

CORNWELL[®] TOOLS



MODEL MSM-100K

COOLING SYSTEM PRESSURE TESTER



Interactive
adapter
search:

CornwellRadiatorTools.com

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



MSM-300CRU

NO adapters needed!

Both MSM-300CRA and 300CRU offer:

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

MODEL MSM-300CRA

VACUUM ASSIST
COOLANT REFILL KIT



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

MSM-14000P:

Designed as an add-on for the MSM-100K. Carrying case comes with 14 composite cooling system adapters. When added to the MSM-100K with its pump and 3 adapters, the combination will pressure test the cooling systems of all modern cars and light trucks through 2015. Pump and adapters fit into the case as shown below. 14 included adapters: MSM-10022P, MSM-10025P, MSM-10031P, MSM-10034P, MSM-10041P, MSM-10044P, MSM-10046P, MSM-10048P, MSM-10052P, MSM-10056P, MSM-10245P, MSM-10345P, MSM-10445P, MSM-14503, Replacement plastic box available: MSM-14000PCS.

Laminated adapter application sheet included with the MSM-14000P

FITS RIGHT INSIDE THE CASE -



MSM-14000P

MODEL MSM-400K

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



- Pressure pump uses shop air to generate pressure in small or large systems.
- Pressure regulator gives fine control
- Includes the four most common cooling system adapters needed for today's vehicles:

MSM-10128
MSM-10138
MSM-10036
MSM-10052P

MSM-400K PARTS LIST AND DIAGRAM



Diagram (not shown)

| Diagram | Part # |
|---------|---------------------|
| | MSM-10013 |
| | MSM-300K-1 |
| 1 | MSM-10001 |
| 2 | MSM-300K-2 |
| 3 | MSM-300K-4 |
| 4 | MSM-10005 |
| 5 | adapter: MSM-10036 |
| 6 | adapter: MSM-10052P |
| 7 | adapter: MSM-10128 |
| 8 | adapter: MSM-10138 |
| 9 | MSM-10009 |
| 10 | MSM-10012 |
| 11 | MSM-10011 |

Description:

- Replacement plastic carrying case
- Complete pump with gauge and hose assembly (1-4)
- Pressure gauge
- Valve regulator assembly
- Tester head with hose assembly
- Tester seal
- 52mm OD radiator adapter with dual seal (seal and O-ring)
- 50mm OD radiator adapter with O-ring
- 32mm ID x 16mm deep radiator adapter with seal
- 32mm ID x 9.5mm deep radiator adapter with seal
- Rubber seal for MSM-10128 and MSM-10138
- O-ring for MSM-10052P and MSM-10036
- Rubber seal for MSM-10036



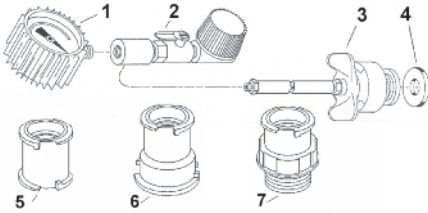
MSM-6000 Large Truck Cooling System Adapter Set:

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

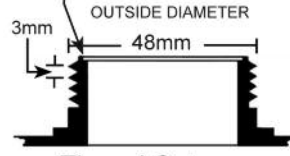
MSM-10022

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

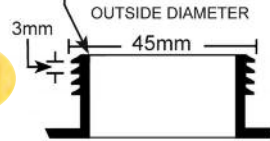
MSM-1C026

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

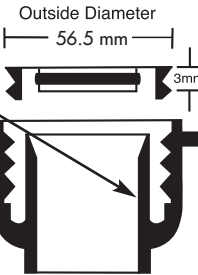


MSM-1C030



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

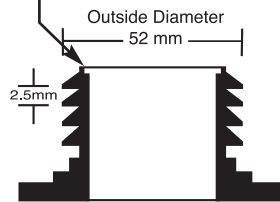


MSM-1C035P

MSM-10032P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



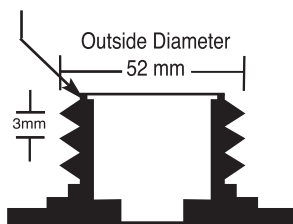
Thread Cutaway

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



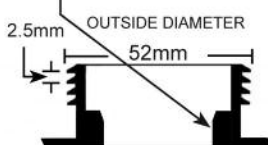
Thread Cutaway

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



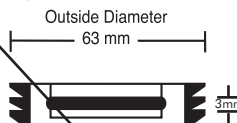
Thread Cutaway

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

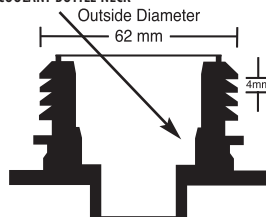
PORSCHE®:

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®:

