ABC123	Entire Article 2000 Chevrolet Camaro

ARTICLE BEGINNING

2000-01 GENERAL SERVICING
Compressor Refrigerant Oil Checking

*** PLEASE READ THIS FIRST ***

NOTE: For compressor applications, see COMPRESSOR APPLICATIONS & BODY DESIGNATIONS article. DO NOT exceed A/C system refrigerant oil capacity when servicing system. See REFRIGERANT OIL & REFRIGERANT SPECIFICATIONS article.

REFRIGERANT OILS

NOTE: Use only specified oil for A/C system or compressor. Always check underhood A/C specification label or A/C compressor label before adding refrigerant oil to A/C compressor/system.

Use only NEW, moisture-free refrigerant oil in A/C systems. Refrigerant oil is highly refined, with a very low moisture content. Oil container must be tightly closed when not in use, or moisture from air will be absorbed into refrigerant oil.

Refrigerant R-134a systems use Polyalkylene Glycol (PAG) refrigerant oil. Using a mineral oil based lubricant with R-134a systems will result in A/C compressor failure due to lack of proper lubrication.

All compressors have different lubrication requirements and use different Polyalkylene Glycol (PAG) refrigerant oils. Use only the specified PAG refrigerant oil for appropriate system and A/C compressor. Always check underhood A/C specification label or A/C compressor label before adding refrigerant oil to A/C compressor/system. See listing of refrigerant oils currently available from vehicle manufacturers.

NOTE: PAG oil absorbs moisture very rapidly, 2.3-5.6 percent by weight as compared to a mineral oil absorption rate of 0.005 percent by weight.

DAIMLERCHRYSLER CORP.

Use ND-8 PAG oil, SUN PAG 56 oil, SP-10 PAG oil, SP-15 PAG Oil, or SP-20 PAG oil.

FORD MOTOR CO.

Use YN-12B or YN-12C PAG Refrigerant Oil (specification WSH-M1C231-B) or Heavy Truck PAG Oil (specification WST-M1C231-B2).

GENERAL MOTORS

On all models except Aurora, DeVille, Seville and Saturn, use

PAG Refrigerant Oil (Part No. 12345923). On Aurora, DeVille and Seville use PAG Refrigerant Oil (Part No. 12356151). On Saturn, use Saturn PAG refrigerant oil.

SERVICING PRECAUTIONS

DISCHARGING SYSTEM

Discharge A/C system, using approved refrigerant recovery/recycling equipment before loosening any fittings. Follow refrigerant recovery/recycling equipment manufacturer's instructions.

DISCONNECTING LINES & FITTINGS

After system is discharged, carefully clean area around all fittings to be opened. Always use 2 wrenches when loosening or tightening fittings. Some refrigerant lines are connected with a spring-lock coupling. Special tools may be required to disconnect lines. To prevent dirt and moisture from entering system, cap all openings as soon as lines are removed. DO NOT remove service valve caps until ready to connect lines and fittings.

NOTE: All R-134a based systems use 1/2-16 ACME threaded fittings. Ensure all replacement parts match connections of system being worked on.

CONNECTING LINES & FITTINGS

Always use new a gasket or "O" rings when connecting lines or fittings. Coat "O" rings with refrigerant oil, and ensure it is not twisted during installation. To prevent damage to lines and fittings, always use 2 wrenches or specified tools. Keep refrigerant oil off fitting threads. Long term contact of oil on threads may cause future damage to threads.

PLACING SYSTEM IN OPERATION

After component service or replacement has been completed, evacuate system thoroughly with a vacuum pump. Charge system with proper amount of refrigerant. See REFRIGERANT OIL & REFRIGERANT SPECIFICATIONS article. Perform leak test. After system has been leak tested, check system operation.

NOTE: A/C systems normally will not need additional refrigerant oil unless oil loss has occurred due to ruptured lines, leaking compressor seals, compressor overhaul or component replacement.

CHECKING COMPRESSOR OIL

DELPHI-THERMAL (HARRISON) HD6/HT6/HU6 & HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL.

NOTE: Replacement compressor may be shipped with 8-9 ounces of refrigerant oil. Drain shipping refrigerant oil into a clean container and retain for use.

1) If possible, operate system for several minutes to stabilize system. Turn engine off. Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain and measure refrigerant oil from old compressor through suction and discharge ports, and drain plug. Add specified amount of oil to replacement compressor. Install compressor drain plug and compressor.

