

# MAINTENANCE INFORMATION

## 1992 Mazda 323

This document has been edited in order to make it actually readable and usable.

1986-94 MAINTENANCE  
Mazda Maintenance Information

1990-94 Protege  
1986-94 323

### \* PLEASE READ THIS FIRST \*

NOTE: For scheduled maintenance intervals and the related fluid capacities, fluid specifications and labor times for major service intervals, see SCHEDULED SERVICES article in this section. Specifications for fluid capacities, lubrication specifications, wheel and tire size, and battery type are covered in this article.

### MODEL IDENTIFICATION

#### VIN LOCATION

The Vehicle Identification Number (VIN) is located on the left side of the dash panel at the base of the windshield. The VIN chart explains the code characters.

#### VIN CODE ID EXPLANATION

Numbers preceding the explanations in the legend below refer to the sequence of characters as listed on VIN identification label.

See VIN example below.

(VIN)	J	M	1	B	F	2	2	2	1	K	0	2	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

#### 1 - Manufacturing Country

J \* Japan

#### 2 - Make

M \* Mazda Motors Corp., Japan

#### 3 - Type

1 \* Passenger Car

#### 4-5 - Model

BF \* 323 (1986-89)

BW \* 323 Wagon (1987-88)

BG \* 323 & Protege (1990-94)

#### 6-7 - Body Style

22 \* 4-Door Sedan

23 \* 3-Door Hatchback

24 \* 5-Door Hatchback

62 \* Wagon

#### 8 - Modification Code

2 \* 1.6L SOHC Engine

4 \* 1.8L SOHC Engine

6 \* 1.8L DOHC Engine

#### 9 - VIN Check Digit

1 \* Constant For All Models

#### 10 - Vehicle Model Year

G \* 1986

H \* 1987

J \* 1988

K \* 1989

L \* 1990

M \* 1991

N \* 1992

P \* 1993

R \* 1994

#### 11 - Assembly Plant

0 \* Hiroshima, Japan

#### 12-17 - Serial Number

\* Sequential Production Number

## MAINTENANCE SERVICE INFORMATION

### SEVERE & NORMAL SERVICE DEFINITIONS

NOTE: Use the Severe Service schedule if the vehicle to be serviced is operated under ANY (one or more) of these conditions:

Service is recommended at mileage intervals based on vehicle operation. Service schedules are based on the following primary operating conditions:

#### Normal Service

- Driven More Than 10 Miles (16.09 Km) Daily
- No Operating Conditions From Severe Service Schedules

#### Severe Service (Unique Driving Conditions)

- Repeated Short Distance Driving
- Dusty Conditions
- Extended Use Of Brakes
- Salt Or Other Corrosive Materials On Roads
- Rough Or Muddy Roads
- Extended Idling Or Low Speed Operation
- Extended Operation In Extreme Temperatures

### CAMSHAFT TIMING BELT

CAUTION: Failure to replace a faulty camshaft timing belt may result in serious engine damage.

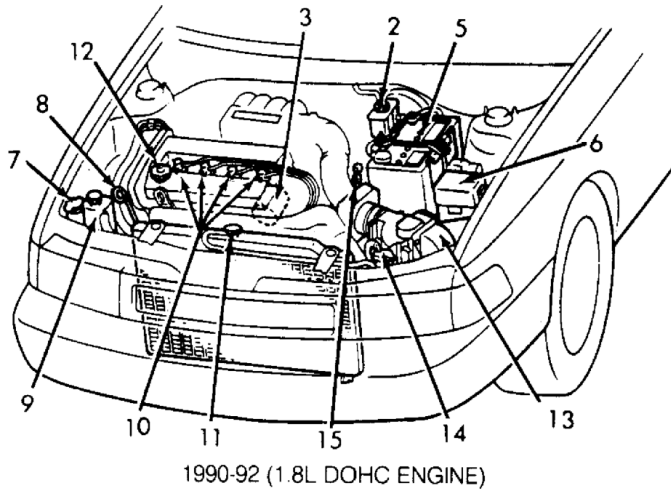
The condition of camshaft drive belts should always be checked on vehicles which have more than 50,000 miles. Although some manufacturers do not recommend belt replacement at a specified mileage, others require it at 60,000-100,000 miles. A camshaft drive belt failure may cause extensive damage to internal engine components on most engines, although some designs do not allow piston-to-valve contact. These designs are often called "Free Wheeling".

