November 21, 2012 Subject: **Can-Am™ Spyder™ ST Predelivery Inspection**

No. **2013-3**

REVISION 2
March 14th, 2013

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2013	Spyder ST Series	Refer to table on next pages for complete listing	All

▶Text(s) between arrows is (are) modified element(s) to the original publication.◀

TABLE OF CONTENTS

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IMPORTANT NOTICE

This bulletin must be used in conjunction with the check list enclosed in the bag with the *OPERATOR'S GUIDE*. Make sure that Spyder roadster *PRE DELIVERY CHECK LIST* is completed and signed.

⚠ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized BRP Can-Am roadster dealer/distributor. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. BRP however, 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 service representative and specific *SHOP MANUAL* sections.

Make sure the customer receives the *OPERATOR'S GUIDE*, *PREDELIVERY CHECK LIST* signed copy and *SAFETY DVD*.

⚠ 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.

MODEL LISTING

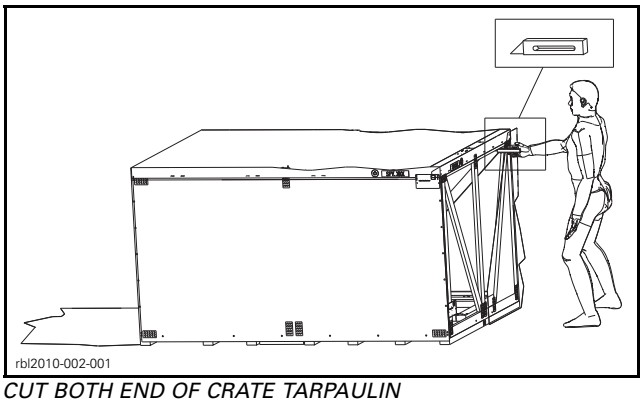
YEAR	MODEL	MODEL NUMBER	COUNTRY	PREDELIVERY KIT	SERIAL NUMBER
2013	Spyder ST SM5	B7DD	Australia	(P/N 703 100 386)	All
		B7DC, B7DE	Canada United States of America		
		B7DB	Europe		
	Spyder ST SE5	B8DB, B8DC	Canada United States of America		
	Spyder ST Limited SE5	D4DF	Australia		
		D4DA, D4DC, D4DG, D4DH	Canada United States of America		
		D4DB, D4DD	Europe		
	Spyder ST-S SM5	C1DB, C1DC, C1DD, C1DG	Canada United States of America	(P/N 703 100 387)	
	Spyder ST-S SE5	C2DH	Brazil		
		C2DB, C2DC, C2DE, C2DG	Canada United States of America		
		C2DD	Europe		

UNCRATING

Crate Cover Removal

NOTICE Allowing the crate to drop may cause serious damage to vehicle.

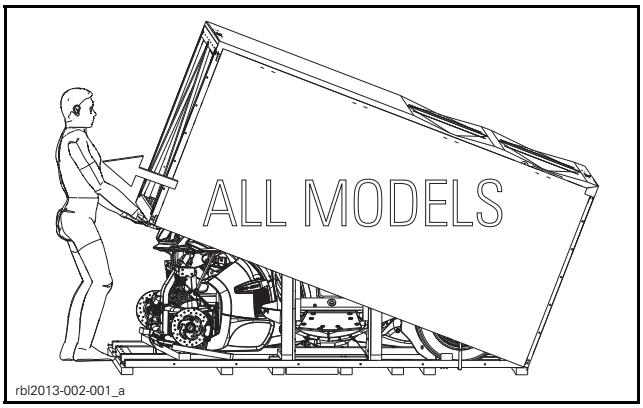
1. Position the crate on a firm, level surface.
2. Carefully cut both ends of crate tarpaulin to locate the front of vehicle.



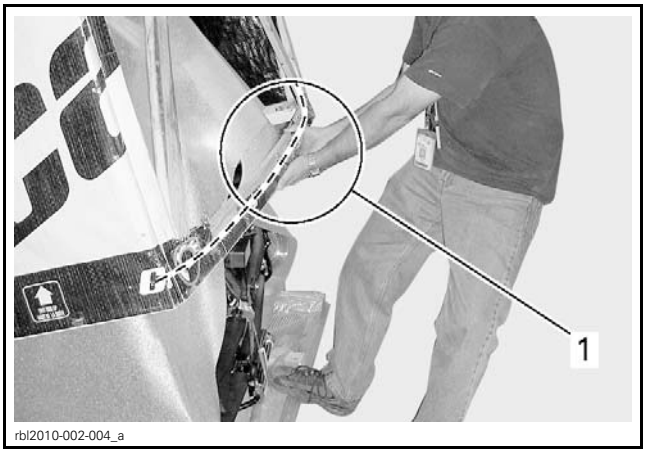
CUT BOTH END OF CRATE TARPAULIN

3. Remove all screws holding crate cover to crate base.
4. Tilt cover from the front side of the vehicle then pull cover toward you to clear vehicle fascia.

NOTICE Do not raise cover vertically. Tilt cover located on the front side of the vehicle. Refer to illustration.



TYPICAL - TILT COVER THEN PULL IT



FRONT OF VEHICLE
1. Pull crate cover to clear front fascia of the vehicle

NOTICE The crate cover must be pulled toward the outside while lifting it to avoid to damage vehicle.

NOTE: Screws that are used are Robertson† #2 type (or equivalent) that require the use of an appropriate screwdriver.

Parts and Sub-crates Removal

NOTICE Be careful not to scratch the cover bumper and the front fascia.

NOTE: The sub-crates are located on each side of the vehicle.

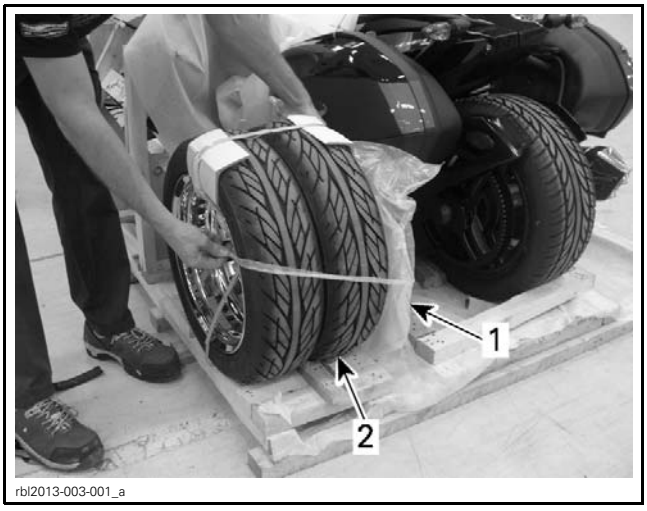
1. Remove protective foam from vehicle.

2. On LH side, remove all screws holding front cargo module sub-crate.

† Robertson is a registered trademark of Robertson Inc.

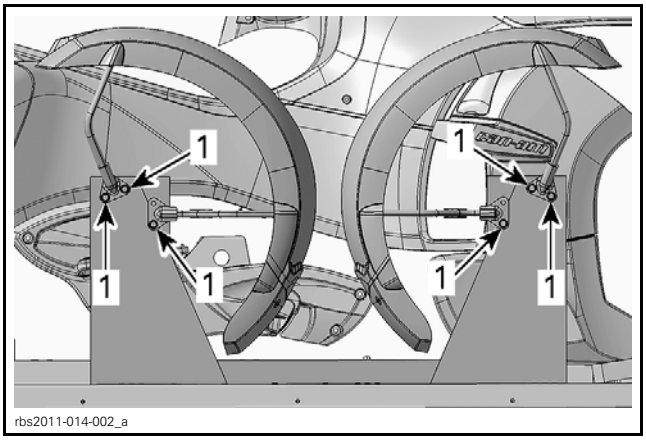
TYPICAL - LH SIDE
1. Sub-crate that contains front cargo module

3. Remove windshield and front wheels from crate base.



TYPICAL
1. Windshield
2. Front wheels

4. On RH side, remove six bolts and two fenders from sub-crate.



TYPICAL - RH SIDE - SUB-CRATE THAT CONTAINS FRONT FENDER
1. Bolts

5. On RH side, remove all **nails** holding front fender sub-crate and remove sub-crate.

Parts Check

Ensure that the crate includes the following items (inside front storage compartment or secured to front of vehicle):

NOTE: Empty all contents from front storage compartment.

DESCRIPTION	MODEL	QTY
Operator's guide	All	1
Predelivery check list		1
Safety DVD		1
Predelivery kit		1
Service covers		2
Windshield trims		2
Wheel caps		2
Fender reinforcement brackets		2
Front cargo liner	ST LTD	1

The predelivery kit includes the following items:

DESCRIPTION (LOCATION)	QTY
Wheel lug nut - chrome (front wheel) (Base and LTD)	6
Wheel lug nut - black (front wheel) (ST-S)	6
M6 X 20 hexagonal flange screw (front storage compartment)	4

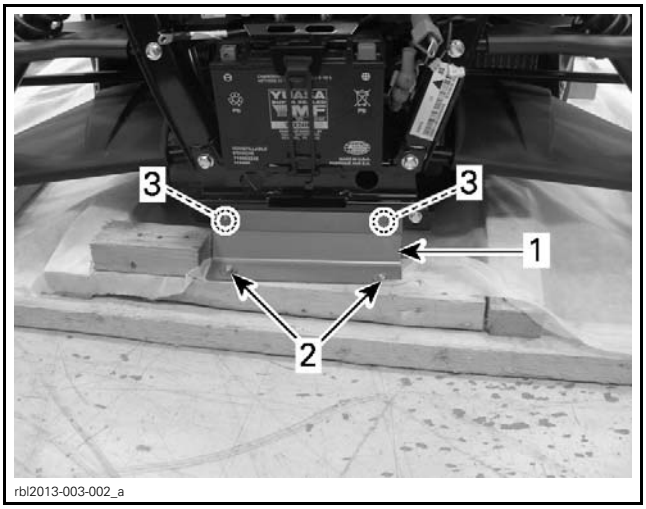
DESCRIPTION (LOCATION)	QTY
M6 X 12 hexagonal flange screw (front storage compartment)	2
M6 panel nut (body panels)	4
M6 x 20 Torx screw (body panels)	4
Plastic washer (body panels)	4
M8 x 20 hexagonal flange screw (front fender)	8
M6 x 12 hexagonal flange screw (rear fender reinforcement)	4
Locking tie (rear fender)	4
M6 X 20 Torx screw (rear fender)	4
M6 X 16 Torx screw (rear fender reinforcement)	4
Plastic washer (rear fender)	4
M6 elastic flange nut (rear fender)	4
M6 elastic flange nut (rear fender reinforcement)	4
Battery installation kit (2 bolts and 2 nuts)	1
M5 socket button head screw (windshield)	4
M5 flat washers (windshield)	8
M5 black hexed nut (windshield)	4

Lifting the Front of Vehicle

⚠ WARNING

No one should be standing in front or at the back of the vehicle while straps are being cut.

1. Remove plate retaining front of vehicle to crate base by removing screws and nuts.



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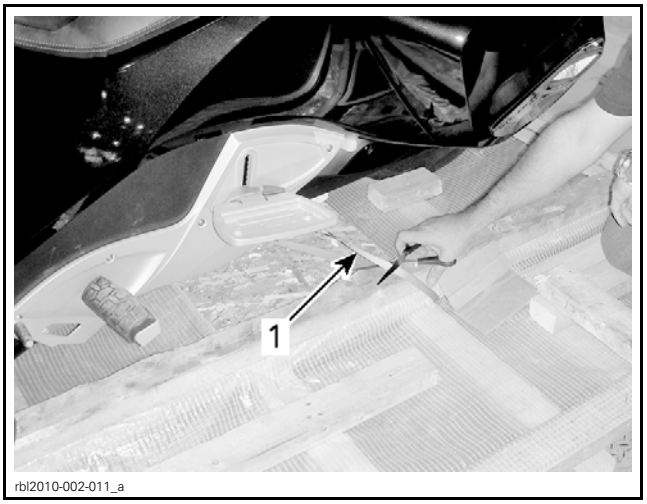
1. Plate
2. Screws
3. Screw and nuts

2. Remove strap retaining side of vehicle to crate base.



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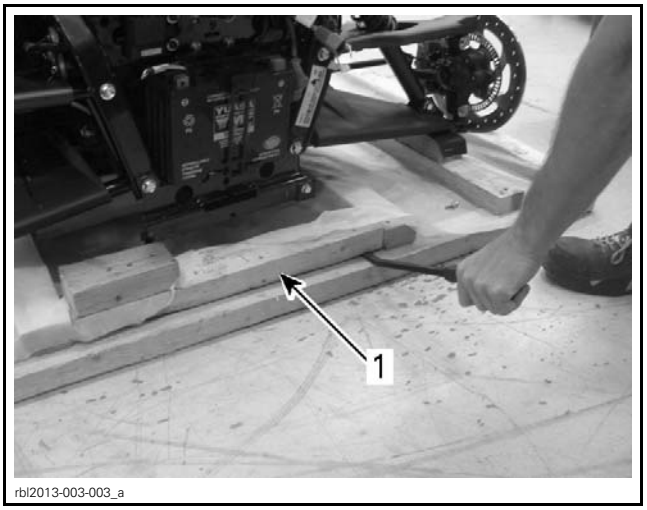
TYPICAL
1. Side strap

NOTE: The following steps will describe two methods to lift the front of the vehicle. The conventional one uses a hydraulic jack and the alternate one uses a chain block. Use the proper method according to your shop layout.

Conventional Method

1. Remove piece of wood located at the front of the vehicle.

NOTE: This piece of wood can be used to level the jack.



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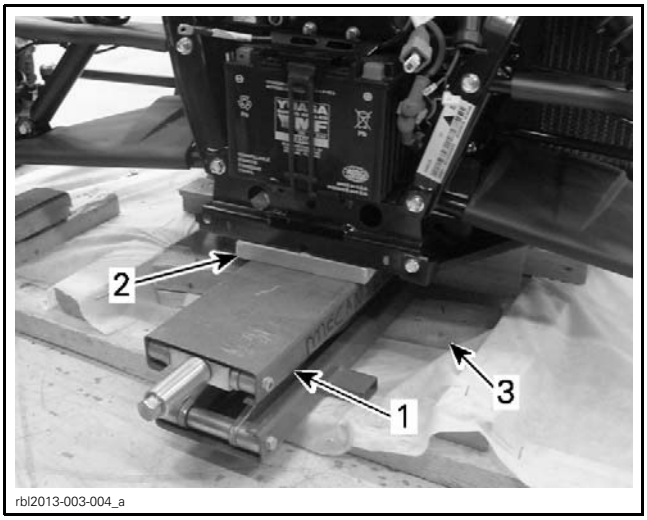
1. Wood piece to remove

2. Install a jack with a piece of wood on top to increase contact surface.



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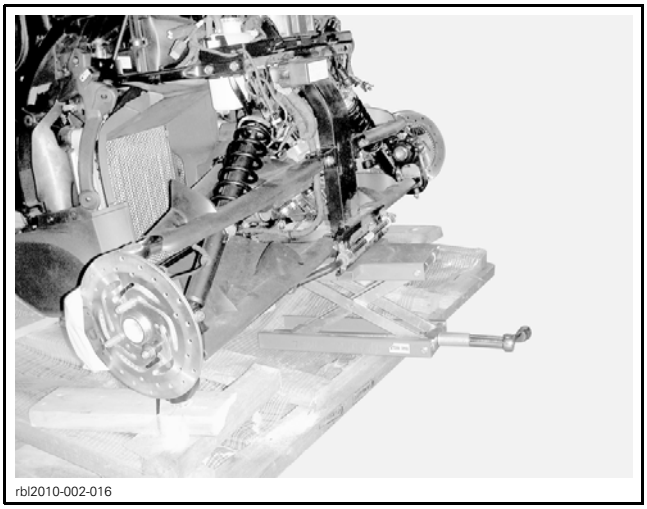
TYPICAL - FRONT OF VEHICLE
1. *Jack*
2. *Wood piece*
3. *Wood piece removed earlier*

⚠ CAUTION Approach with care when vehicle is jacked because it may be unstable.

3. Lift the vehicle.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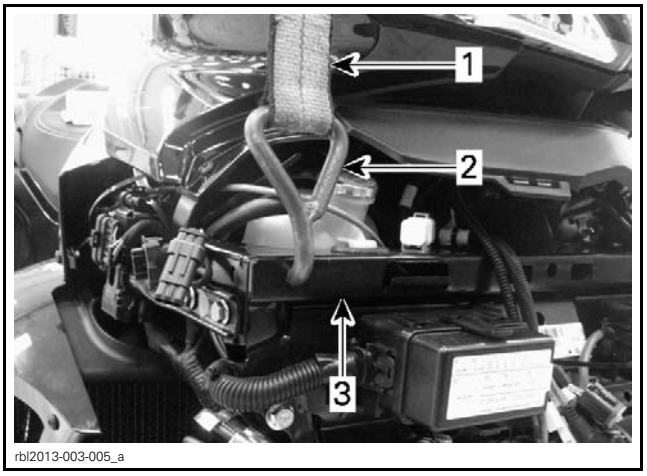
TYPICAL

NOTICE Never lift vehicle by the suspension arm.

Alternate Method

1. Install proper straps with hooks on RH and LH lateral supports of vehicle.

NOTE: Insert hooks through the holes in the frame.



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1. *Strap*
2. *Hook*
3. *Frame*

2. Hook straps on an appropriate lifting kit.
3. Lift vehicle using a chain block.

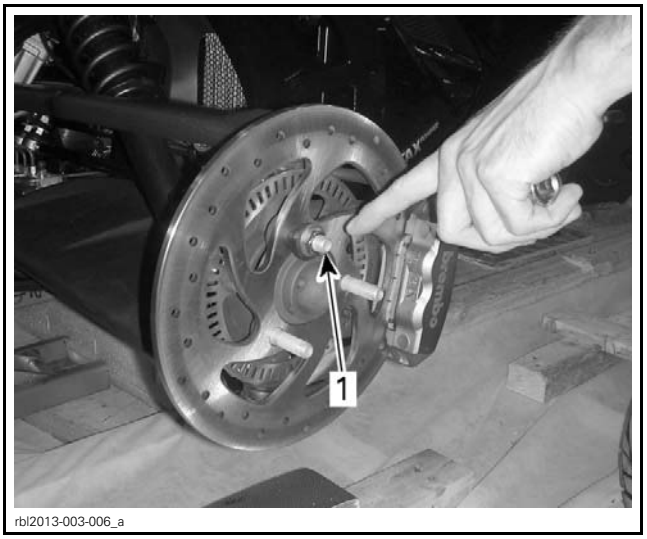
NOTICE Never lift vehicle by the suspension arm.

Front Wheels Installation

1. Clean front and rear brake discs using XPS BRAKES AND PARTS CLEANER (USA) (P/N 219 701 705) and a clean rag.

NOTICE A thin layer of anticorrosion treatment is present on the brake discs and must be removed before using the vehicle. Not conforming to this procedure may lead to a brake chattering squeaking and brake pad replacement would be necessary.

2. Remove nut securing front brake discs to vehicle.



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1. *Nut*

3. Install front wheels on vehicle.

4. Ensure that the rotation direction shown by the arrow is respected.

⚠ WARNING

The tires are only designed to rotate in one direction. Do not switch the left and right front wheels.

