

FUEL SYSTEM

SERVICE INSTRUCTION WORKSHEET

TO REPAIR GF4353-3

NIKKI (HITACHI) CARBURETOR

4 Barrel • MAZDA RX7

Carefully read the text in the following paragraphs to become familiar with the contents of this worksheet before performing carburetor overhaul.

1. The steps of disassembly are shown on the Parts List in a descending order sequence. Parts are illustrated in the exploded view and identified numerically. To reassemble, proceed from the bottom of the list and work toward the top.

NOTE: For some carburetors, specification data may not be available. Since the Float Level Setting is an essential adjustment, it is recommended that Float Level Setting be measured and recorded before dismantling Float Assy.

2. Parts List shown DOES NOT reflect the contents of the kit.

3. This sheet will service most carburetors of this type. The illustration

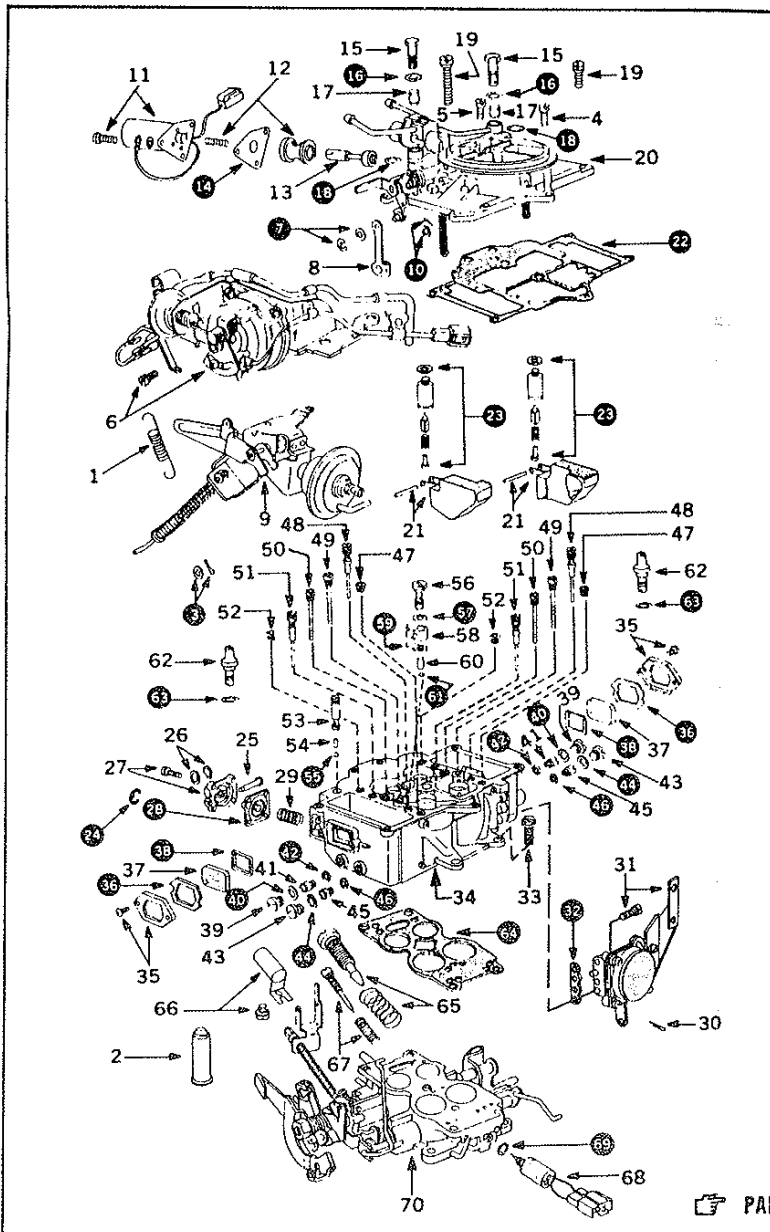
(exploded view) is typical and although minor variations occur among the different parts numbers, procedures will be essentially as described and the differences will be easily recognized.

4. Kit may contain extra parts intended for other carburetors within this group. Substitute identical replacement parts for original worn parts found in carburetor.

5. Cover opening on Intake manifold after carburetor is removed. Place carburetor parts in cleaning solvent. Remove all loose particles using a stiff bristle brush. Do not use any abrasives to clean carburetor parts. Also, do not insert wires to clean out passageways and jets. Items made of rubber, leather, nylon or plastic are not to be soaked in carburetor cleaner.

