TOYOTA
SERVICE BULLETIN
Group: 12 No.: 06 Date: Feb 11

Aurion GSV40

Changes to Repair Manual AA02N3EQ

Changes have been made to Toyota Aurion Repair Manual AA02N3EQ.

Publication	Section	Title	Paragraph
AA02N3EQ	Service Specification	2GR-FE Engine Mechanical	Service Data
	2GR-FE Engine Mechanical	Engine Unit	Inspection

Changes follow on from this page. Changes are indicated by an arrow.

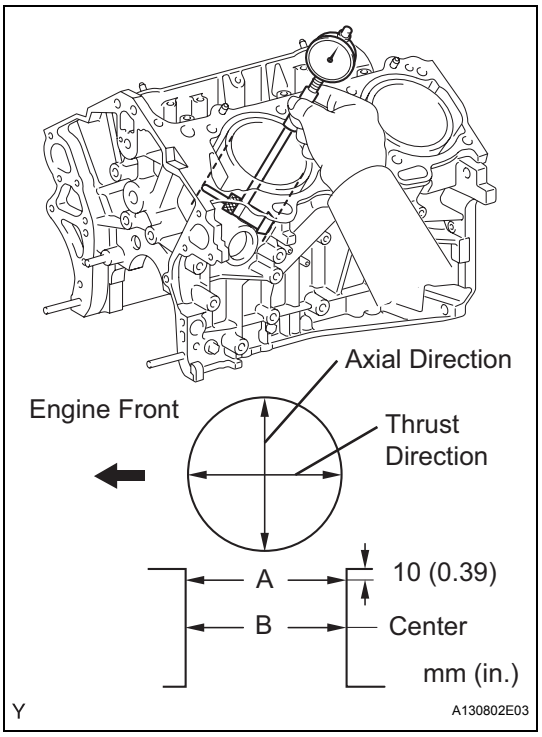
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SERVICE SPECIFICATIONS – 2GR-FE ENGINE MECHANICAL

