TRAINING SERVICES MME

TRAINING MANUAL

Mazda6 Facelift

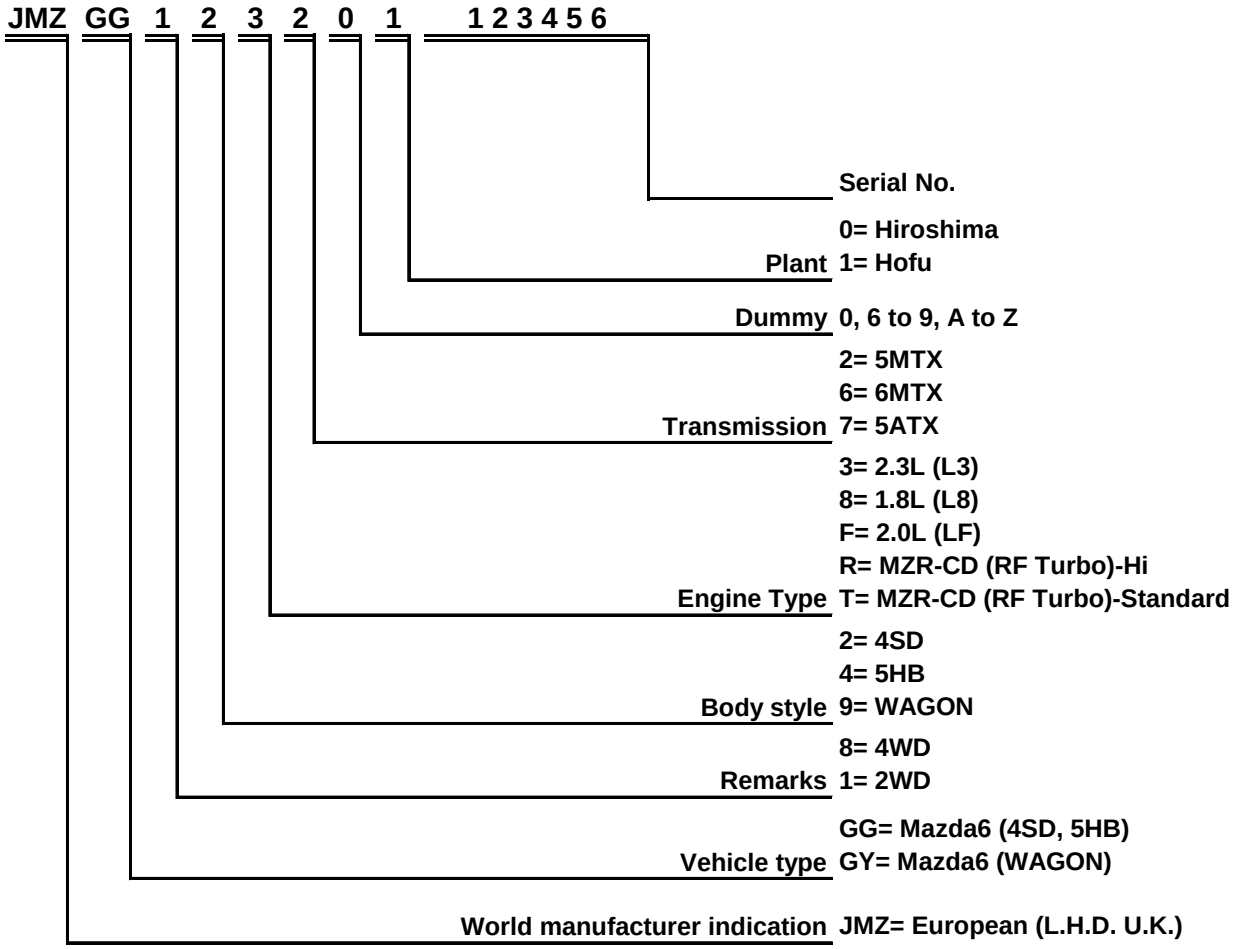
ZOOM-ZOOM

00

General Information

00 General Information

Vehicle Identification Number (VIN) Code



M6FL_00T001

Applicable VIN

JMZ GG1236*# 600001—
JMZ GG12360# 600001—
JMZ GG1282*# 600001—
JMZ GG12820# 600001—
JMZ GG12F6*# 600001—
JMZ GG12F60# 600001—
JMZ GG12R6*# 600001—
JMZ GG12R60# 600001—
JMZ GG12T6*# 600001—
JMZ GG12T60# 600001—
JMZ GG1436*# 600001—
JMZ GG14360# 600001—
JMZ GG1482*# 600001—
JMZ GG14820# 600001—
JMZ GG14F6*# 600001—
JMZ GG14F60# 600001—
JMZ GG14R6*# 600001—
JMZ GG14R60# 600001—
JMZ GG14T6*# 600001—
JMZ GG14T60# 600001—
JMZ GY1936*# 400001—
JMZ GY1982*# 400001—
JMZ GY19820# 400001—
JMZ GY19F6*# 400001—
JMZ GY19F60# 400001—
JMZ GY19R6*# 400001—
JMZ GY19R60# 400001—
JMZ GY19T6*# 400001—
JMZ GY19T60# 400001—
JMZ GY8937*# 400001—
JMZ GY89370# 400001—

Engine / Transaxle Combinations

- All engines have been revised. New transaxles have been added to the range. The following engine/transaxle combinations are available:

	G35M-R 5-speed manual transaxle	**G66M-R** 6-speed manual transaxle	**A26M-R** 6-speed manual transaxle	**FS5A-EL** 5-speed automatic transaxle (front wheel drive)	**JA5AX-EL** 5-speed automatic transaxle (**A**ll **W**heel **D**rive (**AWD**))
L8 1.8L 88 KW (120 HP) at 5,500 rpm 165 Nm at 4,300 rpm	X				
LF 2.0L 108 KW (147 HP) at 6,500 rpm 184 Nm at 4,000 rpm		X		X	
L3 2.3L 122 KW (166 HP) at 6,500 rpm 207 Nm at 4,000 rpm		X		X	X
RF Turbo STD 2.0L 89 KW (121 HP) at 3,500 rpm 320 Nm at 2,000 rpm			X		
RF Turbo HI 2.0L 105 KW (143 HP) at 3,500 rpm 360 Nm at 2,000 rpm			X		

M6FL_00T002

Scheduled Maintenance

Europe

Maintenance items	Maintenance interval (number of momths or km (miles) which ever comes first)									
	Months	12	24	36	48	60	72	84	96	108
	X1000 km	20	40	60	80	100	120	140	160	180
