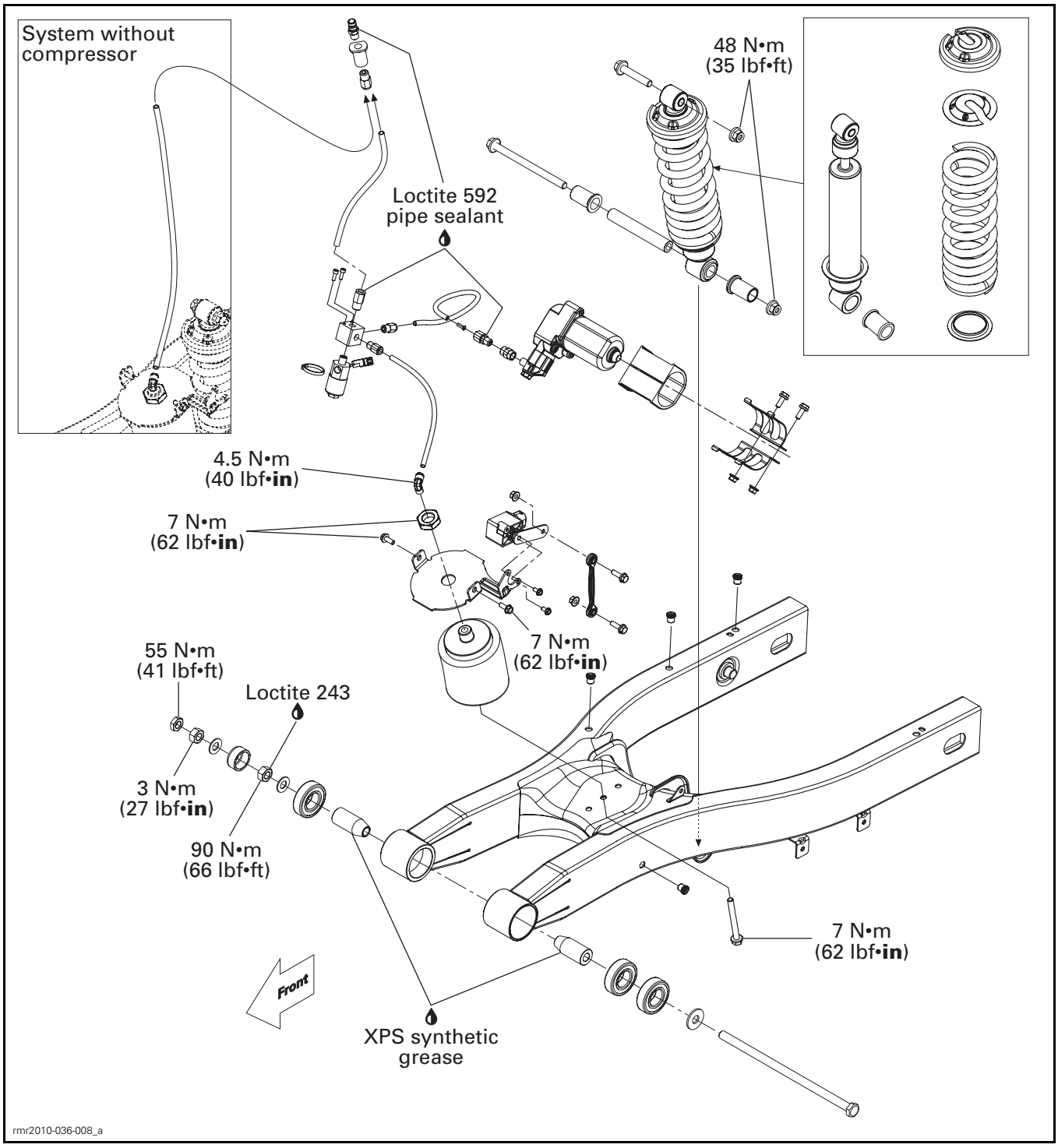
REAR SUSPENSION

SERVICE TOOLS

Description	Part Number	Page
BLIND HOLE BEARING PULLER SET	529 036 117	18
FLUKE 115 MULTIMETER	529 035 868	6, 9–10
SPRING REMOVER	529 036 007	15

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 243 (BLUE)	293 800 060	19
LOCTITE 592 (PIPE SEALANT)	293 800 018	12
XPS SYNTHETIC GREASE	293 550 010	19


System without compressor
48 N•m (35 lbf•ft)
Loctite 592 pipe sealant
4.5 N•m (40 lbf•in)
7 N•m (62 lbf•in)
7 N•m (62 lbf•in)
55 N•m (41 lbf•ft)
Loctite 243
3 N•m (27 lbf•in)
90 N•m (66 lbf•ft)
7 N•m (62 lbf•in)
Front
XPS synthetic grease
rmr2010-036-008_a

GENERAL

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

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, cotter pins, etc.) must be replaced.

⚠ CAUTION The ACS suspension system may be under high pressure (up to 7 bar (100 PSI)). Release air pressure prior to working on the system. Refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING*.

⚠ CAUTION Always wear safety goggles when working with pressurized air system.

NOTICE Do not exceed 7 bar (100 PSI) in the system. This might damage the air suspension system.

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

NOTE: Install a battery charger on battery terminals (under seat) for any tests that involve a prolonged *KEY ON* period. If battery voltage gets too low, some accessories are shut off by the ECM.

SYSTEM DESCRIPTION

System Without Compressor (Manual Adjustment)

The ACS suspension without an integrated compressor is adjustable manually using a conventional air compressor and a pressure gauge. This system is equipped with an air spring mounted on the swing arm and located in front of the shock absorber.

The air spring is connected directly to an air hose with a pneumatic valve, as a result, adjusting the air pressure is as easy as inflating a tire.

NOTE: When adjusting the pressure, do not put your weight on the vehicle and do not load cargo in the storage compartment.

System With Compressor (Remote Adjustment)

This system works the same way as the manual one except that the adjustment is done electronically using a dedicated button. The compressor is integrated in the vehicle so the system can be adjusted on the fly to suit rider preferences and automatically keeps vehicle level constant with changing rider weight or load applied.

The requested setting is sent to the multifunction gauge and a position sensor mounted on the swing arm monitors the vehicle level to ensure proper ride height. Depending on the rider adjustment, the multifunction gauge will increase pressure in the air spring using the compressor or release pressure using the solenoid valve.

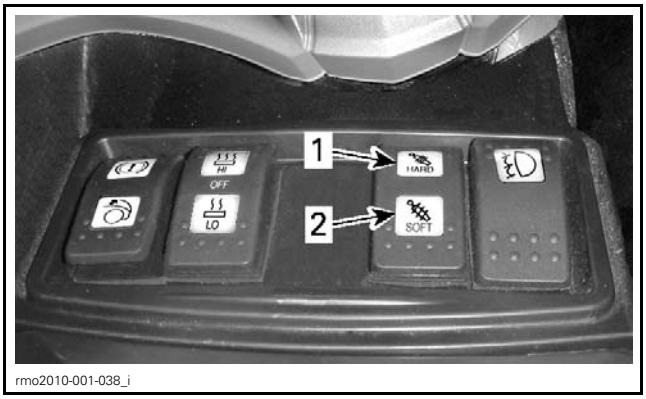
The highlighted bar on the multifunction gauge indicates the actual setting. Pressing the switch will move the bar up or down one at a time.

The multifunction gauge indicates suspension setting as follows.

1. Actual setting

NOTE: On models without separate analog gauges, the temperature bar gauge will be replaced by the suspension bar in the multifunction gauge.

To change the ACS setting, press ACS switch until the requested setting is displayed in the multifunction gauge.



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1. Press here to stiffen
2. Press here to soften

ACS Suspension Settings

On both systems, the ACS suspension is adjustable from 0.7 bar (10 PSI) to 7 bar (100 PSI). Refer to the table below to know the air pressure setting relating to the recommended loading capacity of the vehicle.

System Without Compressor

RECOMMENDED REAR SUSPENSION PRESSURE	
CONDITION	PRESSURE
Rider alone	2 bar (30 PSI)
Rider and fully loaded side storage compartments and top storage compartment	3 bar (40 PSI)
Rider and a passenger	5 bar (75 PSI)
Rider, a passenger and fully loaded side storage compartments and top storage compartment	6 bar (85 PSI)

System With Compressor

ACS SUSPENSION SETTINGS	
SETTING BAR	RIDING COMFORT
1 (top)	Softest
2	Soft
3	Factory setting
4	Stiff
5 (bottom)	Stiffest

Releasing Air Pressure in System for Servicing

Before working on the air system, always release air pressure as follows.