Many manufacturers changed their maintenance and warranty schedules in the mid-1980's to reflect timing belt inspection and/or replacement at 50,000-60,000 miles. Most service interval schedules in this manual reflect these changes.

Belts or components should be inspected and replaced if any of the following conditions exist:

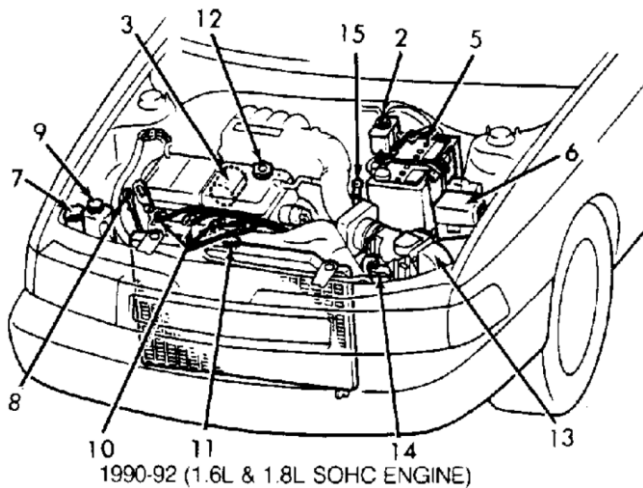
- Cracks Or Tears In Belt Surface
- Missing, Damaged, Cracked Or Rounded Teeth
- Oil Contamination
- Damaged Or Faulty Tensioners
- Incorrect Tension Adjustment
- Replace camshaft timing belt at 60,000 mile intervals.

**SERVICE POINT LOCATIONS**



1. Alternator Drive Belt
2. Brake Fluid Reservoir
3. Oil Filter
4. Speedometer Drive Gear (With Oil Level Gauge for Manual Transaxle, Except 4WD Models)
5. Battery
6. Main Fuse Block
7. Windshield Washer Fluid Reservoir
8. Engine Oil Dipstick
9. Power Steering Reservoir (if Equipped)
10. Spark Plugs
11. Radiator Cap
12. Engine Oil Filler Cap
13. Air Cleaner
14. Radiant Coolant Reservoir
15. Automatic Transmission Fluid Level Gauge (if Equipped)
16. Clutch Fluid Reservoir (if Equipped)

Service Point Locations (1990-1994 1.8L DOHC Engine)  
Courtesy of Mazda Motor of America, Inc.

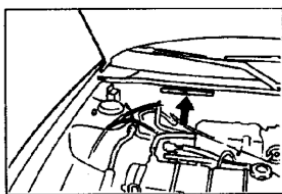


1. Alternator Drive Belt
2. Brake Fluid Reservoir
3. Oil Filter
4. Speedometer Drive Gear (With Oil Level Gauge for Manual Transaxle, Except 4WD Models)
5. Battery
6. Main Fuse Block
7. Windshield Washer Fluid Reservoir
8. Engine Oil Dipstick
9. Power Steering Reservoir (if Equipped)
10. Spark Plugs
11. Radiator Cap
12. Engine Oil Filler Cap
13. Air Cleaner
14. Radiant Coolant Reservoir
15. Automatic Transmission Fluid Level Gauge (if Equipped)
16. Clutch Fluid Reservoir (if Equipped)

Service Point Locations (1990-1994 1.6L SOHC Engine)  
Courtesy of Mazda Motor of America, Inc.

**INFORMATION LABEL LOCATIONS**

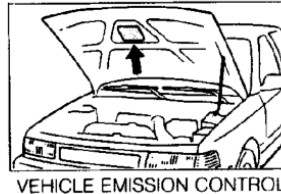
1990-92 MODELS



CHASSIS NUMBER



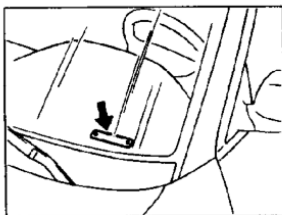
OIL LABEL



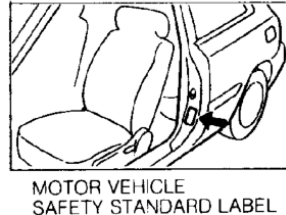
VEHICLE EMISSION CONTROL INFORMATION LABEL



