Electric Coolant Exchanger

Operation Manual

Model: GD-515

This manual contains all important warnings, advice, operating instructions, operations and base maintenance information.
It is recommended to keep this manual with the purchase invoice.

Besides, please note down the number of the purchase invoice here:

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Pleases store this manual in a safe and dry place for future reference.

Contents

Safety Definitions: Follow all WARNING and CAUTIONmessages in this manual. These messages aredefined as follows: WARNING means you may risk death or serious personal injury; CAUTION means you may risk personal injury,property damage, or serious unit damage. This manual provides clear and useful tips. These safety messages cover situations we are aware of. We cannot know, evaluate, and advise you regarding allpossible hazards. You must make sure all conditions and procedures do not endanger your personal safety.

Disclaimer: All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without obligation to notify any person or organization of such revisions or changes.If necessary, obtain detailed health and safety information from the appropriate government agencies, and the vehicle and coolant manufacturers.Further, our company shall not be liable for errors contained herein or for incidental or consequential damages(including lost profits or losses after accident in connection with the furnishing, performance, or use of coolant solutions).

⚠WARNING ⚠

1) Before using the coolant exchanger, read, understand and follow the safety precautions and operating instructions outlined in this manual. This equipment must be operated by qualified personnel who must be familiar with vehicle cooling systems, coolants and the dangers they present.
2) Contact with antifreeze/coolant may cause injury. Hot antifreeze/coolant can burn skin and injure eyes.
3) Wear protective equipment, including safety goggles and gloveswhen operating this equipment. If eyes accidentally contacting with antifreeze/coolantoccurs, call a physician immediatelyand flush eyes with cold water for 30 minutes. If contacting with skin occurs, thoroughly wash the area with soap and water.
4) Do not store ethylene glycol based solutions in open or unlabeled containers. Ethylene glycol causes birth defects in laboratory animals; solution may taste pleasant to animals, but is poisonous to them.
5) Vehicle cooling systems are hot and under pressure. Please do not open the radiator cap and do not remove hoses from a hot system except as directed in this manual. Otherwise it may cause burns to the skin.
6) Do not pressurize the vehicle cooling system above its rated pressure. Or it may result in cooling system failure and the leakage of engine coolant.
7) Never run a vehicle engine without adequate ventilation. Vehicle emissions can cause sickness, injury, or death.
8) Please keep the working place away from lead-acid or other automotive battery.Never smoke and keep away from all appliances that produce sparks or flame. Batteries generate explosive gases during normal operation.
9) This equipment is not designed for any other purposes than testing cooling systems and exchanging used antifreeze/ coolant with new or recycled product.
10) The operator is responsible for complying with any and all applicable laws and regulations governing the use of this type of equipment, as well as disposal of used antifreeze/coolant and used equipment and components.
11) The equipment shall be immediately turned off when the leakage is found and do not use it unless after checking to confirm and troubleshoot the leak.
12) Place an empty container next to it for storage of the liquid leaked in case of a sudden leak.
13) The power supply of this machine is AC220V. Please pay attention to the safety of power connection and follow the instructions to connect correctly.
14) Please check whether the amount of coolant filled is accurate or not after completing the exchange. Otherwise, our company will not be liable for the damage caused to the vehicle due to the inaccurate filling.

PACKAGE

When unpacking, the following machine must be included. If any accessories are damaged or missing, please contact your local distributor.

Packing List:
GD-515 1 Unit

Figure 1

CAUTION

- After unpacking, please check if the machine is in good condition or whether the parts are loose or fall off before using it.

Accessories

20×12 rubber tube	Unit	1	Fluid line clamp	Set	2
21×14 rubber tube	Unit	1	Type A for BMW Water Tank	Set	1
22×16 rubber tube	Unit	1	Type B for BMW Water Tank	Set	1
25×20 rubber tube	Unit	1	Water pipe transfer L	Unit	1
30×25 rubber tube	Unit	1	Water pipe transfer M	Unit	1
40×32 rubber tube	Unit	1	Water pipe transfer S	Unit	1
42×35 rubber tube	Unit	1	Stainless steel hose clamp 18×32	Unit	2
45×38 rubber tube	Unit	1	Stainless steel hose clamp 14×27	Unit	2
49×42 rubber tube	Unit	1	Stainless steel hose clamp 27×51	Unit	2
53×45 rubber tube	Unit	1	25L Oil tank	Unit	1

MACHINE FEATURES

Our electric coolant exchanger can complete the exchange of vehicle coolant in a very short time. Convenient, practical and easy to operate.

