

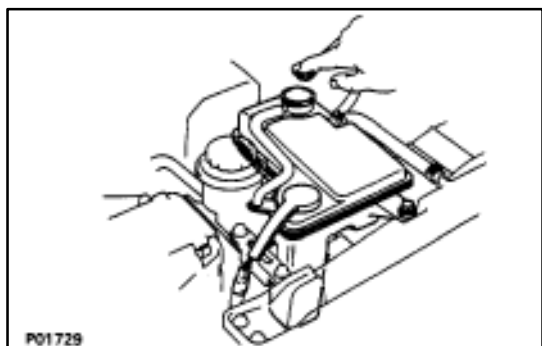
## ENGINE TUNE-UP

### INSPECTION OF ENGINE COOLANT

#### 1. INSPECT ENGINE COOLANT LEVEL AT RESERVOIR TANK

The coolant level should be above the "COLD LEVEL" at normal temperature (20°C (68°F)).

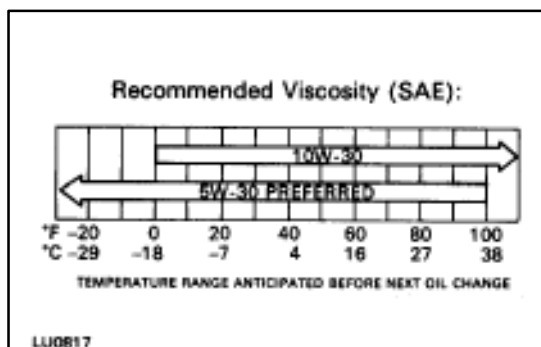
If low, check for leaks and add coolant up to the "COLD LEVEL".



#### 2. INSPECT ENGINE COOLANT QUALITY

There should be any excessive deposits of rust or scales around the radiator cap or reservoir tank filler hole, and the coolant should be free from oil.

If excessively dirty, clean the coolant passages and replace the coolant.



## INSPECTION OF ENGINE OIL

#### 1. INSPECT ENGINE OIL QUALITY

Check the oil for deterioration, entry of water, discoloring or thinning.

If the quality is poor, replace the oil.

Oil grade: API grade SG, Energy-Conserving II multigrade.

Recommended viscosity is as shown, with SAE 5W-30 being the preferred engine oil.

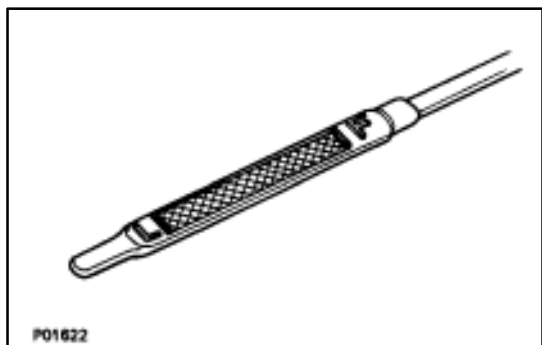
Drain and refill oil capacity:

w/ oil filter change

4.8 liter (5.1 US qts, 4.2 Imp. qts)

w/o oil filter change

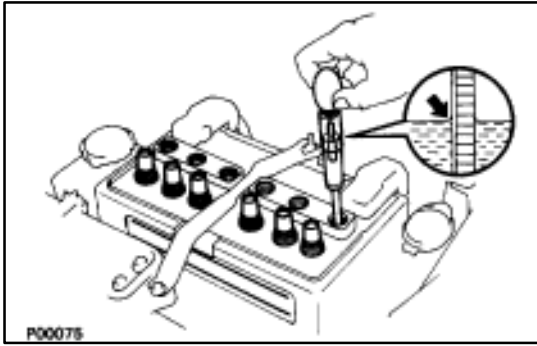
4.5 liter (4.8 US qts, 4.0 Imp. qts)



#### 2. INSPECT ENGINE OIL LEVEL

The oil level should be between the "L" and "F" marks on the dipstick.

If low, check for leakage and add oil up to "F" mark.



## INSPECTION OF BATTERY

### 1. INSPECT BATTERY SPECIFIC GRAVITY AND ELECTROLYTE LEVEL

(a) Check the specific gravity of each cell.

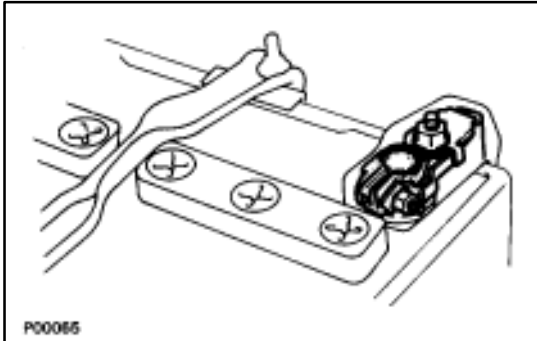
**Standard specific gravity:**

**1.27–1.29 when fully charged at 20°C(68°F)**

If not within specification, charge the battery.

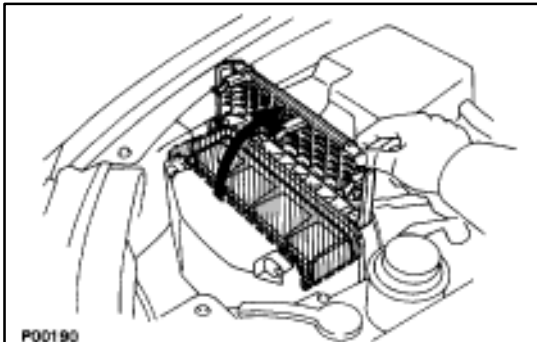
(b) Check the electrolyte quantity of each cell.

If insufficient, refill with distilled (or purified) water.



### 2. CHECK BATTERY TERMINALS

Check that the battery terminals are not loose or corroded.

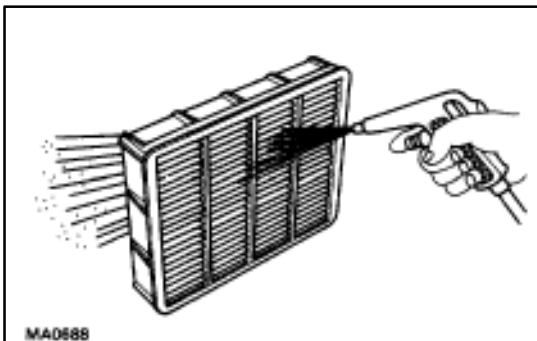
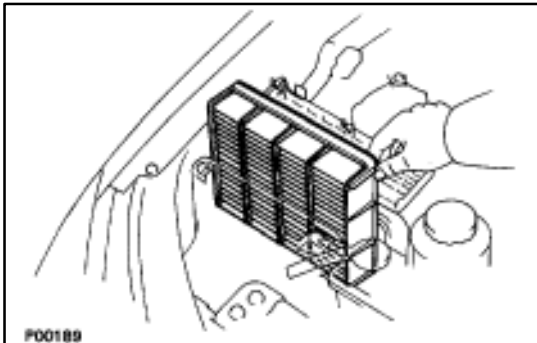


## INSPECTION AND CLEANING OF AIR FILTER

### 1. REMOVE AIR FILTER

(a) Open the air cleaner cap.

(b) Remove the air filter.



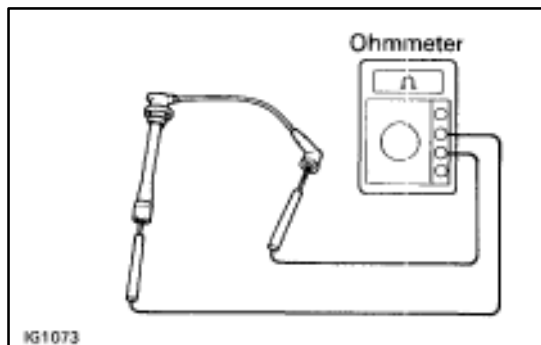
### 2. INSPECT AIR FILTER

(a) Visually check that the air filter is not excessively damaged or oily.

(b) Clean the air filter with compressed air.

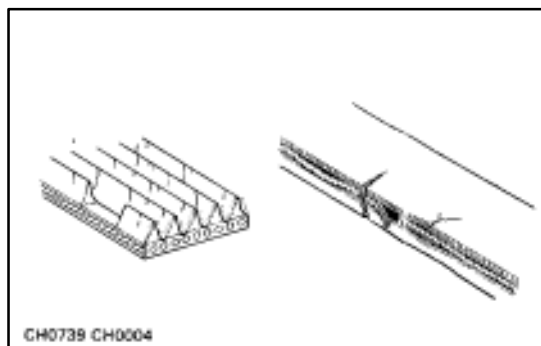
First blow from the inside thoroughly, then blow off the outside of the air filter.

### 3. REINSTALL AIR FILTER



## INSPECTION OF HIGH-TENSION CORDS

1. **REMOVE HIGH-TENSION CORDS** (See page [IG-11](#))
2. **INSPECT HIGH-TENSION CORDS**
  - (b) Using an ohmmeter, measure the resistance.  
**Maximum resistance: 25 kΩ per cord**  
 If the resistance is greater than maximum, replace the cord.
3. **REINSTALL HIGH-TENSION CORDS** (See page [IG-16](#))



## INSPECTION OF DRIVE BELT

### INSPECT DRIVE BELT

**HINT:** A belt tensioner is used, so checking the belt tension is not necessary.

- (a) Visually check the drive belt for excessive wear, frayed cords etc.

If necessary, replace the drive belt.

**HINT:**

- Cracks on rib side of a drive belt are considered acceptable. If the drive belt has chunks missing from the ribs, it should be replaced.
- The drive belt tension can be released by turning the belt tensioner counterclockwise. The pulley bolt for the belt tensioner has a left-hand thread.
- (b) Check the belt tensioner operation.
  - Check that the belt tensioner moves downward when the drive belt is pressed down at the points indicated in the illustration with approx. 98 N (10 kgf, 22.0 lbf) of force.
  - Check the alignment of the belt tensioner pulley to make sure the drive belt has not slipped off the pulley.

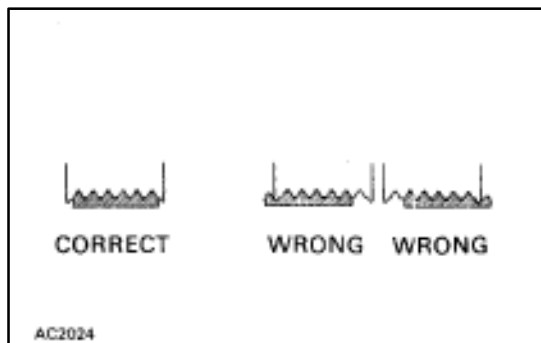
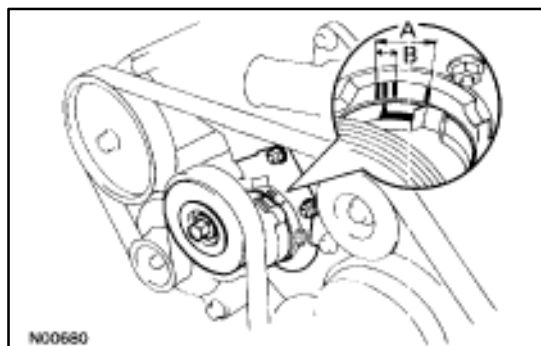
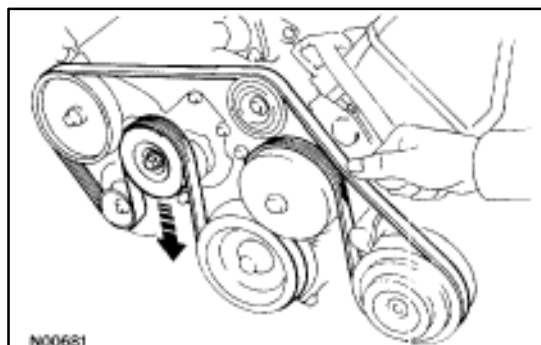
If necessary, replace the belt tensioner.