1. Open seat.
2. Push and hold pneumatic valve plunger using a small screwdriver.
3. Wait until the system is completely empty of air.

NOTE: Make sure to wait enough time in order to let the system expel the air. (no more pressurized air sound from the valve).

TROUBLESHOOTING

DIAGNOSTIC TIPS

Error Code (AIR FAULT) Displayed in Gauge

The error code AIR FAULT can appear on the multifunction gauge for different reasons that are not necessarily related to a failure of the ACS system.

If the error code appears on the multifunction gauge, it indicates a disparity between the requested and the actual suspension settings.

If the error code remains active for a long period, it may indicates a major leak in the system. In this case, the multifunction gauge will automatically shut down the compressor to prevent it from overheating.

If there is a major leak in the system, check the system for leakage as follows:

– Start vehicle and adjust the ACS setting to *ACS 6*.
– Inspect all hoses and fittings with soapy water to detect leaks.

Error Code Displayed and Suspension Setting Can Not Be Adjusted

If there is no leak, it is probably an electrical problem. In this case, an electrical failure of the compressor or the solenoid valve will result the impossibility to change the actual suspension setting.

After multiple attempts to change suspension setting, the multifunction gauge will activate error code AIR FAULT. Refer to *TROUBLESHOOTING GUIDELINES* for further troubleshooting procedure.

TROUBLESHOOTING GUIDELINES

Requested Setting Display Does Not Change in Gauge

1. Check the *ACS SWITCH (CSS)*.
2. Check fuse F8, refer to *POWER DISTRIBUTION*.

3. Check relay R8, refer to *POWER DISTRIBUTION*.

Suspension Setting Can Not Be Changed

1. Check the *ACS SWITCH (CSS)*.
2. Check the *ACS RELAY (R1)*.
3. Test the *ACS POSITION SENSOR*.
4. Check multifunction gauge control circuit continuity (to compressor PIN-19 and to solenoid valve PIN-18).

Suspension Setting Can Be Reached to Decrease Pressure Only

1. Check the *ACS RELAY (R1)*.
2. Check the *ACS COMPRESSOR*.

Suspension Setting Can Be Reached To Increase Pressure Only

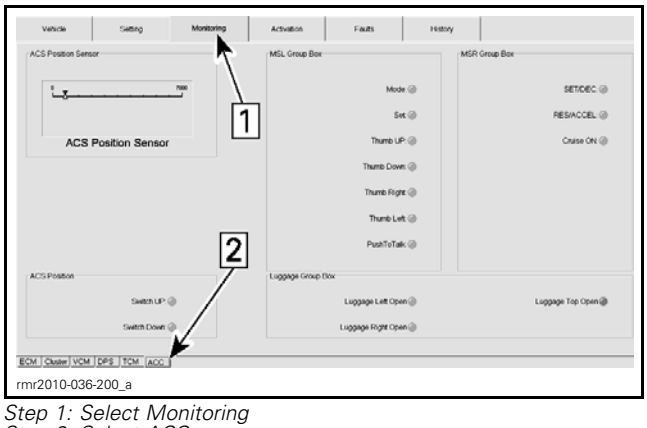
1. Check the *ACS SOLENOID VALVE*.

TROUBLESHOOTING WITH B.U.D.S.

ACS Position Sensor Monitoring

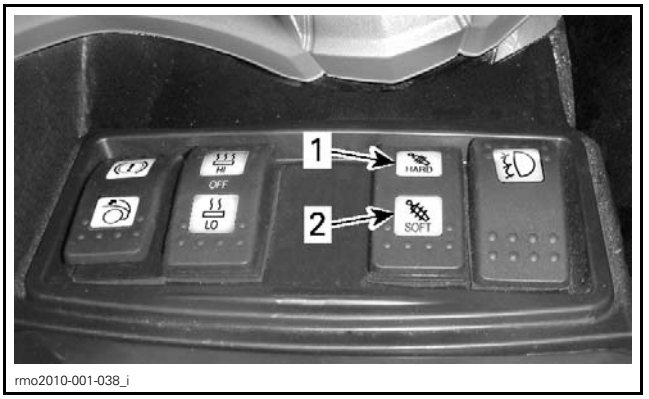
To monitor the position sensor during troubleshooting operation, proceed as follows:

1. Connect vehicle to B.U.D.S.. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Monitoring** page.
3. Select **ACC** folder.



Step 1: Select Monitoring
Step 2: Select ACC

4. Start engine and let it run at idle.
5. Press ACS adjustment switch on vehicle.



ACS ADJUSTMENT SWITCH
1. Press here to stiffen
2. Press here to soften

6. Check proper operation in B.U.D.S.

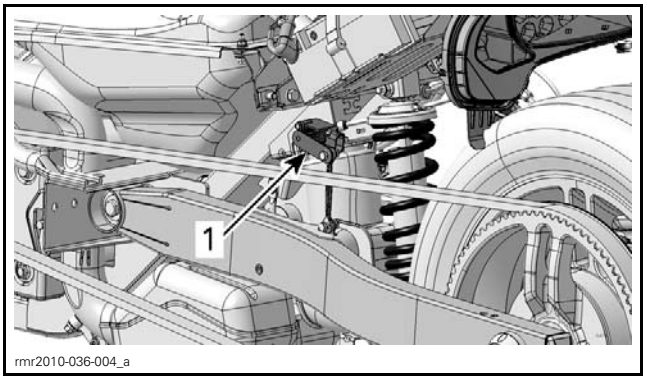
PROCEDURES

NOTE: Refer to the exploded view for service product, torque and assembly details.

ACS POSITION SENSOR

ACS Position Sensor Location

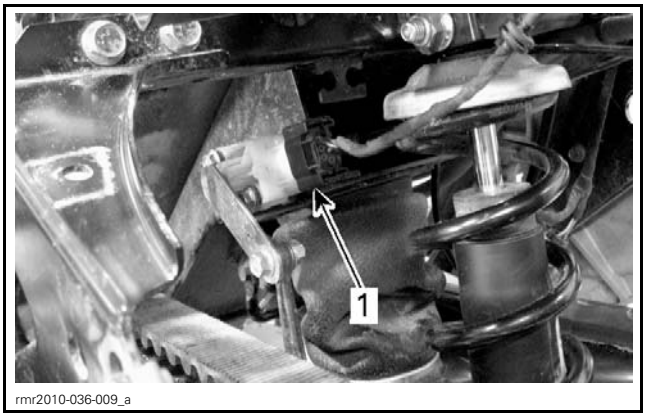
The ACS position sensor is located on the LH side of the vehicle near the shock absorber.



SOME PARTS REMOVED FOR CLARITY PURPOSE
1. ACS position sensor

ACS Position Sensor Signal Circuit Continuity Test

1. Remove rear cargo module. Refer to *BODY* subsection.
2. Disconnect position sensor connector.



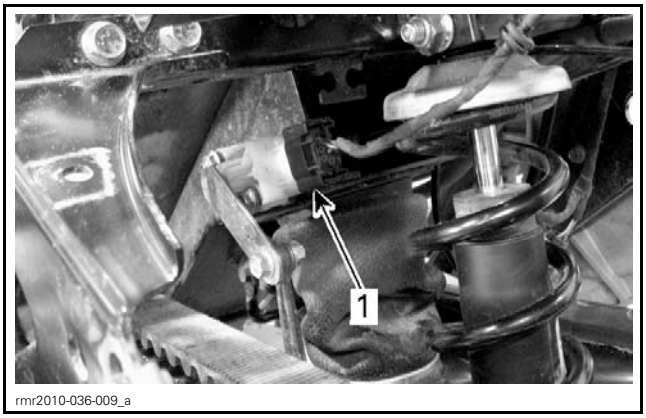
1. Position sensor connector

3. Remove multifunction gauge from vehicle. Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.
4. Set the FLUKE 115 MULTIMETER (P/N 529 035 868) to Ω.
5. Measure resistance as per the following table.