Cam lobe height	Standard	44.316 to 44.416 mm (1.7447 to 1.7487 in.)
	Maximum	44.166 mm (1.7388 in.)
Oil clearance	Standard No. 1 journal	0.040 to 0.079 mm (0.0016 to 0.0031 in.)
	Other journals	0.025 to 0.062 mm (0.0010 to 0.0024 in.)
	Maximum No. 1 journal	0.10 mm (0.0039 in.)
	Other journals	0.09 mm (0.0035 in.)
Thrust clearance	Standard	0.08 to 0.13 mm (0.0031 to 0.0051 in.)
	Maximum	0.15 mm
No. 4 camshaft		
Journal diameter	No. 1 journal	35.946 to 35.960 mm (1.4152 to 1.4157 in.)
	Other journals	25.959 to 25.975 mm (1.0220 to 1.0226 in.)
Circuit runout	Maximum	0.04 mm (0.0016 in.)
Cam lobe height	Standard	44.262 to 44.362 mm (1.7426 to 1.7465 in.)
	Maximum	44.112 mm (1.7367 in.)
Oil clearance	Standard No. 1 journal	0.040 to 0.079 mm (0.0016 to 0.0031 in.)
	Other journals	0.025 to 0.062 mm (0.0010 to 0.0024 in.)
	Maximum No. 1 journal	0.10 mm (0.0039 in.)
	Other journals	0.09 mm (0.0035 in.)
Thrust clearance	Standard	0.08 to 0.13 mm (0.0031 to 0.0051 in.)
	Maximum	0.15 mm
Ring pin for cylinder head sub-assembly		
Protrusion height		2.5 to 3.5 mm (0.098 to 0.138 in.)
Straight pin for cylinder head sub-assembly		
Protrusion height		17.5 to 19.5 mm (0.689 to 0.768 in.)
Connecting rod thrust clearance	Standard	0.15 to 0.40 mm (0.0059 to 0.0157 in.)
	Maximum	0.50 mm (0.020 in.)
Connecting rod oil clearance	Standard	0.045 to 0.067 mm (0.0018 to 0.0026 in.)
	Maximum	0.070 mm (0.0028 in.)
Crankshaft thrust clearance	Standard	0.04 to 0.24 mm (0.0016 to 0.0094 in.)
	Maximum	0.30 mm (0.0118 in.)
	Thrust washer thickness	2.43 to 2.48 mm (0.0957 to 0.0976 in.)
Cylinder block warpage	Maximum	0.07 mm (0.0028 in.)
Cylinder bore diameter	Standard	94.000 to 94.012 mm (3.7008 to 3.7013 in.)
	Maximum	94.200 mm (3.7087 in.)
Piston diameter	Distance	9.8 mm (0.3858 in.)
	Standard	93.960 to 93.980 mm (3.6992 to 3.7000 in.)
[Corrected]	Minimum	93.830 mm (3.6941 in.)
Oil clearance	Standard	0.02 to 0.052 mm (0.0008 to 0.0020 in.)
	Maximum	0.06 mm
Connecting rod out-of alignment	Maximum	0.05 mm (0.0020 in.) per 100 mm (3.94 in.)
Connecting rod twist	Maximum	0.15 mm (0.0059 in.) per 100 mm (3.94 in.)
Piston pin hole inside diameter		22.001 to 22.010 mm (0.8662 to 0.8665 in.)
Piston pin diameter		21.997 to 22.006 mm (0.8660 to 0.8664 in.)
Oil clearance	Standard	0.001 to 0.007 mm (0.00004 to 0.00028 in.)
	Maximum	0.015 mm (0.0006 in.)
Connecting rod bushing inside diameter		22.005 to 22.014 mm (0.8663 to 0.8667 in.)
Oil clearance	Standard	0.005 to 0.011 mm (0.0002 to 0.0004 in.)
	Maximum	0.03 mm (0.0012 in.)

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(b) Using a cylinder gauge, measure the cylinder bore diameter at positions A and B in the thrust and axial directions.

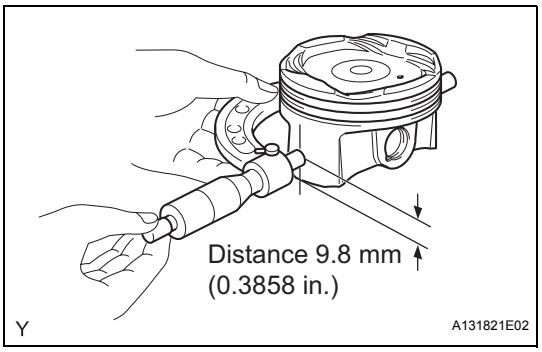
Standard diameter:

94.000 to 94.012 mm (3.7008 to 3.7013 in.)

Maximum diameter:

94.200 mm (3.7087 in.)

If the average diameter of 4 positions is greater than the maximum, replace the cylinder block.



32. INSPECT PISTON SUB-ASSEMBLY WITH PIN

(a) Using a micrometer, measure the piston diameter at right angles to the piston center line where the distance from the piston end is as specified.

Distance:

9.8 mm (0.3858 in.)

Standard diameter:

93.960 to 93.980 mm (3.6992 to 3.7000 in.)

[Corrected] **Minimum diameter:**

93.830 mm (3.6941 in.)

33. INSPECT PISTON OIL CLEARANCE

(a) Measure the cylinder bore diameter in the thrust directions.

(b) Subtract the piston diameter measurement from the cylinder bore diameter measurement.

Standard oil clearance:

0.020 to 0.052 mm (0.0008 to 0.0020 in.)

Maximum oil clearance:

0.060 mm (0.0024 in.)

If the oil clearance is greater than the maximum, replace all the pistons. If necessary, replace the cylinder block.

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