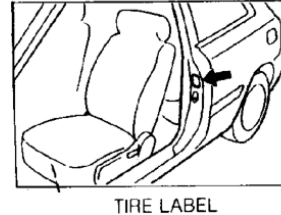
VACUUM HOSE ROUTING DIAGRAM LABEL (CALIFORNIA VEHICLES ONLY)



VEHICLE IDENTIFICATION NUMBER



MOTOR VEHICLE SAFETY STANDARD LABEL

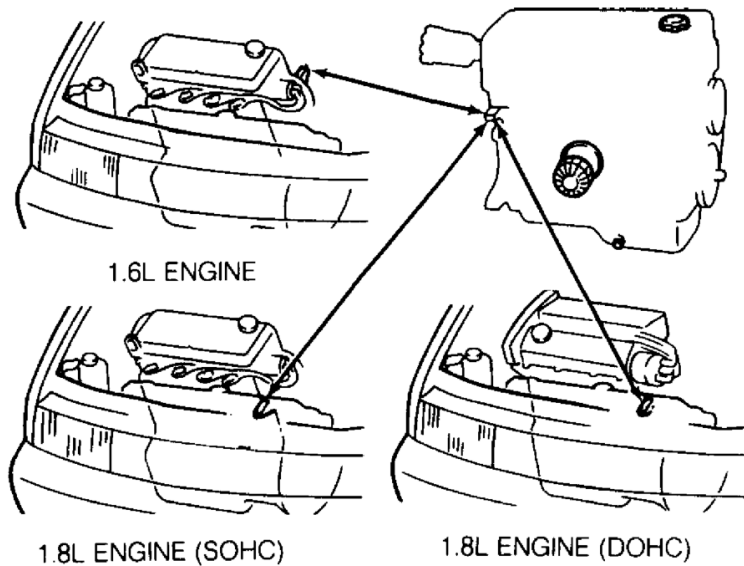


TIRE LABEL

93C45700

Information Label Locations (1990-94 Models)  
Courtesy of Mazda Motor of America, Inc.

**ENGINE NUMBER ALL YEARS**



Engine Number Locations (All Years)  
Courtesy of Mazda Motor of America, Inc.

**SERVICE LABOR TIMES**

NOTE: For 1990 and newer vehicles, labor times are provided, where available, within appropriate SERVICE INTERVAL table in SCHEDULED SERVICES article.

SERVICE LABOR TIMES TABLE (HOURS) (1986-89 VEHICLES)

Application	30,000 Mile Service	60,000 Mile Service
1.6L Non-Turbo		
Automatic Transaxle .....	3.0 .....	5.6
Manual Transaxle .....	3.0 .....	(1) 5.8
1.6L Turbo .....	3.0 .....	6.6
1.8L .....	3.0 .....	6.4
(1) - Add .6 hr. if equipped with 4WD.		

**LUBRICATION SPECIFICATIONS**

LUBRICATION SPECIFICATIONS TABLE

Application	Fluid Specifications
Brake Fluid .....	SAE J1703 or DOT 3
Engine Oil	
Minimum Temperature	
Greater Than 0°F (-18°C) .....	SAE 10W-30 API SH
Maximum Temperature	
Less Than 0°F (-18°C) .....	SAE 5W-30 API SH
Power Steering Fluid .....	Dexron-IIe ATF
Rear Axle & Transfer Case (4WD)	
Minimum Temperature	
Greater Than 0°F (-18°C) .....	SAE 90 API GL-5
Maximum Temperature	
Less Than 0°F (-18°C) .....	SAE 80W API GL-5
Automatic Transaxle .....	Dexron-IIe or M-III ATF
Manual Transaxle (1)	
2WD, SOHC Engine .....	Dexron-IIe ATF or SAE 75W-90 API GL-4, GL-5
2WD, DOHC Engine .....	Dexron-IIe or M-III ATF
AWD .....	M-III ATF, Dexron-IIe or SAE 75W-90 API GL-4, GL-5

(1) - Use ATF fluid in manual transmissions in cold weather climates only.