5. Tighten wheels lug nuts by hand (from PDI kit).
6. Lower vehicle on crate base.
7. Remove the jack.

rbl2013-003-007

TYPICAL

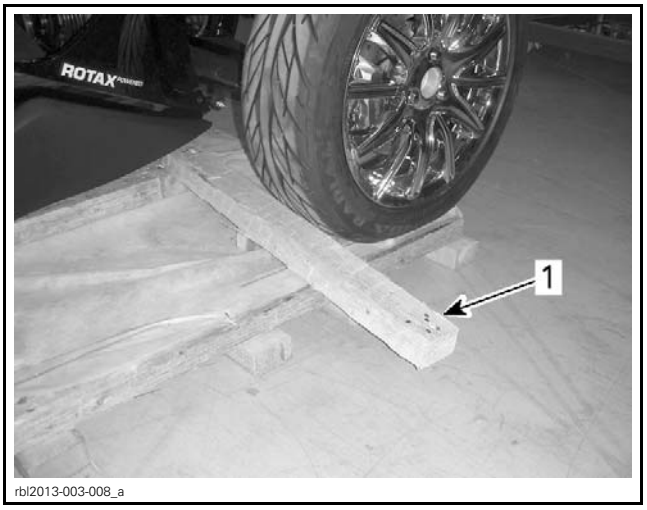
8. Torque wheels lug nuts.

PART	TORQUE
Wheel lug nut	105 N•m (77 lbf•ft)

9. Install wheel caps (inside front storage compartment).

Vehicle Removal

1. Put a piece of wood behind the front wheels to prevent the vehicle from rolling.



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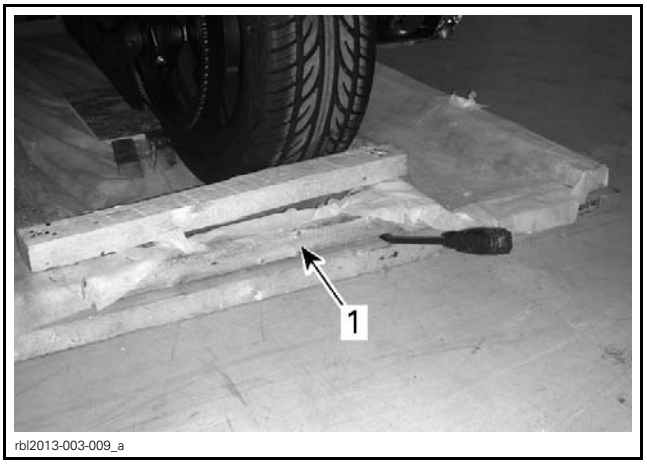
TYPICAL - FRONT RH WHEEL
1. Wood piece

2. Remove the piece of wood at the back of the crate and insert it under the rear wheel.



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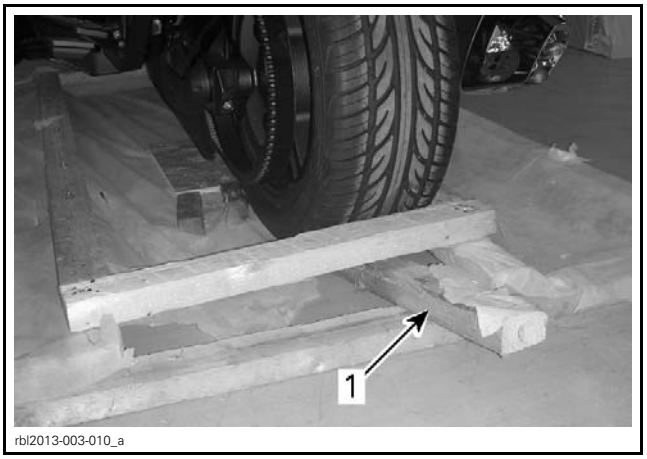
TYPICAL
1. Wood piece



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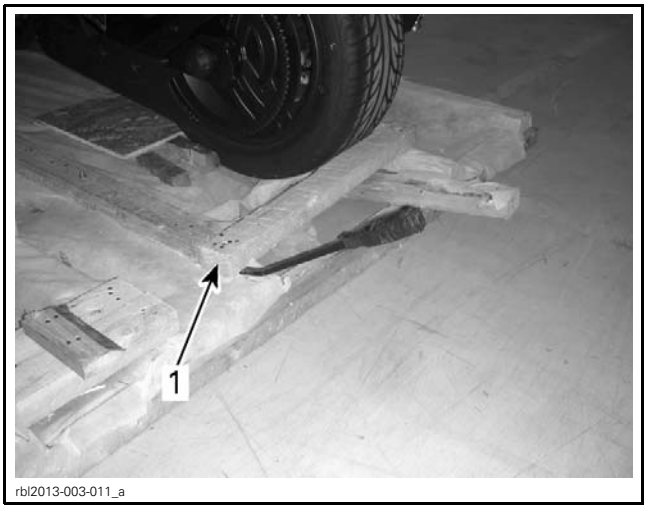
TYPICAL
1. Wood piece removed earlier

3. Remove the piece of wood from behind the rear wheel.



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TYPICAL
1. Wood piece behind rear wheel

4. Carefully remove pieces of wood positioned earlier behind the front wheels.
5. With the help of your assistant, move vehicle rearward out of the crate base.


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TYPICAL

NOTICE Always move vehicle rearward out of the crate base.

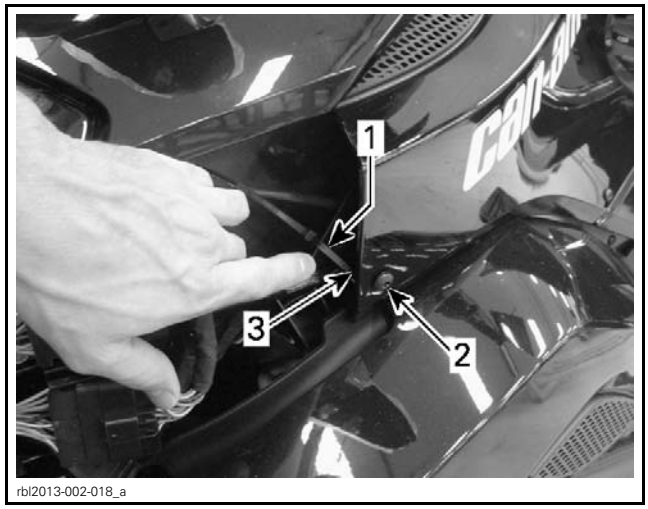
PARTS TO BE INSTALLED

Front Cargo Module

⚠ WARNING

Make sure battery is not connected before installing front cargo module. Do not install front cargo module if battery is connected because sparks can occur if tools touch battery terminals.

1. Remove LH and RH upper side panels.
   1.1 Cut locking tie retaining front screw and panel nut.



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TYPICAL
1. Locking tie
2. Front panel screw
3. Panel nut

   1.2 Remove rear panel screws.

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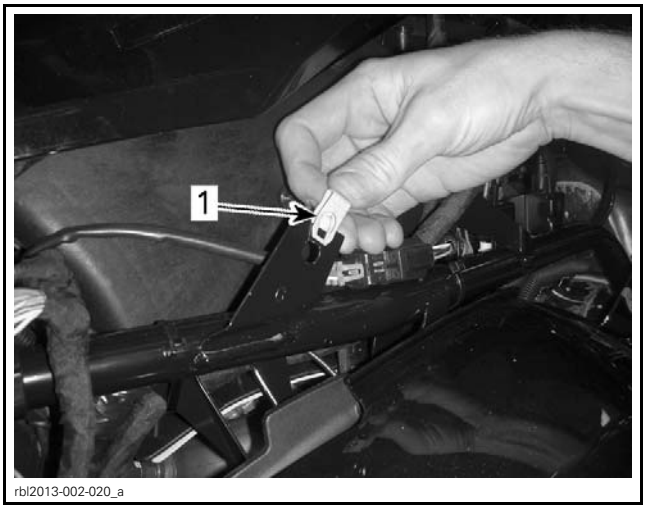
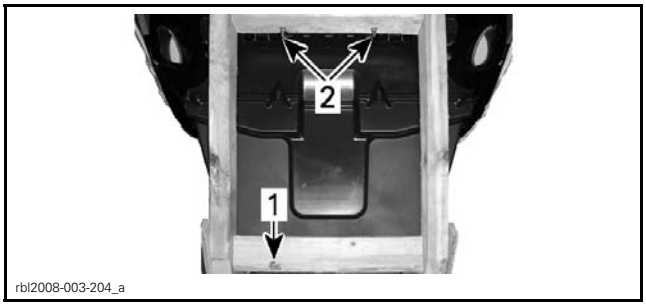
TYPICAL
1. Rear panel screws

   1.3 Install the previously removed panel nut on lateral bracket.



TYPICAL
1. Panel nut

2. Assisted by another person, remove and discard bolts holding the bottom and the top sections of sub-crate.

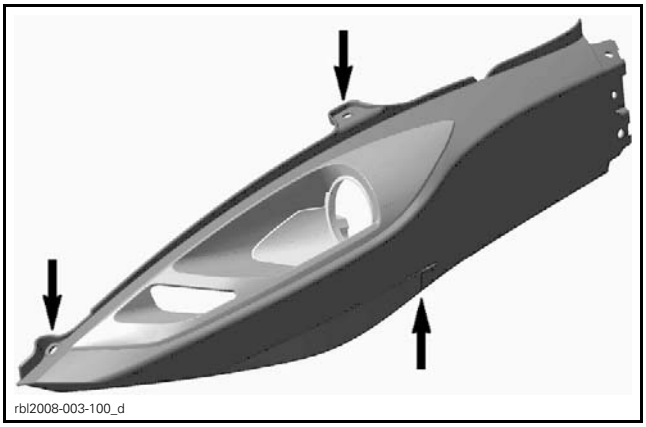


1. Lower retaining bolt
2. Upper retaining bolts

NOTE: Be careful not to lose the caged nut located in the bottom fixation hole of the front cargo module.

3. Open front storage compartment cover.

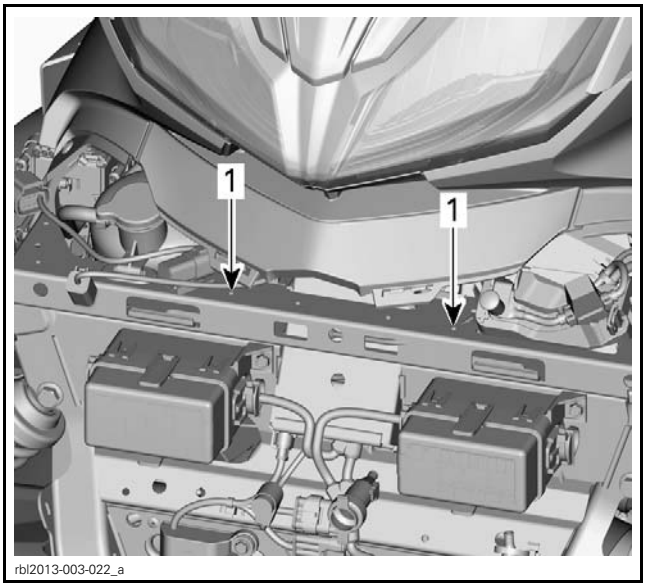
4. Remove plastic rivets securing front panels.



FRONT PANELS PLASTIC RIVETS LOCATION

5. Cut locking ties securing horn and AAPTS harness to frame.

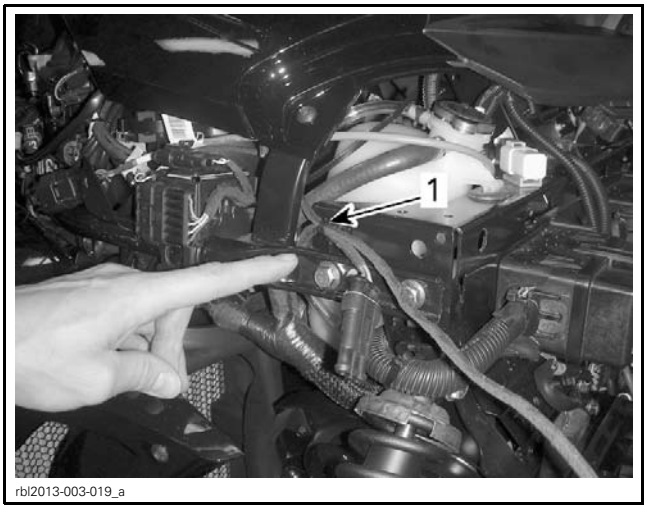
6. Tap two middle holes on the vehicle frame for M6 x 20 screws (from PDI kit).



1. Holes to tap for screws

TYPICAL

7. On RH side, undo reusable tie raps and secure harness as shown.



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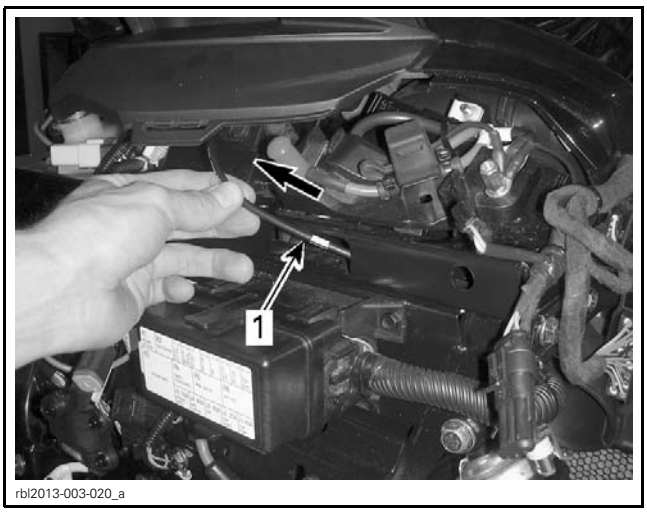
1. Tie rap

8. Extract hood latch release cable.



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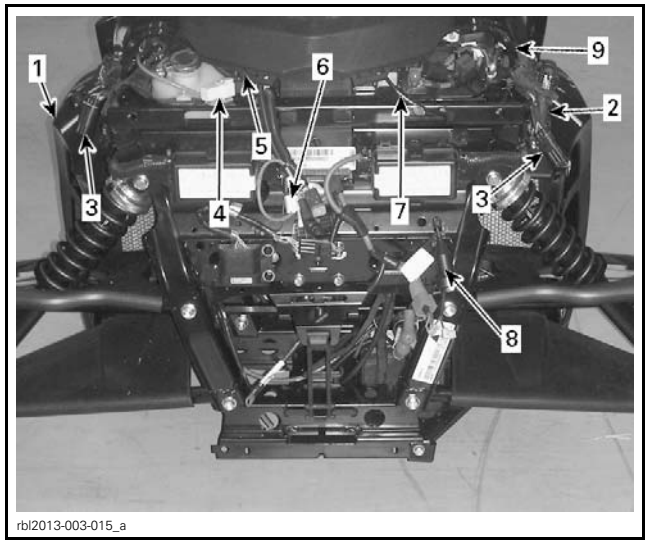
1. Hood latch release cable

All Models

9. Ensure that the following cables and connectors are accessible prior to installing front cargo module, cut locking ties if required.



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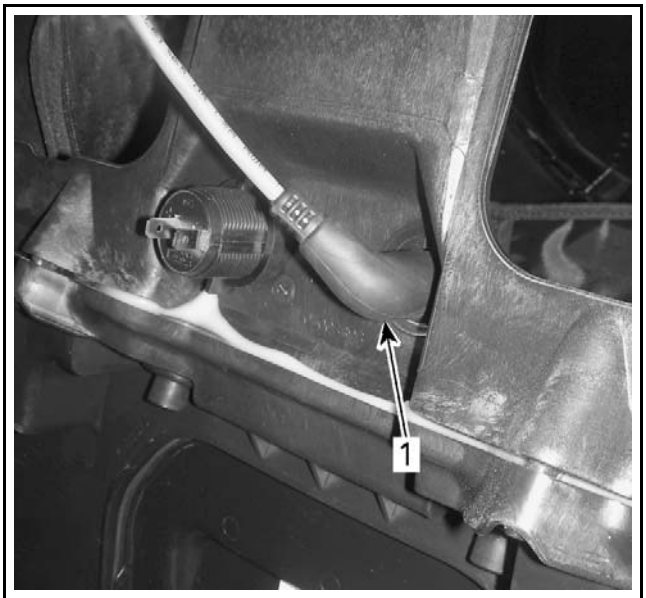
TYPICAL - REFER TO THE FOLLOWING TABLE FOR ITEMS DESCRIPTION

ITEMS	DESCRIPTION
1	AAPTS sensor connector (hidden on the illustration)
2	Horn connector (hidden on the illustration)
3	Low beam light (CE)
4	DLC connector (B.U.D.S.)
5	Storage cover switch connector (option package)
6	Storage cover cable
7	12 V power outlet (option package) (LTD model only)

ST LTD Model Only

10. Connect the auxiliary cable and install nut and cap.



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1. Auxiliary cable

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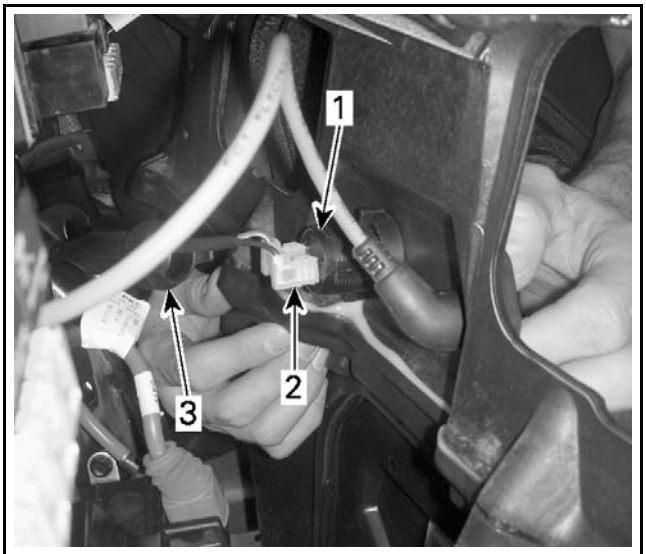
1. Auxiliary cable nut and cap

11. Connect Black (-) negative cable and PURPLE (+) positive cable to 12V connector and cover with rubber boot.

NOTE: Negative (-) and positive (+) positions are indicated on the connector.



