

INTRODUCTION


How to Use This Manual

This manual is divided into 14 sections. The first page of each section is marked with a black tab that lines up with one of the thumb index tabs on the front and back covers. You can quickly find the first page of each section without looking through a full table of contents. The symbols printed at the top corner of each page can also be used as a quick reference system.

Each section includes:

1. A table of contents, or an exploded view index showing:
 - Parts disassembly sequence.
 - Bolt torques and thread sizes:
 - Page references to descriptions in text.
2. Disassembly/assembly procedures and tools.
3. Inspection.
4. Testing/troubleshooting.
5. Repair.
6. Adjustments.

Special Information

 **WARNING** Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

CAUTION: Detailed descriptions of *standard* workshop procedures, safety principles and service operations are not included. Please note that this manual does contain warnings and cautions against some specific service methods which could cause **PERSONAL INJURY**, or could damage a vehicle or make it unsafe. Please understand that these warnings cannot cover all conceivable ways in which service, whether or not recommended by Honda motor, might be done, or of the possible hazardous consequences of each conceivable way, nor could Honda motor investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda motor, *must satisfy himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized.

All information contained in this manual is based on the latest product information available at the time of printing. We reserve the right to make changes at any time without notice. No part of this publication may be reproduced, stored in retrieval system, or transmitted, in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. This includes text, figures and tables.

