

## **Preface**

### **To User**

Dear users:

Thank you for your interest in Lifan car and had chosen this car.

Lifan car is the latest innovated product developed by this company. Please read the User's Guide carefully before using this vehicle product for the first time, it will guide you to use our product more correct and safer.

Also, we would like to ask you to take maintenance at your local service station as per stipulation in Maintenance Manual. In time and necessary maintenance will not only prolong service life of the car, but also will bring you a safe journey.

Our company is committing in continuous improvement of products, and the revision of the manual may not be kept up with this, therefore if you found your car has some features that is different with the descriptions in this Manual, your car is the final reference please. The changes of the revision will be made without any notice in advance.

## **Preface**

### **This User's Guide applies for**

**Lifan LF7160,LF7160L1,LF7130A cars**

If the explanation to certain function of product is not clear enough in this Manual, or is there anything unclear, please contact your local Lifan vehicle service station for help in operation & maintenance.

Lifan vehicle will bring you good luck and we wish you a pleasant journey!

Thank you

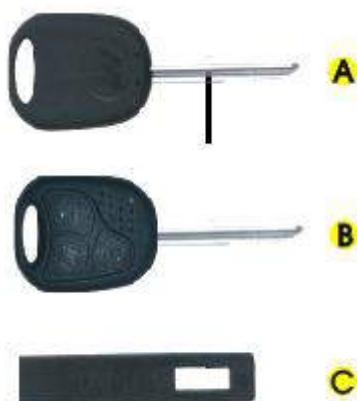
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## Keys

This is vehicle is equipped with 2 keys



Two master keys

Remote controller (if the vehicle you  
Purchased has remote door-opening function)

Key label

A—Master keys

Able to open all locks on vehicle.

B—Remote controller

Able to unlock door lock without key, the key can open all locks.on the vehicle .

C—Key label

Number of key is marked on key label, keep it safe in case others to order/make keys illegally with this label.

### Note:

Take away vehicle keys when leaving vehicle, even for short.

### Anti-theft Control system (option)

Anti-theft control system may prevent from unauthorized operating of your vehicle.

A pulse transmitter is located inside your vehicle keys, when starting up engine, the controller in anti-theft control system when verify the correctness of pulse signals generated from transmitter inside keys,so to prevent from starting your vehicle with illegal keys.

Therefore only keys encoded and authorized by Lifan Automobile Co., Ltd. can be used.

(According to configuration of anti-theft control systems in different models, their functions may have differences.)

## Vehicle door

### Central control door lock (option)



When the doors are shut, or when lock (or unlock) left/right front door locks by pressing down (or pulling up) lock pins (refer to figure) on four doors, it may control synchronous lock or unlock of other doors. It has no relationship with door lock control and ignition switch.

### Note:

- It's unnecessary and dangerous to attach or modify anti-theft control system of any other forms. It will damage central control unit of vehicle and endangers other electric devices.
- The user should take full responsibility to any loss due to the user had tampered with or modified electric system in other forms.

### Child Safety Lock



As shown in above figure, when switch up the vehicle lock bar, the child safety lock is now OFF, the handle inside vehicle is deactivated and the vehicle door can only be opened from outside. This system has nothing to do with central authority gate lock system.

## Controller

### 1. Remote control transmitter



This vehicle is equipped with one remote control transmitter, each can work independently.

Keep your remote control transmitter safe in case others illegally break into your vehicle. If any of the remote control transmitter was lost, go to Lifan Automobile franchised service station to reconfigure the remote control transmitter, which will deactivate the lost remote control transmitter.

### 2. Remote control system

Remote system allow you to control the door lock remotely.

When remote controlling, the remote transmitter sends out radio signal after encoding, the remote receiving controller receives and verify this signal in case your vehicle is unlocked by illegal transmitter. Therefore, your vehicle can only be unlocked by remote transmitters encoded by authorization of Lifan Automobile Co., Ltd.

Within remote control distance, press down “Unlock” button of remote transmitters to unlock all door locks. The turn lights on both sides of vehicle will flash twice; Press down “Lock” button of remote transmitter to lock all doors, and in the same time the turn lights on both sides of vehicle will flash once.

Lifan vehicle is furnished with advanced 20km/h auto lock function, to prevent from accidental opening of vehicles doors during running, which may cause injury to passengers.

### 3. Change battery for remote control transmitter

After certain interval, battery capacity of remote control transmitter may reduced and cause deterioration of remote effect, change battery if necessary.

#### Note:

Do not press the button of remote control transmitter when not used, this may shorten the life of battery, and cause temporary failure of remote control transmitter.

When changing battery, open transmitter cover and insert new battery in reliably, replace transmitter cover.

## Trunk compartment cover

Trunk compartment lock is unlocked by pulling cable.

### Unlock and lock



Unlock: When switching unlock mechanism at side plate to the left of driver's seat, the trunk compartment is unlocked.

Lock: Push down and shut trunk compartment cover, lift it slightly to check if it is securely shut.

### Note:

Do not drive vehicle when trunk compartment cover is open or not completed shut, or the exhausted gas from engine may enter passenger compartment.

### Engine hood



When unlock engine hood lock, pull tie rod located at right bottom of dash board, to disengage engine hood hook from shift 1.

**Open engine hood:**



You should stir hook apart through the cracks in lower grill in front of the engine hood , than raise the engine hood , pull out the strut and support into engine hood stiffening plate inside bore.

**Close engine hood:**



Please check whether you leave the instruments in engine room before you close the engine hood , lay the engine hood strut back the holder, than make the engine hood fall freely in the height of 30cm and confirm the lock.

**Door glass**

**Door glass electric window regulator switch assembly**

**Location:**

Driver side door.





**Operation:**

For driver's convenience, there are 5 control switches on driver side door, among which four are used to control door glass electric window regulator, the other one controls kids lock switch.

Please operate as the current is turned on.

Switch upward or downward will open or close the relative pane.

Kids lock switch may lock or unlock left/right rear door glass electric window regulator operation function.



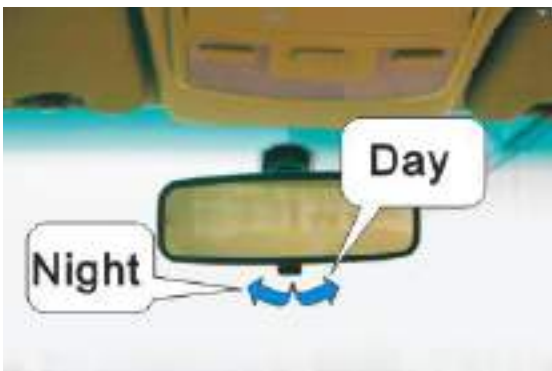
The switch on passenger side doors or driver side door can control the passenger side door pane. If you press lock on driver side door, the switch on passenger side door can not be operated except the switch on driver side door.

**Note:**

- During running, passengers are forbidden to stretch out from windows.
- When door glass reaches up or lower limit, please stop holding control switches, or it may cause hum an failures.
- Turn off start-up switch and pull out key before leaving door, in case kids left in window play with the control switch.
- When the engine is not started, avoid frequent raising or lowering door glass, to avoid excessive consumption of battery power.

**Back view mirror**

**Anti-dazzle internal back view mirror**



There are 'day' and 'night' two position for internal mirror. Move the adjust shaft to 'day' position when drive the car in the day. Move the adjust shaft to 'night' position when drive the car at night, which can decrease the strong light at driver eyes from the back car head light (adjust shaft is located at down of the mirror).

### Note:

Keep driver's back view area. Select the 'day' position and adjust it to acquire the best view area. If you select the 'night' position, which may decrease the clear and view area of the mirror.

### Electric back view mirror adjustable from inside



Electric adjustable external back view mirrors on both sides can be adjusted in left/right/up/down angle by regulator buttons on driver's side door, after adjustment, please turn the button back to the middle position. If adjust finished, dial back "O".

Adjust permitted if ignition switch connected.

### Operation:

- First select to adjust back view mirrors on left or right side, then switch back view mirror switch to L (left) or R (right).
- Then joggle switch front, back, left and right, in the same time the mirror inside back view mirror will adjust the angle of back view mirror upward, downward, leftward and rightward in related to the control direction, till a satisfied angle is obtained.
- The return adjust switch to "O" position.  
increase the direction of back view mirror

### Note:

Do not switch while rotating, or it may damage the switch.

## Head rest

### Adjust head rest height

Grip two sides of head rest with both hands and pull it upward or push downward, till position suitable for head.



### Detach and installation

#### Front head rest:

- Detach:

Press the unlock button on left guide telescoping seat. Play upward properly along the guide telescoping direction of head rest to pull out head rest.

- Installation:

Align guide telescoping on head rest with holes on seat, apply slight force to press downward to install the head rest onto seat.

#### Note:

Adjust the middle of the head rest close to the above of the ear most. Confirm the head rest fixed first, do not drive without head rest confirmed.

## Seat

### Front seat:



### **Moving seat forwards and backwards**

Lift governor lever at the front bottom of seat (refer to A in figure) to move front seat, then release governor lever, slightly move seat to engage the lock gear.

### **Adjust back rest angle**

The button for adjust position of back rest and swivel back rest side (refer to B in figure).

### **Note:**

For safety, seat adjustment shall be proceeded when vehicle in stop condition.

## **Rear seat**

### **Foldable rear seat**



Fold the rear seat to down, which can increase the area of trunk, so you can put some big thing in the trunk. Pull up the handle of the rear seat, and then fold the rear seat forward.

If you want to replace the rear seat to up position, please pull the rear seat, then push the rear seat to lock position and confirm the rear seat has been locked.

### **Rack guard plate**

Rack guard plate behind rear seat may be used to store light things, but not driver back view must be obstructed.

### **Note:**

Heavy objects mustn't be placed on rack guard plate, otherwise they may injure passengers at emergency brake, besides, the heating element for rear window may be damaged by abrasion of such objects.

## Seat belt



Always fasten seat belt during driving, so to make best use of the seat belt. Passengers should also fasten seat belt for same reason.

When using 3-points seat belt, make sure the seat belt passes through the middle of shoulder (as shown in figure), never allow seat belt passing neck.

### Note:

- Each set of seat belt is for one person use only and must not be shared (even for kids). Loose clothes, such as coat, may influence the function of seat belt.
- The passage of seat belt shall be smooth, avoid belt abrasion on sharp edges.
- Keep seat belt opening from obstructed by papers or foreign matters, or the seat belt will not run smoothly.
- Keep seat belt clean, or the restrainer may not work properly.
- Change seat belt if damaged or stretched due to accidents.
- Installation and fixing of seat belt can only be carried out at service station.

### 3-points inertia idler seat belt

When pull inertia idler seat belt, the movement is flexible. The seat belt will lock at sudden brake of vehicle.

The auto restrain unit will also lock seat belt at vehicle acceleration, down slope and turn.

#### • Fasten seat belt

Slowly pull out seat belt tongue, passing chest and insert it into the locking unit at the side of seat till a “click” is heard (pull for inspection).

#### • Do not twist seat belt

Front seat back rest must not be excessively leaned back, or it may interfere the normal function of seat belt.

### • Release seat belt

Press down red button on belt lock to release seat belt, the tongue will ejected out.

.Lay the tongue back, retractor will retract the seat belt.the retaining plate will keep the tongue to a suitable position.

### Two point safe belt

There is two point safe belt in the middle of back row seat.

### Fasten seat belt

Slowly pull out seat belt tongue, passing waist and insert it into the locking unit at the side of seat till a “click” is heard (pull for inspection).

When pass waist ,don't twist it to prevent the accident. When you want to Release seat belt, Press down red button on belt lock to release seat belt, the tongue will ejected out.

### Air bag (option)



### Front air bag

On Lifan vehicle models furnished with air bag, front air bag system with reliable performance is used.

When severe front collision occurs, the front air bag system is a compensation to 3-points seat belt, it offers extra protection to head and chest of the driver or assistant driver.

