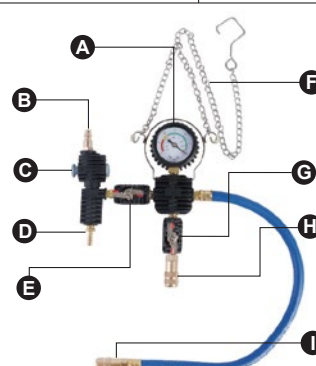


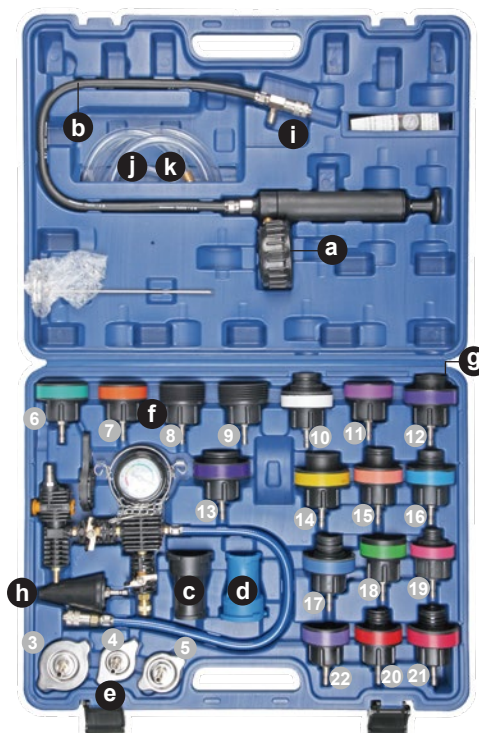
AT3313C 28PCS Cooling System Pressure Tester & Vacuum Purge Master Kit

I. INTRODUCTION

- Set for testing leaks in automotive cooling system and refill new coolant by creating a vacuum in cooling system
- Includes various adapters for major vehicle brands on market
- Adapters and pump are made of light weight nylon 6-6
- Connectors (blue and black) are for testing pressure caps
- Includes a thermometer for extra safety

II. CONTENTS

No	Description	Specifications	Material
a	Pressure pump	0-2.5 kg/cm ² (35 psi)	Nylon 6-6
b	Pump hose	Max. pressure: 200 psi	Rubber
c	Black cap tester	For R123 and R124	Nylon 6-6
d	Blue cap tester	For R123 and R125	Nylon 6-6
e	Test cap	No. 3 to No. 5	Steel
f	Test cap	No. 6 to No. 21	Nylon 6-6
g	O-ring	Various sizes	NBR
h	Conical adapter	Universally applicable	Rubber
i	90° Connector	Suitable for confined spaces	Bronze
j	Coolant hose		PVC
k	Air bleeding hose		PVC
A	Vacuum gauge -76 - 0 inHg		
B	Shop air connector		
C	Air switch		
D	Air bleeding exit		
E	Air control valve		
F	Hook and chain		
G	Coolant control valve		
H	Coolant hose connector		
I	Test cap connector		



III. WARNING

- Always read the instructions carefully before using the tool
- This tool kit is for cooling system maintenance only
- DO NOT spill coolant on working floor. Clean immediately if spills
- Ensure the working area has adequate lighting
- Keep children and unauthorized persons away from the working area
- Keep working area clean and tidy, dry and free from unrelated materials
- DO NOT allow untrained persons to use this tool kit
- Always wear eye protection that meets OSHA and ANSI Z87.1 standards
- Always wear gloves when working with the tool
- Always wear ear protection
- Disposal:
Customers should follow local regulations to handle used/wasted parts



- Take care when opening the cooling system.
- Cooling system may be under pressure and hot coolant can spray out.
- Before dismantling the pump or the adapter release the pressure.
- Check the cooling fluid after the pressure test or repair of correct level and frost protection.
- Take care when working on running engines, Loose or baggy clothing can be caught in rotating engine parts.

IV. INSTRUCTIONS

I. CREATE A VACUUM IN THE COOLING SYSTEM

- 1 Drain coolant from the radiator.
- 2 Hook the gauge underneath the car's hood.
- 3 Connect shop air to shop air connector (B).
- 4 Connect the conical adapter (8) or a suitable test cap (5 or 6) onto the radiator filler neck (as in Fig. 1).
- 5 Turn on the air switch (C) and air control valve (E), while coolant control valve (G) remains off, to create a vacuum in the cooling system (as in Fig. 2).
- 6 When the pressure falls into the range between -50 and -60 cmHg (-20 and -25 inHg), turn off the air control valve (E) and then air switch (C).
- 7 Leave the gauge on the radiator for approximately 10 mins to check if there are leaks in the cooling system before refilling new coolant.



