

MAINTENANCE

SECTION MA

MA

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MAINTENANCE SCHEDULE (Except for Europe)

The following tables show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

Periodic maintenance beyond the last period shown on the tables requires similar maintenance.

MAINTENANCE OPERATION			MAINTENANCE INTERVAL										Reference page*2
Periodic maintenance should be performed either at number of kilometers (miles) or months, whichever comes first.		Number of kilometers in thousands (Number of miles in thousands) Number of months	1 (0.6) —	10 (6) 6	20 (12) 12	30 (18) 18	40 (24) 24	50 (30) 30	60 (36) 36	70 (42) 42	80 (48) 48		
ENGINE			Underhood and under vehicle										
Check drive belts for cracks, fraying, wear & tension			X*1		X*1		X		X*1		X	MA-8	
Change engine anti-freeze coolant (Ethylene glycol base)							X				X	MA-10	
Change engine coolant (Soft water)*1				X	X	X	X	X	X	X	X	MA-10	
Check cooling system					X		X		X		X		
Check fuel lines							X				X	MA-9	
Replace air cleaner filter (Viscous paper type)*							X				X		
Clean & replace air cleaner filter (Dry paper type)**1 (Gulf standard models only)		Clean		X	X	X		X	X	X			
		Replace					X				X		
Change engine oil (Use recommended oil)*		Non-turbo models		X	X	X	X	X	X	X	X		
		Turbo models		Every 5,000 km (3,000 miles) or 6 months									
Change engine oil filter*			X	X	X	X	X	X	X	X	X		
Check & adjust carburetor idle rpm & mixture ratio (Check mixture ratio only on models bouned for areas affected by emission regulations)*1			X	X	X	X	X	X	X	X	X	MA-13	
Replace fuel filter*							X				X		
Adjust ignition timing*1				X	X	X	X	X	X	X	X	MA-13	
Check & replace spark plugs		Check*1		X		X		X		X		MA-9	
		Replace			X*1		X		X*1		X	MA-9	
Check ignition wiring							X				X		
Check positive crankcase ventilation (P.C.V.) system*1					X		X		X		X		
Check vacuum fitting hoses & connections*1					X		X		X		X		
Check exhaust gas sensor (Australia models only)							X				X	MA-12	
Check vapor lines (Gulf standard & Australia models only)							X				X	MA-8	
Replace timing belt							Every 100,000 km (60,000 miles)				MA-18		
CHASSIS AND BODY			Underhood										
Check brake, clutch & automatic transmission fluid level & leaks*				X	X	X	X	X	X	X	X		
Change brake fluid*							X				X		
Check brake booster vacuum hoses, connections & check valve							X				X		
Check power steering fluid & lines			X*1	X	X*1	X	X*1	X	X*1	X	X		
			Under vehicle										
Check brake, clutch & exhaust systems for proper attachment, leaks, cracks, chafing, abrasion, deterioration, etc.				X	X	X	X	X	X	X	X		
Check oil level in manual transmission & differential gear*			X*1	X	X*1	X	X*1	X	X*1	X	X		
Check steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts for damaged, loose & missing parts & lubrication*		X			X		X		X		X		
			Outside and inside										
Check wheel alignment. If necessary, rotate & balance wheels					X		X		X		X		
Check brake pads, discs & other brake components for wear, deterioration & leaks*			X	X	X	X	X	X	X	X	X		
Check front wheel bearing grease							X				X		
Lubricate locks, hinges & hood latch*			X*1	X	X*1	X	X*1	X	X*1	X	X		
Check seat belts, buckles, retractors, anchors & adjuster					X		X		X		X	MA-23	
Check foot brake, parking brake & clutch for free play, stroke & operation			X*1	X	X*1	X	X*1	X	X*1	X	X		

NOTE: (1) Maintenance items with "*" should be performed more frequently according to "Maintenance under severe driving conditions".

Check: Check. Correct or replace if necessary.

*1: Except Australia models

*2: Refer to the already-published Service Manual if not specified.

MAINTENANCE SCHEDULE (Except for Europe)

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

The maintenance intervals shown on the preceding pages are for normal operating conditions. If the vehicle is mainly operated under severe driving conditions as shown below, more frequent maintenance must be performed on the following items as shown in the table.

Severe driving conditions

- A — Driving under dusty conditions
- B — Driving repeatedly short distances
- C — Towing a trailer
- D — Extensive idling
- E — Driving in extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high
- F — Driving in high humidity areas or in mountainous areas
- G — Driving in areas using salt or other corrosive materials
- H — Driving on rough and/or muddy roads or in the desert
- I — Driving with frequent use of braking or in mountainous areas

Driving condition	Maintenance item	Maintenance operation	Maintenance interval	Reference page*2
A	Air cleaner filter Dry paper type	Clean	More frequently	
	All types	Replace		
A B C D	Engine oil Non-turbo models	Replace	Every 5,000 km (3,000 miles) or 3 months	
	Turbo models	Replace	More frequently	
A B C D	Engine oil filter	Replace	Every 5,000 km (3,000 miles) or 3 months	
A E	Fuel filter	Replace	Every 20,000 km (12,000 miles) or 12 months	
. F	Brake fluid	Replace	Every 20,000 km (12,000 miles) or 12 months	
. . . . C	Automatic & manual transmission oil & differential gear oil	Replace	Every 40,000 km (24,000 miles) or 24 months	
. G H .	Steering gear & linkage, axle & suspension parts, propeller shaft & drive shaft	Check	Every 10,000 km (6,000 miles) or 6 months	
A C G H I	Brake pads, discs & other brake components	Check	Every 5,000 km (3,000 miles) or 3 months	
. G	Lock, hinges & hood latch	Lubricate	Every 5,000 km (3,000 miles) or 3 months	
			Every 10,000 km (6,000 miles) or 6 months*1	

Maintenance operation: Check = Check. Correct or replace if necessary.
 *1: Australia models only
 *2: Refer to the already-published Service Manual if not specified.

MAINTENANCE SCHEDULE (For Europe except U.K.)

The following tables show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

Periodic maintenance beyond the last period shown on the tables requires similar maintenance.

STANDARD & THE FIRST FREE SERVICES

MAINTENANCE OPERATION	Months	MAINTENANCE INTERVAL				
		—	12	24	36	48
Perform the standard service on a yearly basis, but on a mileage basis when driving more than 20,000 km (12,000 miles) a year.	km x 1,000	1	20	40	60	80
	(Miles x 1,000)	(0.6)	(12)	(24)	(36)	(48)

Reference page*3

Engine	(Underhood and under vehicle)					
Check drive belts for cracks, fraying, wear & tension	X*1	X*1	X	X*1	X	MA-8
Change engine anti-freeze coolant (Ethylene glycol base)			X		X	MA-10
Check cooling system		X	X	X	X	
Check fuel lines			X		X	MA-9
Replace air cleaner filter (Viscous paper type)*			X		X	
Replace timing belt		Every 100,000 km (60,000 miles)				MA-18
Check & adjust carburetor idle rpm & mixture ratio*1	X	X	X	X	X	MA-13
Replace fuel filter*			X		X	
Adjust ignition timing*1		X	X	X	X	MA-13
Replace spark plugs		X*1	X	X*1	X	MA-9
Check ignition wiring		X	X	X	X	
Check positive crankcase ventilation (P.C.V.) system*1		X	X	X	X	
Check vacuum fitting hoses & connections*1		X	X	X	X	
Check exhaust gas sensor*2			X		X	MA-12
Check vapor lines*2			X		X	MA-8

Chassis and body	(Underhood)					
Check brake, clutch & automatic transmission fluid level & leaks*		X	X	X	X	
Change brake fluid*			X		X	
Check brake booster vacuum hoses, connections & check valve			X		X	
Check power steering fluid & lines		X	X	X	X	
(Under vehicle)						
Check brake, clutch & exhaust systems for proper attachment, leaks, cracks, chafing, abrasion, deterioration, etc.		X	X	X	X	
Check oil level in manual transmission & differential gear*		X	X	X	X	
Check steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts for damaged, loose & missing parts & lubrication*	X	X	X	X	X	
(Outside and inside)						
Check wheel alignment. If necessary, rotate & balance wheels		X	X	X	X	
Check brake pads, discs & other brake components for wear, deterioration & leaks*		X	X	X	X	
Check front wheel bearing grease			X		X	
Lubricate locks, hinges & hood latch*		X	X	X	X	
Check seat belts, buckles, retractors, anchors & adjuster		X	X	X	X	MA-23
Check foot brake, parking brake & clutch for free play, stroke & operation		X	X	X	X	
Check body corrosion		Annually				MA-24

ENGINE OIL SERVICE

MAINTENANCE OPERATION	Months	MAINTENANCE INTERVAL								
		—	6	12	18	24	30	36	42	48
Perform at the specified time or mileage, whichever comes first.	km x 1,000	1	10	20	30	40	50	60	70	80
	(Miles x 1,000)	(0.6)	(6)	(12)	(18)	(24)	(30)	(36)	(42)	(48)
Underhood										
Change engine oil (Use recommended oil)*	Non-turbo models	X	X	X	X	X	X	X	X	X
	Turbo models	Every 6 months or 5,000 km (3,000 miles)								
Change engine oil filter*	See NOTE (1).	X	X	X	X	X	X	X	X	X

Reference page*3

NOTE: (1) If Nissan PREMIUM oil filter or equivalent is used on non-turbo models, change oil filter at the first and the second oil changes, and then at every second oil change.

(2) Maintenance items with "*" should be performed more frequently according to "Maintenance under severe driving conditions".

Check: Check. Correct or replace if necessary.

*1: Non-catalyzer models only

*2: Catalyzer models only

*3: Refer to the already-published Service Manual if not specified.

MAINTENANCE SCHEDULE (For U.K)

The following tables show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

Periodic maintenance beyond the last period shown on the tables requires similar maintenance.

MAINTENANCE OPERATION	MAINTENANCE INTERVAL										Reference page*	
	0.6	9	18	27	36	45	54	63	72			
	(1)	(15)	(30)	(45)	(60)	(75)	(90)	(105)	(120)			
Periodic maintenance should be performed either at number of miles (kilometers) or months, whichever comes first.	Number of miles in thousands (Number of kilometers in thousands)	—	6	12	18	24	30	36	42	48		
ENGINE MAINTENANCE	Under bonnet and under vehicle											
Replace timing belt											Every 60,000 miles (100,000 km)	MA-18
Change engine anti-freeze coolant (Ethylene glycol base)					X				X			MA-10
Check cooling system				X		X		X		X		
Check fuel lines						X				X		MA-9
Check drive belts for cracks, fraying, wear & tension		X		X		X		X		X		MA-8
Replace air cleaner filter (Viscous paper type)*						X				X		
Change engine oil (Use recommended oil) & oil filter*	Non-turbo models See NOTE (1)	X	X	X	X	X	X	X	X	X		
	Turbo models										Every 4,500 miles (7,500 km) or 6 months	
Check & adjust carburetor idle rpm & mixture ratio		X	X	X	X	X	X	X	X	X		MA-13
Replace fuel filter				X		X		X		X		
Adjust ignition timing			X	X	X	X	X	X	X	X		MA-13
Replace spark plugs			X	X	X	X	X	X	X	X		MA-9
Check ignition wiring						X				X		
Check positive crankcase ventilation (P.C.V.) system				X		X		X		X		
Check vacuum hoses & connections				X		X		X		X		
CHASSIS AND BODY MAINTENANCE	Under bonnet											
Check brake, clutch & automatic transmission fluid level & leaks*		X	X	X	X	X	X	X	X	X		
Change brake fluid				X		X		X		X		
Check brake booster vacuum hoses, connections & check valve						X				X		
Check power steering fluid & lines		X	X	X	X	X	X	X	X	X		
	Under vehicle											
Check brake, clutch & exhaust systems for proper attachment, leaks, cracks, chafing, abrasion, deterioration, etc.		X	X	X	X	X	X	X	X	X		
Check oil level in manual transmission & differential gear*		X	X	X	X	X	X	X	X	X		
Check steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts for damage, loose & missing parts & lubrication*	X		X		X		X			X		
	Outside and inside											
Check wheel alignment. If necessary, rotate & balance wheels				X		X		X		X		
Check brake pads, disc & other brake components for wear, deterioration & leaks*		X	X	X	X	X	X	X	X	X		
Check front wheel bearing grease						X				X		
Lubricate locks, hinges & hood latch*		X	X	X	X	X	X	X	X	X		
Check seat belts, buckles, retractors & adjuster				X		X		X		X		MA-23
Check foot brake, parking brake & clutch for free play, stroke & operation		X	X	X	X	X	X	X	X	X		
Check body corrosion											Annually	MA-24

NOTE: (1) Use Nissan PREMIUM oil filter or equivalent.

If Nissan oil filter other than PREMIUM type is used, oil filter and oil should be changed every 6,000 miles (10,000 km) or 6 months, whichever comes first.

(2) Maintenance items with "*" should be performed more frequently according to "Maintenance under severe driving conditions".

Check: Check. Correct or replace if necessary.

*: Refer to the already-published Service Manual if not specified.

MAINTENANCE SCHEDULE (For Europe except U.K.)

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

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- G — Driving in areas using salt or other corrosive materials
- H — Driving on rough and/or muddy roads or in the desert
- I — Driving with frequent use of braking or in mountainous areas

Driving condition	Maintenance item	Maintenance operation	Maintenance interval	Reference page*
Standard service				
A	Air cleaner filter	Replace	Every 12 months or	
A . . . E	Fuel filter	Replace	20,000 km (12,000 miles)	
. F	Brake fluid	Replace		
. . . C	Automatic & manual transmission oil, & differential gear oil	Replace	Every 24 months or 40,000 km (24,000 miles)	
. G H	Steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts	Check		
A . C . . . G H I	Brake pads, discs & other brake components	Check	Every 6 months or 10,000 km (6,000 miles)	
. G	Lock, hinges & hood latch	Lubricate		
Engine oil service				
A B C D	Engine oil	Non-turbo models	Replace	Every 3 months or 5,000 km (3,000 miles)
		Turbo models	Replace	More frequently
A B C D	Engine oil filter	Replace	Every 3 months or 5,000 km (3,000 miles)	

Maintenance operation: Check = Check. Correct or replace if necessary.

*: Refer to the already-published Service Manual if not specified.

MAINTENANCE SCHEDULE (For U.K)

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

The maintenance intervals shown on the preceding pages are for normal operating conditions. If the vehicle is mainly operated under severe driving conditions as shown below, more frequent maintenance must be performed on the following items as shown in the table.

Severe driving conditions

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- G — Driving with frequent use of braking or in mountainous areas

Driving condition	Maintenance item	Maintenance operation	Maintenance interval	Reference page*
A	Air cleaner filter	Replace	More frequently	
A B C D . . .	Engine oil & oil filter	Non-turbo models Replace	Every 4,500 miles (7,500 km) or 3 months	
		Turbo models Replace	More frequently	
. . C	Automatic & manual transmission oil, differential gear oil	Replace	Every 18,000 miles (30,000 km) or 12 months	
. . . E F .	Steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts	Check	Every 9,000 miles (15,000 km) or 6 months	
A . C . E F G	Brake pads, discs & other brake components	Check	Every 4,500 miles (7,500 km) or 3 months	
. . . E . .	Lock, hinges & hood latch	Lubricate	Every 4,500 miles (7,500 km) or 3 months	

Maintenance operation: Check = Check. Correct or replace if necessary.

*: Refer to the already-published Service Manual if not specified.

ENGINE MAINTENANCE

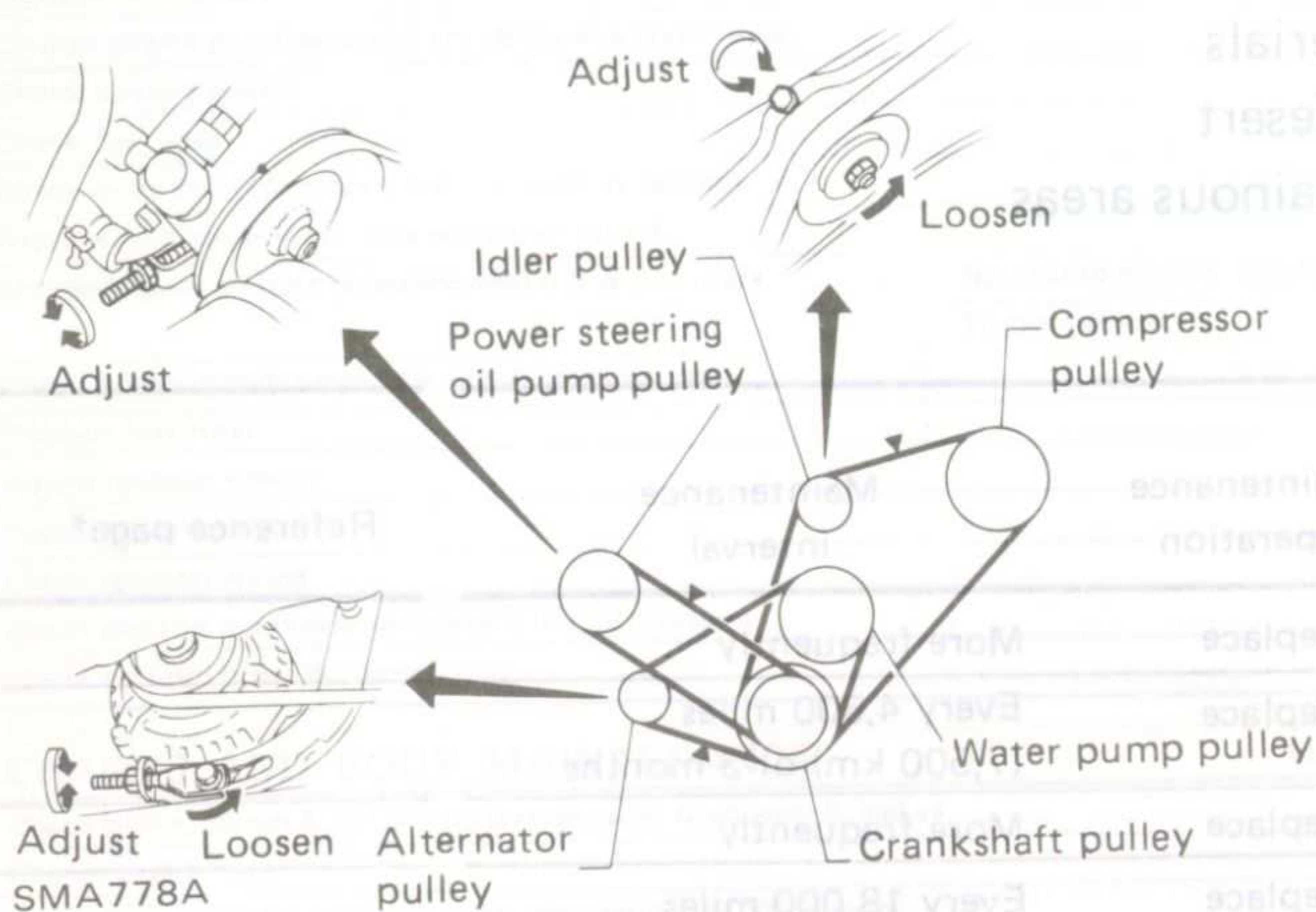
Checking Drive Belts

1. Inspect for cracks, fraying, wear or oil adhesion. Replace if necessary.

The belts should not touch the bottom of the pulley groove.

2. Check drive belt deflections by pushing on the belt middle between pulleys.

Adjust if belt deflections exceed the limit.