Apart from normal protection, when front collision occurs, the seat belt shall keep driver or assistant driver in position for best play the role of air bag.

### Note:

The max. performance of seat belt and air bag occurs only when the seat is in correct position.

### Role of front air bag

Design of air bag allows air bag correctly function by inflate the air bag with expandable gas during front collision, the air bag will expand in front of the driver or assistant driver. The forward movement of the driver or assistant driver will be attenuated so to reduce the harm to driver's head and chest.

### **Air bag will not function under following conditions**

- Side collision
- Tail collision
- Slight front collision (including bump cement pillar, trees or other kinds of spindle, in collision with truck, etc)

Air bag is no substitution of seat belt, but a composition of whole passive safety solution of vehicle. Please be aware that only when seat belt and air bag works simultaneously that may best exert the max. protection of seat belt and air bag. Thus not only for legal stipulations, but for safety reason, always use seat belt.

### **Parking brake**



Parking brake rod lies between two front seats

#### **Using parking brake**

Lift up handle to its end to prevent vehicle from slippage.

When using parking brake when ignition switch is turned on, the brake warning indicator will light up.

#### **Release parking brake**

Slightly lift up the handle, press down lock button and push parking brake downward to its end.

## Manual shifting gear



### R: Reverse gear

#### Engage in reserve gear

Reverse shift can only be engaged into when vehicle is stopped. When engine is running, step down clutch to its end before shifting, wait several seconds before shifting to avoid quack sound because of bad gear box gearing.

After turn on ignition switch, the rear reversing lights will light up once the reverse gear is engaged.

### Note:

Do not rest hand on shifting rod during driving, or the pressure from hand will be transferred to gear box shifting fork, and cause abnormal wear of shifting fork.

## Sound system



The sound system starts working after turn on ignition switch (please refer to the manual of sound system).

### Note:

1. Nobody except the authorized mechanic is allowed to open the cover to check and examine the CD player.
2. In rainy season and damp areas, the moisture is apt to cover the perspective optical lens, which may disable the CD player temporarily. When this happens, please eject the disk and switch off the player. The player will recover its work normally in some minutes when the moisture on the lens vaporizes.
3. Please keep the disk clean; don't deform, scratch or break the disk.



## Adjustable steering wheel



When need adjust top or bottom angle and position, you can hold the steering wheel, press collum governor lever A to get the angle which you need, then back the governor lever A and lock.

### Note:

No adjust the steering wheel when driving, shift the steering wheel up or down to confirm the position and lock after adjusted the steering wheel.

## Steering unit lock/ignition Switch



Position 1: OFF (S)

Position 2: Accessories(A)

Position 3: ON (M)

Position 4: Start up (D)

## Operation:

Position 1: Insert or pull out ignition key at this position. Remove key and turn steering wheel till lock pin engagement sound heard, then the steering wheel is locked.

Position 2: Turn ignition switch key to this position will power on accessories, but there is no power on engine. If the key is hardly turned in key hole, slightly turn steering wheel left and right to release lock pin.

Position 3: Vehicle power on at this position, the whole vehicle electric circuit is in working condition.

Position 4: Start up engine in this position; Release key, which will automatically return to“ON”position and switch off start up power.

In start up position, head lights, wind shield wiper, air blower and glass heater switches are switched off.

## Start up engine

### Note:

- Do not step down accelerator pedal when starting up electro jet engine.
- When start up engine in closed area, be aware of CO toxicity.
- Shift shifting rod into neutral and pull up parking brake before start up.
- Vehicles with manual gear box shall have the clutch pedal stepped down to allow starting unit driving only engine.
- Once the engine is started up, release ignition switch key immediately to disengage starting motor and engine, or the starting motor might be damaged.
- If the engine fails to be started properly, do not start up engine by pushing or pulling (unburnt fuel entering ternary catalytic converter, and may cause damage), better use wire jumping method to start up engine.
- Do not stop engine after start up, keep it running to heat it up, then it may be started, keep engine running at idle speed for 30 seconds before starting up is only needed in cold (freezing) season. This gives lubrication system more time to allow lubricant adapting circulation.
- Do not drive over-speed or at full speed before engine temperature reaches normal operation temperature.

## Turn off engine

After long time high speed running of engine, keep it running at idle speed for about 2 min., which allows engine to cool down before turn off, then turn off engine, then close engine .

### Note:

When engine is in warm status, keep cooling fan running for a while even it is turned off.

## Ternary catalytic converter

In order to meet the stricter tail gas exhaust standard, ternary catalytic converter integrated with close loop control system method is adopted in Lifan vehicles. This is the best solution for tail gas exhaust in the world.

## Position of ternary catalytic

### Converter:

Between front exhaust pipe of engine and silencer.

### Operation conditions:

- 1.Normal working temperature range is 400°C~800°C. Ultrahigh temperature may cause thermal aging, carrier sintering, smelting, etc., and cause failure of ternary catalytic converter.
- 2.Fuel must adopt quality lead free gasoline. Lead content in gasoline may cause failure of catalytic function of precious metal in ternary catalytic converter.

### Note:

- Avoid collision or severe motion on ternary catalytic converter, or the internal ceramic carrier may break and clog exhaust system.
- Fuel used has to be quality lead free gasoline, lead contained gasoline may damage ternary catalytic converter and electronic control system elements. On cars equipped with ternary catalytic converters, labels shall be stuck on filling port of fuel tank to remind the user using quality lead free gasoline.

### Ternary catalytic converter

- Avoid frequent cold start or long time start up engine during start up engine (fuel is absorbed into cylinder during start up, and is discharged into ternary catalytic converter unburnt, which might cause damage to ternary catalytic converter).
- When fuel inside fuel tank is not enough gravely, irregular fuel supply may damage ternary catalytic converter.
- Conduct periodical maintenance at Lifan service station, get in time information about the electronic control system. Repair if necessary or it may shorten the life of ternary catalytic converter and deteriorate its purification function.
- The service life of ternary catalytic converter shall be no less than 75000km.

### Signal lights/alarm lights



Forms of signal/alarm lights is related to different vehicle models and engines used. Symbols illustrated here are identical with actual symbols on lights.

## Coolant temp/coolant level indicator



If this light was not go out or still flash during vehicle running, it indicates too high coolant temperature or low coolant level.

Stop vehicle immediately and check coolant level, replenish if necessary.

### Note:

You must stop to reduce the engine's heat when hand gets in red area.

If failure was not due to low coolant level, check heat radiation fan fuse. Change with new fuse if necessary (DIY-Change fuse).

If the coolant level and heat radiation fan fuse are correct and the lights remains on. Stop driving and contact the service station immediately for overhauling.

## Generator indicator



This lamp lights up after turn on ignition switch, and goes out after engine is started.

If this lamp lights up during vehicle running, it indicates charging system fault. Stop vehicle at once, turn off engine and check ribbed V-belt.

- Stop driving after belt damaged, cause the generator, water pump, booster pump are out of work, change new belt.
- If the belt is no worn but the alarm lights remains on, driving vehicle to a near service station, repairing it.

### Engine oil pressure indicator



This lamp lights up after turn on ignition switch, and goes out after engine is started.

If this lamp lights up or flashes during vehicle running, it indicates lubrication system fault, and is warning the driver for too high/low engine oil pressure, stop vehicle at once and turn off engine, check engine oil level, replenish if necessary. If oil level is regular, driving vehicle to a near service station, checking lubrication system.

### Note:

Engine oil pressure alarm lamp is not engine oil level indicator.

### OBD failure indicator(option)



This lamp lights up after turning on ignition switch, and goes out after the engine starts. If this lamp lights up during vehicle running, go to maintenance workshop to check OBD and eliminate the breakdown.

**Brake shoe abrasion indicator**



If this lamp lights up or flashes after turn on of ignition switch or during vehicle running, it indicates brake shoe was abraded to limit position and the inner conductor of brake shoe was disconnected, the alarm lights was lightened, and it was given to remind the driver to change brake shoes and ensure safe operation.

**Head lights indicator  
(Refers to switch description)**



This lamp lights up when turn on head lights main beam.

**Engine fault inspection indicator**



This lamp lights up after turning on ignition switch and goes out in several seconds.

If this lamp lights up when drive normally which mean malfunction. The electronic fuel injection switches over urgent circulation procedure to help you short range drive, than you should get in touch with the maintenance station for trouble removal.

### Seat belt indicator



If the driver does not fasten seat belt, this lamp lights up after turning on ignition switch, it reminds driver to fasten seat belt.

### Brake fluid level indicator and Parking brake indicator



After release parking brake, if this lamp remains lighting or keep lighting up during operation, it might be too low fluid level in brake fluid tank, if brake at this time, the free travel of brake pedal may also increase. This may indicates fault occurs in one of the pipes in dual pipe brake system. If this happens, drive the vehicle to service station immediately and keep in mind that the brake during operation requires higher stepping force and longer braking distance.

After ignition switch turned on, this lamp lights up when pulling up parking brake or brake fluid level low. When turn on ignition switch and pull up parking brake, while this lamp doesn't light up, find out the reason for fault in time to make sure this lamp works fine.

**Note:**

It will bring the brake system break down when the parking brake handle is in the hang-up state for a long time if driving (the parking brake indicator lights up).

**Safety airbag indicator**



This lamp lights up after turning on ignition switch, and goes out after 3 to 4 seconds. If the lamp lights up during vehicle running, go to maintenance workshop to check and eliminate the breakdown.

**Steering lights (Emergency lights) indicator**



Steering lights indicator-Lights up when steering lights works.

Emergency indicator-Turn on emergency lights, the left/right indicator work simultaneously.

**Door open indicator**



When vehicle door is open, this indicator lights up, check if this indicator lights up to avoid injure passengers during operation.

If the door open, at the time of the indicator lamp lights up, the warning tone will sound when ignition switch lights.



### ABS indicator



ABS (wheel anti-lock brake system)  
 (refer to ABS specification)

### Airblower innercirculation Indicator



As per passenger requirement, air inlet method may be selected for ventilation system:inner circulation that requires cooling inside. Please find operations in Eater & Ventilator/Air Conditioner;for more details.

### Windshield defrost/ heating switch and indicators



After switch on ignition switch, switch on ventilation window heating controller switch, the indicator on switch will light up

Windshield defrost/heating switch will being closed automatically after a certain time of delaying,If you want to use it again, you should push the switch to put it back, then push it again to open it.

**Note:**

The heat wire for clearing fog is on the inner appearance of back windshield, the clearing fog function will disappear when the heat wire is damaged. The clearing fog will consume more power, it will discharge the battery, so when start up the engine or the engine hasn't operated , please don't use the clearing fog function.

**Background lights adjust switch and indicator**



After turn on ignition switch,the background adjust switch can work.When the meter lights up,left and right rotate this switch,which can adjust the intensity of meter lights.

**Automatic A/C (option)**



**Read the picture from left arrives right:**

**1 Automatic operate on-off key**

Automatic setting is a kind of economic running mode, that is inner temperature, blow mode is same with the last using mode, air volume can be adjusted automatically in accordance with the sensor from circumstance, temperature, sunshine,etc..

**2 Air conditioning manual release key**

The air volume, blow mode, inner temperature can be adjusted in accordance with passengers' demands when opening.

### 3 Breeze sending mode switch key

This key press can choose different blow mode in accordance with passengers' demands.

### 4 Front-defrost control key

When press this key, it starts front windshield compulsory defrosted or demisted.

#### Rear-defrost control key

When press this key, the rear-defrost circuit is connected, it starts rear windshield compulsory defrosted or demisted.

### 5 Fresh air/ circulated air switch key

Fresh air mode is implied, circulated air mode is working when the light lights up.

### 6 Air purify function key

When press this key, negative ion generator is working, brings negative ion, cleaning the air in the car.

### 7 Turn off key

Knob can adjust blow air volume.

