

Brake Fluid Exchanger

Operational Manual

Model NO.:GS-432



Specifications

Item	Description
Functions	Remove, and replace fluid from most types and models of vehicle brake systems, Also removes trapped air.
Working Air Pressure	10 to 30 PSI
Air Inlet	1/4" male quick couple
Tank Fluid Capacity	6.0 Liters
Pressure Regulator	Manual control dial, locking
Pressure Gauges	0~140PSI
Brake Fluid Filler Hose	ø8mm(dia.), reinforced polyurethane with ball valve and quick coupler at one end
Packing dimension	500×465×545mm
Collection Bottles	1000 ml
Net/gross Weight	9/11 kg
Accessories	Master Cylinder Adapters kit: See Parts List at the end of this manual for details

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram, Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

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. Read all instructions before using this tool!

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. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye and ear protection.** Always wear ANSL approved impact safety goggles.

Wear an ANSI approved dust mask or respirator when working around chemical dusts and mists

8. **Do not overreach.** Keep proper footing and balance at times. Do not reach over or across running machines.
9. **Maintain tools with care.** Inspect tool cords and hoses periodically and, if damaged, have them replaced, or repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before operating.
11. **Avoid unintentional starting.** Be sure the air pressure is in the off position when not in use and before making hose connections.
12. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
13. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will 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 operate properly.
14. **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.
15. **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.
16. **Pacemaker safety warning.** People with pacemakers should consult their physician(s) before using this produce. Electromagnetic fields in close proximity to a heart pacemaker could cause interference to, or failure of the pacemaker. In addition, people with pacemakers should adhere to the following:
 - Caution is necessary when near the coil, spark plug cables, or distributor of a running engine. The engine should always be off if adjustments are to be made to the distributor.
17. **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 capability.

Brake Fluid Exchanger Safety Precautions



Caution: This equipment is designed to be operated by qualified and trained personnel. It should only be operated after reading and understanding the safety warnings and operating procedures in this instruction manual and the vehicle's service manual.

