ENGINE MECHANICAL

030F4–03

SERVICE DATA

1AZ–FE

Battery specific gravity	at 20°C (68°F)	1.25–1.29
Ignition timing	w/ Terminals TC and CG of DLC3 connected	8 – 12° BTDC
	w/ Terminals TC and CG of DLC3 disconnected	5 – 15° BTDC
Idle speed		610 – 710 r/min.
Compression		
	Compression pressure	1.360 MPa (13.9 kgf/cm^2, 198 psi)
	Minimum pressure	0.98 MPa (10 kgf/cm^2, 142 psi)
	Difference between each cylinder	100 kPa (1.0 kgf/cm^2, 14 psi)
Cylinder head set bolt		
Bolt length	Standard	161.3 – 162.7 mm (6.350 – 6.406 in.)
	Maximum	164.2 mm (6.465 in.)
Valve clearance		
Intake	(Cold)	0.19 – 0.29 mm (0.0075 – 0.0114 in.)
Exhaust		0.30 – 0.40 mm (0.0118 – 0.0157 in.)

2AZ–FE

Battery specific gravity	at 20°C (68°F)	1.25–1.29
Ignition timing	w/ Terminals TC and CG of DLC3 connected	8 – 12° BTDC
	w/ Terminals TC and CG of DLC3 disconnected	5 – 15° BTDC
Idle speed	A/T	610 – 710 r/min.
	M/T	650 – 750 r/min.
Compression		
	Compression pressure	1.360 MPa (13.9 kgf/cm^2, 198 psi)
	Minimum pressure	0.98 MPa (10 kgf/cm^2, 142 psi)
	Difference between each cylinder	100 kPa (1.0 kgf/cm^2, 14 psi)
Cylinder head set bolt		
Bolt length	Standard	161.3 – 162.7 mm (6.350 – 6.406 in.)
	Maximum	164.2 mm (6.465 in.)
Valve clearance		
Intake	(Cold)	0.19 – 0.29 mm (0.0075 – 0.0114 in.)
Exhaust		0.30 – 0.40 mm (0.0118 – 0.0157 in.)

1MZ–FE

Battery specific gravity	at 20°C (68°F)	1.25–1.29
New drive belt deflection	Pressing force: 98 N (10 kgf, 22 lbf)	
	For fan and generator	9.1 – 10.5 mm (0.358 – 0.413 in.)
	For vane pump	7.0 – 9.0 mm (0.276 – 0.354 in.)
Used drive belt deflection	Pressing force: 98 N (10 kgf, 22 lbf)	
	For fan and generator	11.0 – 13.5 mm (0.433 – 0.531 in.)
	For vane pump	10.0 – 12.0 mm (0.394 – 0.472 in.)
New drive belt tension		
	For fan and generator	617 – 853 N (63 – 87 kgf, 139 – 192 lbf)
	For vane pump	647 – 843 N (66 – 86 kgf, 146 – 190 lbf)
Used drive belt tension		
	For fan and generator	294 – 490 N (30 – 50 kgf, 66 – 110 lbf)
	For vane pump	323 – 519 N (33 – 53 kgf, 73 – 117 lbf)
Ignition timing	w/ Terminals TC and CG of DLC3 connected	8 – 12° BTDC
	w/ Terminals TC and CG of DLC3 disconnected	7 – 25° BTDC
Idle speed		550 – 650 r/min.
Compression pressure		1.47 MPa (15 kgf/cm^2, 213 psi)
Minimum pressure		0.98 MPa (10 kgf/cm^2, 142 psi)
Difference between each cylinder		100 kPa (1.0 kgf/cm^2, 14 psi)

12 pointed head cylinder head set bolt diameter at tension portion		
	Standard	8.95 – 9.05 mm (0.3524 – 0.3563 in.)
	Minimum	8.75 mm (0.3775 in.)
Valve clearance at cold	Intake	0.15 – 0.25 mm (0.006 – 0.010 in.)
	Exhaust	0.25 – 0.35 mm (0.010 – 0.014 in.)