

# PNEUMATIC OIL EXTRACTOR INSTRUCTION & MAINTENANCE MANUAL



NO.9TVP1-65A-B

Please wear proper safety gear while working.



## DESCRIPTION OF THE MACHINE

1. Fastvacuum speed, capable of high negative pressure, multi-purpose equipment.
2. High quality cylinder, higher intensity, high grade of transparency as well as high temperature resistance (able to withstand 80°C & negative pressure without deforming). Transparent cylinder allows oil observation and measurement.
3. Use compressed air as power source; guarantee the safety in use, Eco friendly and low power consumption.
4. Vacuum cylinder and oil tank at a same time, increase oil extraction speed.
5. Different diameter of oil suction probes to meet the need of different type of cars.
6. Height adjustable oil tray lift, can be fix to desirable height.
7. Can be used with other mechanical engine oil, lubricants as well as temporary storage. Brake fluid, gasoline, diesel and other liquid contains methanol and ketones or flammable is strictly prohibited.

Function	Collect waste oil from vehicle gear box or engine
Power	Compressed air
Air consumption	About 200L / min.
Air inlet pressure(for vacuum)	87~116 PSI / 6~8 Bar
Oil ejection pressure	10~14 PSI / 0.7~1 Bar
Vacuum degree	0 ~ -14 PSI / 0~-1 Bar
Tank capacity	65 L
Perspex cylinder capacity(Practicable/total)	9 / 10 L
Collect tray capacity	16 L
Height	About 1355mm ~ 1635 mm
Working temperature	40~60°C (for engine oil)

## IN THE PACKAGE, YOU WILL FIND:

- a) One complete oil tank/reservoir
- b) One complete measuring glass/cylinder
- c) One oil collecting bowl/tray
- d) One strain
- e) Probes 6 pcs with sleeve
- f) User's manual

## **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.

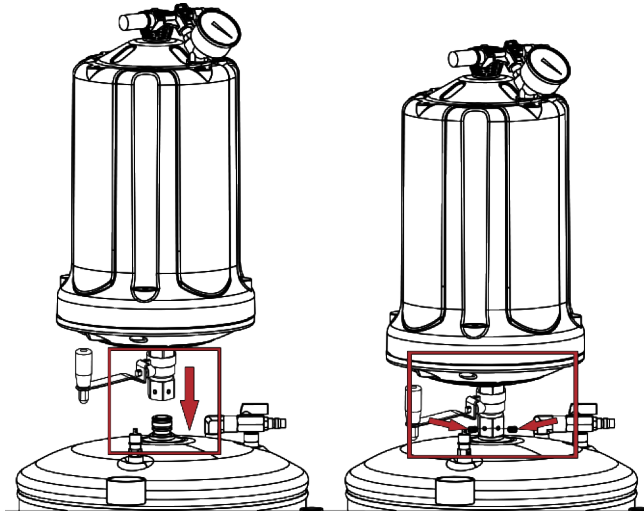
1. Observe work area conditions. Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
2. Avoid Unintentional Starting. Be sure the air pressure is in the off position when not in use and before making hose.
3. Stay alert. Watch what you are doing, use common sense. Do not operate any tool when you are tired.
4. 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.
5. 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.
6. 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.
7. 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.
8. Use in a well ventilated area. Firework is strictly prohibited during operation, keep away from heat, high voltage, flammable and explosive place.
9. Once leakage is found in the hose or other components during operation, turn off air compressor immediately, conduct a detailed inspection and proceed with troubleshooting.
10. Do not exceed the recommended operating air pressure. This could damage equipment.  
Always protect your skin and eyes from contact with oil and solvents.
11. Do not start engine during the time of oil extraction. Otherwise it will cause the damage of extraction probes and injuries of people.
12. Be careful for the oil extracted out from the vehicle, as temperature of oil is high, always between 40~60°C.

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

## OPERATION INSTRUCTION

### Setup Cylinder

1. Refer to above FIG.1 install the cylinder to the oil tank base with ejection ball valve handle is perpendicular with the machine.
2. Tighten with inside hexagonal screw.



