

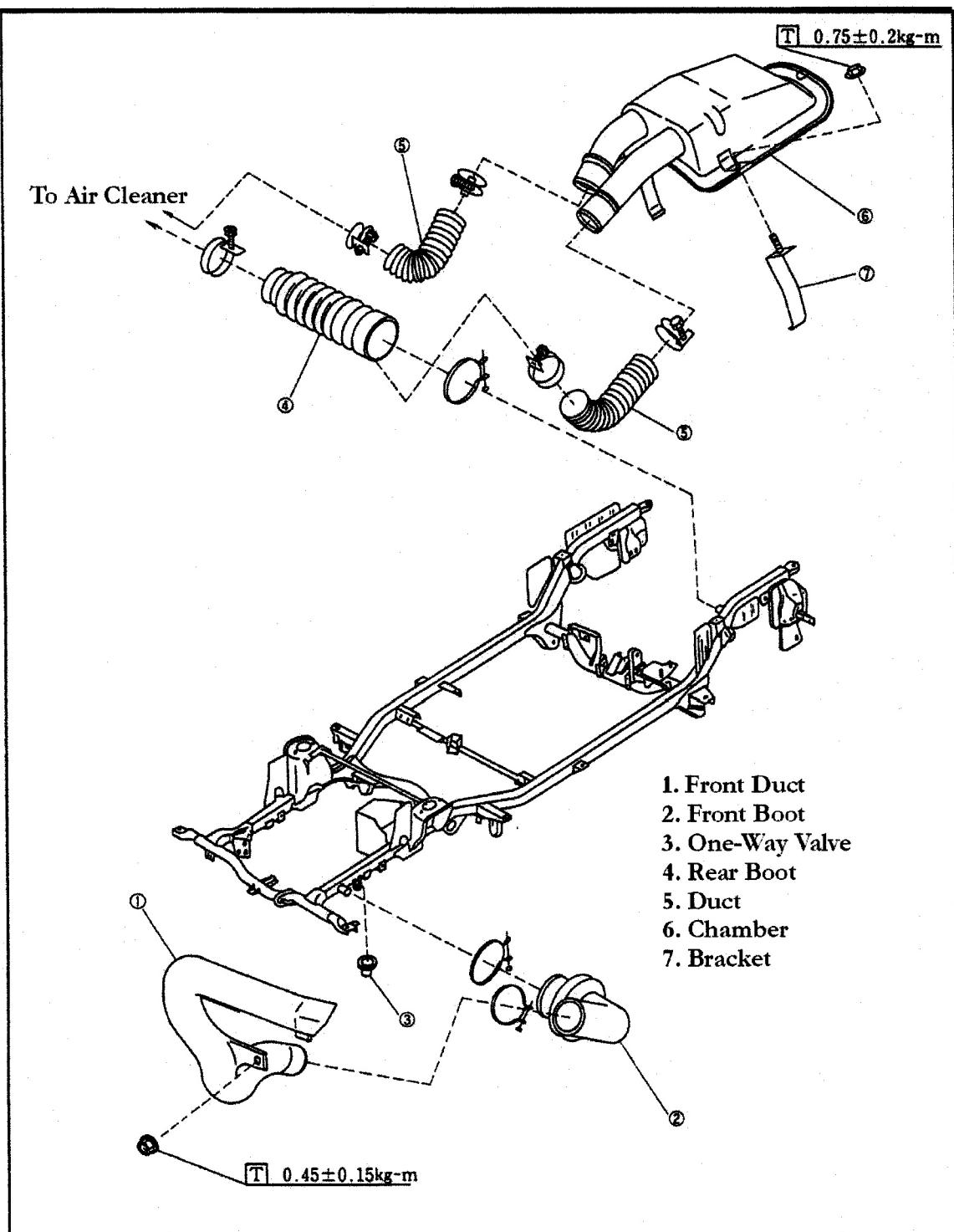
Chapter 7

Air – Fuel System – Exhaust

- 12. Air Intake System (Carbureted)**
- 13. Air Intake System (Fuel Injected-Supercharged)**
- 14. Air Cleaner and Air Intake Sensor**
- 15. Intake Manifold (Carbureted)**
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- 21. Fuel Injection-Air/Water Temp Sensors-O2 Sensor**
- 22. Exhaust Truck-Van**