TEST PROBES	RESISTANCE
Gauge connector pin 13 (LT BU/YL)	Close to 0 Ω
Position sensor connector pin 4 (LT BU/YL)	

ACS Position Sensor Input Voltage Test

1. Remove rear cargo module. Refer to *BODY* subsection.
2. Disconnect position sensor connector.



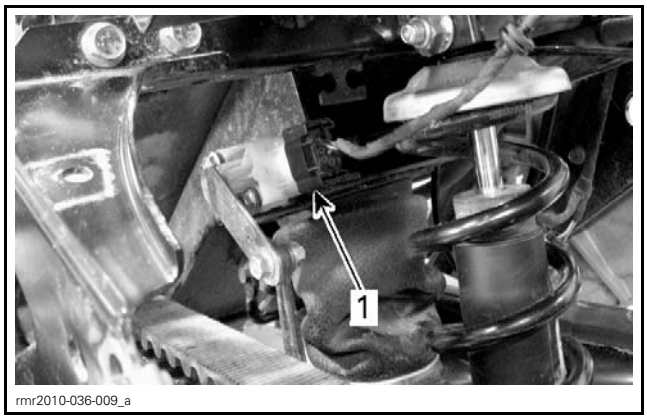
1. Position sensor connector

3. Set the FLUKE 115 MULTIMETER (P/N 529 035 868) to Vdc.
4. Start engine and let it run at idle.
5. Measure voltage as per the following table.

TEST PROBES	VOLTAGE
Pin 5 (YL/WH)	Battery voltage (± 12 Vdc)
Battery negative (-) post	

ACS Position Sensor Ground Circuit Continuity Test

1. Remove rear cargo module. Refer to *BODY* subsection.
2. Disconnect position sensor connector.



1. Position sensor connector

3. Set the FLUKE 115 MULTIMETER (P/N 529 035 868) to Vdc.
4. Start engine and let it run at idle.
5. Measure voltage as per the following table.

TEST PROBES	VOLTAGE
Pin 1 (BK)	Battery voltage (± 12 Vdc)
Battery positive (+) post	

ACS Position Sensor Reset (With B.U.D.S.)

1. Connect vehicle to B.U.D.S.. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Setting** page.
3. Select **ACC** folder.
4. Park vehicle straight on a level surface.
5. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
6. Check rear tire pressure and make sure that tire is inflated at 193 kPa (28 PSI).
7. Place 14 kg (30 lb) inside rear cargo module.
8. Install a jack under the rear portion of frame.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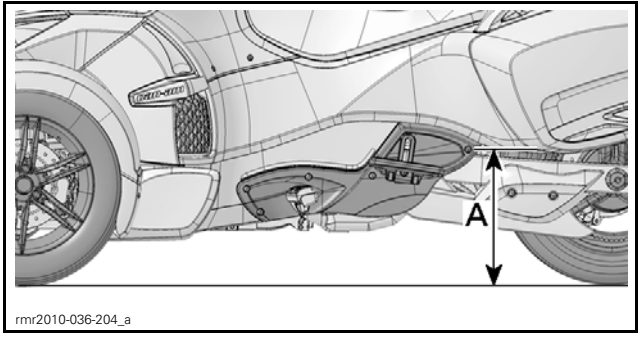
TYPICAL

9. Lift vehicle until rear screw of the footrest support is at 348 mm (13.701 in) of the ground.

POSITION SENSOR RESET	
LOW position	348 mm (13.701 in)



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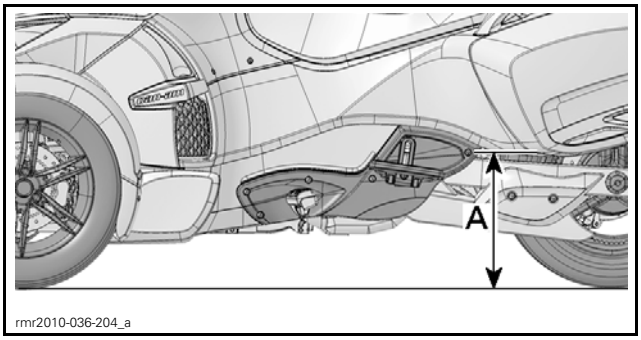
POSITION SENSOR RESET LOW POSITION
A. 348 mm (13.701 in)

10. Place ignition switch to ON position.
11. Press **Position Sensor Reset LOW Position** in B.U.D.S.
12. Lift vehicle until rear screw of the footrest support is at 403 mm (15.866 in) of the ground.

POSITION SENSOR RESET	
HIGH position	403 mm (15.866 in)



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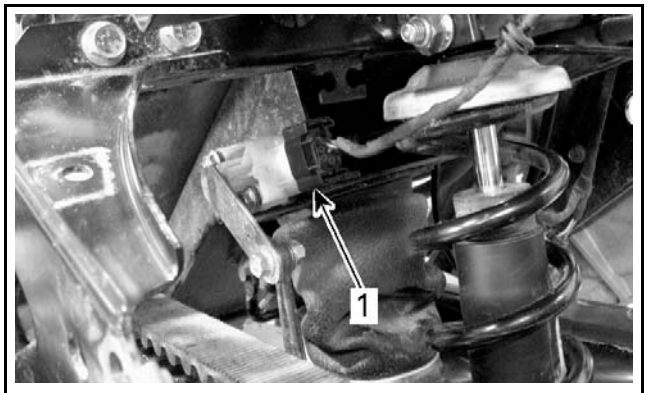
POSITION SENSOR RESET HIGH POSITION
A. 403 mm (15.866 in)

13. Press **Position Sensor Reset HIGH Position** in B.U.D.S.
14. Place ignition switch to OFF position for 30 seconds.
15. Lower vehicle at the ground.
16. Start engine and let it run at idle then check if ACS suspension works properly.

ACS Position Sensor Replacement

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove body parts as required to access to the position sensor. Refer to *BODY* subsection.
3. Disconnect position sensor connector.



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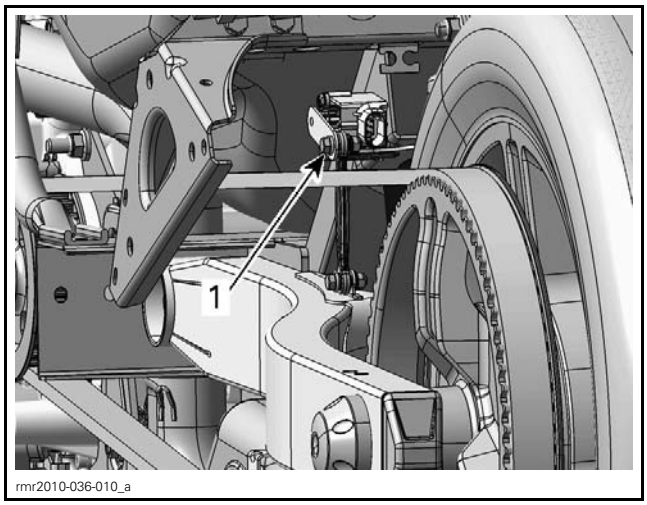
1. Position sensor connector

4. Detach link rod from position sensor by removing upper bolt and nut.



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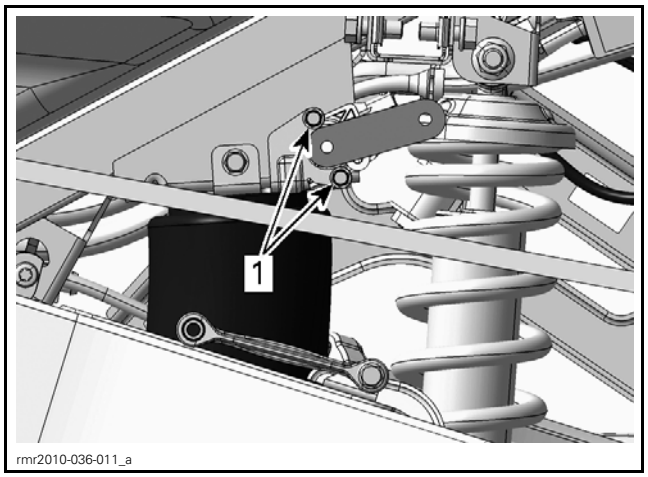
1. Link rod upper bolt

5. Move position sensor arm to access to retaining screws.
6. Remove position sensor retaining screws.



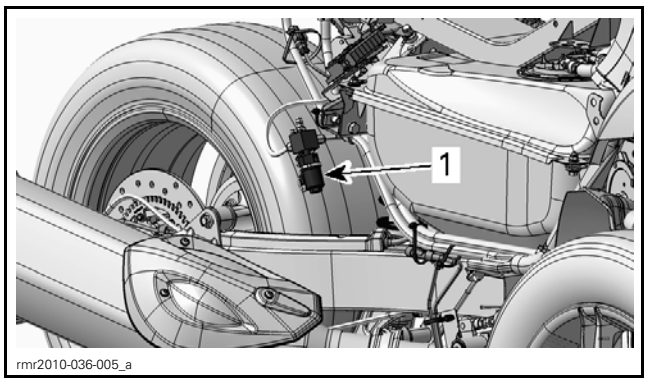
1. Position sensor retaining screws

7. Remove position sensor from vehicle.
8. Install a new position sensor on vehicle as the reverse of removal.
9. Perform the initialization of the position sensor, refer to *ACS POSITION SENSOR RESET (WITH B.U.D.S.)*.