	X1000 miles	12,5	25	37,5	50	62,5	75	87,5	100	112,5
PETROL ENGINE										
Engine valve clearance		Audible inspect every 120,000km (75,000 miles), if noisy adjust								
Spark plugs		Replace every 100,000km (62,500miles)								
Air cleaner element				R			R			R
Evaporation system(if installed)				I			I			I
DIESEL ENGINE										
Engine valve clearance		I					I			
Engine timing belt *2		Replace every 120,000 km (75,000 miles)								
Fuel filter				R			R			R
Fuel injection system		I		I			I			I
Fuel system (Drain water)		D	D	D	D	D	D	D	D	D
Air cleaner element*1		C	C	R	C	C	R	C	C	R
PETROL AND DIESEL ENGINE										
Engine oil*3		R	R	R	R	R	R	R	R	R
Engine oil filter *3		R	R	R	R	R	R	R	R	R
Drive belt *4				I			I			I
Cooling system (including coolant level adjustment)			I		I		I		I	
Engine coolant	FL 22 type *5	Replace every 200,000 km (125,000 miles) 0r 11 years								
	Others	Replace at first 100,000 km (62,500 miles) or 4 years; after that, every 2years								
Fuel lines and hoses			I		I		I		I	
Battery electrolyte level and specific gravity		I	I	I	I	I	I	I	I	I
Brakes lines hoses and connections		I	I	I	I	I	I	I	I	I
Brake fluid *6			R		R		R		R	
Parking brake		I	I	I	I	I	I	I	I	I
Disc brakes		I	I	I	I	I	I	I	I	I
Steering operation and linkages		I	I	I	I	I	I	I	I	I
Manual transaxle oil						R				
Automatic transaxle fluid level				I			I			I
Rear differential oil (for 4 WD)		*7 *8								
Transfer oil (for 4 WD)		*8								
Front and rear suspension and ball joints			I		I		I		I	
Drive shaft dus boots			I		I		I		I	
Exhaust system and heat shields		Inspect every 80,000 km (50,000 miles) or 5 years								
Body condtion (for rust, corrosion and perforation)		Inspect annualy								
Cabin air filter (if installed)			R		R		R		R	
Tires (including spare tire) (with inflation pressure adjustment)		I	I	I	I	I	I	I	I	I