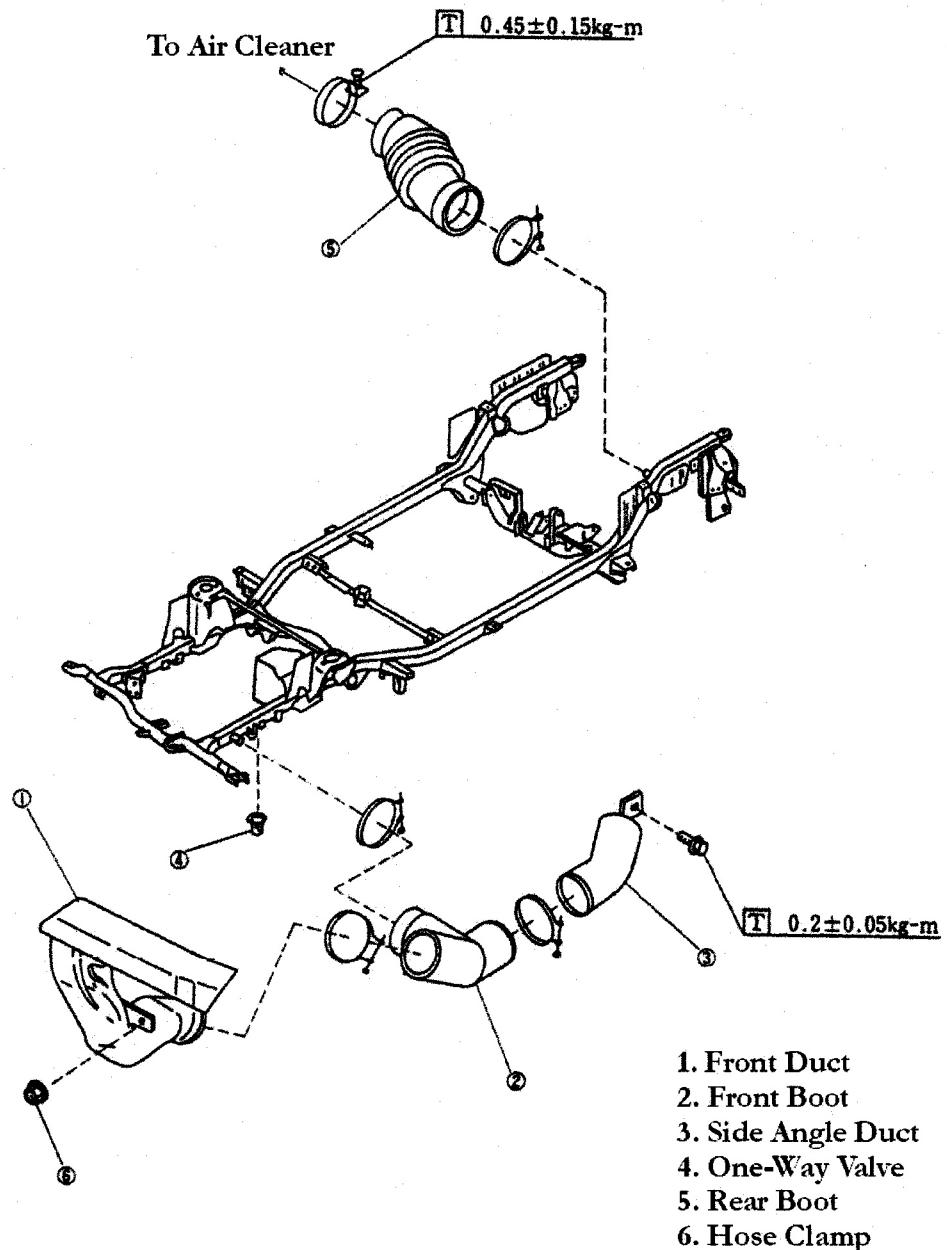
Air Intake System

Carbureted Vehicle



Air Intake System

SC Vehicle

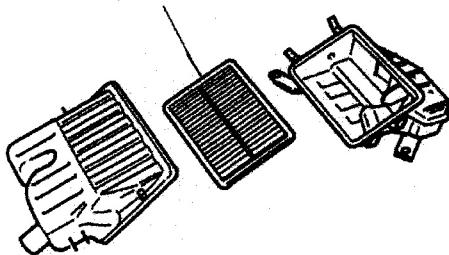


Air Intake System

Air Cleaner Case and Sensor

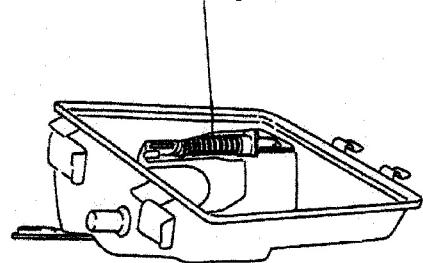
**Note: Change Air Element Every 12,000K
Clean Air Cleaner Case Every 6 Months**

Air Cleaner (Element)



Caution: The Air Intake Charge Temperature Sensor is Located in The Lower Case of The Air Cleaner Unit. Take Care Not to Damage the Sensor or System Balance Trouble Will Occur

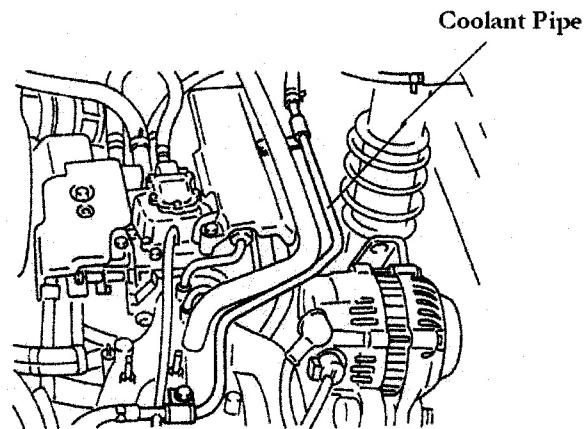
Air Intake Temp Sensor



Note: Do Not Forget to Connect Sensor if Air Cleaner Unit is Removed

Intake Manifold (Carbureted)

