

# CORNWELL<sup>®</sup> TOOLS



**MODEL MSM-100K5**

COOLING SYSTEM PRESSURE TESTER



Interactive  
adapter  
search:

[CornwellRadiatorTools.com](http://CornwellRadiatorTools.com)

**MODEL MSM-400K**

Shop Air Powered Cooling  
System Pressure Tester for  
Automobiles/Lt. Trucks



**MODEL MSM-300CRA**

VACUUM ASSIST  
COOLANT REFILL KIT



**MSM-300CRU**

**NO adapters needed!**

Both MSM-300CRA and 300CRU offer:

- More powerful vacuum generator
- Enlarged fluid passageways increase flow rate



**APPLICATION GUIDE and PARTS LIST FOR COOLING SYSTEM  
ADAPTERS and COOLING SYSTEM TOOLS**

# Consult Your Cornwell® Tools Distributor for Availability of these New Expanded Cooling System Adapter Kits

## MSM-15000P:

Designed as an add-on for the MSM-15000P. Carrying case comes with 15 composite cooling system adapters. When added to the MSM-100K5 with its pump and 4 adapters, the combination will pressure test the cooling systems of most modern cars and light trucks. Pump and adapters fit into the case as shown below. 15 included adapters:

MSM-10022P, MSM-10025P, MSM-10034P, MSM-10041P, MSM-10044P, MSM-10046P, MSM-10048P, MSM-10056P, MSM-10063P, MSM-10072P, MSM-10086P, MSM-10088P, MSM-10093P, MSM-10345P, MSM-10445P

Replacement plastic case available: MSM-14000PCS.



Laminated adapter application sheet included with the MSM-15000P

FITS RIGHT INSIDE THE CASE

MSM-15000P

## MSM-11000:

### Truck Adapter Set with 11 Adapters

These adapters are compatible with most cooling system pressure testers and refillers. It includes the following adapters:



MSM-11000



Laminated adapter application sheet included with the MSM-11000

FITS RIGHT INSIDE THE CASE

**MSM-14505** with "B" half turn twist on filler neck

**MSM-10022P** for Volvo® and Mack® (48mm x 3mm)

**MSM-10025P** for Volvo® (45mm x 3mm)

**MSM-10027P** for Volvo® (63mm x 3mm)

**MSM-10032P** for Freightliner, Kenworth®, and Peterbilt® (52mm x 2.5mm - seals on rim)

**MSM-10036P** for Freightliner®, International® and Sterling® (52mm x 2.5mm - seals in filler neck)

**MSM-10042P** for Kenworth® (52mm x 2.5mm)

**MSM-10052P** for some Freightliner® (50mm x 2.5mm)

**MSM-10054P** for some Freightliner® (60mm x 3mm)

**MSM-10084P** for Kenworth® (55mm x 3mm)

**MSM-10096P** for Volvo® (42MM X 3MM)

Replacement plastic case available: MSM-11000-1



## MSM-6000 Large Truck Cooling System Adapter Set:

Compatible with most cooling system pressure tester pumps. Includes 6 cooling system adapters: (1) MSM-14505 for Large Trucks with "B" half turn twist on filler neck, 2 11/16" O.D., (2) MSM-10036P for International®, Freightliner®, Sterling® and other trucks with 52mm x 2.5mm threaded filler neck, (3) MSM-10027P for Volvo® trucks with 63mm x 3mm threaded filler neck, (4) MSM-10022P for Volvo® and Mack® trucks with 48mm x 3mm threaded filler neck, (5) MSM-10054P for Freightliner® trucks with 60mm x 3mm threaded filler necks, and (6) MSM-10032P for Kenworth®, Freightliner®, and Peterbilt® trucks with 52mm x 2.5mm threaded filler necks.

Replacement plastic case available: MSM-6000-1



### MSM-300K PARTS LIST

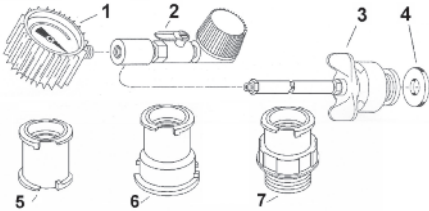


Diagram #	Stock Part #	Description:
Not shown	MSM-10013	Plastic Carrying Case
*	MSM-300K-1	Complete Pump with Gauge and Hose Assy (1-4)
1	MSM-10001	Pressure Gauge
2	MSM-300K-2	Valve Regulator Assembly
3	MSM-300K-4	Tester Head with Hose Assembly
4	MSM-10005	Tester Seal
5	MSM-1C052	Cooling system Cap Adapter (A size)
6	MSM-14504	Cooling system Cap Adapter (B size)
7	MSM-1C035P	Cooling system Cap Adapter (52mm x 2.5mm)



## MSM-300K Large Truck Cooling System Pressure Tester:

1. Pressure pump uses shop air to generate pressure in large truck cooling systems EFFORTLESSLY!

2. Set includes 3 adapters to pressure test pressure relieving caps found on large trucks. The MSM-1C052 cap adapter tests caps from "A" size (2 3/16" O.D.) filler necks. The MSM-14504 cap adapter tests caps from "B" size (2 11/16" O.D.) filler necks. The MSM-1C035P cap adapter tests caps with a 52mm x 2.5mm thread.

## MSM-400CRT

Cooling system refiller designed for heavy duty trucks!

See page 23 for parts diagram



- New vacuum generator creates higher vacuum more quickly
- Enlarged passageways and valves help to move coolant faster
- Larger diameter hose increase fluid transfer
- Longer hose accommodates the height of large trucks

## Vacuum Holding Adapters

Large trucks often have two cooling system caps located on the expansion tank: an accessible, non-pressure relieving cap and a pressure relieving cap that will leak under vacuum (normally found on the side of the tank).

MSM-10052V



50 x 2.5 mm

MSM-10025V



45 x 3 mm

MSM-10022V



48 x 3 mm

MSM-10036V



52 x 2.5 mm

In order to put the cooling system under vacuum to service the cooling system, a vacuum-holding adapter may be necessary. These adapters replace the pressure-relieving cap during the process and have an automatic safety pressure-relief system in case it is accidentally left on.

Available as a set of 4, part number: MSMTVA4

MSM3N1 and MSM400CRT are designed with 4 molded recesses to store these adapters with the tools.

## MSM-3N1

Coolant Refill, Retention and Pressure Test Kit

- Works on cars, light trucks and HD trucks
- Ultra-fast refill rate 4.8 Gal/Min
- Change components without draining cooling system
- Use shop air to pressure test
- Switch between functions without disconnecting
- Eliminates air pockets and prevents over pressurization
- Seals directly to radiator and works with most adapters
- INCLUDES: 10' hose, dual function gauge (pressure/vacuum) with protective boot, application guide and case



See back cover for parts diagram

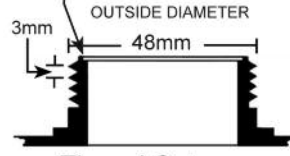
MSM-10022

MSM-10022P



MSM-1C023P

WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

**AUDI®:** models with male threads on filler neck  
**PORSCHE®:**  
 Boxster: 1997-2006  
 Cayman: 2006  
 911: 1999-current  
**SMART CAR®:**  
 All Models 2008-2015  
**VOLKSWAGEN®:**  
 models with male threads on filler neck of radiator or expansion tank

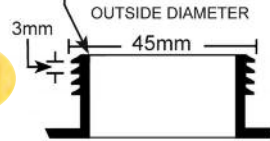
MSM-1C026

MSM-10025P



MSM-1C026P

WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

**FERRARI®/MASERATI®:**  
 most models 2000-current  
**JEEP®:** models with male threads on filler neck (1990-1994)  
**RENAULT®:** (1985-1997)  
**SAAB® 900:** (1978-1993)  
 -900 Convertible (1994)  
 -9000 (1986-1998)  
**STERLING®:** (1987-1991)  
**VOLVO®:** most models with threaded neck through 2007 (see page 20)



MSM-10031

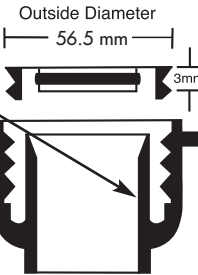


MSM-1C030



MSM-10031P

WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

**VOLKSWAGEN®:**  
 Most models with female threads on filler neck 1990-1998 and some models until 2003

MSM-10032

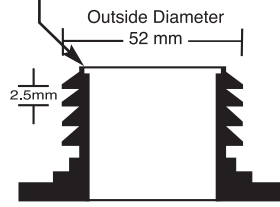


MSM-1C035P

MSM-10032P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



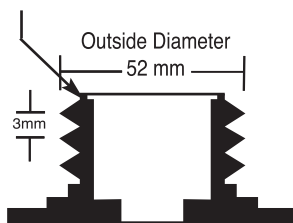
Thread Cutaway

**APPLICATION:**

Some models of Buick®, Cadillac®, Chevrolet®, Ford®, Freightliner®, GMC®, International®, Infiniti®, Isuzu®, Jaguar®, Kenworth®, Land Rover®, Lincoln®, Mazda®, Mercedes®, Mercury®, Nissan®, Oldsmobile®, Peterbilt® and Pontiac®.