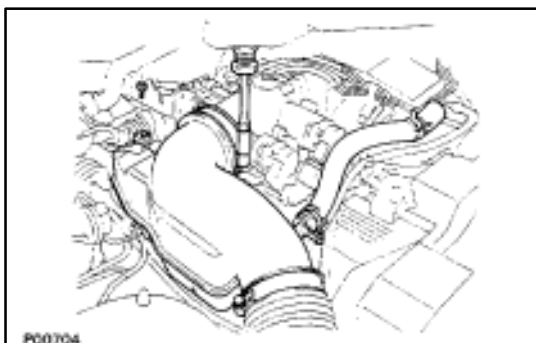
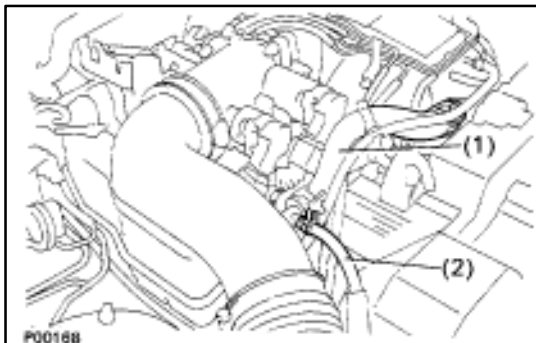
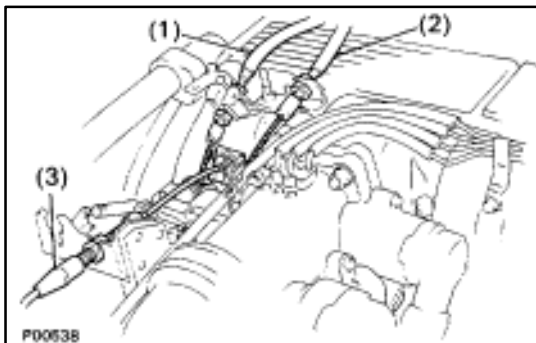
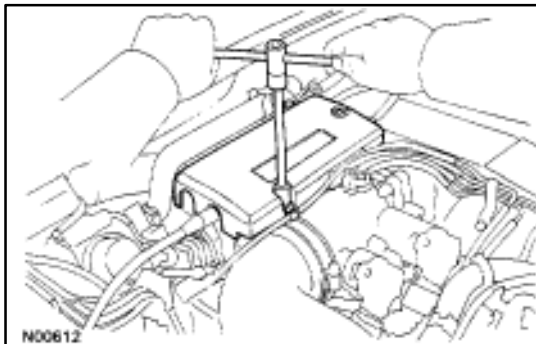
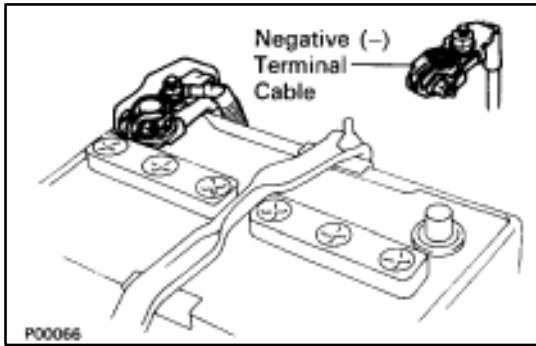
- Check that the arrow mark on the belt tensioner falls within area A of the scale.

If it is outside area A, replace the drive belt.

**HINT:**

- When a new belt is installed, it should lie within area B. If not, the drive belt is not correct.
- After installing a belt, check that it fits properly in the ribbed grooves.
- Check by hand to confirm that the belt has not slipped out of the groove on the bottom of the pulley.





## INSPECTION AND ADJUSTMENT OF VALVE CLEARANCE

HINT: Inspect and adjust the valve clearance when the engine is cold.

### 1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

**CAUTION:** Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

### 2. DRAIN ENGINE COOLANT (See page [CO-6](#))

### 3. REMOVE THROTTLE BODY COVER

- Remove the mounting cap nut.
- Loosen the two bolts, and remove the throttle body cover.

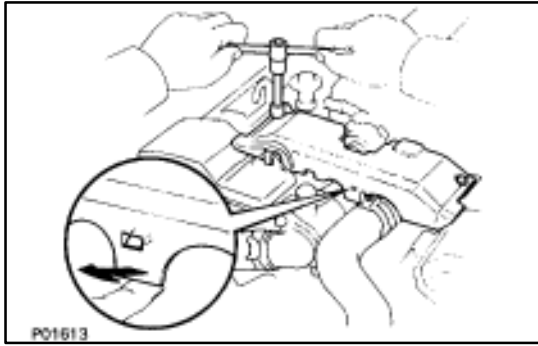
### 4. DISCONNECT CONTROL CABLES FROM THROTTLE BODY

Disconnect the following cables:

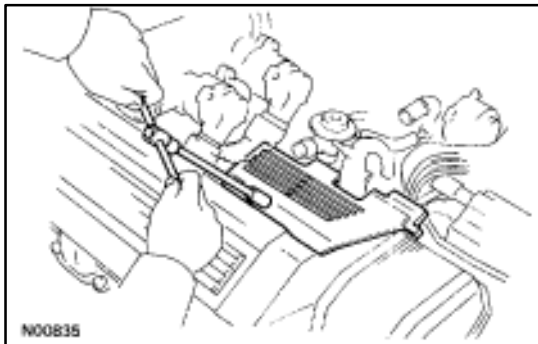
- Accelerator cable
- A/T throttle control cable
- (w/ Cruise Control System)  
Cruise control actuator cable

### 5. REMOVE INTAKE AIR CONNECTOR

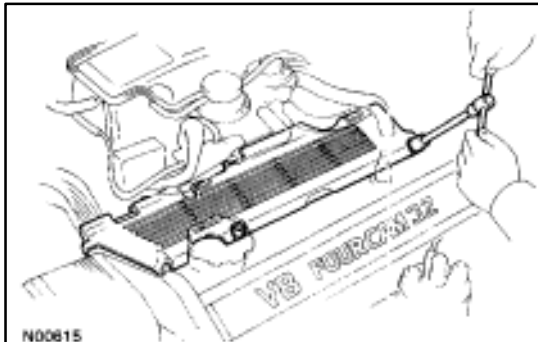
- Disconnect the following hoses:
  - Air hose from ISC valve
  - Air hose (from PS air control valve) from intake air connector
- Remove the bolt holding the intake air connector to the cylinder head cover.
- Loosen the two hose clamps.
- Disconnect the intake air connector from the throttle body and air cleaner hose, and remove the throttle body.

**6. REMOVE UPPER HIGH-TENSION CORD COVER**

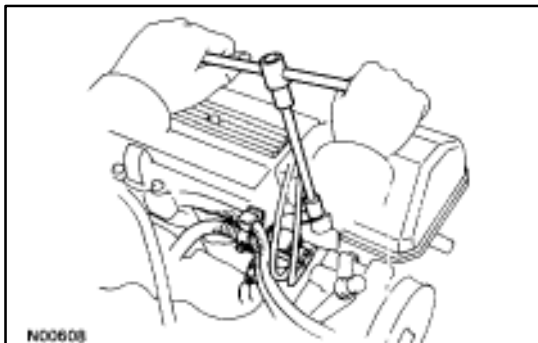
- (a) Remove the two mounting bolts.
- (b) Disconnect the front side claw groove of the cord cover from the claw of the lower cover, and remove the cord cover.

**7. REMOVE RH ENGINE WIRE COVER**

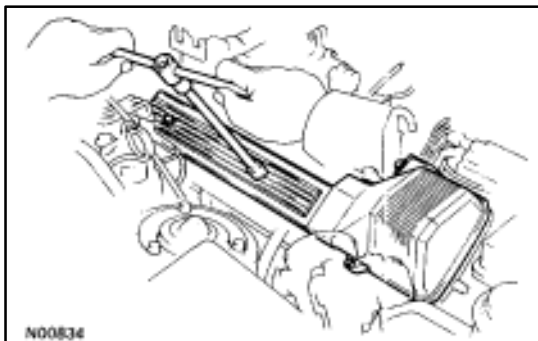
Remove the bolt and engine wire cover.

**8. REMOVE LH ENGINE WIRE COVER**

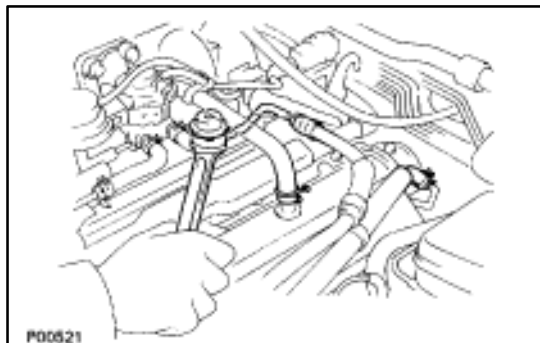
Remove the two bolts and engine wire cover.

**9. REMOVE VSV FOR EVAP SYSTEM**

Remove the two bolts, and disconnect the VSV from cylinder head and timing belt cover.

**10. REMOVE RH NO.3 TIMING BELT COVER**

Remove the three bolts and timing belt cover.

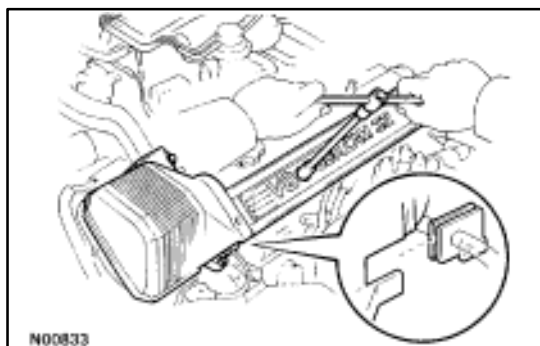


### 11. DISCONNECT FUEL INLET HOSE FROM LH DELIVERY PIPE

Remove the pulsation damper and two gaskets, and disconnect the inlet hose.

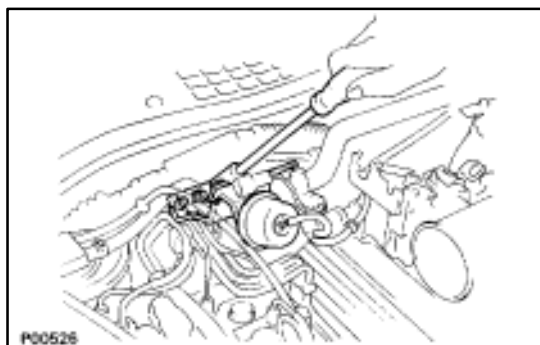
### 12. DISCONNECT FUEL RETURN HOSE FROM FUEL RETURN PIPE

### 13. DISCONNECT PCV HOSE FROM LH CYLINDER HEAD



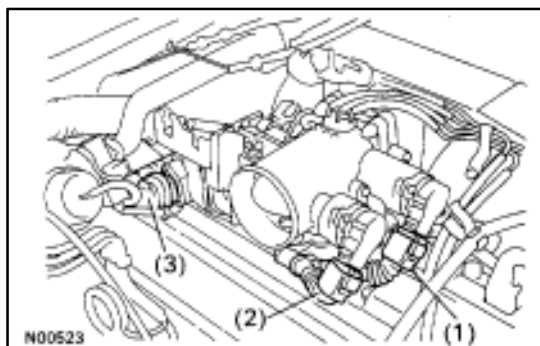
### 14. REMOVE LH NO.3 TIMING BELT COVER

- (a) Remove the four mounting bolts.
- (b) Disconnect the cord grommet from the timing belt cover, and remove the timing belt cover.
- (c) Remove the cord grommet from the high-tension cord.