NOTE: Approximately 3.0 ounces of refrigerant oil, suspended in refrigerant, will be lost due to a large, abrupt leak. When replacing a faulty A/C component, add amount of oil specified for component plus 3.0 ounces to compensate for oil loss. If oil cannot easily be added to component, add it to accumulator.

2) When replacing other A/C components, add specified amount of refrigerant oil to component before installation. See DELPHI-THERMAL (HARRISON) HD6/HT6/HU6, HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL. COMPONENT REFRIGERANT OIL CAPACITIES (2000) or DELPHI-THERMAL (HARRISON) HD6/HT6/HU6, HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL. COMPONENT REFRIGERANT OIL CAPACITIES (2001) table. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

DELPHI-THERMAL (HARRISON) HD6/HT6/HU6, HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL. COMPONENT REFRIGERANT OIL CAPACITIES (2000)

Component	Ounces
Cars	
Accumulator/Receiver-Drier	
"G" & "Y" Bodies	3.5
"F", "N" & "W" Bodies	(1)
"C", "E", "H" & "J" Bodies	3.0
"S" Body	2.0
"V" Body	(2) 1.0
Compressor	
"C", "E", "V" & "Y" Bodies	(2) 2.0
"F", "G", "H", "P", "N" & "W" Bodies	(3)
"J" Body	2.8
"S" Body	(4) 2.0
Condenser	
Except "C", "J", "S" & "W" Bodies	1.0
"C", "J", "S" & "W" Bodies	2.0
Evaporator	
Except "C", "E" & "S" Body	3.0
"C", "E" & "S" Body	2.0
Refrigerant Hose/Line	
"S" Body	1.0
Sudden Refrigerant Loss	
"W" Body	(5)

Component	Ounces
Trucks & Vans	
Accumulator/Receiver-Drier	
Except "C" & "K" (New Style), "S/T" & "U" Series	3.5
"C" & "K" Series (New Style)	2.0
"S/T" Series	(4)
"G" Series	(1)
"U" Series	(6)
Compressor	
Except "U" Series	(3)
"U" Series	(2)
Compressor Suction/Discharge Hose	
"S/T" Series	1.0
Condenser	
Except "U" Series	1.0
"U" Series	(6)
Evaporator	
Except "U" Series	3.0
"U" Series	(6)

(1) - Add amount drained from old accumulator/receiver-drier plus one ounce.
(2) - Add amount drained from component or amount specified, whichever is greater.
(3) - Drain and measure refrigerant oil from old compressor. If old compressor had less than one ounce, add 2 ounces of refrigerant oil to replacement compressor. If old compressor had more than 2 ounce, add the same amount of refrigerant oil to replacement compressor.
(4) - Add 2 ounces of refrigerant oil plus amount drained from old component.
(5) - Add 3 ounces of refrigerant oil plus amount specified for replacement component.
(6) - Information not available from manufacturer.

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DELPHI-THERMAL (HARRISON) HD6/HT6/HU6, HD6/HR-6HE 6-CYL., V5 5-CYL. & V7 7-CYL. COMPONENT REFRIGERANT OIL CAPACITIES (2001)

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Component	Ounces
Cars	
Accumulator/Receiver-Drier	
"C" & "E" Bodies	(1) 2.0
"F", "N", "V" & "W" Bodies	(2)
"G", "H", "K", "M", "Y" & "Z" Bodies	3.5
"J" Body	3.0
"S" Body	2.0
"V" Body	1.0
Compressor	
"C", "E" & "V" Body	(1) 2.0
"F", "G", "H", "J", "P", "N" & "W" Bodies	(4)
"J" Body	2.8
"K" & "Y" Bodies	2.0
"S" Body	(5) 2.0


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    Condenser
      "C" & "E" Bodies  ......................................  (1) 1.0
        Except "C", "E", "J" & "S" Bodies  .......................  1.0
        "J" & "S" Body  ..........................................  2.0
    Evaporator
      "C" & "E" Bodies  ......................................  (1) 3.0
        "E" & "S" Bodies  ........................................  2.0
        Except "E" & "S" Bodies  .................................  3.0
    Refrigerant Hose/Line
      "S" Body  ..................................................  1.0
    Sudden Refrigerant Loss
      "C" & "W" Body  ............................................  (6)
  Trucks & Vans
    Accumulator/Receiver-Drier
      "C", "K" & "S/T" Series  ...............................  (1) 2.0
      "G" Series
        With Accumulator  ....................................  (1) 2.0
        With Receiver/Drier  .................................  (1) 1.0
      "A/B" & "U" Series  ....................................  (1) 0.4
    Compressor
      Except "A/B" & "U" Series  .............................  (1) 2.0
      "A/B" Series  ..........................................  (3) 2.7
      "U" Series
        With Front A/C  ......................................  (3) 2.7
        With Front & Rear A/C  ...............................  (3) 3.4
    Condenser
      Except "U" Series  .....................................  (1) 1.0
      "A/B" & "U" Series  ....................................  (1) 0.7
    Evaporator (Front Or Rear)  ..............................  (1) 3.0

