

iBR, REVERSE AND VTS

SERVICE TOOLS

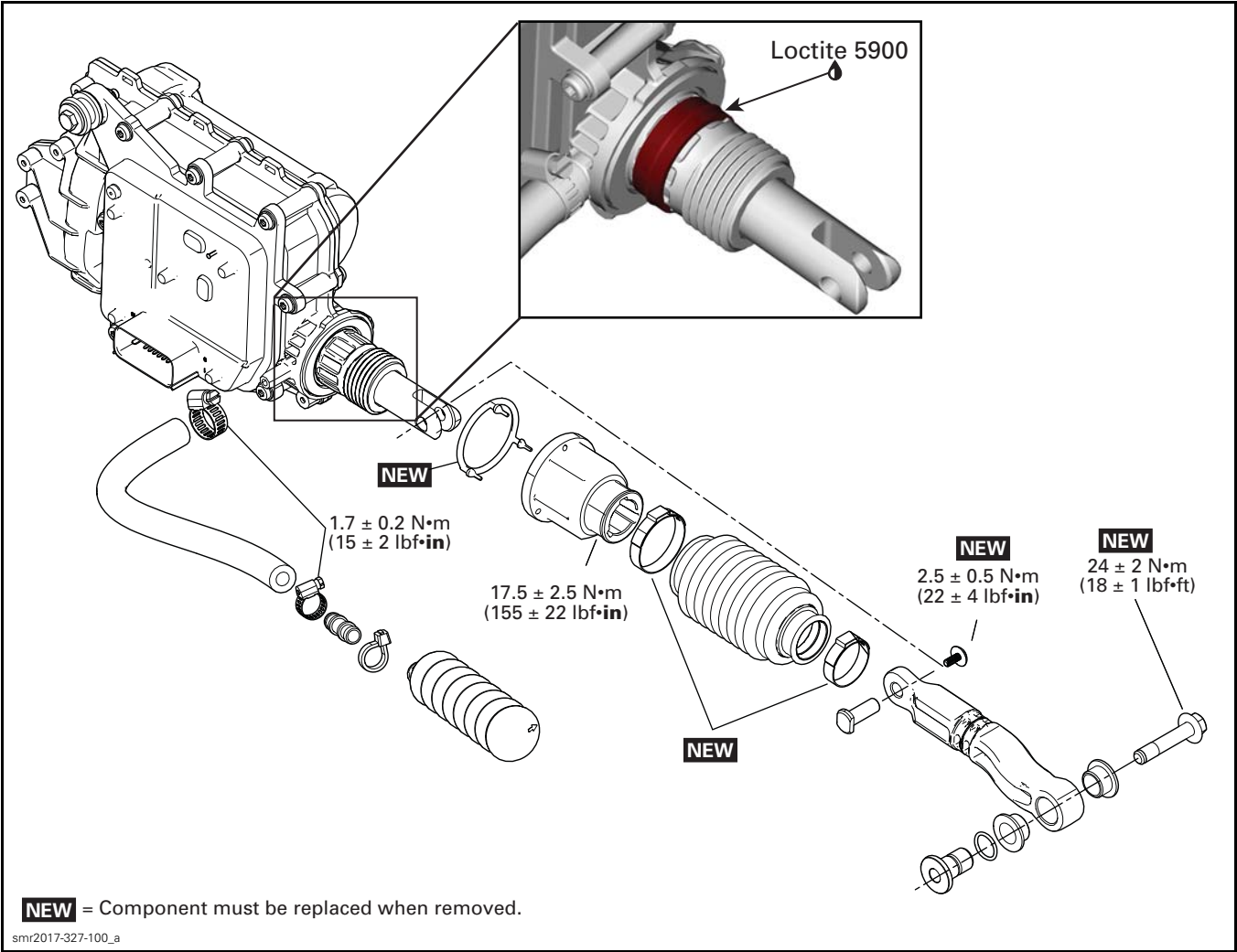
Description	Part Number	Page
DIAGNOSTIC HARNESS	529 036 188	23
IBR NUT SOCKET.....	529 036 379	16

SERVICE PRODUCTS

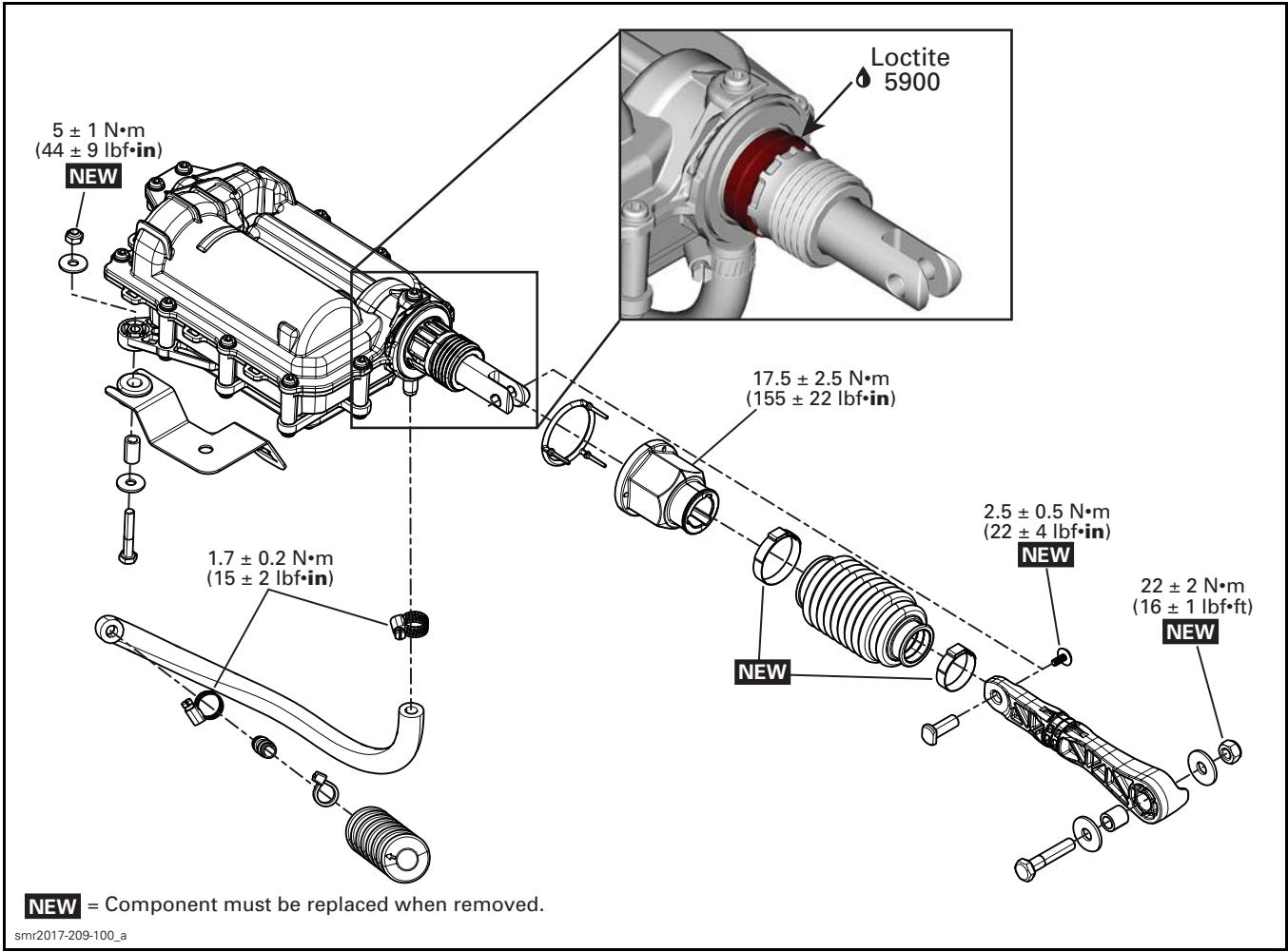
Description	Part Number	Page
LOCTITE 5900	293 800 066	16, 21