6. Remove parts from solvent and clear out all passages and jets with air gun.

TYPICAL ILLUSTRATION



PARTS LIST

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|---|--|
| 1 Spring, Lever, Hot Start | 34 Main Body |
| 2 Spring & Cover Assy., Throttle Return | 35 Screw (4) & Retainer (2), Sight Glass |
| 3 Clip & Washer (2), Spring Rod | 36 Gasket (2), Sight Glass |
| 4 Screw, Lead Clamp, Choke | 37 Sight Glass (2), Main Body |
| 5 Screw (2), Bracket, Choke Diaphragm | 38 Seal, Sight Glass |
| 6 Screw (3) & Choke w/Bracket Assy. | 39 Plug (2) Main Jet Pri. |
| 7 Clip & Washer, Choke Lever | 40 Gasket (2), Plug, Pri. |
| 8 Choke Lever | 41 Jet (2), Main, Pri. |
| 9 Choke Diaphragm & Bracket Assy. | 42 Gasket (2), Main Jet, Pri. |
| 10 Clip & Washer, Fast Idle Rod | 43 Plug (2), Main Jet, Sec. |
| 11 Screw (3) & Solenoid, Bowl Vent | 44 Gasket (2), Plug, Sec. |
| 12 Spring & Valve Seat, Solenoid Valve, Rod | 45 Jet (2), Main, Sec. |
| 13 Gasket, Mounting Solenoid | 46 Gasket (2), Main Jet, Sec. |
| 14 Bolt (2), Special Fuel Inlet | 47 Jet (2), Sec. Step Air Bleed |
| 15 Gasket (2), Special Bolt | 48 Jet (2), Sec. Step |
| 16 Filter (2), Fuel Inlet | 49 Jet (2), Main Sec. Air Bleed |
| 17 Gasket (2), Fuel Inlet Assy. | 50 Jet (2), Main Pri. Air Bleed |
| 18 Screw, Long (2), Short (3), Air Horn | 51 Jet (2), Slow, Pri. |
| 19 Air Horn Assembly | 52 Jet (2), Pri. Slow Air Bleed |
| 20 Hinge Pin & Float Assy. (2) | 53 Plug, Check Ball Inlet |
| 21 Gasket, Air Horn | 54 Weight, Check Ball Inlet |
| 22 Needle, Seat & Gasket Assy. (2) | 55 Ball, Check Pump Inlet |
| 23 Clip, Pump Lever | 56 Screw, Pump Discharge Nozzle |
| 24 Pin, Pump Lever | 57 Gasket, Screw, Pump Nozzle |
| 25 Shim (2), Pump Lever | 58 Nozzle, Pump Discharge |
| 26 Screw & Cover, Pump Diaphragm | 59 Gasket, Mounting Pump Nozzle |
| 27 Diaphragm, Pump | 60 Weight, Check Ball, Discharge |
| 28 Spring, Pump Diaphragm | 61 Ball, Check, Pump Discharge |
| 29 Clip, Sec. Throttle Rod | 62 Power Valve (2) |
| 30 Screw (3) & Sec. Throttle Diaphragm | 63 Gasket (2), Power Valve |
| 31 Gasket, Mounting, Sec. Diaphragm | 64 Gasket, Main Body to Throttle Body |
| 32 Screw (4) Main Body to Throttle Body | 65 Screw & Spring, Idle By-Pass |
| | 66 Screw & Cover, Idle Mixture (Cal.) |
| | 67 Screw & Spring, Idle Mixture |
| | 68 Solenoid, Power Valve |
| | 69 Gasket, Solenoid Mounting |
| | 70 Throttle Body |

PARTS LIST SHOWN DOES NOT REFLECT THE CONTENTS OF THE KIT.

NOTE: Circled parts are included in most kits. Extra parts are included for other kits.

