

BA 1998 Honda VTR1000F Improvements to Date 2015-12-21 @ 104,500± miles (Mfgr. date 03-97)
Not in order of fabrication/installation date, priority or cost ("BA" = made or modified by me)

1. Mufflers: Two Bros C2 small oval aluminum slip-on mufflers (badges removed & cans clear hard anodized to semi-gloss finish); repacked with Unifax HT ceramic media over stainless steel wool (OEM cans received "Bafflectomy" before removal & storage)
2. Header-Collector modification: Removed obstruction in OEM header junction
3. Carburetors: BA carb recalibration (shimmed OEM needles +.040"; main jets 175 f/178 r & 48 pilot jet 2.5± turns out; going back to 45 pilot jets and new jet needles & needle jets (Carb jetting varies between 3 sets rotated every 16,000 miles)
4. Emission Controls: Removed PAIR system & BA internal mod to OE reed valve
5. Handlebars: Dan Moto 3-D "clip-on" handlebars with longer stainless steel socket head cap screws and custom made askew washers. Previously installed Tommaselli 3-way Adjustable 41mm clip-ons with adjustable steering head stops as well as Helibars; "Superbike" tubular handlebar conversion ½ complete but on hold
6. Tank Grips: BA fabricated rubber tank pads (to protect if bars swing around & they give "cool" BSA look)
7. Hand Grips: ProGrip" gel grips (safety wired) & ProGrip lever skins" (ribbed rubber lever covers)
8. Heated Grips: BA heated grips with w/QD connectors; BA On-Off switch & bracket on left handlebar
9. Burglar Alarm: Digital anti-theft alarm with ignition kill & wireless remote + BA hidden secondary ignition kill switch
10. Radar Detector: Hard wired modified radar/laser detector with QD jack to helmet earphone for audio alert (BT dongle worked with Q3 but over-rode pairing with GPS, S5 & Ipod, so not used)
11. Driving Lights: Twin fairing mounted 55w halogen driving lights on BA with illuminated rocker switch on left handlebar (conversion to LED being designed)
12. Turn Signals: *Front* Lockhart "Type 3 Flush-Mount" 3-wire Front with "Custom LED Co." LED White running / Amber turn color LEDs. *Rear* OEM front 3-wire turn signal assemblies installed at rear with addition of second positive wire to power running light function; OEM 1157 incandescent bulbs replaced with high-output 1157 LED units & 3-wire OEM turn signal relay replaced with low-load LED digital relay (BA wiring circuit) to maintain DOT flash rates.
13. Rear Lighting: BA LED license plate "surround" wired to brake light circuit
14. Brake & Clutch Lines: Braided stainless steel-Teflon brake lines (Russell front dual-hose / Galfer rear hose)
15. Clutch Line: HEL custom length SS clutch line (+1.5" longer actually not required for Tommaselli's)
16. Front Brake Master Cylinder: 02 Honda RVT SP2 front brake master cylinder & 03 Honda CBR600F4i front brake calipers (modified to fit VTR)
17. Brake Pads: EBC HH+ front & SBS Low-Friction rear brake pads
18. Horns: Fiamm "Low Tone" mounted on BA bracket 180° opposite OEM horn; i.e., dual horns (relay not required)
19. Luggage: Ventura luggage system with "Tour Rack" used with Ventura bags & a "Sport" rack was modified to accept Givi-type 32 liter rear top box & Shad SH46 (46 liter) rear top box (Ventura passenger grab rail installs when racks are not used); semi-soft rear panniers (saddle bags) also attach to "quick install" BA mounts. 2015-09 added Nelson-Rigg expandable tail bag mounted on matching size 3.5 mm thick ABS BA fabricated base plate with vinyl closed-cell foam, non-slip .125" thick "shelf liner", facing with bottom cut-outs for 2" wide Velcro hoop, loop bonded to saddle, edge split-tube non-rub piping. Nelson-Rigg Sport 40 pannier straps lay between underside of seat bag and top of mounting plat and are restrained front-rear off Ventura grab bar (rear) and passenger foot peg brackets (front); total 4 fast-tex buckles (only front buckles require snugging after reinstallation) and with turn of key in seat lock saddle, tail bag & panniers remove as one unit for under saddle access. Also have Nelson-Rigg micro magnetic tank bag.
