YAMAHA / INTAKE

INTERCOOLER TUBING + BOV — INSTALL GUIDE

Not for: 230 / 300 HP 1630 ACE (use GT40-SD-TUBE-230300-BOV). Not for 260 HP iS / aS Limited (use GT40-SD-TUBE-260-BOV). Not for 1503 4-TEC. Confirm engine c...

GT40-SD-TUBE-325-BOV | INTERMEDIATE | 1.5-3 HRS | 4 PAGES

TOOLS

- 8 mm / 10 mm / 13 mm sockets + ratchet, 3/8" drive
- T25 + T30 Torx drivers
- 4 mm + 5 mm hex (Allen) keys
- 1/4" drive torque wrench, 5—25 Nm range
- Long Phillips screwdriver (reach into tight clamp positions)
- Hose-clamp pliers (vacuum-line spring clamps)
- Flashlight or headlamp — the charge tube run sits low in the engine bay

PRO TIPS

Clock the BOV and couplers with the engine loaded in mind.

Recheck clamp tension after the first ride.

AVOID

Pinching the BOV reference line

Clocking the coupler so it rubs under engine movement

Skipping boost-leak check after install

INTERCOOLER TUBING + BOV — INSTALL GUIDE

GT40 Marine | SKU GT40-SD-TUBE-325-BOV | 325HP Charge Tubing + Blow-Off Valve | Rev 1.0 — 2026-05-24

FITMENT

| Platform | Model | Year | Engine |

|---|---|---|---|

| Sea-Doo | RXP-X 325 | 2024—present | 1630 ACE 325 |

| Sea-Doo | RXT-X 325 | 2024—present | 1630 ACE 325 |

| Sea-Doo | GTX Limited 325 | 2025—present | 1630 ACE 325 |

Not for: 230 / 300 HP 1630 ACE (use GT40-SD-TUBE-230300-BOV). Not for 260 HP iS / aS Limited (use GT40-SD-TUBE-260-BOV). Not for 1503 4-TEC. Confirm engine code stamped on the block and HP rating on the BRP placard before install.

IN THE BOX

(1) GT40-formed intercooler-to-throttle charge tube, aluminum, ceramic-coated charcoal

(1) GT40-formed supercharger-to-intercooler charge tube, aluminum

(1) Blow-off valve assembly, billet, spring-actuated

(1) BOV mounting flange, welded to upper tube, machined seat

(4) Silicone couplers, reinforced, charge-grade

(8) T-bolt clamps, stainless 2.5"–3" assorted to suit

Home Garage

(1) Vacuum reference line, 6 ft. silicone, 4 mm ID

(4) Spring vacuum-line clamps

(2) M6 × 25 mm SHCS — BOV-to-flange

(2) M6 stainless flat washers

(1) Install hardware bag — spare couplers, clamps, two spare clamps

(1) GT40 product registration card

(1) This guide

Verify all components present before starting. Missing parts: support@gt40marine.com.

TOOLS REQUIRED

8 mm / 10 mm / 13 mm sockets + ratchet, 3/8" drive

T25 + T30 Torx drivers

4 mm + 5 mm hex (Allen) keys

1/4" drive torque wrench, 5—25 Nm range

Long Phillips screwdriver (reach into tight clamp positions)

Hose-clamp pliers (vacuum-line spring clamps)

Flashlight or headlamp — the charge tube run sits low in the engine bay

Shop towels — keep several handy, the intercooler will leak residual condensate when disconnected

SAFETY

Read in full before starting.

Battery disconnected for the duration of the install.

Cold engine only. The charge tubing reaches significant temperature in operation.

Eye protection. Removing the stock tubing may release residual condensate or boost-pressure-trapped vapor.

No smoking / open flame.

Hand protection when handling the ceramic-coated tubing — the coating is durable but skin oils can mark fresh finish before first cure cycle.

If you are not comfortable with PWC engine bay work, take the install to a certified marine technician.