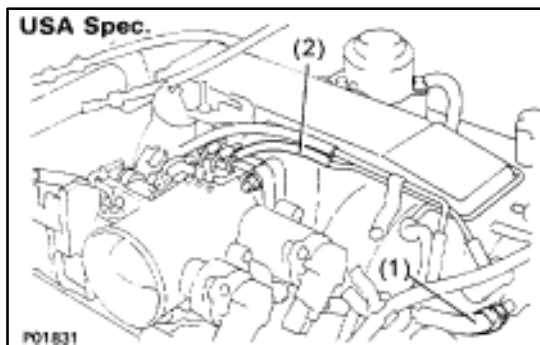
### 15. DISCONNECT HEATER WATER VALVE FROM BODY

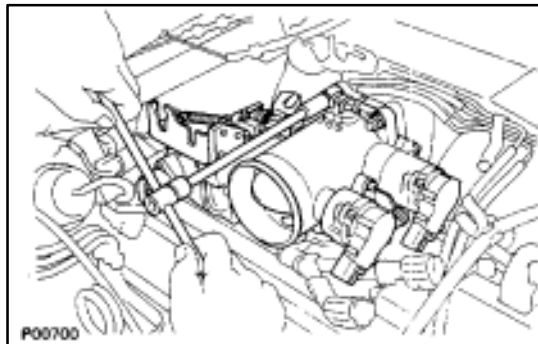
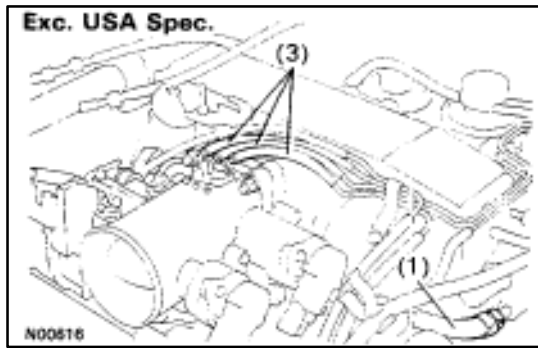
- (a) Disconnect the VSV connector.
- (b) Remove the bolt holding the engine wire clamp to the water valve bracket.
- (c) Remove the two bolts, and disconnect the water valve and bracket assembly.



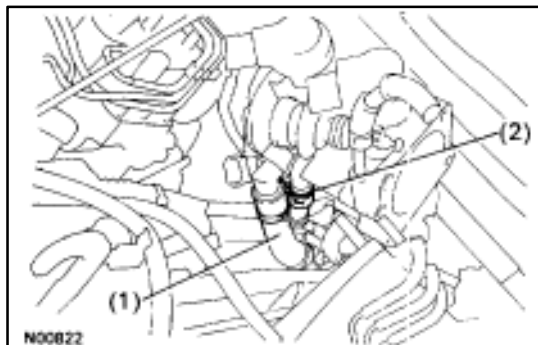
### 16. REMOVE THROTTLE BODY

- (a) Disconnect the following connectors:
  - (1) Throttle position sensor connector
  - (2) (w/ TRAC)  
Sub-throttle position sensor connector
  - (3) (w/ TRAC)  
Sub-throttle actuator connector
- (b) Disconnect the following hoses:
  - (1) Water by-pass hose from ISC valve
  - (2) (USA Spec.)  
Vacuum hose from throttle body
  - (3) (Exc. USA Spec.)  
Three vacuum hoses from throttle body

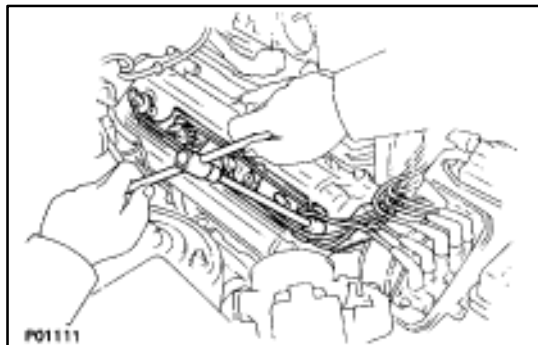




- (c) Remove the two bolts and two nuts, disconnect the throttle body from the air intake chamber.

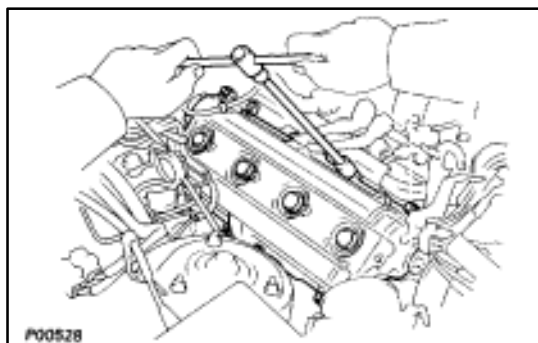


- (d) Disconnect the following hoses, and remove the throttle body:
- (1) PCV hose from throttle body
  - (2) Water by-pass hose from throttle body
- (e) Remove the throttle body gasket.

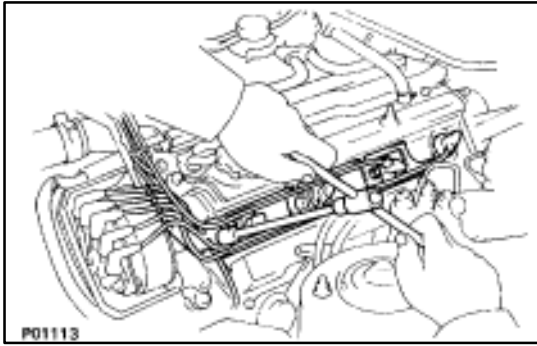


## 17. REMOVE RH CYLINDER HEAD COVER

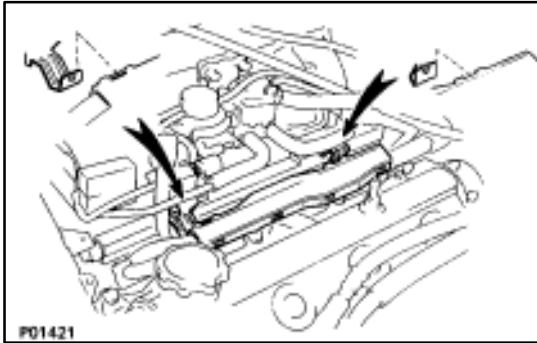
- (a) Remove the two bolts holding the cord clamp to the cylinder head.
- (b) Disconnect the high-tension cords from the spark plugs.
- (c) Disconnect the high-tension cords from the front high-tension cord clamp.



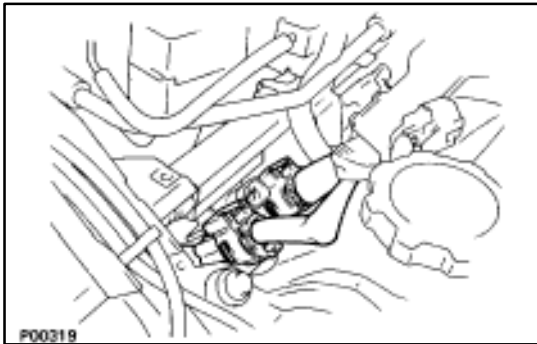
- (d) Remove the eight bolts, seal washers, cylinder head cover and gasket.

**16. REMOVE LH CYLINDER HEAD COVER**

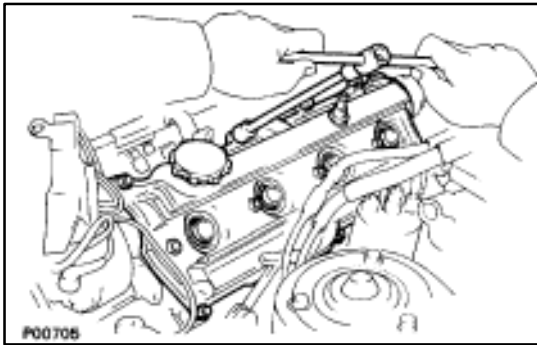
- (a) Remove the two bolts holding the high-tension cord clamp to the cylinder head.
- (b) Disconnect the high-tension cords from the spark plugs.
- (c) Disconnect the high-tension cords from the front high-tension cord clamp.



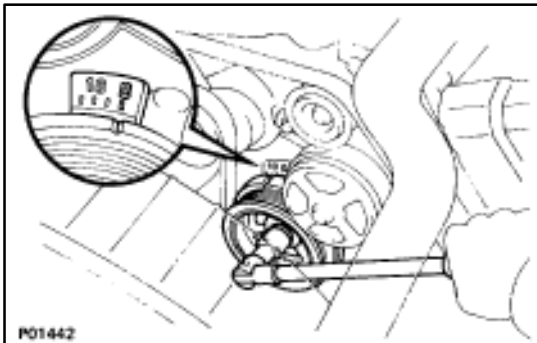
- (d) Disconnect the engine wire from the two wire clamps on the LH delivery pipe.
- (e) Disconnect the four injector connectors.



- (f) Disconnect the two engine wire connectors.

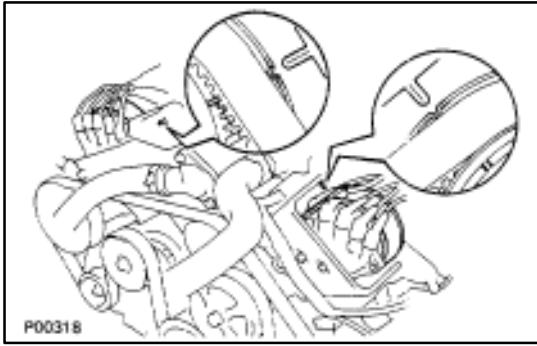


- (g) Remove the eight bolts, seal washers, cylinder head cover and gasket.

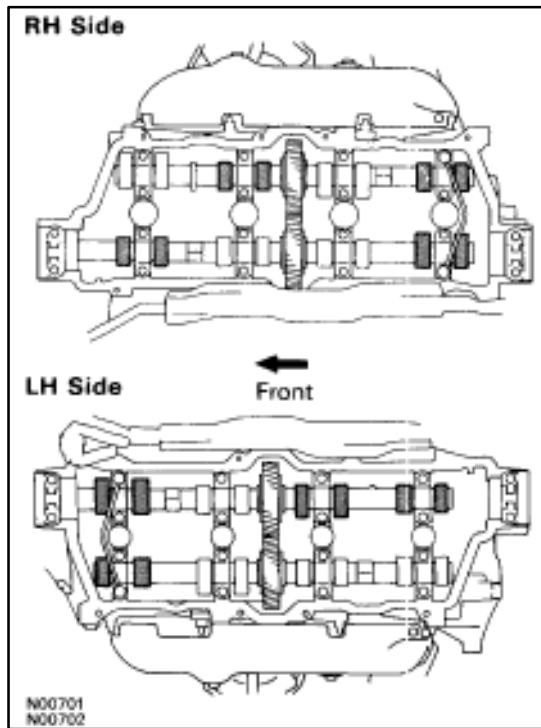
**19. SET NO.1 CYLINDER TO TDC/COMPRESSION**

- (a) Turn the crankshaft pulley, and align its groove with the timing mark "0" of the No.1 timing belt cover.





- (b) Check that the timing marks of the camshaft timing pulleys and timing belt rear plates aligned.  
If not, turn the crankshaft one revolution (360°) and align the mark as above.



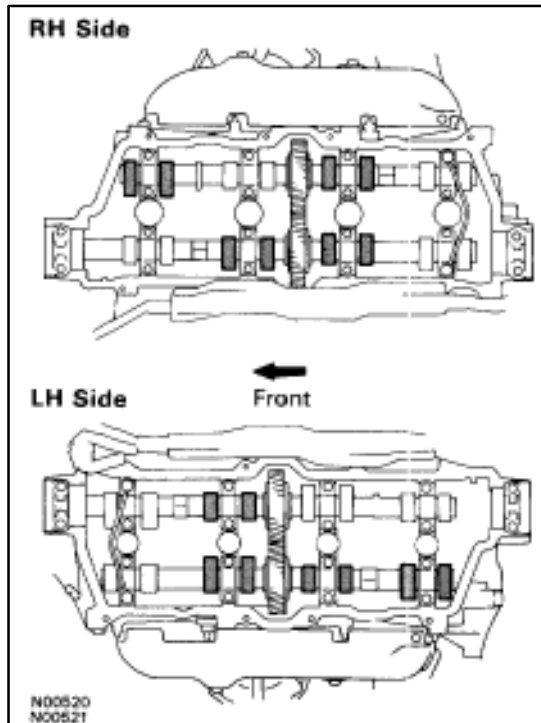
## 20. INSPECT VALVE CLEARANCE

- (a) Check only those valves indicated.
- Using a feeler gauge, measure the clearance between the valve lifter and camshaft.
  - Record the out-of-specification valve clearance measurements. They will be used later to determine the required replacement adjusting shim.