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



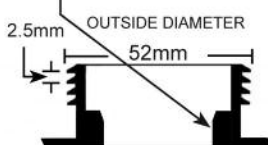
Thread Cutaway

**APPLICATION:**

Some models of Cadillac®, Chevrolet®, Daewoo®, Ford®, Jaguar®, Land Rover®, Pontiac®, Saab®, Saturn® and Suzuki®



WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



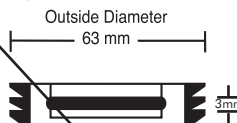
Thread Cutaway

**APPLICATION:**

Some models of Buick®, Cadillac®, Chevrolet®, Dodge®, Ford®, Freightliner®, GMC®, Hummer®, International®, Infiniti®, Isuzu®, Jaguar®, Jeep®, Land Rover®, Lincoln®, Mazda®, Mercedes®, Mercury®, Nissan®, Pontiac®, RAM®, Saab®, Saturn® and Suzuki®



WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

AUDI®: A4 1996-current  
A6 1998-current  
A8 1997-current  
S4 2004-current  
TT 2000-current

BENTLEY®: 2006-current

LAMBORGHINI®: 2006-current

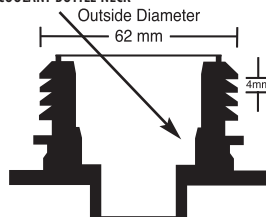
PORSCHE®:

Boxster 2007-2013  
Cayenne 2003-2013  
Cayman 2007-2011  
Panamera 2010-current  
Macan 2015-current

VW®: Most Models 1998 & newer



WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

INFINITI®

QX30 2017 - current

MERCEDES-BENZ®:

with threaded filler neck on expansion tank (except M-class, 1998-2005)

(see page 18)

Sprinter Van

2019 - current

CHRYSLER®:

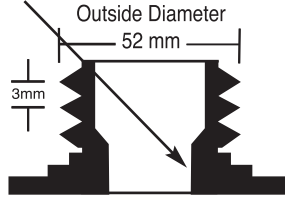
Crossfire 2004-2008



MSM-1C047P

MSM-10046P

WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

Some models of  
Aston Martin®,  
Ford®, Jaguar®  
and Mazda®



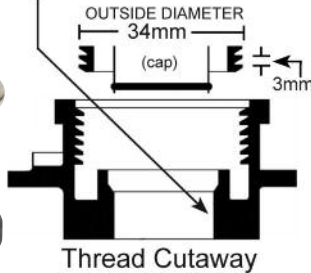
MSM-10046

MSM-1C049P



MSM-10048P

WHERE GO-RING OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

**LEXUS®:**  
Some models 2007 & later,  
see page 17

**TOYOTA®:**  
Models with threaded filler  
necks

**SCION®:**  
XB, 2008-2015



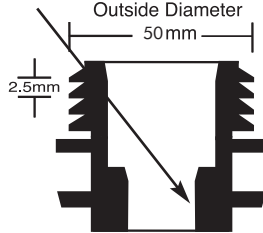
MSM-10048

MSM-10052



MSM10052R  
For low  
over-head  
applications

WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

**ASTON MARTIN®:**  
6.0 L, V-12 2015-current

**FORD®:**  
Many of the newer models  
(2011 and newer) will take  
the MSM-10052/MSM-  
10052P. See page 15-16 for  
specific models.

**LAND ROVER®:**  
LR-2 2008-current  
Range Rover  
Evoque 2012-current

**MAZDA®:**  
Mazda 3 2004-current

**VOLVO®:**  
Most Models 2004-current



MSM-10052P



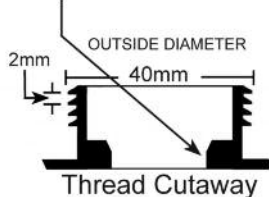
MSM-1C053P

MSM-10056P



MSM-10056

WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

**CHEVROLET®:**  
Chevrolet Volt 2012-current  
Electric motor and Battery  
System  
Cobalt SS 2005-2007  
(Supercharger  
Cooling System)

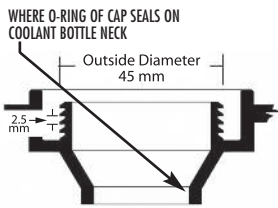
**SATURN®:**  
Ion Redline 2004-2007  
(Supercharger  
Cooling System)

**CADILLAC®:**  
STS V 2006-current  
(Supercharger  
Cooling System)



MSM-1C057P





**APPLICATION:**

**DODGE®:**

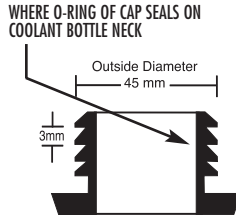
Sprinter Van 2007-2010

**MERCEDES-BENZ®:**

Sprinter Van 2011-2018

A Class 2019 - current

B Class 2015 - current



**APPLICATION:**

**BMW®:**

Turbocharger Cooling Systems (all)

**INFINITI®**

QX 50 2019 - current

**MINI®:**

Cooper 2002-current

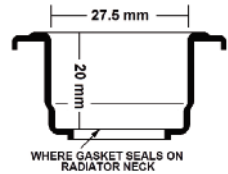
**NISSAN®**

Kicks 2019 - current

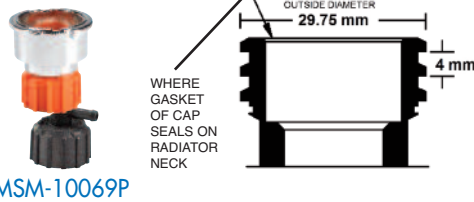
Rogue Sport 2017 - current

**SMART CAR®:** 2016 - current

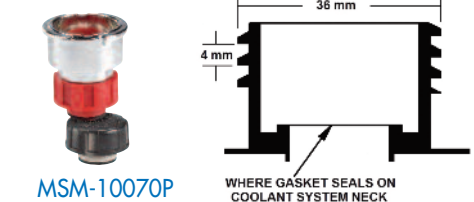
*Comment: The MSM-10063P seals with an O-ring just like the cap from the system they test. In most cases the MSM-10025P, which seals on the top rim will adequately seal such that pressure testing can be accomplished.*



**KTM® MOTORCYCLES THREADED ADAPTER**



**APRILIA® MOTORCYCLES THREADED ADAPTER**



**APPLICATION:**

**ALFA ROMEO®:**

Some models with threaded filler necks

**RAM®:**

ProMaster 2015-current

**FERRARI®:**

Some models 2015-current

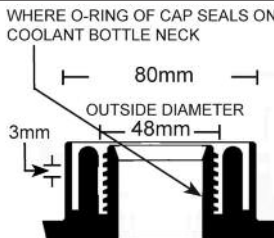
**FIAT®:**

Model 500: Some versions with threaded filler necks

**MASERATI®:**

Ghibli S Q4 2015-current

*Comment: The MSM-10072P seals with an o-ring just like the cap from the system it tests. In most cases, the MSM-10025 and MSM-10025P, which seal on the top rim will adequately seal such that pressure testing can be accomplished.*



**APPLICATION:**

**BENTLEY®:**

Some Models

**VOLKSWAGEN®:**

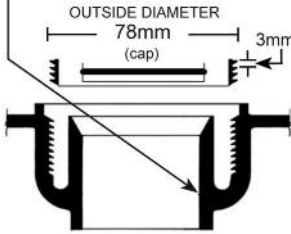
Sharan (EU)

Phaeton 2004-2006 (US)



MSM-10078P

WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

PORSCHE®:

Boxster 2015-current  
Cayman 2014-current  
(found in luggage compartment)

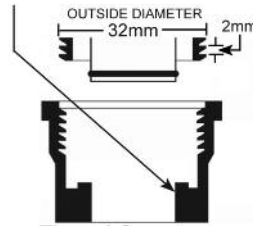


MSM-1C087P

MSM-10086P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

HYUNDAI®:

Some sub-models of  
Elantra, Ioniq, Kona and  
Tucson

KIA®:

Some sub-models of Niro,  
Seltos, Soul and Sportage  
See page 16 (for  
HYUNDAI®) and 17 (for  
KIA®) for more specific  
applications.

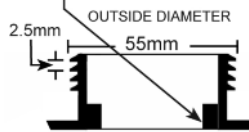


MSM-1C089

MSM-10088P



WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



**APPLICATION:**

VOLVO®:

XC40 2018 - current  
XC90T8 Hybrid-2016-current



MSM-10092P



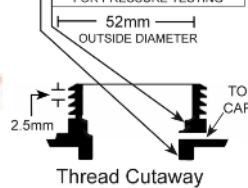
MSM-10093P

Left Hand Thread



WHERE MSM-10093P SEALS FOR VACUUM REFILLING

WHERE MSM-10092P SEALS FOR PRESSURE TESTING



**APPLICATION:**

CHEVROLET® Silverado  
with Duramax® Engine:  
2017-2019

GMC® Sierra Pick-Up  
with Duramax® Engine:  
2017-2019

Use [MSM-10092P](#)  
for pressure testing.  
Use [MSM-10093P](#)  
for vacuum refilling.



