



**STAGE 2 CARBURETOR KIT INSTALLATION INSTRUCTIONS FOR THE
NEW TRIUMPH BONNEVILLE, T-100 BONNEVILLE AND THRUXTON 900 –
2001- 2005**

Shipping Inventory

Modified Bonneville Performance Stage 2 Carburetor Kit – Moto Exotics

BP Stage 2 Carburetor Kit
2 Mikuni HSR 42mm Carburetors
Barnett Throttle Cables--1 push pull 1 idle
Joker Machine throttle housing
H-D V-ROD nostalgic grips
<p>** The modified stage 2 kit includes all the above and the following: 2 new port matched billet manifolds, 2 billet air-filter adapters, 4 replacement allen head screws for manifold rubber clamps 2 black nylon hole plugs (3/8 & 7/16) for the stock switch/throttle housing 1 foot flex fuel line and 1 brass T fitting—no clamps are necessary cut to fit 2 K&N filters, Battery Box with spacer and fastener--Bonneville The assembled kit is already fitted with the following: Top and Bottom brace, Choke Assembly, Throttle Rod, replacement screws, spacers and Synchronization Adjuster. The pilot jet <u>20</u>, main jet <u>150</u>, needle jet <u>96</u> and accelerator pump nozzle <u>50</u> have been replaced and positioned. This kit has been bench synchronized.</p>

**I. REMOVAL INSTRUCTIONS OF REAR WHEEL, MUDGUARD, SEAT,
SIDE COVERS, FUEL TANK AND AIRBOX FOR CERTIFIED TRIUMPH
MECHANICS**

Introduction- Bonneville Performance recommends that at all times during the installation that you refer to the Triumph Motorcycle Service Manual, part Number T3850902 Issue 2, 03/2002, and that all work performed be conducted by a certified Triumph Motorcycle mechanic.

A.) REAR WHEEL REMOVAL- PAGE 14-14 Triumph Motorcycle Service Manual

- 1.) Support motorcycle on center stand or center lift so rear wheel is suspended and there is clearance for removal. Use tie downs.**
- 2.) If both wheels are raised chock the front wheel to prevent any weight shift when rear wheel is removed.**
- 3.) Remove chain guard.**
- 4.) Remove caliper and support so there is no strain on the brake line.**
- 5.) Remove both silencers from exhaust headers.**

- 6.) Remove axle nut and washer—support or chock rear wheel—and slide out axle.
- 7.) Disengage chain from sprocket and hang over swing—use soft cloth to protect swing arm from scratches that will occur if you do not cover.
- 8.) Lower wheel to the ground and collect spacer and caliper support arm and all fasteners for re-assembly.

B.) REMOVE SEAT PAGE 15-9 Triumph Motorcycle Service Manual

- 1.) Remove the 2 allen-screws from rear seat section.
- 2.) Lift seat from the rear and slide backwards to disengage tongue-- collect all fasteners for re-assembly.

C.) REMOVE REAR MUD GUARD PAGE 15-13 Triumph Motorcycle Service Manual

- 1.) Disconnect battery and remove from motorcycle.
- 2.) Disconnect electrical connectors on the underside of the mudguard.
- 3.) Support fender from beneath and remove the 4 Torx head screws-- collect all fasteners for re-assembly.

D.) REMOVE FUEL TANK PAGE 9-10 Triumph Motorcycle Service Manual

- 1.) Turn off fuel tap.
- 2.) Remove fuel line at the tap connection.
- 3.) Remove both rear tank-mounting bolts.
- 4.) With assistance from another set of hands support tank at the rear and lift so that the breather line is visible on the right side of the underside of tank—remove and plug line.
- 5.) With tank raised and supported at the rear slide backwards—disengaging it from the front mounting rubbers—set tank aside in a safe place to prevent any damage to the painted surface.

E.) REMOVE SIDE COVERS PAGE 15-10 Triumph Motorcycle Service Manual

- 1.) Loosen and remove both side cover screws at the base of the cover—lift slightly to disengage top mounts and remove—set aside in a safe place to prevent damage to painted surface.
- 2.) Make certain rubber mounts are in place or remove and secure with fasteners for later re-assembly.

F.) REMOVE AIRBOX PAGE 9-14 Triumph Motorcycle Service Manual

- 1.) Remove carburetor breather line to airbox.
- 2.) Pull back and remove rubber connectors from the airbox to bell of both carburetors—there is a lot of factory glue in this area that is used to seal and support the carburetors with these rubber airbox connectors so you may need to manipulate the connectors to remove them without damaging the rubber.
- 3.) Remove the electrical connectors from both sides of airbox—note placement as the replacement battery box has identical connectors.
- 4.) Remove rear master cylinder reservoir from airbox and temporarily support in an upright position with zip tie.
- 5.) Remove all side panel screws on both sides of airbox.
- 6.) Support airbox at the base so it does not drop then remove 4 top fasteners that secure airbox to top section of frame around the battery box section.
- 7.) By gently re-positioning the airbox remove both side panels.
- 8.) The airbox is now free to be removed through the rear wheel area.

E.) REMOVE THROTTLE CABLES PAGE 9-19 Triumph Motorcycle Service Manual

- 1.) Open right side switch housing and remove throttle assembly and throttle grip from handlebars.
- 2.) Replace fasteners and close switch-assembly.
- 3.) Place two black hole-plugs provided in the openings in the switch assembly created by removing the stock throttle cables.