### Valve clearance (Cold):

Intake 0.15–0.25 mm (0.006–0.010 in.)

Exhaust 0.25–0.35 mm (0.010–0.014 in.)



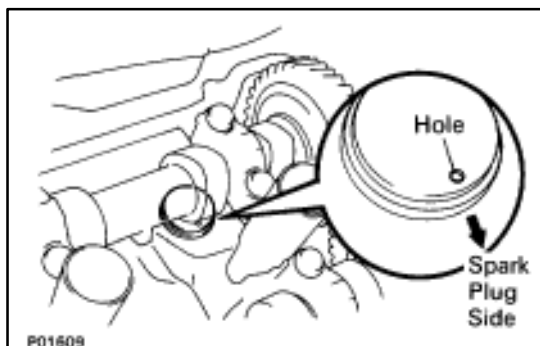
- (b) Turn the crankshaft one revolution (360°), and align the mark as above. (See procedure step in 19 (a))
- (c) Check only the valves indicated as shown. Measure the valve clearance.  
(See procedure in step (a))



## 21. REMOVE THEFT DETERRENT HORN

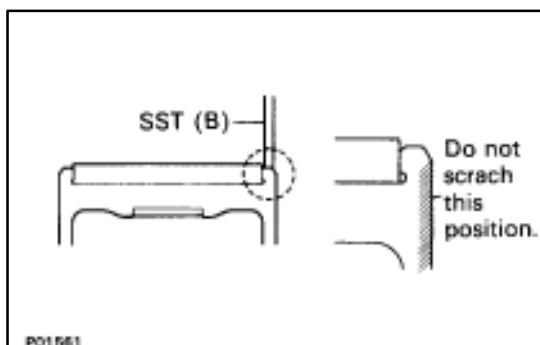
- (a) Disconnect the connector.
- (b) Remove the bolt and theft deterrent horn.

HINT: Remove the deterrent horn when the valve clearance is adjusted for the front portion of the exhaust camshaft on the LH cylinder head.



## 22. ADJUST VALVE CLEARANCE

- (a) Remove the adjusting shim.
  - Turn the crankshaft, and position the cam lobe of the camshaft on the adjusting valve upward.
  - Position the hole of the adjusting shim toward the spark plug side.



- Press down the valve lifter with SST (A), and place SST (B) between the camshaft and valve lifter flange. Remove SST (A).

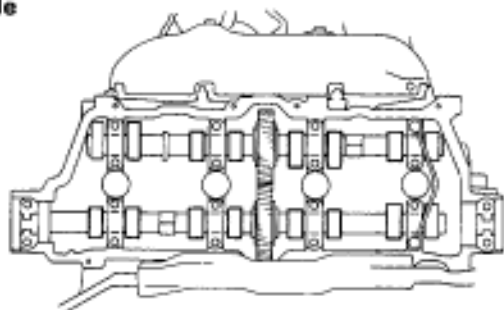
SST 09248-55011

(09248-05011 (A), 09248-05021 (B))

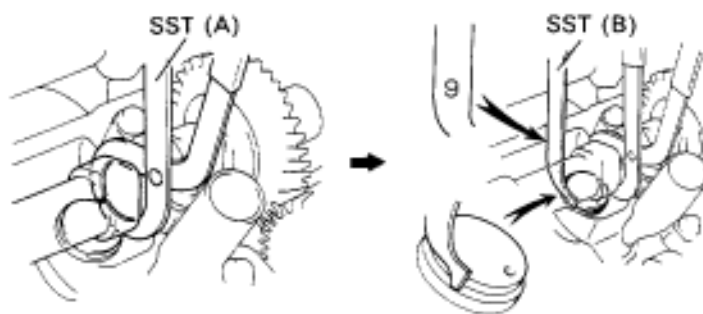
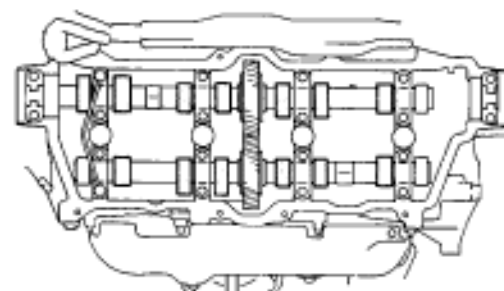
**NOTICE:** The valve lifter is made of aluminum, which is easily scratched. So when setting SST (B), take care not to scratch the face of the valve lifter.

### Setting Method for SST for Except Camshaft End Portions

RH Side



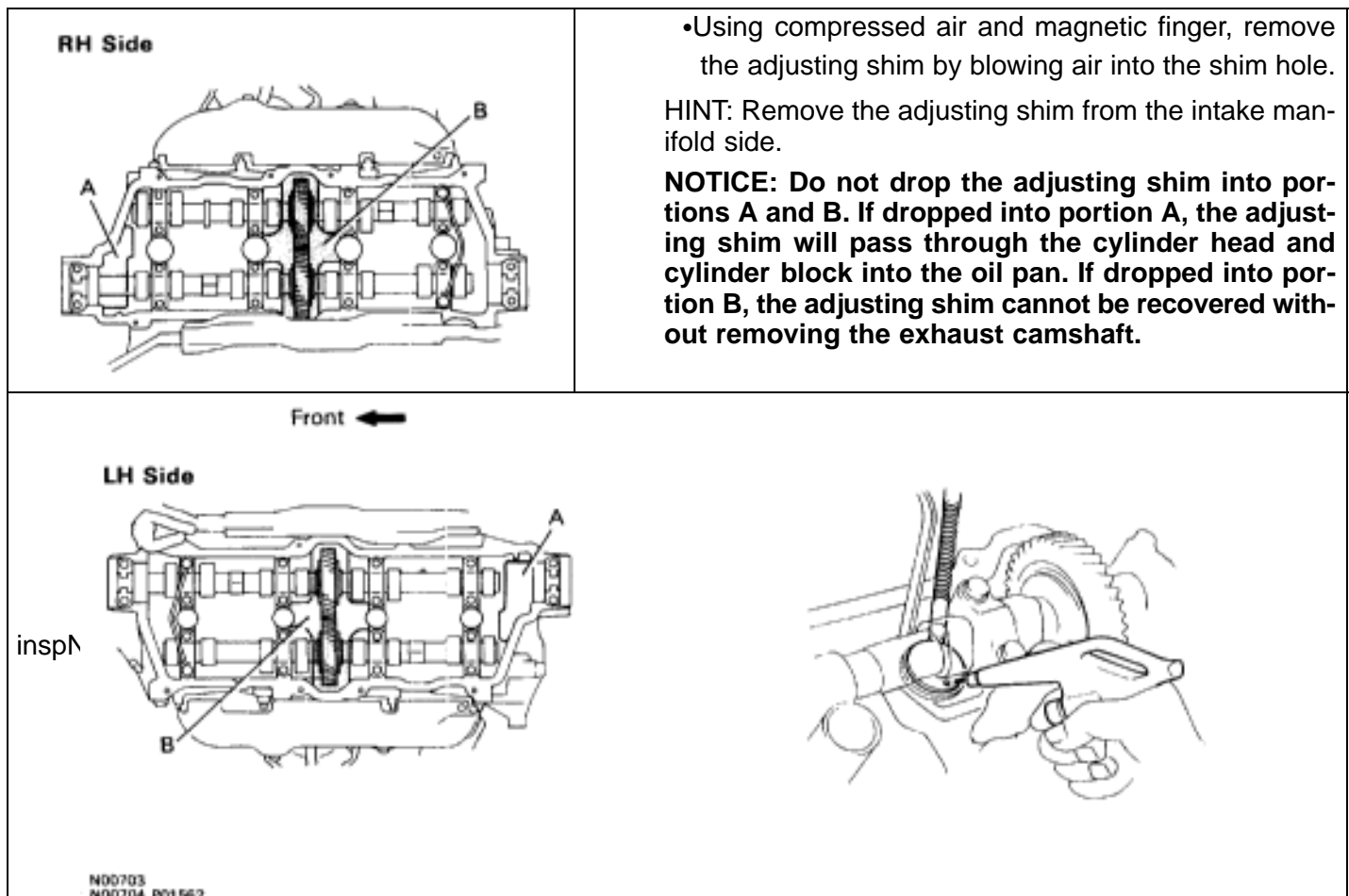
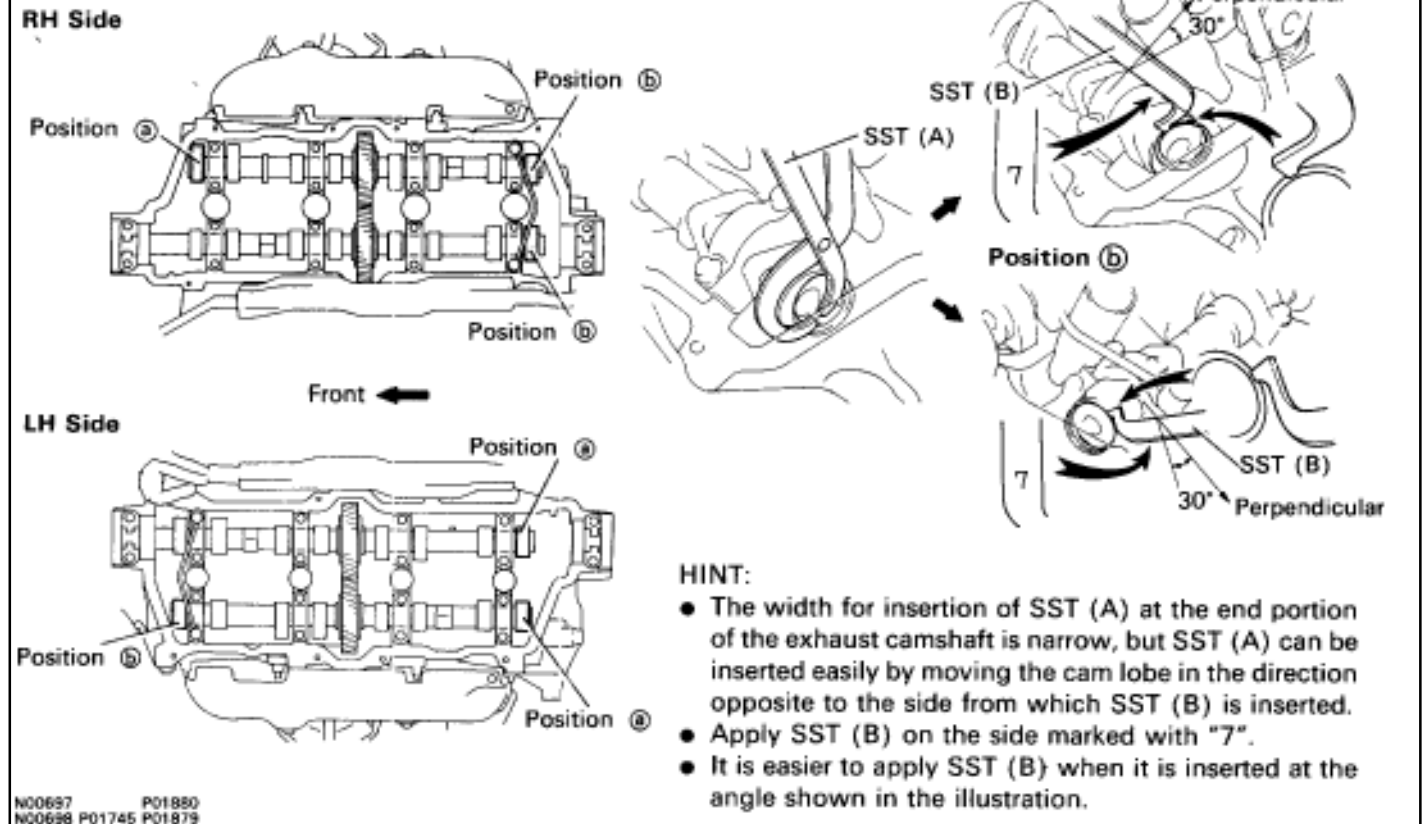
LH Side

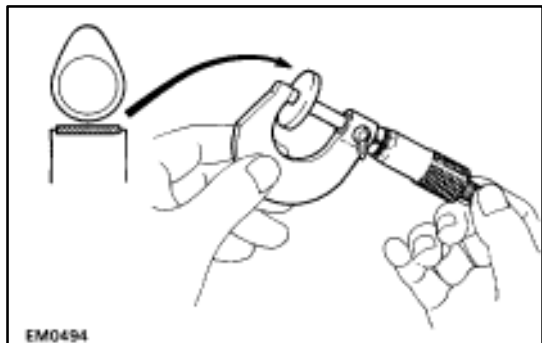


HINT: Apply SST (B) on the side marked with "9".

