WATERCRAFT
PREDELIVERY
Bulletin

Date: **January 11, 2008** Subject: **Predelivery Inspection (4-TEC™) (Canada / U.S. / Other country)** No. **2008-1**

REVISION 1, May 7, 2008 <=

2008		MODEL NUMBER	ENGINE (hp)	PREDELIVERY KIT P/N	SERIAL NUMBER
MODEL	**PACKAGE**				
GTX†	STD	148A	1503NA (155)	294 000 824	ALL
	STD inter.	148B		294 000 821	
	STD	338A	1503BVIC (215)	294 000 824	
	STD inter.	338B		294 000 821	
	WAKE	158A	1503NA (155)	294 000 824	
	WAKE inter.	158B		294 000 821	
	WAKE	268A	1503BVIC (215)	294 000 824	
	WAKE inter.	268B		294 000 821	
	LTD	188A	1503BVIC (215)	294 000 825	
	LTD inter.	188B		294 000 820	
RXT™	STD	178A / 178C	1503BVIC (215)	294 000 824	
	STD inter.	178B / 178D		294 000 822	
	X	318A	1503BVIC HO (255)	294 000 827	
	X inter.	318B		294 000 828	
GTI™	STD	238A	1503DT (130)	294 000 824	
	STD inter.	238B		294 000 819	
	SE	248A	1503DT (130)	294 000 824	
	SE inter.	248B		294 000 817	
	SE	308A / 308C	1503NA (155)	294 000 824	
	SE inter.	308B / 308D		294 000 817	
	STD R	258A	1503DT (130)	294 000 826	
	STD R inter.	258B		294 000 818	
RXP™	STD	288A	1503NA (155)	294 000 824	
	STD inter.	288B		294 000 823	
	STD	218A	1503BVIC (215)	294 000 824	
	STD inter.	218B		294 000 823	
	X	328A	1503BVIC HO (255)	294 000 827	
	X inter.	328B		294 000 829	
GTX† is a trademark of Castrol Ltd. Used under license					

⇨ Underlined text(s) between arrows is (are) added element(s) to the original publication. ⇦

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IMPORTANT NOTICE

This bulletin must be used in conjunction with the *PRE-DELIVERY CHECK LIST* enclosed in the shrink pack.

⚠ WARNING

To obtain limited warranty coverage, pre-delivery procedures must be performed by an authorized Sea-Doo watercraft dealer/distributor. Apply all necessary torques as indicated.

— The information and components/system descriptions contained in this document are correct at the time of publication. However, BRP maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

— Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. BRP reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

— The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts; however, they represent parts that have the same or similar function.

— The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training.

— Further information or inquiries should be directed to your distributor service representative and/or specific *SHOP MANUAL* sections.

— Please complete the *PREDELIVERY CHECK LIST* for each watercraft and retain a purchaser signed copy.

— Make sure the purchaser receives the *OPERATORS GUIDE*, *PREDELIVERY CHECK LIST* signed copy and *SAFETY VIDEO*.

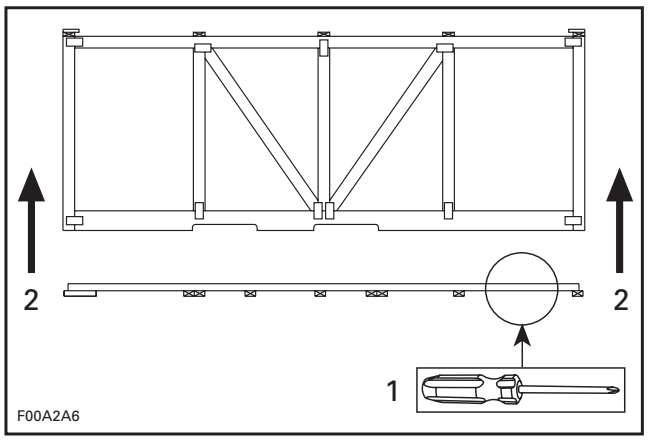
⚠ WARNING

Torque wrench tightening specifications must be strictly adhered to. Where specified, install new locking devices (e.g. lock tabs, elastic stop nuts). If the efficiency of a locking device is impaired, it must be renewed.

UNCRATING

Crate Cover

Model(s): All



Carefully lay crate on its bottom.

CAUTION: Allowing crate to drop may cause serious damage to watercraft.

Remove all screws [1] retaining crate cover to crate base.

NOTE: Screws that are used are Robertson† #2 type that require the use of an appropriate bit (Scrulox #2 from Snap-on†† Tools or ECAR.1 from Facom††† Tools).

Assisted by another person, lift up crate cover [2].

NOTE: Do not tip cover toward front or back of watercraft. Raise cover vertically [2] from both ends at the same time.

Remove watercraft protective bag.

Remove parts from watercraft's storage compartments and from crate.

Lifting the Watercraft

Model(s): All

Cut strapping at watercraft front eyelet.

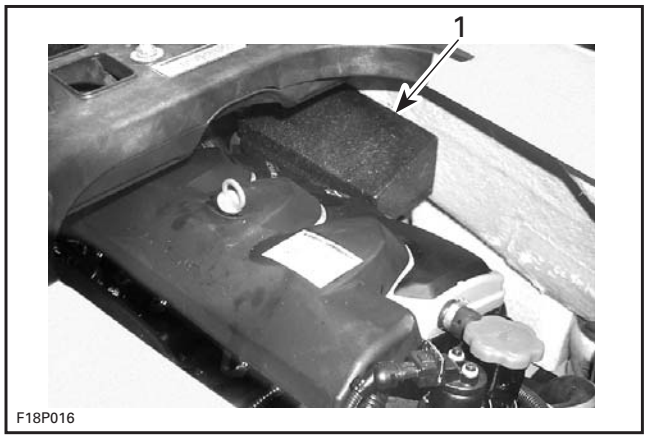
Release shipping bracket at rear of watercraft from crate base.

Lift watercraft using appropriate lift kit and install it on a proper support.

Engine Foam Protector

Model(s): International

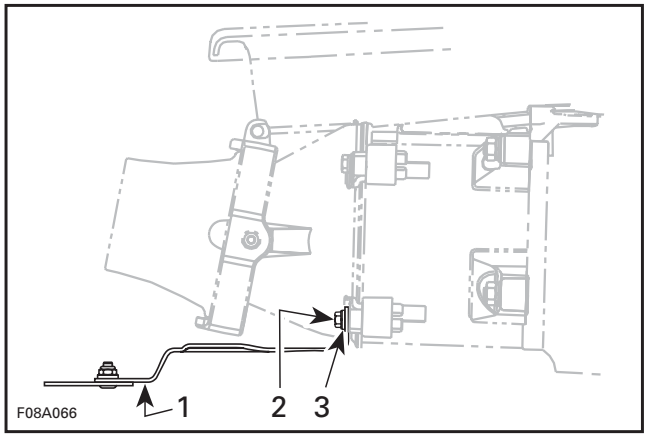
Remove seat(s).



Remove the foam protector [1] supporting engine.

Shipping Bracket

Model(s): All



Remove shipping bracket [1] from venturi.

Discard shipping bracket and hexagonal bolts [2].

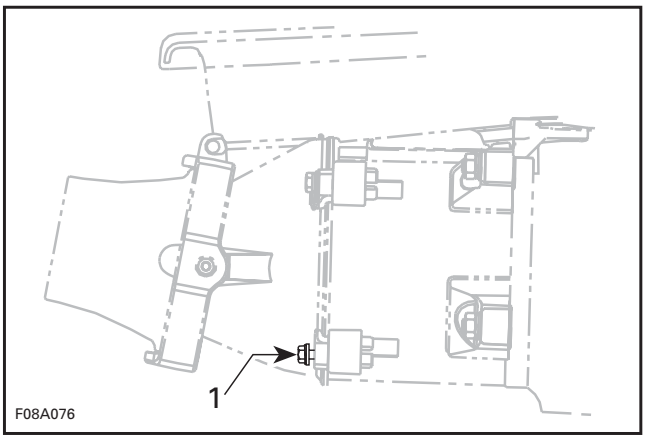
Keep the flat washers [3] located between bracket and pump.

† Robertson is a registered trademark of Robertson Inc.
†† Snap-on is a trademark of Snap-on Inc.
††† FACOM is a brand of International tools Group, subsidiary of FIMALAC.

SET-UP

Venturi

Model(s): All



Secure lower portion of the venturi **[1]** with:

- 2 hexagonal bolts (with scotch grip) from predelivery kit (refer to table below).
- 2 M8 flat washers (previously removed).

Models	Bolt	Torque
148A / 148B / 158A / 158B / 238A / 238B / 248A / 248B / 288A / 288B / 308A / 308B / 308C / 308D	M8 x 50 with scotch-grip	21 N•m (15 lbf•ft)
338A / 338B / 268A / 268B / 188A / 188B / 178A / 178B / 178C / 178D / 318A / 318B / 258A / 258B / 218A / 218B / 328A / 328B	M8 x 40 with scotch-grip	

Battery Preparation and Installation

NOTE: GTI rental vehicle is equipped with a dry type battery that is already activated and requires no maintenance. The state of charge needs to be checked as per the instruction later in the battery section of this bulletin.

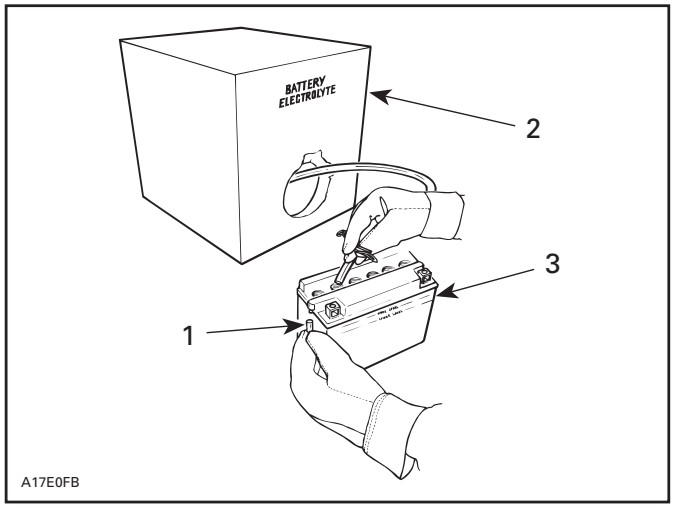
Model(s): All except GTI rental

Activation of a New Battery

⚠ WARNING

Never charge or boost battery while installed in watercraft.

Remove battery from watercraft.



Remove the sealing tube **[1]** from the vent elbow (removed on picture).

⚠ WARNING

Failure to remove the sealing tube could result in an explosion.

Remove caps and fill battery to UPPER LEVEL line **[3]** with electrolyte **[2]** (specific gravity: 1.265 at 21°C (70°F)).

NOTE: This battery may fill slower than others due to the anti-spill check ball design.

Allow the battery to stand for 30 minutes MINIMUM so that electrolyte soak through battery cells.

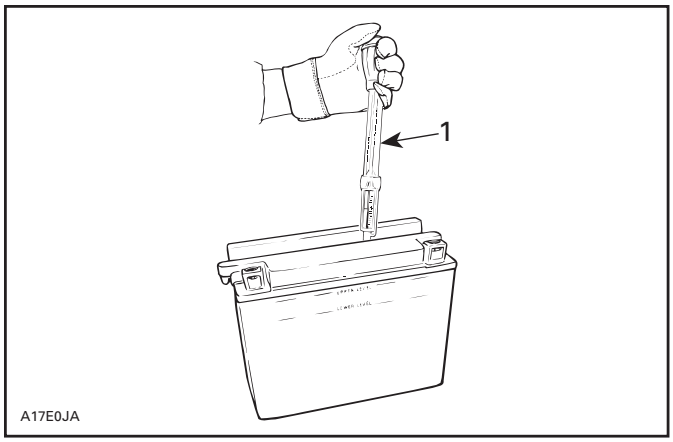
Readjust the electrolyte level to the UPPER LEVEL line.

Connect a 2 A battery charger for 3 to 5 hours.

⚠ WARNING

Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarettes or open flames. Always turn battery charger off prior to disconnecting cables. Otherwise a spark will occur and battery might explode.

CAUTION: If charging rate raises higher than 2.4 A reduce it immediately. If cell temperature rises higher than 50°C (122°F) or if the casing feels hot, discontinue charging temporarily or reduce the charging rate.



Test battery state of charge. Use a hydrometer [1]. Specific gravity must be 1.265.

If electrolyte level has dropped after charging, fill with distilled water to UPPER LEVEL line. After water is added, continue charging for 1 to 2 hours to mix water with electrolyte.

Reinstall caps and clean any electrolyte spillage using a solution of baking soda and water.

NOTE: Hand tighten caps then tighten an additional 1/4 turn using a 20 mm (3/4 in) socket. Using other tool could damage the plastic battery caps.

⚠ WARNING

Battery electrolyte is caustic. To prevent spillage, battery cell cap should be sufficiently tight to properly seal.

