

A/C COMPRESSOR OIL CHECKING

Article Text

1992 Dodge Colt

For a a a a

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Saturday, April 27, 2002 06:41PM

ARTICLE BEGINNING

1992 AIR CONDITIONING & HEAT
Compressor Oil Checking

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

COMPRESSOR APPLICATION

NOTE: Due to late changes, always refer to underhood A/C specification label in engine compartment or A/C compressor label while servicing A/C system. If A/C Specification Label and specifications in this article differ, always use label specifications.

COMPRESSOR APPLICATION TABLE

Application	Compressor
Acura	Nippondenso 10-Cyl.
Audi	
80	Nippondenso 10-Cyl.
100	Zexel 5-Cyl.
BMW	Bosch 6-Cyl.
Chrysler Motors/Eagle	
Colt & Summit	Sanden FX105V Scroll
Colt Vista & Summit Wagon ...	Nippondenso 10PA15 10-Cyl.
Stealth	Sanden FX105VS Scroll
Ram-50	Sanden FX80 Scroll
Daihatsu	Matsushita Rotary Vane
Ford Motor Co.	
Capri	Nippondenso 10-Cyl.
Festiva	Nippondenso 6-Cyl.
General Motors & Geo	
LeMans	Harrison V5 5-Cyl.
Metro & Tracker	Nippondenso 10-Cyl.
Prizm	Matsushita Rotary Vane
Storm	Diesel Kiki KC-50 Rotary Vane
Honda	
Accord	Nippondenso 10-Cyl.
Civic	Sanden Scroll
Prelude	Sanden Scroll
Hyundai	
Elantra	Sanden TRF 090 Scroll
Excel	Sanden SD-709 7-Cyl.
Scoupe	Sanden SD-709 7-Cyl.
Sonata	Ford FX-15 10-Cyl.
Infiniti	
G20	Atsugi NVR 14S Rotary Vane

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M30	Zexel DKS-16H 6-Cyl.
Q45	Calsonic V5 5-Cyl.
Isuzu		
Amigo	Diesel Kiki DKS-13S 6-Cyl.
Impulse	.....	Diesel Kiki DKV-14D Rotary Vane
Pickup		
4-Cylinder	.....	Diesel Kiki DKS-13S 6-Cyl.
V6	.....	Harrison R4 4-Cyl. Radial
Stylus	.....	Diesel Kiki DKV-14D Rotary Vane
Rodeo		
4-Cylinder	.....	Diesel Kiki DKS-17S 6-Cyl.
V6	.....	Harrison R4 4-Cyl. Radial
Trooper	.....	Diesel Kiki DCV-14A Rotary Vane
Jaguar		
XJS	.....	Harrison A-6 6-Cyl.
XJ6	.....	Sanden SD-709 7-Cyl.
Lexus	.....	Nippondenso 10PA20 10-Cyl.
Mazda		
B2200 & B2600i	.....	Sanden 5-Cyl.
Miata	.....	Nippondenso TV12 Rotary Vane
MPV, MX-6 & 626	.....	Nippondenso 10-Cyl.
Navajo	.....	Ford FX-15 10-Cyl.
MX-3, Protege & 323	.....	Panasonic Rotary Vane
929	.....	Panasonic Rotary Vane
Mercedes-Benz		
190E	.....	Nippondenso 10PA15 10-Cyl.
300E, 400E & 500E	.....	Nippondenso 10PA17 10-Cyl.
300SE/SD, 400SE & 500SEL	....	Nippondenso 10PA20 10-Cyl.
Mitsubishi		
Diamante	.....	Sanden FX105VS Scroll
Galant & Mirage	.....	Sanden FX105V Scroll
Eclipse	.....	Nippondenso 10PA17 10-Cyl.
Expo/Expo LRV	.....	Nippondenso 10PA15 10-Cyl.
Pickup	.....	Sanden FX80 Scroll
Montero	.....	Nippondenso 10PA15 10-Cyl.
Precis	.....	Sanden SD-709 7-Cyl.
3000GT	.....	Sanden FX105VS Scroll
Nissan		
Maxima & 300ZX	.....	Zexel DKS-16H 6-Cyl.
Pathfinder & Pickup	.....	Zexel DKV-14C Rotary Vane
Stanza	.....	Atsugi NVR 140S Rotary Vane
Sentra & NX	.....	Zexel DKV-14C Rotary Vane
240SX	.....	Calsonic V5 5-Cyl.
Porsche		
1989-92 Carrera 2/4	.....	Nippondenso 10-Cyl.
Saab	.....	Sanden 5-Cyl.
Subaru		
Legacy	.....	Zexel DCW-17 5-Cyl.
Legacy	.....	Calsonic V5-15C 5-Cyl.
Loyale	Hitachi MJS170-5DP 6-Cyl.
SVX	Calsonic V5 5-Cyl.
Suzuki	Nippondenso 10-Cyl.

