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INTRODUCTION

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BODY CODE PLATE

DESCRIPTION

The Body Code Plate (Fig. 1) is located in the engine compartment on the radiator closure panel crossmember. There are seven lines of information on the body code plate. Lines 4, 5, 6, and 7 are not used to define service information. Information reads from left to right, starting with line 3 in the center of the plate to line 1 at the bottom of the plate.

BODY CODE PLATE – LINE 3

DIGITS 1 THROUGH 12

Vehicle Order Number

DIGITS 13 THROUGH 17

Open Space

DIGITS 18 AND 19

Vehicle Shell Line

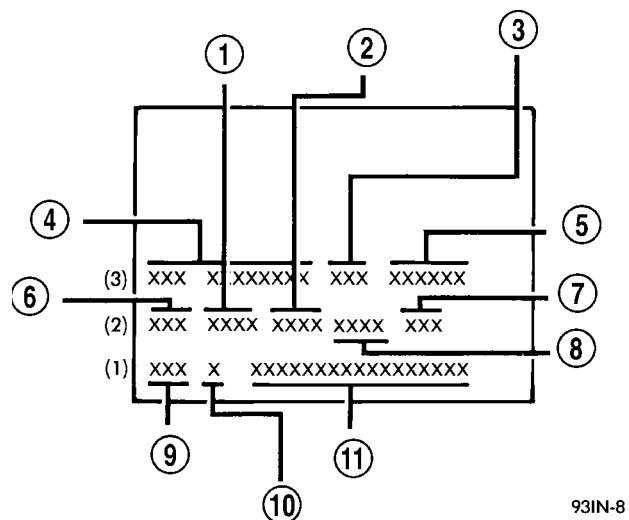
- RS

DIGIT 20

Carline

FWD

- K = Dodge
- Y = Chrysler



93IN-8

Fig. 1 BODY CODE PLATE

- 1 - PRIMARY PAINT
- 2 - SECONDARY PAINT
- 3 - VINYL ROOF
- 4 - VEHICLE ORDER NUMBER
- 5 - CAR LINE SHELL
- 6 - PAINT PROCEDURE
- 7 - ENGINE
- 8 - TRIM
- 9 - TRANSMISSION
- 10 - MARKET
- 11 - VIN

AWD

- C = Chrysler
- D = Dodge

BODY CODE PLATE (Continued)

DIGIT 21

Price Class

- H = Highline
- L = Lowline
- P = Premium
- S = Luxury
- X = Premium

DIGITS 22 AND 23

Body Type

- 52 = Short Wheel Base
- 53 = Long Wheel Base

BODY CODE PLATE LINE 2

DIGITS 1, 2 AND 3

Paint Procedure

DIGIT 4

Open Space

DIGITS 5 THROUGH 7

Primary Paint (Refer to 23 - BODY/PAINT - SPECIFICATIONS).

DIGIT 8 AND 9

Open Space

DIGITS 10 THROUGH 12

Secondary Paint

DIGIT 13 AND 14

Open Space

DIGITS 15 THROUGH 18

Interior Trim Code

DIGIT 19

Open Space

DIGITS 20, 21, AND 22

Engine Code

- EDZ = 2.4L 4 cyl. 16-Valve DOHC Gasoline (MPI)
- EGA = 3.3L 6 cyl. Gasoline (SMPI)
- EGH = 3.8L 6 cyl. Gasoline (SMPI)
- EGM = 3.3L 6 cyl. Ethanol Flexible Fuel
- ENJ = 2.5L 4 cyl. 16-Valve Turbo Diesel

DIGIT 23

Open Space

BODY CODE PLATE LINE 1

DIGITS 1, 2, AND 3

Transaxle Codes

- DGC = 31TH 3-Speed Automatic Transaxle
- DGL = 41AE/TE 4-Speed Electronic Automatic
- DDR = T850 5-Speed Manual Transaxle

DIGIT 4

Open Space

DIGIT 5

Market Code

- C = Canada
- B = International
- M = Mexico
- U = United States

DIGIT 6

Open Space

DIGITS 7 THROUGH 23

Vehicle Identification Number

• Refer to Vehicle Identification Number (VIN) paragraph for proper breakdown of VIN code.

IF TWO BODY CODE PLATES ARE REQUIRED

The last code shown on either plate will be followed by END. When two plates are required, the last code space on the first plate will indicate (CTD)

When a second plate is required, the first four spaces of each line will not be used due to overlap of the plates.

FASTENER IDENTIFICATION

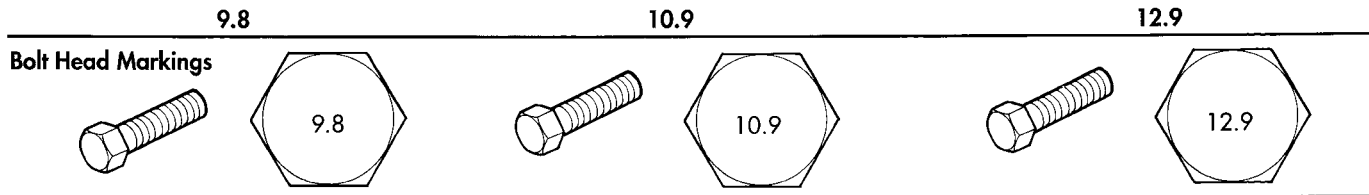
DESCRIPTION

The SAE bolt strength grades range from grade 2 to grade 8. The higher the grade number, the greater the bolt strength. Identification is determined by the line marks on the top of each bolt head. The actual bolt strength grade corresponds to the number of line marks plus 2. The most commonly used metric bolt strength classes are 9.8 and 10.9. The metric strength class identification number is imprinted on the head of the bolt. The higher the class number, the greater the bolt strength. Some metric nuts are imprinted with a single-digit strength class on the nut face. Refer to the Fastener Identification and Fastener Strength Charts.

