

SCHEDULED MAINTENANCE INTERVALS

Mazda

TO BE SERVICED	TYPE OF SERVICE	VEHICLE MILEAGE INTERVAL (x1000)												
		7.5	15	22.5	30	37.5	45	52.5	60	67.5	75	82.5	90	97.5
Engine oil & filter	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Air cleaner element	R				✓				✓				✓	
Engine coolant A	R				✓				✓				✓	
Spark plugs (Millenia KJ engine)	R				✓				✓				✓	
Automatic transaxle fluid	S/I				✓				✓				✓	
Bolts & nuts on chassis & body	S/I				✓				✓				✓	
Brake lines, hoses & connections	S/I				✓				✓				✓	
Cooling system	S/I				✓				✓				✓	
Disc brakes	S/I				✓				✓				✓	
Drive belts (Millenia B)	S/I				✓				✓				✓	
Drive shaft dust boots	S/I				✓				✓				✓	
Exhaust system heat shield	S/I				✓				✓				✓	
Front & rear suspension ball joints	S/I				✓				✓				✓	
Fuel lines & hoses	S/I				✓				✓				✓	
Idle speed	S/I				✓				✓				✓	
Steering operation & linkages	S/I				✓				✓				✓	
Engine timing belt C	R								✓					
Fuel filter	R								✓					
Manual transmission	R								✓					
Hose & tube for emission	S/I								✓					

R: Replace

S/I: Service or Inspect

A (Millenia): replace initially at 45,000 miles & every 30,000 miles thereafter.

B (Millenia KJ engine): replace every 105,000 miles

C (Calif.): inspect every 30,000 miles & replace at 105,000 miles (if not replaced previously).

FREQUENT OPERATION MAINTENANCE (SEVERE SERVICE)

If a vehicle is operated under any of the following conditions it is considered severe service

- Extremely dusty areas.
- 50% or more of the vehicle operation is in 32°C (90°F) or higher temperatures, or constant operation in temperatures below 0°C (32°F).
- Prolonged idling (vehicle operation in stop and go traffic).
- Frequent short running periods (engine does not warm to normal operating temperatures).
- Police, taxi, delivery usage or trailer towing usage.

Oil & oil filter: change every 5000 miles.

Oil & oil filter (Puerto Rico): change every 3000 miles.

Air cleaner element: service or inspect every 15,000 miles

Automatic transaxle fluid: service or inspect every 15,000 miles.

Bolts & nuts on chassis & body: tighten every 15,000 miles.

Disc brakes: service or inspect every 15,000 miles.

BRAKE SPECIFICATIONS

All measurements in inches unless noted

Year	Model		Brake Disc			Brake Drum			Minimum Lining Thickness	Brake Caliper	
			Original Thickness	Minimum Thickness	Maximum Runout	Original Inside Diameter	Max. Wear Limit	Maximum Machine Diameter		Bracket Bolts (ft. lbs.)	Mounting Bolts (ft. lbs.)
1999	626	F	0.940	0.870	0.002	—	—	—	0.080	33-36	45-49
		R	0.390	0.310	0.002	9.00	NA	9.06	0.040	22-28	30-41
	Miata	F	0.790	0.710	0.004	—	—	—	0.040	58-65	78-88
		R	0.350	0.310	0.004	—	—	—	0.040	33-36	45-49
	Millenia	F	1.100	1.020	0.002	—	—	—	0.080	47-62	63-84
		R	0.370	0.290	0.002	—	—	—	0.080	12-17	16-23
	Protege	F	NA	A	0.002	—	—	—	B	33-36	58-75
		R	—	—	—	7.87	7.91	NA	0.040	—	—
2000	626	F	0.940	0.870	0.002	—	—	—	0.080	22-28	58-75.2
		R	0.390	0.310	0.002	9.00	NA	9.06	0.040	26-28	34-49
	Miata	F	0.790	0.710	0.004	—	—	—	0.040	33-39	37-50
		R	0.350	0.310	0.004	—	—	—	0.040	26-28	34-49
	Millenia	F	1.100	1.000	0.002	—	—	—	0.080	47-62	63-84
		R	0.370	0.300	0.002	—	—	—	0.080	12-17	16-23
	Protege	F	NA	A	0.002	—	—	—	B	33-36	58-75
		R	—	—	—	7.87	7.91	NA	0.040	—	—
2001	626	F	0.940	0.870	0.002	—	—	—	0.080	22-28	58-75.2
		R	0.390	0.310	0.002	9.00	NA	9.06	0.040	26-28	34-49
	Miata	F	0.790	0.710	0.004	—	—	—	0.040	33-39	37-50
		R	0.350	0.310	0.004	—	—	—	0.040	26-28	34-49
	Millenia	F	1.100	1.000	0.002	—	—	—	0.080	47-62	63-84
		R	0.370	0.300	0.002	—	—	—	0.080	12-17	16-23
	Protege	F	NA	A	0.002	—	—	—	B	33-36	58-75
		R	—	—	—	7.87	7.91	NA	0.040	—	—
2002-03	626	F	0.940	0.870	0.002	—	—	—	0.080	22-28	58-75.2
		R	0.390	0.310	0.002	9.00	NA	9.06	0.040	26-28	34-49
	Miata	F	0.790	0.710	0.004	—	—	—	0.040	33-39	37-50
		R	0.350	0.310	0.004	—	—	—	0.040	26-28	34-49
	Millenia	F	1.100	1.000	0.002	—	—	—	0.080	47-62	63-84
		R	0.370	0.300	0.002	—	—	—	0.080	12-17	16-23
	Protege	F	NA	A	0.002	—	—	—	B	33-36	58-75
		R	—	—	—	7.87	7.91	NA	0.040	—	—