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Toyota

Camry Nippondenso 10PA17C 10-Cyl.

Celica

4A-FE Engine Nippondenso 10PA15C 10-Cyl.

3S-GTE & 5S-FE Engine .. Nippondenso 10PA17C/VC 10-Cyl.

Corolla

4A-GE Engine Matsushita Rotary Vane

4A-FE Engine Nippondenso 10PA15 10-Cyl.

Cressida Nippondenso 10-Cyl.

Land Cruiser Nippondenso 10PA17 10-Cyl.

MR2 Nippondenso 10P13C 10-Cyl.

Paseo Matsushita Rotary Vane

Pickup & 4Runner Nippondenso 10-Cyl.

Previa Nippondenso 10PA17E 10-Cyl.

Supra Nippondenso 10-Cyl.

Tercel Matsushita TV10B Rotary Vane

Volkswagen

Fox Nippondenso 6-Cyl.

All Others Sanden SD-508 5-Cyl. Or SD-709 7-Cyl.

Volvo Diesel Kiki DKS-15BH/CH 6-Cyl.

REFRIGERANT OIL & REFRIGERANT CAPACITY

REFRIGERANT OIL & REFRIGERANT CAPACITY TABLE

Application	(1) Oil Ounces	Refrigerant Ounces
Acura		
Integra	(2) 2.0-3.4	32-34
Legend		
Sedan	(2) 4.2	25.5-26.5
Coupe	(2) 3.7-4.7	24-26
Vigor	(2) 4.4-5.4	28-30
Audi		
80	(2) 2.7	36-38
100	9.4-10.8	37-41
BMW		
318 & 325 Series	10	(3) 35-39
525i, 535i, 735i & 735iL	10	68-69
Chrysler Motors/Eagle		
Colt & Summit	(2) 5.0	36
Colt Vista & Summit		
Wagon	(2) 2.7	30
Ram-50	7.9-9.1	30
Stealth	(2) 4.6-6.0	34
Daihatsu		
Charade	4.2-4.8	21-25
Rocky	4.0-4.7	25-28
Ford Motor Co.		
Capri	10	23

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Festiva	10	25
General Motors & Geo		
LeMans	8.0	35
Metro	3.0	8
Prizm	6.0	23-27
Storm	5.1	21
Tracker	3.0	21
Honda		
Accord	3.0-4.1	28-30
Civic	4.0-4.4	21-23
Prelude	4.0-4.7	26-28
Hyundai		
Excel & Scoupe	8.1	30-32
Elantra	(2) 4.0	32
Sonata	6.9-7.7	30-32
Infiniti		
G20	6.8	24-29
M30	6.8	29-32
Q45	9.7	38-42
Isuzu		
Amigo	6.0	30
Impulse & Stylus	5.0	21
Pickup		
Diesel Kiki	5.0	30
Harrison 4-Cyl. Radial	6.0	30
Rodeo		
Diesel Kiki	5.0	35
Harrison 4-Cyl. Radial	6.0	35
Trooper	5.0	30
Jaguar		
XJ6	(2) 4.6	40
XJS	10	40
Lexus		
ES300	(2) 3.5	32-36
LS400	(2) 4.0	37
SC300/SC400	(2) 4.0	32-36
Mazda		
B2200 & B2600i	(2) 4.5	28
Miata	(2) 2.7-3.3	28
MPV		
Dual Unit	(2) 2.7-3.3	51
Single Unit	(2) 2.7-3.3	37
MX-3	(2) 5.0	28
MX-6 & 626	(2) 2.0-3.3	32
Protege & 323	(2) 3.3-4.0	26.5-28.0
Navajo	7.0	28-29
929	(6)	28
Mercedes-Benz		
190E	(2) 4.0	36
300E, 400E & 500E	(2) 4.0	39
300SE/SD, 400SE		
& 500SEL	(2) 5.3	(4) 42

