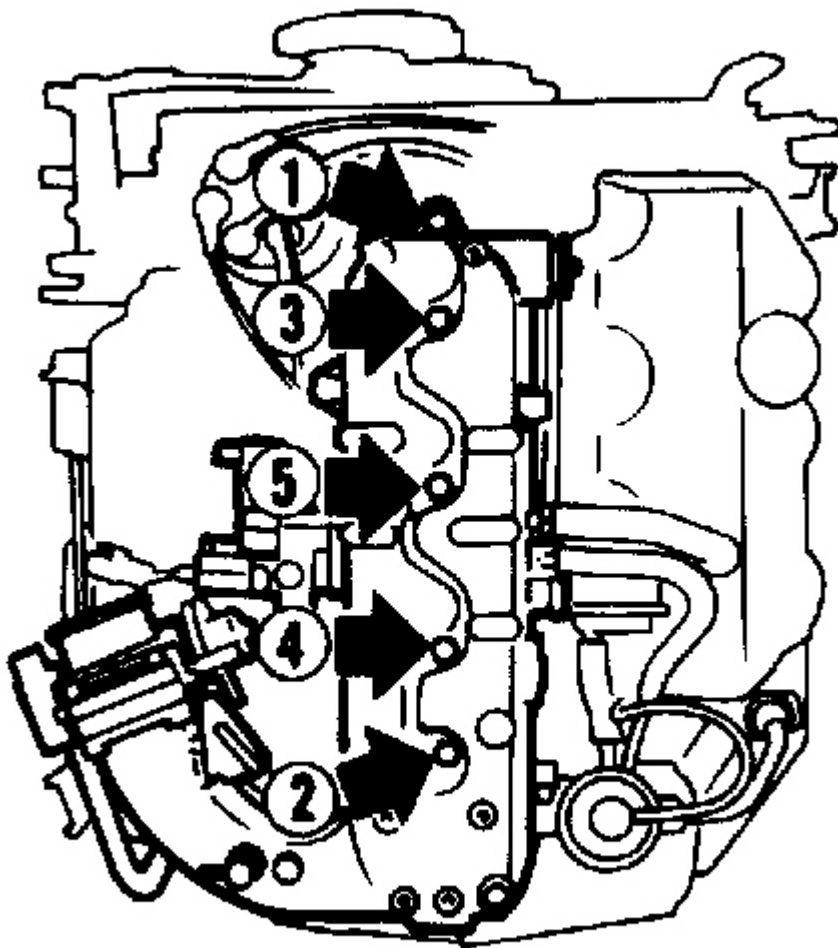


## INTAKE MANIFOLD

### Removal

1. Release fuel system pressure. Disconnect battery and drain cooling system. Disconnect vacuum and coolant lines attached to intake manifold and label accordingly. Remove throttle linkage. Remove collector cover and collector. See **Fig. 1**.



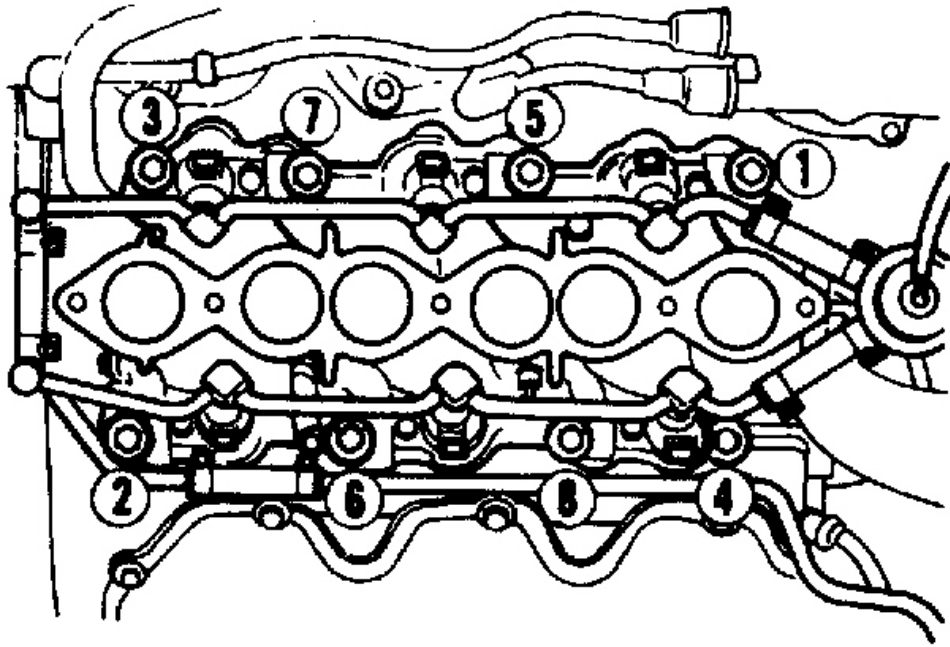
**Fig. 1: Intake Collector Removal Sequence**