DISASSEMBLY – ASSEMBLY NOTES

1. MEASURE AND RECORD FLOAT LEVEL SETTING BEFORE DISMANTLING FLOAT ASSY. (21). REMEMBER THAT THE FLOAT UNIT IS SUBJECT TO POSSIBLE FUEL ABSORPTION. IF IN DOUBT, REPLACE WITH A NEW ONE.
2. MARK OR INDEX PARTS ESPECIALLY WHERE SIMILARITIES EXIST. ALSO NOTE SPRING LOCATION POINTS TO INSURE CORRECT RE-ASSEMBLY. JETS ARE COLOR CODED AND ARE IN PAIRS (BRASS COLOR—PRIMARY; SILVER—SECONDARY).
3. RETAIN ALL OLD GASKETS FOR MATCHING PURPOSES. RE-ASSEMBLE WITH ALL NEW APPLICABLE GASKETS.
4. BEFORE REMOVING IDLE BY-PASS (65) AND MIXTURE SCREW (67), MARK POSITION, TURN IN UNTIL LIGHTLY SEATED COUNTING NUMBER OF TURNS, TURN OUT TO INDEX MARK, RECORD NUMBER OF TURNS FOR RE-ASSEMBLY & REMOVE. HOWEVER, IF MISSED RECORDING START WITH A BASIC SETTING FOR (65) - BACK OUT 4 TURNS; (67) BACK OUT 2 TURNS.
5. TIGHTEN FUEL SIGHT GLASS RETAINER SCREWS (35) DOWN EVENLY. DO NOT OVER TIGHTEN.
6. WHEN INSTALLING CHOKE & BRACKET ASSY. (6), MAKE SURE HOOK-END OF CHOKE THERMOSTAT COIL IS CORRECTLY INSERTED ONTO LEVER OF CHOKE SHAFT.
7. CHECK THROTTLE LINKAGE FOR FREEDOM OF MOVEMENT BEFORE AND AFTER INSTALLING CARBURETOR ON ENGINE.

ADJUSTMENT DATA

<p>FIG. A FLOAT LEVEL ADJUSTMENT (DRY)</p> <ol style="list-style-type: none"> 1. WITH AIR HORN ASSY. INVERTED & GASKET IN PLACE, ALLOW WEIGHT OF BOTH FLOATS ONLY TO REST ON NEEDLE. 2. MEASURE DISTANCE "X" AS SPECIFIED (SEE SPEC. CHART) BETWEEN AIR HORN GASKET SURFACE & TOP OF EACH FLOAT AS SHOWN. 3. IF ADJUSTMENT IS REQUIRED, BEND FLOAT TANG OF EACH FLOAT AN EQUAL AMOUNT. CAUTION: DO NOT APPLY FORCE ON RESILIENT NEEDLE INTO SEAT AS DAMAGE TO SPECIAL RUBBER TIP COULD RESULT. 		<p>FIG. B FLOAT DROP ADJUSTMENT</p> <ol style="list-style-type: none"> 1. WITH AIR HORN ASSY. HELD IN UPRIGHT POSITION & GASKET IN PLACE, ALLOW BOTH FLOATS TO HANG FREELY. 2. MEASURE DISTANCE "Y" AS SPECIFIED (SEE SPEC. CHART) FROM AIR HORN GASKET SURFACE TO BOTTOM OF EACH FLOAT. 3. IF ADJUSTMENT IS REQUIRED, BEND BOTH FLOAT STOP TABS AN EQUAL AMOUNT FOR EACH FLOAT AS NEEDED. 	
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<p>FIG. C FAST IDLE BENCH SETTING</p> <ol style="list-style-type: none"> 1. WITH CHOKE VALVE FULLY CLOSED, MEASURE CLEARANCE AS SPECIFIED (SEE SPEC. CHART) BETWEEN PRIMARY THROTTLE VALVE & WALL OF THROTTLE BORE. 2. TO ADJUST, BEND FAST IDLE CONNECTOR ROD WHERE SHOWN. 	
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SPECIFICATIONS BY APPLICATION

Year	MODEL	Float Level Adj. (Fig. A)	Float Drop Adj. (Fig. B)	Fast Idle (Fig. C) Bench Setting	Choke Valve Opening Angle Adj.	Idle Speed (Engine RPM)	
						Hot	Fast

MAZDA

1984-83	RX-7 12A Rotary Eng.	5/8"	2"	3/64"	3	750 ⁴	2
1981	RX-7 12A Rotary Eng.	5/8"	2"	15/64" ¹	3	750	2
1980-79	RX-7 12A Rotary Eng.	5/8"	2"	1/16"	3	750 ± 25	2

FOOTNOTES:

¹ Canada Model set 3/64".

² Manufacturer does not supply Fast Idle Speed.
See Fast Idle Bench Setting.

³ See Shop Manual.

⁴ Automatic Transmission in "D";
Manual Transmission in Neutral.