



General Instructions

- Take lots of pictures as you take your carburetor apart. This will give you a reference of where things go.
- Using a cookie sheet with folded up sides will help keep parts from falling on the floor.
- We suggest not removing the throttle shaft, valves, or choke shaft unless they are corroded, or very dirty. These parts can be easily damaged and are difficult to re-assemble.
- Instruction sheets that come with our carburetor kits are somewhat generic. It may not match your parts exactly.
- Do NOT use WD-40 around your carburetor. It reacts with ethanol.
- Using Silicon Spray Lubricant on the gaskets will help with sticking in case you need to take the carburetor apart again.
- Be careful after taking the top of the carburetor off. Turning the carburetor upside down may cause parts to fall out and you won't know where they were.
- Screws and jets that are frozen can often be removed after heating outside the screw or jet.
- Stuck check balls can be removed by heating the outside of where the check ball resides and tapping the carburetor on the work bench.
- Do not discard any parts until complete done. You may have to refer for size, or matching.

Cleaning:

- Clean with carburetor dis-assembled.
- Soak all parts except rubber & electrical in Simple Green for 2 hours. Aluminum parts will get discolored if left longer.
- Wash parts with hot water if available to remove all chemicals.
- Blow out each passage way taking special notice of the smaller ones. Test each passage that air goes through the entire passage.
- Blow out the idle mixture hole.

- Check any hole above the idle mixture hole (inside the bore). This is the idle discharge and often becomes plugged.
- A tooth brush can facilitate cleaning parts.
- Soda blasting, then washing again will make the carburetor look good any will clean any minor deposits.
- Any corrosion, or deposits that are hard to remove may indicate the passages are also corroded and the carburetor should be replaced.
- If your engine has been sitting for 6 months or more, the gas has probably turned, and the gas tank will need to be cleaned as well as the fuel lines. Flushing new gas through the tank will not be enough.

Assembly:

- Do NOT apply any gasket sealant on any of the gaskets. Gas will break sealant part and the particles will clog the small passages.
- Test your float.
 - Brass floats should be immersed into hot water. As the air inside expands any leak will be noticeable with air bubbles.
 - Plastic, or Nitrophyl floats should be weighed. The weight is in grams. Check our technical pages for any weight specification that we may have.
- Most gaskets will fit as expected, but you may have to trim some, especially under the venturis.
- Your kit may include multiple gaskets in order to get better coverage out of the kit. Use the one that fits the best. Look for any opening the gasket may leave allowing air into the carburetor. Some holes may be casting holes that don't lead to anything and do not have to be covered.
- Mounting gaskets for multiple bore carburetors do not have to have matching holes. Example a four-barrel gasket can be open in the middle instead of 4 holes as long as the carburetor has some kind of passage between bores. The passage is between primary, or secondary, not both.
- When adjusting the float be careful not to put any pressure on the needle. The viton tip is easily damaged.
- Most idle mixture screws can be cleaned using a soft wire wheel. Inspect for any scoring, which would indicate over tightening. Screw with scoring should be replaced.

Accelerator Pumps:

- On leather cups run your finger around the inside of the cup to break any manufacturer sealant.
- Apply 2 drops of oil to cups (leather, or rubber) before inserting into carburetor. Do not soak the cup in oil. The swelling of the cup needs to happen inside the carburetor. Allow the 2 drops of oil and the gas to do its job naturally.
- Twist the pump as you are inserting to help keep the cup from curling or folding over.
- Test your accelerator pump circuit before putting the top of the carburetor back on. Our technical pages have instructions on how to do this for most carburetor types.
- Pump wells are usually slight tapered, and the pump will not seal until it gets towards the bottom.

INSTRUCTION SHEET

HITACHI CARBURETOR—MODEL 328

50-422-1

DISASSEMBLY

GENERAL EXPLODED VIEW

THE GENERAL DESIGN AND PARTS SHOWN WILL VARY TO INDIVIDUAL UNITS COVERED ON THIS INSTRUCTION SHEET.

USE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT CLEANING AND INSPECTION. REMOVE STAKING FROM BOWL COVER FOR EASY REMOVAL OF POWER PISTON ASSY. (22). CAUTION: NOTE SIZES OF JETS AND THEIR LOCATION FOR PROPER ASSEMBLY. (RECORD SIZES BELOW.)