M6FL_00T003

I: Inspect: Inspect and clean, repair, adjust, or replace if necessary.
R: Replace
C: Clean
D: Drain

Remarks:

***1** If the vehicle is operated in very dusty or sandy areas, clean and if necessary, replace the air filter more often than the recommended intervals.

***2** Replacement of the timing belt is required at every 120,000 km (75,000 miles). Failure to replace the timing belt may result in damage to the engine.

***3** If the vehicle is operated under any of the following conditions, change the engine oil and oil filter every 10,000 km (6,250 miles) or shorter.
a) Driving in dusty conditions
b) Extended periods of idling or low speed operation
c) Driving for long period in cold temperatures or driving regularly at short distance only

***4** Also inspect and adjust the power steering and air conditioner drive belts, if installed.

***5** Use FL22 type coolant in vehicles with the inscription “FL22” on the radiator cap itself or the surrounding area. Use FL22 when replacing the coolant.

***6** If the brakes are used extensively (for example, continuous hard driving or mountain driving) or if the vehicle is operated in extremely humid climates, change the brake fluid annually.

***7** If the vehicle is operated under any of the following conditions, change the rear differential oil every 45,000 km (28,100 miles).
a) Towing a trailer or using a car-top carrier
b) Driving in dusty, sandy or wet condition
c) Extended periods of idling or low speed operation
d) Repeated short trips of less than 16 km (10 miles)