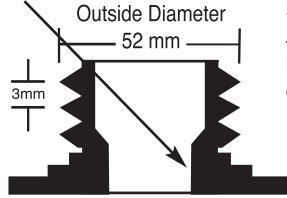
Crossfire 2004-2008



MSM-1C047P

MSM-10046P

WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



APPLICATION:

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



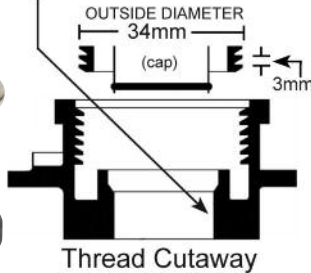
MSM-10046

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

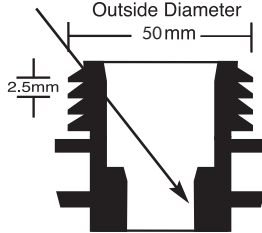


MSM-10048

MSM-10052



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



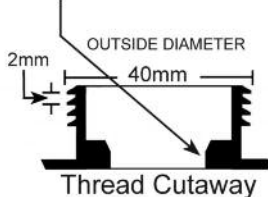
MSM-10052P

MSM-1C053P



MSM-10056P

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)

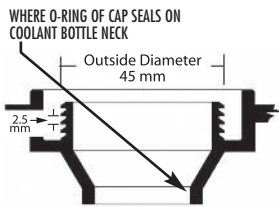
SATURN®:
Ion Redline 2004-2007 (Supercharger Cooling System)

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

MSM-10056



MSM-1C057P



APPLICATION:

DODGE®:

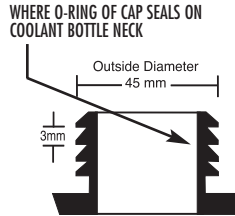
Sprinter Van 2007-2010

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

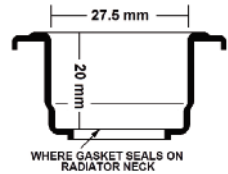
NISSAN®

Kicks 2019 - current

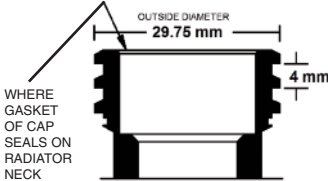
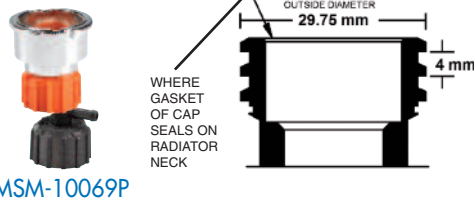
Rogue Sport 2017 - current

SMART CAR®: 2016 - current

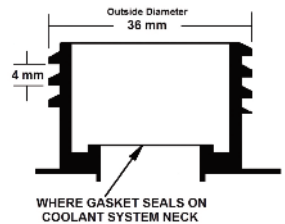
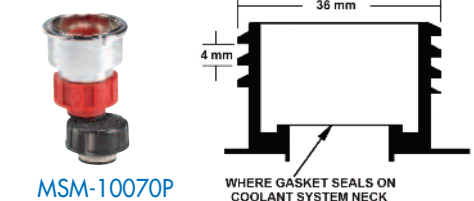
Comment: The MSM-10063P seals with an O-ring just like the cap from the system they test. In most cases the MSM-10025P, which seals on the top rim will adequately seal such that pressure testing can be accomplished.



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

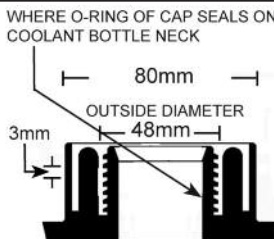
FIAT®:

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®:

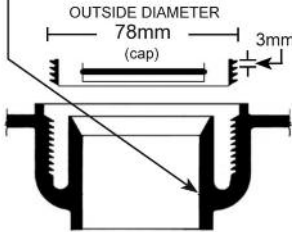
Sharan (EU)

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)

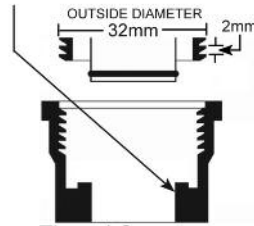


MSM-1C087P

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.

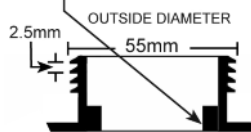


MSM-1C089

MSM-10088P



WHERE O-RING OF CAP SEALS ON COOLANT BOTTLE NECK



APPLICATION:

VOLVO®:

XC40 2018 - current
XC90T8 Hybrid-2016-current



MSM-10092P

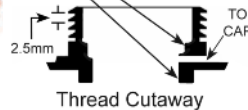


MSM-10093P

Left Hand Thread



WHERE MSM-10093P SEALS FOR VACUUM REFILLING
WHERE MSM-10092P SEALS FOR PRESSURE TESTING
52mm
OUTSIDE DIAMETER



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.



