



Electric Scooter

LF1200DT

User Manual

EAT MY DUST
SCOOTERS

100% ELECTRIC

WWW.EMDSOOTERS.COM.AU

#BETHECHANGE

Australia's Favourite Electric Motorbike

PREFACE

Thank you for choosing The O.G. We have worked extremely hard to bring this product here to Australia and really hope you enjoy it as much as we think you will!

This manual provides all the technical information required to operate and maintain your scooter safely.

PLEASE READ THIS MANUAL BEFORE OPERATING YOUR SCOOTER.

Taking the steps in here will extend the life of your brand new scooter.

IMPORTANT INFO

MAXIMUM LOAD

The vehicle is designed to carry <100kgs. It will be capable of carrying more but this means sacrificing performance and battery life.

We recommend the total weight of the passenger and driver does not exceed 110km.

PURPOSE

The O.G. Scooter is classed a registered motorbike in all Australian States. This means it is designed for use strictly on the road and not permitted in bicycle lanes.

Pay special attention to statements preceded by the following words:

WARNING: Indicates a strong possibility of severe personal injury or death if instructions are not followed.

CAUTION: Indicates a possibility of equipment damage if instructions are not followed.

NOTE: Indicates a possibility of equipment damage if instructions are not followed.

Environmental Protection (EP): Indicates special precautions that must be taken to meet environment protection laws and regulations. Improper use of a motorcycle may cause environment pollution.

If the operator fails to follow safe operating and maintenance practices, Co. will not take any responsibility to any injury or damage occurred.

This manual should be considered as a permanent part of the motorcycle and should remain with the motorcycle when resold.

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HOW TO STAY SAFE

Riding a motorbike safely involves more than obeying the road rules. You must be aware of your surroundings and ride to survive.

- ▶ Always perform a pre-ride inspection before you ride. Checking the brakes are operating correctly and the mirrors are in position.
- ▶ Ensure you are legally permitted to ride the motorbike where you are. This means having a valid motorcycle license in NSW and VIC. A valid car license in all remaining states. If these rules change, it is your responsibility to check prior to riding.
- ▶ Always be visible:
 - Wear bright or reflective clothing.
 - Don't ride in another motorist's "blind spot".
 - Your scooter will feel zippy, try not to cut others off in traffic.
 - Obey all applicable road rules.
 - Obey the speed limits, and NEVER travel faster than conditions warrant.
 - Use extra caution at intersections, parking lot entrances and exits.
 - Always ride with both hands and keep both feet on the platform while the passenger grasps the handrail with both feet on the rear footrest.

Protective Clothes

We recommend that you; always wear a helmet, a face shield and protective clothing. Your passenger needs the same protection.

Try to wear clothing that won't blow in the wind too much. Doing up jackets etc.

Refitting/Design Changes

ANY attachment or device that alters the performance of the scooter voids any and all Warranty and guarantee provided by EMD Scooters. Any change to the design of the scooter also voids all Warranty.

Permitted Accessories

WARNING: The addition of accessories and cargo may reduce the vehicle's stability, performance and safe operating speed.

- ▶ Keep cargo weight low and close to the center of the vehicle. Load weight equally on both sides to minimize imbalance.
- ▶ Adjust tyre pressure and rear suspension to suit load weight and riding conditions.
- ▶ Make sure that cargo is fastened on the vehicle.
- ▶ Do not attach items to the handlebars, fork or fender. Otherwise, unstable handling or slow steering response may occur.
- ▶ The maximum load weight of the motorcycle is 110kg. Please do not overload.

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GENERAL INFORMATION

Parts Diagram



100% electric

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Vin Record

VIN: Record your VIN here so you always have it in the event anything happens.

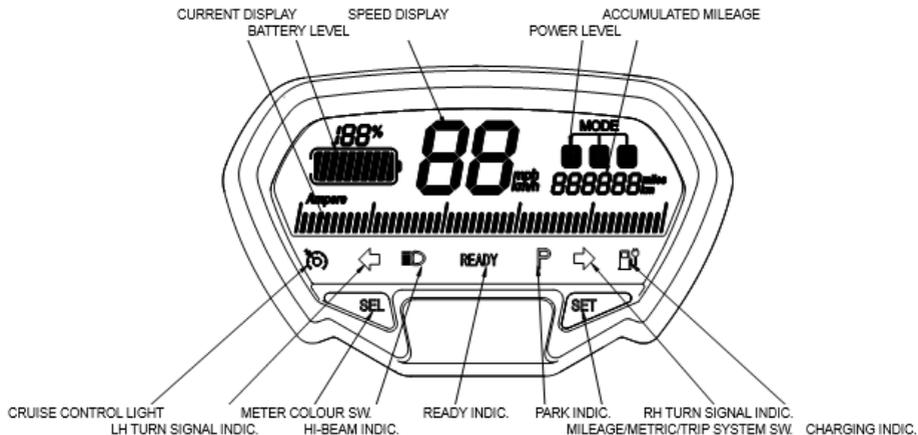
The VIN is stamped into the frame under seat. The vehicle compliance plate is fixed on the left side of frame

