



DIAPHRAGM CARBURETOR DIAGNOSTIC

This documentation can be used as a guide how to inspect and diagnose failure associated with the diaphragm carburetor used on the Honda GX100.

CARBURETOR DISASSEMBLY

Before disassembling the carburetor for inspection, a well-illuminated, clean surface is essential to good carburetor repairing. Use pages 5 and 6 from this document as an illustrated guide for disassembly. The best cleaner for the carburetor is a spray type carburetor cleaner. The pressure in the can works to dislodge dirt, and the chemicals aren't as caustic as dip tank cleaners. If a dip tank cleaner is used, all plastic and rubber must be removed from the carburetor, and the carburetor should not soak for longer than 15 minutes.

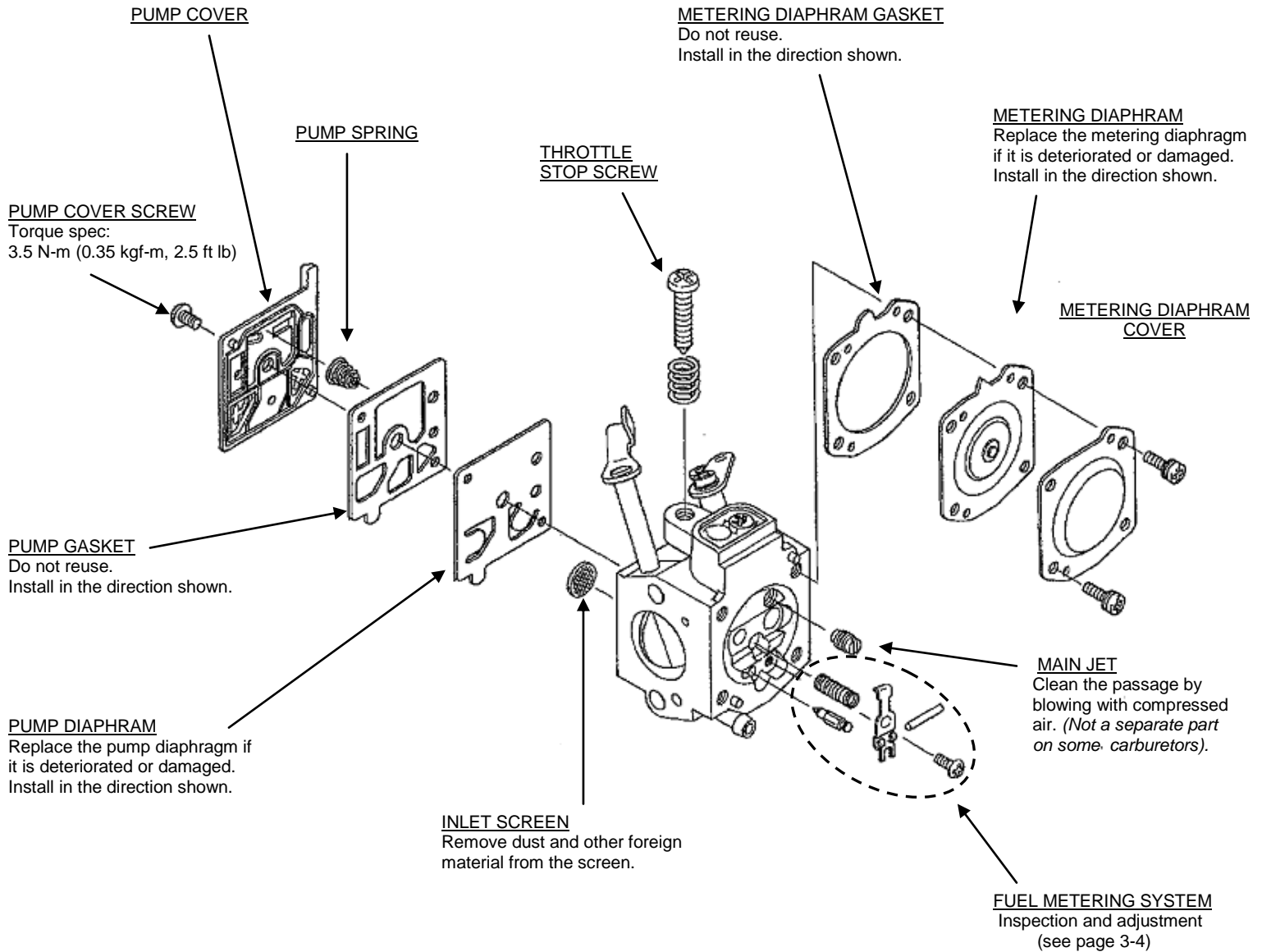
DISSASSEMBLY SEQUENCE

1. Fuel pump cover screw, being careful and watching for pump spring.
2. Fuel pumps diaphragm and gasket.
3. Inlet screen.
4. Four metering diaphragm cover screws.
5. Metering diaphragm, being careful to remove from metering lever.
6. Metering diaphragm gasket.
7. Metering lever pin screw.
8. Metering lever & inlet needle.
9. Main jet, (some carburetors will not have access to this jet).
10. Reassemble in reverse order.

NOTES

- A. Cracked gaskets and torn, frayed or porous diaphragms must be replaced. It is best to replace all the gaskets and diaphragms.
- B. The carburetor is not repairable if it has a damaged body casting.
- C. If the choke friction spring and ball, choke shaft or valve needs replacing, remove choke valve from the shaft. With your finger, cover the hole through which the choke shaft can be seen, then pull out shaft and remove the ball and spring from the hole. The choke friction ball should be perfectly round.