1. Disconnect (-) Negative Battery Terminal
2. Drain Coolant System
3. Remove Coolant Pipe in Below Diagram

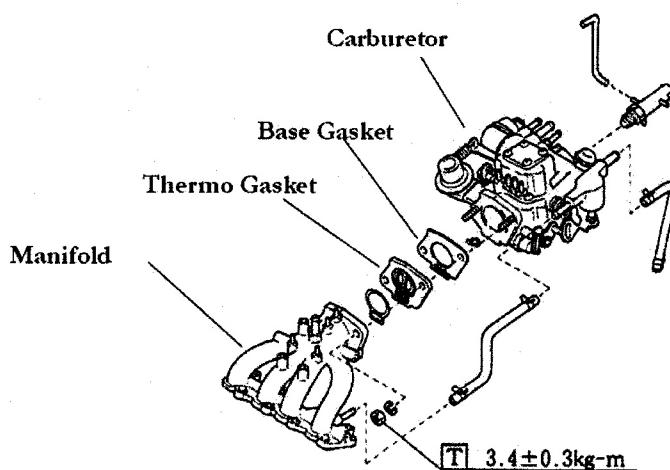


4. Remove any Hoses Necessary and Mark (Label) With Tape

See Diagram Below

5. Disconnect Carburetor Linkage, Vacuum Hoses, Fuel Line, etc.
6. Remove Carburetor
7. Remove Intake Manifold
8. Clean All Surfaces Before Re-Assembly

Note: Never Re-Use Gaskets

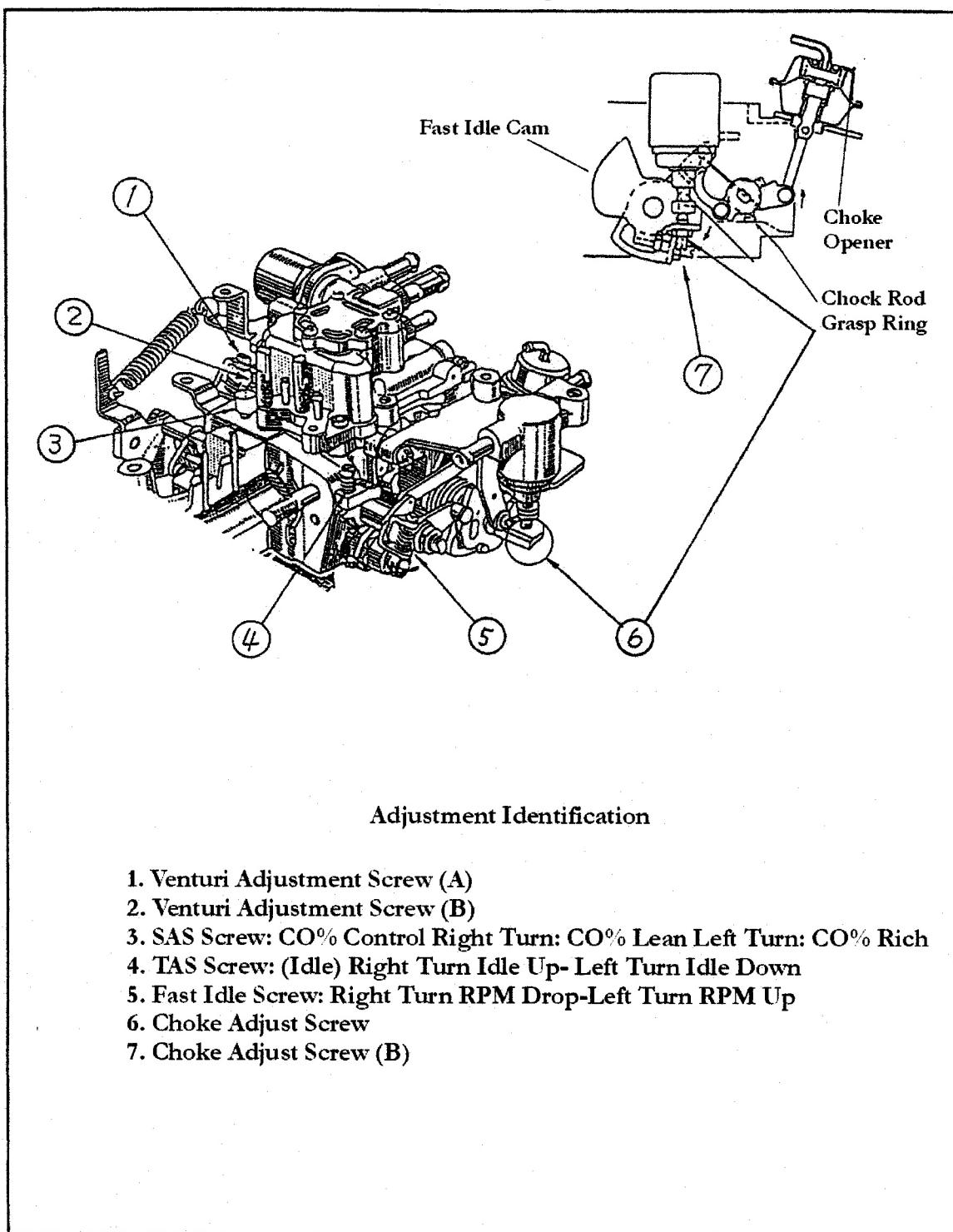


Fuel System Specification (Carbureted)