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CONTROLLING PARTS

METER



The charging indicator is green when battery charging reaches 100%. Power is lower than 10%, the charge indicator keeps flashing (yellow). The indicator shows yellow when the battery is charging.

Ignition Switch

“ON”: The circuit of the scooter can be operated, power indicator on the dashboard is lit and the key cannot be removed.

“OFF”: The circuit of the scooter cannot be operated and the key can be removed.

“LOCK”: To lock the steering head, turn the handlebars to the left or right as far as possible, insert the key into the ignition slot, turn to “OFF”, then depress and turn counter clockwise to “LOCK”, remove the key. To unlock the steering head, turn the key clockwise.

“OPEN”: Open the seat lock.



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Left Handlebar Controls

-  Hi-beam
-  Lower-beam
-  Overtaking light - Hi-beam light flash
-  Left turn signal light
-  Right turn signal light
-  Press to sound the horn

Rear Brake Lever: Grasping in the lever will apply the rear brake.



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Right Handlebar Controls

Power Level lever

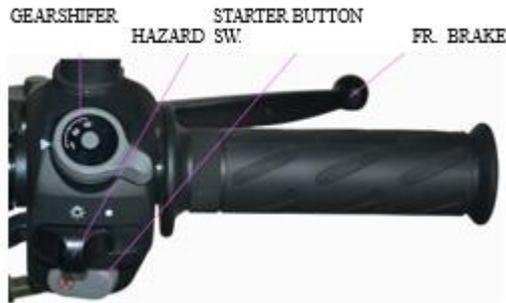
Level 1: Suitable for carparks and tight spaces. This is used to maneuver the bike more than.

Level 2: Useful for starting slowly and getting up to speed over a longer distance

Level 3: The highest power mode and the mode we recommend you spend the most time in when driving on the roads.

STARTER BUTTON: This is commonly referred to as a kill switch on petrol scooters. This must be held in for 3 seconds prior to any power reaching the motor. This ensures the rider is ready and reduces risk of any incident when taking off. It is also a cruise control switch, once the scooter is travelling more than 5km/hr, holding this button will engage cruise control. Braking at any time will cancel the cruise control.

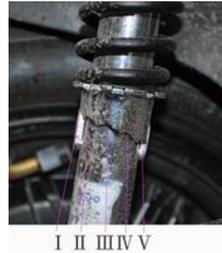
Front Brake Lever: Grasping in the lever will apply the front, hydraulic disc brake.



Rear Shock Absorber

The shock absorber has 5 adjustment positions for different loads and riding conditions. Position I is for light loads and smooth road conditions. Position II to V increase spring preload for a stiffer rear suspension, and can be used when the motorcycle is heavily loaded or ridden in rugged roads.

NOTE: Be certain to adjust shock absorbers both left and right to the same position.



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Stands



Side Stand

When parking the vehicle, turn the side stand clockwise along the frame to position. Before driving the vehicle, turn the stand to the initial position. After returning the side stand, press and hold  button for 3 seconds to switch "P" to "READY" position.

Center Stand

When parking the vehicle, step on the center stand at the left of body while rising the rear portion of body with right hand so as to support the vehicle. Before driving the vehicle, move the steering head forward to let the center stand return automatically.

OPERATION GUIDE

Pre-Ride Inspection

Inspect your vehicle every time before you ride it. The items listed here will only take a few minutes to inspect, and in the long run they can save time, expense, and possibly your life.