Courtesy of NISSAN MOTOR CO., U.S.A.

2. Disconnect fuel line and components that interfere with removal. Remove intake manifold bolts using

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removal sequence. See **Fig. 2** . Remove intake manifold and fuel injector fuel lines as an assembly.



**Fig. 2: Intake Manifold Removal Sequence**  
Courtesy of NISSAN MOTOR CO., U.S.A.

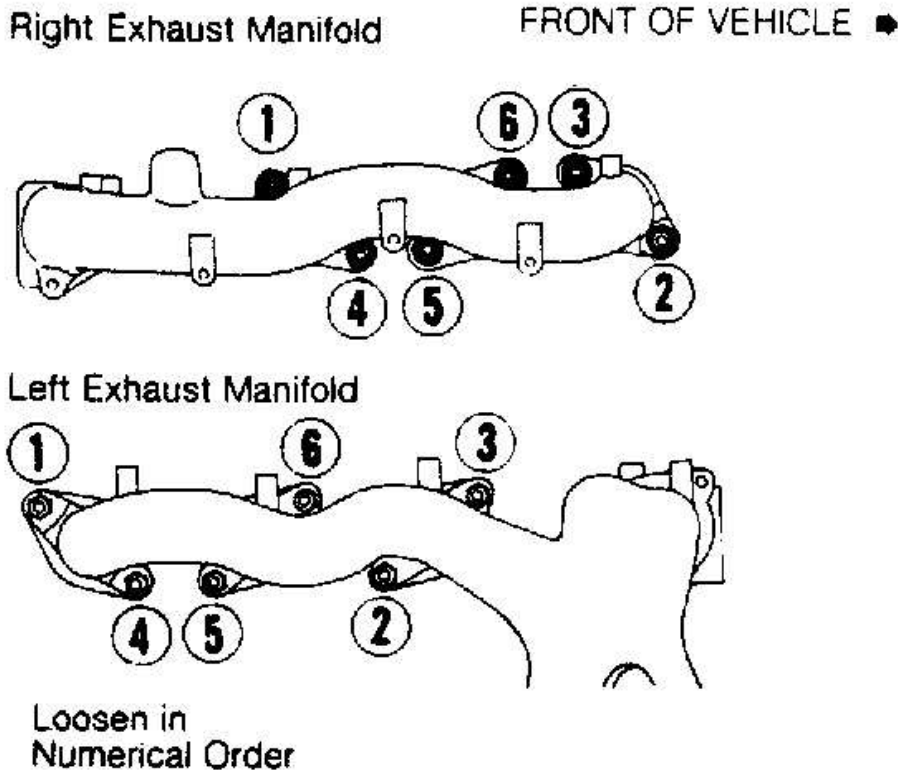
#### Installation

Using new gaskets, install intake manifold assembly. Tighten bolts in reverse order of removal sequence. See **Fig. 2** . Ensure that all electrical and vacuum lines are properly connected. To complete installation, reverse removal procedure.

#### EXHAUST MANIFOLD

##### Removal

Remove exhaust manifold covers. Disconnect exhaust pipes from manifolds. Disconnect exhaust manifolds using proper sequence. See **Fig. 3** . On turbo models, disconnect oil passage tube and remove turbocharger.



### [Fig. 3: Exhaust Manifold Removal Sequence](#)

Courtesy of NISSAN MOTOR CO., U.S.A.

#### Installation

To install, reverse removal procedure. Use new gaskets. To tighten, reverse exhaust manifold loosening sequence. See [Fig. 3](#).

