AUTOMATIC MECHANICAL TRANSMISSION

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USE OF EZ DRIVE:

This vehicle is equipped with an electronically controlled transmission called "EZ drive", which implements automatic control of clutch and gear shifting operations through integration of an electronically controlled hydraulic unit into the existing mechanical transmission.

Only the 1st, 2nd and reverse gears are available when you start the vehicle. Stepping down the accelerator pedal can engage one of them.

WORK MODE

The transmission can work in either of the following two different work modes:

- Semiautomatic mode (manual): the drive decides when to carry out gear shifting
- Full automatic mode (auto): the system decides when to carry out gear shifting

Switching between work modes is implemented through pressing the switch button "AUTO" close to the gearshift handle.

It is unnecessary to release the accelerator pedal during the gear shifting process.

When shifting to some low-speed gear, the system will automatically increase the engine speed to the degree required by the new gear if the engine speed is higher than some value. (This is similar to that for sports vehicle)

Gear shifting will be very smooth when the opening degree of the throttle remains unchanged and the engine speed increases gradually.

GEARSHIFT HANDLE

The position of the gearshift handle (A) is variable and it has one steady state position and four variable positions available. The four variable positions include: "N" (neutral position), "R" (reverse gear), "+" (change up) and "–" (change down). The gearshift handle will automatically return to the steady state position immediately after being released. See the following figure.

The steady state position lies between the positions UP "+" and DOWN"-".

When the vehicle is stopped and its ignition key is switched off, the system will not carry out any gear shifting operation when you operate the gearshift handle, whether you step down the brake pedal or not. The gear in use remains to be that used before the engine is turned off.

When the vehicle is stopped and its ignition key is switched on, the system will carry out any gear shifting operation request from the gearshift handle if you step down the brake pedal. You can shift to any required gear in this case.

When the vehicle is stopped and its engine is running, the system can only shift to one of starting gears, such as the 1st, 2nd, or reverse gear, of course, including the neutral position.

SEMIAUTOMATIC MODE (MANUAL)

In this mode, the driver can manually select an appropriate gear to obtain the desired vehicle performance.

When the manual mode is activated, the corresponding gear shifting procedures are as follows:

- To move the gearshift handle to the position UP (+) for gear changing up. Or
- To move the gearshift handle to the position DOWN (-) for gear changing down.

If the gear shifting operation is in accordance with correct operating conditions of the engine and transmission, the system will carry out it.

When the engine reaches the operating conditions at idle speed during its normal running, as decelerates to stop, the system will automatically change down to a lower gear.

When the engine is running at a relatively high speed, the system will automatically change up to a higher gear.

FULL AUTOMATIC MODE (AUTO):

Once the button "AUTO" is pressed down, the full automatic mode is activated. Similarly, this mode can be deactivated through pressing down it again. When the full automatic mode is activated, the word "AUTO" and current gear position are shown in the display screen.

In this mode, the system will automatically shift the gear according to the vehicle speed, engine speed and throttle position (brake position when braking is carried out).

In this mode, the system will automatically shift down the gear (i.e. the function of rapidly stepping down the accelerator pedal) when the driver rapidly steps down the accelerator pedal in order to obtain the optimal acceleration performance; under this condition, the vehicle will be changed down one to two gears so as for the engine to obtain the optimal torsion performance (i.e. overtake policy).

In this mode, you can also carry out any gear shifting operation request through the gearshift handle with no need of deactivating this mode in advance: this function is called "Proposed Gear"; the gear shifting operation request will be carried out within four seconds after the full automatic mode is canceled (during this period, the word "AUTO" remains to be shown on the display screen).

After that, the system will return to the full automatic mode.

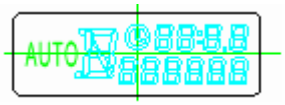
In this mode, the system can roughly estimate the road conditions such as upslope or downslope and match the impulse spectrum for gear shifting with the engine load, so as to optimize its gear shifting function. Also, the selected gear position along with the word "AUTO" is shown on the display screen.