F: Front

R: Rear

A With 1.6L engine: 0.780 in.

With 1.8L engine: 0.870 in.

B With 1.6L engine: 0.060 in.

With 1.8L engine: 0.080 in.

CAPACITIES

SAFARI RANGES										
Year	Model	Engine	Engine ID/VIN	Engine Oil with Filter	Transmission		Drive Axle		Fuel Tank (gal.)	Cooling System (qts.)
		Displacement			(pts.)	Front (pts.)	Rear (pts.)			
		Liters (cc)								
1999	626 ES	2.0 (1991)	FS	4.0	6.0	17.6	A	—	16.9	7.9
	626 ES-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	626 LX	2.0 (1991)	FS	4.0	6.0	17.6	A	—	16.9	7.9
	626 LX-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	Miata	1.8 (1839)	BP	4.0	4.2	13.5	—	2.1	12.7	6.3
	Millenia	2.5 (2497)	KL	5.2	—	16.9	A	—	18.0	7.4
	Millenia S	2.3 (2255)	KJ	5.9	—	16.9	A	—	18.0	7.4
	Protege DX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9
	Protege ES	1.8 (1839)	FP	5.0	5.6	15.2	A	—	13.2	9.9
Protege LX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9	
2000	626 ES	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 ES-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	626 LX	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 LX-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	Miata	1.8 (1839)	BP	4.0	4.2	13.5	—	2.1	12.7	6.3
	Millenia	2.5 (2497)	KL	5.2	—	16.9	A	—	18.0	7.4
	Millenia S	2.3 (2255)	KJ	5.9	—	16.9	A	—	18.0	7.4
	Protege DX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9
	Protege ES	1.8 (1839)	FP	5.0	5.6	15.2	A	—	13.2	9.9
Protege LX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9	
2001	626 ES	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 ES-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	626 LX	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 LX-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	Miata	1.8 (1839)	BP	4.0	4.2	13.5	—	2.1	12.7	6.3
	Millenia	2.5 (2497)	KL	5.2	—	16.9	A	—	18.0	7.4
	Millenia S	2.3 (2255)	KJ	5.9	—	16.9	A	—	18.0	7.4
	Protege DX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9
	Protege ES	1.8 (1839)	FP	5.0	5.6	15.2	A	—	13.2	9.9
Protege LX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9	
2002-03	626 ES	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 ES-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	626 LX	2.0 (1991)	FS	3.7	6.0	17.6	A	—	16.9	7.9
	626 LX-V6	2.5 (2497)	KL	4.2	6.0	17.0	A	—	16.9	7.9
	Miata	1.8 (1839)	BP	4.0	4.2	13.5	—	2.1	12.7	6.3
	Millenia	2.5 (2497)	KL	5.2	—	16.9	A	—	18.0	7.4
	Millenia S	2.3 (2255)	KJ	5.9	—	16.9	A	—	18.0	7.4
	Protege DX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9
	Protege ES	1.8 (1839)	FP	5.0	5.6	15.2	A	—	13.2	9.9
Protege LX	1.6 (1597)	ZM	5.0	5.6	15.2	A	—	13.2	7.9	

NOTE: All capacities are approximate. Add fluid gradually and check to be sure a proper fluid level is obtained.