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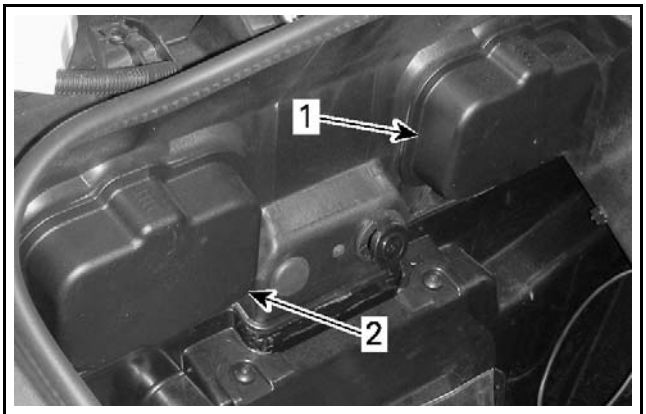
1. 12V connector
2. Negative and positive cables connector
3. Rubber boot

All Models

12. Before installing storage compartment, remove the fuse service covers as follows:

    12.1 Push down on the fuse service covers to open the fuse boxes and pull the covers off.



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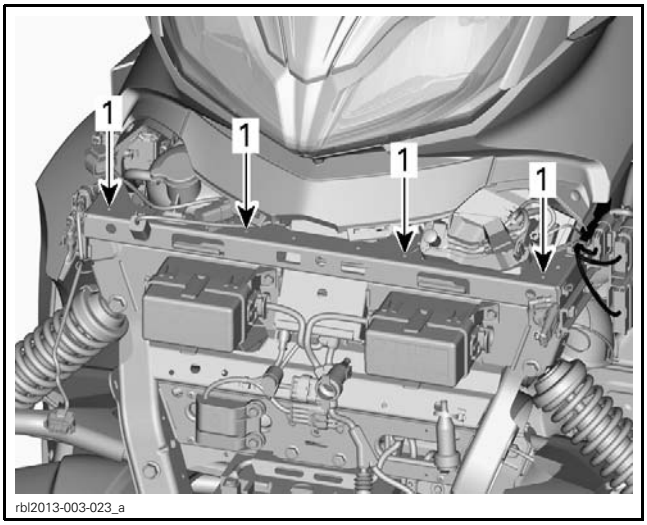
1. Left fuse service cover
2. Right fuse service cover

All Models

13. Assisted by another person, position front storage compartment into support slots of vehicle.

NOTE: Ensure that all cables are accessible prior to installing front storage compartment.

14. Secure the front storage compartment.
    - On TOP, use four M6 x 20 hexagonal flange screws
    - At the bottom, use two M6 x 12 hexagonal flange screws.



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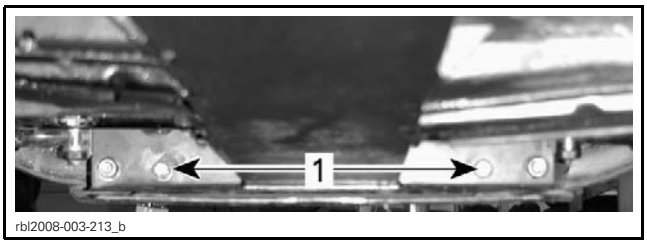
TOP SCREWS
1. *M6 X 20 hexagonal flange screws*



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BOTTOM SCREWS
1. *M6 X 12 hexagonal flange screws*

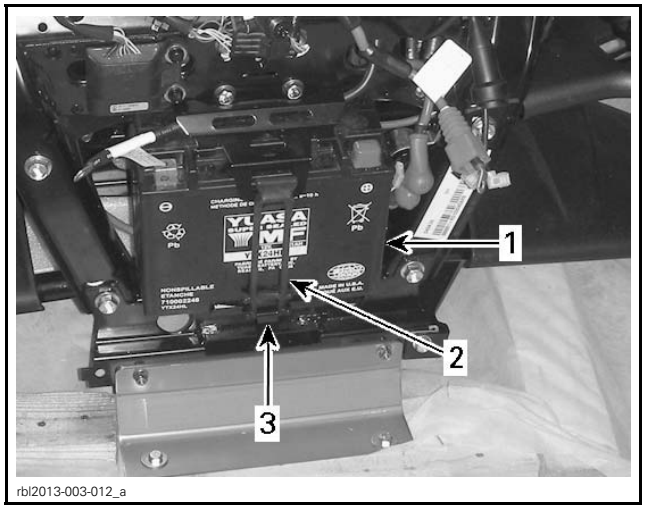
NOTE: Install all screws before tightening them.

FRONT STORAGE COMPARTMENT SCREW	TORQUE
M6 X 20 hexagonal flange screw	4.5 N•m (40 lbf•**in**)
M6 X 12 hexagonal flange screw	10 N•m (89 lbf•**in**)

Battery

The battery is located at the front of the cargo module.

1. Pull down the rubber strap to disengage it from the hook.



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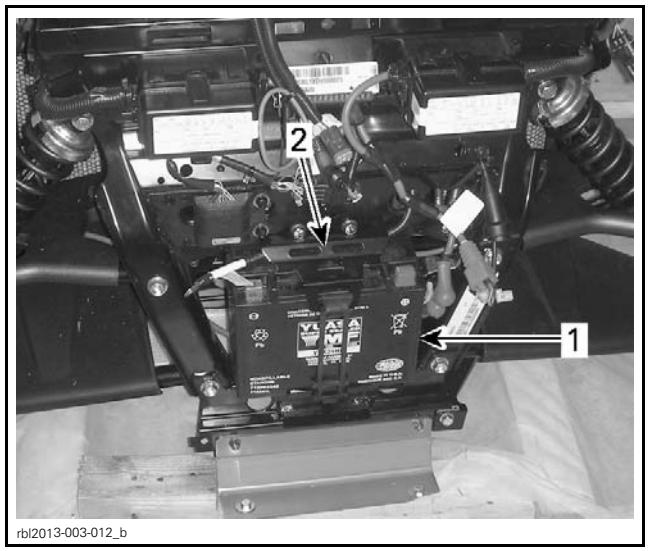
TYPICAL
1. *Battery*
2. *Rubber strap*
3. *Hook*

2. Remove bracket and battery from the vehicle.



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TYPICAL
1. *Battery*
2. *Bracket*

NOTE: If you do not have a fully charged battery at hand, the fully charged battery can be put in place later.

IMPORTANT: It is of the upmost importance for the battery life span that the battery initial charging be performed. Refer to **the latest** *CAN-AM ROADSTER BATTERY ACTIVATION, CHARGING AND MAINTENANCE*. Correct keywords to search **the latest** Service Bulletin in BOSSWEB or Knowledge Center are :**"roadster battery activation"** including quotation marks.

3. Install charged battery in battery rack.

NOTICE **Always charge battery before its installation on the vehicle.**

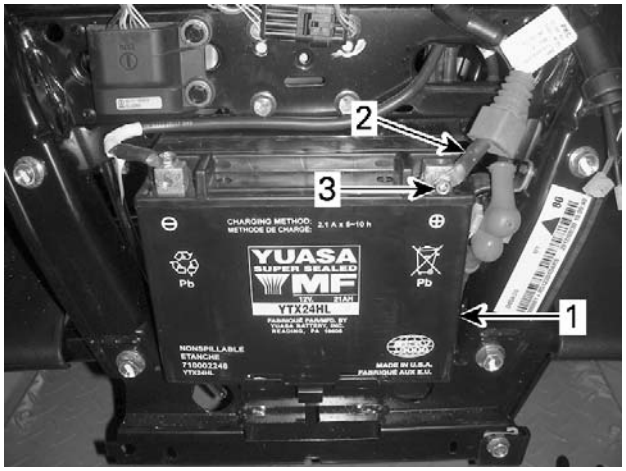
4. Connect RED (+) positive battery cables using battery screws from the PDI kit.

⚠ WARNING

Always connect RED (+) cable first.

5. Tighten positive post battery screw.

PART	TORQUE
Post battery screw	4 N•m (35 lbf•**in**)



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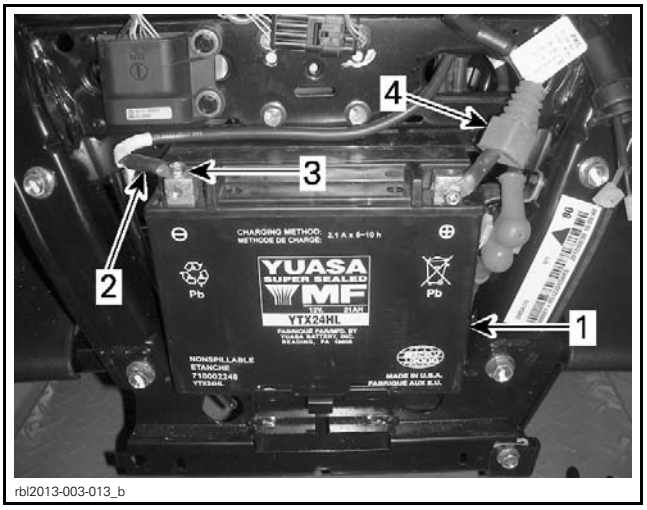
1. Battery
2. RED (+) positive battery cable
3. Positive post battery screw

6. Apply DIELECTRIC GREASE (P/N 293 550 004) on battery posts.
7. Connect BLACK (–) negative battery cables using battery screws from the PDI kit.
8. Tighten negative post battery screw.

PART	TORQUE
Post battery screw	4 N•m (35 lbf•**in**)

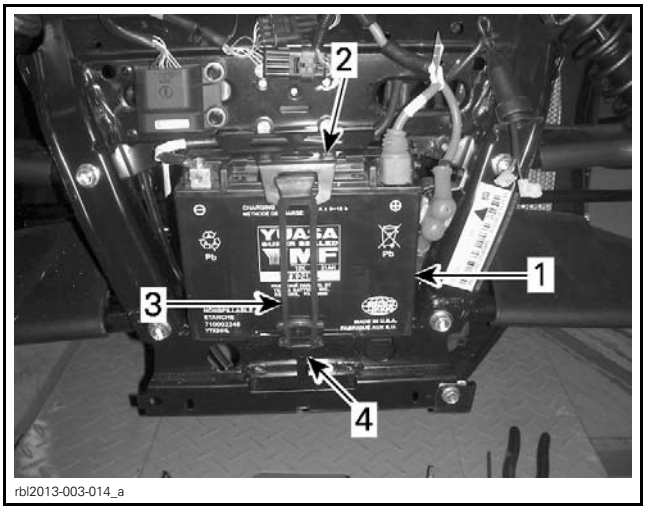
9. Close RED rubber boot cover.



rbl2013-003-013_b

1. Battery
2. Black (-) negative battery cable
3. Negative post battery screw
4. RED rubber boot cover

10. Put bracket back in position on battery.
11. Install rubber strap and pull it down to engage it with the hook.

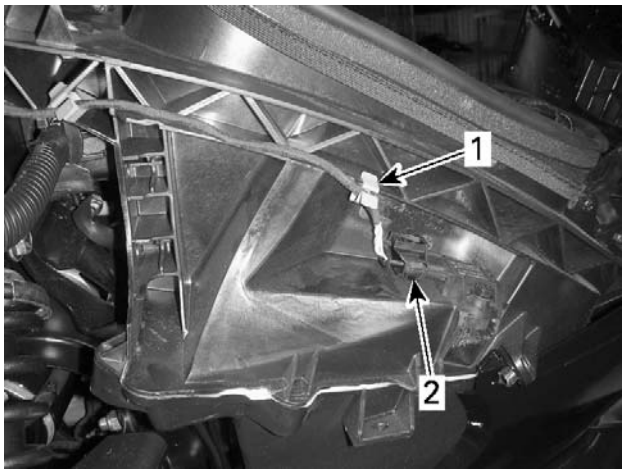


rbl2013-003-014_a

1. Battery
2. Bracket
3. Rubber strap
4. Hook

AAPTS (Ambient Air Pressure and Temperature Sensor) Installation

1. Route cable through retaining guide clips.



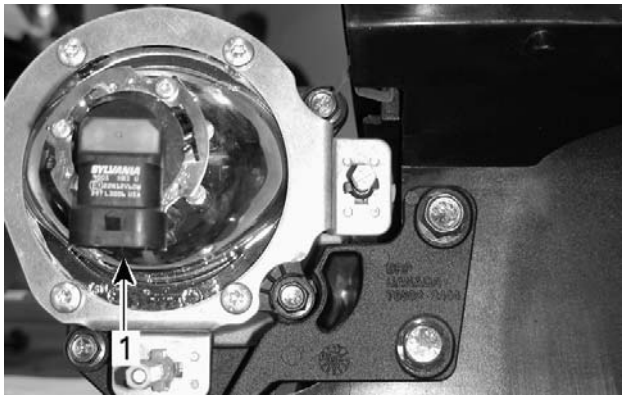
rbl2013-002-003_a

1. Cable retaining clips

Low Beam Headlight Connection

All CE Models

1. Connect wiring harness to low beam headlights.



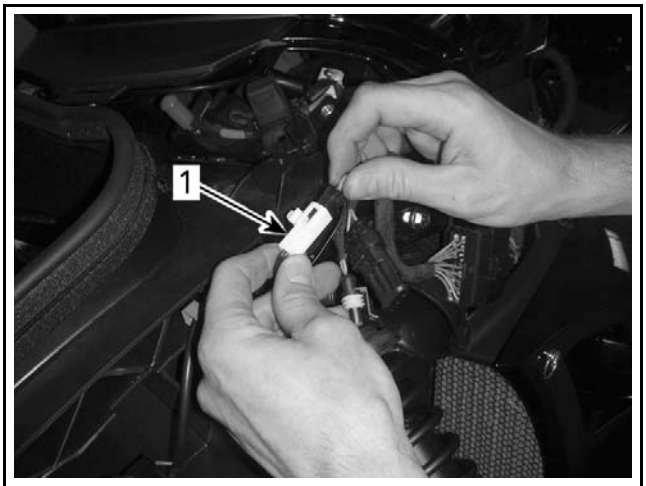
rbl2008-003-215_b

1. Low beam headlight connector

2. Verify low beam headlights aiming. Refer to *LIGHTS* in *SETUP*.

Horn Connection

1. Connect horn connector.
2. Route cable through the retaining guide clips.

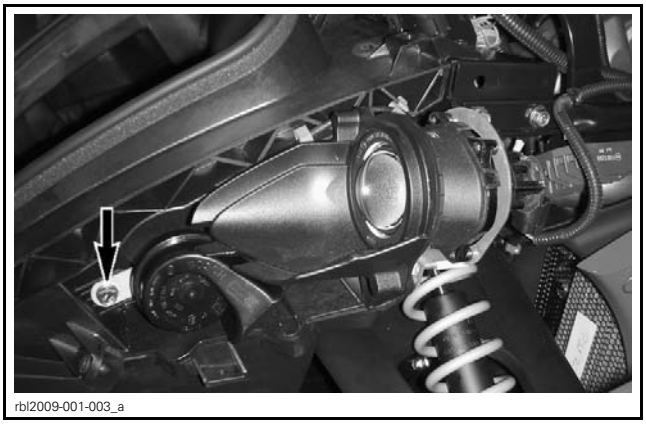


rbl2013-002-007_a

1. Horn connector

CE Models

If necessary, remove horn from vehicle to ease connector installation.


rbl2009-001-003_a

HORN RETAINING BOLT LOCATION

Hood Latch Release Cable

1. Attach hood latch release cable into bracket.
2. Squeeze bracket legs to prevent cable from coming out using pliers.

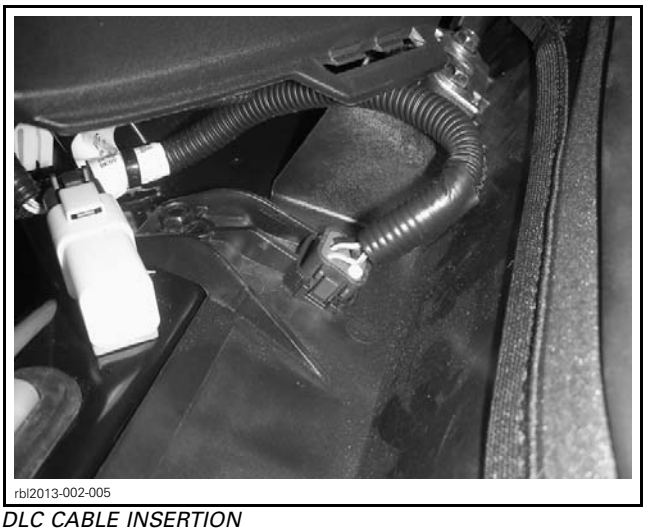

rbl2013-002-004

3. Verify if the front storage compartment cover opens and closes correctly.
4. Adjust cable if necessary.

NOTICE If the key does not turn easily, do not force it. Pull it out and reinsert.

Diagnostic Link Cable (DLC)

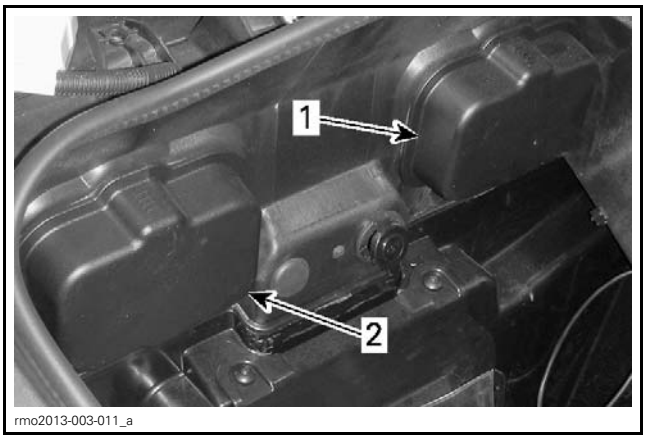
1. Insert diagnostic link cable (DLC) into its housing on the front section of vehicle.



DLC CABLE INSERTION

All Models

2. After installing storage compartment, reinstall the fuse service covers as follows:
   2.1 Position the fuse service covers and push down carefully until the fuse service covers engage.



1. Left fuse service cover
2. Right fuse service cover

Body Parts Installation

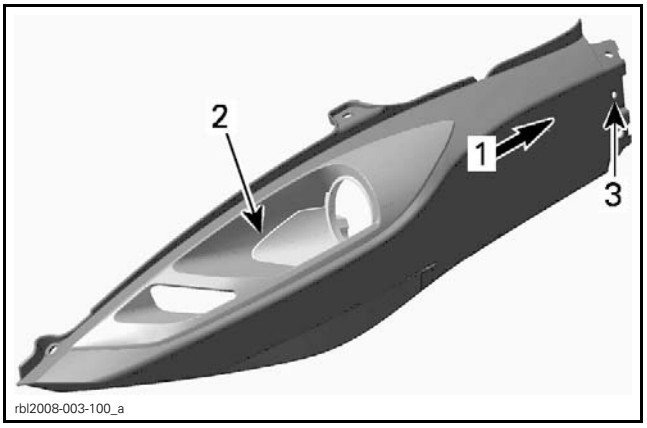
NOTICE Do not overtighten screws. Any deformation on the panel around the screw is an indication that it is too tight. Be careful not to damage the panels.

Front Panels

1. Install M6 panel nuts on front panels (included in the PDI kit)
2. Install front panels on vehicle.

RH FRONT PANEL SHOWN
1. Front M6 panel nuts

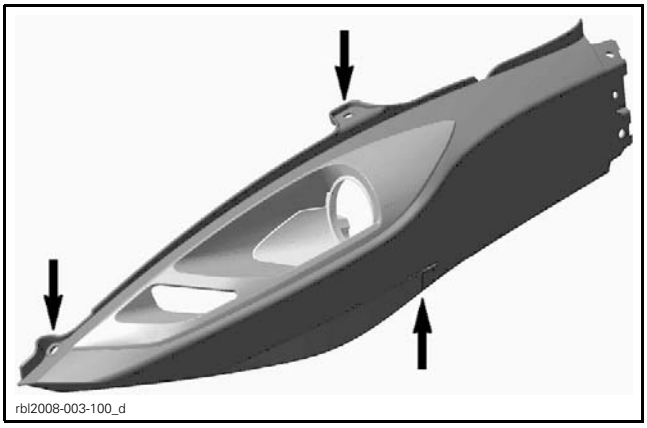
3. Secure front panels. Use screw removed during front panel removal.