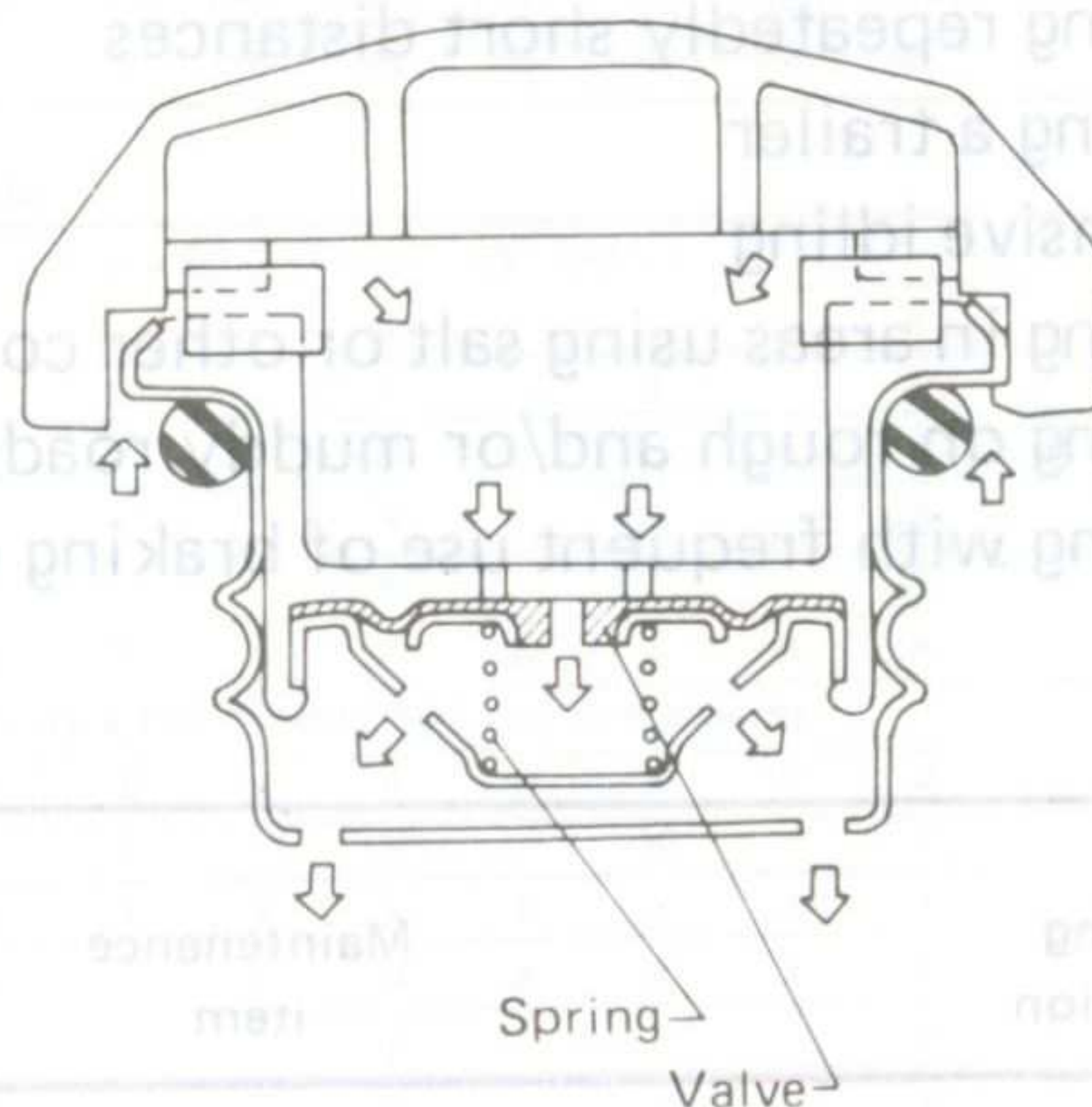


Unit: mm (in)

	Used belt deflection		Set deflection of new belt
	Limit	Adjusted deflection	
Alternator	12 (0.47)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioner compressor	11 (0.43)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)
Power steering oil pump	20 (0.79)	14 - 16 (0.55 - 0.63)	12 - 14 (0.47 - 0.55)
Applied pushing force	98 N (10 kg, 22 lb)		

Checking Vapor Lines

1. Visually inspect vapor lines for proper attachment, cracks, damage, loose connections, chafing and deterioration.
2. Check fuel tank vacuum relief valve for clogging, sticking, etc.

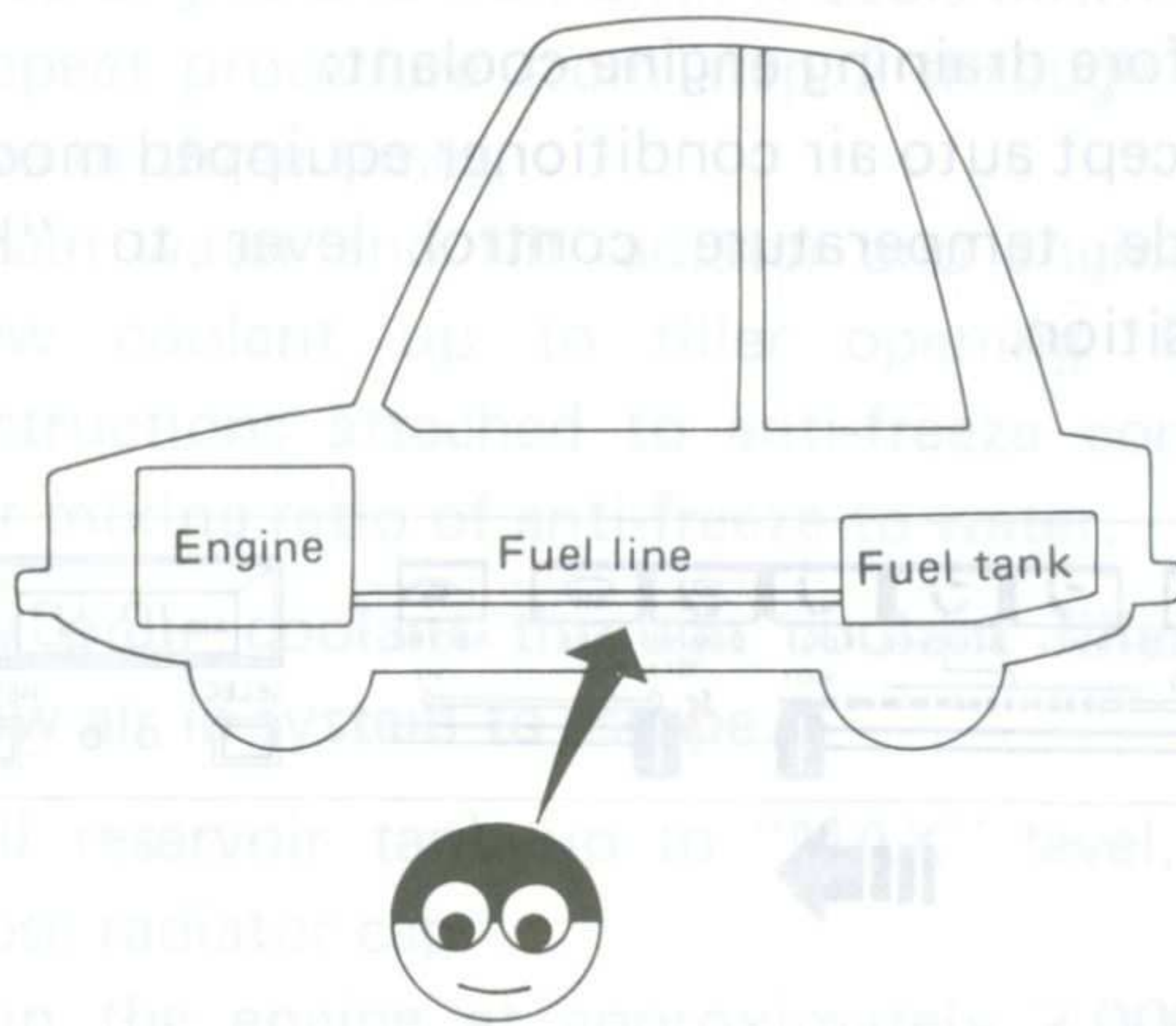


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ENGINE MAINTENANCE

Checking Fuel Line

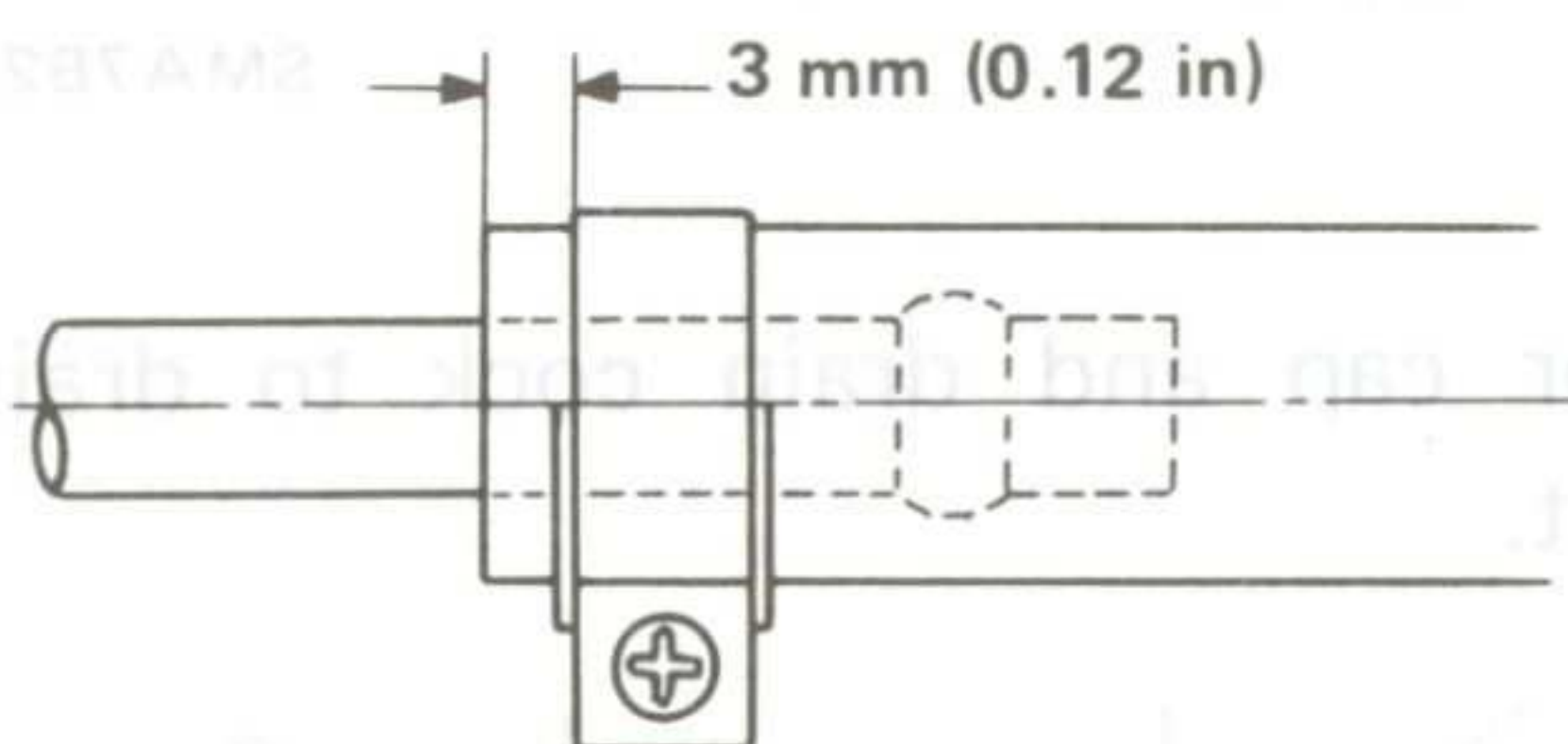
Check fuel lines and tank for proper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.



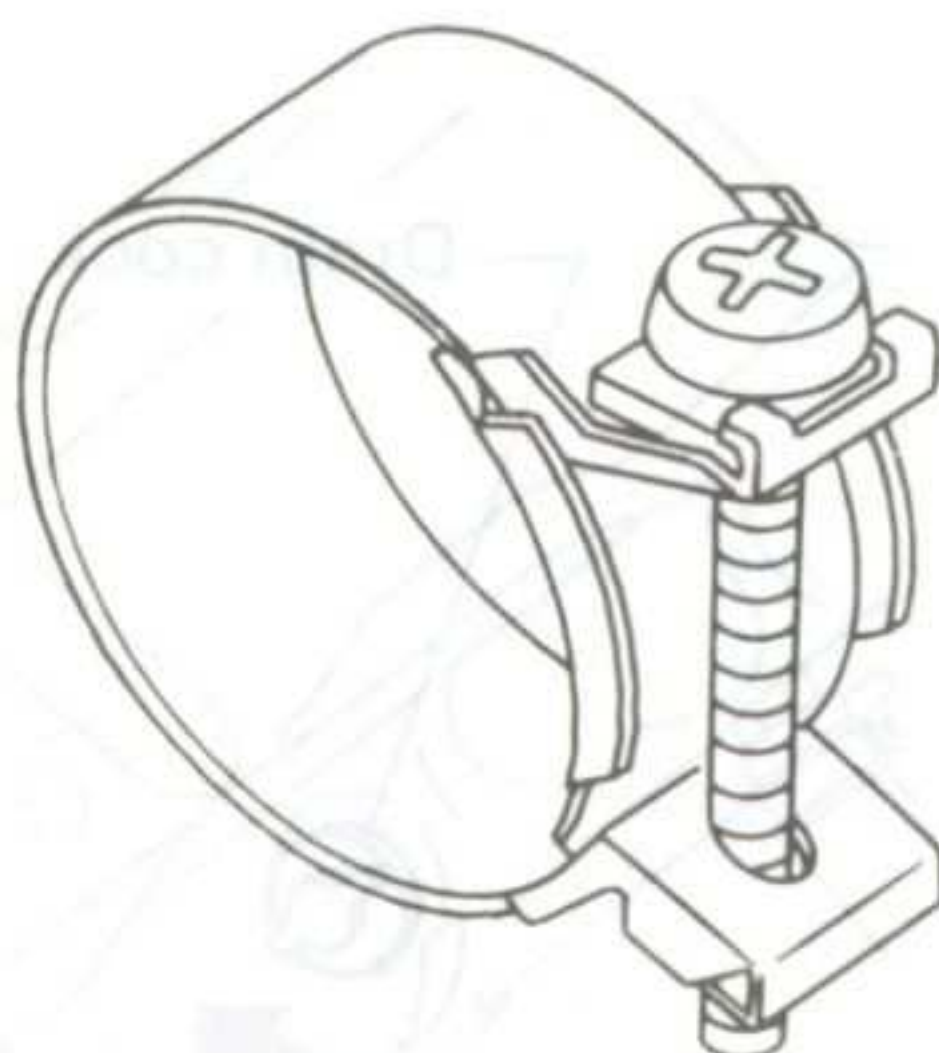
SMA803A

CAUTION:

- Tighten high pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end or screw position (wider than other portions of clamp) is flush with hose end.
- When tightening hose clamp, ensure that screw does not come into contact with adjacent parts.



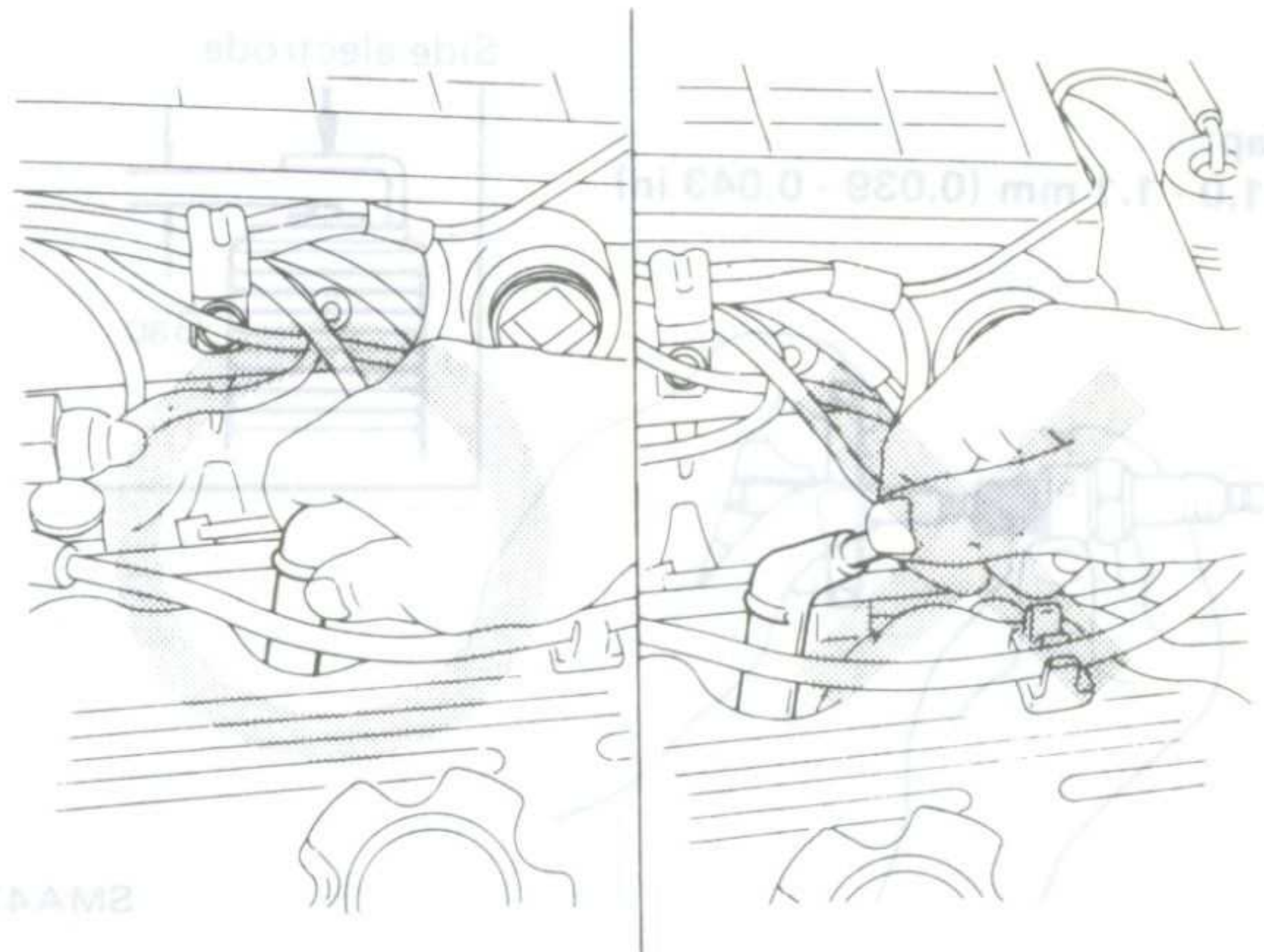
 Fuel hose clamps
1.0 - 1.5 N·m
(0.10 - 0.15 kg-m,
0.7 - 1.1 ft-lb)



SMA804A

Checking and Replacing Spark Plugs

- Disconnect ignition wires from spark plugs by pulling on the boot. Do not pull on the wires.



SMA633B

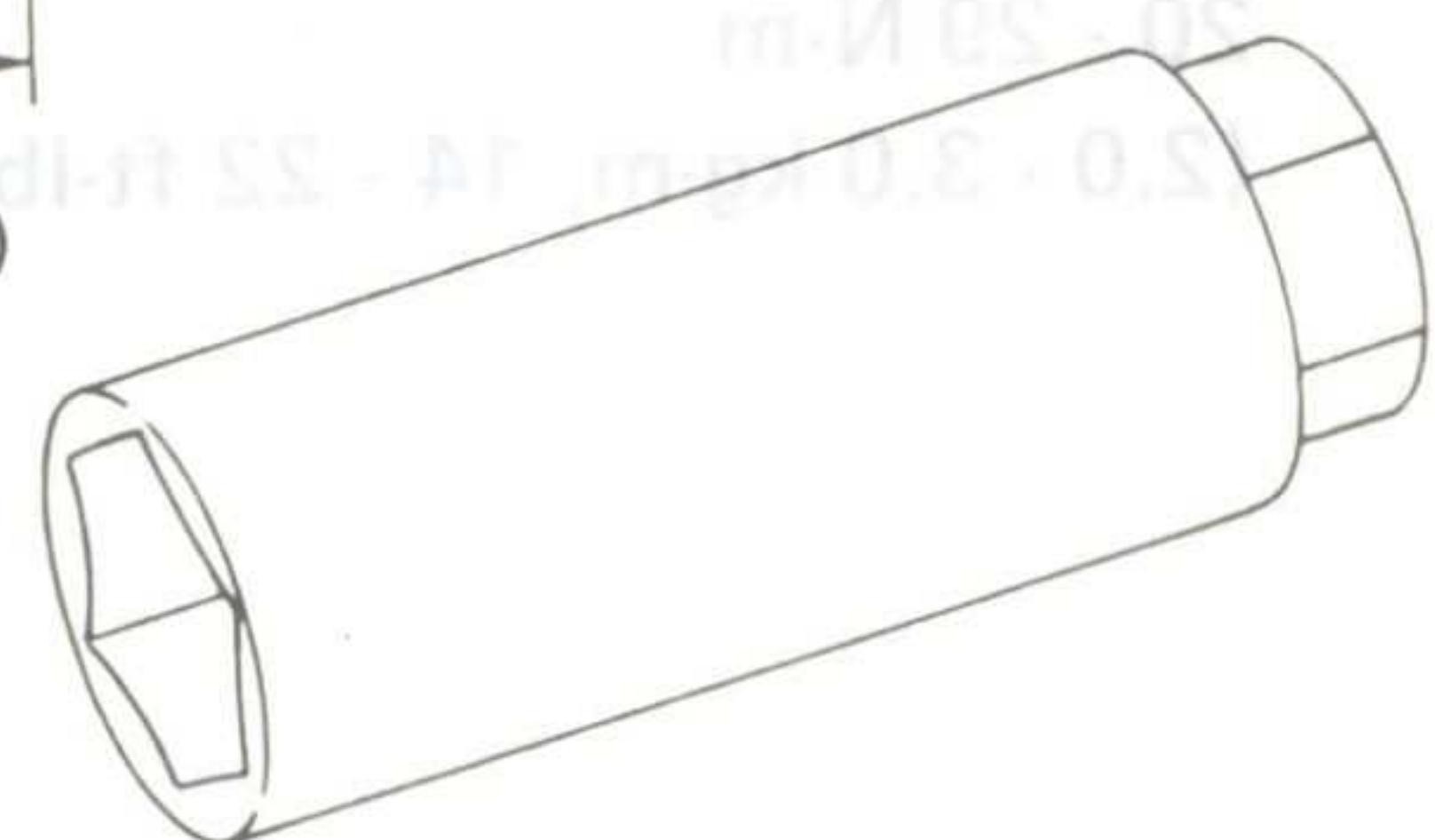
- Remove spark plugs with a suitable plug wrench as shown below.