20. BA "Yamda" mirrors (OEM VTR mounts grafted to R1 stems and mirrors) & Don H's VTR Mirror Extenders
21. Automatic Chain Oiler: Scott Oiler (BA installation)
22. Head Light Modulator: Kisan P115-H3 headlight modulator with BA adjustable infrared daylight sensor connected with 12 gage wire to customized Easy Beaver "twin relay" headlight harness connected direct to battery & Osram 70w/65w H4 halogen headlight bulb
23. Toll Booth Coin Dispenser: BA bracket for coin dispenser (removed)
24. I-Pass: Grip-lock tabs on wind screen for IPASS transponder
25. Bicycle Computer: Sigma BC1200 computer on top triple clamp w/BA mounting bracket & rotor carrier magnet (BC unit to be relocated to above tachometer)
26. Fuel Tank: Enlarged VTR OEM gas tank 5.2 gallon capacity (OEM capacity tank used on ≤1,000 mile trips)
27. Head Light Lens Protection: Ventura headlight QD lens protector
28. Fenders: BA front fender extension
29. Fairing Wind Screen: Zero Gravity "Double Bubble (dark gray tint) wind screen
30. Rear Drive: DID 520 final drive chain conversion with lightened steel sprockets; front 16T / Rear 43T (OEM front 41T does not give better mileage & its RPM range causes poor drivability IMO)
31. Front Suspension: Race Tech .90 kg (35.2x340mm) fork springs w/3.625" PVC pre-load spacers; Greg Nemish re-valve, Silkolene Pro RSF5 syn fork fluid @ 5.125" below TOT; preload @ 4 lines showing & rebound @ 1 turn out. Fork tubes retuned by Greg Nemish; BA maintained; tube raised +6mm OEM height now down to +4mm
32. Rear Suspension: Penske 8981 shock w/7x950 spring & adjusted ride height @ +1/8" OEM O.A. length (2015-09); compression @ 3 & Rebound @ 16 out
33. Saddle: BA Ver3 modified +1" taller Sargent saddle with BA "Tush Pan" & "Ball Gutter" + Temperfoam inlay

34. Voltage Regulator Rectifier: BA modified 2006 Kawasaki Ninja 600 FH016 mosfet (VRR) connected to OEM alternator output wires with waterproof connectors & VRR 10 gauge wire output connected direct-to-battery; OEM VRR White/Red wire was connected to main switch (and then to battery) but now powers an auxiliary circuit (DC power does not care which way it flows). Replaced with same unit September 2015 though prior unit tested OK.
35. Seat Cowl: BA modified with air intake & reverse NACA exhaust ducts for flow-through cooling of VRR
36. Onboard Volt Meter: Flight Dynamics digital LED bar-scale volt meter on left fairing "flat"
37. Case Guards: 5-point mount steel tube case guards (not sliders) custom, fabricated in Japan by track school chief mechanic specifically for the VTRs used by the school (only 10 sets imported to US)
38. Throttle Lock: BA modified NEP throttle lock (best & least expensive I've used and sized for larger hands)
39. Throttle Assist: BA modified "Cramp Buster" throttle assist device
40. Knee Grips: "Tech Spec" tank knee grip pads cut to BA pattern (they did not have a VTR template)
41. Cam Chain Tensioners: APE manual cam chain tensioners / Comet gaskets
42. Engine Output: Average of 101 hp & 69 ft lb in 2007 Dynojet Model 250 dynamometer "runs"
43. Engine Condition: TBD, last vacuum leak down test reading in 2009 at <3%
44. TPS recalibration: 420± Ohms (TPS secured with socket head cap screws for adjustability)
45. Fork brace: "Superbrace" black anodized fork brace with BA fork guard extensions
46. Front & Rear Headers: Wrapped with 1-inch ceramic/fiberglass wrap & coated with Hi-Temp black "paint"
47. Carburetor Synchronization: Plumbed with vacuum lines for synchronization without tank removal
48. Foot Pegs: MFW Vario adjustable pilot foot pegs (knurled tips ground off & polished to prevent boot damage); pegs now adjusted 1-inch lower & ½" forward from OEM position
49. Foot Shift Lever: BA lengthened ¾" & shifter linkage adjusted for shorter throw (replacement heim joint in-progress)
50. Rear Brake Pedal: Brake master cylinder piston rod shortened 5/16" (as required due to Item 48) & brake pedal "flat" lengthened 13mm (as required due to Item 48)
51. Exhaust Heat Guards: BA exhaust boot heel "heat guards" (as required due to Item 48)
52. Battery: Motobatt 14 amp hour 4-pole battery (2 positive & 2 negative terminals) installed in May 2015; prior 12 amp hour OEM equivalent "Energizer" battery taken out of service as prophylactically (as it still holds a 12.9+ volt charge (original OEM Yuasa battery similarly was taken out of service in 2007); NOT considering lithium iron battery due to high auxiliary power system load demands
53. Auxiliary Power Circuits: BA auxiliary power 6-circuit distribution block with main fuse & individual circuits have inline fuses & relays (as mentioned in Item 33, OEM VRR output positive white/red wire that originally connected to main fuse now used to power 1 of 6 auxiliary circuits)
54. Battery Connections: Fused coaxial jack connected direct to battery (Deltran Battery Tender Plus output wire modified with BA coaxial/SAE plug adapter) & Anti-Gravity Batteries Co. lithium ion boost battery direct-to-battery cables connected to rear set of Motobatt battery terminals.