Vehicle Type		Carbureted Vehicle			
Fuel Tank	Capacity	40 l			
	Location	Under Rear Floor Decking			
Fuel Pump Specifications	Type	Plunger (Van-Try)	Diaphragm (Truck)		
	Output Press	$0.15 \pm 0.03 \text{ kg/m}^2$	←		
	Output Volume	15 l/h	←		
	Amp Draw	1.5A	←		
	Min Voltage	9V	←		
	Hz	17Hz	—		
	Fuel Filter Type	Cartridge			
Fuel Return System (Yes-No)		Yes			
Fuel Seperator System (Yes-No)		No			
Fuel Vent System Type		Charcoal Canister Type			
Carburetor	Model	HVB32			
	Maker	Hitachi			
	Fuel Inlet Dia	Inner $\phi 46$ Outer $\phi 50$			
	Fuel Outlet Dia	$\phi 32$			
	Venturi	Yes			
	Needle Valve Dia	$\phi 1.4$			
	Float Bowl Vent	Open Vent, Inner Vent Solenoid (Vent SW OP)			
	Main Nozzle	1	$\phi 2.8$ $\phi 4$		
		2	$\phi 2.5$ $\phi 3.5$		
	Secondary	1	$\phi 3$ $\phi 4$		
		2	$\phi 3.5$ $\phi 4.5$		
	Idle Hole Dia	$\phi 1.3$			
	Bypass Hole Dia	$\phi 0.7 - \phi 1.0$ $l = 3.8 \text{ mm}$			
	Power Valve Nozzle	$\phi 0.4 \times 1.9 \text{ cc/10}$			
	Float Level	Float Chamber Surface Up 2.5(mm)			
	Carb Weight	2.8kg			
Notes					
www.yokohamamotors.com [English]					

Fuel System

Carburetor Diagram

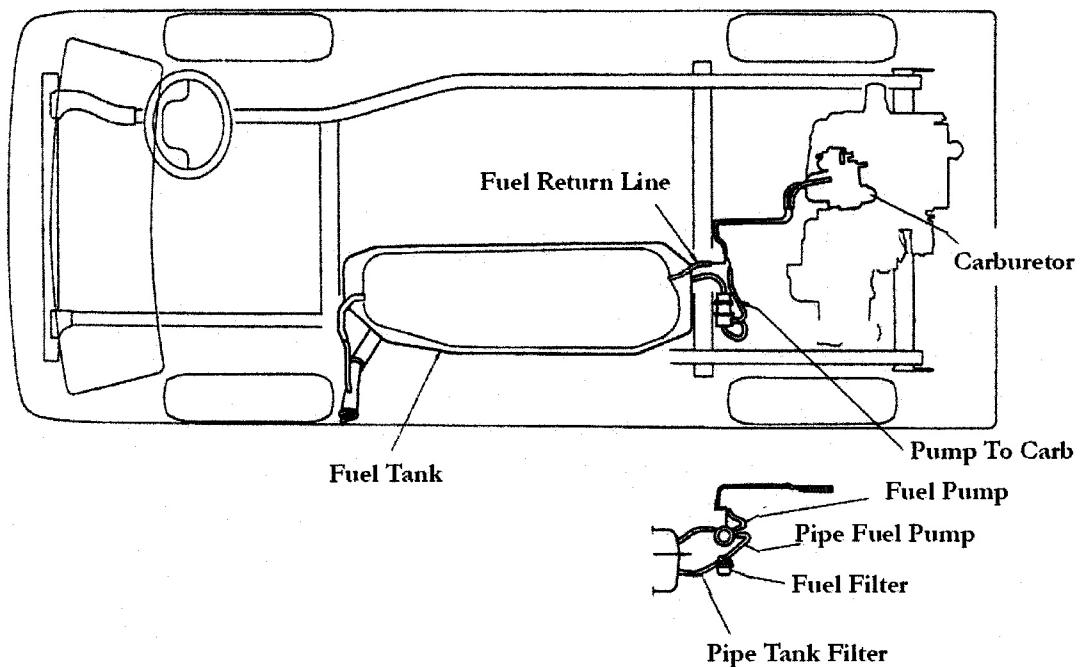
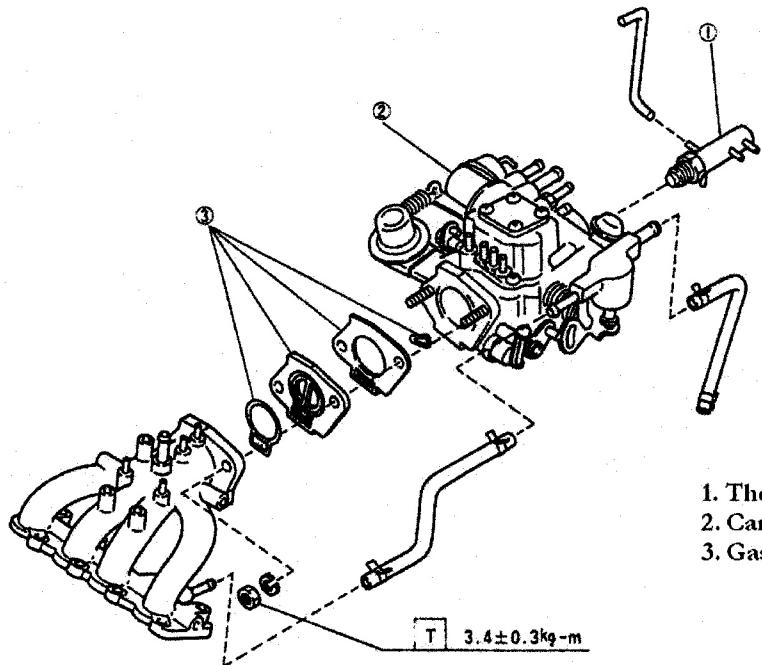