Installation

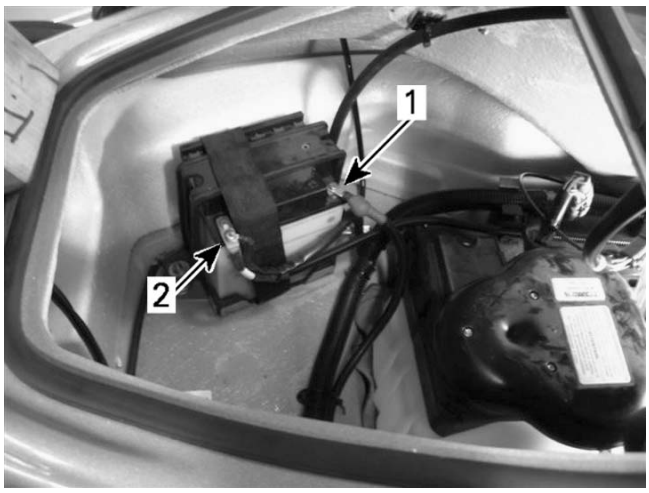
Model(s): All

Secure RED positive cable to battery positive post with:

- 1 hexagonal bolt,
- 1 flat washer and
- 1 nut, all from predelivery kit (P/N 250 000 282).

Apply dielectric grease (P/N 293 550 004) on positive battery post.

Cover positive battery post with rubber boot.



NOTE: On RXP models, RED positive cable [1] **must be installed at a 45° angle** while BLACK negative cable [2] is still accepted at a 90° angle; refer to photo.

Model(s): All

- Secure BLACK negative cable to negative battery post with:
  - 1 hexagonal bolt,
  - 1 flat washer and
  - 1 nut, all from predelivery kit (P/N 250 000 282).

Apply dielectric grease (P/N 293 550 004) on negative battery post.

⚠ WARNING

Always connect battery cables exactly in this specific order. Connect RED positive cable first, then BLACK negative ground cable.

Secure battery with previously removed

- bracket,
- 2 flat washers and
- 2 nuts.

Install battery vent tube.

NOTE: GTI rental models comes with a sealed battery. No vent tube installation is needed.

⚠ WARNING

Ensure vent tube is not kinked or obstructed. Battery vent tube must be properly installed ⇨ and secured with a locking tie ⇦.

Sealed VRLA Battery Routine Charging

Model(s): GTI rental

This vehicle is equipped with a dry type battery that is already activated and requires no maintenance.

Place the battery on a leveled surface. Battery must be out of the vehicle.

CAUTION: Remember that unlike a conventional battery, the sealed VRLA battery won't be topped off during its life. Never pry off sealing caps: it is dangerous and damaging.

The single most important thing to maintaining a VRLA battery is to not let it sit discharged: keep it fully charged. A sealed VRLA battery should be kept to near fully charged for peak performance.

In fact, it can need charging more often than a car battery because it's probably not used routinely and, therefore, not "automatically" charged.

Use the following guidelines for boost charge. Always verify battery condition before charging, and 30 minutes after charging.

- A fully charged battery should read 12.8V or higher after battery has been off the charger 1 - 2 hours.

CAUTION: Overcharging can harm the battery beyond recovery.

It is not recommended to overcharge sealed VRLA batteries. Because of their characteristics, too much of a boost charge will decrease the volume of electrolyte. The longer the overcharge time, the greater the drop in electrolyte – and starting power.

Stage of charge	Voltage	Action	Charging time*
100%	12.8 – 13.0	None Check at 3 months from date of manufacture	None required
75% – 100%	12.5 – 12.8	May need slight charge, if no charge given, check in 3 months	3 – 6 hours
50% – 75%	12 – 12.5	Need charge	5 – 11 hours
25% – 50%	11.5 – 12	Need charge	At least 13 hours verify state of charge
0% – 25%	11.5 or less (see instructions below)	Need charge	20 hours

* Using a constant current charger at standard amps specified on the battery. Charging times can vary depending on type of charger. Follow the charger's instructions.

CAUTION: Water cannot be added to the sealed VRLA battery to make up the difference. Overcharging can warp plates, making future charging difficult or impossible. Watch charging times carefully, or ideally, use a Yuasa Automatic Charger. Always stop charging if the battery becomes really warm to the touch. Let it cool down 6 - 12 hours and resume charging.

⚠ WARNING

Always wear protective goggles and charge in a ventilated area. If battery gets really warm to the touch, discontinue charging and allow battery to cool down. No sparks, flames or smoking when charging.

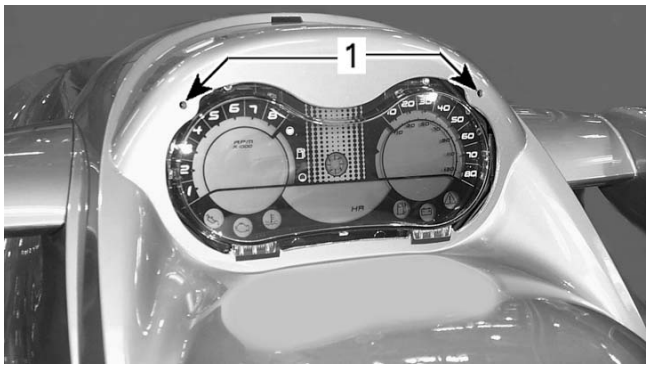
Charging Instructions for Sealed VRLA Batteries with Voltage of 11.5 or Less

Batteries with voltage below 11.5 V may require special equipment and procedures to recharge. In charging an over discharged battery having a terminal voltage of 11.5 V or lower, its internal resistance may be too high to charge at a normal charge voltage.

Therefore, it may be necessary to raise the voltage of the battery initially (25 V as a maximum), and charge for approximately 5 minutes. If the ampmeter shows no change in current after 5 minutes, you need a new battery. Current flowing into the battery at high voltage can become excessive. Monitor amperage and adjust voltage as necessary to keep current at the battery's standard amp rating. Charge for approximately 20 hours.

Rear View Mirrors Installation

Model(s): RXT and RXT-X (International)



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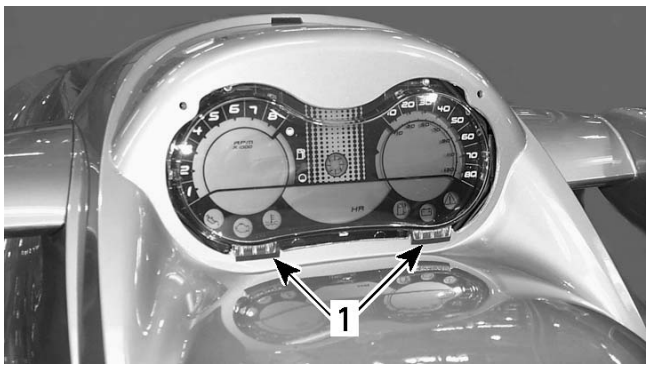
— Models **WITHOUT** the cluster bezel already installed —

Remove and keep both screws [1] retaining instrument cluster. Unplug and set cluster aside for now.

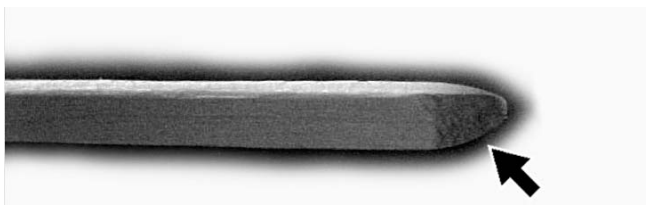


sbl2006-002-101_b

NOTE: At 2 places at bottom of cluster, rubber shims [1] are folded on body for a tight fit; care should be taken not to lose those shims so they are reused when reinstalling cluster.

— Models **WITH** the cluster bezel already installed —

CAUTION: Cluster's locking tabs may break when removing cluster bezel; extreme care must be taken while performing bezel removing procedure.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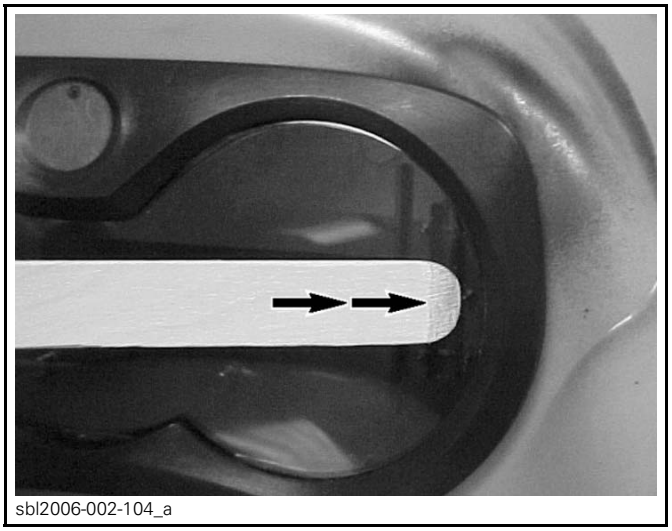
Take a small wooden stick (coffee stirrer type) and chamfer its end; refer to photo.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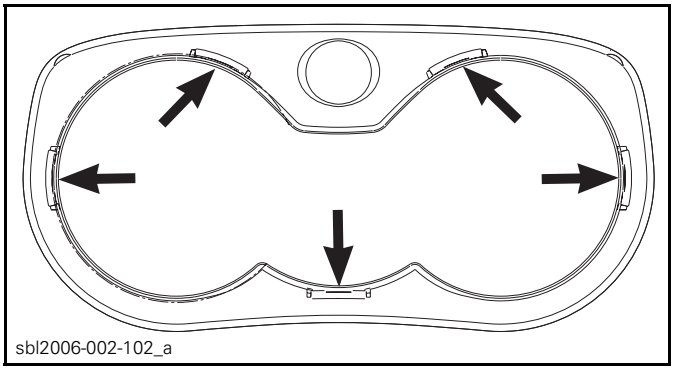
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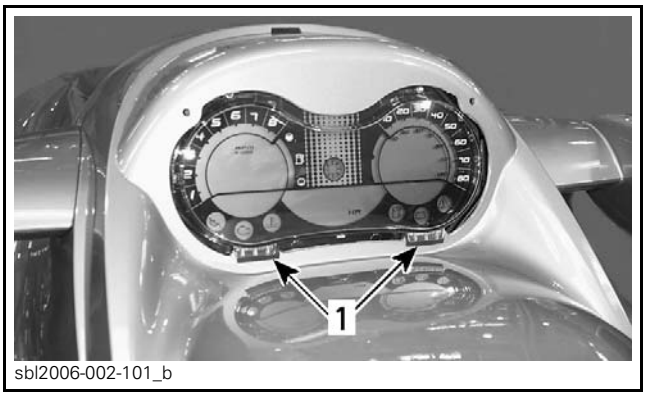
Slide chamfered end between bezel and cluster, in line with each side locking tab, pushing out smoothly while lifting out bezel; repeat procedure with lower locking tab and then, gently lift bezel upward, out of its upper locking tabs.

Remove and keep both screws retaining instrument cluster. Unplug and set cluster aside for now.



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NOTE: At 2 places at bottom of cluster, rubber shims [1] are folded on body for a tight fit; care should be taken not to lose those shims so they are reused when reinstalling cluster.


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On some models, it is required to cut the locking tie retaining support plate to front storage cover or to mirror.

Install rear view mirrors on both sides.

NOTE: Install left and right mirrors so that inscription "OBJECTS IN MIRROR ARE CLOSER THAN THEY APPEAR" is in upright position.

Secure each mirror with:

– 2 M8 x 120 hexagonal bolts (P/N 230 062 060) and
– 2 M8 stainless steel flat washers (P/N 234 062 500), all from predelivery kit .

Torque to 5 N•m (44 lbf•**in**).

NOTE: To ensure a correct installation, torque rear bolts (closest to mirror) before front ones.

Reconnect instrument cluster and secure back in place using same screws.

Torque screws to a **MAXIMUM** of 1.5 N•m (13 lbf•**in**).

— Models **WITH** the cluster bezel already installed —

Reinstall instrument cluster bezel simply by pushing it in so it snaps back in place.

— Models **WITHOUT** the cluster bezel already installed —

Bezel is in mirror bag; install instrument cluster bezel simply by pushing it in so it snaps in place.

Model(s): GTI SE
(International Only)

Pull out temporary plastic fasteners, 2 retaining pod and 2 retaining glove box.

Set glove box aside.

Align mirror support inside pod to install each side mirror.

Secure each mirror with:

- 2 M8 x 120 socket head bolts and
- 2 M8 stainless steel flat washers , all from predelivery kit .

Insert rearward screw through mirror support hole and in mirror and tighten manually.

NOTE: Install left and right mirror so that the inscription "OBJECTS IN MIRROR ARE CLOSER THAN THEY APPEAR" is in upright position.

Insert forward screw and tighten manually.

Without touching mirrors, complete tightening both mirrors in the following sequence:

– left rear screw then right rear;
– left front screw then right front.

Torque to 5 N•m (44 lbf•**in**).

Reinstall pod in place and insert 6 new rivets (P/N 293 150 123) (from predelivery kit) in their respective holes; do not pop yet.

Reinstall box in place and insert 4 new rivets (P/N 293 150 123) (from predelivery kit) in their respective holes; do not pop yet.