In this mode, the system will optimize the moment for gear shifting according to the degree that the driver steps down the accelerator pedal and the corresponding acceleration category.

The system will automatically change up the gear when the throttle opening degree is unchanged and the engine speed increases to the degree that it matches with the throttle opening degree.

When the throttle is nearly fully opened, the system understands that the driver wants to obtain the maximum engine power and therefore retains the current gear position until it shifts up the gear when the maximum engine power is applied.

INDICATIONS ON THE DISPLAY SCREEN



In automatic or manual mode, the indications on the display screen will be as follows:

N – neural position
1 – 1st gear
2 – 2nd gear
3 – 3rd gear
4 – 4th gear
5 – 5th gear
R – reverse gear

When the vehicle is stopped and the ignition key is switched on (the electronic system is activated), the display will show the gear position and work mode before the engine is turned off (automatic mode = "AUTO", manual mode = no word displayed).

SYSTEM ACTIVATION

Turn the ignition key to the position "ON" and the display will show the current gear position (N, 1, 2, 3, 4, 5, or R) after one second or so, and at this moment you can carry out any gear shifting operation.

Suggestion: if the current gear position has not yet been displayed after ten seconds, turn the ignition key to the position "STOP" and repeat the above procedure when the display is shut down. If the same error occurs again, please contact the Chery Service Center.

Suggestion: Open the door at the driver side and the system will activate the hydraulic unit for next engine ignition if the line pressure is insufficient.

When the key is in the position "ON", the display will show the recently selected mode, as semiautomatic or full automatic mode. And at this moment, you can switch the work mode.

ENGINE IGNITION

In either of the two scenarios for neural and any other gear position in use, engine ignition can be carried out.

If you try to ignite the engine when some gear is engaged, the engine can be started up only after you step down the brake pedal.

After ignition, the system will automatically change to the neutral position and the display will show the letter “N”. At the same time, the work mode remains to be that before the engine is turned off (semiautomatic or full automatic mode).

After engine ignition, only the 1st, 2nd and reverse gears are available.

Suggestion: the engine will not be ignited if you do not step down the brake pedal and the selected gear position is not neural (N). In order to start the engine, it is necessary to step down the brake pedal and then turn the key to the position “ON” or to turn the key to the position “STOP”, step down the brake pedal and then turn the key to the position “ON”.

STARTUP WITH THE 1ST OR 2ND GEAR

In order to engage the 1st or 2nd gear, you need to do the following:

- **If you intend to start the vehicle with the 1st gear:** it is necessary to step down the brake pedal and push the gearshift handle to the position UP (+).
- **If you intend to start the vehicle with the 2nd gear:** it is necessary to step down the brake pedal and push the gearshift handle to the position UP (+) twice consecutively (it is recommended that you use this method on road surface with small adhesive force).

Step down the accelerator pedal and the vehicle will start to move. Drive mode has no influence on the above procedure.

When the vehicle is stopped and the engine is running, it is unnecessary to step down the brake pedal in order to change to the neutral position, while it is necessary to do this in order to shift to the 1st or reverse gear. When the vehicle is stopped and the engine is turned off, you can shift to any gear position after stepping down the pedal.

Warning: never leave the vehicle when the neutral position is shifted to and the hand brake is not pulled up.

Warning: when some gear is engaged and the engine is not started up, the sound signal will provide an alarm, indicating the potential danger incurred because the transmission will automatically shift to the neutral position.

VEHICLE START-UP

Only the 1st, 2nd and reverse gears are available if the engine is running and the vehicle is stopped

In order to shift to one of the above gears, step down the brake pedal and operate the gearshift handle between the two front seats.

Suggestion: when the vehicle is fully stopped, the reverse gear can be shifted to from the neutral position, 1st or 2nd gear.