CAUTION:

Before removing spark plug, be careful that there is no foreign substance in the hollow place around spark plug.



Wrench with a magnet
to hold spark plug



SEM294A

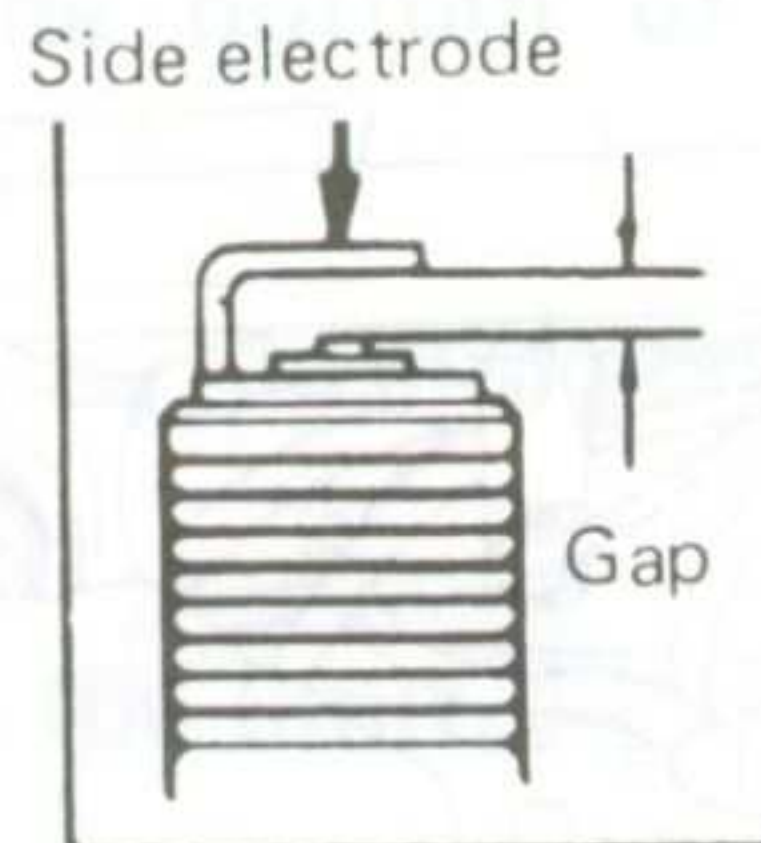
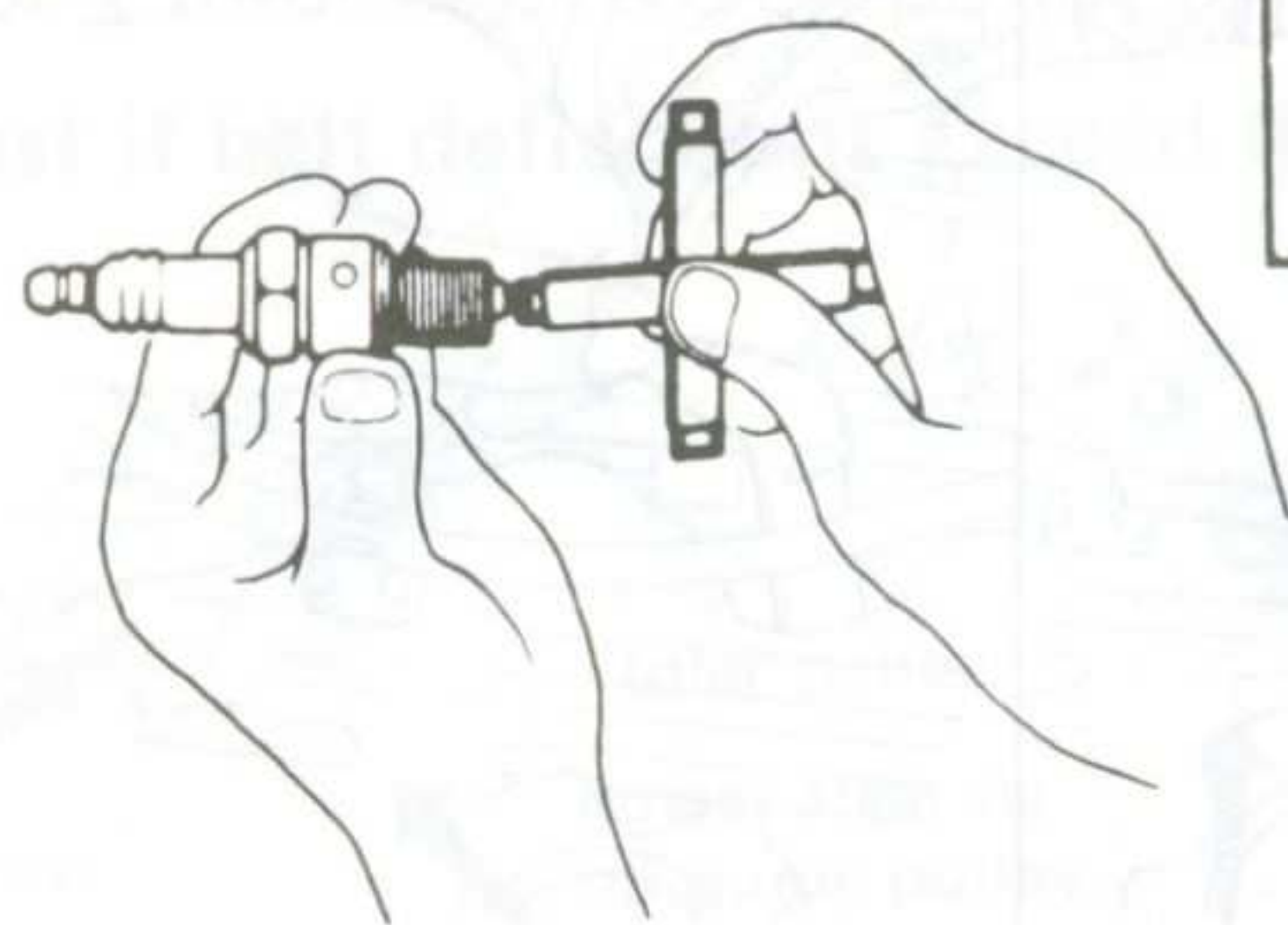
- Inspect insulator for cracks or chips, gasket for damage or deterioration.

ENGINE MAINTENANCE

Checking and Replacing Spark Plugs (Cont'd)

4. Check spark plug gap.

Gap:
1.0 - 1.1 mm (0.039 - 0.043 in)



SMA476

		VG30E	VG30ET
Except Europe & Australia	Standard	BCP6ES-11	BCP6E-11
	Hot type	BCP5ES-11	BCP5E-11
	Cold type	BCP7ES-11	BCP7E-11
Europe & Australia	Standard	BCPR6ES-11	BCPR6E-11
	Hot type	BCPR5ES-11	BCPR5E-11
	Cold type	BCPR7ES-11	BCPR7E-11

5. Install spark plugs. Reconnect ignition wires according to Nos. indicated on them.

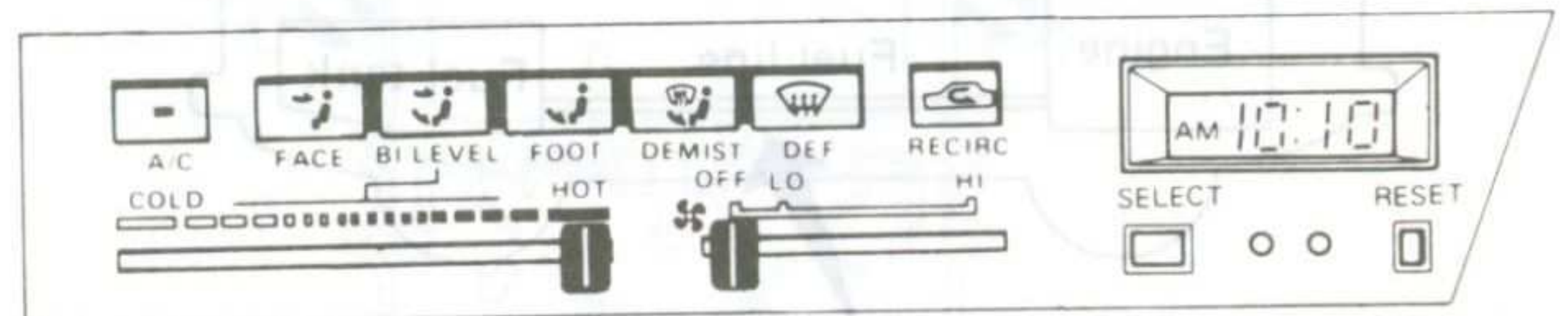
: Spark plug
20 - 29 N·m
(2.0 - 3.0 kg-m, 14 - 22 ft-lb)

Changing Engine Coolant

WARNING:

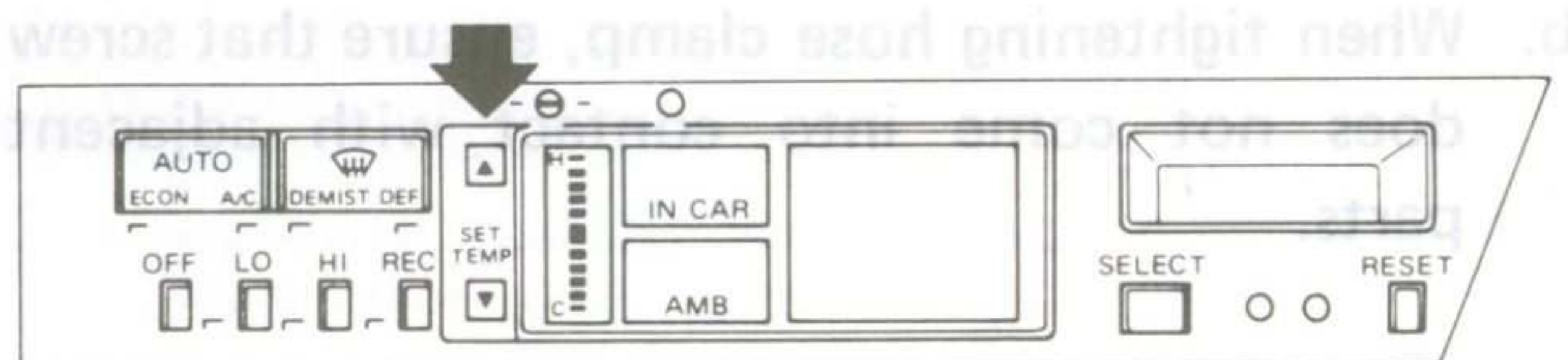
To avoid the danger of being scalded, never attempt to change the coolant when the engine is hot.

- Before draining engine coolant:
 - Except auto air conditioner equipped models
Slide temperature control lever to "HOT" position.



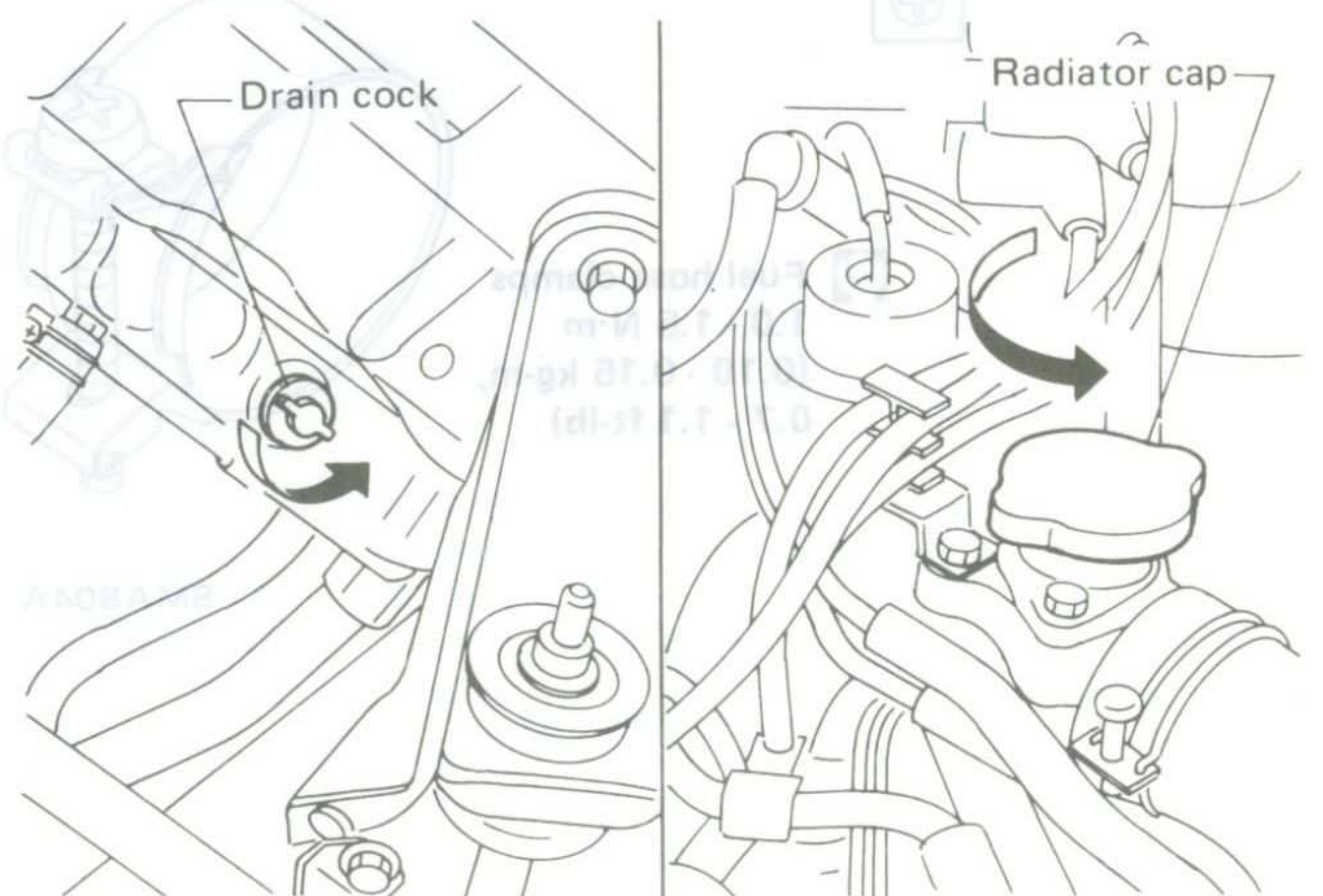
SMA781A

- Auto air conditioner equipped models
Turn ignition switch "ON" and set temperature at maximum.
Then turn ignition switch "OFF".



SMA782A

- Open radiator cap and drain cock to drain engine coolant.

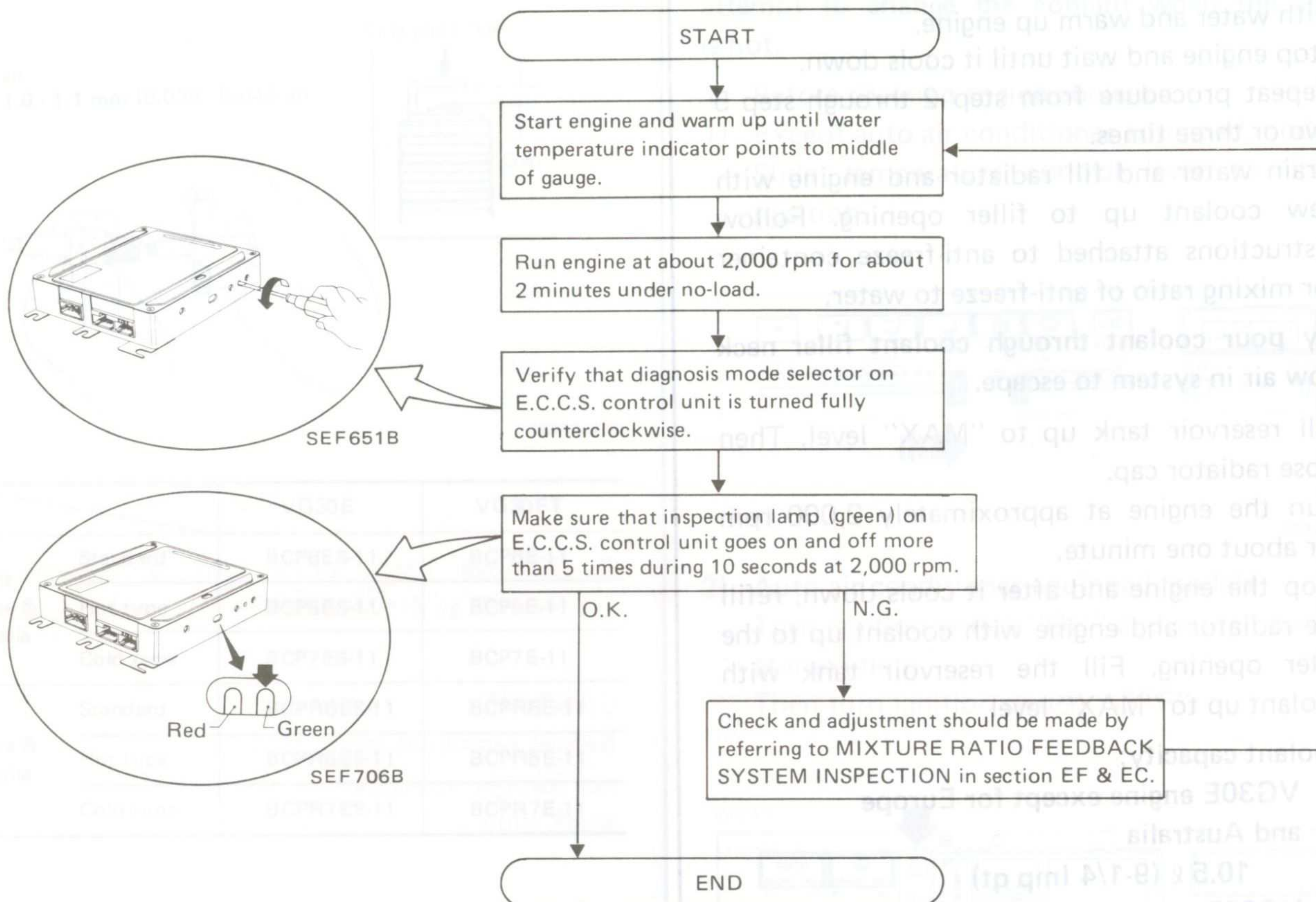


SMA783A

ENGINE MAINTENANCE

Checking Exhaust Gas Sensor

Checking procedure



ENGINE MAINTENANCE

Changing Engine Coolant (Cont'd)

3. Open drain plug on left side of cylinder block to drain coolant from cylinder block.
4. Close drain plug securely. Then, fill radiator with water and warm up engine.
5. Stop engine and wait until it cools down.
6. Repeat procedure from step 2 through step 5 two or three times.
7. Drain water and fill radiator and engine with new coolant up to filler opening. Follow instructions attached to anti-freeze container for mixing ratio of anti-freeze to water.

Slowly pour coolant through coolant filler neck to allow air in system to escape.

8. Fill reservoir tank up to "MAX" level. Then close radiator cap.
9. Run the engine at approximately 2,000 rpm for about one minute.
10. Stop the engine and after it cools down, refill the radiator and engine with coolant up to the filler opening. Fill the reservoir tank with coolant up to "MAX" level.