Secure mirror support using M10 stainless steel flat washer (P/N 234 002 600) and M10 x 40 socket head screw (P/N 205 004 060) from predelivery kit ; start screwing only to grab threads; do not torque yet.

Pop all rivets, box's and pod's and then, tighten mirror support screw. Torque to 8 N•m (71 lbf•**in**).

Model(s): GTI std and GTI std R International Only

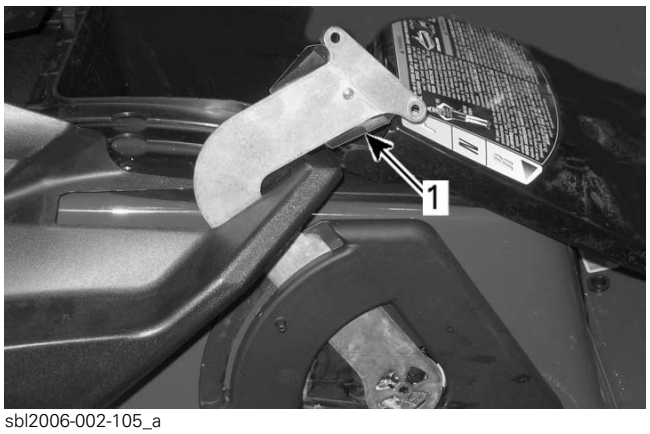
Insert 6 new rivets (from predelivery kit) in their respective holes, in pod; do not pop yet.

Insert 4 new rivets (from predelivery kit) in their respective holes, in box; do not pop yet.

Now that all rivets are in position, pop them from left to right and front to rear.

Reverse Handle

Model(s): GTI std, GTI std R, GTI SE International Only



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Install reverse handle (from glove box) using guide **[**1**]** (P/N 268 000 023), pop rivet (P/N 204 000 081), and 2 Phillips† M5 x 12 (P/N 250 000 319) screws from predelivery kit .

Handlebar Assembly / Handlebar Cover

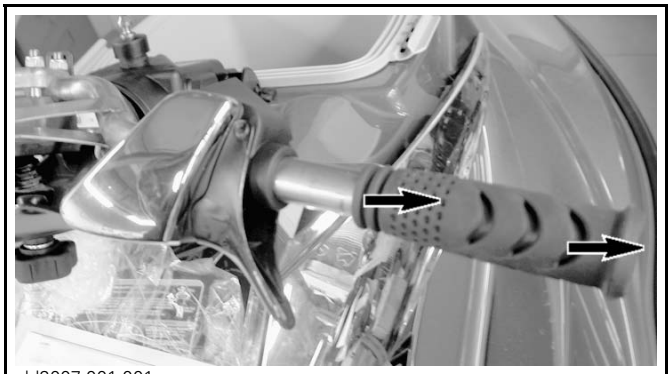
Model(s): International models except X

– Handlebar assembly is located on the deck at the rear of vehicle or ⇨ in the engine compartment for the RXP X⇦. To install it, refer to *HANDLEBAR ASSEMBLY* further in this bulletin.

Model(s): North American models except X

– Upper handlebar cover with padding is located inside front luggage compartment, underneath storage box. To install it, follow this procedure:

† Phillips is a registered trademark of Phillips Screw Co.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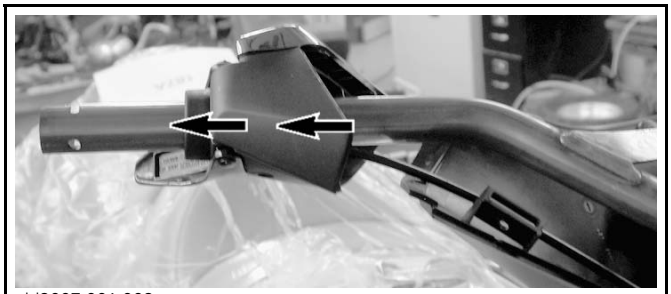
Pull out right side handle grip and unscrew M6 x 16 throttle lever housing socket set screw. Discard screw as there are new ones in the PDI kit.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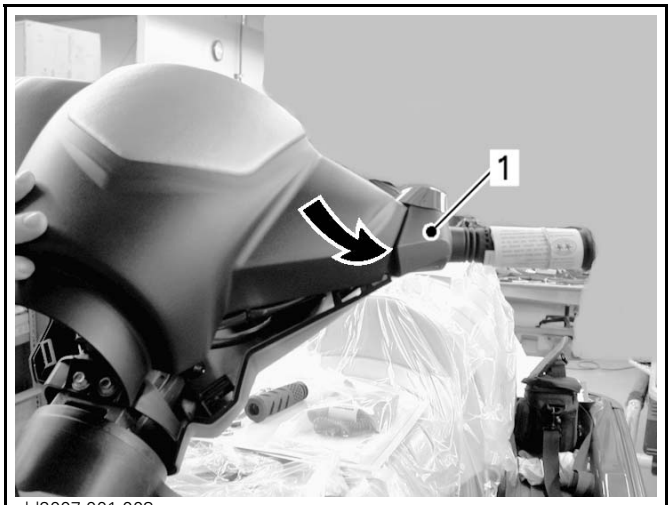
Push out throttle lever housing just enough to gain a little room on the inside approximately 12.7 mm (1/2 in).



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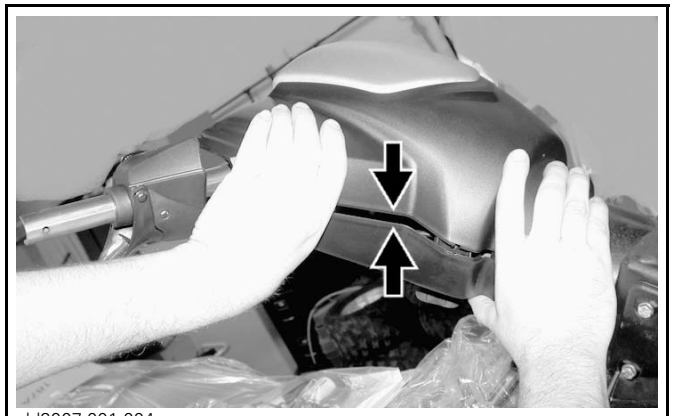
Align and slide upper handlebar cover under left side engine stop switch housing [1] and then, close it down slowly toward right side making sure to align **all 5 male/female tabs** along the way.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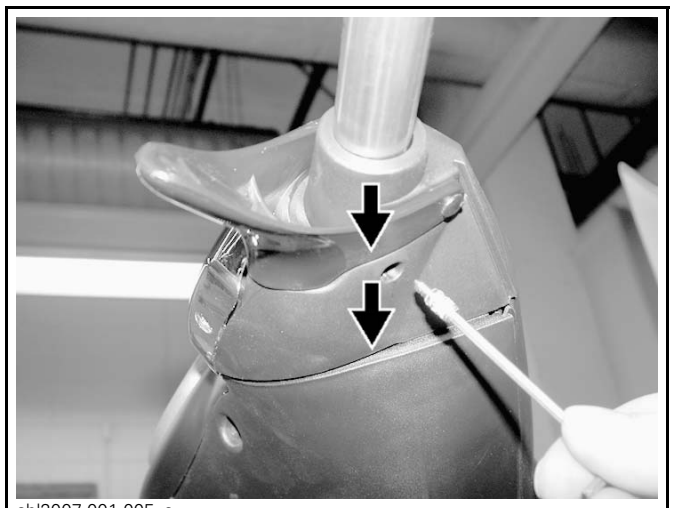
Press upper and lower handlebar covers together so tabs clip in position.

Secure upper and lower covers using three K40 x 16 screws (P/N 241 141 660) and washers (P/N 234 051 600) included in the predelivery kit.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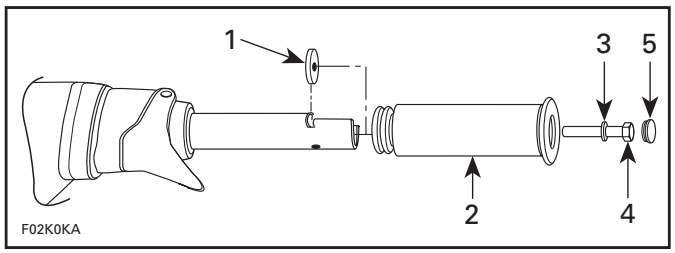
Push throttle lever housing back in position and secure in place using an M6 x 16 (P/N 250 000 036) socket head screw (with scotch grip — from predelivery kit).



Place an insert [1] (P/N 277 000 554) (from predelivery kit) into notch in handlebar.

Slide handle grip [2] back in place making sure it bottoms at proper place.

Secure with an M6 x 30 hexagonal bolt [4] (P/N 250 000 002) (with scotch grip — from predelivery kit) and an M6 stainless steel flat washer [3] (P/N 240 062 600) (from predelivery kit).

CAUTION: Ensure to install flat washer otherwise screw will damage grip end.

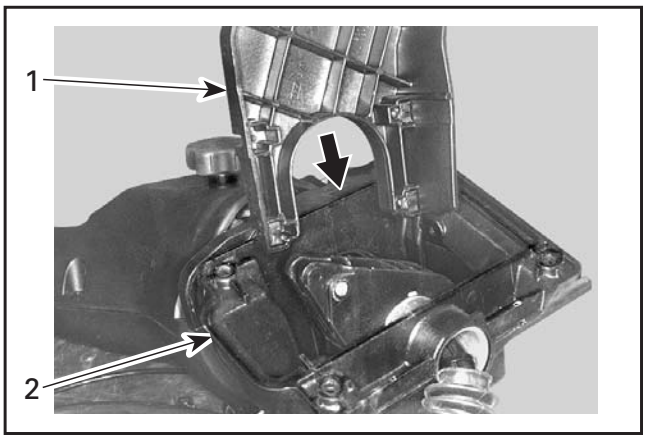
Torque bolt to 7 N•m (62 lbf•**in**).

Cover bolt by inserting rubber cap [5] (P/N 277 000 203) (from predelivery kit).

Repeat steps for other side.

Handlebar Assembly

Model(s): International Only except X



Install cable support [1] on steering support [2] and secure with:

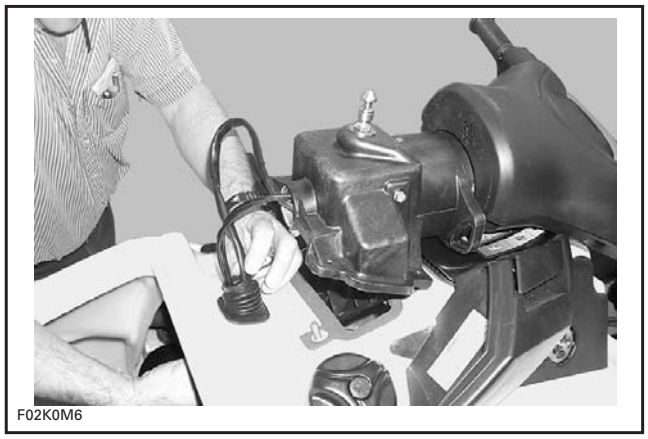
– 3 M6 x 20 hexagonal bolts (P/N 207 162 060) and
– 3 M6 flat washers (P/N 234 061 600) from predelivery kit .

Apply Loctite†† 243 (blue – threadlocker) on bolt threads.

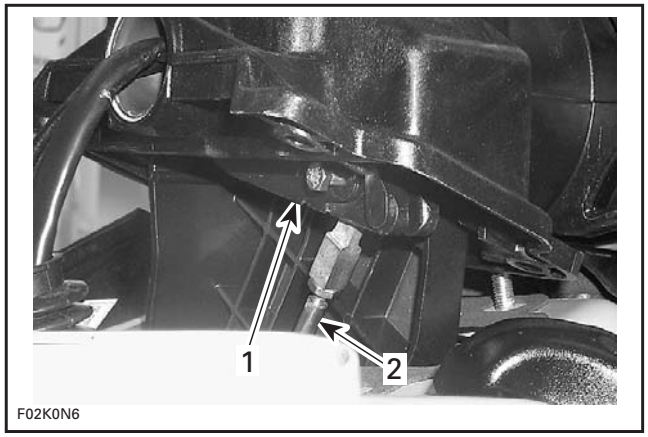
Torque to 5 N•m (44 lbf•**in**).

Remove both wing nuts from threaded studs on console.

Open front storage cover and remove storage tray (if so equipped).



Insert throttle cable and steering harness through console hole and position steering assembly.



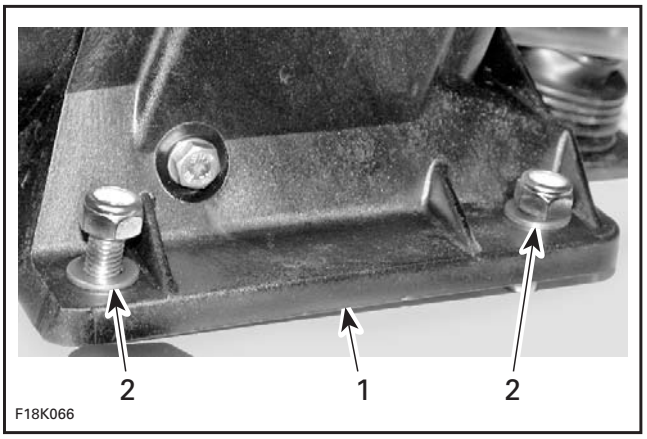
Attach steering cable end [2] to steering stem arm [1] and secure with the M6 x 30 hexagonal bolt (P/N 211 000 061) from predelivery kit .