CE MODEL SHOWN
1. Move side air deflector backward
2. Area that must be fit
3. Front panel screw

NOTE: On **CE models**, move side air deflector backward for a best fit.

4. Install plastic rivets.


rbl2008-003-100_d

FRONT PANELS PLASTIC RIVETS LOCATION

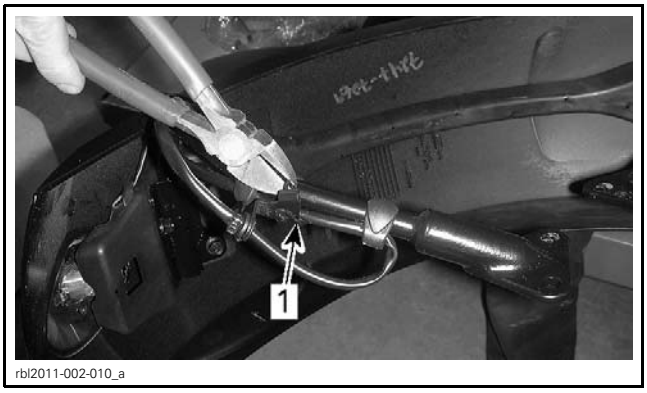
Service Covers

Install service covers on the front of vehicle (included in front service compartment).

NOTE: Service covers are installed in two grommets and one slot.

Front Fenders

1. Cut locking tie that hold harness bracket on fender.



rbl2011-002-010_a

TYPICAL
1. Locking tie

NOTE: Do not remove protection from suspension arms.


rbl2013-004-002_a

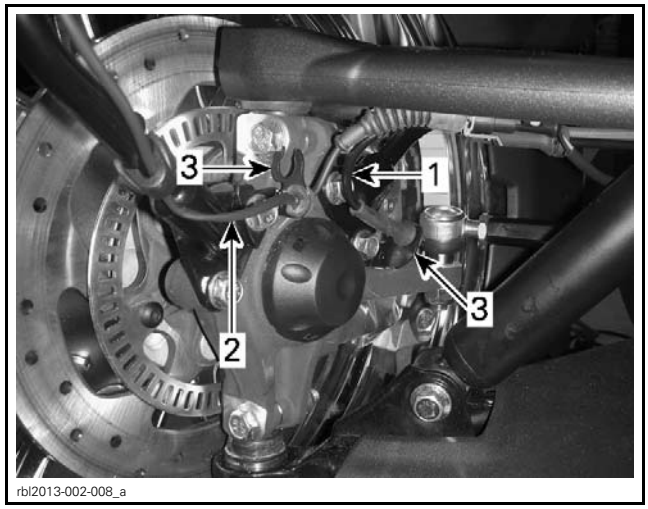
TYPICAL

2. Position front fender on vehicle.


rbl2011-002-011

TYPICAL

3. Route front ABS sensor harness and fender light harness on fender hooks.



rbl2013-002-008_a

TYPICAL
1. ABS sensor harness
2. Fender light harness
3. Fender hooks

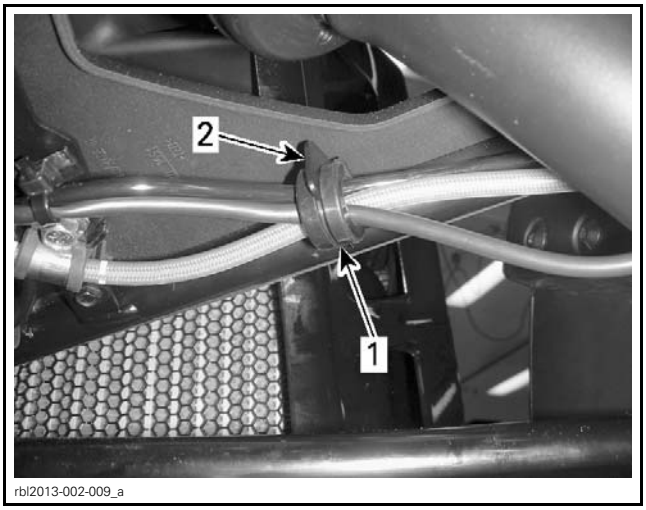
NOTE: Properly insert cable grommet on harness bracket.

4. Connect fender light connector.

NOTE: Make sure harnesses are properly secured through grommet.

rbl2013-002-006_a

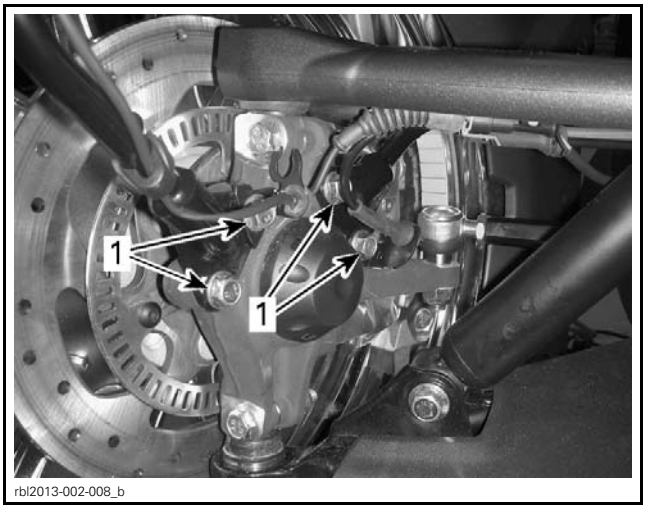
1. Fender light connector



rbl2013-002-009_a

1. Cable grommet
2. Harness bracket

5. Secure fender support on wheel hub.
6. Remove protection from suspension arms.



rbl2013-002-008_b

1. M8 x 20 hexagonal flange screws

7. Install 4 M8x 20 hexagonal flange screws to complete the fender support installation.

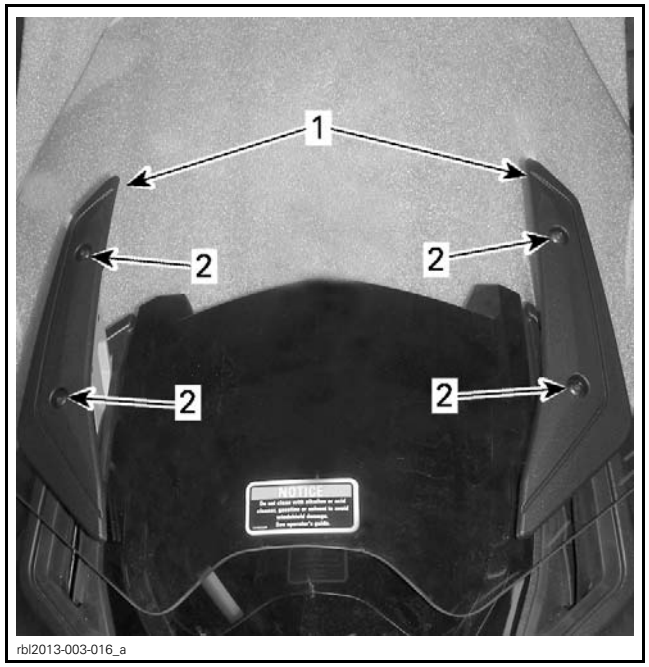
FENDER SUPPORT RETAINING SCREW
24 N•m (18 lbf•ft)

8. Carry out the same procedure for the other side.

Windshield

1. Align windshield on windshield support.
2. Install two trims, four M5 x 16 screws, 8 washers and four nuts (from PDI kit) to secure windshield.

NOTE: There is one washer on the screw side and one on the nut side.



rbl2013-003-016_a

1. Trims
2. Screws and washers

rbl2013-003-017_a

1. Nuts

NOTE: You can move windshield along the tracks to facilitate installation of nuts.

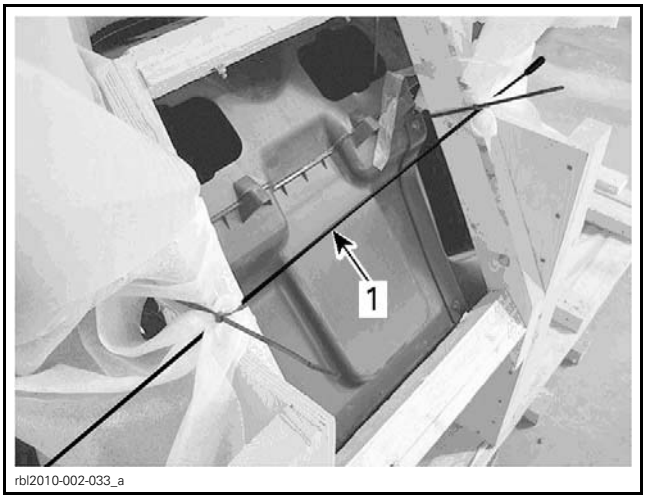
rmo2013-003-013_a

3. Torque windshield retaining nuts.

PART	TORQUE
Windshield retaining nut	2.5 N•m (22 lbf•**in**)

Antenna (LTD Model Only)

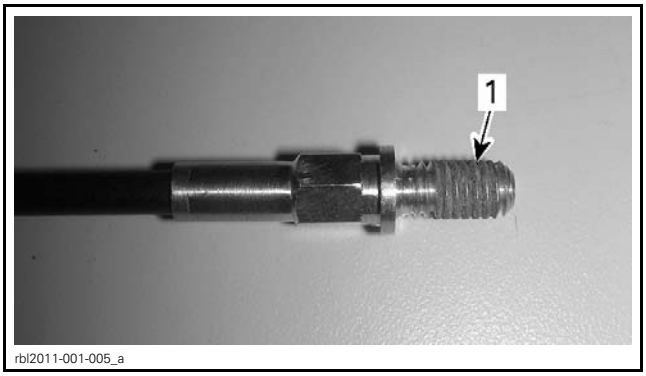
1. Detach antenna from the sub-crate.



rbl2010-002-033_a

1. Antenna

Antenna With Self-Locking Product



rbl2011-001-005_a

1. Self-locking product already applied

Install the antenna on the RH side of the rear cargo module (tighten by hand) and position the rubber cap.

Rear Fender

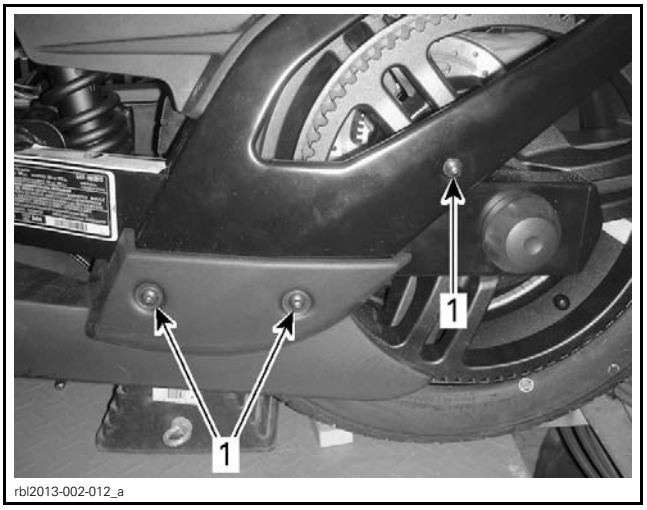
NOTE: Before applying any torque, install all nuts and screws.

ST LTD Model Only

Remove rear saddlebag kit.

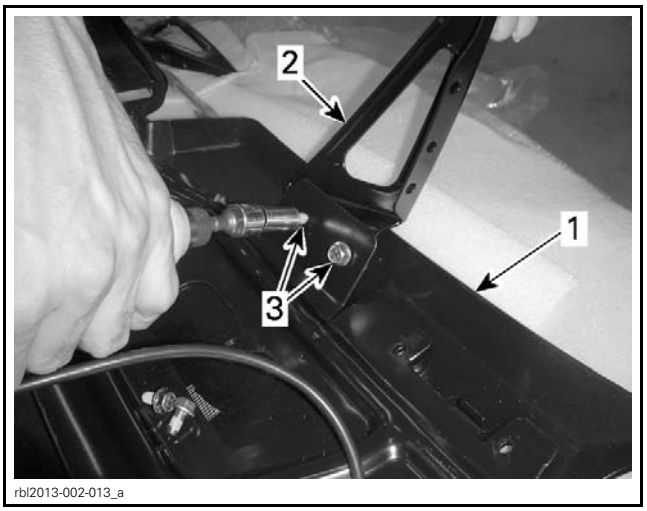
All Models

1. Remove rear fender packaging.
2. Loosen LH and RH fender support screws.



LEFT SIDE FENDER SUPPORT
1. *Screws, washers and nuts*

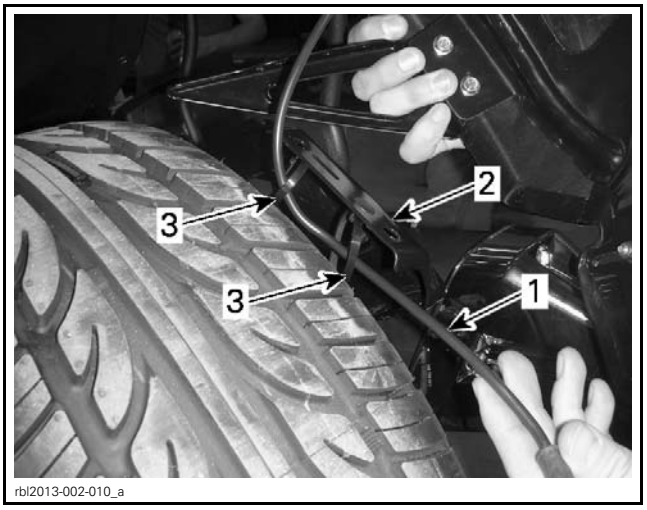
3. Pre-assemble rear fender to its LH and RH rear fender brackets with M6 x 12 screws, flat plastic washers and M6 nuts (on back side).



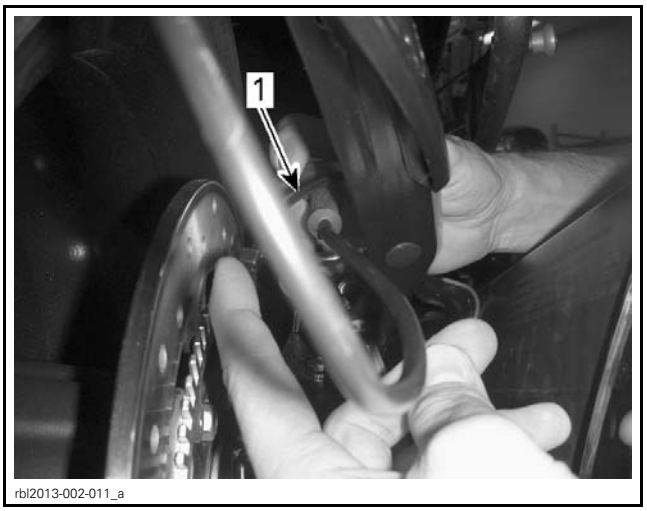
1. *Rear fender*
2. *Support*
3. *M6 x 12 Screws, washers and nuts*

NOTE: Do not torque screws.

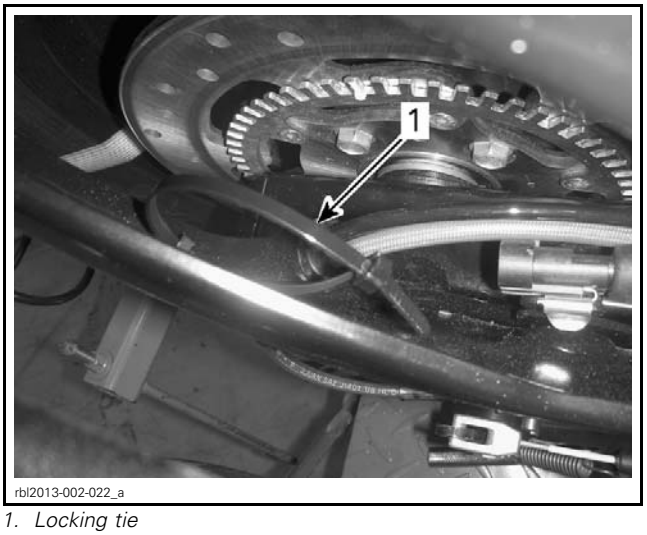
4. Connect license plate light connector.
5. Secure license plate light harness inside RH rear fender support using 4 locking ties (from PDI kit) into factory installed retainers.



1. *License plate light harness*
2. *Rear fender support*
3. *Locking ties in retainers*

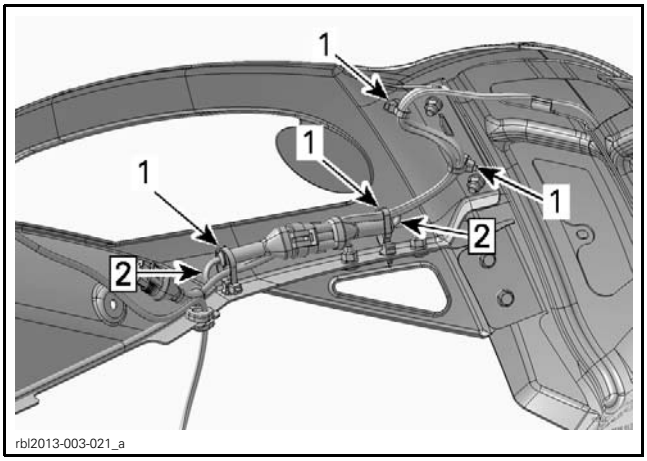


1. *Locking tie*



1. *Locking tie*

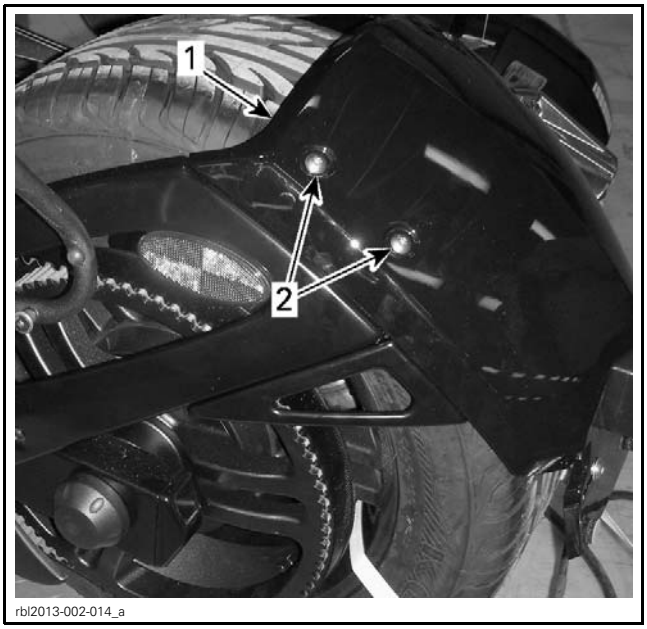
NOTE: For **Australian models** route the back-up light harness making a loop in the locking ties as shown.



