SERVICE MANUAL

MODEL
A10 & A12
ENGINE

NISSAN

NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

SECTION EF

ENGINE FUEL

EF

AIR CLEANER

DESCRIPTION

There are two types of air cleaners: the conventional type and the thermo controlled manual type. The thermo controlled manual type is utilized in models destined for European countries while the conventional type is utilized in models destined for other areas.

The air cleaner element is a viscous paper type and does not require any cleaning until replacement.

Note: Do not brush or blast elements before replacement.

The conventional type air cleaner is designed for use in areas where ambient temperatures do not change extremely throughout the year.

The thermo controlled manual type air cleaner is suitable for applications where extreme temperature change is encountered. In models equipped with the manual type air cleaner, a change-over valve located inside the air duct is switched depending on ambient temperatures. In cold weather, the valve is switched to accelerate fuel spray by utilizing the heat of the exhaust manifold. In warm or hot weather, the valve is switched back. This valve can be switched as required by the lever attached to the air cleaner duct.

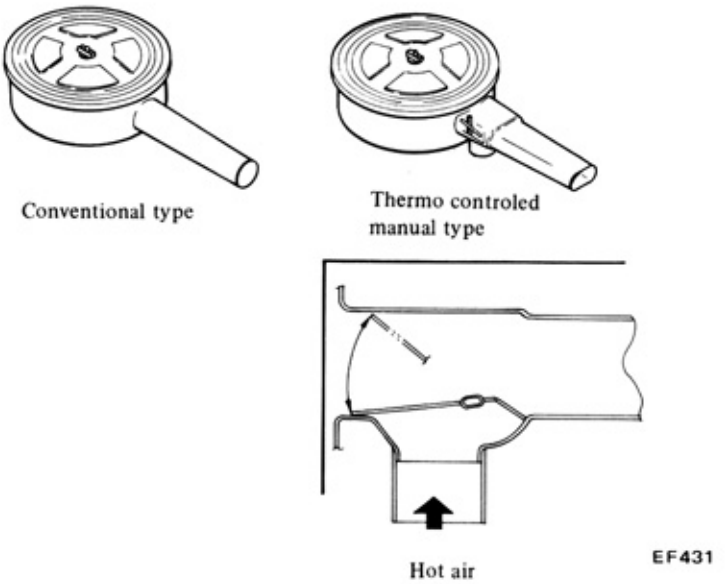


Fig. EF-1 Air cleaner

FUEL STRAINER

DESCRIPTION

The fuel strainer is a cartridge type. It uses a paper element which can be checked for condition from the outside.

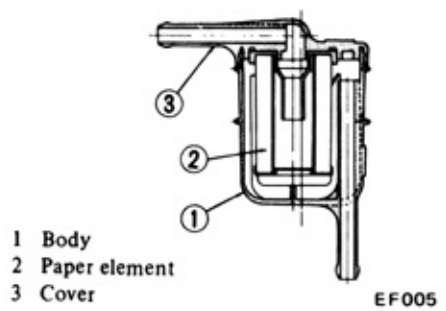


Fig. EF-2 Sectional view of cartridge type fuel strainer

REMOVAL

Disconnect inlet and outlet fuel lines from fuel strainer, and remove fuel strainer.

Note: Before disconnecting fuel lines, use a container to receive fuel remaining in lines.

FUEL PUMP

CONTENTS

DESCRIPTION

The fuel pump transfers gasoline from the tank to the carburetor in sufficient quantity to meet engine requirements at any speed or load.

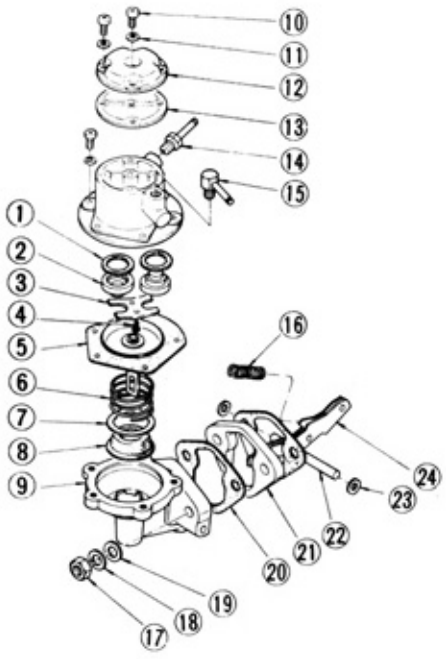
The fuel pump is a diaphragm type, consisting of a body, rocker arm and link assembly, diaphragm, diaphragm spring, seal, inlet and outlet valves.

The diaphragm consists of specially treated rubber, which is not affected by gasoline, held together by two metal discs and a pull rod.

FUEL PUMP TESTING

The fuel pump is operating properly when its pressure is within specifications and its capacity is equal to the engine's requirements at all speeds.

Pressure and capacity must be determined by two tests, with the pump mounted on the engine. Be sure that there is gasoline in the tank when conducting these tests.