Apply Loctite 243 (blue – threadlocker) on bolt threads.

Torque to 5 N•m (44 lbf•**in**).

NOTE: Ensure threads protrude through elastic nuts

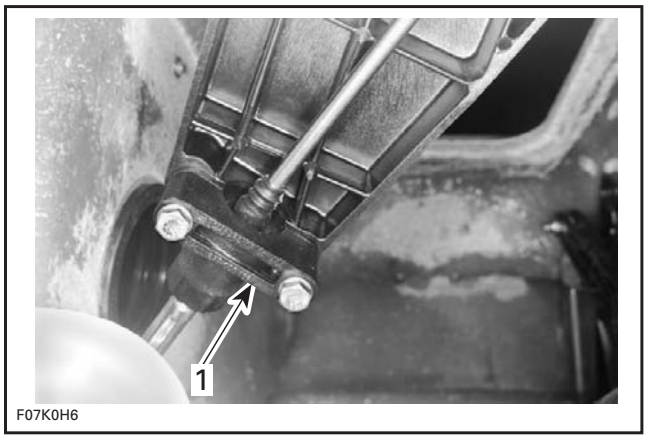
†† Loctite is a registered trademark of Loctite Corp.



Secure steering assembly **[**1**]** with 4 M8 flat washers **[**2**]** (P/N 234 081 600) and 4 M8 elastic nuts (P/N 232 581 200) from predelivery kit .

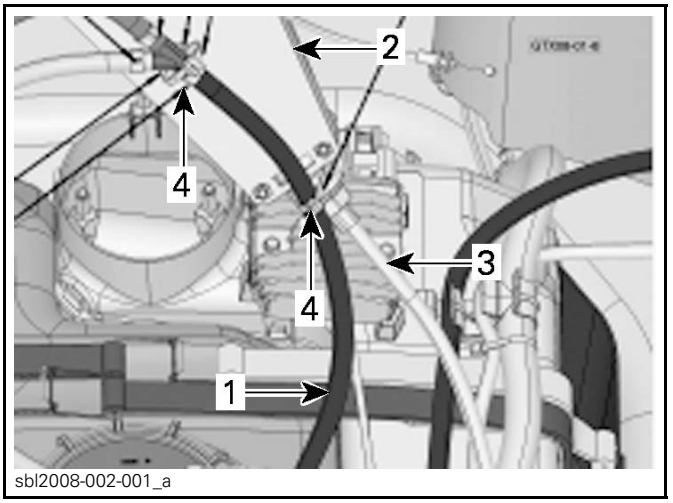
Apply Loctite 243 (blue – threadlocker) on bolt threads.

Torque to 12 N•m (9 lbf•ft).



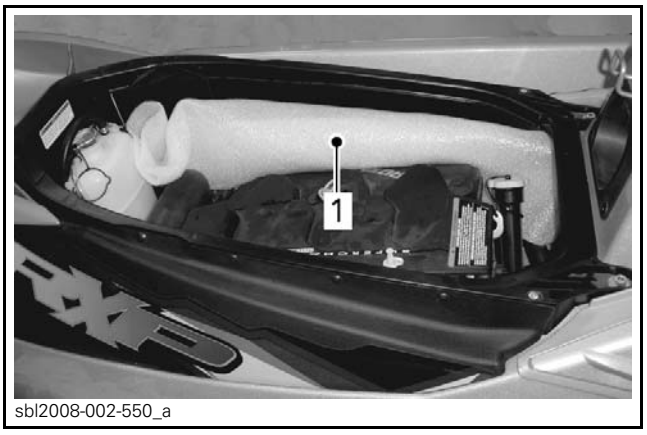
Install bearing support **[**1**]** (P/N 277 001 528) from predelivery kit to cable support using 2 M6 x 50 (P/N 207 065 060) hexagonal bolts and 2 M6 flat washers (P/N 234 061 600) from predelivery kit. Do not torque yet.

⇨ Steering alignment procedure, described further in this bulletin, must be performed prior to torque bolts. ⇦



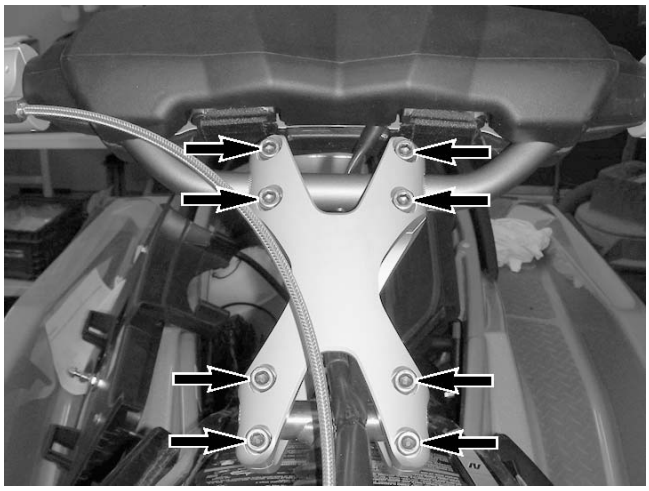
Secure vent tube **[**1**]** to steering support **[**2**]** and steering cable **[**3**]** using 2 locking tie,**[**4**]** (not provided)as show on the picture.

Model(s): ⇨ ***International only RXP-X model***

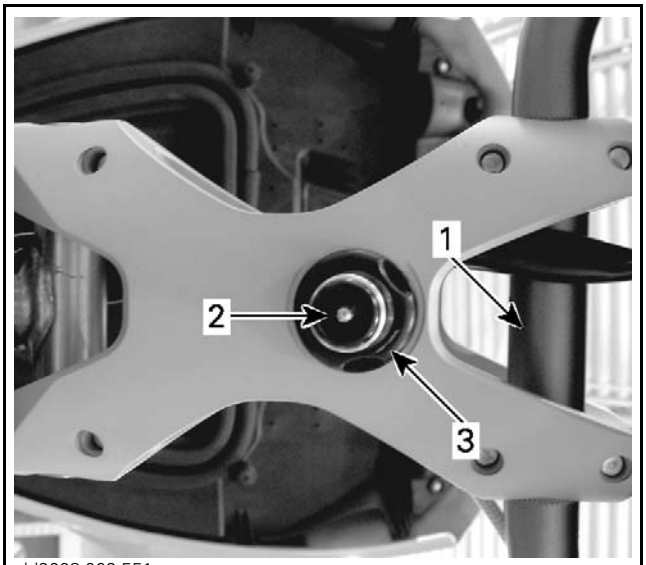


NOTE: Handlebar is now packaged into engine compartment.

Unwrap handlebar


sbl2008-002-004_a

Unscrew the 8 M8 bolts and collapse “X” riser block.

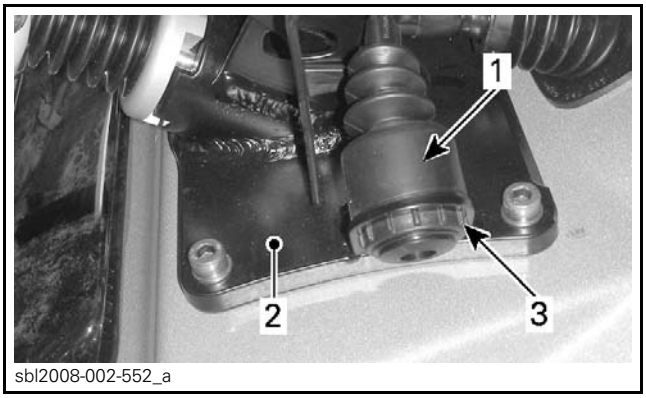


sbl2008-002-551_a

Install handlebar on “X” riser block with throttle lever on right side.

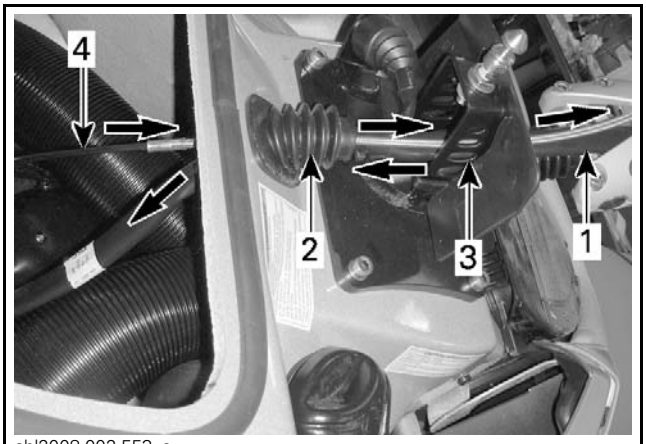
NOTE: Hole for DESS key must be toward rear of watercraft. It also must be toward handlebar [1].

Install DESS key [2] on “X” riser block as shown. Torque nut to 1.8 N•m (16 lbf•**in**).



sbl2008-002-552_a

Insert buzzer [1] through direction support / trim and install on bracket at right of direction support [2]. Apply Loctite 425 (P/N 293 800 040) on nut [3] and torque nut to 3.3 N•m (29 lbf•**in**).

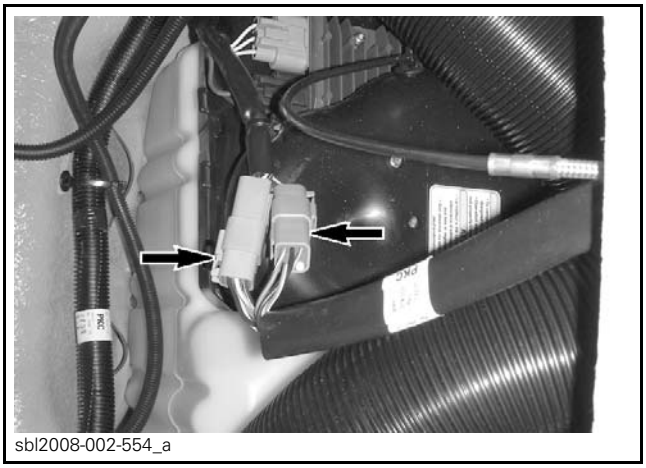


sbl2008-002-553_a

Insert wire harness [1] into direction support / trim [3] and grommet [2], toward storage compartment.

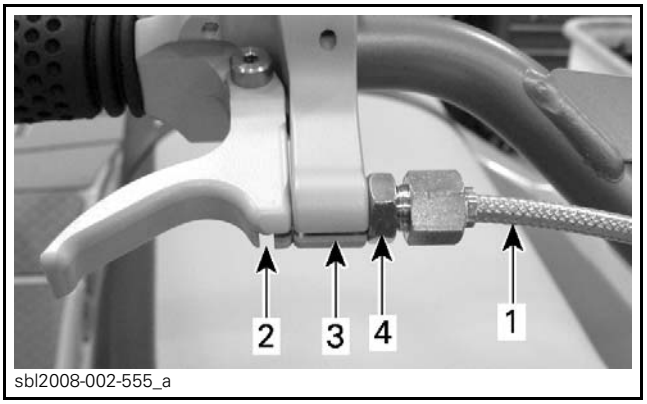
Insert throttle cable [4] from storage compartment into grommet and direction support / trim, toward handlebar.

NOTE: Throttle cable must pass over X riser.


sbl2008-002-554_a

Plug-in connectors into storage compartment.

NOTE: Connectors cannot be switched up.



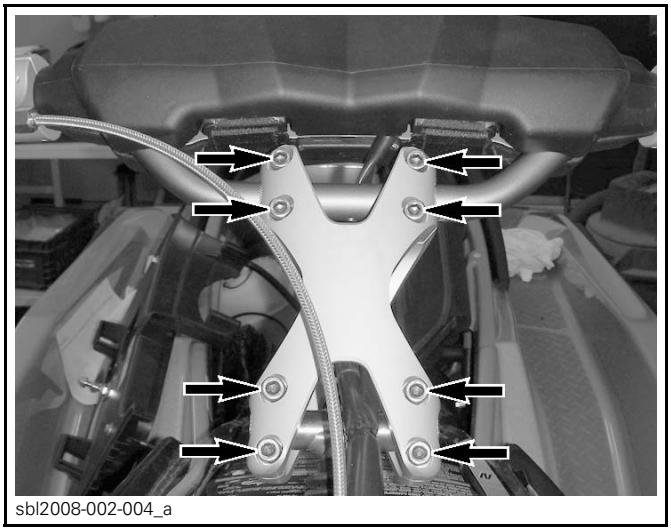
sbl2008-002-555_a

Connect throttle cable to throttle lever as follow:

- Hook cable end barrel [2] to throttle lever
- Pull throttle cable sheath [1] and install throttle cable adjustment screw [4] into its housing [3]
- Adjust as per procedure further in this bulletin.