General Info



Special Tools



Specifications

specs

Maintenance



Engine



Cooling



Fuel and
Emission Controls



Transaxle



Steering



Suspension



Brakes



Body



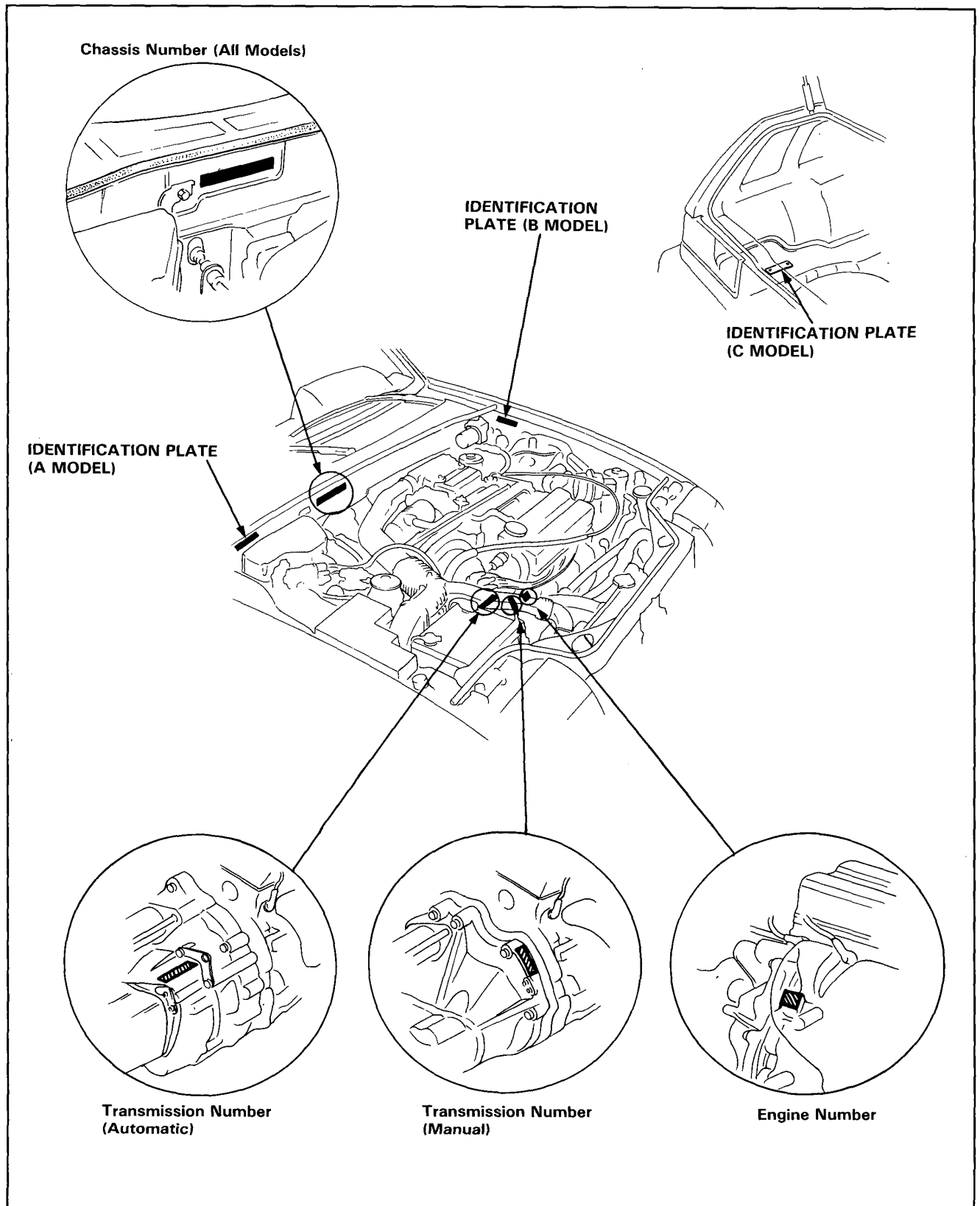
Heater and
Air Conditioner



Electrical



Identification Number Locations



Standards and Service Limits

Cylinder Head/Valve Train — Section 6

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT	
Compression	300 rpm and wide-open throttle	Nominal A20A4 Engine (Expect KS, KX) Other Engines Minimum A20A4 Engine (Expect KS, KX) Other Engines Maximum variation	1,226 kPa (12.5 kg/cm ² , 178 psi) 1,176 kPa (12.0 kg/cm ² , 171 psi) 1,030 kPa (10.5 kg/cm ² , 149 psi) 980 kPa (10.0 kg/cm ² , 142 psi) 196 kPa (2 kg/cm ² , 28 psi)	
Cylinder head	Warpage Height	90 (3.54)	0.05 (0.002) 89.8 (3.54)	
Camshaft	End play	0.05–0.15 (0.002–0.006)	0.5 (0.02)	
	Oil clearance	No. 1, 3 and 5 Journals	0.050–0.089 (0.002–0.004)	0.15 (0.006)
		No. 2 and 4 Journals	0.130–0.169 (0.005–0.008)	0.23 (0.009)
	Runout	0.03 (0.001) max.	0.06 (0.002)	
	Cam lobe height	A20A4 Engine KX	—	—
		Manual and Automatic	IN A IN B EX	— — —
	A20A4 Engine Others	IN	38.858 (1.5102)	—
		EX	38.607 (1.5200)	—
	A20A1 Engine MT	IN	38.477	—
		EX	38.353	—
	A16A1 Engine	IN	38.175	—
		EX	37.776	—
	Other Engines	IN	38.541 (1.5174)	—
EX		38.607 (1.5200)	—	
Valve	Valve clearance	IN	0.12–0.17 (0.005–0.007)	—
		EX	0.25–0.30 (0.010–0.012)	—
	Valve stem O.D.	IN	6.58–6.59 (0.2591–0.2594)	6.55 (0.258)
		EX	6.94–6.95 (0.2732–0.2736)	6.91 (0.272)
	Stem-to-guide clearance	IN	0.02–0.05 (0.001–0.002)	0.08 (0.003)
		EX	0.06–0.09 (0.002–0.004)	0.12 (0.005)
Stem installed height	IN	48.59 (1.913)	49.34 (1.943)	
	EX	47.66 (1.876)	48.41 (1.906)	
Valve seat	Width	IN and EX	1.25–1.55 (0.049–0.061)	2.0 (0.08)
Valve spring	Free length	IN	49.2 (1.94)	48.2 (1.90)
		EX Inner	39.8 (1.57)	38.8 (1.53)
		Outer	49.8 (1.96)	48.8 (1.92)
	Squareness Inner and Outer	—	1.75 (0.068)	
Valve guide	I.D.	IN	6.61–6.63 (0.260–0.261)	6.65 (0.262)
		EX	7.01–7.03 (0.276–0.277)	7.05 (0.278)
Rocker arm	Arm-to-shaft clearance	—	0.008–0.054 (0.0003–0.0021)	0.08 (0.003)

* A16A1 Engine only

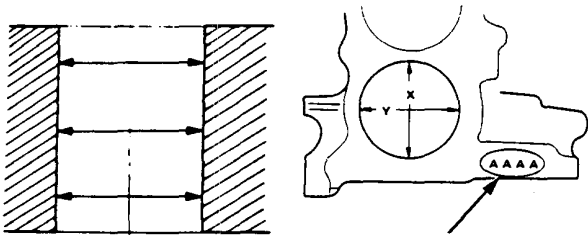
Engine Block — Section 7

MEASUREMENT		STANDARD (NEW)	SERVICE LIMIT	
Cylinder block	Warpage of deck surface Bore diameter	A	0.08 (0.003) max.	
		B	82.70–82.71 (3.2559–3.2563)	
		A	82.69–82.70 (3.2555–3.2559)	
		A	*80.01–80.02 (3.1500–3.1504)	
		B	*80.00–80.01 (3.1496–3.1500)	
Bore taper	Reboring limit	—	0.05 (0.002)	
		—	0.5 (0.02)	
Piston	Skirt O.D. (At 21 mm (0.83 in) from bottom of skirt)	A	82.67–82.68 (3.2574–3.2551)	
		B	82.66–82.67 (3.2543–3.2574)	
		A	*79.98–79.99 (3.1488–3.1492)	
		B	*79.97–79.98 (3.1484–3.1500)	
	Clearance in cylinder	Piston-to-ring clearance	Top	0.02–0.04 (0.0008–0.0016)
			2nd	0.030–0.060 (0.0012–0.0024)
			* Top and 2nd	0.030–0.055 (0.0012–0.0022)
Piston ring	Ring end gap	Top	*0.02–0.05 (0.0008–0.0020)	
		A20A1 Engine	A	0.15–0.35 (0.006–0.014)
			B	0.20–0.37 (0.008–0.015)
		A16A1 Engine	Others	0.20–0.35 (0.008–0.014)
			Others	0.20–0.37 (0.008–0.015)
		Oil	RIKEN	0.30–0.42 (0.012–0.017)
TEIKOKU	0.30–0.90 (0.012–0.035) 0.20–0.70 (0.008–0.028)			
Connecting rod	Pin-to-rod interference Large end bore diameter End play installed on crankshaft	—	0.013–0.032 (0.0005–0.0013)	
		—	Nominal 48 (1.89) *45 (1.77)	
		—	0.15–0.30 (0.006–0.012)	
Crankshaft	Main journal diameter Taper/out-of-round, main journal Rod journal diameter	—	0.40 (0.016)	
		—	49.970–49.994 (1.9673–1.9683)	
		—	0.005 (0.0002) max. 44.976–45.000 (1.7707–1.7717) *41.976–42.000 (1.6530–1.6535)	

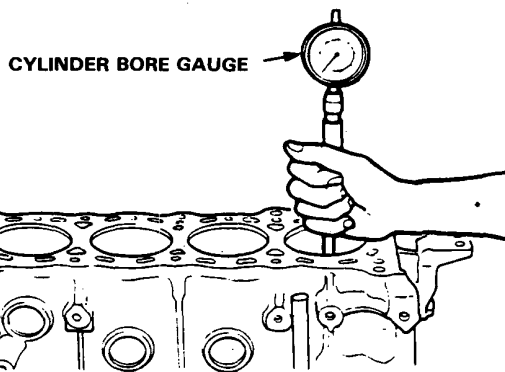
Cylinder Block

Inspection

1. Measure wear and taper in directions X and Y at three levels in each cylinder as shown.



CYLINDER BORE SIZES (A or B)
Read the letters from left-to-right for No. 1 through No. 4 cylinders.



A20A Engine:

Cylinder Bore Size A

Standard (New): 82.70–82.71 mm
(3.2559–3.2563 in.)

Service Limit: 82.74 mm (3.2575 in.)

Cylinder Bore Size B

Standard (New): 82.69–82.70 mm
(3.2555–3.2559 in.)

Service Limit: 82.73 mm (3.2571 in.)

Oversize

Standard 0.30 (New): 83.01–83.02 mm
(3.2681–3.2685 in.)

A16A Engine:

Cylinder Bore Size A

Standard (New): 80.01–80.02 mm
(3.1500–3.1504 in.)

Cylinder Bore Size B

Standard (New): 80.00–80.01 mm
(3.1496–3.1500 in.)

Service Limit: 80.04 mm (3.1512 in.)

Oversize

Standard 0.25 (New): 80.25–80.26 mm
(3.1594–3.1598 in.)

Standard 0.5 (New): 80.50–80.51 mm
(3.1693–3.1697 in.)

Bore Taper

Limit: (Difference between first and third measurement) 0.05 mm (0.002 in.)

- If measurements in any cylinder are beyond Oversize Bore Service Limit, replace the block.
- If block is to be rebored, refer to Piston Clearance Inspection (page 7-9) after reboring.

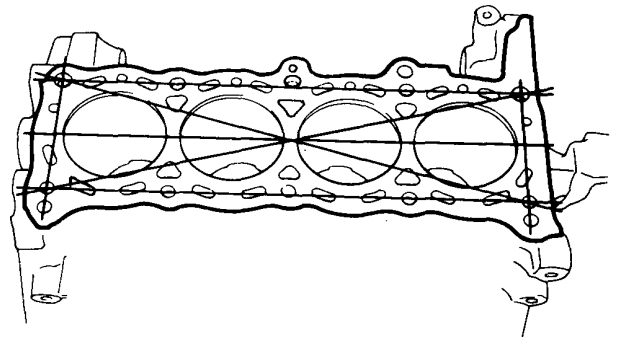
NOTE: Scored or scratched cylinder bores must be honed.