  (1) - Add amount drained from component or amount specified,
        whichever is greater.
  (2) - Add amount drained from old accumulator/receiver-drier
        plus one ounce.
  (3) - Add amount drained from compressor or amount specified,
        whichever is greater. Replacement compressor is shipped with
        2.7 ounces for front A/C or 3.4 ounces for front and rear A/C.
  (4) - Drain and measure refrigerant oil from old compressor.
        If old compressor had less than one ounce, add 2 ounces of
        refrigerant oil to replacement compressor. If old compressor had
        more than 2 ounce, add the same amount of refrigerant oil to
        replacement compressor.
  (5) - Add 2.0 ounces of refrigerant oil plus amount drained
        from old compressor.
  (6) - Add 3.0 ounces of refrigerant oil plus amount specified
        for replacement component.
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FORD FS-10 10-CYLINDER

1) Slowly discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain as much compressor oil from suction and discharge ports as possible. Rotate compressor shaft 6-8 revolutions by hand, while pouring oil from

ports. Collect oil in a clean container and measure amount drained. DO NOT reuse old refrigerant oil.

2) If amount drained is 3.0-5.0 ounces, add amount drained plus one ounce of refrigerant oil to replacement compressor. If amount drained is more than 5.0 ounces, add the same amount that was drained from old compressor. If amount drained is less than 3.0 ounces, add 3.0 ounces to compressor. See FORD FS-10 COMPONENT REFRIGERANT OIL CAPACITIES table. Add refrigerant oil to replacement compressor through suction port.

3) Use new "O" rings on refrigerant lines. Install A/C compressor. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

FORD FS-10 COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Accumulator/Receiver-Drier	
Except Cougar & Focus	(1)
Cougar & Focus	(2)
Condenser	
Except Contour & Mystique	(3) 1.0
Contour & Mystique	0.7
Evaporator	
Except Contour & Mystique	(4) 3.0
Contour & Mystique	0.7
Other Components (5)	
Except Contour, Cougar, Focus & Mystique	2.0
Refrigerant Lines (6)	
Contour, Cougar, Focus & Mystique	2.0

(1) - Drain and measure oil from old accumulator. On Continental, Contour, Escort, Mustang, Mystique, Villager and Windstar, drill two 1/2" holes in bottom of old accumulator, and drain oil. On all models, add the same amount of oil drained plus 2.0 ounces of refrigerant oil to new accumulator.
(2) - Drain and measure oil from old accumulator. Add the same amount of oil drained plus 3.0 ounces of refrigerant oil to new accumulator.
(3) - Add NEW refrigerant oil for replacement condenser to inlet side of accumulator or to condenser.
(4) - Add NEW refrigerant oil for replacement evaporator to inlet side of accumulator.
(5) - Add specified amount of NEW refrigerant oil to inlet side of accumulator following replacement/repair of refrigerant line/hose, fixed orifice tube, A/C compressor pressure relief valve, charge port leak, or "O" ring seal leaks.
(6) - If all refrigerant lines have been replaced.

FORD SC90V VARIABLE SCROLL

Lincoln LS

1) Slowly discharge A/C system, using approved refrigerant

recovery/recycling equipment. Remove A/C compressor. Drain as much compressor oil from suction and discharge ports as possible. Rotate compressor shaft 6-8 revolutions by hand, while pouring oil from ports. Collect oil in a clean container and measure amount drained. DO NOT reuse old refrigerant oil.

2) If amount drained is 3.0-5.0 ounces, add amount drained plus one ounce of refrigerant oil to replacement compressor. If amount drained is more than 5.0 ounces, add the same amount that was drained from old compressor. If amount drained is less than 3.0 ounces, add 3.0 ounces to compressor. See FORD SC90V COMPRESSOR COMPONENT REFRIGERANT OIL CAPACITIES table. Add refrigerant oil to replacement compressor through suction port.