## Meters

### Front fog lights indicator



Press front fog lights switch, indicator light lights up. The front fog lamp lights up only under position lamp, dipped beam lamp and main beam lamp light up.

### Rear fog lights indicator



press rear fog lights switch, indicator light lights up. The rear fog lamp lights up only under position lamp, dipped beam lamp and main beam lamp light up.

**Note:**

In the Sunday, the lighting back frog light will dazzle the eye in the day or at night if unnecessary, please turn off it.

**Odometer**



Max. allowable speed (refer to Operation Guide) during running-in period.

**Counters**

The lower counter records total mileage of the vehicle, the above counter records short distance mileage. The last digit in short distance counter is 0;999.9Km, You can shift from the clock display to subtotal mileage display if the pressing time less than 1 second; it will enter the hour timing adjust mode if your pressing time is longer than 2 seconds under the clock display, hour twinkling if you shift in the mode of hour timing adjusted, at the same time the hour adds one; the minute timing adjust appeared after you finished hour adjust, minute twinkling and the minute adds one when press the key. You can clear subtotal mileage if your pressing time is longer than 2 seconds under the mode of subtotal mileage display.

**Speedometer**



Max. allowable rotate speed (refer to Operation Guide) during running-in period. White area on

speedometer shows permitted area when worn-in engine is in the state of warming.

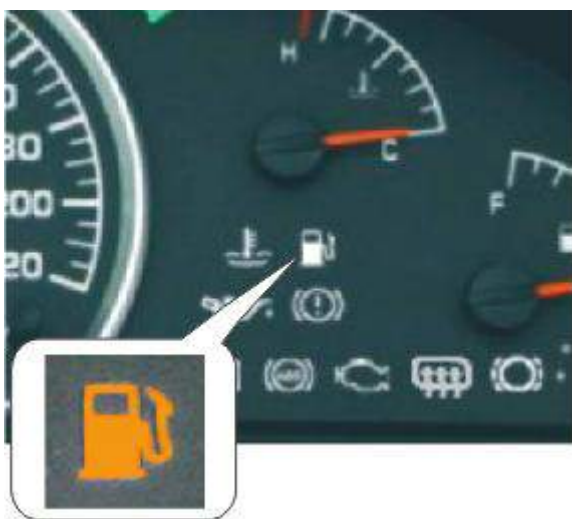
Shifting in high shifting gear or low engine speed when pointer approaches red area (6000 r/min). Shifting in high speed gear may help saving fuel and reduce noise. If the engine works with difficult or unstable status, shifting in adjacent lower speed gear.

### Fuel meter



Fuel meter indicate the fuel level in fuel tank. The fuel meter starts work after turn on ignition switch, but it will take several seconds to allow pointer reach to final position. The pointer will swing while car is starting up, accelerating or turning.

The capacity of fuel tank is about 49L, when pointer reaches red area edge of bottom region (E), there is about 5L fuel left in fuel tank. Fuel alarm light is lighting at the same time.



### Note:

The fuel is not enough, which will damage the catalytic and fuel system, so when the alarm light is lighting, please fill the fuel.

### Coolant thermometer



H: Hot area      C: Cold area

The fuel meter starts work after turn on ignition switch, but it will take several seconds to allow pointer reach to final position.

When your car runs normally, the index stands in the white area. But when the temperature outside is very high and the engine runs with heavy burthen, the index may departure the right area. However, the vehicle always works very normally before the alarming light of cooling liquid flashes. If the light flashes warning, please stop the engine and check the cooling liquid.

When the engine runs with heavy burthen, the index moves upwards, but when the engine runs normally, the index will return to the middle.

### Note:

When the pointer reach to the red area, engine is overheat, please stop the car to cool the engine and inspect the coolant level.

### Switches



## Note:

Operation of all lights shall be in conformity with traffic laws.

### 1-Central control door lock switch

Control the door closed or opened.

### 2-Background lights adjust switch

When the meter light lights up, left and right rotate this switch, which can adjust the intensity of meter lights.

### 3-Warning indicator switch

Turn on warning indicator switch is actually turn on front/rear/left/right steering lamp on both sides, steering lamp and signal indicators on instrument panel will also flash, this system can work when the ignition switch is turned off.

### 4- Front fog lights switch

Fog lights function only when lights switch is turned on. Press the button to light up the front fog lights, and the work indicator on switch will light up.

### 5-Rear fog lights switch

when lights switch is turned on,press down rear fog lights switch, the rear fog lights will light up ,the rear fog lights indicators on combination instrument will light up at the same time.

### 6-Rear window defrost/heating switch

Rear windshield heating unit functions after ignition switch is turned on. After turning on heater, heating indicator for rear wind on dash board.The rear wind shield heating switch can be closed automatically when postponed after given time, you need spot press the key to replacement than spot press again to open.

## Steering lamp and beam selecting switch lever



Steering lamp work only after ignition switch turned on.

Push forwards the lever, turn on the right steering lamp.

Push backwards the lever, turn on the left steering lamp.

Indicator on instrument panel flashes when steering lamp are working.

The steering lamp and signal indicator lights flash twinkled continually if one of them has fault. The steering lamp turned off automatically after steering.

### Lights switch

Shift 1-Position lamp

When the light is on, all instrument panel light, front/rear fog lights switch, lights, alarm lights switch, light and cigarette lighter light will light up together.

Shift 2-Head lamp main/dipped beam

The head lamp work only after ignition switch ON, head lamp will be automatically turned off when starting up engine.

Main/dipped beam--turn the lever upwards and downwards.

Head lamp main beam flash---lift the lever slightly, the lever lay back if the force disappeared.

### Signal for changing lane

Operate relative signal indicator when changing lane, the signal indicator on instrument panel will also blink at the same time. The lever lay back automatically if finish the lane change.

Horn switch



The horn is not controlled by ignition switch, press the switch inward to sound the horn, stop it when release the switch.

### Windshield wiper and cleaner system



Windshield wiper and cleaner will not work until the ignition switch turned on.



**Note:**

In freezing season, before turn on wind shield wiper switch, check if the wiper blade is stuck onto the glass.

**Windshield wiper switch**

“OFF” position — Wiper stop working

“INT” position — Intermittent wiping

(Once/6 seconds)

“LO” position — Low speed wiping

“HI” position — High speed wiping

• **Auto window washing/wiping**

**Device**

Lift up wiper switch lever, the wiper and cleaner start work.

• **Restore switch lever**

The cleaner stops and the wiper continue working for about 4 seconds.

**Heater, ventilator and A/C**



**Air circulating**

The best comfort is due to the air reasonable circulating in cabin.

**air outlet**

Please keep the vent and wind pipe clean please don't plug the wind vent under the front seat and the outlet vent in the trunk, or it will affect the heater and ventilation. Keep the air flowing in the car.

**air vent**

There is disc-wheel for controlling the air flow and vent for air flowing direction on the air vent. ( The vent can be adjusted to up, down, left, right).



**A— Wind speed adjust switch.**

We kindly recommend you that please only use it while the engine is operating , or it will discharge the battery

**B—Temperature control switch.**

The temperature is lowest at the blue point, height at the red point.

**C—air flow direction distribution button****Heater, ventilator and A/C****Supply the air to head****Supply the air to foot and face****Supply the air to foot****Supply the air to foot and windshield glass at the same****Supply the air to windshield glass(for clearing frog and frost)**

Whether the distribution C is at which position, the air will always supply the air to air vent. You can close the vent as the passenger need.

**Cold air**

Cold air equipment only work when the engine operate. Put down the cold air button on the meter , the indicator light lights , which show the cold air equipment start to work. The temperature adjust button B should be located blue area.

For more cold efficient, the cold air equipment should work under the condition vehicle door and glass is closed.

**Inner air circulating**

For increasing the cold wind function under the heat day and preventing the monstrous flavor coming into

passenger cabin, please rotate the wind speed adjust switch A to left, locate it at the inner circulating position, adjust the intake air speed, but change it to outlet position as soon as your need, so to replace the fresh air in the cabin.

If the car parks in sun for a long time, the temperature will be very high, Turn on the outside loop switch to make passenger cabin, decrease the inner temperature.

### Outlet air

Close the outside air circulating mode when need the air conditioner, turn on the switch of air conditioner, rotate the switch on the air conditioner side, adjust the air current till you feel suitable.

Watervapour concrete to water on the inner wall of air condition, the water can flow out from the special prepared hole, therefore, there maybe some water the parking car.

### Note:

The switch of the cooling wind is in linkage with the knob of wind speed; when the wind- speed-adjusting knob is switched off, the cooling air system does not work as well.



#### Front windshield clear frog quick



#### Rear windshield clear frog and frost quick

- (1) turn on the cold air switch;
- (2) Rotate the temperature adjust knob B to the blue point position, rotate to propriety position after clearing the frog, make you comfortable about the inner temperature.
- (3) rotate the air flow direct distribution C to supply the air to windshield;
- (4) Close or decrease three up outlet;
- (5) Rotate the air speed adjust knob A to the propriety position: please select the outlet if the out air is dry and good, or select the inner circulate.

You can use the special car glass anti-frog fluid to anti frog for glass.

For keep the compressor good seal and normal operating, please at least operate it once per month. When the air condition equipment doesn't works normally, you should turn off it and go to service station in time for inspection.

### Notice to A/C operation:

- Since the A/C is not used under low ambient temperature, it's designed using temperature is: ambient temperature higher than 50°C.
- Effect of A/C is obvious only when all doors and windows are shut. But when the vehicle is placed under sun for a long time and the inside temperature gets high, open doors and windows to ventilation of passenger cabin..
- If the engine is overheat, i.e. when engine is working under high load and high temperature, which had caused slanting height of water temperature, turn off A/C till the water tank temperature down to normal value.
- If the cooling ability reduces sharply, switch off A/C and check the whole system.
- When starting up A/C in summer, pay attention is the cooling fan is immediately operating and enter into high speed, stop using A/C if the cooling fan is defected in case starting up pressure relief system.
- Often check the A/C compressor for abnormal noise, is the A/C solenoid clutch engagement & disengagement completely, or go to service station in time for inspection.
- Before using A/C in each summer, check coolant for leakage, go to service station to repair or replenish coolant in time.
- Do not use A/C for long in idle speed, high ambient temperature or direct sunshine, or the A/C system may get damaged due to high system pressure, ultrahigh temperature.

### Note:

This air system uses environment friendly coolant R134a, please obey relevant stipulations in operation & maintenance.

### Skylight (option)



#### Operation instruction:

Spot press operation and press long operation:

1. Key time above 0.3 seconds is a long key. The skylight stop working when loses the key.
2. Key time is less than 0.3 seconds is a kind of order touch. The skylight opens or closed from top to bottom. If order touch again when the skylight is working, then it stops.

Clip Defended function:

If the resistance exceeds over 10kg while the skylight is closing, the skylight will stop working and open to the top, then close again.

Guard against thief function:

The skylight will close automatically within 5 to 10 seconds when disconnected ignite power.

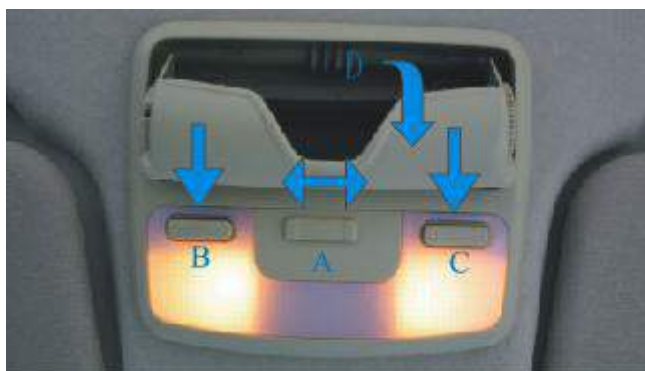
## Note:

Do not keep the key time too long.