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Mitsubishi

Diamante	5.3-6.0	37
Eclipse	(2) 2.7	33
Expo	(2) 2.7	30
Galant	(2) 5.0-5.7	33
Mirage	(2) 5.0	36
Pickup	7.9-9.1	30
Montero	(2) 2.7	28
Precis	8.1	30-32
3000GT	(2) 4.6-6.0	(5) 34

Nissan

Maxima	6.8	30-33
Pathfinder & Pickup	6.8	29-32
Sentra & NX	6.8	23-26
Stanza & 300ZX	6.8	26-30
240SX	8.0	29-32

Porsche

1989-92 Carrera 2/4	3.3	29.5
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Saab

900	5.9	34-36
9000		
Without Rear A/C	4.6	39
With Rear A/C	7.1	48

Subaru

Legacy		
Zexel	(2) 2.4	29-32
Calsonic	(2) 3.2	29-32
Loyale	(2) 2.4	26-28
SVX	(2) 2.4	21-24

Suzuki

Samurai	4.8-5.0	18
Sidekick	4.8-5.0	21-23
Swift	4.8-5.0	18

Toyota

Camry	(2) 3.5	32-35
Celica	3.4-4.7	24-27
Corolla	3.4-4.7	22-27
Cressida	3.4-4.7	27-30
Land Cruiser	3.4-4.7	30-34
MR2	3.4-4.1	28-32
Paseo	3.4-4.1	25-28
Pickup	3.4-4.7	24-29
Previa		
Without Rear A/C	3.4-4.7	32-35
With Rear A/C	3.4-4.7	41-44
Supra	3.4-4.1	22-27
Terrel	3.4-4.1	25-28
4Runner	3.4-4.7	27-30

Volkswagen

Cabriolet	4.8	38-42
Corrado	4.6	37-40
Fox	4.5	38-40

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Golf, GTI & Jetta	4.6	37-41
Passat	4.6	41-44
Volvo				
240	6.8	39
740, 940 & 960	6.8	43

- (1) - Total system capacity, unless otherwise noted.
 - (2) - Compressor refrigerant oil capacity.
 - (3) - Condenser without external looped tubing. Capacity for condenser with external looped tubing is 42-44 ounces.
 - (4) - Use 48 ounces if equipped with rear passenger compartment A/C-heater system.
 - (5) - Use 29 ounces for vehicles produced after 10/15/91.
 - (6) - Information not available from manufacturer.
-

ISOLATING COMPRESSOR

NOTE: Only compressors with stem-type service valves can be isolated.

1) Connect service gauge set to the compressor service valves and open compressor valves slightly (clockwise). Start engine and operate air conditioning. Slowly turn compressor suction valve clockwise toward closed (front-seated) position.

2) When suction pressure is reduced to zero or less, turn off engine and compressor, and quickly turn suction valve stem to full front-seated position. Suction pressure should be slightly greater than zero. Turn discharge valve to front-seated position.

3) To check oil level, slowly open compressor crankcase plug to relieve any remaining pressure. After oil level is corrected, cap service gauge ports on both valves. Back-seat suction service valve to allow refrigerant to enter compressor. Open discharge valve halfway.

4) Loosen discharge service valve cap, allowing refrigerant pressure to force air out of compressor. Back-seat service valve and tighten cap. Compressor is now ready for operation.

REFRIGERANT OIL

Only NEW, pure, moisture-free refrigerant oil should be used in the air conditioning system. This oil is highly refined and dehydrated so moisture content is less than 10 parts per million. The oil container must be tightly closed at all times when not in use, or moisture from the air will be absorbed into the refrigerant oil.

SERVICING PRECAUTIONS

NOTE: Discharge A/C system using approved refrigerant recovery/recycling equipment. DO NOT allow refrigerant to enter the atmosphere. Always follow recovery/recycling equipment manufacturer's instructions.