(Fig 1)

### Oil Tray

1. Open the carton to take out the oil tray, check to see if there is any damage.
2. Pull out the lift pole and Screw the oil tray on with clock-wise direction.
3. Take out the cylinder, connect it to the oil tank with ball valve handle in vertical seating.
4. Fix the cylinder in the correct direction with the inside hexagonal screw.
5. Ensure the lift pole is perpendicular to the equipment.
6. For the convenience in installation, please lift up the lift pole in proper height fixing with a locating ring to avoid rubbing against between cylinder and oil tray.

### 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.

### Vacuum Generation

1. Operating air pressure: 6~8 bar / 87~116 PSI
2. Consumption of air: 200L / Min



## **IF ONLY EXTRACT MEASURING GLASS/CYLINDER TO BE VACUUM.**

1. Turn off all valves BEFORE use.
2. Connect the air compressor to the air inlet ①, gradually turn on the air inlet ball valve for vacuumization.
3. Gradually turn on the air inlet valve (which equipped by customer himself) 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 20~30 seconds)
5. Turn off air source after completion (To ensure the suction speed remains in stable negative pressure for continuously extraction required. please continue vacuum generation)
6. Now it is ready for extraction Tips: ball Valve 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 ONLY EXTRACT MEASURING GLASS/CYLINDER TO BE VACUUM.**

1. According to the SAME first and second steps described in the previous steps.
2. Open the valve ③.
3. Gradually turn on the air inlet valve 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.

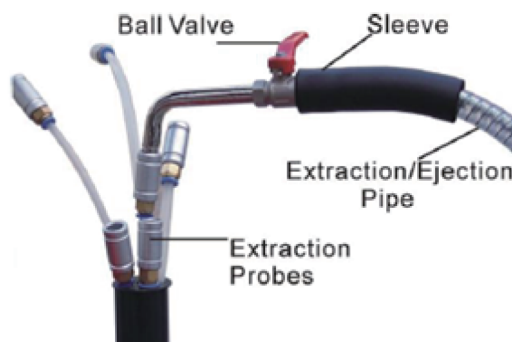
**Notice: Under a working condition without air source. Please pump the tank with vacuum air before use.**

### **Tips:**

1. Benefits for gradually and slowly turn on air inlet valve is for reducing air-consumption and a quicker speed for vacuum-generation.
2. Benefits for vacuum generation of both cylinder and oil tank is fastening 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.

## **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.



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

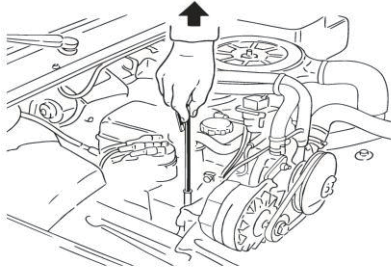


Fig.2

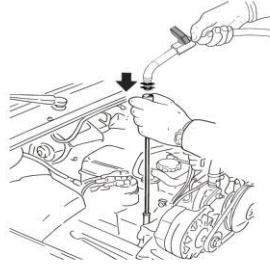


Fig. 3

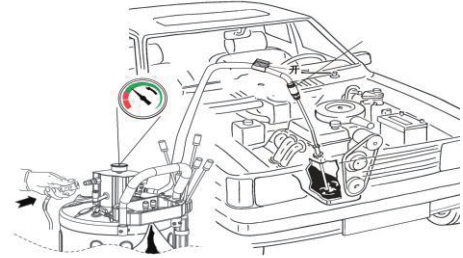


Fig.4



**Oil temperature higher than 80°C will cause seriously damage to the components, in worst case it could bring to machine failure.**

## EJECTION

### ***OIL EJECTION FROM CYLINDER TO UNDERSIDE OIL TANK***

1. When the oil level reached cylinder 'STOP' warning line, please empty the cylinder with oil ejection.
2. Turn on ball valve ③, at the same time turn on mini ball valve from the hose ⑥ to release cylinder pressure and oil drain into the oil tank.
3. Turn off valves ③ and ⑥ after ejection.