N00699  
N00700 P01746 P01747

## Setting Method for SST for Camshaft End Portions





(b) Determine the replacement adjusting shim size following Formula or Charts:

- Using a micrometer, measure the thickness of the removed shim.
- Calculate the thickness of a new shim so the valve clearance comes within specified value.

T \_\_\_\_\_ Thickness of used shim

A \_\_\_\_\_ Measured valve clearance

N \_\_\_\_\_ Thickness of new shim

Intake  $N = T + (A - 0.20 \text{ mm (0.008 in.)})$

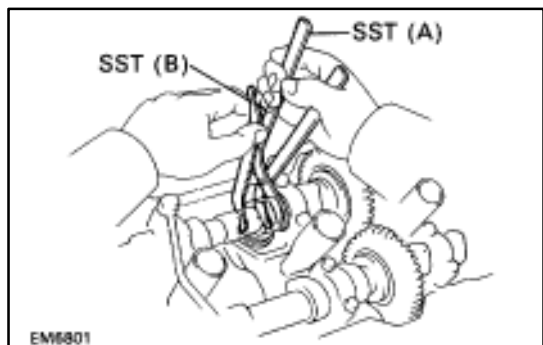
Exhaust  $N = T + (A - 0.30 \text{ mm (0.012 in.)})$

- Select a new shim with a thickness as close as possible to the calculated values.

HINT: Shims are available in thirty-three sizes in increments of 0.025 mm (0.0010 in.), from 2.50 mm (0.0984 in.) to 3.30 mm (0.1299 in.).

(c) Install a new adjusting shim.

- Place a new adjusting shim on the valve lifter.



- Press down the valve lifter with SST (A), and remove SST (B).

SST 09248-55011

(d) Recheck the valve clearance.

**Intake valve clearance (Cold):**

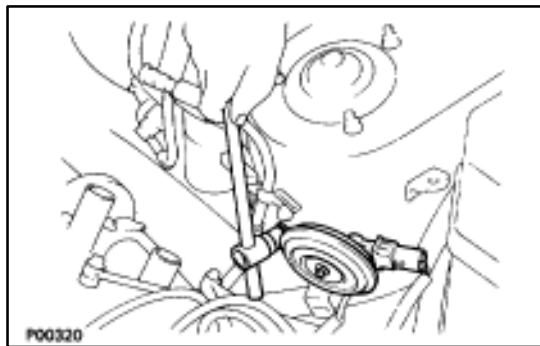
**EXAMPLE:** The 2.800 mm (0.1102 in.) shim is installed, and the measured clearance is 0.440 mm (0.0173 in.). Replace the 2.800 mm (0.1102 in.) shim with a No.48 shim.

New shim thickness						mm (in.)
Shim No.	Thickness	Shim No.	Thickness	Shim No.	Thickness	
01	2.500 (0.0984)	19	2.775 (0.1093)	48	3.050 (0.1201)	
62	2.525 (0.0994)	23	2.800 (0.1102)	75	3.075 (0.1211)	
63	2.550 (0.1004)	70	2.825 (0.1112)	81	3.100 (0.1220)	
64	2.575 (0.1014)	28	2.850 (0.1122)	76	3.125 (0.1230)	
06	2.600 (0.1024)	71	2.875 (0.1132)	77	3.150 (0.1240)	
65	2.625 (0.1033)	33	2.900 (0.1142)	78	3.175 (0.1250)	
66	2.650 (0.1043)	72	2.925 (0.1152)	56	3.200 (0.1260)	
67	2.675 (0.1053)	38	2.950 (0.1161)	79	3.225 (0.1270)	
13	2.700 (0.1063)	73	2.975 (0.1171)	80	3.250 (0.1280)	
68	2.725 (0.1073)	43	3.000 (0.1181)	81	3.275 (0.1288)	
18	2.750 (0.1083)	74	3.025 (0.1191)	61	3.300 (0.1299)	