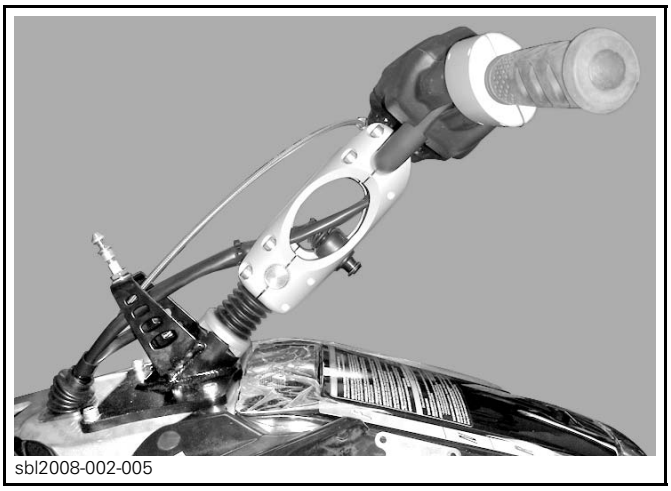
Model(s): North American X and RXT-X interational models

On North American X models, the handlebar is already installed on watercraft but has been tilt down for shipping. ⇦

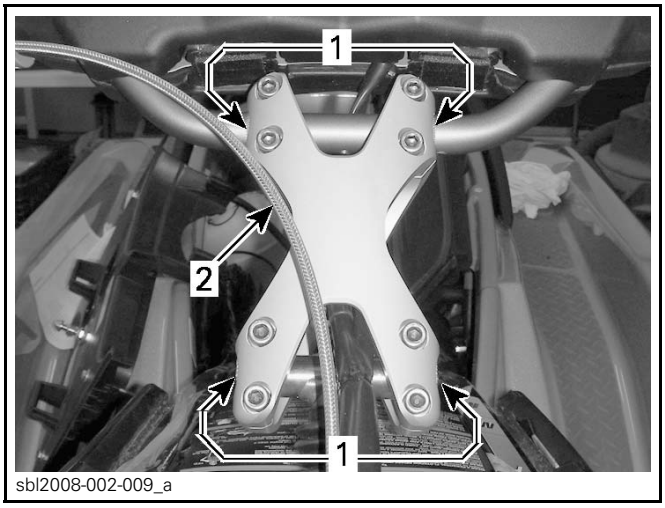

sbl2008-002-004_a

Loosen the 8 bolts shown on picture enough to move assembly freely.

Model(s): All X models


sbl2008-002-005

Align handlebar and X riser in order to be straight with steering stem.

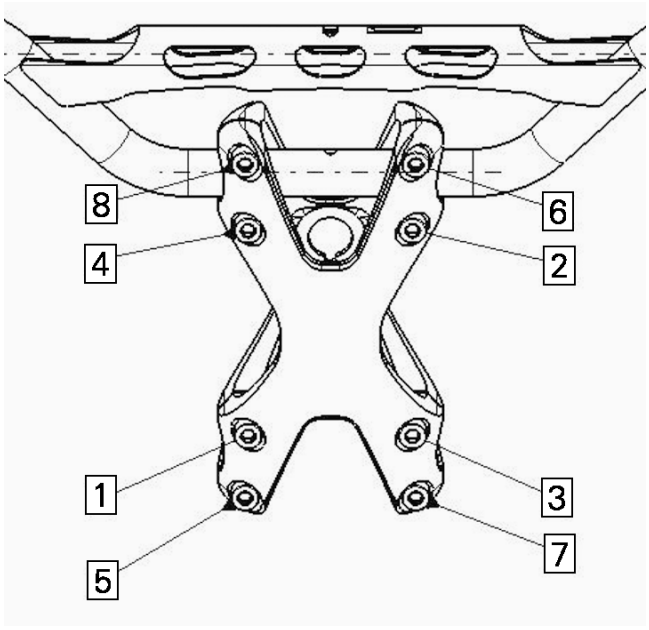


sbl2008-002-009_a

Make sure handlebar and stem is well centered in the X riser [1].

NOTE: ⇨ Throttle cable ⇦ [2] must pass over X riser.

Torque the 8 bolts first at 2 - 3 N•m (18 - 26 lbf•**in**), then at 19 N•m (14 lbf•ft) into the following sequence.



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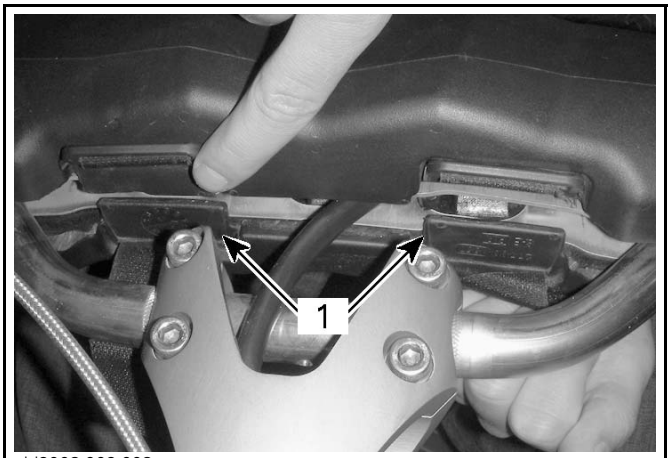
Model(s): International only X models


sbl2008-002-007_a

Loosen 2 screws that secure housing.

Move housing toward end of handle about 13 MM (1/2″).



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Wrap padding on handlebar, secure it with velcro™.

NOTE: Tabs must be around handlebar **[**1**]**.

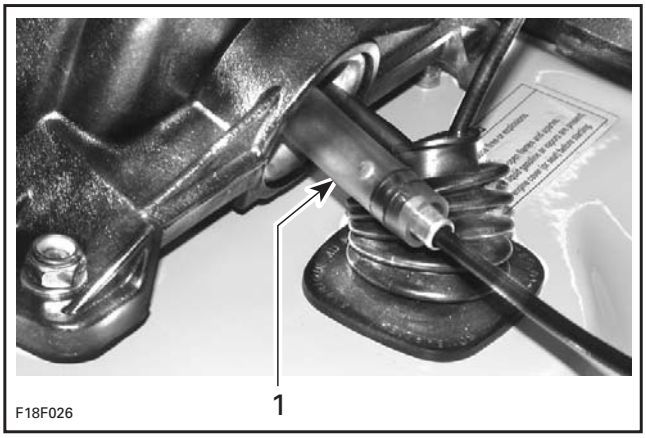
Put back housing at is original location and retorque bolts at 2 - 3 N•m (18 - 27 lbf•**in**).

Model(s): All X models

Install handle grip following same process as others watercrafts described previously.

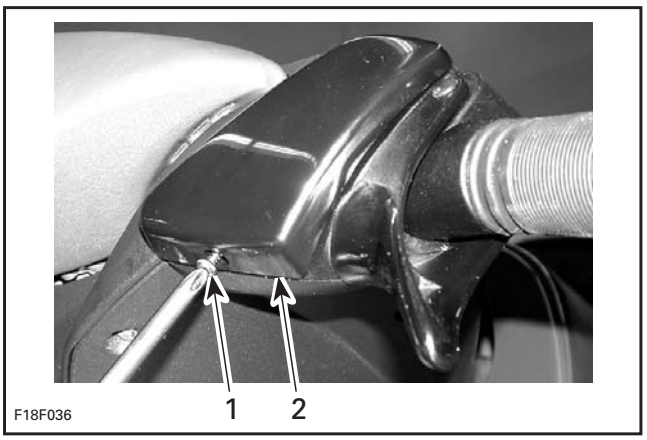
Throttle Cable

Model(s): International except X

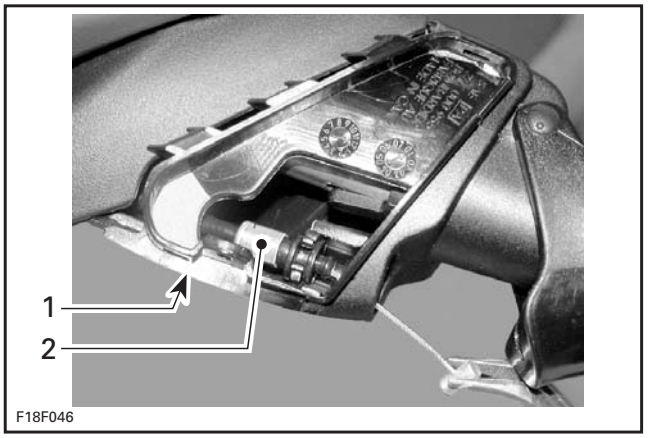


F18F026

Insert end of throttle cable into plastic tube **[**1**]** leading out from steering assembly.



Unscrew [1] and lift throttle housing cover [2].



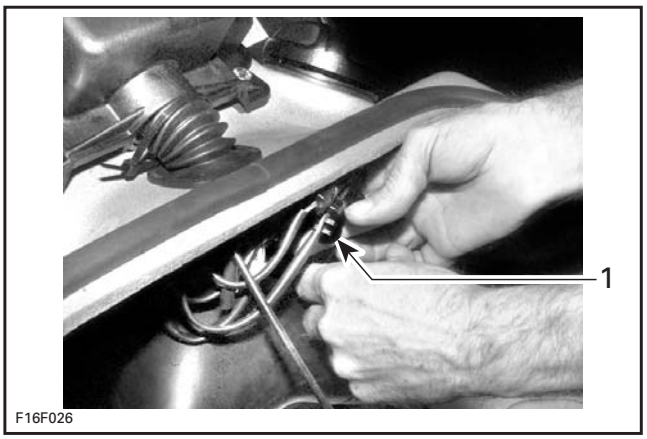
From handlebar side, pull hose/cable and install throttle cable [2] in throttle housing [1].

Reinstall throttle housing cover.

Install throttle cable into throttle lever.

Steering Harness

Model(s): International except X



Connect [1] steering harness connectors to main harness connectors.

Secure with locking tie from predelivery kit or, in some cases, use existing locking tie attached to vent tube bracket.

Steering Rubber Boot

Model(s): International except X

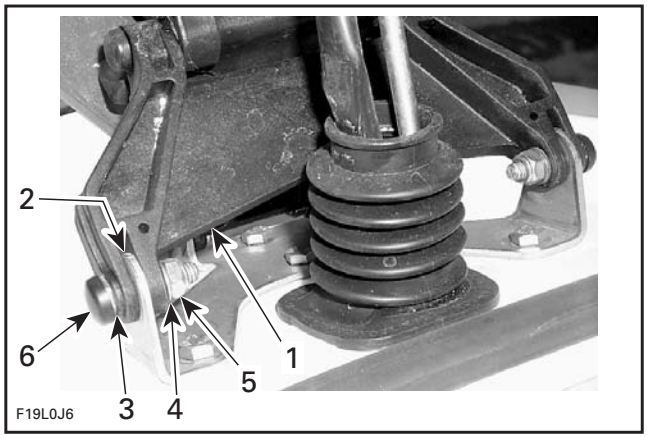
Position rubber boot.

Storage Cover Installation

Model(s): All GTX, RXP and RXP-X International

Remove plastic wrapping over storage cover assembly.

Remove access cover and storage basket from storage cover assembly.



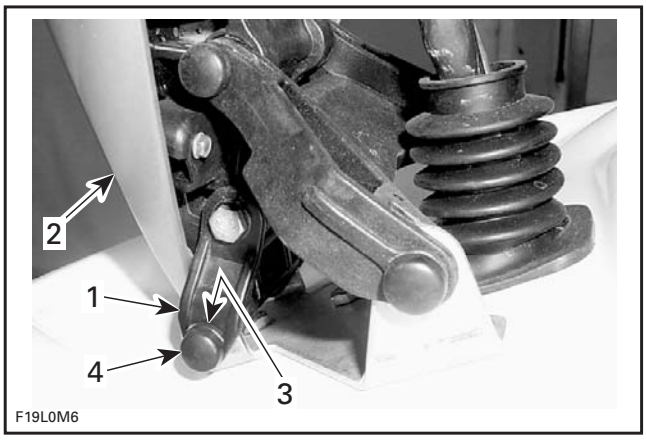
Secure rear arm of storage cover assembly **[**1**]** to deck pivot support **[**2**]** using:

– 2 M6 x 25 hexagonal bolts **[**3**]** (P/N 211 000 022),
– 2 M6 flat washers **[**4**]** (P/N 234 061 600) and
– 2 M6 elastic nuts **[**5**]** (P/N 232 561 200), all from predelivery kit .

Apply Loctite 243 (blue – threadlocker) on bolt threads.

Torque nuts to 4 N•m (35 lbf•**in**).

Cover bolt heads with pressure caps **[**6**]** (P/N 414 136 900) from predelivery kit .



