

ENGINE TECHNICAL DATA [ZJ, Z6, LF]

B3E015001001W01

Item				Specifications			
				ZJ	Z6	LF	
MECHANICAL							
Valve clearance [engine cold]	(mm {in})	IN	0.27-0.33 {0.0107-0.0129}		0.22-0.28 {0.0087-0.0110}		
		EX			0.27-0.33 {0.0107-0.0129}		
Compression pressure	(kPa {kgf/cm ² , psi}) [rpm]	Standard	1,461 {14.90, 211.9} [300]	1,470 {14.99, 213.2} [250]	1,720 {17.54, 294.4} [300]		
		Minimum	1,023 {10.44, 148.4} [300]	1,029 {10.49, 149.2} [250]	1,204 {12.28, 174.6} [300]		
		Maximum difference between cylinders	196.1 {2.0, 28.5}				
Cylinder head bolt length	(mm {in})	Standard	128.9-129.5 {5.075-5.098}		145.2-145.8 {5.72-5.74}		
		Maximum	130.2 {5.125}		146.5 {5.77}		
Pushing distance of the front oil seal		(mm {in})	0-0.5 {0-0.019} (from the edge of the engine front cover)				
Pushing distance of the rear oil seal		(mm {in})	0-0.5 {0-0.019} (from the edge of the cylinder block)		-		
Oil control valve (OCV)		Resistance (ohm) [20°C {68°F}]		6.9-7.9		-	
Idle speed	(rpm)	ATX	N range	-	700-800	600-700	
			D range	-	650-750	600-700	
		MTX	690-790	640-740	600-700		
Ignition timing (test mode on)			(BTDC°)	9-11		8	
Idle-up speed	(rpm)	No load	ATX	N range	-	700-800	650-750
				D range	-	650-750	600-700
			MTX	Neutral position	690-790	640-740	600-700
		Electrical loads ON*1	ATX	N range	-	700-800 [34-42 A] 700-800 [Above 42 A]	650-750 [38-48 A] 700-800 [Above 48 A]
				D range	-	650-750 [34-42 A] 670-770 [Above 42 A]	650-750 [38-48 A] 700-800 [Above 48 A]
					700-800	650-750	650-750

				MTX	Neutral position	[34-42 A] 700-800 [Above 42 A]	[34-42 A] 700-800 [Above 42 A]	[38-48 A] 700-800 [Above 48 A]	
		A/C ON	Low load*2	ATX	N range	-	700-800	650-750	
					D range	-	650-750	650-750	
			High load*2	MTX	Neutral position	700-800	650-750	700-800	
				ATX	N range	-	700-800	750-850	
					D range	-	700-800	750-850	
				MTX	Neutral position	700-800	700-800	700-800	
		P/S ON					700-800	700-800	-
		CO concentration					Within the regulation		
		HC concentration							
LUBRICATION SYSTEM									
Oil pressure (approx. quantity) [oil temperature: 100 °C {212 °F}]				(kPa {kgf/cm ² , psi}) [rpm]		330-380 {3.36-3.87, 47.8-55.0} [3,000]		234-521 {2.39-5.31, 33.9-75.5} [3,000]	
Oil capacity (approx. quantity)	Oil replacement			(L {US qt, Imp qt})		3.7 {3.9, 3.3}		3.9 {4.1, 3.4}	
	Oil and oil filter replacement			(L {US qt, Imp qt})		3.9 {4.1, 3.4}		4.3 {4.5, 3.8}	
	Total (dry engine)			(L {US qt, Imp qt})		4.2 {4.4, 3.7}		4.6 {4.9, 4.0}	
COOLING SYSTEM									
Coolant capacity			(L {US qt, Imp qt})			With heater: 6.0 {6.3, 5.3} Without heater: 5.5 {5.8, 4.8}		With heater: 7.5 {7.9, 6.6} Without heater: 6.9 {7.3, 6.1}	
Cooling system cap valve opening pressure				(kPa {kgf/cm ² , psi})		90-110 {0.92-1.12, 13.1-15.9}		135-155 {1.38-1.58, 19.6-22.4}	
Thermostat	Initial-opening temperature				(°C {°F})		80-84 {176-183}		
	Full-opening temperature				(°C {°F})		95 {203}	97 {207}	
	Full-open amount			(mm {in})		8.5 {0.33} or more		8.0 {0.31} or more	
FUEL SYSTEM									
Fuel line pressure (kPa {kgf/cm ² , psi})				Fuel hold pressure		250 {2.55, 36.2} or more			
				Fuel pressure		350-410 {3.57-4.18, 50.8-59.4}			
Fuel injector	Resistance			(ohm) [20°C {68°F}]		Approx. 13.8		11.4-12.6	
	Leakage amount			(drop/2 min)		1 or less			
	Injection volume			(ml {cc, cu in}/15 s)		64-84 {64-84, 3.9-5.1}		46-66 {46-66, 2.8-4.0}	
CHARGING SYSTEM									
Battery	Electrolyte gravity					1.22-1.29 [20 °C {68 °F}]			
	Maximum back-up current*4				(mA)	20			
	Test load chart (A)	Battery type (5-hour rate)	50D20L (40)		150				
			75D26L (52)		195				
			80D26L (55)*5		-	195	-		
	Slow charge	Battery type	50D20L (40)		4.0-5.0				

