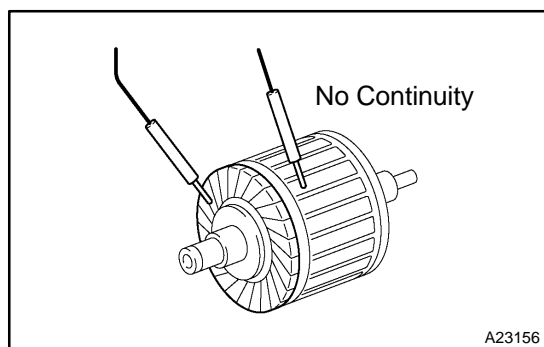


## INSPECTION

### 1. INSPECT COMMUTATOR FOR OPEN CIRCUIT

Using an ohmmeter, check that there is continuity between the segments of the commutator.

If there is no continuity between any segment, replace the armature.

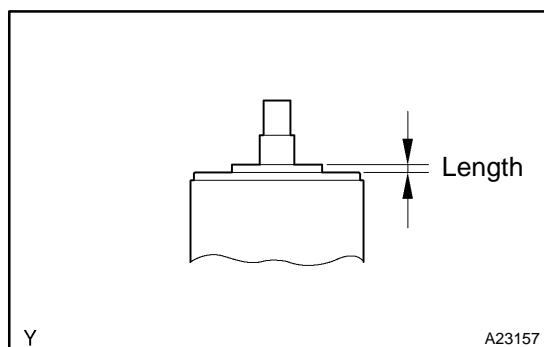


### 2. INSPECT COMMUTATOR FOR GROUND

(a) Using an ohmmeter, check that there is no continuity between the commutator and armature coil core.

If there is continuity, replace the armature.

(b) Check that the commutator for dirty and burm on surface. If the surface is dirty or burnt, correct it with sandpaper (No.400) or on a lathe.



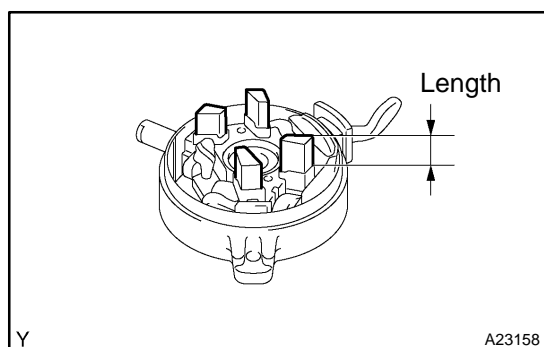
### 3. INSPECT COMMUTATOR LENGTH

(a) Using vernier calipers, measure the commutator length.

**Standard length: 3.1 mm (0.122 in.)**

**Maximum length: 3.8 mm (0.150 in.)**

If the length is greater than maximum, replace the armature.



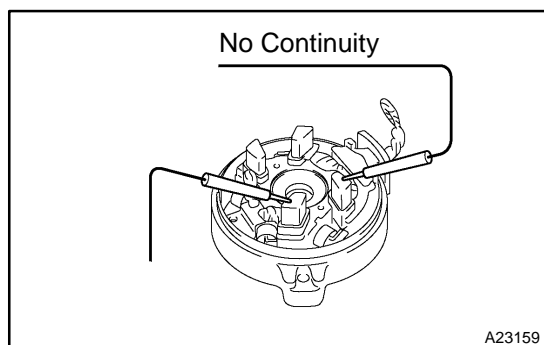
### 4. INSPECT STARTER COMMUTATOR END FRAME ASSY

(a) Using vernier calipers, measure the brush holder length.

**Standard length: 9.0 mm (0.354 in.)**

**Maximum length: 4.0 mm (0.158 in.)**

If the length is less than minimum, replace the starter commutator end frame assy.

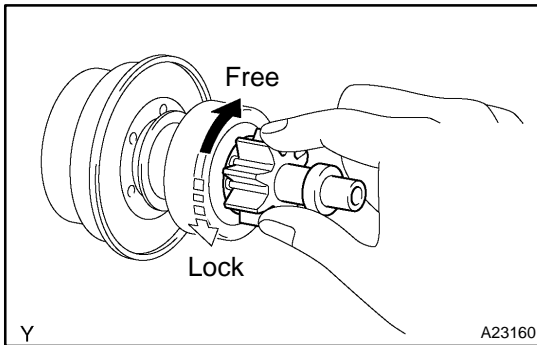


(b) Check the brush holder.

(1) Using an ohmmeter, check that there is no continuity between the positive (+) and negative (–) brush holders.

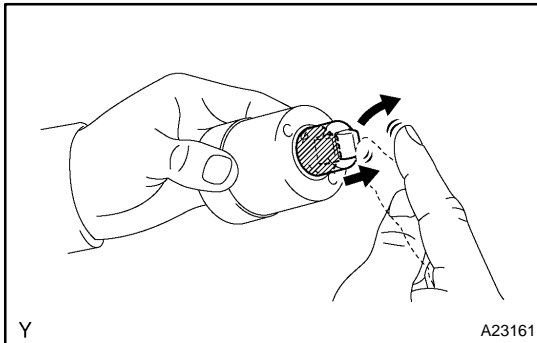
If the there is continuity, repair or replace the starter commutator end frame assy.

If there is no continuity, repair or replace the field frame.



### 5. INSPECT CLUTCH PINION GEAR

Rotate the pinion gear clockwise, and check that it turns freely. Check that it locks by rotating the pinion gear counterclockwise. If necessary, replace the clutch assembly.

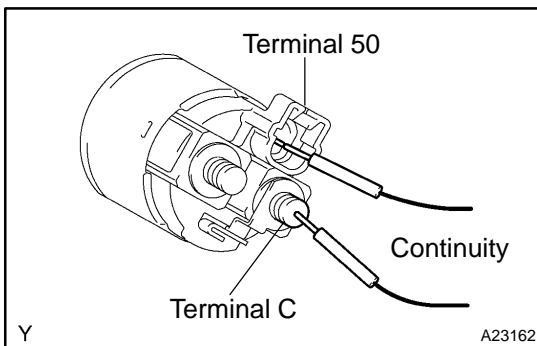


### 6. INSPECT REPAIR SERVICE STARTER KIT

(a) Check the plunger.

- (1) Push in the plunger and check that it returns quickly to its original position.

If necessary, replace the repair service starter kit.

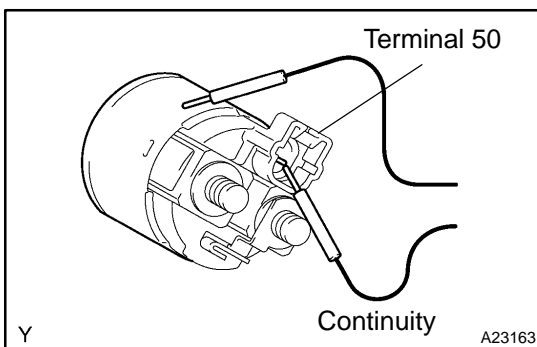


### 7. INSPECT MAGNET STATER SWITCH

(a) Check the pull-in coil for open circuit.

- (1) Using an ohmmeter, check that there is continuity between terminal 50 and C.

If there is no continuity, replace the repair service starter kit.



(b) Check whether or not the hold-in coil has an open circuit.

- (1) Using an ohmmeter, check that there is continuity between terminal 50 and the switch body.

If there is no continuity, replace the repair service starter kit.