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DISCHARGING SYSTEM

If compressor has stem-type service valves, it can be isolated and removed without discharging entire system. See ISOLATING COMPRESSOR. Otherwise, discharge system completely before loosening any fittings.

DISCONNECTING LINES & FITTINGS

After system is discharged, carefully clean area around all fittings to be opened. Always use 2 wrenches when tightening or loosening fittings. Some refrigerant lines are connected with a coupling. Special tools may be required to disconnect lines. Cap or plug all openings as soon as lines are removed. DO NOT remove caps until connections of lines and fittings are completed.

NOTE: All R-134a based systems use 1/2-16 ACME threaded fittings.

CONNECTING LINES & FITTINGS

NOTE: Different fittings and connections are used on systems using HFC-134a refrigerant. Ensure all replacement parts match the connections of the system being worked on.

Always use a new gasket or "O" ring when connecting lines or fittings. Coat "O" ring with refrigerant oil and ensure it is not twisted during installation. Always use 2 wrenches to prevent damage to lines and fittings.

PLACING SYSTEM IN OPERATION

After component service or replacement has been completed and all connections have been made, evacuate system thoroughly with a vacuum pump. Charge system with proper amount of refrigerant and perform leak test. See REFRIGERANT OIL & REFRIGERANT SPECIFICATIONS TABLE for system capacities. Check all fittings that have been opened. After system has been leak tested, check system performance.

NOTE: Most compressors are pre-charged with a fixed amount of refrigerant (shipping) oil. Drain compressor oil from new compressor and add refrigerant oil to new compressor according to amount removed from old compressor. Always refer to underhood A/C Specification Label or A/C compressor label while servicing A/C system.

ATSUGI

ROTARY VANE

1) Before checking and adjusting oil level, operate engine at 1200 RPM, and set controls at maximum cooling and high blower motor

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speed for 10 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain compressor oil through compressor discharge port and measure oil amount.

3) If amount drained is less than 3 ounces, conduct leak tests at system connections. Repair or replace faulty parts as necessary. Check purity of oil and adjust oil level as follows.

4) If amount drained is 3 ounces or more, oil level is okay. Fill with same amount drained, using new oil. If amount drained is less than 3 ounces, pour in 3 ounces of new refrigerant oil.

COMPONENT REFRIGERANT OIL CAPACITIES TABLE (ATSUGI ROTARY VANE)

Component	Ounces
Condenser	1.0-1.7
Evaporator	1.5-2.5
Receiver-Drier	0.5-0.8
Refrigerant Lines (1)	1.0-1.7

(1) - Add only if a refrigerant oil leak is indicated.

BOSCH

6-CYLINDER

1) Before checking and adjusting oil level, operate compressor at engine idle speed, and set controls at maximum cooling and high blower motor speed for 20-30 minutes to return oil to compressor.

2) Stop engine and discharge refrigerant. See SERVICING PRECAUTIONS at beginning of article. Remove refrigerant oil level inspection plug on side of compressor. Oil should be at lower lip of threaded hole. If oil level is low, add new refrigerant oil as necessary. Replace inspection plug and tighten to 10-12 ft. lbs. (14-16 N.m).

CALSONIC

V5 5-CYLINDER

1) Before checking and adjusting oil level, operate engine at 1000-1500 RPM, and set controls at maximum cooling and high blower motor speed for 10 minutes (20 minutes on Subaru) to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain compressor oil from compressor discharge port and measure oil amount.

3) If amount drained is less than 3.2 ounces, conduct leak tests at system connections. Repair or replace faulty parts as

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necessary. Check purity of oil and adjust oil level as follows.

4) If amount drained is 3.2 ounces or more, oil level is okay. Fill with same amount drained, using new oil. If amount drained is less than 3.2 ounces, pour in 3.2 ounces of new refrigerant oil.

COMPONENT REFRIGERANT OIL CAPACITIES TABLE (CALSONIC V5)

Component	Ounces
Condenser	1.0-1.7
Evaporator	1.5-2.5
Receiver-Drier	0.5-0.8
Refrigerant Lines (1)	1.0-1.7

(1) - Add only if a refrigerant oil leak is indicated.