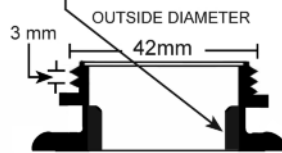
MSM-10098P



MSM-1C099P



WHERE O-RING OF CAP SEALS IN COOLANT BOTTLE NECK



APPLICATION:

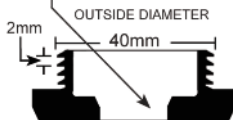
TESLA®:

Tesla Model 3

MSM-1C105P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



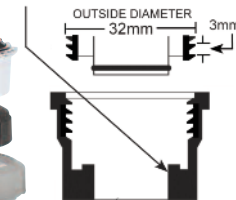
APPLICATION:

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



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



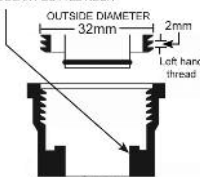
APPLICATION:

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

MSM10110P
Photo coming soon

Left Hand Thread

WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK



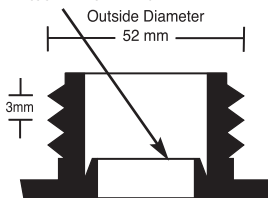
APPLICATION:

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



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

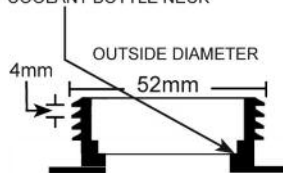
MERKUR® SCORPIO:
(1987-1989)

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

MSM-10345P



WHERE GASKET OF CAP SEALS ON COOLANT BOTTLE NECK

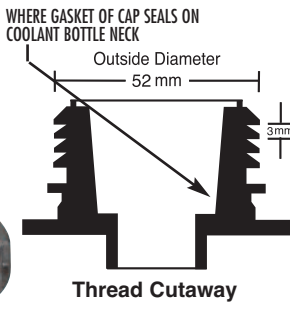


Thread Cutaway

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



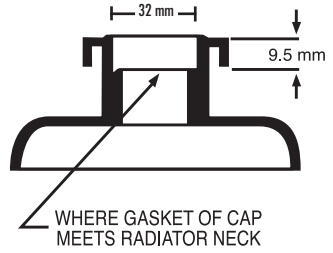
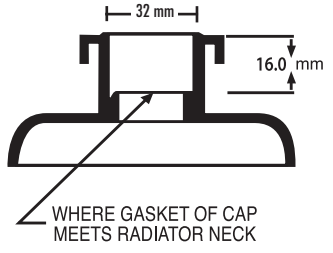
APPLICATION:
 BMW®:
 Most BMW models 2007-current
 3-Series 2006-current
 5-Series 2005-current
 6-Series 2005-current
 X3 2009-current
 X5 2009-current
 X6 2008-current
 TOYOTA®:
 Supra 2020 - current

FORKLIFTS - MOTORCYCLES - MOST ASIAN VEHICLES

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

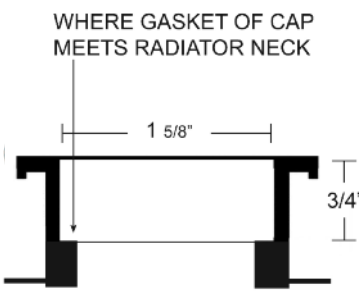


Most motorcycles, including the Harley Davidson® liquid cooled models, use this configuration



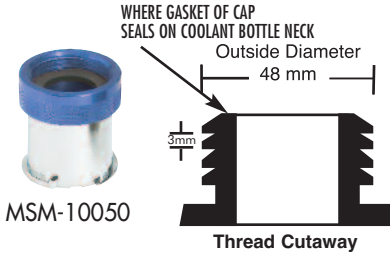
Comments: The MSM-1C029/MSM-10128 and the MSM-1C039/MSM-10138 have applications too numerous to list here. See Application Guide pp 14-20. These adapter sets are quite similar, but the MSM-1C029/MSM-10128 is a deeper neck than the MSM-1C039/MSM-10138. See drawings above, right.

