoline to 1L motor oil).
- Please strictly follow the percentage fuel ratio, otherwise it will damage the engine.

4.2 Ethanol gasoline is strictly prohibited

4.3 It is recommended to use FD-grade, high-quality two-stroke fully synthetic motor oil(recommended: MOTUL 710, mercury 2T, Total 2T). Inferior motor oil will cause engine performance degradation or even damage.

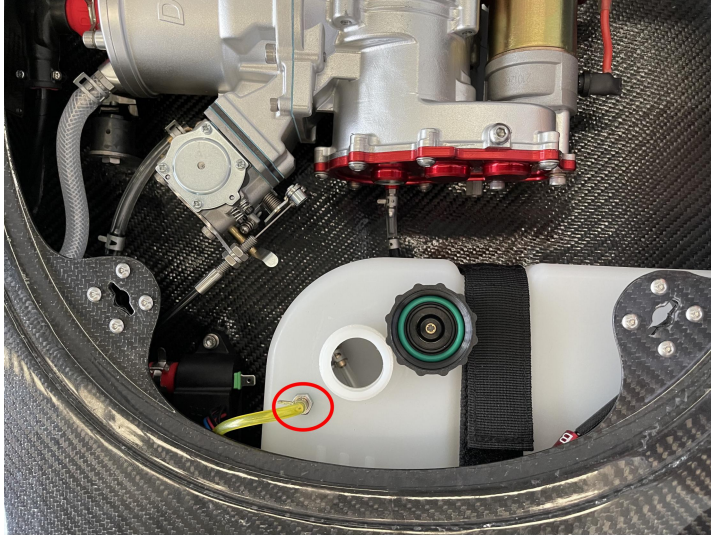
4.4 It is strictly forbidden to mix use of motor oil from different manufacturers or brands, otherwise it will cause serious blockage in the carburetor.

4.5 The mixed fuel should not be stored for a long time. The "expired" fuel will cause blockage in the carburetor, so the engine will not work properly.

4.6 Please check the air outlet pipe of the fuel tank regularly. Remove the water if there is any. If water enters the fuel tank, the engine will not work normally.

4.7 It is strictly forbidden to place the Jetboard up side down. it might results fuel leakage from the fuel tank. If you find a fuel leak in the cabin, please do not start the engine, fix the leakage and clean the fuel before starting the engine. When fuel leaks, there are potential safety hazards such as fire and explosion when starting the engine.

4.8 Check whether the fuel tank air outlet pipe is installed in place, the red circled part in the following photo:



4.9 Before each surfing, please make sure that the fuel tank cap is tightened, to prevent explosion and casualties caused by oil leakage.

4.10 it is forbidden to store fuel in the fuel tank during the battery charging or long-time storage.

4.11 Suggest to use metal fuel tanks to store fuel to avoid fuel contamination by non-metal fuel tanks.

4.12 Always to draw out the remaining fuel in the fuel tank before storage and transportation to avoid fire hazards.

5、 The use of the controller and notice

1、 Controller + Battery



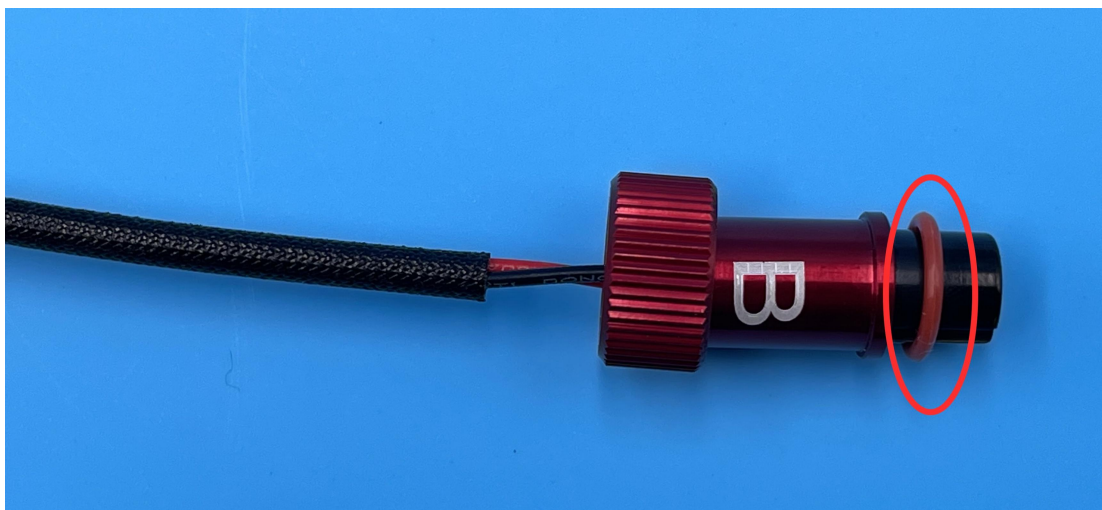
Notice:

- When the battery is charging, it generates a tiny charge and potential sparks. It is allowed to charge the battery if there is any gasoline in the fuel tank, or there is gasoline steam in the air.
- it is not allowed to charge the battery when there is water in the cabin or the Jetboard is floating on the water.
- If the power cable is damaged or oxidized, or loose, it is not allowed to charge the battery.
- Use the original charger to charge the battery only, and the charger should be placed in a dry and ventilated place.
- The Jetboard should be placed in a ventilated, dry, and clean environment during the charging. Check the charging process regularly to avoid fire hazards.