ACS SOLENOID VALVE

ACS Solenoid Valve Location

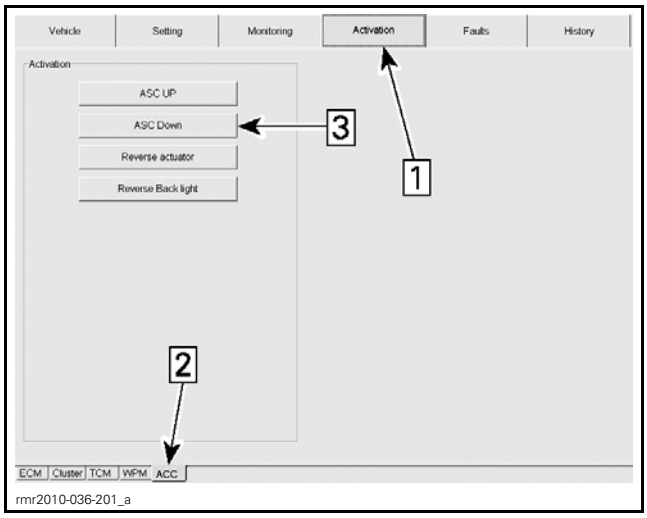
The ACS solenoid valve is located on the RH side of the vehicle near the shock absorber.



SOME PARTS REMOVED FOR CLARITY PURPOSE
1. ACS solenoid valve

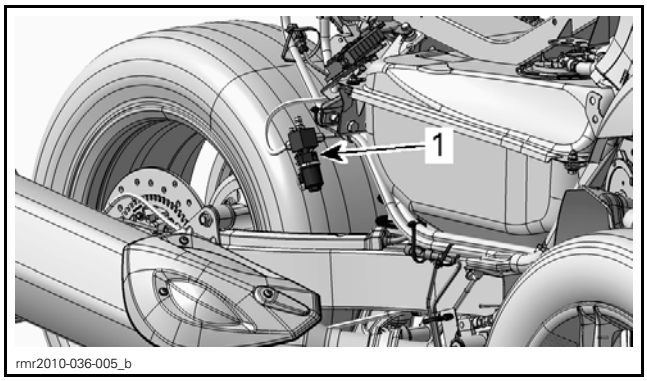
ACS Solenoid Valve Operation Test

1. Connect vehicle to B.U.D.S.. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACC** folder.
4. Press **ASC Down** button to proceed.



Step 1: Select Activation
Step 2: Select ACC
Step 3: Press ASC Down

5. Verify that air exits from side port to confirm proper solenoid operation.



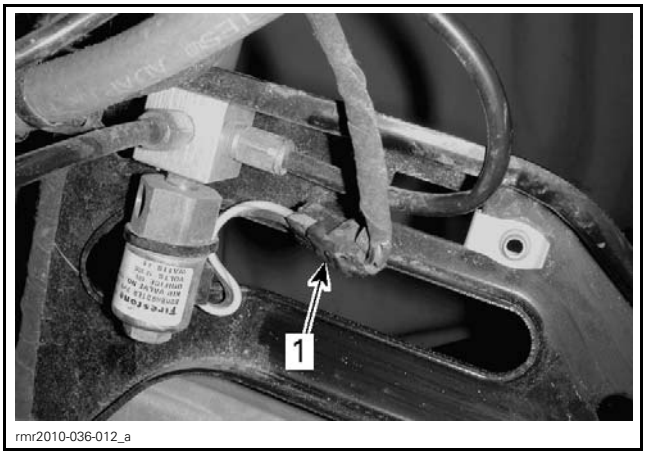
SOME PARTS REMOVED FOR CLARITY PURPOSE
1. Side port

If no air exits from side port:

– Check input voltage at solenoid valve (PIN-1), refer to the *WIRING DIAGRAM*.
– Check ground circuit continuity at solenoid valve (PIN-2), refer to the *WIRING DIAGRAM*.
– Check connector and terminal condition.

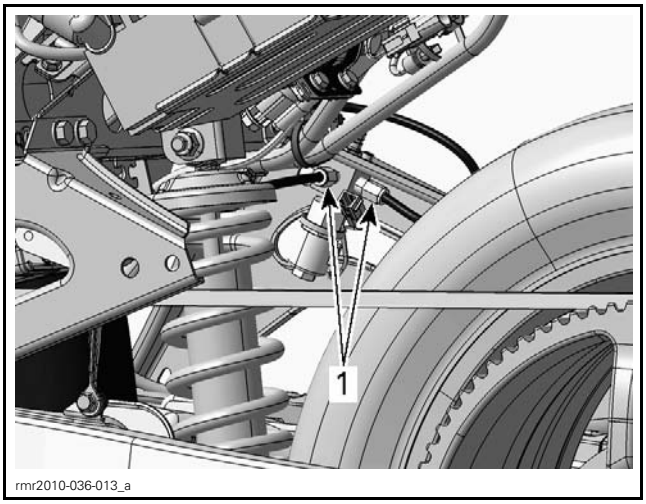
ACS Solenoid Valve Replacement

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove body parts as required to access to the ACS solenoid valve. Refer to *BODY* subsection.
3. Disconnect solenoid valve connector.



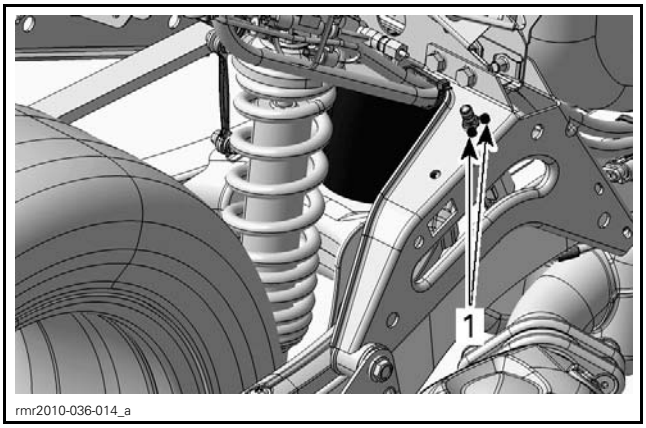
1. Solenoid valve connector

4. Disconnect pneumatic hoses from air fittings as follows:
   4.1 Push fitting ring toward ACS manifold.
   4.2 Hold ring in place.
   4.3 Pull air hose.



1. Air fittings

5. Remove ACS manifold retaining screws.



1. ACS manifold retaining screws

6. Remove ACS manifold from vehicle.

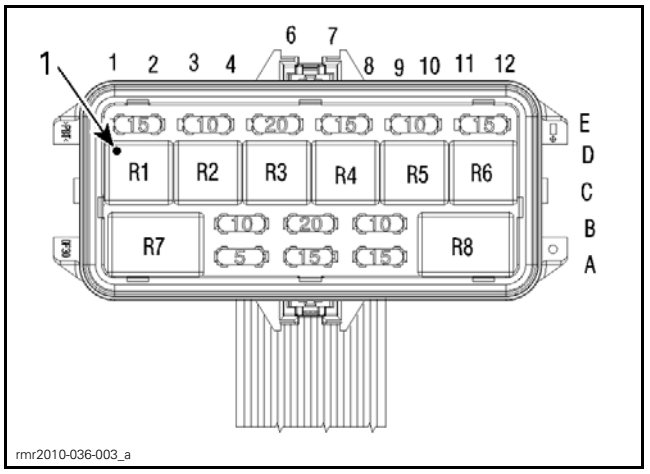
7. Unscrew ACS solenoid valve from ACS manifold.
8. Install a new solenoid valve as the reverse of removal procedure.
9. Check the air system for leakage, to do so, start vehicle and adjust the ACS setting to *ACS 6*, then inspect all hoses and fittings with soapy water to detect leaks.

ACS RELAY (R1)

ACS Relay Location

ACS relay (R1) is located in the front fuse block, under the front storage compartment cover.