FASTENER IDENTIFICATION (Continued)

Bolt Markings and Torque - Metric

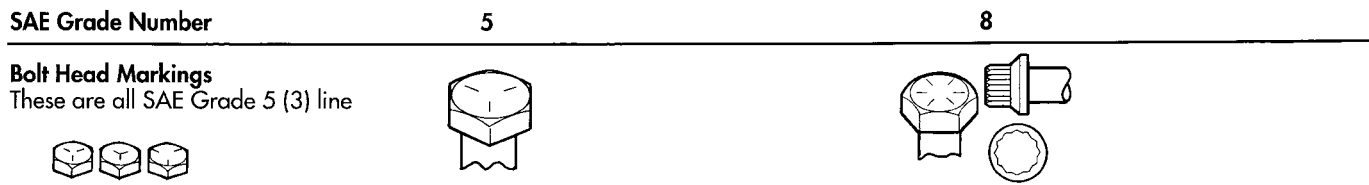
Commercial Steel Class



Body Size	9.8				10.9				12.9			
	Torque		Torque		Torque		Torque		Torque		Torque	
	Diam.	Cast Iron	Aluminum	Cast Iron	Aluminum	Cast Iron	Aluminum	Cast Iron	Aluminum	Cast Iron	Aluminum	
mm	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb
6	9	5	7	4	14	9	11	7	14	9	11	7
7	14	9	11	7	18	14	14	11	23	18	18	14
8	25	18	18	14	32	23	25	18	36	27	28	21
10	40	30	30	25	60	45	45	35	70	50	55	40
12	70	55	55	40	105	75	80	60	125	95	100	75
14	115	85	90	65	160	120	125	95	195	145	150	110
16	180	130	140	100	240	175	190	135	290	210	220	165
18	230	170	180	135	320	240	250	185	400	290	310	230

Bolt Markings and Torque Values - U.S. Customary


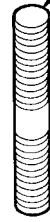


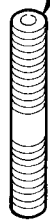


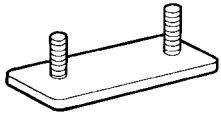

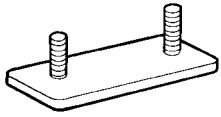
SAE Grade Number



Body Size	Bolt Torque - Grade 5 Bolt				Bolt Torque - Grade 8 Bolt			
	Cast Iron		Aluminum		Cast Iron		Aluminum	
	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb	N•m	ft-lb
1/4 - 20	9	7	8	6	15	11	12	9
- 28	12	9	9	7	18	13	14	10
5/16 - 18	20	15	16	12	30	22	24	18
- 24	23	17	19	14	33	24	25	19
3/8 - 16	40	30	25	20	55	40	40	30
- 24	40	30	35	25	60	45	45	35
7/16 - 14	60	45	45	35	90	65	65	50
- 20	65	50	55	40	95	70	75	55
1/2 - 13	95	70	75	55	130	95	100	75
- 20	100	75	80	60	150	110	120	90
9/16 - 12	135	100	110	80	190	140	150	110
- 18	150	110	115	85	210	155	170	125
5/8 - 11	180	135	150	110	255	190	205	150
- 18	210	155	160	120	290	215	230	170
3/4 - 10	325	240	255	190	460	340	365	270
- 16	365	270	285	210	515	380	410	300
7/8 - 9	490	360	380	280	745	550	600	440
- 14	530	390	420	310	825	610	660	490
1 - 8	720	530	570	420	1100	820	890	660
- 14	800	590	650	480	1200	890	960	710

FASTENER IDENTIFICATION (Continued)

HOW TO DETERMINE BOLT STRENGTH

	Mark	Class		Mark	Class
Hexagon head bolt	 <p>Bolt head No.</p> <p>4 — 4T 5 — 5T 6 — 6T 7 — 7T 8 — 8T 9 — 9T 10 — 10T 11 — 11T</p>		Stud bolt	 <p>No mark</p>	4T
	 <p>No mark</p>	4T			
Hexagon flange bolt w/washer hexagon bolt	 <p>No mark</p>	4T		 <p>Grooved</p>	6T
Hexagon head bolt	 <p>Two protruding lines</p>	5T			
Hexagon flange bolt w/washer hexagon bolt	 <p>Two protruding lines</p>	6T	Welded bolt		
Hexagon head bolt	 <p>Three protruding lines</p>	7T			
Hexagon head bolt	 <p>Four protruding lines</p>	8T			4T

FASTENER USAGE

DESCRIPTION

FASTENER USAGE

WARNING: USE OF AN INCORRECT FASTENER MAY RESULT IN COMPONENT DAMAGE OR PERSONAL INJURY.

Fasteners and torque specifications references in this Service Manual are identified in metric and SAE format.

During any maintenance or repair procedures, it is important to salvage all fasteners (nuts, bolts, etc.) for reassembly. If the fastener is not salvageable, a fastener of equivalent specification must be used.

























THREADED HOLE REPAIR

Most stripped threaded holes can be repaired using a Helicoil®. Follow the vehicle or Helicoil® recommendations for application and repair procedures.

INTERNATIONAL SYMBOLS

DESCRIPTION

The graphic symbols illustrated in the following International Control and Display Symbols Chart are used to identify various instrument controls. The symbols correspond to the controls and displays that are located on the instrument panel.

 1	 2	 3	 4	 5	 6
 7	 8	 9	 10	 11	 12
 13	 14	 15	 16	 17	 18
 19	 20	 21	 22	 23	 24

INTERNATIONAL CONTROL AND DISPLAY SYMBOLS

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- | | | | |
|----|--------------------------------------|----|----------------------------|
| 1 | High Beam | 13 | Rear Window Washer |
| 2 | Fog Lamps | 14 | Fuel |
| 3 | Headlamp, Parking Lamps, Panel Lamps | 15 | Engine Coolant Temperature |
| 4 | Turn Warning | 16 | Battery Charging Condition |
| 5 | Hazard Warning | 17 | Engine Oil |
| 6 | Windshield Washer | 18 | Seat Belt |
| 7 | Windshield Wiper | 19 | Brake Failure |
| 8 | Windshield Wiper and Washer | 20 | Parking Brake |
| 9 | Wind screen Demisting and Defrosting | 21 | Front Hood |
| 10 | Ventilating Fan | 22 | Rear hood (Decklid) |
| 11 | Rear Window Defogger | 23 | Horn |
| 12 | Rear Window Wiper | 24 | Lighter |

METRIC SYSTEM

The following chart will assist in converting metric units to equivalent English and SAE units, or vice versa.