Fig. 1

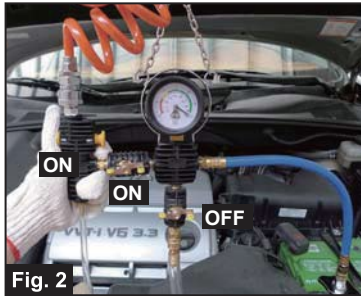


Fig. 2

II. REFILL NEW COOLANT

- 8 Connect the coolant hose (10) to the coolant hose connector (H).
- 9 Put the hose into a container filled with pre-mixed new coolant.
- 10 Turn on the coolant control valve (G) (while the air control valve (E) and air switch (C) remain off), coolant will be introduced into the radiator immediately (as in Fig. 3).
- 11 The refilling process is completed when the gauge reads zero.
- 12 Remove residual coolant in the gauge before storage.

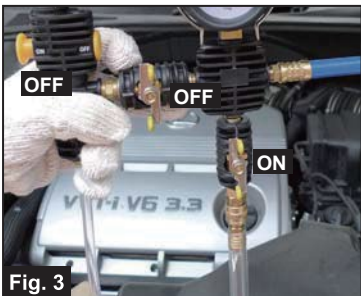


Fig. 3

COOLING SYSTEM PRESSURE TEST

- 1 Choose a suitable adapter and screw the adapter onto the radiator filler neck.
- 2 Connect the pressure tester to adapter.
- 3 Pump pressure to the range between 10 and 15 psi (Fig. 4).
- 4 Check if the gauge reading moves.
If it does, there could be leaks in the cooling system.
Attention: Do not pump the pressure up to 35 psi.



Fig. 4

RADIATOR CAP PRESSURE TEST

- 1 Connect the original radiator cap to one side of the connector, and a test cap on the other side (Fig. 5).
- 2 Pump pressure to the specified pressure on the cap.
- 3 When pumping pressure under the specified pressure, check if the gauge reading drops. If it does, there could be leaks on the cap.
- 4 When pumping pressure above the specified pressure, check if the radiator cap has the ability to release pressure. If it does not, the cap should be replaced.



Fig. 5

IV. APPLICATIONS

The application below is for reference only. More vehicle applications are possible. Some car models may have multiple suitable adapters due to variations in body style (e.g. sedan, hatchback, or cabriolet), engine size and capacity (e.g. 1.6L, 1.8L, 2.4L), and engine numbers.