***8** If this component has been submerged in water, the oil should be changed.

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Engines

01 Engine

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Petrol Engines

Diesel Engines

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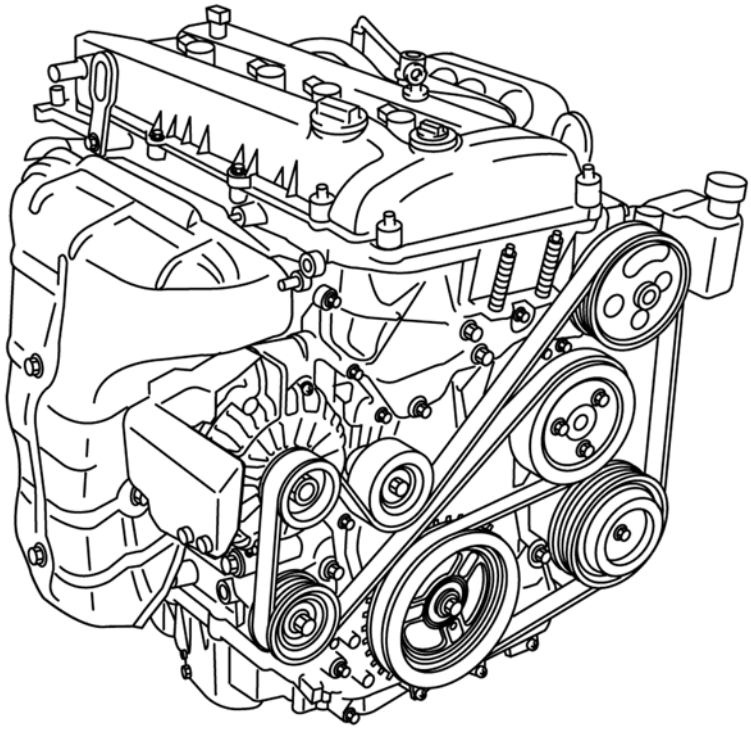
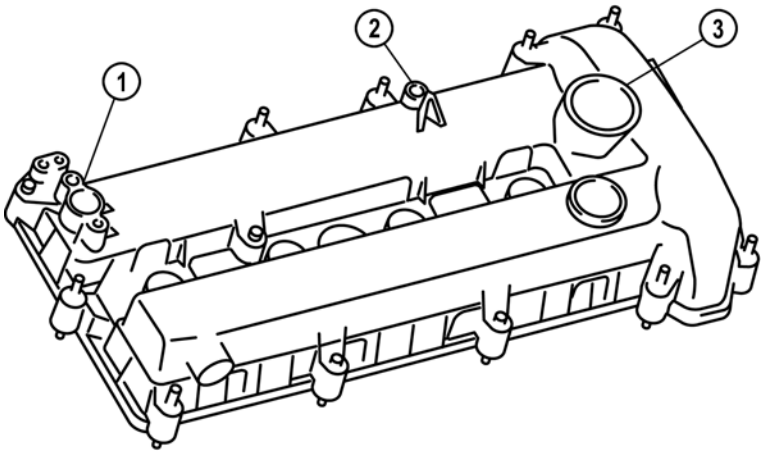
Mechanics



M6FL_01057

Cylinder Head Cover

- The cylinder head cover is made of plastic. On LF and L3 engines a hole is provided for installation of the **OCV** (**O**il **C**ontrol **V**alve).
- A dipstick insertion hole has been equipped to the cylinder head cover.

