

ENGINE SPECIFICATION

B3E010002000T03

Specification

Item				Specifications		
				ZJ	Z6	LF
MECHANICAL						
Cylinder arrangement and number				In-line, 4-cylinder		
Combustion chamber				Pentroof		
Valve system				DOHC, timing chain driven, 16 valves		
Displacement	(ml {cc, cu in})			1,349 {1,349, 82.3}	1,598 {1,598, 97.5}	1,999 {1,999, 122.0}
Bore × stroke	(mm {in})			74.0 × 78.4 {2.91 × 3.09}	78.0 × 83.6 {3.07 × 3.29}	87.5 × 83.1 {3.44 × 3.27}
Compression ratio				10.0:1		10.8:1
Compression pressure			(kPa {kgf/cm ² , psi} [rpm])	1,461 {14.90, 211.9} [300]	1,470 {14.99, 213.2} [250]	1,720 {17.54, 249.5} [300]
Valve timing	IN	Open	BTDC (°)	-5-35	-3-37	4
		Close	ABDC (°)	55-15	53-13	52
	EX	Open	BBDC (°)	40	53	37
		Close	ATDC (°)	-1	3	4
Valve clearance	(mm {in})	IN	0.27-0.33 {0.0107-0.0129} [Engine cold]		0.22-0.28 {0.0087-0.011} [Engine cold]	
		EX			0.27-0.33 {0.0107-0.0129} [Engine cold]	
LUBRICATION SYSTEM						
Type				Force-fed type		
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 pump	Type			Trochoid gear type		
	Relief valve opening pressure (approx. quantity)	(kPa {kgf/cm ² , psi})		400-450 {4.08-4.59, 58.3-65.4}		500-600 {5.09-6.11, 72.6-87.0}
Oil filter	Type			Full-flow, paper element		
	Bypass pressure	(kPa {kgf/cm ² , psi})		78-118 {0.8-1.2, 11.4-17.1}		
Oil capacity (approx. quantity)	Total (dry engine)	(L {US qt, Imp qt})		4.2 {4.4, 3.7}		4.6 {4.8, 4.0}
	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}

COOLING SYSTEM					
Type			Water-cooled, Electromotive		
Coolant capacity (approx. quantity)		(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}
Water pump			Centrifugal, V-ribbed belt-driven		
Thermostat	Type		Wax, bottom-bypass		
	Opening temperature	(°C {°F})	80-84 {176-183}		
	Full-open temperature		(°C {°F})	95 {203}	97 {207}
	Full-open lift		(mm {in})	8.5 {0.33} or more	8.0 {0.31} or more
Radiator	Type		Corrugated fin		
Cooling system cap	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}	
Cooling fan	Type		Electric		
	Number of blades		7		
	Outer diameter	(mm {in})	390 {15.4}		
FUEL SYSTEM					
Injector	Type		Hi-ohmic		
	Type of fuel delivery		Top-feed		
	Type of drive		Voltage		
Pressure regulator	Regulating pressure	(kPa {kgf/cm ² , psi})	approx. 380 {3.87, 55.1}		
Fuel tank	Capacity	(L {US gal, Imp gal})	55 {15, 12}		
Fuel	Type		Unleaded (RON 95 or above)		
EMISSION SYSTEM					
Catalyst	Type		WU-TWC (monolith)	WU-TWC (monolith), TWC (monolith)	
Evaporative emission control system	Type		Canister type		
PCV system	Type		Closed type		
CHARGING SYSTEM					
Battery	Voltage		(V)	12	
	Type and capacity (5-hour rate)		(A·h)	50D20L (40), 75D26L (52), 80D26L (55)*	50D20L (40), 75D26L (52)
Generator	Out-put		(V-A)	12-80	12-90
	Regulated voltage		Controlled by PCM		
	Self diagnosis function				
IGNITION SYSTEM					
Ignition system	Type		SEI (Single electronic ignition)		
	Spark advance		Electronic		
	Firing order		1-3-4-2 (all cylinders independent firing)		
Spark plug	Type	DENSO	SK16PR-E11	-	
		NGK	-	ITR6F13	