1. *Locking ties*
2. *Locking ties in a loop*

6. Put fender in position and install two M6 x 20 screws on each side.

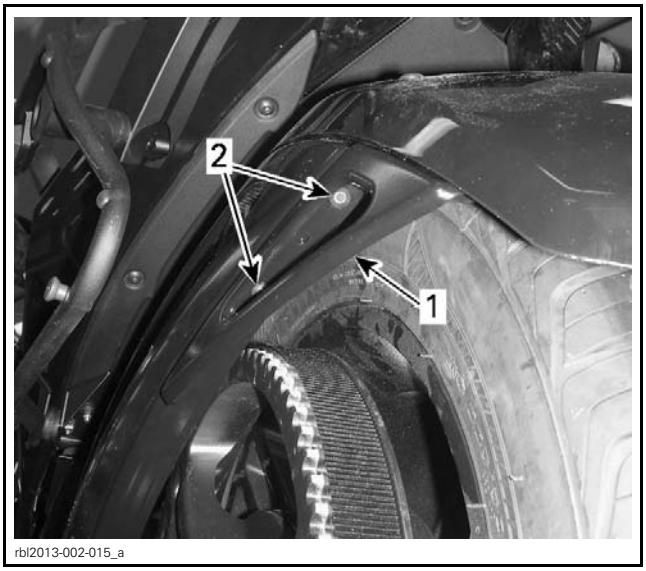
NOTE: Do not torque screws.



TYPICAL
1. *Fender*
2. *Screws*

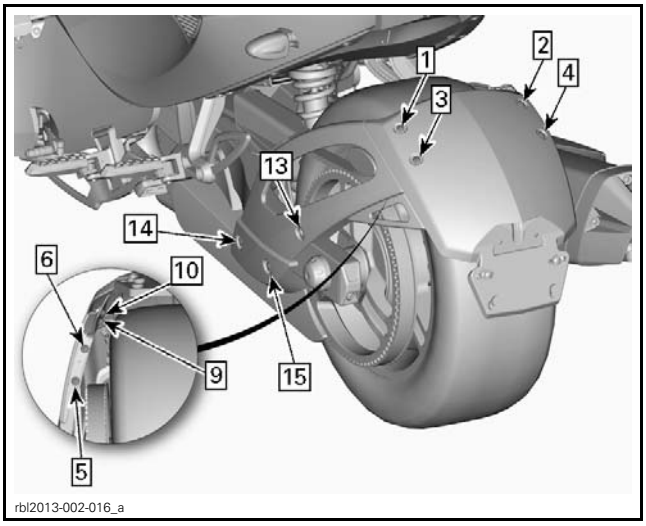
7. Install two screws and nuts on each side of fender reinforcement plate.

NOTE: Do not torque screws and nuts.

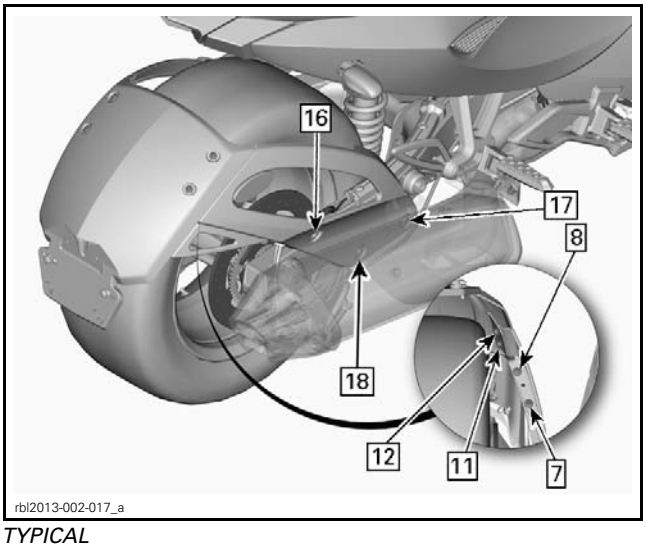


TYPICAL
1. *Fender reinforcement plate*
2. *Screws and nuts*

8. Torque screws and nuts according to the following tightening sequence:



TYPICAL



TYPICAL

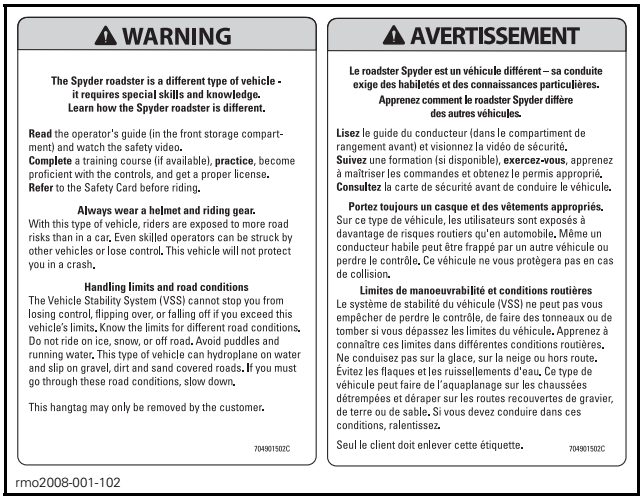
PARTS	TORQUE
Screws and nuts	7.5 N•m ± 0.5 N•m (66 lbf•**in** ± 4 lbf•**in**)

Hang Tag and Safety Labels

This vehicle comes with a hang tag and labels containing important safety information. The labels are considered permanent parts of the vehicle and should not be removed. Hang tag is to be removed by the owner only.

Any person who rides this vehicle should read and understand all the information given on hang tag and safety labels before riding.

Safety labels of several language can be chosen by customer, according to availability.

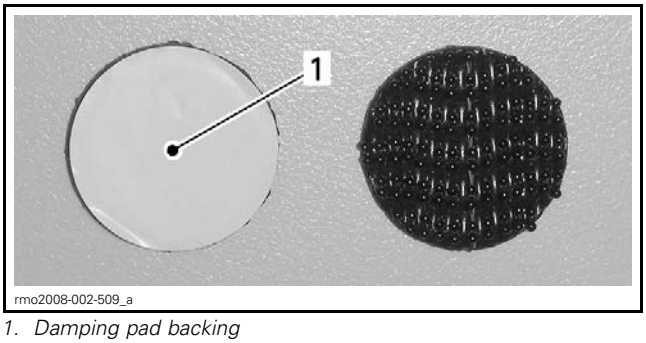


rmo2008-001-102

Licence Plate Installation

NOTE: When a license plate needs to be installed or replaced, ensure to install two new damping pads (P/N 293 740 028) on plate to be installed.

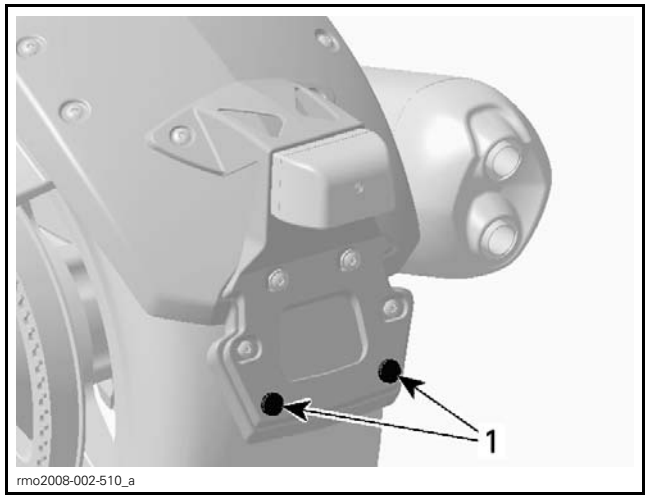
1. Remove existing plate on vehicle (if applicable).
2. Peal off backing of new damping pads.



rmo2008-002-509_a

1. Damping pad backing

3. Position new damping pads over existing pads on vehicle plate support.



rmo2008-002-510_a

TYPICAL
1. Damping pads

4. Secure upper portion of license plate on vehicle plate support using existing hardware.
5. Squeeze license plate and support together at each lower corner.

Accessories Installation

1. Install accessories (if any) as per their installation instructions (included in each kit).
2. Install any other equipment required by law (if any).

Vehicle Decals

1. Install decals on vehicle according to customer country language and local legislation.
2. Ensure that the new decals are installed at the same location and over the factory installed decals.

FLUIDS

General Guidelines

All fluids (except fuel) have already been filled at factory, it is only necessary to validate them. However, if refill is needed, refer to the appropriate *ROADSTER SHOP MANUAL* for the proper procedure.

Fuel

1. Add fuel in the fuel reservoir.


rmo2008-001-016

FUEL RESERVOIR

Recommended Fuel

Use regular unleaded gasoline containing MAXIMUM 10% ethanol. The gasoline must have the following minimum octane requirements.

In Brazil, use regular unleaded gasoline containing MAXIMUM 25% ethanol.

FUEL OCTANE RATING	
INSIDE NORTH AMERICA	
Recommended: 91 (RON + MON)/2)	Minimum: 87 (RON + MON)/2)
Use premium unleaded fuel for optimum engine performance.	

FUEL OCTANE RATING	
OUTSIDE NORTH AMERICA	
Recommended: 95 RON	Minimum: 92 RON
Use premium unleaded fuel for optimum engine performance.	

⚠ WARNING

Never top off the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow. Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle.

NOTICE Never experiment with other fuels. Engine or fuel system damages may occur with the use of an inadequate fuel.

NOTICE Never mix oil with fuel these vehicles are equipped with a 4-stroke engine.

Clutch Fluid (SM5 Model)

Recommended Clutch Fluid

Use DOT 4 brake fluid from a sealed container. An opened container may be contaminated or may have absorbed moisture from the air.

Clutch Fluid Level Verification

The clutch fluid reservoir is near the reverse button on the left handlebar.

Check the clutch fluid level as follows:

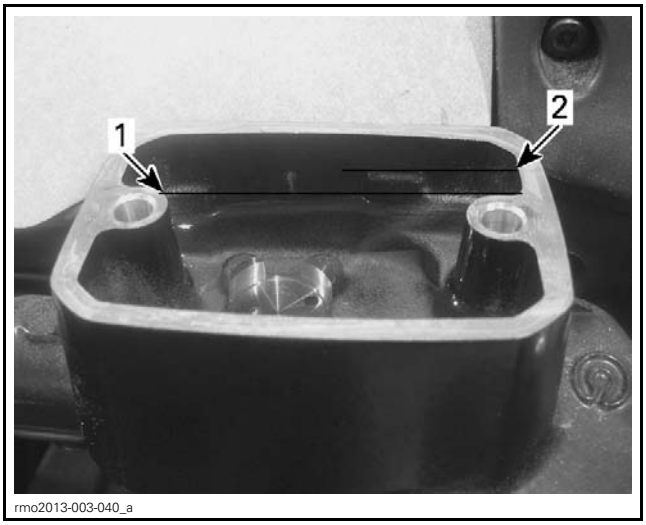
1. Park the vehicle on a firm, level surface.
2. Set the handlebar straight in order to position the top of clutch fluid reservoir horizontally.
3. Wipe clean the cap area.
4. Use the Phillips head screwdriver located in the toolkit.
5. Unscrew cap retaining screws.


rmo2010-001-005

6. Carefully remove cap. Pay attention not to drop the cap seal.
7. Look inside the reservoir to see the fluid level.

Check clutch fluid level inside the reservoir:

– The fluid must be flush to the fill level line (protuberance on the reservoir wall).



FLUID REMOVED FOR CLARITY PURPOSE
1. *Minimum*
2. *Maximum*

Engine Coolant

⚠ WARNING

When opening the reservoir, the coolant can be very hot and spray out if the engine is hot. In order to avoid getting burned, check coolant level when engine is cold.

Recommended Coolant

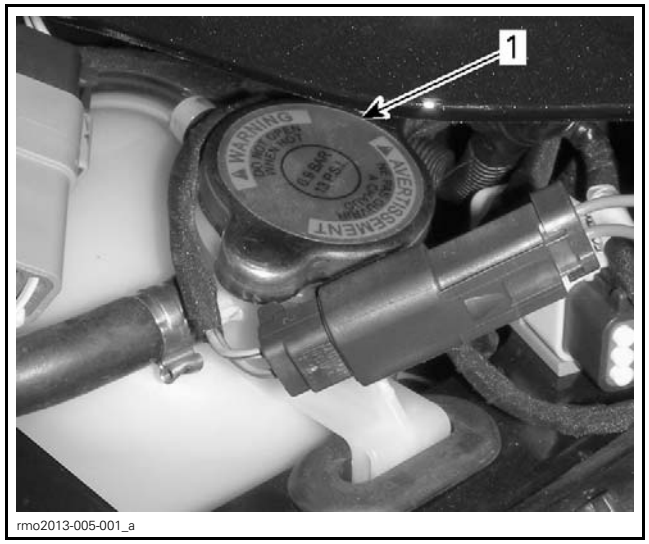
The cooling system must be filled with distilled water and antifreeze solution (50% distilled water, 50% antifreeze).

For best performance, use BRP PREMIXED COOLANT (P/N 219 700 362).

Coolant Level Verification

1. Park vehicle on a firm level surface.
2. Open the front storage compartment.
3. Pull out the right-hand side service cover with both hands.
4. Check the coolant level on the right hand side. Coolant must be visible without exceeding the COLD. level mark.

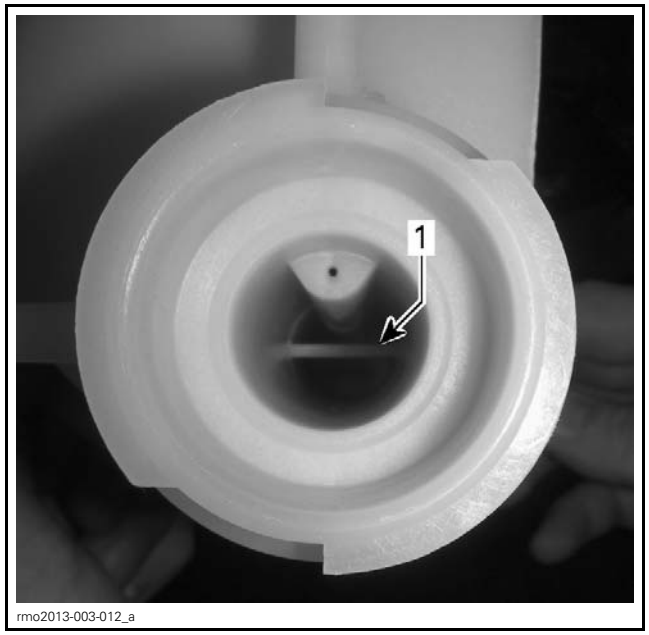
NOTE: If engine is hot, coolant must be visible without exceeding the HOT. level mark.



1. *Coolant reservoir cap*

5. If required, add coolant until it is visible in the reservoir without exceeding the COLD level mark. Use a funnel to avoid spillage.
   Do not overfill.

NOTE: As an indication, look directly inside the reservoir to make sure the coolant arrives at the reference line.



1. *Coolant level reference line*

6. Reinstall the service cover.

Brake Fluid

⚠ WARNING

Avoid contact of brake fluid with skin or eyes because it may cause severe burns. In case of contact with the skin, wash thoroughly. In case of contact with the eyes, immediately rinse with plenty of water for at least 10 minutes and then consult a doctor immediately.

NOTICE Do not overfill brake fluid reservoir.

Recommended Fluid

Use only DOT 4 brake fluid from a sealed container. An opened container may be contaminated or may have absorbed moisture from the air.

NOTICE To avoid serious damage to the braking system, do not use non-recommended fluids. Brake fluid can damage plastic and painted surface. Handle with care.

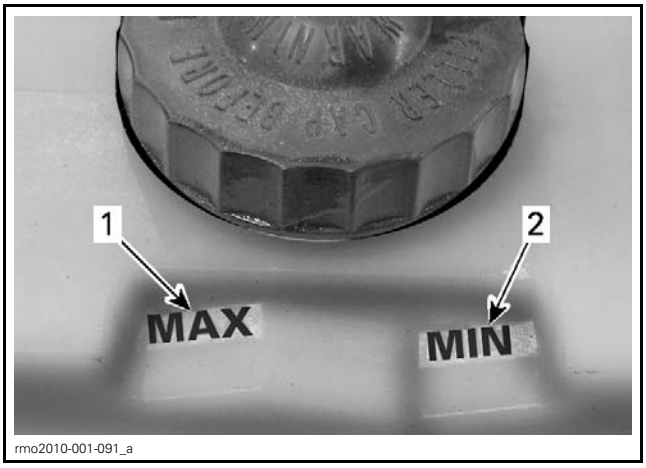
Brake Fluid Level Verification

1. Park vehicle on a firm level surface.
2. Unlatch and lift the seat.
3. Remove reservoir caps.

rmo2013-003-035_a

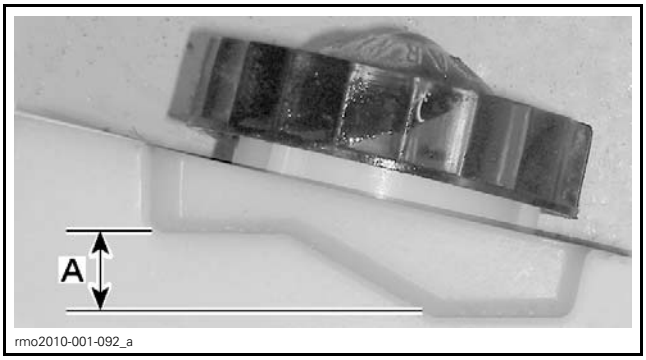
1. Brake fluid reservoir caps

4. Check brake fluid level in both reservoirs, near the back of the seat.
5. Ensure that fluid is above the MIN. mark.



rmo2010-001-091_a

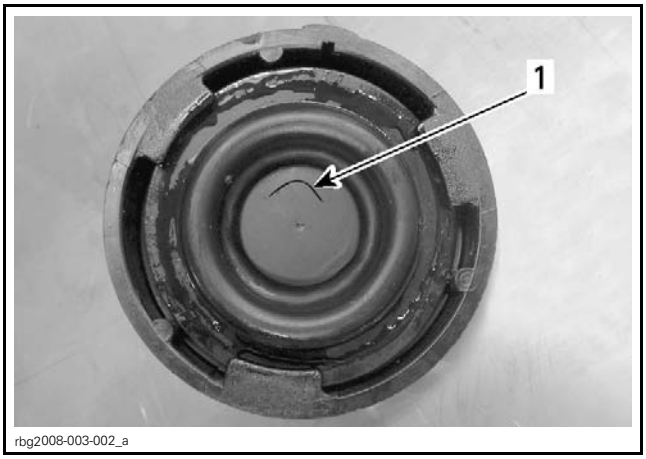
1. Brake fluid MAX. level mark
2. Brake fluid MIN. level mark



rmo2010-001-092_a

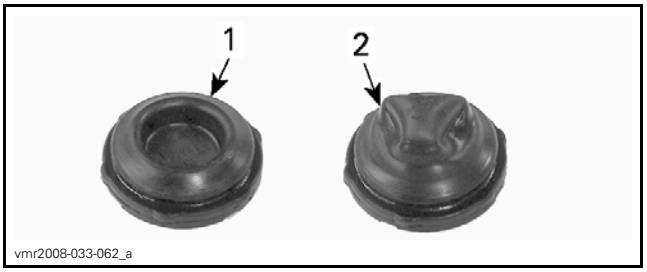
A. Operating range

6. If necessary, add recommended brake fluid.
7. Immediately wipe out spills if necessary.
8. Prior to installing brake fluid reservoir caps:
   – Check that V slit is in good condition.
   – Ensure diaphragm are properly positioned.



rbg2008-003-002_a

TYPICAL
1. V slit



TYPICAL
1. *Correct position*
2. *Wrong position*

9. Reinstall both reservoir caps.
10. Close seat and ensure it is fully latched.

Engine Oil

NOTICE The procedures for checking the Spyder roadster oil level and replacing oil are different from most of the motor vehicles today. Properly follow instructions provided in this section.

