

Honda 120 Tech. Worksheet

Driver_____

Handler_____

Class_____

Date_____

1. Exhaust length 20"-26" no steps or tapers, 1" O.D. Max, unaltered screw in muffler_____
2. External visual check- exhaust shrouds, air cleaner, engine seals in tact_____
3. Restrictor plate- between carb. & insulator stock gaskets both sides. Gasket= 0.025 max_____
4. Plate thickness= 0.0625max Hole Diameter: Novice= 0.3125 Red Junior= 0.4375 Blue_____
5. 2 gaskets between carb. And plastic adapter is okay_____

6. Specs For Honda 120 Carb, for Novice Jr and Sr Honda

Japan- # BE 60B Thailand # BE 60 R _____

Carburetor Bore: Intake end= 0.950 Throttle end= 0.632_____

- a. Venturi Bore: No Go= 0.456_____
- b. Main Jet: Honda Part. May be any size_____
- c. Main Air Jet: #60 Drill (0.040) No Go at bottom of hole 0.0394max_____
- d. Main Jet access passage: #41(0.096) Drill No Go_____
- e. Main Nozzle Bore: #50 Drill (0.070) No Go_____
- f. Main Nozzle: Installed Height 0.429_____
- l. See tech manual for main nozzle are bleed hole dimensions
- j. Pilot Jet: #79 Drill (0.0145) No Go_____
- k. Pilot Air Jet: 0.050 min. 1.25 mm (0.0492) Go_____
- l. Pilot Seat: #61 Drill (0.039) No Go_____
- m. Pilot Screw tip: 0.019 min._____
- n. Float Bowl Vent: #31 Drill (0.120) No Go_____
- o. Needle Valve Seat: #51 Drill (0.067) No Go_____
- p. No addition or subtraction on materials in the bore or venture_____

Specs For Honda 160 Carb, for Heavy Honda Class

Japan #BE 65B Thailand #BE 65Q_____

Carburetor Bore: Intake end= 0.951 Throttle end= 0.710_____

- a. Venturi Bore: Go= 0.522_____
- b. Main Jet: Honda Part. May be any size_____
- c. Main Air Jet: #53 Drill (0.0595) No Go at back of hole_____
- d. Main Jet access passage: #41 Drill No Go_____
- e. Main Nozzle Bore: #47 Drill (0.078) No Go_____
- f. Main Nozzle: Installed Height 0.424 No Go_____
- g. See tech manual for main nozzle are bleed hole dimensions_____
- h. Pilot Jet: #79 Drill (0.0145) No Go_____
- l. Pilot Air Jet: 0.050 min. 1.25 mm #55 Drill (0.052) No Go_____
- j. Pilot Seat: #61 Drill (0.039) No Go_____
- k. Pilot Screw tip: 0.020 min._____
- j. Float Bowl Vent: #31 Drill (0.120) No Go_____
- m. Needle Valve Seat: #51 Drill (0.070) No Go_____