1 Packing
2 Valve assembly
3 Retainer
4 Screw
5 Diaphragm assembly
6 Diaphragm spring
7 Retainer
8 Oil seal
9 Body lower complete
10 Screw
11 Spring washer
12 Fuel pump cap
13 Cap gasket
14 Inlet connector
15 Outlet connector
16 Rocker arm spring
17 Nut
18 Spring washer
19 Plain washer
20 Gasket
21 Spacer
22 Rocker pin
23 Spacer
24 Rocker arm

EF134

Fig. EF-3 Exploded view of fuel pump

Static pressure test

Static pressure test is conducted as follows:

1. Disconnect carburetor fuel line at carburetor.
2. Install necessary adapter and "tee" fitting to fuel line and attach a suitable pressure gauge.
3. Start and run engine at varying speeds.
4. Reading on gauge is static fuel pressure; this should remain within following limits:

A10 Engine 0.24 kg/cm^2 (3.41 psi)
A12 Engine 0.18 kg/cm^2 (2.56 psi)

Pressure below lower limit indicates extreme wear on one part or a small amount of wear on each working part.

If may also indicate a ruptured diaphragm; worn, warped, dirty or gumming valves and seats or a weak diaphragm return spring. Pressure above upper limit indicates an excessively strong and tight diaphragm. This condition requires removal of fuel pump assembly for replacement or repair.

Capacity test

Capacity test is used only when static pressure is within specifications. Capacity test is conducted as follows:

1. Disconnect fuel pipe at carburetor.
2. Place a suitable container at end of pipe.
3. Start engine and run it at 3,000 rpm.
4. On A10 and A12 engines pump should deliver 600 cc (1¼ U.S. pt.) of fuel in one minute or less.

If no gasoline, or only a little flows from open end of pipe, fuel pipe is clogged or pump is malfunctioning. Before removing pump, remove gas tank cap, disconnect both inlet and outlet pipes and blow through them with an air hose to make sure they are clear.

This will rectify possible clogged gas strainer in fuel tank. Reconnect pipes to pump and retest flow.

REMOVAL AND DISASSEMBLY

Remove fuel pump assembly by unscrewing two mounting nuts and disassemble in following order:

1. Separate upper body and lower body by unscrewing body set screws.
2. Take off cap and cap gasket by removing cap screw.
3. Unscrew elbow and connector.
4. Take off valve retainer by unscrewing two valve retainer screws. Two valves are easily removed.
5. To remove diaphragm, diaphragm spring, lower body seal washer and lower body seal from lower body, press down on diaphragm counter against force of diaphragm spring and while doing this, cant diaphragm so that rectangular part in lower end of pull rod is unhooked from rocker arm link.

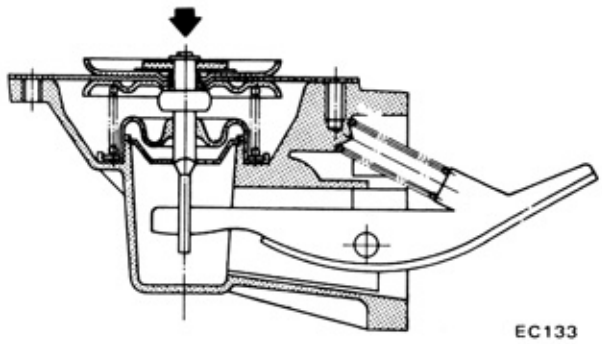


Fig. EF-4 Removing pull rod

INSPECTION

1. Check upper and lower bodies for cracks.
2. Check valve assembly for wear of valve and valve spring. Blow valve assembly by breath to examine its function.
3. Check diaphragm for small holes, cracks and wear.
4. Check rocker arm for wear at portion in contact with camshaft.
5. Check rocker arm pin for wear since a worn pin may cause oil leakage.
6. Check all other components for any abnormalities and replace with new parts as required.

ASSEMBLY

Assembly is done in reverse order of disassembly. For reassembly and reinstallation, note following:

1. Use new gasket.
2. Lubricate rocker arm link, rocker arm pin and lever pin before installation.
3. To test function, position fuel pump assembly about 1 meter (3.3 ft) above fuel level with a pipe connecting fuel pump and fuel strainer and operate rocker arm by hand. If fuel is drawn up soon after rocker arm is released, function of pump is satisfactory.

