

# STARTING & CHARGING

## SERVICE DATA

031E6-02

|                                                     |                |                                      |
|-----------------------------------------------------|----------------|--------------------------------------|
| Starter armature assy<br>Circle runout              | Standard       | 0.02 mm (0.0008 in.)                 |
|                                                     | Maximum        | 0.05 mm (0.0020 in.)                 |
|                                                     | Standard       | 29 mm (1.142 in.)                    |
|                                                     | Minimum        | 28 mm (1.102 in.)                    |
| Commutator length                                   |                |                                      |
|                                                     |                |                                      |
| Starter brush holder assy<br>Brush length           | Standard       | 15.5 mm (0.610 in.)                  |
|                                                     | Minimum        | 9.0 mm (0.354 in.)                   |
| Generator rotor assy<br>Slip ring resistance        | at 20°C (68°F) | 2.27 to 2.53 $\Omega$                |
|                                                     | Standard       | 15.3 to 15.5 mm (0.602 to 0.610 in.) |
|                                                     | Minimum        | 14.3 mm (0.561 in.)                  |
|                                                     |                |                                      |
| Slip ring diameter                                  |                |                                      |
|                                                     |                |                                      |
| Generator brush holder assy<br>Exposed brush length | Standard       | 11.0 to 13.6 mm (0.433 to 0.535 in.) |
|                                                     | Minimum        | 1.5 mm (0.059 in.)                   |