Recommended Engine Oil

NOTE: For SM5 models, the same oil lubricates the engine, the gearbox and the clutch.

NOTE: For SE5 models, the same oil lubricates the engine, the gearbox, the clutch and the HCM (hydraulic control module).

Use XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121).

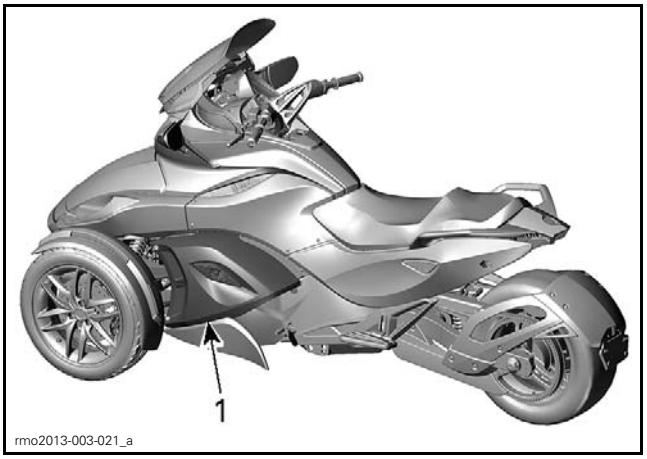
If not available, use a 5W40 semi-synthetic (minimum) or synthetic **motorcycle oil** meeting the requirements for API service SL, SJ, SH or SG classification. Always check the API service label on the oil container.

NOTICE To avoid damaging the clutch, do not use a motor oil meeting the API service SM or ILSAC GF-4 classification. Clutch slippage will occur. Motorcycle oils designed for use with a wet-clutch are the best alternative.

NOTICE Do not add any oil additives to the recommended oil. This may lead to gearbox and clutch malfunctions.

Vehicle Preparation for Engine Oil Level Verification

1. Park the vehicle on a level surface.
2. Remove LH middle side panel.

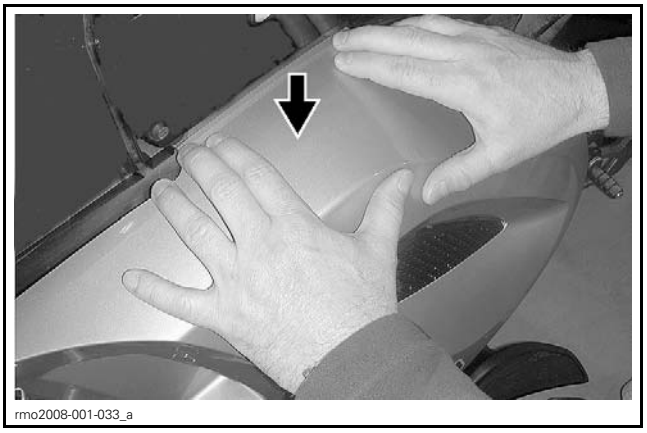


1. Middle side panel

3. Unscrew 3 clips.

1. Middle side panel clips

4. Press down panel top edge with both hands and pull out.



5. Remove middle side panel from vehicle by lifting it.

Oil Level Verification Procedure

⚠ WARNING

Before starting vehicle ensure vehicle in a well ventilated area or is outside. Smoke will come from the engine for 10 minutes as the anti corrosion coating on the exhaust system and engine burns off.

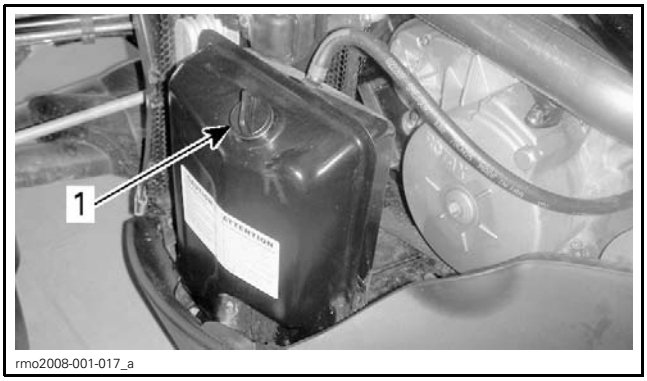
NOTICE For an accurate oil level reading, it is necessary to ride vehicle for 5–7 minutes to ensure that the engine is at its operating temperature. If oil level is verified when vehicle is not at operating temperature, oil level must be between lower and upper marks on dipstick.

NOTICE Never add oil in the engine if the verification is performed when the engine is cold.

1. With the engine already at normal operating temperature, start engine and let it run for at least 30 seconds.

NOTE: Running engine for at least 30 seconds allows the suction oil pump to drain the oil from the engine crankcase back into the oil tank. Not carrying out this step could result in overfilling the engine oil.

2. Stop engine.
3. Unscrew and remove oil dipstick.



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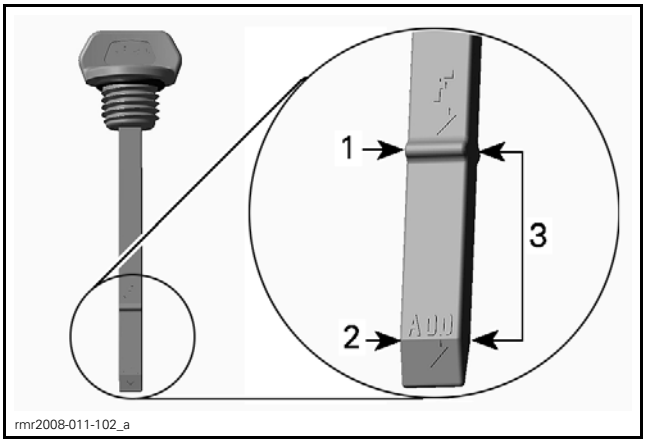
1. Oil dipstick

4. Wipe off the dipstick.
5. Reinsert and **completely screw in** the dipstick to assure an accurate reading.
6. Unscrew and remove dipstick again.
7. Check oil level on dipstick. It should be near or equal to the upper mark.



rmr2008-011-102_a

1. Upper mark (full)
2. Lower mark (add)
3. Operating range

If oil level is at or near upper mark:

– Do not add oil.
– Properly insert and tighten dipstick.
– Install the LH middle side panel.

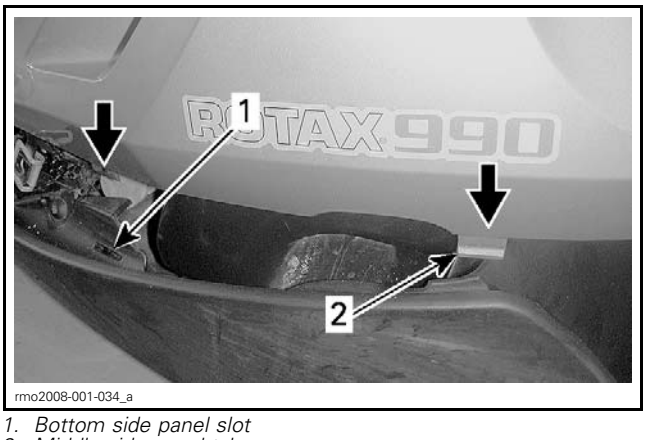
If oil level adjustment:

– Adjust oil level until it is in the operating range, close to the upper mark. **Do not overfill.**
– Properly insert and tighten dipstick.
– Install the LH middle side panel.

NOTE: At the lower mark, 500 ml (.5 qt (U.S. liq.)) of oil is required.

Vehicle Parts Reinstallation

1. Install LH middle panel.
2. Insert the middle side panel tabs into the bottom side panel slots.



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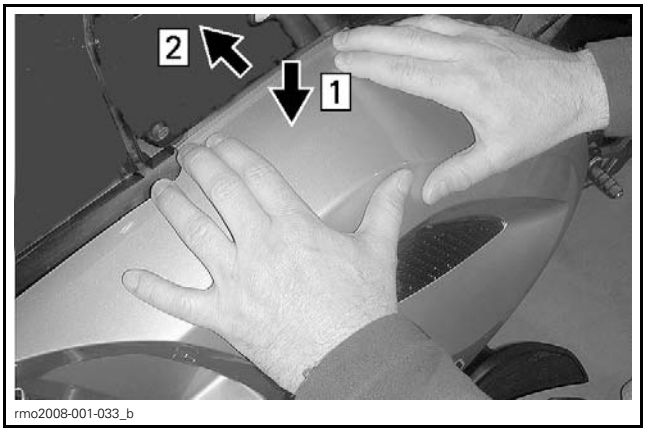
1. Bottom side panel slot
2. Middle side panel tab

3. Press down panel top edge with both hands and push in.
4. While pressing, ensure that lower tabs remain in slots while pressing.



rmo2008-001-033_b

1. Press down top edge
2. Push top edge under top side panel edge

5. Secure panel by pushing and turning each clip clockwise (1/4 turn).


rmo2008-001-035_a

NOTE: Clip is properly fixed when a small amount of force is required while turning clip to its maximum rotation. Clip is not properly fixed when it is loose while turning.

SETUP

Guidelines

All adjustments have already been performed at factory. It is only necessary to validate them. However, if readjustment is needed, refer to the appropriate *ROADSTER SHOP MANUAL* for the proper procedure.

Brake Discs Cleaning

NOTICE A thin layer of anticorrosion treatment is present on the brake disc and must be removed before using the vehicle. Not conforming to this procedure may lead to a brake chattering squeaking and brake pad replacement would be necessary.

1. Clean rear brake disc using XPS BRAKES AND PARTS CLEANER (USA) (P/N 219 701 705) and a clean rag.
2. Apply parking brake.
3. Lift the front of vehicle.
4. Remove front wheels and clean brake discs using XPS BRAKES AND PARTS CLEANER (USA) (P/N 219 701 705) and a clean rag.
5. Reinstall front wheels on vehicle.
6. Ensure that the rotation direction shown by the arrow is respected.

⚠ WARNING

The tires are only designed to rotate in one direction. Do not switch the left and right front wheels.

7. Tighten wheels lug nuts by hand.
8. Lower vehicle.
9. Torque wheels lug nuts.

WHEEL LUG NUT TIGHTENING TORQUE
105 N•m (77 lbf•ft)

10. Release parking brake.
11. Install wheel caps (located inside front storage compartment).

Tires Pressure

⚠ WARNING

Low pressure may cause tire to deflate and rotate on wheel. Overpressure may burst the tire. Always follow recommended pressure.

NOTICE **Always check pressure when tires are cold before using the vehicle.**

NOTE: Tire pressure changes with temperature and altitude. Recheck pressure if one of these conditions has changed (e.g., significant weather change, driving in the mountains).

1. Inflate tires to the specified air pressure. Refer to the following table.

COLD TIRE PRESSURE RECOMMENDATION	
FRONT	REAR
103 kPa ± 14 kPa (15 PSI ± 2 PSI)	193 kPa ± 14 kPa (28 PSI ± 2 PSI)

NOTE: The pressure difference between the left and right side tire should not exceed 3.4 kPa (.5 PSI).

For your convenience, an electronic pressure gauge is supplied in the tool kit.

Drive Belt

NOTICE Always verify drive belt tension with all parts at room temperature and the rear wheel lifted of the ground.

1. Place vehicle on a level surface.

NOTE: The area must be protected against wind and must have a very low background noise.

2. Set transmission to NEUTRAL.
3. Lift rear of vehicle by the frame until rear wheel is off the ground.

NOTICE Do not lift under rear shock absorber. Always lift by the frame. Refer to illustration.


rmr2008-030-009

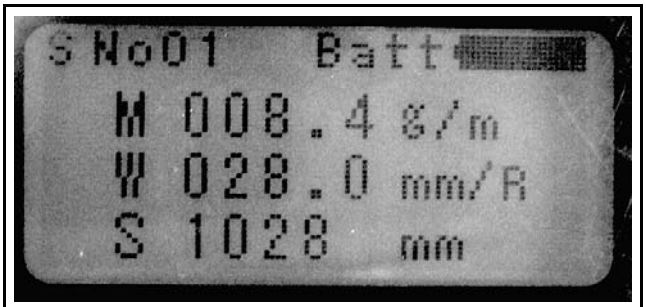
TYPICAL - LIFT BY THE FRAME

4. To check the drive belt tension use the BELT TENSION METER (P/N 529 036 115).


529036115

5. Enter the following specifications to program the meter.

MASS	WIDTH	SPAN
8.4 g/m	28.0 mm/R	1028 mm



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SONIC TENSION METER DISPLAY

NOTE: Refer to the manufacturer's instructions to set the informations into the device.

6. Turn rear wheel to align a wheel spoke with the swing arm.


rmr2008-031-003

TYPICAL - SWING ARM ALIGNS WITH A SPOKE

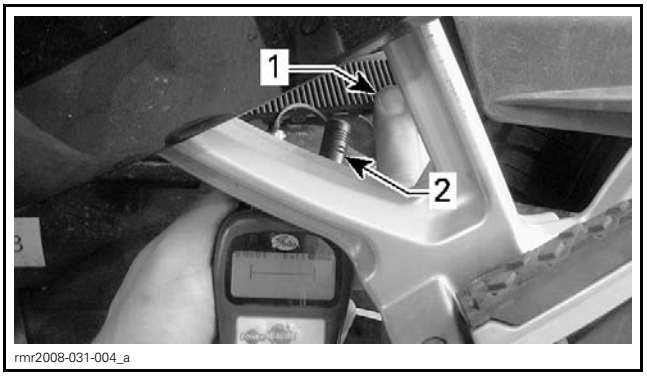
7. Position the sensor behind the LH passenger footrest and hold the sonic tension meter sensor approximately 1 cm (1/2 in) from belt or closer without touching the belt.


rbs2010-006-002

SPYDER GS/RS

8. Tap the belt to make the belt vibrate and note the measurement.
9. Repeat step 8.

NOTE: The second value should be within ±25N. If not, repeat measurements until tolerance is met.



TYPICAL – SPYDER RS SHOWN
1. *Tap the belt*
2. *Sonic tension meter sensor*

10. Repeat steps 6 to 9 for the 2 remaining wheel spokes.

The average of the 3 obtained values (at the 3 spokes) must be within the following range:

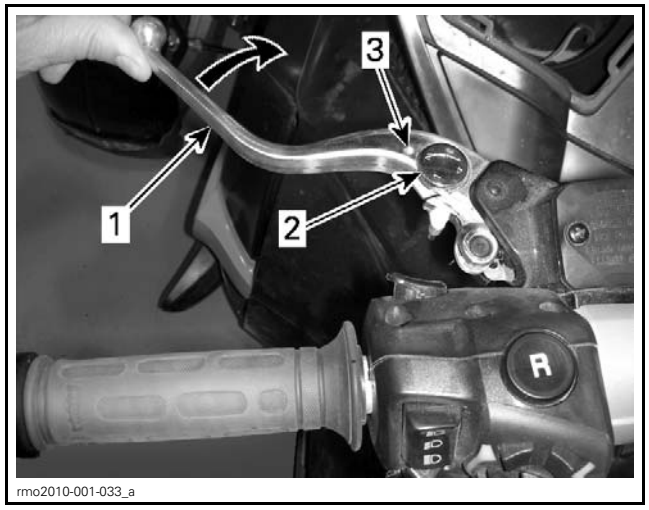
DRIVE BELT TENSION (PARTS AT ROOM TEMPERATURE AND REAR WHEEL LIFTED)
▶1050N ± 150N◀

If the tension of drive belt is out of specification, adjust drive belt as per *DRIVE BELT TENSION ADJUSTMENT*. Refer to *DRIVE SYSTEM* subsection in the proper *CAN-AM ROADSTER SHOP MANUAL*.

Clutch Lever

NOTE: The distance between the clutch lever and handgrip can be adjusted from position 1 (greatest distance) to position 4 (smallest distance).

1. Adjust the clutch lever as per the owner's preference.
   - 1.1 Push the clutch lever forward to release the adjuster dial. Hold in position.
   - 1.2 Turn the adjuster dial to the desired position aligning the dial number with the dot on the lever.
   - 1.3 Release the clutch lever.



CLUTCH LEVER ADJUSTMENT
1. *Clutch lever*
2. *Adjuster dial*
3. *Dot*

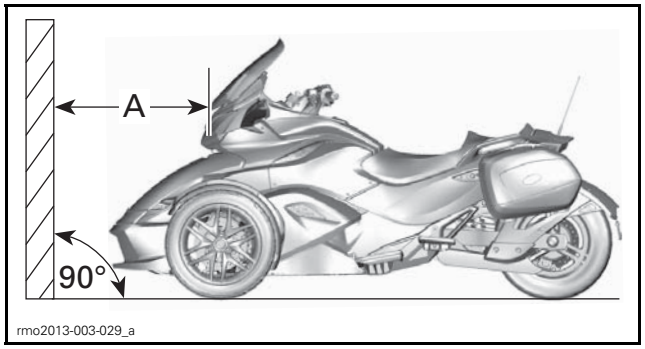
Lights

Headlight Aiming Adjustment

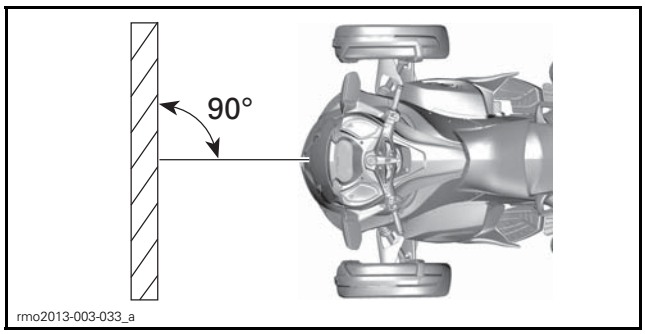
North American Models

Position the vehicle 10 m (33 ft) in front of a test surface as shown.

Have a person of at least 91 kg (200 lb) taking place on the driver's seat.



A. 10 m (33 ft)

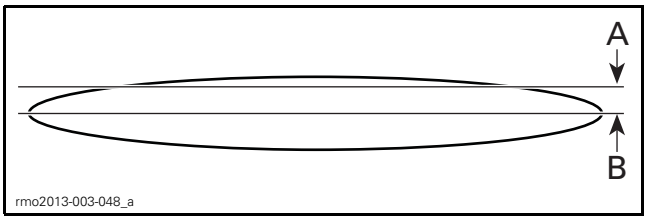


Trace 2 lines parallel to the ground on the test surface as follows:

LINES ON THE TEST SURFACE	
Line 2	704 mm (27-23/32 in) above ground
Line 3	794 mm (31-17/64 in) above ground

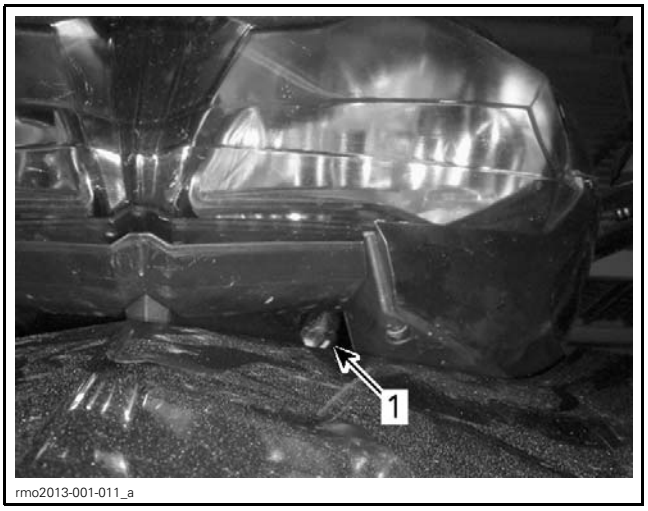
Select low beam.