CARBURETOR

CONTENTS

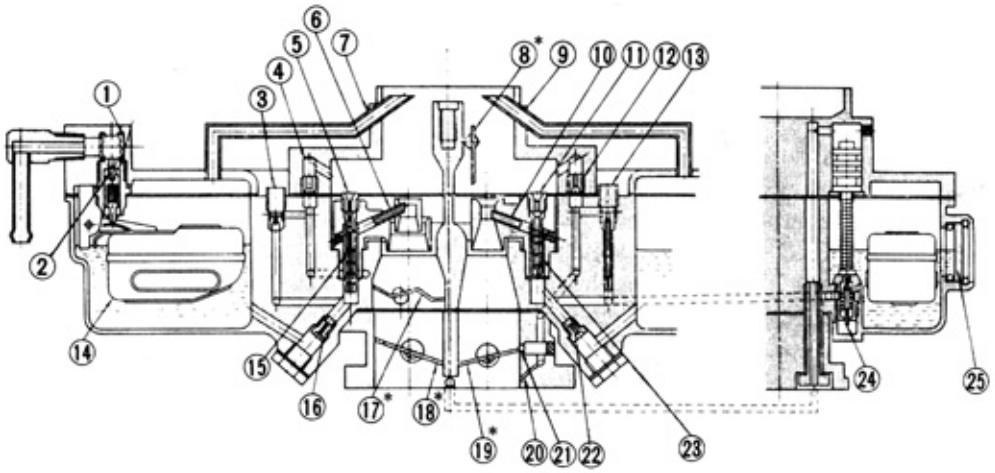
DESCRIPTION

The carburetors are downdraft two-barrel types designed to increase power and fuel economy, as well as to reduce exhaust gas emissions.

These carburetors present several distinct features of importance to car owner.

A summary of features is as follows:

1. The secondary throttle valve is operated by throttle lever. High power and good acceleration are gained with



1 Filter
2 Needle valve
3 Secondary slow jet
4 Secondary slow air bleed
5 Secondary main air bleed
6 Secondary main nozzle
7 Secondary air vent pipe
8 *Choke valve
9 Primary air vent pipe
10 Primary main nozzle
11 Primary main air bleed
12 Primary slow air bleed
13 Primary slow jet
14 Float
15 Secondary emulsion tube
16 Secondary main jet
17 *Auxiliary valve
18 *Secondary throttle valve
19 *Primary throttle valve
20 Idle hole
21 By-pass hole
22 Primary main jet
23 Primary emulsion tube
24 Power valve
25 Level gauge

Note: Do not remove parts marked with an asterisk "*".

Fig. EF-5 Sectional view of carburetor

combination of the auxiliary valve.

2. The accelerating pump provides excellent acceleration.
3. The power valve mechanism is a vacuum actuated boost type and improves high speed driving.
4. The throttle opener control system incorporates a servo diaphragm which helps open the throttle valve at a decreasing speed so as to reduce hydrocarbon emissions to a minimum.
5. An anti-dieseling solenoid valve is installed to prevent "dieseling". When the ignition key is turned off, the fuel passage involved in the slow system is closed and the fuel supply is shut down completely.
6. The carburetor comes equipped with a dash pot, which ensures smooth deceleration without engine stall under all operating conditions.

STRUCTURE AND OPERATION

These carburetors consist of a primary system for normal running and a secondary system for full load running.

A float system common to both primary and secondary systems, a secondary switch-over mechanism, an accelerating mechanism, etc. are also attached.

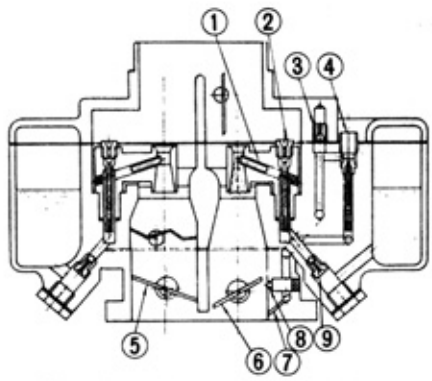
An anti-dieseling solenoid valve and a power valve mechanism are also installed.

PRIMARY SYSTEM

Primary main system

The fuel flowing out of the passages at the bottom of the float chamber passes through the primary main jet, and is mixed with the air coming from the main air bleed. The gas mixture is injected into the venturi through the main nozzle.

When the throttle valve is wide open and the engine requires dense mixture gas, the power valve opens, and fuel also flows into the main system.



1 Primary main nozzle
2 Primary main air bleed
3 Primary slow air bleed
4 Primary slow jet
5 Secondary throttle valve
6 Primary throttle valve
7 Idle hole
8 By-pass hole
9 Primary main jet

Fig. EF-6 Partially loading

Idling and slow system

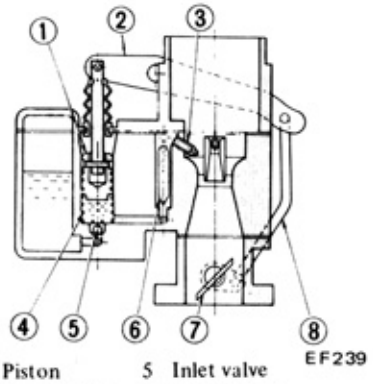
Passing through the main jet, the fuel passage is separated from main line, fuel flows through the slow jet, primary slow air bleed is ejected from the by-pass hole and idle nozzle.

Accelerating mechanism

A mechanical accelerating pump synchronized with the throttle valve is used.

When the throttle valve is closed, the piston rod is pushed up with linkage, which pushes up the piston through the piston return spring.

When the piston comes down, the inlet valve closes, the outlet valve opens, and fuel within the pump is blown out from the pump jet by compressed piston return spring. The fuel hits against the side wall of the small venturi, becoming minute drops and compensating transient spareness of fuel.



