

# 11. CYLINDER/PISTON

|                     |      |                       |      |
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## SERVICE INFORMATION

### GENERAL

- The service procedures in this section can be performed with the engine installed in the frame.
- Take care not to damage the cylinder wall and piston.
- Be careful not to damage the mating surfaces by using the screw driver when removing the cylinder.
- When disassembling, mark and store the disassembled parts to ensure that they are reinstalled in their original locations.

### SPECIFICATIONS

Unit: mm (in)

| ITEM   |                                      | STANDARD                                | SERVICE LIMIT                   |              |
|--|--------------------------------------|---|---------------------------------|--------------|
| Cylinder   | I.D.                                 | 63.50 – 63.51 (2.5000 – 2.5004)         | 63.55 (2.502)                   |              |
|  | Out of round                         | —                                       | 0.10 (0.004)                    |              |
|  | Taper                                | —                                       | 0.10 (0.004)                    |              |
|  | Warpage                              | —                                       | 0.05 (0.002)                    |              |
| Piston, piston rings                             | Piston mark direction                | "IN" mark facing toward the intake side | —                               |              |
|  | Piston O.D.                          | 63.47 – 63.49 (2.4988 – 2.4996)         | 63.40 (2.496)                   |              |
|  | Piston O.D. measurement point        | 6.5 (0.36) from bottom of skirt         | —                               |              |
|  | Piston pin bore I.D.                 | 15.002 – 15.008 (0.5960 – 0.5909)       | 15.055 (0.5927)                 |              |
|  | Piston pin O.D.                      | 14.994 – 15.000 (0.5903 – 0.5906)       | 14.98 (0.590)                   |              |
|  | Piston-to-piston pin clearance       | 0.002 – 0.014 (0.0001 – 0.0006)         | 0.04 (0.0016)                   |              |
|  | Piston ring-to-ring groove clearance | Top                                     | 0.045 – 0.075 (0.0018 – 0.0030) | 0.10 (0.004) |
|  |                                      | Second                                  | 0.015 – 0.050 (0.0006 – 0.0020) | 0.08 (0.003) |
|  | Piston ring end gap                  | Top                                     | 0.05 – 0.20 (0.002 – 0.008)     | 0.3 (0.01)   |
|  |                                      | Second                                  | 0.15 – 0.30 (0.004 – 0.010)     | 0.7 (0.030)  |
| Oil (side rail)                                  |                                      | 0.20 – 0.70 (0.008 – 0.028)             | 1.1 (0.04)                      |              |
| Cylinder-to-piston clearance                     |                                      | 0.01 – 0.04 (0.0004 – 0.0016)           | 0.90 (0.035)                    |              |
| Connecting rod small end I.D.                    |                                      | 15.010 – 15.028 (0.5909 – 0.5917)       | 15.09 (0.594)                   |              |
| Connecting rod small end-to-piston pin clearance |                                      | 0.010 – 0.034 (0.0004 – 0.0013)         | 0.075 (0.0030)                  |              |

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