Out-of-Round

Service Limit: 0.05 mm (0.002 in.)

2. Check the top of the block for warpage.
Measure along the edges and across the center as shown.

SURFACES TO BE MEASURED

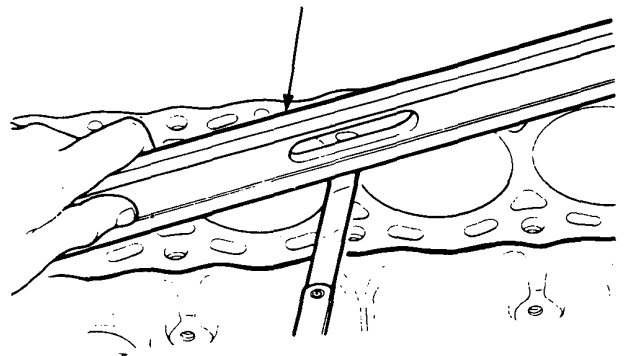


Engine block Warpage:

Standard (New): 0.08 mm (0.003 in.)

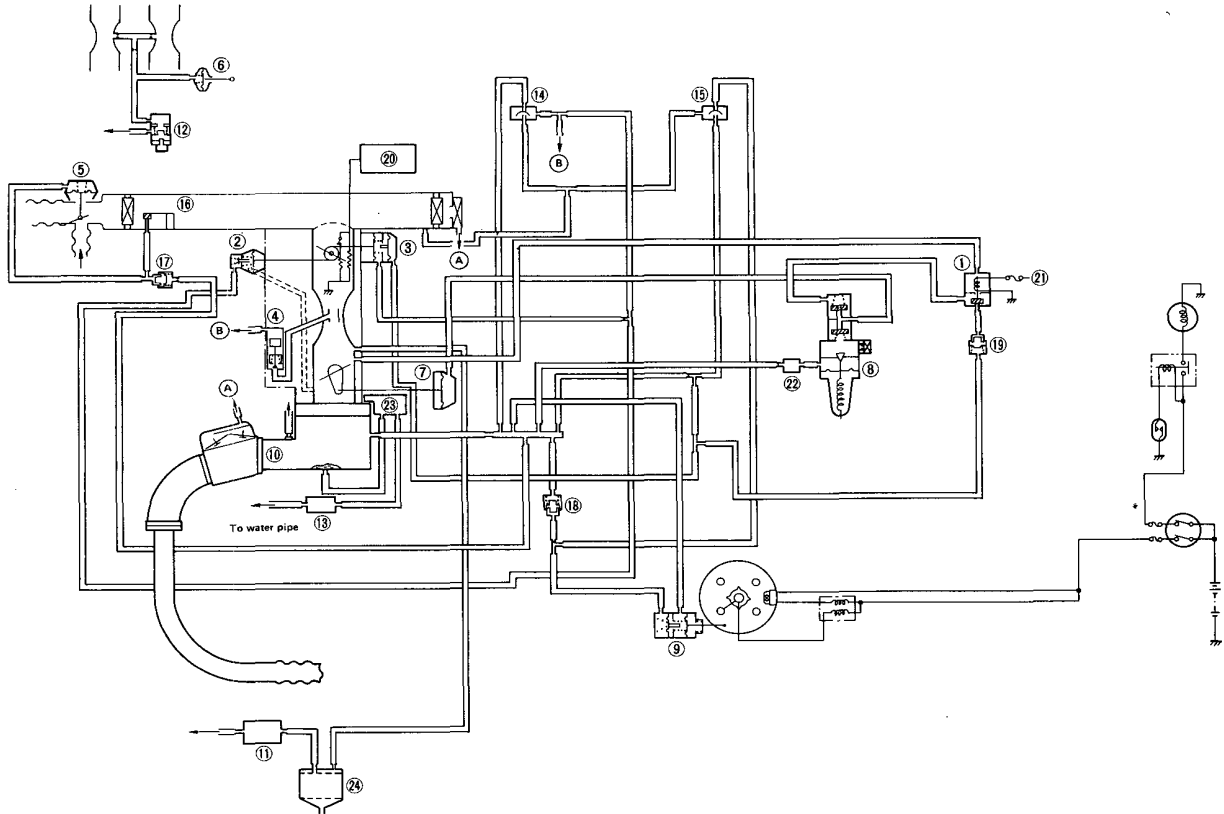
Service Limit: 0.10 mm (0.004 in.)

PRECISION STRAIGHT EDGE



Vacuum and Electrical Connections

[A20A2 KF, KG, KW, KE, KY (M/T) model]



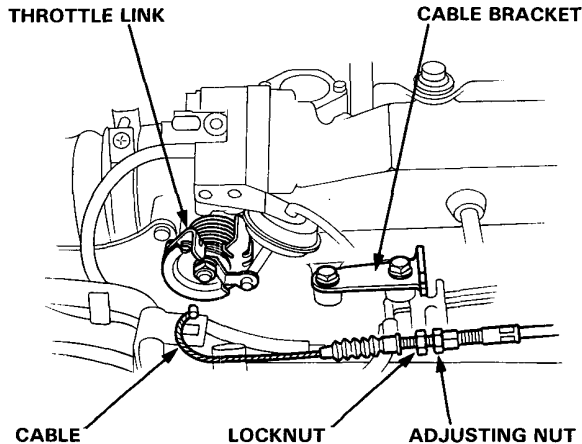
- ① CRANKING OPENER SOLENOID VALVE
- ② CHOKE OPENER
- ③ FAST IDLE UNLOADER
- ④ POWER VALVE
- ⑤ AIR CONTROL DIAPHRAGM
- ⑥ SECONDARY DIAPHRAGM
- ⑦ THROTTLE CONTROLLER
- ⑧ THROTTLE CONTROLLER CONTROL VALVE
- ⑨ VACUUM ADVANCE DIAPHRAGM
- ⑩ PCV VALVE
- ⑪ TWO-WAY VALVE
- ⑫ THERMO WAX VALVE A
- ⑬ THERMO WAX VALVE B

- ⑭ THERMOVALVE A
- ⑮ THERMOVALVE B
- ⑯ AIR BLEED VALVE A
- ⑰ CHECK VALVE A
- ⑱ CHECK VALVE B
- ⑲ CHECK VALVE E
- ⑳ "L" TERMINAL OF REGULATOR
- ㉑ IGNITION SWITCH STARTER SIGNAL
- ㉒ ACCUMULATOR
- ㉓ HEAT RISER
- ㉔ CHARCOAL CANISTER (KY ONLY)

Throttle Cable

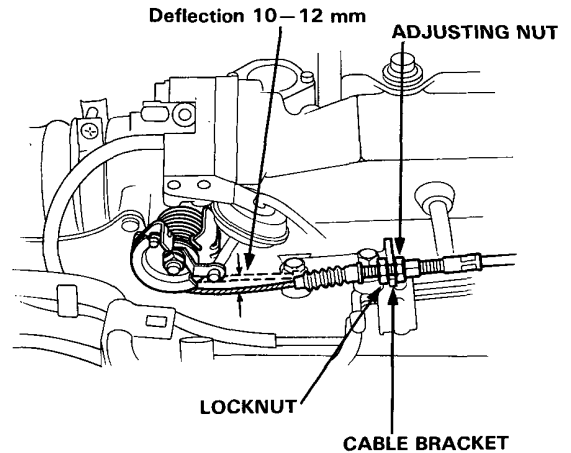
Replacement

1. Loosen the locknut and remove the throttle cable from the cable bracket.
2. Remove the cable from the throttle linkage.