Operation:

1. Order touch "OPEN", then the rear skylight uplifts.
2. Order touch "OPEN" again, the skylight will open to the top; when the key time exceeds over 0.3 seconds, the skylight will stop in current location when loose the key.
3. The skylight closes automatically when order touch the "CLOSE" in the position of open the skylight, when the key time exceeds over 0.3 seconds, the skylight will stop in current location when loose the key.

## Inner lights



## Switch position

- (A) center: door light contact switch, the lamp inner cabin lights up when the door is open; the unclosed door indicator on the instrument warning ring, also there is function of sound buzzer.
- (A) switched left to OFF position lights out.
- (A) switched right to ON position lights usually light up.
- Press (B): left indicator ON
- Press (C): right indicator ON
- Press (D): eyes glass box opens, you can put the glass in it.

## Sun shield



Sun shield may be turned up and down, it has the role to shield the sunshine, and a dressing mirror is installed onto the sunshield in front of the front passenger seat.

## Cigarette lighter/socket



Press cigarette lighter into socket to turn on. The cigarette lighter will automatically ejected out after heating elements get red,it can be used.

### **Note:**

It is danger to press the cigarette lighter switch with hands or heavy things for a long time to prevent the switch eject out automatically.

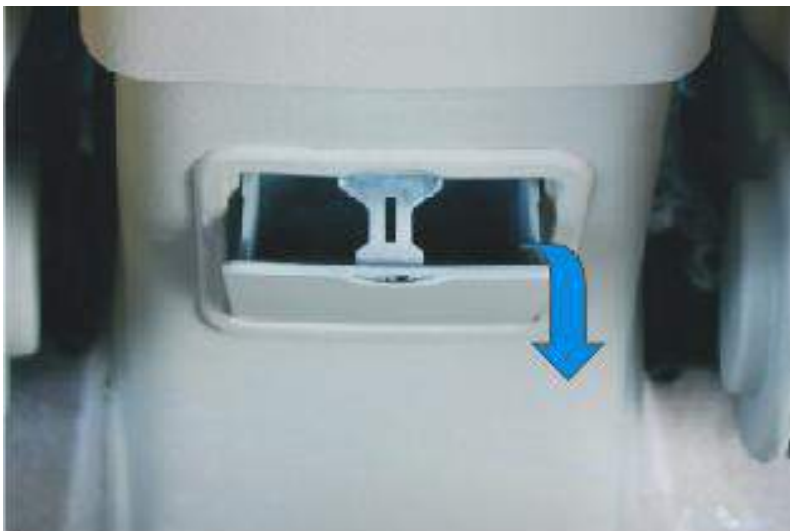
## Ash tray



### Front ash tray

Clean tray-Open ash tray and pull out the ash tray.

Reinstall-Insert ash tray along the guide rail.



### Rear ash tray

Clean tray-Open ash tray, press down spring and pull out ash tray.

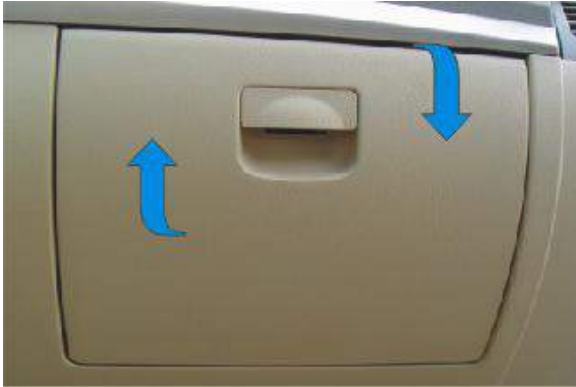
Reinstall-hold ash tray vertical, press in groove till engaging with groove.

### Note:

- Cigarette lighter and socket is still workable when the ignition key is pulled out.
- If the cigarette lighter get stuck in socket and can not eject, please go to service station for inspection.

## Sundries box and glove cabin

### Sundries box



When stocking vehicle documentary, Coca Cola, food, etc:

Open-Switch upward to open sundries box.

Close-Push sundries box forward to lock.



Open-push sundries box cover upward.

Close-put back sundries box cover.

The first floor can be stored tickets, coin and so on.

The second floor can be stored tapes, CDs and so on.

### glove cabin



Glove cabin is furnished on front left/right doors to keep small things such as gloves.



## Running in period

The running in period is in the first 1500km. Not only you can save the fuel but also increase in life span if works correctly:

- 1.Avoid wide-open throttle when driving.
- 2.Avoid engine overspeed.
- 3.Avoid slamming the brake in first 300km.
- 4.Avoid driving for a long time in the same speed.

At running in period,driving speed limit refers to following table (km/h) :

Manual transmission gear	5 shift gearbox
Shift 1	30
Shift 2	55
Shift 3	80
Shift 4	105
Shift 5	120

### Note:

During the first 1000km, the allowed max. speed of engine is 4200r/min.

After 1000km~1500km, the driving speed or engine rotate speed may gradually increase to max. speed.

### After running in period

The allowable max. engine rotate speed is 6000 r/min.

### Note:

- When in cold status, do not drive high speed when in neutral or engaged, only when engine is warmed, the driving speed and engine speed at each shift can be normally used.
- Avoid high speed rotate of engine, engage in higher shift if it works went up,which helps reduce fuel consumption and noise.
- Shift into lower shift when engine can not sustain stable running to prevent engine from overload.

## Safe driving

Good vehicle condition is the foundation of safe driving.

### Before start up, check:

- Lights;
- Brake;
- Fuel capacity;
- Back view mirror;
- Cleanness of head lights, inner back view mirror and windows;
- Tire conditions and pressure;
- Engine oil level;
- Coolant level;
- Brake fluid level;
- Wind shield glass cleanser.

### For safety, make sure:

- Confirm there is no foreign matters located under control pedal;
- Keep things in position;
- Do not drive when you feel tired or slow in reaction;
- Take a short break after driving for continuously 2 hours;
- Stop driving when you are not feeling well;
- Restrict driving speed as per traffic law and road conditions.

### Note:

On smooth road surface, the maneuver and brake force is restricted by tire adhesive force. In humid road surface, the front wheel may skid at extremely high velocity, which deteriorate the control and steering performance of vehicle.

Other description about safe driving occurs in many places in this manual, please pay attention.

## Economic driving & Environment adaptability

Fuel consumption, exhaust, noise and economical efficiency has close relationship with individual driving habit.

In order to reduce fuel consumption and pollution to environment, so to minimize abrasion to engine, brake and tire, pay attention to following points:

Min. fuel consumption & min. environment influence may be obtained at low engine speed, try driving in high speed gear as long as possible, under same running speed, the fuel consumption at 2nd gear and 3rd gear is 2 times or 1.5 times as greater as 4th gear.

- Switch to low speed shift when engine fails to operate steadily.
- Through transmission gear, you may keep running at speed of 40km/h~60km/h in high speed gear, also vehicle can be accelerated.
- Avoid continuous max. speed driving.

- Try driving as steady as possible, avoid unnecessary acceleration or brake, which may increase influence to fuel consumption.
- Turn off engine during traffic jam.

**Other driving conditions may have influence to fuel consumption, there are some factors that may increase fuel consumption as follows:**

- Crowded traffic, especially in metropolitan with many signal lights.
- Frequent start and stop, especially short distance driving prevent engine from reaching normal working temperature.
- When driving at low speed shift in crowded road, the engine rotate speed is relatively high. Therefore make plan at the routes to avoid poor driving conditions.

· **Other factors:**

E.g. driving in winter, trailer, poor road, etc. that might increase fuel consumption.

**Pay attention to following items for vehicle to obtain optimum fuel economic efficiency:**

- Regularly send vehicle to service station for maintenance per schedule.
- Regularly check tire pressure, too low tire pressure may not only increase difficult in control, but also increase rolling resistance and consequently increase fuel consumption and tire abrasion.
- Do not mount unnecessary top rack or ski board on top of vehicle in driving, especially in high speed driving, this may increase air resistance and influence driving speed.
- Do not put large quantity of unnecessary article inside trunk compartment, especially in urban area, where frequent acceleration is needed, the load capacity of vehicle has big influence to fuel consumption.
- All extra energy consumers (such as rear window heater, attached head lights, A/C, etc.) should only be used when necessary, higher generator load or operating A/C may increase fuel consumption.
- Check fuel consumption regularly via odometer, check vehicle if the fuel consumption increases.

## Standard driving

·Lifan car is equipped with advanced hydraulic steering boosting integrated with steering system. In order to maintain normal function, and protect hydraulic system from failure, avoid turning steering wheel to its left/right limit for long.

·Lifan car is equipped with clutch hydraulic operation system, to aid clutch pedal stepping, after shift, keep foot away from clutch pedal in case clutch skid by misoperation.

·Do not rest hand on shifting rod after shifting, to prevent from causing premature abrasion of shifting mechanism.

·Frequent emergency brake and sudden acceleration may quicken abrasion on engine and tire, and also it will increase fuel consumption

## Fuel vapor control & Recovery unit

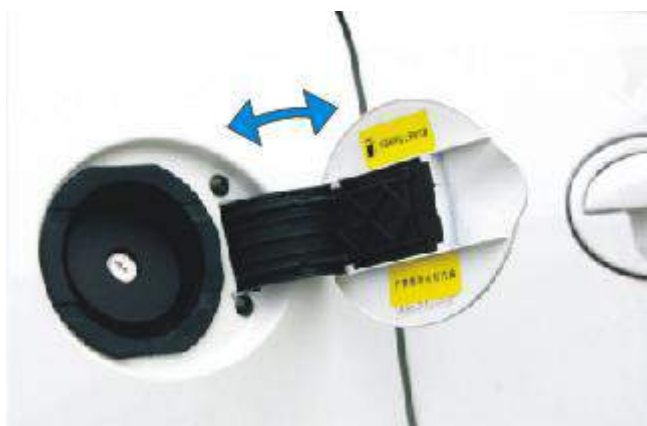
This car is equipped with fuel vapor control & recovery unit, to ensure proper working of this unit, and considering environment protection and fuel economic efficiency, following issues shall be noted:

- 1.Do not stay in direct sunlight for long.
- 2.In plateau area, even if the vehicle stops using, starting again in short interval.
- 3.After long time exposure to sunlight or long time unused in plateau area, fuel may overflow from fuel vapor control & recovery unit, which is quite normal.

## Note:

- Fuel vapor control & recovery unit adopts the principle of active carbon absorption and desorption. Fuel absorbed in this unit may be absorbed into engine, burn and utilize when starting up engine.
- When vehicle is left under direct sunlight for long, the fuel vapor may fill the fuel vapor control & recovery unit and cause fuel overflow from this unit.
- In plateau area, due to thin air, the fuel is easier to generate vapor. If the vehicle is not started up for long, the fuel vapor will fill the unit and overflow.

## Fuel



## Note:

Use only #93 or above gasoline, with RON no less than 93.

Using low grade gasoline or inferior gasoline may shorten engine life and cause damage to ternary catalytic unit.

Oil filler is under the right rear wing's cover. Head up the oil tank cable combination base which lies under the main driver seat. Open the oil tank cover as shown in the following picture, the oil tank contains 49L.

Refueled notice:

1. Shut down the engine.
2. Open the fuel outer cover. (see the above methods).
3. Revolve the fuel tank cover, open the cover when turn it anticlockwise direction, close it when clockwise direction.
4. Turn the fuel tank cover clockwise direction after finished the refuel. (Till heard the sound of striking)
5. Close fuel tank outer cover.

Refill with correct method:

Insert filler into fuel tank filling port in full and prevent it from incline.

Slow down fuel filling, or the fuel filling nozzle may be shut too early because of foam generated in fuel.

If the fuel filling nozzle is automatically shut, it indicates full fuel tank, do not attempt fill in more fuel, or it will inflate the expansion space inside fuel tank, the fuel will overflow once the temperature get too high.

## Engine oil

### Note:

Use only API grade Class SG and above engine oil or 10W/30 engine oil.