Coolant capacity:

VG30E engine except for Europe and Australia

10.5 l (9-1/4 Imp qt)

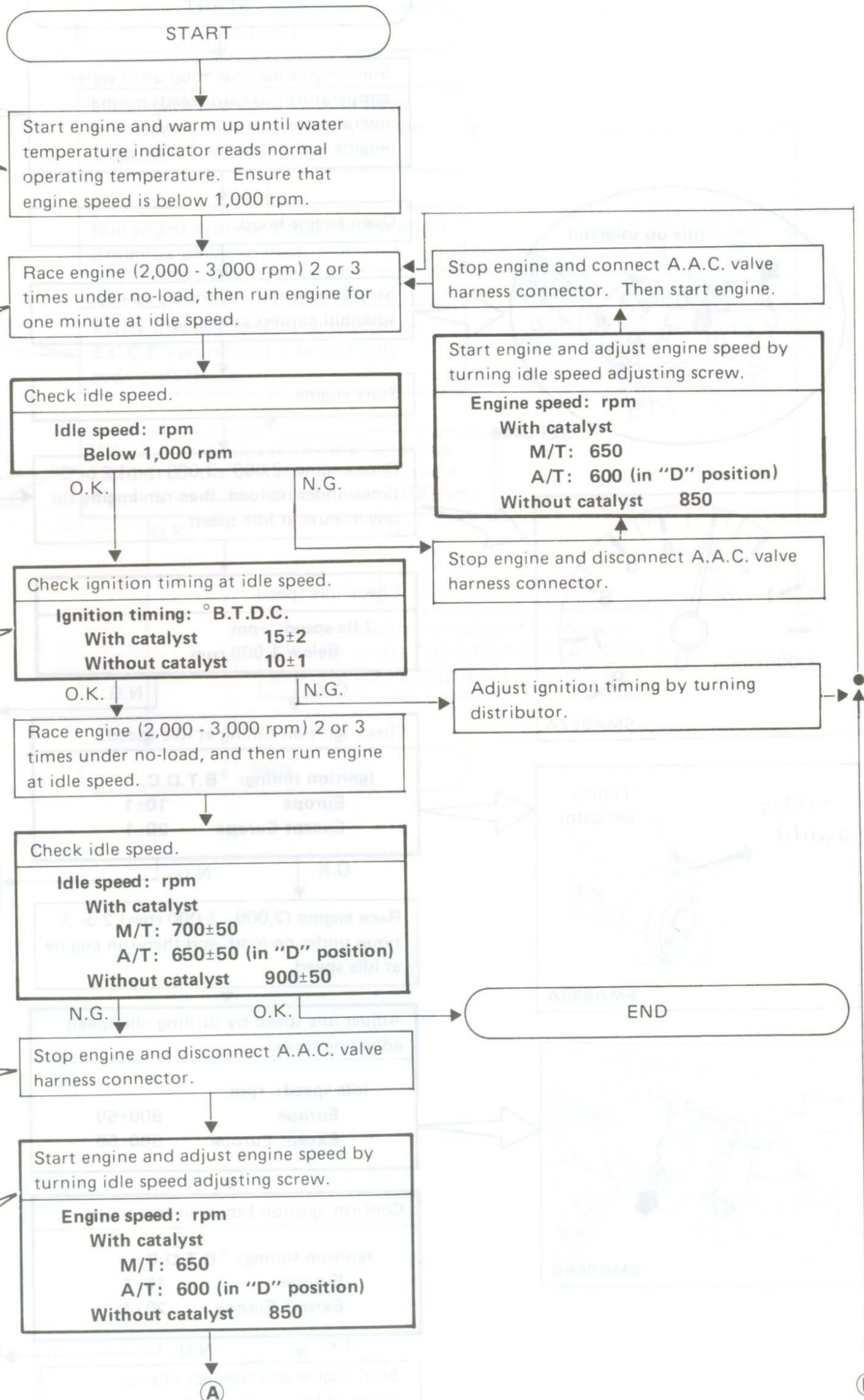
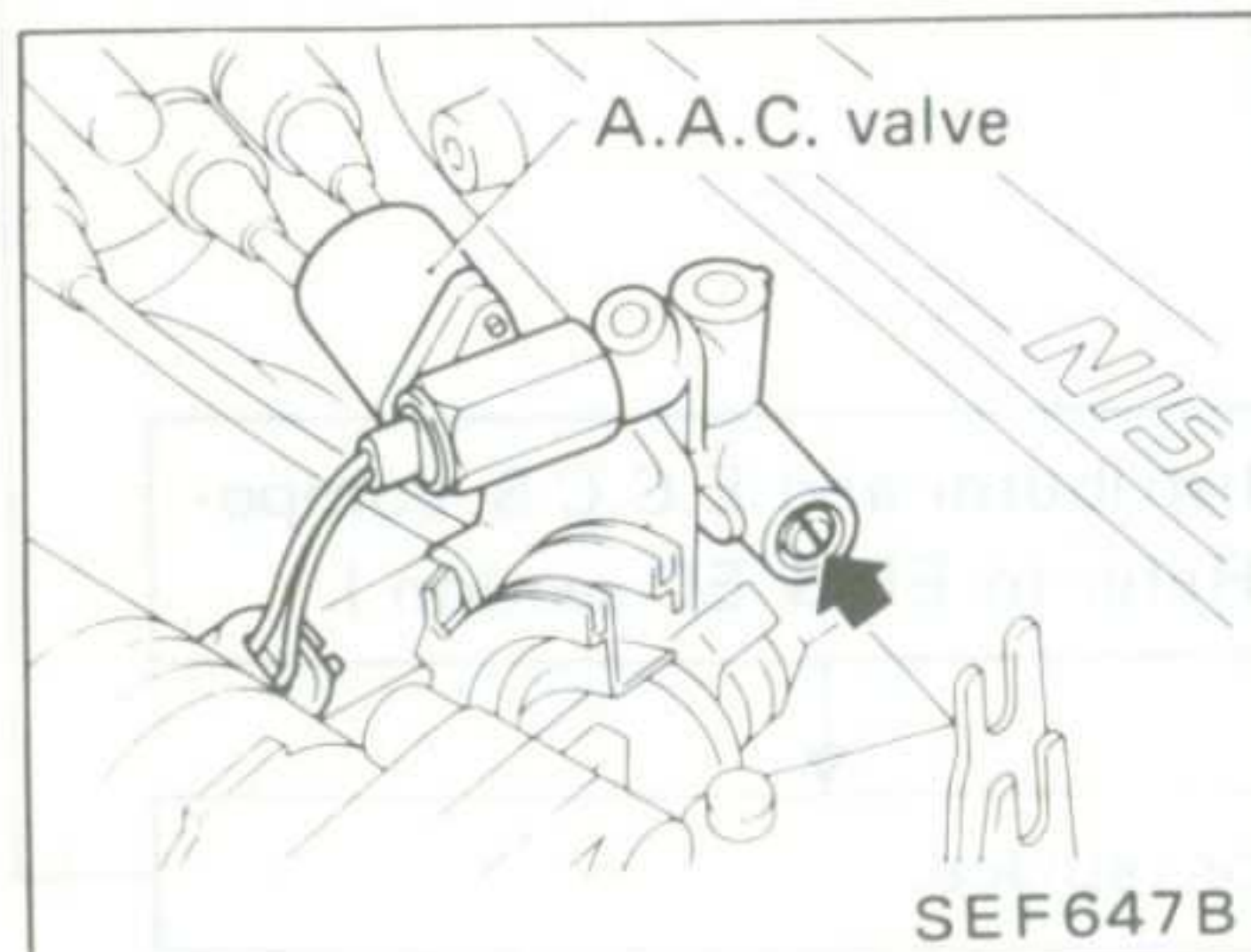
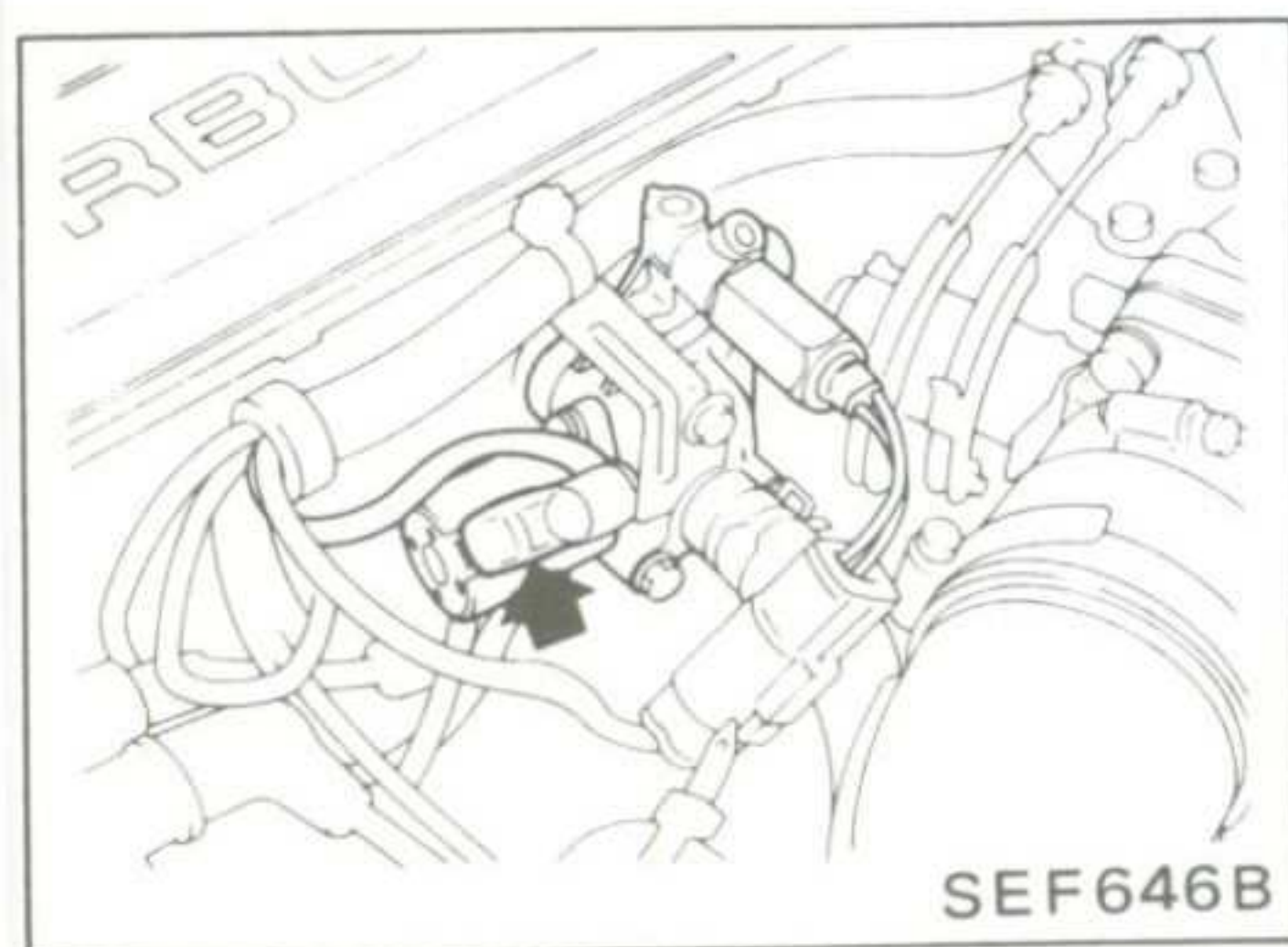
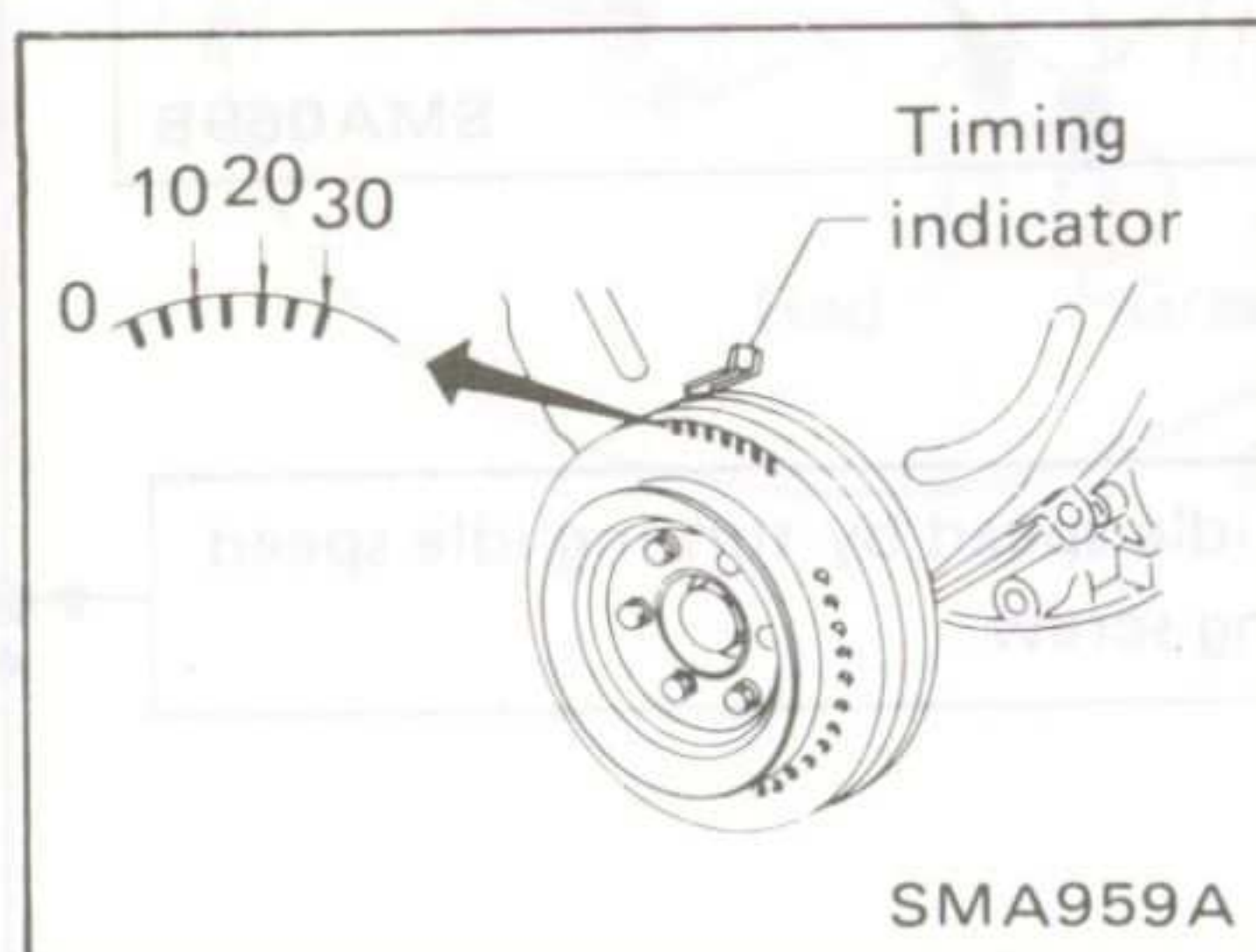
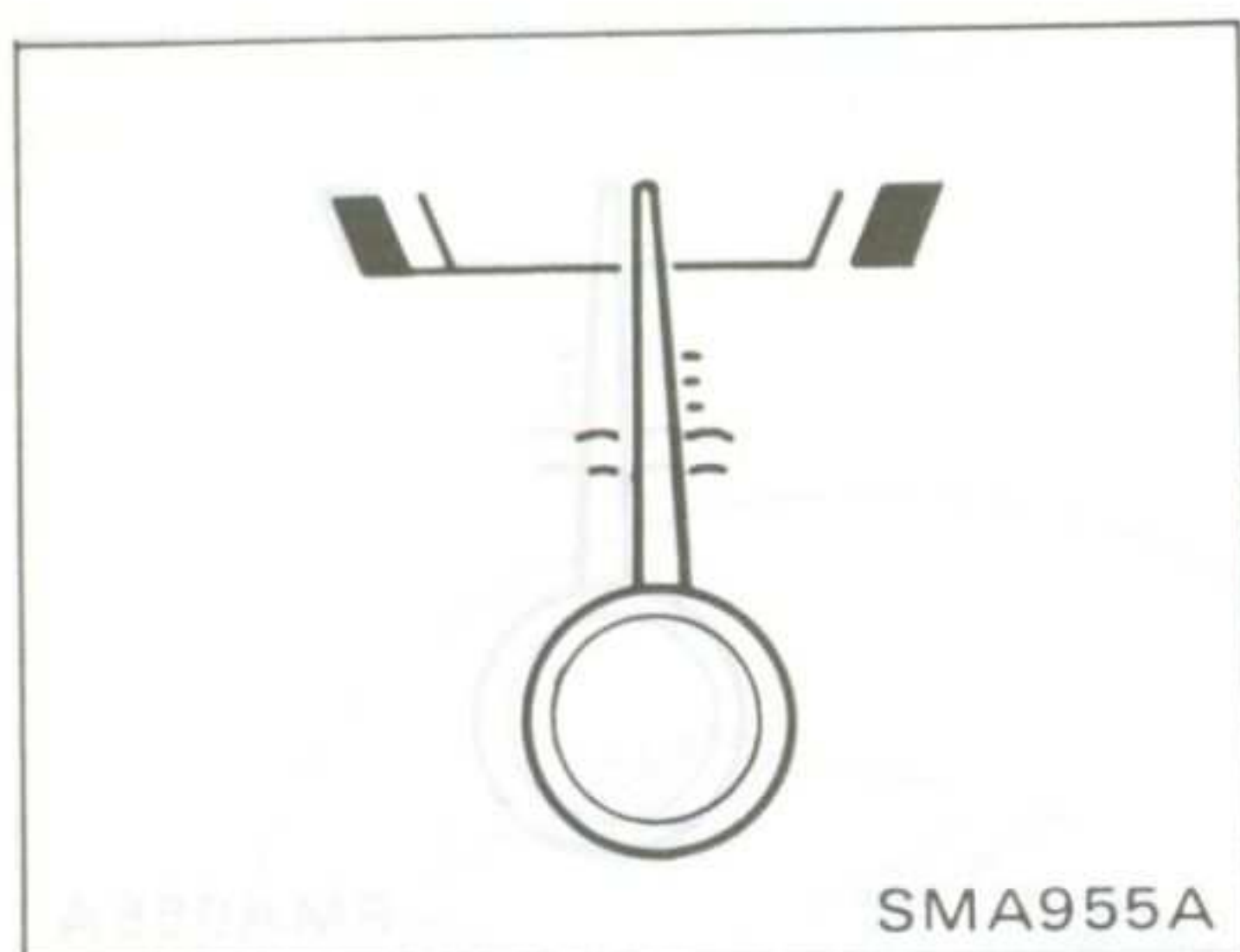
VG30E engine for Europe and Australia and VG30ET engine

11.0 l (9-5/8 Imp qt)

ENGINE MAINTENANCE

Checking and Adjusting Idle-rpm, Ignition Timing and Mixture Ratio (Cont'd)

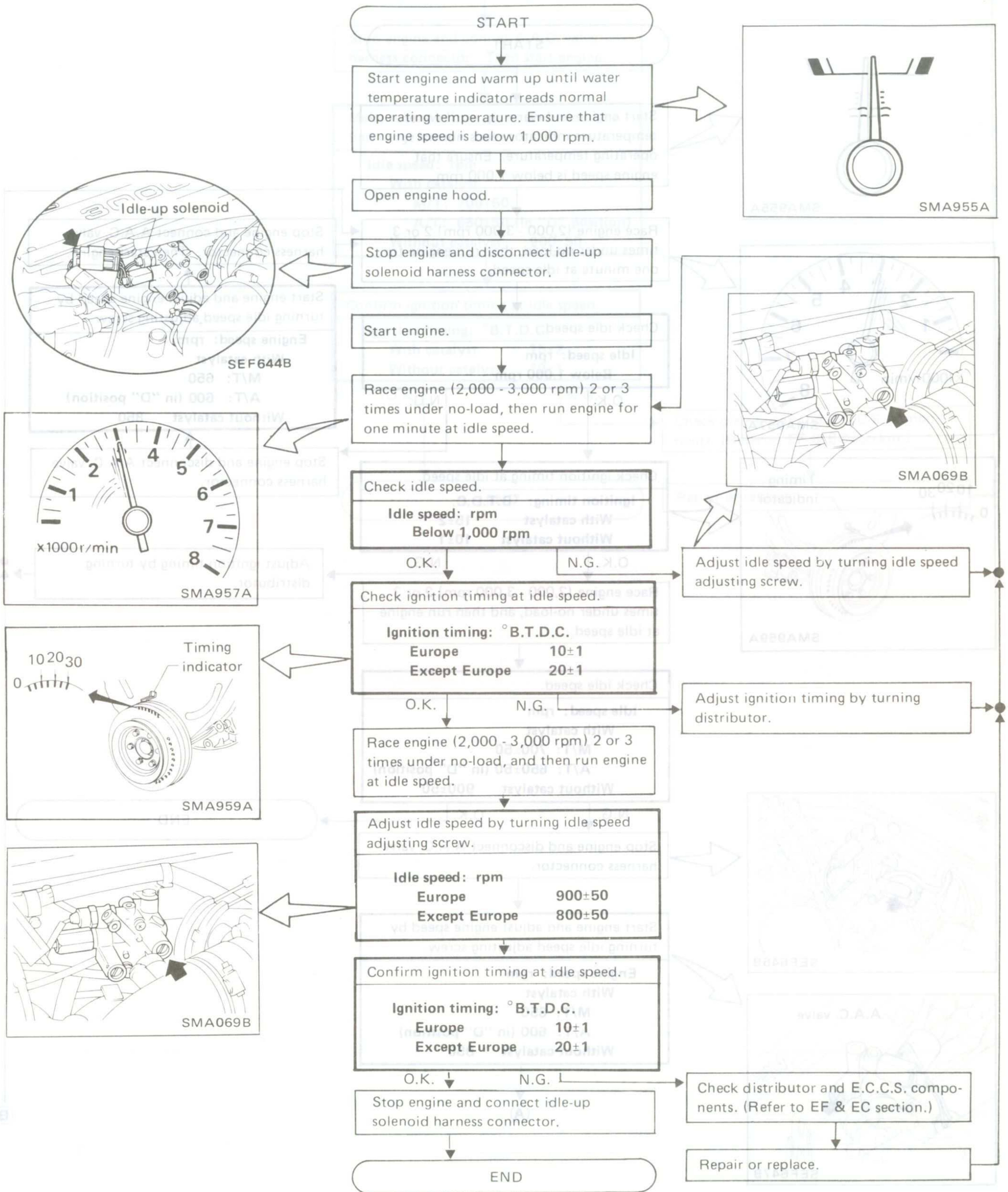
Checking and adjusting idle rpm and ignition timing (VG30ET engine)