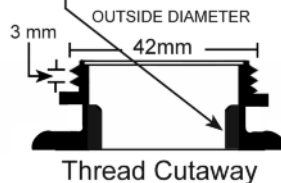
MSM-10098P



MSM-1C099P



WHERE O-RING OF CAP SEALS IN COOLANT BOTTLE NECK



**APPLICATION:**

TESLA®:

Tesla Model 3

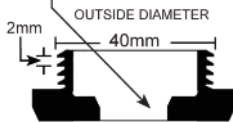
### MSM-1C105P



MSM-10104P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



#### APPLICATION:

**HYUNDAI®:**  
Some sub-models of Santa Fe and Tucson  
**KIA®:**  
Some sub-models of Sorento. See page 16 (for HUNDAI®) and 17 (for KIA®) for more specific applications

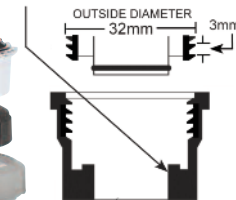
### MSM-1C107P



MSM-10106P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



#### APPLICATION:

**HYUNDAI®:**  
Some sub-models of Santa Fe and Tucson  
**KIA®:**  
Some sub-models of Sorento. See page 16 (for HUNDAI®) and 17 (for KIA®) for more specific applications



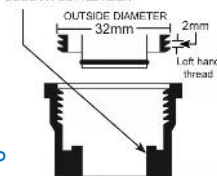
MSM-10110P

Left Hand Thread



MSM-1C111P

WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



#### APPLICATION:

**HYUNDAI®:**  
Ioniq Electric and Kona Electric  
**KIA®:**  
Niro Hybrid and Plug-in. See page 16 (for HYUNDAI®) and 17 (for KIA®) for specific applications

### MSM-10245

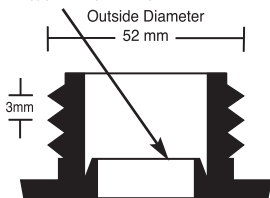


MSM-1C047P

MSM-10245P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



Thread Cutaway

#### APPLICATION:

**BMW®:** models with threaded filler necks (up to 1987)  
325: up to 1991  
525: up to 1993

**MERKUR® SCORPIO:**  
(1987-1989)

*Comments: Rubber gasket seals on "shelf" inside expansion tank neck*

MSM-1C246

### MSM-10345P

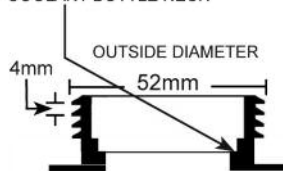


MSM-1C346

MSM-10345



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK

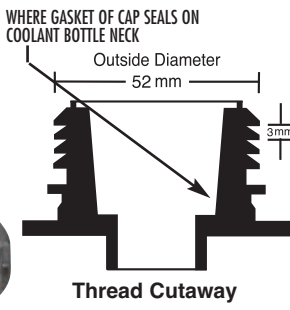


Thread Cutaway

#### APPLICATION:

**BMW®:** 1988-2008  
**LAND ROVER®:**  
Some models with male threads on filler neck (see page 17)  
Discovery 1999-2004  
Range Rover 1996-2006

*Comments: Rubber gasket seals on "shelf" inside expansion tank neck*



**APPLICATION:**  
**BMW®:**  
 Most BMW models 2007-current  
 3-Series 2006-current  
 5-Series 2005-current  
 6-Series 2005-current  
 X3 2009-current  
 X5 2009-current  
 X6 2008-current  
**TOYOTA®:**  
 Supra 2020 - current

**FORKLIFTS - MOTORCYCLES - MOST ASIAN VEHICLES**

Remote adapter allows pressure pump or vacuum refiller to be installed in various low overhead applications.



MSM-10128R

Most motorcycles, including the Harley Davidson® liquid cooled models, use this configuration

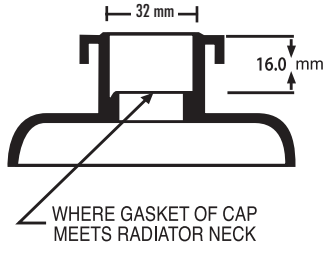


MSM-1C029



MSM-10128

ROUNDED EARS

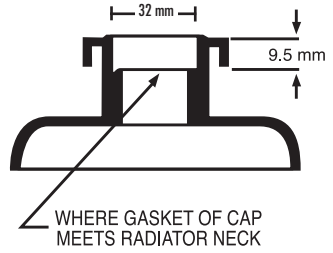


MSM-1C039



MSM-10138

SQUARE EARS



Comments: The MSM-1C029/MSM-10128 and the MSM-1C039/MSM-10138 have applications too numerous to list here. See Application Guide pp 14-20. These adapter sets are quite similar, but the MSM-1C029/MSM-10128 is a deeper neck than the MSM-1C039/MSM-10138. See drawings above, right.

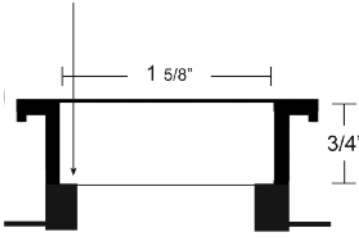
**Note: MSM-10128 & MSM-10138 are shaped to resemble caps from the system to be tested.**



MSM-1C052

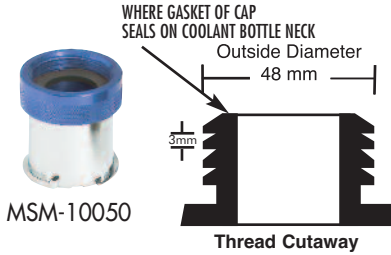
MSM-10004

WHERE GASKET OF CAP MEETS RADIATOR NECK



**APPLICATION:**  
 Most passenger vehicles through the mid 1980's have this radiator neck and many still do today. This is the configuration onto which the pump attaches directly.  
 For Necks 1" deep use 1/4" thick MSM-10006 spacer washer to compensate.

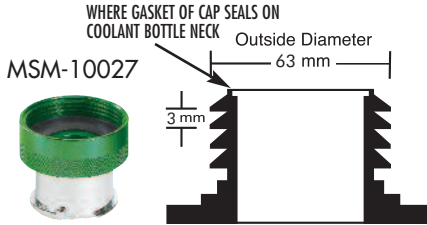
# LARGE TRUCKS / BUSES / HEAVY EQUIPMENT



**APPLICATION:**

MACK® TRUCKS:  
2008 and later with  
48mm x 3mm male  
threads on filler neck

VOLVO®:  
Large Trucks with  
48mm x 3mm male  
thread on filler neck



**APPLICATION:**

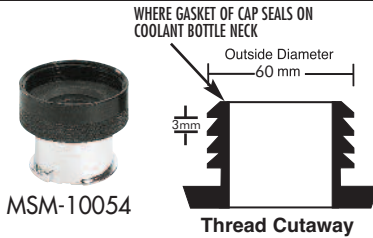
VOLVO®:  
Large Trucks with  
63mm x 3mm  
thread on filler neck



**APPLICATION:**

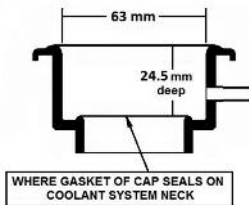
KENWORTH®:  
T660 and T680 Trucks  
T880

PETERBILT®:  
579



**APPLICATION:**

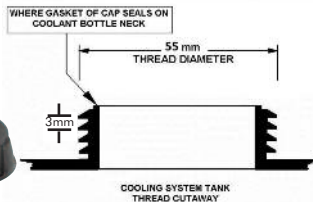
FREIGHTLINER®:  
Trucks with  
60mm x 3mm male  
thread on filler neck



**APPLICATION:**

LIEBHERR® CRANE:  
Some models

VAN HOOL® BUS:  
Some models



**APPLICATION:**

KENWORTH®:  
2015-current  
T270  
T370

## LARGE TRUCKS / BUSES / HEAVY EQUIPMENT

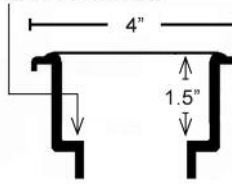


MSM-10090P

Note:  
Cap and adapter  
have 3 tabs



WHERE GASKET OF CAP SEALS ON  
COOLANT BOTTLE NECK



**APPLICATION:**  
**INDUSTRIAL**  
**APPLICATIONS:**  
With a 4 inch neck



MSM-14504



MSM-14504



MSM-14505

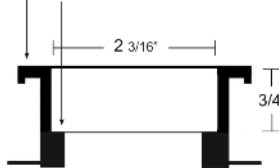


MSM-10450  
Type cap

**PART #MSM-10450:**  
Truck adapter kit for trucks with "B"  
size 2 11/16" O.D. filler neck

WHERE GASKET OF CAP MEETS  
RADIATOR NECK (MSM-14503)

WHERE GASKET OF CAP MEETS  
RADIATOR NECK (MSM-14505)



Thread Cutaway



MSM-14503  
Type cap

MSM-14503

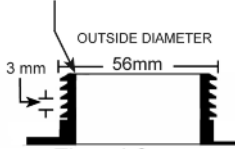
**PART #MSM-14503:**  
GM adapter kit tests pressure on "closed cooling systems" on GM 2.5L "X" body cars and 1.8L "J" body cars



MSM-10094



WHERE GASKET OF CAP SEALS ON  
COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

VOLVO®:

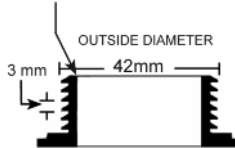
Volvo FH4 trucks and  
A45G Haul Trucks



MSM-10096



WHERE GASKET OF CAP SEALS ON  
COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

VOLVO®:

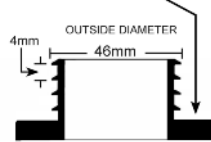
with 6.7L Cummins engine  
VOLVO®:  
Volvo EC220E Excavator



MSM-10102



WHERE GASKET OF CAP SEALS ON  
COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

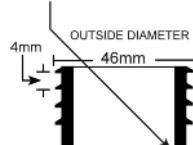
JOHN DEERE®:

Some John Deere tractors



MSM10108P

WHERE GASKET OF CAP SEALS ON  
COOLANT BOTTLE NECK



Thread Cutaway

**APPLICATION:**

FENDT® 900 series,  
1000 series and  
1100 series

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
www.CornwellRadiatorTools.com