#### CYLINDER HEAD

**NOTE:** See [Fig. 4](#) for exploded view of cylinder head.

#### Removal

1. Release fuel system pressure. Set cylinder No. 1 to TDC of compression stroke. Ensure that timing marks are aligned. Disconnect negative battery cable. Drain cooling system.
2. Remove air cleaner. Remove intake collector cover and collector. See [Fig. 1](#). Label and disconnect all wiring and hoses interfering with intake manifold removal. Remove air regulator and all hoses as an

## 1989 Nissan 300ZX

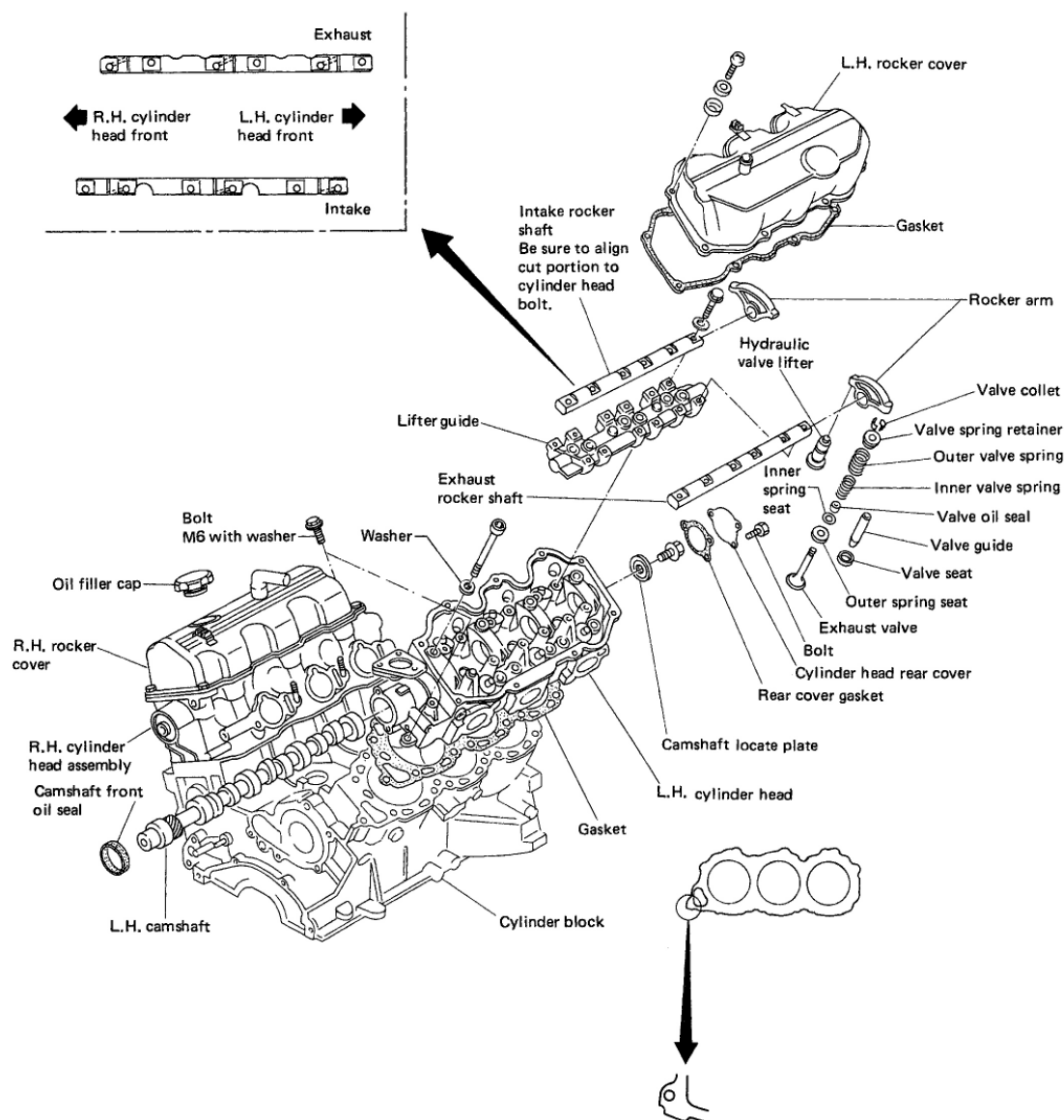
3.0L V6 - VIN [H] & 3.0L V6 TURBO - VIN [C] 1989 Engines - 3.0L & 3.0L Turbo V6

assembly.