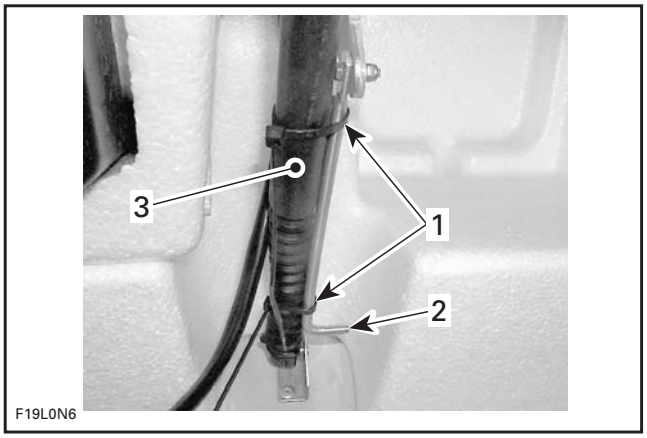
Secure front arm of deck pivot support **[**1**]** to storage cover assembly **[**2**]** with the M6 x 60 hexagonal bolt **[**3**]** (P/N 207 066 080) from predelivery kit .

Apply Loctite 243 (blue – threadlocker) on bolt threads.

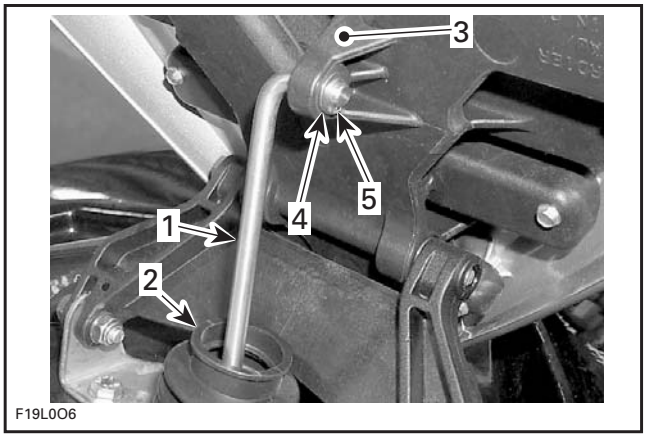
Torque to 4 N•m (35 lbf•**in**).

Cover bolt head with a pressure cap **[**4**]** (P/N 414 136 900) from predelivery kit .

Model(s): All RXP and RXP-X International



Cut locking ties **[**1**]** holding storage cover rod **[**2**]** to shock assembly **[**3**]**.



Insert storage cover rod **[**1**]** through deck rubber grommet **[**2**]**.

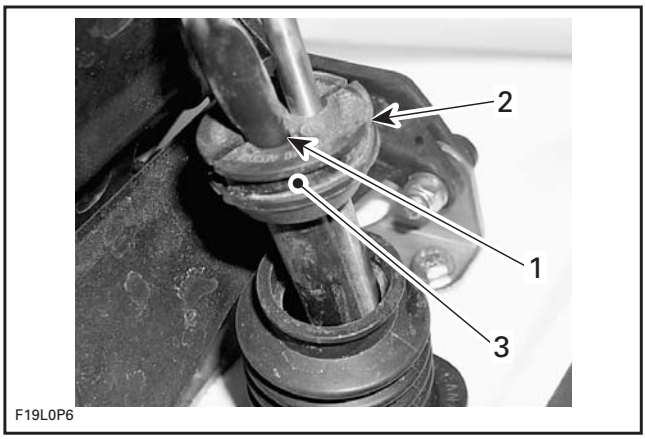
Clip shock female receptacle onto bracket ball.

Secure storage cover rod to storage cover **[**3**]** using:

– an M6 flat washer **[**4**]** (P/N 234 061 600) and
– a circlip **[**5**]** (P/N 293 370 005) from predelivery kit .


F19L216

NOTE: It may be necessary to compress shock to insert storage cover rod into storage cover, using a 1/2 inch drive ratchet.



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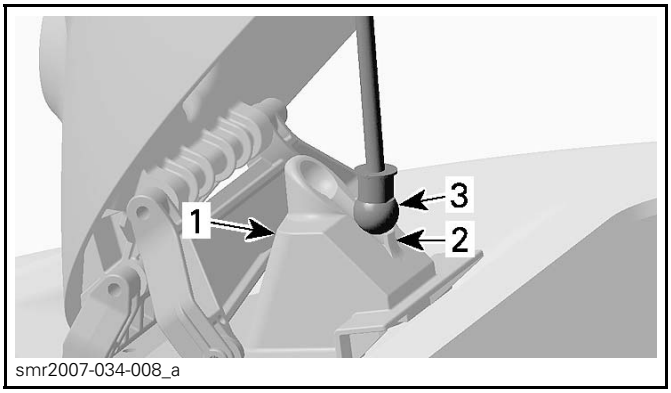
Insert storage cover harness [1] in oval hole of rubber grommet [2] (P/N 293 720 070), from predelivery kit .

Secure rubber grommet on left side of storage cover rod using locking tie [3], from predelivery kit .

Storage Cover Shock Installation On GTX STD,LTD and Wake



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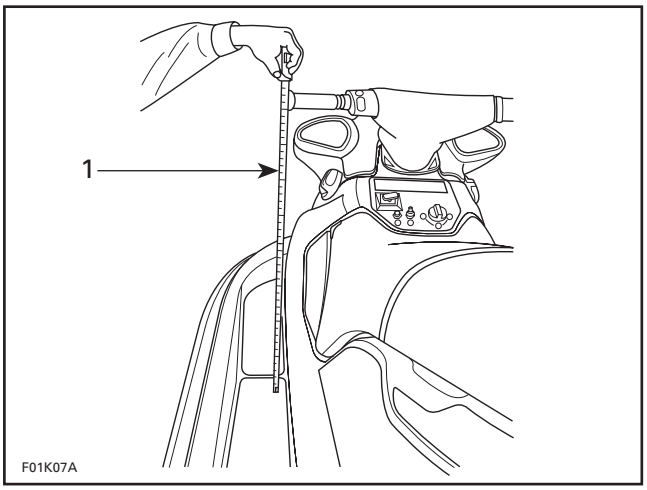
Snap the top of shock (body side) in inner shell socket.

Place the bottom of shock [3] (rod side) against the bump [2] on the shock support [1] and close storage compartment cover. The bottom of the shock will be inserted in its place automatically.

FINAL PREPARATION

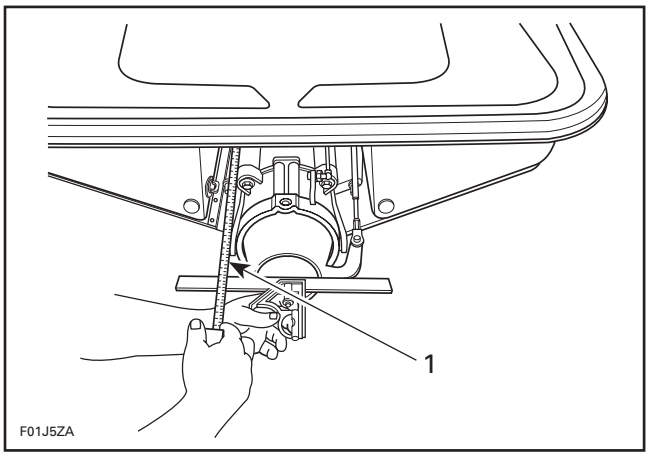
Steering Alignment

Model(s): ⇨ All



F01K07A

Position handlebar in straight ahead position by measuring each side the distance from handlebar grip end to floorboard [1].



F01J5ZA

Check jet pump nozzle position by placing a straight edge on nozzle outer end. Measure the distance on each side of the straight edge [1]. It must be equalled.

If necessary, steering alignment adjustment should be performed at steering cable support.

Model(s): All Models except GTI Series

Open storage compartment cover and remove basket.

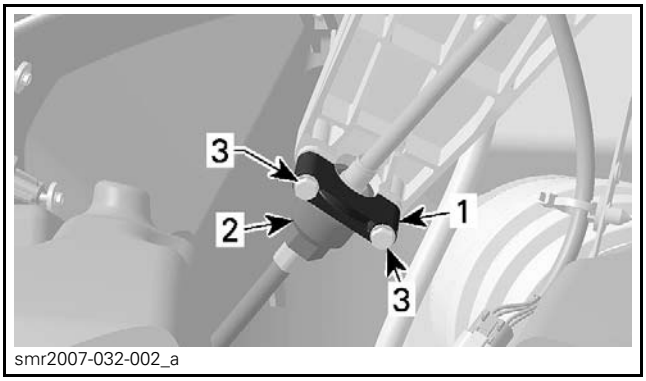
Model(s): RXP

Remove front vent tube to allow room.

Model(s): GTI Series

Remove the glove box.

Model(s): All Models



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Loosen bolts [3] securing the retaining block [1] at the bottom of cable support.

Turn adjustment nut [2] as required.

After adjustment, torque retaining block bolts to 6 N•m (53 lbf•**in**).

CAUTION: Verify when the handlebar is turned completely to the left or right side, that there is no interference with venturi, O.P.A.S. or VTS ring.

O.P.A.S.™ System Alignment

Model(s): All

All adjustments have already been performed at factory. If readjustments are needed, check O.P.A.S. system alignment procedure in appropriate *SHOP MANUAL*.

Fuel

Model(s): All

At predelivery, we suggest dealers to fill fuel tank with recommended fuel type as described in *SPECIFICATIONS TABLE*.

NOTE: Never add oil in fuel.

CAUTION: Never use fuel containing more than 10% alcohol (ethanol or methanol).

⚠ WARNING

Fuel is flammable and explosive under certain conditions. Always work in a well ventilated area.

It might be necessary to remove and install safety lanyard 2 or 3 times to initially feed fuel system.

NOTE: This procedure should be explained to purchaser at delivery.

NOTE: Verify fuel line connectors prior to powering-up ECM. This verification must be done visually as well as manually by physically checking each connection.

⚠ WARNING

Never install safety lanyard prior to checking fuel line connector tightness.

Fuel System Pressurization

Model(s): All

⚠ WARNING

At PDI, or whenever doing any type of repair on watercraft or if any components of fuel system are disconnected, a pressure test must be done before starting engine. Ensure to verify fuel line ends for damage. Always cut damaged end before reinstallation.

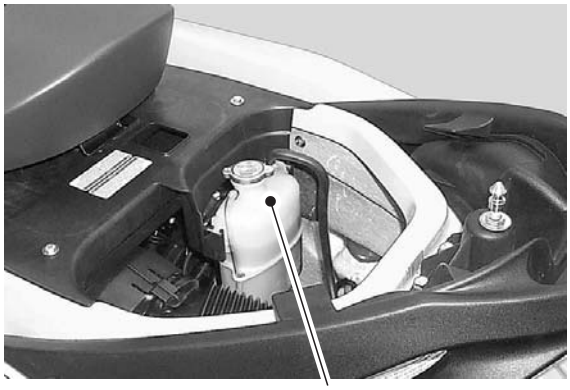
For fuel system pressure test procedure, refer to appropriate *SHOP MANUAL*.

Coolant Level

Model(s): All

⚠ WARNING

Check coolant level with engine cold. Never add coolant in cooling system when engine is hot.



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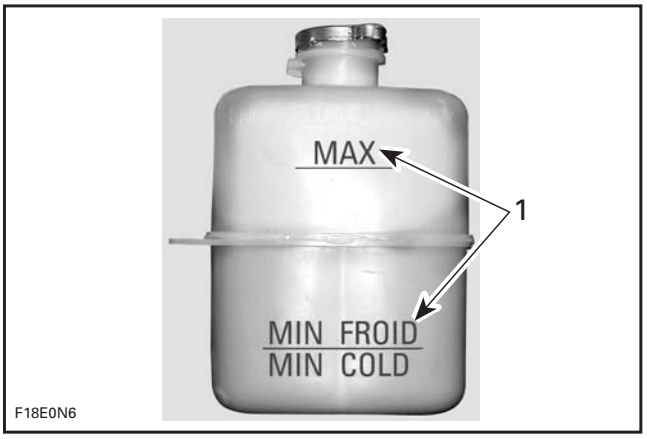
Remove seat or seat extension to expose cooling system expansion tank [1].



With vehicle on a level surface, liquid should be between MIN. and MAX. level marks [1] of coolant reservoir when engine is cold.

NOTE: Watercraft is leveled when it is in water. When on a trailer, raise trailer tongue and block in this position when bumper rail is leveled.

Add coolant to have level between marks as required.

Use a funnel to avoid spillage.

Do not overfill.

NOTE: Use recommended coolant type as described in the Specifications table.

Properly reinstall and tighten filler cap then reinstall seat.

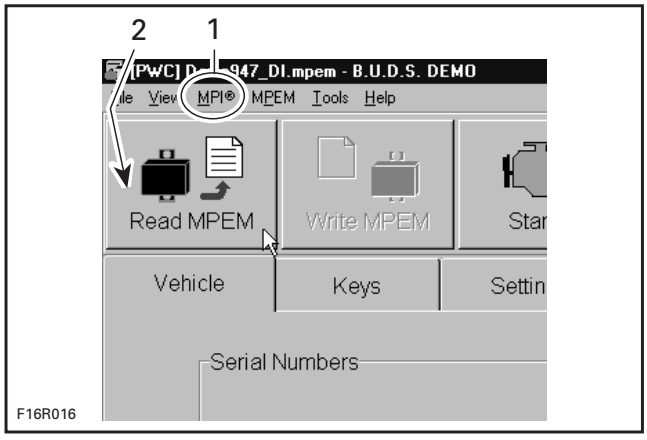
Watercraft Identification

Model(s): All

To enter watercraft identification or to program a safety lanyard, use BRP Utility and Diagnostic Software (B.U.D.S.) in conjunction with VCK.