3) Use new "O" rings on refrigerant lines. Install A/C compressor. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

FORD SC90V COMPRESSOR COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Accumulator/Receiver-Drier	
LS	(1)
Condenser	
LS	(2) 1.0
Evaporator	
LS	(3) 1.0
Other Components (4)	
LS	0.75

(1) - Drain and measure oil from old accumulator. Drill two 1/2" holes in bottom of old accumulator, and drain oil. Add the same amount of oil drained plus 1.5 ounces of refrigerant oil to NEW accumulator/receiver-drier.
(2) - Add NEW refrigerant oil for replacement condenser to inlet side of accumulator/receiver-drier or to condenser.
(3) - Add NEW refrigerant oil for replacement evaporator to inlet side of accumulator/receiver-drier.
(4) - Add specified amount of NEW refrigerant oil to inlet side of accumulator/receiver-drier following replacement/repair of refrigerant line/hose, Thermostatic Expansion Valve (TXV), A/C compressor pressure relief valve, charge port or "O" ring seal leaks.

FORD SC115 FIXED SCROLL

Fore "E" Series

1) Slowly discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain as much compressor oil from suction and discharge ports as possible. Rotate compressor shaft 6-8 revolutions by hand, while pouring oil from ports. Collect oil in a clean container and measure amount drained. DO NOT reuse old refrigerant oil.

2) If amount drained is 3.0-5.0 ounces, add amount drained

plus one ounce of refrigerant oil to replacement compressor. If amount drained is more than 5.0 ounces, add the same amount that was drained from old compressor. If amount drained is less than 3.0 ounces, add 3.0 ounces to compressor. See FORD SC115 COMPRESSOR COMPONENT REFRIGERANT OIL CAPACITIES table. Add refrigerant oil to replacement compressor through suction port.

3) Use new "O" rings on refrigerant lines. Install A/C compressor. Evacuate and charge system. Perform leak test. Ensure A/C system is operating properly.

FORD SC115 COMPRESSOR COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Accumulator/Receiver-Drier	
"E" Series	(1)
Condenser	
"E" Series	(2) 1.0
Evaporator	
"E" Series	(3) 3.0
Other Components (4)	
"E" Series	2.0

(1) - Drain and measure oil from old accumulator. Drill two 1/2" holes in bottom of old accumulator, and drain oil. Add the same amount of oil drained plus 2.0 ounces of refrigerant oil to NEW accumulator/receiver-drier.
(2) - Add NEW refrigerant oil for replacement condenser to inlet side of accumulator/receiver-drier or to condenser.
(3) - Add NEW refrigerant oil for replacement evaporator to inlet side of accumulator/receiver-drier.
(4) - Add specified amount of NEW refrigerant oil to inlet side of accumulator/receiver-drier following replacement/repair of refrigerant line, fixed orifice tube, A/C compressor pressure relief valve, charge port or "O" ring seal leaks.

NIPPONDENSO 10-CYLINDER

General Motors (Metro & Tracker)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain, measure and discard refrigerant oil from old compressor. Drain refrigerant oil from replacement compressor. Add refrigerant oil to replacement compressor equal to amount drained from oil compressor.

2) Add specified amount of refrigerant oil to components that are replaced during compressor replacement. See NIPPONDENSO 10-CYLINDER COMPONENT REFRIGERANT OIL CAPACITIES table. Install A/C compressor. Evacuate and charge system. Perform leak test.

NIPPONDENSO 10-CYLINDER COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces

Compressor	
Metro	3.0
Tracker	(1) 4.0
Condenser	0.7-1.0
Evaporator	(2)
Receiver-Drier	
Metro	0.3
Tracker	1.3
System Total	
Metro	3.4
Tracker	3.5

(1) - Replacement compressors are shipped with specified amount of PAG refrigerant oil.
(2) - Information not available from manufacturer.

NIPPONDENSO 10S15/10S17/10S20

DaimlerChrysler Corp. (Caravan, Town & Country, 2000-2001 Neon, PT Cruiser & Voyager)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain, measure and discard refrigerant oil from old compressor. Drain refrigerant oil from replacement compressor. Add refrigerant oil to replacement compressor equal to amount drained from oil compressor and recovered during A/C system discharge.

2) Add specified amount of refrigerant oil to components that are replaced during compressor replacement. See NIPPONDENSO 10S15/10S17/10S20 COMPONENT REFRIGERANT OIL CAPACITIES table. Install A/C compressor. Evacuate and charge system. Perform leak test.

