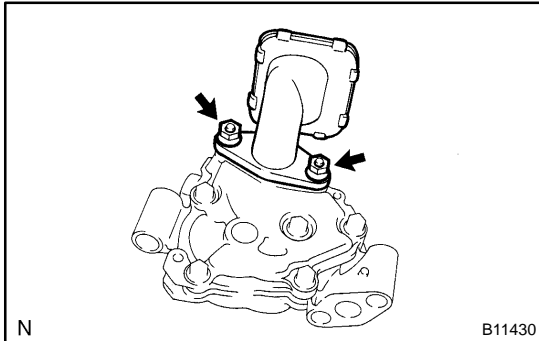
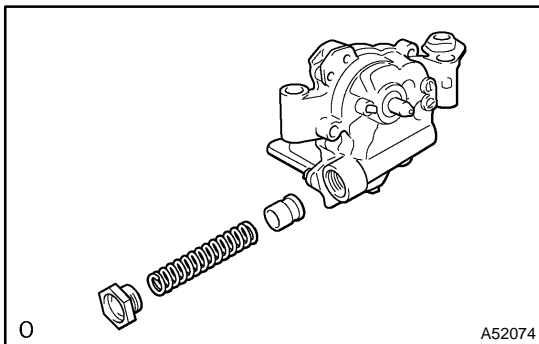


## OVERHAUL



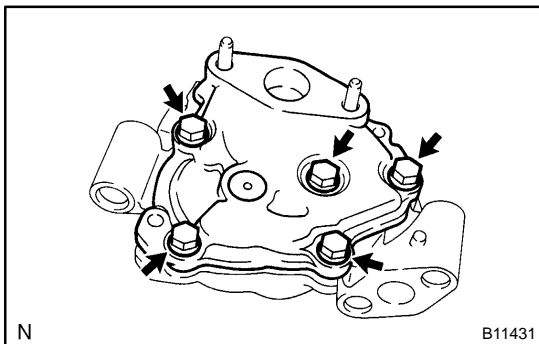
### 1. REMOVE OIL PUMP STRAINER SET

- (a) Remove the 2 nuts and oil pump strainer.



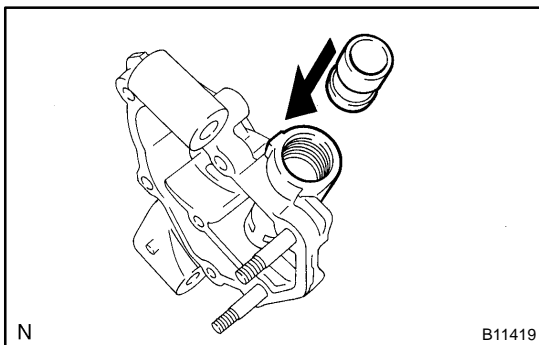
### 2. REMOVE OIL PUMP RELIEF VALVE

- (a) Using a socket wrench (27 mm), remove the plug.  
 (b) Remove the valve spring and relief valve.



### 3. REMOVE OIL PUMP COVER

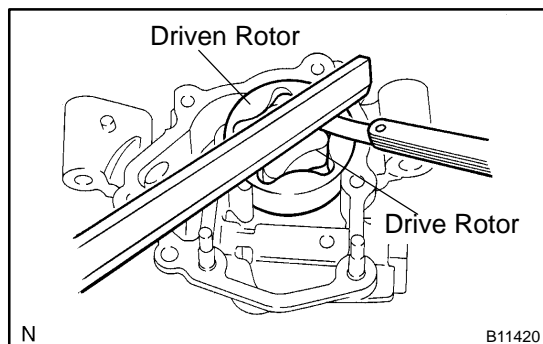
- (a) Remove the 5 bolts and oil pump cover.



### 4. INSPECT OIL PUMP RELIEF VALVE

- (a) Check the relief valve.  
 (1) Coat the valve with engine oil and check that the valve falls smoothly into the valve hole by its own weight.

If it does not, replace the relief valve. If necessary, replace the oil pump Assy.



## 5. INSPECT OIL PUMP ROTOR

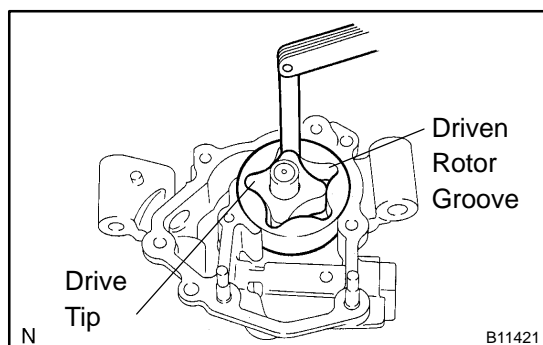
(a) Check the side clearance.

- (1) Using a feeler gauge and precision straight edge, measure the clearance between the rotors and precision straight edge.

**Standard: 0.030 to 0.085 mm (0.0012 to 0.0033 in.)**

**Maximum: 0.16 mm (0.0063 in.)**

If the side clearance is greater than the maximum, replace the oil pump Assy.