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



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



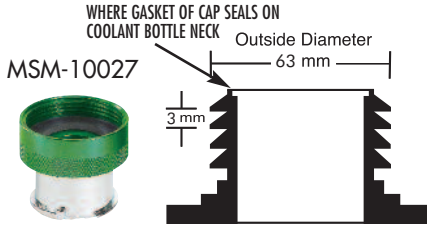
APPLICATION:

MACK® TRUCKS:

2008 and later with
48mm x 3mm male
threads on filler neck

VOLVO®:

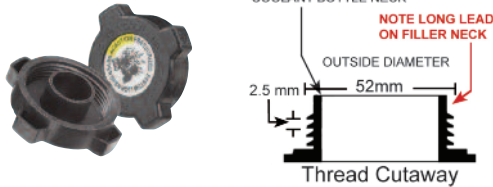
Large Trucks with
48mm x 3mm male
thread on filler neck



APPLICATION:

VOLVO®:

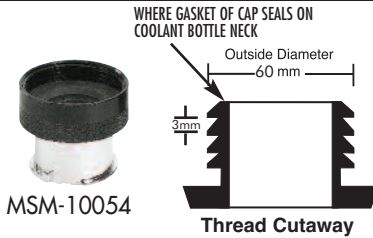
Large Trucks with
63mm x 3mm
thread on filler neck



APPLICATION:

KENWORTH®:

T660 and T680 Trucks



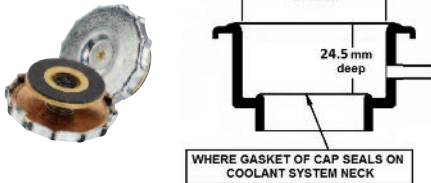
APPLICATION:

FREIGHTLINER®:

Trucks with
60mm x 3mm male
thread on filler neck



Note: Cap and adapter have 3 tabs



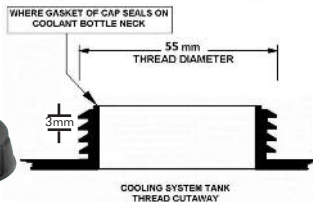
APPLICATION:

LIEBHERR® CRANE:

Some models

VAN HOOL® BUS:

Some models



APPLICATION:

KENWORTH®:

2015-current

T270

T370

LARGE TRUCKS / BUSES / HEAVY EQUIPMENT

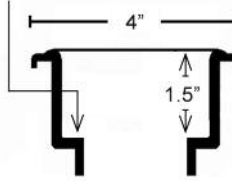


MSM-10090P

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-10450



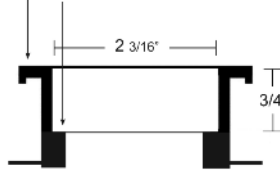
MSM-14505

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

MSM-14503
Type cap



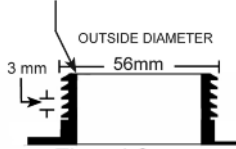
PART #MSM-14503:
GM adapter kit tests pressure on "closed cooling systems"
on GM 2.5L "X" body cars
and 1.8L "J" body cars



MSM-10094



WHERE GASKET OF CAP SEALS ON
COOLANT BOTTLE NECK



Thread Cutaway

APPLICATION:

VOLVO®:

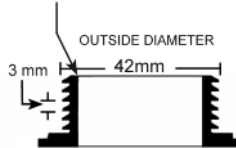
Volvo FH4 trucks and
A45G Haul Trucks



MSM-10096



WHERE GASKET OF CAP SEALS ON
COOLANT BOTTLE NECK



Thread Cutaway

APPLICATION:

VOLVO®:

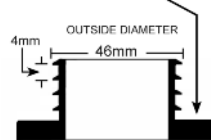
Volvo EC220E Excavator



MSM-10102



WHERE GASKET OF CAP SEALS ON
COOLANT BOTTLE NECK



Thread Cutaway

APPLICATION:

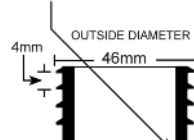
JOHN DEERE®:

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 |
|--|------------------------|------------------|
| ACURA® | | |
| 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 |
| ALFA ROMEO® | | |
| Most Models 2014-current | MSM-10072P* | MSM-1C026/1C026P |
| ASTON MARTIN® | | |
| 6.0 L, V-12 2015-current | MSM-10052/10052P | MSM-1C053/1C053P |
| Various Models 2005-current | MSM-10046/10046P | MSM-1C246/1C047P |
| AUDI® | | |
| 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 |
| BLUEBIRD® BUS | | |
| Late model Thomas Built buses | MSM-10036/10036P | MSM-1C037/1C035P |
| BMW® | | |
| 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 |
|--|--|--|
| BMW® | | |
| 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 |
| BUICK® | | |
| 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 | |
| CADILLAC® | | |
| All Models w/ male threads on filler neck except as noted below | MSM-10036/10036P** | MSM-1C037/1C035P |
| Catera 1997-2001 STS, CTS, ATS 2005-2010 Engine Cooling System Supercharger Cooling Syst | MSM-10034/10034P MSM-10036/10036P MSM-10056/10056P | MSM-1C246/1C047P MSM-1C037/1C035P MSM-1C057/1C057P |
| CHEVROLET® | | |
| 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 Engine Cooling System Supercharger Cooling System | MSM-10036/10036P MSM-10056/10056P | MSM-1C037/1C035P 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