F.) REMOVE CARBURETORS PAGE 9-21 Triumph Motorcycle Service Manual

- 1.) Disconnect Throttle Position Sensor connector and heater connector from stock carburetors.
- 2.) Loosen hose clamps between carburetor manifolds and carburetors on the manifold rubbers.
- 3.) Slip off the carburetor assembly and set aside.
- 4.) Remove manifold fasteners and stock manifolds.
- 5.) Set aside manifold rubbers, hose clamps and stock manifold fasteners for use in the assembly of the Bonneville Performance stage 2-carburetor kit.

II. INSTALL BONNEVILLE PERFORMANCE STAGE 2 CARBURETOR KIT

Please note that the stage 2-kit comes assembled, jetted and bench synchronized for the Bonneville engine that has been fitted with an aftermarket exhaust system—this includes the Triumph off-road silencers.

The jetting has been determined through exhaustive dynamometer tuning. There should be no need to change pilot jets, needle jets or accelerator pump nozzles. Depending on the exhaust system there may be a need to change the main jet—it is currently a 160—155, 150 and 145 main jets are provided if there is a need to rejet for top end performance. A Mikuni 42mm HSR Carburetor tuning manual is provided for reference and the Bonneville Performance Sudco International representative, Mike Gaffney, is available for tech support at 323- 728-5407 between 9am & 5pm PST.

- A.) Loosen and remove steady bolt above carburetors that attaches the rear section of the engine to the frame.
- B.) Install Bonneville Performance manifolds—insure o-rings are seated and connecting engine surface is clean—attach with stock manifold fasteners.
- C.) Inspect stock manifold rubbers for any damage or wear—replace if necessary.
- D.) Attach manifold rubbers to new Bonneville Performance manifolds and snug front hose clamp so that it will not slip off manifold surface.
- E.) Slide on the assembled Bonneville Performance stage to carb kit so that the top stainless steel mounting bracket is in line with the rear engine steady bolt area.
- F.) Support carburetors and insert steady bolt through top carburetor bracket and engine support and tighten to proscribed torque setting.
- G.) Align and tighten both manifold rubber hose clamps on both carburetors.
- H.) Insure that o-rings are seated in both air-filter adapters and press on adapters to each carburetor bell.
- I.) Insert Bonneville Performance replacement battery box through rear wheel area and align with stock fastener locations—long section of the box is the inner fender area.
- J.) Insert and tighten 4 stock fasteners.
- K.) Re-attach electrical connectors in the same locations on both sides of the replacement battery box as they were on stock airbox.
- L.) Re-attach rear master cylinder reservoir on the threaded location on the right side of the replacement battery box—use allen screw and spacer provided so that the master cylinder reservoir is aligned in a level position.

- M.) Open right side switch housing and remove stock throttle cables from the switch/throttle housing assemble.
- N.) Remove stock throttle grip from bars.
- O.) Lubricate new Barnett idle and push/pull throttle cables provided.
- P.) Attach idle cable to throttle advance on the carburetor kit.
- Q.) Attach push-pull cable to throttle advance on the carburetor kit.
- R.) Align cables and route along frame backbone to the new throttle housing assembly.
- S.) Note the cables thread into the housing at the base and there is a different OD for each cable to insure proper placement. In the housing.
- T.) Attach cables to new throttle grip provided and seat inside housing body and attach top portion to close the housing.
- U.) Check alignment of cables and adjust for smooth pull and return.
- V.) Zip tie cables on frame backbone where appropriate.
- W.) Remove the other stock grip and replace with new left-side handlebar grip provided.
- X.) Install K&N filters—insure that offsets are on the air-filters are placed on the correct side so that the side covers will mount with no interference from filter bodies. Note that the Bonneville Performance air-filter adapters are grooved to match the K&N mounting grooves. Insure that these grooves align and are seated before tightening the clamps.

III. THE MOTORCYCLE IS NOW READY TO BE RE-ASSEMBLED IN THE REVERSE ORDER OF DISASSEMBLY.

- 1.) REPLACE BATTERY IN NEW BATTERY BOX—DO NOT RECONNECT TO THE TERMINALS UNTIL THE FENDER IS REPLACED AND THE REAR LIGHT CONNECTORS ARE RECONNECTED. WHEN CONNECTED REPLACE SAFETY STRAP IN THE LOCATIONS PROVIDED ON THE BATTERY BOX.
- 2.) REPLACE REAR MUD GUARD--PAGE 15-13 TRIUMPH MOTORCYCLE SERVICE MANUAL—REVERSE ORDER IN REMOVAL SECTION ABOVE.
- 3.) REAR WHEEL REPLACEMENT, REAR BRAKE CALIPER RE-ASSEMBLY AND CHAIN CONNECTION--PAGE 14-15 TRIUMPH

MOTORCYCLE SERVICE MANUAL--REVERSE ORDER IN REMOVAL SECTION ABOVE.

- 4.) REPLACE FUEL TANK FUEL LINE AND OVER FLOW BREATHER LINE--PAGE 9-12 TRIUMPH MOTORCYCLE SERVICE MANUAL--REVERSE ORDER IN REMOVAL SECTION ABOVE.**
- 5.) REPLACE SEAT--PAGE 15-9 TRIUMPH MOTORCYCLE SERVICE MANUAL- REVERSE ORDER IN REMOVAL SECTION ABOVE.**
- 6.) REPLACE THE SIDE COVERS.**

Note; the BP Stage 2-carburetor kit does not include a breather collector for the crankcase breather line that was originally routed to the stock airbox. Bonneville Performance recommends that a breather line with filter be routed to the rear of the motorcycle or a collector breather combination be attached as included in the stage 3-carburetor kit. Photos and details on the recommended breather/collector can be found on the website at www.bonnevilleperformance.com. Various other collector/breathers can be found in the aftermarket V-Twin catalogues, Custom/specialty stores or your local H-D dealership.