Always use the latest B.U.D.S. version that is available from BOSSWeb (www.bossweb.brp.com).

NOTE: BUDS 2.3.17 version or higher is required.



Connect VCK components and start B.U.D.S.

Choose KW2000 Protocol from Choose Protocol option in the MPI drop-down menu [1].

Read ECM using leftmost icon [2].

Click on VEHICLE tab.

Enter purchaser name in the CUSTOMER field.

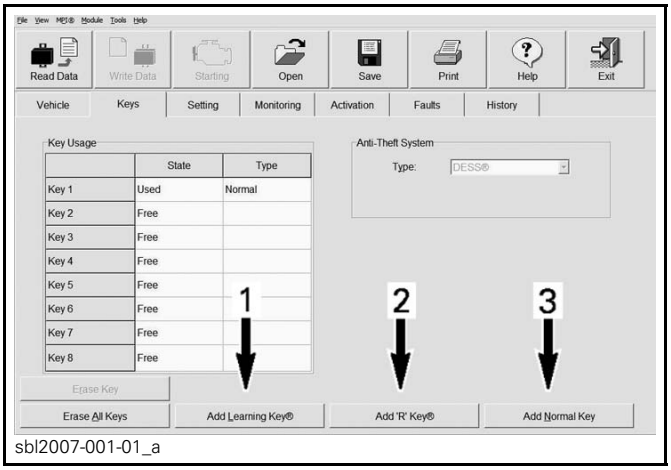
Click on second icon of toolbar Write ECM to register new informations from MPI memory to ECM.

Programming Keys With B.U.D.S.

Model(s): All

Refer to *SERVICE BULLETIN 2007-5* in regards to the 3 different lanyard options available on ALL 4– Tec's.

Only 2 lanyards are shipped per watercraft. All models to the exception of the GTI R are shipped with Standard key and Learning key.The GTI R is shipped with the Standard key and the R key.



Click on KEYS tab.

If key to be added is a Normal key (yellow key), click on ADD NORMAL KEY **[3]** button on bottom of screen.

If key to be added is a Learning key (white key), click on ADD LEARNING KEY **[1]** button on bottom of screen.

If key to be added is a R key (orange key), click on ADD R KEY **[2]** button on bottom of screen.

NOTE:

Install key on MPI or watercraft DESS post.

A new key is now saved in the computer.

NOTE: In International predelivery kit , a special intake manifold gasket is supplied **to lower engine power** on rental units in countries where required by law.

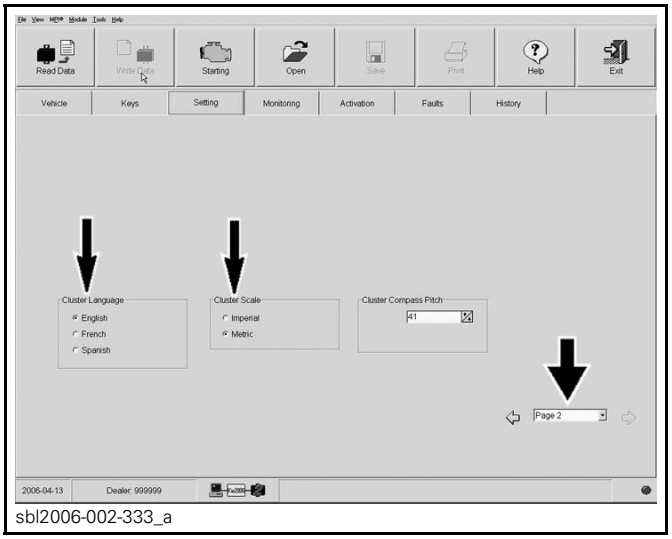
Model(s): All

Ensure to save new data in ECM using WRITE DATA button.

⚠ WARNING

Ensure to program keys as per bulletin 2007–5.

Cluster Language / Scale Settings



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In B.U.D.S., select "Settings", then "Page 2" to choose cluster language and scale settings (speedometer in miles or kilometers).

Ending a B.U.D.S. Session

Model(s): All

Click on FAULT tab and check if there are active faults.

If so, service watercraft then clear the faults in B.U.D.S.

IMPORTANT: After a problem has been solved, ensure to clear fault(s) in ECM using the VCK. This will properly reset appropriate counter(s). This will also records that problem has been fixed in ECM memory.

Click on WRITE DATA button to transfer new settings and information.

Click on EXIT button (rightmost) to end session.

Ensure to reinstall cap over the communication connector.

Recommended Engine Oil

Model(s): Naturally Aspirated Engines

Watercraft featuring 4-stroke engines without superchargers require 4-stroke motor oil meeting requirements for API service classification SL, SJ or SH. Always check API service label on oil container to be sure it includes those letters.

The BRP 4-stroke oil SAE 10W-40 (P/N: 219 700 346) sold by authorized Sea-Doo dealers meets those requirements.

The BRP synthetic oil 5W40 is very suitable for this engine. Ensure to respect same oil change intervals with synthetic oil.

Model(s): Supercharged Intercooled Engines

Use the BRP 4-stroke oil SAE 10W-40 (P/N: 219 700 346) or an equivalent approved by BRP. The same oil lubricates both the engine and the supercharger clutch. This oil has been thoroughly tested to be free of any additives that could impair functionality of supercharger clutch.

NOTE: Use of any oil that is not recommended may void BRP's limited warranty.

CAUTION: NEVER use synthetic oil in 215 and 255 HP engines. This would impair the proper operation of the supercharger clutch. Do not add any additives to the recommended oil. Beware that mineral oil not recommended by BRP may also contain additives (friction modifiers) that may cause inappropriate slippage of the supercharger and eventually lead to premature wear. For this reason, XP-S 10W 40 mineral oil (P/N 219 700 346) or a BRP approved equivalent are the only recommended oils.

Oil Viscosity

Same oil is recommended for all seasons and all ambient temperatures.

Engine Oil Level

Model(s): All

Engine is factory filled with oil.

Verify oil level using following procedure:

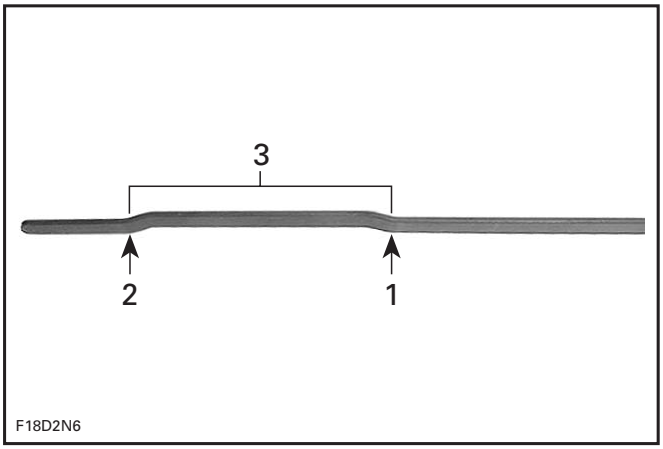
CAUTION: If watercraft is not in water, make sure to cool engine using flush kit, otherwise, engine, drive line and/or exhaust system may be severely damaged. Refer to FLUSHING in the *(OPERATOR'S GUIDE)* and follow procedure.

CAUTION: When using flush kit, never run engine for more than 5 minutes; drive line seal has no cooling when watercraft is out of water; severe damage may occur.

- Warm-up engine then let idle for 30 seconds before stopping.
- Stop engine.
- Wait at least 30 seconds then pull dipstick out and wipe clean.

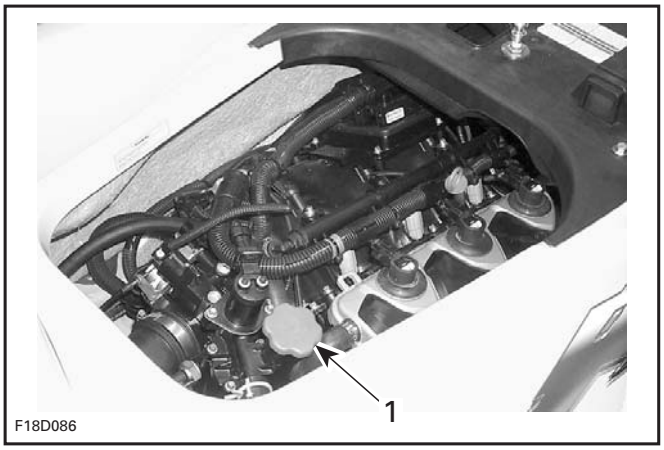
⚠ WARNING

Engine oil may be hot. Certain components in engine compartment may be very hot. Direct contact may result in skin burn.



- Reinstall dipstick, push in completely.
- Remove dipstick and read oil level. It should be between marks [3].

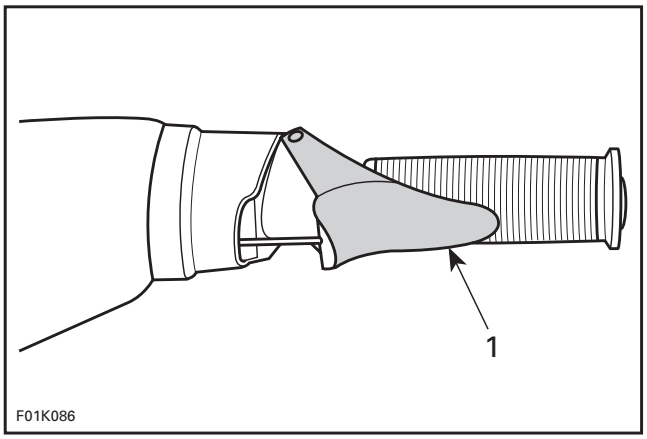
• Mark [1] for FULL.
• Mark [2] for ADD.



- To add oil, unscrew oil cap [1]. Place a funnel into opening and add recommended oil to proper level. Do not overfill.
- Properly reinstall oil cap and dipstick.

Throttle Cable

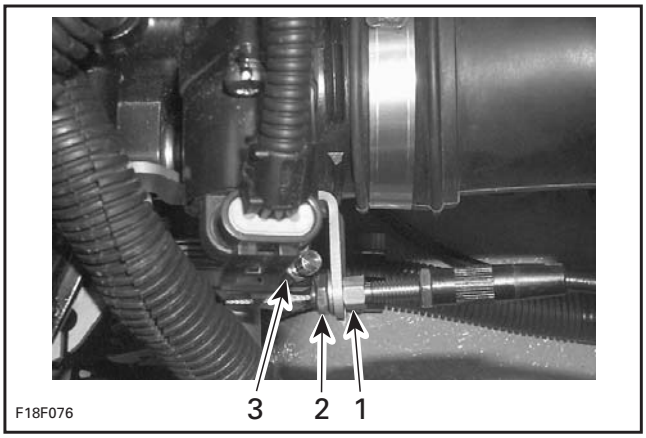
Model(s): All



Verify adjustment of throttle cable as follows:

- Throttle lever [1] must reach handlebar grip without causing strain to cable or cable bracket.
- With throttle lever in full throttle position, throttle lever stopper should almost contact throttle body.
- To verify that there is free play, apply a light pressure on throttle plate(s), a slight play should be obtained.
- With throttle lever released, it must have a free play of 1 - 3 mm (0.04 - 0.120 in) in cable.

CAUTION: Improper cable adjustment will cause strain on cable and/or damage cable bracket or throttle lever at handlebar.



To adjust throttle cable, loosen jam nut [2] then turn adjustment nut [1] as necessary.

⚠ WARNING

Make sure idle speed screw contacts throttle cam when throttle lever is fully released at handlebar.

CAUTION: Never attempt to adjust idle speed through throttle body tamper proof screw. If so, it would impair idle speed stability. Besides, no adjustment could be performed by dealer nor factory to correct idle speed. Throttle body would need to be replaced. Also take into account that it might change engine emission level and engine might not meet EPA/CARB requirements.

For more informations on throttle cable adjustment, refer to appropriate Sea-Doo *SHOP MANUAL*.

FINAL INSPECTION

General Instructions

Make sure that tool kit and fire extinguisher are properly secured at their proper location.

Complete *PREDELIVERY CHECK LIST* following all instructions.

Test ride watercraft.

Decal Protective Films

Protective film on all decals must be removed. Slowly peel off protective films.

Cleaning the Watercraft

Clean watercraft.

CAUTION: Clean apparent fiberglass and plastic parts with a clean cloth and soapy water or isopropyl alcohol. Never use strong detergent, degreasing agent, paint thinner, acetone, etc. Do not apply isopropyl alcohol directly on decals.

Accessories

On some models, accessories, such as wakeboard rack, GPS (Global Positioning System), etc., must be installed prior to delivering vehicle. Refer to appropriate *OPERATOR'S MANUAL* for complete installation procedure.