iBR ACTUATOR

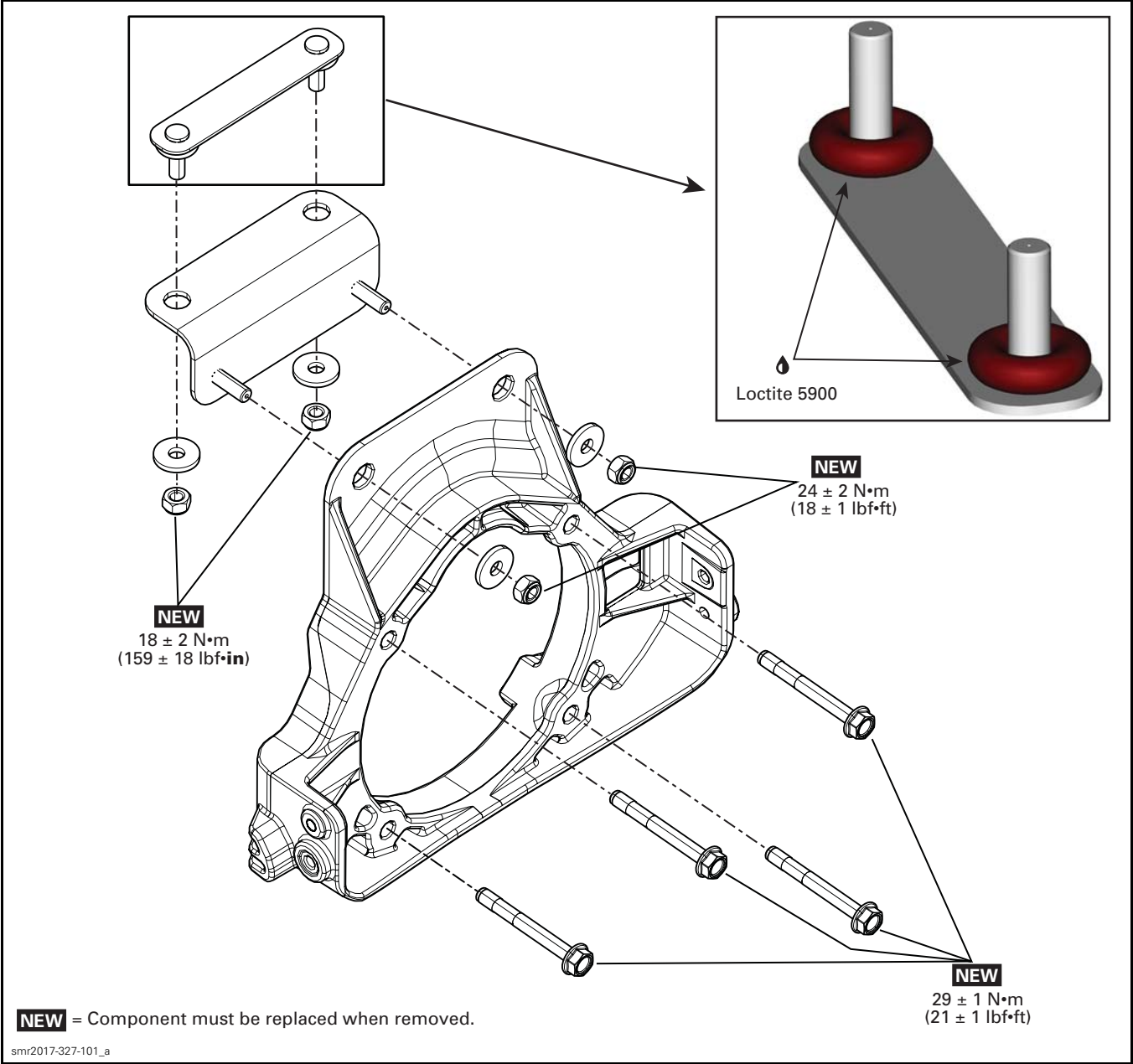
1500 Series



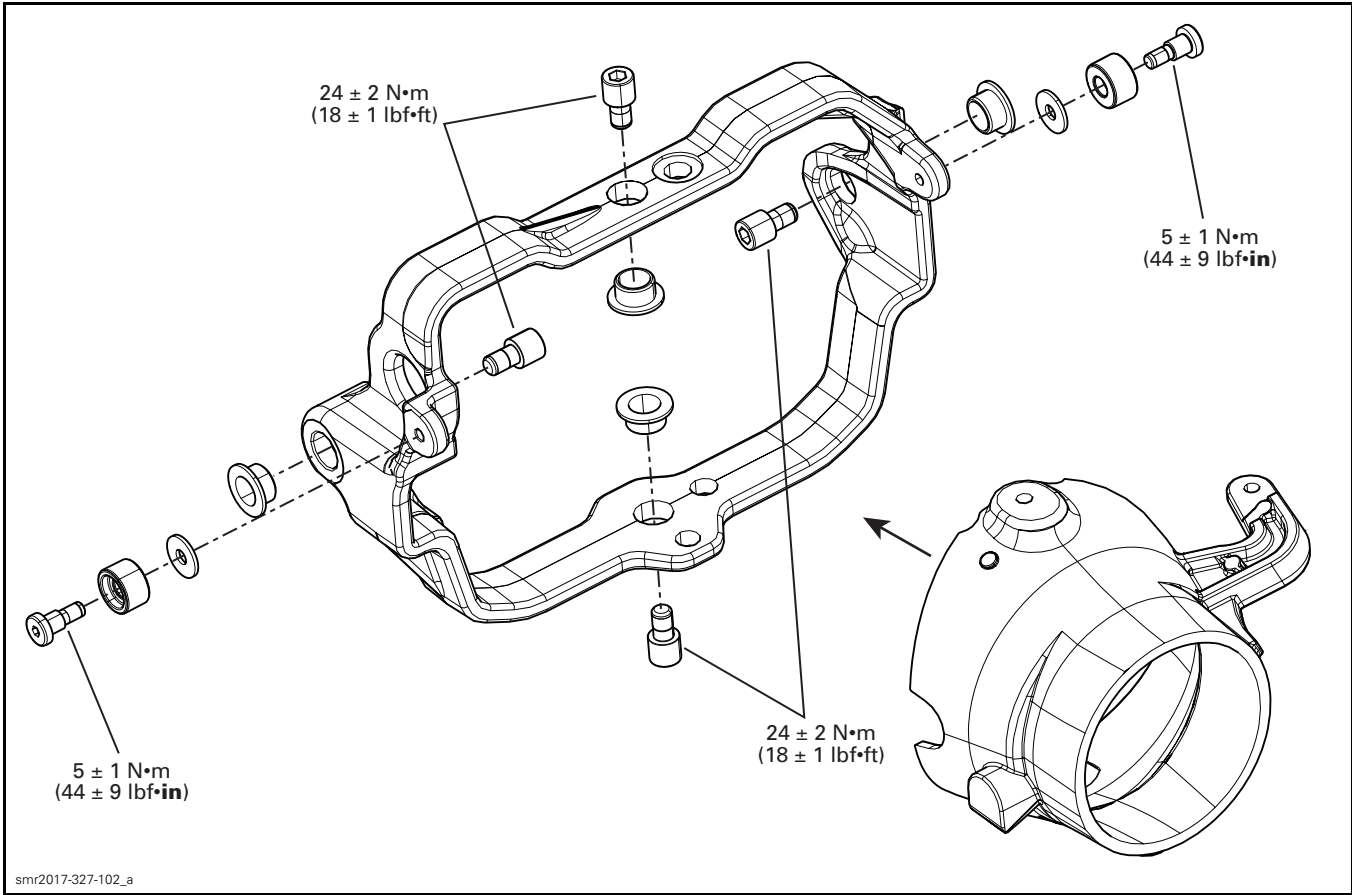
900 ACE Series



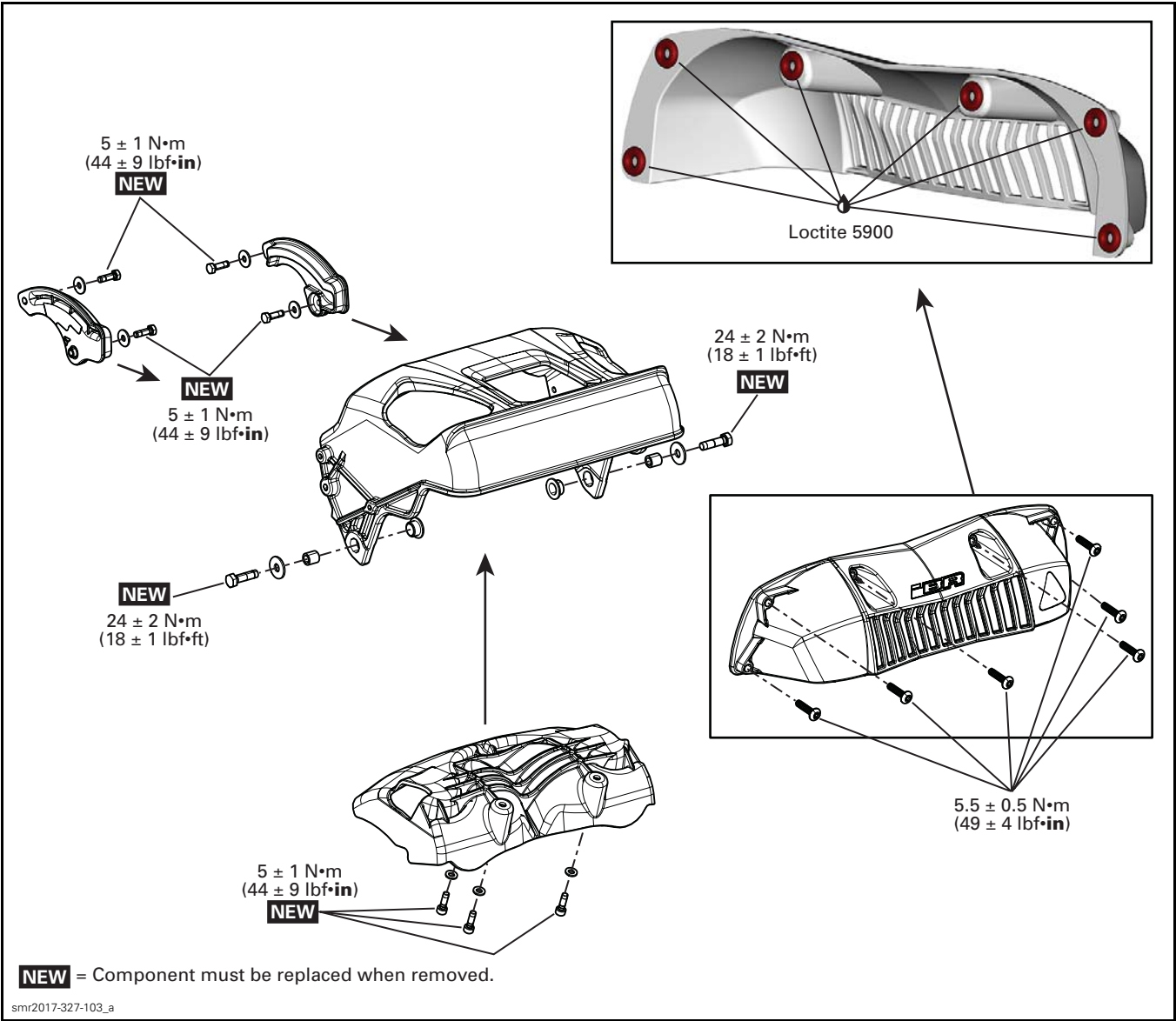
iBR GATE SUPPORT BRACKET



VTS TRIM RING AND NOZZLE



iBR GATE



GENERAL

During assembly/installation, use torque values and service products as indicated in the exploded views.

Clean threads before applying a threadlocker. Refer to *SELF-LOCKING FASTENERS* and *LOCTITE APPLICATION* at the beginning of this manual for complete procedure.

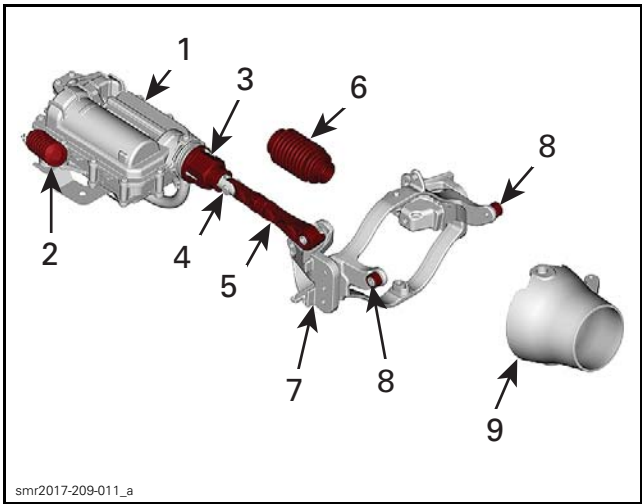


WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g.: locking tabs, elastic stop nuts, self-locking fasteners, cotter pins, etc.) must be replaced with new ones.

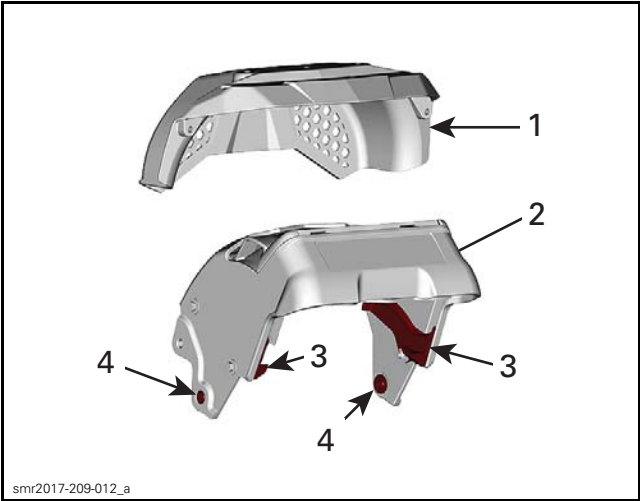
Hoses, cables or locking ties removed during a procedure must be reinstalled as per factory standards.

SYSTEM DESCRIPTION (iBR)



TYPICAL - iBR SYSTEM COMPONENTS

- 1. Actuator
- 2. Air chamber
- 3. iBR nut
- 4. Actuator shaft
- 5. Connecting arm
- 6. Actuator shaft bellows
- 7. Gate support bracket (LH)
- 8. Friction sleeves
- 9. Nozzle



TYPICAL

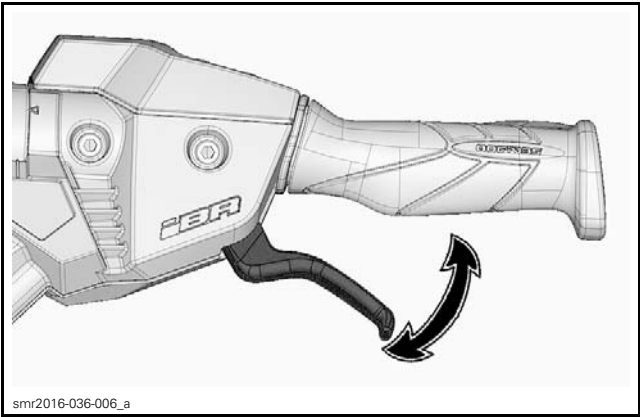
- 1. Protective guard (models without boarding platform)
- 2. Gate
- 3. Support plates
- 4. Gate bushings

The iBR (intelligent Brake and Reverse) is an electronically controlled braking and reverse system.

The iBR module controls the position of the iBR gate to provide forward thrust, reverse thrust, braking thrust, and neutral.

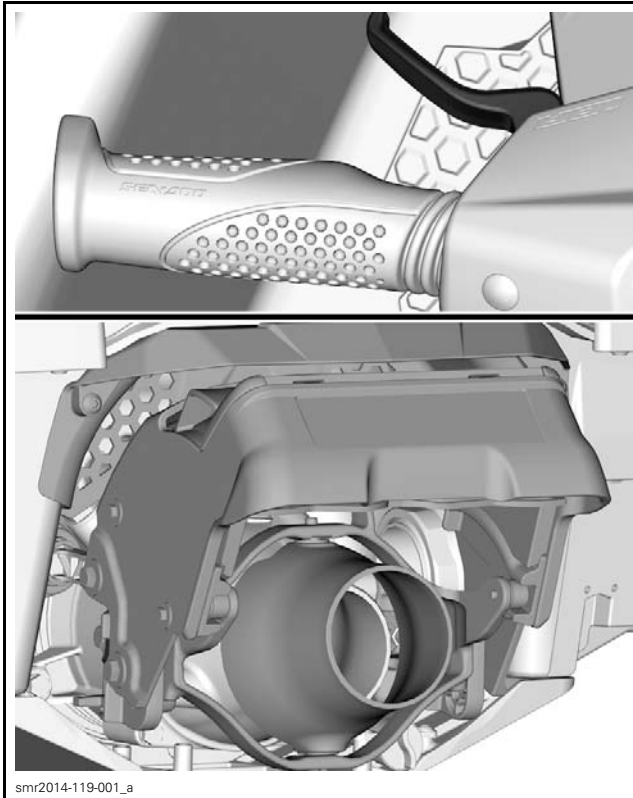
The operator commands the position of the iBR gate using either the throttle lever for forward thrust, or the iBR lever for neutral, reverse, and for the braking function.

The iBR lever is located on the LH side of the handlebar.