### ***MORE ABOUT OIL EJECTION FROM CYLINDER***

1. Turn on valve ③, 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 ⑥ for helping making a quicker transferring of waste oil into the tank.
3. Turn off valve ③ and ball valve ⑥ 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.**

## **OIL COLLECTION**

1. Lift the vehicle to proper height.
2. Move the oil extractor below the car engine, oil tray position right under the vehicle oil drain hole.
3. Ensure ball valve ⑤ is off.
4. Open the wing valve ⑦ (by rotating it in anticlockwise direction, vertical sitting as open).
5. Open the mini ball valve ④, release tank pressure.
6. Waste oil is transfer from the oil tray to the oil tank.

## **TANK EMPTYING**

**When the oil retained in tank near full(see oil window), 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. Hold the ejection hook and insert it into the external disposal tank.
3. Connect the air compressor with the air inlet ④.
4. Turn on the mini ball valve ④ gradually, adding tank pressure, turn off air compressor when pressure reach to desired pressure. ( The safety valve will automatically release pressure when the tank pressure reach 1.0 bar / 14PSI, turn off the air compressor immediately and quickly drop the tank pressure below 1.0bar / 14PSI, otherwise it could lead to serious incident).
5. Turn on FIG.5 wing valve ⑤ for oil ejection.
6. Cut off air source after ejection, empty tank pressure and turn off all valves.
6. Waste oil is transfer from the oil tray to the oil tank.

## **WARNING!**

1. The ball valve ③ (Fig.5) 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), making sure no any pressure existed in the tank. Otherwise, oil will spray out.

## **TROUBLE SHOOTING**

1. Vacuum gauge don't work
  - Check the air pressure: standard air pressure through "air inlet valve "should between 87~116 PSI / 6~8 bar; Air consumption is about 200L / Min.
  - Make sure all the valves are on the correct place.
  - Check vacuum operator-to-tank seal.
2. There is a figure showed on the vacuum gauge but the machine don't working and extracting
  - Check extraction hose-to-probe seal.
  - Temperature of waste oil is too low or not.(ordinary temperature of oil should between 40~60°C.)
  - Extract grease oil or other oil with high density, which is, avoided.
  - Make sure that extraction pipe open.
  - Make sure that extraction pipe do not block off and probe don't touch the bottom of tank.
  - Make sure that the silencer haven't been blocked.

## **INSPECTION, MAINTENANCE, AND CLEANING**

1. Before each use, inspect the general condition of the machine Check for loose screws, air and oil leakage, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. Do not 11 use damaged equipment.
2. Periodically recheck all hoses, valves, nuts, bolts, and screws for tightness.
3. For a long time to use, please check the adapter/O seals of the adaptors for leakage.
4. It's necessary to drain the waste oil as soon as possible in case of the corroding of tank.
5. Store in a clean and dry location.
6. All maintenance and repairs must be completed by a qualified technician.