1 Piston
2 Pump lever
3 Pump nozzle
4 Piston return spring
5 Inlet valve
6 Outlet valve
7 Primary throttle valve
8 Pump connecting rod

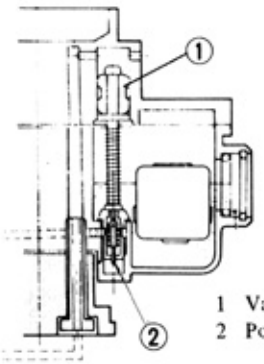
Fig. EF-7 Accelerating mechanism

Power valve mechanism

The vacuum actuated boost type power valve mechanism makes use of the downward pulling force of the air stream below throttle valve.

When the throttle valve is slightly opened during light load running, a high vacuum piston upward against the spring, leaving the power valve closed.

When vacuum is lowered during full load or acceleration, the spring pushes the vacuum piston downward, opening the power valve to furnish fuel.



1 Vacuum piston
2 Power valve

Fig. EF-8 Sectional view of power valve

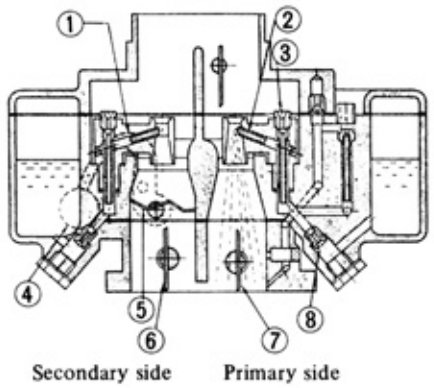
SECONDARY SYSTEM

Secondary main system

When the primary throttle valve is wide open and the engine produces high power, the secondary throttle valve begins to open by the linkage.

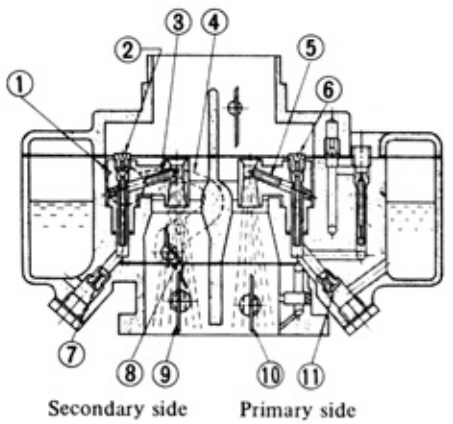
However, the auxiliary valve does not open at a slow speed due to counterweight connected to the valve shaft.

As the engine picks up speeds, the auxiliary valve opens against the load of the counterweight and the secondary system starts operation for high power operation. The fuel flowing out of the passage at the bottom of the float chamber passes through the secondary main jet. The fuel is mixed with the air coming from the main air bleed and mixture is blown into the venturi through the main nozzle. When the primary throttle valve is in full open position, the secondary throttle valve is also fully opened.



1 Counter lever
2 Primary main nozzle
3 Primary main air bleed
4 Counterweight
5 Auxiliary valve
6 Secondary throttle valve
7 Primary throttle valve
8 Primary main jet

Fig. EF-9 At full open, slow speed



1 Counter weight
2 Secondary main air bleed
3 Secondary main nozzle
4 Counter lever
5 Primary main nozzle
6 Primary main air bleed
7 Secondary main jet
8 Auxiliary valve
9 Secondary throttle valve
10 Primary throttle valve
11 Primary main jet

Fig. EF-10 At full open, high speed

Step system

The construction of this system corresponds to the idling and slow system of the primary system.

This system aims at the power filling up of the gap when fuel supply is transferred from the primary system to the secondary system. The step port is located near the auxiliary valve in its fully closed state.

ANTI-DIESELING SYSTEM

The carburetor is equipped with an anti-dieseling solenoid valve.

As the ignition switch is turned off, the valve is brought into operation, shutting off the supply of fuel to the slow circuit.

Tightening torque:
180 to 220 kg-cm
(156 to 191 in-lb)

The following figure shows a sectional view of this control.

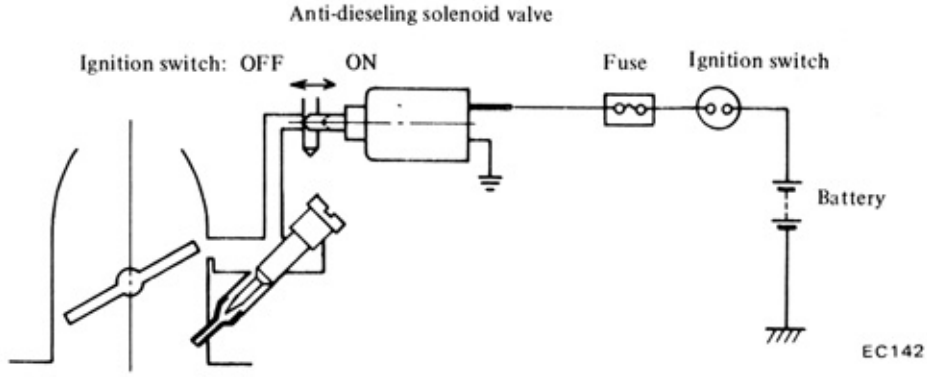


Fig. EF-11 Schematic drawing of anti-dieseling solenoid valve

FLOAT SYSTEM

There is only one float chamber, while two carburetor systems, primary and secondary, are provided.