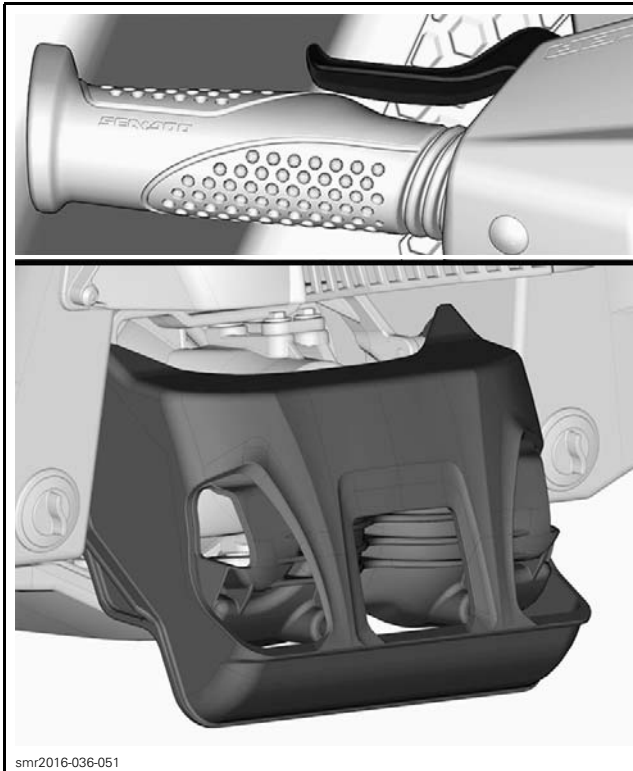


When the iBR lever is pulled in, it operates the brake and reverse lever sensor (BRLS). It is a double output hall effect sensor. The redundancy is used for security purposes.

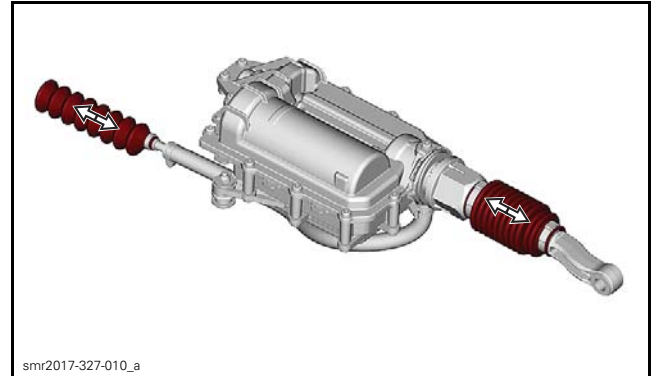
The BRLS sends the signals to the iBR module. The iBR module controls an electric motor that in turn raises or lowers the iBR gate through a mechanical drive unit.



TYPICAL - FORWARD



TYPICAL - REVERSE



iBR ACTUATOR AIR CHAMBER MOVEMENT

NOTE: The iBR gate will move when commanded by the iBR lever only if the engine is running. For maintenance purposes, the iBR OVERRIDE function available through the gauge can be used to electrically move the gate to the desired position.

Depending on vehicle speed and how far the iBR lever is pulled in, the iBR module will automatically adjust the iBR gate movement speed and stroke.

NOTE: The iBR lever must be pulled in at least 25% of its travel (approximately) before the iBR gate starts to move. The first 25% of iBR lever travel has no effect on the iBR gate.

Every time the iBR gate moves when commanded by the iBR lever, engine RPM is momentarily reduced to idle speed as the gate moves.

⚠ WARNING

If it is necessary to remove any foreign object catch in the iBR gate, nozzle or linkages, strictly observe the following before proceeding:

- Remove tether cord from engine cut-off switch.
- Wait at least 5 minutes or remove iBR fuses.
- Do not press on START/STOP button. If START/STOP button is pressed, wait another 5 minutes.

iBR Override Function

iBR override moves the iBR actuator through its full range of motion.

NOTICE Remove any foreign object that may obstruct iBR actuator movement.

Activating iBR Override Function

1. Press the START/STOP button.
2. Install the tether cord.

Subsection XX (iBR, REVERSE AND VTS)

NOTE: Do not start the engine. The tether cord must be installed to ensure the information center will not shut off all indications after its self test function. Briefly press the START/STOP button to reactivate the electrical system when required.

3. Pull in the iBR lever;

3.1 There will be a beep.

3.2 Press the SET button on the information center (gauge).

Models with a VTS Switch

4. Press the VTS UP or DOWN button to move the iBR gate.

Models Without a VTS Switch

5. Press the UP/DOWN arrow button (RH handlebar) to move the iBR gate.

Forward Mode

To engage forward:

- Start engine
- Pull in the throttle lever.

The iBR gate will automatically move to the forward position (full up).

NOTE: The full up position of the iBR gate is dependent on the selected VTS trim position.

Reverse Mode

If the watercraft speed is below 14 km/h (9 MPH) when the iBR lever is pulled in, reverse mode is engaged.

When the iBR lever is pulled in to engage the reverse, the following occurs:

- Engine RPM is reduced to idle.
- The iBR gate moves to the reverse position.
- Engine RPM ramps up to the engine power commanded by the throttle lever.

When operating in reverse mode, the iBR lever controls the iBR gate position and the engine RPM is controlled by the throttle lever.

Maximum engine RPM in reverse is 5000 RPM.

Braking Mode

If the watercraft speed is 14 km/h (9 MPH) per hour and above when the iBR lever is pulled in, braking mode is engaged.

When the iBR lever is pulled in to engage braking, the following occurs:

- Engine RPM is reduced to idle.

- The iBR gate moves to the maximum down position.
- Engine RPM ramps up to the engine power commanded by the iBR lever.

When operating in braking mode, the iBR gate always moves to the maximum down position. The throttle lever signal is overridden and engine RPM is now dependent on watercraft speed and how far the iBR lever is pulled in.

If watercraft speed is high when braking is applied, engine power will be initially low and then ramp up to the power commanded by the iBR lever position. The engine RPM may be increased, as necessary, to apply a stronger braking effect with the jet pump thrust when the conditions dictate.

As the watercraft slows to less than 8 km/h (5 MPH), the following occurs:

- Braking mode ceases.
- Reverse mode takes over if the iBR lever is not released.
- Throttle control reverts back to the throttle lever.

Neutral Mode

Every time the iBR lever is pulled in and released, the iBR gate will default to the **neutral** position, except if the throttle lever is still pulled in when the iBR lever is released. If the throttle lever is still pulled, the iBR gate will move to the forward position when the iBR lever is released and the watercraft will accelerate forward.

SYSTEM DESCRIPTION (VTS)

The VTS system is actually part of the iBR system.

It provides watercraft pitch trim adjustments by adjusting the vertical position of the jet nozzle.

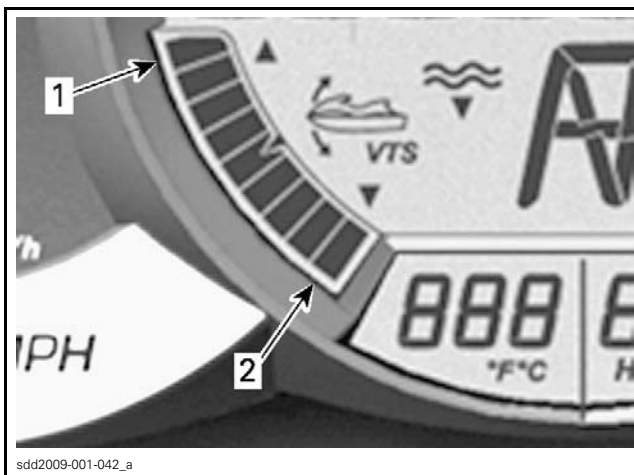
The VTS can be electrically trimmed to the desired attitude within the VTS range, or to one of 2 preset trim positions (on applicable models).

The VTS switch (or Up/Down switch) sends command signals to the gauge. The gauge converts them to CAN protocol and sends them through the CAN bus to the iBR module on the iBR actuator. The actuator then moves the iBR gate which moves the nozzle to the desired trim position.

NOTE: The nozzle and iBR gate move together in the VTS trim range up to the maximum nozzle down position. If NEUTRAL, BRAKING or REVERSE is engaged, the iBR gate moves past the VTS full down position. When FORWARD thrust is reengaged, the nozzle and iBR gate move up to the last selected VTS trim position.

The nozzle trim position can be seen on the VTS position indicator in the information center.

NOTE: Changing the VTS trim position only changes the indication. The nozzle will move to the selected VTS trim position when forward thrust is engaged.



INFORMATION CENTER — VTS POSITION INDICATOR

1. Bow up
2. Bow down

NOTE: Only the segment indicating the relative position of the VTS will be on. The illustration shows all segments on as can be seen during the self test function.

The VTS system provides the following features according to models

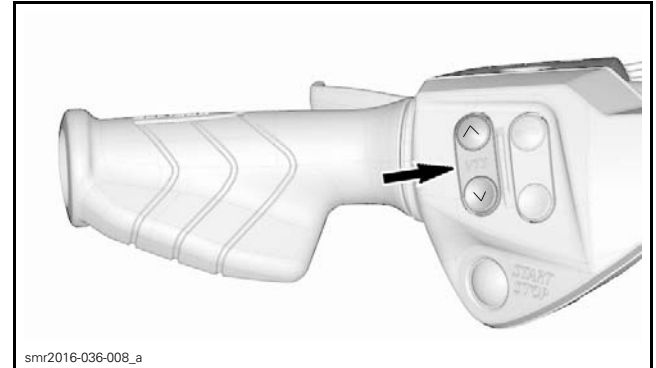
- Nozzle trimming
- Selection of 2 preset trim positions
- Recording of 2 preset trim positions.

Nozzle Trimming

Watercraft must be operating in forward position. Depending on the model, 5 or 9 trim positions are available.

Using the VTS Button (LH Side of Handlebar)

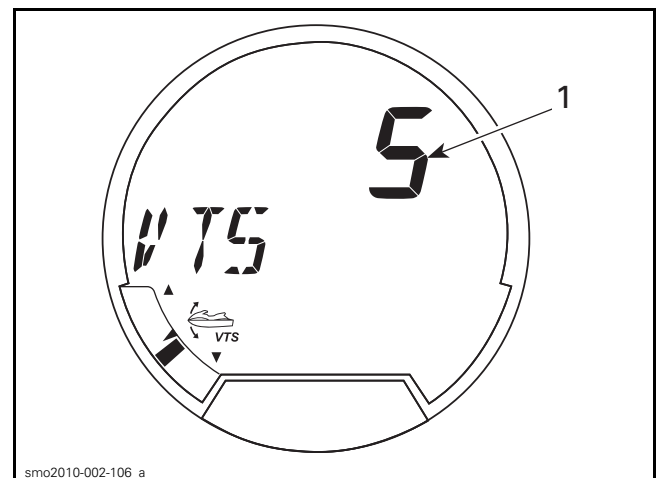
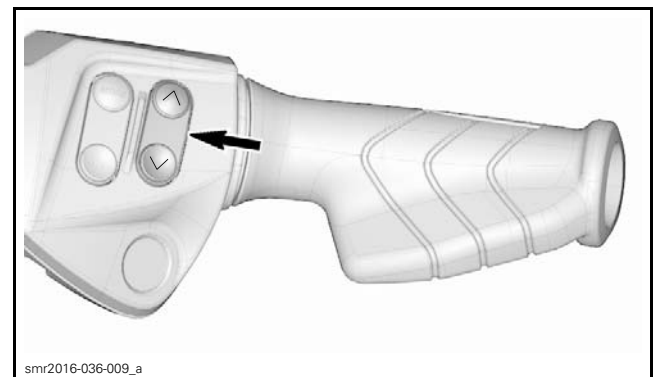
Press the UP or DOWN arrow button to change the VTS setting.



TYPICAL - VTS CONTROL BUTTON

Using the Up/Down Button (RH Side of Handlebar)

1. Press the MODE button to display the VTS function in the gauge.
2. Press the UP or DOWN arrow button to change the VTS setting.



FUNCTION SELECTED - VTS

1. VTS setting

3. Press the SET button to save the desired setting.

Using Preset Trim Positions

Two preset trim positions can be selected.

Subsection XX (iBR, REVERSE AND VTS)

To select the **highest** trim position, double-click on the VTS UP arrow button (bow up).

To select the **lowest** trim position, double-click on the VTS DOWN arrow button (bow down).