3. Remove EGR control valve, vacuum switching valve. Remove thermostat housing and attached switches as an assembly.
4. Remove PCV valve hose and EGR tube. On turbo models, remove turbocharger. Remove intake manifold and fuel rail as an assembly. See **Fig. 2** . Remove drive belts. Remove exhaust manifold covers. Disconnect exhaust manifold connecting tube.
5. Mark timing belt-to-camshaft pulleys relationship before removal. Remove cylinder head mounting bolts in reverse order of tightening sequence. See **Fig. 5** . Bolts should be loosened in 2 or 3 stages.
6. Remove camshaft pulleys and rear timing cover. Remove timing belt and valve covers. Remove cylinder head with exhaust manifold attached. If necessary, remove exhaust manifold from cylinder head. Remove exhaust manifold bolts in reverse order of tightening sequence. See **Fig. 3** .

# 1989 Nissan 300ZX

3.0L V6 - VIN [H] & 3.0L V6 TURBO - VIN [C] 1989 Engines - 3.0L & 3.0L Turbo V6



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**Fig. 4: Exploded View Of Cylinder Head**  
Courtesy of NISSAN MOTOR CO., U.S.A.

## Inspection

Check cylinder head for cracks, flaws or damage. Inspect cylinder head and block mating surfaces for warpage. Warpage limit is .004" (.10 mm). If beyond limit, resurface head. Maximum surface grinding limit of head and/or block is .008" (.20 mm) total. Replace head and/or block if machined or warped beyond service limit.

**NOTE:** Cylinder head bolts 4, 5, 12 and 13 are longer than other head bolts. See Fig. 5.

## Installation

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## 1989 Nissan 300ZX

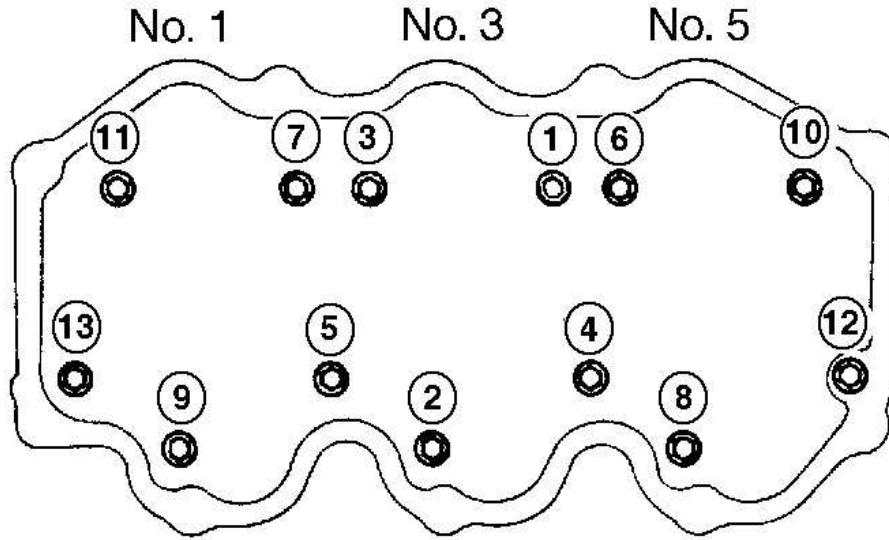
3.0L V6 - VIN [H] & 3.0L V6 TURBO - VIN [C] 1989 Engines - 3.0L & 3.0L Turbo V6

1. Set No. 1 piston at TDC of compression stroke. Crankshaft pulley timing mark should line up with mark on oil pump housing. Knock pin of camshaft should be in 12 o'clock position during installation of cylinder head. Ensure that mating surfaces of cylinder head and block are clean. Install cylinder head and gasket. **DO NOT** use sealer.