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>ACURA®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039
<b>ALFA ROMEO®</b>		
Most Models 2014-current	MSM-10072P*	MSM-1C026/1C026P
<b>ASTON MARTIN®</b>		
6.0 L, V-12 2015-current	MSM-10052/10052P	MSM-1C053/1C053P
Various Models 2005-current	MSM-10046/10046P	MSM-1C246/1C047P
<b>AUDI®</b>		
Models with male threads on filler neck of exp. tank	MSM-10022/10022P	MSM-1C023/1C023P
Models with female threads on filler neck of exp. tank	MSM-10041/10041P	MSM-1C040/1C040P
<b>BLUEBIRD® BUS</b>		
Late model Thomas Built buses	MSM-10036/10036P	MSM-1C037/1C035P
<b>BMW®</b>		
Models w/ threaded filler neck Up to 1987	MSM-10245/10245P	MSM-1C346/1C346P
1988 & Newer, except as noted	MSM-10345/10345P	MSM-1C446/1C446P
Most models after 2006	MSM-10445/10445P	MSM-1C446/1C446P
Model 325 1988-1991	MSM-10245/10245P	MSM-1C246/1C047P
Model 535 1989-1993	MSM-10245/10245P	MSM-1C246/1C047P
1 Series 2008-current	MSM-10445/10445P	MSM-1C446/1C446P
3 Series 1990-2006	MSM-10345/10345P	MSM-1C346/1C346P
2006-current	MSM-10445/10445P	MSM-1C446/1C446P
5 Series 1998-2004	MSM-10345/10345P	MSM-1C346/1C346P
2005-current	MSM-10445/10445P	MSM-1C026/1C026P
Turbocharger Cooling Sys. (all)	MSM-10063P▲	MSM-1C026/1C026P
6 Series 2004-current	MSM-10445/10445P	MSM-1C446/1C446P
Turbocharger Cooling Sys. (all)	MSM-10063P▲	MSM-1C026/1C026P
7 Series 1994-2008	MSM-10345/10345P	MSM-1C346/1C346P
2008-current	MSM-10445/10445P	MSM-1C446/1C446P
Turbocharger Cooling Sys. (all)	MSM-10063P▲	MSM-1C026/1C026P

▲ MSM-10063P seals the same way the radiator cap seals but the MSM-10025 and MSM-10025P will work in most applications

\*\*If MSM-10036/36P "Stem" with O-ring will not fit into cooling system neck, the MSM-10032/32P may be required.

\*MSM-10025 and MSM-10025P should also work in this application

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>BMW®</b>		
X1 2009-2011	MSM-10445/10445P	MSM-1C446/1C446P
X3 2004-7/2009 7/2009-current	MSM-10345/10345P MSM-10445/10445P	MSM-1C346/1C346P MSM-1C446/1C446P
X5 2000-2008 2009-current	MSM-10345/10345P MSM-10445/10445P	MSM-1C346/1C346P MSM-1C446/1C446P
Turbocharger Cooling Sys. (all)	MSM-10063P▲	MSM-1C026/1C026P
X6 2008-current	MSM-10445/10445P MSM-10063P▲	MSM-1C446/1C446P MSM-1C026/1C026P
Turbocharger Cooling Sys. (all)	MSM-10063P▲	MSM-1C026/1C026P
Z3 2002	MSM-10345/10345P	MSM-1C346/1C346P
Z4 2003-2008	MSM-10345/10345P	MSM-1C346/1C346P
2009-current	MSM-10445/10445P	MSM-1C446/1C446P
Z8 2003	MSM-10345/10345P	MSM-1C346/1C346P
<b>BUICK®</b>		
All Models w/ male threads on filler neck except as noted below	MSM-10036/10036P**	MSM-1C037/1C035P
Skyhawk 1982-1987 1.8L & 2.0L	MSM-14503	
Skyllark 1982-1988 2.5L 1992-1998	MSM-14503 MSM-10036/36P**	MSM-1C033/1C035P
Somerset 1985-1987 2.5L	MSM-14503	
<b>CADILLAC®</b>		
All Models w/ male threads on filler neck except as noted below	MSM-10036/10036P**	MSM-1C037/1C035P
Catera 1997-2001	MSM-10034/10034P	MSM-1C246/1C047P
STS, CTS, ATS 2005-2010	MSM-10036/10036P	MSM-1C037/1C035P
Engine Cooling System Supercharger Cooling Syst	MSM-10056/10056P	MSM-1C057/1C057P
<b>CHEVROLET®</b>		
All Models w/ male threads on filler neck except as noted below	MSM-10036/10036P**	MSM-1C037/1C035P
Aveo 2004-2011	MSM-10034/10034P	MSM-1C246/1C047P
Bolt 2017-current	MSM-10056/10056P	MSM-1C057/1C057P
Citation 1982-1985 2.5L	MSM-14503	
Cobalt 2005-2010	MSM-10036/10036P	MSM-1C037/1C035P
Engine Cooling System Supercharger Cooling System	MSM-10056/10056P	MSM-1C057/1C057P
Impala 1994-1996 2004-current	MSM-10036/36P** MSM-10036/10036P	MSM-1C033/1C035P MSM-1C037/1C035P
Lumina 1990-1992	MSM-14503	
Metro 1998-2001	MSM-10138	MSM-1C039
Nova 1985-1988	MSM-10128	MSM-1C029

# COOLING SYSTEM ADAPTERS

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>CHEVROLET® CONTINUED</b>		
Prizm 1998-2002	MSM-10138	MSM-1C039
Silverado pick-up with Duramax engine 2017-2019 pressure testing vacuum filling 2020-current	MSM-10092P MSM-10093P MSM-10036/36P	MSM-1C037/1C035P
Spectrum 1985-1989	MSM-10128	MSM-1C029
Sprint 1985-1988	MSM-10128	MSM-1C029
Tracker 1998-2004	MSM-10138	MSM-1C039
Volt 2012-current Electric Motor Battery System Gasoline Engine	MSM-10056/10056P MSM-10056/10056P MSM-10036/10036P	MSM-1C057/1C057P MSM-1C057/1C057P MSM-1C037/1C035P
<b>CHRYSLER®/DODGE®/EAGLE®/PLYMOUTH®/RAM®</b>		
1500 with eTorque 2018 - current	MSM-10056/10056P	MSM-1C057/1C057P
200 2015-2017	MSM-10036/36P	MSM-1C037/35P
2000GTX 1989-90	MSM-10128	MSM-1C029
Avenger 1995-1999	MSM-10128	MSM-1C029
Colt 1984-1993 1992-1994 (some models)	MSM-10128	MSM-1C029
Conquest 1984-1989	MSM-10128	MSM-1C029
Crossfire 2004-2008	MSM-10044/10044P	MSM-1C045/1C045P
Dart 2013-2016	MSM-10036/36P	MSM-1C035/35P
Laser/Talon 1990-1998	MSM-10128	MSM-1C029
Pacifica 2017-current Engine cooling system Hybrid Motor	MSM-10036/36P MSM-10056/10056P	MSM-1C033/1C035P MSM-1C057/1C057P
Promaster 2014-current	MSM-10072P*	MSM-1C026/1C026P
RAM 50 Pickup 1987-1993	MSM-10128	MSM-1C029
RAM Pick-up (some models) 2013-current	MSM-10036/36P	MSM-1C037/35P
Sebring 2003-2005 6c 3.0L & 4c 2.4L 2001, 2002-2006	MSM-10138 none	MSM-1C039 MSM-1C052
Sprinter Van 2007-2010	MSM-10058P	MSM-1C059P
Stealth 1991-1996	MSM-10128	MSM-1C029
Stratus (3.0 liter only) 2001-2006	MSM-10138	MSM-1C039
Summit 1989-1992 1992-1996	MSM-10128 MSM-10138	MSM-1C029 MSM-1C039
Talon 1990-1998	MSM-10128	MSM-1C029
<b>DAEWOO®</b>		
All 1999-2002	MSM-10034/10034P	MSM-1C246/1C047

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>FENDT®</b>		
900, 1000 and 1100 series	MSM-10108P	
<b>FERRARI®</b>		
Most Models 2000-current	MSM-10025/10025P	MSM-1C026/1C026P
<b>FIAT®</b>		
500 2015-current	MSM-10072P*	MSM-1C026/1C026P
<b>FORD®/LINCOLN®/MERCURY®</b>		
All Models w/male threads on filler neck except as noted below	MSM-10036/36P**	MSM-1C033/1C035P
Aspire 1994-1997	MSM-10128	MSM-1C029
C-Max 2013-current	MSM-10052/52P	MSM-1C053/1C053P
Contour 1995-1997 1998-2000	MSM-10034/10034P MSM-10046/10046P	MSM-1C246/1C047P MSM-1C047/1C047P
Cougar 1989-1992 1993-1997 V8 1993-1997 V6	MSM-10128 MSM-10036/36P** MSM-10128	MSM-1C029 MSM-1C033/1C035P MSM-1C029
Ecosport 2013 - current	MSM-10052/52P	MSM-1C053/1C053P
Edge 2015-current	MSM-10052/52P	MSM-1C053/53P
Escape 2001-2012 2013-current	MSM-10046/10046P MSM-10052/10052P	MSM-1C047/1C047P MSM-1C053/1C053P
Escort/Tracer 1991-current	MSM-10128	MSM-1C029
Explorer/Mountaineer 1995-2002 2002-current	MSM-10128 MSM-10036/36P**	MSM-1C029 MSM-1C033/1C035P
F-150 Pickup 2001-2014 2015-current	MSM-10032/32P MSM-10052/52P	MSM-1C037/35P MSM-1C053/53P
F-650 2002-current	MSM-10032/32P	MSM-1C037/35P
F-750 2002-current	MSM-10032/32P	MSM-1C037/35P
Festiva 1988-1993	MSM-10128	MSM-1C029
Fiesta 2011-current	MSM-10052/10052P	MSM-1C053/1C053P
Focus 2000-2004 2005-2007 2008-2011 2012-current	MSM-10034/10034P MSM-10036/36P** MSM-10128 MSM-10052/10052P	MSM-1C246/1C047P MSM-1C033/1C035P MSM-1C029 MSM-1C053/1C053P
Fusion/MKZ 2013-current	MSM-10052/10052P	MSM-1C053/1C053P
LS 2002-2006	MSM-10034/10034P	MSM-1C246/1C047P
MKC 2015-current	MSM-10052/52P	MSM-1C053/53P
Mustang Mustang Mach-e 2021-current V8, 1996-2015 V6, 1997-2004 V6, 2005-2014 V6, 2015-current V8, 2015-current	MSM-10052/52P MSM-10036/36P** MSM-10128 MSM-10036/36P** MSM-10052/10052P MSM-10052/52P	MSM-1C053/53P MSM-1C033/1C035P MSM-1C029 MSM-1C033/1C035P MSM-1C053 MSM-1C053/53P

\*\*If MSM-10036/36P "Stem" with O-ring will not fit into cooling system neck, the MSM-10032/32P may be required.