- D. If the throttle shaft is to be replaced, remove the screw and throttle valve (butterfly); also the throttle stop screw. Pull throttle shaft and lever assembly out of the carburetor body.
- E. Ensure the fuel metering system is working properly (see pages 3 and 4)

HONDA GX100 DIAPHRAGM CARBURETOR



MQ (PART# 16100-Z4E-S14) ~ HDA234B ~ Rammer MTX60-70
MQ (PART# 16100-Z0D-V05) ~ HDA201C ~ Rammer MT65HA

There are four components to the fuel metering system:

1. The Metering Diaphragm
2. The Metering Lever
3. The Metering Lever Spring
4. The Inlet Needle

1. The metering diaphragm is a very sensitive device. It must respond instantly to slight changes in the fuel vacuum within the metering chamber. The diaphragm is made of a nitrile rubber compound over woven silk, with a convolution molded in to allow for greater movement. A stiffener plate and a button are attached at the center. Because the diaphragm must respond to each intake stroke of the engine, it must be of the proper weight and resiliency. If too stiff or too heavy, it will not respond fast enough and the engine will starve for fuel at high speeds.

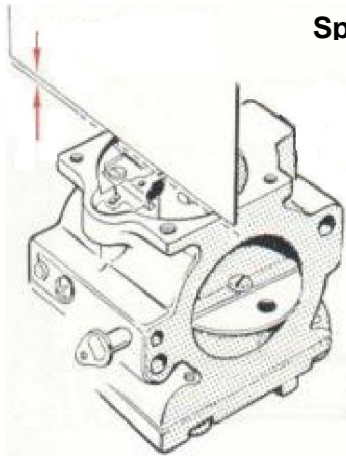


2. The metering lever transfers the pressure of the spring to the inlet needle, holding the needle closed and preventing fuel from flowing from the pump. When the engine is running, the meter does not lift the needle off the seat; since the needle tip is under pressure from the fuel pump, it lifts off the seat as soon as the metering diaphragm travels far enough down to override the spring force. Metering lever height is very important in controlling when and how far the inlet needle opens. If the lever is set too high, the engine may run rich; if it is too low the engine will run lean.