1) Clear marks of liquid inlet/outlet hose
2) Vacuum extraction & pressure filling of coolant at the same time
3) Quickly judge the replacement progress of the waste coolant and new coolant : the wave position of the side by side waste and new coolant chambers is clearly marked and accurate.
4) Pressure test for checking leaks as standard configuration to improve maintenance efficiency
5) Multiple adapters fit to large numbers of vehicle in European, American or Asian markets, etc.
6) Improve several functions of the manual model like improving the coolant replacement rate
7) Shorter time plus higher coolant replacement rate

WORKING CONDITIONS AND PARAMETERS

1. Working Conditions

1) Environmental temperature：-20℃~+60℃
2) Relative humidity：＜85%

2. Parameters

1) Voltage：AC220V
2) Motor power：120W
3) Air pressure：5-8Bar
4) Working pressure of leak check：＜1.2Bar
5) Leak check hose length：about 2.5m
6) Inlet and outlet coolant hose length：about 2.5m
7) Waste tank capacity：about 25L
8) Maximum flow rate of pump：about 7.0L /Min
9) Machine dimensions：540*480*1320mm

PRODUCT STRUCTURE

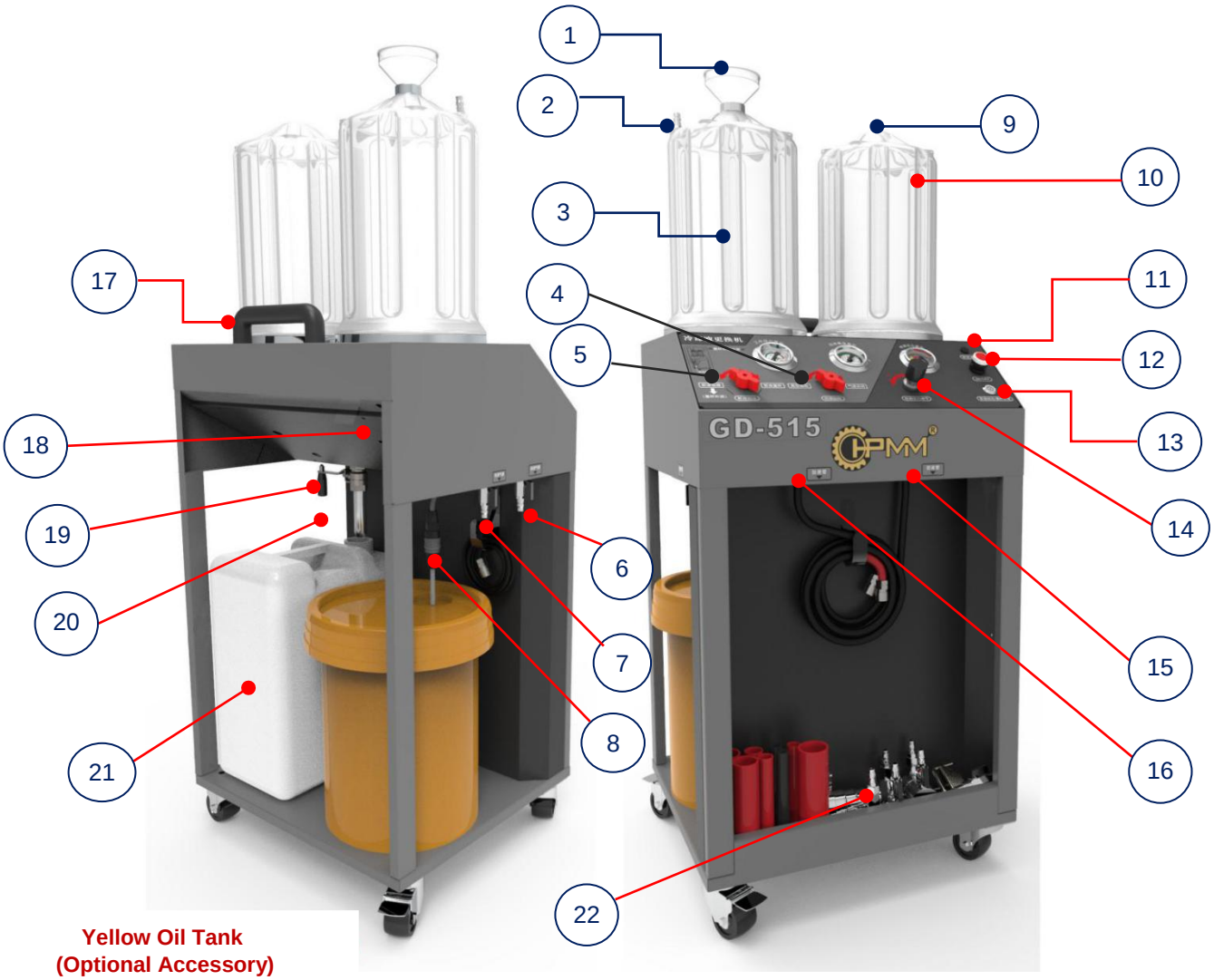

Figure 2

1.New coolant filling port: for manual new coolant refill

2.New coolant filling hole

3.New coolant chamber

4.Waste coolant recycling

5.Fill new coolant

6.Leak check gas inlet

7.Air for Vacuuming

8.New coolant bucket suction tube

9.Waste coolant chamber stopper

10.Waste coolant chamber

11.Fuse

12.ON/OFF

13.New coolant to car/New coolant to chamber

14.Test pressure adjust

15.Coolant returning hose

16.Coolant filling hose

17.Handle

18.Power inlet :AC220V

19.Waste coolant discharge valve

20.Telescopic mechanism of tank seal

21.Waste coolant storage tank

22.Adapters

1. Fill New Tank (two refill options)

CAUTION

- Please refer to the vehicle maintenance manual or consult relevant professional organizations or personnel to determine the volume and type of coolant for the vehicle cooling system.

Option 1: Manually pour the new coolant into the chamber

- From the New coolant filling port (figure 2 -1) and manually pour the new coolant into the chamber according to demand.

Option 2: automatically refill the new coolant via "Fill New Tank" function

- Connect the coolant filling hose (figure 2 -16) to the new coolant filling hole(figure 2 -2) at the top of the new coolant chamber reliably.
- Turn the fill new coolant valve(figure 2-5) to the chamber fillingposition.
- Connect the power inlet (figure 2-18) to the AC220V power supply and turn on the ON/OFF switch (figure 2 -12).
- Turn on the new coolant to car / new coolant to chamber switch(figure 2 -13) to start filling operation.