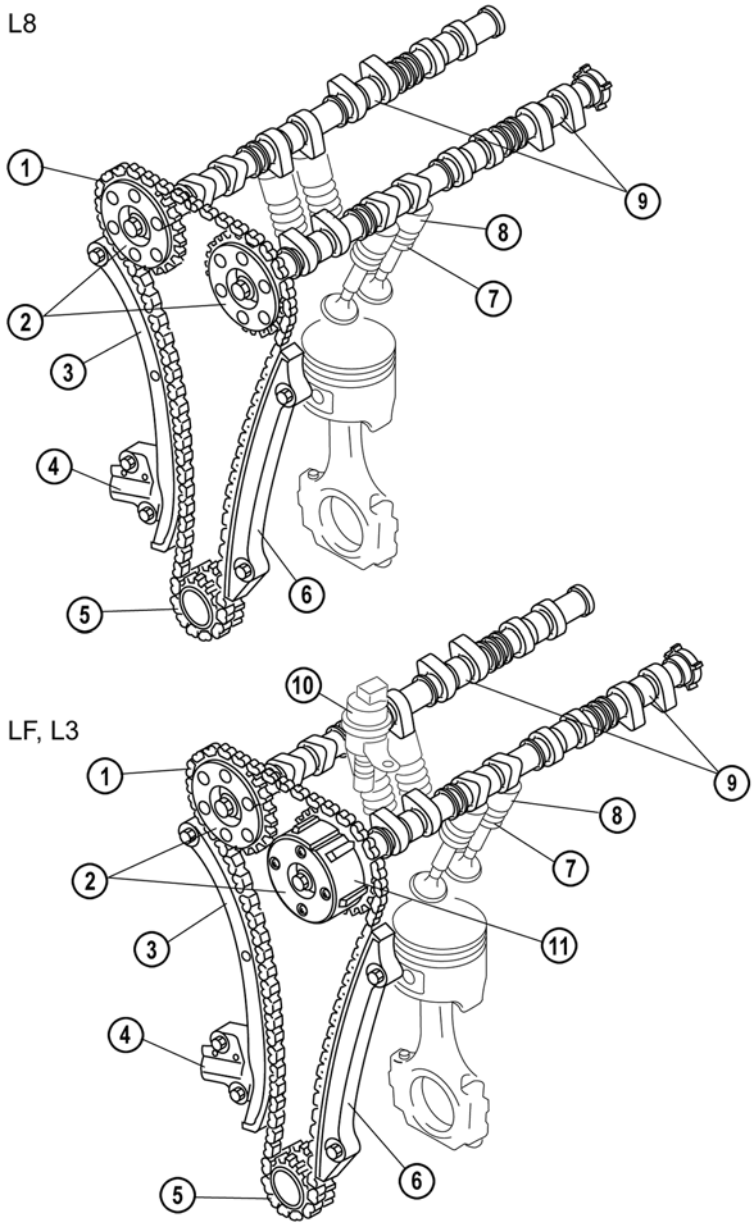


M6FL_01001

1 **CMP** (**C**a**m**shaft **P**osition) sensor attachment part
2 Dipstick insertion hole
3 OCV attachment hole (LF, L3)

Valve Mechanism

- For the LF engine the variable valve timing system has been carried over from the L3 engine.
- All engines use a sensor ring with 6 reference cams for the CMP Sensor on the intake camshaft.