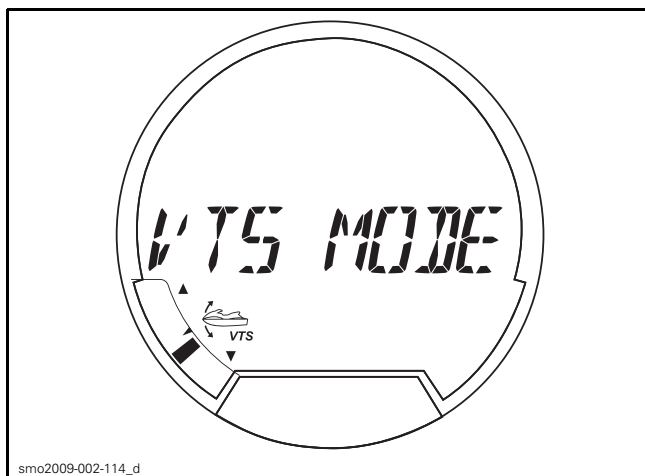
Recording Preset Trim Positions

Two different VTS trim positions may be recorded for quickly selecting the preferred watercraft trim attitude.

When the VTS PRESET trim positions are changed, the new settings will remain recorded in memory.

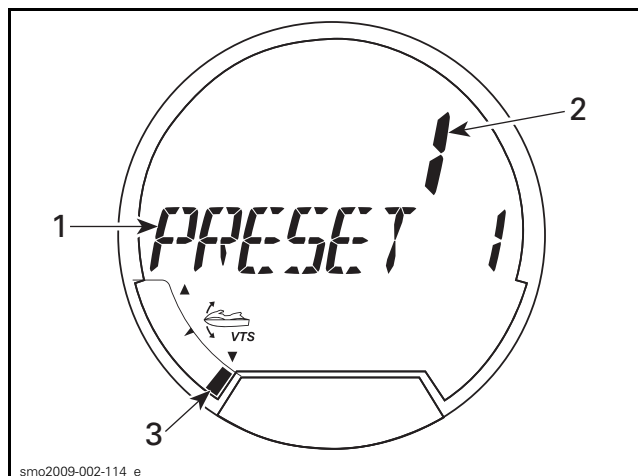
To record VTS preset trim positions:

1. Press the START/STOP button.
2. Install the tether cord on the engine cut-off switch.
3. Press the MODE button repeatedly until VTS MODE is displayed.



FUNCTION SELECTED - VTS MODE

4. Press the SET button to display PRESET 1.
5. Press the VTS UP/DOWN button to change the PRESET 1 VTS position.



FUNCTION SELECTED - PRESET 1

1. Preset 1 function
2. VTS setting selected to 1
3. VTS position indicator at setting 1 (bow down)

6. Press the SET button to save PRESET 1 and display PRESET 2.
7. Set PRESET 2
8. Press the SET button to save the settings.

NOTE: The VTS system will compare the preset trim settings recorded, the highest position will be assigned to the UP arrow (bow up), the lowest to the DOWN arrow.

Lock/Unlock iBR Actuator

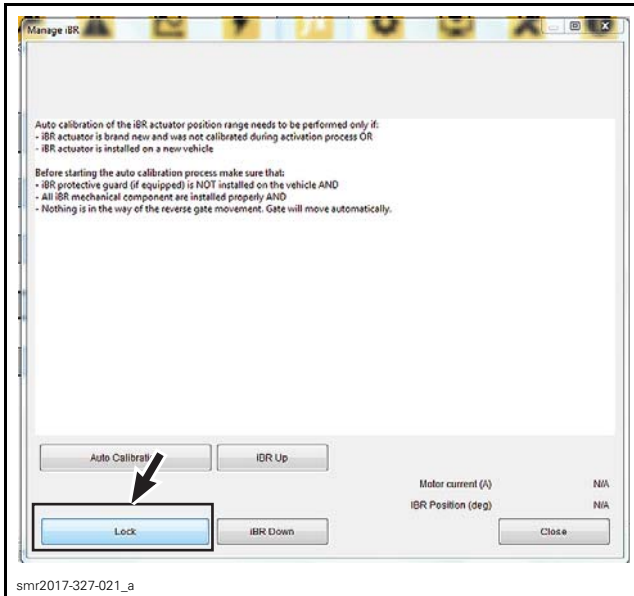
Locking the iBR Actuator

When working on the iBR, it may be interesting to lock the iBR to avoid accidental movement.

Go to:

- Functions
- iBR button
- IO Controls
- Move iBR Up/Down

Press on the LOCK button.

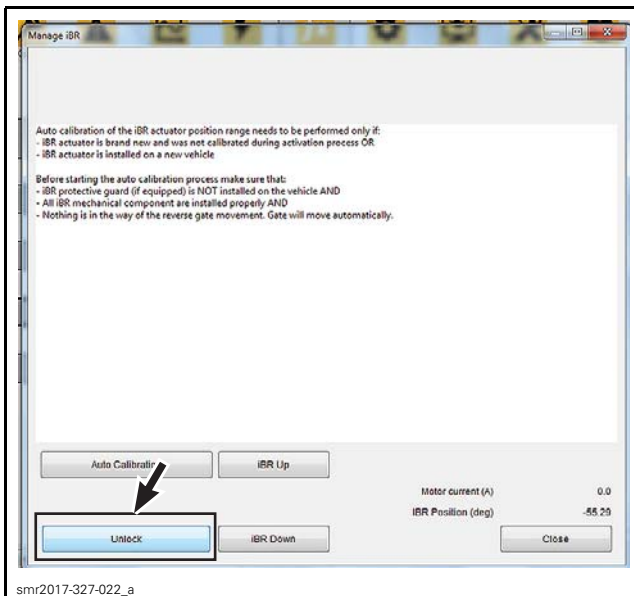


Unlock the iBR Actuator (Activate)

To unlock or activate the iBR actuator, press the UNLOCK button.

Go to:

- Functions
- iBR button
- IO Controls
- Move iBR Up/Down



ADJUSTMENT

iBR AUTO CALIBRATION

NOTICE iBR auto-calibration must be performed with the complete reverse gate assembly properly installed. Performing the auto-calibration procedure without the reverse gate assembly in place will damage the actuator.

Perform after repairing or removing the jet pump and/or iBR system components.

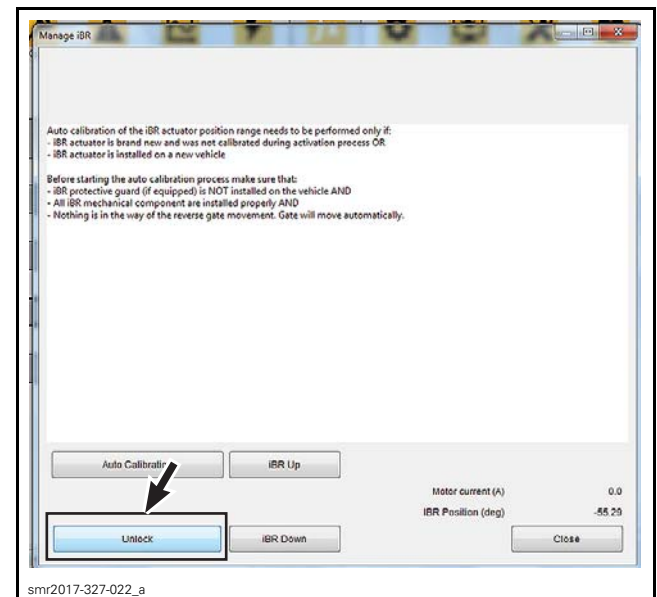
Connect the vehicle to BUDS2 software.

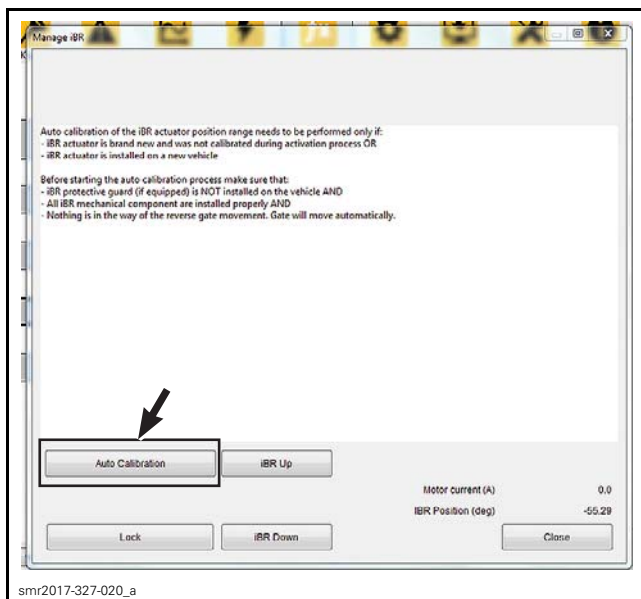
New iBR Actuators

Click or select the following:

- Functions
- iBR button
- IO Controls
- Move iBR Up/Down

Unlock the iBR actuator and perform an auto-calibration.



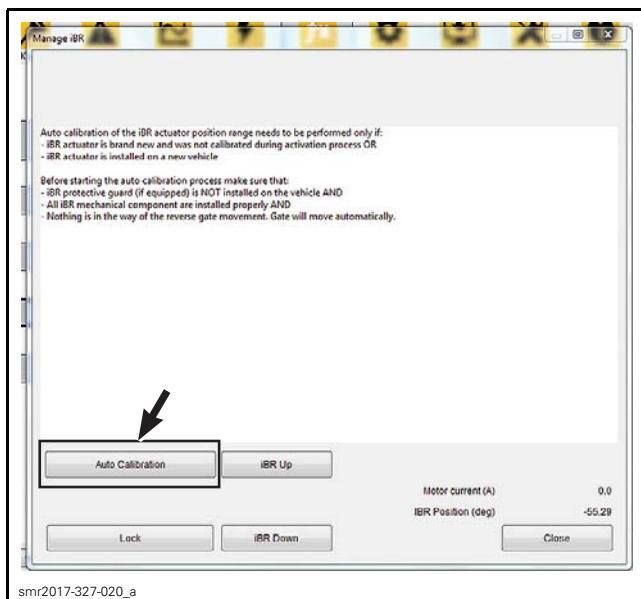


Previously Installed (Activated) iBR Actuators

Click or select the following:

- Functions
- iBR button
- IO Controls
- Move iBR Up/Down

Perform an auto-calibration.



MAINTENANCE

Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection of this shop manual.

INSPECTION

The iBR system is self monitoring. If a fault occurs in the iBR system, it will raise a fault code and communicate it to the information center through the CAN bus. The information center will turn on the iBR indicator light to advise the operator of the iBR system fault. If the fault remains active, it may be displayed in the gauge. If it is no longer active, BUDS2 must be used to read the fault.

TESTING SEQUENCE

To troubleshoot the iBR system, carry out the following in this order:

- Ensure the iBR gate movement is not obstructed in any way.
- Ensure the iBR gate mechanism is in good condition and does not show signs of excessive wear or friction.
- Check system fuses.
- Check battery condition and state of charge.
- Make sure battery connections are clean and tight.
- Connect the watercraft to BUDS2 to check for iBR system or CAN bus related fault codes. Carry out service actions as indicated in BUDS2.
- If a CAN bus communication fault with the iBR actuator is indicated, or the iBR actuator is not visible in BUDS2, carry out a continuity test of the CAN bus wires. Refer to *CAN COMMUNICATION TEST* in this subsection.
- Try moving the iBR using the iBR UP and iBR DOWN buttons on the iBR activation page in BUDS2.
- Check for proper gate and actuator movement. Refer to *TESTING iBR SYSTEM*.
- Visually inspect system connectors for moisture ingress, corrosion, and proper contact.
- Remove the screw retaining the gate to the connecting arm. Move the gate up and down by hand to check for freedom of movement.

TESTING THE iBR SYSTEM FUNCTIONAL

This test requires two persons. One person to start engine and operate controls, and one person to observe iBR gate movement.

Provide adequate ventilation of exhaust gases or move watercraft outside.

NOTICE Do not install an exhaust ventilation hose in the iBR gate area or damage may occur when the iBR gate moves downward during operation.

- NOTICE**
- Ensure there are no tools or other object that may interfere with the iBR gate movement.
 - Do not run engine for more than 2 minutes out of water or damage may occur.

⚠ WARNING

The person observing the iBR gate movement must stand to the side of the stern well clear of the iBR gate and pump nozzle in full view of the operator.

Test on Dry Land

NOTICE This procedure must be completed within one minute of the engine starting.

1. Connect a water hose to the watercraft to provide exhaust system cooling when operating engine. DO NOT open water tap yet.
2. Start engine, open water tap and let idle.

NOTE: If iBR gate was not in the neutral position, it will move to the neutral position on engine start up.

3. Depress the throttle lever slightly and visually confirm the iBR gate moves to the forward position (up to the VTS trim position), then release throttle. The iBR gate must remain in the forward position.
4. Depress the iBR lever fully and confirm the iBR gate moves to the full down position.
5. Release the iBR lever completely and confirm the iBR gate moves to the neutral position.
6. Close water tap and shut engine off.
7. Remove water hose from vehicle.

Test with Watercraft on a Waterway

1. Connect a water hose to the watercraft to provide exhaust system cooling when operating engine. DO NOT open water tap yet.
2. Start engine, open water tap and let idle.