Suggestion: If obstruction happens during any of the following shifting procedures: the reverse to the 1st gear position and the neutral to the 1st gear position, the system will automatically shift to the 2nd gear. If the 2nd gear cannot be changed to too, it will automatically return to the neutral position. The procedure of shifting to the 2nd gear should not be regarded as a failure, because this is just a logical procedure. Similarly, if obstruction happens during any procedure of shifting to the reverse gear, the system will partly turn off the clutch so as to realize gear shifting. In this scenario, there will be noise accompanying and you will feel uncomfortable. If the second attempt to shift to this gear fails, the system will consider this gear unavailable and automatically shift to the neutral position (N).

Warning: be sure to confirm that the gear position shown on the display screen is what you want before you step down the brake pedal after issuing any gear shifting operation request when the vehicle is stopped.

GEAR SHIFTING

The gearshift handle can be used to realize gear shifting up/down or shifting to the reverse gear or neutral position.

Pushing forward the gearshift handle can realize gear shifting up (+) and pulling it back can realize gear shifting down (-).

When the engine is turned off, the ignition key is in the position ON and the vehicle is stopped, any gear position can be shifted to.

Suggestion: release the handle immediately after any gear shifting operation is accomplished. Operation timeout (more than 12 seconds) will result in automatic switching to the full automatic mode (AUTO). Excessively long stay of the handle in some position will lead to illumination of the warning lamp; all these symptoms will be eliminated as long as you release the handle.

Suggestion: if you want to park the vehicle on some slope and engage some gear so as for it to function as a brake, it is necessary to confirm the gear position signal shown on the display screen, then turn the key to the position STOP and release the brake pedal one to two seconds later so as for the clutch to be fully engaged.

SHIFTING TO/FROM THE NEUTRAL POSITION (N) WHEN THE VEHICLE IS RUNNING

When the vehicle is running, you can release the accelerator pedal to use the neutral position (irrelevant to work mode). Neutral position request vehicle be accepted only when the vehicle speed is lower than 80km/h. If the vehicle speed exceeds 80km/h, the system will not accept this request and retain the current gear in use.

Neutral position **cannot** be changed to when you step on the accelerator pedal and in this case the system will retain the current gear in use.

If you want a running vehicle to shift from the neutral position to some other gear position, just push the gearshift handle to the position UP (+). The current work mode (automatic or manual mode) is not

irrelevant to this. In this case, the system will automatically change to the gear that most matches with the current engine speed and vehicle speed. The display screen will show the current work mode along with the gear position in use.

SHIFTING TO/FROM THE REVERSE GEAR (R)

Shifting to/from the reverse gear is possible only under the following conditions:

- The brake pedal is stepped down.
- The vehicle speed is close to 0km/h.

When the reverse gear is shifted to, the display screen will show the current work mode and the letter (R).

If you try to change to the reverse gear without stepping down the brake pedal, the system will not carry out any operation and the display screen will show the current work mode (the word "AUTO" or no word displayed) and gear position.

The system manages shifting from the reverse gear (or shifting to the 1st gear) on the basis of the above conditions: when you step down the brake pedal and the vehicle speed is close to 0km/h, the system will accept the gear shifting operation request issued through pushing the gearshift handle to the position UP(+) and change to the 1st gear.

The display screen will show the current work mode and gear position (i.e. the 1st gear).

ENGINE TURNOFF/SYSTEM SHUTDOWN

Turn the key to the position "STOP" and the engine is turned off. However, the system is still working at this moment.

Within about two to four seconds after turning the key to the position "STOP", the hydraulic unit in the system will cease work and the display is turned off. Only on this condition, the system is truly completely shut down.

Before the engine is turned off, the selected gear will be always in the engagement.

If the engine is turned off when the neutral position is used, the system will issue a sound signal to remind the driver of the necessity to shift to the 1st or reverse gear to implement safe parking.