Fuel fed from the fuel pump flows through the filter and needle valve into the float chamber. A constant fuel level is maintained by the float and needle valve.

Because of the inner air vent type float chamber ventilation, fuel consumption is not affected by dirt accumulated in the air cleaner.

The needle valve includes special hard steel ball and will not wear for all its considerably long use.

Besides, the insertion of a spring will prevent the flooding at rough road running.

CHOKE SYSTEM (Manual)

The choke valve is provided with a spring, installed eccentrically on the normal carburetting device, and synchronized with the throttle valve.

When the choke is fully closed, the throttle valve opens 19 degrees from the fully closed position. This is the best condition in which to start the engine. The synchronization of the choke valve and the throttle valve can be correctly maintained after the engine is started.

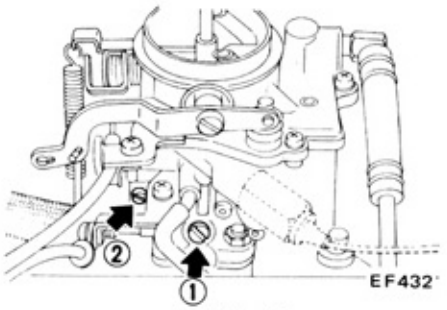
ADJUSTMENT AND INSPECTION

Idle adjustment

1. Check carburetor pipes for proper connection.
2. Warm up engine sufficiently.
3. Continue engine operation for one minute at idling speed.
4. Adjust throttle adjusting screw until engine is at specified speed.

Engine speed — Unit: rpm

Engine model \ Car model		F10	B210	B120
A10		700	–	–
A12	M/T	700	600	650
	A/T	–	700 in "N" position	–
Engine manifold vacuum at idle speed mmHg (inHg)		–480 (–18.9) or above		



1 Idle adjust screw
2 Throttle adjust screw

Fig. EF-12 Throttle adjusting screw and idle adjusting screw

5. Check ignition timing, if necessary adjust it to specifications.

This operation need not be carried out at 1,600 km (1,000 miles) service.

Ignition timing:
A10 engine: 8° B.T.D.C.
A12 engine: 7° B.T.D.C.

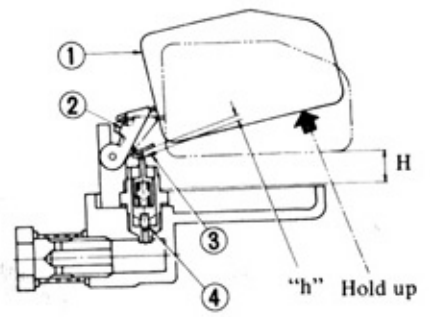
FUEL LEVEL

1. Turn down float chamber to allow float to come into contact with needle valve, and measure "H" shown in Figure EF-13.

When "H" is approximately 15 mm (0.59 in), top float position is correct.

Top float position can be adjusted by bending float seat.

Upon completion of adjustment, check fuel level with attached level gauge.



1 Float
2 Float stopper
3 Float seat
4 Needle valve

Fig. EF-13 Adjusting float level

2. Adjust bottom float position so that clearance "h" between float seat and needle valve stem is 1.3 to 1.7 mm (0.051 to 0.067 in) when float is fully raised. Bend float stopper as required.
3. After adjustments in steps 1 and 2 above have been made, make sure that when fuel is delivered to float chamber, fuel level is maintained within the range of 18 to 20 mm (0.71 to 0.79 in) as shown in Figure EF-14.

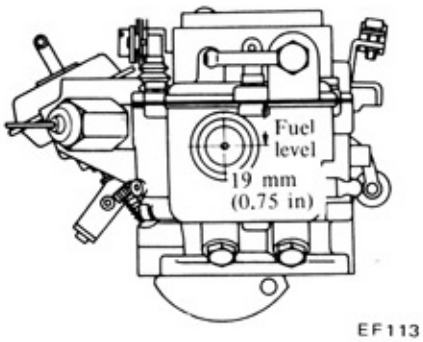
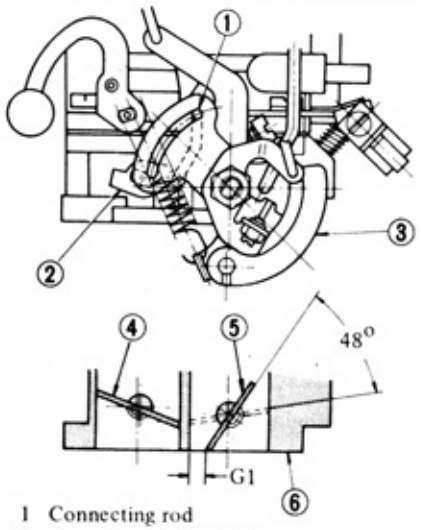


Fig. EF-14 Checking fuel level

INTERLOCK OPENING OF PRIMARY AND SECONDARY THROTTLE VALVES

1. Open primary side throttle valve 48° from fully closed position, and measure clearance "G1" between throttle valve and throttle chamber inside wall as shown in Figure EF-15.