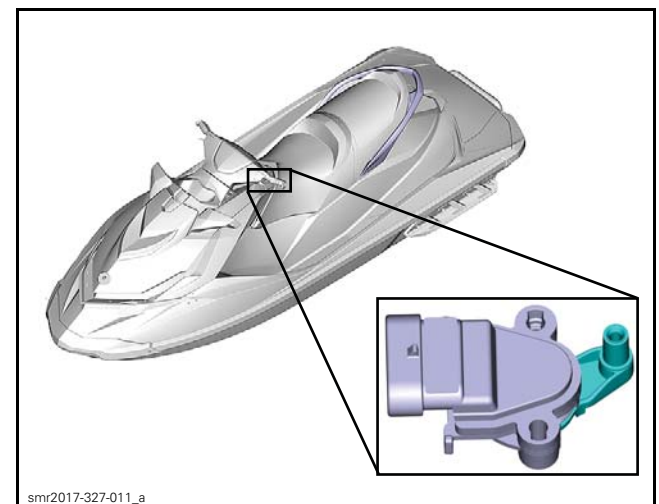
NOTE: If iBR gate is not in the neutral position before the engine start, it will move to the neutral position on engine start up.

3. Depress the throttle lever slightly, then release it. Forward movement of the watercraft confirms the iBR gate has moved to the forward position.

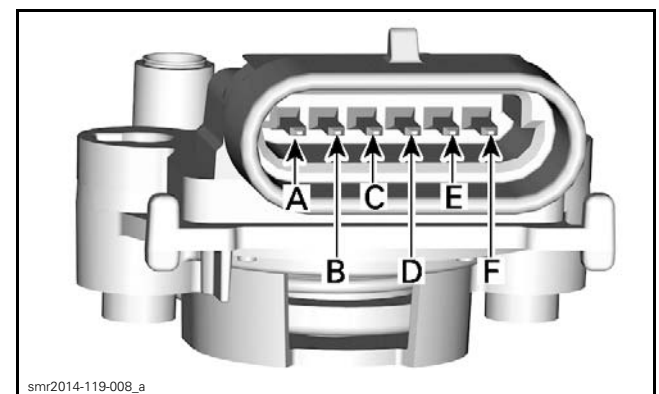
4. Depress the iBR lever fully. Rearward movement of the watercraft confirms the iBR gate has moved to the reverse position.
5. Release the iBR lever completely. Reverse thrust should cease and the watercraft should continue to drift rearward on momentum.
6. Apply a small amount of forward thrust to stop rearward velocity, then tap the iBR lever to return the iBR gate to neutral.
7. Close water tap and shut engine off.
8. Remove water hose from vehicle.

PROCEDURES

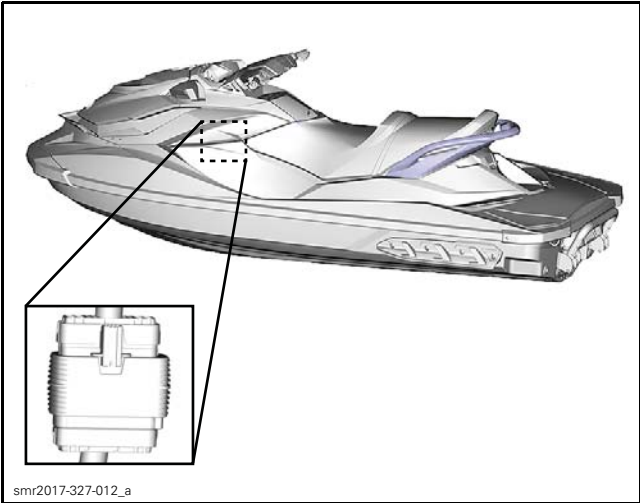
SWITCHES LOCATION AND PIN-OUT



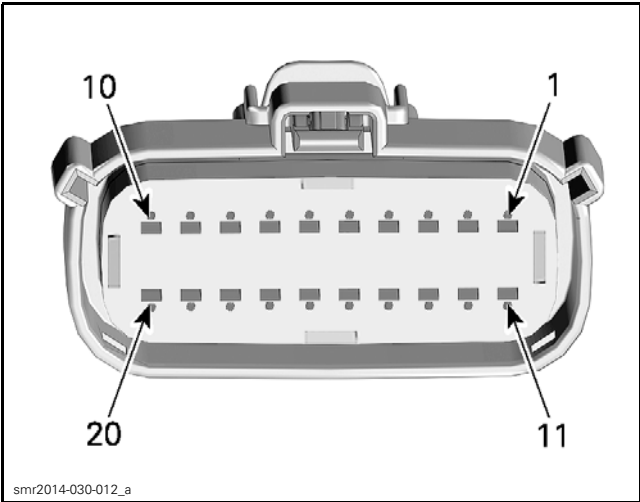
BRLS LOCATION



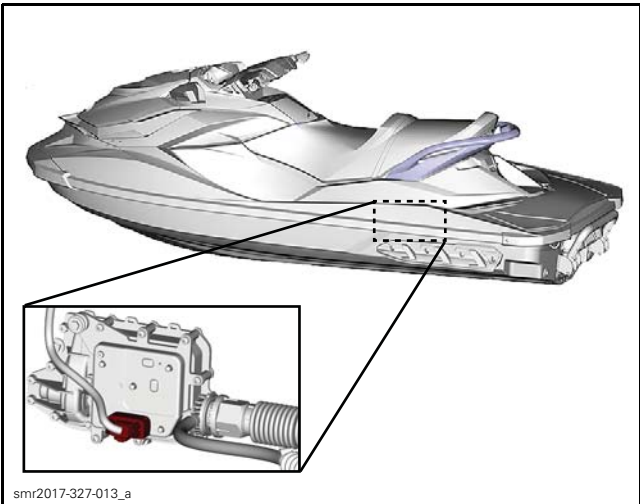
BRLS PINOUT



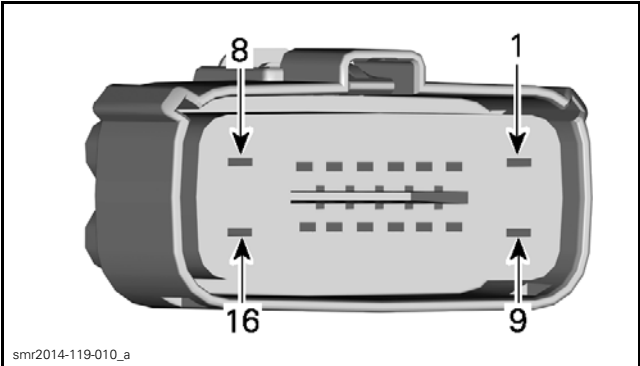
STEERING CONNECTOR LOCATION



STEERING CONNECTOR



iBR ACTUATOR CONNECTOR LOCATION



iBR ACTUATOR CONNECTOR

iBR ACTUATOR

Specifications

Always refer to *WIRING DIAGRAM*.

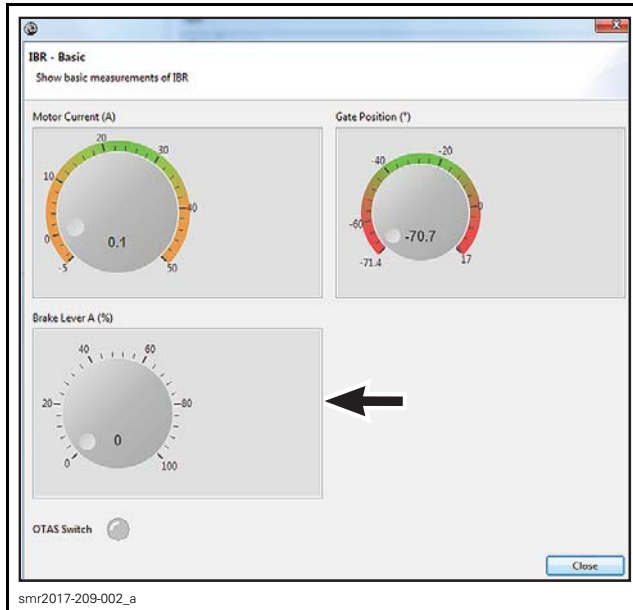
iBR ACTUATOR CONNECTOR	
PIN	SIGNAL
iBR-1	Battery voltage (Hot at all times)
iBR-2	Battery voltage (Hot with main relay on)
iBR-8	Ground

iBR ACTUATOR CURRENT DRAW	
DOWN SELECTION	-5 to -15 A
UP SELECTION	+10 to +20 A

Testing iBR Actuator Operation

The iBR actuator operation must be checked using the BRP diagnostic software BUDS2.

1. Connect the vehicle to BUDS2 software.
2. Go to:
 - Functions
 - iBR button
 - IO Controls
 - Move iBR Up/Down
3. Click **iBR UP** and **iBR DOWN** buttons alternately and look for a change in **iBR Position (Deg)**.



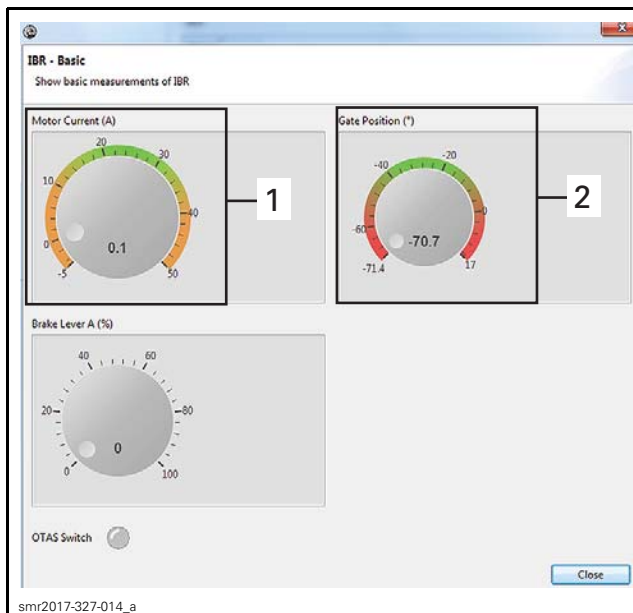
BUDS2 SOFTWARE - MEASUREMENTS/IBR

If the iBR moves using these buttons but does not move using the iBR lever, test *BRLS VOLTAGE* in this subsection.

If the iBR does not move, check the iBR fuse(s) in fuse box. If fuse(s) are good, check power and ground circuits.

Testing iBR Actuator Motor Current

1. Go to:
 - Measurements/Presets/iBR.



1. Motor Current (A)
2. Gate Position (°)

2. Note the **Gate Position (°)** indication.
3. Activate the iBR override function.

4. Move the iBR to the full up position and look for the **Motor Current (A)** indication. Also look for a change of **Gate Position (°)** indication.

NOTE: Current draw indication will not be stable. High and low peaks will be observed. Look for the maximum average current draw.

5. Move the iBR to the full down position and look for the **Motor Current (A)** draw indication. Also look for a change of **Gate Position (°)** indication.

If current draw is abnormally high (between 20 and 30 A), check the following:

- Ensure iBR gate is free of debris.
- Check for excessive friction in gate movement.
- Check roller bushings, plastic bushings and iBR ramps.
- Check for proper voltage to the iBR actuator.
- Check for fault codes using BUDS2.

Remove debris, replace iBR gate components, or replace the iBR actuator as applicable.

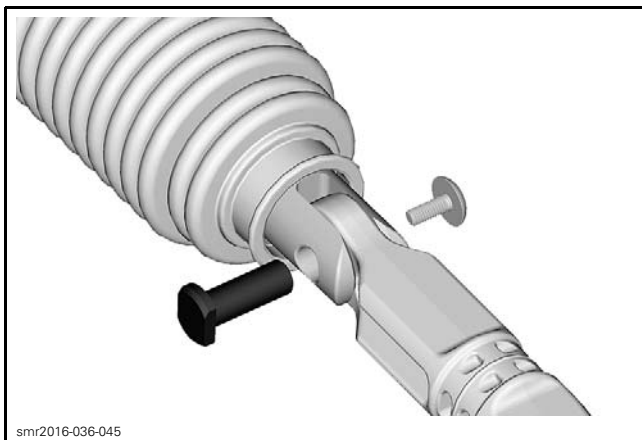
Removing the iBR Actuator

NOTICE Do not try to manually force the iBR gate when all components are installed.