A Included in transaxle

CRANKSHAFT AND CONNECTING ROD SPECIFICATIONS

All measurements are given in inches.

Year	Engine Displacement Liters (cc)	Engine ID/VIN	Crankshaft				Connecting Rod		
			Main Brg. Journal Dia.	Main Brg. Oil Clearance	Shaft End-play	Thrust on No.	Journal Diameter	Oil Clearance	Side Clearance
1999	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	1.9661- 1.9667	0.0008- 0.0014	0.0032- 0.0111	4	1.7693- 1.7699	0.0008- 0.0017	0.0044- 0.0103
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	2.2022- 2.2029	A	0.0031- 0.0111	4	1.8874- 1.8880	0.0005- 0.0015	0.0043- 0.0103
	2.3 (2255)	KJ	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
	2.5 (2497)	KL	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
2000	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	1.9661- 1.9667	0.0008- 0.0014	0.0032- 0.0111	4	1.7693- 1.7699	0.0008- 0.0017	0.0044- 0.0103
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	2.2022- 2.2029	A	0.0031- 0.0111	4	1.8874- 1.8880	0.0005- 0.0015	0.0043- 0.0103
	2.3 (2255)	KJ	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
	2.5 (2497)	KL	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
2001	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	1.9661- 1.9667	0.0008- 0.0014	0.0032- 0.0111	4	1.7693- 1.7699	0.0008- 0.0017	0.0044- 0.0103
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	2.2022- 2.2029	A	0.0031- 0.0111	4	1.8874- 1.8880	0.0005- 0.0015	0.0043- 0.0103
	2.3 (2255)	KJ	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
	2.5 (2497)	KL	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
2002-03	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	1.9661- 1.9667	0.0008- 0.0014	0.0032- 0.0111	4	1.7693- 1.7699	0.0008- 0.0017	0.0044- 0.0103
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	2.2022- 2.2029	A	0.0031- 0.0111	4	1.8874- 1.8880	0.0005- 0.0015	0.0043- 0.0103
	2.3 (2255)	KJ	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157
	2.5 (2497)	KL	2.4385- 2.4391	0.0015- 0.0022	0.0032- 0.0111	4	2.0843- 2.0848	0.0010- 0.0016	0.0071- 0.0157

NA: Not Available

A No. 1, 2, 4 & 5: 0.0009-0.0020 in.

No. 3: 0.0012-0.0022 in.

ENGINE AND VEHICLE IDENTIFICATION

Engine							Model Year	
Code A	Liters (cc)	Cu. In.	Cyl.	Fuel Sys.	Engine Type	Eng. Mfg.	Code B	Year
BP	1.8 (1839)	112.2	4	MPFI	DOHC	Mazda	X	1999
FP	1.8 (1839)	112.2	4	MPFI	DOHC	Mazda	Y	2000
FS	2.0 (1991)	121.5	4	MPFI	DOHC	Mazda	1	2001
KJ	2.3 (2254)	137.2	6	MPFI	DOHC	Mazda	2	2002
KL	2.5 (2496)	152.3	6	MPFI	DOHC	Mazda	3	2003
Z5	1.5 (1489)	90.8	4	MPFI	DOHC	Mazda		
ZM	1.6 (1597)	97.4	4	MPFI	DOHC	Mazda		

MPFI: Multi-Point Fuel Injection

DOHC: Double Over Head Cam

A Located above the starter

B 10th digit of the Vehicle Identification Number (VIN)