Interactive Adapter search:
www.CornwellRadiatorTools.com

| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|---|--|--|
| CHEVROLET® CONTINUED | | |
| 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-1C037/1C057P |
| 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 |
| CHRYSLER®/DODGE®/EAGLE®/PLYMOUTH®/RAM® | | |
| 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-10138 | MSM-1C029 MSM-1C039 |
| 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 |
| DAEWOO® | | |
| All 1999-2002 | MSM-10034/10034P | MSM-1C246/1C047 |

| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|--|---|--|
| FENDT® | | |
| 900, 1000 and 1100 series | MSM-10108P | |
| FERRARI® | | |
| Most Models 2000-current | MSM-10025/10025P | MSM-1C026/1C026P |
| FIAT® | | |
| 500 2015-current | MSM-10072P* | MSM-1C026/1C026P |
| FORD®/LINCOLN®/MERCURY® | | |
| 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 |
|--|------------------------------|-------------------------------|
| FORD®/LINCOLN®/MERCURY® | | |
| 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 2000-2003 | MSM-10128 MSM-10036/36P** | MSM-1C029 MSM-1C033/1C035P |
| ZX2 2001-2003 | MSM-10128 | MSM-1C029 |
| FREIGHTLINER® | | |
| 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 |
| GEO® | | |
| Metro 1989-1994 1995-1998 | MSM-10128 MSM-10138 | MSM-1C029 MSM-1C039 |
| Prizm 1989-1992 1993-2002 | MSM-10128 MSM-10138 | MSM-1C029 MSM-1C039 |
| Storm 1990-1993 | MSM-10128 | MSM-1C029 |
| Tracker 1989-1993 1994-2004 | MSM-10128 MSM-10138 | MSM-1C029 MSM-1C039 |
| GMC® | | |
| 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 |
| HONDA® | | |
| 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 |
|---|------------------------------|-------------------------------|
| HUMMER® | | |
| All Models with male threads on filler neck | MSM-10036/10036P | MSM-1C037/1C035P |
| HYUNDAI® | | |
| Models with non-threaded cap | MSM-10128 | MSM-1C029 |
| Elantra 2016 - current | MSM-10086P | MSM-1C087 |
| Ioniq, Electric 2020 | MSM-1011P | 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 |
| INDUSTRIAL | | |
| Various industrial applications (see page 13 for specs) | MSM-10090P | |
| INTERNATIONAL® | | |
| 466 Engine with male threads on filler neck 1994-1998 | MSM-10032/32P | MSM-1C033/1C035P |
| INFINITI® | | |
| All Models with Non-Threaded Small Cooling System Caps (see page 11) | MSM-10128 | MSM-1C029 |
| QX56 2004-2009 | MSM-10036/36P** MSM-10128 | MSM-1C033/1C035P MSM-1C029 |
| 2010-current | | |
| QX 30 2017 - current | MSM-10044/10044P | MSM-1C045/1C045P |
| QX50 2019 - current | MSM-10063/10063P | MSM-1C026/1C026P |
| ISUZU® | | |
| 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 |
|---|-------------------------------------|--------------------------------------|
| ISUZU® CONTINUED | | |
| 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 |
| JAGUAR® | | |
| 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 |
| XK8 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 |
| JEEP® | | |
| Models with male threads on filler neck 1987-1990 | MSM-10025/10025P | MSM-1C026/1C026P |
| Cherokee 2014-current | MSM-10036/10036P | MSM-1C026/1C026P |
| 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 |
| JOHN DEERE® TRACTORS | | |
| 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 | N/A - consult factory | N/A |
| Some Models | MSM-10102P | |
| KENWORTH® TRUCKS | | |
| 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 |

| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|--|---|---|
| KIA® | | |
| 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 |
| LAND ROVER® | | |
| 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 |
| LEXUS® | | |
| 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 |

**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 |
|--|---|---|
| LIEBHERR® CRANE | | |
| Some Models | MSM-10076 | |
| MACK® TRUCK | | |
| Late models with male threads on filler neck | MSM-10050/10022P | MSM-1C023/1C023P |
| MASERATI® | | |
| Most Models 2000-current Ghibli S Q4 2015-current | MSM-10025/10025P MSM-10072P* | MSM-1C026/1C026P MSM-1C026/1C026P |
| MAZDA® | | |
| 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 Tribute 2001-2011 Mazda 3 2004-current Mazda 6 2003-current | none MSM-10036/36P** MSM-10046/10046P MSM-10052/10052P MSM-10036/10036P | MSM-1C052 MSM-1C033/1C035P MSM-1C047/1C047P MSM-1C053/1C053P MSM-1C037/1C035P |
| McLAREN® | | |
| Most Models 2012-current | MSM-10072P | MSM-1C026/1C026P |
| MERCEDES® | | |
| 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 |
| MERKUR® | | |
| Scorpio 1987-1989 | MSM-10245/10245P | MSM-1C246/1C047P |
| MINI® | | |
| Cooper S Model 2002-current | MSM-10063P▲ | MSM-1C026/1C026P |
| MITSUBISHI® | | |
| 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 |