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
www.CornwellRadiatorTools.com

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>FORD®/LINCOLN®/MERCURY®</b>		
Probe		
1989-1997	MSM-10128	MSM-1C029
Ranger Pickup		
1995-current (non threaded neck)	MSM-10128	MSM-1C029
2002-current (threaded neck)	MSM-10036/36P**	MSM-1C033/1C035P
Super Duty Pick-up		
1995-2011	MSM-10032/32P	MSM-1C037/35P
2012-current expansion tank Intercooler	MSM-10032/32P MSM-10128	MSM-1C037/35P MSM-1C029
Tempo/Topaz		
1992-1994	MSM-10128	MSM-1C029
Thunderbird		
1989-1993 (All)	MSM-10128	MSM-1C029
1994-1997 (V6)	MSM-10128	MSM-1C029
1994-1997 (V8)	MSM-10036/36P**	MSM-1C033/1C035P
2002-2004 (V8)	MSM-10036/36P**	MSM-1C033/1C035P
Transit Connect		
2010-2012	MSM-10034/10034P	MSM-1C246/1C047P
2013-current	MSM-10052/10052P	MSM-1C053/1C053P
Villager		
1993-2002	MSM-10128	MSM-1C053/1C053P
Windstar		
1995-2000	MSM-10128	MSM-1C029
2000-2003	MSM-10036/36P**	MSM-1C033/1C035P
ZX2		
2001-2003	MSM-10128	MSM-1C029
<b>FREIGHTLINER®</b>		
Trucks with: 60mm x 3mm male thread	MSM-10054/10054P	
52mm x 2.5mm male thread		
Cascadia		
2007-current	MSM-10032/32P	MSM-1C033/1C035P
Century, Columbia		
2002-current	MSM-10036/10036P	MSM-1C037/1C035P
<b>GEO®</b>		
Metro		
1989-1994	MSM-10128	MSM-1C029
1995-1998	MSM-10138	MSM-1C039
Prizm		
1989-1992	MSM-10128	MSM-1C029
1993-2002	MSM-10138	MSM-1C039
Storm		
1990-1993	MSM-10128	MSM-1C029
Tracker		
1989-1993	MSM-10128	MSM-1C029
1994-2004	MSM-10138	MSM-1C039
<b>GMC®</b>		
All Models with male threads on filler neck	MSM-10036/10036P	MSM-1C037/1C035P
Sierra pick-up with Duramax Engine		
2017-2019 pressure testing vacuum filling	MSM-10092P MSM-10093P	
2020-current	MSM-10036/36P	MSM-1C037/35P
<b>HONDA®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>HUMMER®</b>		
All Models with male threads on filler neck	MSM-10036/10036P	MSM-1C037/1C035P
<b>HYUNDAI®</b>		
Models with non-threaded cap	MSM-10128	MSM-1C029
Elantra		
2016 - current	MSM-10086P	MSM-1C087
Ioniq, Electric		
2020	MSM-10110P	MSM-1C0111
Ioniq		
2017-2019	MSM-10086P	MSM-1C087
Kona, Electric		
2019-2020	MSM-1011P	MSM-1C0111P
Kona (gasoline)		
2020	MSM-10086P	MSM-1C087P
Santa Fe		
2021-current	MSM-10104P	MSM-1C105P
Santa FE, Hybrid		
2021-current	MSM-10106P	MSM-1C107P
Tucson 2.0L & 2.4L		
2016-current	MSM-10086P	MSM-1C087P
Tucson 2.5L		
2022-current	MSM-10106P	MSM-1C107P
Tucson Hybrid		
2022-current	MSM-10106P	MSM-1C107P
Tucson, non-hybrid		
2022-current	MSM-10104P	MSM-1C105P
<b>INDUSTRIAL</b>		
Various industrial applications (see page 13 for specs)	MSM-10090P	
<b>INTERNATIONAL®</b>		
466 Engine with male threads on filler neck		
1994-1998	MSM-10032/32P	MSM-1C033/1C035P
<b>INFINITI®</b>		
All Models with Non-Threaded Small Cooling System Caps (see page 11)	MSM-10128	MSM-1C029
QX56		
2004-2009	MSM-10036/36P**	MSM-1C033/1C035P
2010-current	MSM-10128	MSM-1C029
QX 30		
2017 - current	MSM-10044/10044P	MSM-1C045/1C045P
QX50		
2019 - current	MSM-10063/10063P	MSM-1C026/1C026P
<b>ISUZU®</b>		
All models except as noted below		
1985-2009	MSM-10128	MSM-1C029
Amigo		
1999-2000 (L-4 only)	MSM-10138	MSM-1C039
Ascender		
2002-2009	MSM-10036/10036P	MSM-1C037/1C035P
i280		
2006	MSM-10036/10036P	MSM-1C037/1C035P
i290		
2007-2008	MSM-10036/10036P	MSM-1C037/1C035P

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
www.CornwellRadiatorTools.com

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>ISUZU® CONTINUED</b>		
i350 2006	MSM-10036/10036P	MSM-1C037/1C035P
i370 2007-2008	MSM-10036/10036P	MSM-1C037/1C035P
Oasis 1996-1999	MSM-10138	MSM-1C039
Rodeo 1998-2003 (L-4 only)	MSM-10138	MSM-1C039
<b>JAGUAR®</b>		
Models with male threads on filler neck 1990-1994	MSM-10034/10034P	MSM-1C246/1C047P
E-Pace 2018-current	MSM-10052/10052P	MSM-1C053/1C053P
F-Type 2013-current	MSM-10036/10036P	MSM-1C037/1C035P
XE 2015-current	MSM-10036/10036P	MSM-1C035P
XF 2009-current	MSM-10036/36P**	MSM-1C033/1C035P
XJ 2009-current	MSM-10032/32P	MSM-1C033/1C035P
XJ8 1998-2003 2004-2009	MSM-10046/10046P MSM-10036/36P**	MSM-1C047/1C047P MSM-1C033/1C035P
XX8 1997-2004, 2006	MSM-10046/10046P	MSM-1C047/1C047P
S-Type 2000-2008	MSM-10036/36P**	MSM-1C033/1C035P
X-Type 2002-2009	MSM-10034/10034P	MSM-1C246/1C047P
<b>JEEP®</b>		
Models with male threads on filler neck 1987-1990	MSM-10025/10025P	MSM-1C026/1C026P
Cherokee 2014-current	MSM-10036/10036P	MSM-1C026/1C026P
Grand Cherokee 4xe 2022-current battery system gasoline system	MSM-10056P MSM-10036/10036P	MSM-1C057P MSM-1C035P
Renegade 2015-current	MSM-10036/10036P	MSM-1C037/1C035P
Wrangler 2018-current	MSM-10036/10036P	MSM-1C035/1C037P
with eTorque 2018-current	MSM-10056/10056P	MSM-1C057/1C057P
Wrangler 4xe 2021-current battery system gasoline engine	MSM-10056P MSM-10036/10036P	MSM-1C057P MSM-1C035P
<b>JOHN DEERE® TRACTORS</b>		
Most model #'s over 3000 with 48mm O.D. male threads on filler neck	MSM-10022/10022P	MSM-1C023/1C023P
Most model #'s under 3000 with 52mm O.D. male threads on filler neck Some Models	N/A- consult factory MSM-10102P	N/A

\*\*If MSM-10036/36P "Stem" with O-ring will not fit into cooling system neck, the MSM-10032/32P may be required.

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>KENWORTH® TRUCKS</b>		
Some models 2007-current	MSM-10032/32P	MSM-1C033/1C035P
T270, T370 2015-current	MSM-10084P	
T660 2008-2017	MSM-10042P	MSM-1C035P
T680 2014-current	MSM-10042P	MSM-1C035P
T880 2014-current	MSM-10042P	MSM-1C035P
<b>KIA®</b>		
Models with non-threaded cap Carnival 2022-current	MSM-10128 MSM-10106P	MSM-1C029 MSM-1C107P
K5 2021-current	MSM-10106P	MSM-1C107P
Niro EV 2019-current	MSM-10110P	MSM-1C111P
Niro Hybrid & Plug-in 2017-current	MSM-10086P	MSM-1C087P
Seltos 1.6L 2021-current	MSM-10086P	MSM-1C087P
Sorento 2021-current	MSM-10104P	MSM-1C105P
Sorento Hybrid 2021-current	MSM-10110P	MSM-1C107P
Soul 1.6L 2021-current	MSM-10086P	MSM-1C087P
Sportage 2.0L & 2.4L 2021-current	MSM-10086P	MSM-1C087P
Sportage 2.5L 2022-current	MSM-10106P	MSM-1C107P
<b>LAND ROVER®</b>		
Defender 1993-1995, 1997		
Discovery 1998 1999-2004	MSM-10034/10034P MSM-10345/10345P	MSM-1C246/1C047P MSM-1C346
Freelander 2002-current	MSM-10025/10025P	MSM-1C026/1C026P
LR2 2008-current	MSM-10052/10052P	MSM-1C053/1C053P
LR3 2005-2009	MSM-10036/36P**	MSM-1C033/1C035P
LR4 2010-2016	MSM-10036/36P**	MSM-1C033/1C035P
Range Rover 1988-1994 1995-2005 2006-current	MSM-10034/10034P MSM-10345/10345P MSM-10036/36P**	MSM-1C246/1C047P MSM-1C346 MSM-1C033/1C035P
Range Rover Evoque 2012-current	MSM-10052/10052P	MSM-1C053/1C053P
Velar 2018-current	MSM-10032/10032P	MSM-1C035P
<b>LEXUS®</b>		
Models with 16mm deep filler neck, see page 10	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 10	MSM-10138	MSM-1C039
Models with threaded filler necks	MSM-10048/10048P	MSM-1C049P

