

MAGNETI MARELLI

MM-OD-02 Máquina chupona neumática para eliminación de aceite

Instrucciones de uso

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Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

- 1. Keep work area clean.** Cluttered areas invite injuries.
- 2. Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
- 3. Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools or extension cords.
- 4. Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
- 5. Avoid Unintentional Starting.** Be sure the air pressure is in the off position when not in use and before making hose connection.
- 6. Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
- 7. Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it would operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any control or switch does not operate properly.
- 8. Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool.
- 9. Do not operate tool if under the influence of alcohol or drugs.** Read warning labels if taking prescription medicine to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
- 10. Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

Note: Performance of this tool may vary depending on variations in air pressure and compressor capacity.

Product specific safety precautions

This equipment is designed be operated by qualified personnel. It should only be operated after reading and understanding the safety warnings and operating procedures in this instruction manual.

- 1. Do not smoke near this equipment.**
- 2. Use in a well ventilated area.**
- 3. When leaks are found in the equipment or hoses, immediately turn the air pressure off and repair the leaks.**
- 4. Do not exceed the recommended operating air pressure. This could damage equipment. See specification on Page 5.**
- 5. Keep a type ABC fire extinguisher nearby in case of fires.**

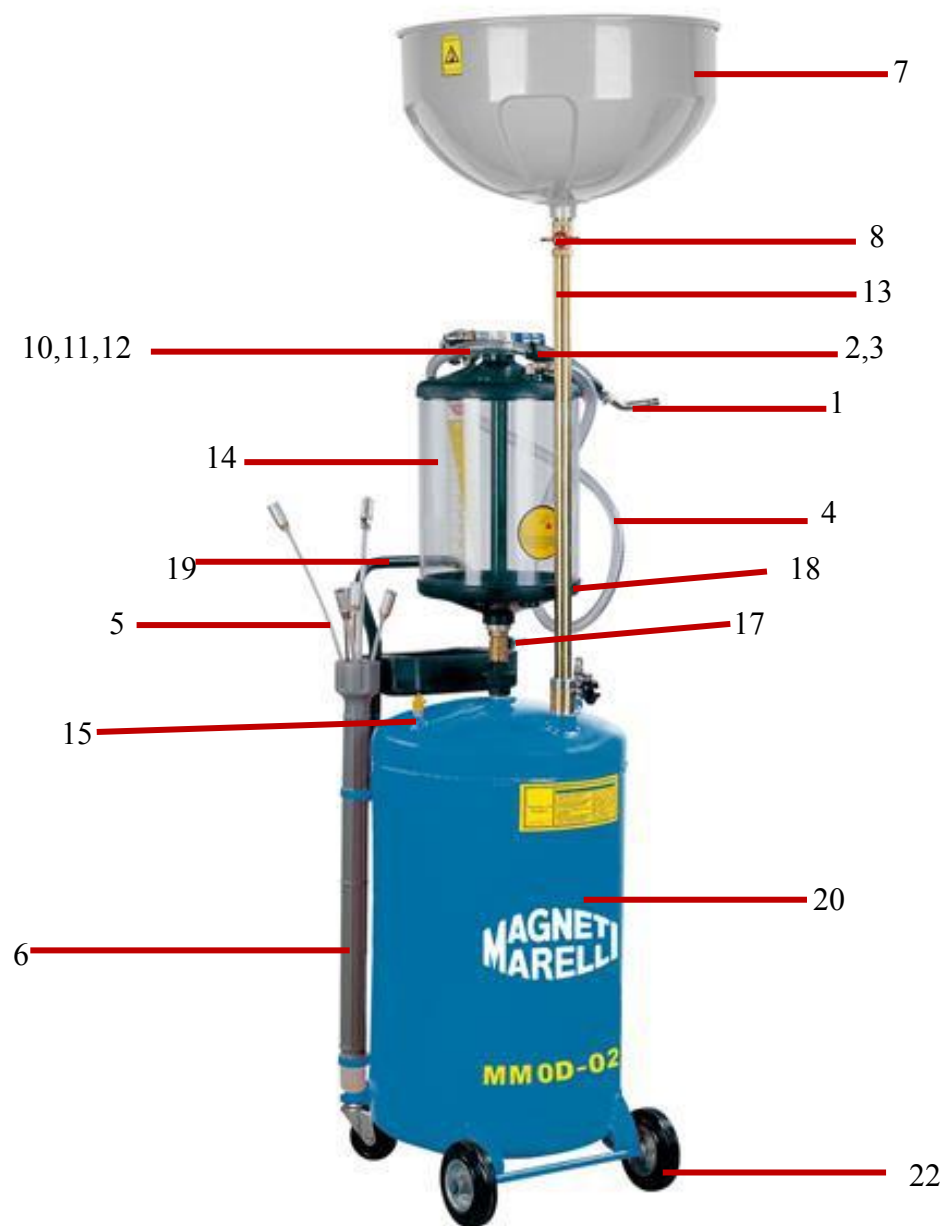


- 6. Always protect your skin and eyes from contact with oil and solvents.**



- 7. Do not start engine during the time of oil extraction. Otherwise it will cause the damage of extraction probes and injuries of people.**
- 8. Be careful for the oil extracted out from the vehicle, as temperature of oil is high, always between 40~60°C**
- 9. Used oil should be properly disposed or recycled. Please contact with your local waste liquid/solid authority for information on recycling.**

Names of Parts:



1.Oil Hook	9.Oil Hose	17. Wing Valve
2. Ball Valve	10. Air Inlet Quick Couple(female)	18. Ring Valve
3.Tube Sleeve	11. Oil Inlet Quick Couple(female)	19. Tool Plate
4. Extraction/Ejection Tube	12..Vacuum Gauge	20. Tank
5. Probes	13. Central Pole	21. Paper Guide Roll
6.Probe Sleeve	14. Cylinder	22. Wheel