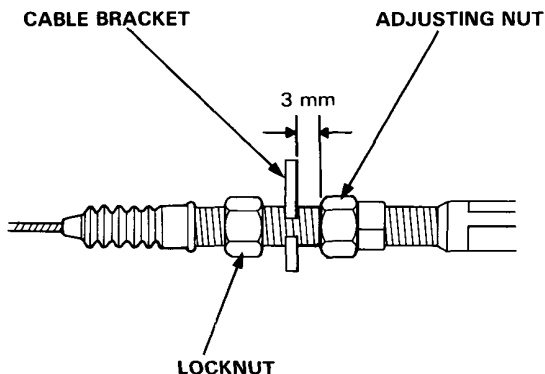
Inspection/Adjustment

1. Check that the throttle cable operates smoothly with no binding or sticking. Repair as necessary.
2. Check cable free play at the throttle linkage. Cable deflection should be 10–12 mm (0.39–0.47 in.)



Installation

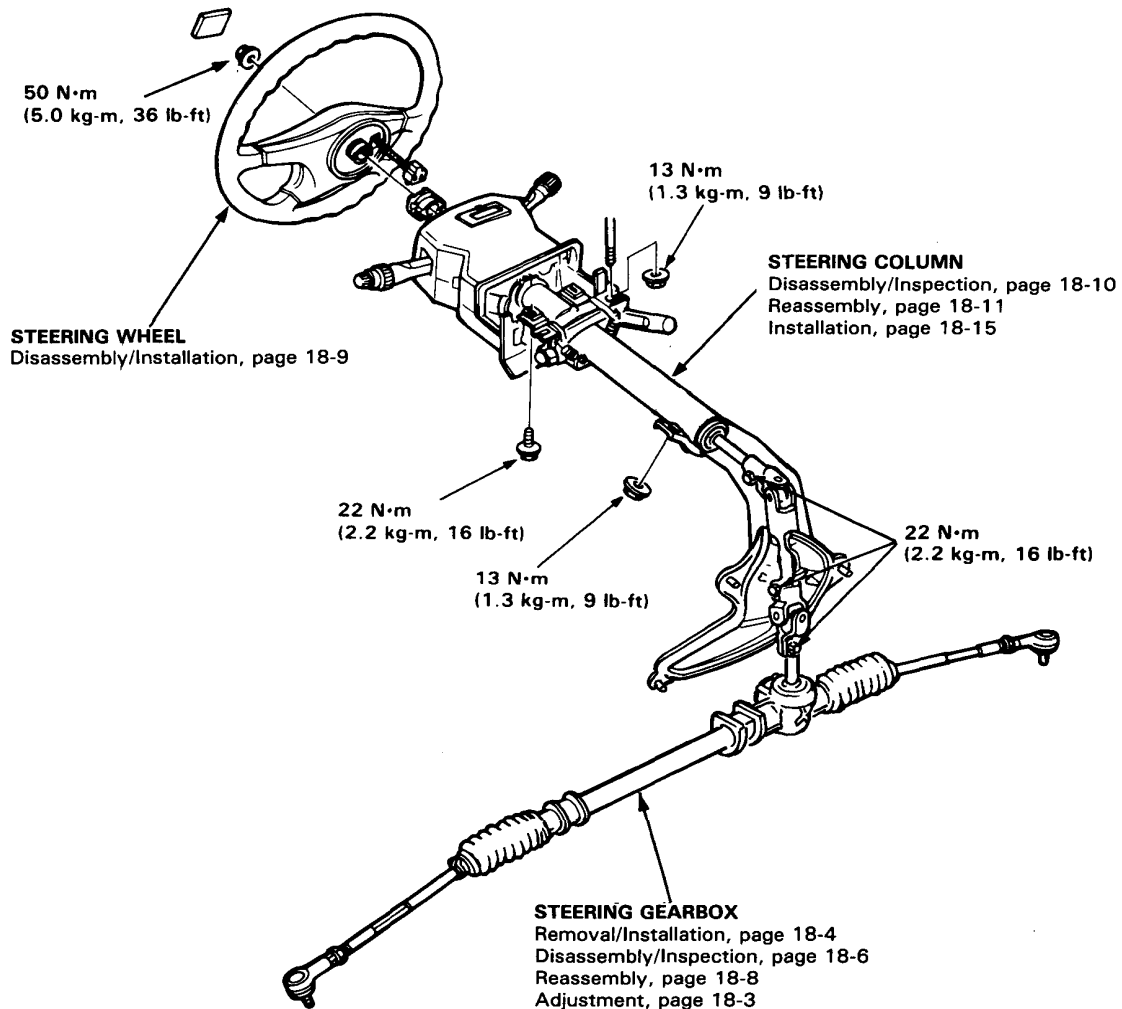
1. Hold the cable sheath, removing all slack from the cable.
2. Turn the adjusting nut until it is 3 mm away from the cable bracket.
3. Tighten the locknut. The cable deflection should now be 10–12 mm (0.39–0.47 in.) If not, see Inspection/Adjustment.



3. If deflection is not within specs, loosen the locknut and turn the adjusting nut until the deflection is as specified.
4. With the cable properly adjusted, check the throttle valve to be sure it opens fully when you push the accelerator pedal to the floor. Also check the throttle valve to be sure it returns to the idle position whenever you release the accelerator.