Adjustment Identification

1. Venturi Adjustment Screw (A)
2. Venturi Adjustment Screw (B)
3. SAS Screw: CO% Control Right Turn: CO% Lean Left Turn: CO% Rich
4. TAS Screw: (Idle) Right Turn Idle Up- Left Turn Idle Down
5. Fast Idle Screw: Right Turn RPM Drop-Left Turn RPM Up
6. Choke Adjust Screw
7. Choke Adjust Screw (B)

Fuel System

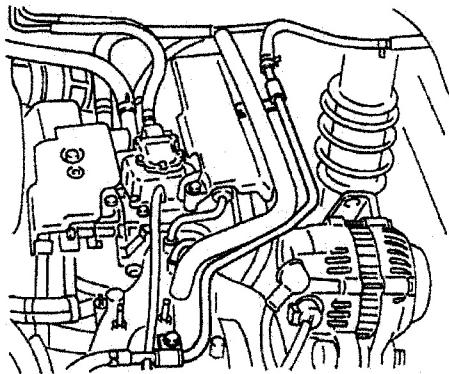
Adjustment Screws



Fuel System

Carburetor Removal

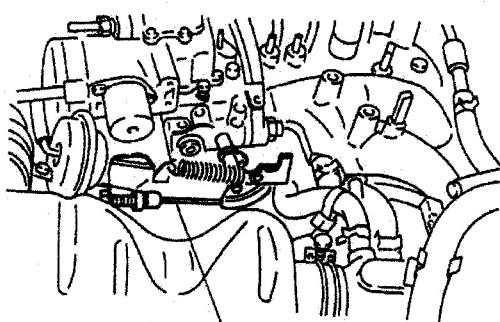
1. Remove (-) Battery Connection
2. Disconnect Pipe Braket Below



3. Remove the (2) Carburetor Covers
4. Drain Coolant System (See Coolant)
5. Mark Hoses and Remove

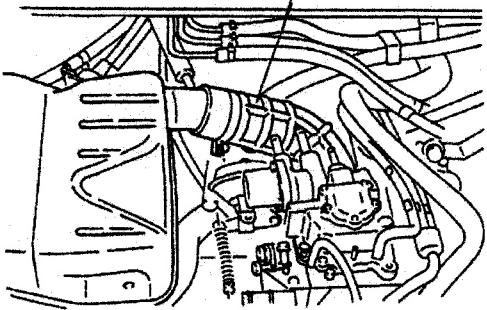
Caution: Fuel is Dangerous

6. Disconnect Accelerator Cable as Shown in the Diagram Below.

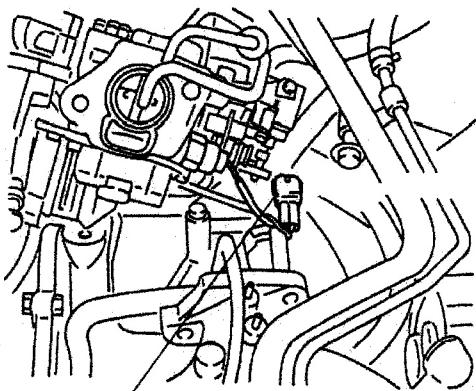


Accelerator Cable

7. Remove Air-Cleaner Duct Duct



8. Remove the (2) Nuts Attaching The Carburetor to the Intake Manifold
9. Disconnect Throttle Cut-Off Solenoid Connector as in the Diagram Below



Connector

10. Remove Carburetor

Note: Always Use New Gaskets

Torque For Intake to Carburetor Nuts

$T \ 3.4 \pm 0.3 \text{kg}\cdot\text{m}$

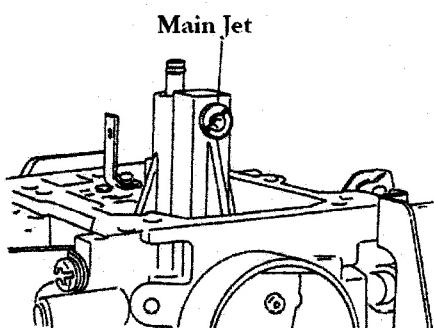
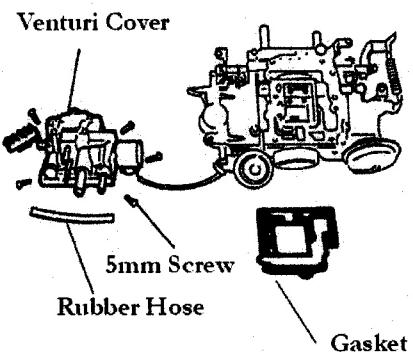
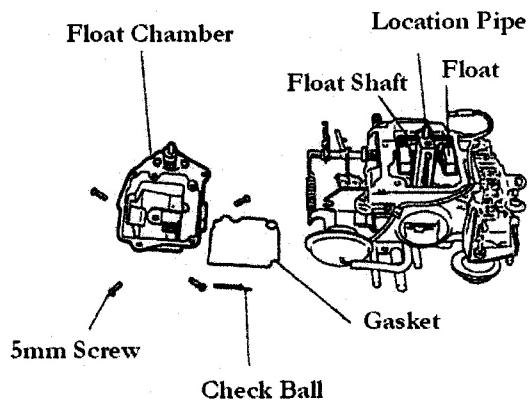
Fuel System