In this case, you shall turn the key to the position "ON", step down the brake pedal and shift to the 1st or reverse gear.

Suggestion: the system will automatically remember the work mode (automatic or manual mode) when the engine is turned off. And it will reset to the remembered work mode after next ignition.

FAULT SIGNALS

System errors are indicated through illumination of the warning lamp on the instrument board (see the section of "WARNING LAMP & INFORMATION").

In the event that there is any error in the system, it will:

- Issue discontinuous sound signals (through the buzzer) for about four seconds;

- For some errors, the system will automatically change to the "AUTO" work mode so that the driver can easily drive to the nearest Chery service station for troubleshooting.

For some errors, only the 1st, 2nd and reverse gears are available.

Warning: be sure to step down the brake pedal all the time from engine turnoff to system shutdown and release the brake pedal only after the display is turned off.

Warning: do not pull out the key while the vehicle is running and otherwise the system will abnormally work until the vehicle is stopped and the steering will be locked once being turned for the first time.

SOUND SIGNALS

In the following cases, the system will issue sound signals:

- When you park the vehicle with the neutral position used. You can hear a sound signal when turning the key to the position "STOP".
- When the clutch is excessively hot during the start-up process. In this case, you shall "forcibly" start the engine without hesitation; or, release the accelerator pedal and step down the brake pedal so as to ensure that the vehicle body is steady when it is on a ramp.

In order to ensure safety, the system will activate signal sounds in the following cases and automatically change to the neutral position when the vehicle is stopped, the engine is running and the selected gear position is 1, 2 or R:

- Neither the accelerator pedal nor brake pedal is stepped down within three minutes.
- Step down the brake pedal for over ten minutes.
- Fail to step down the accelerator or brake pedal within three seconds after opening the driver-side door.
- There are one or more faults with the transmission.

PARKING

In order to ensure safe parking, the vehicle shall be shifted to the 1st or reverse gear. When it is on a ramp, you shall use the handbrake.

When you are about to stop the engine on the condition that the vehicle is on a ramp with some gear engaged, you shall release the brake only after the current gear position is shown on the display screen.

If the current gear position is neutral and you want to shift it to some parking gear, you shall activate the system and shift to the 1st or reverse gear.

VEHICLE STOP

Release the accelerator pedal and step down the brake pedal if necessary. If you want to stop the vehicle when it is on an uphill and the engine is running, you shall step down the brake pedal rather than the

accelerator pedal.

Regardless of the current gear position and work mode, the system will automatically disengage the clutch and shift down to a lower gear position.

When the vehicle is stopped, the system will automatically shift to the 1st gear position.

SYSTEM SAFETY DEVICES

The system is provided with safety devices and policies for drive convenience:

- In case of deceleration, the drive ratio will automatically decrease for starting the vehicle again. Conversely, the system will automatically shift to the 1st gear when the vehicle is stopped.
- When the engine speed reaches the maximum allowable speed, the system will automatically increase the drive ratio if you still accelerate the vehicle.
- When the vehicle is stopped, the brake pedal is released, and the engine is running with some gear engaged, the system will automatically change to the neutral position so as to prevent the vehicle from accidentally moving when the driver-side door has been opened for more than three seconds.

Suggestion: it is advisable to wait for completion of the current gear shifting operation request until issuing another request, so as to avoid issuing of multiple requests within a short time.