ENGINE MAINTENANCE

Checking and Adjusting Idle-rpm, Ignition Timing and Mixture Ratio

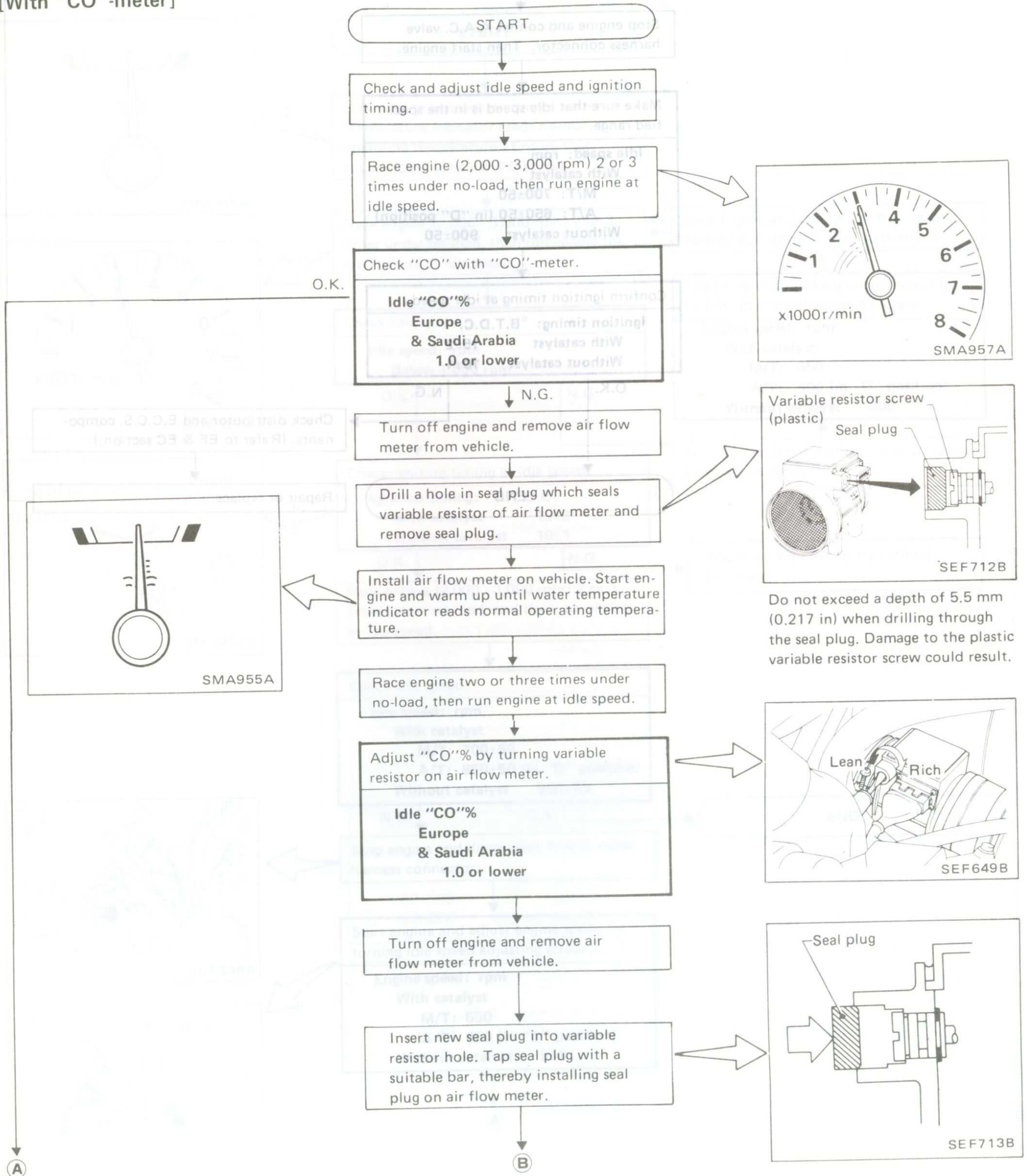
Checking and adjusting idle rpm and ignition timing (VG30E engine)



ENGINE MAINTENANCE

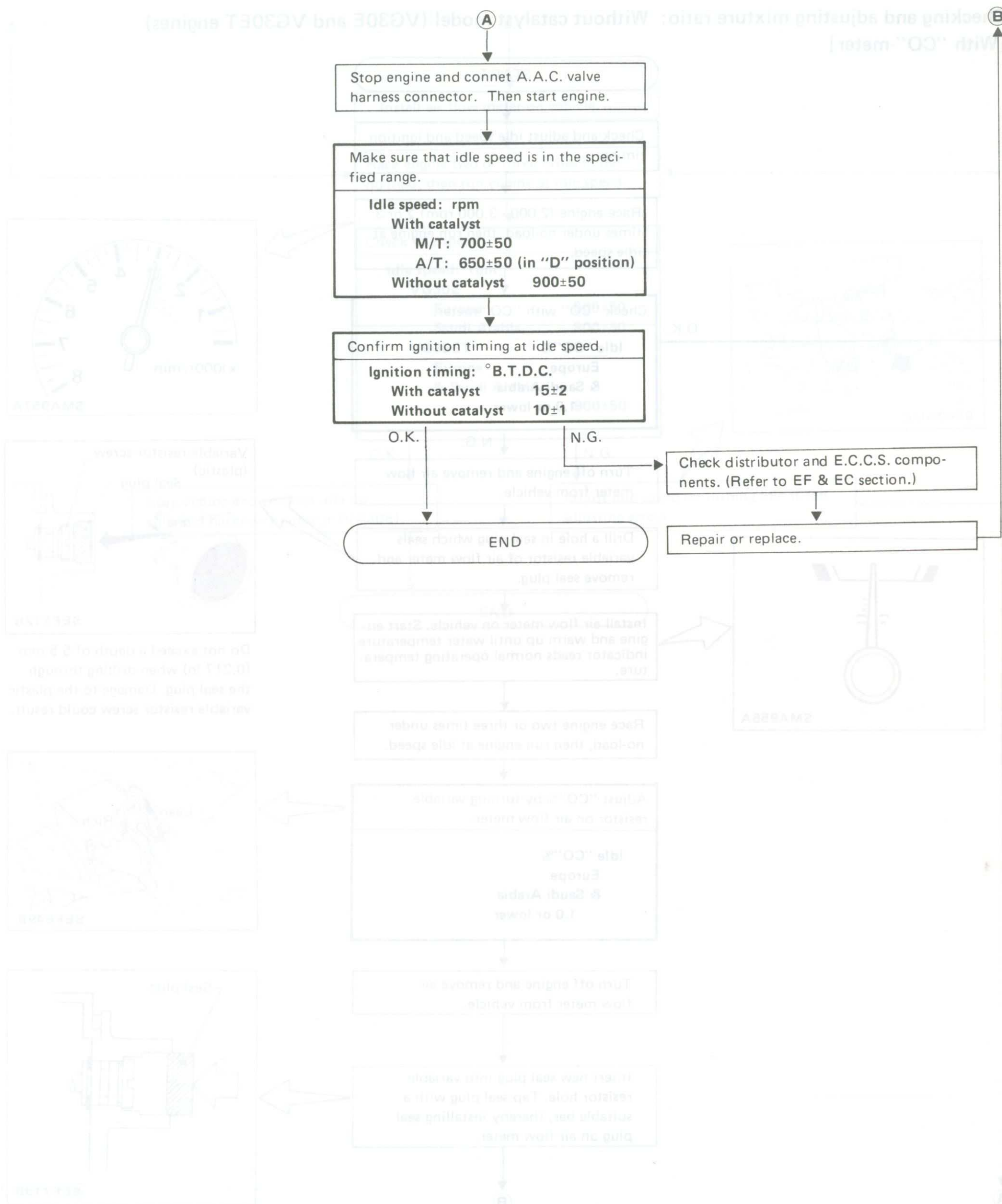
Checking and Adjusting Idle-rpm, Ignition Timing and Mixture Ratio (Cont'd)

Checking and adjusting mixture ratio: Without catalyst model (VG30E and VG30ET engines)
[With "CO"-meter]



ENGINE MAINTENANCE

Checking and Adjusting Idle-rpm, Ignition Timing and Mixture Ratio (Cont'd)



ENGINE MAINTENANCE

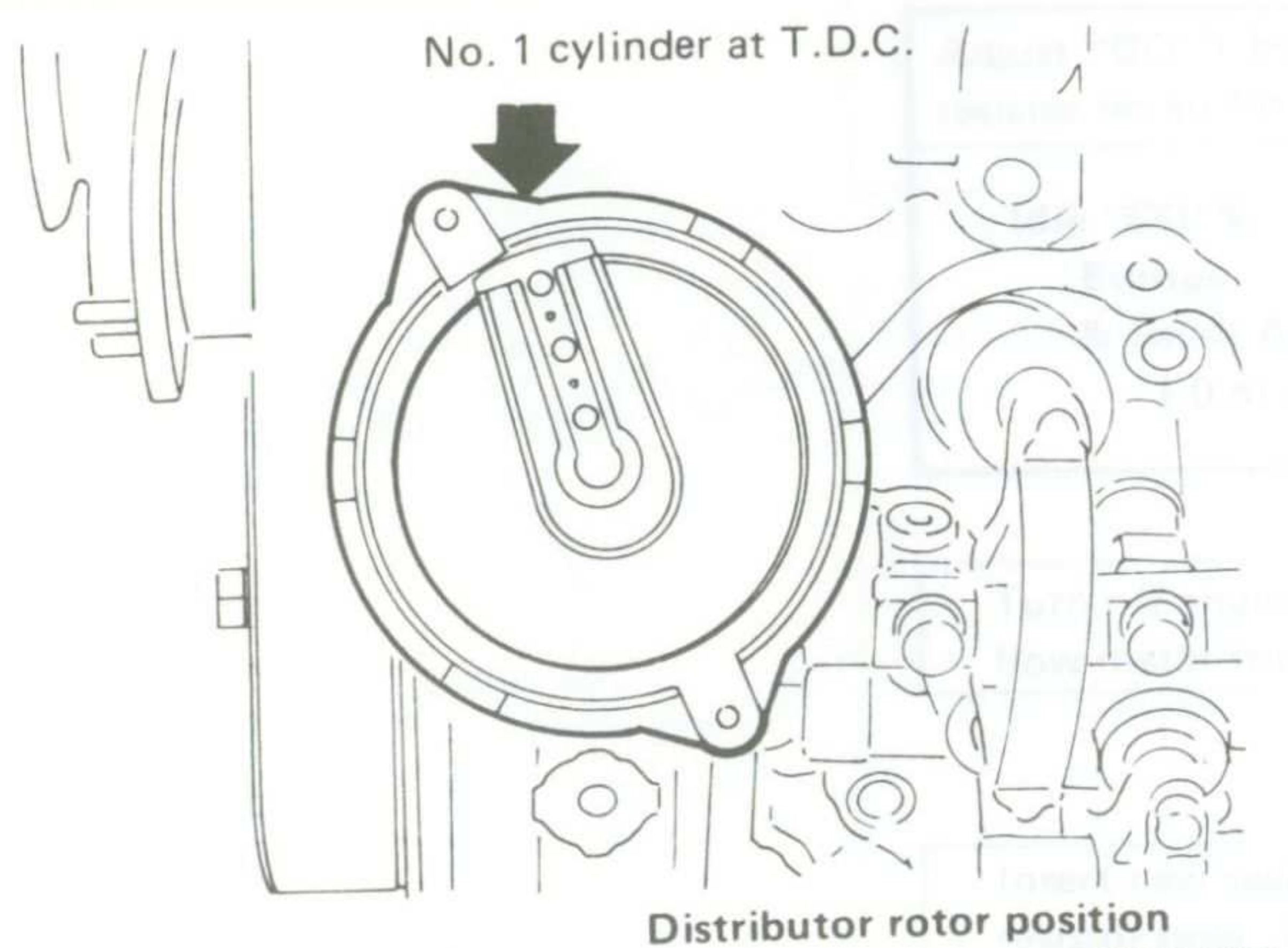
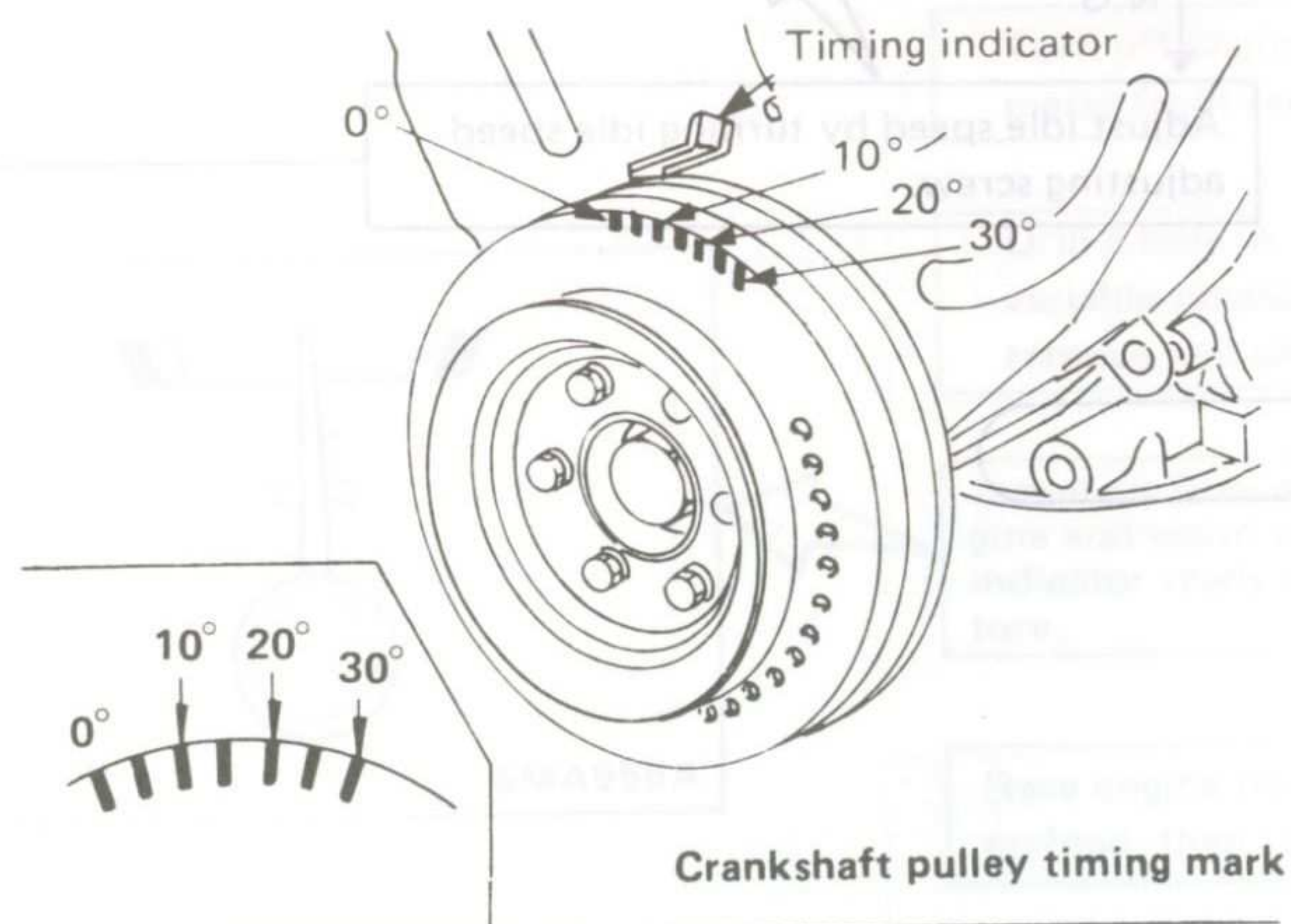
Replacing Timing Belt

After removing timing belt, do not rotate crankshaft and camshaft separately, because valves hit piston heads.

1. Remove engine undercover and drain engine coolant from radiator.

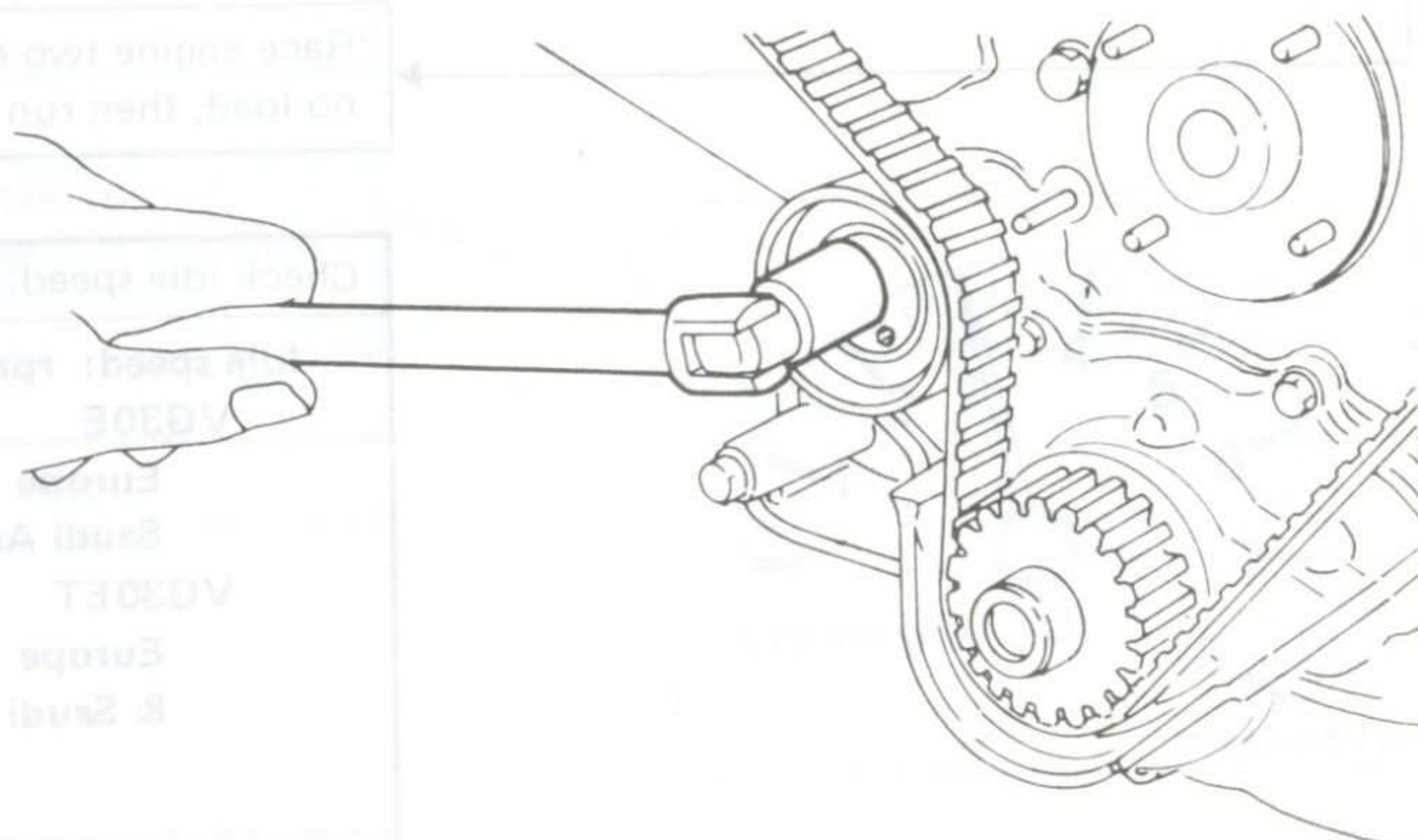
Be careful not to allow coolant to contact drive belts.

2. Remove radiator shroud and fan.
3. Remove the following belts.
 - Power steering drive belt
 - Compressor drive belt
 - Alternator drive belt
4. Remove upper and lower radiator hoses.
5. Set No. 1 cylinder at T.D.C. on its compression stroke.