DESCRIPTION

The metric system is based on quantities of one, ten, one hundred, one thousand and one million.

CONVERSION FORMULAS AND EQUIVALENT VALUES

MULTIPLY	BY	TO GET	MULTIPLY	BY	TO GET
in-lbs	x 0.11298	= Newton Meters (N·m)	N·m	x 8.851	= in-lbs
ft-lbs	x 1.3558	= Newton Meters (N·m)	N·m	x 0.7376	= ft-lbs
Inches Hg (60° F)	x 3.377	= Kilopascals (kPa)	kPa	x 0.2961	= Inches Hg
psi	x 6.895	= Kilopascals (kPa)	kPa	x 0.145	= psi
Inches	x 25.4	= Millimeters (mm)	mm	x 0.03937	= Inches
Feet	x 0.3048	= Meters (M)	M	x 3.281	= Feet
Yards	x 0.9144	= Meters	M	x 1.0936	= Yards
mph	x 1.6093	= Kilometers/Hr. (Km/h)	Km/h	x 0.6214	= mph
Feet/Sec	x 0.3048	= Meters/Sec (M/S)	M/S	x 3.281	= Feet/Sec
mph	x 0.4470	= Meters/Sec (M/S)	M/S	x 2.237	= mph
Kilometers/Hr. (Km/h)	x 0.27778	= Meters/Sec (M/S)	M/S	x 3.600	Kilometers/Hr. (Km/h)

COMMON METRIC EQUIVALENTS

1 inch = 25 Millimeters	1 Cubic Inch = 16 Cubic Centimeters
1 Foot = 0.3 Meter	1 Cubic Foot = 0.03 Cubic Meter
1 Yard = 0.9 Meter	1 Cubic Yard = 0.8 Cubic Meter
1 Mile = 1.6 Kilometers	

Refer to the Metric Conversion Chart to convert torque values listed in metric Newton- meters (N·m). Also, use the chart to convert between millimeters (mm) and inches (in.).

TORQUE REFERENCES

DESCRIPTION

SPECIFIED TORQUE FOR STANDARD BOLTS

Class	Diameter mm	Pitch mm	Specified torque					
			Hexagon head bolt			Hexagon flange bolt		
			N•m	kgf-cm	ft-lbf	N•m	kgf-cm	ft-lbf
4T	6	1	5	55	48 in.-lbf	6	60	52 in.-lbf
	8	1.25	12.5	130	9	14	145	10
	10	1.25	26	260	19	29	290	21
	12	1.25	47	480	35	53	540	39
	14	1.5	74	760	55	84	850	61
	16	1.5	115	1,150	83	—	—	—
5T	6	1	6.5	65	56 in.-lbf	7.5	75	65 in.-lbf
	8	1.25	15.5	160	12	17.5	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	43	65	670	48
	14	1.5	91	930	67	100	1,050	76
	16	1.5	140	1,400	101	—	—	—
6T	6	1	8	80	69 in.-lbf	9	90	78 in.-lbf
	8	1.25	19	195	14	21	210	15
	10	1.25	39	400	29	44	440	32
	12	1.25	71	730	53	80	810	59
	14	1.5	110	1,100	80	125	1,250	90
	16	1.5	170	1,750	127	—	—	—
7T	6	1	10.5	110	8	12	120	9
	8	1.25	25	260	19	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	105	1,050	76
	14	1.5	145	1,500	108	165	1,700	123
	16	1.5	230	2,300	166	—	—	—
8T	8	1.25	29	300	22	33	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	110	1,100	80	120	1,250	90
9T	8	1.25	34	340	25	37	380	27
	10	1.25	70	710	51	78	790	57
	12	1.25	125	1,300	94	140	1,450	105
10T	8	1.25	38	390	28	42	430	31
	10	1.25	78	800	58	88	890	64
	12	1.25	140	1,450	105	155	1,600	116
11T	8	1.25	42	430	31	47	480	35
	10	1.25	87	890	64	97	990	72
	12	1.25	155	1,600	116	175	1,800	130

TORQUE SPECIFICATIONS

TORQUE REFERENCES (Continued)

Individual Torque Charts appear within many of the Groups. Refer to the Standard Torque Specifications Chart for torque references not listed in the individual torque charts.

tion. The formula to use the check digit is not released to the general public.

VEHICLE IDENTIFICATION NUMBER

DESCRIPTION

The Vehicle Identification Number (VIN) can be viewed through the windshield at the upper left corner of the instrument panel, near the left windshield pillar (Fig. 2). The VIN consists of 17 characters in a combination of letters and numbers that provide specific information about the vehicle. Refer to VIN Code Breakdown Chart for decoding information.

To protect the consumer from theft and possible fraud the manufacturer is required to include a Check Digit at the ninth position of the vehicle identification number. The check digit is used by the manufacturer and government agencies to verify the authenticity of the vehicle and official documenta-

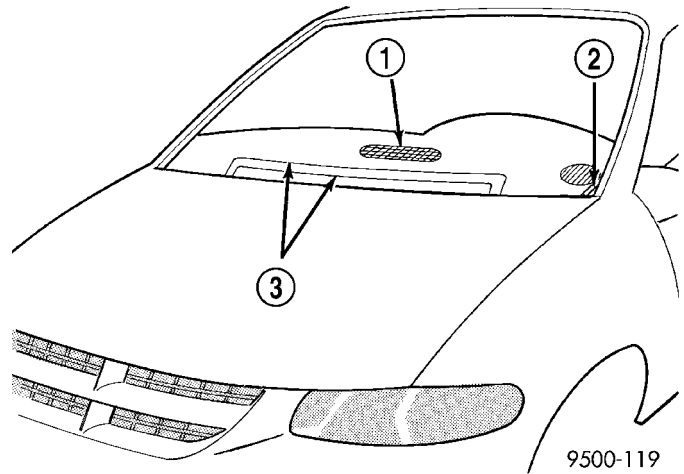


Fig. 2 VEHICLE IDENTIFICATION NUMBER (VIN)