7.Tray/pan	15. Safety Valve	
8. Fasten Screw	16. Quick Couple(female)	

Specification:

Functions: Remove and extract waste fluids or oil out from engine and etc. with flexible PVC tube and robust CU probe. Power from compressed air

Air Inlet Pressure:	86~114PSI /6~8Kgs/cm ² (Extraction) 14~28 PSI/1~2KGS (Ejection),2.5 Kg/cm ² S Max.
Air Consumption:	52 Gallons/min (200L/min.)
Vacuum Degree:	0 ~ -12PSI/0~-0.1Mpa (the area between red and green)
Tank Capacity:	21 Gallons/80Liters
Glass Capacity:	2.6Gallons/10Liters
Tray Capacity:	3.4Gallons/13Liters(Ø470mm)
Working Temperature:	40~60°C (for engine oil)
Waste Liquid:	Engine Oil/Fluid
Net Weight:	28KGS
Dimensions:	265*265*455/490*490*185/510*405*840mm
dipstick probe:	
4PCS PVC Probe+2PCS CU Probe	flow rate 0.8~4.3L/Min

Package Contents

Please inspect and look for damages from shipping when package is first received. If the unit is damaged in any way, please contact customer service and include pictures if possible.

In the package, you will find:

- a) One Complete Oil Tank/Reservoir (80L/21Gallon),
- b) One Complete Measuring Glass/Cylinder
- c) One Oil Collecting Bowl
- d) One Complete Extraction/ Ejection Pipe
- e) Probes 6 pcs with sleeve
- f) User's Manual

Operation Instruction**1) Setup****Cylinder**

1. Open the carton and take cylinder complete set out from the carton.
2. Screw the cylinder (No.14 of page 4) on the oil tank with clock-wise direction.
3. Make sure the "Level Sticker" in the right front of the unit.
4. Then screw the "Fasten Nut" fixed on the top of the tank with Cylinder well for making close connection.

Oil Tray

1. Open the carton to take out the oil tray, checking any damage or not. If so, please immediately contact with your distributor.
2. Screw the oil tray (No.7 of page 4) on with clock-wise direction.
3. The tube connected between oil tray and oil tank should be in a vertical position compare to the earth to avoid tube bend.
4. The fasten screw (No.8 of page 4) under oil tray should not on the right upper side of the vacuum gauge (No.12 of page 4) to avoid damage of vacuum gauge when drop down.

2) Preparation

1. Check well connected of all pipes.
2. Making sure all ball valves and switches are closed.
3. Stop the engine of the vehicle.
4. Temperature of oil in the engine should between 40~60°C. Start the vehicle for a while to heat the oil.

3) Vacuum Generation

Operating air pressure: 86~114PSI /6~8KGS

Consumption of air: 52 Gallons/min (200L/min.)

If ONLY extract measuring glass to be vacuum.

1. Turn off all valves BEFORE use.
2. Connect air compressor to air inlet (No.: 2 of Fig.1)
3. Gradually turn on the air inlet valve (No.: 3 of Fig.1 which equipped by customer himself) for vacuum generation.