NOMENCLATURE

REF. NO.	REF. NO.
1. SCREW & LOCKWASHER - PUMP LEVER	42. SPRING - PUMP RETURN
2. SLEEVE - PUMP LEVER	43. BALL (NYLON)-PUMP INTAKE CHECK
3. COTTER PIN - PUMP ROD	44. POWER VALVE ASSEMBLY
4. WASHER (2) - PUMP ROD	45. GASKET - POWER VALVE
5. SPRING - PUMP ROD	46. PLUG - PUMP DISC. PASSAGE
6. LEVER & ROD ASSY.-PUMP	47. GASKET - PLUG
7. COTTER PIN - FAST IDLE ROD	48. WEIGHT - PUMP DISC. BALL
8. WASHER - FAST IDLE ROD	49. BALL - PUMP DISC. CHECK
9. SPRING - FAST IDLE ROD	50. JET - PRIMARY SLOW AIR BLEED
10. SCREW & LOCKWASHER - CABLE BRACKET	51. JET - SECONDARY SLOW AIR BLEED
11. BRACKET - CHOKE CABLE	52. PLUG - PRIMARY SLOW JET
12. SPRING - THROTTLE RETURN	53. JET - PRIMARY SLOW
13. SOLENOID ASSY.	54. JET - SECONDARY SLOW
14. GASKET - SOLENOID	55. SCREW & LOCKWASHER (2)-PRIMARY VENTURI
15. COTTER PIN-SECONDARY DIAPHRAGM LINK	56. PRIMARY VENTURI ASSEMBLY
16. SCREW & LOCKWASHER (3)-SEC. DIAPHRAGM ASSY.	57. JET - PRIMARY MAIN AIR BLEED
17. SEC. DIAPHRAGM ASSY.	58. TUBE - PRIMARY EMULSION (SMALL DIAMETER)
18. GASKET - SECONDARY DIAPHRAGM ASSEMBLY	59. GASKET - PRIMARY VENTURI
19. SCREW & LOCKWASHER (3)-AIR HORN	60. SCREW & LOCKWASHER (2)-SECONDARY VENTURI
20. AIR HORN ASSY.	61. SECONDARY VENTURI ASSY.
21. GASKET - AIR HORN	62. JET - SECONDARY MAIN AIR BLEED
22. POWER PISTON ASSY.	63. TUBE - SECONDARY EMULSION (LARGE DIAMETER)
23. BOLT - FUEL INLET BANJO	64. GASKET - SEC. VENTURI
24. GASKET - BANJO (UPPER)	65. PLUG - PRIMARY MAIN JET
25. SCREEN - FUEL INLET	66. GASKET - PLUG
26. GASKET - BANJO (LOWER)	67. JET - PRIMARY MAIN
27. SCREW (3)-WINDOW CLAMP	68. PLUG - SEC. MAIN JET
28. CLAMP - WINDOW	69. GASKET - PLUG
29. GASKET - WINDOW CLAMP	70. JET - SEC. MAIN
30. WINDOW - FUEL BOWL	71. SCREW & LOCKWASHER (1)-THROTTLE BODY
31. GASKET - BOWL WINDOW	72. SCREW & STAR LOCKWASHER (1) (HOLLOW)-THROTTLE BODY
32. SEAL - FUEL BAFFLE	73. SCREW & LOCKWASHER (2)-THROTTLE BODY
33. SLEEVE - FLOAT RETAINER	74. BOWL ASSY.
34. FLOAT & LEVER ASSY.	75. GASKET - THROTTLE BODY
35. NEEDLE & SEAT ASSY.	76. NEEDLE - IDLE ADJUSTING
36. GASKET (SERVICE)-NEEDLE AND SEAT ASSEMBLY	77. SPRING - IDLE NEEDLE
37. SCREW & LOCKWASHER (2)-PUMP RETAINER	78. THROTTLE BODY ASSEMBLY
38. RETAINER - PUMP	
39. GASKET - PUMP RETAINER	
40. BOOT - PUMP	
41. PUMP ASSEMBLY	

CLEANING

CLEANING MUST BE DONE WITH CARBURETOR DISASSEMBLED. SOAK PARTS LONG ENOUGH TO SOFTEN AND REMOVE ALL FOREIGN MATERIAL. USE (1) A CARBURETOR CLEANING SOLVENT, (2) LACQUER THINNER OR (3) DENATURED ALCOHOL. MAKE CERTAIN THE THROTTLE BODY IS FREE OF ALL CARBON DEPOSITS. WASH OFF IN SUITABLE SOLVENT. BLOW OUT ALL PASSAGES IN CASTINGS WITH COMPRESSED AIR AND CHECK CAREFULLY TO INSURE THOROUGH CLEANING OF OBS-CURE AREAS. CAUTION: DO NOT SOAK RUBBER OR PLASTIC PARTS IN SOLVENTS. BEING CAREFUL OF DIAPHRAGM ASSY. (17), SOLENOID (13), AND FLOAT ASSEMBLY (34).

