

# GT-416

## Automatic Transmission Fluid Exchanger

### User Manual



**GAT MACHINERY CO., LTD.**

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## **Precautions for safe use**

Only qualified personnel who have been trained can use the equipment. Use and operate the equipment only after reading and understanding the following regulations.

- Wear protective glasses when operating.
- Do not smoke near the equipment.
- Do not inhale the mist of cleaning fluid emitted by the cleaning equipment and automatic transmission.
- Use the equipment in a well-ventilated area.
- Please read the safe use of the materials used carefully.
- Before connecting and removing the joints, wrap the joints with cloth to prevent ATF oil from splashing on the operator.
- If there is leakage in the cleaning equipment and interfaces, it should be repaired immediately.
- If there is any splashing and leakage of ATF oil, it should be cleaned up immediately.
- A fire extinguisher should be available near the cleaning equipment.
- When using the equipment, the pressure cannot exceed the rated value of the equipment, otherwise the equipment will be damaged and it is easy to cause personal injury. This kind of equipment damage is not covered by the warranty.

## **Brief description**

Automatic transmission fluid exchanger has become one of the necessary equipment in the automobile repair and maintenance industry. It is the latest one that uses the pressure of the car itself for circulation cleaning, thereby restoring the acceleration performance of the transmission. Reduce vibration, reduce fuel consumption, and extend the life of the transmission.

The flow rate of the automatic transmission fluid exchanger is adjustable, which is an advanced model. In the past, the equipment often had insufficient or excessive oil due to the unadjustable pressure and flow, which directly affected the quality of oil change, causing damage to the gearbox or waste of new oil. The automatic transmission fluid exchanger effectively solves the above problems.

The automatic transmission fluid exchanger is a car maintenance equipment with advanced technology, reliable quality, complete functions and reasonable price.

It only takes 20 minutes to complete the whole process of cleaning and refilling new oil for the automatic transmission, hydraulic variable speed drive and transmission radiator. If the replacement time exceeds this time, the bonding degree of the new and used oils will increase, and the automatic transmission oil can be completely replaced.

## Precautions for enabling equipment

Refer to Figure A

1. Connect the power cord to the power supply, red to the positive pole and black to the negative pole.
2. Add the required new ATF oil to the new oil tank (the original oil storage of the automatic transmission is generally more than 8 liters, so add about 3 liters more than the original oil volume). You can refer to the transmission oil volume in the manual of the vehicle to be replaced and re-view the new oil window and scale.
3. Now you are ready to start the cleaning or replacement process.



Figure A

(1) New oil window	(2) Used oil window	(3) New oil supply port
(4) Used oil flow regulating valve	(5) New oil flow regulating valve	(6) Exchange and Flushing switch
(7) Power switch	(8) New oil pressure gauge	(9) Used oil pressure gauge
(10) Oil outlet pipe		