ACS SUSPENSION RELAY (R1)	
RELAY TERMINAL	FUSE BLOCK PIN
86	D1
85	C2
30	C1
87	D2



FRONT FUSES BLOCK
1. ACS suspension relay

ACS Relay Continuity Test

1. Remove relay (R1), refer to*ACS RELAY LOCATION*.
2. Set the FLUKE 115 MULTIMETER (P/N 529 035 868) to Ω.
3. Measure resistance as per the following table.

TEST PROBES	RESISTANCE
Terminal 30	Open (OL)
Terminal 87	

4. Apply 12 volts on terminals 86 and 85.
5. Measure resistance again as per the following table.

TEST PROBES	RESISTANCE
Terminal 30	Close to 0 Ω
Terminal 87	

If results are not as per the previous tables, replace relay.

ACS Relay Input Voltage Test

1. Remove relay (R1), refer to *ACS RELAY LOCATION* .
2. Set the FLUKE 115 MULTIMETER (P/N 529 035 868) to Vdc.
3. Start engine and let it run at idle.
4. Measure voltage as per the following tables.

TEST PROBES	VOLTAGE
Fuse box pin C1 (LT GN/GY)	Battery voltage (± 12 Vdc)
Battery negative (-) post	

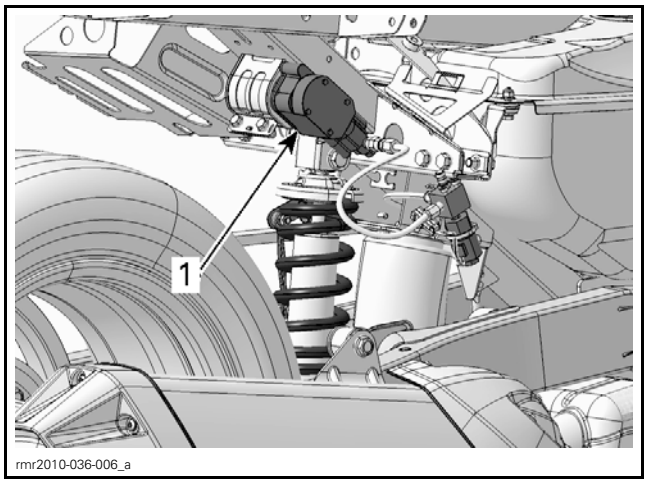
TEST PROBES	VOLTAGE
Fuse box pin D1 (LT GN/GY)	Battery voltage (± 12 Vdc)
Battery negative (-) post	

If voltage is not as specified:
- Check fuse F8, refer to *POWER DISTRIBUTION*.
- Check relay R8, refer to *POWER DISTRIBUTION*.
- Check wiring continuity, refer to the *WIRING DIAGRAM*.
- Check connector and terminal condition.

ACS COMPRESSOR

ACS Compressor Location

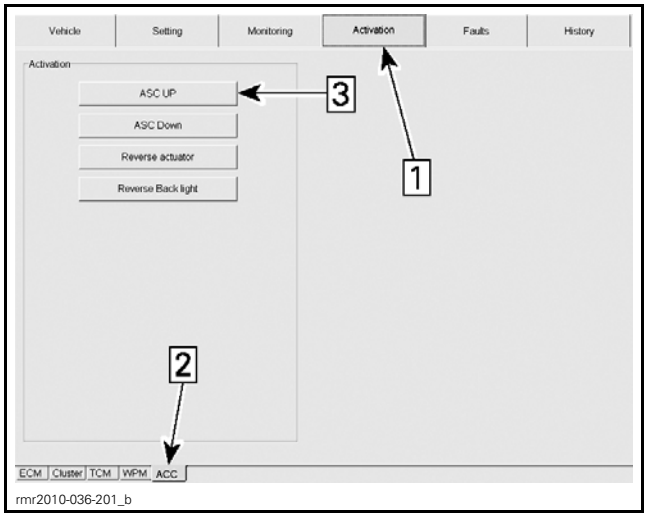
The ACS compressor is located on the RH side of the vehicle near the shock absorber.



SOME PARTS REMOVED FOR CLARITY PURPOSE
1. ACS compressor

ACS Compressor Operation Test

1. Connect vehicle to B.U.D.S.. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACC** folder.
4. Press **ASC UP** button to proceed.



Step 1: Select Activation
Step 2: Select ACC
Step 3: Press ASC UP

5. Verify if compressor works properly.

NOTICE **Do not power compressor for a long period (30 seconds maximum) to prevent overheating.**

If compressor does not work:
- Check input voltage at compressor (PIN-2), refer to the *WIRING DIAGRAM*.

– Check ground circuit continuity at compressor (PIN-1), refer to the *WIRING DIAGRAM*.
– Check connector and terminal condition.

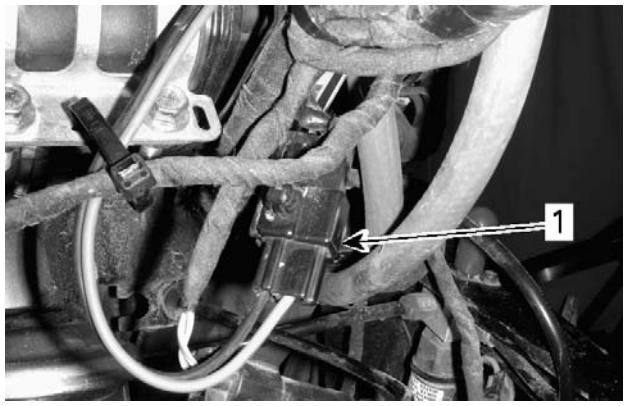
If the fault is not found after having carried out the previous tests:

– Test compressor operation by connecting it directly to the battery posts.
  • If compressor works properly, check relay R1, refer to *ACS RELAY (R1)* in this subsection.
  • If compressor does not work properly, replace compressor.

NOTICE **Do not power compressor directly with the battery for a long period. Apply voltage quickly to ensure that the compressor will not over pressurize the air system or overheating.**

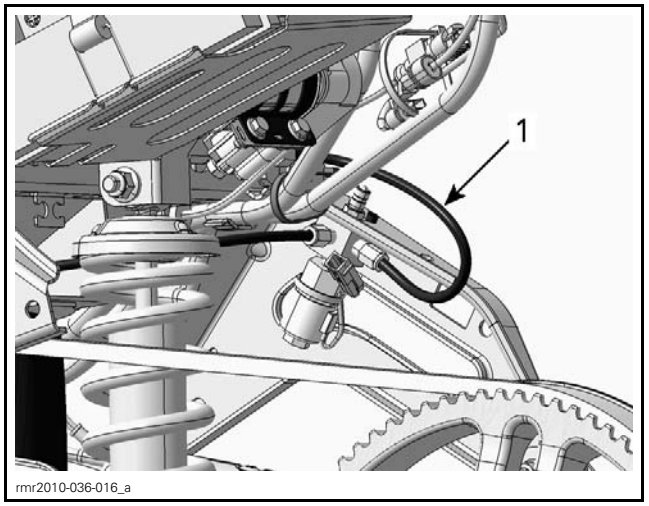
ACS Compressor Removal

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove body parts as required to access to the compressor. Refer to *BODY* subsection.
3. Disconnect compressor connector.



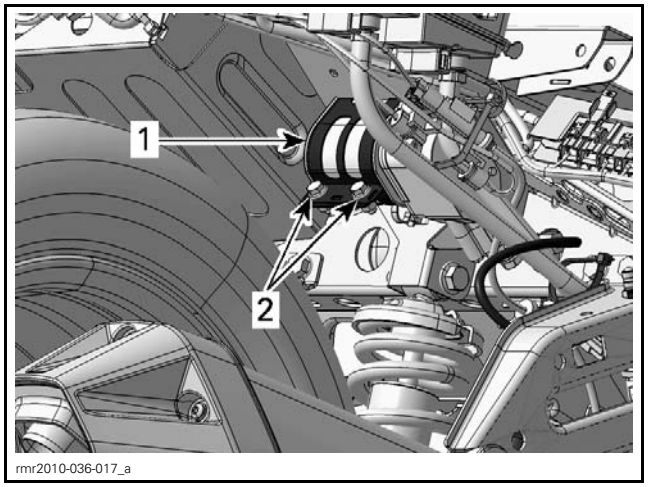
1. Compressor connector

4. Disconnect compressor pneumatic hose from manifold as follows:
   4.1 Push fitting ring toward ACS manifold.
   4.2 Hold ring in place.
   4.3 Pull air hose.