2、Controller wiring diagram



3、 Always check whether connectors are well connected, and check the integrity of sealing ring, if it's damaged or loosened, please replace it in time.



4、 Insert the key to activate the controller. The green light indicate the controller is on standby. The controller will automatically power

off after key removed for 3 minutes.

5、 Controller indication light (Refer picture below)

5.1 When indicator lights "1" and "2" are off, all system are powered off.

5.2 After key is inserted, "1" turn to orange, "2" flashes for 6 seconds and off. The starter will activated and beginning to start the engine, the Jetboard is ready for use.

5.3 When key is removed, the indicator light "1" will turn to green, and the water pump will continue to work for 3 mins, then the Jetboard is power off.

5.4 When "2" indicator light flashes, it's the low voltage alarm, battery needs to be recharged.

5.5 If the key is not inserted but the "1" light is on, and the water pump is not work, it can be considered that the throttle handle is shorted. If the light turns off after unplugged connectors between handle and controller, you will need to check and repair the throttle handle circuit. If the light does go off even after handle is disconnected, the controller is damaged.



Caution:

- Do not let the control system soaks in water for a long time;

- It is strictly forbidden to disassemble the control system;
- Please charge the controller once every 1 to 2 months when the Jetboard be stored.

6、 Engine start sequence and notice

1、 Insert the key into the handle to the stage 1, close the carburetor choke plate with full throttle.

2、 Push start key to the stage 2, starter will be activated and start the engine for 5 seconds and then stop; The engine will be started for short time and off, as much fuel has been pumped into combustion chamber.

3、 Pull out the key, then open the carburetor choke plate, release the throttle trigger to default position, then insert the key and restart the engine again, the engine will running at idle speed. Slightly accelerate the engine for 3-5 seconds and remove the key, the Jetboard shall ready for use.

4、 If the starting is unsuccessful, repeat the steps above.

5、 If the engine can be not started after multi-attempts, there could be too much fuel in combustible chamber. You need to remove the excess fuel, please refer (How to remove water or excessive fuel in the engine).

Notice: Before starting, insert the key to stage 1 first, and then press it to stage 2 when ready to surf (refer 9.5 for details). The maximum starting timing shall not more than 10 seconds/time on the shore. The interval time between each starts shall no less than 30 seconds. (the engine will be overheated and damaged

without cooling water, so please do not start the engine on the shore for too long).

7、Precautions of using Jetboard

- Always wear life vest and explore the surfing area before start, choose the appropriate waters to start. Note: Avoid floating debris and underwater obstacles.
- Before use, check whether the engine screws are loose and whether there is leakage in the fuel tank, fuel pipe, and carburetor. Otherwise it will cause fire and explosion.
- Check the cooling water pipe before each use, ensure there is no air leakage, blockage and damage. Otherwise, the engine and exhaust pipe will be overheated and damaged.
- The engine must be started in a dry and well-ventilated place, and it is strictly prohibited to start the engine indoor or a place with bad ventilation.
- Long time running at idle speed may cause serious carbon build-up on the spark plug. Never touch the running engine, there is risk of pinching hand
- Before cooling down, Do not touch the cylinder and exhaust pipe to avoid burns.
- If water got into the engine or engine sounds oddly, please do not start the engine more than 3 times to avoid damages the engine. Please check and eliminate the problem before starting again.
- Maintain a safe speed and keep safe distance from surrounding people, objects, or other surf boats.

- Prepare in advance and avoid collisions. The Power Jetboard has no brake. If you want to slow down and stop, you must be prepared in advance.
- For your own safety, do not practice the jetboard too far from the shore. Before you became a experienced surfer, don't surf too far away.

8、 Surfing Skill Quick Guide

•In Shallow Water: Put the Jetboard in the water with a depth of more than 50cm, stand next to the Jetboard, put one knee on the Jetboard and insert the key to stage 1(standby mode), hold the handle on the hull and push the key to stage 2 to start the engine. When the engine starts, give an appropriate acceleration according to your weight, so the Jetboard is fast enough to carry the surfer, then surfer can slowly try to standing up.

•In Deep Water: before go to deep water, please practice in shallow water first. When you fall off in a deep water area or engine suddenly stopped, don't immediately climb back to the Jetboard. swimming to the broadside of Jetboard, hold the handle and insert the start key. After the engine is started and fast enough to sliding, the surfer shall climb on to the Jetboard asap, this can avoid too much of water enters into cabin. Note: if the engine couldn't start after 2-3 times attempts, please DO NOT start it again, or it could be damage to the starting motor and other parts. At this stage, the engine may have been flooded by the water, please go to the shore to

clean the water.

Important note: After you familiar with the steering and throttle control, you can try to adjust the CG (center of gravity) to achieve better surfing experiences. When the front end is high, your CG is too much back, slightly forward your body to move CG forward; When your CG is forward, contacting surface of Jetboard to water is too large, it will reduce the speed.