DIESEL KIKI (ZEXEL)

ROTARY VANE

1) Before checking and adjusting oil level, operate engine at 1200 RPM, and set controls at maximum cooling and high blower motor speed for 10-20 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain compressor oil from compressor discharge port and measure oil amount.

3) If amount drained is less than 2.4-3.0 ounces (1.7 ounces on Geo Storm), conduct leak tests at system connections. Repair or replace faulty parts as necessary. Check purity of oil and adjust oil level as follows.

4) If amount drained is 2.4-3.0 ounces (1.7 ounces on Geo Storm), oil level is okay. Fill with same amount drained, using new oil. If amount drained is less than 2.4 ounces (1.7 ounces on Geo Storm), pour in 2.4-3.0 (1.7) ounces of new refrigerant oil.

5 & 6-CYLINDER

1) Before checking and adjusting oil level, operate engine at 1200 RPM, and set controls at maximum cooling and high blower motor speed for 20-30 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Remove oil drain plug and drain oil. Measure amount of oil drained. Install drain plug with new "O" ring.

3) If amount drained is 2.0-3.0 ounces (4.4 ounces for Infiniti; 6.4 ounces for Nissan Maxima/300ZX), fill with same amount, using new oil. If amount drained is less than 2.0-3.0 ounces (4.4 ounces for Infiniti; 6.4 ounces for Nissan Maxima/300ZX), fill with 2.0-3.0 ounces (4.4 ounces for Infiniti; 6.4 ounces for Nissan Maxima/300ZX). Install filler plug and recharge system.

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COMPONENT REFRIGERANT OIL CAPACITIES TABLE (DIESEL KIKI - ZEXEL)

Component	Ounces
Condenser	1.0-1.7
Evaporator	1.5-2.5
Receiver-Drier	0.5-0.8
Refrigerant Lines (1)	1.0-1.7

(1) - Add only if a refrigerant oil leak is indicated.

FORD

FX-15 10-CYLINDER

1) Slowly discharge system. See SERVICING PRECAUTIONS at beginning of article. Remove A/C compressor. Drain compressor oil from suction and discharge ports. Measure amount drained and discard oil.

2) If amount drained from removed (old) compressor is between 3 and 5 ounces, add drained amount of new refrigerant oil into the NEW compressor through suction port.

3) If amount drained is less than 3 ounces, add 3 ounces to the NEW compressor. If amount drained is more than 5 ounces, add 5 ounces. Use new "O" rings on refrigerant lines. Install A/C compressor. Evacuate and recharge system. Perform leak test.

COMPONENT REFRIGERANT OIL CAPACITIES TABLE (FX-15 - HYUNDAI)

Component	Ounces
Condenser	1.0
Evaporator	3.0
Receiver-Drier	(1)

(1) - Drain oil from old receiver-drier. Add amount drained plus 2 ounces.

HARRISON

A-6 6-CYLINDER

Compressor oil checking procedure not available from manufacturer.

R4 4-CYLINDER RADIAL

1) Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain compressor oil and measure amount of oil drained.

2) If amount drained is more than one ounce, fill with same

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amount, using new oil. If amount drained is less than one ounce, fill compressor with 2.0 ounces. Install compressor and recharge system.

COMPONENT REFRIGERANT OIL CAPACITIES TABLE (HARRISON R4 RADIAL)

Component	Ounces
Condenser	1.0
Evaporator	1.7
Receiver-Drier	1.0
Refrigerant Lines	0.3

V5 5-CYLINDER

1) If system is operable, run for several minutes to stabilize system before performing repairs. Turn off engine. Discharge system and remove compressor. See SERVICING PRECAUTIONS at beginning of article. Remove drain plug. Drain and measure oil.

2) If one ounce or more is drained, add same amount. If less than one ounce is drained, add 2 ounces of new refrigerant oil to compressor.

3) If A/C components are replaced, add refrigerant oil to system. Add one ounce if condenser is replaced. Add 3.5 ounces if accumulator is replaced.

4) When replacing a component which has caused a large refrigerant leak, add 3 ounces of new oil plus the required amount for the part being replaced. Add oil directly to part being replaced if possible. If oil cannot be easily added to part, add oil to accumulator.

HITACHI

6-CYLINDER

1) Before checking and adjusting oil level, operate compressor at 1000-1500 engine RPM, and set controls at maximum cooling and high blower motor speed for about 10 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain oil from compressor through suction port. Measure amount of oil drained.