REASSEMBLY

REASSEMBLE IN REVERSE ORDER OF DISASSEMBLY. NOTE: SPECIAL INSTRUCTIONS AND ADJUSTMENTS.

SPECIAL INSTRUCTIONS

IDLE ADJUSTING NEEDLE (76)-TURN NEEDLE IN UNTIL LIGHTLY SEATED THEN BACK OUT 1-3/4 TO 2 TURNS.

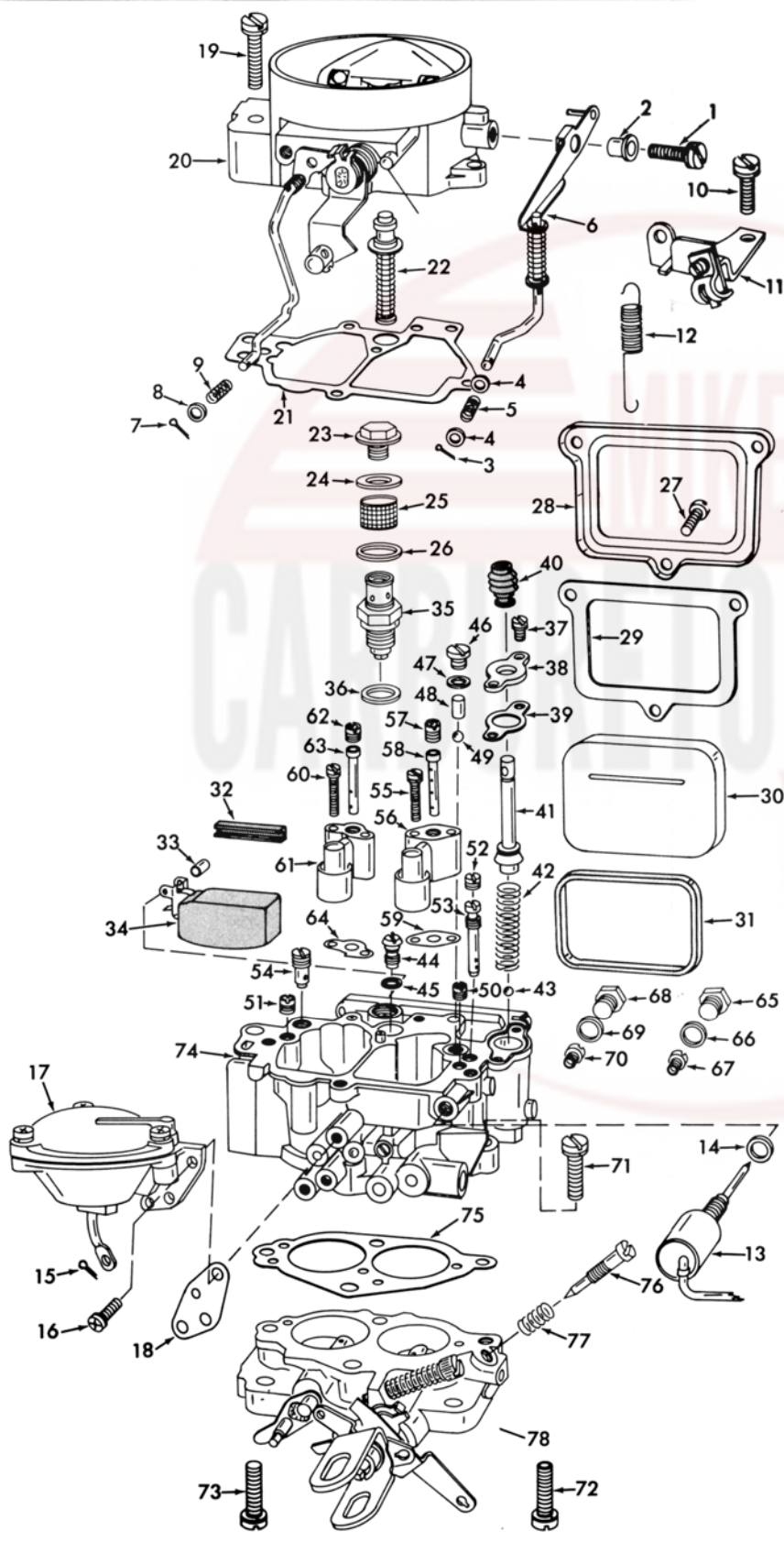
PUMP RETURN SPRING (42)-INSTALL WITH CROSS WIRE IN SLOT AT BOTTOM OF PUMP CYLINDER.