ENGINE TUNE-UP SPECIFICATIONS

Year	Engine	Engine ID/VIN	Spark	Ignition Timing		Fuel Pump (psi)	Idle Speed		Valve	
	Displacement		Plug Gap	(deg.)			(rpm)		Clearance	
	Liters (cc)		(in.)	MT	AT		MT	AT	In.	Ex.
1999	1.6 (1597)	ZM	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.010-0.012	0.010-0.012
	1.8 (1839)	BP	0.041	6-18B	6-18B	39-45	700-800	700-800	HYD	HYD
	1.8 (1839)	FP	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.009-0.012	0.009-0.012
	2.0 (1991)	FS	0.041	11-13B	6-18B	37-46	650-750	650-750	HYD	HYD
	2.3 (2255)	KJ	0.030	6B	6B	39-48	600-700	600-700	0.011	0.011
	2.5 (2497)	KL	0.041	9-11B	9-11B	39-45	600-700	600-700	HYD	HYD
2000	1.6 (1597)	ZM	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.010-0.012	0.010-0.012
	1.8 (1839)	BP	0.040-0.043	6-18B	6-18B	53-61	750-850	750-850	0.008-0.009	0.012-0.013
	1.8 (1839)	FP	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.009-0.012	0.009-0.012
	2.0 (1991)	FS	0.040-0.043	11-13B	6-18B	30-38	650-750	650-750	0.009-0.012	0.009-0.012
	2.3 (2255)	KJ	0.030	6B	6B	39-48	600-700	600-700	0.011	0.011
	2.5 (2497)	KL	A	9-11B	9-11B	30-36	600-700	600-700	B	C
2001	1.6 (1597)	ZM	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.010-0.012	0.010-0.012
	1.8 (1839)	BP	0.040-0.043	6-18B	6-18B	53-61	750-850	750-850	0.008-0.009	0.012-0.013
	1.8 (1839)	FP	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.009-0.012	0.009-0.012
	2.0 (1991)	FS	0.040-0.043	11-13B	6-18B	30-38	650-750	650-750	0.009-0.012	0.009-0.012
	2.3 (2255)	KJ	0.030	6B	6B	39-48	600-700	600-700	0.011	0.011
	2.5 (2497)	KL	A	9-11B	9-11B	30-36	600-700	600-700	B	C
2002-03	1.6 (1597)	ZM	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.010-0.012	0.010-0.012
	1.8 (1839)	BP	0.040-0.043	6-18B	6-18B	53-61	750-850	750-850	0.008-0.009	0.012-0.013
	1.8 (1839)	FP	0.040-0.043	6-18B	6-18B	30-36	650-750	650-750	0.009-0.012	0.009-0.012
	2.0 (1991)	FS	0.040-0.043	11-13B	6-18B	30-38	650-750	650-750	0.009-0.012	0.009-0.012
	2.3 (2255)	KJ	0.030	6B	6B	39-48	600-700	600-700	0.011	0.011
	2.5 (2497)	KL	A	9-11B	9-11B	30-36	600-700	600-700	B	C

NOTE: The Vehicle Emission Control Information label often reflects specification changes made during production. The label figures must be used if they differ from those in this chart.

