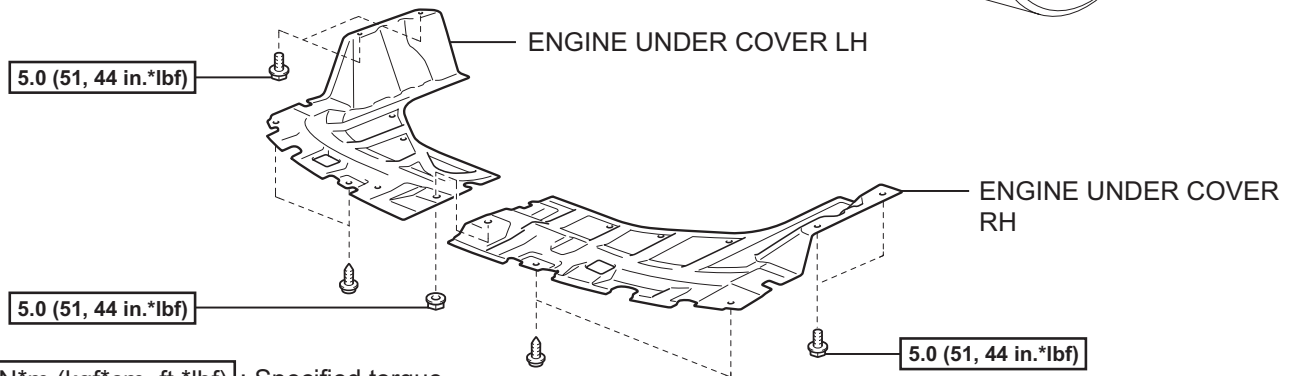
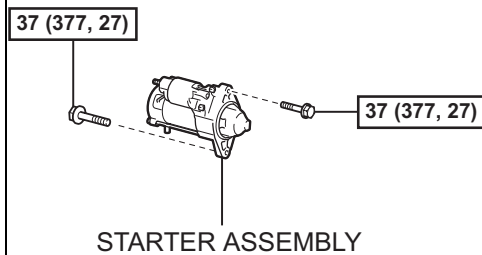
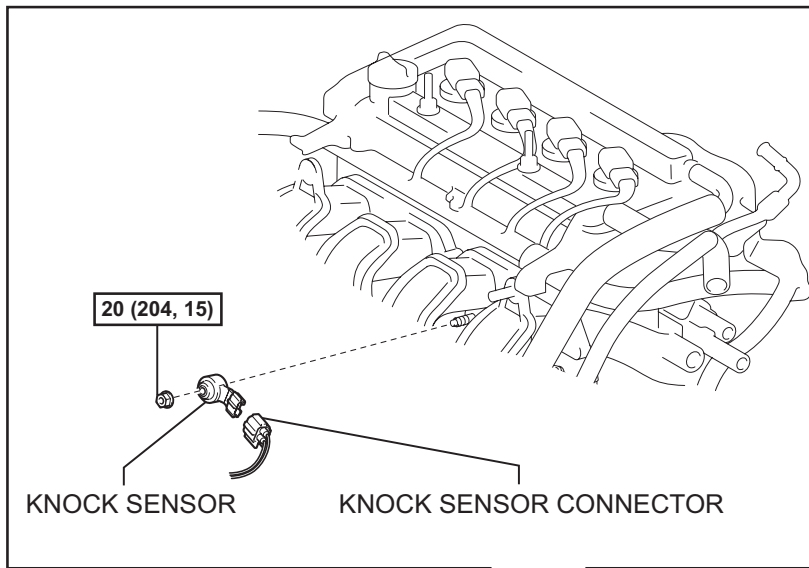


# KNOCK SENSOR

## COMPONENTS

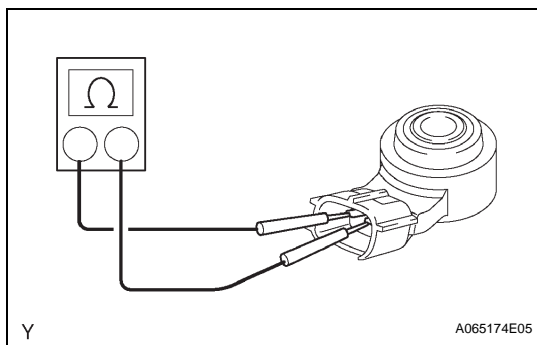
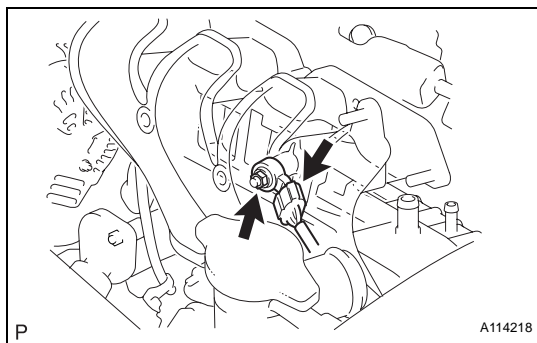
ES



N\*m (kgf\*cm, ft.\*lbf) : Specified torque

## REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**  
**CAUTION:**  
 Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.
2. **REMOVE ENGINE UNDER COVER LH (See page ST-8)**
3. **REMOVE ENGINE UNDER COVER RH (See page ST-8)**
4. **REMOVE STARTER ASSEMBLY (See page ST-8)**
5. **REMOVE KNOCK SENSOR**
  - (a) Disconnect the sensor connector.
  - (b) Remove the nut and sensor.



## INSPECTION

1. **INSPECT KNOCK SENSOR**
  - (a) Measure the resistance of the sensor.  
**Standard resistance:**  
**120 to 280 k $\Omega$  at 20°C (68°F)**  
 If the result is not as specified, replace the knock sensor.

### DESCRIPTION

A flat type knock sensor (non-resonant type) has a structure that can detect vibrations over a wide band of frequencies: between approximately 6 kHz and 15 kHz.

Knock sensors are fitted onto the engine block to detect engine knocking.

The knock sensor contains a piezoelectric element which generates a voltage when it becomes deformed. The voltage is generated when the engine block vibrates due to knocking. Any occurrence of engine knocking can be suppressed by delaying the ignition timing.

DTC No.	DTC Detection Condition	Trouble Area
P0327	Output voltage of knock sensor 0.5 V or less (1 trip detection logic)	<ul style="list-style-type: none"> <li>• Short in knock sensor circuit</li> <li>• Knock sensor</li> <li>• ECM</li> </ul>
P0328	Output voltage of knock sensor 4.5 V or more (1 trip detection logic)	<ul style="list-style-type: none"> <li>• Open in knock sensor circuit</li> <li>• Knock sensor</li> <li>• ECM</li> </ul>