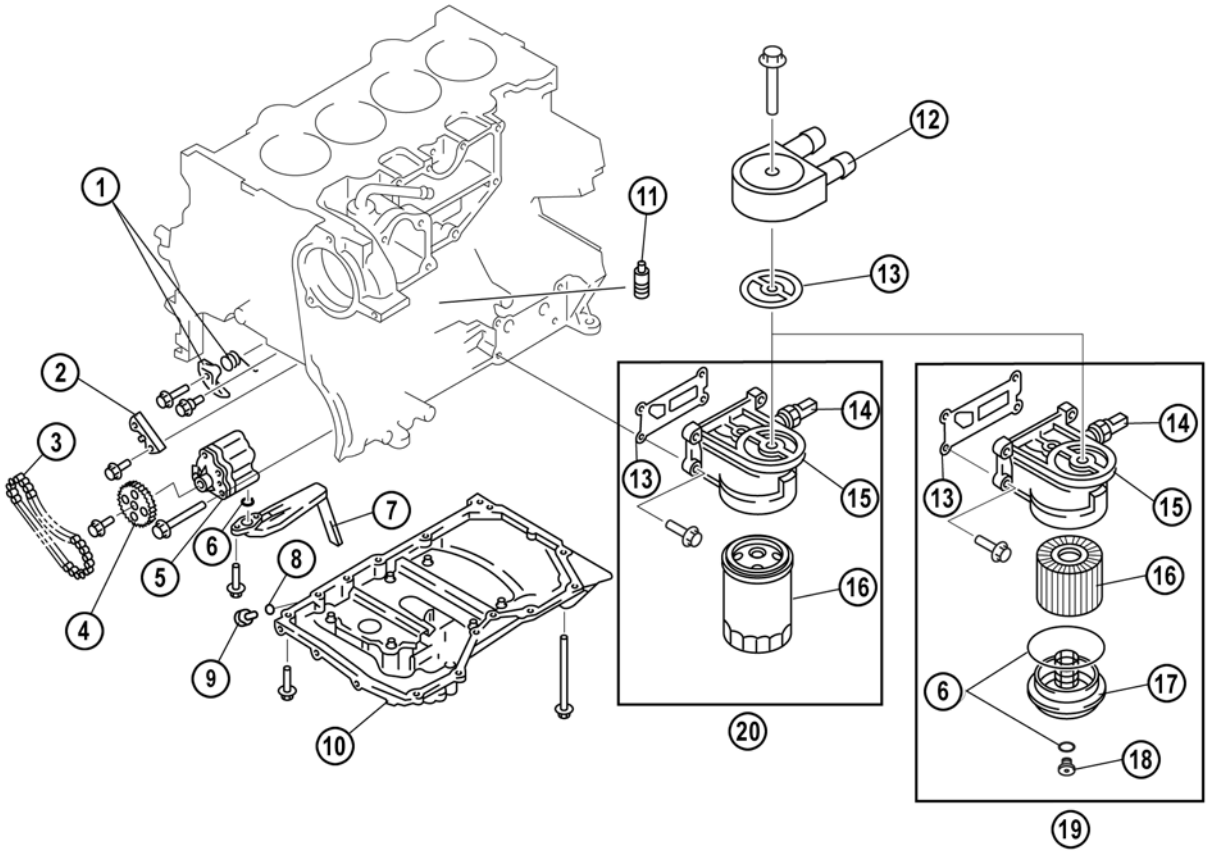


M6FL_01002

1	Timing chain	7	Valve assembly
2	Camshaft sprocket	8	Tappet
3	Tensioner arm	9	Camshafts
4	Chain tensioner	10	OCV
5	Crankshaft sprocket	11	Variable valve timing actuator
6	Chain guide		

Lubrication

- The lubrication system has been carried over from the previous engines. Depending on specification, both spin-on and cartridge type oil filters are available.
- The oil cooler is now installed on both the L3 and the LF engine.

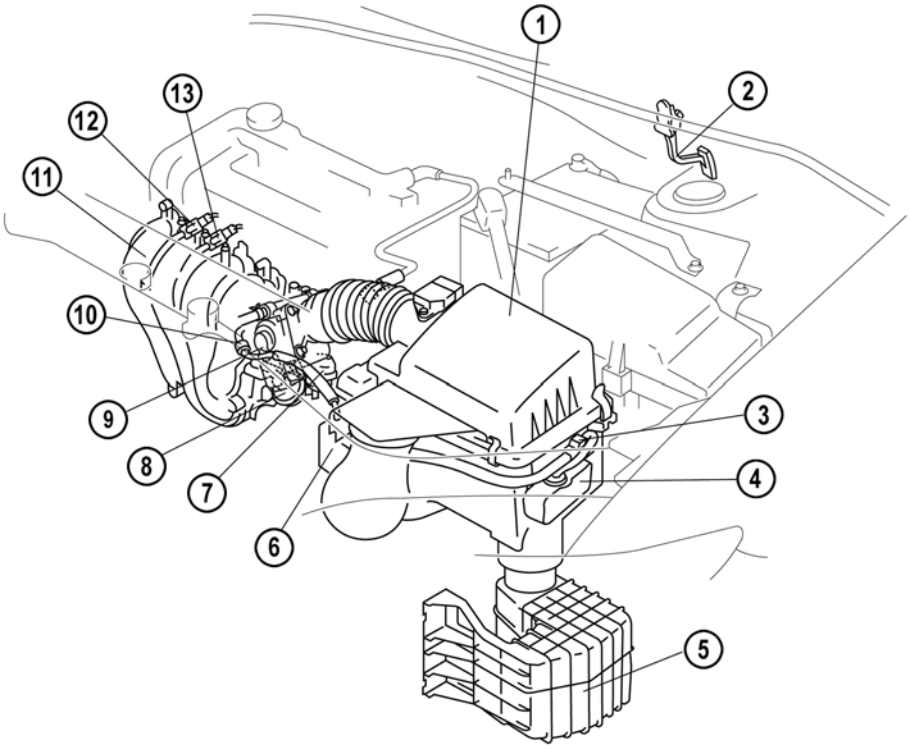


M6FL_01003

1	Oil pump chain tensioner	11	Oil jet valve
2	Oil pump chain guide	12	Oil cooler (LF, L3)
3	Oil pump chain	13	Gasket
4	Oil pump sprocket	14	Oil pressure switch
5	Oil pump	15	Oil filter adapter
6	O-ring	16	Oil filter
7	Oil strainer	17	Oil filter cover
8	Washer	18	Oil filter drain plug
9	Oil pan drain plug	19	Cartridge type oil filter
10	Oil pan	20	Spin-on type oil filter