- Fill new coolant to the tank according to the actual needs. Then end this operation.

2. Cycle Flushing(optional)

- Turn off the engine.
- Disconnect the hose between the radiator and engine
- Select the an adapter(figure2-22) with the same inner diameter as radiator hose.
- Connect the specific filter according to the right figure assembly to the corresponding connectors respectively and hang the filter assembly to the vehicle engine cover.
- Pour a proper amount of cleaning solution into the filter transparent cup.
- Start the car engine, then the cycle flushing operation begins.
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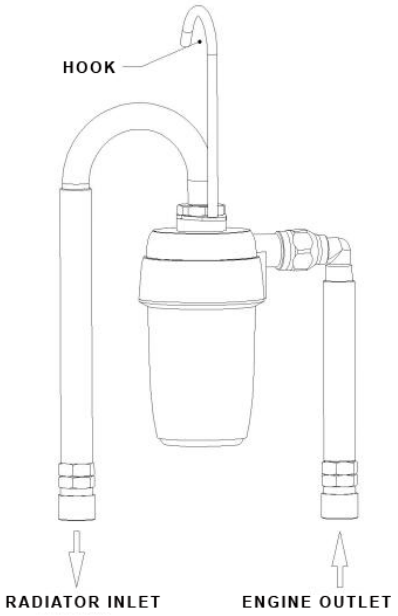

WARNING

- Never run a vehicle engine in a garage or a closed room which lacks a proper exhaust system because engine produces carbon monoxide, which can causedeath in a sealed room.
- Coolant in the vehicle cooling systems is hot with high pressure. Please wear goggles, gloves and protection suit and be really careful when remove theradiator cap and hoses.
- Must check whether the coolant level of the cooling system is within a reasonable range after the exchange. If necessary, the level height can be adjusted by recycling used coolant or filling new coolant function.

3. Rapid Exchange

- Start the car engine and wait for the radiator fan to run for 1-2 minutes before turning off.
- Remove radiator hose from engine or radiator.
- Select the an adapter(figure2-22) with the same inner diameter as radiator hose.
- Connect the coolant filling hose(figure2-16) to the upper water port of the radiator and the waste coolant returning hose(figure2-15) to the water outlet of the engine.
- Connect air source to the air for vacuuming inlet (figure2-7) and turn on the ball valve. The air pressure must be not more than 8bar.
- Turn the fill new coolant valve(figure 2-5) to the new coolant chamber position.
- Connect the power inlet (figure 2-18) to the AC220V power supply reliably and turn on the ON/OFF switch .(figure 2 -12)
- Confirm the connection points again.
- Turn the waste coolant recycling valve(figure2-4) to the “Vacuum extraction” position then turn on the new coolant to car/ new coolant to chamber switch(figure 2 -13) ,the machine starts to perform the quick replacement operation.
- Observing waste coolant discharge pipe outlet located in the waste coolant chamber(figure 2 -10) The exchange process is completed when the color of the coolant is the same as new coolant.
- Turn off the new coolant to car/ new coolant to chamber switch(figure 2 -13) then turn off the waste coolant recycling valve(figure2-4).
- After quick replacement, clean and restore all pipelines of the machine, waiting for the next operation.