PRE-INSTALL CHECKLIST

- [ ] Watercraft on stable trailer or stand
- [ ] Battery negative disconnected and isolated
- [ ] Engine bay clean and dry
- [ ] Factory tubing routing photographed from multiple angles before disassembly
- [ ] All 4 supplied silicone couplers laid out and matched to tube ends (varying ID — 2.5" vs 3" depending on location)
- [ ] BOV pre-assembled to its flange with the M6 SHCS, hand-tight only — final torque after install

STEP-BY-STEP INSTALL

STEP 1 — ACCESS THE ENGINE BAY

Remove the seat. Lift the storage bin to expose the engine bay top hatch.

Disconnect the battery negative terminal. Secure the cable away from the post.

STEP 2 — REMOVE THE STOCK CHARGE TUBING

The 325HP 1630 ACE uses two charge tubes:

- The **lower tube** runs from the supercharger outlet down and around to the intercooler inlet
- The **upper tube** runs from the intercooler outlet up to the throttle body inlet

- Loosen all four clamps on the lower tube (supercharger end + intercooler end)
- Pull the lower tube free — expect a small amount of residual condensate to spill from the intercooler side. Catch it with a shop towel
- Loosen all four clamps on the upper tube (intercooler end + throttle body end)
- Pull the upper tube free
- Inspect the supercharger outlet seal and intercooler inlet/outlet seals — wipe clean

Set the stock tubes aside. Do not discard if you may sell the craft in stock form later.

STEP 3 — PRE-FIT THE GT40 LOWER TUBE

- Slide a silicone coupler onto the supercharger outlet, push fully to the shoulder, slide a T-bolt clamp onto the coupler (do not tighten yet)
- Slide a second silicone coupler onto the intercooler inlet, T-bolt clamp on (loose)
- Lower the GT40 ceramic-coated tube into position — supercharger end first, intercooler end second
- Push both coupler-tube joints fully home (1/2 in. minimum coupler engagement on both sides)
- Rotate the tube to clear the throttle linkage, fuel rail, and harness loom — 10 mm clearance minimum to any moving or hot component

STEP 4 — PRE-FIT THE GT40 UPPER TUBE + BOV FLANGE

- Slide a coupler onto the intercooler outlet, T-bolt clamp on (loose)
- Slide a coupler onto the throttle body inlet, T-bolt clamp on (loose)
- Lower the GT40 upper tube into position, intercooler end first
- The BOV flange must orient outboard with the valve body facing the open engine bay sidewall — verify before final clamp torque
- Push both coupler-tube joints fully home
- Rotate the upper tube to align the BOV flange — confirm clearance to the harness loom and the upper hull bulkhead (15 mm minimum)

STEP 5 — TORQUE ALL CHARGE-TUBE CLAMPS

Working in this sequence — supercharger end of lower tube, intercooler-inlet end of lower tube, intercooler-outlet end of upper tube, throttle-body end of upper tube — torque each T-bolt clamp to **5 Nm (44 in-lb)** alternating in two passes.

Pull-test each joint after torque. No coupler should rotate or slide on either fitting.

STEP 6 — INSTALL THE BOV ON ITS FLANGE

- Position the BOV body against the upper-tube flange with the supplied gasket
- Thread both M6 × 25 mm SHCS through the BOV and into the flange with flat washers
- Snug both bolts evenly, then torque to **10 Nm (89 in-lb)** with a 5 mm hex socket
- Confirm the BOV outlet points outboard — discharge will vent to the engine bay (not into the hull bilge or onto the intercooler)

STEP 7 — ROUTE THE VACUUM REFERENCE LINE

The BOV requires a manifold-pressure reference signal to open at the correct boost-spike moment.