S/N	Check Item	Contents
1	Tyres	Check condition and pressure
2	Front/rear brakes	Check operation
3	Horn	Check function
4	Lights	Check function
5	Meter	Check function
6	Ignition switch	Check function
7	Rearview mirror	Check clean
8	Grips	Check for its smoothness and reliability
9	Steering bearings	Check for looseness. Repack with all-purpose grease
10	Front/rear axles	Check all fasteners. Tighten and adjust as needed.
11	Fasteners	Check all fasteners and fittings. Tighten and adjust as needed.
12	Electric quantity	Check that electric quantity if suitable. Recharge if needed.
13	OL protection sw.	Check to see that the device is on, or switch to "ON"

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Attentions to Riding

1. Developing your riding skills in an ongoing process. Even if you have ridden other motorcycles, take time to become familiar with how this vehicle works and handles. Practice in a safe area until you build your skills and get accustomed to the vehicle's size and weight. Because accidents often involve inexperienced or untrained riders.
2. When using the vehicle, make sure that the OL protection switch is set to ON, then turn on the ignition switch and set the travel switch to ON. When P indicator switches into READY indicator, slowly turn the throttle grip to activate the motor, thus, speed of vehicle achieves the best state. Do not turn the grip fast.
3. It is a normal phenomenon when starting the motor with a "buzzing" sound, due to the voice of high magnetic field work. The voice will disappear as the motor speed achieves the best state.
4. Do not overload driving. In the case of security, try not to brake, starting frequently.
5. Do not accelerate on downhill road; do not clench handle brake or else it is easy to slip to sideways and fall over the vehicle.
6. When riding at night, please open the headlight. Please slow down and turn on the winker when turning the corner; do not make sharp turn.
7. Please use caution in rain days. Don't drive the vehicle in deep water area avoid the damage of motor.
8. Please don't operate the vehicle with one hand. We urge all riders to take a government-certified riding course.

Notes of Post-Ride

1. After using the vehicle, set the travel switch to OFF position. Turn off power, and remove the key.
2. Please pay attention to support the vehicle smoothly when parking.
3. Check the battery and recharge if necessary.
4. Optimized methods to utilize the lithium battery: put it in a cool and dry place, and recharge it every two weeks to maintain its capacity.

MAINTENANCE

Tool Kit

Some roadside repairs, minor adjustments and parts replacement can be performed with the tools available in the kit.

- ▶ Open-ended spanner, 8 × 10
- ▶ Double-end screw driver
- ▶ Screw driver grip
- ▶ Tool bag

Maintenance Schedule

Initial Maintenance work should be performed at 500km's drive or 1 month after buy the vehicle whichever comes first. Then we recommend that maintenance should be done once every 6 months to Lifan service stations to evaluate the vehicle performance.

Conventional security and performance

S/N	ITEMS	CONTENTS
1	Tyres	Check air pressure, tread depth
2	Brake system	Check operation, fluid level, cable, etc.
3	Horn	Check the lines and insulation
4	Rear-view mirror	Check the mirror functions properly
5	Lights	Make sure all lights are working properly
6	Meter	Check indicators, lines, circuit
7	Fasteners	Tighten up nuts
8	Throttle grip	Twist the throttle to ensure smooth action

Structural Inspection

S/N	ITEMS	CONTENTS
1	Front/rear wheel hubs	Check end gag, etc.
2	Grips	Twist the grip to ensure smooth action
3	Frame, rear fork	Check all welded points and fasteners.
4	Front fork	Check fasteners, bearings
5	Shock absorber	Check the absorber works properly
6	Lock set	Check the lock functions properly

Importance Parts

S/N	ITEMS	CONTENTS
1	Battery	Voltage balancing, normal charging and discharging
2	Motor	End cover, bearings, hall, signal lines, electrical circuits and casing insulation
3	Controller	Under voltage, over-current protection
4	Charger	Check charging current, voltage
5	Main cable	Check the welded points of lines and insulation

NOTES:

1. Such parts as front axle, rear axle, etc, should be lubricated with grease (No. 3, lithium base grease).
2. Clean more frequently when riding in unusual wet or dusty area.

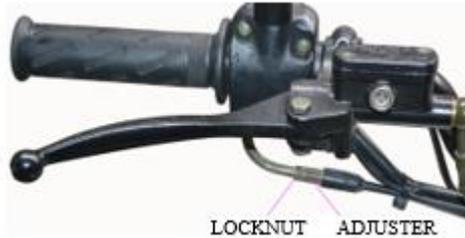
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Operation of Throttle Grip

Check for smooth rotation of the throttle grip from the fully open to the fully closed position at both full steering position.