Intake-Air System

- The intake-air system has been basically carried over from the previous engines. It comprises:
  - **VTCS** (**V**ariable **T**umble **C**ontrol **S**ystem) (L8, LF, L3)
  - **VIS** (**V**ariable **I**ntake-air **S**ystem) (LF, L3)
  - **VAD** (**V**ariable **A**ir **D**uct) (L3)
- All petrol engines now use an electronic throttle control.
- For the LF engine the VIS has been carried over from the L3 engine.

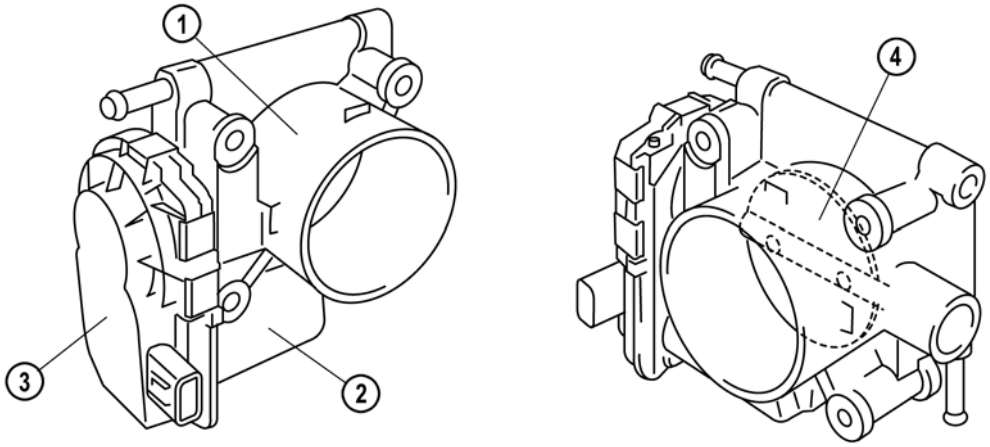


M6FL_01004

1 Air cleaner
2 Accelerator pedal
3 VAD solenoid valve (L3)
4 VAD shutter valve (L3)
5 Resonance chamber
6 VAD vacuum chamber (L3)
7 VTCS shutter valve actuator
8 VIS shutter valve actuator (LF, L3)
9 Throttle body
10 VAD check valve (one-way) (L3)
11 Intake manifold
12 VIS solenoid valve (LF, L3)
13 VTCS solenoid valve

Electronic Throttle Control

- All engines are using an electronically controlled throttle body, which is quite similar to the one on RX-8. This supersedes the **IAC** (**I**dle **A**ir **C**ontrol) valve.
- To keep moisture from freezing inside the throttle body, and thus to prevent the throttle valve from getting stuck, engine coolant is circulated through the throttle body.
- The throttle body cannot be disassembled.
- When the throttle actuator is not energized, the throttle valve is maintained slightly open by the force of the return spring. This allows limited operation of the engine in case of a malfunction.