# Adjusting Shim Selection Chart (Exhaust)

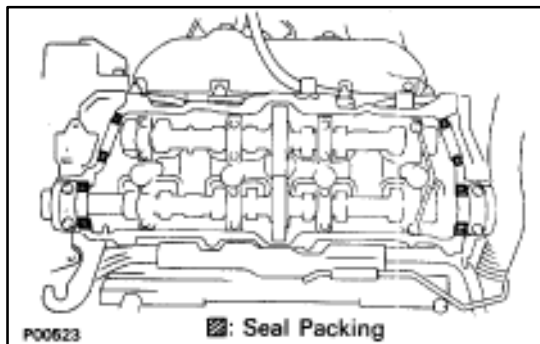
Measured clearance mm (in.)	Installed shim thickness mm (in.)	Shim No.
0.000 - 0.030 (0.0000 - 0.0012)	0.000 - 0.030 (0.0000 - 0.0012)	01
0.031 - 0.050 (0.0012 - 0.0020)	0.031 - 0.050 (0.0012 - 0.0020)	01
0.051 - 0.070 (0.0020 - 0.0028)	0.051 - 0.070 (0.0020 - 0.0028)	01
0.071 - 0.090 (0.0028 - 0.0035)	0.071 - 0.090 (0.0028 - 0.0035)	01
0.091 - 0.110 (0.0035 - 0.0043)	0.091 - 0.110 (0.0035 - 0.0043)	01
0.111 - 0.130 (0.0043 - 0.0051)	0.111 - 0.130 (0.0043 - 0.0051)	01
0.131 - 0.150 (0.0051 - 0.0059)	0.131 - 0.150 (0.0051 - 0.0059)	01
0.151 - 0.170 (0.0059 - 0.0067)	0.151 - 0.170 (0.0059 - 0.0067)	01
0.171 - 0.190 (0.0067 - 0.0075)	0.171 - 0.190 (0.0067 - 0.0075)	01
0.191 - 0.210 (0.0075 - 0.0083)	0.191 - 0.210 (0.0075 - 0.0083)	01
0.211 - 0.230 (0.0083 - 0.0091)	0.211 - 0.230 (0.0083 - 0.0091)	01
0.231 - 0.249 (0.0091 - 0.0098)	0.231 - 0.249 (0.0091 - 0.0098)	01
0.250 - 0.269 (0.0098 - 0.0106)	0.250 - 0.269 (0.0098 - 0.0106)	01
0.270 - 0.289 (0.0106 - 0.0114)	0.270 - 0.289 (0.0106 - 0.0114)	01
0.290 - 0.309 (0.0114 - 0.0122)	0.290 - 0.309 (0.0114 - 0.0122)	01
0.310 - 0.329 (0.0122 - 0.0130)	0.310 - 0.329 (0.0122 - 0.0130)	01
0.330 - 0.349 (0.0130 - 0.0138)	0.330 - 0.349 (0.0130 - 0.0138)	01
0.350 - 0.369 (0.0138 - 0.0146)	0.350 - 0.369 (0.0138 - 0.0146)	01
0.370 - 0.389 (0.0146 - 0.0154)	0.370 - 0.389 (0.0146 - 0.0154)	01
0.390 - 0.409 (0.0154 - 0.0162)	0.390 - 0.409 (0.0154 - 0.0162)	01
0.410 - 0.429 (0.0162 - 0.0170)	0.410 - 0.429 (0.0162 - 0.0170)	01
0.430 - 0.449 (0.0170 - 0.0178)	0.430 - 0.449 (0.0170 - 0.0178)	01
0.450 - 0.469 (0.0178 - 0.0186)	0.450 - 0.469 (0.0178 - 0.0186)	01
0.470 - 0.489 (0.0186 - 0.0194)	0.470 - 0.489 (0.0186 - 0.0194)	01
0.490 - 0.509 (0.0194 - 0.0202)	0.490 - 0.509 (0.0194 - 0.0202)	01
0.510 - 0.529 (0.0202 - 0.0210)	0.510 - 0.529 (0.0202 - 0.0210)	01
0.530 - 0.549 (0.0210 - 0.0218)	0.530 - 0.549 (0.0210 - 0.0218)	01
0.550 - 0.569 (0.0218 - 0.0226)	0.550 - 0.569 (0.0218 - 0.0226)	01
0.570 - 0.589 (0.0226 - 0.0234)	0.570 - 0.589 (0.0226 - 0.0234)	01
0.590 - 0.609 (0.0234 - 0.0242)	0.590 - 0.609 (0.0234 - 0.0242)	01
0.610 - 0.629 (0.0242 - 0.0250)	0.610 - 0.629 (0.0242 - 0.0250)	01
0.630 - 0.649 (0.0250 - 0.0258)	0.630 - 0.649 (0.0250 - 0.0258)	01
0.650 - 0.669 (0.0258 - 0.0266)	0.650 - 0.669 (0.0258 - 0.0266)	01
0.670 - 0.689 (0.0266 - 0.0274)	0.670 - 0.689 (0.0266 - 0.0274)	01
0.690 - 0.709 (0.0274 - 0.0282)	0.690 - 0.709 (0.0274 - 0.0282)	01
0.710 - 0.729 (0.0282 - 0.0290)	0.710 - 0.729 (0.0282 - 0.0290)	01
0.730 - 0.749 (0.0290 - 0.0298)	0.730 - 0.749 (0.0290 - 0.0298)	01
0.750 - 0.769 (0.0298 - 0.0306)	0.750 - 0.769 (0.0298 - 0.0306)	01
0.770 - 0.789 (0.0306 - 0.0314)	0.770 - 0.789 (0.0306 - 0.0314)	01
0.790 - 0.809 (0.0314 - 0.0322)	0.790 - 0.809 (0.0314 - 0.0322)	01
0.810 - 0.829 (0.0322 - 0.0330)	0.810 - 0.829 (0.0322 - 0.0330)	01
0.830 - 0.849 (0.0330 - 0.0338)	0.830 - 0.849 (0.0330 - 0.0338)	01
0.850 - 0.869 (0.0338 - 0.0346)	0.850 - 0.869 (0.0338 - 0.0346)	01
0.870 - 0.889 (0.0346 - 0.0354)	0.870 - 0.889 (0.0346 - 0.0354)	01
0.890 - 0.909 (0.0354 - 0.0362)	0.890 - 0.909 (0.0354 - 0.0362)	01
0.910 - 0.929 (0.0362 - 0.0370)	0.910 - 0.929 (0.0362 - 0.0370)	01
0.930 - 0.949 (0.0370 - 0.0378)	0.930 - 0.949 (0.0370 - 0.0378)	01
0.950 - 0.969 (0.0378 - 0.0386)	0.950 - 0.969 (0.0378 - 0.0386)	01
0.970 - 0.989 (0.0386 - 0.0394)	0.970 - 0.989 (0.0386 - 0.0394)	01
0.990 - 1.009 (0.0394 - 0.0402)	0.990 - 1.009 (0.0394 - 0.0402)	01
1.010 - 1.029 (0.0402 - 0.0410)	1.010 - 1.029 (0.0402 - 0.0410)	01
1.030 - 1.049 (0.0410 - 0.0418)	1.030 - 1.049 (0.0410 - 0.0418)	01
1.050 - 1.069 (0.0418 - 0.0426)	1.050 - 1.069 (0.0418 - 0.0426)	01
1.070 - 1.089 (0.0426 - 0.0434)	1.070 - 1.089 (0.0426 - 0.0434)	01
1.090 - 1.109 (0.0434 - 0.0442)	1.090 - 1.109 (0.0434 - 0.0442)	01
1.110 - 1.129 (0.0442 - 0.0450)	1.110 - 1.129 (0.0442 - 0.0450)	01
1.130 - 1.149 (0.0450 - 0.0458)	1.130 - 1.149 (0.0450 - 0.0458)	01
1.150 - 1.169 (0.0458 - 0.0466)	1.150 - 1.169 (0.0458 - 0.0466)	01
1.170 - 1.189 (0.0466 - 0.0474)	1.170 - 1.189 (0.0466 - 0.0474)	01
1.190 - 1.209 (0.0474 - 0.0482)	1.190 - 1.209 (0.0474 - 0.0482)	01
1.210 - 1.229 (0.0482 - 0.0490)	1.210 - 1.229 (0.0482 - 0.0490)	01
1.230 - 1.249 (0.0490 - 0.0498)	1.230 - 1.249 (0.0490 - 0.0498)	01
1.250 - 1.269 (0.0498 - 0.0506)	1.250 - 1.269 (0.0498 - 0.0506)	01
1.270 - 1.289 (0.0506 - 0.0514)	1.270 - 1.289 (0.0506 - 0.0514)	01
1.290 - 1.309 (0.0514 - 0.0522)	1.290 - 1.309 (0.0514 - 0.0522)	01
1.310 - 1.329 (0.0522 - 0.0530)	1.310 - 1.329 (0.0522 - 0.0530)	01
1.330 - 1.349 (0.0530 - 0.0538)	1.330 - 1.349 (0.0530 - 0.0538)	01
1.350 - 1.369 (0.0538 - 0.0546)	1.350 - 1.369 (0.0538 - 0.0546)	01
1.370 - 1.389 (0.0546 - 0.0554)	1.370 - 1.389 (0.0546 - 0.0554)	01
1.390 - 1.409 (0.0554 - 0.0562)	1.390 - 1.409 (0.0554 - 0.0562)	01
1.410 - 1.429 (0.0562 - 0.0570)	1.410 - 1.429 (0.0562 - 0.0570)	01
1.430 - 1.449 (0.0570 - 0.0578)	1.430 - 1.449 (0.0570 - 0.0578)	01
1.450 - 1.469 (0.0578 - 0.0586)	1.450 - 1.469 (0.0578 - 0.0586)	01
1.470 - 1.489 (0.0586 - 0.0594)	1.470 - 1.489 (0.0586 - 0.0594)	01
1.490 - 1.509 (0.0594 - 0.0602)	1.490 - 1.509 (0.0594 - 0.0602)	01
1.510 - 1.529 (0.0602 - 0.0610)	1.510 - 1.529 (0.0602 - 0.0610)	01
1.530 - 1.549 (0.0610 - 0.0618)	1.530 - 1.549 (0.0610 - 0.0618)	01
1.550 - 1.569 (0.0618 - 0.0626)	1.550 - 1.569 (0.0618 - 0.0626)	01
1.570 - 1.589 (0.0626 - 0.0634)	1.570 - 1.589 (0.0626 - 0.0634)	01
1.590 - 1.609 (0.0634 - 0.0642)	1.590 - 1.609 (0.0634 - 0.0642)	01
1.610 - 1.629 (0.0642 - 0.0650)	1.610 - 1.629 (0.0642 - 0.0650)	01
1.630 - 1.649 (0.0650 - 0.0658)	1.630 - 1.649 (0.0650 - 0.0658)	01
1.650 - 1.669 (0.0658 - 0.0666)	1.650 - 1.669 (0.0658 - 0.0666)	01
1.670 - 1.689 (0.0666 - 0.0674)	1.670 - 1.689 (0.0666 - 0.0674)	01
1.690 - 1.709 (0.0674 - 0.0682)	1.690 - 1.709 (0.0674 - 0.0682)	01
1.710 - 1.729 (0.0682 - 0.0690)	1.710 - 1.729 (0.0682 - 0.0690)	01
1.730 - 1.749 (0.0690 - 0.0698)	1.730 - 1.749 (0.0690 - 0.0698)	01
1.750 - 1.769 (0.0698 - 0.0706)	1.750 - 1.769 (0.0698 - 0.0706)	01
1.770 - 1.789 (0.0706 - 0.0714)	1.770 - 1.789 (0.0706 - 0.0714)	01
1.790 - 1.809 (0.0714 - 0.0722)	1.790 - 1.809 (0.0714 - 0.0722)	01
1.810 - 1.829 (0.0722 - 0.0730)	1.810 - 1.829 (0.0722 - 0.0730)	01
1.830 - 1.849 (0.0730 - 0.0738)	1.830 - 1.849 (0.0730 - 0.0738)	01
1.850 - 1.869 (0.0738 - 0.0746)	1.850 - 1.869 (0.0738 - 0.0746)	01
1.870 - 1.889 (0.0746 - 0.0754)	1.870 - 1.889 (0.0746 - 0.0754)	01
1.890 - 1.909 (0.0754 - 0.0762)	1.890 - 1.909 (0.0754 - 0.0762)	01
1.910 - 1.929 (0.0762 - 0.0770)	1.910 - 1.929 (0.0762 - 0.0770)	01
1.930 - 1.949 (0.0770 - 0.0778)	1.930 - 1.949 (0.0770 - 0.0778)	01
1.950 - 1.969 (0.0778 - 0.0786)	1.950 - 1.969 (0.0778 - 0.0786)	01
1.970 - 1.989 (0.0786 - 0.0794)	1.970 - 1.989 (0.0786 - 0.0794)	01
1.990 - 2.009 (0.0794 - 0.0802)	1.990 - 2.009 (0.0794 - 0.0802)	01
2.010 - 2.029 (0.0802 - 0.0810)	2.010 - 2.029 (0.0802 - 0.0810)	01
2.030 - 2.049 (0.0810 - 0.0818)	2.030 - 2.049 (0.0810 - 0.0818)	01
2.050 - 2.069 (0.0818 - 0.0826)	2.050 - 2.069 (0.0818 - 0.0826)	01
2.070 - 2.089 (0.0826 - 0.0834)	2.070 - 2.089 (0.0826 - 0.0834)	01
2.090 - 2.109 (0.0834 - 0.0842)	2.090 - 2.109 (0.0834 - 0.0842)	01
2.110 - 2.129 (0.0842 - 0.0850)	2.110 - 2.129 (0.0842 - 0.0850)	01
2.130 - 2.149 (0.0850 - 0.0858)	2.130 - 2.149 (0.0850 - 0.0858)	01
2.150 - 2.169 (0.0858 - 0.0866)	2.150 - 2.169 (0.0858 - 0.0866)	01
2.170 - 2.189 (0.0866 - 0.0874)	2.170 - 2.189 (0.0866 - 0.0874)	01
2.190 - 2.209 (0.0874 - 0.0882)	2.190 - 2.209 (0.0874 - 0.0882)	01
2.210 - 2.229 (0.0882 - 0.0890)	2.210 - 2.229 (0.0882 - 0.0890)	01
2.230 - 2.249 (0.0890 - 0.0898)	2.230 - 2.249 (0.0890 - 0.0898)	01
2.250 - 2.269 (0.0898 - 0.0906)	2.250 - 2.269 (0.0898 - 0.0906)	01
2.270 - 2.289 (0.0906 - 0.0914)	2.270 - 2.289 (0.0906 - 0.0914)	01
2.290 - 2.309 (0.0914 - 0.0922)	2.290 - 2.309 (0.0914 - 0.0922)	01
2.310 - 2.329 (0.0922 - 0.0930)	2.310 - 2.329 (0.0922 - 0.0930)	01
2.330 - 2.349 (0.0930 - 0.0938)	2.330 - 2.349 (0.0930 - 0.0938)	01
2.350 - 2.369 (0.0938 - 0.0946)	2.350 - 2.369 (0.0938 - 0.0946)	01
2.370 - 2.389 (0.0946 - 0.0954)	2.370 - 2.389 (0.0946 - 0.0954)	01
2.390 - 2.409 (0.0954 - 0.0962)	2.390 - 2.409 (0.0954 - 0.0962)	01
2.410 - 2.429 (0.0962 - 0.0970)	2.410 - 2.429 (0.0962 - 0.0970)	01
2.430 - 2.449 (0.0970 - 0.0978)	2.430 - 2.449 (0.0970 - 0.0978)	01
2.450 - 2.469 (0.0978 - 0.0986)	2.450 - 2.469 (0.0978 - 0.0986)	01
2.470 - 2.489 (0.0986 - 0.0994)	2.470 - 2.489 (0.0986 - 0.0994)	01
2.490 - 2.509 (0.0994 - 0.1002)	2.490 - 2.509 (0.0994 - 0.1002)	01
2.510 - 2.529 (0.1002 - 0.1010)	2.510 - 2.529 (0.1002 - 0.1010)	01
2.530 - 2.549 (0.1010 - 0.1018)	2.530 - 2.549 (0.1010 - 0.1018)	01
2.550 - 2.569 (0.1018 - 0.1026)	2.550 - 2.569 (0.1018 - 0.1026)	01
2.570 - 2.589 (0.1026 - 0.1034)	2.570 - 2.589 (0.1026 - 0.1034)	01
2.590 - 2.609 (0.1034 - 0.1042)	2.590 - 2.609 (0.1034 - 0.1042)	01
2.610 - 2.629 (0.1042 - 0.1050)	2.610 - 2.629 (0.1042 - 0.1050)	01
2.630 - 2.649 (0.1050 - 0.1058)	2.630 - 2.649 (0.1050 - 0.1058)	01
2.650 - 2.669 (0.1058 - 0.1066)	2.650 - 2.669 (0.1058 - 0.1066)	01
2.670 - 2.689 (0.1066 - 0.1074)	2.670 - 2.689 (0.1066 - 0.1074)	01
2.690 - 2.709 (0.1074 - 0.1082)	2.690 - 2.709 (0.1074 - 0.1082)	01
2.710 - 2.729 (0.1082 - 0.1090)	2.710 - 2.729 (0.1082 - 0.1090)	01
2.730 - 2.749 (0.1090 - 0.1098)	2.730 - 2.749 (0.1090 - 0.1098)	01
2.750 - 2.769 (0.1098 - 0.1106)	2.750 - 2.769 (0.1098 - 0.1106)	01
2.770 - 2.789 (0.1106 - 0.1114)	2.770 - 2.789 (0.1106 - 0.1114)	01
2.790 - 2.809 (0.1114 - 0.1122)	2.790 - 2.809 (0.1114 - 0.1122)	01
2.810 - 2.829 (0.1122 - 0.1130)	2.810 - 2.829 (0.1122 - 0.1130)	01
2.830 - 2.849 (0.1130 - 0.1138)	2.830 - 2.849 (0.1130 - 0.1138)	01
2.850 - 2.869 (0.1138 - 0.1146)	2.850 - 2.869 (0.1138 - 0.1146)	01
2.870 - 2.889 (0.1146 - 0.1154)	2.870 - 2.889 (0.1146 - 0.1154)	01
2.890 - 2.909 (0.1154 - 0.1162)	2.890 - 2.909 (0.1154 - 0.1162)	01
2.910 - 2.929 (0.1162 - 0.1170)	2.910 - 2.929 (0.1162 - 0.1170)	01
2.930 - 2.949 (0.1170 - 0.1178)	2.930 - 2.949 (0.1170 - 0.1178)	01
2.950 - 2.969 (0.1178 - 0.1186)	2.950 - 2.969 (0.1178 - 0.1186)	01
2.970 - 2.989 (0.1186 - 0.1194)	2.970 - 2.989 (0.1186 - 0.1194)	01
2.990 - 3.009 (0.1194 - 0.1202)	2.990 - 3.009 (0.1194 - 0.1202)	01
3.010 - 3.029 (0.1202 - 0.1210)	3.010 - 3.029 (0.1202 - 0.1210)	01
3.030 - 3.049 (0.1210 - 0.1218)	3.030 - 3.049 (0.1210 - 0.1218)	01
3.050 - 3.069 (0.1218 - 0.1226)	3.050 - 3.069 (0.1218 - 0.1226)	01
3.070 - 3.089 (0.1226 - 0.1234)	3.070 - 3.089 (0.1226 - 0.1234)	01
3.090 - 3.109 (0.1234 - 0.1242)	3.090 - 3.109 (0.1234 - 0.1242)	01
3.110 - 3.129 (0.1242 - 0.1250)	3.110 - 3.129 (0.1242 - 0.1250)	01
3.130 - 3.149 (0.1250 - 0.1258)	3.130 - 3.149 (0.1250 - 0.1258)	01
3.150 - 3.169 (0.1258 - 0.1266)	3.150 - 3.169 (0.1258 - 0.1266)	01
3.170 - 3.189 (0.1266 - 0.1274)	3.170 - 3.189 (0.1266 - 0.1274)	01
3.190 - 3.209 (0.1274 -		





### 23. REINSTALL THEFT DETERRENT HORN

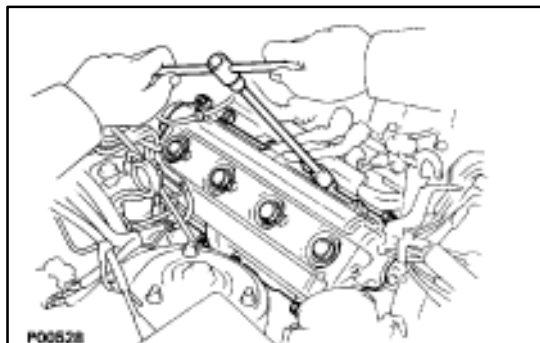
- (a) Install the theft deterrent horn with the bolt.
- (b) Connect the connector.