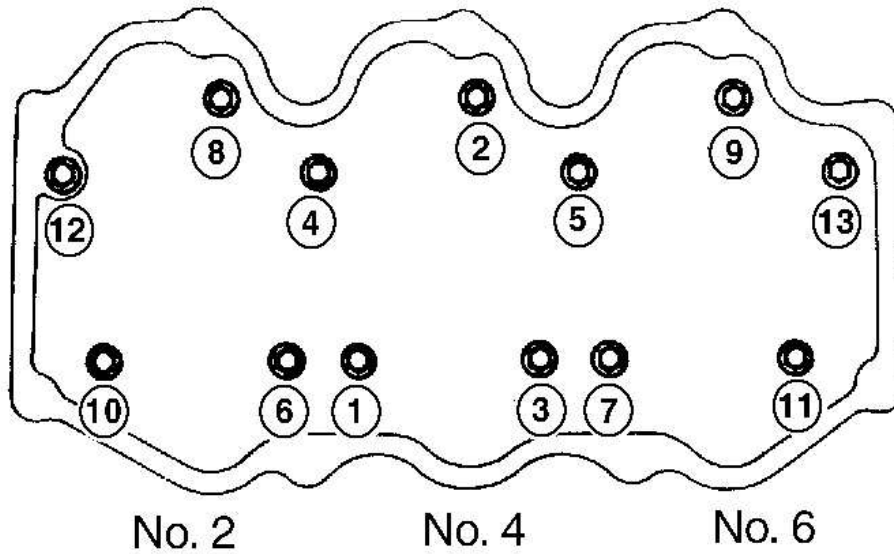
**CAUTION: DO NOT rotate crankshaft and camshafts separately or valve-to-piston contact may take place.**

2. Oil threads and install head bolts. Tighten head bolts in 5 stages as shown in **CYLINDER HEAD BOLT TIGHTENING SEQUENCE** chart. See **Fig. 5** . After assembly is completed, run engine for several minutes and allow to cool down. Recheck head bolt torque.

RIGHT SIDE



LEFT SIDE



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**Fig. 5: Cylinder Head Bolt Tightening Sequence**  
 Courtesy of NISSAN MOTOR CO., U.S.A.

**CYLINDER HEAD BOLT TIGHTENING SEQUENCE**

Stages	Ft. Lbs. (N.m)
1st	22 (29)

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# 1989 Nissan 300ZX

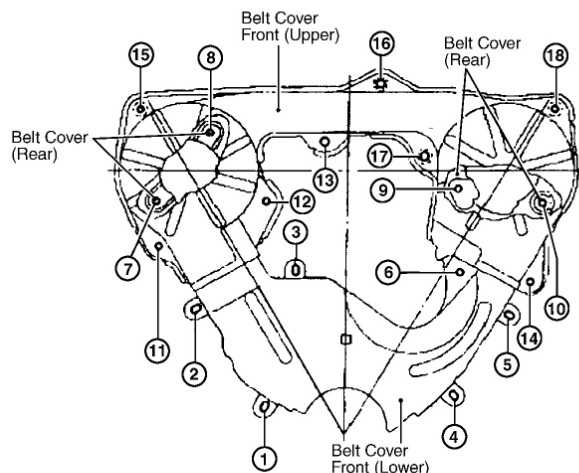
3.0L V6 - VIN [H] & 3.0L V6 TURBO - VIN [C] 1989 Engines - 3.0L & 3.0L Turbo V6

2nd		43 (59)
3rd		Loosen All Bolts
4th		22 (29)
5th		40-47 (54-64)

## TIMING BELT

### Removal

1. Release fuel system pressure. Raise and support vehicle. Remove right wheel and engine side cover (if necessary). Lower vehicle and drain cooling system. Remove cooling fan duct. Remove engine coolant reservoir. Remove actuator and remove radiator hoses. **DO NOT** allow coolant to contact drive belts.
2. Remove front upper and lower belt covers. See **Fig. 6** . Remove drive belts and set No. 1 cylinder at TDC of compression stroke. Remove idler bracket of A/C compressor drive belt and crankshaft pulley. Remove timing belt by removing timing belt tensioner and return spring.



Tightened Parts	Section	Parts Tightened With Bolts
Bolt A (6 pcs.) Rubber Washer Bolt Cover Front (Lower)	① ② ③ ④ ⑤ ⑬	② ③ Cylinder Block ⑤ ⑬ Compressor Bracket ① ④ Oil Pump
Bolt B (1 pc.) Rubber Washer Bolt Cover (Front Lower) Water Pump Mounting Bolts	⑥	Water Pump Mounting Bolt
Bolt C (4 pcs.) Bolt Cover (Rear)	⑦ ⑧ ⑨ ⑩	Cylinder Head
Bolt A (7 pcs.) Rubber Washer Bolt Cover Front (Upper) Bolt Cover (Rear) Welded Nut (4 pcs.)	⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑	⑮ ⑯ ⑰ ⑱ Welded Nuts ⑲ ⑳ Cylinder Head ㉑ Water Outlet

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**Fig. 6: Removing & Installing Timing Belt Covers**  
 Courtesy of NISSAN MOTTOR CORP.