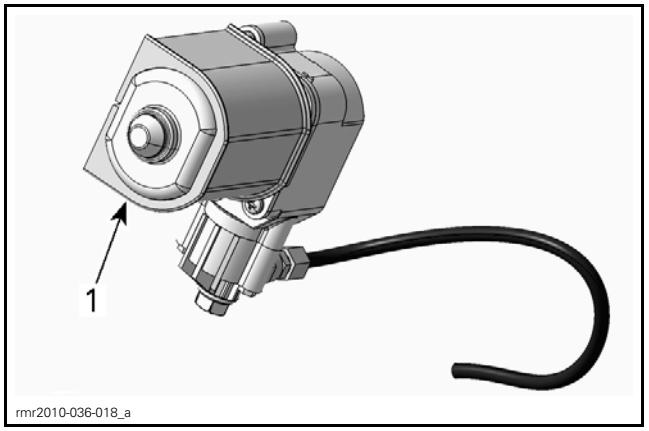
1. Compressor pneumatic hose

5. Remove bolts and nuts from compressor retaining collar.



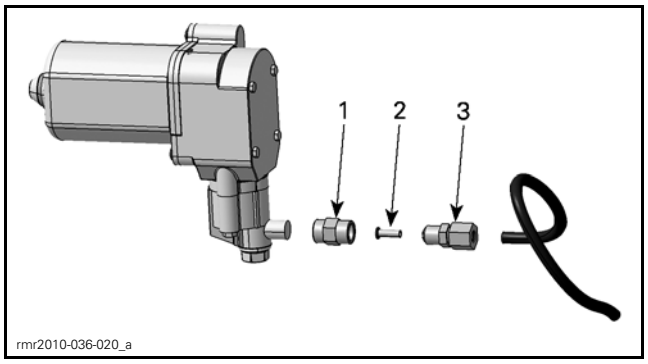
1. Retaining collar
2. Bolts

6. Open retaining collar then remove compressor.
7. Remove compressor rubber.



1. Compressor rubber

8. Unscrew check valve and fitting from compressor.



1. NPT nipple
2. Inner sleeve
3. Check valve

ACS Compressor Installation

The installation procedure is the reverse of removal procedure, however pay attention to the following.

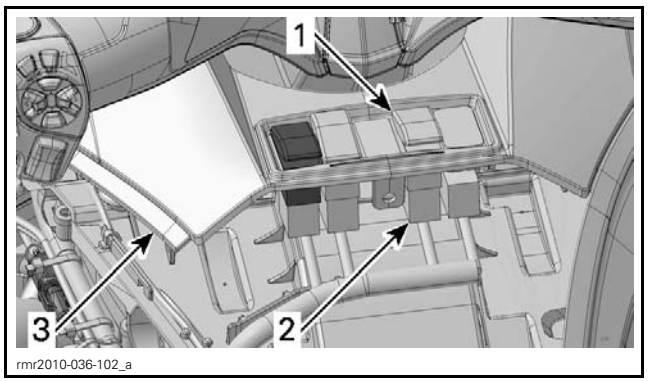
Apply LOCTITE 592 (PIPE SEALANT) (P/N 293 800 018) on check valve male threads.

Check the air system for leakage, to do so, start vehicle and adjust the ACS setting to *ACS 6*, then inspect all hoses and fittings with soapy water to detect leaks.

ACS SWITCH (CSS)

ACS Switch Test

Remove central panel. Refer to *BODY* subsection.



1. ACS switch
2. ACS switch connector
3. Central panel

Check switch continuity as follows.

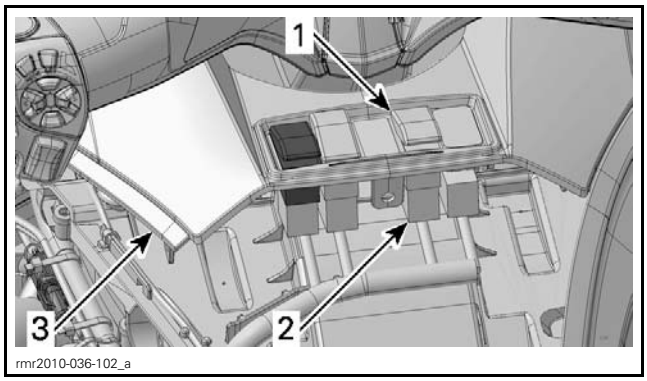
ACS SWITCH POSITION	PIN		RESISTANCE
Firmly pushed to UP	2	5	Close to 0 Ω
Released (FREE)	2	3	
Firmly pushed to DWN	2	1	

If switch is defective, replace it with a new one.

ACS Switch Replacement

Remove central panel. Refer to *BODY* subsection.

Remove ACS switch from console by pushing retaining tabs.



1. ACS switch
2. ACS switch connector
3. Central panel

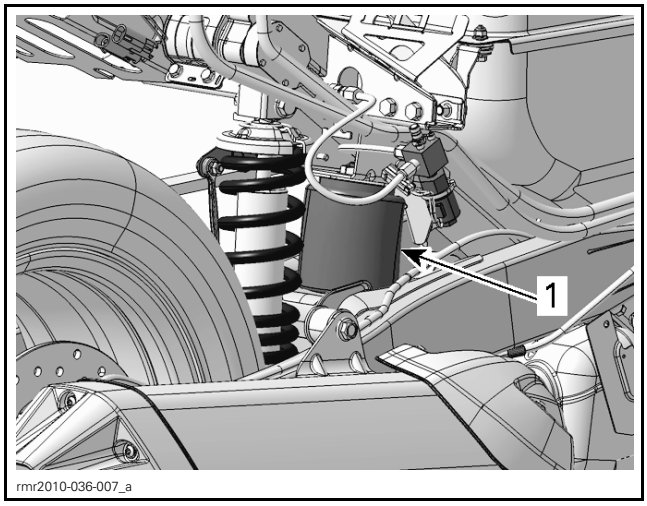
Install a NEW switch on console.

Re-install central panel as the reverse of removal procedure.

ACS AIR SPRING

ACS Air Spring Location

The ACS air spring is located on the swing arm in front of the shock absorber.

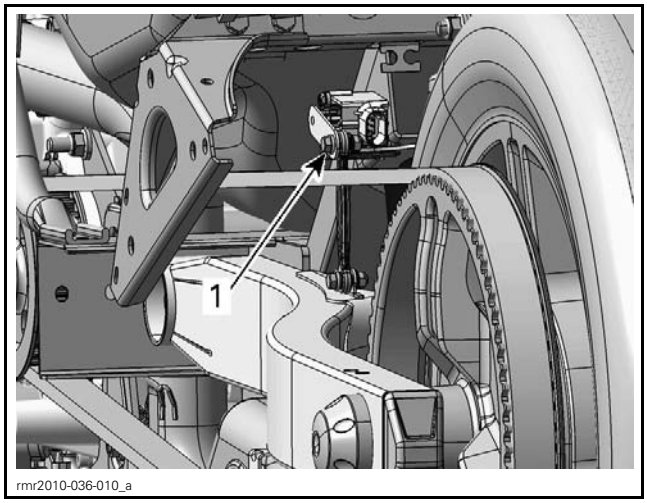


SOME PARTS REMOVED FOR CLARITY PURPOSE
1. ACS air spring

ACS Air Spring Removal

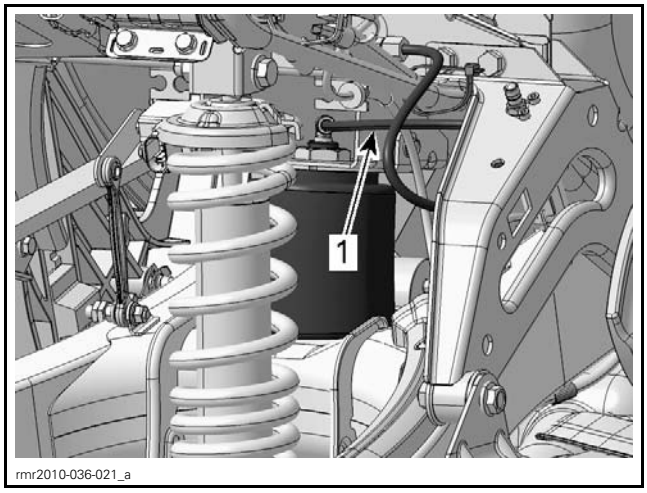
NOTICE Always detach link rod from position sensor before servicing the rear suspension (on applicable models).