Manual Steering

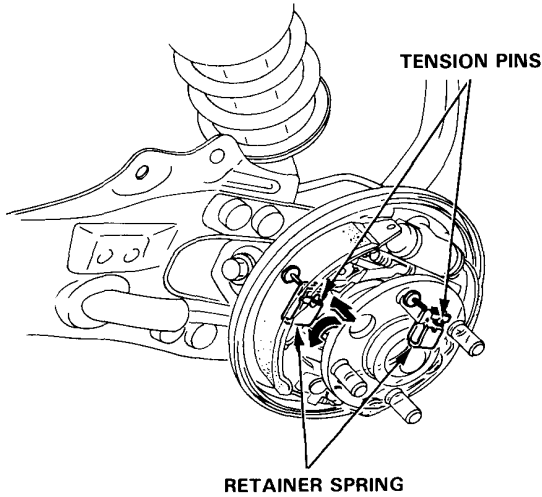
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Rear Drum Brake

Disassembly

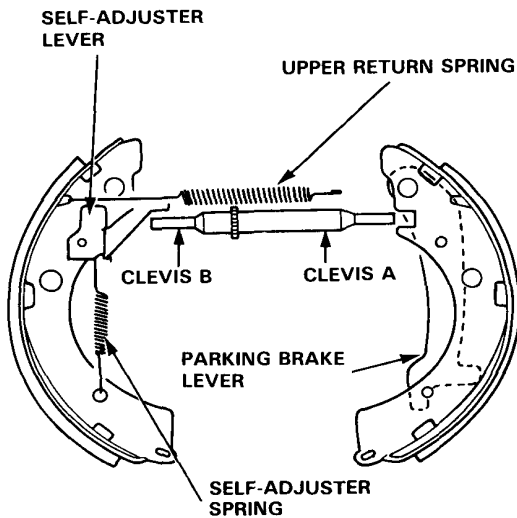
1. Remove the tension pins by pushing the retainer spring and turning them.



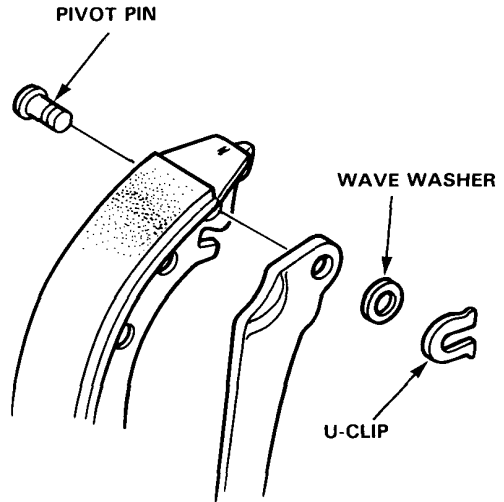
2. Lower the brake shoe assembly and remove the lower return spring.

NOTE: Make sure not to damage the dust cover on the wheel cylinder.

3. Remove the brake shoe assembly.
4. Disconnect the parking brake cable from the parking brake lever.
5. Remove the upper return spring, self-adjuster lever and self-adjuster spring, and separate the brake shoes.



6. Remove the wave washer, parking brake lever and pivot pin from the brake shoe by removing the U-clip.

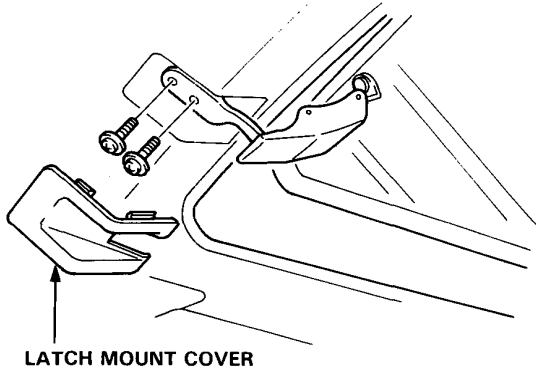


Quarter Glass

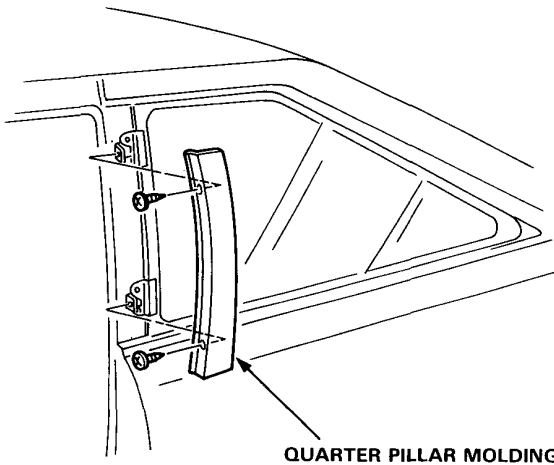
Replacement

Glass Back

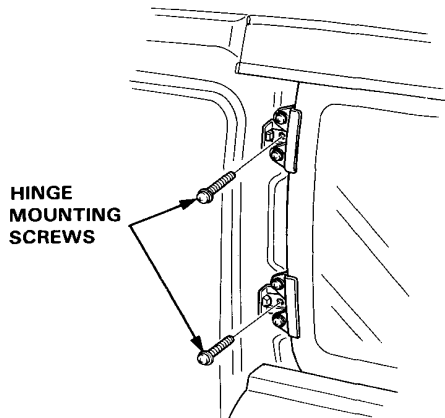
1. Pry the latch mount cover out and then remove the screws.



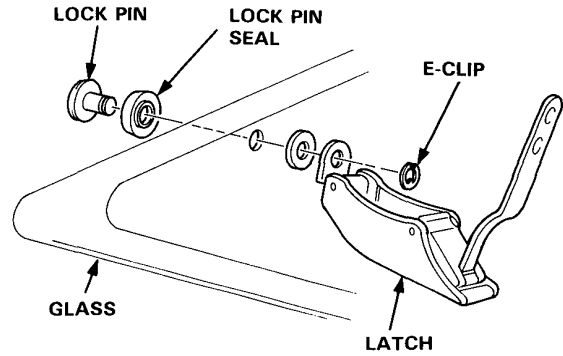
2. Remove the screws and the quarter pillar molding.



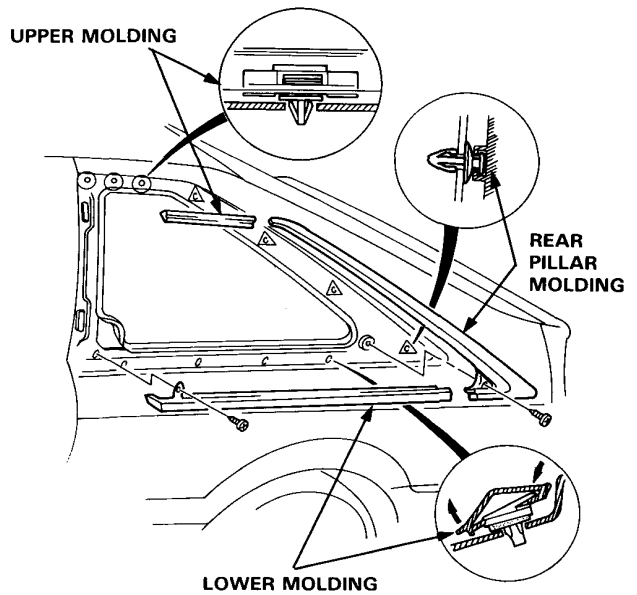
3. Remove the quarter glass hinge mounting screws, and then the glass.