"G1" 5.83 mm (0.230 in)



1 Connecting rod
2 Secondary connecting lever
3 Throttle lever
4 Secondary throttle valve
5 Primary throttle valve
6 Throttle chamber

Fig. EF-15 Adjusting interlock opening (Primary and secondary throttle valves)

2. Without disturbing above setting, bend connecting rod as necessary so that secondary throttle valve is about to open.

Upon completion of adjustment, make sure that link system operates smoothly.

ACCELERATING PUMP

1. Visually inspect accelerating pump cover for any sign of fuel leaks.
2. If fuel leaks are found, check gasket, and replace if necessary.

ANTI-DIESELING SOLENOID VALVE

If engine does not stop when ignition switch is turned off, this indicates that a striking (closed) solenoid valve is shutting off supply of fuel to engine.

If harness is in good condition, replace solenoid valve as a unit.

Notes:
a. Tightening torque is 180 to 220 kg-cm (156 to 191 in-lb).
b. After replacement, start engine and check to be sure that fuel is not leaking, and that anti-dieseling solenoid is in good condition.

MAJOR SERVICE OPERATION

The perfectly adjusted carburetor delivers the proper fuel and air ratios at all speeds for the particular engine for which it was designed. By completely disassembling at regular intervals, which will allow cleaning of all parts and passages, the carburetor can be maintained in its original condition and will continue to deliver the proper ratios.

To maintain accurate carburetion of passages and discharge holes, extreme care must be taken in cleaning.

Use only carburetor solvent and compressed air to clean all passages and discharge holes. Never use wire or other pointed instrument to clean or carburetor calibration will be affected.

REMOVAL

Remove carburetor from engine, taking sufficient care to the following:

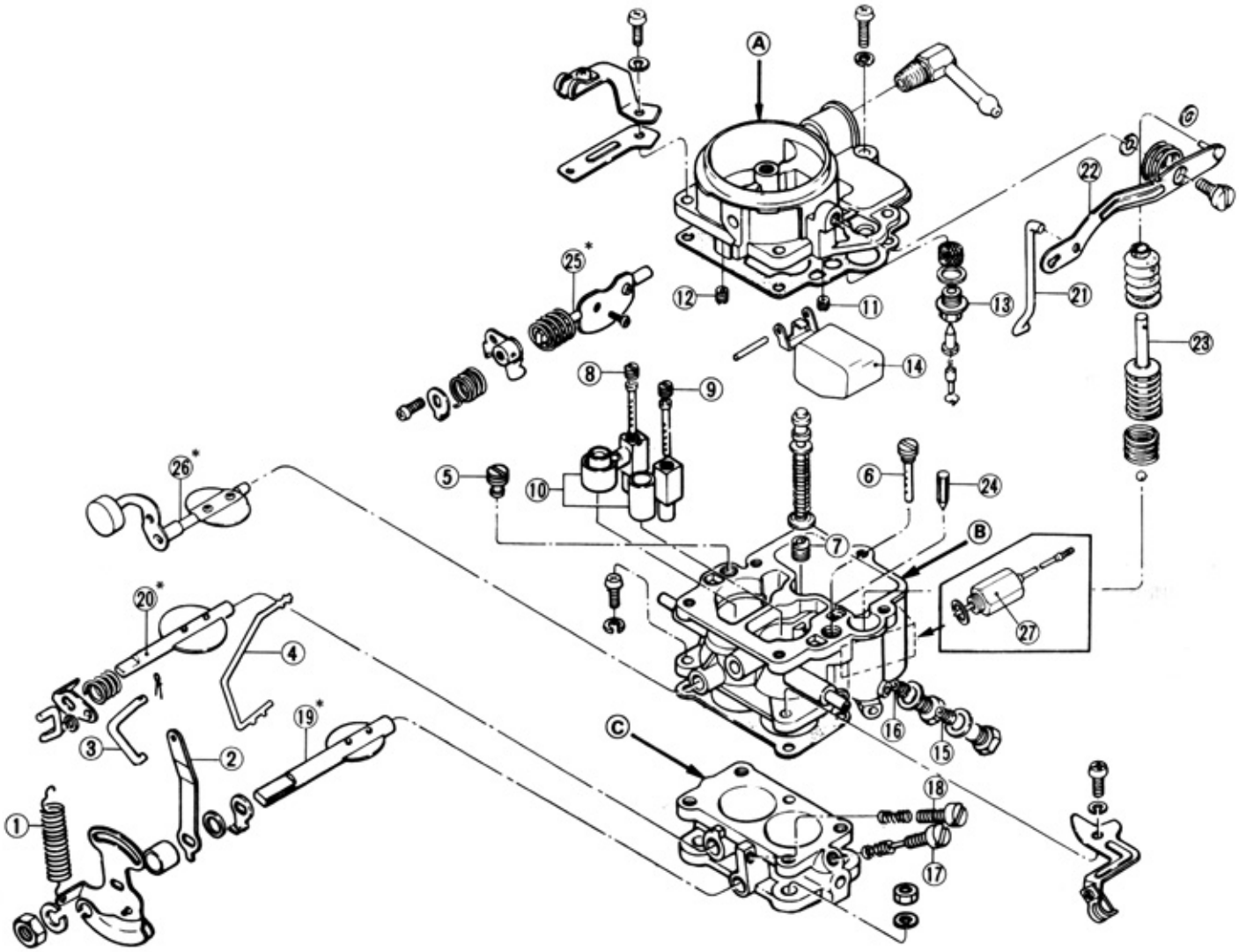
Precautions:

a. When disconnecting fuel lines, do not spill fuel from fuel pipe.