3) If amount drained is 2.4 ounces or more, fill with same amount using new oil. If amount drained is less than 2.4 ounces, fill with 2.4 ounces. Install compressor and recharge.

4) If A/C components are replaced, add refrigerant oil to system. Add 1.7 ounces if condenser is replaced. Add 2.4 ounces if evaporator is replaced. Oil does not need to be added if receiver-drier is replaced. Add 1.7 ounces of refrigerant oil only if a refrigerant oil leak is indicated.

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MATSUSHITA

ROTARY VANE

Discharge system. See SERVICING PRECAUTIONS at beginning of article. Remove compressor from vehicle. Drain oil from compressor through inlet and outlet ports. Fill compressor with 3.4-4.7 ounces of oil through suction port. Add 0.7 ounces if receiver-drier was replaced. When replacing condenser or evaporator, add 1.4-1.7 ounces of refrigerant oil.

NIPPONDENSO

ROTARY VANE

1) Before checking and adjusting oil level, operate compressor at engine idle speed, and set controls at maximum cooling and high blower motor speed for 20-30 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Drain compressor oil through compressor intake and discharge ports. Measure amount drained.

3) Fill compressor with same amount as drained, plus one ounce. When replacing condenser, add one ounce. When replacing evaporator, add 1 1/2 ounces. When replacing receiver-drier, add 1/3 ounce of new refrigerant oil.

6 & 10-CYLINDER

NOTE: Porsche, Suzuki and Volkswagen compressor oil checking procedures are not available from manufacturer.

Acura & Honda

1) Discharge system. See SERVICING PRECAUTIONS at beginning of article. Remove compressor from vehicle. Drain all oil from NEW compressor and fill compressor with 3-4 ounces of clean refrigerant oil.

2) On Accord, add 5/6 ounce of refrigerant oil when replacing evaporator. Add 1/3 ounce when replacing condenser. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

3) On Legend, add 2 ounces of refrigerant oil when replacing evaporator. Add one ounce when replacing condenser. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

4) On Integra, add one ounce of refrigerant oil when replacing evaporator. When replacing condenser, receiver-drier or hoses, add 1/3 ounce per component replaced.

5) On Vigor, add one ounce of refrigerant oil when replacing evaporator. Add 2/3 ounce when replacing condenser. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

Ford Motor. Co

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On Capri, add one ounce of refrigerant oil when replacing condenser or evaporator. When replacing receiver-drier, add 1/2 ounce. On Festiva, drain and measure oil from receiver-drier. Add the amount drained plus one ounce. Add one ounce when replacing evaporator. Add 3 ounces of refrigerant oil when replacing evaporator.

Lexus & Toyota

Add 1 1/2 ounces of refrigerant oil when replacing condenser. Add 1 1/2 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/2 ounce per component replaced.

Mazda

Add one ounce of refrigerant oil when replacing condenser. Add 1 1/2 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

Mercedes-Benz

Add 2/3 ounce of refrigerant oil when replacing condenser. Add 1 1/3 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced. If A/C system line has broken (sudden discharge), add 1 1/3 ounces of refrigerant oil.

Mitsubishi

1) On Eclipse, add 2/3 ounce of refrigerant oil when replacing condenser. Add one ounce when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

2) On Expo/Expo LRV and Montero, add one ounce of refrigerant oil when replacing condenser. Add 2 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

PANASONIC

ROTARY VANE

Add one ounce of refrigerant oil when replacing condenser. Add 2 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce of refrigerant oil.

SANDEN

SCROLL

Chrysler/Mitsubishi

1) On Colt, Galant, Mirage, Pickup, Ram-50 and Summit, add 1/2 ounce of refrigerant oil when replacing condenser. Add 1 1/2 ounces when replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

2) On Diamante, Stealth and 3000GT, add 1/3 ounce of refrigerant oil when replacing condenser. Add 2 1/2 ounces when

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replacing evaporator. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

Honda

1) Discharge system. See SERVICING PRECAUTIONS at beginning of article. Remove compressor from vehicle. Drain all oil from NEW compressor and fill compressor with 4 ounces of clean refrigerant oil.