- 1 - DEFROSTER OUTLET
- 2 - VEHICLE IDENTIFICATION NUMBER
- 3 - HEATED WINDSHIELD GRID

VIN CODE BREAKDOWN CHART

POSITION	INTERPRETATION	CODE = DESCRIPTION
1	Country of Origin	1 = Manufactured By DaimlerChrysler Corporation 2 = Manufactured By DaimlerChrysler Canada Inc.
2	Make	D = Dodge C = Chrysler
3	Vehicle Type	4 = Multipurpose Pass. Vehicle Less Side Air Bags 8 = Multipurpose Pass. Vehicle With Side Air Bags
4	Gross Vehicle Weight Rating	G = 2268 - 2721 kg. (5001 - 6000 lbs.)
5	Car Line	1 = Chrysler Caravan - FWD P = Chrysler, Town & Country - FWD P = Dodge, Caravan/Grand Caravan - FWD P = Dodge, Caravan C/V, Grand Caravan C/V - FWD T = Chrysler, Town & Country - AWD T = Dodge, Grand Caravan - AWD J = Chrysler, Voyager/Grand Voyager - FWD Y = Voyager/Grand Voyager - FWD Left Hand Drive C = Voyager/Grand Voyager - AWD Left Hand Drive H = Voyager/Grand Voyager - FWD Right Hand Drive K = Voyager/Grand Voyager - AWD Left Hand Drive

VEHICLE CERTIFICATION LABEL

DESCRIPTION

A vehicle certification label is attached to the rear shutface of the driver's door (Fig. 3). This label indicates date of manufacture (month and year), Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating (GAWR) front, Gross Axle Weight Rating (GAWR) rear and the Vehicle Identification Number (VIN). The Month, Day and Hour of manufacture is also included.

All communications or inquiries regarding the vehicle should include the Month-Day-Hour and Vehicle Identification Number.

MFD BY	DAIMLER CHRYSLER CORPORATION	DATE OF MFR	1-96 C	GVWR	2268 KG (05000 LB)
GAWR FRONT	WITH TIRES	RIMS AT	COLD		
1203 KG (2650 LB)	P195/75R14	14 X 5.5	380 KPA(35 PSI)		
GAWR REAR	WITH TIRES	RIMS AT	COLD		
1225 KG (2700 LB)	P195/75R14	14 X 5.5	380 KPA(35 PSI)		

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: XXXXXXXXXXXXXXXX TYPE: SINGLE X DUAL



MDH: 010615 021 PAINT:POP VEHICLE MADE IN CANADA TRIM:C5C3 4848505

8086df7b

Fig. 3 VEHICLE CERTIFICATION LABEL - TYPICAL E-MARK LABEL

DESCRIPTION

An E-mark Label (Fig. 4) is located on the rear shut face of the driver's door. The label contains the following information:

- Date of Manufacture
- Month-Day-Hour (MDH)
- Vehicle Identification Number (VIN)
- Country Codes
- Regulation Number
- Regulation Amendment Number
- Approval Number

Date of Manufacture: 05-95 MDH: 052915
VIN: XXXXXXXXXXXXXXXX

E4	21	0195002	E11	13	063098
	26	0195001		14	030169
E5	10	010035	E11	17	040212
	11	020011		39	00155
	18	010010		44	0244038
	28	010016		51	011082
	46	010019		79	00155
	85	000044			
E11	12	030263		48	005003

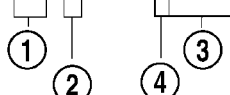


Fig. 4 E-MARK LABEL

- 1 - COUNTRY CODE
- 2 - REGULATION NUMBER
- 3 - APPROVAL NUMBER
- 4 - AMENDMENT NUMBER

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VECI LABEL

DESCRIPTION

All models have a Vehicle Emission Control Information (VECI) Label. Chrysler permanently attaches the label in the engine compartment. It cannot be removed without defacing information and destroying the label.

The label contains the vehicle's emission specifications and vacuum hose routings. All hoses must be connected and routed according to the label.

MANUFACTURER PLATE

DESCRIPTION

The Manufacturer Plate (Fig. 5) is located in the engine compartment on the passenger side rear corner of the hood. The plate contains five lines of information:

1. Vehicle Identification Number (VIN)
2. Gross Vehicle Mass (GVM)
3. Gross Train Mass (GTM)
4. Gross Front Axle Rating (GFAR)
5. Gross Rear Axle Rating (GRAR)

DAIMLERCHRYSLER CORPORATION

XXXXXXXXXXXXXXXXXX

XXXX KG

XXXX KG

1 XXXX KG

2 XXXX KG

Fig. 5 MANUFACTURER PLATE

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LUBRICATION & MAINTENANCE


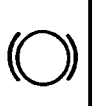
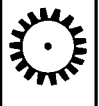



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INTERNATIONAL SYMBOLS

DESCRIPTION

DaimlerChrysler Corporation uses international symbols to identify engine compartment lubricant and fluid inspection and fill locations (Fig. 1).

	ENGINE OIL		BRAKE FLUID
	AUTOMATIC TRANSMISSION FLUID		POWER STEERING FLUID
	ENGINE COOLANT		WINDSHIELD WASHER FLUID

8097ddbdt

Fig. 1 INTERNATIONAL SYMBOLS

FLUID TYPES

DESCRIPTION

DESCRIPTION - ENGINE OIL AND LUBRICANTS

WARNING: NEW OR USED ENGINE OIL CAN BE IRRITATING TO THE SKIN. AVOID PROLONGED OR REPEATED SKIN CONTACT WITH ENGINE OIL. CONTAMINANTS IN USED ENGINE OIL, CAUSED BY INTERNAL COMBUSTION, CAN BE HAZARDOUS TO YOUR HEALTH. THOROUGHLY WASH EXPOSED SKIN WITH SOAP AND WATER. DO NOT WASH SKIN WITH GASOLINE, DIESEL FUEL, THINNER, OR SOLVENTS, HEALTH PROBLEMS CAN RESULT. DO NOT POLLUTE, DISPOSE OF USED ENGINE OIL PROPERLY. CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA.

When service is required, DaimlerChrysler Corporation recommends that only Mopar® brand parts, lubricants and chemicals be used. Mopar® provides the best engineered products for servicing DaimlerChrysler Corporation vehicles.

Only lubricants bearing designations defined by the following organization should be used.