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

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

COOLING SYSTEM ADAPTERS

Interactive Adapter search:
www.CornwellRadiatorTools.com

| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|---|--|--------------------------------------|
| PONTIAC® continued | | |
| Solstice 2006-2009 | MSM-10036/10036P | MSM-1C037/1C035P |
| Sunbird 1982-1992 | MSM-14503 | |
| Sunburst 1985-1988 | MSM-10128 | MSM-1C029 |
| Sunfire 1995-1998 1999-2005 | MSM-10036/36P** MSM-10036/10036P | MSM-1C033/1C035P MSM-1C037/1C035P |
| Vibe 2003-2010 | MSM-10138 | MSM-1C039 |
| PORSCHE® | | |
| 911 1999-2015 | MSM-10022/10022P | MSM-1C023/1C023P |
| Boxster 1997-2006 2007-2013 2015-current (in luggage compartment) | MSM-10022/10022P MSM-10041/10041P MSM-10078P | MSM-1C023/1C023P MSM-1C040/1C040P |
| Cayman 2006 2007-2011 2014-current (in luggage compartment) | MSM-10022/10022P MSM-10041/10041P MSM-10078P | MSM-1C023/1C023P MSM-1C040/1C040P |
| 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 |
| RENAULT® | | |
| All models 1985-1987 | MSM-10025/10025P | MSM-1C026/1C026P |
| ROLLS ROYCE® | | |
| Ghost 2010 Engine Cooling System Supercharger Cooling System | MSM-10445/10445P MSM-10063P | MSM-1C446/1C446P MSM-1C026/1C026P |
| SAAB® | | |
| 900 1978-1993 1994-1998 | MSM-10025/10025P MSM-10034/10034P | MSM-1C026/1C026P MSM-1C246/1C047P |
| 900 Convertible 1994 | MSM-10025/10025P | MSM-1C026/1C026P |
| 9000 1986-1998 | MSM-10025/10025P | MSM-1C026/1C026P |
| 9-3 1999-2003 2004-2011 | MSM-10034/10034P MSM-10036/10036P | MSM-1C246/1C047P 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 |
|--|--|--|
| SATURN® | | |
| 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 2003-2009 | MSM-10034/10034P MSM-10036/10036P | MSM-1C246/1C047P 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 |
| SCION® | | |
| All models 2004-2016 | MSM-10138 | MSM-1C039 |
| XB 2018-2015 | MSM-10048/10048P | MSM-1C049/1C049P |
| SMART CAR® | | |
| All models 2008-2015 2016-current | MSM-10022/10022P MSM-10063P | MSM-1C023/1C023P MSM-1C026/1C026P |
| STERLING® | | |
| All models 1987-1991 | MSM-10025/10025P | MSM-1C026/1C026P |
| SUBARU® | | |
| 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 |
| SUZUKI® | | |
| 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 2004-2006 2007-2009 | MSM-10138 MSM-10128 MSM-10036/10036P | MSM-1C039 MSM-1C029 MSM-1C037/1C035P |

COOLING SYSTEM ADAPTERS

Interactive Adapter search:
www.CornwellRadiatorTools.com

| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|---|------------------------------|------------------------------|
| TESLA® | | |
| Model 3 2017-current | MSM-10098P | MSM-1C099P |
| Model Y 2020-current | MSM-10098P | MSM-1C099P |
| TOYOTA® | | |
| 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 |
| TRUCKS/HEAVY DUTY | | |
| Vehicles with large fill ("B") neck (2 11/16") see page 13 | MSM-10450 (Set) or MSM-14505 | MSM-10450 (Set) or MSM-14504 |
| VAN HOOL® BUS | | |
| Some models | MSM-10076 | |
| VOLKSWAGEN® | | |
| 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 |