2) On Civic, add 1 1/2 ounce of refrigerant oil when replacing evaporator. Add 2/3 ounce when replacing condenser. When replacing receiver-drier or hoses, add 1/3 ounce per component replaced.

3) On Prelude, add 1/2 ounce of refrigerant oil when replacing evaporator. When replacing other A/C components, add 1/3 ounce per component replaced (including hoses).

Hyundai

Add 1.6 ounces of refrigerant oil when replacing evaporator. Add one ounce when replacing condenser. When replacing receiver-drier, add 1/3 ounce of refrigerant oil.

5-CYLINDER

1) Discharge system. See SERVICING PRECAUTIONS at beginning of article. Remove compressor belt and loosen mounting bolts. Rotate compressor in brackets until filler plug is at top. Clean area around filler plug and remove plug slowly. Rotate front hub plate so notch in lobe is 110 degrees from bottom. See Fig. 1. This rotates ball end of top piston to align with oil fill port and allows clearance for dipstick.

2) Insert compressor dipstick diagonally from right to left until stop on dipstick contacts filler plug surface. Remove dipstick and note oil fill level. Each increment on dipstick represents one ounce of oil. Add oil as necessary to reach 3-4 ounce level.

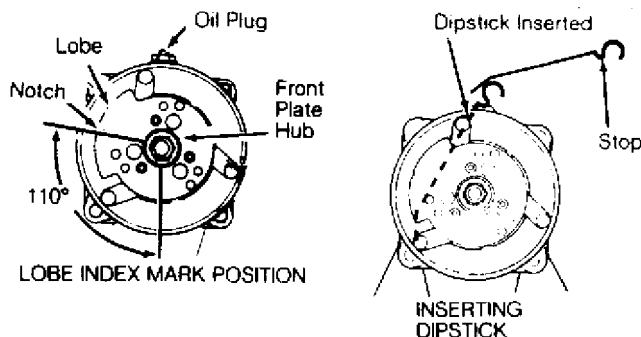


Fig. 1: Checking Oil Level (Sanden 5-Cylinder & 7-Cylinder)
Courtesy of Sanden International U.S.A, Inc.

7-CYLINDER

Hyundai Excel & Scoupe, & Mitsubishi Precis

1) Before checking and adjusting oil level, operate compressor at engine idle speed, and set controls at maximum cooling

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and high blower motor speed for 20-30 minutes to return oil to compressor.

2) Stop engine. Discharge refrigerant and remove compressor from vehicle. See SERVICING PRECAUTIONS at beginning of article. Remove oil drain plug and drain oil. Measure amount of oil drained. Install drain plug with new "O" ring.

3) If amount drained is 2.3 ounces or more, fill with same amount using new oil. If amount drained is less than 2.3 ounces, fill with 2.3 ounces. Install filler plug. Install compressor and recharge system.

COMPONENT REFRIGERANT OIL CAPACITIES TABLE (SANDEN 7-CYL-EXCEL, PRECIS & SCOUPE)

Component	Ounces
Condenser	1.0
Evaporator	3.0
Receiver-Drier	1

Jaguar XJ6

1) Discharge system. See SERVICING PRECAUTIONS at beginning of article. Determine angle at which compressor is mounted. Clean area around filler plug and remove plug slowly.

2) Insert compressor dipstick diagonally until stop on dipstick contacts filler plug surface. See Fig. 1. Remove dipstick and note oil fill level. Each increment on dipstick represents one ounce of oil.

3) Determine amount of oil needed according to mounting angle. See COMPRESSOR OIL INCREMENT CAPACITIES (SANDEN 7-CYLINDER) table for specified amount.

4) If necessary, correct compressor oil level. Install compressor oil plug, and tighten it to 72-108 INCH lbs. (8-12 N.m). Evacuate and recharge A/C system. Perform leak test.

COMPRESSOR OIL INCREMENT CAPACITIES TABLE (SANDEN 7-CYLINDER)

Mounting Angle (In Degrees)	Oil Level In Increments
0	2-4
10	4-5
20	5-6
30	6-7
40	7-9
50	8-10
60	10-12
90	12-13

ZEXEL

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See DIESEL KIKI (ZEXEL).

END OF ARTICLE