B: Before top dead center

HYD: Hydraulic

A 626 models: 0.028-0.031
Millenia models: 0.039-0.043

B 626 models: 0.010-0.012
Millenia models: HYD

C 626 models: 0.010-0.013
Millenia models: HYD

GENERAL ENGINE SPECIFICATIONS

Year	Model	Engine Displacement Liters (cc)	Engine ID/VIN	Fuel System Type	Net Horsepower @ rpm	Net Torque @ rpm (ft. lbs.)	Bore x Stroke (in.)	Compression Ratio	Oil Pressure @ rpm
1999	626 ES	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 ES-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	626 LX	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 LX-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	Miata	1.8 (1839)	BP	EFI	A	B	3.27x3.35	9.5:1	43-57@3000
	Millenia	2.5 (2497)	KL	EFI	170@5800	160@4800	3.33x2.92	9.2:1	49-71@3000
	Millenia S	2.3 (2255)	KJ	EFI	210@5300	210@3500	3.16x2.92	10.0:1	44-66@3000
	Protege DX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
	Protege ES	1.8 (1839)	FP	EFI	E	F	3.27x3.35	9.1:1	43-57@3000
	Protege LX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
2000	626 ES	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 ES-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	626 LX	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 LX-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	Miata	1.8 (1839)	BP	EFI	A	B	3.27x3.35	9.5:1	43-57@3000
	Millenia	2.5 (2497)	KL	EFI	170@5800	160@4800	3.33x2.92	9.2:1	49-71@3000
	Millenia S	2.3 (2255)	KJ	EFI	210@5300	210@3500	3.16x2.92	10.0:1	44-66@3000
	Protege DX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
	Protege ES	1.8 (1839)	FP	EFI	E	F	3.27x3.35	9.1:1	43-57@3000
	Protege LX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
2001	626 ES	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 ES-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	626 LX	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 LX-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	Miata	1.8 (1839)	BP	EFI	A	B	3.27x3.35	9.5:1	43-57@3000
	Millenia	2.5 (2497)	KL	EFI	170@5800	160@4800	3.33x2.92	9.2:1	49-71@3000
	Millenia S	2.3 (2255)	KJ	EFI	210@5300	210@3500	3.16x2.92	10.0:1	44-66@3000
	Protege DX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
	Protege ES	1.8 (1839)	FP	EFI	E	F	3.27x3.35	9.1:1	43-57@3000
	Protege LX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
2002-03	626 ES	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 ES-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	626 LX	2.0 (1991)	FS	EFI	125@5500	127@3300	3.27x3.62	9.0:1	57-71@3000
	626 LX-V6	2.5 (2497)	KL	EFI	170@6000	163@5000	3.33x2.92	9.5:1	49-71@3000
	Miata	1.8 (1839)	BP	EFI	A	B	3.27x3.35	9.5:1	43-57@3000
	Millenia	2.5 (2497)	KL	EFI	170@5800	160@4800	3.33x2.92	9.2:1	49-71@3000
	Millenia S	2.3 (2255)	KJ	EFI	210@5300	210@3500	3.16x2.92	10.0:1	44-66@3000
	Protege DX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000
	Protege ES	1.8 (1839)	FP	EFI	E	F	3.27x3.35	9.1:1	43-57@3000
	Protege LX	1.6 (1597)	ZM	EFI	C	D	3.07x3.29	9.0:1	43-57@3000

EFI: Electronic Fuel Injection

A LEV states: 138@6500
Except LEV states: 140@6500

B LEV states: 117@5000
Except LEV states: 119@5500

C LEV states: 103@5500
Except LEV states: 105@5500

D LEV states: 106@4000
Except LEV states: 107@4000

E LEV states: 120@6000
Except LEV states: 122@6000

F LEV states: 119@4000
Except LEV states: 120@4000

PISTON AND RING SPECIFICATIONS

All measurements are given in inches.

Year	Engine Displacement Liters (cc)	Engine ID/VIN	Piston Clearance	Ring Gap			Ring Side Clearance		
				Top Compression	Bottom Compression	Oil Control	Top Compression	Bottom Compression	Oil Control
1999	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	0.0010-0.0014	0.006-0.011	0.006-0.011	0.008-0.027	0.0012-0.0026	0.0012-0.0027	0.0030-0.0060
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	0.0015-0.0020	0.006-0.012	0.006-0.012	0.008-0.028	0.0014-0.0026	0.0014-0.0026	SNUG
	2.3 (2255)	KJ	0.0004-0.0014	0.006-0.010	0.010-0.014	0.008-0.030	0.0014-0.0025	0.0012-0.0025	0.0028-0.0062
	2.5 (2497)	KL	0.0012-0.0022	0.006-0.012	0.010-0.016	0.008-0.028	0.0008-0.0025	0.0012-0.0025	0.0008-0.0020
2000	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	0.0010-0.0014	0.006-0.011	0.006-0.011	0.008-0.027	0.0012-0.0026	0.0012-0.0027	0.0030-0.0060
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	0.0015-0.0020	0.006-0.012	0.006-0.012	0.008-0.028	0.0014-0.0026	0.0014-0.0026	SNUG
	2.3 (2255)	KJ	0.0004-0.0014	0.006-0.010	0.010-0.014	0.008-0.030	0.0014-0.0025	0.0012-0.0025	0.0028-0.0062
	2.5 (2497)	KL	0.0012-0.0022	0.006-0.012	0.010-0.016	0.008-0.028	0.0008-0.0025	0.0012-0.0025	0.0008-0.0020
2001	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	0.0010-0.0014	0.006-0.011	0.006-0.011	0.008-0.027	0.0012-0.0026	0.0012-0.0027	0.0030-0.0060
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	0.0015-0.0020	0.006-0.012	0.006-0.012	0.008-0.028	0.0014-0.0026	0.0014-0.0026	SNUG
	2.3 (2255)	KJ	0.0004-0.0014	0.006-0.010	0.010-0.014	0.008-0.030	0.0014-0.0025	0.0012-0.0025	0.0028-0.0062
	2.5 (2497)	KL	0.0012-0.0022	0.006-0.012	0.010-0.016	0.008-0.028	0.0008-0.0025	0.0012-0.0025	0.0008-0.0020
2002-03	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	0.0010-0.0014	0.006-0.011	0.006-0.011	0.008-0.027	0.0012-0.0026	0.0012-0.0027	0.0030-0.0060
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	0.0015-0.0020	0.006-0.012	0.006-0.012	0.008-0.028	0.0014-0.0026	0.0014-0.0026	SNUG
	2.3 (2255)	KJ	0.0004-0.0014	0.006-0.010	0.010-0.014	0.008-0.030	0.0014-0.0025	0.0012-0.0025	0.0028-0.0062
	2.5 (2497)	KL	0.0012-0.0022	0.006-0.012	0.010-0.016	0.008-0.028	0.0008-0.0025	0.0012-0.0025	0.0008-0.0020