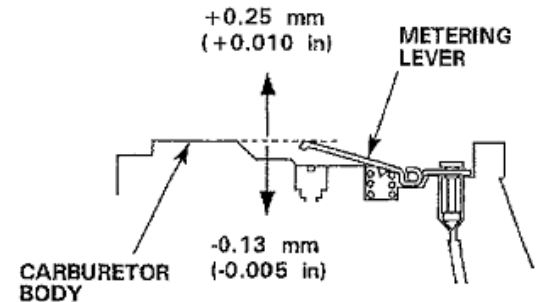


ADJUSTING THE METER LEVER HEIGHT

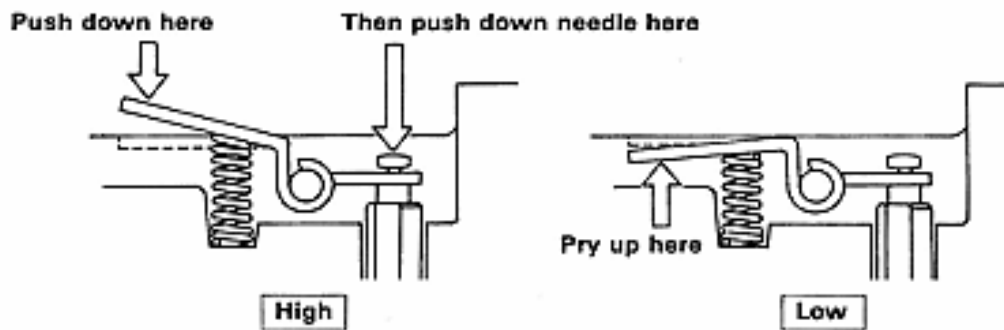
When adjusting the metering lever, place a straight edge across carburetor body as illustrated below. Metering lever should just touch the straight edge, without opening the inlet needle valve. Measure the gap between the metering lever surface and carburetor body. If the measurement is outside the specification, adjust by bending the metering lever.



Specification: +0.25 \circ -0.13 mm (+010 \circ -0.005 in)
(Specification provided by American Honda)

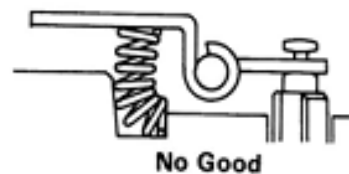
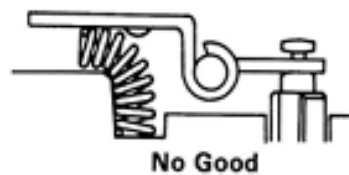


If the metering lever is too high, push down on the free end of the lever, then carefully push down on the inlet needle, if the metering lever is too low, pry up carefully on the free end of the lever.

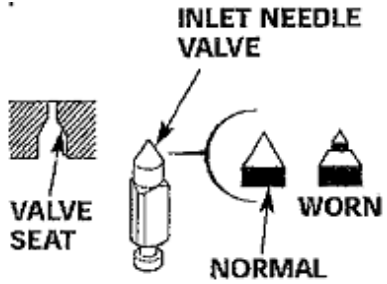


- The metering lever spring does more than simply close the inlet needle. It helps determine the acceleration and deceleration characteristics of the engine. The spring must allow the valve to open at just the right moment on acceleration or the engine will stumble, and it must close at the right time when the throttle is closed or the engine will flood. Therefore, it is important to maintain the proper metering lever spring in the carburetor.

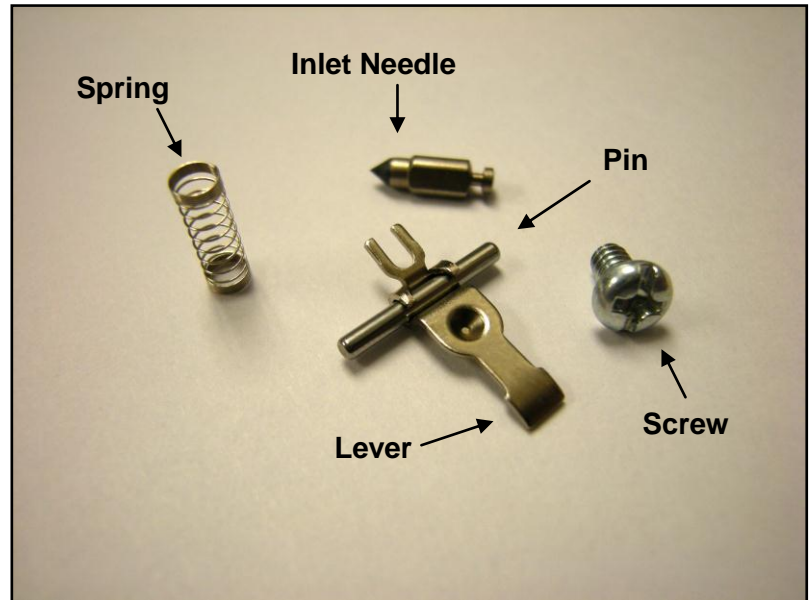
When inspecting the metering lever spring make sure it's seated at the bottom of the casting pocket and under the dimple in the metering lever.