n. No addition or subtraction on materials in the bore or venture_____

7. Remove gear box and sun gear- check for any alterations, except to output end of shaft, no polishing_____
8. Remove cooling shrouds- check for all pieces installed. No metal added or subtracted_____
9. Valve Lift Retainer with zero clearance: Intake= 0.245 max Exhaust= 0.255 max_____
10. Push Rod Length 4.775min 4.799max_____
11. Visually inspect rocker arms, pivots, and studs for alteration. See tech manual
12. Coil and Timing: Remove head and check coil position @ .65" btdc- see tech manual
13. Check timing: if quick check of timing line 27 is in question. 0.665" btdc or 20 btdc max
14. Coil Mounting Bolts: Stock 6mm 1-1/16" long. 3/8" max. no thread 0.230 min. threaded dia._
15. Cylinder Head: Head gasket inner rim thickness = 0.040 min._____
16. Valve depth intake and exhaust= 0.210max / 0.178min_____
17. Retainers: (thickness) Intake: 0.228 min Exhaust: 0.241 min_____
18. Flange thickness: Intake= 0.110 max Exhaust= 0.070 max_____
19. Flat of Flange to machined surface: Intake = 0.148 Exhaust= 0.165 min_____
20. Springs:
 - 120 Springs:**
 - a. Wire Diameter= 0.071 max
 - b. Stacked length= 0.394
 - c. O.D. 0.790 max, # of coils = 5.3
 - d. Pressure: 11 lbs max @ inches (0.812)
 - 140 springs**
 - a.. 0.079 max
 - b. Stacked length= 0.524
 - c. O.D. 0.808, # of coils= 7
 - d. Pressure: 16 lbs max @ 0.8125
21. Valve: Single angle= 45 degrees unaltered_____
22. Weight: Intake= 18 grams min Exhaust= 16 grams min_____
23. Head Diameter: Intake= 0.862/0.870 Exhaust= 0.744/0.752 _____
24. Overall length: Intake= 2.444/2.458 Exhaust= 2.385/2.395_____
25. Stem diameter: Intake= 0.216 Exhaust= 0.212/0.216_____
26. See tech manual for additional dimensions
27. Head Surface to Valve Seat: Intake and exhaust= 0.265max/0.250min_____
28. Head Surface to Valve Guide: Intake= 0.925max Exhaust= 0.925max_____
29. Head Surface to lowest machined area in port: Intake= 1.064max Exhaust= 1.010max_____
30. Head thickness@ Flange Bolts: 2.911min/ 2.917max_____
31. Ports- stock "AS CAST"- Single 45 degree angle valve seats_____
32. Port Diameter @ valve: Intake: 0.745min/ 0.752max Exhaust= 0.665min/ 0.675max_____
33. Block: Bore= 2.366max Stroke= 1.659max/ 1.640min_____
34. Top of Piston Deck: 0.000" _____
35. Plastic fan- all blades intact_____
36. Degree Cam: See tech manual
37. Max lift: Intake= 0.227 Exhaust= 0.229_____
38. Centerline: Intake= 104-107.5 atdc Exhaust= 107.5-110.5 btdc_____
39. Check flywheel and crankshaft keyways for alterations_____
40. Check key for alteration offset QMA key allowed when using tier 2 flywheel_____
41. Check flywheel magnet and screw for alteration_____
42. Check flywheel weight: 1642 grams 57.9oz. min Thailand flywheels 1550 grams_____
43. Check flywheel diameter magnet area – 6.285 min_____

44. Crankcase cover: Stock "AS CAST"_____
45. Gasket: Stock Honda gasket 0.025 max thickness_____
46. Cover to be flat + .005_____
47. Piston: Stock Honda standard size no alterations. Triangle or Dot towards push rods_____
48. Piston Weight: 106 grams min. With rings and retainers 118 grams min_____
49. Piston Height: 1.808-1.813_____
50. Skirt diameter= 2.357 min 2.363 max (perpendicular to pin)_____
51. See tech manual for additional dimensions
52. Wrist Pin: O.D.= .5116 ref. I.D.= 0.354 ref length 1.854+-0.010 Weight: 23 grams min._____
53. Rings: Stock Honda- thickness= compression and scraper 0.57, 3 piece Oil Ring0.098_____
54. Small end bore= 0.5111 ref._____
55. Length- near edges of bore= 2.101 min 2.111 max_____
56. Weight with bolts: 119 grams min or 4.2oz. min._____
57. Crankshaft: Stock Honda no alterations. Governor drive gear in place_____
58. Camshaft: Stock Honda no alterations. Compression release intact._____
59. Heel to heel: Intake= 0.864 -0.869 Exhaust= 0.865-0.870_____
60. Heel to peek: Intake= 1.079-1.093 Exhaust= 1.081-1.095_____
61. Length flange to flange: 3.137 min 3.142 max_____
62. Cam bearings: 0.547 min- 0.551 max_____
63. Tappets: Stock Honda no alterations. Base Diameter= 0.910 min_____
64. Stem Diameter= 0.312 min Base thickness= 0.076 min - 0.090 max_____
65. Length= 1.180 min- 1.220 max Weight= 16 grams min_____
66. Block Stock Honda "AS CAST". Oil level sensor intact_____
67. Bore= 2.366 max_____
68. Machined side cover surface- to cam thrust face= 3.228/3.240max_____
69. Machined side cover surface- to bearing face= 3.429 min/3.442max_____

TECH OFFICIAL _____ DATE _____

Event _____