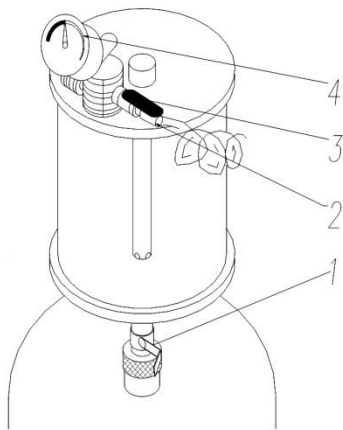


Fig. 1

4. When finger reaching to the MAX. area on the vacuum gauge, turn off the air inlet valve
Estimated time for vacuum generation within 20~30seconds)
5. Remove the pipe of air compressor.(If continuously extraction required, just leave the pipe connected with machine)
6. Now it is ready for extraction

Tips: Valve 1(Fig.1) should be on the position off when only extract vacuum for the cylinder, in order to have a view of the quality and quantity of the waste oil.

If extract to be vacuum for both measuring glass and tank

1. According to the SAME first and second steps described in the previous steps.
2. Open the valve (No.: 1 of Fig.1)
3. Gradually turn on the air inlet valve (No.: 3 of Fig.1) for vacuum generation.

4. When finger reaching to the MAX. area on the vacuum gauge, turn off the air inlet valve (estimated time for vacuum generation within 4~5 minutes)
5. Remove the pipe of air compressor.
6. Now it is ready for extraction

Tips:

1. Benefits for gradually and slowly turn on air inlet valve (No.: 3 of Fig.1) is for reducing air-consumption and a quicker speed for vacuum-generation.
2. Benefits for vacuum generation of both cylinder and oil tank is fasting the speed of oil transferring.
3. We suggest extract both cylinder and tank to be vacuum when the machine is needed to be used to the place without air compressor. That will benefit long time continuously working.

4) Extraction

1. Choose suitable probe (which is the largest diameter one can be inserted into the engine) and tightly connect it to the extraction pipe connector. (refer to Fig.2)

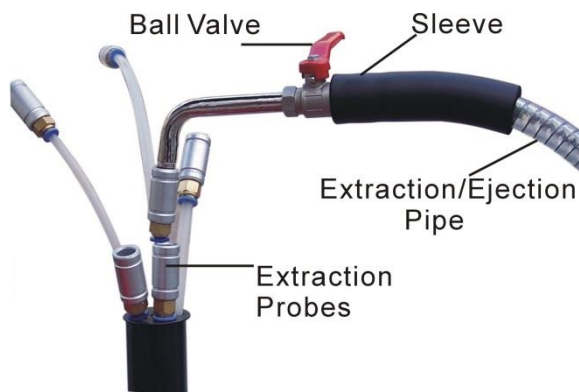


Fig. 2

2. Insert the end of the probe into the engine oil inlet hole of the engine.
3. Turn on the ball valve (Fig.2)
4. If waste oil only extracted into the **cylinder**. Please making sure the valve 1(Fig.1) is closed.
5. If waste oil extracted to the **oil tank** through the cylinder. Please open the valve 1(Fig.1) accordingly. Also the oil tank need to be vacuum before extraction operation.
6. After finish extraction, turn off the extraction ball valve (Fig.2)

Notice: Extraction of hot-oil, max. temperature for oil 60℃. Please do not exceed 60℃.

Please hold the black sleeve to avoid scald.

5) Ejection

Oil ejection from cylinder to underside oil tank

1. Turn on valve 1(Fig 1), if vacuum existed in the tank, and then oil from cylinder will be fast transferred into the tank.
2. If no vacuum existed in the tank, turn on the ball valve (Fig.2) for helping making a quicker transferring of waste oil into the tank.
3. Turn off valve1 (Fig.1) and ball valve (Fig.2) after ejection finished.
4. Continuously repeating above operation steps for oil ejection before oil contained in the cylinder reaching “STOP” level on the sticker of cylinder.(Which is eject oil before cylinder reaching full)

TIPS

It will be faster for transferring of waste oil from transparent measuring glass into oil tank, if vacuum generated in both transparent measuring glass and oil tank.

6) Oil Collection

This function for model no.: HC-2097 only.

Model No.: HC-2090 without oil collection tray.