**FLUID CAPACITIES**

FLUID CAPACITIES TABLE (1)

Application	Quantity
A/C System R-12 Refrigerant	
1986-87 .....	30 Ozs.
1988-89 .....	24-28 Ozs.
1990-94 .....	26.5 Ozs.
Cooling System	
Automatic Transaxle .....	6.3 Qts. (6.0L)
Manual Transaxle .....	5.3 Qts. (5.0L)
Engine Oil (2)	
1.6L .....	3.6 Qts. (3.4L)
1.8L .....	4.2 Qts. (4.0L)
Fuel Tank	
323	
1986-87 .....	11.9 Gals. (45.0L)
1988-89	
2WD .....	12.7 Gals. (48.0L)
4WD .....	13.2 Gals. (50.0L)
1990-94 .....	13.2 Gals. (50.0L)
Protege	
1990-91	
2WD .....	14.5 Gals. (55L)
4WD .....	15.9 Gals. (60L)
1992-94 .....	14.5 Gals. (55L)
Automatic Transmission	
1986-87 .....	6.0 Qts. (5.7L)
1988-89 .....	6.7 Qts. (6.3L)
With Turbo .....	3.6 Qts. (3.4L)
1990-91	
2WD .....	6.1 Qts. (5.8L)
4WD .....	7.0 Qts. (6.6L)
1992-94 .....	6.6 Qts. (6.3L)
Manual Transmission	
1986-89 2WD .....	3.4 Qts. (3.2L)
1988-89 4WD .....	3.8 Qts. (3.6L)
Wagon .....	6.0 Qts. (5.7L)
1990-93	
SOHC .....	2.8 Qts. (2.7L)
DOHC .....	3.6 Qts. (3.5L)
1994	
SOHC .....	2.8 Qts. (2.7L)
DOHC .....	3.3 Qts. (3.2L)
Rear Axle Oil (4WD) .....	0.7 Qts. (0.6L)
Transfer Case (4WD) .....	0.5 Qts. (0.5L)

1. Capacities are recommended or calculated levels. Always use dipstick (if available) to measure level.
2. Includes filter change.

## WHEEL & TIRE SPECIFICATIONS

### WHEEL & TIRE SPECIFICATIONS TABLE

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Wheel Size	Tire Size
13 x 5" (Steel / Aluminum).....	P175/70 R13 or P155/80 R13
14 x 5.5" (Steel / Aluminum).....	P185/65 R14 or P185/60 R14
14 x 4T" (Temporary Spare).....	T115/70D14

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## TIRE INFLATION

### TIRE INFLATION SPECIFICATIONS TABLE

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Application (1)	Specifications psi (kg/cm <sup>2</sup> )
Normal Loads.....	32 (2.2)
Temporary Spare.....	60 (4.2)

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(1) - Tire inflation label is located on driver's door.

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## WHEEL TIGHTENING

Tighten wheel lug nuts to 65-87 ft. lbs. (88-118 N.m).

## BATTERY SPECIFICATIONS

**CAUTION:** When battery is disconnected, vehicles equipped with computers may lose memory data. When battery power is restored, driveability problems may exist on some vehicles. These vehicles may require a relearn procedure. See appropriate COMPUTER RELEARN PROCEDURES article in the GENERAL INFORMATION section.

If battery is replaced, new battery should be of the same group number as shown on the original battery's label.

## CAUTIONS & WARNINGS

### REPLACING BLOWN FUSES

Before replacing a blown fuse, remove ignition key, turn off all lights and accessories to avoid damaging the electrical system. Be sure to use fuse with the correct indicated amperage rating. The use of an incorrect amperage rating fuse may result in a dangerous electrical system overload.

### BRAKE PAD WEAR INDICATOR

Indicator will cause a squealing or scraping noise, warning that brake pads need replacement.

### CATALYTIC CONVERTER

Continued operation of vehicle with a severe malfunction could cause converter to overheat, resulting in possible damage to converter and vehicle.

Any modification to the exhaust system on turbo models, which reduces exhaust backpressure, will lead to lean fuel mixtures and excessive spark advance. This could cause serious engine damage.

### ELECTROSTATIC DISCHARGE SENSITIVE (ESD) PARTS

WARNING: Many solid state electrical components can be damaged by static electricity (ESD). Some will display a warning label, but many will not. Discharge personal static electricity by touching a metal ground point on the vehicle prior to servicing any ESD sensitive component.

### ENGINE OIL

CAUTION: Never use non-detergent or straight mineral oil.

### FUEL SYSTEM SERVICE

WARNING: Relieve fuel system pressure prior to servicing any fuel system component (fuel injection models).