## **Features and functions of cleaning systems**

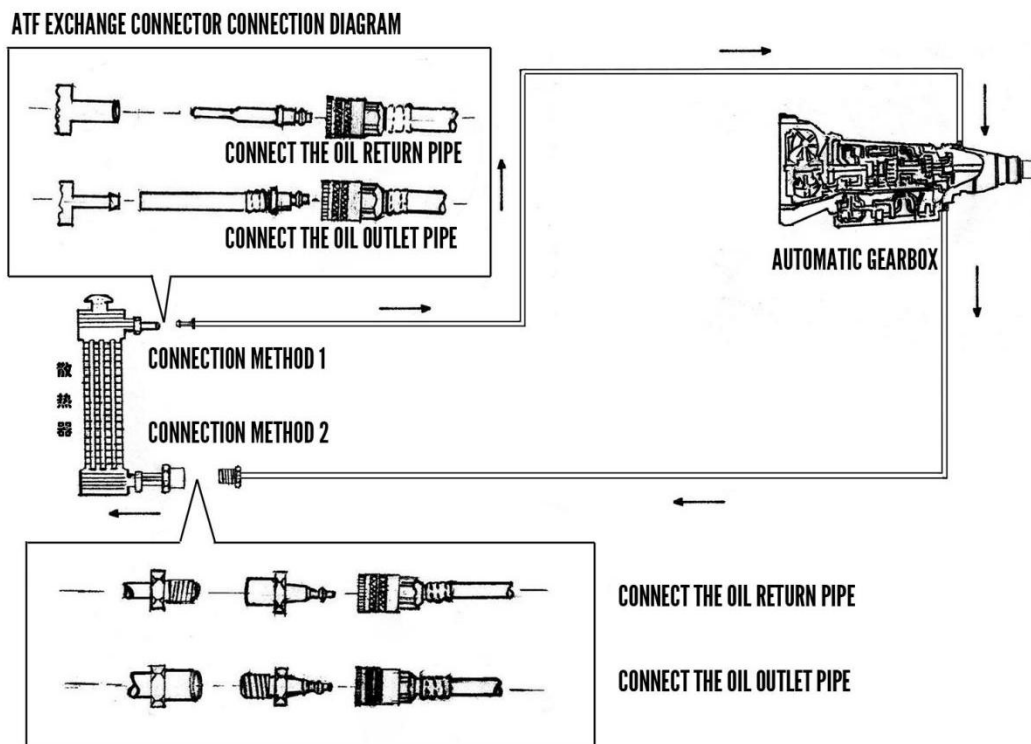
1. New oil window: The cleanliness of the oil during oil change can be observed through the window; the comparison between the new oil and the used oil window when the new oil passes through the window.
2. Indicator light: When the power is turned on, the indicator light is on.
3. Used oil window: The cleanliness of the oil during oil change can be observed through the window; the comparison between the used oil and the new oil window when the used oil passes through the window.
4. Function switch: When cyclic cleaning is required, turn to the cleaning gear, and when exchange is required, turn to the exchange gear.
5. Oil filling port: Open the screw cap and add new ATF oil.
6. Return oil pressure gauge: Displays the internal pressure of the gearbox.
7. New oil flow regulating valve: Adjust the flow of new oil into the gearbox.
8. Used oil flow regulating valve: Adjust the flow of used oil when it comes out.
9. Return oil pipe: Connect the return oil port of the gearbox.

Note: A: Used oil storage tank: store used ATF oil (15 liters).

B: Power cord: connect to the power supply, DC-12V. When connected, the light inside the device will light up, which makes it easier to clearly

observe the oil storage capacity of the new and used oil tanks. The red one is connected to the positive pole and the black one is connected to the negative pole.

C. New oil storage tank: store new ATF oil (15 liters).



- Note: 1) When connecting the pipe, you can remove either connector 1 or connector 2.
- 2) ATF switch, connect the two oil pipes to either end of the radiator oil pipe.



## Cleaning system cycle flushing process



Note: Switch to Flushing

- Cleaning method without replacing the filter element:
  1. Before cleaning and replacing the automatic transmission, the vehicle's power wheels must be off the ground (using a lift or jack).
  2. Find an (ATF) automatic transmission cooling pipe that is easy to disassemble and remove the joint.
  4. Connect the configuration joint to the oil pipe of the transmission (see Figure B).
  5. The two pipes of the equipment can be connected at will regardless of the direction of oil inlet and outlet.
  6. At this time, close the used oil flow regulating valve, add the cleaning agent into the transmission, turn on the power, and switch the function. Turn on the circulation cleaning.
  7. Start the engine, and the cleaning equipment begins to enter the circulation cleaning process. Switch each gear. This circulation cleaning lasts about 10 minutes, which can completely remove the metal debris and sludge in the transmission and restore the original performance of the transmission.
  8. After the circulation cleaning is completed, turn off the engine and

proceed to the next step of replacing the transmission oil.

Note: When switching between forward gear and reverse gear, you should step on the brake first and then switch gear after the wheels stop.