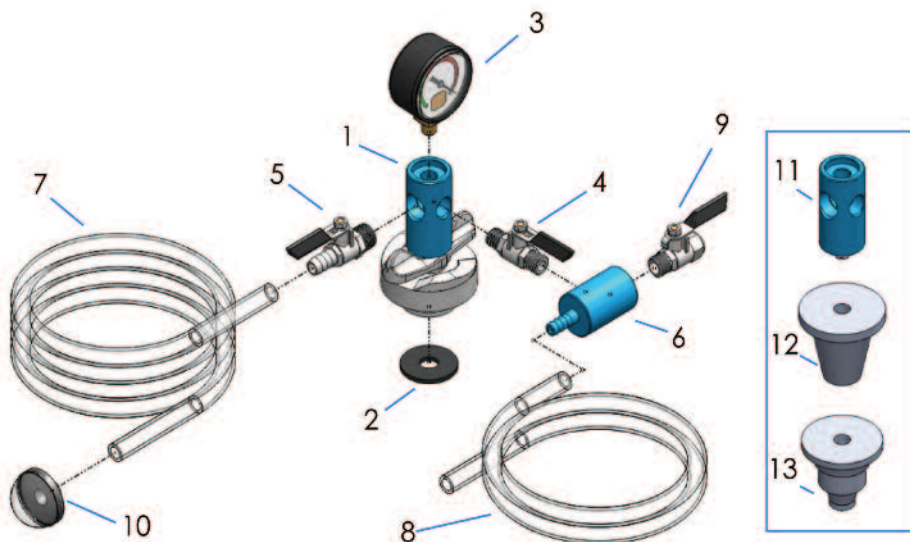
| Make/Model/Year | Cooling System Adapter | Cap Adapter |
|---|--------------------------------------|-----------------------------|
| VOLKSWAGEN® (CONTINUED) | | |
| Golf 1985-1990 | MSM-10022/10022P | MSM-1C023/1C023P |
| 1991-1999 | MSM-10031/10031P | MSM-1C030 |
| 2000-current | MSM-10041/10041P | 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 |
| VOLVO® | | |
| 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, MSM-10084P , MSM-10094P | 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, MSM-10034P , MSM-10036P | 1 7/8" O.D. x 1 3/16" I.D. x 1/8" thick | MSM-10015 |
| MSM-10245, MSM-10345, MSM-10245P , MSM-10345P | 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, MSM-10031P , MSM-10041P , MSM-10074P | 36 mm O.D. x 28 mm I.D. x 4mm cross section O-ring | MSM-10031R |
| MSM-10036, MSM-10046, MSM-10052, MSM-10036P , MSM-10046P , MSM-10052P , MSM-10088P , MSM-10092P | 31 mm O.D. x 23 mm I.D. x 4mm cross section O-ring | MSM-10012 |
| MSM-10044, MSM-10044P | 42 mm O.D. x 34 mm I.D. x 4mm cross section O-ring | MSM-10016 |
| MSM-10048, MSM-10048P | 13/16" O.D. x 5/8" I.D. x 3/32" cross section O-ring (O-ring # P16) | MSM-10018 |
| MSM-10445, MSM-10445P | 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, MSM-10056P , MSM-10098P | 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 |
| MSM-10025P , MSM-10096P | 1 11/16" O.D. x 1 1/16" I.D. x 1/8" thick | MSM-10021 |
| MSM-10022P | 1 3/4" O.D. x 1" I.D. x 1/8" thick | MSM-10023 |
| MSM-10032P , MSM-10042P | 1 7/8" O.D. x 1 1/16" I.D. x 1/8" thick | MSM-10032PG |
| MSM-10027P | 2 3/8" O.D. x 1 5/8" I.D. x 1/8" thick | MSM-10027G |
| MSM-10054P | 2 1/4" O.D. x 1 1/2" I.D. x 1/8" thick | MSM-10054G |
| MSM-10058P | 27 mm O.D. x 21 mm I.D. x 3mm cross section O-ring | MSM-10058R |
| MSM-10063P , MSM-10078P | 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 |
| MSM-10069P | 1" OD x 5/8" ID x 3/16" thick O-ring | MSM-10069R |
| MSM-10070P | 1" OD x 1/2" ID x 1/16" thick | MSM-10070G |
| MSM-10072P | 26 mm OD x 19 mm ID x 3.5mm cross section O-ring | MSM-10072R |
| MSM-10076 | Molded rubber gasket (custom) | MSM-10076G |
| MSM-10086P , MSM-10106P | 21 mm OD x 14 mm ID x 3.5mm cross section O-ring | MSM-10086R |
| MSM-10090P | Molded rubber gasket (custom) | MSM-10090G |
| MSM-10093P | 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 |
| MSM-10104P | 21 mm O.D. x 15 mm I.D. x 3 mm cross | MSM-10104R |

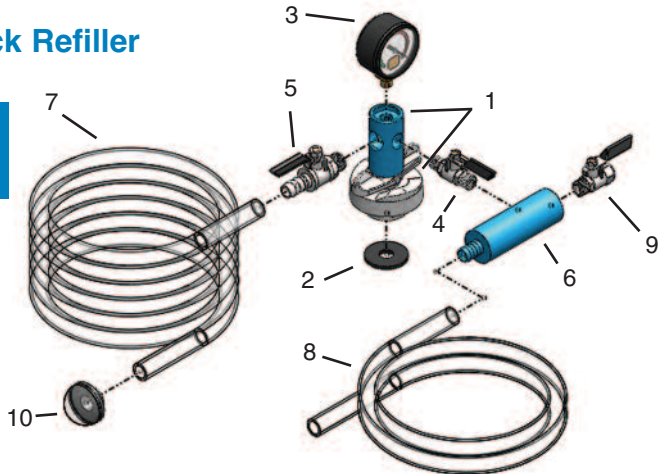
MSM-300CRA and MSM-300CRU Cooling System Refiller Parts Diagram and Part Numbers



| 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 |
| MSM-300CRA ONLY | | |
| 1 | MSM-300CRA-7 | COOLANT REFILL BODY ASSEMBLY |
| 2 | MSM-10005 | TESTER SEAL |
| MSM-300CRU ONLY | | |
| 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-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)