- Locate the factory MAP sensor port on the intake manifold or an existing tee fitting
- Cut the supplied 4 mm silicone vacuum line to length — direct route, no excess loop, no contact with hot components
- Push one end onto the BOV vacuum nipple, secure with a spring clamp
- Push the other end onto the MAP-port nipple or tee, secure with a spring clamp
- Confirm the line is fully seated and the clamps are oriented for visual inspection at next service

STEP 8 — REASSEMBLY AND FIRST START

- Walk the engine bay — every coupler, every T-bolt, every M6 fastener
- Confirm no tools or hardware remaining in the bay
- Reconnect the battery negative terminal — torque to **10 Nm (89 in-lb)**
- Replace the engine bay hatch, storage bin, seat
- Start the engine on the trailer with the cooling hose connected
- Idle for 60 seconds — listen for any boost leak (hissing, lean stumble)
- Bring engine up to 3000 RPM briefly — listen for BOV operation as throttle closes
- Scan with BUDS or compatible OBD diagnostic — no fault codes (P0238 / P0299 indicate a charge-side leak)

If clean: install complete.

POST-INSTALL

BREAK-IN

The first water test should run a conservative throttle profile — gradual ramp to half throttle for the first 5 minutes, then full throttle pulls. This lets the ceramic coating complete its first heat-cure cycle without thermal shock.

TUNING

This kit is mechanical-only at the stock 325HP calibration. No ECU tune required for fitment on a stock-tune craft.

For Stage 2 / Stage 3 / Stage 4 builds, the BOV spring rate may need adjustment to match the target boost ceiling — see kit-level guides for GT40-SD-STG2-325 and above.

SERVICE

- Inspect all clamps and couplers every 25 run hours — retorque if any have relaxed
- Inspect the vacuum reference line every 50 hours — replace if any cracking or oil saturation
- The BOV diaphragm and spring are field-serviceable — contact support for replacement parts

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TROUBLESHOOTING

| Symptom | Likely Cause | Fix |

|---|---|---|

| Lean stumble at high RPM | Charge-side leak | Recheck all 4 couplers + BOV flange torque |

| BOV does not open on lift | Vacuum reference line disconnected or pinched | Reseat reference line, recheck MAP port |

| BOV opens at low load | Vacuum reference line connected to wrong port | Verify port is manifold-side, not pre-throttle |

| Check Engine + P0238 | Charge-pressure sensor seeing leak | Recheck coupler torque, replace coupler if visibly damaged |

| Coupler swelling visible after 1 hour run | Defective coupler material | Stop operation, replace coupler, contact support |

| Tubing contacts harness during full-throttle hull flex | Clearance not verified at install | Reroute harness, retorque T-bolt clamps |

If symptoms persist after the checks above, contact GT40 Marine support before further operation.

TORQUE REFERENCE SUMMARY

| Fastener | Torque |

|---|---|

| Charge-tube T-bolt clamps (all 4 positions) | 5 Nm / 44 in-lb |

| BOV to flange M6 SHCS | 10 Nm / 89 in-lb |

| Vacuum line spring clamps | Hand-set, no torque |

| Battery negative terminal | 10 Nm / 89 in-lb |

All torque values nominal — refer to current Sea-Doo factory service manual for any conflicting OEM specifications.

WARRANTY

GT40 Marine warrants this kit free from defects in materials and workmanship for **ninety (90) days** from date of purchase. Warranty covers replacement of defective GT40-supplied components. Warranty does not cover:

- Damage from improper installation
- Damage from operation outside design intent
- Damage from operation outside factory ECU calibration limits without supporting modifications
- Damage from boost levels above the kit-rated ceiling (BOV spring-rated to 22 psi)
- Use on craft outside the listed fitment matrix

To submit a warranty claim: email **support@gt40marine.com** with order number, photographs of the installed kit, and a description of the failure mode. Response within two business days.

SUPPORT

Email: support@gt40marine.com

Site: gt40marine.com

Install help: include the GT40 SKU above and your hull serial number in any support correspondence

Built in the United States. Designed for buyers who want the best.

REAL SUPPORT

EMAIL SUPPORT BEFORE YOU BUY.

Send engine, model, year, and goal.

Engine / model / year

EMAIL SUPPORT

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Performance and marine replacement parts. Est. 2014.
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