1. Wear ANSI approved safety goggles.



2. Do not smoke near this equipment. Keep a type ABC fire extinguisher nearby in case of fires.



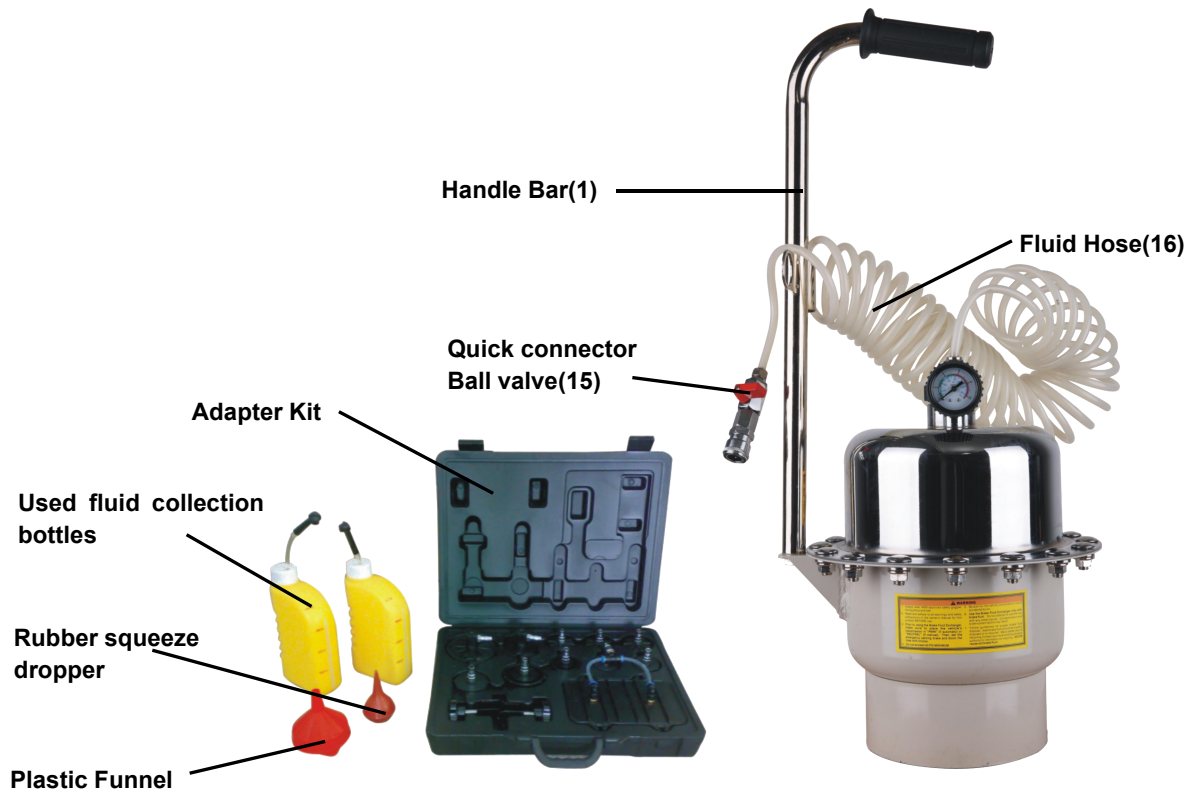
3. Use in a well ventilated area.
4. When leaks are found in the equipment or hoses, immediately turn the air pressure off and repair the leaks.
5. Immediately clean up any fluid spills or leaks.
6. Do not exceed the recommended operating air pressure. This could damage equipment. See Specifications on page 2.
7. Do not use any cleaning compounds in this system.
8. Prior to using the Brake Fluid Exchanger make sure to read and understand all warnings, safety precautions, and instructions as outlined in the vehicle manufacturer's service manual. Every vehicle has specific brake bleeding requirements. It is beyond the scope of this manual to properly describe the correct procedure for each vehicle.
9. Prior to using the Brake Fluid Exchanger, make sure to place the vehicle's transmission in "PARK"(if automatic) or "NEUTRAL" (if manual). Then, set the emergency parking brake and block the tires with chocks.
10. Use the Brake Fluid Exchanger only with brake fluid. Do not attempt to use the tool to siphon any other liquids. Contamination of brake fluid and possible brake system failure may result.
11. Follow guidelines for proper brake fluid disposal. Used brake fluid should be properly disposed of or recycled. Many states require recycling. Contact your local solid/liquid waste authority for information on recycling. Do not reuse old brake fluid.
12. Do not use pressurized air to blow off brake dust. Only use brake parts cleaner to clean dust off of the brake calipers.
13. Be alert for hot brake components and other hot vehicle components to avoid accidental burns.
14. Some brake pads contain asbestos. Asbestosis, a chronic lung inflammation, can result from prolonged inhalation of asbestos particles. Accordingly, wear appropriate ANSI approved respiratory devices and proper protective clothing when working near any brake pads.
15. Always keep distance brake fluid from contacting the vehicle's paint finish. Brake fluid will damage the paint finish on vehicles.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be under-stood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

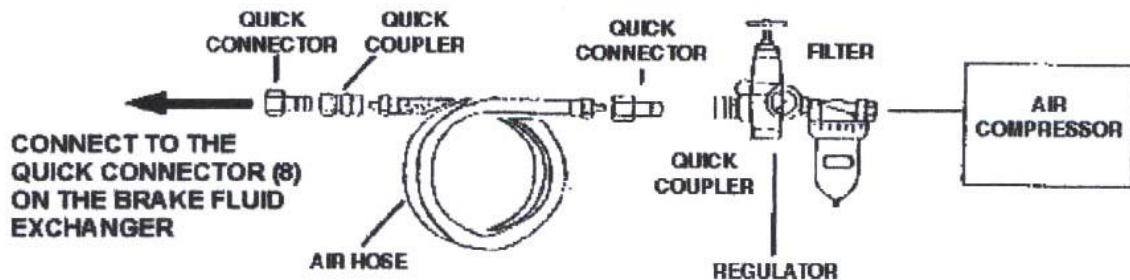
When unpacking, check to make sure the following parts are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.