Beam aiming is correct when the top) of headlight reflection is between marks.



TYPICAL - HEADLIGHT REFLECTION ON TEST SURFACE
1. 704 mm (27-23/32 in)
2. 794 mm (31-17/64 in)

Each headlight can be adjusted by turning the adjustment screws located in the front of the lower console with a Phillips screwdriver. Adjust both headlights evenly.

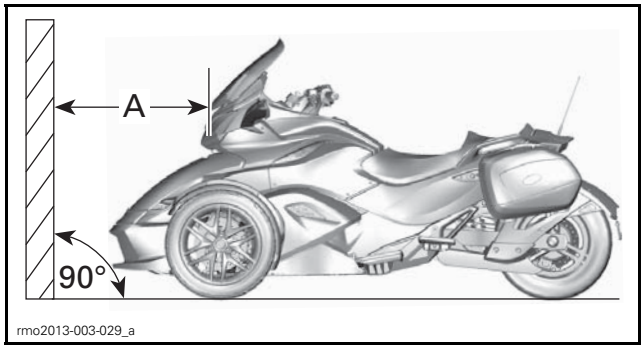


1. Adjustment screw

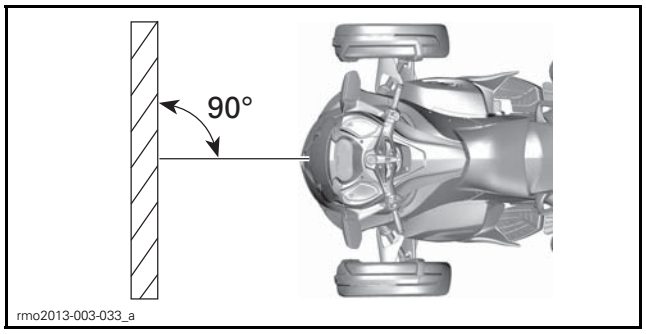
European Models

Position the vehicle 10 m (33 ft) in front of a test surface as shown.

Have a person of at least 91 kg (200 lb) taking place on the driver's seat.



A. 91 kg (200 lb)

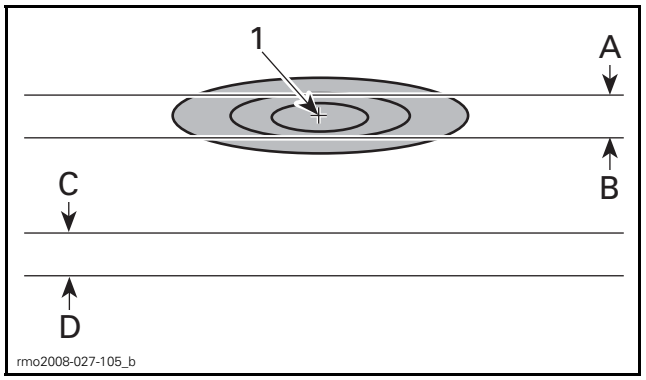


Trace 4 lines parallel to the ground on the test surface as follows:

LINES ON THE TEST SURFACE	
Line A	894 mm (36-13/64 in) above ground
Line B	804 mm (31-5/8 in) above ground
Line C	464 mm (18-9/32 in) above ground
Line D	374 mm (14-23/32 in) above ground

Select high beam.

Beam aiming is correct when the focus point (center point of ellipse) of headlight reflection is between upper marks.

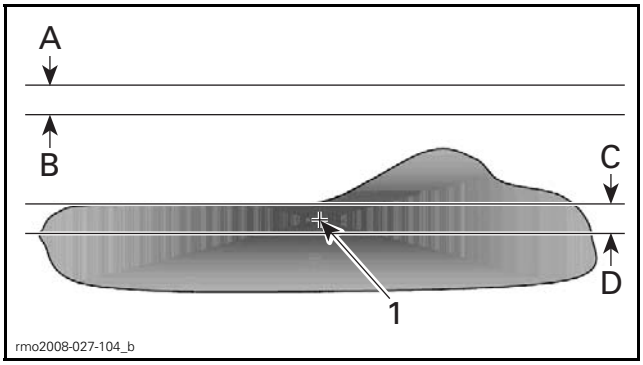


HEADLIGHT REFLECTION ON TEST SURFACE — HIGH BEAM
1. Focus point

A. 894 mm (36-13/64 in) above ground
B. 804 mm (31-5/8 in) above ground
C. 464 mm (18-9/32 in) above ground
D. 374 mm (14-23/32 in) above ground

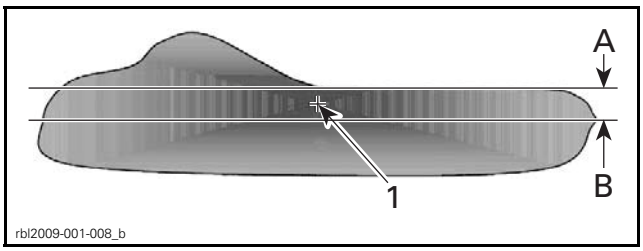
Select low beam.

Beam aiming is correct when the focus point (brightest point) of headlight reflection is between lower marks.



RH TRAFFIC HEADLIGHT REFLECTION ON TEST SURFACE — LOW BEAM
1. Focus point

A. 894 mm (36-13/64 in) above ground
B. 804 mm (31-5/8 in) above ground
C. 464 mm (18-9/32 in) above ground
D. 374 mm (14-23/32 in) above ground

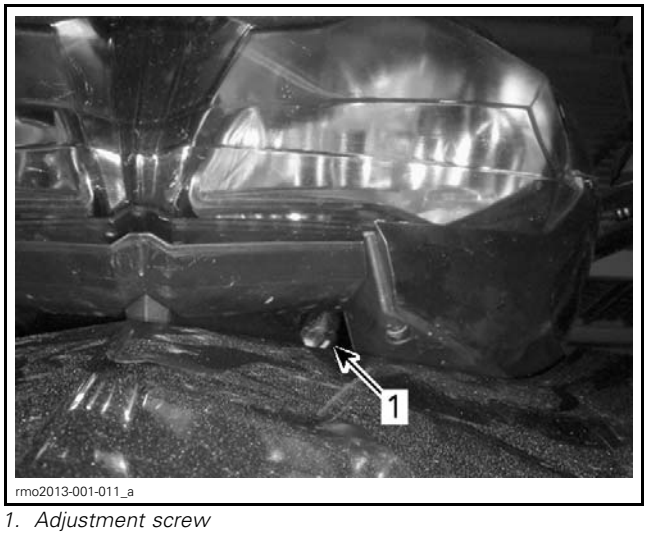


LH TRAFFIC HEADLIGHT REFLECTION ON TEST SURFACE — LOW BEAM
1. Focus point

A. 464 mm (18-9/32 in) above ground
B. 374 mm (14-23/32 in) above ground

High Beam

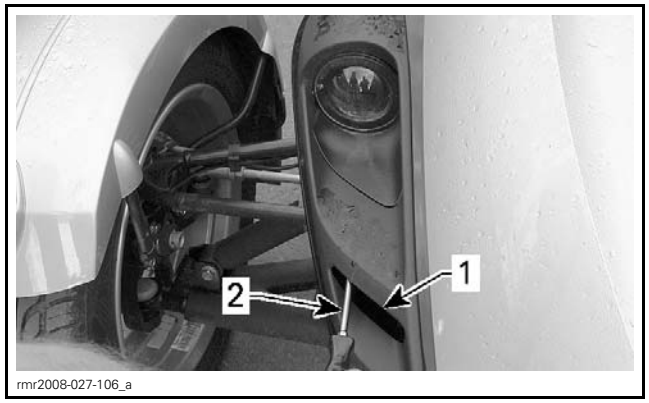
Turn adjustment screws to adjust beam height. Adjust both headlights evenly.



1. Adjustment screw

Low Beam

Insert a long Phillips screwdriver into air duct to reach the adjustment screws.



1. Air duct
2. Screwdriver

Turn adjustment screws to adjust beam height. Adjust both headlights evenly.

B.U.D.S. Programming

Always use the latest B.U.D.S. version on your shop computer. It is available from the following web site:

WWW.BOSSWEB.BRP.COM

Please note that the latest B.U.D.S. version is also available in Knowledge Center.

NOTICE During data transfer, make sure that:
- Voltage (12V) remains stable before starting update. Charge the battery or use a power pack to have enough power.
- Although screen "freezes" for a while, remain on the B.U.D.S. because update still continues
- Never disconnect any cable while updating ECM.

MANDATORY TOOLS	
A personal computer (laptop or desktop)	
MPI-2 INTERFACE CARD (P/N 529 036 018)	
MPI-2 DIAGNOSTIC CABLE (P/N 710 000 851)	
OPTIONAL TOOL	
Extension cable available at electronic retail outlets. Do not exceed 7.5 m (25 ft)	

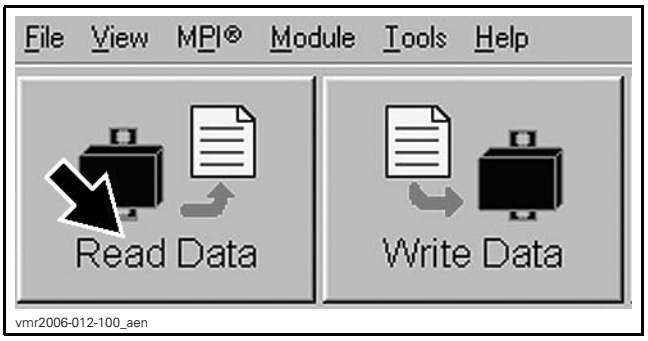
NOTE: B.U.D.S. is not used to program the hard keys (included keys are ready to use).

Use B.U.D.S. to
- Enter Customer's Name
- Reset Trip Hours and Trip Distances

– Reset Last Service
– Set Speedometer Units
– Set Cluster Language
– Check fault codes (if any).

Connecting PC to Vehicle

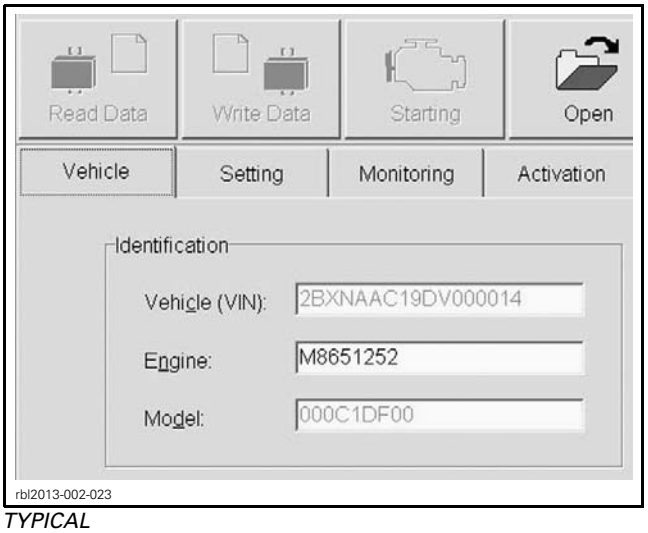
1. Remove service cover from vehicle.
2. Connect the PC to vehicle. Refer to the latest edition of *CAN-AM ROADSTER B.U.D.S. SOFTWARE AND COMMUNICATION TOOLS* for the proper connecting procedure.
3. Press READ DATA button from the tool bar to initiate communication with the vehicle.



Entering Customer's Name

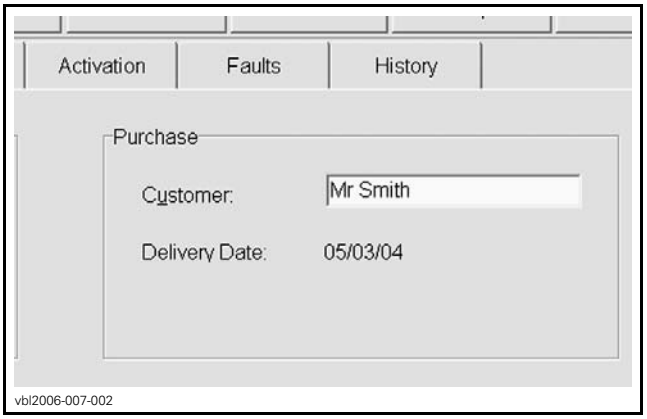
NOTE: When starting the vehicle, the multifunction display will show the name of the customer; for example: "HI JOHN SMITH". If the customer's name is not programmed, only "HI" will be visible when turning the vehicle ON.

1. Click on the VEHICLE tab to open the vehicle information page.



TYPICAL

2. Type the name of the customer.



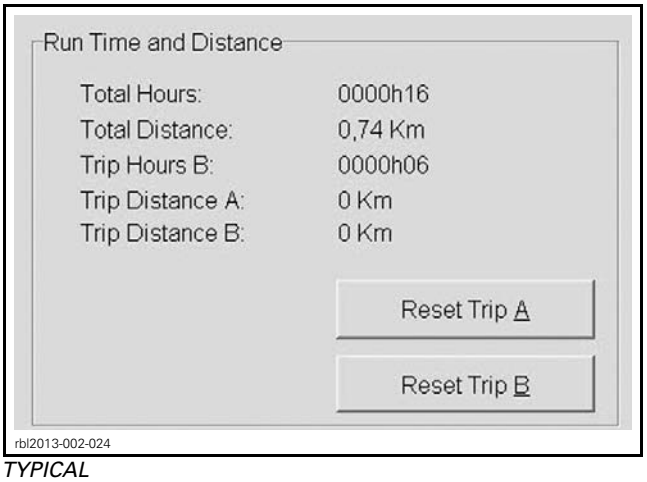
TYPICAL

3. Click on WRITE DATA to save the information in the vehicle ECM.

NOTE: After you are finished typing the name, B.U.D.S. automatically updates the Delivery Date on the screen.

Resetting Trip Hours and Trip Distances

1. Ensure that the VEHICLE tab is selected.
2. Click on the RESET TRIP buttons to reset the information.

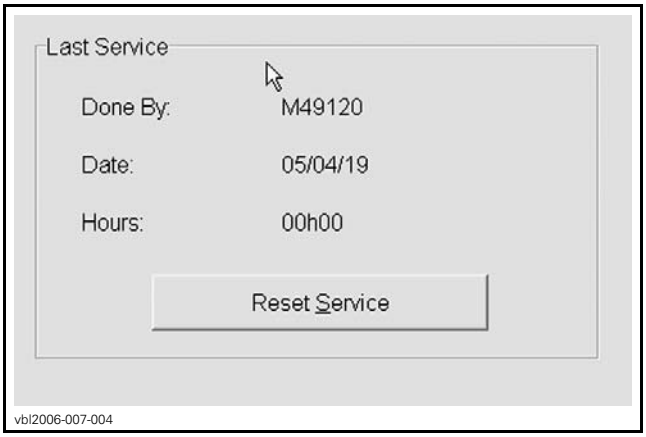


TYPICAL

NOTE: It can also be done directly on the info-center, using the selector button.

Resetting Last Service

1. Click on the RESET SERVICE button to reset the informations.



TYPICAL

NOTE: After each maintenance service, Last Service should be reset to keep a good track of vehicle service history.

Speedometer Units

NOTE: The speedometer is factory preset in miles but it is possible to change it to kilometer reading. Any unit modification is applied to the speedometer, odometer and trip meter.

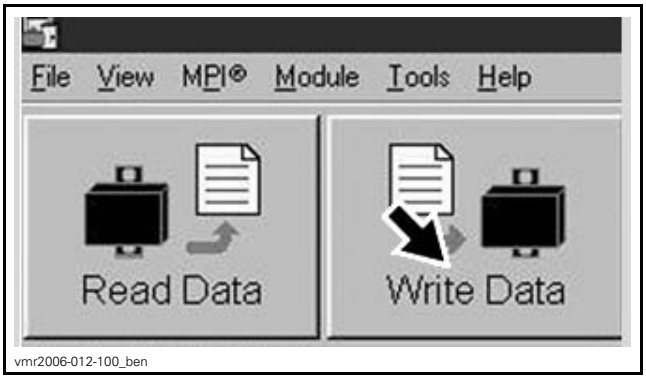
1. Select the SETTING tab in B.U.D.S.
2. Select CLUSTER page.
3. Select **Metric** or **Imperial** from the **Cluster Units** section.

NOTE: No data will be lost when changing this setting.

Ending a B.U.D.S. Session

NOTICE **After a problem has been solved, ensure to clear the fault(s). This will properly reset the appropriate counter(s).**

1. Click on FAULT tab and check if there are active faults. If so, service vehicle then clear the faults in B.U.D.S
2. Click on WRITE DATA button to transfer new settings and information to the modules.



WRITE DATA BUTTON

3. Click on EXIT button (right most) to end session.
4. Reinstall DCL connector into its housing.
5. Reinstall service cover on vehicle.

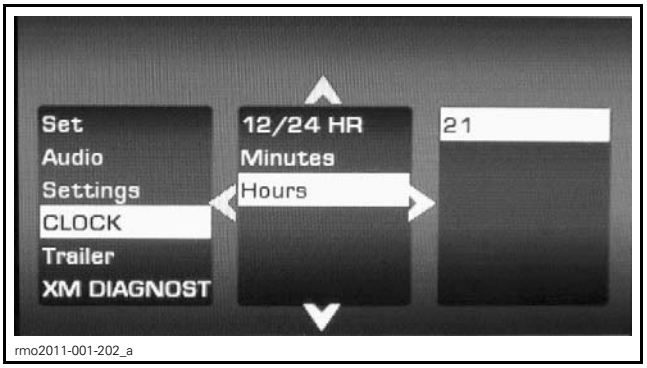
Clock Setting

NOTE: It is normal that the **check engine** indicator lamp is displayed while the clock is adjusted.

Setting the Time

To set the hours:

Select CLOCK in main category of Preferences Screen.

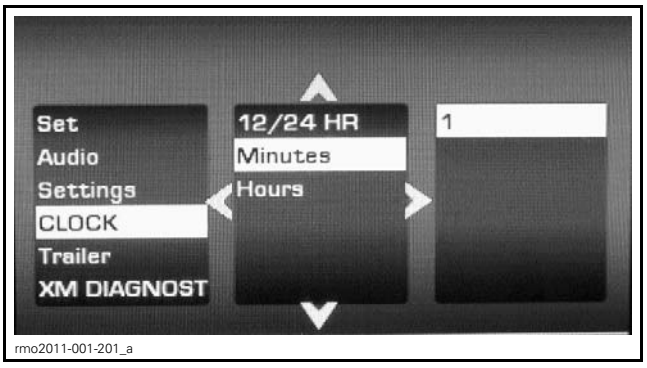


Select HOURS in secondary category.