1. Remove iBR gate assembly.
2. Remove the small Oetiker clamp retaining the connecting arm bellows.



3. Remove connecting arm pin and screw.



4. Remove iBR nut and bellows. IBR NUT SOCKET (P/N 529 036 379).

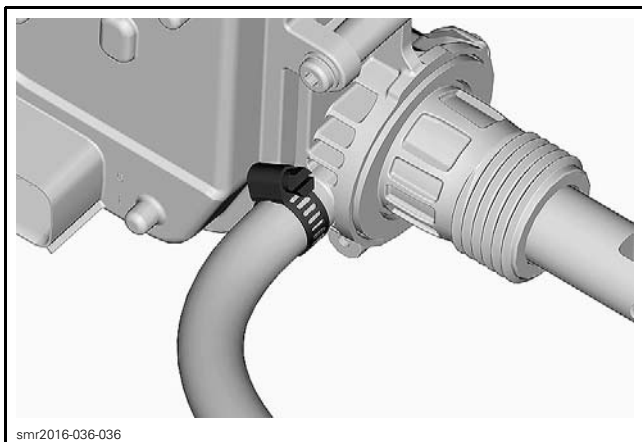


5. Move muffler. Refer to *EXHAUST SYSTEM*.
6. Unplug electrical connector.
7. Remove retaining strap.
8. Remove iBR actuator and air chamber.

Installing the iBR Actuator

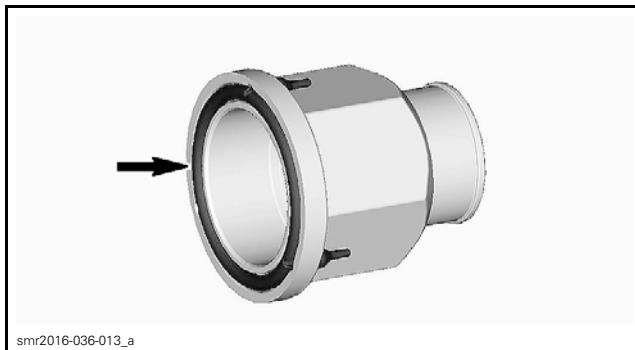
NOTICE Failure to adhere to the sequence in the following steps will cause the iBR air chamber to rupture or burst and cause premature failure of the iBR actuator.

1. Install the air chamber on the iBR actuator.
 - 1.1 Tighten the clamp.



2. Connect iBR actuator connector.
3. Install iBR actuator shaft through hull opening.

4. Slide the o-ring into position on iBR nut.



5. If the same actuator is reinstalled, clean all residues of sealing compound near the threaded area.
6. Apply LOCTITE 5900 (P/N 293 800 066) on actuator, between actuator housing and threads, as shown in the exploded view.

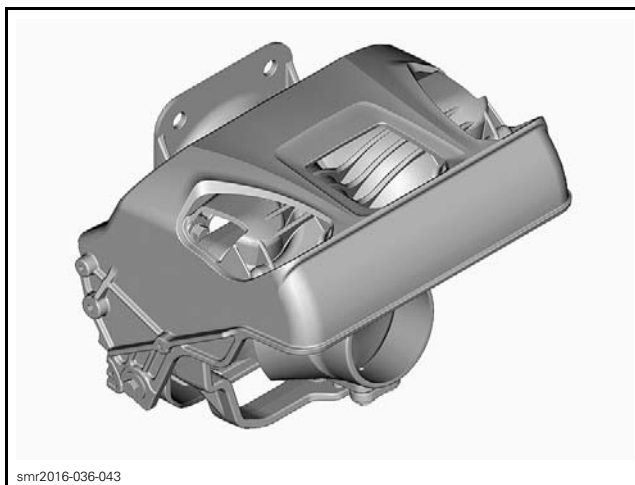
NOTICE Ensure no sealing agents contact the iBR shaft.

7. Torque iBR nut.
 8. Install strap.
 9. Install connecting arm.
- Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

Perform *IBR AUTO-CALIBRATION* procedure.

IBR GATE ASSEMBLY

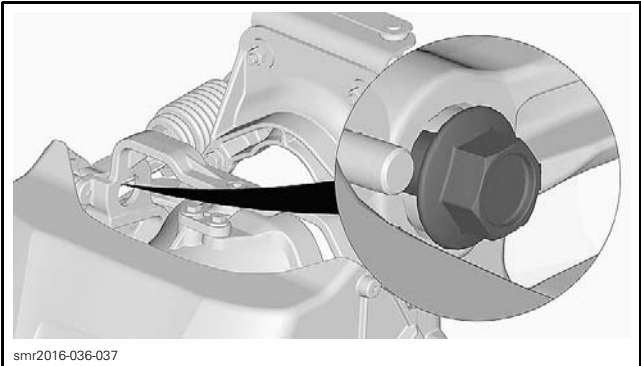


Removing the iBR Gate Assembly

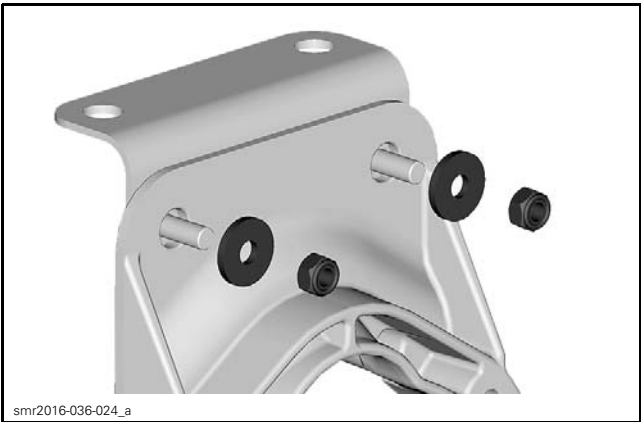
1. Remove the guard.



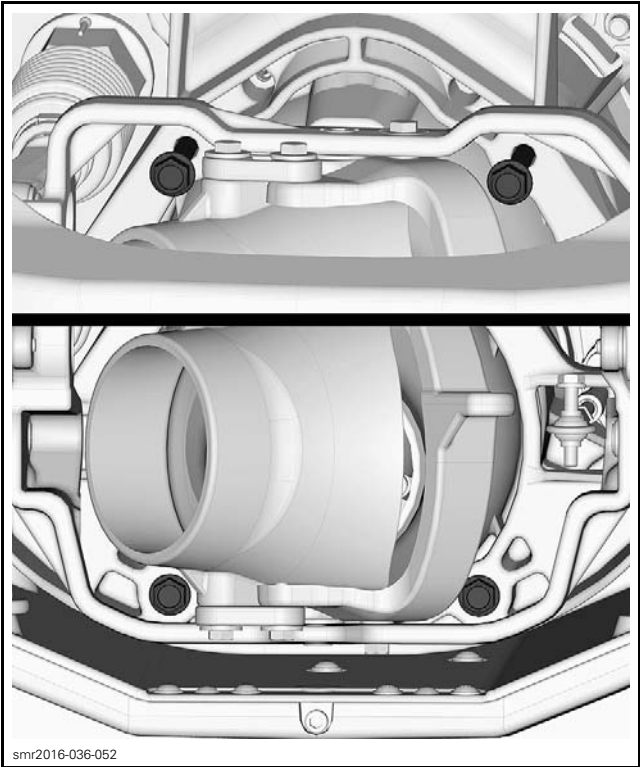
- 2. Use the iBR override function to lower the gate until the holes align.
- 3. Disconnect the connecting arm.



- 4. Disconnect the steering cable. Refer to *STEERING AND O.T.A.S.* subsection.
- 5. Remove L-plate retaining nuts.



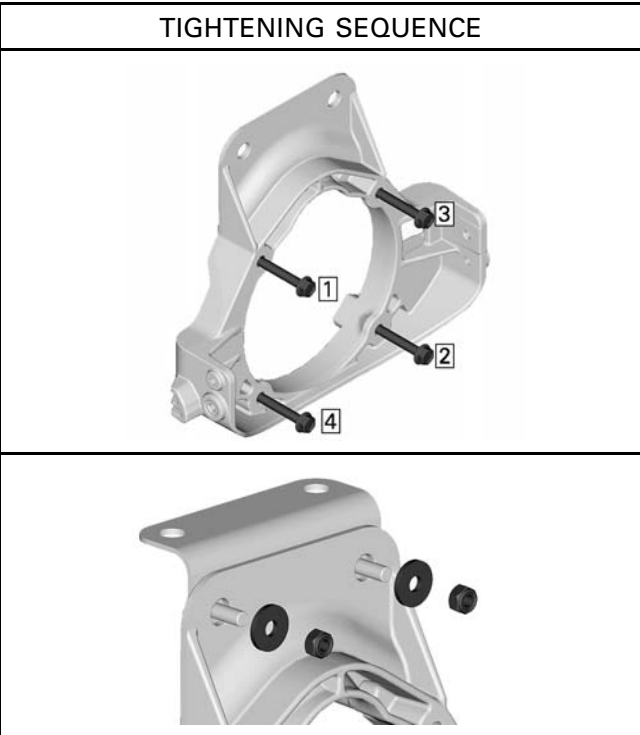
- 6. Remove the iBR gate support bracket screws.



TOP: GATE LOWERED / BOTTOM: GATE RAISED (BY HAND)

NOTICE Do not drop the venturi when removing the iBR Gate Assembly.

Installing the iBR Gate Assembly

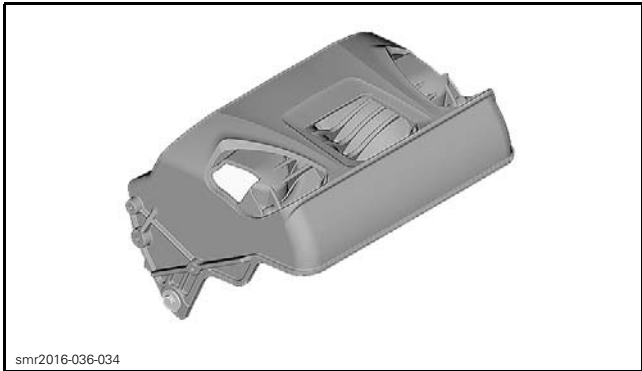


Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

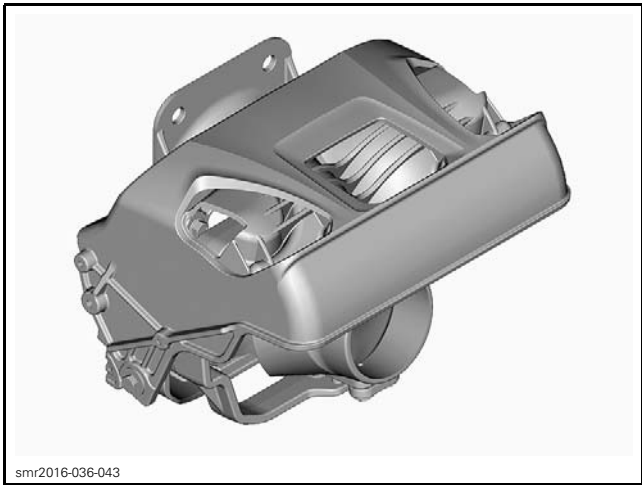
Perform *iBR AUTO-CALIBRATION* procedure.

iBR REVERSE GATE

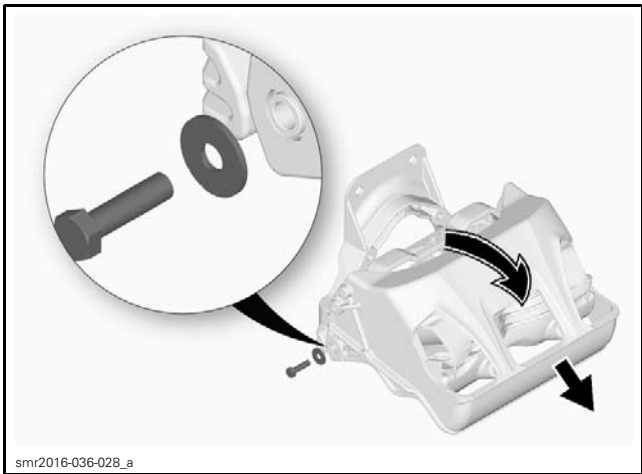


Removing the iBR Reverse Gate

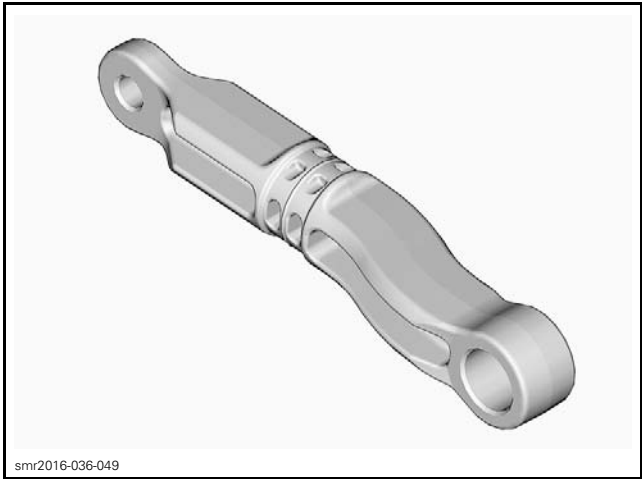
Remove the iBR gate assembly.