1. Lift the vehicle up, unscrew oil drain plug of vehicle.
2. Open the wing valve(No.17 of page 4)
3. Open valve 1(Fig.1) for air out.
4. Then oil transferring from oil tray to oil tank.
5. Screw on the drain plug of vehicle.
6. Also waste oil can be extracted out if vacuum existed in the cylinder and oil tank.

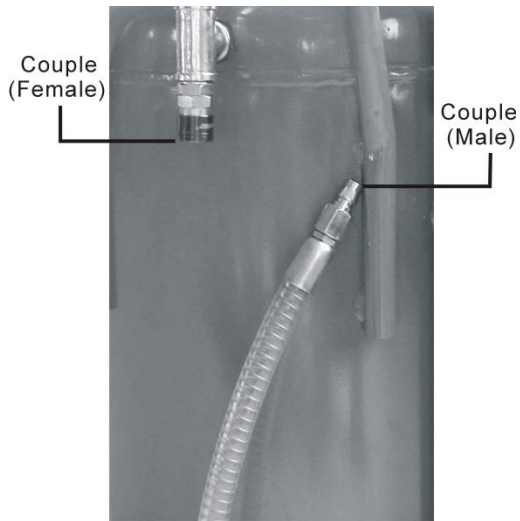


Fig. 4

7) Tank Emptying

When the oil retained in tank near full(see back transparent tube), You need to eject oil out into a disposal tank and resolve the waste oil accordingly to the instruction of local government.

1. Turn off all the valves.
2. Making sure no pressure contained in the oil tank. Otherwise, open the wing valve (No.17 of page 4) for pressure out first to prevent oil spray out.
3. Close the wing valve (No.17 of page 4)and ball valve(No.2 of page 4)
4. Disconnect the couple as Fig.4
5. Disconnect the extraction/ejection tube from the couple(No.11 of page 4)
6. Connect extraction/ejection tube with quick couple(male)(Fig.4)
7. Insert the hook into external disposal tank.
8. Connect air inlet couple (male) with fast couple (female) (Fig.4).
9. Turn on the ball valve on air inlet tube. Turn off the ball valve after certain pressure existed in the tank. Hold the ejection tube to avoid oil spray if air inlet pipe without ball valve for controlling.
10. Turn on ball valve (No.2 of page 4) gradually.
11. Drain oil out completely. Then remove the air inlet tube away.
12. Disconnect extraction/ejection tube with fast couple(male)(Fig.4)
13. Connect couples (Fig.4) well.
14. Turn off all the valves and remove all pipes, oil drum and machine to the original places.

WARNING!!!

- 1. The ball valve 1(Fig.1) must be closed in order to prevent air enter causing transparent measuring glass damaged.**
- 2. Please hold the end of Ejection Hook to avoid waste oil spattering out, cause an injury of eye, dirty of clothes.**
- 3. Before disconnect extraction/ejection tube with fast couple(male)(Fig.4), making sure no any pressure existed in the tank. Otherwise, oil will spray out.**

Safety Device

A safety valve (No.15 of page 4) will release pressure when pressure is **over 35PSI/2.5kgs** during ejection.

Trouble Shooting

A: Vacuum gauge don't work

- a) Check the air pressure: standard air pressure through "air inlet valve "should between **86~114PSI /6~8KGS**; Air consumption is 52 Gallons/min (200L/Min).
- b) Make sure all the valves are on the correct place.
- c) Check vacuum operator-to-tank seal.

B: There is a figure showed on the vacuum gauge but the machine don't working and extracting

- a) Check extraction hose-to-probe seal.
- b) Temperature of waste oil is too low or not?(ordinary temperature of oil should between 40~50°C.
- c) Extract grease oil or other oil with high density, which is, avoided.
- d) Make sure that extraction pipe open.
- e) Make sure that extraction pipe do not block off and probe don't touch the bottom of tank.

Ordinary Maintenance

- a) Check leakage of the machine regularly.
- b) Pipe to pipe connection should be tightly closed together.
- c) It's necessary to release the waste oil as soon as possible in case of the corroding of

tank.

- d) If you work for suction oil for a long time (ordinary one year), please check the adapter of the probe for leakage.

Notes

- a) Application for oil change with probe: for metal probe big suction capacity: 3.1L/Min, small suction capacity 0.8L/Min; for plastic probe the biggest one suction capacity 4.3L/Min, the smallest one 0.8L/Min.
- b) If you work for suction oil for a long time, please check the adapter/O seals of the cylinders/adaptors for leakage.

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