CAUTION

- If any problem is found in the process of exchange, the main power supply and air supply of the equipment should be turned off in time
- For models with thermostat, if the coolant drops to a certain temperature, it may cause the exchange to stop. At this point, please first close the ball valve on the adapter (figure 2-22). Then start the engine again, keep the radiator fan runs for 1-2 minutes and turn off the engine. Finally, continue coolant exchange process.

4. Fill Coolant

- Connect the new coolant filling hose(figure2-16) to the upper water port of automobile radiator, waste coolant returning hose(figure2-15) connected with the water outlet of the automobile engine.
- Turn the fill new coolant valve(figure2-5)to choose the way of filling.
- Connect the power inlet (figure 2-18) of the machine to the AC220V power supply firmly and turn on the ON/OFF switch(figure 2 -12).
- Press the new coolant to car/ new coolant to chamber switch (figure 2 -13) and the machine start “Fill Coolant” operation.
- Keep observing the liquid level in the cooling system, end “Fill Coolant” when the liquid level rises between the reasonable range.

CAUTION

- Fill coolant: If it is found that the liquid level of the vehicle cooling system islow after “Rapid Exchange” operation, add new coolant to the vehicle through “Fill Coolant” function.
- If any problem is found in the process of exchange, shut off the machine and cut the air source.
- Operation tips: If need to fill new coolant only, it can also be injected directly from the vehicle coolant expansion tank without disconnecting the cooling system pipeline.

5. Recycle Waste

- Start the engine, keep the radiator fan runs for 1-2 minutes and then turn off the engine.
- Remove the hose from radiator or engine.
- Select the an adapter(figure2-22) with the same inner diameter as radiator hose.
- Connect the coolant filling hose (figure2-16) to the upper water port of the radiator. Connect the waste coolant returning hose(figure2-15) to the water outlet of car engine. Using the waste coolant chamber stopper(figure2-9) to block the top of the chamber.

- Connect compressed air source to the air for vacuuminginlet(figure 2-7) and turn on the ball valve. The air pressure must be not more than 8bar.
- Turn the waste coolant recycling valve (figure2-4) to the “Vacuum extraction” position then turn on the air supply.
- The equipment starts to “Recycle Waste” progress.
- “Recycle Waste” is completed until no waste coolant flow back to the machine.

6. Empty Waste

- Unplug waste coolant chamber stopper(figure2-9)
- Turn onwaste coolant discharge valve(figure 2 -19)drain the coolant in the waste coolant chamber (figure 2 -10)to waste coolant storage tank(figure 2 -21).
- Unscrew the cover of the waste coolant collecting barrel,lift up the Telescopic mechanism of tank seal(figure 2 -20) until its end face is close to the end face of the ball valve.
- At this time, waste coolant collecting barrel is separated from the cover and can be removed from the device.
- Pour the waste coolant into the designated collection point.

7. Check Leaks

WARNING

- During leak check, never pressurize the vehicle cooling system above its rated pressure. Or it may result in cooling system failure. Please obtain maximum pressure of the cooling system from car maintenance manual or consult the relevant professional of the vehicle manufacturers. The maximum pressure our company have learned is not exceed 1.2bar/17.5psi, for reference only.

- Connect the compressed air to the leak check gas inlet (figure2-6) and turn on the ball valves. Then adjust the pressure to the proper range(The maximum pressure our company have learned is not exceed 1.2bar/17.5psi, for reference only. Specific maximum pressure are recommended to refer to the vehicle maintenance manual or consult the relevant professional of the automobile manufacturer.)
- Remove the hose from radiator or engine.
- Select the an adapter (figure2-22) with the same inner diameter as radiator hose and connect it with the water outlet of the engine, close the ball valve on the adapter. If there is an expansion water tank in the cooling system, please use specific line clamp to seal the hose of it.

- Connect the leak check gas inlet special tube (figure2-6 inside) to upper water port of vehicle radiator. Slowly open the ball valve of the adapter at the upper water port position of the radiator and then turn off the leak check gas inlet ball valve.(figure2-6)
- Wait for about 1-3 minutes according to different vehicle models to complete the leak check process. If the pressure remains unchanged, it means no leaks in the cooling system. Otherwise, please check the leakage points.
- Disconnect the air source when the leak checking is finished. Slowly open the ball valve near the air source inlet to release the pressure in the vehicle pipeline to complete the operation.