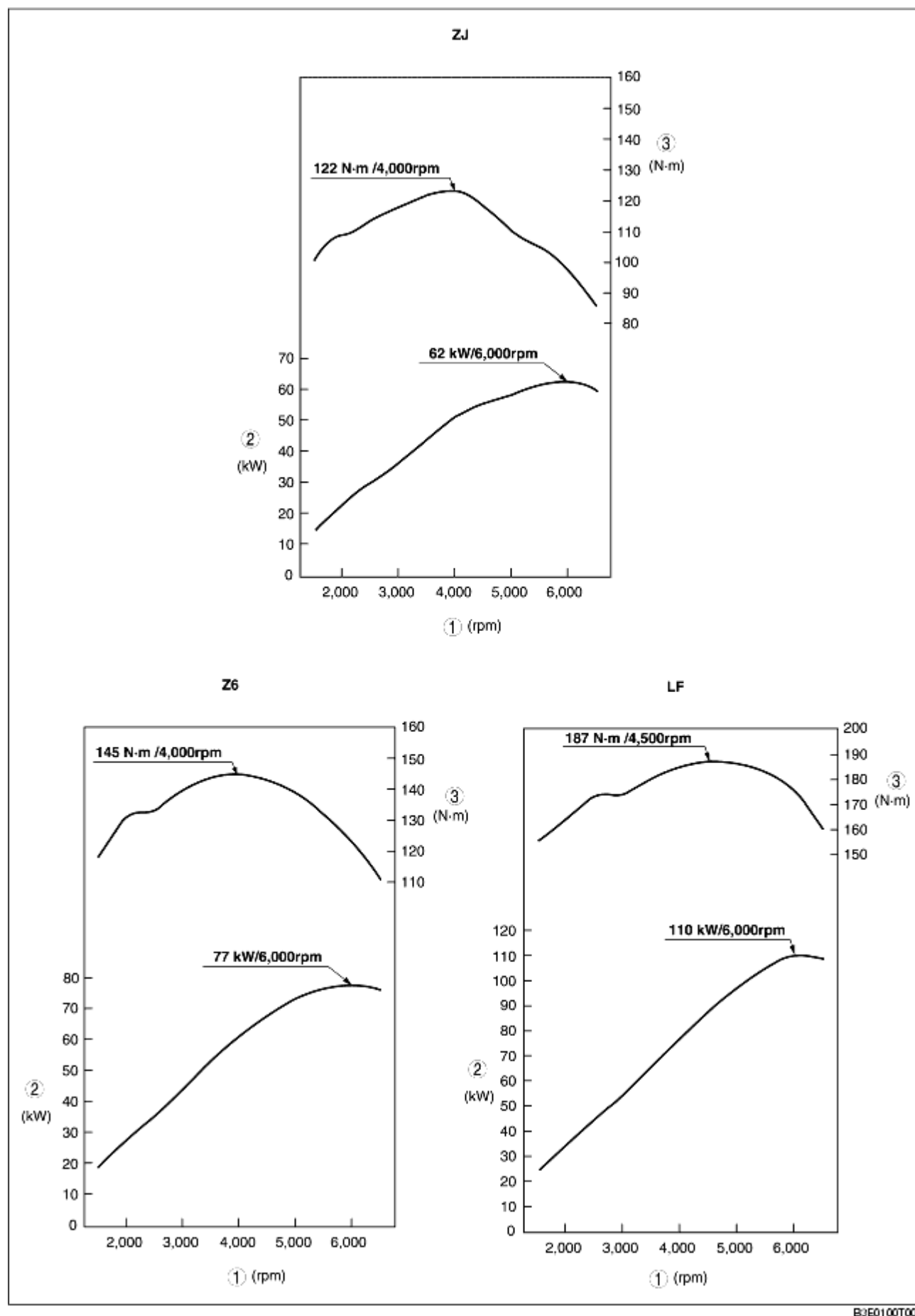
STARTING SYSTEM			
Starter	Type		Coaxial reduction
	Output	(kW)	1.0
CONTROL SYSTEM			
EGR control	Type		Stepping motor type

* : For intensely hot area

Recommended engine oil

Item	Specifications			
	Europe			Except Europe
Grade	API SL, ACEA A3			API SG, SH, SJ, SL, 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.			-

Engine Performance Curve



1	Engine speed
2	Output
3	Torque