Do not choose other types of engine oil or inferior engine oil.

Do not mix different brands of engine oil.

The engine is filled with premium engine oil before ex-works, it may be used all year long (except extremely freezing weather).

Mineral or synthetic engine oil may be used to replenish or change original engine oil, the remarks of engine oil capacity is related to model of engine itself.

When using single stage engine oil SAE10W or multi-stage engine oil SAE5W/20 & SAE5W/30, do not allow long time operation of engine at full open of choke, especially when ambient temperature is relatively high.

### Check engine oil level



**The engine oil ruler is located at the illustrated position.**

Pay regular check to engine oil level, better conduct during fuel filling.

When checking engine oil level, keep vehicle horizontal, turn off engine and wait for several minutes till engine oil back flow to oil pan, then pull out engine oil ruler, wipe it clean with clean cloth and reinsert, take out engine oil ruler again and check the fuel level, which should be somewhere between max. mark and min. mark. If the oil level is higher than max. mark, it will cause excessive consumption of engine oil and clog ternary catalytic unit, which will cause big loss. If the oil level is lower than min. mark, it will cause bad lubrication of engine, which will badly influence the service life of engine.

The oil level difference between max. and min. mark on engine oil ruler is 1.2L. If vehicle is running on highway in summer, or hauling trailer or climbing slopes, keep engine oil level at max. mark position.

### Refill engine oil

Remove engine oil refill cap from cylinder head cover, fill in engine oil, start up engine and re-check, then check engine oil with engine oil ruler.

### Change engine oil

As per specification of maintenance interval, periodically change engine oil. If the vehicle is continuously operated under dusty area or area at weather of  $-20^{\circ}\text{C}$  or less, the change interval of engine oil shall be relatively shortened.

## **Gearbox oil**

### **Gearbox oil:**

Grade #: API GL-4, SAE 85W/90W.

### **Check oil level**

No need to check gearbox oil level within specified interval in maintenance schedule.

### **Change oil:**

Change gearbox oil once every  
80000km~100000km or 2 years.

### **Note:**

If the vehicle can not be started due to lacking gearbox oil, it can not be hauled until driving wheel separated from floor.

## **Coolant**



Coolant level can only be correct checked when engine is OFF.

No need to open reservoir , the tank is half transparent.

The cooling system of vehicle is filled with permanent anti-freezing fluid before ex-works, this anti-freezing fluid has the features of anti- freezing, anti-corrosion, anti-fouling and increase boiling point of coolant, etc. Coolant is toxic, store it in original container and keep it safe from kids.

### **Note:**

Check coolant level:

Correct coolant level is vital to normal operation of cooling system. When engine is in cold status, the coolant level shall be between min. and max. marks of overflow tank. When engine is in warm status, the coolant level shall be slightly higher than max. mark.

### **Coolant consumption**

Coolant loss usually indicates cooling system leakage, should this happens, go to franchised service station for inspection.

Enclosed cooling system will only loss when coolant overhead and exceeded its boiling point. If this is not caused by improper operation or cooling air flow clogged, contact franchised service station.

### **Reasons of engine overheat**

Reduced cooling air flow, such as heat radiator fault, clogging or accessories on heat radiator grille.

Heat radiator fan not working or water temperature sensor failure.

Vehicle running on slope or engine temperature too high because of shift low, or ambient temperature too high.

### **Note:**

If the engine overheat reason can not be located or the fault can not be cleared, contact service station immediately, or it might cause damage to other components.

When engine is hot, even the engine is OFF, the fan may still run for certain period of time.

### **How to refill coolant**

Cool down engine a little bit, slightly loose cap to release pressure and then remove cap.

After refill, the level shall be no higher than max. mark on overflow tank. When engine is overheat, the residual coolant will overflow from heat radiator cover.

·During vehicle running, do not add in dirty water because of lacking coolant, or it may influence cooling system function.

·If cooling system has leakage and cause inadequate coolant, clear fault and add in same concentration coolant, refill shall be carried out after engine cooling.

·Do not use inferior coolant mismatch with Lifan car requirement or mix coolant of different kinds, or the life of engine will be severely influenced by corrosion and water fouling, etc.

### **Driving in winter**

The anti-freezing temperature of cooling system before ex-works may reach  $-25^{\circ}\text{C}$ . In order to obtain adequate anti-freezing ability, inspect coolant in time before cold season, add coolant additives (undiluted) if necessary.

When higher anti-freezing ability is required, increase the ratio of coolant additives, but no less than 70% max. Otherwise it may deteriorate anti-freezing performance and influence cooling effect.

The anti-freezing ability of vehicle in cold area shall be usually  $-35^{\circ}\text{C}$ .

### **Cooling fan**

The cooling fan is driven by motor, and controlled by the water temperature sensor based on the temperature of the coolant. As for LF481 engine DELPHI electronic injection system, the high speed open temperature of its switch is:  $97.5^{\circ}\text{C}$ , and close temperature is:  $96^{\circ}\text{C}$ . As for SUN&TECK electronic injection system, the high speed open temperature of its switch is:  $99.75^{\circ}\text{C}$ , and close temperature is:  $96.75^{\circ}\text{C}$ ; the low speed open temperature of its switch is:  $95.25^{\circ}\text{C}$ , and close temperature is:  $92.25^{\circ}\text{C}$ .

After A/C start, the cooling fan starts work, and is not controlled by water temperature sensor.

If the fan fails to operate at high coolant temperature, check fuse or water temperature sensor, change or

inspection if necessary.

## Power steering fluid level



Under the engine is cold, the power steering fluid level should be at between the 'MAX' and 'MIN' line of the reservoir. If the level is below the 'MIN' line, please add the fluid and inspect it in time.

### Power steering fluid type:

ESSO ATF. DIII

### Capacity

1.2 L

## Windshield cleaning system



Windshield cleanser storage tank is located at the left of engine chamber, the capacity is approximate 3.5L.

### Cleanser type:

NFC60

### Refill cleanser

Remove cap, refill cleanser to bottle neck, then tight cap and turn on ignition switch, check function of cleaning system.

Better add window cleaning solution (such as cleanser) in water.



## Wiper nozzle adjustment

### Wiper nozzle adjustment:

Use needle to adjust the water sprinkle position of wiper nozzle. The adjust needle dia. shall be no bigger than 1mm.

### Note:

- If the water spray effect is not good, may be because of nozzle clogged by dust, but not spray element failure.
- In winter, the adjustment may not be carried out because of ice inside nozzle, melt ice inside nozzle first and then adjust.

## Brake

### Following points are substantial to safe using of brake:

- New friction disc has to be run in, within first 200km, it does not have the best brake effect, braking force reduction may be suitably added by increase pedal force, even for newly installed friction disc.
- When vehicle goes down slope, shift into low speed shift, so to utilize brake function of engine to release the burden of brake, do not hold brake pedal down for long during brake, adopt alternative step down and release method.
- When driving pass pool or driving in heavy rain or after cleaning, the brake performance may be reduced. Normal brake performance may be recovered after brake dries.
- Same type and quality grade friction discs shall be installed on same shaft.
- Do not choose brake friction disc mismatch with Lifan car technical requirement, or it may be extremely difficult.
- After driving on salt laid road for certain period of time, even the brake is not used, the original adequate brake force will be deteriorated due to adhesion of salt layer, which must be cleared.
- Abasion of brake friction disc, to a large extent, is determined by using conditions and driving method. If the vehicle is frequently start/stop driving in urban area, also the rough driving will quicken the abrasion of friction disc, go to service station at regular interval specified in maintenance schedule, and have the brake friction disc thickness checked.
- If the brake pedal travel increases suddenly, one pipe in the dual pipe brake system may have fault. Drive vehicle to service station, but keep in mind that the brake requires higher stepping force and the brake distance might increased.

## Brake booster



Brake booster is vacuum operated, only functions when engine ON.

When brake booster is not working, such as when vehicle is hauled, or fault in booster, step brake pedal with higher force.

## Brake fluid

### Choosing brake fluid

- Choose brake fluid specified for Lifan cars.
- Do not use humidified or dirty brake fluid, or it may deteriorate the brake effect , braking loses efficacy even.

Usually, the storage period of unopened brake fluid is 6 months under ambient temperature of -30℃~60℃.

### Note:

- Do not mix brake fluid of different brands.
- Brake fluid is toxic, and it may damage the varnish of vehicles.



### Brake fluid pot

Brake fluid pot is located inside engine compartment.

### Check brake fluid level

Correct brake fluid level is vital to normal operation of brake system. The level shall be always kept between min. and max. marks.

Brake fluid level will automatically lowered after abrasion of brake friction disc, which is quite normal.

However, if brake fluid level appears obvious lowering or lowered to min. mark within short time, it might

be because of brake system leakage, drive vehicle to service station and have the brake system checked.

## **Anti-lock brake system (ABS)**

ABS mainly works to improve the active safety of vehicle. Compare with routine brake system, its best feature is prevent from wheel locked, thus to maintain steering ability on slippery road at emergency brake and improve the steering stability of brake. However, it is expected that ABS implement the above function under the situation of exceed the physical termination.

Lifan cars has adopted advanced ABS system, plus EBD (electronic brake force distribution) additional function, which may optimize brake force distribution on front/rear axle.

### **ABS work features**

During emergency brake, when certain wheel speed is lower than vehicle speed and is to be locked, the ABS will participate in pressure regulating to reduce the brake force on this wheel, the brake force for two front wheels are separately adjusted and the rear two wheels are adjusted with same braking force, which maintains steering stability in max. In condition of emergency, only when the driver is stepping down braking pedal sharply which makes the wheel nearly locked, will the ABS functions. Pressure pulse inside pipe during ABS working is transferred to brake pedal via master cylinder booster, so the driver may feel slight vibration on brake pedal and “rumble” sound from hydraulic adjustment. This is a warning that reminds the driver that the wheel is going to be locked and the ABS is carrying out optimum adjustment within this range to prevent from wheel locking. The driver, at this moment, must not release brake pedal. Under normal conditions, when the driver is stepping down brake pedal with slight force to make half brake, since the brake pressure had not yet reached wheel lock critical point, ABS will not participate in adjustment and the vehicle is normally braked.

### **ABS alarm indicator**

ABS alarm indicator monitors ABS system, usually the ABS alarm indicator will light up for 1~2 seconds after ignition switch turned on, and will go out after system self-diagnosis. If the ABS alarm indicator did not light up during ignition or did not go out afterward, or the indicator keeps lighting during running, that indicates ABS system failure, however the vehicle may be still routine braked without ABS adjustment function. Please go to nearest Lifan vehicle service station for maintenance.

Parking brake alarm indicator on Lifan car is furnished with EBD (electronic brake force distribution) monitoring function, if the ABS alarm indicator and parking brake alarm indicator light up at the same time, it means not only the ABS function failure, but also the normal brake system has failure, too. Danger of rear wheel lock may occur during emergency brake, drive your vehicle to nearest Lifan car service station for maintenance.

## Pedals



Movement of all pedals must not be interfered, for this, nothing should be placed under each pedal that may interfere the travel of pedal, or anything that rolls or slides when stepping down pedals. No extra carpet or felt must be placed around pedals.

### Note:

- If failure occurs in brake system, try use the full travel of brake pedal.
- Clutch and accelerator pedal must be able to be stepped down fully.
- All pedals should be able to home without interference.

## Accumulator

Lifan cars uses maintenance free lead accumulator, which requires no maintenance under normal conditions.

### Driving in winter

Winter season makes working conditions extremely severe for accumulators, its discharge ability is not as good as that in normal temperature.

We suggest inspection at service station before winter, charge if necessary. This may not only enable more prompt and more reliable starting up, but also helps to prolong the service life of accumulator.

### Note:

Accumulator electrolyte is corrosive, do not splash it into eyes, skin and clothes, water clean with plenty of water if accidentally contact with electrolyte.

Electrolyte requires no replenishment.