b. When removing carburetor, do not drop any nut or bolt into intake manifold.

c. Be careful not to bend or scratch any part.

DISASSEMBLY AND ASSEMBLY



EF433

Ⓐ Choke chamber
Ⓑ Center body
Ⓒ Throttle chamber

1 Throttle return spring
2 Starting lever
3 Connecting rod
4 Choke connecting rod
5 Secondary slow jet
6 Primary slow jet
7 Power jet
8 Secondary main air bleed
9 Primary main air bleed
10 Primary and Secondary small venturi
11 Primary slow air bleed
12 Secondary slow air bleed
13 Needle valve
14 Float
15 Primary main jet
16 Secondary main jet
17 Idle adjust screw
18 Throttle adjust screw
19 *Primary throttle valve
20 *Secondary throttle valve
21 Accelerating pump rod
22 Accelerating pump lever
23 Accelerating pump
24 Injector weight
25 *Choke valve
26 *Auxiliary valve
27 Anti-dieseling solenoid valve (A12 Engine only)

Note: Do not remove the parts marked with an asterisk "*".

Fig. EF-16 Exploded view of carburetor

Disassembly

1. Properly fitting wrenches and screwdrivers must be used on nozzles and jets as well as on screws and nuts, and care must be exercised not to damage any parts.
2. Clean carburetor thoroughly before disassembly.
3. Do not attempt to remove any parts marked with an asterisk (*) in Figure EF-16.

CLEANING AND INSPECTION

Dirt, gum, water or carbon contamination in or on exterior moving parts of a carburetor are often responsible for unsatisfactory performance. For this reason, efficient carburetion depends upon careful cleaning and inspection while servicing.

1. Blow all passages and castings with compressed air and blow off all parts until dry.

Note: Do not pass drills or wires through calibrated jets or passages as this may enlarge orifice and seriously affect carburetor calibration.

2. Check all parts for wear. If wear is noted, damaged parts must be replaced. Note especially following:
(1) Check float needle and seat for wear. If wear is noted, assembly must be replaced.
(2) Check throttle and choke shaft bores in throttle chamber and choke chamber for wear or out-of-roundness.
(3) Inspect idle adjusting needle for burrs or ridges. Such a condition requires replacement.
3. Inspect gaskets to see if they appear hard or brittle or if edges are torn or distorted. If any such condition is noted, they must be replaced.
4. Check filter screen for dirt or lint. Clean, and if screen is distorted or remains plugged, replace.
5. Check linkage for operating condition.
6. Inspect operation of accelerating pump. Pour fuel into float chamber and make throttle lever operate. Check condition of fuel injection from accelerating nozzle.
7. Push connecting rod of diaphragm chamber and block passage of vacuum by finger. When connecting rod becomes free, check for leakage of air or damage to diaphragm.

Jets

Carburetor performance depends on jets and air bleeds. That is why these components must be fabricated with utmost care. To clean them, use cleaning solvent and blow air on them. Larger inner numbers stamped on jets indicate larger diameters. Accordingly, main and slow jets with larger numbers provide richer mixture; smaller numbers leaner mixture. Conversely, main and slow air bleeds, through which air passes, make fuel leaner if they bear larger numbers; smaller numbers richer fuel.

Assembly

To assemble, reverse disassembly procedure, taking care to the following:
1. Thoroughly wash all parts before assembling.
2. Inspect gaskets to see if they appear hard or brittle or if edges are torn or distorted.

If any of such undesirable conditions is noted, they must be replaced.
3. Install jet and air bleed having the same size number as that of original one.
4. After reassembling carburetor, check each rotating portion or sliding portion for smooth operation.