NA: Not Available

TIRE, WHEEL AND BALL JOINT SPECIFICATIONS

Year	Model	OEM Tires		Tire Pressures (psi)		Wheel Size	Ball Joint Inspection
		Standard	Optional	Front	Rear		
1999	Millenia	P205/65HR15	P215/55VR16	32	29	Std: 6-JJ Opt: 6.5-JJ	2-30 in. A
	Miata	P185/60HR14	P195/50VR15	26	26	6-JJ	3-16 in. A B
	Protégé 1.6L	P185/65R14	None	32	29	6-JJ	8-43 in. A
	Protégé 1.8L	P185/65R14	P195/50VR15	32	32	Std: 5.5-JJ Opt: 6-JJ	8-43 in. A
	626 2.0L	P185/70R14	None	32	36	5.5-JJ	8-43 in. A
	626 2.5L	P205/60HR15	None	32	36	6-JJ	8-43 in. A
2000	Millenia	P205/65HR15	P215/55VR16	32	29	Std: 6-JJ Opt: 6.5-JJ	2-30 in. A
	Miata	P185/60HR14	P195/50VR15	26	26	6-JJ	3-16 in. A B
	Protégé 1.6L	P185/65R14	None	32	29	6-JJ	8-43 in. A
	Protégé 1.8L	P185/65R14	P195/50VR15	32	32	Std: 5.5-JJ Opt: 6-JJ	8-43 in. A
	626 2.0L	P185/70R14	None	32	36	5.5-JJ	8-43 in. A
	626 2.5L	P205/60HR15	None	32	36	6-JJ	8-43 in. A
2001	Millenia	P205/65HR15	P215/55VR16	32	29	Std: 6-JJ Opt: 6.5-JJ	2-30 in. A
	Miata	P185/60HR14	P195/50VR15	26	26	6-JJ	3-16 in. A B
	Protégé 1.6L	P185/65R14	None	32	29	6-JJ	8-43 in. A
	Protégé 1.8L	P185/65R14	P195/50VR15	32	32	Std: 5.5-JJ Opt: 6-JJ	8-43 in. A
	626 2.0L	P185/70R14	None	32	36	5.5-JJ	8-43 in. A
	626 2.5L	P205/60HR15	None	32	36	6-JJ	8-43 in. A
2002-03	Millenia	P205/65HR15	P215/55VR16	32	29	Std: 6-JJ Opt: 6.5-JJ	2-30 in. A
	Miata	P185/60HR14	P195/50VR15	26	26	6-JJ	3-16 in. A B
	Protégé 1.6L	P185/65R14	None	32	29	6-JJ	8-43 in. A
	Protégé 1.8L	P185/65R14	P195/50VR15	32	32	Std: 5.5-JJ Opt: 6-JJ	8-43 in. A
	626 2.0L	P185/70R14	None	32	36	5.5-JJ	8-43 in. A
	626 2.5L	P205/60HR15	None	32	36	6-JJ	8-43 in. A

OEM: Original Equipment Manufacturer

PSI: Pounds Per Square Inch

STD: Standard

OPT: Optional

A Torque required in inch lbs. to rotate ball joint when removed from the knuckle

B Applies to upper and lower ball joints

TORQUE SPECIFICATIONS

All readings in ft. lbs.