Suggestion:

- When the vehicle is stopped and the key is in the position “ON”, step down the brake pedal all the time until deciding to start the vehicle, then release the brake pedal and gradually accelerate the vehicle.
- It is recommended that the neutral position be retained when the vehicle is stopped for a long time and the engine is running.
- When parking the vehicle on an uphill, you shall use the brake rather than the start-up method to keep the vehicle stable and step down the accelerator pedal only when you decide to begin your journey.
- The 2nd gear can be used for startup only when the road surface has small adhesive force and more control is needed in the event of startup.
- If you have to shift from the reverse to 1st gear or vice versa, you shall make sure that the vehicle is completely stopped and then step down the brake pedal.
- If you need to use the neutral position for the vehicle to run freely on a downhill due to some unpredictable reasons even though this is very improper, then the system will engage the optimal gear according to the vehicle speed, so as to deliver correct drive torques to the wheels after receiving the gear shifting operation request.
- When the vehicle is on a downhill with some gear engaged and the accelerator pedal is released (assuming that the vehicle is running forward), the system will automatically engage the clutch to provide the vehicle with an appropriate engine retarding torque if the vehicle speed exceeds the predetermined value.

WARNING LAMP

DAMAGED TRANSMISSION DEVICE (RED)

Turn the key to the position "ON" and then the warning lamp illuminates, but the engine will be stalled after being started up.

When any transmission device damage is detected, the warning lamp will flash (simultaneously with a sound signal accompanying).

Warning: if the warning lamp illuminates all the time, please contact the Chery Service Center for systematic examination.

DAMAGED TRANSMISSION DEVICE (RED): TO REDUCE THE NUMBER OF GEAR SHIFTING OPERATION REQUESTS

If multiple gear shifting requests are issued within a limited time, the warning lamp will illuminate to indicate that the driver has carried out incorrect gear shifting operations.

In this case, the system will launch a program to protect the electric pump through restricting the number of gear shifting operations so as to prevent the vehicle from being stopped due to some sudden fault. At first the system will reject all gear shifting requests: if the driver continuously issues multiple gear shifting requests within a short time, the system will restrict the gear shifting operations regardless of the current work mode. If the gear shifting requests are still sent, the electric pump will be shut down.

DAMAGED TRANSMISSION DEVICE (RED): MANUAL MODE UNAVAILABLE

The manual mode cannot be switched to when the engine is running. Otherwise, the warning lamp will illuminate.

Warning: if the warning lamp illuminates all the time, please contact the Chery Service Center.

DAMAGED TRANSMISSION DEVICE (RED): AUTOMATIC MODE UNAVAILABLE

The automatic mode cannot be switched to when the engine is running. Otherwise, the warning lamp will illuminate. In addition, this will often happen if the "AUTO" button has a poor contact.

DAMAGED TRANSMISSION DEVICE (RED): EXCESSIVELY HOT CLUTCH

The warning lamp will illuminate (simultaneously with a sound signal accompanying) if the clutch is found to be excessively hot when the vehicle is started.

Warning: if the warning lamp illuminates all the time, please contact the Chery Service Center.

ENGINE IGNITION DELAY

When the brake switch is damaged, the system will turn on the warning lamp. In order to prevent the vehicle from being suddenly stopped due to some fault, the system will consider the brake pedal to have been stepped down during the start-up process. In order to ensure operational safety, the engine will delay its ignition time so as to allow the driver to have an enough time to step down the brake pedal.

DAMAGED TRANSMISSION (RED): FAILURE TO CHANGE THE GEAR

In any of the following cases, the warning lamp on the display screen will be illuminated with a sound signal accompanying simultaneously.

- The gear shifting operation cannot be carried out due to one or more system errors. Or
- Only the 1st, 2nd or reverse gear position can be shifted to due to one or more system errors.

VEHICLE TOWING

Make sure that the neutral position is selected (confirm that the vehicle can be moved) and tow it like a vehicle with a traditional mechanical transmission (refer to the description in its service manual). During the entire towing process, its front wheels shall be suspended.

If the transmission cannot change to the neutral position, you shall not tow the vehicle.

REGULAR MAINTENANCE PROGRAM

The regular maintenance program requires that the transmission oil level of EZ Drive shall be checked every 20,000 kilometers.

OIL LEVEL CHECK

EZ DRIVE'S HYDRAULIC OIL FOR GEAR SHIFTING