9、 Common problem, Maintenance and Solutions

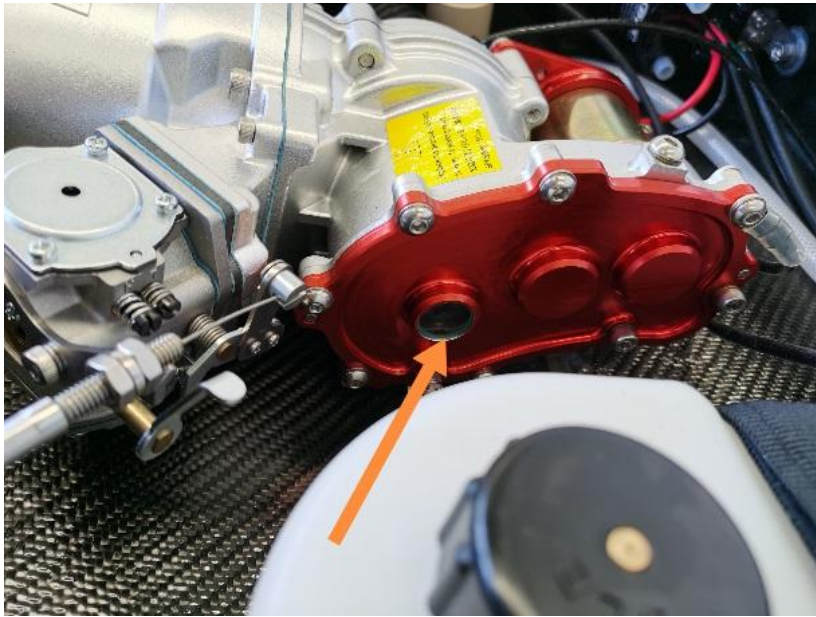
1、 Gearbox oil replacement:

Every 15 hours the running or the oil can not be seen from the observation window, the oil needs to be replaced and refilled (0-W40 motor oil is recommended, and the oil level should not exceed half of the observation window)

Follow the steps below:

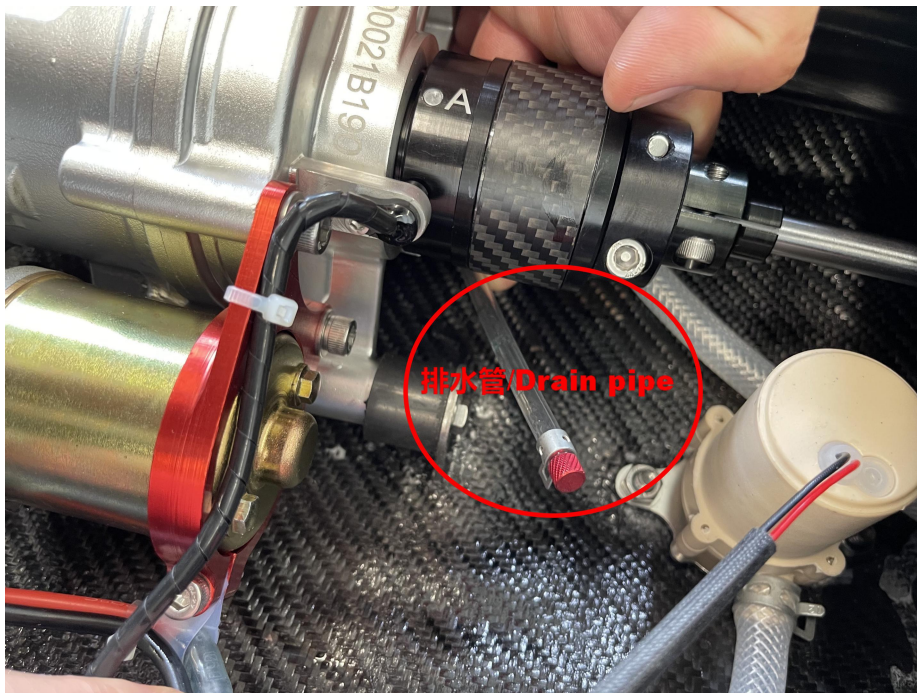
- 1) 1.Remove the red plug and screws on oil reservoir.
- 2) Put the red plug back after old oil is emptied.
- 3) Use a syringe to inject 50ml of motor oil from the top hole.