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
www.CornwellRadiatorTools.com

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>LIEBHERR® CRANE</b>		
Some Models	MSM-10076	
<b>MACK® TRUCK</b>		
Late models with male threads on filler neck w/6.7L Cummins engine 2022-current	MSM-10050/10022P MSM-10096P	MSM-1C023/1C023P
<b>MASERATI®</b>		
Most Models		
2000-current	MSM-10025/10025P	MSM-1C026/1C026P
Ghibli S Q4 2015-current	MSM-10072P*	MSM-1C026/1C026P
<b>MAZDA®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 111	MSM-10138	MSM-1C039
Models w/Threaded Caps: B 2300 Pickup 1994-1997 2001-2009	none MSM-10036/36P**	MSM-1C052 MSM-1C033/1C035P
Tribute 2001-2011	MSM-10046/10046P	MSM-1C047/1C047P
Mazda 3 2004-current	MSM-10052/10052P	MSM-1C053/1C053P
Mazda 6 2003-current	MSM-10036/10036P	MSM-1C037/1C035P
<b>McLAREN®</b>		
Most Models 2012-current	MSM-10072P	MSM-1C026/1C026P
<b>MERCEDES®</b>		
Models w/threaded filler neck except as noted below	MSM-10044/10044P	MSM-1C045/1C045P
A Class 2019-current	MSM-10058P	MSM-1C059P
B Class 2015-current	MSM-10058P	MSM-1C059P
M-Class w/threaded neck 1998-2005	MSM-10036/36P**	MSM-1C033/1C035P
Sprinter Van 2011-2018 2019-current	MSM-10058P MSM-10044/10044P	MSM-1C059P MSM-1C045/1C045P
<b>MERKUR®</b>		
Scorpio 1987-1989	MSM-10245/10245P	MSM-1C246/1C047P
<b>MINI®</b>		
Cooper S Model 2002-current	MSM-10063P▲	MSM-1C026/1C026P
<b>MITSUBISHI®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>NISSAN®</b>		
All models with non-threaded small cooling system caps 1987-current	MSM-10128	MSM-1C029
Armada/Titan 2004-2009 2010-current	MSM-10036/36P** MSM-10128	MSM-1C033/1C035P MSM-1C029
Kicks 2019-current	MSM-10063/10063P	MSM-1C026/1C026P
Rogue Sport 2017-current	MSM-10063/10063P	MSM-1C026/1C026P
<b>OLDSMOBILE®</b>		
Achieva 1992-1998	MSM-10036/36P**	MSM-1C033/1C035P
Alero 1999-2004	MSM-10036/10036P	MSM-1C037/1C035P
Aurora 1995-1999	MSM-10036/36P**	MSM-1C033/1C035P
Bravada 2002-2004	MSM-10036/10036P	MSM-1C037/1C035P
Cutlass 1997-1998 1999	MSM-10036/36P** MSM-10036/10036P	MSM-1C033/1C035P MSM-1C037/1C035P
Intrigue 1999 2000-2002	MSM-10036/36P** MSM-10036/10036P	MSM-1C033/1C035P MSM-1C037/1C035P
<b>PETERBILT® TRUCKS</b>		
579 2021-2023	MSM-10042P	MSM-1C035P
Some models 2007-current	MSM-10032/32P	MSM-1C033/1C035P
<b>PONTIAC®</b>		
Fiero 1984-1988	MSM-14503	
Firebird 1999-2002	MSM-10036/10036P	MSM-1C037/1C035P
G3 2009-2010	MSM-10034/10034P	MSM-1C246/1C047P
G5 2007-2010	MSM-10036/10036P	MSM-1C037/1C035P
G6 2005-2010	MSM-10036/10036P	MSM-1C037/1C035P
Grand Am 1985-1988 1992-1998 1999-2005	MSM-14503 MSM-10036/36P** MSM-10036/10036P	MSM-1C033/1C035P MSM-1C037/1C035P
Grand Prix 2004-2008	MSM-10036/10036P	MSM-1C037/1C035P
GTO 2004-2006	MSM-10036/36P**	MSM-1C033/1C035P
Le Mans 1988-1993	MSM-10034/10034P	MSM-1C246/1C047P
Montana 2007-2009 1999-2006	MSM-10036/10036P none	MSM-1C037/1C035P MSM-1C052
Optima 1988-1991	MSM-10036/36P**	MSM-1C033/1C035P

\*MSM-10025 and MSM-10025P should also work in this application

\*\*If MSM-10036/36P "Stem" with O-ring will not fit into cooling system neck, the MSM-10032/32P may be required.

▲MSM-10063P seals the same way the radiator cap seals but the MSM-10025/MSM-10025P will work in most applications.

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
www.CornwellRadiatorTools.com

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>PONTIAC® continued</b>		
Solstice 2006-2009	MSM-10036/10036P	MSM-1C037/1C035P
Sunbird 1982-1992	MSM-14503	
Sunburst 1985-1988	MSM-10128	MSM-1C029
Sunfire 1995-1998	MSM-10036/36P**	MSM-1C033/1C035P
1999-2005	MSM-10036/10036P	MSM-1C037/1C035P
Vibe 2003-2010	MSM-10138	MSM-1C039
<b>PORSCHE®</b>		
911 1999-2015	MSM-10022/10022P	MSM-1C023/1C023P
Boxster 1997-2006	MSM-10022/10022P	MSM-1C023/1C023P
2007-2013	MSM-10041/10041P	MSM-1C040/1C040P
2015-current (in luggage compartment)	MSM-10078P	
Cayman 2006	MSM-10022/10022P	MSM-1C023/1C023P
2007-2011	MSM-10041/10041P	MSM-1C040/1C040P
2014-current (in luggage compartment)	MSM-10078P	
Cayenne 2003-2013	MSM-10041/10041P	MSM-1C040/1C040P
Macan 2015-current	MSM-10041/10041P	MSM-1C040/1C040P
Panamera 2010-current	MSM-10041/10041P	MSM-1C040/1C040P
<b>RENAULT®</b>		
All models 1985-1987	MSM-10025/10025P	MSM-1C026/1C026P
<b>ROLLS ROYCE®</b>		
Ghost 2010 Engine Cooling System Supercharger Cooling System	MSM-10445/10445P MSM-10063P	MSM-1C446/1C446P MSM-1C026/1C026P
<b>SAAB®</b>		
900 1978-1993	MSM-10025/10025P MSM-10034/10034P	MSM-1C026/1C026P MSM-1C246/1C047P
1994-1998		
900 Convertible 1994	MSM-10025/10025P	MSM-1C026/1C026P
9000 1986-1998	MSM-10025/10025P	MSM-1C026/1C026P
9-3 1999-2003	MSM-10034/10034P	MSM-1C246/1C047P
2004-2011	MSM-10036/10036P	MSM-1C035/1C035P
9-5 1999-2008	MSM-10034/10034P	MSM-1C246/1C047P
9-7X 2005-2009	MSM-10036/10036P	MSM-1C037/1C035P

\*\*If MSM-10036/36P "Stem" with O-ring will not fit into cooling system neck, the MSM-10032/32P may be required.

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>SATURN®</b>		
All models except as below 1999-2010	MSM-10036/36P**	MSM-1C033/1C035P
L-Series 2000-2005	MSM-10034/10034P	MSM-1C246/1C047P
Vue 2002	MSM-10034/10034P	MSM-1C246/1C047P
2003-2009	MSM-10036/10036P	MSM-1C037/1C035P
Ion Redline 2004-2007 Engine Cooling System Supercharger Cooling System	MSM-10036/10036P MSM-10056/10056P	MSM-1C037/1C035P MSM-1C057/1C057P
<b>SCION®</b>		
All models 2004-2016	MSM-10138	MSM-1C039
XB 2018-2015	MSM-10048/10048P	MSM-1C049/1C049P
<b>SMART CAR®</b>		
All models 2008-2015 2016-current	MSM-10022/10022P MSM-10063P	MSM-1C023/1C023P MSM-1C026/1C026P
<b>STERLING®</b>		
All models 1987-1991	MSM-10025/10025P	MSM-1C026/1C026P
<b>SUBARU®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039
<b>SUZUKI®</b>		
Models with 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models with 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039
Forenza 2004-2008	MSM-10034/10034P	MSM-1C246/1C047P
Reno 2005-2008	MSM-10034/10034P	MSM-1C246/1C047P
Verona 2004-2006	MSM-10034/10034P	MSM-1C246/1C047P
XL7 2002-2003	MSM-10138	MSM-1C039
2004-2006	MSM-10128	MSM-1C029
2007-2009	MSM-10036/10036P	MSM-1C037/1C035P