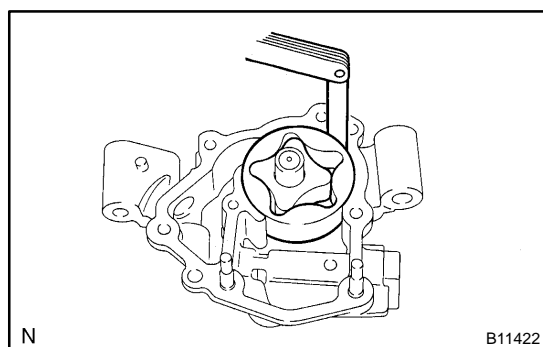
(b) Check the tip clearance.

- (1) Using a feeler gauge, measure the clearance between the driven rotor tips.

**Standard: 0.080 to 0.160 mm (0.0031 to 0.0063 in.)**

**Maximum: 0.35 mm (0.0138 in.)**

If the tip clearance is greater than the maximum, replace the oil pump Assy.



(c) Check the body clearance.

- (1) Using a feeler gauge, measure the clearance between the driven rotor and pump body.

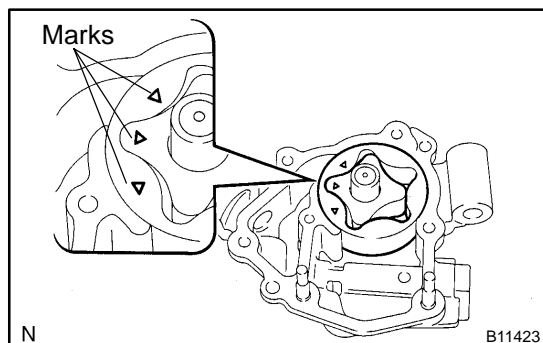
**Standard: 0.100 to 0.170 mm (0.0039 to 0.0067 in.)**

**Maximum: 0.325 mm (0.01280 in.)**

(d) Remove the oil pump rotors.

If the body clearance is greater than the maximum, replace the oil pump Assy.

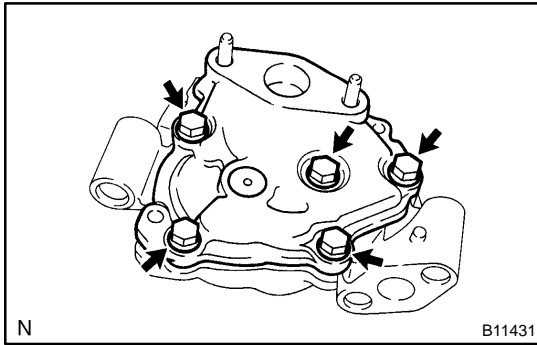
## 6. REMOVE OIL PUMP ROTOR



## 7. INSTALL OIL PUMP ROTOR

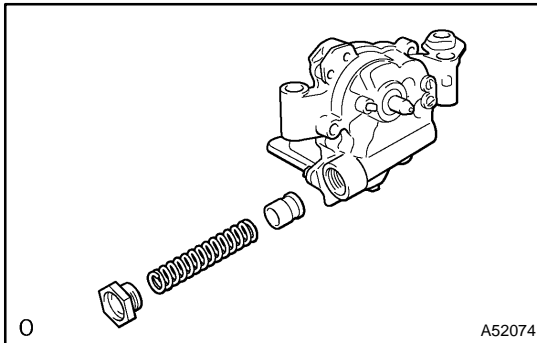
(a) Coat the drive rotor and driven rotor with engine oil.

(b) Place the drive and driven rotors into the pump body with the marks facing the pump body cover side.



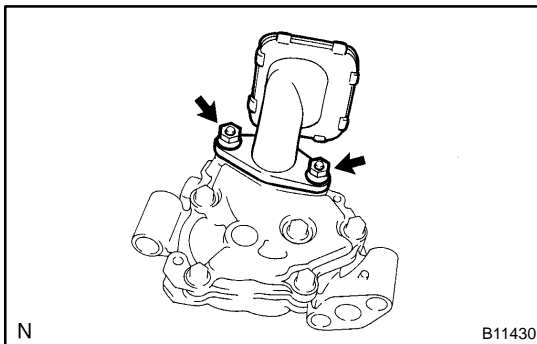
## 8. INSTALL OIL PUMP COVER

- (a) Install the pump body cover with the 5 bolts.  
**Torque: 8.8 N·m (90 kgf·cm, 79 in·lbf)**



## 9. INSTALL OIL PUMP RELIEF VALVE

- (a) Coat the relief valve with engine oil.  
 (b) Insert the relief valve and spring into the pump body hole.  
 (c) Using a socket wrench (27 mm), install the plug.



## 10. INSTALL OIL PUMP STRAINER SET

- (a) Place a new gasket on the oil pump.  
 (b) Install the oil strainer with the 2 nuts.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)**