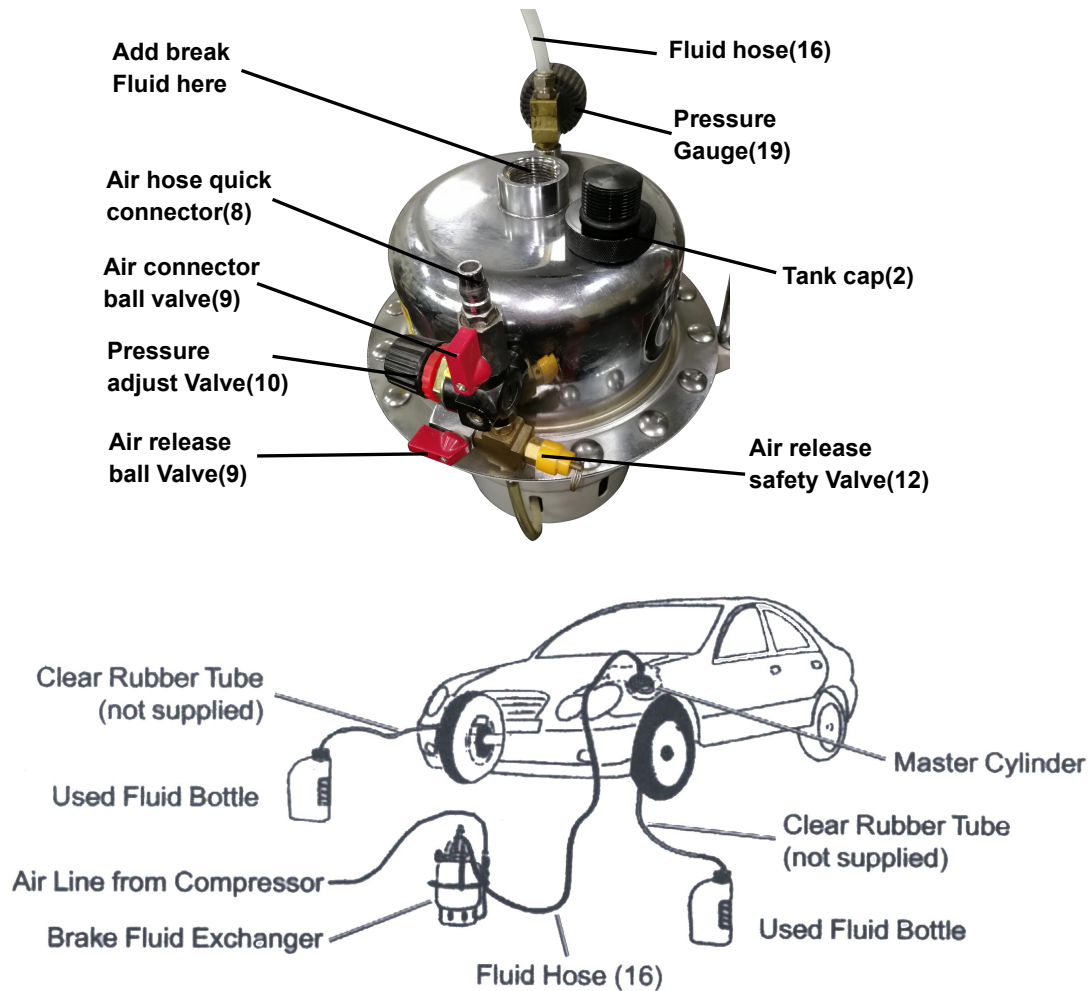
Operation

Preparation

1. Lift the vehicle up and on secure vehicle stands in a well ventilated area.
2. Set vehicle emergency brake and turn engine off.
3. Locate the drain connection on the brake cylinders. Refer to the vehicle manufacturer's maintenance manual for their location.
4. Turn on the air compressor (not supplied) and place its hose next to the Brake Fluid Exchanger (The air compressor should have a moisture filter installed on it. See illustration below.)




Controls and Indicators











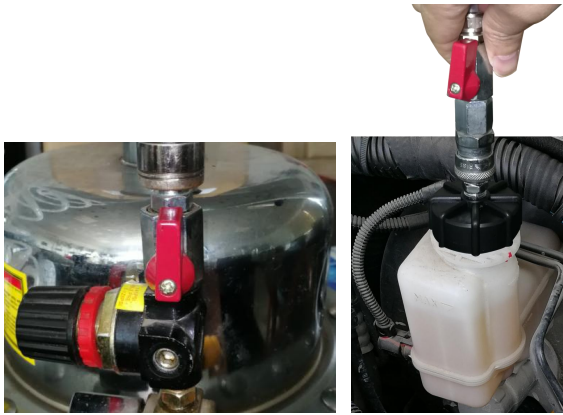


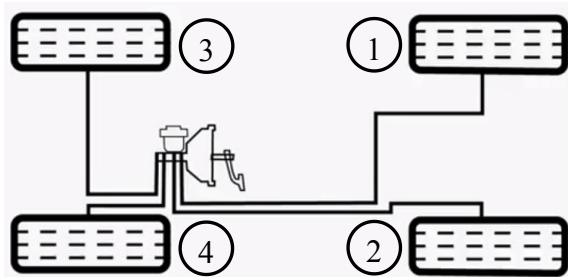

Bleeding Brakes and Adding New Fluid



WARNING: The vehicle engine must never be started in a closed garage, or any other sealed structure. Carbon monoxide is produced during operation and is deadly in a closed environment. Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have any of these signs get fresh air immediately.