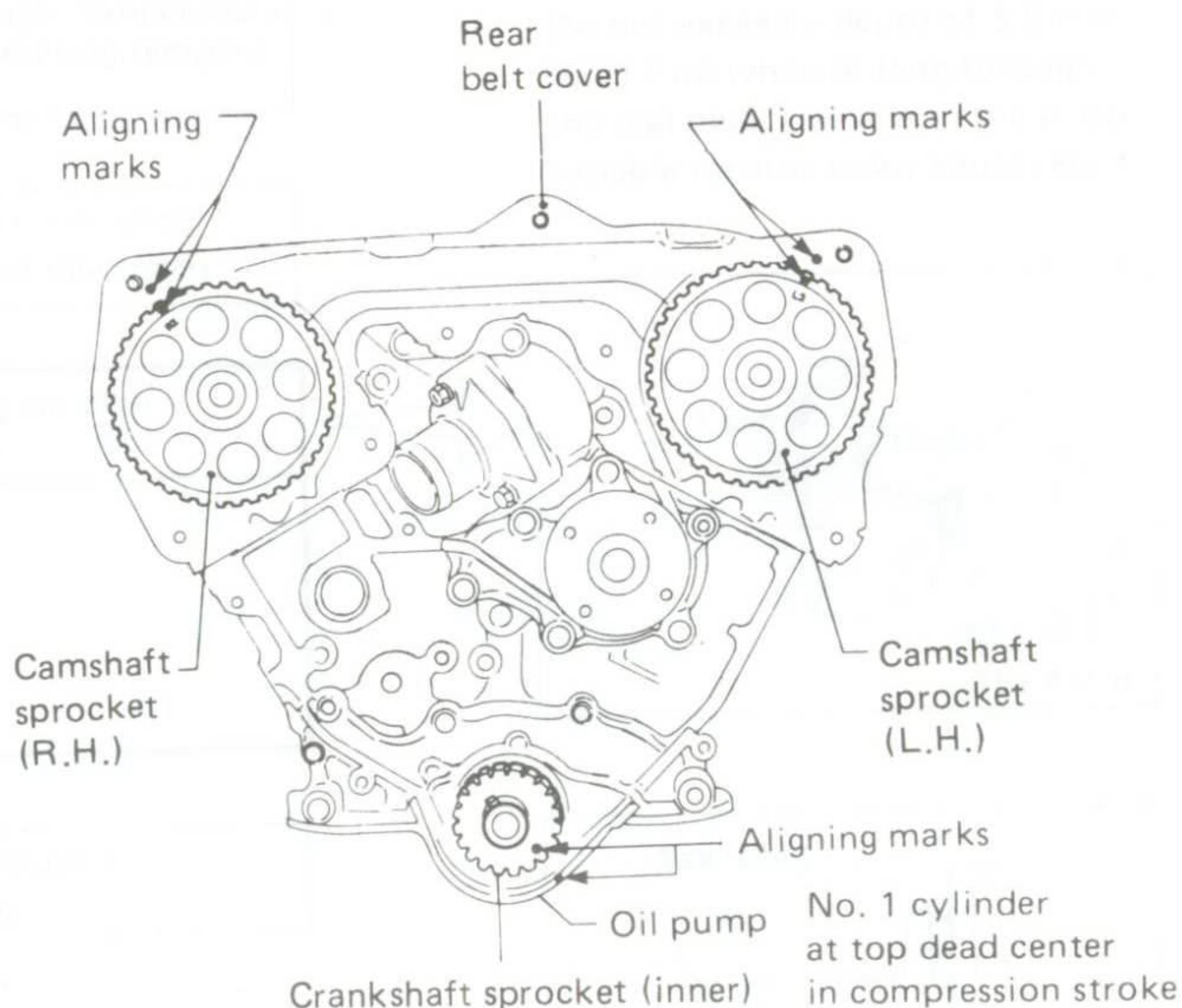
SEM530A

6. Remove idler bracket of the compressor drive belt and crankshaft pulley.
7. Remove front upper and lower belt covers.
8. Replace timing belt by loosening timing belt tensioner and return spring.



SEM240A

9. Visually check the condition of the timing belt. Refer to EM section.
10. Confirm that No. 1 cylinder is set at T.D.C. on its compression stroke.

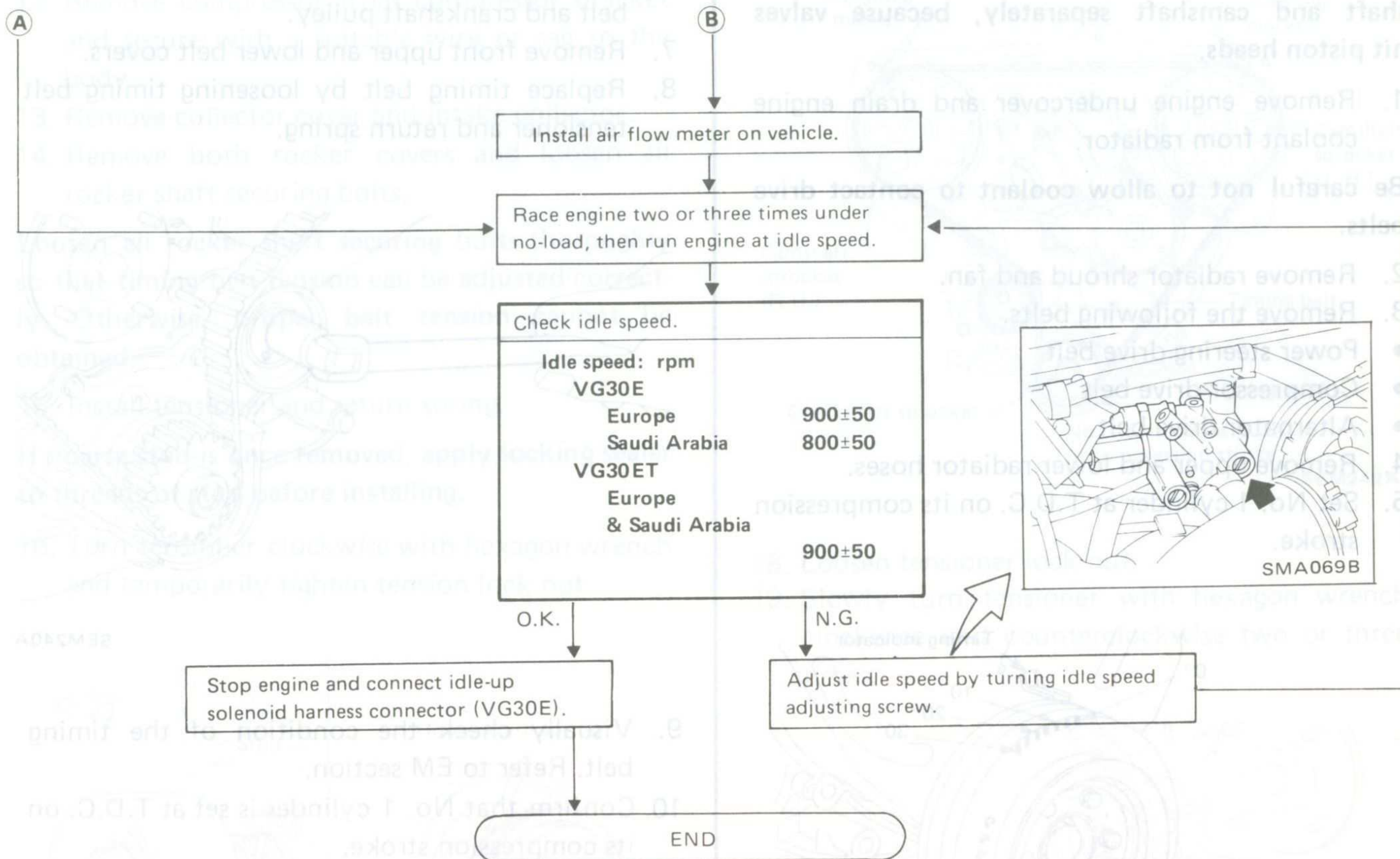


SEM241A

11. Disconnect all hoses, connectors and wires attached to intake collector and rocker covers.

ENGINE MAINTENANCE

Checking and Adjusting Idle-rpm, Ignition Timing and Mixture Ratio (Cont'd)



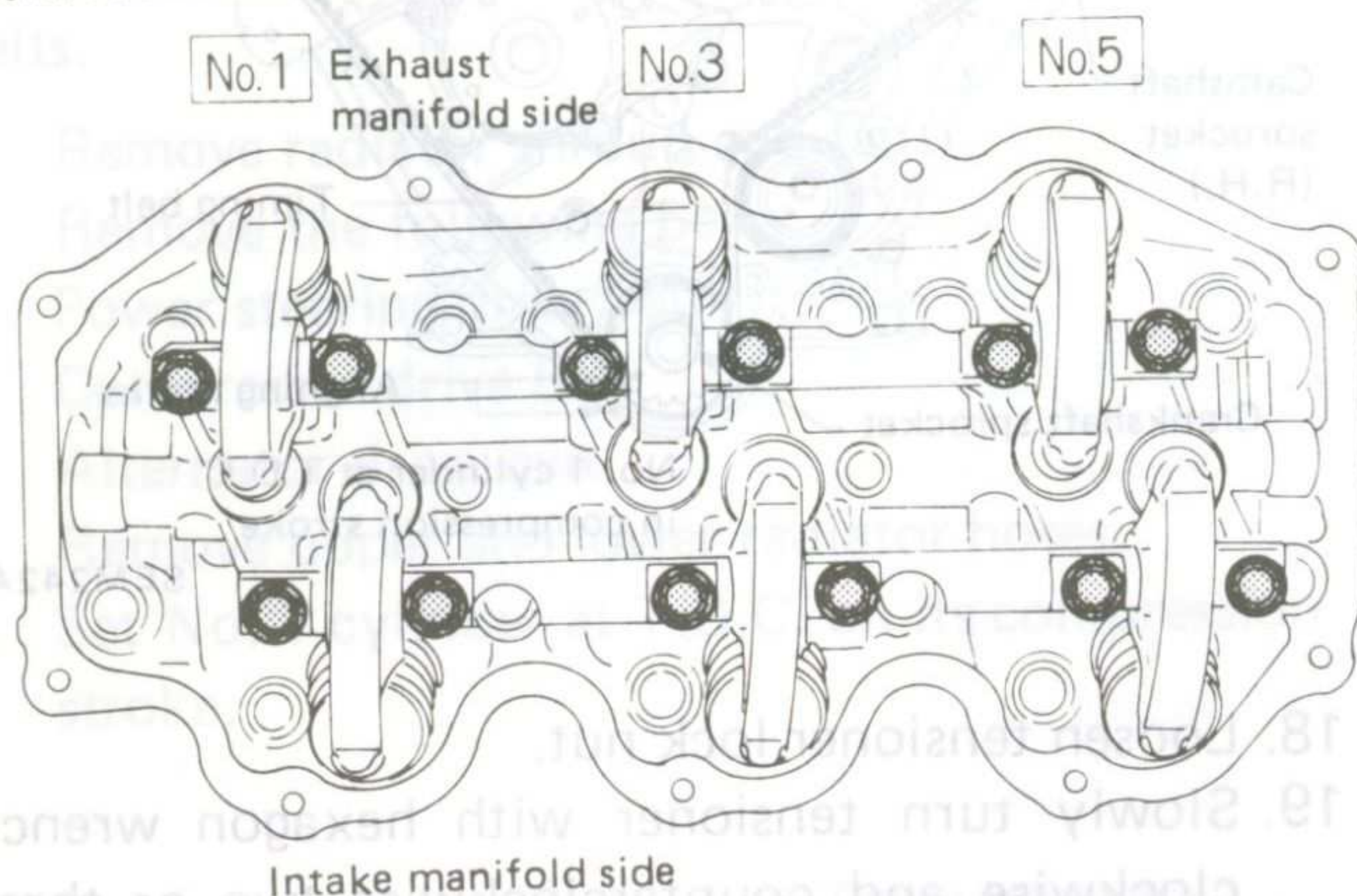
ENGINE MAINTENANCE

Replacing Timing Belt (Cont'd)

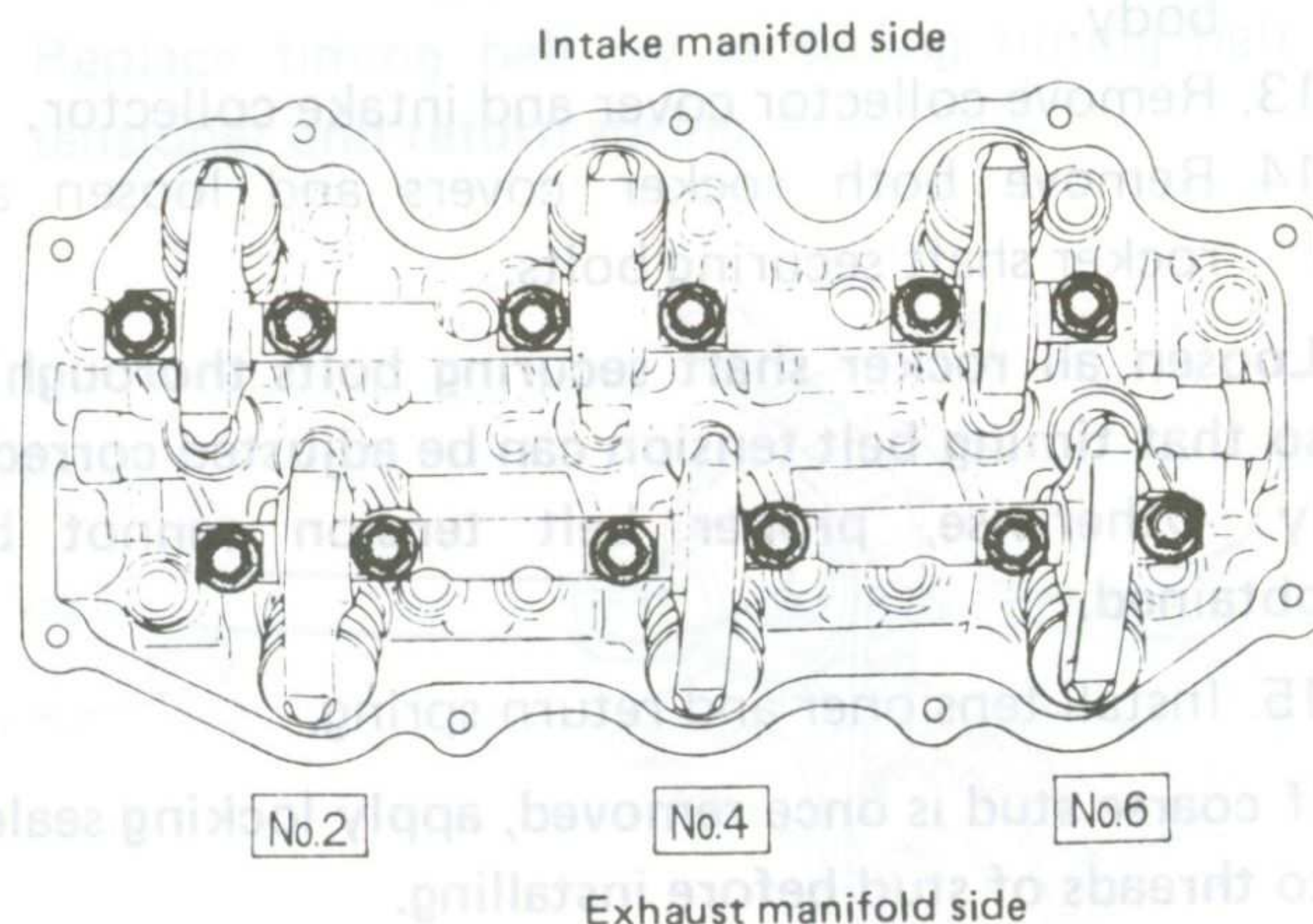
21. Tighten rocker shaft securing bolts in two or three stages.

 18 - 22 N·m
(1.8 - 2.2 kg-m, 13 - 16 ft-lb)

R.H. rocker shafts



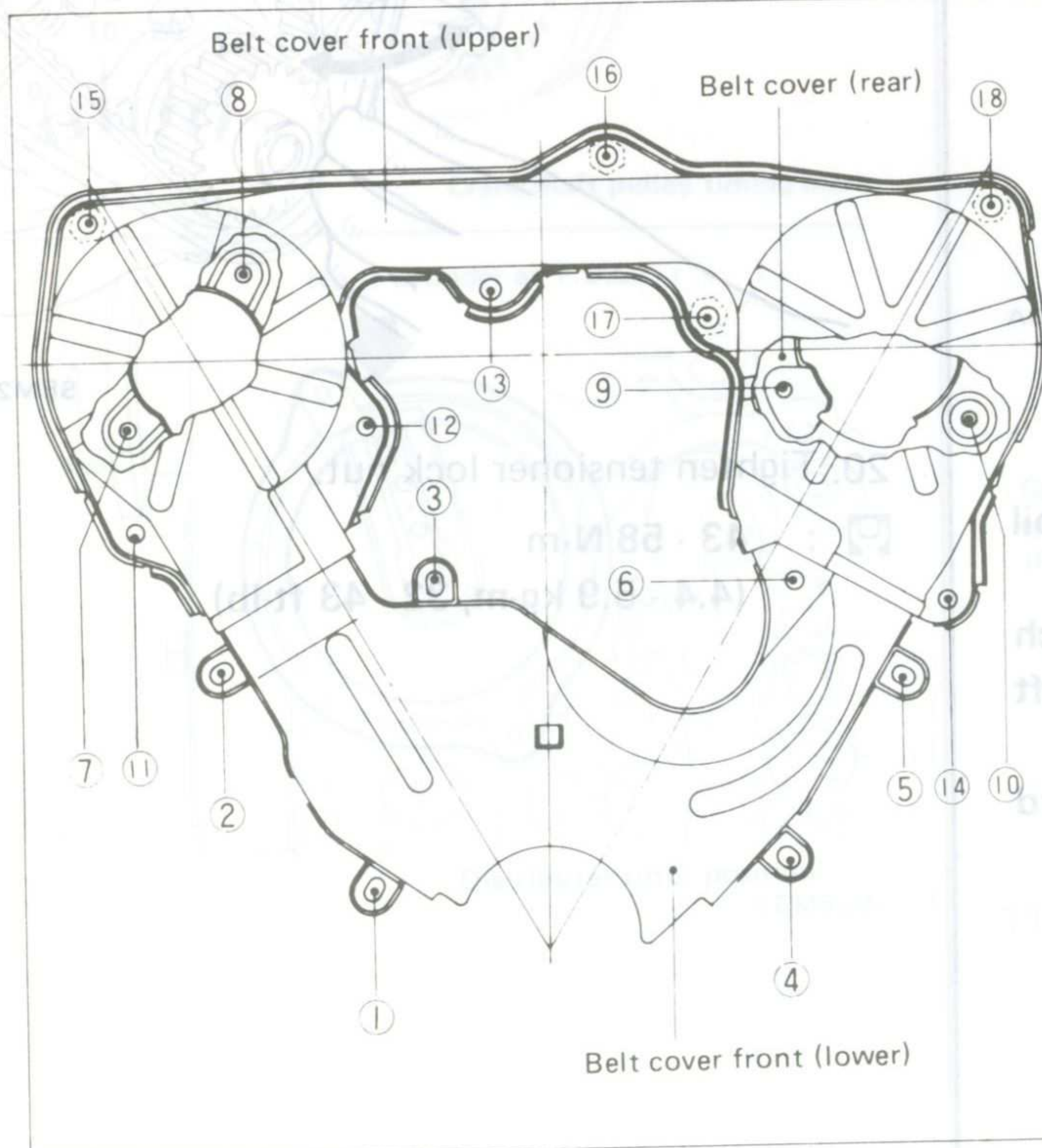
L.H. rocker shafts

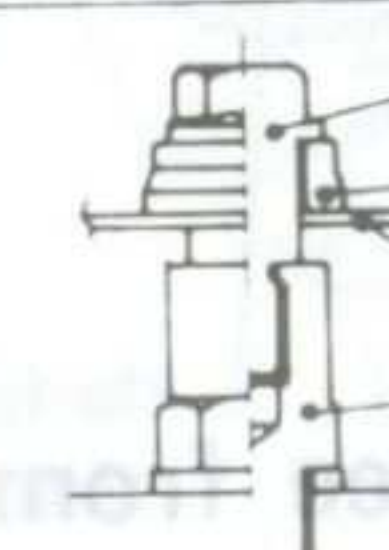
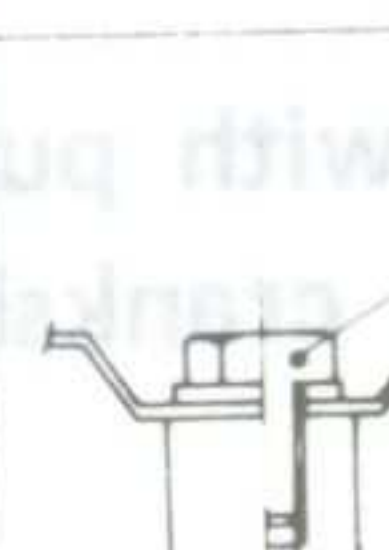
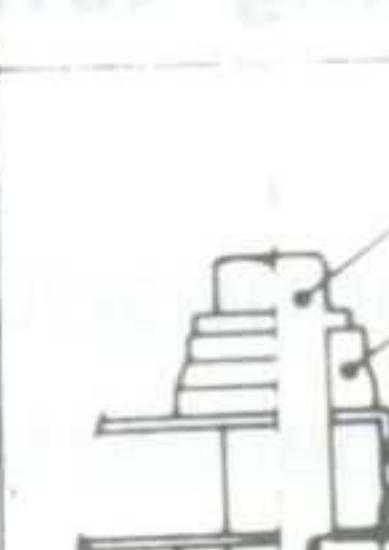


SEM245A

Before tightening, be sure to set camshaft lobe at the position where lobe is not lifted.