NIPPONDENSO 10S15/10S17/10S20 COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Accumulator/Receiver-Drier	
Caravan, Town & Country, & Voyager	1.0
Neon	1.0
PT Cruiser	3.0
Compressor (1)	
Caravan, Town & Country, & Voyager	
With Rear Unit	7.4
Without Rear Unit	5.0
Neon	6.1
PT Cruiser	5.4
Condenser	
Caravan, Town & Country, & Voyager	1.0
Neon	1.0
PT Cruiser	1.0
Evaporator	
Caravan, Town & Country, & Voyager	
Front	2.0


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    Rear  ..............................................  2.0
  Neon  ................................................  2.0
  PT Cruiser  ..........................................  2.0
Refrigerant Lines
  Neon  ................................................  1.5
  PT Cruiser  ..........................................  1.5
System Total
  Caravan, Town & Country, & Voyager
    With Rear Unit  ....................................  7.4
    Without Rear Unit  .................................  5.0
  Neon  ................................................  6.1
  PT Cruiser  ..........................................  5.4

(1) - Replacement compressor is shipped with a quantity
      of refrigerant oil equal to system total.
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NIPPONDENSO 10PA17/10PA17C 10-CYL.

DaimlerChrysler Corp. (Avenger 2.0L & Sebring Coupe 2.0L)
1) Drain oil from old compressor, and measure amount drained. Replacement compressor is shipped with 5.7 ounces of refrigerant oil. From replacement compressor, drain the difference between amount of shipping oil and amount of oil drained from replacement compressor.
2) Add specified amount of refrigerant oil to components that are replaced during compressor replacement. See 10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES table. When replacing components listed, DO NOT exceed system total capacity.

DaimlerChrysler Corp. & Jeep (Caravan, Concorde, Grand Cherokee, Intrepid, LHS, Neon, Town & Country, Voyager, Wrangler & 300M)
1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Disconnect refrigerant hoses at compressor. Remove compressor bolts and A/C compressor.
2) Remove suction port on top of A/C compressor, and drain and measure oil. On Caravan, Town & Country, Voyager and Grand Cherokee, add the same amount of oil drained from old compressor to replacement compressor.
3) On all other models, add amount of oil to compressor equal to the total system capacity minus amount retained in components that are not being replaced. See 10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES (2000) or 10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES (2001) table. Install A/C compressor. Evacuate and charge A/C system. Perform leak test.

10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES (2000)

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Component                                                  Ounces

Avenger 2.0L & Sebring Coupe 2.0L
  Compressor  ..........................................  (1) 5.7
  Condenser  ...........................................  0.5
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    Evaporator ............................................... 2.0
    Receiver-Drier ........................................... 0.3
    Suction Hose ............................................. 0.3
    System Total ......................................... 5.7-6.4
  Concorde, Intrepid, LHS & 300M
    Compressor ........................................... (1) 5.0
    Condenser ................................................ 1.0
    Evaporator ............................................... 2.0
    Receiver-Drier ........................................... 1.0
    Leaking/Blown Line ....................................... 1.5
    System Total ............................................. 5.1
  Caravan, Town & Country, & Voyager
    With Rear Unit
      Compressor ......................................... (1) (2)
      Condenser .............................................. 1.0
      Front Evaporator ....................................... 2.0
      Rear Evaporator ........................................ 2.0
      Receiver-Drier ......................................... 1.0
      System Total ........................................... 7.4
    Without Rear Unit
      Compressor ......................................... (1) (2)
      Condenser .............................................. 1.0
      Evaporator ............................................. 2.0
      Receiver-Drier ......................................... 1.0
      System Total ........................................... 5.0
  Grand Cherokee
    Accumulator .............................................. 3.8
    Compressor ............................................... (2)
    Condenser ................................................ 0.2
    Evaporator ............................................... 2.1
    System Total ............................................. 5.8
  Neon
    Compressor ............................................... (3)
    Condenser ................................................ 1.0
    Evaporator ............................................... 2.0
    Receiver-Drier ........................................... 1.0
    Refrigerant Line ......................................... 1.5
    System Total ............................................. 6.8
  Wrangler
    Accumulator .............................................. 3.0
    Compressor ............................................... (2)
    Condenser ............................................... 0.75
    Evaporator ............................................... 1.5
    System Total ............................................. 6.1

  (1) - Replacement compressor is shipped with specified amount
        of refrigerant oil.
  (2) - Ensure replacement compressor contains the same amount
        of refrigerant oil as was drained from old compressor.
  (3) - Add amount drained from removed compressor, plus amount
        recovered from system, to replacement compressor. DO NOT
        exceed system total.
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10PA17/10PA17C COMPONENT REFRIGERANT OIL CAPACITIES (2001)