**PARTS DIAGRAM**

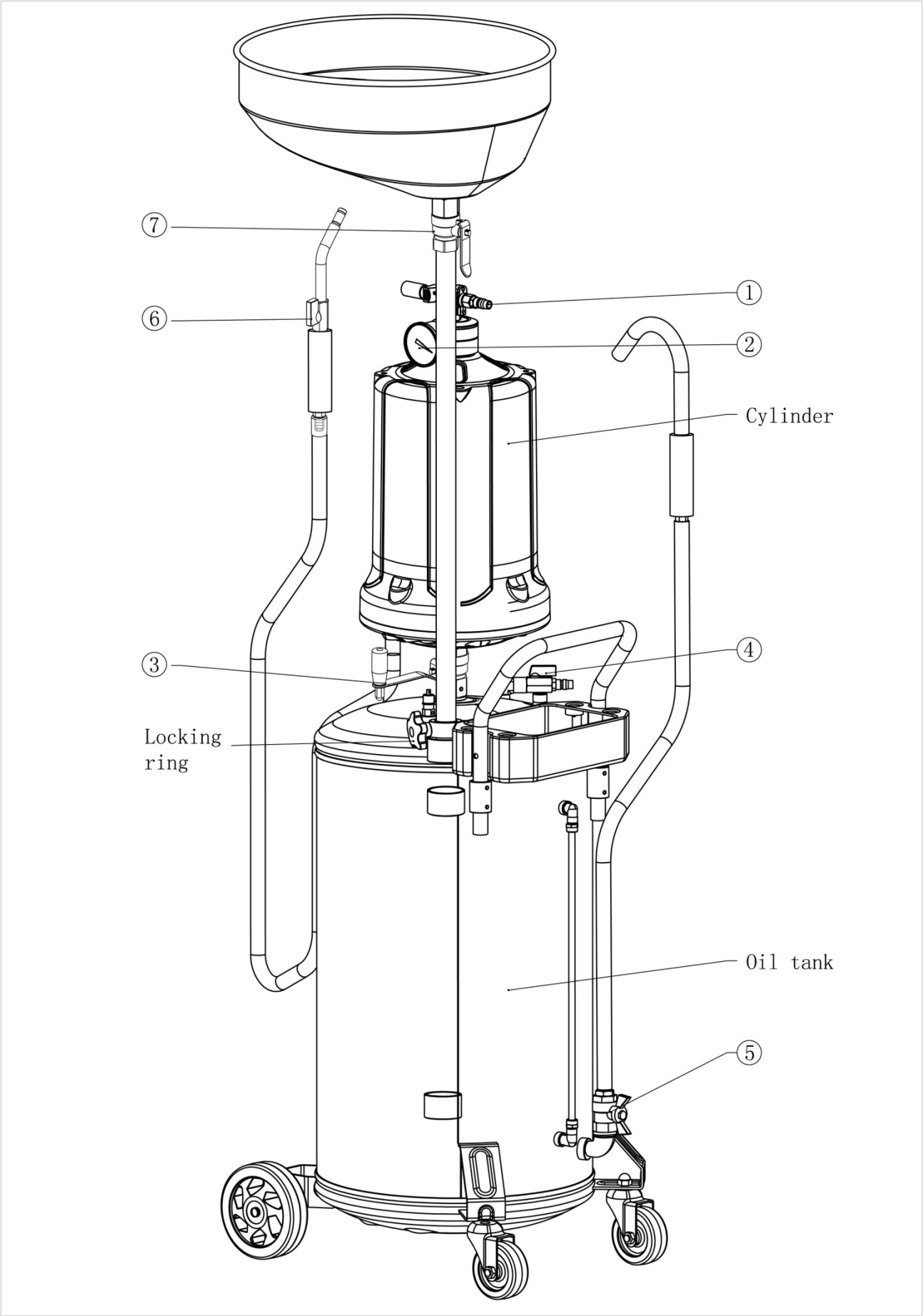
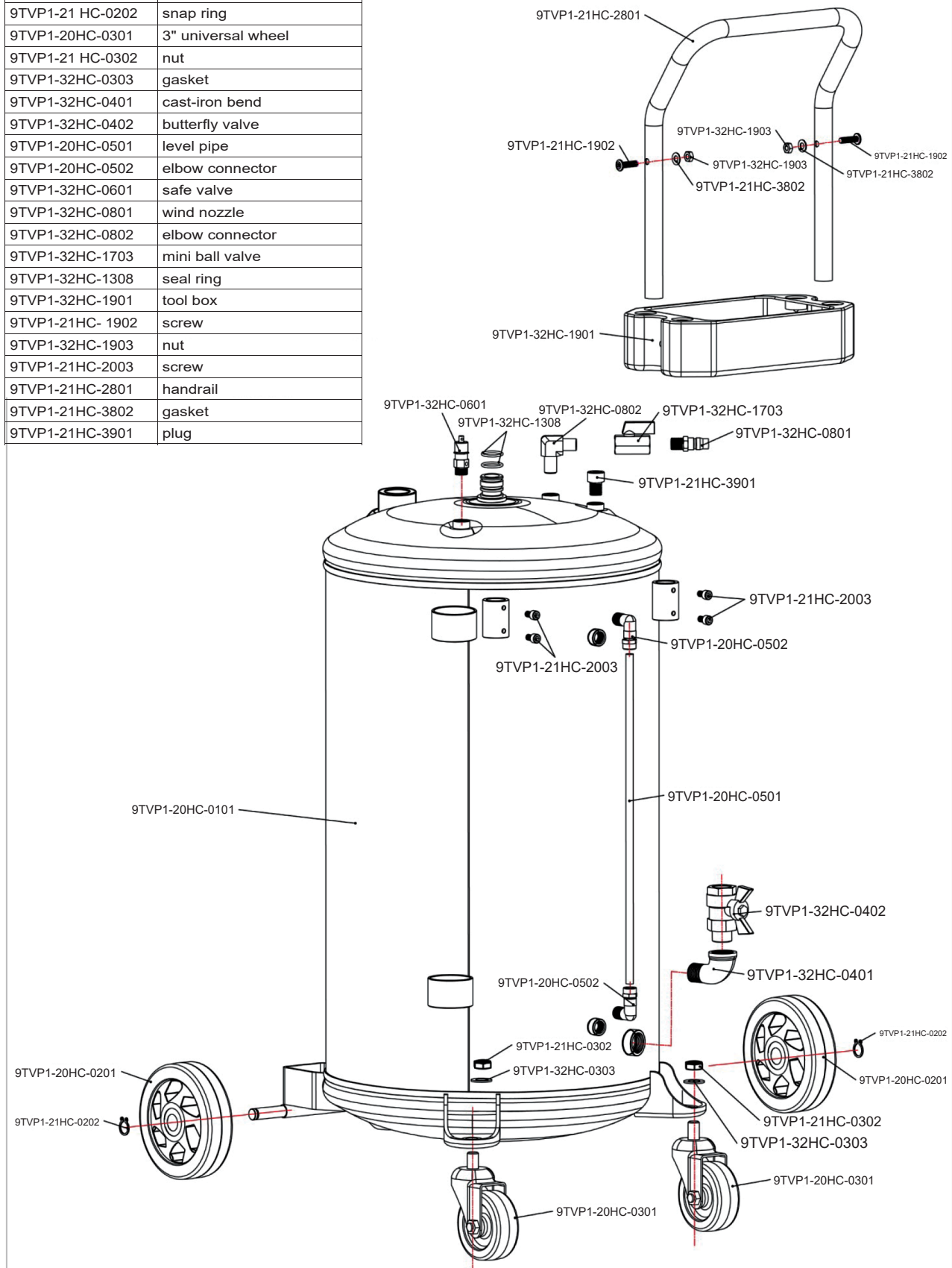
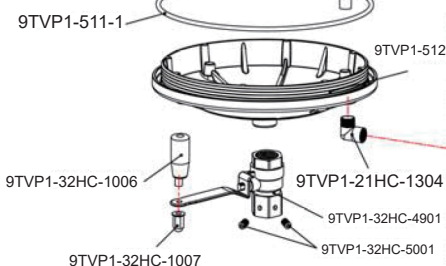