Step	Content	Figure
1	Unscrew and remove the Tank Cap (2), then pour in the appropriate amount of new brake fluid. Refer to the vehicle manufacturer's service manual for the correct amount and type of fluid. Screw in the Tank Cap (2) tightly.	

Step	Content	Figure
2	Open the engine hood and find the brake fluid pot. Remove the brake fluid pot Lid.	
3	Take off the brake fluid from the brake fluid pot about 2/3 with Rubber squeeze dropper.	
4	Open the Adapter Kit and find the Adapter Lid that looks like, and best fits, for brake fluid pot. Secure the Adapter Lid to the brake fluid pot.	
5	Insert the Fluid Hose (16) Quick Connector (15) onto the brake fluid pot Adapter Lid.	
5	Connect the air line hose (not supplied) to the Air Hose Quick Connector (8) on the Brake Fluid Exchanger. Make sure that it's Ball valve (9) is in the closed position.	
6	<p>Pull out on the Pressure Adjust Valve (10) knob, and while viewing the Pressure Gauge (19), turn the knob to adjust the Tank pressure to between 20 to 30 PSI.</p> <p> Caution: Never exceed 30 PSI or damage may occur to equipment and connection hoses.</p>	 

Step	Content	Figure
7	<p>Slowly open the Quick connector Ball valve(15) and Ball valve(9) on top of the master cylinder, This begins the process of forcing the new fluid in, and while oil fluid out and into the Used Fluid Bottles. Check for leaks at all connection Points. If leaks are found, turn the Ball valve (9) on the Master Cylinder to the OFF (sideways) position. Correct the leaks and continue.</p>	
8	<p>Lift the vehicle up, Remove the dust cap of brake fluid outlet from the tire, and insert the Used fluid collection bottle connect to the brake fluid outlet. Use a wrench to loosen the screw of brake fluid outlet. It means the brake fluid changing finished till the color of the brake fluid from the oil outlet hose changed from cloudy to clear. Then lock the screw of brake fluid outlet and Remove the Used Fluid Bottle.</p> <p> Note: Please refer to the picture on the right and drain the brake fluid in turn.</p>	 
9	<p>Empty the Used Fluid Bottles into a fluid recycle tank, or in other bottles for proper disposal.</p>	<p> Note: Follow guidelines for proper brake fluid disposal. Used brake fluid should be properly disposed of or recycled. Many states require recycling. Contact your local solid/liquid waste authority for information on recycling. Do not reuse old brake fluid.</p>

Steps When Finished Bleeding Brakes and Adding New Fluid

1. Replace the original Brake fluid pot lid.
2. Remove the air input line from Air Hose Quick Connector (8) on the Tank.
3. Open the Air release Ball Valve (9) on the Tank, and pull on the Air Release Safety Valve (12) to depressurize the Tank.
4. Empty the Used Fluid Bottles into a fluid recycle tank, or in other bottles for proper disposal.

 **WARNING: Before driving the vehicle, depress the brake pedal repeatedly until the brake pedal feels firm. Check the brake calipers for leaks. Then, test the brakes thoroughly at slow speed before operating the vehicle under normal conditions.**