Measure the throttle grip free play at the throttle grip flange. The standard free play should be approx. 2-6mm. To adjust the free play, loosen the locknut, turn the adjuster. Adjustment over, fasten the locknut.



Maintenance of Lithium Battery

1. Battery capacity will gradually decrease as the use of time and mileage increases. The correct use and maintenance can effectively extend the life of the battery.
2. Please charge lithium battery fully before first using newly purchased electric motorcycle. First requirement when using battery recharged again after use controller under-voltage protection. Pay attention as follows: charging the battery for first 5 times should be not less than 8 hours, but not more than 12 hours. When charging, bear in mind that the charger operation method.
3. The battery should be fixed reliably to avoid damaging. Never throw, roll and weight the battery when transferring it.
4. Keep the battery dry, clean to prevent the self-discharge too much.
5. Avoid losing electricity for a long time. As a rule, charge the battery in time after using the vehicle every day. During long-term storage of vehicle, remove the battery from the vehicle, and charge it, then put it in a cool and dry place ($-10^{\circ}\text{C}\sim 25^{\circ}\text{C}$) Then recharge it (after stored for 10~15 days).
6. To protect the battery from damage, slowly start the vehicle to avoid instantaneous discharging too much.
7. Battery discharges to the termination voltage, and continue to discharge, called as over-discharge. Pay attention to not let the battery discharge during riding. In order to maximize the life of the battery, charge it when the battery discharged to 50%.
8. Avoid over-charging as follows, the battery can be charged for 2 hours when the charger indicator lights all bright. This done, do not use the battery immediately, let it rest for 10 minutes or so to use again.
9. Battery applicable ambient temperature: 15-45 °C
Optimum charging environment: 25 °C
10. Reduce temperature of battery as far as possible when charging battery temperature, ensure good heat dissipation, and away from heat source.

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11. Avoid large current discharging for a long time. Prevent it from exposure in the sun.
12. After discharge of the lithium battery, charge it in time. Do not put discharged battery over 12 hours

NOTE: Please dispose of used battery in a manner that is compatible with the environment. We suggest you take it to local recycling center or service station for reclamation. Do not throw it in the rubbish. At the same time to remove the lithium battery is prohibited.

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ELECTRIC QUANTITY
DISPLAY BUTTON



Front Brake



Check

The brake fluid level and brake pads shall be checked regularly. If any pad is worn to its limit depth, replace both pads as a set in no time.

Check the brake fluid level through the sight glass. If the fluid level is below the LOWER, loosen the cylinder cover screws, remove the cover, add brake fluid up to UPPER level mark. If any doubt, see your dealer for help.

WARNING: Apply the specified brake fluid, or braking effectiveness and riding safety will be affected adversely. Brake fluid may cause irritation. Avoid contact with skin or eyes. In case of contact, flush thoroughly with water and call a doctor if your eyes were exposed. Do not allow contaminants such as dirt or water to enter the brake fluid tank.

Adjustment

1. Measured at the tip of the front brake lever moves before the brake starts to engage is called free play. The free play should be maintained within 10 ~20mm.
2. If the brake lever free play becomes excessive and the brake pads are not worn beyond its minimum depth, there is probably air in the brake system and bleed it. For which purpose, see your dealer for help.

NOTE: If such adjustment is still unsatisfactory, see your dealer for help.

3. Apply the brake several times and check for free wheel rotation after the brake lever is released.

Rear Brake

BRAKE PANEL INDICATOR ADJUSTING NUT
REFERENCE MARK BRAKE ARM PIN



Check

The brake is equipped with a brake wear indicator. If the pointer aligns with the reference mark on full application of the brake, replace the pads as a set at the first opportunity.

Adjustment

The rear brake equipped with the motorcycle is of lever type.

1. Measured at the tip of the rear brake lever moves before the brake starts to engage is called free play. The free play should be maintained within 10 ~20mm.
2. Turning the adjusting nut in direction A will decrease the free play, and in direction B increase the free play.

NOTE: Make sure the curved slot in the adjusting nut corresponds to the circular surface of the brake arm pin after making final free play adjustment. If such adjustment is still unsatisfactory, see your dealer for help.

3. Apply the brake several times and check for free wheel rotation after the brake lever is released.

Front/Rear Shock Absorber and Suspension

Support the motorcycle on the center stand, pull in the front brake lever to lock the front wheel, pump the front/rear shock absorber up and down several times to see that it functions well without noise or leakage. Check the rear fork bushing for proper play by pressing the side of the rear wheel. Make sure that all of the fasteners are tightened securely.