Year	Engine Displacement Liters (cc)	Engine ID/VIN	Cylinder Head Bolts	Main Bearing Bolts	Rod Bearing Bolts	Crankshaft Damper Bolts	Flywheel Bolts	Manifold		Spark Plugs	Lug Nut
								Intake	Exhaust		
1999	1.6 (1597)	ZM	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	1.8 (1839)	BP	56-60	40-43	35-36	116-122	71-76	14-18	29-34	11-16	65-87
	1.8 (1839)	FP	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	2.0 (1991)	FS	B	C	D	116-122	71-76	14-18	15-20	11-16	65-87
	2.3 (2255)	KJ	E	F	D	116-122	45-49	14-18	14-18	11-16	65-87
	2.5 (2497)	KL	E	G	D	116-122	45-49	14-18	14-18	11-16	65-87
2000	1.6 (1597)	ZM	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	1.8 (1839)	BP	56-60	40-43	35-36	116-122	71-76	14-18	29-34	11-16	65-87
	1.8 (1839)	FP	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	2.0 (1991)	FS	B	C	D	116-122	71-76	14-18	15-20	11-16	65-87
	2.3 (2255)	KJ	E	F	D	116-122	45-49	14-18	14-18	11-16	65-87
	2.5 (2497)	KL	E	G	D	116-122	45-49	14-18	14-18	11-16	65-87
2001	1.6 (1597)	ZM	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	1.8 (1839)	BP	56-60	40-43	35-36	116-122	71-76	14-18	29-34	11-16	65-87
	1.8 (1839)	FP	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	2.0 (1991)	FS	B	C	D	116-122	71-76	14-18	15-20	11-16	65-87
	2.3 (2255)	KJ	E	F	D	116-122	45-49	14-18	14-18	11-16	65-87
	2.5 (2497)	KL	E	G	D	116-122	45-49	14-18	14-18	11-16	65-87
2002-03	1.6 (1597)	ZM	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	1.8 (1839)	BP	56-60	40-43	35-36	116-122	71-76	14-18	29-34	11-16	65-87
	1.8 (1839)	FP	A	NA	NA	116-122	71-76	14-18	15-20	11-16	65-87
	2.0 (1991)	FS	B	C	D	116-122	71-76	14-18	15-20	11-16	65-87
	2.3 (2255)	KJ	E	F	D	116-122	45-49	14-18	14-18	11-16	65-87
	2.5 (2497)	KL	E	G	D	116-122	45-49	14-18	14-18	11-16	65-87

NA: Not Available

A Step 1: 13-16 ft. lbs.

Step 2: Tighten 85-95 degees

Step 3: Repeat step 2

B Step 1: 16 ft. lbs.

Step 2: Tighten each bolt 90 degrees

Step 3: Repeat Step 2

C Step 1: 16 ft. lbs.

Step 2: Tighten each bolt 90 degrees

D Nuts: 15-20 ft. lbs

Bolts: 12-16 ft. lbs.

E Step 1: 17-19 ft. lbs.

Step 2: Tighten each bolt 90 degrees

Step 3: Repeat Step 2

F Step 1: Inner bolts: 17-19 ft. lbs.

Step 2: Outer bolts: 13.5-15.5 ft. lbs.

Step 3: Inner bolt Nos. 1-3: Tighten each bolt 70 degrees

Step 4: Inner bolt No. 4: Tighten each bolt 80 degrees

Step 5: Outer bolts: Tighten each bolt 60 degrees

Step 6: Repeat Step 3-5

G Step 1: Inner bolts: 17-18 ft. lbs.; Outer bolts: 13-15 ft. lbs.