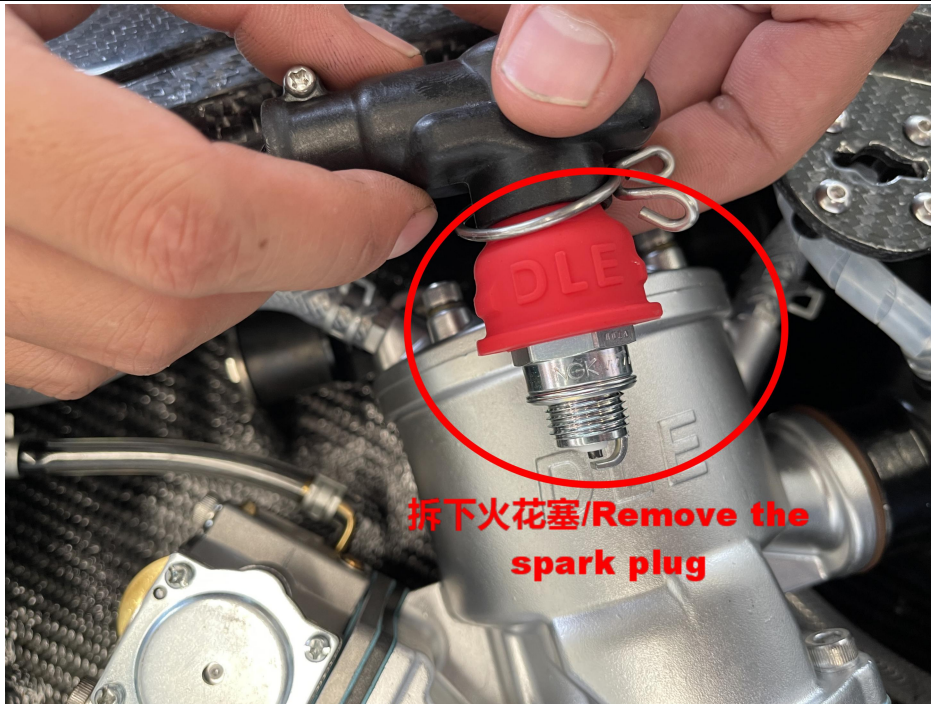


2、 Solution for water or fuel flooding

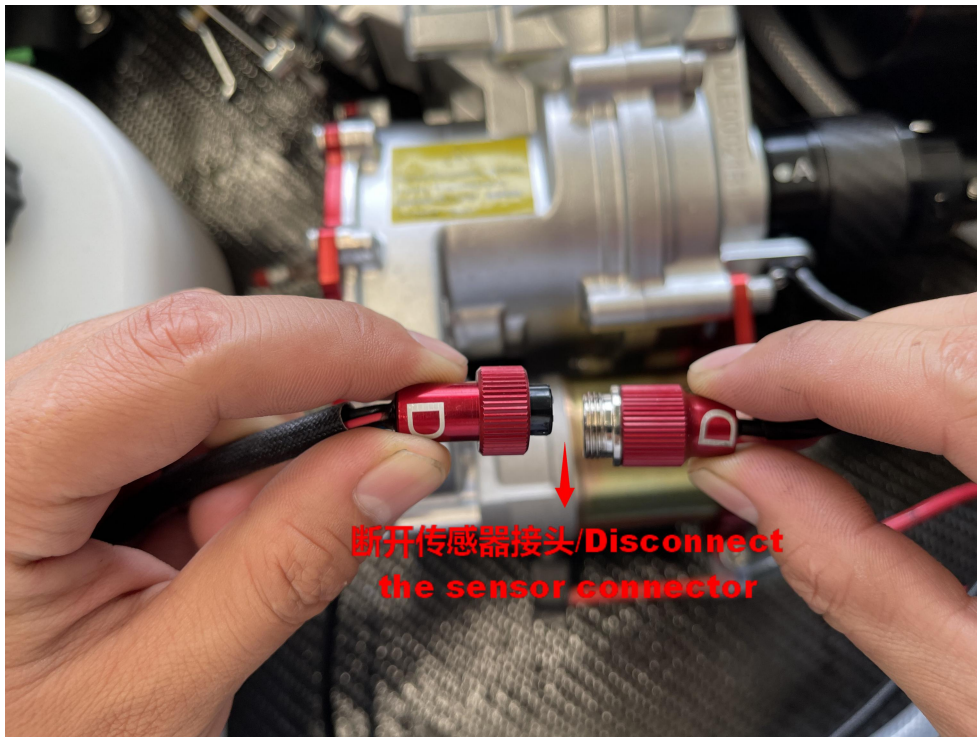
2.1 Open the engine drain valve



2.2 Remove the spark plug, shake off the water (fuel) inside, and wipe the spark plug dry. Then put it into the spark plug cap.



2.3 Disconnect the sensor so the ignition won't spark, to prevent any potential fire hazard.



2.4 Tilt the Jetboard 45 degree down to the spark plug hole, so the water (fuel) can be flowed out.

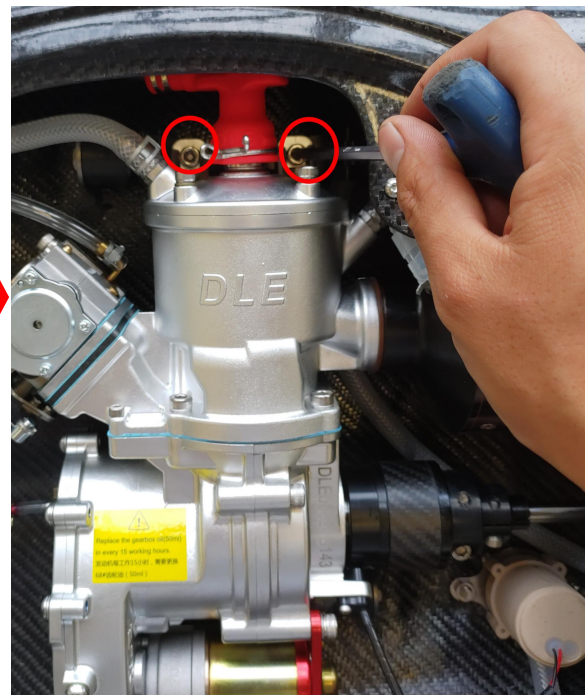
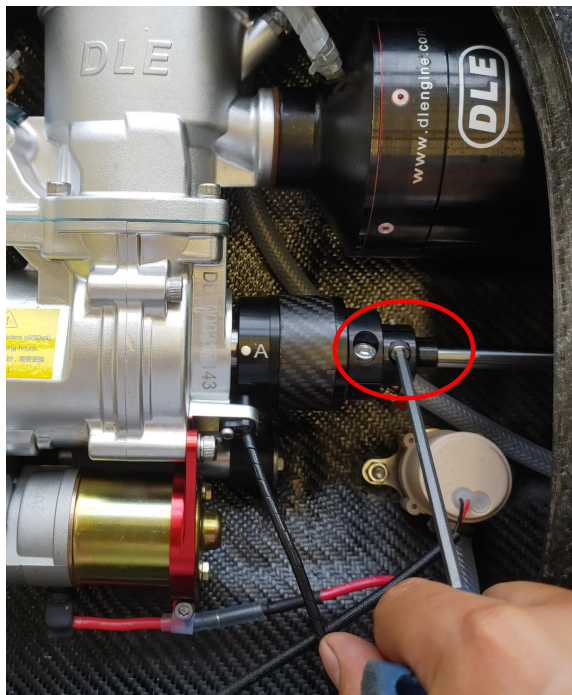
2.5 Insert the key to start, the starter motor will drive the engine but ignition will not ignite. Repeat the step 2-5 times to drain the water (fuel) completely.