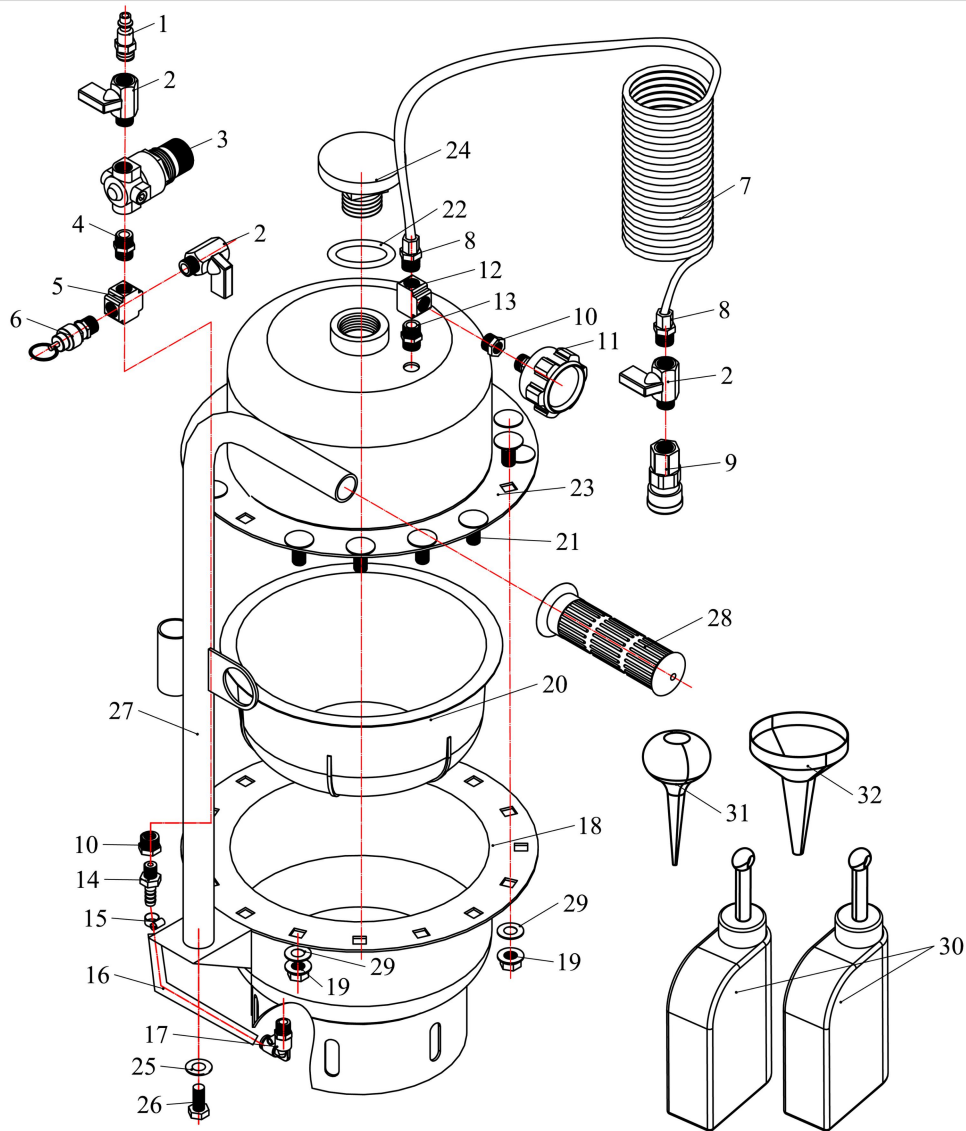
Maintenance



Caution: Before performing any maintenance on the Brake Fluid Exchanger, verify that the Brake Fluid Exchanger is non-pressure.

1. Clean up any brake fluid oil that may have spilled.
2. Wipe down the Brake Fluid Exchanger components with a cloth.
3. Store the unit in a clean and dry location.