Carburetor Brakedown

HVB32 Series

Note: Order Rebuild Kit For Hitachi HVB32

Detailed Instructions Included in Rebuild Kit
This Diagram for Reference Only



Note: Rebuild Kit Has Up To Date Specifications
This Page for General Reference

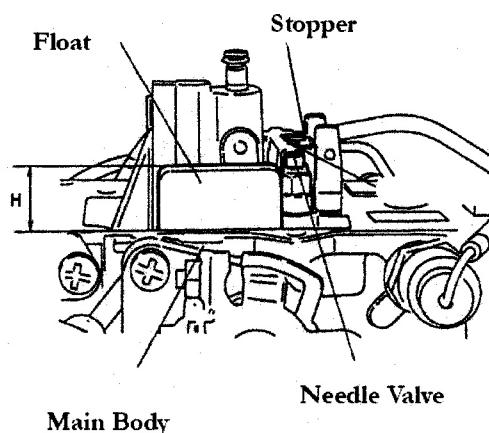
Fuel System

Caburetor Float Bowl Measurement

HVB32-1 Series
HVB32-1A Series

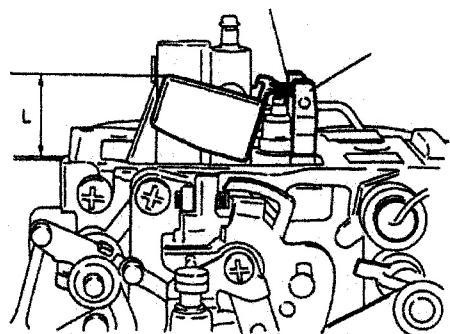
Float Measurement

High Point	14mm
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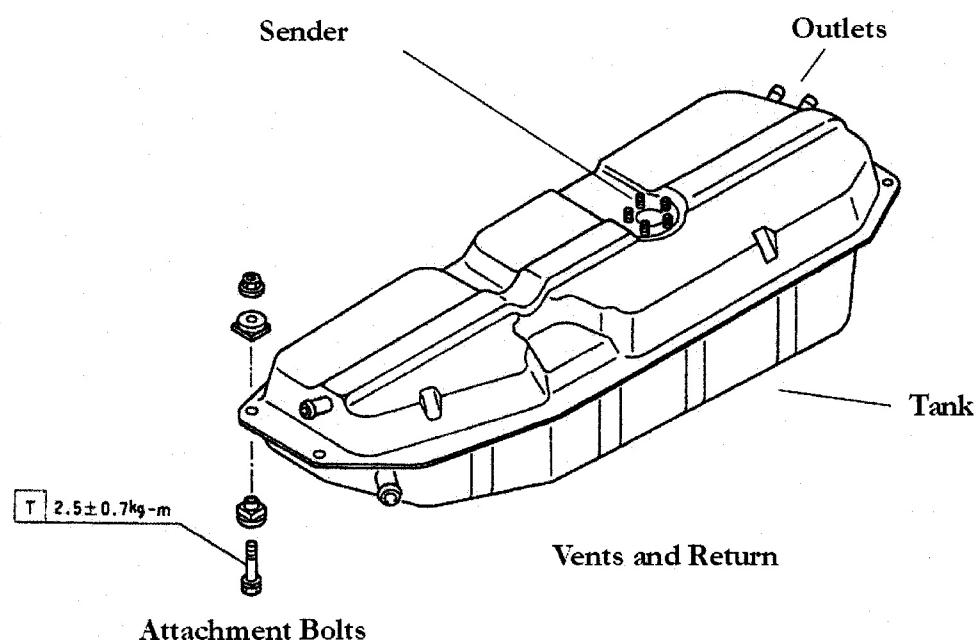
Float Measurement

Low Point	24.6~25.5mm
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Fuel System

Fuel Tank



Attachment Bolts

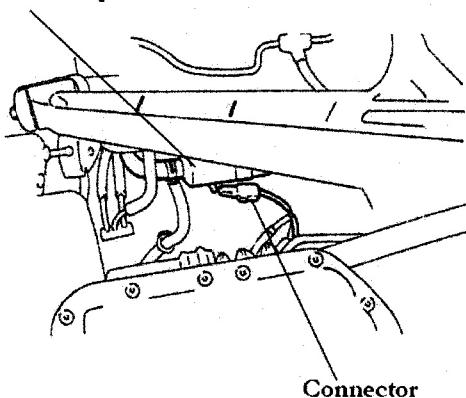
Note: Do Not Over Torque Attachment Bolts

Fuel System (EMPi)

Fuel Pump - Pressure Regulator - Knock Sensor

Fuel Pump

Fuel Pump



1. Disconnect Connector
2. Start Engine to Burn Fuel in Line and Relieve Fuel Pressure
3. Stop Engine Disconnect (-) battery Post
4. Disconnect From Bracket
5. Disconnect Fuel Lines
6. Remove Pump
7. Install new Pump
8. Connect Lines
9. Connect to Bracket
10. Connect Battery
11. Connect Pump Electrical Connector
12. Turn Key to ON Position 5 Seconds and OFF
13. Turn Key to Start and RUN Engine
14. Check for Leaks