# COOLING SYSTEM ADAPTERS

Interactive Adapter search:  
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Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>TESLA®</b>		
Model 3 2017-current	MSM-10098P	MSM-1C099P
Model Y 2020-current	MSM-10098P	MSM-1C099P
<b>TOYOTA®</b>		
Models with Non-Threaded Cooling System Caps: Models w/ 16mm deep filler neck, see page 11	MSM-10128	MSM-1C029
Models w/ 9.5mm deep filler neck, see page 11	MSM-10138	MSM-1C039
Models with Threaded Cooling System Caps: Celica 2000-2005	MSM-10048/10048P	MSM-1C049/1C049P
MR2 Spyder 2000-2005	MSM-10048/10048P	MSM-1C049/1C049P
Mirai (Hydrogen Fuel Cell) 2019-current	MSM-10048/10048P	MSM-1C049/1C049P
RAV4 1996-2008	MSM-10138	MSM-1C039
2009-current	MSM-10048/10048P	MSM-1C049/1C049P
Sienna (see page 11) 1998-2006	MSM-10128R	MSM-1C029
2007-current	MSM-10138	MSM-1C039
Supra 2020-current	MSM-10445/10445P	MSM-1C446/1C446P
Hybrid Synergy Drive Cooling System: Camry 2007-current	MSM-10048/10048P	MSM-1C049/1C049P
Corolla 2020-current	MSM-10048/10048P	MSM-1C049/1C049P
Highlander 2006-current	MSM-10048/10048P	MSM-1C049/1C049P
Prius 2004-current	MSM-10048/10048P	MSM-1C049/1C049P
<b>TRUCKS/HEAVY DUTY</b>		
Vehicles with large fill ("B") neck (2 11/16") see page 13	MSM-10450 (Set) or MSM-14505	MSM-10450 (Set) or MSM-14504
<b>VAN HOOL® BUS</b>		
Some models	MSM-10076	
<b>VOLKSWAGEN®</b>		
Models with male threads on filler neck, 1975-1993	MSM-10022/10022P	MSM-1C023/1C023P
Models with female threads on filler neck, 2004-current	MSM-10041/10041P	MSM-1C040/1C040P
Beetle 1998-current	MSM-10041/10041P	MSM-1C040/1C040P
CC 2009-2017	MSM-10041/10041P	MSM-1C040/1C040P
Cabrio 1995-2002	MSM-10031/10031P	MSM-1C030
Corrado 1990-1994	MSM-10031/10031P	MSM-1C030
Eurovan 1993-2003	MSM-10031/10031P	MSM-1C030

Make/Model/Year	Cooling System Adapter	Cap Adapter
<b>VOLKSWAGEN® (CONTINUED)</b>		
Golf 1985-1990	MSM-10022/10022P	MSM-1C023/1C023P
1991-1999	MSM-10031/10031P	MSM-1C030
2000-current	MSM-10041/10041P	MSM-1C040/1C040P
GTI 1985-1990	MSM-10022/10022P	MSM-1C023/1C023P
1991-1999	MSM-10031/10031P	MSM-1C030
2000-current	MSM-10041/10041P	MSM-1C040/1C040P
Jetta 1980-1990	MSM-10022/10022P	MSM-1C023/1C023P
1991-1999	MSM-10031/10031P	MSM-1C030
1999-current	MSM-10041/10041P	MSM-1C040/1C040P
Passat 1990-1997	MSM-10031/10031P	MSM-1C030
1998-current	MSM-10041/10041P	MSM-1C040/1C040P
Phaeton 2002-2006	MSM-10074P	
Touareg 2004-current	MSM-10041/10041P	MSM-1C040/1C040P
<b>VOLVO®</b>		
All with threaded neck except large trucks and as specified below	MSM-10025/10025P	MSM-1C026P
C30 2008-current	MSM-10052/10052P	MSM-1C053/1C053P
C70 2008-current	MSM-10052/10052P	MSM-1C053/1C053P
S40 2004-2011	MSM-10052/10052P	MSM-1C053/1C053P
S60 2011-current	MSM-10052/10052P	MSM-1C053/1C053P
S80 2008-current	MSM-10052/10052P	MSM-1C053/1C053P
V50 2005-2011	MSM-10052/10052P	MSM-1C053/1C053P
V60 2014-current	MSM-10052/10052P	MSM-1C053/1C053P
V70 2008-2010	MSM-10052/10052P	MSM-1C053/1C053P
XC40 2018-current	MSM-10088P	MSM-1C089P
XC60 2010-current	MSM-10052/10052P	MSM-1C053/1C053P
XC70 2008-current	MSM-10052/10052P	MSM-1C053/1C053P
XC90 T8 Hybrid 2016-current Engine Cooling Battery Cooling	MSM-10052/52P MSM-10088P	MSM-1C053/53P MSM-1C089P
Volvo® Large Trucks with: 48mm x 3mm thread 63mm x 3mm thread	MSM-10050/10022P MSM-10027/10027P	MSM-1C023/1C023P
Volvo® Heavy Equipment A45G Articulated Hauler 2017-current	MSM-10094P	
EC220E Excavator 2015-current	MSM-10096P	

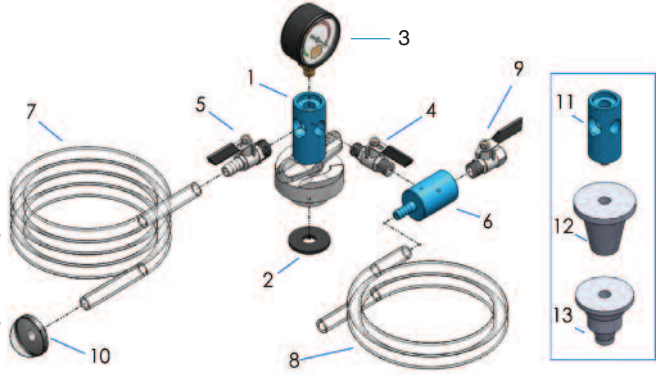
# CORNWELL® TOOLS COOLING SYSTEM ADAPTER GASKET APPLICATION GUIDE

Some gaskets are available separately. See chart below for gasket applications and availability.

ADAPTER	GASKET/O-RING SIZE	PART NUMBERS
MSM-10032, <a href="#">MSM-10084P</a> , <a href="#">MSM-10094P</a>	2 1/16" O.D. x 1 1/8" I.D. x 1/8" thick	MSM-10032G
MSM-10034, MSM-10036	2 1/16" O.D. x 1 7/16" I.D. x 1/8" thick	MSM-10011
MSM-10022, MSM-10025, MSM-10050, <a href="#">MSM-10034P</a> , <a href="#">MSM-10036P</a>	1 7/8" O.D. x 1 3/16" I.D. x 1/8" thick	MSM-10015
MSM-10245, MSM-10345, <a href="#">MSM-10245P</a> , <a href="#">MSM-10345P</a>	1 7/16" O.D. x 15/16" I.D. x 1/16" thick	MSM-10017
MSM-10128, MSM-10138	1 1/8" O.D. x 1/2" I.D. x 1/4" thick	MSM-10009
MSM-10031, MSM-10041, <a href="#">MSM-10031P</a> , <a href="#">MSM-10041P</a> , <a href="#">MSM-10074P</a>	36 mm O.D. x 28 mm I.D. x 4mm cross section O-ring	MSM-10031R
MSM-10036, MSM-10046, MSM-10052, <a href="#">MSM-10036P</a> , <a href="#">MSM-10046P</a> , <a href="#">MSM-10052P</a> , <a href="#">MSM-10088P</a> , <a href="#">MSM-10092P</a>	31 mm O.D. x 23 mm I.D. x 4mm cross section O-ring	MSM-10012
MSM-10044, <a href="#">MSM-10044P</a>	42 mm O.D. x 34 mm I.D. x 4mm cross section O-ring	MSM-10016
MSM-10048, <a href="#">MSM-10048P</a>	13/16" O.D. x 5/8" I.D. x 3/32" cross section O-ring (O-ring # P16)	MSM-10018
MSM-10445, <a href="#">MSM-10445P</a>	38 mm O.D. x 28 mm I.D. x 5mm cross section O-ring	MSM-10020
MSM-10027, MSM-10054	2 1/2" O.D. x 1 9/16" I.D. x 1/8" thick	MSM-10019
MSM-10056, <a href="#">MSM-10056P</a> , <a href="#">MSM-10098P</a>	23 mm O.D. x 17 mm I.D. x 3mm cross section O-ring	MSM-10056R
MSM-14503	2 3/4" O.D. x 1 3/4" I.D. x 3/16" thick	MSM-14502
MSM-10450 Kit, Test Plug (Obsolete)	2 1/16" O.D. x 1/2" I.D. x 1/4" thick (2 required)	MSM-14507
MSM-10450, MSM-14505	Molded Gasket	MSM-14501A
<a href="#">MSM-10025P</a> , <a href="#">MSM-10096P</a>	1 11/16" O.D. x 1 1/16" I.D. x 1/8" thick	MSM-10021
<a href="#">MSM-10022P</a>	1 3/4" O.D. x 1" I.D. x 1/8" thick	MSM-10023
<a href="#">MSM-10032P</a> , <a href="#">MSM-10042P</a>	1 7/8" O.D. x 1 1/16" I.D. x 1/8" thick	MSM-10032PG
<a href="#">MSM-10027P</a>	2 3/8" O.D. x 1 5/8" I.D. x 1/8" thick	MSM-10027G
<a href="#">MSM-10054P</a>	2 1/4" O.D. x 1 1/2" I.D. x 1/8" thick	MSM-10054G
<a href="#">MSM-10058P</a>	27 mm O.D. x 21 mm I.D. x 3mm cross section O-ring	MSM-10058R
<a href="#">MSM-10063P</a> , <a href="#">MSM-10078P</a>	1 7/16" O.D. x 1 3/16" I.D. x 1/8" cross section O-ring	MSM-10063R
MSM-10067, MSM-10067R	Molded rubber gasket	MSM-10067G
<a href="#">MSM-10069P</a>	1" OD x 5/8" ID x 3/16" thick O-ring	MSM-10069R
<a href="#">MSM-10070P</a>	1" OD x 1/2" ID x 1/16" thick	MSM-10070G
<a href="#">MSM-10072P</a>	26 mm OD x 19 mm ID x 3.5mm cross section O-ring	MSM-10072R
MSM-10076	Molded rubber gasket (custom)	MSM-10076G
<a href="#">MSM-10086P</a> , <a href="#">MSM-10106P</a>	21 mm OD x 14 mm ID x 3.5mm cross section O-ring	MSM-10086R
<a href="#">MSM-10090P</a>	Molded rubber gasket (custom)	MSM-10090G
<a href="#">MSM-10093P</a>	27 mm OD x 19 mm ID x 4mm cross section O-ring	MSM-10093R
MSM-10102	2-3/8" OD x 2" ID x 3/16" cross (#329)	Consult Factory
<a href="#">MSM-10104P</a>	21 mm O.D. x 15 mm I.D. x 3 mm cross	MSM-10104R