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove body parts as required to access to the ACS air spring. Refer to *BODY* subsection.
3. Detach link rod from position sensor by removing upper bolt and nut (on applicable models).



1. Link rod upper bolt

4. Disconnect pneumatic hose from air spring as follows:
   - 4.1 Push fitting ring toward air spring.
   - 4.2 Hold ring in place.
   - 4.3 Pull air hose.

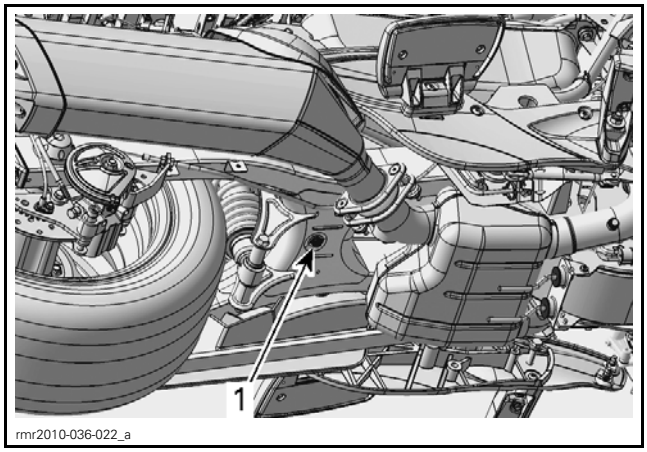


1. Air spring hose

5. Install a jack under the rear portion of frame.
6. Slightly lift the vehicle to extend the air spring.

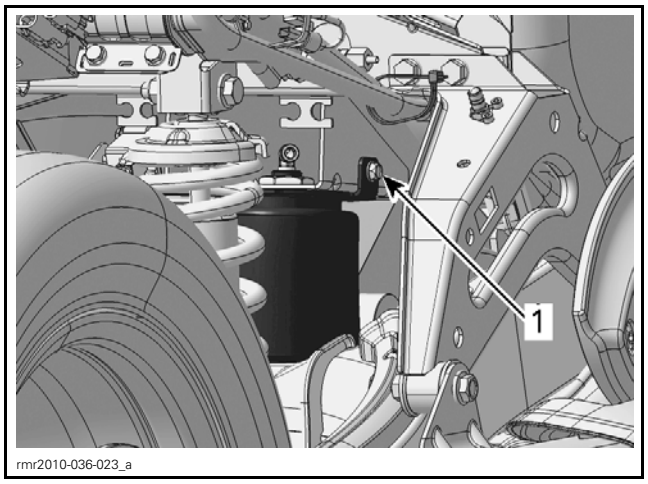
TYPICAL

7. From underneath swing arm, remove air spring lower retaining screw.



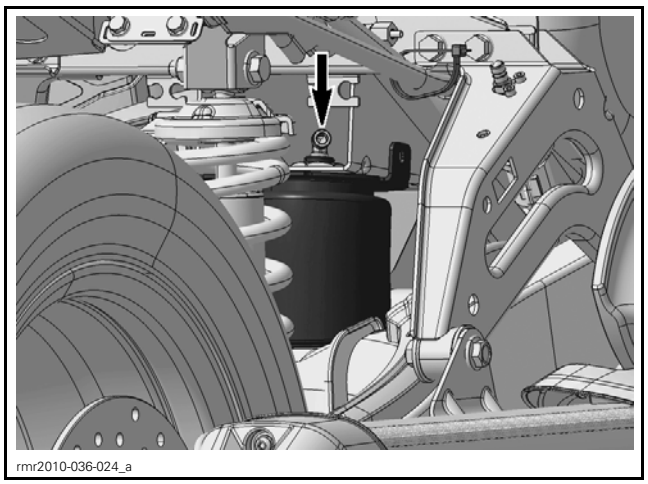
1. Lower retaining screw

8. Remove air spring upper retaining screws on both side.

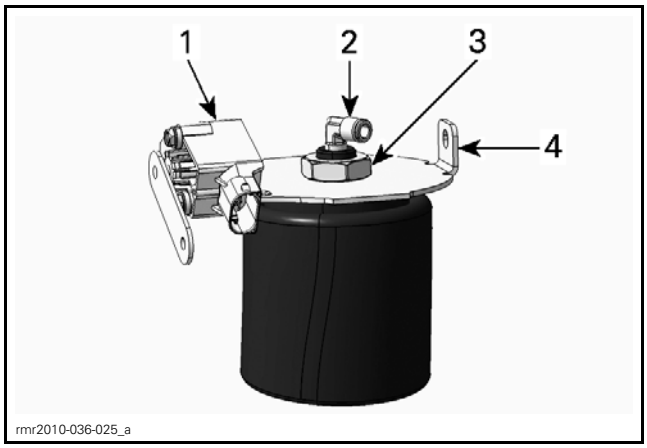


1. Upper retaining screw

9. Carefully push down air spring then remove it from vehicle frame.



10. Remove the following components from air spring:
    – ACS position sensor
    – Pneumatic fitting
    – Air spring plate retaining nut
    – Air spring plate.



1. ACS position sensor
2. Pneumatic fitting
3. Air spring plate retaining nut
4. Air spring plate

ACS Air Spring Installation

The installation procedure is the reverse of removal procedure, however pay attention to the following.

Torque air spring retaining screws to 7 N•m (62 lbf•**in**).

Torque air spring retaining nut to 7 N•m (62 lbf•**in**).

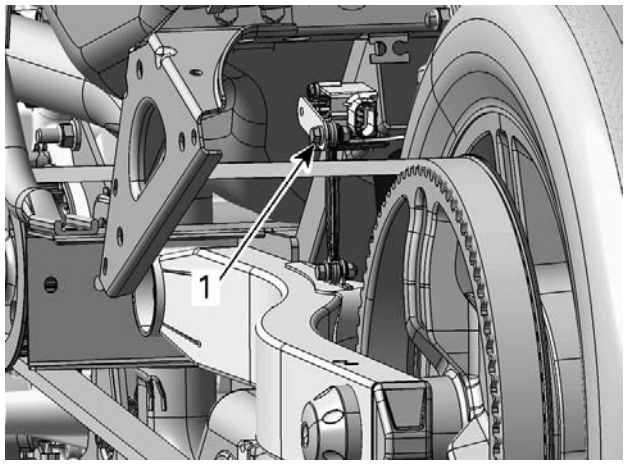
Check the air system for leakage, to do so, start vehicle and adjust the ACS setting to *ACS 6*, then inspect all hoses and fittings with soapy water to detect leaks.

SHOCK ABSORBER

Shock Absorber Removal

NOTICE **Always detach link rod from position sensor before servicing the rear suspension (on applicable models).**

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove body parts as required to access to the shock absorber. Refer to *BODY* subsection.
3. Detach link rod from position sensor by removing upper bolt and nut (on applicable models).

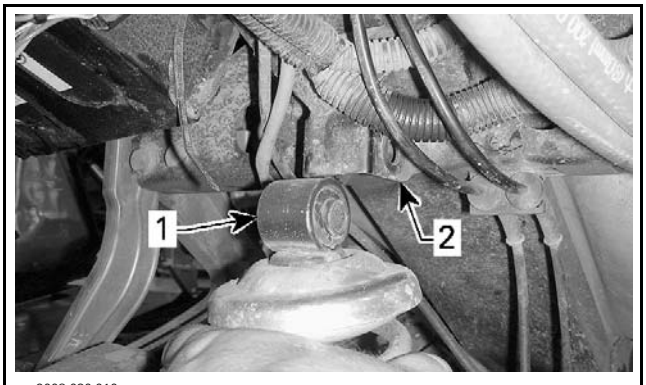


1. Link rod upper bolt

4. Remove the shock absorber upper bolt.
5. Install a jack under the rear portion of frame.

TYPICAL

6. Lift the vehicle until the shock absorber can be removed from upper bracket.

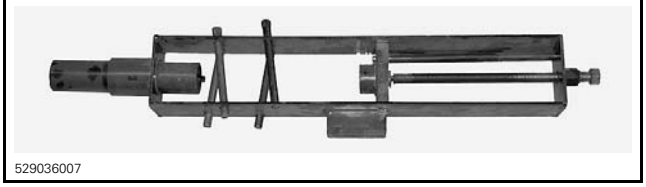


TYPICAL
1. Shock absorber
2. Upper bracket

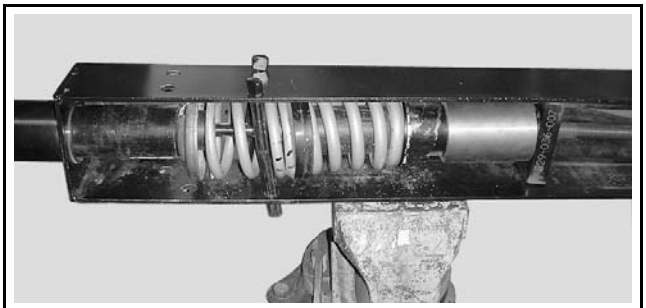
7. Remove the shock absorber lower bolt.
8. Remove rear shock absorber from vehicle.