Fuel Pump Pressure

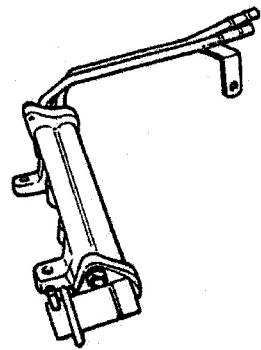
Fuel Pump Output Pressure IG SW ON

Normal	3.1kg/cm ²
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Fuel Pump Pressure at IDLE

Normal	2.6kg/cm ²
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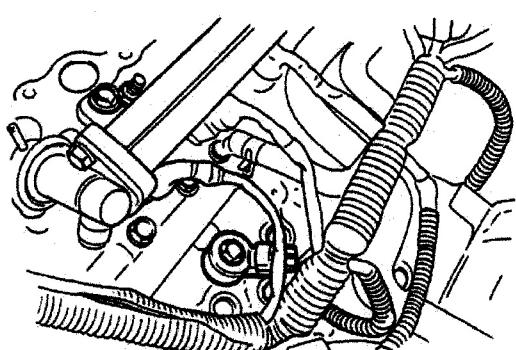
Pressure Regulator



Pressure Regulator Regulates to 3.1kg/cm²

To Replace: Remove Lines and (2) Attachment Bolts

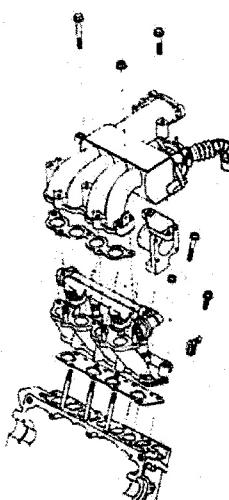
Knock Sensor



Knock Sensor: Detailed Schematic See Electrical Section of this Book

Fuel System (EMPi)

Fuel Injector - Air and Water Temp Sensor - O2 Sensor



Note: Rough Idle or No Idle Can Be Caused By Bad Injector(s)
First Check Ignition System Before Changing Injector(s)

Injector Test

1. Start Engine and Warm to Idle
2. Use a Stethoscope to Listen to Each Injector.
You Should Hear Each Injector Make a Chi Chi Chi Sound. If an Injector is "Dead" Unplug the Connector and Plug Again.

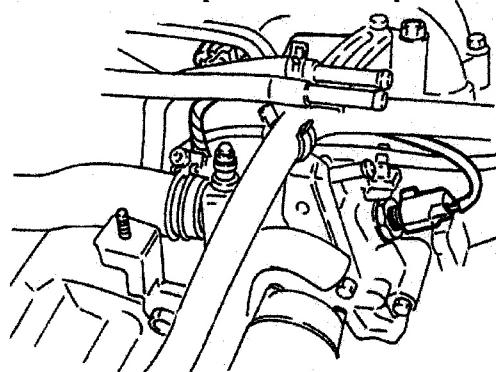
Note: Quick Check of Connector Circuit
Live or Dead Connect to a Injector That is Known Live. If you Hear The Chi Chi Chi Sound You Know The Circuit is Good. Return Connector to Original Injector.

Note: If All Injectors Live Spray Water Mist Around Injectors to Check For Vacuum Leak. If Leak Found Change Seals

3. Change Bad Injector(s) and Seals

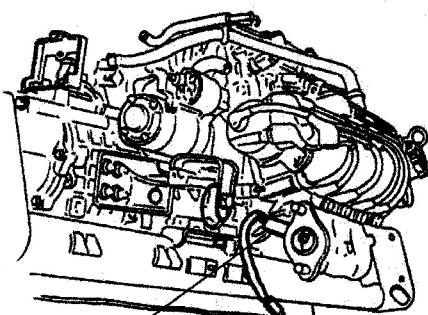
Note: Change ALL Seals

Air Temp and Water Temp



Note: See Electrical Section of this Book for Detailed Information on these Circuits