Tyre

Proper air pressure will provide maximum stability, riding comfort and prolong tyre life

Tyre Pressure, kPa		
Rider	Front: 175	Rear: 200
Rider & passenger	Front: 200	Rear: 225
Tyre size	Front: 3.00-10	Rear: 100/80-10

WARNING: Operation with excessively worn tyres is hazardous and will adversely affect traction and handling.

NOTE: Tyre pressure should be checked before you ride while the tyres are “Cold” Check the tyres for cuts, embedded nails, or other sharp objects. Check the rims for dents or deformation. See your dealer for change or damaged tyres or punctured inner tubes.

CAUTION: Improper tyre inflation will cause abnormal tread wear and create a safety hazard. The tyre pressure less than the rated value may result in slipping wheel on the ground or coming off from the rim.

When the tread depth in the middle section of tyres reached limits below, please replace them.

Tread Depth Limits, mm			
Front tyre	1.6	Rear tyre	2.0

Fuse

Fusing type over-current protector (fuse) is located on the right-rear side of the vehicle frame. The fuse will blow to protect the circuit automatically in the case of troubles such as a short circuit or an overload trouble. After the troubleshooting, fit a new fuse available in the fuse box.

CAUTION: Specially pay attention to specification (40A) of fuse when replace it. Never use other material such as aluminium, iron or copper wire instead. Otherwise the circuit may be burnt.

Charger

To charge the battery on the vehicle, please turn off the ignition switch, then connect the charger to the socket of the vehicle, and to 220V AC power outlet. When recharging the battery alone, connect the charger with the battery socket, and then access to 220V AC power outlet. After charging, turn off 220V AC power outlet, at last disconnect the charger plug.

CAUTION: Do not operation in the reverse order.

TROUBLESHOOTING, VEHICLE SAFETY AND OPTIONAL PART

Common Fault Disposal Methods

TROUBLE	CAUSE	REMEDY
Meter fails to operate when turning on power	<ol style="list-style-type: none"> 1. Ignition switch damaged or poor connected 2. Power pin connected with battery socket poorly 3. Fuse open-circuit 4. Meter malfunction 	<ol style="list-style-type: none"> 1. Check ignition switch, connecting parts, repair or replace if necessary 2. Check power pin and socket, repair or replace if necessary 3. Check fuse, replace if necessary 4. Check meter, replace if necessary
Meter functions properly but does not accelerate when turning on power	<ol style="list-style-type: none"> 1. Electricity shortage or under voltage 2. Accelerator failure 3. RH/LH handlebar malfunction 4. Controller/motor failure 	<ol style="list-style-type: none"> 1. Charge 2. See the service station for help 3. See the service station for help 4. See the service station for help
Speed is too slow or range is insufficient	<ol style="list-style-type: none"> 1. Power is no enough 2. Tyre pressure under-inflation 3. Frequent brake starting or overload 4. Battery aging or vehicle attenuation 5. Temperature is too low 6. Controller failure 	<ol style="list-style-type: none"> 1. Recharge 2. Check the pressure, inflate if necessary 3. Good riding habit 4. Replace battery 5. normal phenomenon 6. See the service station for help
Battery fails to be recharged or undercharged	<ol style="list-style-type: none"> 1. Charger is connected with lithium battery unreliably 2. Cable is loose or fall off 3. Charger malfunction 	<ol style="list-style-type: none"> 1. Connect reliably 2. Fasten the battery cable reliably 3. See the service station for help

If any other malfunctions, see your LIFAN service station for help.

Optional Part

LIFAN vehicle guard 3.0 terminal equipped with 1 set of DC converter and APP operating instructions

Motor Fault Code Messages

CODE	DESCRIPTION	CAUSE	REMEDY
01	Motor fault	Phase failure	Please contact the after-sales service
02	Motor fault	Hall failure	
03	Motor fault	Over-temperature	
04	Motor fault	Motor stalling	Check rear wheel for jamming or contact the after-sales service

Controller Fault Code Messages

CODE	DESCRIPTION	CAUSE	REMEDY
21	Controller fails to function	MOSFET	Please contact the after-sales service
22		drive failure	
23		Over-current	
24		Overvoltage	
25		Over-temperature	
26	Controller fault	Under voltage	
27	Steering bar fault	Steering bar fault	