### HALOGEN BULBS

Halogen bulbs contain pressurized gas which may explode if overheated. DO NOT touch glass portion of bulb with bare hands. Eye protection should be worn when handling or working around halogen bulbs.

### RADIATOR CAP

CAUTION: Always disconnect the fan motor when working near the radiator fan. The fan is temperature controlled and could start at any time even when the ignition key is in the OFF position. DO NOT loosen or remove radiator cap when cooling system is hot.

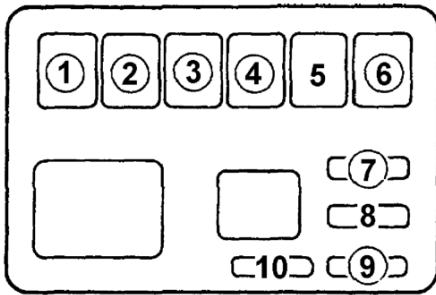
### RADIATOR FAN

WARNING: Keep hands away from radiator fan. Fan is controlled by a thermostatic switch which may come on or run for up to 15 minutes even after engine is turned off.

### TURBOCHARGED MODELS

CAUTION: Do not race engine immediately after starting. When stopping engine, allow engine to idle for approximately 60 seconds before shutting it off. Failure to do so may cause turbocharger damage due to lack of oil flowing to the turbocharger bearings.

**FUSE PANEL & FUSE BLOCK IDENTIFICATION (1990-94)**



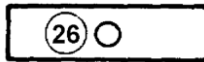
**Fuse & Circuit Breaker Identification**

- 1 - 30 Amp - Fuel Injection System
- 2 - 30 Amp - Headlights
- 3 - 80 Amp - Main Protection Of All Circuits
- 4 - 60 Amp - Hazard, Room, Door Lock, Stoplight, Taillights
- 5 - Empty
- 6 - 30 Amp - Cooling Fan
- 7 - 20 Amp - Additional Cooling Fan
- 8 - Empty
- 9 - 10 Amp - Engine Control Unit
- 10 - Empty

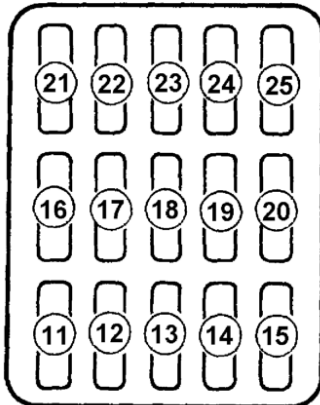
Underhood Fuse Panel Identification (1990-94)  
Courtesy of Mazda Motor of America, Inc.

**FUSE PANEL & FUSE BLOCK IDENTIFICATION (1990-94)**

**Circuit breaker**



**Fire wall**



**Fuse & Circuit Breaker Identification**

- 11 - 10 Amp (Red)  
Rear Wiper/Washer
- 12 - 15 Amp (Blue)  
Hazard Warning
- 13 - 10 Amp (Red)  
Clock, Interior Lights, Cargo Light, Trunk Light
- 14 - 15 Amp (Blue)  
Engine Control System
- 15 - 15 Amp (Blue)  
Radio
- 16 - 30 Amp (Green)  
Power Door Locks
- 17 - 30 Amp (Green)  
Automatic Seat Belt
- 18 - 30 Amp (Green)  
Power Windows
- 19 - 15 Amp (Blue)  
Cruise Control, Turn Signals, Instrument Panel (Gauges & Warning Lights), Back-Up Lights
- 20 - 20 Amp (Yellow)  
Windshield Wiper/Washer
- 21 - 20 Amp (Yellow)  
15 Amp (Blue) (4WD 1990-91)  
Stoplights, Horn
- 22 - 15 Amp (Blue)  
Taillights, Side Marker Lights, Parking Lights, Illumination  
Lights, License Plate Lights
- 23 - 15 Amp (Blue) (If Equipped)  
Sun Roof
- 24 - 20 Amp (Yellow) (4WD 1990-91)  
Center Differential Lock System  
Blank (1992-94)
- 25 - 20 Amp (Yellow)  
Rear Window Defogger
- 26 - 30 Amp (Circuit Breaker)  
Heater Blower Motor

Interior Fuse Panel Identification (1990-94)  
Courtesy of Mazda Motor of America, Inc.