FLUID TYPES (Continued)

- Society of Automotive Engineers (SAE)
- American Petroleum Institute (API)
- National Lubricating Grease Institute (NLGI)

API CERTIFICATION AND LICENSE SYMBOL

Use an engine oil that is API Certified (GF-3) and Licensed to display the certification mark (Fig. 2). MOPAR® provides engine oils that meet or exceed, Material Standard MS-6395 requirement.

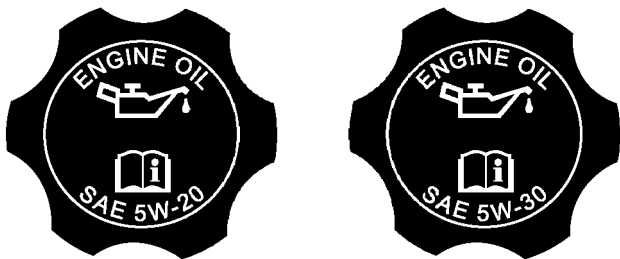


9400-9

Fig. 2 API Certification Mark

SAE VISCOSITY

SAE 5W-20 and SAE 5W-30 engine oils are recommended for all operating temperatures. These engine oils are designed to improve low temperature starting and vehicle fuel economy. Refer to the engine oil filler cap for the preferred engine oil viscosity grade for each vehicle (Fig. 3). SAE viscosity grades are used to specify the correct viscosity oil for an engine. Use only Multi-Viscosity oils such as SAE 5W-20 or 5W-30. These are specified with a dual SAE viscosity grade which indicates the cold (5W) to hot (20, 30) temperature performance range of the oil.



81364ec7

Fig. 3 5W-30 Oil Filler Cap

CONTAINER IDENTIFICATION

The Engine Oil Certification Mark was developed and trademarked by the API to refer customers to those engine oils preferred by the automobile manufacturers. This symbol means that the oil has been certified and licensed by the American Petroleum Institute (API). This certification mark will only be found on the front of the oil containers. Those oils

that do not display the "Mark" on the front of the container should not be used (Fig. 2).

DiamlerChrysler only recommends API Certified engine oils that meet the requirements of Material Standard MS-6395. Use Mopar or an equivalent oil meeting the specification MS-6395.

SYNTHETIC ENGINE OILS

There are a number of engine oils being promoted as either synthetic or semi-synthetic. If you chose to use such a product, use **only** those oils that are certified by the American Petroleum Institute (API) to display the "Certification Mark" and show SAE viscosity grade recommended for each vehicle. Follow the service schedule that describes your driving type.

ENGINE OIL ADDITIVES/SUPPLEMENTS

The manufacturer **does not recommend** the addition of any engine oil additives/supplements to the specified engine oil. Engine oil additives/supplements should not be used to enhance engine oil performance. Engine oil additives/supplements should not be used to extend engine oil change intervals. No additive is known to be safe for engine durability and can degrade emission components. Additives can contain undesirable materials that harm the long term durability of engines by:

- Increasing the level of Phosphorus and Sulfur in the engine oil. The API Certified Engine Oils control the Phosphorus and Sulfur contents of the oil to levels that reduce the contamination effect on the vehicles emission control system.
- Altering the viscosity characteristics of the engine oil so that it no longer meets the requirements of the specified viscosity grade.
- Creating potential for an undesirable additive compatibility interaction in the engine crankcase. The engine oils contain a performance additive system carefully developed to optimize the oils performance in the engine. The addition of supplements may cause the oil to thicken prematurely, cause excessive deposit build up and potentially shorten engine life.

AXLE LUBRICANTS

SAE ratings also apply to multigrade gear lubricants. In addition, API classification defines the lubricants usage. Such as API GL-5 and SAE 75W-90.

LUBRICANTS AND GREASES

Lubricating grease is rated for quality and usage by the NLGI. All approved products have the NLGI symbol (Fig. 4) on the label. At the bottom of the NLGI symbol is the usage and quality identification letters. Wheel bearing lubricant is identified by the

FLUID TYPES (Continued)

letter "G". Chassis lubricant is identified by the letter "L". The letter following the usage letter indicates the quality of the lubricant. The following symbols indicate the highest quality.

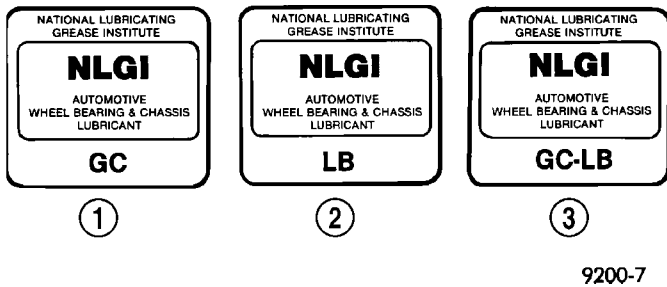


Fig. 4 NLGI SYMBOL

- 1 - WHEEL BEARINGS
- 2 - CHASSIS LUBRICATION
- 3 - CHASSIS AND WHEEL BEARINGS

SPECIALIZED LUBRICANTS AND OILS

Some maintenance or repair procedures may require the use of specialized lubricants or oils. Consult the appropriate sections in this manual for the correct application of these lubricants.

DESCRIPTION - ENGINE COOLANT

WARNING: ANTIFREEZE IS AN ETHYLENE GLYCOL BASE COOLANT AND IS HARMFUL IF SWALLOWED OR INHALED. IF SWALLOWED, DRINK TWO GLASSES OF WATER AND INDUCE VOMITING. IF INHALED, MOVE TO FRESH AIR AREA. SEEK MEDICAL ATTENTION IMMEDIATELY. DO NOT STORE IN OPEN OR UNMARKED CONTAINERS. WASH SKIN AND CLOTHING THOROUGHLY AFTER COMING IN CONTACT WITH ETHYLENE GLYCOL. KEEP OUT OF REACH OF CHILDREN. DISPOSE OF GLYCOL BASE COOLANT PROPERLY, CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA. DO NOT OPEN A COOLING SYSTEM WHEN THE ENGINE IS AT OPERATING TEMPERATURE OR HOT UNDER PRESSURE, PERSONAL INJURY CAN RESULT. AVOID RADIATOR COOLING FAN WHEN ENGINE COMPARTMENT RELATED SERVICE IS PERFORMED, PERSONAL INJURY CAN RESULT.