Lithium Battery Fault Code Messages

CODE	DESCRIPTION	CAUSE	REMEDY
41	Battery warning	Charging saturated protection	Disconnect the charger, stop charging
42		Battery low voltage protection	Charging as soon as possible
43		Charging overcurrent protection	Disconnect the charger, stop charging
44		Discharging overcurrent protection	Please contact the after-sales service
45		Discharging overheating protection	Take out the battery, put it in cool place
46		Discharging low temperature protection	Please contact the after-sales service
47		Battery open circuit	
48		Discharging short-circuit protection	
49		Charging overheating protection	
50		Charging low temperature protection	
51		Circuit board MOS overheating protection	
52	Battery fault	Temperature sensor failure	

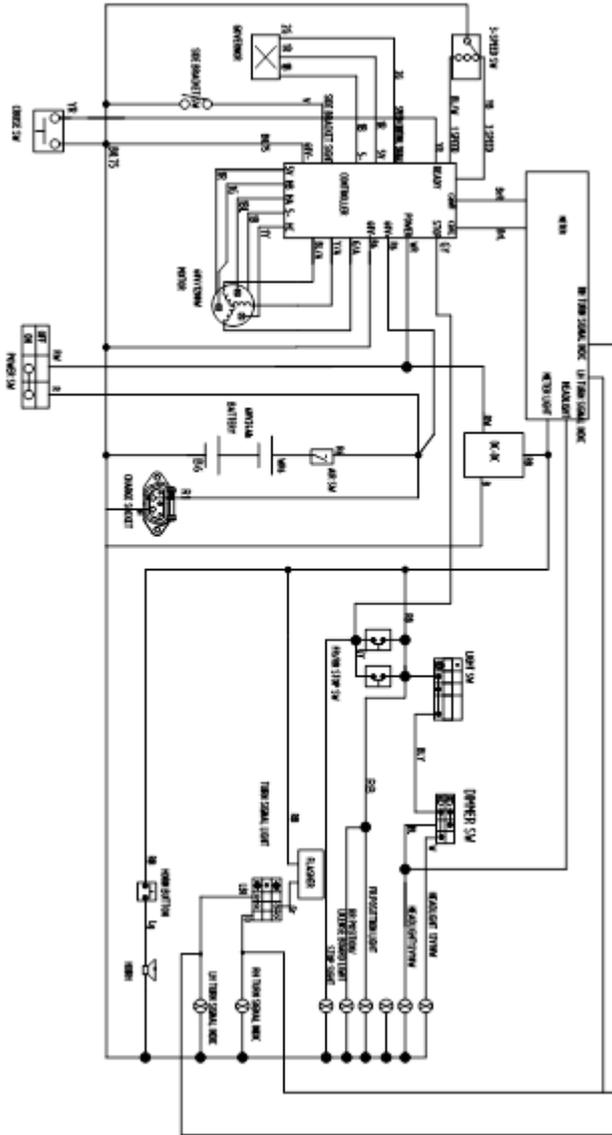
DMU Fault Code Messages

CODE	DESCRIPTION	CAUSE	REMEDY
61	Communication module	SIM card identification failure	Please contact the after-sales service
62		SIM card debts (showing 2s.)	
63		GPS failure	
64		GPS antenna short circuit	
65		GPS antenna open-circuit	
66		Do not write to vehicle SN	

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ELECTRIC DIAGRAM



SPECIFICATIONS

1. Basic Data	
Overall dim., mm	1975x715x1070
Wheelbase, mm	1200
Ground clearance, mm	130
Kerb weight, kg	76
Max. laden weight, kg	150
Brake type (front/rear)	Disc/Drum
Braking operation (front/rear)	Hand braking
Rim type (front/rear)	Web/web wheel
Tyre type (front/rear)	3.00-10 / 100/80-10
2. Electric Equipment	
Motor type	10ZW6065317
Brand	LIFAN
Type	Monoblock wheel
Nominal voltage, V	60
Rated speed, r/min	650
Rated torque, N·m	17.4
Rated power, W	1200
Type	BN6024PW 60V24Ah
Battery	Lithium battery
Rated capacity, Ah	24
Nominal voltage, V	60
100km power consumption, kwh	1.83
UVP, V	51
OCP, A	35
Charger input voltage/frequency	220V/50Hz
3. Main Performance	
Top speed, km/h	51
Driving range, km	55
Grade ability, °	12
Accelerating ability, (0-100M), S	20