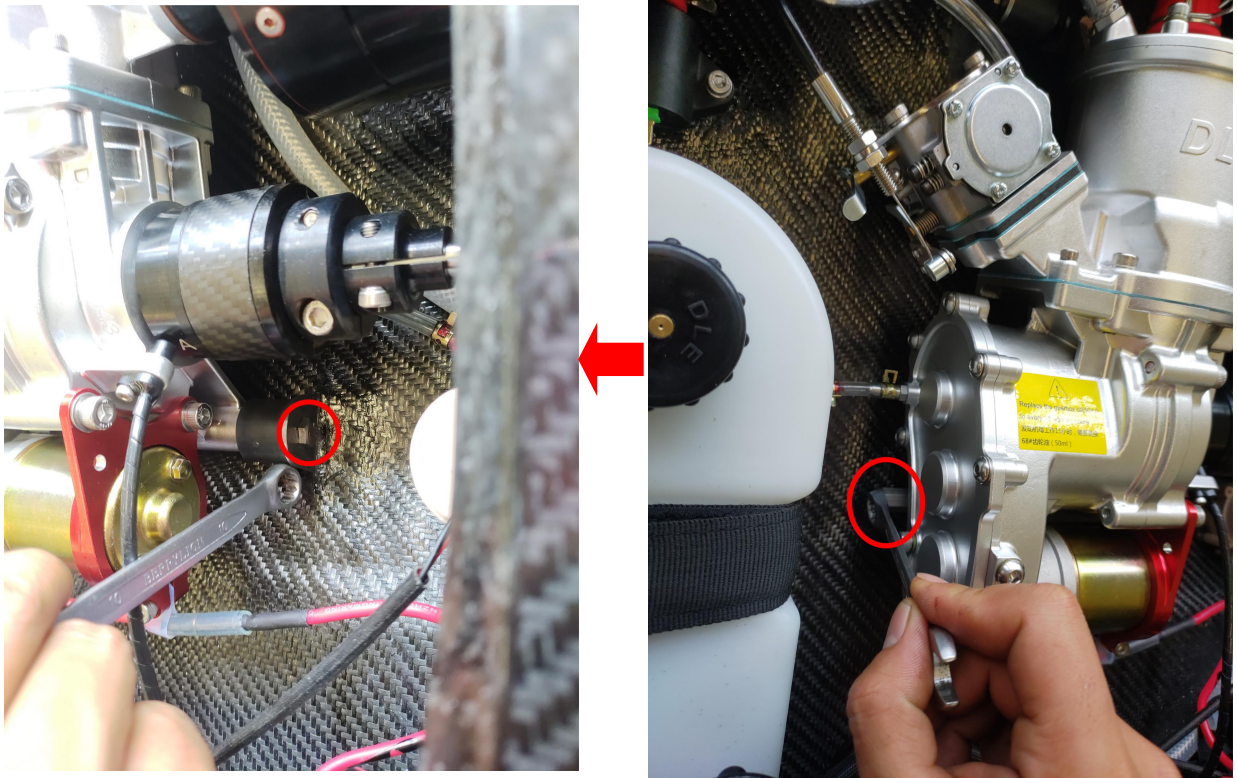
2.6 Close the drain valve, install the spark plug and put spark plug cap back.

2.7 The engine shall be started successfully. If not, more water/fuel could still remaining in the engine, please repeat the above steps.

3、 Remove the engine

- 1) Loosen the the coupler lock screw.
- 2) Loosen the coupler mounting screw and pull backwards to separate the coupler.
- 3) Remove the four engine mounting screws.
- 4) Remove the water pipe, oil pipe and cables.