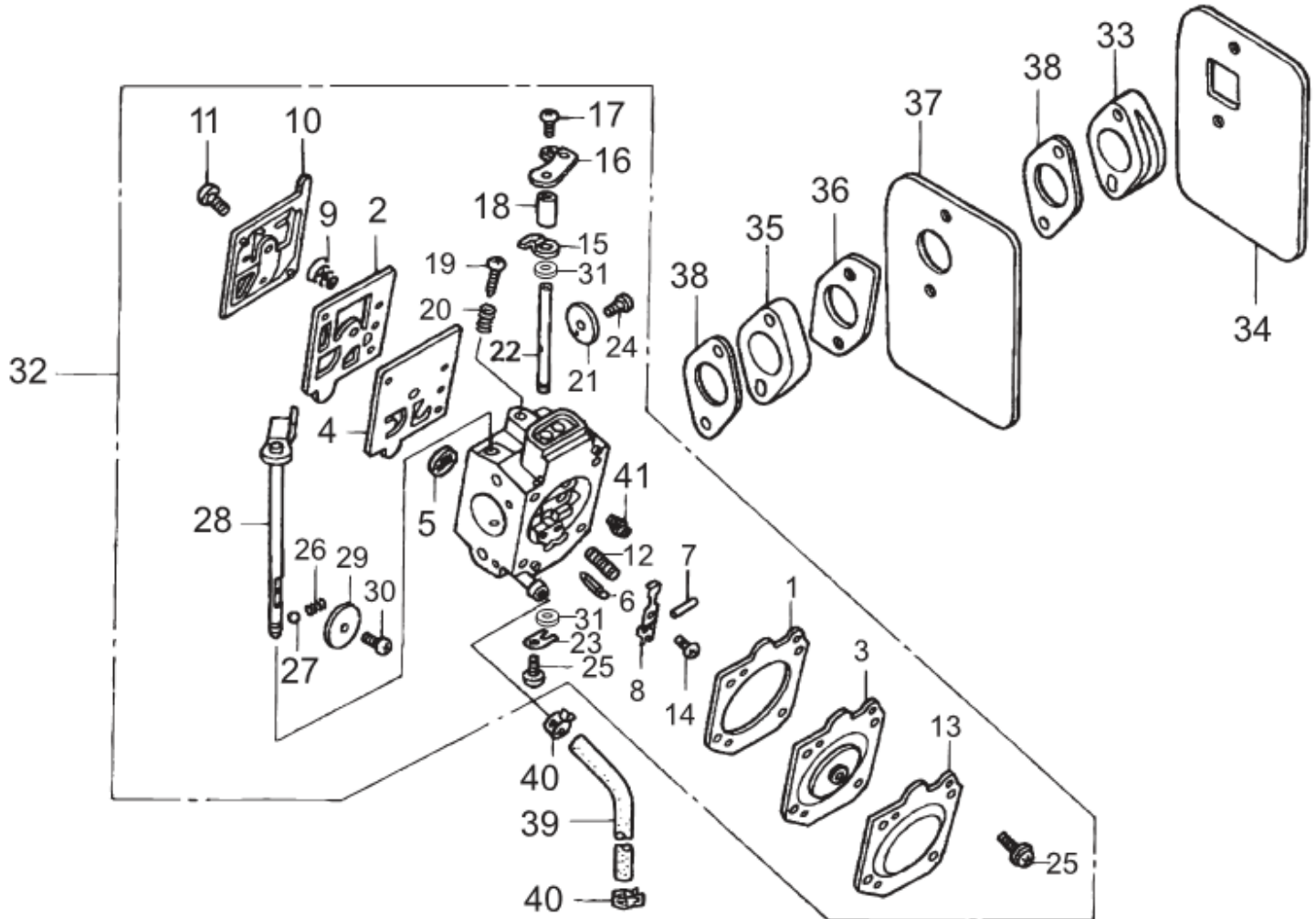


4. When inspecting the inlet needle valve check the tip and seat for wear (see below).



When assembling the lever onto the pin, make sure the lever fits easily on the pin and moves freely without sticking.