Step 2: Inner bolt Nos. 1-3: Tighten each bolt 70 degrees

Step 3: Inner bolt No. 4: Tighten each bolt 80 degrees

Step 4: Outer bolts: Tighten each bolt 60 degrees

Step 5: Repeat Step 2

VALVE SPECIFICATIONS

Year	Engine Displacement Liters (cc)	Engine ID/VIN	Seat Angle (deg.)	Face Angle (deg.)	Maximum out of Square (in.)	Spring Free Length (in.)	Stem-to-Guide Clearance (in.)		Stem Diameter (in.)	
							Intake	Exhaust	Intake	Exhaust
1999	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	45	45	0.062	A	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	45	45	0.061	1.732	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.3 (2255)	KJ	NA	45	0.062	1.413	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.5 (2497)	KL	45	45	0.064	1.847	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
2000	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	45	45	0.062	A	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	45	45	0.061	1.732	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.3 (2255)	KJ	NA	45	0.062	1.413	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.5 (2497)	KL	45	45	0.064	1.847	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
2001	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	45	45	0.062	A	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	45	45	0.061	1.732	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.3 (2255)	KJ	NA	45	0.062	1.413	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.5 (2497)	KL	45	45	0.064	1.847	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
2002-03	1.6 (1597)	ZM	NA	NA	NA	NA	NA	NA	NA	NA
	1.8 (1839)	BP	45	45	0.062	A	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	1.8 (1839)	FP	NA	NA	NA	NA	NA	NA	NA	NA
	2.0 (1991)	FS	45	45	0.061	1.732	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.3 (2255)	KJ	NA	45	0.062	1.413	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354
	2.5 (2497)	KL	45	45	0.064	1.847	0.0010-0.0023	0.0012-0.0025	0.2351-0.2356	0.2349-0.2354

NA: Not Available

A Intake: 1.80 in.

Exhaust: 1.903 in.

WHEEL ALIGNMENT

Year	Model		Caster		Camber		Toe-in (in.)	Steering Axis Inclination (Deg.)
			Range (+/-Deg.)	Preferred Setting (Deg.)	Range (+/-Deg.)	Preferred Setting (Deg.)		
1999	626 A	F	1.00	+2.13	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 B	F	1.00	+2.15	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 C	F	1.00	+2.05	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	Miata	F	1.00	+5.75	1.00	+0.05	0.12 +/- 0.16	11.63
		R	—	—	1.00	-0.75	0.12 +/- 0.16	—
	Millenia	F	1.00	+2.23	0.75	-0.19	0.12 +/- 0.16	9.09
		R	—	—	1.00	-0.31	0.12 +/- 0.16	—
Protégé	F	1.00	+1.88	1.00	-0.75	0.08 +/- 0.16	—	
	R	—	—	1.00	-0.52	0.08 +/- 0.16	—	
2000	626 A	F	1.00	+2.13	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 B	F	1.00	+2.15	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 C	F	1.00	+2.05	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	Miata	F	1.00	+5.75	1.00	+0.05	0.12 +/- 0.16	11.63
		R	—	—	1.00	-0.75	0.12 +/- 0.16	—
	Millenia	F	1.00	+2.23	0.75	-0.19	0.12 +/- 0.16	9.09
		R	—	—	1.00	-0.31	0.12 +/- 0.16	—
Protégé	F	1.00	+1.88	1.00	-0.75	0.08 +/- 0.16	—	
	R	—	—	1.00	-0.52	0.08 +/- 0.16	—	
2001	626 A	F	1.00	+2.13	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 B	F	1.00	+2.15	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 C	F	1.00	+2.05	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	Miata	F	1.00	+5.75	1.00	+0.05	0.12 +/- 0.16	11.63
		R	—	—	1.00	-0.75	0.12 +/- 0.16	—
	Millenia	F	1.00	+2.23	0.75	-0.19	0.12 +/- 0.16	9.09
		R	—	—	1.00	-0.31	0.12 +/- 0.16	—
Protégé	F	1.00	+1.88	1.00	-0.75	0.08 +/- 0.16	—	
	R	—	—	1.00	-0.52	0.08 +/- 0.16	—	
2002-03	626 A	F	1.00	+2.13	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 B	F	1.00	+2.15	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	626 C	F	1.00	+2.05	1.00	-0.70	0.12 +/- 0.16	15.06
		R	—	—	1.00	-0.10	0.12 +/- 0.16	—
	Miata	F	1.00	+5.75	1.00	+0.05	0.12 +/- 0.16	11.63
		R	—	—	1.00	-0.75	0.12 +/- 0.16	—
	Millenia	F	1.00	+2.23	0.75	-0.19	0.12 +/- 0.16	9.09
		R	—	—	1.00	-0.31	0.12 +/- 0.16	—
Protégé	F	1.00	+1.88	1.00	-0.75	0.08 +/- 0.16	—	
	R	—	—	1.00	-0.52	0.08 +/- 0.16	—	

A With 14 in. wheels

B With 15 in. wheels

B With 16 in. wheels