Remove the iBR reverse gate.

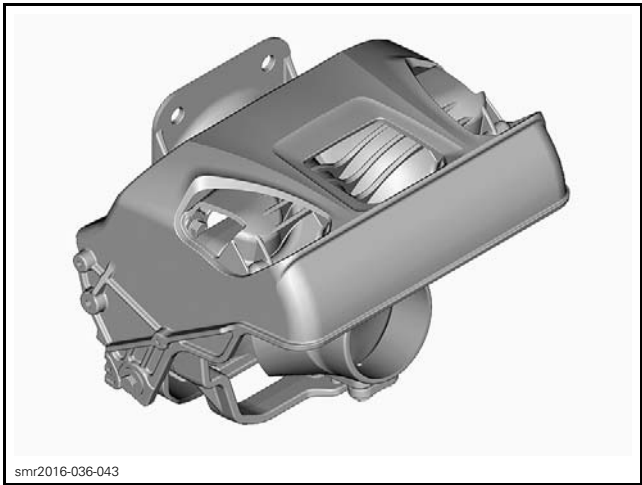


CONNECTING ARM

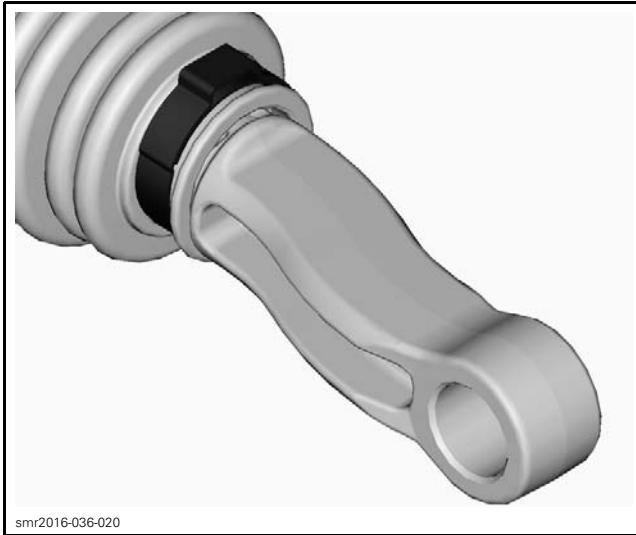


Removing the Connecting Arm

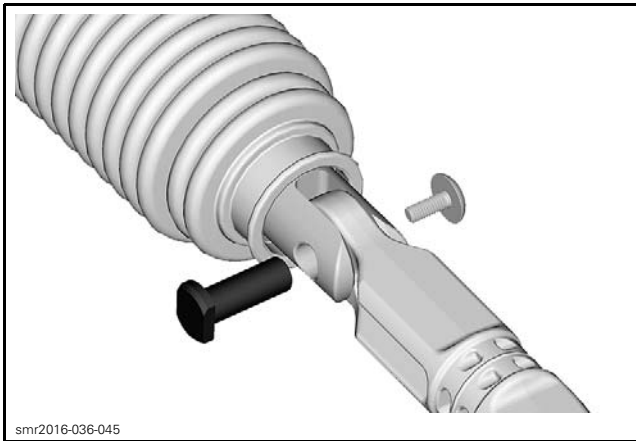
1. Remove the iBR gate assembly. Refer to *iBR GATE ASSEMBLY*.



2. Remove the small Oetiker clamp retaining the connecting arm bellows.



3. Remove connecting arm pin and screw.



4. Remove connecting arm.

Installing the Connecting Arm

Use iBR override function to move iBR actuator to the full down setting.

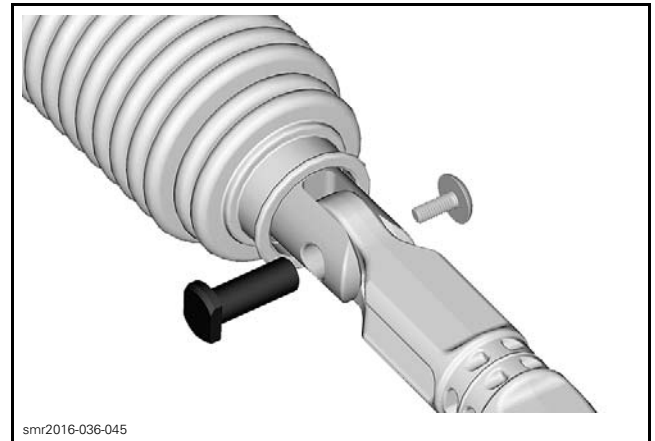
NOTE: The bellows should already be installed and clamped on the iBR nut.



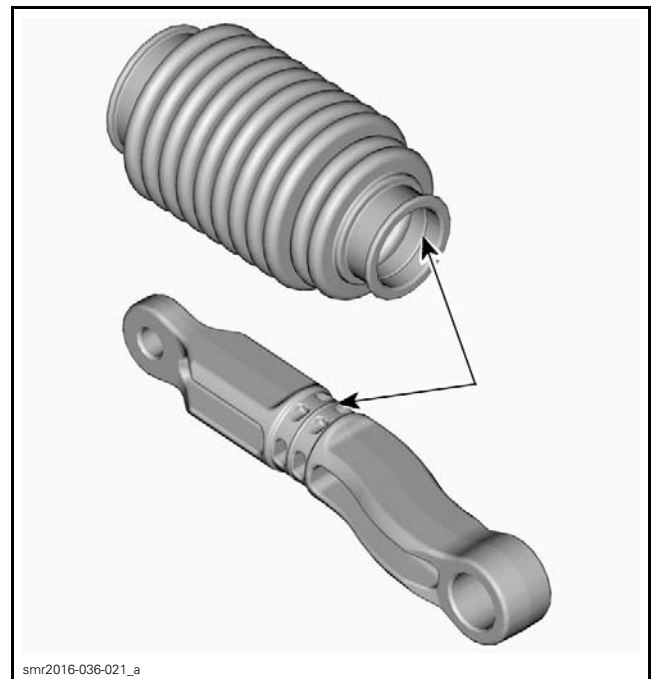
NOTICE Failure to adhere to the sequence in the following steps will cause the iBR air chamber to rupture or burst and cause premature failure of the iBR actuator.

1. Push the bellows back towards iBR actuator.

2. Install connecting arm pin and screw.
2.1 Torque screw.

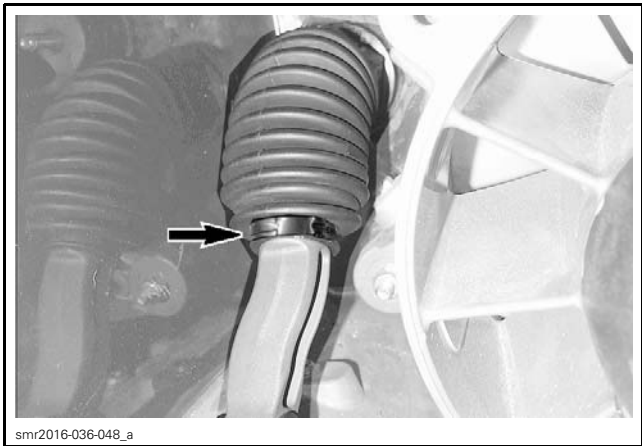


3. Position the bellows over the connecting arm.



4. Compress the air chamber (attached to iBR actuator).

4.1 Clamp the Oetiker clamp on the connecting arm bellows.

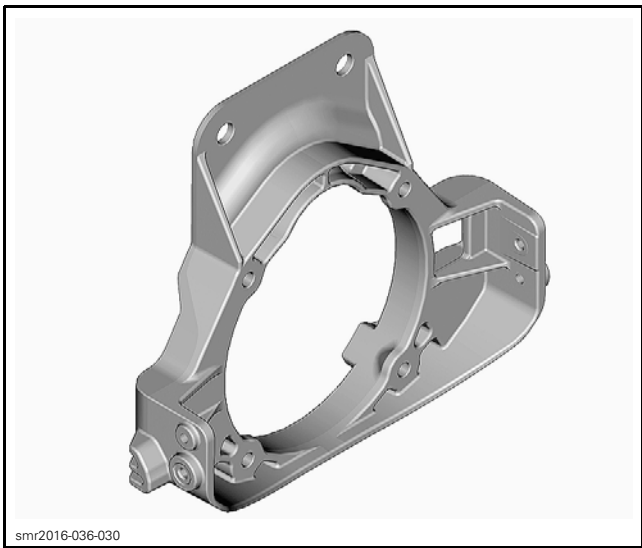


Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

Perform *iBR AUTO-CALIBRATION* procedure.

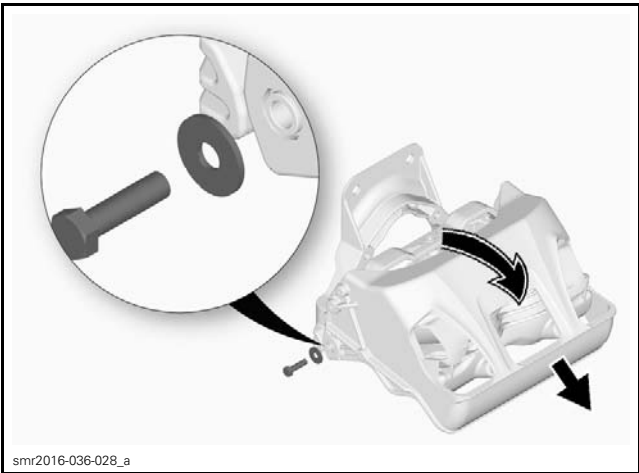
iBR GATE SUPPORT BRACKET



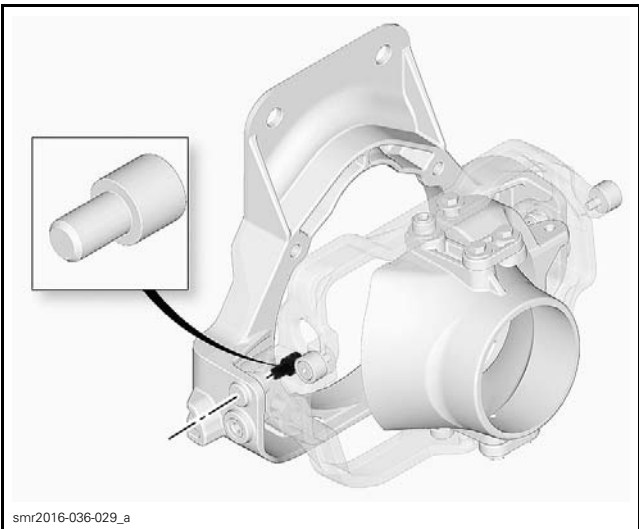
Removing the iBR Gate Support Bracket

Remove the iBR gate assembly.

- 1. Remove the iBR gate.



- 2. Remove the trim ring and nozzle assembly.



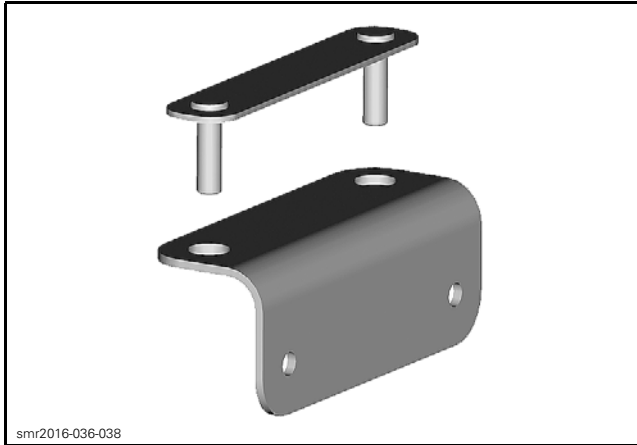
Installing the iBR Gate Support Bracket

Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

Perform *iBR AUTO-CALIBRATION* procedure.

L-PLATE



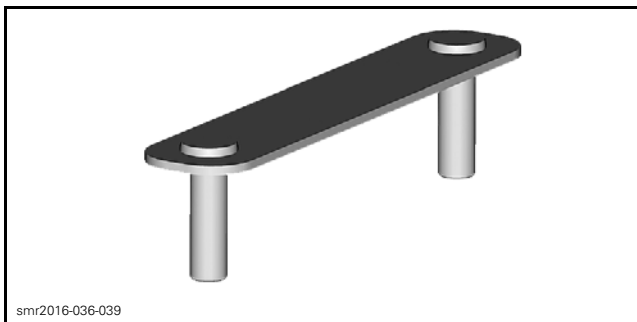
The L plate is pre-aligned from factory. It should not be removed unless it is damaged.

Removing the L-Plate

Remove iBR gate assembly.

Remove L-Plate retaining nuts.