CAUTION: Use of Propylene Glycol based coolants is not recommended, as they provide less freeze protection and less boiling protection.

The cooling system is designed around the coolant. The coolant must accept heat from engine metal, in the cylinder head area near the exhaust valves and engine block. Then coolant carries the heat to the

radiator where the tube/fin radiator can transfer the heat to the air.

The use of aluminum cylinder blocks, cylinder heads, and water pumps requires special corrosion protection. Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769), or the equivalent ethylene glycol base coolant with hybrid organic corrosion inhibitors (called HOAT, for Hybrid Organic Additive Technology) is recommended. This coolant offers the best engine cooling without corrosion when mixed with 50% Ethylene Glycol and 50% distilled water to obtain a freeze point of -37°C (-35°F). If it loses color or becomes contaminated, drain, flush, and replace with fresh properly mixed coolant solution.

The green coolant **MUST NOT BE MIXED** with the orange or magenta coolants. When replacing coolant the complete system flush must be performed before using the replacement coolant.

CAUTION: Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769) may not be mixed with any other type of antifreeze. Doing so will reduce the corrosion protection and may result in premature water pump seal failure. If non-HOAT coolant is introduced into the cooling system in an emergency, it should be replaced with the specified coolant as soon as possible.

DESCRIPTION - FLEXIBLE FUEL ENGINE OIL

The information in this section is for Flexible Fuel Vehicles (FFV) only. These vehicles can be identified by the unique Fuel Filler Door Label that states Ethanol (E-85) or Unleaded Gasoline Only. This section only covers those subjects that are unique to these vehicles. Please refer to the other sections of this manual for information on features that are common between Flexible Fuel and gasoline only powered vehicles.

ETHANOL FUEL (E-85)

E-85 is a mixture of approximately 85% fuel ethanol and 15% unleaded gasoline.

WARNING: Ethanol vapors are extremely flammable and could cause serious personal injury. Never have any smoking materials lit in or near the vehicle when removing the fuel filler tube cap (gas cap) or filling the tank. Do not use E-85 as a cleaning agent and never use it near an open flame.

FUEL REQUIREMENTS

The vehicle will operate on both unleaded gasoline with an octane rating of 87, or E-85 fuel, or any mixture of these two.

FLUID TYPES (Continued)

For best results, a refueling pattern that alternates between E-85 and unleaded gasoline should be avoided. When you do switch fuels, it is recommended that

- you do not switch when the fuel gauge indicates less than 1/4 full
- you do not add less than 5 gallons when refueling
- you operate the vehicle immediately after refueling for a period of at least 5 minutes

Observing these precautions will avoid possible hard starting and/or significant deterioration in driveability during warm up.

FFV STARTING

The characteristics of E-85 fuel make it unsuitable for use when ambient temperatures fall below 0°F. In the range of 0°F to 32°F, you may experience an increase in the time it takes for your engine to start, and a deterioration in driveability (sags and/or hesitations) until the engine is fully warmed up.

Engine Operating on E-85 Fuel

If vehicle operates on E-85 fuel either full or part-time, use only Mopar® Flexible Fuel 5W-30 engine oil or an equivalent that meets DaimlerChrysler Standard MS-9214. Equivalent commercial Flexible Fuel engine oils may be labeled as Multi-Fuel, Variable Fuel, Flexible Fuel, etc. These engine oils may be satisfactory if they meet the DaimlerChrysler Standard.

SAE 5W-30 engine oil is preferred for use in Flexible Fuel engines.

CAUTION: If Flexible Fuel engine oil is not used when using E-85 fuel, engine wear or damage may result.

CRUISING RANGE

Because E-85 fuel contains less energy per gallon than gasoline, you will experience an increase in fuel consumption. You can expect your MPG and your driving range to decrease by about 30% compared to gasoline operation.

DESCRIPTION - AUTOMATIC/MANUAL TRANSAXLE FLUID

NOTE: Refer to the maintenance schedules for the recommended maintenance (fluid/filter change) intervals for these transaxles.

NOTE: All transaxles have a common transmission and differential sump. Filling the transaxle accommodates the differential as well.

TRANSMISSION FLUID

Mopar® ATF+4 (Automatic Transmission Fluid) is required in the 4XTE automatic and T850 manual transaxles. Substitute fluids can induce transmission problems and/or failure.

Mopar® ATF+4 (Automatic Transmission Fluid) when new is red in color. The ATF is dyed red so it can be identified from other fluids used in the vehicle such as engine oil or antifreeze. The red color is not permanent and is not an indicator of fluid condition. As the vehicle is driven, the ATF will begin to look darker in color and may eventually become brown. **This is normal.** ATF+4 also has a unique odor that may change with age. Consequently, **odor and color cannot be used to indicate the fluid condition or the need for a fluid change.**

FLUID ADDITIVES

DaimlerChrysler strongly recommends against the addition of any fluids to the transmission, other than those automatic transmission fluids listed above. Exceptions to this policy are the use of special dyes to aid in detecting fluid leaks.

Various "special" additives and supplements exist that claim to improve shift feel and/or quality. These additives and others also claim to improve converter clutch operation and inhibit overheating, oxidation, varnish, and sludge. These claims have not been supported to the satisfaction of DaimlerChrysler and these additives **must not be used.** The use of transmission "sealers" should also be avoided, since they may adversely affect the integrity of transmission seals.

DESCRIPTION - FUEL REQUIREMENTS

Your engine is designed to meet all emissions regulations and provide excellent fuel economy and performance when using high quality unleaded gasoline having an octane rating of 87. The use of premium gasoline is not recommended. The use of premium gasoline will provide no benefit over high quality regular gasoline, and in some circumstances may result in poorer performance.

Light spark knock at low engine speeds is not harmful to your engine. However, continued heavy spark knock at high speeds can cause damage and immediate service is required. Engine damage resulting from operation with a heavy spark knock may not be covered by the new vehicle warranty.

Poor quality gasoline can cause problems such as hard starting, stalling and hesitations. If you experience these symptoms, try another brand of gasoline before considering service for the vehicle.