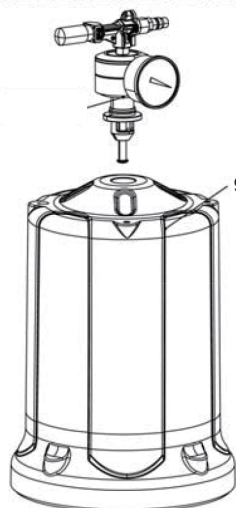
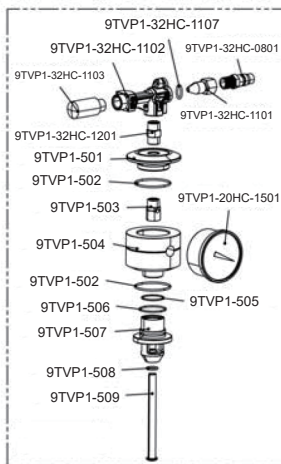
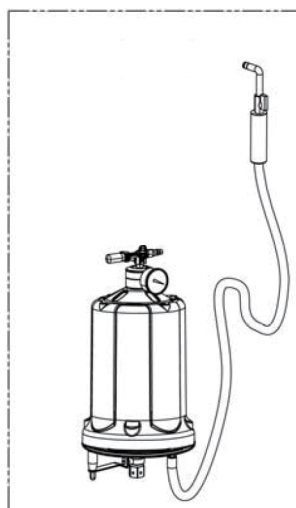