Never short circuit the two terminals of accumulator, or it may cause rapid heating of accumulator and consequent explosion danger. besides, gas emitted from accumulator may easily be inflamed by sparks, so do not use naked fire near accumulator.

To prevent from short circuit, remove earth wire from accumulator when detach electric equipments, but when changing bulbs, turn off relevant switches only.

When dismantling accumulator, remove cathode wire from accumulator, then anode wire from accumulator, take out accumulator from rack, the sequence of installing accumulator is in reverse of dismantling.

Do not operate engine when accumulator is switched OFF, or it may damage electric system (electronic elements).

Use circumferential battery charging equipment, when conducting rapid charging to accumulator on vehicle, detach wire from both terminals first.

Refer to descriptions in “DIY” for connecting external accumulator to start up vehicle.



## Tire

Tires have substantial design features, the tire we provided with our models has excellent road adhesive ability and safety.

Using other tires than dedicated tire for our vehicles models will influence normal operation of vehicles.

### Tire maintenance

- Pay often check to abrasion of tire, foreign matters inlaid in tread shall be cleared in time .
- If tire is damaged, drive vehicle to service station for inspection or change.
- Avoid tire contacting with lubricant or fuel.
- Avoid long time exposure under direct sunshine.
- Make up loss valve cap.
- Make marks before dismantling tires to maintain original rolling direction when re-installation.
- Dismantled tire shall be placed in shadow, dry and cool place. Unused tire should be placed vertical when storing.

### New tire

New tires have not reached max. adhesive force, therefore only middle speed is allowed during the first 100km, this helps prolong the service life of tires.

### Tire abrasion

**Service life of tire, to a large extent, is decided by following factors:**

Tire inflation pressure

Too high or too low pressure will shorten the tire life and cause inferior influence to operation of vehicle.

Continuous high speed running will cause low pressure tire overheat because of excessive deformation. This may cause tread cracking or tire explosion. Besides, low inflation pressure of tire may increase fuel consumption. Thus regular inspection to tire pressure is required, don't forget spare tire during inspection.

Check cold pressure of tires. When temperature climbs up, the tire pressure will increase in stead of reducing.

### **Note:**

Correct tire inflation pressure is marked on label inside column A.

## **Wheel**

### **• Driving method**

Sudden acceleration or forced acceleration/braking will accelerate tire abrasion.

### **•Wheel positioning**

Incorrect wheel positioning may not only cause excessive abnormal abrasion, but also influencing safe driving of vehicle. If the tire abrasion is found abnormal, contact service station immediately.

### **•Abrasion indicator**

There is a 12mm wide and 1.6mm deep abrasion indicator in tread of new tires-refer to right figure. If the indicator on tire is abraded, change new tire immediately. If the indicator remains 1mm (measured at any point on indicator), the required min. tread depth is reached.

If there is no tread at these points, change tire as early as possible.

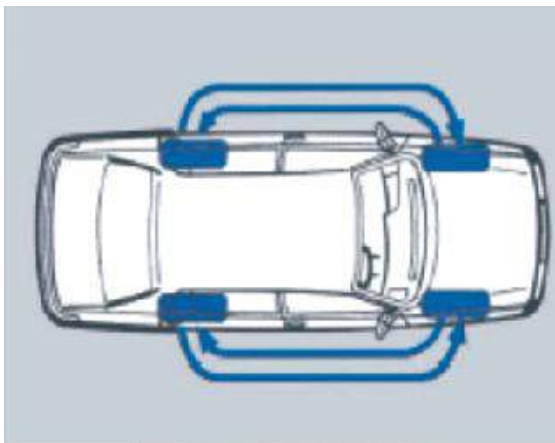
### **•But remember:**

Do not abrade tire to this degree. Tire with tread abraded to this degree may not successfully adhere ground when driving at high speed on wet road surface.



### **Change tire**

Make sure all tire abrasion shall be even, if the front wheel abrasion is severer than that on rear tire, transposition as illustrated. Deeper tread offers safety driving, especially in wet road surfaces.



- For safety reason, tires shall be changed in pairs in stead of separately. The tires with deepest tread shall be installed on front wheels.
- Same specification, same pattern tread tires shall be installed on same axles of vehicle.
- For safety reason, when mounting new tubeless tire, install new rubber valve.
- Tire repairing requires special equipment and technology, which has to be carried out by service station .

### Note:

Do not use inner tube.

### Wheel dynamic balance

Wheel on new vehicles were balanced, but there are many factors that may influence the dynamic balance of wheel, and subsequently influence the manipulating stability of vehicles and quicken tire abrasion.

### Note:

Repaired or new wheels must be balanced before use.

## Maintenance

**Maintenance the vehicles correctly will prevent the corrode.**

**The most common reason which leads to corrode:**

- Pile the salt and soda, dust and humid under the vehicle.
- Rips up or damages the paint layer because of slight crash or gravel.
- Use the vehicles along the seacoast.
- Drive on the road which strews the freezing inhibitor.
- When sticking coal tar, rosin, guano, dead insect.
- Drive in the area of containing smoke-dust, coal, dust, scrap iron or chemical substance.
- Vehicles were stained by dust or mud.

## Cleaning

**Clean the vehicles in accordance the regular way. It leads to paint layer peeled off or body and spare parts corroded in the following situations, which should be cleaned first than repair:**

All seams at engine cap, door edge and all covers are extremely easy to be damaged by pollutes.

Therefore these parts require careful cleaning by sponge during washing, flush them clean and wipe dry this step shall be taken even after auto washing.

When flushing vehicle, do not align the water nozzle directly towards lock element, or the water in it may freeze in winter. Asphalt, smear, industrial waste and insects stuck on vehicle are not easily cleaned by water, the longer these pollutes stays, the worse they would damage the paint surface, use suitable method to clean them in time.

### **Waxing**

Waxing must not be conducted within ten days after newly painted, or it may spoil paint surface. Often waxing may prevent pollutes from sticking onto paint surface and prevent industrial waste from penetrating into paint.

### **Polishing**

Polishing can only be carried out when the paint surface has lost glaze and can not be recovered by waxing. If the polishing agent has no anti-corrosion content, waxing after polishing. Crinkle finishing and plastic parts must not be waxed or polished.

### **Repainting**

Scratching on paint surface (such as bruise or impact) must be make up before rust on metal started (repainting, brushing or spraying).

If rust occurs, remove rust thoroughly before re-painting.

Repainting may be carried out by all service stations.

### **Chrome plated parts protection**

Remove spots or other traces by chrome cleanser. Chrome anti-corrosion agent has long time protection effect, apply it evenly onto surface of all chrome plated parts.

### **Clean windows**

Rubber traces, smear, lubricant and plastic cement may be removed by window cleanser or silicone. Do not use leather for wiping paint surface to wipe windows, cause the residual cleanser may leave traces on glass. Wind shield wiper shall be regularly cleaned and changed once or twice a year, according to operation situation.

To avoid damaging rear window heating element, do not place hard objects on internal heating wire. When wiping rear window glass, wipe along the direction in parallel with heating wire to prevent from causing fault.

### **Protection of plastic**

If common cleaning method was not workable, use special plastic cleanser. Vehicle doors and ceiling decoration may be cleaned by soft brushes or dry plastic foam.

### **Cleaning and protection of leather products**

Before cleaning leather products on steering wheel or seats, prepare a wet rag; If thorough cleaning is required, use a sponge dipped with diluted cleanser solution, do not make leather wet or water may soak through joints.



After cleaned by cleanser, wipe clean with soft rag. Leather can be treated with suitable maintenance agent if necessary. Do not add solutions in cleanser because the solution might spoil the leather color.

### **Cleaning knitwear and decorations**

Knitwear and similar must be cleaned by special cleanser, dry foam and soft brushes.

### **Alloy wheel cap**

Regular maintenance is required to keep good appearance of alloy wheel cap for long, clean thoroughly pollutes and brake disc residue from wheel cap once every two weeks, or the surface of alloy maybe spoiled. After cleaning, treat with acid protection cleanser, wax wheel cover once every 3 months, do not use paint brightener or other grinding material.

If the protective paint is damaged (such as impacted by stone, etc.), the wound must be treated as early as possible.

### **Cleaning and anti-corrosion treatment to surface of parts under engine hood**

Surface of parts under engine hood and surface of engine are anti-corrosion treated before ex-works.

If surface of parts under engine hood or the engine itself was washed by degrease agent, their anti-corrosion material were also washed away. Therefore surface of parts under engine hood and their seam must be treated again to ensure long anti-corrosion performance. Same treatment shall be applied to parts require anti-corrosion treatment after changing. Good anti-corrosion treatment is substantial, especially in winter.

As for vehicles often drive on muddy road, the whole engine shall be cleaned after driving and protective measures shall be taken to eliminate harm of pollute. Bottom of vehicle shall also be cleaned with same method.

All franchised service station have quality protective material and necessary facilities recommended by our company.

### **Bottom protective layer**

Vehicle bottom is painted with special material to protect it from abrasion or damage.

However, this protective layer may be damaged during vehicle operation. Therefore regular inspection shall be paid, especially before and after winter, make up the damaged part.

All franchised service station is furnished with suitable material, necessary facilities and proven process. Thus repair or repaint are better to be undertaken by service station.

Since large number of modern, maintenance free parts are used in vehicle, only a little maintenance is required for stability, economic efficiency and reliability of driving. Descriptions provided by after sales service unit had considered, to a considerable degree, driving mileage per year, which helps to minimize the expenses.

When operating under some severe environments, say freezing ambient temperature, dirty road, necessary maintenance is required on top of specified routine maintenance interval.

### **Especially following items:**

- Change engine oil.
- Clean or change air filter element.
- Maintenance work should be conducted by service station, because it requires special knowledge, facilities and tools. Besides, the maintenance work should be in conformity with our stipulations.

Complete maintenance certificate issued by franchised service station is one of the conditions in claim for warranty.

Safety laws and anti-pollution laws has restricted repair, adjustment and maintenance to engine and chassis carried out by the user. Key parts in relation with safe operation of vehicles must not be repaired and used, so to prevent from causing injury to life and health of passengers.

## Vehicle jack screw

### Vehicle jack screw

Before using jack screw on vehicle, make sure there is suitable space between top jack screw and bottom of vehicle. Jack up vehicle only at illustrated position as shown in Fig. A & B.

### Movable jack screw

Jack up position of movable jack screw shall be in conformity with illustration.

To avoid damaging longitudinal beam or floor, apply suitable rubber gasket or wood gasket in between.

### Note:

Do not jack up vehicle on engine, gearbox, rear axle or front axle, or it may cause severe damage.

### Jack screw provided with vehicle

Using method of jack screw provided with vehicle refers to “Changing tire”.

### Garage jack screw and movable jack screw supporting point



#### Front(Fig.A)

On longitudinal beam of floor.

#### Rear(Fig.B)

Support vertical reinforced plate of longitudinal beam.

To avoid clamping parking brake steel rope, make sure the jack screw is supporting on point on longitudinal reinforced rib.

## Driver's tools



Wheel bolt spanner and jack screw are tied up by rubber ribbon inside trunk. Dual end turn screw and spanner, etc. are contained in special tools kit.

Before re-tighten the jack screw on bracket, retract jacking arm, keep crank close with jack screw body.

Shear type jack screw

Wheel nut spanner with pry bar assembly.

Fire extinguisher

Triangle warning plate

## Spare tire



Spare tire is located inside spare tire seat in trunk.

In Lifan car, there is a lid above pocket for spare tire, unscrew clamp device as illustrated when open lid.

## Change tire

### Change tire



- Pull up parking brake, if the vehicle is parked on slope, put stone or similar behind tire in diagonal.
- Pry off wheel hub cap with turn screw, remove wheel decoration cap with wheel spanner and hook.
- Loose each wheel bolt one turn with wheel spanner.
- Please jack screw under longitudinal beam as illustrated angle, make jack screw seat contact with floor. Support jack screw to wedge mark on longitudinal beam near wheel fender.