### 24. REINSTALL RH CYLINDER HEAD COVER

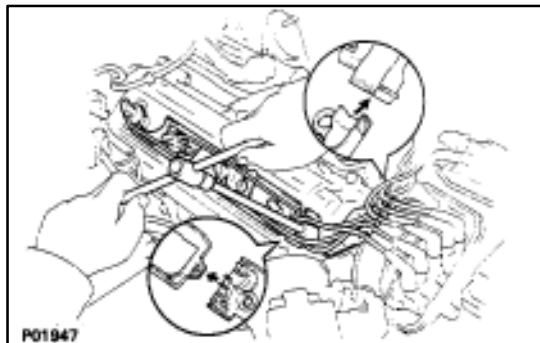
- (a) Remove any oil packing (FIPG) material.
- (b) Apply seal packing to the cylinder head as shown in the illustration.

**Seal packing: Part No. 08826-00080 or equivalent**



- (c) Install the gasket to the cylinder head cover.
- (d) Install the seal washer to the mounting bolt.
- (e) Install the cylinder head cover with the eight bolts.

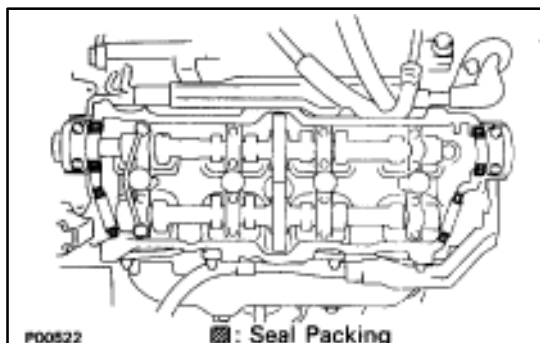
**Torque: 5.9 N·m (60 kgf·cm, 52 in·lbf)**



- (g) Connect the four high-tension cords to the spark plugs.
- (h) Install the rear and front high-tension cord clamps with the two bolts.

**HINT:** Place the front and rear ends of the front high-tension cord clamp on the rear high-tension cord clamp and lower high-tension cord cover.

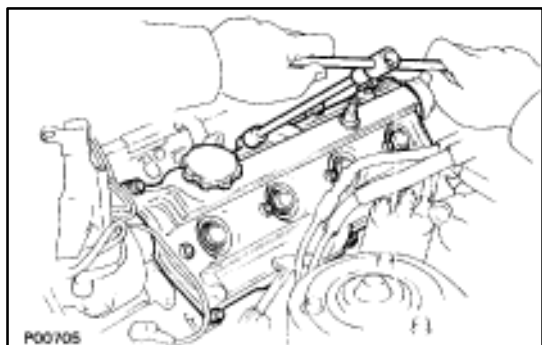
- (i) Fit the high-tension cords to the high-tension cord clamps. (See page [IG-16](#))



### 25. REINSTALL LH CYLINDER HEAD COVER

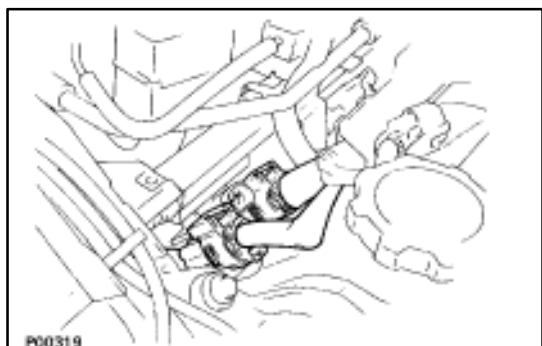
- (a) Remove any oil packing (FIPG) material.
- (b) Apply seal packing to the cylinder head as shown in the illustration.

**Seal packing: Part No. 08826-00080 or equivalent**

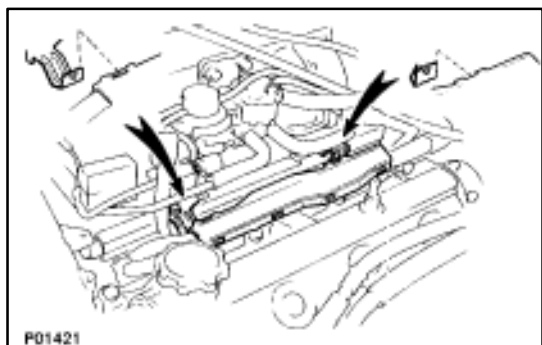


- (c) Install the gasket to the cylinder head cover.
- (d) Install the seal washer to the mounting bolt.
- (e) Install the cylinder head cover with the eight bolts.

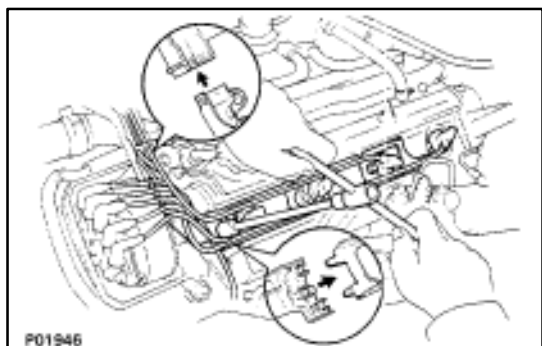
**Torque: 5.9 N·m (60 kgf·cm, 52 in.·lbf)**



- (f) Connect the two engine wire connectors.
- (g) Connect the four injector connectors.



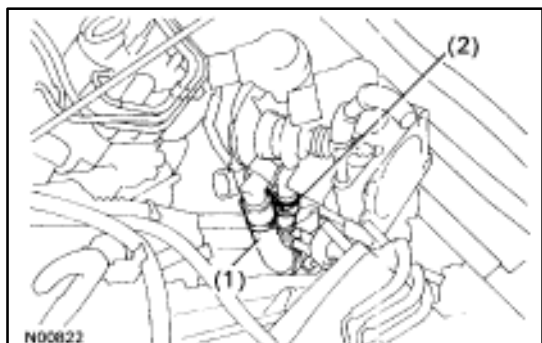
- (h) Install the engine wire to the two wire clamps on the delivery pipe.



- (i) Connect the four high-tension cords to the spark plugs.
- (j) Install the rear and front high-tension cord clamps with the two bolts.

**HINT:** Place the front and rear ends of the front high-tension cord clamp on the rear high-tension cord clamp and lower high-tension cord cover.

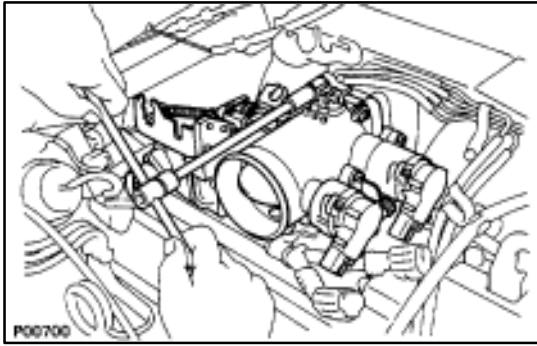
- (k) Fit the high-tension cords to the high-tension cord clamps. (See page [IG-16](#))



## 26. REINSTALL THROTTLE BODY

- (a) Connect the following hoses:
  - (1) PCV hose from throttle body
  - (2) Water by-pass hose from throttle body



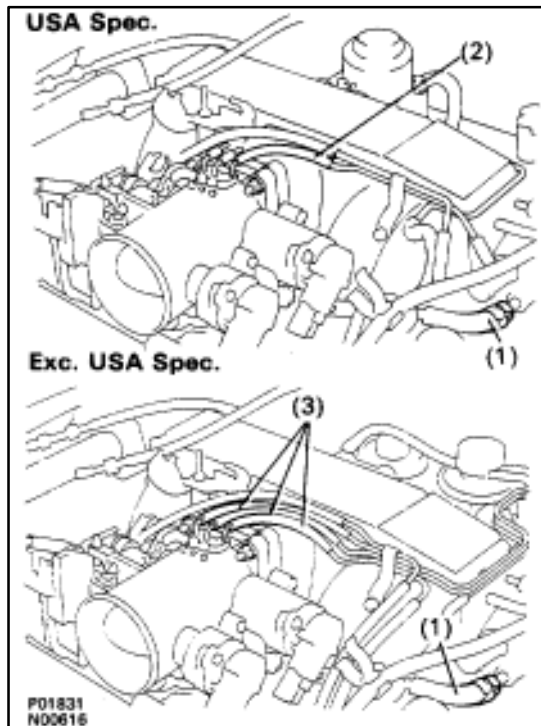


- (b) Install a new gasket and throttle body with the two bolts and two nuts.

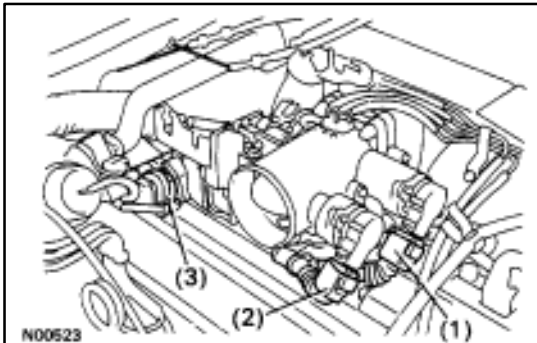
**Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)**

**HINT:** Use bolts 40 mm (1.57 in.) in length.

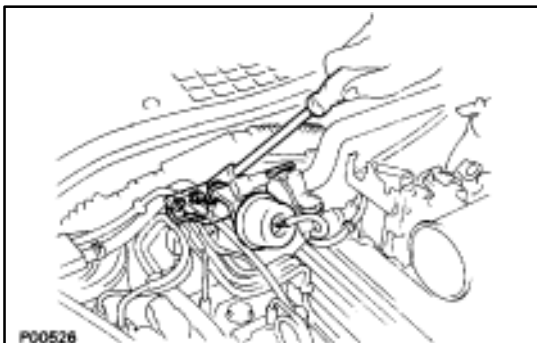
- (c) Install the water by-pass pipe (from rear water by-pass joint) to the clamp on the engine wire cover.