22. Install lower and upper belt covers.



Tightened parts	Section	Parts tightened with bolts
 Bolt A (6 pcs.) Rubber washer Bolt cover front (lower)	1, 2, 3, 4 5, 14	1, 2, 3, 4 : Cylinder block 5, 14 : Compressor bracket
 Bolt B (1 pc.) Rubber washer Bolt cover front (lower) Water pump mounting bolt	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 11, 12 13	15, 16, 17, 18 : Welded nuts 11, 12 : Cylinder head 13 : Water outlet

SEM248A

ENGINE MAINTENANCE

Replacing Timing Belt (Cont'd)

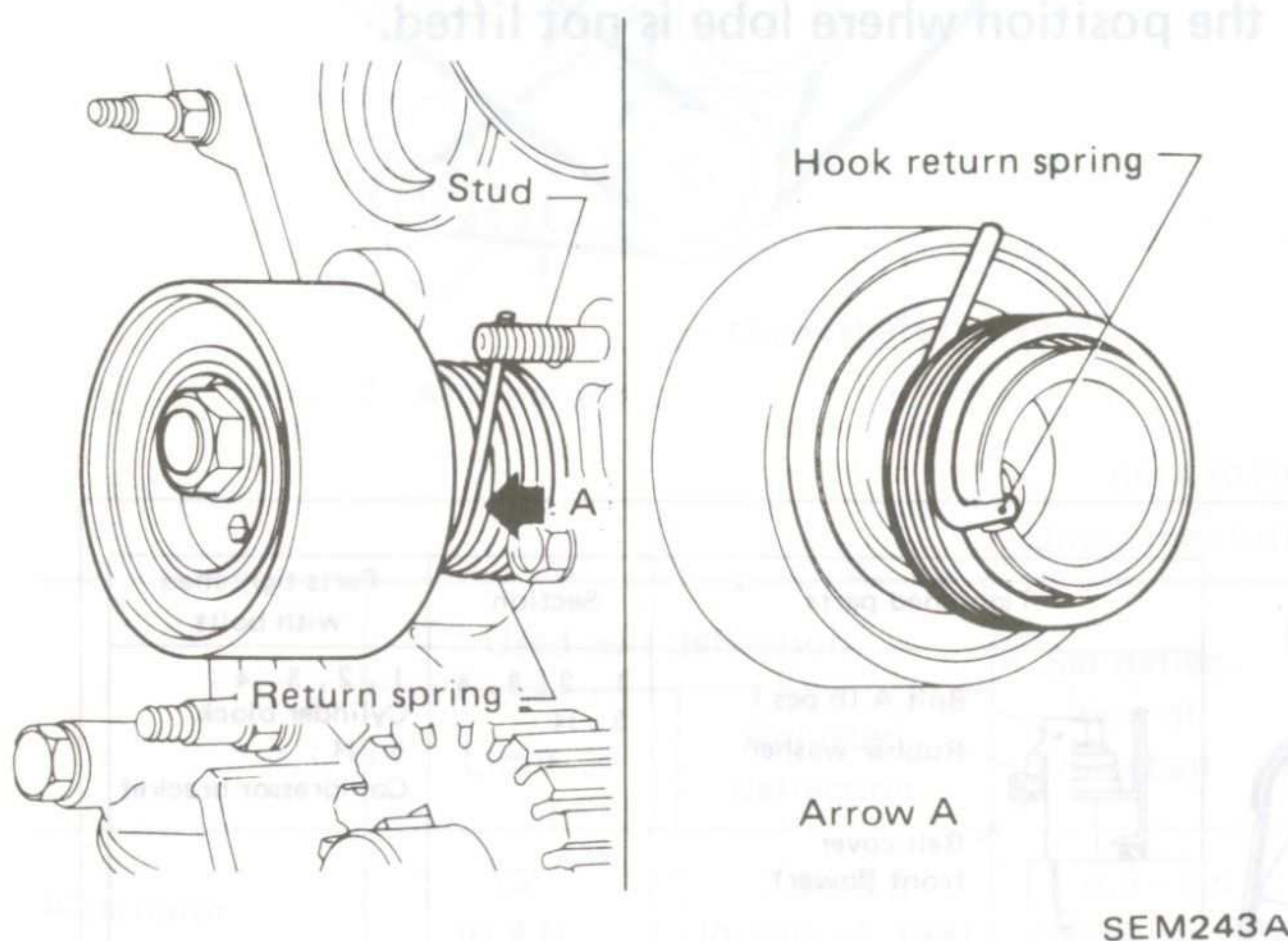
12. Remove compressor from compressor bracket and secure with a suitable wire or rag to the body.
13. Remove collector cover and intake collector.
14. Remove both rocker covers and loosen all rocker shaft securing bolts.

Loosen all rocker shaft securing bolts thoroughly so that timing belt tension can be adjusted correctly. Otherwise, proper belt tension cannot be obtained.

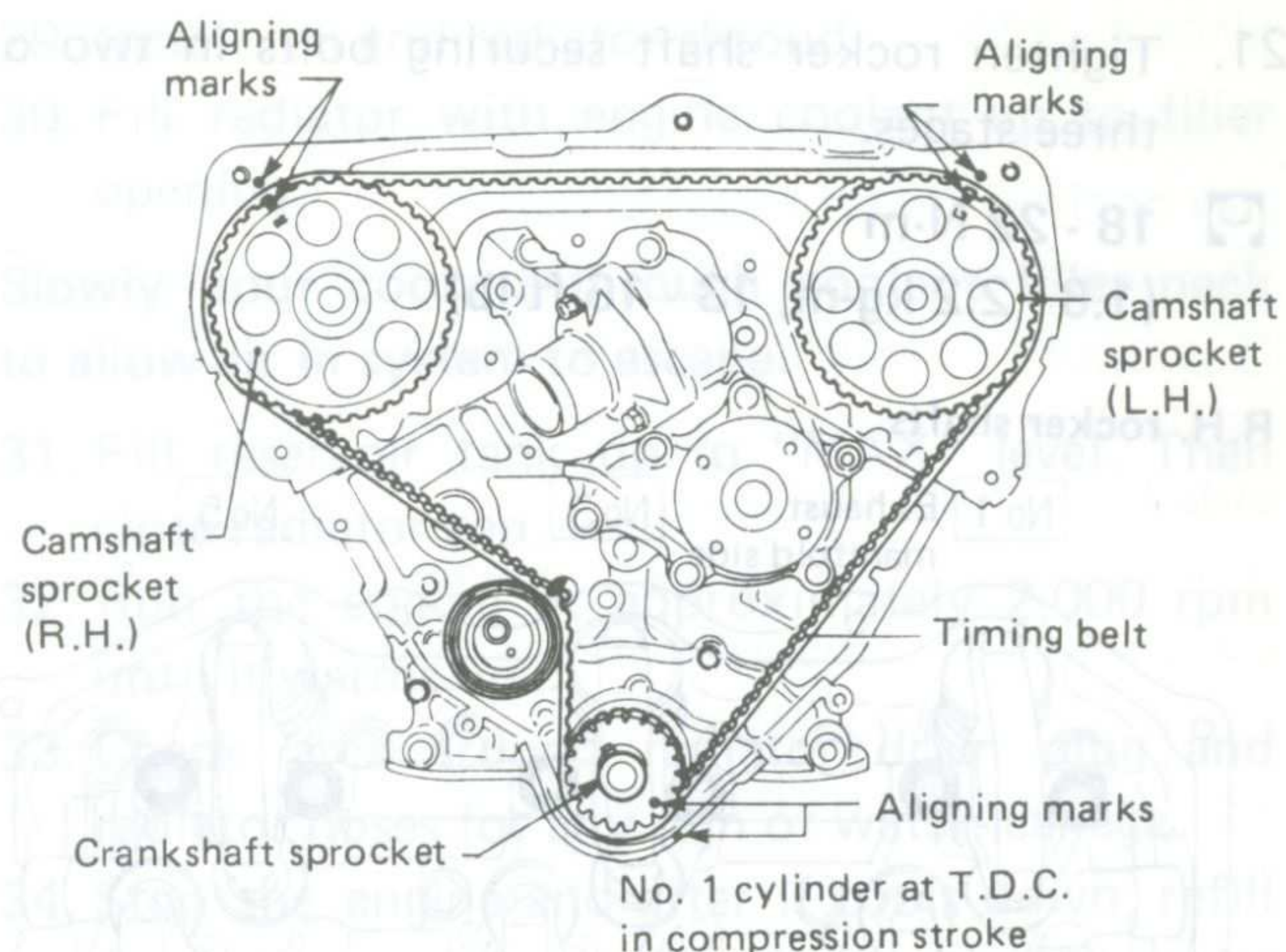
15. Install tensioner and return spring.

If coarse stud is once removed, apply locking sealer to threads of stud before installing.

16. Turn tensioner clockwise with hexagon wrench and temporarily tighten tension lock nut.

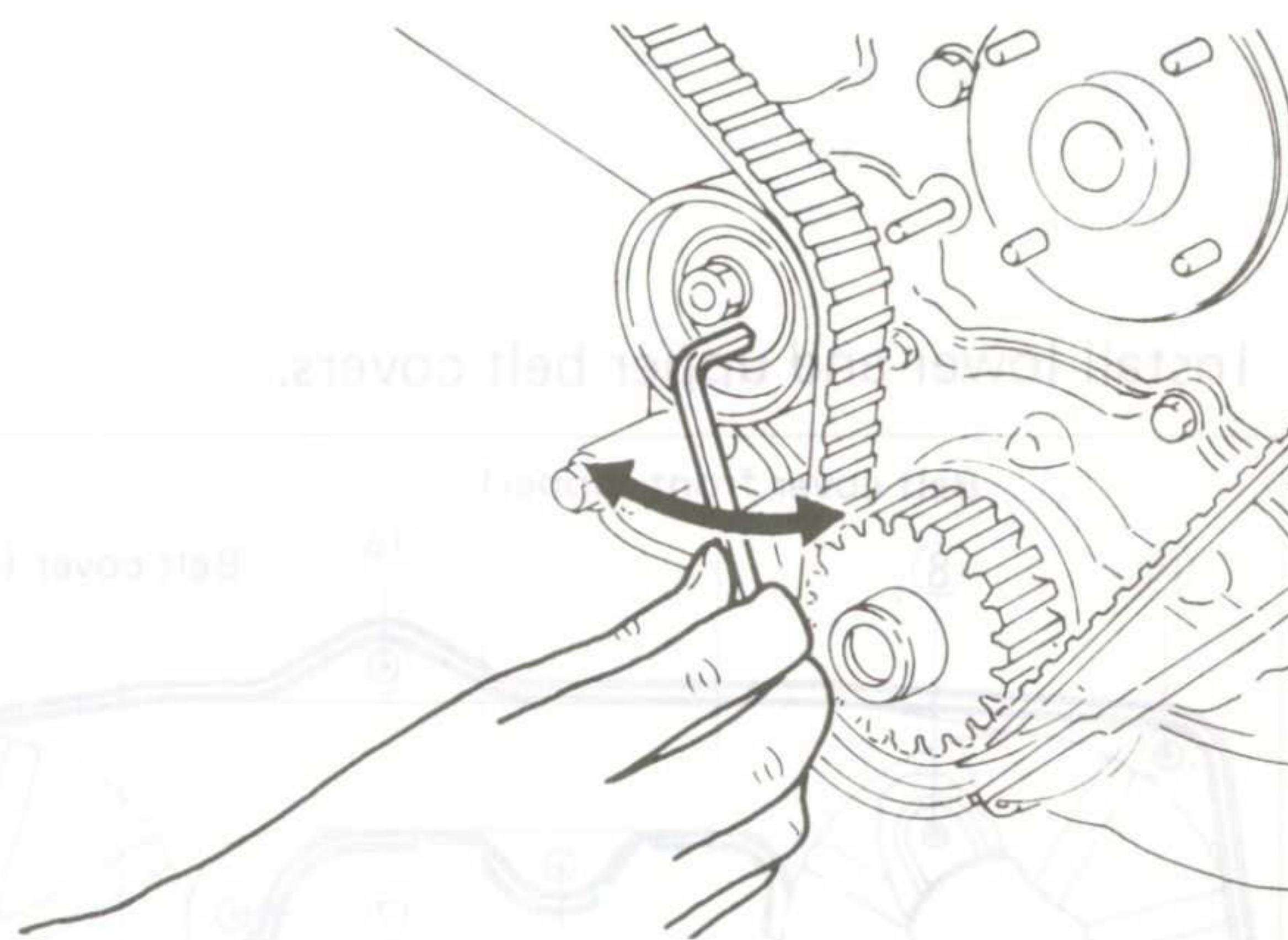


17. Set timing belt.
 - a. Ensure timing belt is clean and free from oil or water. Do not bend it.
 - b. Align white lines on timing belt with punch mark on camshaft sprockets and crankshaft sprocket.
 - c. Have arrow on timing belt pointing toward front belt covers.



SEM242A

18. Loosen tensioner lock nut.
19. Slowly turn tensioner with hexagon wrench clockwise and counterclockwise two or three times.



SEM244A

20. Tighten tensioner lock nut.

⚙ : 43 - 58 N·m
(4.4 - 5.9 kg-m, 32 - 43 ft-lb)

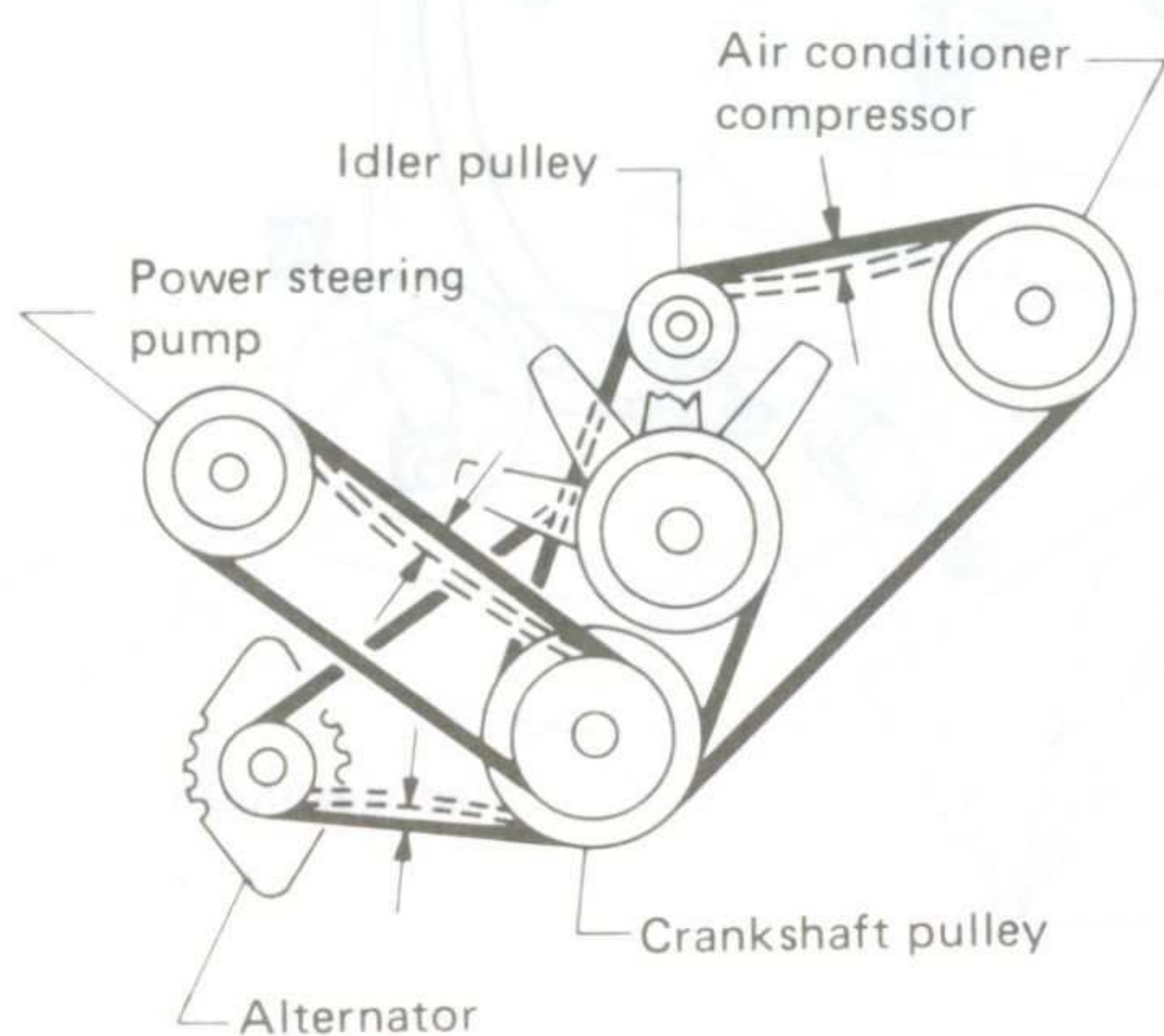
ENGINE MAINTENANCE

Replacing Timing Belt (Cont'd)

23. Install rocker covers, intake collector and intake manifold.
24. Connect hoses, connectors and wires.
25. Install compressor to the engine.
26. Install crankshaft pulley and idler bracket of the compressor drive belt.

 : Crankshaft pulley bolt
123 - 132 N·m
(12.5 - 13.5 kg-m, 90 - 98 ft-lb)

27. Install lower and upper radiator hoses.
28. Install the drive belts.



SMA707B

Unit: mm (in)

	Used belt deflection		Set deflection of new belt
	Limit	Adjusted deflection	
Alternator	12 (0.47)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioner compressor	11 (0.43)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)
Power steering oil pump	20 (0.79)	14 - 16 (0.55 - 0.63)	12 - 14 (0.47 - 0.55)
Applied pushing force	98 N (10 kg, 22 lb)		

Inspect drive belt deflections when engine is cold. If engine is hot, check deflections after waiting 30 minutes or more.

29. Install fan and radiator shroud.
30. Fill radiator with engine coolant up to filler opening.

Slowly pour coolant through coolant filler neck to allow air in system to escape.

31. Fill reservoir tank up to "MAX" level. Then close radiator cap.
32. Run the engine at approximately 2,000 rpm until it warms up.
33. Check area around radiator drain plug and radiator hoses for any sign of water leakage.
34. Stop the engine and after it cools down, refill the radiator and engine with coolant up to the filler opening. Fill the reservoir tank with coolant up to "MAX" level.

CHASSIS AND BODY MAINTENANCE

Spare Tire.

SPACE SAVER SPARE TIRE

This model is equipped with the Space Saver Spare tire or the Foldable Spare tire.

The spare tire is designed for emergency use only.
It is stored in a deflated condition.

An inflator (canister or air pump) has been provided to inflate the spare.

The spare tire can be used repeatedly for emergency situations. However, the canister must be replaced after each inflation.

Be sure to obtain the proper size canister for spare tire size.

CAUTION:

The spare tire is restricted in driving speed up to a maximum of 80 km/h (50 MPH) for short distances and emergency use only.

Use the Space Saver Spare tire for only the front axle. Do not install it to the rear axle. If the rear wheel is flat, replace the front wheel with the Space Saver Spare tire, and then replace the rear flat wheel with the front wheel.

CHASSIS AND BODY MAINTENANCE

Checking Body Corrosion

Visually check the body sheet metal panel for corrosion, paint damage (scratches, chipping, rubbing, etc.) or damage to the anti-corrosion materials. In particular, check the following locations.

Hemmed portion

Hood front end, door lower end, trunk lid rear end, etc.

Panel joint

Side sill of rear fender and center pillar, rear wheel housing of rear fender, around strut tower in engine compartment, etc.

Panel edge

Trunk lid opening, sun roof, opening, fender wheel-arch flange, fuel filler lid flange, around holes in panel, etc.

Parts contact

Waist moulding, windshield moulding, bumper, etc.

Protectors

Damage or condition of mudguard, fender protector, chipping protector, etc.