Caution:

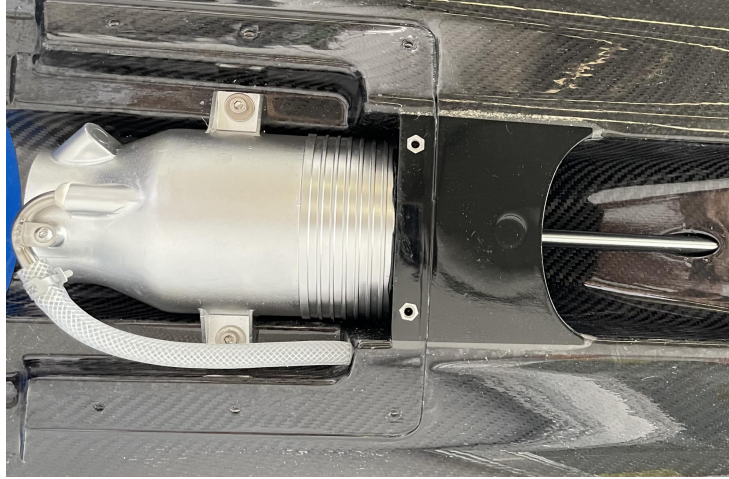
The engine mounting screws need to be applied with thread glue (Loctite 242). The screws need to be tightened diagonally and evenly. The sealing surface of the engine body uses gasket-free design. The surface needs to be cleaned properly and apply anaerobic surface sealant (Loctite 518) evenly. When mounting the one-way bearing, beware of the running direction (arrow side goes up), use torque spanner to tight the screw (troque 28N*m).

4、 Use notice of Thruster

4.1 Check and ensure that there are no obstructions, debris at the impeller entrance or drive shaft, remove it if there is any.

4.2 If there is noticeable power decreasing, strong vibration, or friction between the impeller and injection barrel, STOP the engine

immediately, check for possible debris on the thruster, and check the integrity of the impeller and whether the screws are loose.



Note:

The normal height of cooling water ejection is 50 cm. If the ejecting height is too low and the temperature is too high, STOP the engine immediately and check whether the cooling water pipe is fell off or blocked. Otherwise, the overheat will cause permanent damage to the engine and exhaust pipe.

5、 Throttle handle and key

1. Note that the key is a 2-stages switch, press the key to the stage 1 to prepare for surfing, and the engine can only be started after the key is pressed to stage.
2. After the key is pressed to stage 2, the controller indicator light is on and the Jetboard is powered on; After the key is removed, the indicator light and the power of Jetboard will be automatically turn off after 3 mins.

as shown in the figure



Handle inspection: The accelerator trigger is sticking, and it doesn't reset when you release it.

2.1 Examine the throttle handle components

1) Hang the handle on the stand vertically, spray an appropriate amount of WD-40 to the hole on the end of trigger, pull and release the throttle trigger several times.

2) Keep the handle in a vertical position for at least 5 minutes to allow the oil to lubricate internal parts well .

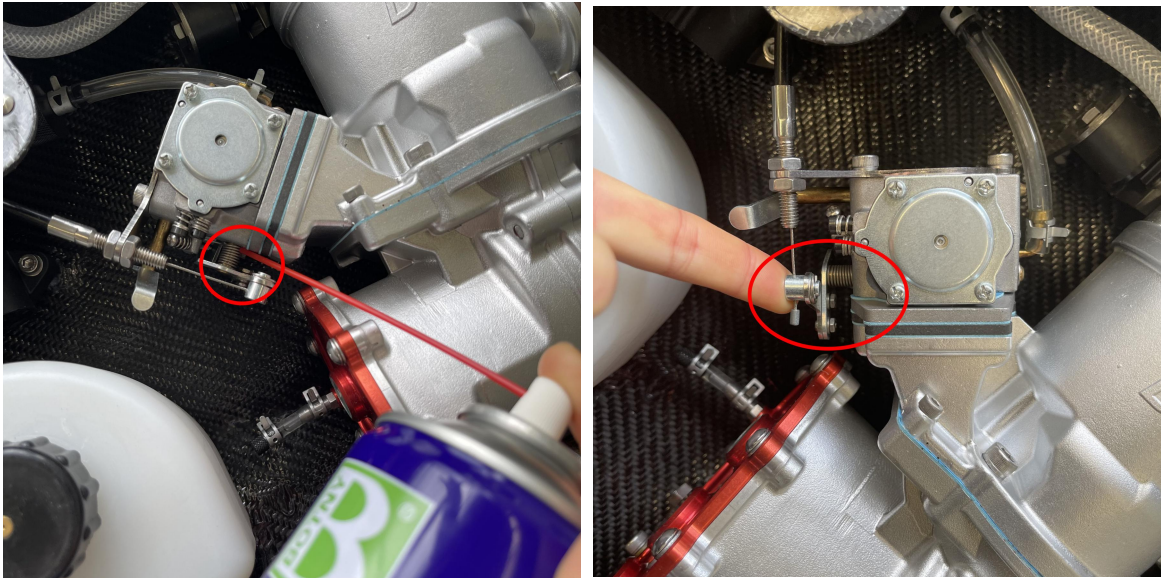


2.2 Check the throttle spring on the carburetor

1) Spray an appropriate amount of WD-40 on the throttle cable that connects to the carburetor, and pull or release the throttle several times.

6、Carburetor adjustment

- L: low speed oil needle (0.8 to 1.0 turn), H: high speed oil needle (1.0 to 1.25 turn).