4. Remove the E-clip with a screwdriver, then remove the latch.



5. If necessary, pull off the weatherstrip and remove the upper molding, the lower molding and the rear pillar molding.



6. Install in the reverse of removal. Check for proper glass fit when closed after installation.

Air Conditioner

Idle Adjustment

- Before turning the A/C switch ON, check that the idle speed (no load) is adjusted properly (section 11).

IDLE SPEED, A/C OFF:

MODEL		A/C OFF
Carbureted Engine	KS only	M/T 750 ± 50 rpm (in neutral) A/T 750 ± 50 rpm (N or P range)
	Except KS	M/T 750 ± 50 rpm (in neutral) A/T 700 ± 50 rpm (N or P range)
Fuel-Injected Engine	KX only	M/T 750 ± 50 rpm (in neutral) A/T 750 ± 50 rpm (N or p range)
	Except KX	M/T 800 ± 50 rpm (in neutral) A/T 800 ± 50 rpm (N or P range)

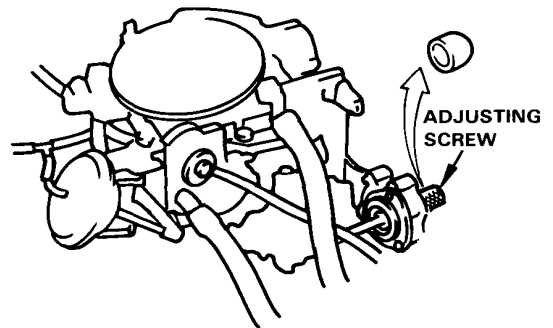
- After charging, adjust the idle speed with the air conditioner ON.
 - Apply the parking brake and block the wheels.
 - Headlights OFF
 - A/C temperature lever COLD
 - Vent and recirc buttons ON
 - Fan switch HI

- Adjust the idle speed by turning the idle adjusting screw in or out as required.

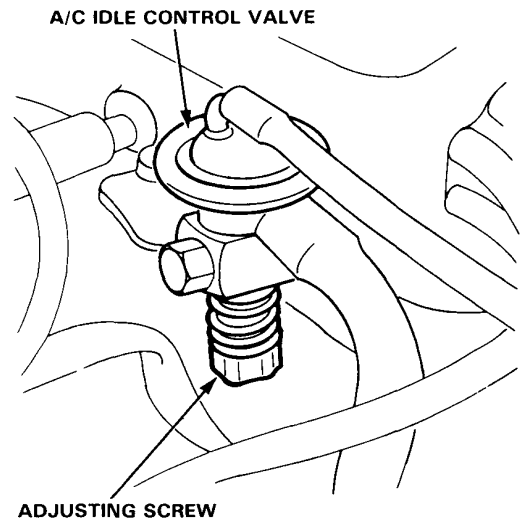
IDLE SPEED, A/C ON:

MODEL		A/C ON
Carbureted Engine	KS only	M/T 800 ± 50 rpm (in neutral) A/T 750 ± 50 rpm (N or P range)
	Except KS	M/T 750 ± 50 rpm (in neutral) A/T 750 ± 50 rpm (N or P range)
Fuel-Injected Engine	KX only	M/T 750 ± 50 rpm (in neutral) A/T 750 ± 50 rpm (N or p range)
	Except KX	M/T 800 ± 50 rpm (in neutral) A/T 800 ± 50 rpm (N or P range)

Carbureted Engine



Fuel-injected Engine



General Information

Engine Number

PH4	2.0ℓ, SOHC, CARB.	—	KC	5MT 4AT	BS1	1900001 ~
PHO	2.0ℓ, SOHC PGM-FI	—	KC (HAM)	4AT	BT1	1700001 ~
			KC			1900001 ~

PH1	1.6ℓ, SOHC CARB.	—	KB, KF KG, KR, KW	5MT	A16A1	1000001 ~	
				4AT		1500001 ~	
PH4	2.0ℓ, SOHC CARB.	CAT.	KG	5MT	A20A1	1700001 ~	
				4AT		1500001 ~	
		—	KB, KE, KF KG, KR, KS, KW	5MT	A20A2	1000001 ~	
				4AT		1500001 ~	
		CAT.	KX	5MT		1300001 ~	
				4AT		1800001 ~	
PJO	2.0ℓ, SOHC PGM-FI	—	KB, KE, KF KG, KR, KS, KW	5MT		A20A4	1000001 ~
				4AT			1500001 ~
		CAT.	KX	5MT	1300001 ~		
				4AT	1800001 ~		

PH4	2.0ℓ, SOHC CARB.	CAT.	KQ	5MT	A20A2	1300001 ~
				4AT		1800001 ~

PH1	1.6ℓ, SOHC CARB.	—	KT	5MT	A16A1	1000001 ~
				4AT		1500001 ~
PH4	2.0ℓ, SOHC CARB.	—	KY, KP, KT, KU	5MT	A20A2	1000001 ~
				4AT		1500001 ~

Transmission Number

TYPE	CODE	AREA	
PC8	M5	EUROPE	A1M5 1000001 ~
	A5		A2A5 1000001 ~
	K5		A2K5 1000001 ~
	Q6		A2Q6 1000001 ~
PF5	K5		B2K5 1000001 ~

TYPE	CODE	AREA		
PC8	M5	GENERAL	A1M5 1000001 ~	
			A5	A2A5 1000001 ~
			K5	A2K5 1000001 ~
PF5	K5		B2K5 1000001 ~	

Emission Controls

Emission Systems (cont'd)

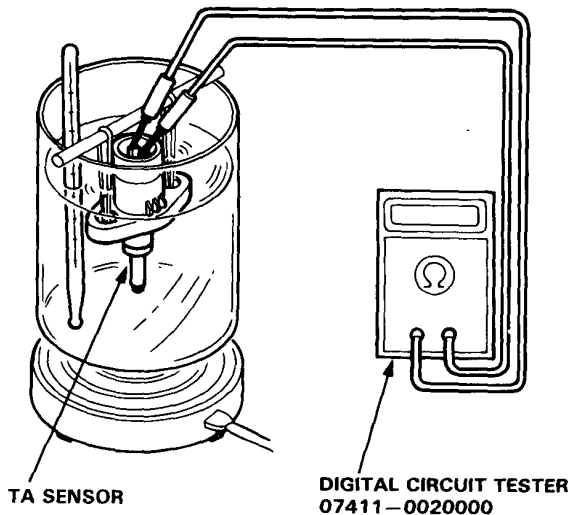
Purpose	System name	Related parts name	PH4		PH1				
			KC, KQ, KX		Others				
			MT	AT	MT	AT	MT	AT	
Starting and driveability control when engine is cold	1. Choke system	<ul style="list-style-type: none"> ● Automatic choke ● Manual choke 	○	○	○	○		○	○
	2. Fast idle control	<ul style="list-style-type: none"> ● Fast idle unloader ● Thermo valve A and B 	○	○	○	○			
	3. Secondary diaphragm vacuum bypass system	<ul style="list-style-type: none"> ● Carburetor thermo valve 	○	○	○	○			
	4. Ignition timing control	<ul style="list-style-type: none"> ● Distributor vacuum advance diaphragm ● Check valve ● Thermo valve 	○	○	○	○			
	5. Choke opener	<ul style="list-style-type: none"> ● Choke opener ● Cranking leak solenoid valve ● Intake air temp. sensor ● Thermo sensor ● Starter switch ● ACG L terminal ● Solenoid valve control unit 	○	○					
	6. Throttle controller	<ul style="list-style-type: none"> ● Throttle controller ● Cranking opener solenoid valve ● Check valve ● Starter switch 			○			○	
	7. PTC. heater	<ul style="list-style-type: none"> ● PTC. heater ● Thermo sensor ● Control relay ● Control unit 	○	○					
	8. Honeycomb shaped carbu. insulator	<ul style="list-style-type: none"> ● Carburetor insulator 			○	○	○	○	
	9. Carburetor heat riser	<ul style="list-style-type: none"> ● Thermostat 	○	○	○	○			



