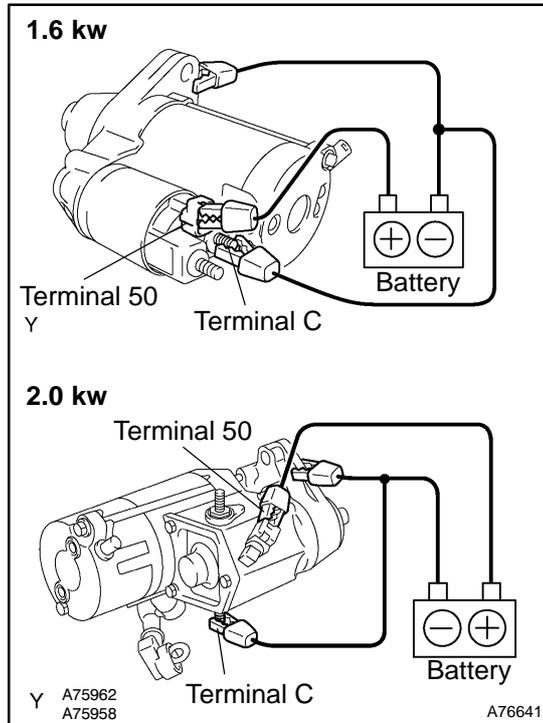


# STARTING SYSTEM (1GR-FE)

## INSPECTION

190KW-01

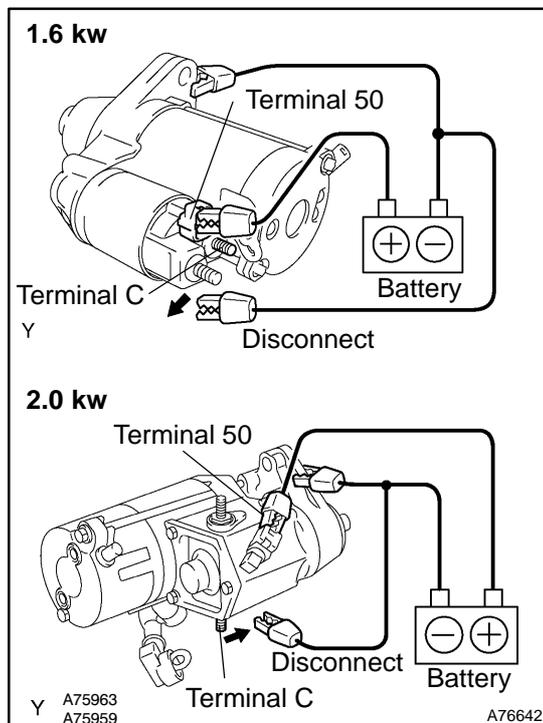


### 1. INSPECT STARTER ASSY

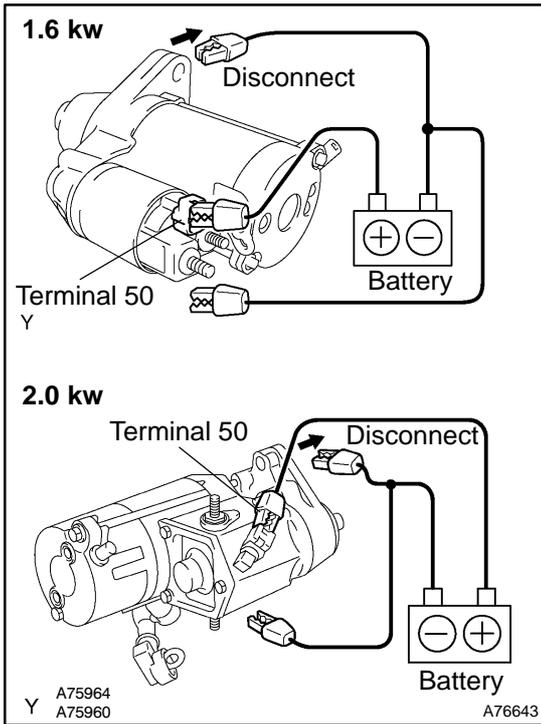
#### NOTICE:

**These tests must be done within 3 to 5 seconds to avoid burning out the coil.**

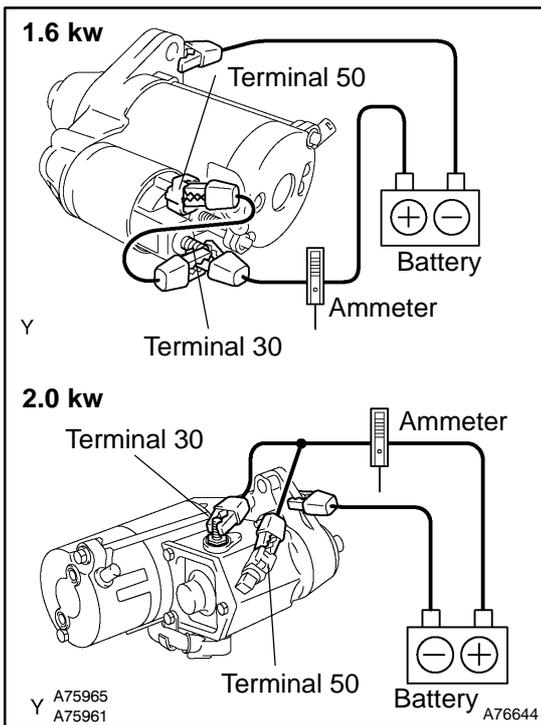
- (a) Do pull-in test.
  - (1) Disconnect the field coil lead wire from terminal C.
  - (2) Connect the battery to the magnetic switch as shown. Check that the clutch pinion gear protrudes.



- (b) Do holding test.
  - (1) Disconnect the negative (-) lead from the terminal C with the above condition (a) is being sustained. Check that the pinion gear remains protruded.

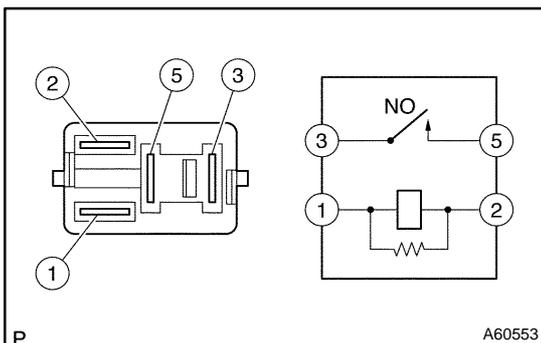


- (c) Inspect clutch pinion gear return.  
(1) Disconnect the negative (-) lead from the switch body. Check that the clutch pinion gear returns inward.



- (d) Perform the operation test without load.  
(1) Connect the field coil lead wire to terminal C.  
**Torque:**  
**1.6kw 10 N·m (102 kgf·cm, 89 ft·lbf)**  
**2.0 kw 5.9 N·m (60 kgf·cm, 52 in·lbf)**  
(2) Hold the starter with a vise.  
(3) Connect the battery and ammeter to the starter as shown.  
(4) Check that the ammeter indicates the specified current.

**Specified current:**  
**1.6kw 90 A or less at 11.5 V**  
**2.0kw 100 A or less at 11.5 V**



**2. INSPECT STARTER RELAY ASSY**

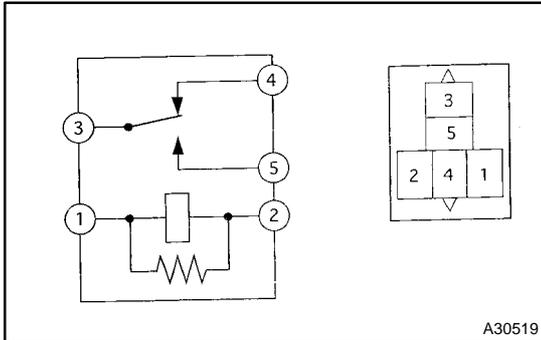
- (a) Continuity inspection.  
(1) Using an ohmmeter, check for continuity between each terminal.

**Specified condition:**

Between terminals	Specified condition
1 - 2	Continuity
3 - 5	No continuity

- (2) Using an ohmmeter, check for continuity between terminals 3 and 5 when the voltage is applied across terminals 1 and 2.

**Specified condition: Continuity**



**3. INSPECT ACC RELAY**

- (a) Continuity inspection.

- (1) Using an ohmmeter, check for continuity between each terminal.

**Specified condition:**

Between terminals	Specified condition
1 - 2	Continuity
3 - 4	
3 - 5	No continuity

- (2) Using an ohmmeter, check for continuity between terminals 3 and 5 when the between voltage is applied across terminals 1 and 2.

**Specified condition: Continuity**