55. Auxiliary Power: BA auxiliary power heavy-gauge wiring harness (connected to battery via relay) powers 6 individual fuses including the volt meter, BA driving lights, switched cigarette lighter type power socket, heated grips, dual USB 2.0 2amp power ports, etc.
56. Auxiliary Power Connections: Item 54 coaxial-jack permits powering of accessories; i.e., Warm & Safe "Heat-Troller" digital thermostat, dual US-type cigarette lighter power sockets, coax plug BA mini tire pump, SAE plug Battery Tender battery volt meter, SAE plug Battery Tender 5V USB power adapter, etc.
57. Polarized Electrical Connections: Fairing mounted turn signals, BA driving lights & volt meter connections converted to SAE polarized QD
58. Brake Lights: BA modified OEM brake/tail light unit modified for Optimax 10-diode LED brake/tail unit inside. Replaced June 2015 with another unmodified OEM brake/tail light unit fit with high-output 7443 LED "bulbs"
59. Cigarette Lighter: Illuminated switched US-type cigarette lighter power socket adjacent tachometer on BA bracket
60. GPS: BA modified "Ram" steering stem mount, extension & GPS cradle (Garmin Nuvi 765T) + BA shade & tether
61. Fuel Tank Venting: Fuel tank vent tube rerouted to eliminate "P-trap stall syndrome" + BA inline check valve under fuel tank
62. Carburetor Venting: Open cell foam in carburetor vent lines to eliminate "side wind effect"
63. Engine Coolant: "Extended Life" ethylene glycol (yes, I know about the controversy but I've had no issues in 75,000+ miles) & distilled water; full acid flush & refill every 2± years using UView 550000 Airlift Cooling System Leak Checker & Airlock Purge Tool Kit ("Engine Ice" coolant conversion being considered)
64. Engine Oil: "Shell Rotella T-6" 5W-40 full synthetic changed every 4~5,000 miles (used Mobil 1 15W-50 after 4,500 mile "wear-in" until about 2008± when Mobil eliminated certain anti-wear additives)
65. Oil Filter: "Purolator Pure One 14610" (3.25-inch length necessitated trimming chin fairing) or K&N OEM EQ changed every or every other oil change depending on type of mileage
66. Brake/Clutch Fluid: "Valvoline Full Synthetic" Dot 3/4 flushed & filled at least every season or more often depending on type of mileage
67. Oil Filter Heat Shield: BA oil filter heat shield (to reduce heat transfer from adjacent front header pipe)
68. Oil Cooler Protection: BA oil cooler aluminum screen rock guard
69. Tires: Michelin Pilot Road 4; prior sets PR3 & 2 sets Storm Ultra 2 Tires. Have run Avon, Bridgestone, Dunlop ("Road Smarts" were OK), Metzeler, etc. I did very much like the Continental Sport Attack front / Road Attack rear combo and am considering their Version 2 for my next set

70. Fairing "3rd Eye" position light BA LED conversion
71. Heated Clothing: Connections for Warm & Safe 65 watt heated jacket liner & armored, waterproof heat gloves
72. Ignition Coils: CBR600RR stick coil conversion
73. Fuel Filters: EMGO 14-34481 dual fuel filters
74. Brake & Clutch Levers: Mad Hornet folding/telescoping lever length clutch & brake click-adjust reach levers with wind-relief opening
75. Spare Engines: 1999 & 2005 spare engines & boxes of new & used OEM parts including entire wiring harness, black boxes & all other electrical components / switches / devices plus a spare frame & swing arm
76. USB Power Ports: Single Dual 5 volt / 2.1 amp output USB power port (left side next to Scott Oiler) powered through auxiliary buss bar then fused and controlled by illuminated rocker switch
77. BT Communicator: Cardo Scala Rider Q3 Bluetooth communicator can pair with Samsung Galaxy S5 Active (32Gb micro-SD card), 16Gb 4th Gen Ipod Touch & Garmin Nuvi 765Traffic GPS (Bluetooth and can sync w-S5 contacts and make calls, and is also a MP3 player & Jpeg viewer (16Gb SD card). Q3 Helmet kit installed in Nolan N90 flip-front, G-Max 54S flip-front & Scorpion EXO-1100 helmets (U-Clear H100 speakers in latter 2 helmets)
78. Erik's lightened flywheel awaiting installation.