Over 40 auto manufacturers world-wide have issued and endorsed consistent gasoline specifications (the Worldwide Fuel Charter, WWFC) to define fuel

FLUID TYPES (Continued)

properties necessary to deliver enhanced emissions, performance and durability for your vehicle. We recommend the use of gasolines that meet the WWFC specifications if they are available.

REFORMULATED GASOLINE

Many areas of the country require the use of cleaner burning gasoline referred to as "reformulated" gasoline. Reformulated gasoline contain oxygenates, and are specifically blended to reduce vehicle emissions and improve air quality.

We strongly support the use of reformulated gasoline. Properly blended reformulated gasoline will provide excellent performance and durability for the engine and fuel system components.

GASOLINE/OXYGENATE BLENDS

Some fuel suppliers blend unleaded gasoline with oxygenates such as 10% ethanol, MTBE, and ETBE. Oxygenates are required in some areas of the country during the winter months to reduce carbon monoxide emissions. Fuels blended with these oxygenates may be used in your vehicle.

CAUTION: DO NOT use gasoline containing METHANOL. Gasoline containing methanol may damage critical fuel system components.

MMT IN GASOLINE

MMT is a manganese-containing metallic additive that is blended into some gasoline to increase octane. Gasoline blended with MMT provide no performance advantage beyond gasoline of the same octane number without MMT. Gasoline blended with MMT reduce spark plug life and reduce emission system performance in some vehicles. We recommend that gasoline free of MMT be used in your vehicle. The MMT content of gasoline may not be indicated on the gasoline pump; therefore, you should ask your gasoline retailer whether or not his/her gasoline contains MMT.

It is even more important to look for gasoline without MMT in Canada because MMT can be used at levels higher than allowed in the United States. MMT is prohibited in Federal and California reformulated gasoline.

SULFUR IN GASOLINE

If you live in the northeast United States, your vehicle may have been designed to meet California low emission standards with Cleaner-Burning California reformulated gasoline with low sulfur. If such fuels are not available in states adopting California emission standards, your vehicles will operate satisfactorily on fuels meeting federal specifications, but emission control system performance may be

adversely affected. Gasoline sold outside of California is permitted to have higher sulfur levels which may affect the performance of the vehicle's catalytic converter. This may cause the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light to illuminate. We recommend that you try a different brand of unleaded gasoline having lower sulfur to determine if the problem is fuel related prior to returning your vehicle to an authorized dealer for service.

CAUTION: If the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light is flashing, immediate service is required; see on-board diagnostics system section.

MATERIALS ADDED TO FUEL

All gasoline sold in the United States and Canada are required to contain effective detergent additives. Use of additional detergents or other additives is not needed under normal conditions.

FUEL SYSTEM CAUTIONS

CAUTION: Follow these guidelines to maintain your vehicle's performance:

- The use of leaded gas is prohibited by Federal law. Using leaded gasoline can impair engine performance, damage the emission control system, and could result in loss of warranty coverage.
- An out-of-tune engine, or certain fuel or ignition malfunctions, can cause the catalytic converter to overheat. If you notice a pungent burning odor or some light smoke, your engine may be out of tune or malfunctioning and may require immediate service. Contact your dealer for service assistance.
- When pulling a heavy load or driving a fully loaded vehicle when the humidity is low and the temperature is high, use a premium unleaded fuel to help prevent spark knock. If spark knock persists, lighten the load, or engine piston damage may result.
- The use of fuel additives which are now being sold as octane enhancers is not recommended. Most of these products contain high concentrations of methanol. Fuel system damage or vehicle performance problems resulting from the use of such fuels or additives is not the responsibility of DaimlerChrysler Corporation and may not be covered under the new vehicle warranty.

NOTE: Intentional tampering with emissions control systems can result in civil penalties being assessed against you.

FLUID TYPES (Continued)

DESCRIPTION - FUEL REQUIREMENTS - DIESEL ENGINE

WARNING: DO NOT USE ALCOHOL OR GASOLINE AS A FUEL BLENDING AGENT. THEY CAN BE UNSTABLE UNDER CERTAIN CONDITIONS AND HAZARDOUS OR EXPLOSIVE WHEN MIXED WITH DIESEL FUEL.

Use good quality diesel fuel from a reputable supplier. For most year-round service, number 2 diesel fuel meeting DIN EN 590 (Class 0 - 4) will provide good performance. If the vehicle is exposed to extreme cold (below -18°C/0°F) or is required to operate at colder than normal conditions for prolonged periods, use climatize No. 2 diesel fuel or dilute the No. 2 diesel fuel with 50% No. 1 diesel fuel as long as it meets ASTM D 975: 1D and 2D and the quality of lubrication behavior is in accordance with DIN EN 590. This will provide better protection from fuel gelling or wax plugging of the fuel filters.

Diesel fuel is seldom completely free of water. To prevent fuel system trouble, including fuel line freezing in winter, drain the accumulated water from the fuel/water separator using the fuel/water separator drain provided. If you buy good quality fuel and follow the cold weather advice above, fuel conditioners should not be required in your vehicle. If available in your area, a high cetane "premium" diesel fuel may offer improved cold starting and warm up performance.

DESCRIPTION - ENGINE OIL - DIESEL ENGINES

Use only Diesel Engine Oil meeting standard **MIL-2104C** or API Classification **CD or higher** or **CCML D4, D5**.

SAE VISCOSITY GRADE

CAUTION: Low viscosity oils must have the proper API quality or the CCMC G5 designation.

To assure of properly formulated engine oils, it is recommended that SAE Grade 10W-40 engine oils that meet Chrysler material standard MS-6395, be used in accordance to ACEA B3, B4 specification. European Grade 10W-40 oils are also acceptable.

Oils of the SAE 5W-40 grade number are preferred when minimum temperatures consistently fall below -15°C.

DESCRIPTION - AWD REAR DRIVELINE MODULE FLUIDS

The AWD Rear Driveline Module Assembly consists of two subassemblies, the Overrunning Clutch Housing (front) and the Differential Carrier (rear).

The recommended lubricant for the Overrunning Clutch Housing is Mopar® ATF+4. The recommended lubricant for the Differential Carrier is Mopar® 80W-90 Gear and Axle Lubricant.