O2 Sensor



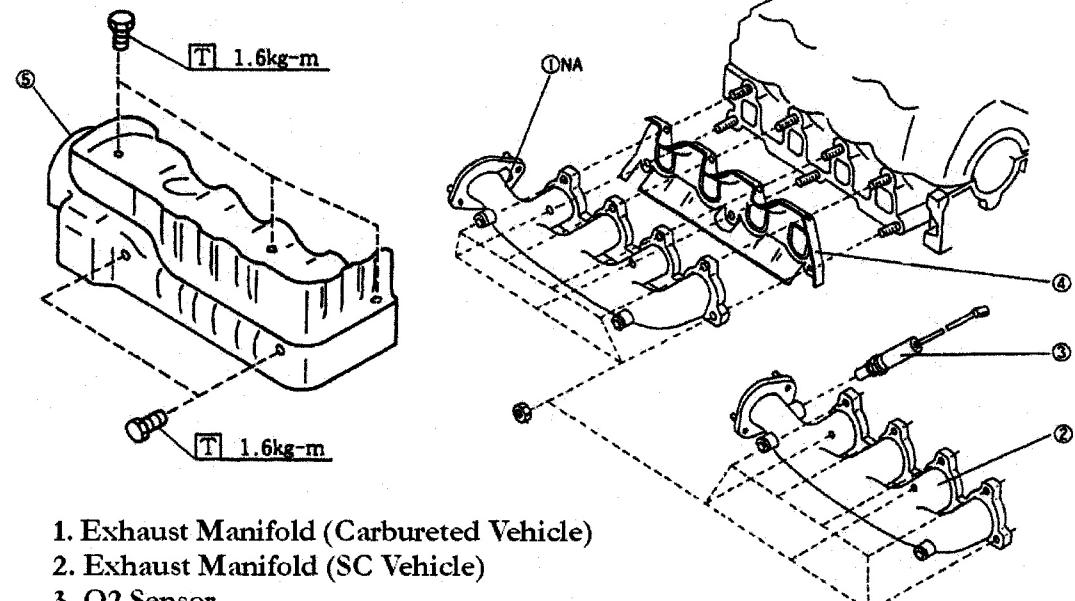
Sensor

Note: O2 Sensor Detailed Information in The Electrical Section of this Book

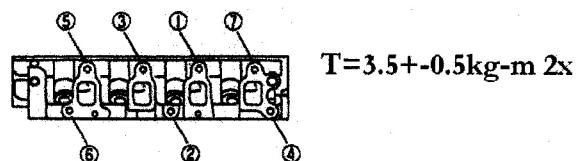
1. Disconnect Electrical Connector
2. Remove and Replace Sensor

Exhaust System

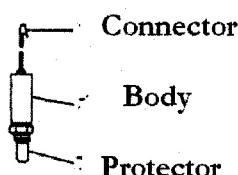
Manifold and O2 Sensor



Manifold Torque Sequence



O2 Sensor

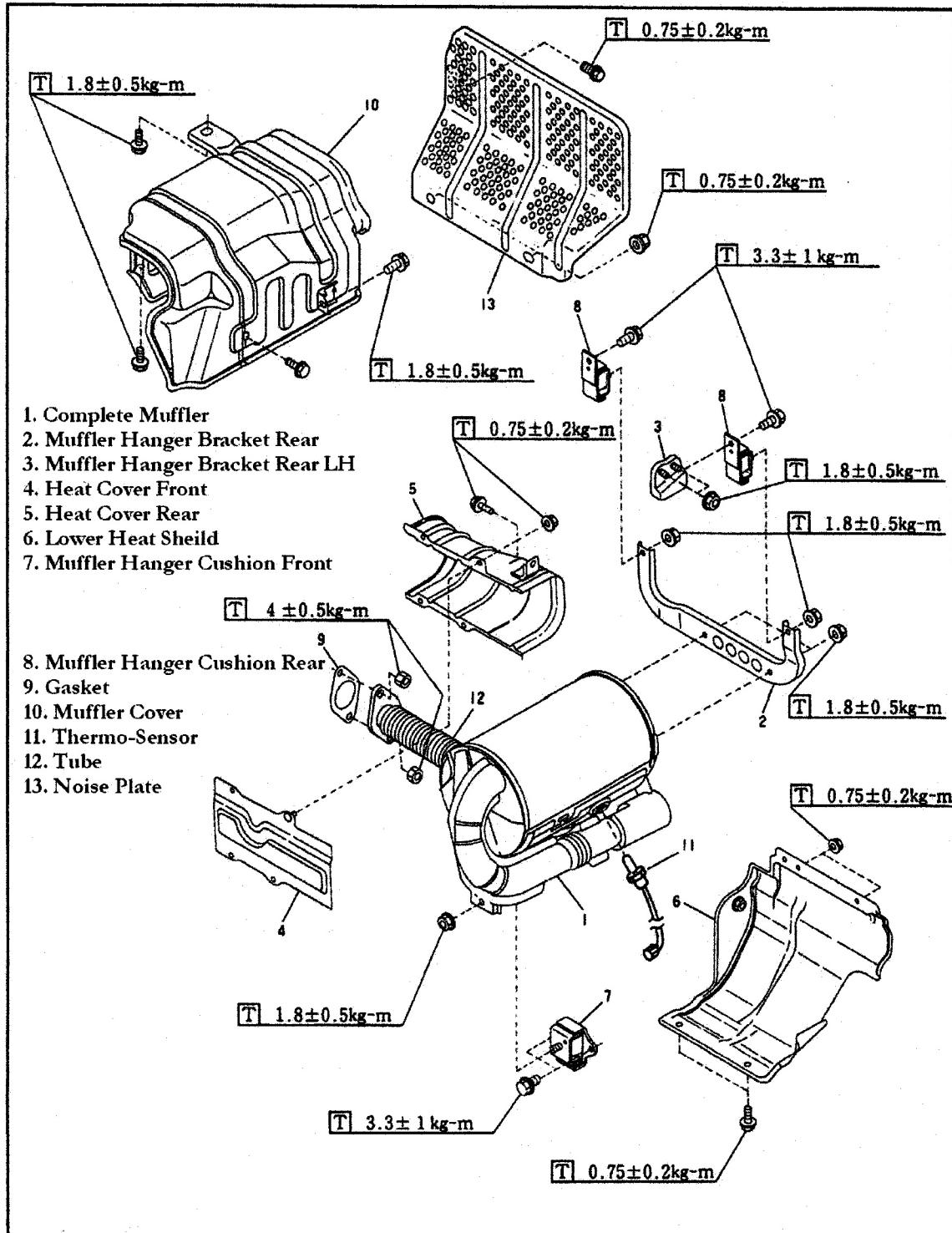


**Note: NEVER Splice Wires on an O2 Sensor
You Cut it, its Trash**

Exhaust System

Truck Van Carbureted

Muffler System



Exhaust System

SC Vehicles

Muffler System