FIG.8

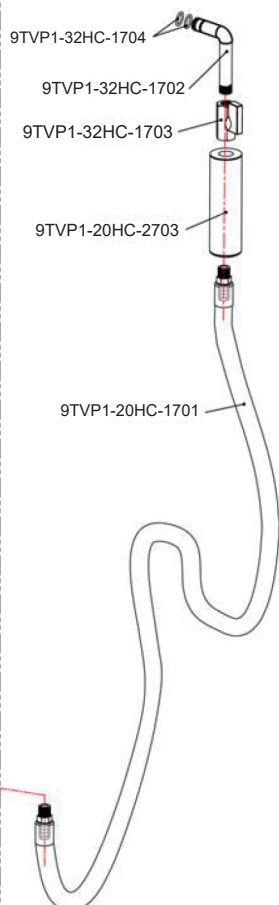
## PARTS LIST

NO.	DESCRIPTION
9TVP1-20HC-0101	2097 tank
9TVP1-20HC-0201	5" directional wheel
9TVP1-21 HC-0202	snap ring
9TVP1-20HC-0301	3" universal wheel
9TVP1-21 HC-0302	nut
9TVP1-32HC-0303	gasket
9TVP1-32HC-0401	cast-iron bend
9TVP1-32HC-0402	butterfly valve
9TVP1-20HC-0501	level pipe
9TVP1-20HC-0502	elbow connector
9TVP1-32HC-0601	safe valve </td
9TVP1-32HC-0801	wind nozzle
9TVP1-32HC-0802	elbow connector
9TVP1-32HC-1703	mini ball valve
9TVP1-32HC-1308	seal ring
9TVP1-32HC-1901	tool box
9TVP1-21HC- 1902	screw
9TVP1-32HC-1903	nut
9TVP1-21HC-2003	screw
9TVP1-21HC-2801	handrail
9TVP1-21HC-3802	gasket
9TVP1-21HC-3901	plug

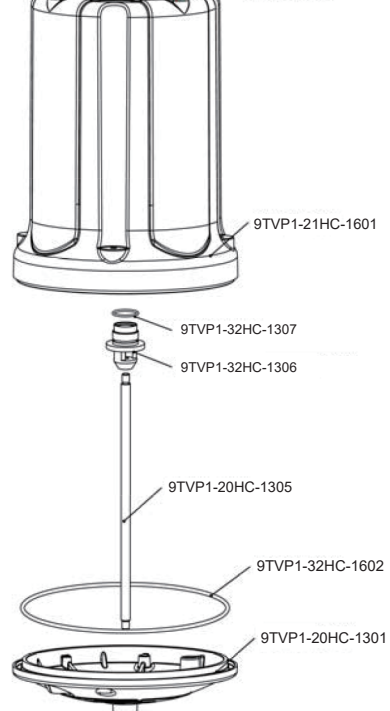
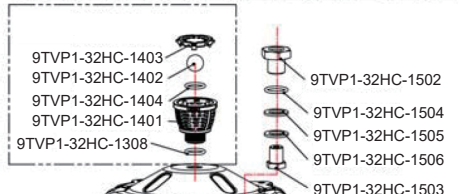
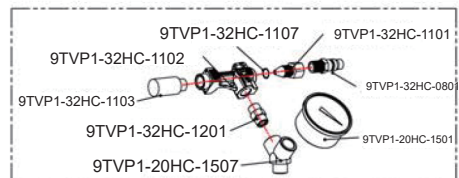