Adjust the unit value using the UP and DOWN arrow.

To set the minutes:

Select CLOCK in main category of Preferences Screen.



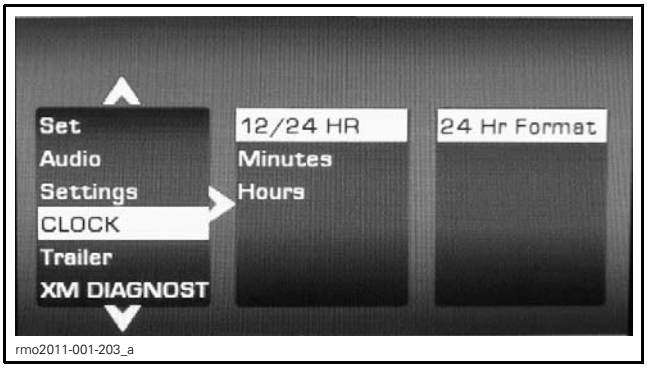
Select MINUTES in secondary category.

Adjust the unit value using the UP and DOWN arrow.

Selecting the Hour Mode

To select the 12/24 hour mode:

Select CLOCK in main category of Preferences Screen.



Select 12/24 HOUR in secondary category.

Select the appropriate value in main unit or setting.

ASSEMBLY INSPECTION

Inspect the following parts to make sure that the vehicle is properly assembled.

NOTE: Ensure that all protective materials are removed from vehicle.

1. Front compartment cover and seat locks
2. Passenger grab handles
3. Front wheel lug nut torque (must be 105 N•m (77 lbf•ft))
4. Suspension arm ball joint cotter pins
5. Tie rod end nuts and cotter pins
6. Rear axle nut and cotter pin
7. Gearshift pedal operation
8. Parking brake pedal and cable operation
9. Brake lines
10. Foot pegs.

NOTE: Refer to the Predelivery Check List to confirm that all items are covered by your inspection.

FINAL INSPECTION

Vehicle Test Run

Ride the vehicle to ensure proper operation of all systems and components.

NOTE: It is normal for the shock absorbers not to provide their optimal performance during the first test ride. They will be set after a few suspension strokes.

1. Instrument cluster operation and indicator-warning pilot lamps functioning on power up.
2. Display of safety message in cluster.
3. Starter interlock mechanism operation.
   - 3.1 Press start button to make sure engine can not be started if M button is not depressed to acknowledge safety message.
4. Cluster mode button and set button operation.
5. Check for error messages in cluster and correct if necessary.
6. Verify that both ignition keys allow the engine to start.
7. Brake operation.
   - – The brake pedal is in front of the right footpeg.
   - – Press it down to operate.
   - – This pedal brakes all three wheels.
   - 7.1 Ensure brake pedal is firm when pressure is applied and that it returns freely.
8. Parking brake operation.
   - – The parking brake pedal is behind the operator's left footpeg. This pedal brakes only the rear wheel.
   - 8.1 Press it down firmly until it locks to apply the parking brake.
   - 8.2 Firmly press the pedal down a second time to release the parking brake.
   - 8.3 Ensure parking brake is shut-off.
9. Reverse button operation (SE5 Model).
   - 9.1 Start engine.
   - 9.2 Shift in first gear, slightly apply on throttle then release.
   - 9.3 Shift in reverse, slightly apply on throttle then release.
   - 9.4 Shift in neutral position, slightly apply on throttle then release.
10. Reverse interlock operation (SM5 Model).
    - 10.1 With the engine running, attempt to shift into reverse without pulling the reverse interlock lever back.
    - 10.2 Release the clutch lever.
    - 10.3 If the transmission is allowed to shift to reverse, the reverse interlock will need to be adjusted.

11. Throttle operation.
    – The throttle is the right handgrip, and it controls engine speed. To increase engine speed, roll the throttle toward you. To decrease engine speed, roll the throttle away from you. The throttle is spring loaded and should return to idle when you release it.

    11.1 With handlebars turned fully left and then fully right, ensure that the throttle returns completely to idle position.
12. Clutch lever operation (SM5 Model).
    – The clutch lever is in front of the left handgrip. The clutch controls the transmission of power from the engine to the rear wheel. The lever is squeezed to disengage power and released to engage power.
13. Engine stop switch operation.
    – The engine stop switch is near the right handgrip. It has two positions and must be set to the run position before you can start the engine. It allows you to stop the engine anytime without removing your hand from the handlebar.
14. Operation of the following lights:
    – Headlights
    – Taillights
    – Brake light
    – Position lights
    – Turn signals
    – Hazard lights
    – Licence plate light.
15. Dimmer switch operation.
16. Headlight overrun button operation.
    – There is a headlight override button on the front of the right handgrip.
17. Horn operation.
    – The horn button is located near the left handgrip.
18. Leakage of the following fluids:
    – Fuel
    – Engine oil
    – Engine coolant
    – Brake fluid
    – Clutch fluid

Vehicle Cleaning

NOTICE Do not clean the windshield with alkaline or acid cleaner, gasoline or solvent to avoid windshield damage.

NOTICE Never use a high pressure washer to clean the vehicle. USE LOW PRESSURE ONLY (like a garden hose). The high pressure can cause electrical or mechanical damage.

NOTICE It is necessary to use flannel cloths on plastic parts to avoid damaging surfaces.

NOTICE Do not wash the seat with a vinyl or plastic cleaner because the seat may become slippery.

NOTICE Certain plastic or vinyl cleaners will damage the seat cover. Use only mild detergent, such as soap specially formulated for motorcycles or automobiles.

1. Wet the vehicle thoroughly with water.
2. Wash the vehicle with water mixed with a mild detergent, such as soap specially formulated for motorcycles or automobiles.
3. Dry the vehicle with a chamois or a soft towel.

NOTE: While washing the vehicle, check for grease or oil. If necessary, use a mild automotive degreaser and follow the manufacturer's instructions.

Delivery to Customer

Complete the *PREDELIVERY CHECK LIST*.

The customer and dealer must read and sign the *PREDELIVERY CHECK LIST*.

SPECIFICATIONS

Canada and USA

MODEL				SPYDER ST
ENGINE				
Engine type				ROTAX 991 60° V-Twin
				4-stroke, Dual Over Head Camshaft (DOHC), liquid cooled
Number of cylinders				2
Number of valves				8 valves
Bore				97 mm (3.82 in)
Stroke				67.5 mm (2.6575 in)
Displacement				998 cm^3 (60.9 in^3)
Compression ratio				12.2:1
Lubrication	Type			Dry sump with separate oil tank and oil cooler
	Oil filter	Engine		BRP Rotax microglass fibre type, replaceable
		Transmission (SE5)		
	Engine oil Capacity	Oil change with new engine filter	SM5	3.9 L (4.1 qt (U.S. liq.))
		Oil change with new engine filter	SE5	4.2 L (4.4 qt (U.S. liq.))
		Oil change with new engine and HCM filters		4.3 L (4.5 qt (U.S. liq.))
	Recommended engine oil			Use XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121) or a 5W 40 semi-synthetic (minimum) or synthetic motorcycle oil meeting the requirements for API service SL, SJ, SH or SG classification
Clutch	Type		SM5 model	Wet, multi-plate, manual operation through a hydraulic piston, vacuum assist
	Fluid			DOT 4 brake fluid
	Type		SE5 model	Centrifugal clutch + wet multi-plate clutch automatically controlled by TCM
	Engagement			2000 +/- 200 RPM (centrifugal)
	Stall			3200 +/- 200 RPM (centrifugal)
Exhaust system				2 into 1 with catalytic converter
Air filter				Paper element
GEARBOX				
Type			SM5	Sequential Manual 5-speed (SM5) with reverse interlock
			SE5	Sequential Semi-automatic 5-speed (SE5) with integrated reverse interlock
COOLING SYSTEM				
Type				Liquid cooled, single radiator with cooling fan
Coolant	Type			Ethyl glycol/water mix (50% coolant, 50% distilled water). Use premixed coolant sold by BRP (P/N 219 700 362) or coolant specifically designed for aluminum engines
	Capacity			3 L (.79 U.S. gal.)
ELECTRICAL SYSTEM				
Magneto generator output				650 W
Ignition system type				Electronic ignition with dual output coil

MODEL			SPYDER ST
ELECTRICAL SYSTEM (cont'd)			
Ignition timing			Not adjustable
Spark plug		Quantity	2
		Make and type	NGK KR8Bi
		Gap	0.7 mm - 0.8 mm (.028 in - .031 in)
Engine RPM limiter setting		Forward	9500 RPM
Battery		Type	Yuasa YTX24HL-BS
		Voltage	12 volts
		Nominal rating	21 A•h
		Recommended charging rate	2 A
Headlight			2 x 60 W (nominal)
Taillight/brake light			2 x 5/21 W
Backup light			21 W
Turn signal lights		Front	4.5 W
		Rear	10 W
Position lights			2 x 5 W
License plate light			5 W
Fuses			Refer to *FUSES* in *ELECTRICAL ACCESSORIES FAILURE*
FUEL SYSTEM			
Fuel delivery		Type	Multi-point Electronic Fuel Injection (EFI) with ETC (Electronic Throttle Control) Dual throttle body (51 mm) with an actuator
Fuel pump		Type	Electrical module in fuel tank
Idle speed			1400 ± 100 RPM (not adjustable)
Fuel	Type		Regular unleaded gasoline (fuel which may contain up to 10% MAX ethanol)
	Octane no.	Inside North America	87 (R+M)/2 or higher
		Outside North America	92 RON or higher
Fuel tank capacity			25 L (6.6 U.S. gal.)
DRIVE SYSTEM			
Final drive type			Carbon reinforced drive belt
Final drive ratio			28/79
STEERING			
Type			Dynamic Power Steering (DPS)
FRONT SUSPENSION			
Suspension type			Double A-arm with anti-sway bar
Suspension travel			151 mm (5.94 in)
Shock absorber		Qty	2
		Type	SACHS twin-tube coil-over
Front preload adjustment			No adjustment
REAR SUSPENSION			
Suspension type			Swing arm with monoshock
Suspension travel			152 mm (6 in)

MODEL		SPYDER ST
REAR SUSPENSION (cont'd)		
Shock absorber	Qty	1
	Type	SACHS twin-tube coil-over
Rear preload adjustment		No adjustment
BRAKES		
Type		Brembo
Front brake		Dual 270 mm (11 in) rigid discs, radially mounted Brembo monobloc calipers with 4 piston, 2-pad
Rear brake		Single disc 270 mm (10.6 in) with 1 piston floating caliper with integrated parking brake
Brake fluid	Capacity	0.53 L (.14 U.S. gal.)
	Type	DOT 4
Parking brake		Mechanical, electrically actuated to the rear caliper
Minimum brake pad thickness		1 mm (.04 in)
Minimum brake disc thickness		6.4 mm (.25 in)
Maximum brake disc warpage		0.10 mm (.004 in)
TIRES		
Type (use only tires recommended by BRP)	Front	KR31 165/55R15
	Rear	KR21 225/50R15
Pressure	Front	Nominal.: 103 kPa (15 PSI) Min.: 89 kPa (13 PSI) Max.: 117 kPa (17 PSI) NOTE: The pressure difference between the left and right side tire should not exceed 3.4 kPa (.5 PSI).
	Rear	Nominal.: 193 kPa (28 PSI) Min.: 179 kPa (26 PSI) Max.: 207 kPa (30 PSI)
Minimum tire tread depth	Front	2.5 mm (3/32 in)
	Rear	4.0 mm (5/32 in)
WHEELS		
Size (diameter X width)	Front	381 mm (15 in) x 127 mm (5 in)
	Rear	381 mm (15 in) x 178 mm (7 in)
Front wheel nuts torque		105 N•m (77 lbf•ft)
Rear drive axle nut torque		130 N•m (96 lbf•ft)

MODEL		SPYDER ST
DIMENSIONS		
Overall length		2 667 mm (105 in)
Overall width		1 506 mm (59.3 in)
Overall height		1 332 mm (52.4 in)
Seat (top) height		737 mm (29 in)
Wheel base		1 711 mm (67.4 in)
Front wheel track		1 308 mm (51.5 in)
Ground clearance, front and under engine		110 mm (4.3 in)
WEIGHT AND LOADING CAPACITY		
Dry weight		392 mm (15.4 in)
Front storage compartment	Capacity	55 L (14.5 U.S. gal.)
	Maximum load	16 kg (35 lb)
Total vehicle load allowed (including operator, all other loads and added accessories)		208 kg (459 lb)
Gross vehicle weight rating (GVWR)		623 kg (1,373 lb)

Europe

MODEL				SPYDER ST
ENGINE				
Engine type				ROTAX 991 60° V-Twin 4-stroke, Dual Over Head Camshaft (DOHC), liquid cooled
Number of cylinders				2
Number of valves				8 valves
Bore				97 mm (3.82 in)
Stroke				67.5 mm (2.66 in)
Displacement				998 cm^3 (60.9 in^3)
Compression ratio				12.2:1
Lubrication	Type			Dry sump with separate oil tank and oil cooler
	Oil filter	Engine		BRP Rotax microglass fibre type, replaceable
		Transmission (SE5)		
	Engine oil capacity	Oil change with new engine filter	SM5	3.9 L (4.1 qt (U.S. liq.))
		Oil change with new engine filter	SE5	4.2 L (4.4 qt (U.S. liq.))
		Oil change with new engine and HCM filters		4.3 L (4.5 qt (U.S. liq.))
		Recommended engine oil		Use XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121) or a 5W 40 semi-synthetic (minimum) or synthetic motorcycle oil meeting the requirements for API service SL, SJ, SH or SG classification.
Clutch	SM5 model	Type		Wet, multi-plate, manual operation through a hydraulic piston, vacuum assist
		Fluid		DOT 4
	SE5 model	Type		Centrifugal clutch + wet multi-plate clutch automatically controlled by TCM
		Engagement		2000 ± 200 RPM (centrifugal)
		Stall		3200 ± 200 RPM (centrifugal)
Exhaust system				2 into 1 with catalytic converter
Air filter				Paper element
GEARBOX				
Type	SM5			Sequential Manual 5-speed (SM5) with reverse interlock
	SE5			Sequential Semi-automatic 5-speed (SE5) with integrated reverse interlock
COOLING SYSTEM				
Type				Liquid cooled, single radiator with cooling fan
Coolant		Type		Ethyl glycol/water mix (50% coolant, 50% distilled water). Use premixed coolant sold by BRP (P/N 219 700 362) or coolant specifically designed for aluminum engines
		Capacity		3 L (.79 U.S. gal.)

MODEL			SPYDER ST
ELECTRICAL SYSTEM			
Magneto generator output			650 W
Ignition system type			Electronic ignition with dual output coil
Ignition timing			Not adjustable
Spark plug		Quantity	2
		Make and type	NGK KR8Bi (apply heat-sink paste P12 (P/N 420 897 186) on spark plug threads)
		Gap	0.7 mm - 0.8 mm (.028 in - .031 in)
Engine RPM limiter setting		Forward	9500 RPM
Battery		Type	Yuasa YTX24HL-BS
		Voltage	12 volts
		Nominal rating	21 A•h
		Recommended charging rate	2 A
Headlight			4 x60 W
Taillight/brake light			2 x5/21 W
Backup light (Australian model only)			20 W
Turn signal lights		Front	21 W
		Rear	21 W
Position lights			2 x5 W
License plate light			5 W
Fuses			Refer to *FUSES* in *ELECTRICAL ACCESSORIES FAILURE*
FUEL SYSTEM			
Fuel delivery		Type	Multi-point Electronic Fuel Injection (EFI) with ETC (Electronic Throttle Control) Dual throttle body (51 mm) with an actuator
Fuel pump		Type	Electrical module in fuel tank
Idle speed			1400 ± 100 RPM (not adjustable)
Fuel	Type	All vehicles except Brazilian	Regular unleaded gasoline (fuel which may contain up to 10% MAX ethanol)
		Brazilian	Regular unleaded gasoline (fuel which may contain up to 25% MAX ethanol)
	Octane no.		92 RON or higher
Fuel tank capacity			25 L (6.6 U.S. gal.)
DRIVE SYSTEM			
Final drive type			Carbon reinforced drive belt
Final drive ratio			28/79
STEERING			
Type			Dynamic Power Steering (DPS)
FRONT SUSPENSION			
Suspension type			Double A-arm with anti-roll bar
Suspension travel			151 mm (5.9 in)
Shock absorber		Qty	2
		Type	SACHS twin-tube coil-over

MODEL		SPYDER ST
FRONT SUSPENSION (cont'd)		
Front preload adjustment		No adjustment
REAR SUSPENSION		
Suspension type		Swing arm with monoshock
Suspension travel		152 mm (6 in)
Shock absorber	Qty	1
	Type	SACHS twin-tube coil-over
Rear preload adjustment		No adjustment
BRAKES		
Type		Brembo
Front brake		Dual 270 mm (11 in)rigid discs, radially mounted Brembo monobloc calipers with 4 piston, 2-pad
Rear brake		Single disc 270 mm (10.6 in) with 1 piston floating caliper with integrated parking brake
Brake fluid	Capacity	0.53 L (.14 U.S. gal.)
	Type	DOT 4
Parking brake		Mechanical, electrically actuated to the rear caliper
Minimum brake pad thickness		1 mm (.04 in)
Minimum brake disc thickness		6.4 mm (.25 in)
Maximum brake disc warpage		0.10 mm (.004 in)
TIRES		
Type (use only tires recommended by BRP)	Front	Kenda KR31 165/55/R15
	Rear	Kenda KR21A 225/50R15
Pressure	Front	Nominal.: 103 kPa (15 PSI) Min.: 89 kPa (13 PSI) Max.: 117 kPa (17 PSI) NOTE: The pressure difference between the left and right side tire should not exceed 3.4 kPa (.5 PSI).
	Rear	Nominal.: 193 kPa (28 PSI) Min.: 179 kPa (26 PSI) Max.: 207 kPa (30 PSI)
Minimum tire tread depth	Front	2.5 mm (3/32 in)
	Rear	4.0 mm (5/32 in)
WHEELS		
Size (diameter X width)	Front	381 mm (15 in) x 127 mm (5 in)
	Rear	381 mm (15 in) x 178 mm (7 in)
Front wheel nuts torque		105 N•m (77 lbf•ft)
Rear drive axle nut torque		130 N•m (96 lbf•ft)

MODEL		SPYDER ST
DIMENSIONS		
Overall length		2 667 mm (105 in)
Overall width		1 506 mm (59.3 in)
Overall height		1 332 mm (52.4 in)
Seat (top) height		737 mm (29 in)
Wheel base		1 711 mm (67.4 in)
Front wheel track		1 308 mm (51.5 in)
Ground clearance, front and under engine		110 mm (4.3 in)
WEIGHT AND LOADING CAPACITY		
Dry weight		392 mm (15.4 in)
Front storage compartment	Capacity	55 L (14.5 U.S. gal.)
	Maximum load	16 kg (35 lb)
Total vehicle load allowed (including operator, all other loads and added accessories)		208 kg (459 lb)
Gross vehicle weight rating (GVWR)		623 kg (1,373 lb)

Because of our ongoing commitment to product quality and innovation, BRP reserves the right, at any time, to make changes in design and specifications and/or to make additions to, or improvements in its products without imposing any obligation upon itself to install them on its previously manufactured products.