SERVICE DATA AND SPECIFICATIONS

ITEM	F10				B210		B120	
	A10		A12		A12		A12	
Carburetor								
Carburetor model	DCG286-6D		DCG306-6D		DCG306-5C		DCG306-5D (L/H) DCG306-1E (R/H)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Outer diameter mm (in)	26 (1.024)	28 (1.102)	26 (1.024)	30 (1.181)	26 (1.024)	30 (1.181)	26 (1.024)	30 (1.181)
Venturi diameter mm (in)	19 (0.748)	24 (0.945)	20 (0.787)	26 (1.024)	20 (0.787)	26 (1.024)	20 (0.787)	26 (1.024)
Main jet	#92	#140	#96	#150	#97	#150	#97 #97	#135 #150
Main jet variation 1,000 m (3,300 ft)	#90	#135	#94	#145	#94	#145	#94	#145
2,000 m (6,600 ft)	#86	#130	#90	#140	#90	#140	#90	#140
3,000 m (10,000 ft)	#84	#127	#88	#135	#88	#135	#88	#135
4,000 m (13,300 ft)	#82	#123	#85	#135	#85	#135	#85	#135
Main air bleed	#80	#80	#80	#80	#80	#80	#80	#80
Slow air bleed	#220	#100	#220	#100	#220	#100	#220	#100
Power jet	#45		#60		#60		#60	
Main nozzle mm (in)	2.1 (0.083)	2.3 (0.091)	2.1 (0.083)	2.8 (0.110)	2.1 (0.083)	2.8 (0.110)	2.1 (0.083)	2.8 (0.110)
Inner dia. x Outer dia. mm (in)	8/13 (0.512)	7/10 (0.394)	8/13 (0.512)	7/10 (0.394)	8/13 (0.512)	7/10 (0.394)	8/13 (0.512)	7/10 (0.394)
Adjustment Engine idling (Ignition timing/Idle speed) rpm	8°/700		7°/700		7°/600 M/T 7°/700 A/T "N" position		7°/650	
Fuel level adjustment Gap between valve stem and H float seat								
H mm (in)	15 (0.59)		15 (0.59)		15 (0.59)		15 (0.59)	
H' mm (in)	19 (0.75)		19 (0.75)		19 (0.75)		19 (0.75)	
h mm (in)	1.3 to 1.7 (0.051 to 0.067)		1.3 to 1.7 (0.051 to 0.067)		1.3 to 1.7 (0.051 to 0.067)		1.3 to 1.7 (0.051 to 0.067)	

ITEM	F10		B210	B120
	A10	A12	A12	A12
Fast idle adjustment Gap between throttle valve and carburetor body (G1) mm (in)	1.15 to 1.3 (0.045 to 0.051)	1.33 to 1.48 (0.052 to 0.058)	1.17 to 1.38 (0.046 to 0.054)	1.17 to 1.38 (0.046 to 0.054)
Interlock opening of primary and secondary throttle valve (G2) mm (in)	5.83 (0.230)	5.83 (0.230)	5.83 (0.230)	5.83 (0.230)
Anti-dieseling solenoid valve tightening torque kg.cm (in lb)	–	180 to 220 (156 to 191)	180 to 220 (156 to 191)	180 to 220 (156 to 191)
Fuel Fuel pressure kg/cm^2(psi)	0.24 (3.4)	0.24 (3.4)	0.18 (2.6)	0.18 (2.6)
Fuel pump capacity cc/min (U.S. pt.) at 3,000 rpm	550 (1.16)	650 (1.37)	600 (1.27)	600 (1.27)

TROUBLE DIAGNOSES AND CORRECTIONS

In the following table, the symptoms and causes of carburetor problems and remedies for them are listed to facilitate quick repairs.

There are various causes of engine malfunctions. It sometimes happens that a carburetor which has no fault appears to have some problems, when actually the electric system is at fault. Therefore, whenever the engine is malfunctioning, the electrical system should be checked first, before adjusting carburetor.

Condition	Probable cause	Corrective action
Overflow	Dirt accumulated on needle valve.	Clean needle valve.
	Fuel pump pressure too high.	Repair pump.
	Needle valve improperly seated.	Replace.
Excessive fuel consumption	Fuel overflow.	See above item.
	Slow jet too large on each main jet.	Replace.
	Main air bleed clogged.	Clean.
	Choke valve does not open fully.	Adjust.
	Linked opening of secondary throttle valve opens too early.	Adjust.
Power shortage	Main jets clogged.	Clean.
	Every throttle valve does not open fully.	Adjust.
	Fuel pump operated improperly.	Clean.
	Fuel strainer clogged.	Repair.
	Power valve clogged.	Clean.
	Air cleaner clogged.	Clean.
	Fuel diaphragm damaged.	Replace.
	Auxiliary valve operating improperly.	Adjust.
Improper idling	Slow jet clogged.	Clean.
	Every throttle valve does not close.	Adjust.
	Secondary throttle valve operating improperly.	Overhaul and clean.
	Throttle valve shafts worn.	Replace.
	Packing between manifold/carburetor faulty.	Replace packing.
	Manifold/carburetor tightening improper.	Correct tightening.
	Fuel overflow.	See the first item.

Condition	Probable cause	Corrective action
Engine hesitation	Main jet or slow jet clogged.	Clean.
	By-pass hole, idle passage clogged.	Clean tube.
	Emulsion tube clogged.	Clean.
	Incorrect idling adjustment.	Correct adjustment.
	Secondary throttle valve operating improperly.	Overhaul and clean.
Engine does not start.	Fuel overflows.	See the first item.
	No fuel.	Check pump, fuel pipe and needle valve.
	Idling adjustment incorrect.	Adjust.
	Fast idle adjustment incorrect.	Adjust.
	Damaged anti-dieseling solenoid.	Replace.