NO.	DESCRIPTION
9TVP1-501-512	cylinder assy
9TVP1-32HC-0801	wind nozzle
9TVP1-32HC'-1101	Bolt
9TVP1-32HC-1107	seal ring
9TVP1-32HC'-1102	vacuum generator
9TVP1-32HC-1103	silencer
9TVP1-32HC-1201	bead valve
9TVP1-501	anti explosion cover(metal)
9TVP1-502	seal ring
9TVP1-503	connector
9TVP1-504	anti explosion seat(metal)
9TVP1-20HC 1501	vacuum au ge
9TVP1-505	seal ring
9TVP1-506	seal ring
9TVP1-507	anti explosion location mace
9TVP1-508	seal ring
9TVP1-509	connecting rod
9TVP1-0801-509	anti explosion valve assy
9TVP1-510	modular cylinder
9TVP1-21 HC- 1302	absorbing oil puiipi
9TVP1-511-1	seal ring
9TVP1-512	cylinder base
9TVP1-32HC-1006	hand lever
32HC-1007	nut
9TVP1-21HC-1304	elbow connector
9TVP1-32HC-4901	ball valve
9TVP1-32HC-5001	screw
9TVP1-20HC-1701	extraction oil hose
9TVP1-32HC-1702	oil extraction hook
9TVP1-32HC-1703	G 14 mini ball valve
9TVP1-32HC-1704	seal ring
9TVP1-20HC-2703	handle sleeve
9TVP1-20-512	Oil suction hose with hook



NO.	DESCRIPTION
9TVP1-20HC-1301	cylinder base
9TVP1-20HC-1305	connecting rod
9TVP1-32HC-1306	connector
9TVP1-32HC'-1307	seal ring
9TVP1-32HC'-1308	seal ring
9TVP1-32HC-1401	anti explosion valve seat
9TVP1-32HC-1402	steel ball
9TVP1-32HC-1403	anti explosion valve cover
9TVP1-32HC'-1404	seal ring
9TVP1-1308-1404	anti explosion valve assy
9TVP1-32HC-1502	connector
9TVP1-32HC-1503	hollow bolt
9TVP1-32HC-1504	seal ring
9TVP1-32HC-1505	rubber gasket
9TVP1-32HC-1506	metallic gasket
9TVP1-2HC-1601	modular cylinder
9TVP1-32HC-1602	seal ring
9TVP1-32HC'-0801	Find nozzle
9TVP1-32HC-1101	Bolt
9TVP1-32HC- 1107	seal ring
9TVP1-32HC-1102	vacuum generator
9TVP1-32HC'- 1103	silencer
9TVP1-32HC-1201	bead valve
9TVP1-20HC-1501	vacuum gauge
9TVP1-20HC-1507	Y-connector
9TVP1-0801-1507	complete vacuum generator



NO.	DESCRIPTION
9TVP1-32HC-2201	probe sleeve
9TVP1-32HC-2202	oil cup
9TVP1-20HC-2301	oil extraction probe(Ø7x1000 PA)
9TVP1-20HC-2302	oil extraction probe(Ø5x700 PA)
9TVP1-20HC-2011	oil extraction probe(Ø6x700 PA)
9TVP1-20HC-2304	oil extraction probe(Ø8x700 PA)

NO.	DESCRIPTION
9TVP1-20HC-1801	oil drain hose
9TVP1-21HC-1802	oil drain hook
9TVP1-20HC-1803	handle sleeve
9TVP1-1801-1803	nil drain hose with hook