Component	Ounces
Concorde, Intrepid, LHS & 300M	
Compressor	(1) 5.0
Condenser	1.0
Evaporator	2.0
Receiver-Drier	1.0
Leaking/Blown Line	1.5
System Total	5.0
Grand Cherokee	
Accumulator	3.8
Compressor	(2)
Condenser	0.2
Evaporator	2.1
System Total	5.8
Neon	
Compressor	(3)
Condenser	1.0
Evaporator	2.0
Receiver-Drier	1.0
Refrigerant Line	1.5
System Total	6.8
Wrangler	
Accumulator	3.0
Compressor	(2)
Condenser	0.75
Evaporator	1.5
System Total	6.1

(1) - Replacement compressor is shipped with specified amount of refrigerant oil.
(2) - Ensure replacement compressor contains the same amount of refrigerant oil as was drained from old compressor.
(3) - Add amount drained from removed compressor, plus amount recovered from system, to replacement compressor. DO NOT exceed system total.

SANDEN SCROLL

General Motors ("K" Body)

1) Service replacement compressor contains 2.8 ounces of SUN PAG refrigerant oil. No oil needs to added to replacement compressor prior to installation.

2) If system abruptly loses refrigerant, for example in the event of a collision, compressor must be replaced. It is not necessary to add refrigerant oil to compressor prior to installation.

3) If refrigerant oil needs to added to system for normal maintenance, or if a component other than compressor is replaced, PAG oil may be added to system. See SANDEN SCROLL COMPONENT REFRIGERANT OIL CAPACITIES (GENERAL MOTORS "K" BODY) table.

4) Use new "O" rings on refrigerant lines. Install A/C

compressor. Perform leak test. Evacuate and charge system. Ensure A/C system is operating properly.

SANDEN SCROLL COMPONENT REFRIGERANT OIL CAPACITIES ("K" BODY)

Component	(1) Ounces
Accumulator	4.0
Compressor	2.8
Condenser	1.0
Evaporator	1.0
System Total	8.8

(1) - If more than specified amount of PAG (GM P/N 12356151) oil is drained from component, add an equal amount to replacement component.

SANDEN MSC90-C SCROLL

DaimlerChrysler Corp. (Avenger & 2000 Sebring Coupe)

1) Drain oil from old compressor, and measure amount drained. Replacement compressor is shipped with 5.7 ounces of refrigerant oil. From replacement compressor, drain the difference between amount of shipping oil and amount of oil drained from replacement compressor.

2) Add specified amount of refrigerant oil for components that are replaced. See SANDEN MSC90-C COMPONENT REFRIGERANT OIL CAPACITIES (AVENGER & 2000 SEBRING COUPE) table. When replacing components listed, DO NOT exceed system total capacity.

SANDEN MSC90-C COMPONENT REFRIGERANT OIL CAPACITIES (AVENGER & 2000 SEBRING COUPE)

Component	(1) Ounces
Condenser	0.5
Evaporator	2.0
Receiver-Drier	0.3
Suction Hose	0.3
System Total	5.7-6.4

(1) - Use SUN PAG 56 refrigerant oil.

DaimlerChrysler Corp. (2001 Sebring Coupe & Stratus Coupe)

1) Drain oil from old compressor, and measure amount drained. Replacement compressor is shipped with 4.1 ounces of refrigerant oil. From replacement compressor, drain the difference between amount of shipping oil and amount of oil drained from replacement compressor.

2) Add specified amount of refrigerant oil for components that are replaced. See SANDEN MSC90-C COMPONENT REFRIGERANT OIL CAPACITIES (2001 SEBRING COUPE & STRATUS COUPE) table. When replacing components listed, DO NOT exceed system total capacity.

SANDEN MSC90-C COMPONENT REFRIGERANT OIL CAPACITIES (2001 SEBRING COUPE & STRATUS COUPE)

Component	(1) Ounces
Condenser	0.5
Evaporator	2.0
Receiver-Drier	0.3
Suction Hose	0.3
System Total	4.1

(1) - Use SUN PAG 56 refrigerant oil.

SANDEN SD-7H15 7-CYLINDER

DaimlerChrysler Corp. & Jeep (Cherokee, Dakota, Durango & Ram Pickup)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove compressor and drain refrigerant oil. Measure amount of oil removed and discard old oil.