Insert jack screw jaw into vertical part of longitudinal beam to prevent slippery during jacking up. If the floor is soft, place a big thick wooden plate beneath jack screw seat.

- Jack up vehicle till wheel leave floor.
  - Detach wheel by removing bolt.
  - Install spare tire and slightly tighten the bolts.
  - Lower down vehicle, tighten bolts as per diagonal sequence.
  - Push up wheel bolt cap, then punch wheel cap with force or press wheel decorating cap into wheel.
  - Put the changed tire into spare tire pocket.
  - Repair defected tire ASAP.
- Jack screw provided by us together with the vehicle is dedicate for this model of vehicle, thus it can not be used to jacking up heavier vehicle or other objects. Do not access under vehicle when vehicle is jacked up.
- If a tire changed is not in conformity with original tires, pay attention to instructions in “User's Manual-Tire”.

### Note:

Check tire pressure after tire changing, check tighten torque of bolts with torque spanner, the tighten torque for steel wheel is 100N·m (11kg·m) and the tighten torque for aluminum wheel is 90N.m(9kg.m).

## Fuse



Fuse box is located at lower left end of instrument panel.

### Change fuse

- Turn off switch for the part to be changed.
- Insert turn screw into right slot of shelf and unlock clamp strip.
- Unload the cover of fuse station sketch (A) (the station of fuse is applying to the physical truth).
- Find out fuse in defected parts as per fuse position.
- Use dedicated fuse detach tool to take out failed fuse, it may be identified from burnt metal strips.
- Reinstall new fuse with same capacity.
- Replace shelf.

### Fuse position

(As shown on fuse box cover)

#### Drive cabin

1. Power 15	25A
2. Combination meter	10A
3. ABS(connect to ignition switch)	5A
4. ABS(connect to constant power)	30A
5. ABS(connect to constant power)	30A
6. Reversing brake lights	10A
7. Air bag	10A
8. Warning switch	15A
9. Skylight(option )	20A
10. Dipped beam light	15A
11. CD player	10A
12. Combination lights(small)	10A
13. Steering lights	5A
14. Electric fuel injection ECU	5A
15. Combination meters illumination	15A
16. Wiper clearance	10A

17. Temperature CD indicator	30A
18. Glass lifter motor	15A
19. Cigarette lighter	10A
20. Fuel pump	15A
21. Central control lock	15A
22. Main beam light	15A
23. Rear defroster	10A
24. Inner lights	15A
25. Fog lights	20A
26. Head lights	15A
27. Ignition AM	30A

**Front compartment**

1. Horn relay	15A
2. Master relay	25A
3. A/C compressor	10A
4. Cooling fan high speed 1	15A
5. Cooling fan high speed 2	20A
6. Cooling fan low speed	20A

**Note:**

- If the newly installed fuse blows out in short time, check electric system of the vehicle at service station.
- Do not repair or reuse blown out fuses, or it may cause severe damage to electric system.

**Change lamp**

Switch off lights before change lamp.

Do not contact glass bulb with naked fingers, when bulb is heated, the fingerprint remained on glass will evaporate and the humidity will stay on reflector and make it dim.

Use same model lamp, which is shown on lamp seats.

A pack of spare lamps shall be placed on vehicle.

V	KW	Application
12V	H1 55W	Head lights
12V	PY 21W	Steering lights
12V	P 21W	Rear fog lights
12V	P 21W	Side turn lights
12V	PY 21W	Position lights
12V	W 5W	Rear license plate light
12V	H3 55W	Front fog lights
12V	C 5W	Rear position lights
12V	W122 10W	Ceiling lights cluster
12V	W 5W	Rear trunk lights



### Change head lights lamp

- Open engine hood.
- Detach head lights plug.
- Remove cap.
- Press down spring clamp on lamp seat.
- Take out fault lamp and install new lamp, engage the positioning convex on lamp seat with concave on reflector.
- Replace cap.

### Note:

- The rubber seal ring must contact closely with lamp, or water may penetrate.
- Air hole on cap faces downward
- Check head lights positioning.



### Rear lights

- Open rear cover.
- Detach trunk decoration plate.
- Press defected lamp downward and left turn to remove.
- When install new lamp, turn it to right most.
- Install lamp seat plate, the spring clamp shall well engaged.



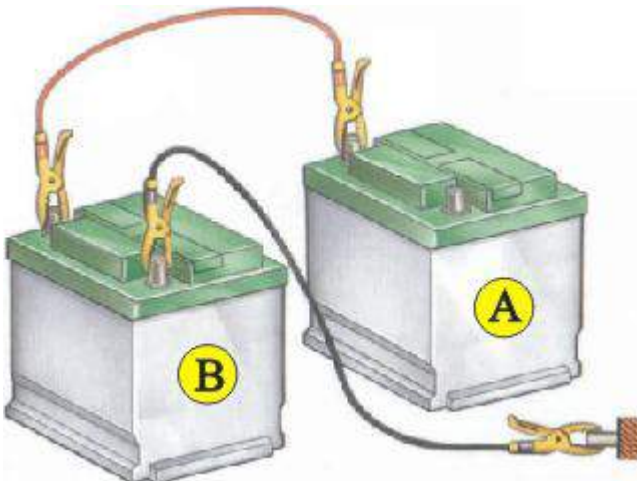
### Ceiling lights

- Carefully press towards center as illustrated by arrows and remove lamps.
- Change lamp.
- Replace lamp, first the end without spring clamp.

### Head lights adjustment

Head lights positioning is vital to traffic safety, adjustment can only be carried out with the aid of dedicate equipment. Therefore adjustment to head lights may only be carried out in service station.

### Emergency start up



#### Fault car ground spo(metal).

A:Discharged battery

B:Auxiliary start up battery

If the engine can not be started up because of no power on battery, connect it with battery in other vehicles to carry out emergency startup.

- Voltages of two battery units shall all be 12V, the capacity of auxiliary start up battery (Ah) shall be similar with that of the battery out of power.
- Section of connecting wire shall be big enough to sustain load, pay attention to instruction from the wire manufacturer.



·Battery out of power may be frozen under  $-10^{\circ}\text{C}$  temperature. Once it is frozen, connect with wire after defrosted.

·Keep two vehicles separately, or the current will be transferred to vehicle body once the anodes are connected.

·Engine of the vehicle in which the auxiliary start up battery is positioned shall be turned on.

### **Wiring as follows:**

1. Connect positive wire (+) (usually red) end with anode of the battery out of power.
2. Connect the other end of the red wire with anode of the auxiliary start up battery.
3. Connect one end of the negative wire (usually black) to the cathode on auxiliary start up battery.
4. Fix the other end of black wire on metal parts on cylinder body or cylinder itself. Do not connect wire to cathode, or the spark generated may ignite explosive gas overflow from battery. Take extreme caution during operation and make sure the wiring clamp don't contact each other. Wire connecting anodes must not get contact with any conductors on vehicle or there might be danger of short circuit.

### **Note:**

- Do not contact the wire with rotate parts inside engine compartment.
- Do not facing battery, there is danger of been acid burnt.
- Start up engine by routine process.
- After engine started up, remove connecting wire as per reverse steps from above.

## **Towing**

To facilitate helping other vehicles or towed by other vehicles, towing rings are furnished under right end of front/rear fender. When towing vehicle, please note:

- Turn ignition key to “3” shift position(M), to allow rotation of steering wheel, operation of turn lights, horn, and using wind shield wiper and window cleaner in case needed.
- Because the brake booster works only when engine operates, thus the force applied on brake pedal shall be added when engine is not working.
- When towing fault car, hang on front part of fault car.

## **Maintenance schedule**

Advanced low maintenance technique is adopted in your car. This technique may set maintenance schedule as per annual driving mileage of your car.

### **Inspection & maintenance service**

As for inspection service, on one hand, it may minimize service fee, on the other hand, it assures safe, reliable and economic operation of car after maintenance. During maintenance, faults were discovered as early as possible to avoid causing bigger damage.

### **Inspection & maintenance service include:**

Lubrication maintenance for every  $8000\text{km}\pm 500\text{km}$ , routine maintenance for every  $8000\text{km}\pm 500\text{km}$ , change brake fluid once every 2 years or every  $50000\text{km}$ , whichever comes first.

For those cars runs over  $15000\text{km}$  a year, a supplementary lubrication maintenance is needed to be conducted for every  $15000\text{km}$  operation.

Note: The maintenance schedule is determined per normal operation conditions of cars. As for cars operating in relatively severe conditions, some work needs to be done between two maintenance cycle, especially those cars with Stop/Start system often used or engine often operates under low temperature, engine oil requires more frequent change. Cars operating in dusty area shall have its air filter frequently cleaned or changed.

Air filter must be changed for every 2 years or 30000km operation, whichever comes first.

You may learn when to carry out certain maintenance in Lifan Warranty & Maintenance Certificate. Also the technical works fulfilled in each inspection & maintenance service is described in Lifan Warranty & Maintenance Certificate. Expenses are calculated as per work-hours and material cost, and the service station will tell you about other works to be completed on your car.

## Engine

- 4-stroke gasoline engine, horizontal.
- H-4 cylinder 16 valves.
- TRITEC 1.6L engine valve is driven by chain and single top camshaft, LF481Q3, LF479Q3 (1.3L) engines are driven by belt and dual top camshaft.
- Multi-point fuel sequence injection, ignition system, ternary catalytic unit with close circuit control.
- TRITEC 1.6L engine adopt electronic choke valve, LF481Q3 and LF479Q3 (1.3L) engine adopts mechanical choke valve.
- Electric heat radiation fan controlled by water temperature sensor.
- Paper dry air filter.

## Driving system

### Manual transmission gear

- Mechanical single disc clutch.
- 5 shifts synchronized manualtransmissi
  - On gear and main gear box is
  - located in same box.
- Central lubrication for transmission gear and main reducing gear.
- Front wheel driving.

## Steering system

- Gear rack steering unit able to adjust gap automatically.
- Steering gear and steering post is connected by safe coupling.
- Equipped with steering booster pump.

## F/R shaft

### Front shaft

- Adopts L arm MacPherson independent suspension.

### Rear shaft

- Adopt vertical swing arm independent suspension.

## Brake system

- Dual pipes brake positioned in diagonal.

F: Ventilation disc brake.

R: Drum brake with proportional valve.

- Brake booster.
- Mechanical parking brake act on rear wheel.

## Chassis

·Bearing integral enclosed full metal structure.

·Whole unit adopts safety glass, front wind shield glass adopts interlayer glass and the rest adopts toughened glass.

·Front and rear parts are deformation parts.