### Inspection

Visually inspect condition of timing belt. Inspect for cracks, wear, breaks and oil/coolant saturation.

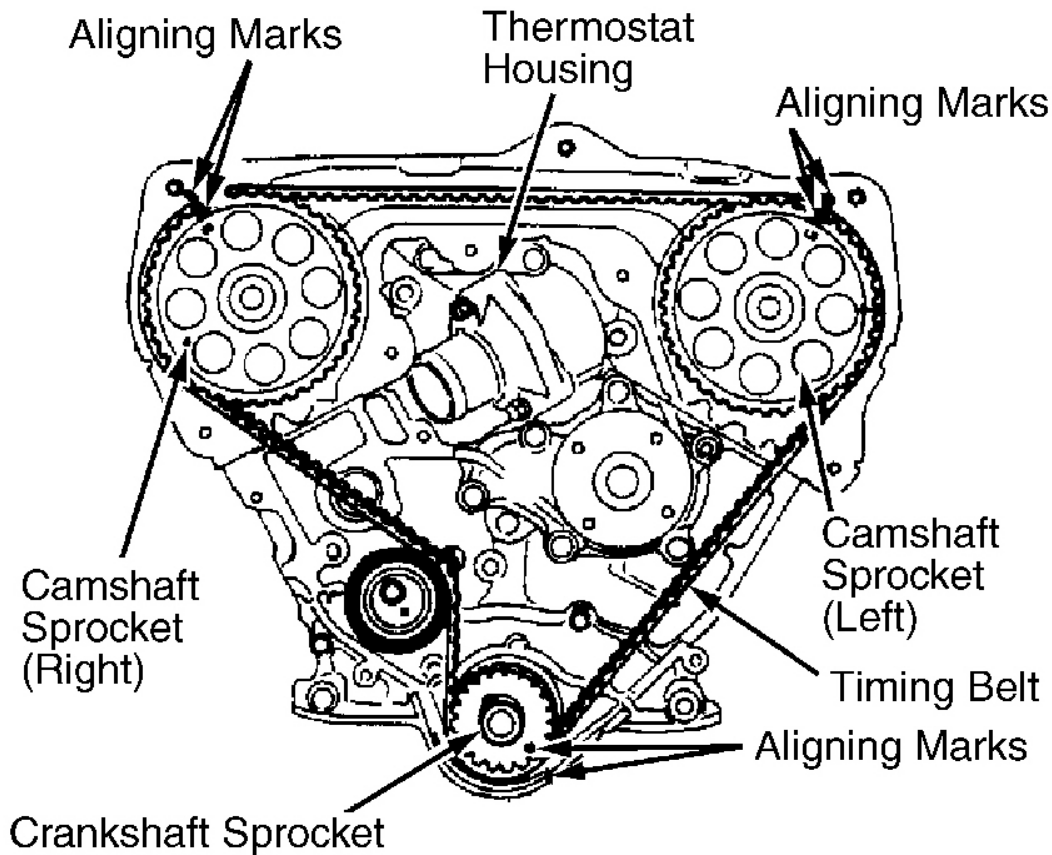
### Installation

1. Ensure that No. 1 piston is at TDC of compression stroke. Remove valve covers and loosen all rocker shaft bolts. **DO NOT** bend timing belt. Install tensioner and return spring.
2. Turn tensioner clockwise and temporarily tighten lock nut. Install timing belt. Align White lines on

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timing belt with punch mark on camshaft pulleys and crankshaft pulley. Arrow on timing belt must be pointing toward front belt covers.

- Using Allen wrench, slowly turn tensioner clockwise and counterclockwise 2 or 3 times. When camshafts and crankshaft marks are aligned, tighten tensioner lock nut. See **Fig. 7**. Ensure that camshaft lobes are correctly positioned. Tighten rocker shaft bolts in 2 stages. To complete installation, reverse removal procedures.



NO. 1 CYLINDER AT TDC  
ON COMPRESSION STROKE

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**Fig. 7: Timing Belt & Pulley Installation**  
Courtesy of NISSAN MOTOR CO., U.S.A.