- (d) Connect the following hoses:
- (1) Water by-pass hose to the ISC valve
  - (2) (USA Spec.)  
Vacuum hose to throttle body
  - (3) (Exc. USA Spec.)  
Three vacuum hoses to throttle body

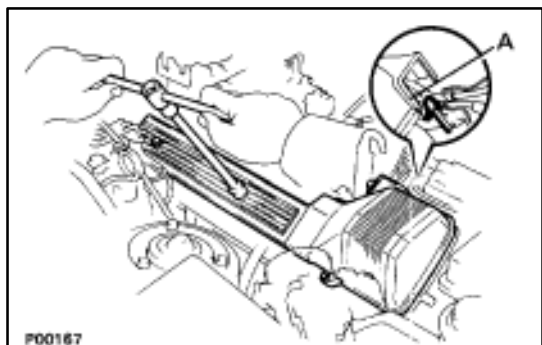


- (e) Connect the following connectors:
- (1) Throttle position sensor connector
  - (2) (w/ TRAC)  
Sub-throttle position sensor connector
  - (3) (w/ TRAC)  
Sub-throttle actuator

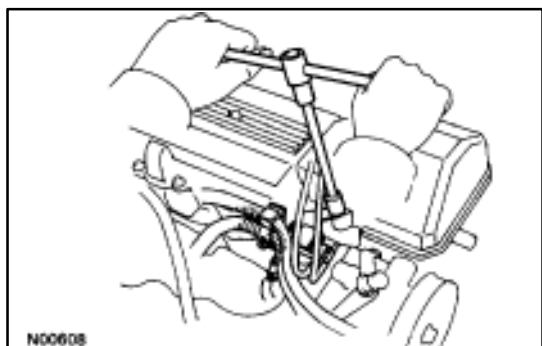


## 27. REINSTALL HEATER WATER VALVE

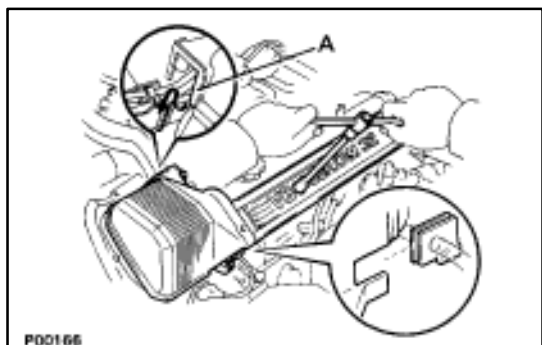
- (a) Install the water valve and bracket assembly with the two bolts.
- (b) Install the engine wire clamp with the bolt.
- (c) Connect the VSV connector.

**28. REINSTALL RH NO.3 TIMING BELT COVER**

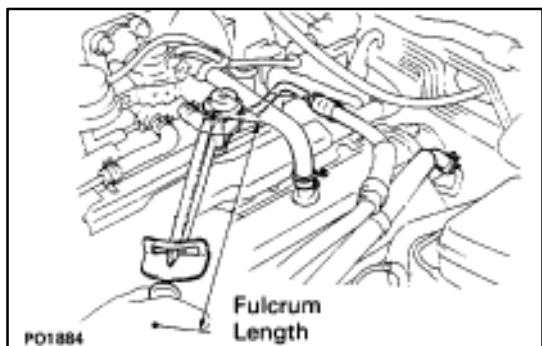
- (a) Install the three gaskets to the timing belt cover.
- (b) Fit portion A of the timing belt cover, matching it with the lower high-tension cord cover.
- (c) Install the timing belt cover with the three bolts.

**29. REINSTALL VSV FOR EVAP SYSTEM**

Install the VSV with the two bolts.

**30. REINSTALL LH NO.3 TIMING BELT COVER**

- (a) Install the three gaskets to the timing belt cover.
- (b) Install the cord grommet to the high-tension cord.
- (c) Install the cord grommet to the timing belt cover.
- (d) Fit portion A of the timing belt cover, matching it with the lower high-tension cord cover.
- (e) Install the timing belt cover with the three bolts.

**31. RECONNECT PCV HOSE TO LH CYLINDER HEAD****32. RECONNECT FUEL RETURN HOSE TO FUEL RETURN PIPE****33. RECONNECT FUEL INLET HOSE TO LH DELIVERY PIPE**

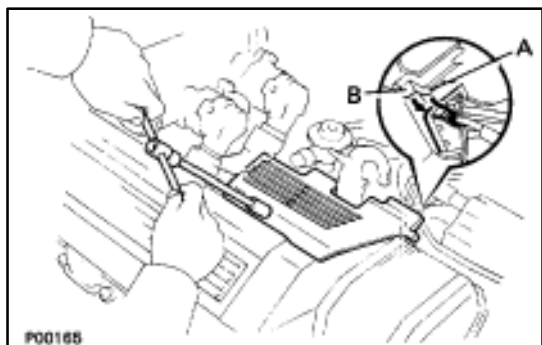
Connect the inlet hose with two new gaskets and the pulsation damper.

SST 09612-24014 (09617-24011)

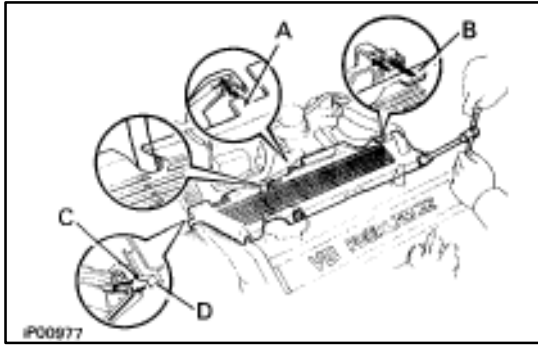
**Torque: 39 N·m (400 kgf·cm, 29 ft·lbf)**

**33 N·m (340 kgf·cm, 24 ft·lbf) for SST**

**HINT:** Use a torque wrench with a fulcrum length of 30 cm (11.81 in.)

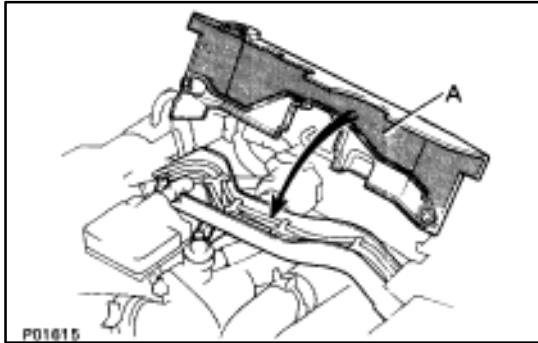
**34. REINSTALL RH ENGINE WIRE COVER**

- (a) Fit portions A and B of the engine wire cover, matching them with the lower high-tension cord cover and No.3 timing belt cover.
- (b) Install the engine wire cover with the bolt.



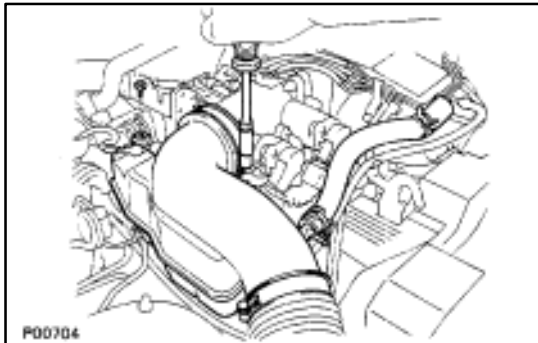
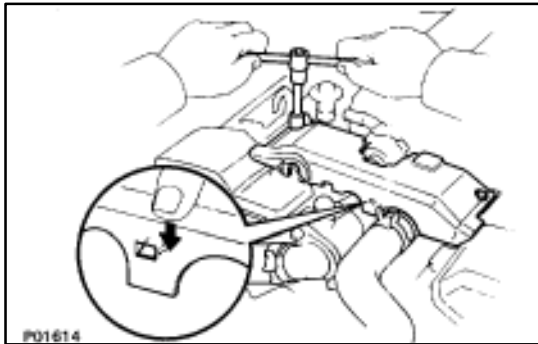
### 35. REINSTALL LH ENGINE WIRE COVER

- (a) Connect portions A and B engine wire cover to the wire brackets.
- (b) Set the VSV (for fuel pressure control system) wire in original position.
- (c) Fit portions C and D of the engine wire cover, matching them with the lower high-tension cord cover and No.3 timing belt cover.
- (d) Install the engine wire cover with the two bolts.



### 36. REINSTALL UPPER HIGH-TENSION CORD COVER

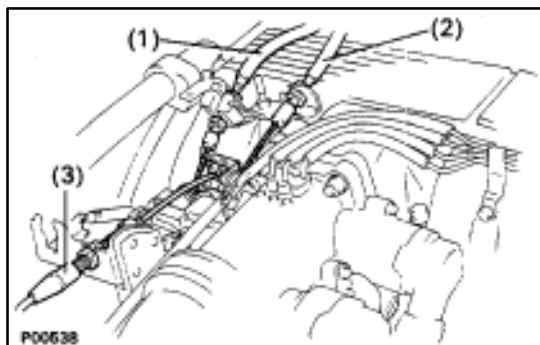
- (a) Fit portion A of the upper high-tension cover, matching the top of the lower high-tension cord cover.
- (b) Push the front side of the upper high-tension cord cover, and connect the front side claw groove of the upper high-tension cord cover to the claw of the lower high-tension cord cover.
- (c) Install the upper high-tension cord cover with the two bolts.



### 37. REINSTALL INTAKE AIR CONNECTOR

- (a) Connect the end portions of the intake air connector to the throttle body and air cleaner hose.
- (b) Tighten the two hose clamps.
- (c) Install the bolt holding the intake air connector to the cylinder head cover.
- (d) Connect the following hoses:
  - (1) Air hose to ISC to ISC valve
  - (2) Air hose (from PS air control valve) to intake air connector

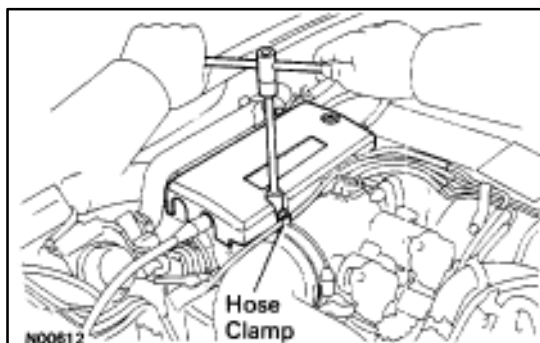




### 38. RECONNECT CONTROL CABLES TO THROTTLE BODY

Connect the following hoses:

- (1) Accelerator cable
- (2) A/T throttle control cable
- (3) (w/ Cruise Control System)  
Cruise control actuator cable

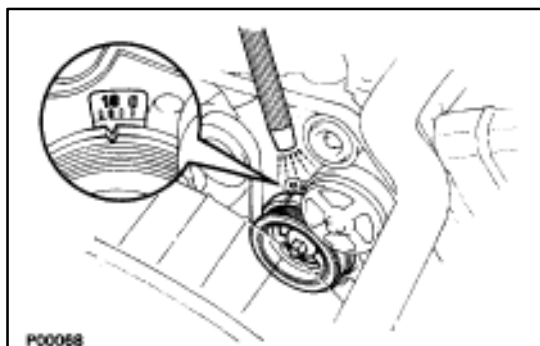


### 39. REINSTALL THROTTLE BODY COVER

Install the throttle body cover and hose clamp with the two bolts and cap nut.

### 40. RECONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

### 41. FILL WITH ENGINE COOLANT (See page [CO-7](#))



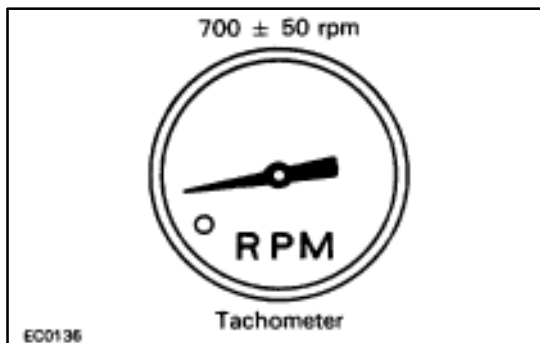
## INSPECTION OF IGNITION TIMING

(See page [IG-28](#))

Ignition timing:

8–12° BTDC @ idle

(w/ Terminals TE1 and E1 connected)



## INSPECTION OF IDLE SPEED

HINT:

- Initial conditions (See step 1 on page [EM-28](#))
- Set the tachometer to the 4-cylinder range.

Idle speed: 700 ± 50 rpm