## MSM-300CRA and MSM-300CRU Cooling System Refiller Parts Diagram and Part Numbers

Item	Part#	Description
3	MSM-300CR-3	Vacuum gauge, lower connect
4	MSM-201CR-12	Isolation valve
5	MSM-300CR-11	Coolant refill valve
6	MSM-300CR-5	Venturi body assembly
7	MSM-200CR-1	Coolant refill hose w/screen
8	MSM-200CR-4	Overflow hose
9	MSM-201CR-13	Air inlet valve
10	MSM-201CR-10	Coolant refill suction screen only
<b>MSM-300CRA only</b>		
1	MSM-300CRA-7	Coolant refill body assembly
2	MSM-10005	Tester seal
<b>MSM-300CRU only</b>		
11	MSM-300CRU-7	Coolant refill body assembly
12	MSM-300CR-15	Adapter cone, smooth
13	MSM-300CR-14	Adapter cone, step
*	MSM-201CR-8	Plastic case (not shown)



## MSM-400K PARTS LIST AND DIAGRAM

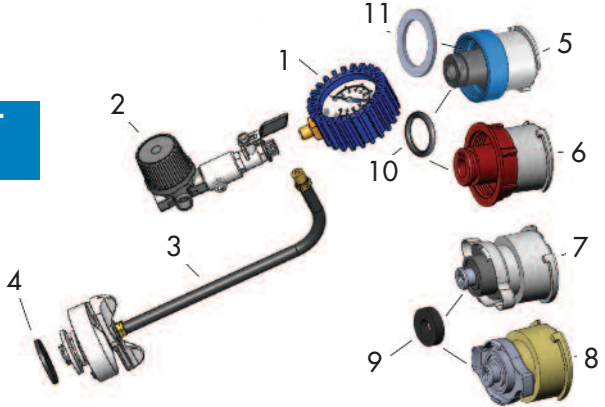


Diagram	Part #	Description:
(not shown)	MSM-10013	Replacement plastic carrying case
	MSM-300K-1	Complete pump with gauge and hose assembly (1-4)
1	MSM-10001	Pressure gauge
2	MSM-300K-2	Valve regulator assembly
3	MSM-300K-4	Tester head with hose assembly
4	MSM-10005	Tester seal
5	adapter: MSM-10036	52mm OD radiator adapter with dual seal (seal and O-ring)
6	adapter: MSM-10052P	50mm OD radiator adapter with O-ring
7	adapter: MSM-10128	32mm ID x 16mm deep radiator adapter with seal
8	adapter: MSM-10138	32mm ID x 9.5mm deep radiator adapter with seal
9	MSM-10009	Rubber seal for MSM-10128 and MSM-10138
10	MSM-10012	O-ring for MSM-10052P and MSM-10036
11	MSM-10011	Rubber seal for MSM-10036



# MSM-400CRT Truck Refiller

See page 4  
For Photo

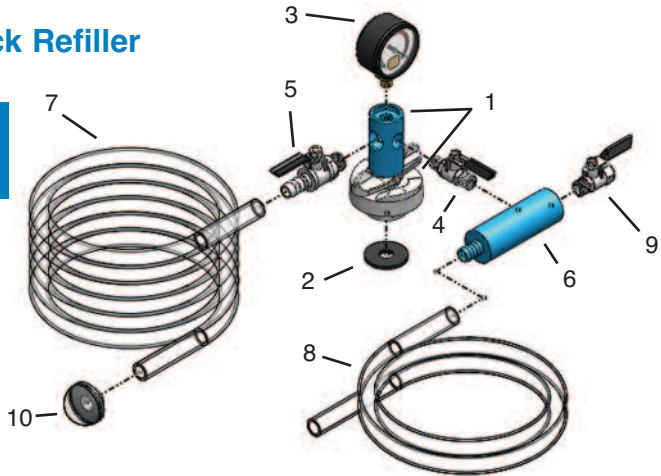


Diagram #	Stock Part #	Description:
1	MSM300CRA-7	COOLANT REFILL BODY ASSEMBLY
2	MSM10005	TESTER SEAL
3	MSM300CR-3	VACUUM GAUGE, LOWER CONNECT
4	MSM201CR-12	ISOLATION VALVE
5	MSM400CRT-11	COOLANT REFILL VALVE
6	MSM400CRT-5	VENTURI BODY ASSEMBLY
7	MSM400CRT-1	COOLANT REFILL HOSE W/SCREEN
8	MSM400CRT-4	OVERFLOW HOSE
9	MSM201CR-13	AIR INLET VALVE
10	MSM400CRT-10	COOLANT REFILL SUCTION SCREEN ONLY
(NOT SHOWN)	MSM400-10	PLASTIC CASE

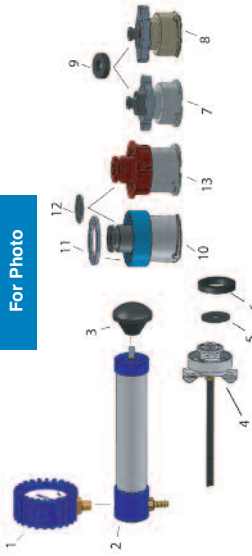


	Maximum Vacuum (inHg)	Flow (CFM)	Air consumption (CFM)	Refill Rate (Gal/Min)
MSM300CRA	28.3	2.4	5.8	2.8
MSM300CRU	28.3	2.4	5.8	2.8
MSM400CRT	28.3	5.8	15.5	4.8
MSM3N1	28.1	8.1	17	4.8

Test performed using 100 - 110psi compressed air  
 Barometric pressure: 30.1 - 30.2  
 (For best results use 100psi regulated pressure input)

# MSM-100K5 PARTS LIST

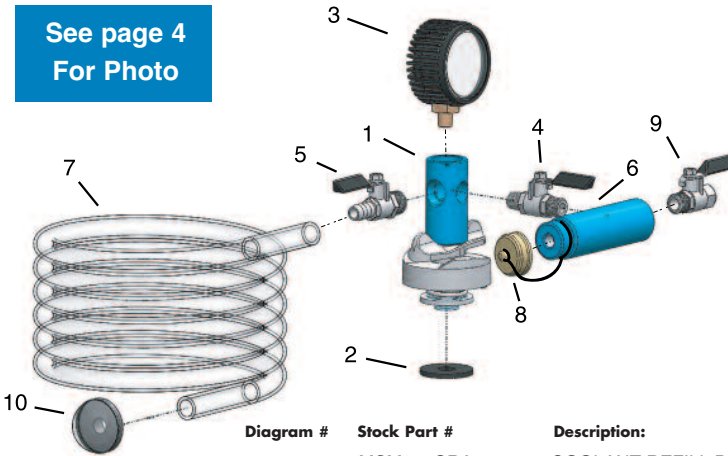
See Front Cover  
For Photo



## DIAGRAM # PART # DESCRIPTION

(not shown)	MSM-10000	Cooling System Tester Pump (#1 thru #5)
1	MSM-10001	Pressure Gauge
2	MSM-10002	Pump assembly with knob
3	MSM-10003	Knob only
4	MSM-10004	Tester Head Assembly with hose <b>NOTE: Hose may be field repaired with 3/16" ID fuel line</b>
5	MSM-10005	Tester Seal
6	MSM-10006	Spacer Washer <b>(1/4" thick rubber washer for 1" deep filler necks-see page 11)</b>
7	MSM-10128	32mm ID x 16mm deep Radiator Adapter with Seal
8	MSM-10138	32mm x ID x 9.5mm Deep Radiator Adapter with Seal
9	MSM-10009	Rubber Seal for 32mm Radiator Adapter
10	MSM-10036	52mm x 2.5mm Threaded Cooling System Adapter
11	MSM-10011	Rubber gasket for 52mm adapter
12	MSM-10012	O-ring for MSM-10036 and MSM-10052P
13	MSM-10052P	50mm x 2.5mm Threaded Cooling System Adapter
(not shown)	MSM-10013	Plastic carrying case
	MSM-100P	Cooling System Tester Pump in Plastic Carrying Case <i>(no adapters)</i>

See page 4  
For Photo



## MSM-3N1 Coolant Refill, Retention and Pressure Test Kit

Diagram #	Stock Part #	Description:
1	MSM300CRA-7	COOLANT REFILL BODY ASSEMBLY
2	MSM10005	TESTER SEAL
3	MSM505-1	DUAL GAUGE
4	MSM201CR-12	ISOLATION VALVE
5	MSM400CR-11	COOLANT REFILL VALVE
6	MSM3N1-1	VENTURI BODY
7	MSM400CRT-1	COOLANT REFILL HOSE W/SCREEN
8	MSM505-5	BRASS GHT CAP
9	MSM201CR-13	AIR INLET VALVE
10	MSM400CRT-10	COOLANT REFILL SUCTION SCREEN ONLY
(NOT SHOWN)	MSM3N1-2	EXHAUST HOSE
(NOT SHOWN)	MSM400-10	PLASTIC CASE

## LIMITED TIME WARRANTY

Any Cornwell® Tools equipment item shown in this booklet which fails to give satisfactory service within the one year warranty period will be repaired or replaced when returned to a Cornwell® Tools representative. Cornwell® Tools shall not be liable for loss of use of the product or other incidental or consequential costs incurred by the purchaser.