2) Drain oil from replacement compressor. Using new refrigerant oil, fill replacement compressor with same amount of oil drained from old compressor. If replacing A/C components, add specified amount of refrigerant oil to each component. See SD-7H15 COMPONENT REFRIGERANT OIL CAPACITIES or SANDEN SD-7H15 COMPONENT REFRIGERANT OIL CAPACITIES (2001) table for component capacities. If oil cannot easily be added to component, add oil to accumulator. Evacuate and charge system. Perform leak test.

Ford Motor Co. (Super Duty Pickup/Motorhome)

1) Discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove A/C compressor. Drain as much compressor oil from suction and discharge ports as possible. Rotate compressor shaft 6-8 revolutions by hand, while pouring oil from ports. Collect oil in a clean container and measure amount drained. DO NOT reuse old refrigerant oil.

2) If amount drained is 3.0-5.0 ounces, add amount drained plus one ounce of refrigerant oil to compressor. If amount drained is more than 5.0 ounces, add the same amount that was drained from compressor. If amount drained is less than 3.0 ounces, add 3.0 ounces to compressor. See SANDEN SD-7H15 COMPONENT REFRIGERANT OIL CAPACITIES (2001) table for component capacities. Add refrigerant oil through suction port.

3) Use new "O" rings on refrigerant lines. Install A/C compressor. Perform leak test. Evacuate and charge system.

SANDEN SD-7H15 COMPONENT REFRIGERANT OIL CAPACITIES (2000)

Component	Ounces
DaimlerChrysler Corp	
Dakota	
Accumulator	3.0


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    Compressor  .......................................  (1)
    Condenser  ....................................... 0.75
    Evaporator  .......................................  1.5
    System Total  .....................................  6.1
  Durango
    Receiver-Drier  ...................................  3.0
    Compressor  .......................................  (1)
    Condenser  ........................................  1.0
    Evaporator
      Front  ..........................................  2.0
      Rear  ...........................................  1.0
    System Total
      With Rear Unit (4.7L & 5.9L)  ...................  8.0
      Without Rear Unit (4.7L)  .......................  5.5
      Without Rear Unit (5.9L)  .......................  6.1
  Ram Pickup
    Accumulator  ......................................  2.0
    Compressor  .......................................  (1)
    Condenser  ........................................  1.0
    Evaporator  .......................................  2.0
    System Total  .....................................  6.2
  Cherokee & Wrangler
    Accumulator  ......................................  3.0
    Compressor  .......................................  (1)
    Condenser  ....................................... 0.75
    Evaporator  .......................................  1.5
    System Total  .....................................  6.1

(1) - Drain and measure oil from old compressor. Using
      NEW refrigerant oil, add the same amount drained from
      old compressor to replacement compressor.
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SANDEN SD-7H15 COMPONENT REFRIGERANT OIL CAPACITIES (2001)
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Component                                                Ounces

DaimlerChrysler Corp
  Dakota
    Accumulator  .........................................  3.0
    Compressor  ..........................................  (1)
    Condenser  ...........................................  1.0
    Evaporator  ..........................................  2.0
    System Total  ........................................  7.1
  Durango
    Accumulator  .........................................  3.0
    Compressor  ..........................................  (1)
    Condenser  ...........................................  1.0
    Evaporator
      Front  .............................................  2.0
      Rear  ..............................................  1.0
    System Total
      With Rear Unit  ................................... 10.0
      Without Rear Unit  .................................  7.1
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    Ram Pickup
      Accumulator  ..........................................  2.0
      Compressor  ...........................................  (1)
      Condenser  ............................................  1.0
      Evaporator  ...........................................  2.0
      System Total  .........................................  6.2
  Ford Motor Co.
    Super Duty Pickup/Motorhome (2)
      Accumulator  ..........................................  (3)
      Condenser  ............................................  1.0
      Evaporator  ...........................................  3.0
      Other Components (4)  .................................  2.0
  Jeep
    Cherokee & Wrangler
      Accumulator  ..........................................  3.0
      Compressor  ...........................................  (1)
      Condenser  ............................................ 0.75
      Evaporator  ...........................................  1.5
      System Total  .........................................  6.1

  (1) - Drain and measure oil from old compressor. Using NEW refrigerant
        oil, add same amount drained from old compressor to replacement
        compressor.
  (2) - On Motorhome, check A/C system specification label for specific
        refrigerant oil capacities.
  (3) - Ensure replacement accumulator contains same amount of
        refrigerant oil that was drained from old accumulator, plus 2
        ounces.
  (4) - Add specified amount of refrigerant oil to accumulator/
        receiver-drier when replacing a fixed orifice tube, compressor
        relief valve, refrigerant line or hose, or repairing an "O" ring
        or charge port leak.
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SANDEN TRS-90 & TR-105 SCROLL

1) Slowly discharge A/C system, using approved refrigerant recovery/recycling equipment. Measure amount of oil drained during A/C system discharge. Disconnect refrigerant hoses at compressor. Remove compressor bolts and A/C compressor.