If the vehicle's transmission needs a filter replacement, the following steps should be performed after cleaning. If not, the ATF exchange process can be performed directly.

- How to replace the filter element and clean it:

9. Open the used oil regulating valve and start the engine, the used oil in the gearbox will be discharged into the used oil tank of the cleaning equipment through the oil outlet pipe under the pressure of the car itself. At this time, you should always monitor the used oil window. When there is no oil flowing through the used oil window, you should immediately shut down the engine and close the used oil regulating valve.

10. Remove the oil pan of the automatic transmission and replace the filter element.

11. Turn the switch to exchange switch, observe through the new oil tank window, pump the new ATF oil added to the new oil tank into the automatic transmission, and start the engine when the amount of added and discharged used oil is equal.

13. Prepare to start the ATF exchange process.

Note: The process of exchanging ATF oil



As shown in the figure: Switch to switch valve, indicating that the new and used oil are exchanged

1. Open the used and new oil regulating valve, turn to exchange switch, start the engine, start the electric pump, and start the gearbox to exchange the used and new oil. Observe the reading of the pressure gauge, adjust the new oil regulating valve so that the reading of the pressure gauge is around 25 PSI, each gear Switch, and then compare the flow rates of the new and used oil, and adjust the flow control valve of the new and used oil at any time (the "+" direction is to increase the flow, the " - " direction is to decrease the flow, but the oil outlet pressure shall not exceed 40 PSI. The oil outlet pressure It can be seen from the oil outlet pressure gauge), and the flow rate of new and used oil must be kept equal at all times (it can be observed from the used and new oil window of the oil storage tank).
2. The new oil sight window of the equipment is the tube through which new oil flows, and the used oil sight window is the tube through which

- used oil in the gearbox flows.
3. 20-50 seconds depending on the situation .
  4. Pay attention to the changes in transmission oil flow and color in the used oil window. You can adjust the flow rate of the used and new oil at any time. The throttle valve adjusts the flow rate.
  5. After the oil change is completed, turn off the engine and turn the function switch to cycle cleaning.
  6. The function switch is switched to cycle cleaning and the used oil regulating valve is closed . Switch to P position and replenish the transmission oil according to the oil dipstick level . If the oil level is sufficient, turn off the engine, connect the gearbox oil pipe as it is, and start the engine. Check the disassembled interface pipes for leaks. Please test drive for one kilometer and then check the oil dipstick level (this step is absolutely necessary)

## **Cleaning system used oil discharge process**

1. Empty the used oil in the used oil tank before each oil change.
2. Open the back door of the equipment to take out the used oil tank, dispose of and recycle the used oil.
3. Put the oil tank back as it was and proceed to the next step of the work procedure.

## Troubleshooting

- Connect the power supply, press the button switch, the device does not work or work abnormally:
  1. Check whether the power supply is properly connected and whether the positive and negative terminals are correctly connected.
  2. The voltage of the power supply is normal.
  3. Unscrew the fuse and check whether the fuse is blown.
- The new oil flow meter shows no oil flowing:
  1. Whether the new oil flow regulating valve is open.
  2. Electric pump pressure is normal.
- The used oil flow meter shows no oil flowing:
  1. Whether the used oil flow regulating valve is open.
- Please contact us to better serve you.

## **Maintenance and care of cleaning system**

1. The design of the equipment uses a fuse to protect the circuit, so the contact point between the fuse and the circuit should be checked regularly to see if it is loose.
2. The equipment should be checked regularly for leakage. If there is leakage, it should be repaired immediately. The hose connection should be checked frequently to see if it is tight and the line is loose. The pipeline should not be twisted forcefully to maintain elasticity.

## **Connector and pipes list**

### **1. Configuration of pipes:**

- 1) 150mm  $\Phi$ 8 open pipes: 3pcs
- 2) 150mm  $\Phi$ 10 open pipes: 2pcs
- 3) 9-16 hose clamps: 2pcs