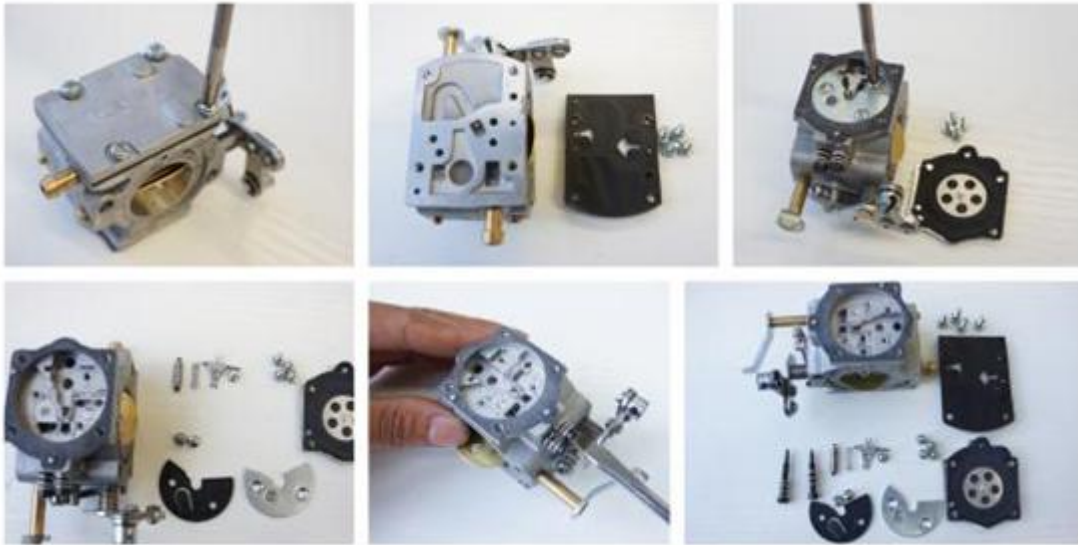


- Turn the oil needle clockwise to close, and turn it counterclockwise to open. When adjusting, close the oil needle clockwise to the end first.
- When closing the oil needle, note that the oil needle screw is a very precise part, and excessive force may cause damage to the needles;
- The default setting of the carburetor normally allowed the engine work at most of areas, only adjust it when necessary.
- In some high altitude areas , the engine might be decreased, you can try to adjust the "H" oil needle counterclockwise, and the adjustment range is controlled within 0.5 circles.
- If the acceleration from low speed to high speed is rough, fine-tune "L" counterclockwise to increase the low-speed fuel supply; Engine running rich at low-speed will cause it easily off at idle, you can fine-tune the "L" clockwise to reduce the Low-speed oil supply.

- Adjust the "H" oil needle to make the engine reach the maximum speed and then open it counterclockwise by 0.2-0.3 turns to keep it slightly running at rich. The color of the spark plug can show the current gas mixture state.
- Start the engine on the water, running at full throttle for 20 seconds, turn off the power while engine running at high speed, remove the spark plug, yellowish brown indicates the gas mixture is on an optimal state , black indicates engine is running rich, and white indicates engine is running at lean.;
- A running lean engine will eventually overheat and burn out the pistons and cylinders and cause serious damage to the engine.

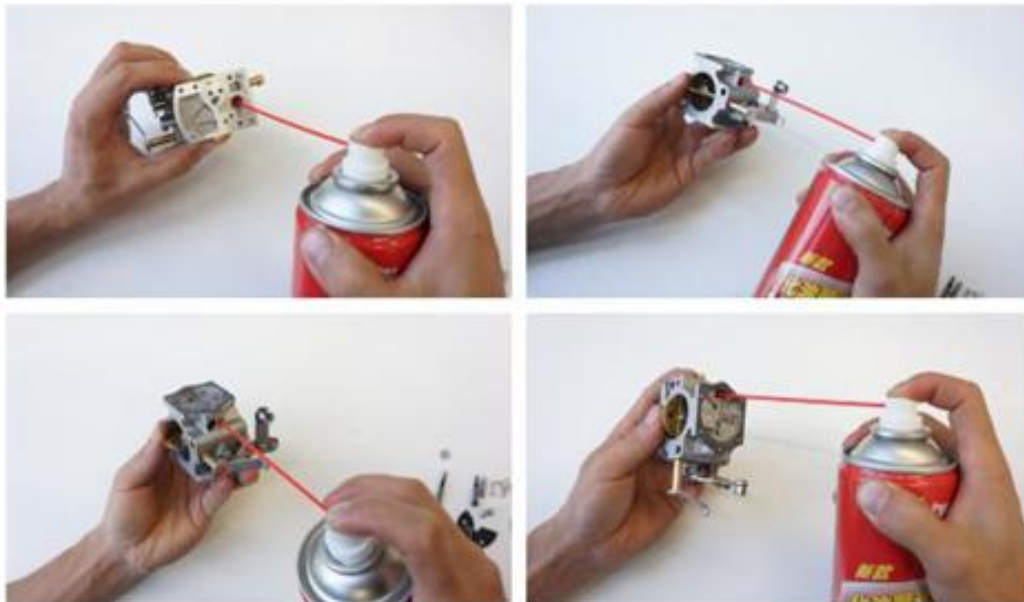
7、 How to clean the carburetor

- Remove the 4 screws on both sides of the carburetor as shown in the figure. Open the carburetor sealing cover.
- Remove the parts in order as shown on the picture. It is recommended to store them in a container to avoid loss.
- Clean the oil filter with carburetor cleaner. Note if you forget to put the filter back, it will cause the internal blockage of the carburetor.
- Cleaning these holes according to the figure, and then install them back in same order that you removed.
- Install the back cover of the carburetor, beware that installation direction of the diaphragm, and tighten the screws.