PARTS LIST

(CORNWELL® TOOLS PART MSM-100K)

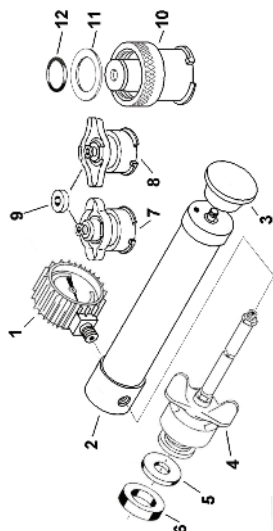
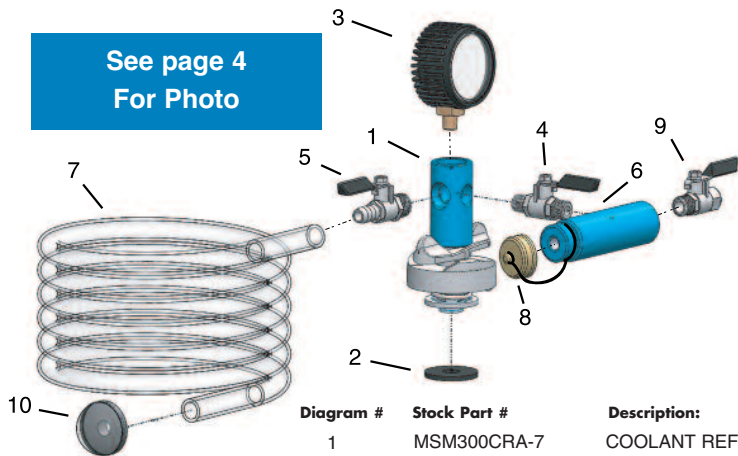


DIAGRAM STOCK PART # DESCRIPTION

| | | |
|----|-----------|---|
| 1 | MSM-10000 | COOLING SYSTEM TESTER PUMP (DIAGRAM #1 THRU 5) |
| 2 | MSM-10001 | PRESSURE GAUGE |
| 3 | MSM-10002 | PUMP ASSEMBLY WITH KNOB |
| 4 | MSM-10003 | KNOB ONLY |
| 5 | MSM-10004 | TESTER HEAD ASSEMBLY WITH HOSE NOTE: HOSE MAY BE FIELD REPAIRED— USE 3/16" ID FUEL HOSE |
| 6 | MSM-10005 | TESTER SEAL |
| 7 | MSM-10006 | SPACER WASHER (1/4" THICK RUBBER WASHER FOR 1" DEEP FILLER NECKS - SEE PAGE 11) |
| 8 | MSM-10128 | 32MM I.D. X 16MM DEEP RADIATOR ADAPTOR WITH SEAL |
| 9 | MSM-10138 | 32MM I.D. X 9.5MM DEEP RADIATOR ADAPTOR WITH SEAL |
| 10 | MSM-10009 | RUBBER SEAL... FOR 32MM RADIATOR ADAPTOR |
| 11 | MSM-10036 | DOMESTIC THREADED RADIATOR ADAPTOR 52MM O.D. WITH DUAL SEAL, (SEAL & O-RING) |
| 12 | MSM-10011 | RUBBER SEAL FOR 52MM RADIATOR ADAPTOR |
| ** | MSM-10012 | O-RING FOR 52MM RADIATOR ADAPTOR |
| ** | MSM-10013 | PLASTIC CARRYING CASE |
| ** | MSM-100K | COOLING SYSTEM TESTER KIT, COMPLETE |
| ** | MSM-100P | COOLING SYSTEM TESTER PUMP IN PLASTIC CASE (DIAGRAM #** AND 1 THRU 5) |

**NOT SHOWN

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-11 | COOLANT REFILL HOSE W/SCREEN |
| 8 | MSM505-5 | BRASS GHT CAP |
| 9 | MSM201CR-13 | AIR INLET VALVE |
| 10 | MSM400CRT-10 | COOLANT REFILL SUCTION |

(NOT SHOWN) MSM3N1-2
(NOT SHOWN) MSM400-10

EXHAUST HOSE
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.