MQ (PART# 16100-Z4E-S14) ~ HDA234B ~ Rammer MTX70
MQ (PART# 16100-Z0D-V05) ~ HDA201C ~ Rammer MT65HA



Technical Information

CARBURETOR ASSEMBLY PARTS LIST

CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	16010Z0DV02	GASKET, METALING DIAPHRAGM	1	
2*	16011Z0DV02	GASKET, PUMP	1	
3*	16013Z0DV02	DIAPHRAGM ASSY, METALING	1	
4*	16014Z0DV02	DIAPHRAGM, PUMP	1	
5*	16018ZM3004	SCREEN, INLET	1	
6*	16019ZM3004	VALVE, INLET NEEDLE	1	
7*	16022ZM3014	PIN, METALING LEVER	1	
8*	16023Z0DV02	LEVER, METALING	1	
9*	16030ZM3004	SPRING, PUMP	1	
10*	16040Z0DV02	COVER, PUMP	1	
11*	16041Z0DV02	SCREW	1	
12*	16042Z0EV92	SPRING	1	
13*	16043Z0DV02	COVER, METALING DIAPHRAGM	1	
14*	16044Z0DV02	SCREW	1	
15*	16045Z0DV02	STOPPER, THROTTLE LEVER	1	
16*	16046Z0DV73	LEVER, THROTTLE	1	
17*	16054Z0DV02	SCREW, VALVE	1	
18*	16048Z0DV02	SPACER, THROTTLE LEVER	1	
19*	16049Z4ES12	SCREW, IDLE ADJUSTING	1	
20*	16050Z0DV02	SPRING	1	
21*	16051Z0DV02	VALVE, THROTTLE	1	
22*	16052Z0DV02	SHAFT, THROTTLE	1	
23*	16053Z0DV02	CLIP, THROTTLE SHAFT	1	
24*	16054Z0DV02	SCREW, VALVE	1	
25*	16055Z0DV02	SCREW ASSY	5	
26*	16056Z0DV02	SPRING	1	
27*	16057Z0DV02	BALL	1	
28*	16058Z0DV72	SHAFT ASSY, CHOKE	1	
29*	16059Z0DV03	VALVE, CHOKE	1	
30*	16060Z0DV02	SCREW	1	
31*	16061Z0DV02	SEAL, DUST	2	
32	16100Z4ES14	CARBURETOR ASSY. (HDA 234B) ...	1	INCLUDES ITEMS W/ *RAMMER...MTX70
32	16100Z0DV05	CARBURETOR ASSY. (HDA 201C) ...	1	INCLUDES ITEMS W/ *RAMMER...MT65HA
33	16211Z0DV00	INSULATOR, CARBURETOR	1	
34	16212Z0DV00	PACKING, INSULATOR	1	
35	16213Z0DV00	INSULATOR B, CARBURETOR	1	
36	16214Z0DV00	PACKING B, INSULATOR	1	
37	16215Z0DV00	PLATE, INSULATOR	1	
38	16221Z0DV00	PACKING, CARBURETOR	2	
39	950033602120	TUBE, VINYL 11X13X210	1	
40	950024085008	CLAMP, TUBE	2	
41*	99101Z0D0540	JET #54 (0 to 5,000 feet)	1 CARBURETOR ASSY. (HDA 201C)..... ONLY
41	99101Z0D0520	JET #52 (5,000 to 8,000 feet)	1 OPTIONAL CARBURETOR ASSY. (HDA 201C)..... ONLY
41	99101Z0D0500	JET #50 (8,000 feet and above)	1 OPTIONAL CARBURETOR ASSY. (HDA 201C)..... ONLY