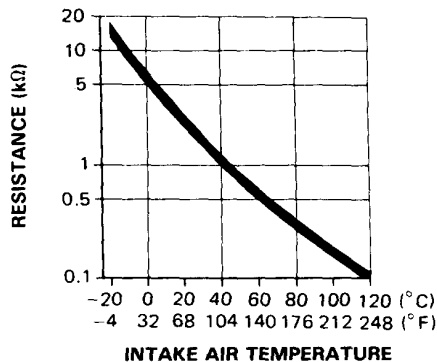
Intake Air Temperature (TA) Sensor

1. Disconnect the connector, then remove the TA sensor from the intake manifold.
2. To test the sensor, suspend it in cold water and heat the water slowly. Make sure more than half of the connector is submerged. Measure the resistance between the terminals.

**STANDARDS: 0.98 – 1.34 k Ω at 40°C (104°F)
0.22 – 0.35 k Ω at 80°C (176°F)**



3. The chart below shows the change in resistance over a range of intake air temperature.



- Replace the sensor if resistance is outside the range.

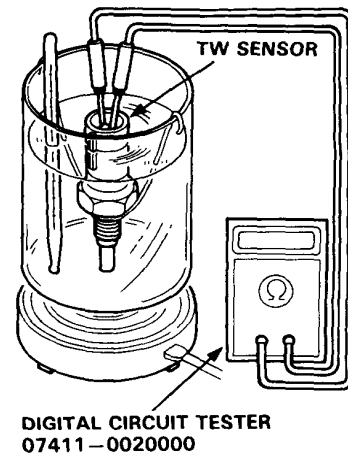
NOTE:

- Don't let the sensor touch the bottom of the container.
- During the test, stir the water in the container to ensure even temperature.

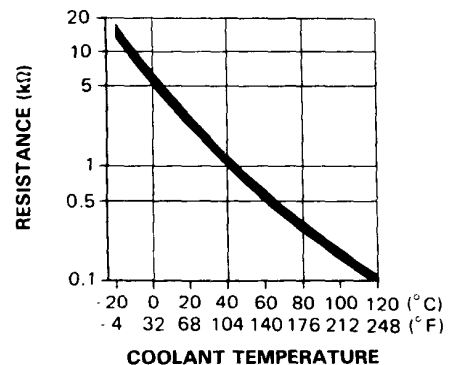
Coolant Temperature (TW) Sensor

1. Disconnect the connector, then remove the TW sensor from the thermostat housing.
2. To test the sensor, suspend it in cold water and heat the water slowly. Make sure more than half of the connector is submerged. Measure the resistance between the terminals.

**STANDARDS: 0.98 – 1.34 k Ω at 40°C (104°F)
0.22 – 0.35 k Ω at 80°C (176°F)**



3. The chart below shows the change in resistance over a range of coolant temperature.



- Replace the sensor if resistance is outside the range.

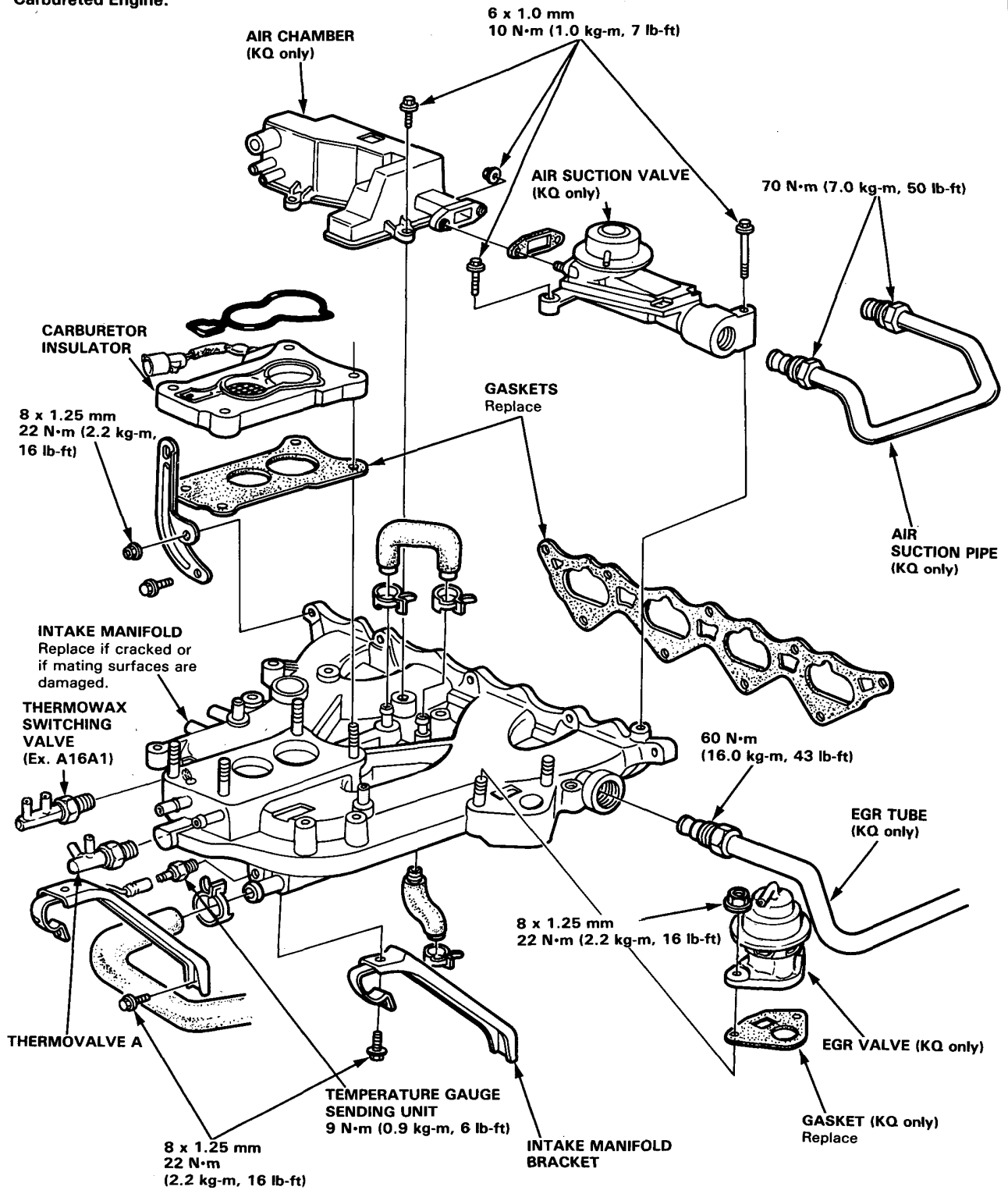
- On installing the sensor, torque to:
28 N·m (2.8 kg·m, 20 lb·ft)