## Technical data

### 1. Engine

Product model	LF7160	LF7160L1	LF7130A
Engine model	TRITEC 1.6L	LF481Q3	LF479Q3
Type			
Displacement mL	1596	1587	1342
Cylinder bore × mm	77×85.8	81×77	78.7×69
Compression ratio	10.5: 1	9.5: 1	9.3: 1
Max. power [kW/(r/min)]	85/6000	78/6000	65/6000
Max. torque [N·m/(r/min)]	149/4500	137/4800	115/4800
Min. fuel consumption g/(kWh)	≤364	≤270	≤270
Fuel supply method	Multi-points electronic control fuel injection		
Ignition	Double coil distributor free ignition		

### 2. Performance parameter

Product model	LF7160	LF7160L1	LF7130A
Max. speed km/h	186	170	155
Acceleration performance (V=0~100km/h)S	≤10.5	≤13	≤14.5
fuel consumption for 100km(90km/h)	5.64	5.8	5.68
Max. climbing ability%	36	36	30
Passenger numbers	5		

### 3. Through put capacity

Product model	LF7160	LF7160L1	LF7130A
Approach angle (°)	16		
Leave angle (°)	16		
Min. clearance above floor mm	143		
Min. turn radius m	≤5.5		

#### 4. Major mass parameters

Product model	LF7160	LF7160L1	LF7130A
Curb weight kg	1155	1155	1135
Axial load distribution (F/R) kg	705/450	705/450	690/445
Full load mass kg	1580	1580	1560
Axial load distribution (F/R) kg	850/730	850/730	835/725

#### 5. Major dimensions

Product model	LF7160	LF7160L1	LF7130A
Lengthmm	4370		
Widthmm	1700		
Height (no load)mm	1473		
Wheelbase (no load) mm	2540		
Front/rear suspension mm	824/1006		
Wheel span mm (F/R) (No load)	1423/1424		



#### Name plate

On left of engine chamber



TRITEC 1.6L Engine



**VIN #**

On front shelf of engine chamber



LF479Q3、LF481Q3

**Engine #**

Engine # On engine body

Product applicable standard: Q/LF 81001-2005 “Technical specification of Lifan brand LF7160 car”

Q/LF 81002-2005 “Technical specification of Lifan brand LF7130 car”

**Maintenance data**

**1. Engine model and parameters**

Model	TRITEC1.6L	LF481Q3	LF479Q3
Date of production			
Displacement mL	1596	1587	1342
Power/rotate speed [kW/(r/min)]	85/6000	78/6000	65/6000
Torque/rotate speed [N.m/(r/min)]	149/4500	137/4800	115/4800
Cylinder bore mm	77	81	78.7
Compression ratio	10.5: 1	9.5: 1	9.3: 1
Multi-spot fuel sequence injection	SIEMENS/DELPHI	DELPHI/SUN&TECK	DELPHI/SUN&TECK

## 2. Engine oil

- Engine oil selection  
Grade API, over Class SG  
TRITEC 1.6L selects SAE 10W/30;  
LF481Q3, LF479Q3 selects SAE 15W/40
- Capacity:  
Approximate 3.5L for TRITEC1.6L;  
Approximate 3.5L~4L for LF481Q3 & LF479Q3.
- Tighten torque of engine oil drainage screw:  
30N.m
- Change interval:  
Change every 8000km

## 3. Gasoline

- Select:  
93# or higher grade gasoline (RON 93) .

## 4. Coolant

- Use vehicle long act anti-freezing fluid
- Capacity:  
(with fluid tank): 8.5L
- Change interval during operation  
Suggest changing coolant once a year.

We suggest maintenance be taken to coolant level switch while doing maintenance to vehicle, check for damage (say breakage, etc.) to prevent anti-freezing agent from overflow and cause trouble.

## 5. Ignition timing and ignition sequence

Ignition sequence:

1—3—4—2

## 6. Idle speed

- Rotate speed: 800 r/min  $\pm$  50 r/min  
Idle speed is not adjustable.

## 7. Spark plug

- Electrode gap: 0.8 mm  $\sim$  1.0mm
- Change interval:  
Under normal conditions, change spark plug every 15,000km, change long act spark plug every 30,000km.

## 8. Power steering fluid

- Model: ESSO ATF. DIII
- Capacity: 1.2 L
- Change interval: Change power steering fluid once every two years, or over 50,000km, whichever comes first.

## 9. Ribbed V belt

- Looseness:

(Thumb press test)

Ribbed V belt	Sink depth: mm
AC generator	2 mm

## 10. Timing gear chain

- Looseness:

Automatic adjust looseness via hydraulic tensioner. (If abnormal noise or excessive looseness occurs, go to franchised service station for careful inspection, only by this can guarantee normal operation of engine).

- Change interval: Changed at 3 years or 60,000km.

## 11. Hydraulic clutch

- Pedal free travel:

15mm~25mm (Hydraulic clutch pedal free travel not adjustable) .

## 12. Gearbox oil

- Model: API GL-4 or SAE 85W/90W(please use special gear oil for LIFAN car , or you must be responsible for the damage resulted from wrong gear oil )

- Capacity: 2.665L

- Change interval: 80000 km~100000km

## 13. Steering clearance

- No clearance allowed

## 14. Steering horizontal tie rod ball head Clearance

- Should be no clearance

## 15. Brake pedal

- Invalid travel

1/3 of the max. pedal travel

## 16. Parking brake

- Invalid travel: 2 teeth

## 17. Front wheel brake friction disc

- Model: L3501101

- Abrasion limit: 7mm (including bed plate thickness) .

## 18. Rear wheel brake friction disc

- Model: L3502101

- Abrasion limit: 2.5mm(Measure friction disc thickness only) .

## 19. Change brake fluid

- . Model: Per DOT4 standard
- . Capacity: 1.0L(without ABS), 1.2L(with ABS)
- . Change interval: Change all brake fluid once every 2 years or after 50,000km.

## 20. Battery

- . Maintenance free lead accumulator.
- . Min. voltage: (loaded) 9.6V at 110A

## 21. Tire

- . Tire model: 185/60R14
- . Tire pressure (unit: Kpa):

	Lifan car	
Tire pressure	Front	240KPa
	Rear	240KPa
Spare tire		240KPa

## 22. Min. tread depth

- . Min. tread depth: 1mm

## 23. Front wheel toe in and front wheel Camber angle

- . No load front wheel toe in value:  $-2 \sim 0$ mm
- . Loaded front wheel toe in value:  $-3 \sim 0$ mm
- . Front wheel camber angle:  $0^{\circ} 30' \pm 30'$

## Maintenance instruction

In the following paragraphs we are going to introduce you some procedures of repair & maintenance, however, many of them require special equipment and test meters. We suggest you sending your car to your local Lifan franchised service station for repair & maintenance. The service station is able to provide you with all maintenance service and necessary parts.

### Change engine oil

When drain engine oil without oil pump, change oil drainage plug O-ring.

### Engine oil filter

- Remove engine oil filter.
- Wipe clean sealing surface on engine.
- Apply a layer of thin oil on rubber O-ring, re-install new engine oil filter element and tighten with hand.

### Note:

Engine oil filter element is a kind of one-shirt thing.



## Valve clearance

Engine with roller type valve rocker.

Engine used on Lifan car adopts roller type valve rocker, the features of which is automatic adjustment to valve clearance, thus the valve clearance requires no adjustment during operation. Besides, engine adopts roller type valve rocker gives valve sound immediately after start up, if this noise is small and distinguishes in short period of time, it's normal phenomenon.

## A/C compressor ribbed V-belt

Inspection

- Use 50N to press belt with finger, the flexibility of belt shall be 5mm~10mm.

## Visual check of engine

### Engine oil/coolant

- Check engine cooling system and heating system for any leakage.
- Check hose and hose connector for looseness or breakage.

## Fuel system inside engine compartment

- Check pipe circuit, hose and hose connector for leakage, abrasion, looseness or breakage.

## Coolant

- When coolant level is too low, replenish to specified level as per correction proportion.
- If lacking coolant occurs often, go to service station for inspection.

## Ribbed V-belt

Check belt for:

- Excessive abrasion, side abrasion.
- Smear
- Cracking
- Check belt tension by finger pressing, adjust if necessary.

## Clutch clearance

Check

• Adopts hydraulic clutch maneuver system, the free travel of clutch pedal is not adjustable. If phenomenon such as clutch not return, travel too low, etc., go to service station for inspection immediately.

## Check tire

- Check tire tread depth.

Check for:

- Abrasion.
- Lateral abrasion.
- Holes on side wall.
- Cracking.

- Rupture.

If the tire tread was found approaching the specified min. depth, i.e. the tread abrasion indicator strip (refer to figure about the 1.6mm high indicators distributed on whole tire surface) are exposed, which indicates the tire abrasion is getting to the limit. If these indicators are abraded off, change tire.



### Check tire abrasion conditions

- Burr on tread indicates unaligned toe in.
- Lateral abrasion on tire indicates inaccurate camber angle.
- Send your car to Lifan service station when above mentioned abrasion occurs, check the reason for front tire abrasion.

### Constant velocity universal joint dust sleeve

- Check dust sleeve for leakage or damage.
- Check installation of all dogs are correct.

### Ball head joint

- Check dust sleeve for damage or reliability.

Once damage found, go to service station for inspection.

### Brake friction disc

- Adopt front wheel brake shoe abrasion indicator to check the thickness of friction disc.
- Check front wheel brake friction disc:

Check friction disc thickness at wheel side (with the aid of flashlight).

• When brake shoe abrasion indicator lights up or when friction disc thickness is less than 7mm (including base plate thickness), it indicates friction disc has reached abrasion limit and requires change. If the friction disc thickness is more than 7mm, the future driving mileage may be determined per experience.

1mm friction disc may drive at least 1,000km under worse driving condition.

E.g. if the friction disc thickness is measured as 9mm, then it may drive at least 2,000km more.

Note: This thumb up calculation method is for worse using conditions, the service life of friction disc under normal conditions is much longer. Thus the friction disc needs to be re-checked after specified mileage reached.



- Check rear wheel brake friction disc  
Check friction disc thickness by man hole on brake bed plate.
- Check rear wheel brake friction disc for grease or brake fluid pollution.

### **Brake system: visual check**

- Check brake master cylinder, brake booster, brake pressure regulator, brake clamp, brake wheel cylinder for leakage or damage.
- Do not twist brake hose.
- When turn to max. angle, avoid brake hose interfere with any part of vehicle.
- Check pipe joint, they shall be well matched without leakage or corrosion.
- Check hose and pipe for air hole, abrasion or breakage.

### **Brake fluid level**

- Check brake fluid level for leakage.

### **Head lights inspection & adjustment**

- Head lights inspection and adjustment shall be carried out at Lifan service station or special unit.

### **Measure battery voltage**

- Use voltmeter to measure voltage between two poles of battery when ignition switch is turned off. If the voltage is higher or equal to 12.2V, it indicates the battery is OK.

### **Road test**

- Check foot brake and parking brake for invalid travel and efficiency.
- Check function of brake booster.
  - a- If the engine is not working, step down brake pedal down several times to vacuum the booster.
  - b- Brake & start engine with mediate force, if the booster works proper, you will feel the force on pedal is slightly lighter (because of booster).
- Function of clutch:  
About 15mm free travel on pedal.
- Check steering function:  
When vehicle is running or parking, rotate steering wheel left and right to check the free travel (wheel heading straight ahead).
- Check the function of shifting unit.
- Visual check sealing of cylinder head and full flow type engine oil filter.

### **Safe measures of ignition system**

Following protective measures shall be observed when inspecting ignition system:

- Detach or install ignition system electric circuit only when ignition switch is turned off, including high voltage circuit or measuring meter circuit.
- If this engine is used for starting operation but not start up (say: measuring compression force of cylinder),

remove supply plug from ignition transformer and disassemble supply plug from fuel injection valve.

- When quick charger is used as auxiliary start up source, its voltage must not exceed 16.5V, and the operating time must not exceed 1 min.
- Flushing engine only after ignition switch turned off.
- If the ignition unit is fault or is estimated having fault, only when the supply plug detached from ignition transformer and fuel injection valve can vehicle be towed.
- Use only high voltage cable supplied by manufacturer to ensure normal functioning of ignition system.

## Towing

Observe road traffic laws when towing vehicle.



Front towing ring



Rear towing ring

Turn on ignition switch to unlock steering wheel, use steering lights indicator, horn, wind shieldwiper if necessary.

The brake booster works after engine is running. Therefore, the force used to step down brake pedal is higher after engine stops.

Use towing rope with slight flexibility to reduce stress between two vehicles. Use synthetic fiber towing rope or towing rope with flexible beackets.

## Tools and documentaries provided with vehicle

### Tools provided with vehicle

Double open end spanner 10×12

Double open end spanner 13×15

Wheel nut spanner with pry bar assembly

Extension bar

Rubber handle dual purpose screw driver

Shear type jack screw assembly

Shear type jack screw crank

### Documentary bag

Automobile User's Guide

Product "Certificate"

Maintenance manual

Vehicle audio device user's guide