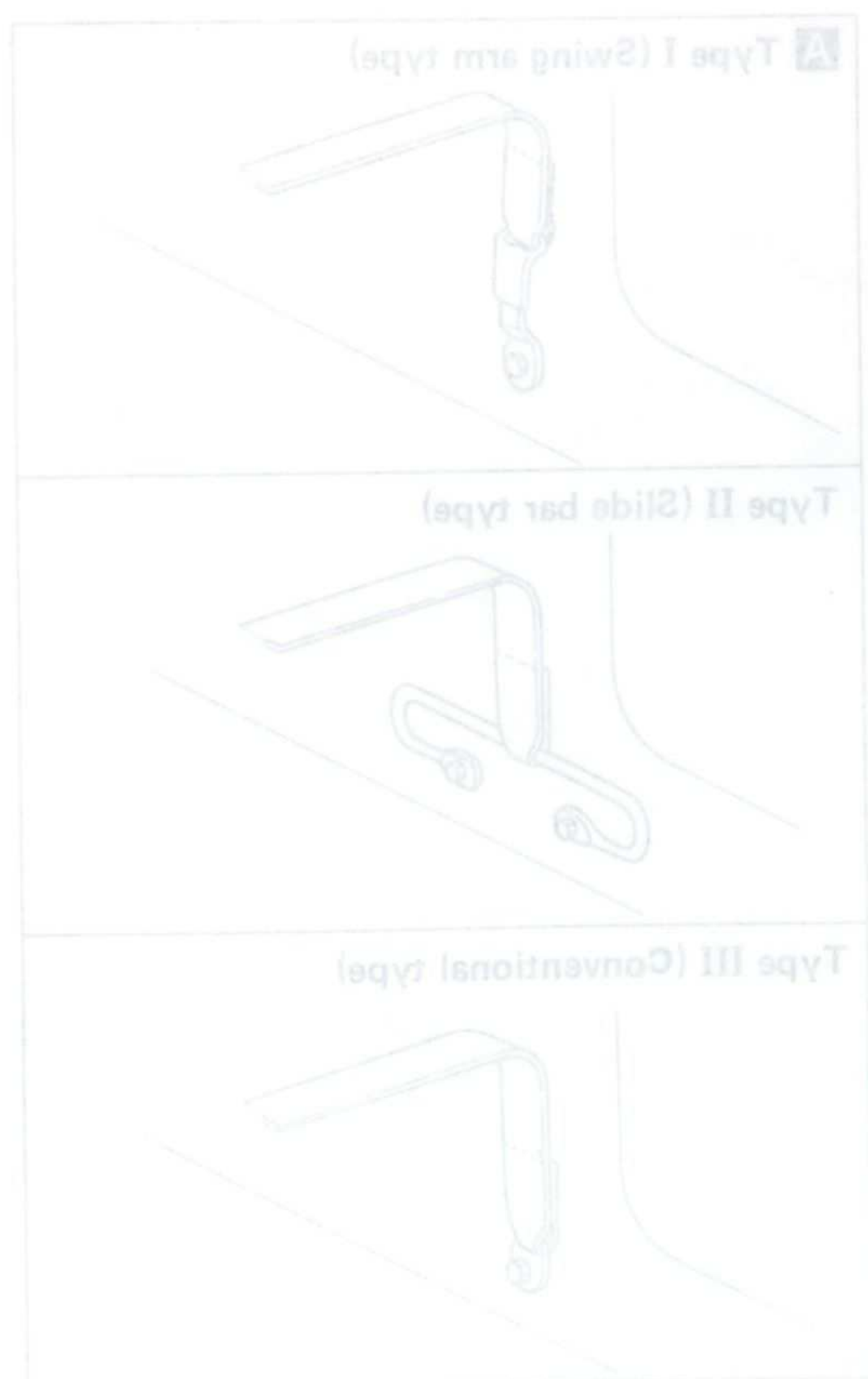
Anti-corrosion materials

Damage or separation of anti-corrosion materials under the body.

Drain holes

Condition of drain holes at door and side sill.

When repairing corroded areas, refer to the Corrosion Repair Manual.



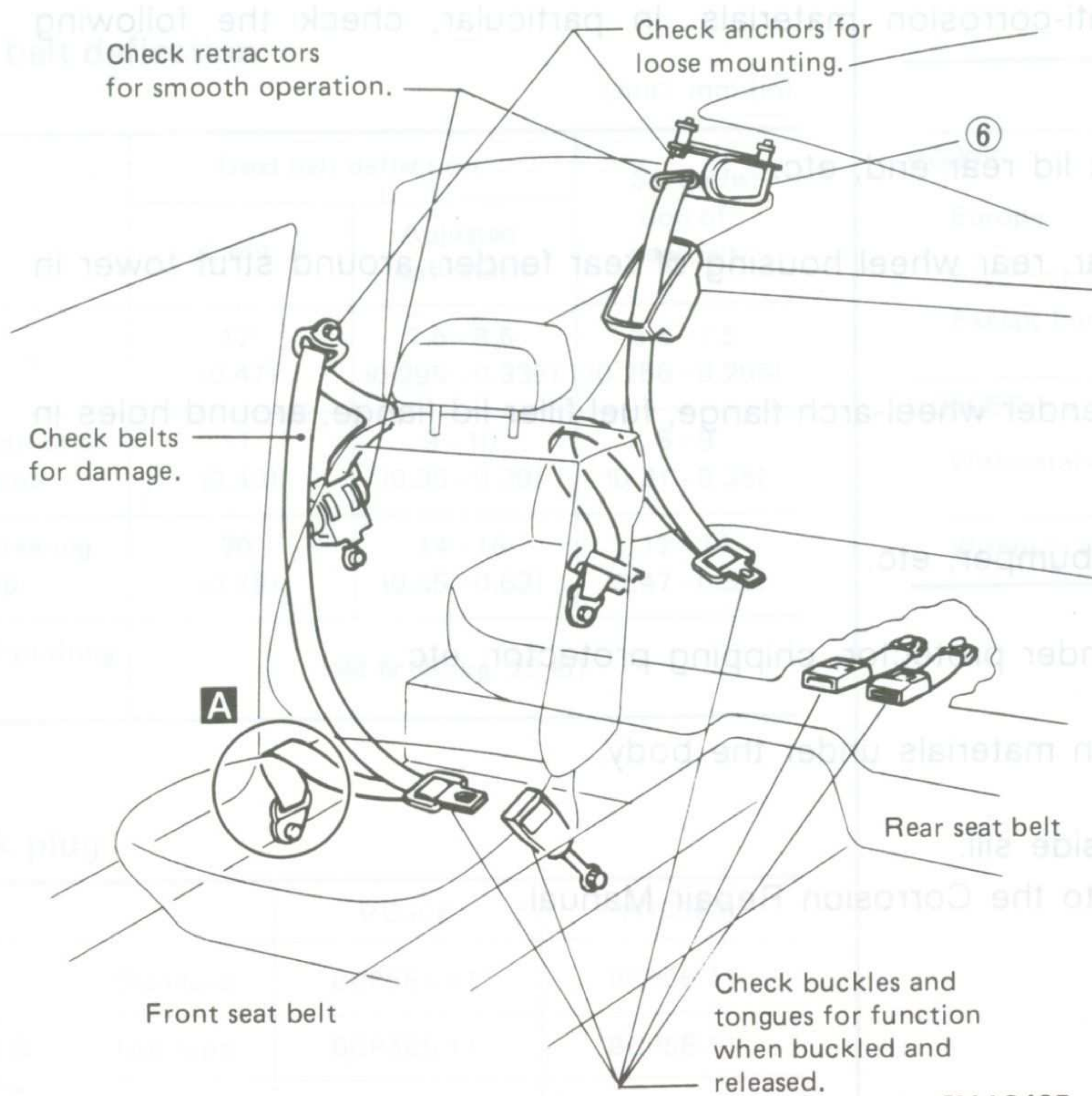
- CAUTION:**
1. If the vehicle is collided or overturned, replace the entire belt assembly, regardless of nature of accident.
 2. If the condition of any component of a seat belt is questionable, do not have seat belt repaired, but replaced as a belt assembly.
 3. If webbing is cut, frayed, or damaged, replace belt assembly.
 4. Do not spill drinks, oil, etc. on inner lap belt buckle. Never oil tongue and buckle.
 5. Use a NISSAN genuine seat belt assembly.
 6. Install properly by observing installing directions in illustrations, otherwise belts may lock unnecessarily.

Anchor bolt
35.8 - 45.8 N·m
(3.65 - 4.65 kg-m, 26.4 - 33.8 ft-lb)

CHASSIS AND BODY MAINTENANCE

Body

CHECKING SEAT BELTS, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS



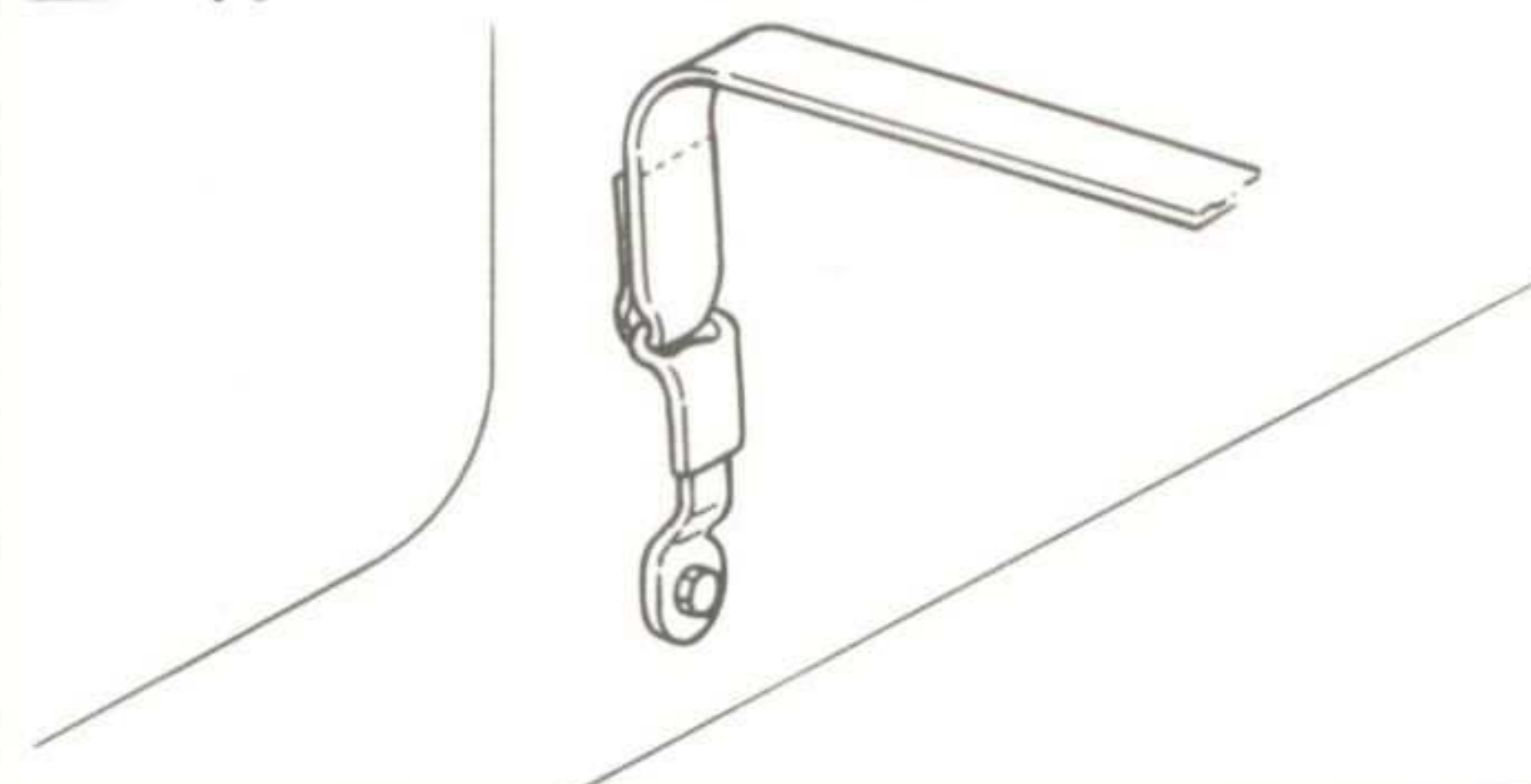
SMA840B

CAUTION:

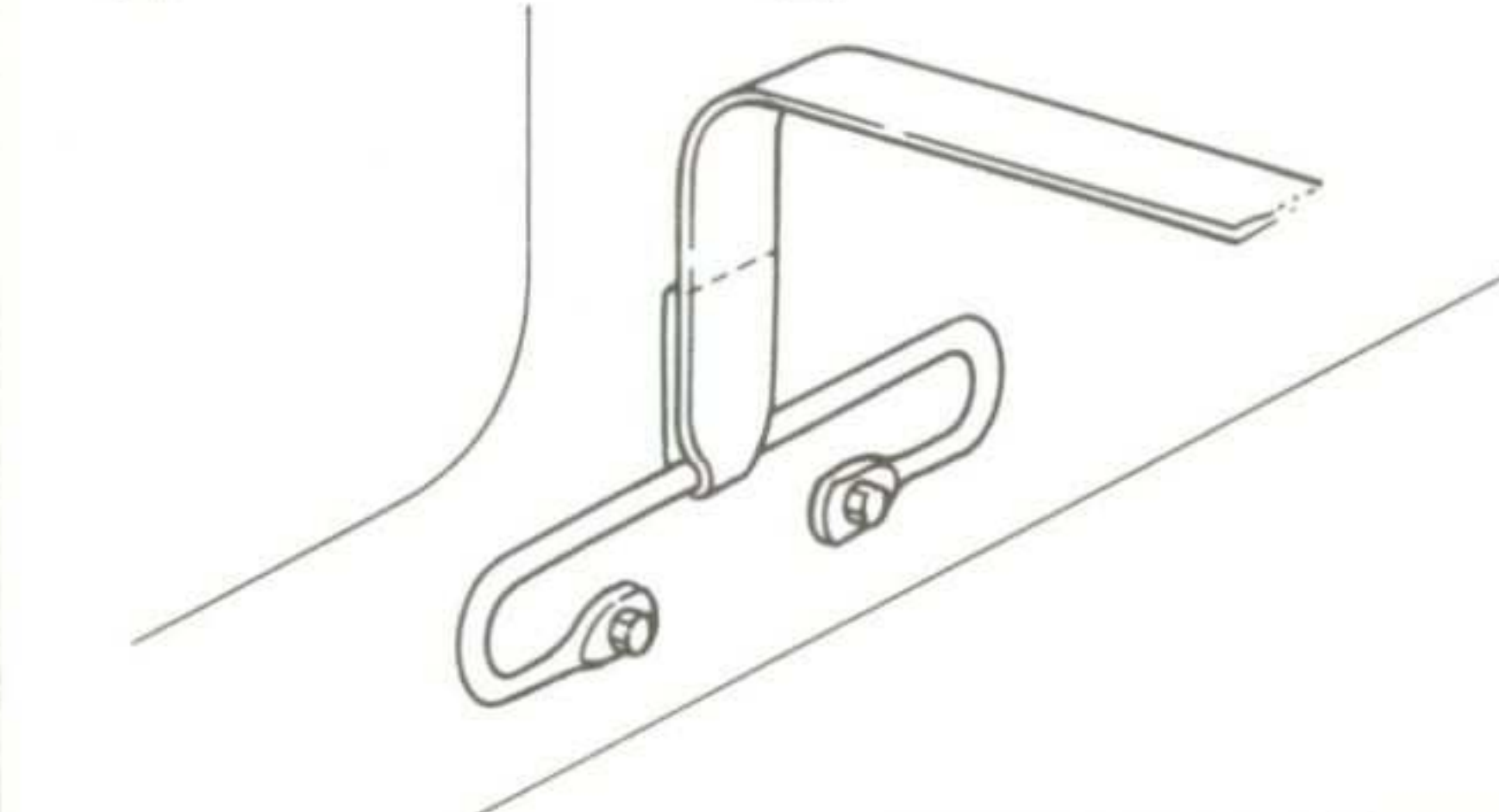
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5. Use a NISSAN genuine seat belt assembly.
- ⑥ Install properly by observing installing directions in illustrations, otherwise belts may lock unnecessarily.

 **Anchor bolt**
 35.8 - 45.6 N·m
 (3.65 - 4.65 kg-m, 26.4 - 33.6 ft-lb)

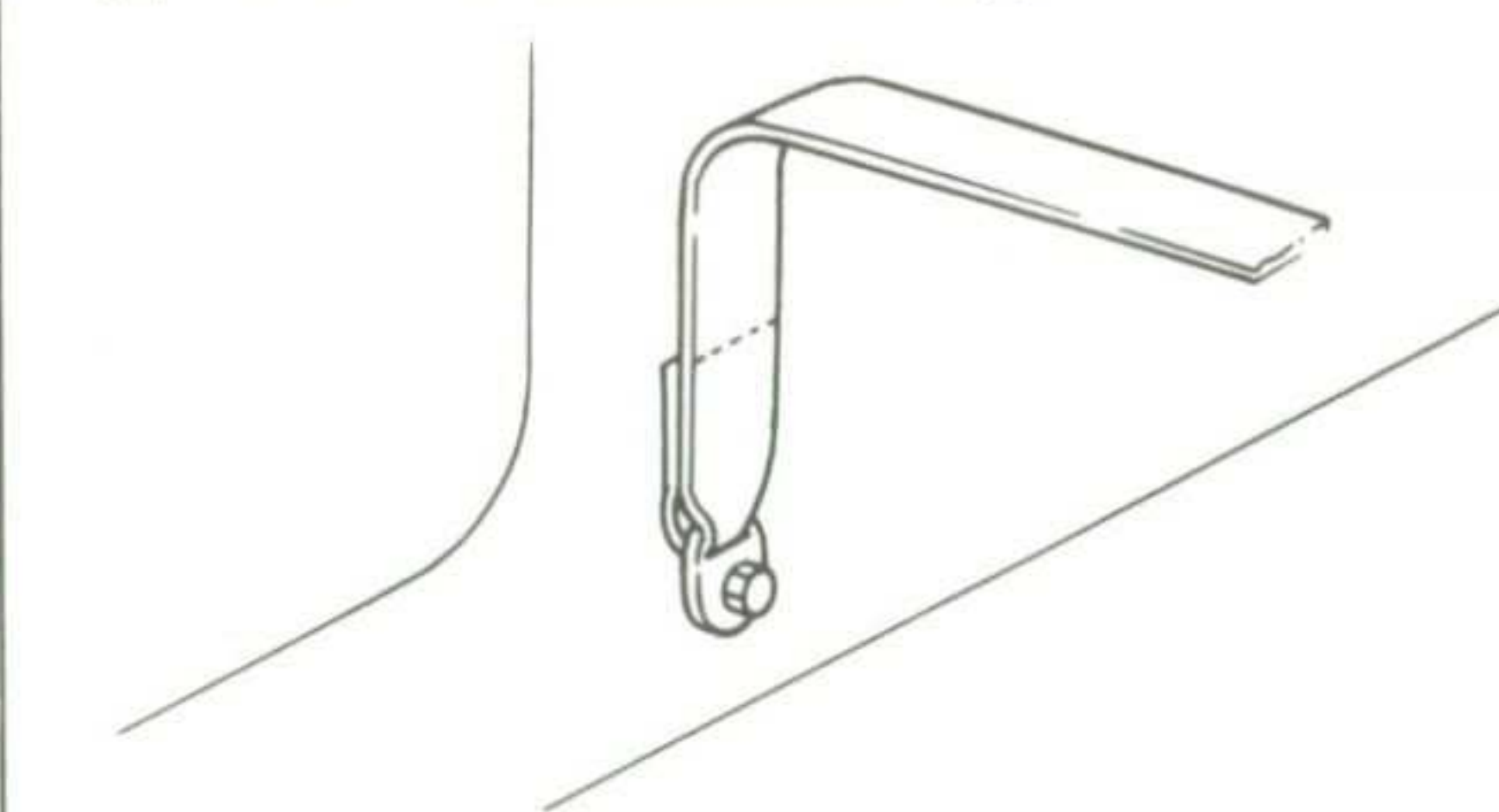
A Type I (Swing arm type)



Type II (Slide bar type)



Type III (Conventional type)



SERVICE DATA AND SPECIFICATIONS (S.D.S.)

Engine Maintenance

INSPECTION AND ADJUSTMENT

Drive belt deflection

Unit: mm (in)

	Used belt deflection		Set deflection of new belt
	Limit	Adjusted deflection	
Alternator	12 (0.47)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioner compressor	11 (0.43)	9 - 10 (0.35 - 0.39)	8 - 9 (0.31 - 0.35)
Power steering oil pump	20 (0.79)	14 - 16 (0.55 - 0.63)	12 - 14 (0.47 - 0.55)
Applied pushing force	98 N (10 kg, 22 lb)		

Spark plug

		VG30E	VG30ET
Except Europe & Australia	Standard	BCP6ES-11	BCP6E-11
	Hot type	BCP5ES-11	BCP5E-11
	Cold type	BCP7ES-11	BCP7E-11
Europe & Australia	Standard	BCPR6ES-11	BCPR6E-11
	Hot type	BCPR5ES-11	BCPR5E-11
	Cold type	BCPR7ES-11	BCPR7E-11

Ignition timing and idle speed

Unit: B.T.D.C. degree/rpm

	M/T	A/T
VG30E		
Europe	10±1/900±50	10±1/900±50 (in "N" position)
Except Europe	20±1/800±50	20±1/800±50 (in "N" position)
VG30ET		
With catalyst	15±2/700±50	15±2/650±50 (in "D" position)
Without catalyst	10±1/900±50	—