DESCRIPTION - AWD POWER TRANSFER UNIT FLUID

The recommended lubricant for the AWD Power Transfer Unit is Mopar® Gear and Axle Lubricant 80W-90.

FLUID CAPACITIES**SPECIFICATIONS - FLUID CAPACITIES**

DESCRIPTION	SPECIFICATION
Fuel Tank (Gas)	75 L (20 gal.)
Fuel Tank (Diesel)	75 L (20 gal.)
Engine Oil* - 2.4 L	4.7 L (5.0 qts.)
Engine Oil* - 3.3/3.8 L	4.7 L (5.0 qts.)
Engine Oil* - 2.5 L (Diesel)	6.0 L (6.3 qts.)
Cooling System** - 2.4 L	10.7 L (11.4 qts.)
Cooling System** - 2.5 L Turbo Diesel with Auxiliary Heater	13.8 L (14.6 qts.)
Cooling System** - 3.3/3.8 L without Auxiliary Heater	12.6 L (13.4 qts.)
Cooling System** - 3.3/3.8 L with Auxiliary Heater	15.4 L (16.3 qts.)
Automatic Transaxle - Service Fill	3.8 L (4.0 qts.)
Automatic Transaxle - 4XTE Overhaul Fill	9.2 L (9.7 qts.)
Manual Transaxle (T850 5-Speed)	2.4-2.7 L (2.5-2.9 qts.)
AWD Power Transfer Unit	1.15 L (2.4 pts.)
Power Steering	1.2 L (2.5 pts.)
AWD Bi-directional Overrunning Clutch	0.575 L (1.22 pts.)
AWD Rear Carrier	0.7 L (1.48 pts.)
* (includes oil filter)	
** (includes heater and recovery/reserve bottle)	

FLUID FILL/CHECK LOCATIONS

DESCRIPTION

The fluid check/fill point locations are located in each applicable service manual section.

LUBRICATION POINTS

DESCRIPTION

Lubrication point locations are located in each applicable Sections.

MAINTENANCE SCHEDULES

DESCRIPTION

DESCRIPTION

There are two maintenance schedules that show the **required** service for your vehicle.

First is Schedule "B". It is for vehicles that are operated under the conditions that are listed below and at the beginning of the schedule.

- Day or night temperatures are below 32° F (0° C).
- Stop and go driving.
- Extensive engine idling.
- Driving in dusty conditions.
- Short trips of less than 10 miles (16 km).
- More than 50% of your driving is at sustained high speeds during hot weather, above 90° F (32° C).
 - Trailer towing. ◇
 - Taxi, police, or delivery service (commercial service). ◇
 - Off-road or desert operation.

NOTE: Most vehicles are operated under the conditions listed for Schedule "B".

Second is Schedule "A". It is for vehicles that are not operated under any of the conditions listed under Schedule "B".

Use the schedule that best describes your driving conditions. Where time and mileage are listed, follow the interval that occurs first.

CAUTION: Failure to perform the required maintenance items may result in damage to the vehicle.

At Each Stop for Fuel

- Check the engine oil level about 5 minutes after a fully warmed engine is shut off. Checking the oil level while the vehicle is on level ground will improve the accuracy of the oil level reading. Add oil only when the level is at or below the ADD or MIN mark.
- Check the windshield washer solvent and add if required.

Once a Month

- Check tire pressure and look for unusual wear or damage.
- Inspect the battery and clean and tighten the terminals as required.
- Check the fluid levels of coolant reservoir, brake master cylinder and transmission, add as needed.
- Check all lights and all other electrical items for correct operation.

At Each Oil Change

- Change the engine oil filter.
- Inspect the exhaust system.
- Inspect the brake hoses.
- Inspect the CV joints and front suspension components.
- Check the automatic transmission fluid level.
- Check the coolant level, hoses, and clamps.

SCHEDULE B

Follow schedule "B" if you usually operate your vehicle under one or more of the following conditions. Change the automatic transmission fluid and filter every 60,000 miles (96 000 km) if the vehicle is usually operated under one or more of the conditions marked with an ◇.

- Day or night temperatures are below 32° F (0° C).
- Stop and go driving.
- Extensive engine idling.
- Driving in dusty conditions.
- Short trips of less than 10 miles (16 km).
- More than 50% of your driving is at sustained high speeds during hot weather, above 90° F (32° C).
 - Trailer towing. ◇
 - Taxi, police, or delivery service (commercial service). ◇
 - Off-road or desert operation.

MAINTENANCE SCHEDULES (Continued)

Miles (Kilometers)	3, 000 (5 000)	6, 000 (10 000)	9, 000 (14 000)	12, 000 (19 000)	15, 000 (24 000)	18, 000 (29 000)
Change engine oil and engine oil filter.	X	X	X	X	X	X
Rotate Tires		X		X		X
Inspect the brake linings.			X			X
Inspect the engine air cleaner filter, replace if necessary. *	X	X	X	X		X
Replace the engine air cleaner filter. *					X	
Replace the air conditioning filter.				X		

Miles (Kilometers)	21, 000 (34 000)	24, 000 (38 000)	27, 000 (43 000)	30, 000 (48 000)	33, 000 (53 000)	36, 000 (58 000)
Change engine oil and engine oil filter.	X	X	X	X	X	X
Rotate Tires		X		X		X
Inspect the brake linings.			X			X
Inspect the engine air cleaner filter, replace if necessary. *	X	X	X		X	X
Replace the engine air cleaner filter.				X		
Inspect the tie rod ends and boot seals.				X		
Inspect the PCV valve and replace as necessary.*				X		
Replace the air conditioning filter.		X				X

Miles (Kilometers)	39, 000 (62 000)	42, 000 (67 000)	45, 000 (72 000)	48, 000 (77 000)	51, 000 (82 000)	54, 000 (86 000)
Change engine oil and engine oil filter.	X	X	X	X	X	X
Rotate Tires		X		X		X
Inspect the brake linings.			X			X
Inspect the engine air cleaner filter, replace if necessary. *	X	X		X	X	X
Replace the engine air cleaner filter. *			X			
Replace the air conditioning filter.				X		