	(A)		(5-hour rate)	75D26L (52)		5.0-6.0		
				80D26L (55)* ⁵		-	5.5-6.5	-
	Quick charge (A/30 min.)		Battery type (5-hour rate)	50D20L (40)		25		
				75D26L (52)		35		
80D26L (55)* ⁵				-	35	-		
Generator	Standard voltage	(V)	Ignition switch ON	Terminal	B	B+		
					P	Approx. 1.0 or less		
					D	Approx. 0		
			Idle [20 °C {68 °F}]	Terminal	B	13.0-15.0		
					P	Approx. 3.0-8.0		
					D	*7		
IGNITION SYSTEM								
Ignition coil	Resistance (Reference) [25 °C {77 °F}]	Primary coil winding		(ohm)	-		0.45-1.15	
		Secondary coil winding		(kilohm)	-		5.0-6.0	
		Insulation resistance of case	(megohm)		-		10	
Spark plug	Type	DENSO			SK16PR-E11		-	
		NGK			-		ITR6F13	
	Plug gap	Standard		(mm {in})	1.0-1.1 {0.039-0.043}		1.25-1.35 {0.049-0.053}	
		Resistance [25°C {77°F}]		(kilohm)	3.0-7.5			
STARTING SYSTEM								
Starter	No load test	Voltage		(V)	11			
		Current		(A)	90 or less			

Recommended engine oil

Item	Specifications					
	Europe			Except Europe		
Grade	API SL or ACEA A3/A5	API SL or ACEA A3		API SG/SH/SJ/SL or ILSAC GF-2/GF-3		
Viscosity (SAE)	5W-30	10W-40	5W-20	40, 30, 20, 20W-20, 10W-30, 10W-40, 10W-50, 20W-40, 15W-40, 20W-50, 15W-50, 5W-20, 5W-30		
Remarks	Mazda genuine Dexelia oil e.g.		-	-		

*1 : Generator generating current value.

*2 : Refrigerant pressure switch (middle pressure switch) is off.

*3 : Refrigerant pressure switch (middle pressure switch) is on.

*4 : Back-up current is the constant flow of current present (for such as the audio unit, clock, PCM) when the ignition switch is off and with the ignition key removed.

*5 : For intensely hot area.

*6 : The lower limit must be more than 0 A.

*7 : Turn the following electrical loads on and verify that the voltage reading increases.

• Headlights

• Blower motor

- Rear window defroster