Brake fluid Exchanger Parts List

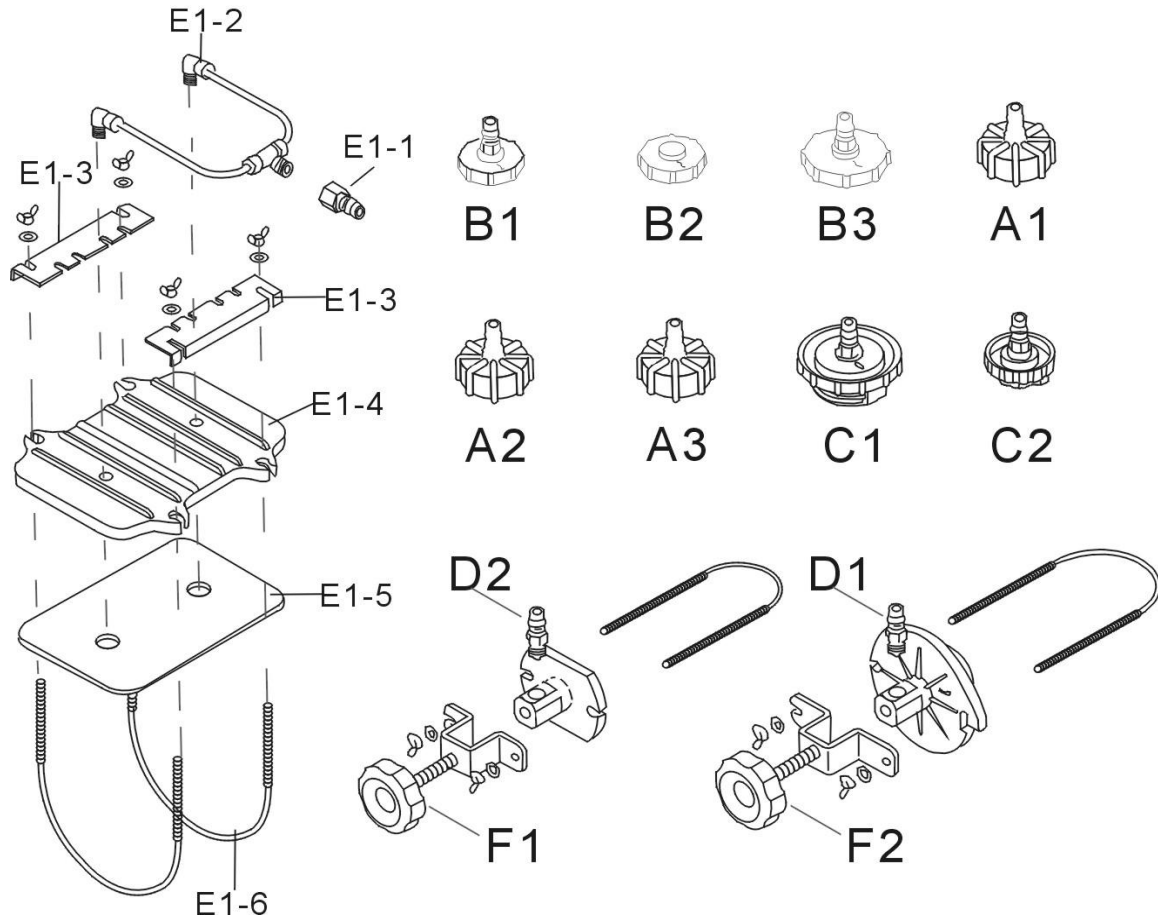


1	EO12001003413	wind nozzle	17	EO1000400325	elbow connector
2	EO02010002872	mini ball valve	18	JZ03076017442	base
3	EO03003002911	pressure adjust valve	19	JZ09076026151	nut
4	JZ09073026016	connector	20	JZ09076026134	Rubber bowl
5	EO07002003039	union cross	21	JZ09076026152	bolt
6	EO02001002792	safe valve	22	FJ08001005191	seal ring
7	JZ09076026153	Nylon spiral tube	23	JZ03076017440	top cap
8	EO11006003379	connector	24	JZ09076026149	tank cap
9	EO12001003426	quick connector	25	FJ04002003795	gasket
10	EO07005003057	bushing	26	FJ04009004873	bolt
11	EO05003002987	pressure gauge	27	JZ03076017441	handle bar
12	EO07001003034	T-connector	28	FJ01002003504	handle sleeve
13	EO07005003072	connector	29	JZ09076026150	gasket
14	EO06005003016	Pagoda joint	30	JZ02082015125	brake fluid collection bottle
15	FJ04005004010	Hold hoop	31	JZ09067025752	rubber squeeze dropper
16	CF01002000914	PU hose	32	JZ09067025751	funnel



NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

Adapter Kit Parts List



Item NO.	Part NO.	Applicable Vehicle models	Item NO.	Part NO.	Applicable Vehicle models
1	B1	U.S.CHRYSLER & GM	8	C2	NISSAN Passenger-car Vehicle
2	B2	U.S.CHRYSLER & GM	9	D1	Universal cover
3	B3	NISSAN Commercial Vehicle	10	D2	Universal cover
4	A1	BMW. AUDI Euro Vehicle	11	E1	GM Square Cover Vehicle
5	A2	NISSAN Passenger-car Vehicle	12	F1	Fit with D2
6	A3	MAZDA	13	F2	Fit with D1
7	C1	HONDA ACCORD			

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.