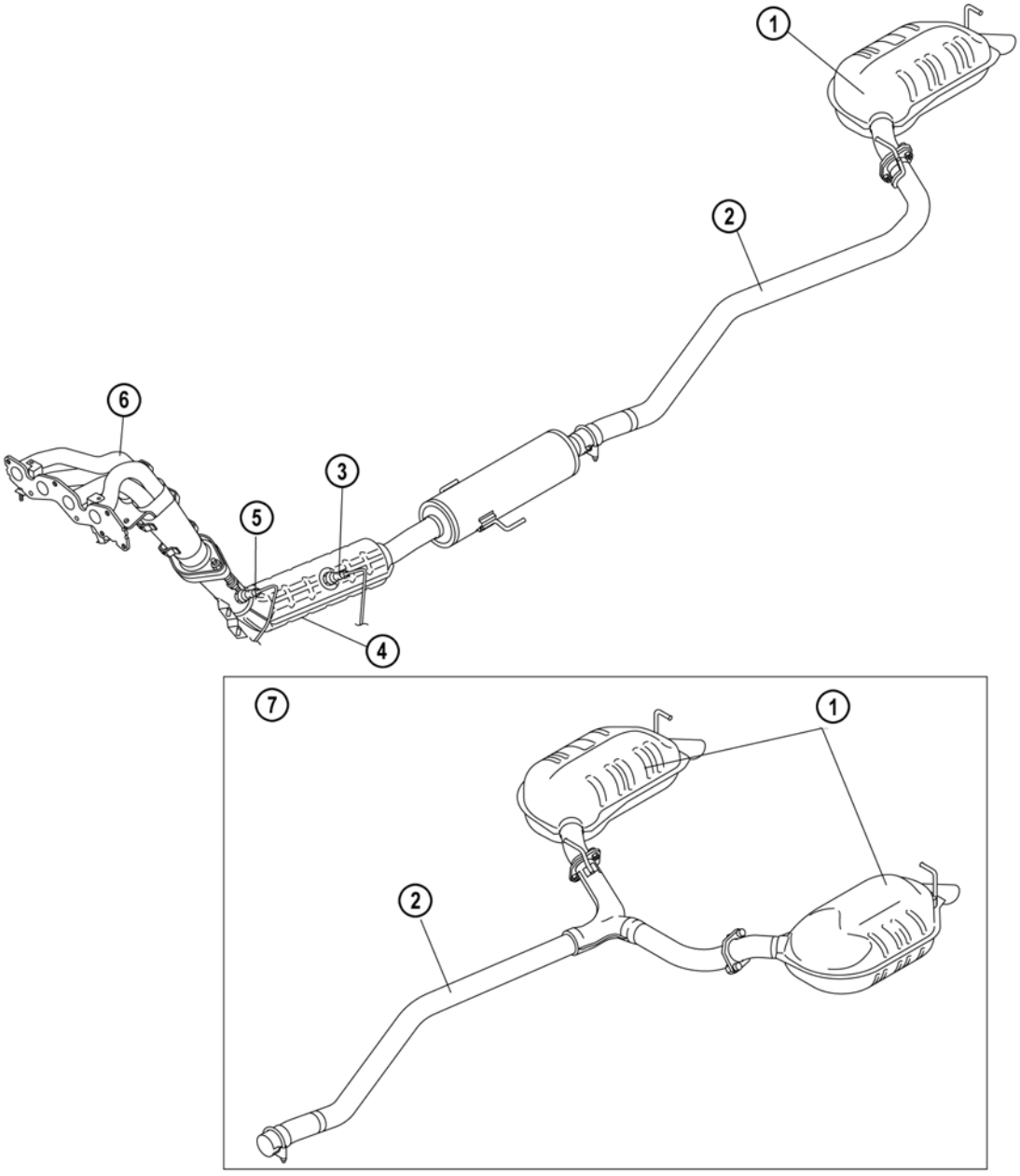


M6FL_01005

1 Throttle body
2 Throttle actuator
3 **TP** (**T**hrottle **P**osition) sensor
4 Throttle valve

Exhaust System

- The exhaust system has been carried over from the previous Mazda6.
- Vehicles specified with LF engine are now using the exhaust system with two main silencers (previously used on L3 engines only).



M6FL_01006

1	Main silencer	5	HO2S (front)
2	Middle pipe	6	Exhaust manifold
3	**HO2S** (**H**eated **O**xygen **S**ensor) (rear)	7	LF, L3
4	**TWC** (**T**hree-**W**ay **C**atalyst)		