PUMP PLUNGER (41)-REMOVE PAPER SLEEVE FROM LEATHER CUP IF USED. FLEX LEATHER OUTWARD SLIGHTLY. SOAK CUP IN GASOLINE, KEROSENE OR OIL FOR A FEW MINUTES PRIOR TO PLACING IN CARBURETOR.

NEEDLE AND SEAT (35)-INSTALL GASKET (36) ON SERVICE NEEDLE AND SEAT.

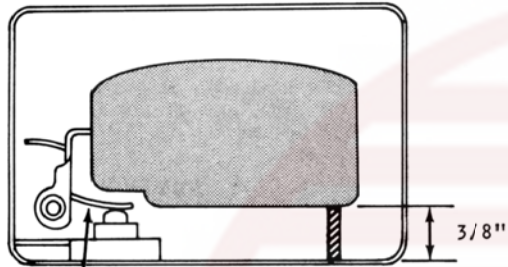
WINDOW CLAMP SCREWS (27)-TIGHTEN SCREWS DOWN EVENLY DON'T OVERTIGHTEN.

POWER PISTON (22)-AFTER INSTALLATION LIGHTLY RESTAKE CASTING AROUND WASHER.



ADJUSTMENTS

- ① FLOAT BOWL INVERTED, MEASURE DISTANCE BETWEEN FLOAT AT TOE END AND CASTING SURFACE. CAUTION: DO NOT PLACE GAUGE UNDER SEAM IN CENTER OF FLOAT.



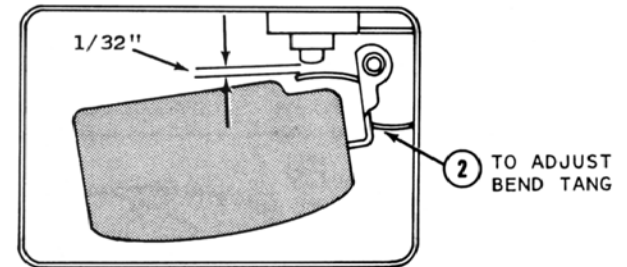
- ② TO ADJUST BEND TANG

CAUTION: DO NOT EXERT PRESSURE ON RESILIENT NEEDLE VALVE.

SOLID NEEDLE
DRY FLOAT LEVEL ADJUSTMENT

FIG. 1.

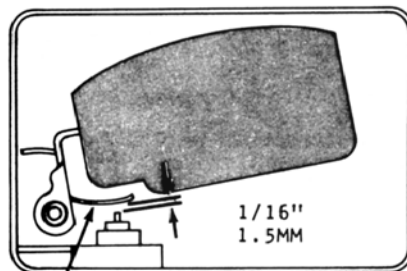
- ① FLOAT BOWL HELD IN NORMAL POSITION WITH FLOAT HANGING FREELY. MEASURE DISTANCE BETWEEN TANG AND NEEDLE HELD IN THE SEATED POSITION.



SOLID NEEDLE
FLOAT DROP ADJUSTMENT

FIG. 2.

- ① FLOAT BOWL INVERTED, LIFT FLOAT FULLY UP. MEASURE DISTANCE BETWEEN FLOAT TANG AND NEEDLE VALVE STEM. (DO NOT COMPRESS STEM INTO NEEDLE.)



- ② TO ADJUST BEND TANG

CAUTION: DO NOT EXERT PRESSURE ON RESILIENT NEEDLE VALVE.

SPRING LOADED NEEDLE
DRY FLOAT LEVEL ADJUSTMENT

FIG. 3.