2) Drain and measure oil from suction and discharge ports of old compressor. Drain oil from replacement compressor and save. Add the same amount of refrigerant oil to replacement compressor as was drained from old compressor. When repairing an excessive leak in A/C system, add one ounce additional oil to compressor.

3) Add proper amount of refrigerant oil to any components being replaced. DO NOT add more refrigerant oil than A/C system total. See SANDEN TRS-90 & TR-105 COMPONENT REFRIGERANT OIL CAPACITIES (2000) or SANDEN TRS-90 & TR-105 COMPONENT REFRIGERANT OIL CAPACITIES (2001) table. Install compressor. Evacuate, charge and leak test A/C system. Ensure A/C system operates properly.

SANDEN TRS-90 & TR-105 COMPONENT REFRIGERANT OIL CAPACITIES (2000)
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Component	Ounces
Breeze, Cirrus, Sebring Convertible & Stratus	
Compressor	(1) 5.0
Condenser	1.0
Evaporator	2.0
Receiver-Drier	1.0
Refrigerant Line	1.5
System Total	5.1
Ram Van/Wagon	
Compressor	(1)
Condenser	1.0
Evaporator	
Front	2.0
Rear (Combination Coil)	2.0
Receiver-Drier	1.0
System Total	
With Rear Unit	10.0
Without Rear Unit	8.0

(1) - Replacement compressor is shipped with specified amount of refrigerant oil. Remove enough refrigerant oil from replacement compressor to equal amount of oil drained from old compressor.

SANDEN TRS-90 & TR-105 COMPONENT REFRIGERANT OIL CAPACITIES (2001)

Component	Ounces
Sebring Convertible, Sebring Sedan & Stratus Sedan	
Compressor	(1) 5.0
Condenser	1.0
Evaporator	2.0
Receiver-Drier	1.0
Refrigerant Line	1.5
System Total	5.1
Ram Van/Wagon	
Compressor	(1)
Condenser	1.0
Evaporator	
Front	2.0
Rear (Combination Coil)	2.0
Receiver-Drier	1.0
System Total	
With Rear Unit	10.0
Without Rear Unit	8.0

(1) - Replacement compressor is shipped with specified amount of refrigerant oil. Remove enough refrigerant oil from replacement compressor to equal amount of oil drained from old compressor.

ZEXEL ROTARY VANE

NOTE: Compressor oil never breaks down unless something is wrong with compressor or A/C system. If old oil is Dark Brown or Black and/or there are foreign substances, metal or other debris in oil, compressor and receiver-drier must be replaced.

Saturn

1) Slowly discharge A/C system, using approved refrigerant recovery/recycling equipment. Remove old A/C compressor. Drain compressor oil from high-side port first, and then low-side port. Rotate compressor clutch plate in both directions to remove oil from compressor. Measure oil amount drained, and discard oil.

2) On "L" models, replacement compressors are shipped with 7.5 ounces of refrigerant oil and nitrogen gas. On "S" models, replacement compressors are shipped with 2.2 ounces of refrigerant oil and nitrogen gas. On all models, open compressor sealing plugs slowly to release nitrogen gas. Drain and measure oil into a clean container (this oil will be used in replacement compressor).

3) Ensure amount of refrigerant oil in replacement compressor is the same as amount removed from old compressor plus amount removed during refrigerant recovery. This represents total system capacity, minus amount retained in components that have not been replaced. See ZEXEL COMPONENT REFRIGERANT OIL CAPACITIES table. Install compressor. Evacuate, charge and leak test A/C system. Ensure A/C system operates properly.

ZEXEL COMPONENT REFRIGERANT OIL CAPACITIES

Component	Ounces
Condenser	
"L" Model	1.3
"S" Model	0.8
Evaporator	
"L" Model	2.4
"S" Model	2.3
Receiver-Drier	
"L" Model	0.4
"S" Model	1.0
Large Refrigerant Loss	
"L" Model	(1) 4.5
"S" Model	(1) 3.0
System Total	
"L" Model	7.5
"S" Model	5.1

(1) - If a sudden refrigerant loss occurs due to a large leak (hose rupture or collision), add specified amount of refrigerant oil, plus amount required for replaced component.

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END OF ARTICLE