NOTE:

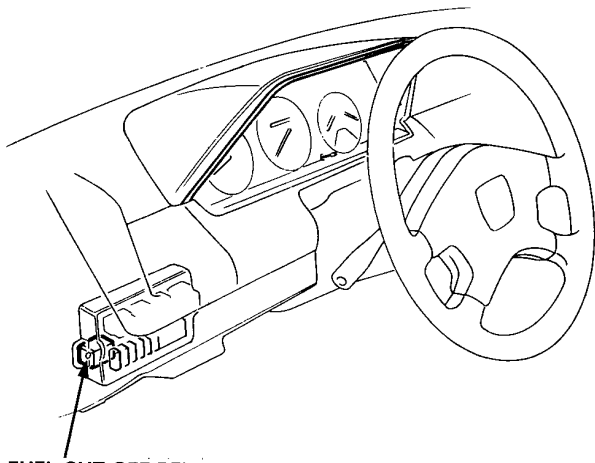
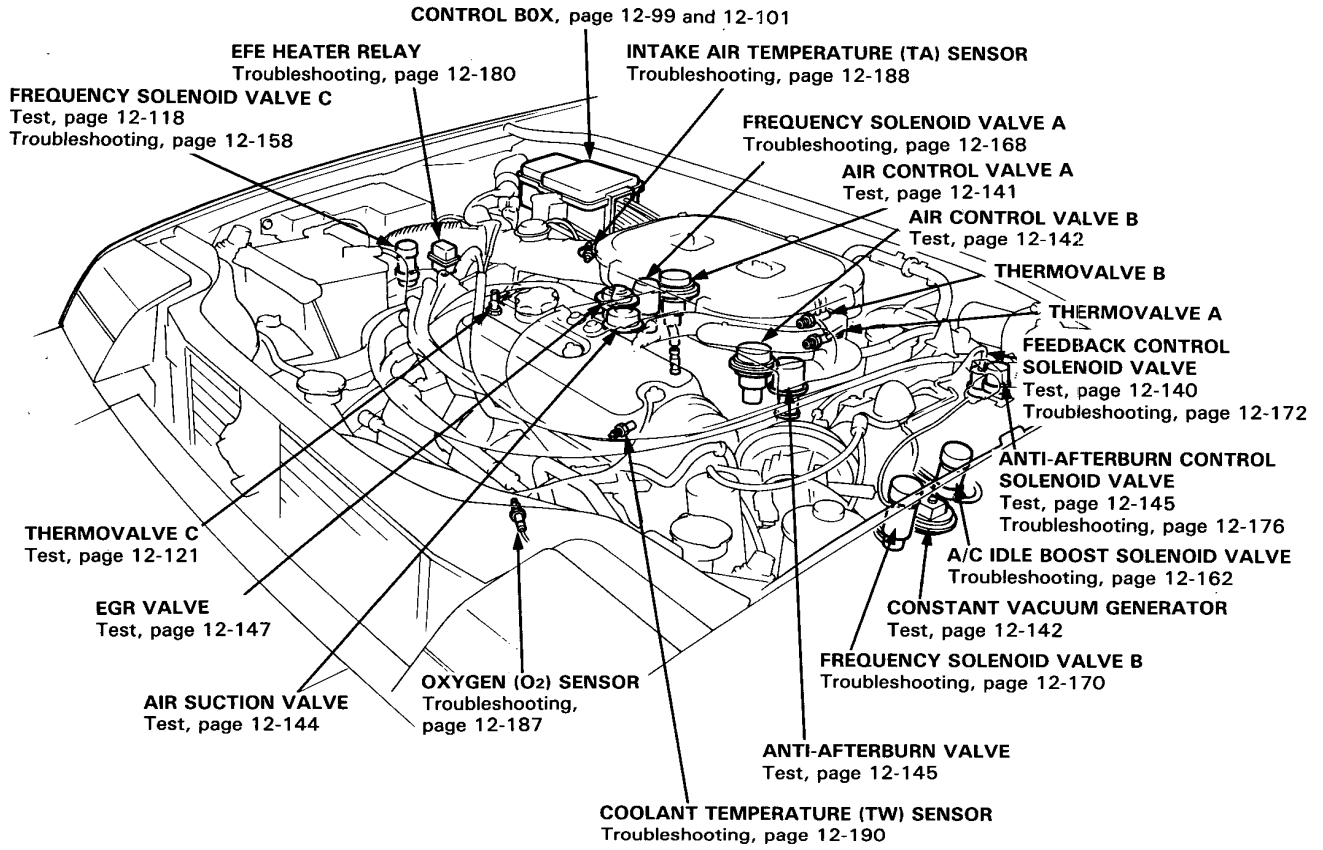
- Don't let the sensor touch the bottom of the container.
- During the test, stir the water in the container to ensure even temperature.



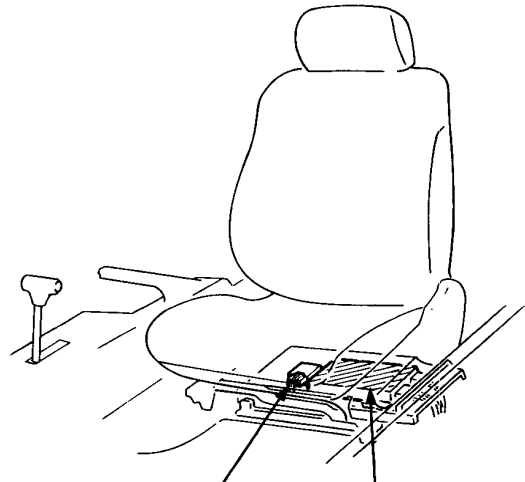
Carbureted Engine:



Component Locations



FUEL CUT-OFF RELAY
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EFE HEATER CONTROL UNIT
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EMISSION CONTROL UNIT
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