Part NO.	Description	Qty
AT3313C-3	Mercedes Benz(W123 ,W126 ,W124 ,W201), GM(Buick), Jeep, Oldsmobile (Silhouette 1990-) Pontiac (Bonneville 1990-) (Grand Prix -2003), Buick (LeSabre 1990-) (Park Avenue 1991-) Chevrolet (Venture 1997-), Chrysler (Sebring 1995-), Dodge (Caravan 1989-) (Dakota 1989-) (Stratus 1995-)	1
AT3313C-4	Peugeot, Subaru, Chrysler, Acura, GM (Nova, Spectrum, Sprint), Mitsubishi, Nissan, Mazda, Toyota, Infiniti GEO, Suzuki, Isuzu, Mercedes Benz, Lexus (LS 400: 1990-1999) (LX 450 : 1996-1999) (LX 470: 1996-1999) (RX 330: 2004-) (ES:1994-1999), Mazda (All: 1985-1999, not 1995 Protege w/1.5L) (MPV:1990-), Mercury (Cougar: 1989-1992) (Cougar: 1993-1997 w/V6) (Topaz:1992-1994) (Tracer :1991-1999) (Villager: 1993-) (Villager: 1995-1999), Mitsubishi (3000GT:1991-1998) (Diamante:1992-1995) (Galant:1985-1993) (Mirage: 1985-1992) (Montero:1989-1998) (Starion : 1989-1993), Nissan (All: 1987-) Subaru (All:1984-), Suzuki (1983-1995 w/16 mm deep neck), Toyota (4Runner:1986-1995) (Avalon 1995-) (Camry:1983-1989) (Camry:1990-1991) (Camry:1994-1999:4cylinder) (Celica:1982-1989) (Corolla: 1983-1992) (Cressida:1985-1992) (Land Cruiser:1987-) (Pickup:1983-1992) (Previa:1989-1997) (Sienna:1998-1999) (Solara:1998-) (Starlet:1983-1984) (Supra:1986-1992: Not turbo) (T100:1995-1998) (Tacoma:1995-) (Tercel:1983-1990), Acura (Integra: 1990-1993), Chevrolet (Nova:1985-1998) (Spectrum:1985-1988) (Sprint:1985-1988), Chrysler (Laser:1991-1998), Dodge (Colt: 1984-1992) (Stealth: 1991-1996) Eagle (Talon:1991-1998), Ford (Escort:1991-) (Explorer:1995-2001) (Festiva:1988-1993) (Probe:1989-1997) (Ranger:1987-) (Tempo:1992-1994) (Thunderbird:1989-1992; 1993-1997:w/VA) (wINDSTAR: 1995-) Geo(Metro: 1989-1994) (Prizm:1998-1998) (Tracker:1989-1993), Honda (Accord:1990-1993) (Civic:1988-1991) (Motorcycles:1991-2004) (Passport:1994-) (Prelude:1990-1998), Hyundai (All:1987-), Infiniti (All:1992-) Isuzu (All: 1992-1997), Kia (Sedona:2003-)	1
AT3313C-5	Honda, Toyota, Suzuki, Mitsubishi, Chrysler, Acura, Lexus, Kia (Sedona:2003-), Mazda (Protege:1995-:1.5L) Mitsubishi (Diamante:1996-)(Galant: 1994-) (Mirage:1993-) (Montero Sport:1997-), Suzuki (1989-1999:w/9mm deep neck) (XL-7:2001-), Toyota (4Runner:1969-) (Camry:1990-1991: V6 w/ auto. trans.) (Camry: 1992-) (Celica: 1990-1998) (Corolla:1993-) (Echo: 2000-) (Paseo:1992-1997) (RAV4:1996-) (Supra:1990-1992 turbo) (Tercel: 1991-1999), Acura (CL:1997-) (Integra:1994-1999) (Legend:1991-1996) (MDX:2001-) (TL:1995-), Chevrolet (Metro:1998-1998) (Prizm:1998) (Tracker:1998-1998), Dodge (Colt:1993-1994), Eagle (Summit:1993-1995), Geo (Metro:1995-1998) (Prizm:1998-) (Prizm:1993-1997) (Tracker: 1994-1998), Honda (Accord:1994-) (Civic:1991-) (Odyssey:1995-) (Pilot:2003-), Isuzu (All: 1998-)	1
AT3313C-6	Mercedes Benz (ML-class, W163, W164)), GM (achiva, skylark, grand am-1992~2002) Mercury (MYSTIQUE:1995-2000), Pontiac(Le Mans:1988-1993), Porsche (911:1999-) (Boxter:1997-) Saab (900: 1994-1998), Saturn(L-Series:2000-), Cadillac (Catera:1997-2001), Daewoo (All:1999-2001) Ford (Contour:1995-2000) (Fiesta: 1995-) (Focus:1998-) (Fusion:2006-), Jaguar (All:1990-1994) (X-Type: 2002-), Land Rover (Discovery:1989-2004) (Range Rover:1988-1994)	1
AT3313C-7	Volvo, Saab, Sterling, Citroen, Renault, Fiat, Alfa, Jeep, Mini, Mini (Cooper S:2002-) Peugeot (206:1999-) (307:2004-) (406:1999-) (407:2004-) (807:2004-), Renault (All: 1985-1987) (Avantime:2002-) (Espace:2002-) Saab (900: 1978-1993) (9000:1986-1998), Sterling (All:1987-1991), Volvo (Passenger vehicles w/ threaded neck)	1
AT3313C-8	VW (Vento, T4,Passa-1996, Golf, Beetle, Sharan), VW (1990-1998: w/ female thrd on filler neck of expansion tank- except 1998 Passat & new Beetle) (Eurovan:1990-2003) (Golf: 1993-1998)	1
AT3313C-9	Audi (A4 ,A5,A6), BMW 345,VW (Passa-1997~2002), Porsche (Cayenne), VW (Beetle:1998-) (Golf:1999-) (Jetta:1999-) (Passat:1998-), Audi (A4:1996-) (A6:1998-) (A8:1997) (TT:2000)	1
AT3313C-10	BMW (E46, E36, E34, E39, E38, E32, E90), BMW (3 Series: 1998-) (5 Series:1997-2003) (7 Series:1998-)	1
AT3313C-11	VW (1975-1993: w/ male thrd on exp.tank) (Golf:1983-1992) Audi (1975-1993: w/ male thread on expansion tank)	1
AT3313C-12	Ford Mondeo, International, Land Rover, Opel, Ssangyong motor	1
AT3313C-13	Mercedes Benz (C-class, E-class, S-class, W140, W220, W124, W210, W211, W215, W216, W221, R230), Mercedes (w/ thread filler neck on expansion tank, except M-Class) (E-Class: 1996-), Chrysler (Crossfire: 2004-)	1
AT3313C-14	Ford Mondeo, Focus,C-MAX03	1
AT3313C-15	Mazda(M3), Mazda (3: 2004-)	1
AT3313C-16	Mercedes A-class (W168)	1
AT3313C-17	BMW E60, E63,E64, E65	1
AT3313C-18	VW SHARAN 1.8T2.8	1
AT3313C-19	TOYOTA-RAV4, PREVIA, Toyota (Celica: 2000-) (MR2 Spyder: 2000-)	1
AT3313C-20	Saab	1
AT3313C-21	Opel,Fiat,Chevrolet,Buick,Cadillac,Ford(USA),Saab,GMC,Suzuki,Vauxhall,Mazda,Lincoln,Oldsmobile,Isuzu,Hummer	1