NOTE: Procedures must be explained to purchaser.

Delivery to Purchaser

General Instructions

Where possible, give a brief demo ride and explain watercraft operation.

Explain, complete and return WARRANTY REGISTRATION CARD (legal requirement).

Purchaser must sign *PREDELIVERY CHECK LIST*.

Give to purchaser:

- Operator's guide
- Safety DVD
- Copy of the *PREDELIVERY CHECK LIST*

Fuel System

Explain to purchaser that it might be necessary to remove and install safety lanyard 2 or 3 times to initially feed fuel system.

Handlebar Tag

A tag is tied to handlebar. Leave it there until delivery and make sure purchaser reads it.

Break-In Period

Explain to purchaser that with Sea-Doo watercraft powered by Rotax® engines, a break-in period of 10 hours is required before continuous operation at full throttle. To achieve a good break-in, vary engine speed every few minutes with brief wide open throttle accelerations of up to 15 seconds. Continued wide open throttle runs and prolonged cruising without speed variations should be avoided, this can cause engine damage during break-in period.

NOTE: Never add oil in fuel tank during break-in period.

SPECIFICATIONS

Technical Specifications

Vehicle		GTI Models		
		GTI 130	GTI SE 130	GTI se 155
ENGINE				
Type		Rotax® 4-TEC®. Single Over Head Camshaft (SOHC)		
		130 hp	130 hp	155 hp
Number of cylinder		3		
Number of valve		12 valves (4 per cylinder) with hydraulic lifters (no adjustment)		
Displacement		1494 cc ⇨ (91 cu. in) ⇦		
Intake system	Type	Naturally aspirated		
	Throttle body	52 mm		
Bore		100 mm (3.9 in)		
Stroke		63.4 mm (2-1/2 in)		
Compression ratio		10.6:1		
Cooling		Closed-loop system		
ELECTRICAL SYSTEM				
Ignition		Digital inductive		
Starter		Electric		
Battery		12 V, 30 A•h. Electrolyte type		
Spark plug	Make and type	NGK, DCPR8E		
	Gap	0.75 mm (.030 in)		
PROPULSION				
Propulsion system		Sea-Doo® direct drive		
Jet pump	Type	Axial flow, single stage. Large hub with 10-vane stator		
	Material	Composite/aluminum		
Transmission		Direct drive, forward/neutral/reverse		
Impeller		Stainless steel		
DIMENSIONS				
Length		322.5 cm (127 in)		
Width		124.5 cm (49 in)		
Height		117 cm (45.9 in)		
Weight (dry)		332 kg (732 lb)	338.8 kg (747 lb)	338.8 kg (747 lb)
Rider capacity (refer to load limit)		1, 2 or 3		
Storage capacity		46.8 L (12.4 U.S. gal)		
Load limit (passengers + luggage)		273 kg (600 lb)		
LIQUIDS				
Fuel	Type	Unleaded		
	Minimum octane	Inside North America: (87 (RON + MON)/2) Outside North America: 92 RON Refer to *RECOMMENDED FUEL* for more details		
	Tank capacity	60 L (15.9 U.S. gal)		
Engine oil	Type	Refer to *LIQUIDS* section		
	Capacity	3 L (2.7 U.S. qt) oil change w/filter 4.5 L (4.1 U.S. qt) total		
Cooling system	Coolant type	Ethylene-glycol 50%/50% antifreeze/demineralized water. Coolant containing corrosion inhibitors for internal combustion aluminum engines		
	Capacity	5.5 L (5 U.S. qt) total		

Vehicle		GTX Models		
		GTX 155	GTX 215	GTX LTD 215
ENGINE				
Type		Rotax® 4-TEC®. Single Over Head Camshaft (SOHC)		
		155 hp	215 hp	215 hp
Number of cylinder		3		
Number of valve		12 valves (4 per cylinder) with hydraulic lifters (no adjustment)		
Displacement		1494 cc ⇨ (91 cu. in) ⇦		
Intake system	Type	Naturally aspirated	Supercharged with intercooler	
	Throttle body	52 mm		
Bore		100 mm (3.9 in)		
Stroke		63.4 mm (2-1/2 in)		
Compression ratio		10.6:1	8.4:1	8.4:1
Cooling		Closed-loop system		
ELECTRICAL SYSTEM				
Ignition		Digital inductive		
Starter		Electric		
Battery		12 V, 30 A•h. Electrolyte type		
Spark plug	Make and type	NGK, DCPR8E		
	Gap	0.75 mm (.030 in)		
PROPULSION				
Propulsion system		Sea-Doo® direct drive		
Jet pump	Type	Axial flow, single stage. Large hub with 10-vane stator		
	Material	Composite/ aluminum	Aluminum	Aluminum
Transmission		Direct drive, forward/neutral/reverse		
Impeller		Stainless steel		
DIMENSIONS				
Length		331 cm (130.3 in)		
Width		122 cm (48 in)		
Height		120 cm (47.2 in)		
Weight (dry)		361 kg (795 lb)	366 kg (805 lb)	366 kg (805 lb)
Rider capacity (refer to load limit)		1, 2 or 3		
Storage capacity		129.8 L (34.3 U.S. gal)		
Load limit (passengers + luggage)		273 kg (600 lb)		
LIQUIDS				
Fuel	Type	Unleaded		
	Minimum octane	Inside North America		
		(87 (RON + MON)/2)	(91 (RON + MON)/2)	(91 (RON + MON)/2)
		Outside North America		
		92 RON	95 RON	95 RON
	Tank capacity	60 L (15.9 U.S. gal)		
Engine oil	Type	Refer to *LIQUIDS* section		
	Capacity	3 L (2.7 U.S. qt) oil change w/filter 4.5 L (4.1 U.S. qt) total		
Cooling system	Coolant type	Ethylene-glycol 50%/50% antifreeze/demineralized water. Coolant containing corrosion inhibitors for internal combustion aluminum engines		
	Capacity	5.5 L (5 U.S. qt) total		

Vehicle		RXP Models		
		RXP 155	RXP 215	RXP-X 255
ENGINE				
Type		Rotax® 4-TEC®. Single Over Head Camshaft (SOHC)		
		155 hp	215 hp	255 hp
Number of cylinder		3		
Number of valve		12 valves (4 per cylinder) with hydraulic lifters (no adjustment)		
Displacement		1494 cc (91 cu. in)		
Intake system	Type	Naturally aspirated	Supercharged with intercooler	Supercharged with external intercooler
	Throttle body	52 mm		
Bore		100 mm (3.9 in)		
Stroke		63.4 mm (2-1/2 in)		
Compression ratio		10.6:1	8.4:1	8.4:1
Cooling		Closed-loop system		
ELECTRICAL SYSTEM				
Ignition		Digital inductive		
Starter		Electric		
Battery		12 V, 30 A•h. Electrolyte type		
Spark plug	Make and type	NGK, DCPR8E		
	Gap	0.75 mm (.030 in)		
PROPULSION				
Propulsion system		Sea-Doo® direct drive		
Jet pump	Type	Axial flow, single stage. Large hub with 10-vane stator		
	Material	Composite/ aluminum	Aluminum	Aluminum
Transmission	Type	Direct drive, forward/neutral/reverse		
	VTS	—	Electric	Electric
Impeller		Stainless steel		
DIMENSIONS				
Length		307 cm (121 in)		
Width		122 cm (48 in)		
Height		118 cm (46.6 in)	118 cm (46.6 in)	116 cm (45.8 in)
Weight (dry)		340 kg (750 lb)	359 kg (792 lb)	361 kg (795 lb)
Rider capacity (refer to load limit)		1 or 2		
Storage capacity		40.3 L (10.7 U.S. gal)		
Load limit (passengers + luggage)		181 kg (399 lb)		
LIQUIDS				
Fuel	Type	Unleaded		
	Minimum octane	Inside North America		
		(87 (RON + MON)/2)	(91 (RON + MON)/2)	(91 (RON + MON)/2)
		Outside North America		
		92 RON	95 RON	95 RON
	Tank capacity	60 L (15.9 U.S. gal)		
Engine oil	Type	Refer to *LIQUIDS* section		
	Capacity	3 L (2.7 U.S. qt) oil change w/filter 4.5 L (4.1 U.S. qt) total		
Cooling system	Coolant type	Ethylene-glycol 50%/50% antifreeze/demineralized water. Coolant containing corrosion inhibitors for internal combustion aluminum engines		
	Capacity	5.5 L (5 U.S. qt) total		

Vehicle		RXT Models	
		RXT 215	RXT-X 255
ENGINE			
Type		Rotax® 4-TEC®. Single Over Head Camshaft (SOHC)	
		215 hp	255 hp
Number of cylinder		3	
Number of valve		12 valves (4 per cylinder) with hydraulic lifters (no adjustment)	
Displacement		1494 cc ⇨ (91 cu. in) ⇦	
Intake system	Type	Supercharged with intercooler	Supercharged with external intercooler
	Throttle body	52 mm	
Bore		100 mm (3.9 in)	
Stroke		63.4 mm (2-1/2 in)	
Compression ratio		8.4:1	
Cooling		Closed-loop system	
ELECTRICAL SYSTEM			
Ignition		Digital inductive	
Starter		Electric	
Battery		12 V, 30 A•h. Electrolyte type	
Spark plug	Make and type	NGK, DCPR8E	
	Gap	0.75 mm (.030 in)	
PROPULSION			
Propulsion system		Sea-Doo® direct drive	
Jet pump	Type	Axial flow, single stage. Large hub with 10-vane stator	
	Material	Aluminum	
Transmission	Type	Direct drive, forward/neutral/reverse	
	VTS	—	Electric
Impeller		Stainless steel	
DIMENSIONS			
Length		331 cm (130 in)	
Width		122 cm (48 in)	
Height		120 cm (47.2 in)	118 cm (46.5 in)
Weight (dry)		370 kg (815 lb)	372 kg (818 lb)
Rider capacity (refer to load limit)		1, 2 or 3	
Storage capacity		129.8 L (34.3 U.S. gal)	123 L (32.5 U.S. gal)
Load limit (passengers + luggage)		273 kg (600 lb)	
LIQUIDS			
Fuel	Type	Unleaded	
	Minimum octane	Inside North America	
		(91 (RON + MON)/2)	
		Outside North America	
		95 RON	
	Tank capacity	60 L (15.9 U.S. gal)	
Engine oil	Type	Refer to *LIQUIDS* section	
	Capacity	3 L (2.7 U.S. qt) oil change w/filter 4.5 L (4.1 U.S. qt) total	
Cooling system	Coolant type	Ethylene-glycol 50%/50% antifreeze/demineralized water. Coolant containing corrosion inhibitors for internal combustion aluminum engines	
	Capacity	5.5 L (5 U.S. qt) total	

Vehicle		WAKE	
		WAKE 155	WAKE 215
ENGINE			
Type		Rotax® 4-TEC®. Single Over Head Camshaft (SOHC)	
		155 hp	215 hp
Number of cylinder		3	
Number of valve		12 valves (4 per cylinder) with hydraulic lifters (no adjustment)	
Displacement		1494 cc ⇨ (91 cu. in) ⇦	
Intake system	Type	Naturally aspirated	Supercharged with intercooler
	Throttle body	52 mm	
Bore		100 mm (3.9 in)	
Stroke		63.4 mm (2-1/2 in)	
Compression ratio		10.6:1	8.4:1
Cooling		Closed-loop system	
ELECTRICAL SYSTEM			
Ignition		Digital inductive	
Starter		Electric	
Battery		12 V, 30 A•h. Electrolyte type	
Spark plug	Make and type	NGK, DCPR8E	
	Gap	0.75 mm (.030 in)	
PROPULSION			
Propulsion system		Sea-Doo® direct drive	
Jet pump	Type	Axial flow, single stage. Large hub with 10-vane stator	
	Material	Composite/ aluminum	Aluminum
Transmission	Type	Direct drive, forward/neutral/reverse	
	VTS	Electric	
Impeller		Stainless steel	
DIMENSIONS			
Length		331 cm (130.3 in)	
Width		122 cm (48 in)	
Height		120 cm (47.2 in)	
Weight (dry)		382 kg (840 lb)	388 kg (853 lb)
Rider capacity (refer to load limit)		1, 2 or 3	
Storage capacity		129.8 L (34.3 U.S. gal)	
Load limit (passengers + luggage)		273 kg (600 lb)	
LIQUIDS			
Fuel	Type	Unleaded	
	Minimum octane	Inside North America	
		(87 (RON + MON)/2)	(91 (RON + MON)/2)
		Outside North America	
		92 RON	95 RON
	Tank capacity	60 L (15.9 U.S. gal)	
Engine oil	Type	Refer to *LIQUIDS* section	
	Capacity	3 L (2.7 U.S. qt) oil change w/filter 4.5 L (4.1 U.S. qt) total	
Cooling system	Coolant type	Ethylene-glycol 50%/50% antifreeze/demineralized water. Coolant containing corrosion inhibitors for internal combustion aluminum engines	
	Capacity	5.5 L (5 U.S. qt) total	