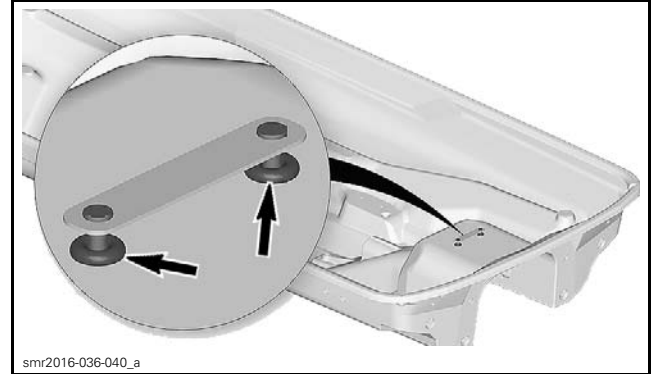
NOTE: The top studs and plate are sealed to the hull. If removed, they must be cleaned and sealed.



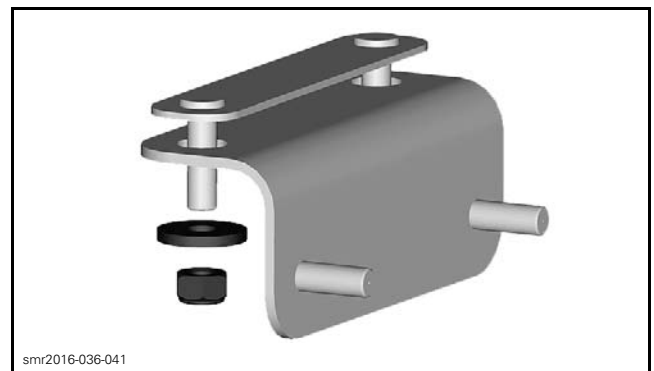
L-PLATE TOP STUDS AND PLATE

Installing the L-Plate

If removed, the top studs and plate must be sealed with LOCTITE 5900 (P/N 293 800 066).

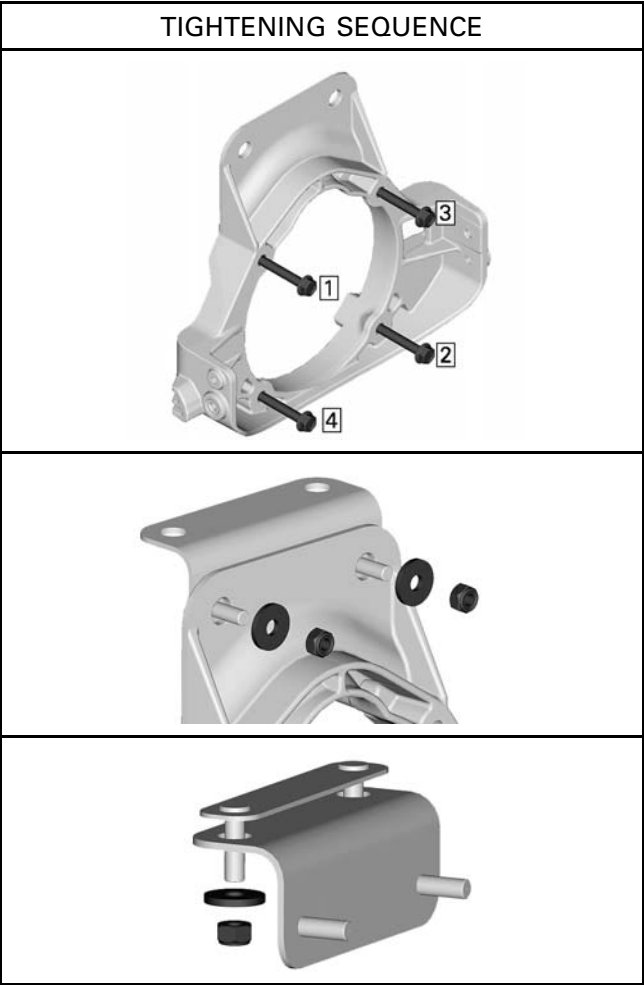


1. Loosely install L-plate nuts.



2. Install gate support bracket with the iBR gate assembly and tighten the 4 bolts and 2 nuts.

3. Tighten L-plate nuts.

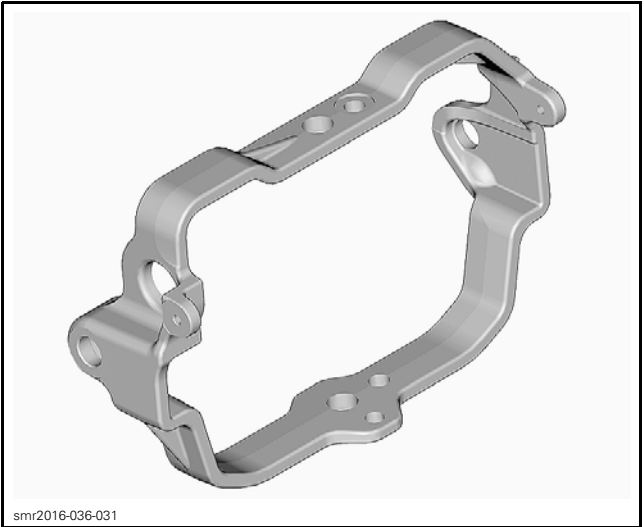


Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

Perform *IBR AUTO-CALIBRATION* procedure.

VTS TRIM RING



Removing the VTS Trim Ring

- 1. Remove iBR gate assembly.
- 2. Remove iBR reverse gate.
- 3. Remove nozzle pivot screws.

Installing the VTS Trim Ring

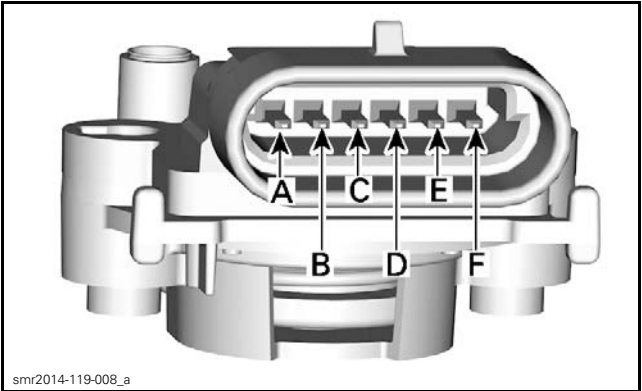
Reverse removal procedure.

NOTICE Allow 24 hours for thread locker on retaining screws to cure.

Perform *IBR AUTO-CALIBRATION* procedure.

BRAKE AND REVERSE LEVER SWITCH (BRLS)

Testing and Specifications



BRLS PINOUT

BRLS PINOUT	
PIN	SIGNAL
BRLS-A	5 VDC
BRLS-B	GND
BRLS-C	View signal % in B.U.D.S.
BRLS-D	5VDC
BRLS-E	GND
BRLS-F	View signal % in B.U.D.S.

NOTE: When moving BRLS lever, the BRLS percentage should increase or decrease in a steady linear fashion.



BUDS2 SOFTWARE - MEASUREMENTS/PRESETS/IBR

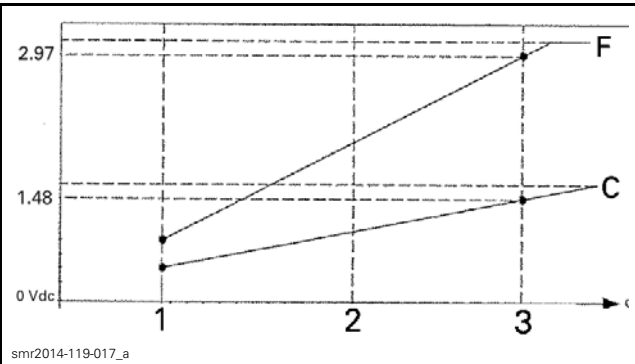
If BUDS2 does not show BRLS percentage moving or if reading is erratic:

- Check for BRLS reference voltage.
- Check for BRLS ground.
- Carry out a continuity test of the wiring between the iBR actuator and the BRLS.

Refer to *WIRING DIAGRAM*.

NOTE: When installed on vehicle the BRLS-C Vdc signal should always be half of the BRLS-F Vdc signal when testing with a multimeter.

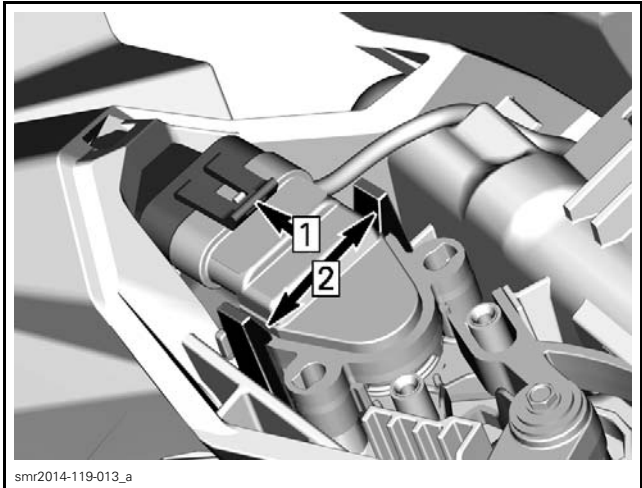
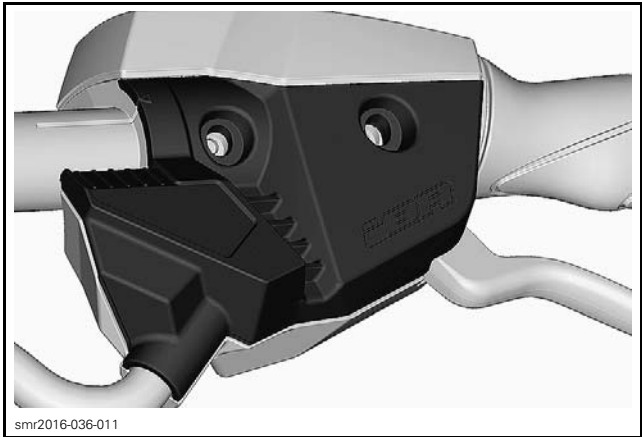
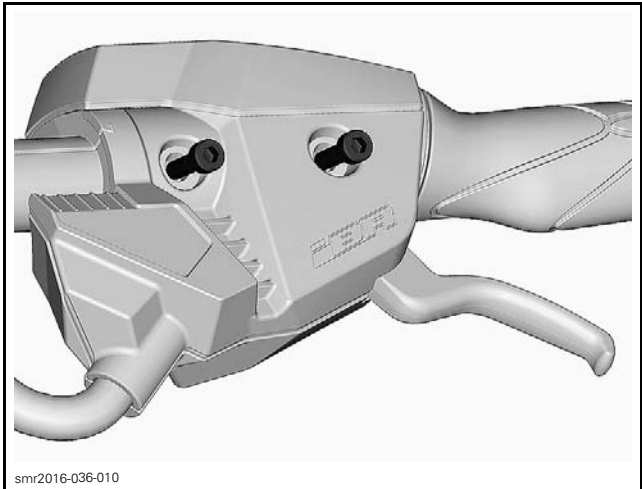
To test, install DIAGNOSTIC HARNESS (P/N 529 036 188) between steering harness connectors.



APPROXIMATE BRLS SIGNAL VOLTAGE CURVE PINS F AND C

1. BRLS released
2. BRLS at 50% pulled
3. BRLS fully pulled

Removing the BRLS



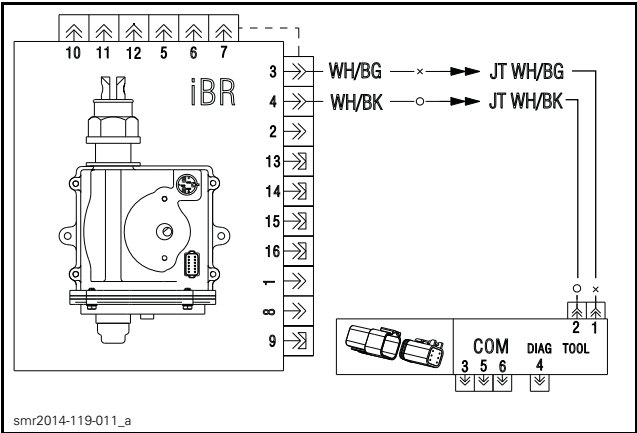
Installing the BRLS

Reverse removal procedure.

TIGHTENING TORQUE	
BRLS switch cover screws	2 N•m ± 1 N•m (18 lbf•in ± 9 lbf•in)

CAN COMMUNICATION TEST

CAN WIRE RESISTANCE TEST		
IBR ACTUATOR CONNECTOR PIN	COM CONNECTOR PIN	SPECIFIED RESISTANCE
iBR-3	COM-1	0 Ω
iBR-4	COM-2	0 Ω



Refer to *PROCEDURES* in this subsection for wiring diagram and pinouts.

Refer to *CONTROLLER AREA NETWORK (CAN)* subsection for additional information.