Note:

Clean the fuel filter in the carburetor regularly, otherwise it will cause the fuel needle adjustment failure and the engine will running unstable.



10. Engine Troubleshooting



	Checking list	Solutions
Engine Can Not be Start	Fuel/Power supply	Refuel the tank or recharge/replace battery
	Connectors	Re-Plug connectors in correct order
	Spark plug	If wet, Replace/wipe it dry
	Ignition	if not igniting, check above 3 items
	Hall sensor	if not working, repair/replace
	Engine	if flooded, drainage water/fuel
	Starter motor	if not working, repair/replace
	One-way bearing	if not working, repair/replace
	Impeller	if blocked, remove debris
	Fuel supply on carburetor	if blocked, clean the oil circuit
	Exhaust pipe	if leaking air, repair/replace
	Cylinder/Piston	if seized, repair/replace
Engine Start unusually	Engine mounting Screws	If loosen, re-tighten or replace
	Engine damper pad	If damaged, replace
	Coupler rubber gasket	If damaged, replace
	Bearing	If wore, replace
	Thruster, impeller screws	If loosen, re-tighten or replace
	Impeller	if deformed/damaged, replace
	Impeller	if blocked, remove debris
	Exhaust pipe	If loosen, re-tighten or replace

11、Controller Troubleshooting (refer 4.5 column)

Controller Indicator Status	Inserted the key	<p>1. The indicator light "1" shows on orange, indicating that the controller is supplying power to the ignition and the water pump.</p> <p>2. The indicator light "2" flashing colorful and off in 5 seconds, indicating that the controller is power the starter motor during the flashing period.</p> <p>3. When low voltage alarm activated, the colorful lights keep flashing, and it will override other indicator lights.</p>	<p>1. If the engine can not be ignited, please check whether the ignition connector is properly connected and whether the sensor is damaged. If the problem persists, the ignition is damaged.</p> <p>2. If the water pump does not work, please check whether the water pump connector is connected properly. If the problem persists, the water pump is damaged.</p>
		<p>After the key is inserted, the indicator light of the controller has no response. Disconnect the throttle handle connector on the controller, and jump the connector at the controller end. If the indicator light of the controller is working normal, the handle wire is damaged.</p>	
Controller Indicator Status	Removed the key	<p>The indicator light "1" shows on green indicating that water pump is working, it will be off after 5 minutes, then the controller will automatically power off, and the water pump stops working</p>	<p>If the key is not inserted, but the green light is on, and the water pump is not working, disconnect the throttle handle connector then the green light is off, indicating that the handle cable is damaged or shorted. Please check whether the throttle handle cable connector has any water residual, or replace the throttle handle cable. If the green light is still on after disconnecting the connector for 5 minutes, the controller is damaged.</p>
		<p>If the key is removed , but the controller is still shows green light after 5 mins and the water pump is keep working, indicating that the controller is damaged.</p>	

12、 Jetboard Storage notice

- Please empty the remaining fuel in the fuel tank before storing the Jetboard;
- Powered off the Jetboard for storing.;
- Although the Jetboard has certain waterproof capability, but the water residual in the engine compartment should be removed before the Jetboard is stored. Remaining water will cause damage to the engine and electronic components;
- Wash the entire Jetboard with fresh water and dry it, keep the hatch cover open, and store it in a dry, shade and ventilated place;
- Before storing the Jetboard, please apply anti-rust spray (WD-40) to metal parts to prevent the parts from oxidizing and rusting;
- When the Jetboard has not used for a long time, charge the battery regularly every 2 months to extend the battery life-time.

13、 Warranty Terms

- This product provides 1 year warranty from the date of purchase.
- Spark plugs, starter motor, Spark plug cap, Exhaust pipe connection sleeve ,carburetor, throttle handle and other consumable parts are not covered by the warranty.
- If the Jetboard is damaged by unauthorized modification, using Non-DLE original parts or violated the standard operation, it will not covered by the warranty.
- Not using proper motor oil to the gasoline or using inferior motor oil, causing engine damage is not covered by the warranty.



- Parts wore from improper use, parts damaged from accidents or inhalation of foreign objects, etc. are not covered by warranty.
- Manufacturers and dealers will not provide warranty when engine damaged by flooding water. If there is a series of failures caused by failing to discharge the excess water just in time, the manufacturer does not provide warranty.
- The manufacturer is not responsible for product damage, property loss, casualties caused by violated operation.
- Please keep the manual and warranty card properly for future use. When returning for repair, please send the warranty card with product together so that the manufacturer can record the warranty information.

14、 After-sales service

If you have any questions or problem with the product, please don't hesitate to contact your seller/local dealer or us. Please provide your name, address, contact number and product model, accurately describe the problem, we will serve you wholeheartedly.

Contacts:

Sale: 086-13529826090

After-sale service:

0086-1398730695/18787398910

Website: www.dlengine.com

E-mail: dle@dlengine.com

Add: Mile City, Honghe Prefecture, Yunnan Province, China 652300