Shock Absorber Disassembly

1. Use the SPRING REMOVER (P/N 529 036 007).

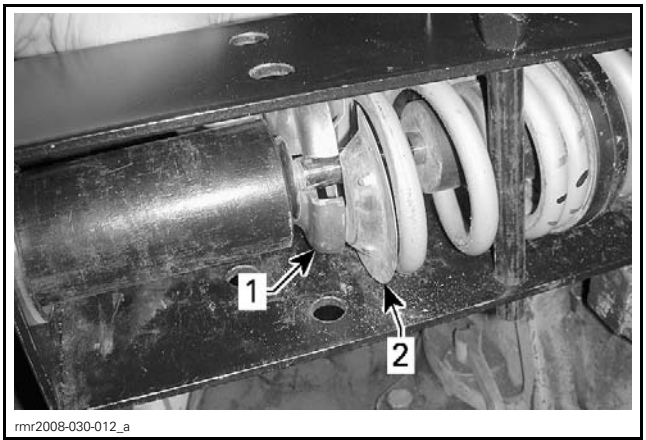


2. Place the tool in a vise.
3. Position the shock absorber in the tool as shown.



TYPICAL

4. Tighten the shock spring remover screw until the spring is sufficiently compressed to remove spring locking devices.
5. Remove spring stopper and its cap then release the shock spring remover screw.



TYPICAL
1. Cap
2. Spring stopper

6. Remove spring from shock.

Shock Absorber Inspection

Examine shock for leaks.

Extend and compress the piston at least 5 complete strokes with its rod upward.

Check that rod moves smoothly and with uniform resistance over its entire stroke.

NOTE: During compression motion, it is normal to feel a small resistance only.

Pay attention to the following conditions that will denote a defective shock:

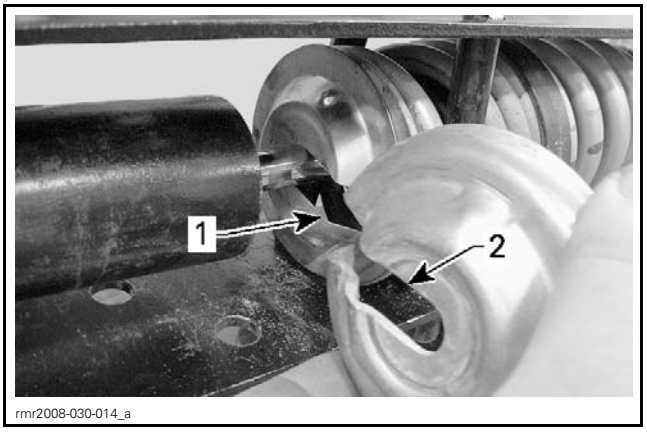
– A very weak rebound.
– A skip or a hang back when reversing stroke at mid travel.
– Seizing or binding condition except at extreme end of either stroke.
– Oil leakage.
– A gurgling noise, after completing one full compression and extension stroke.

Replace if any faults are present.

Shock Absorber Assembly

The assembly is the reverse of the disassembly procedure. However, pay attention to the following.

When installing spring stopper and cap, make sure to install opening at 180°.



TYPICAL
1. *Stopper opening*
2. *Cap opening*

Shock Absorber Installation

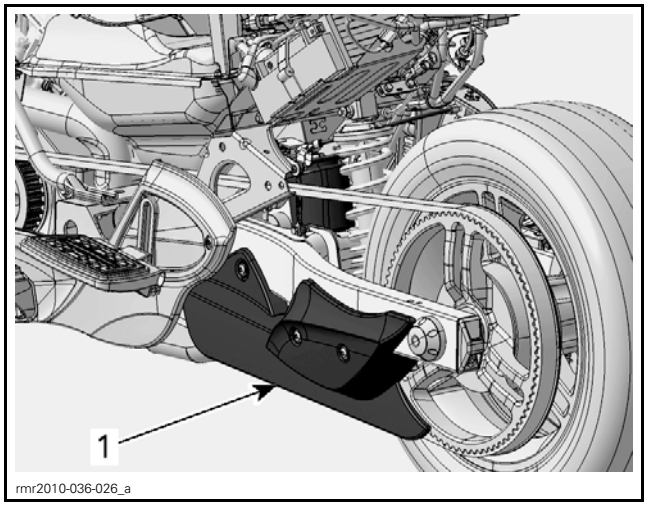
The installation is the reverse of the removal procedure.

SWING ARM

Swing Arm Removal

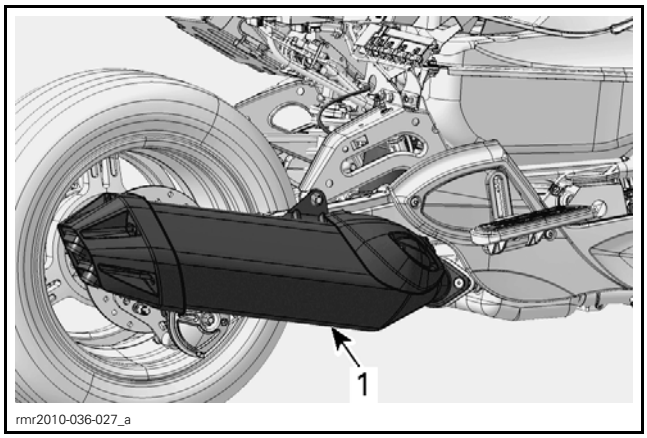
NOTICE **Always detach link rod from position sensor before servicing the rear suspension (on applicable models).**

1. Release air pressure, refer to *RELEASING AIR PRESSURE IN SYSTEM FOR SERVICING* in this subsection.
2. Remove rear cargo module. Refer to *BODY* subsection.
3. Remove belt guard from swing arm.



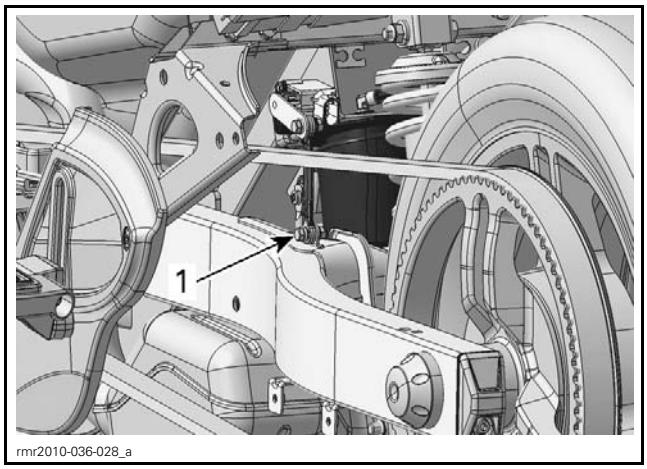
1. *Belt guard*

4. Remove muffler from swing arm.



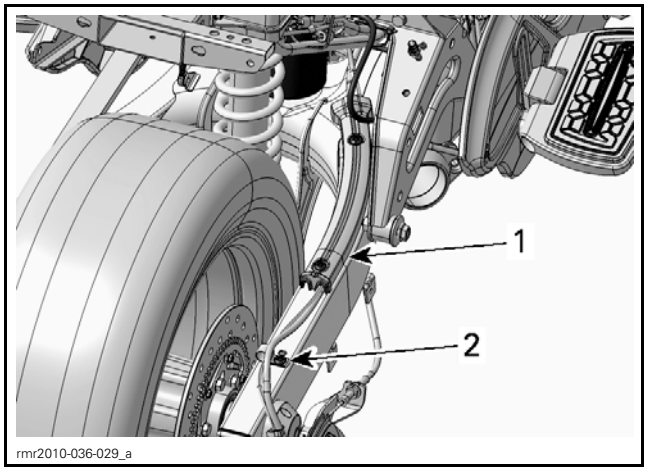
1. *Muffler*

5. Detach ACS position sensor link rod from swing arm by removing lower bolt and nut (on applicable models).



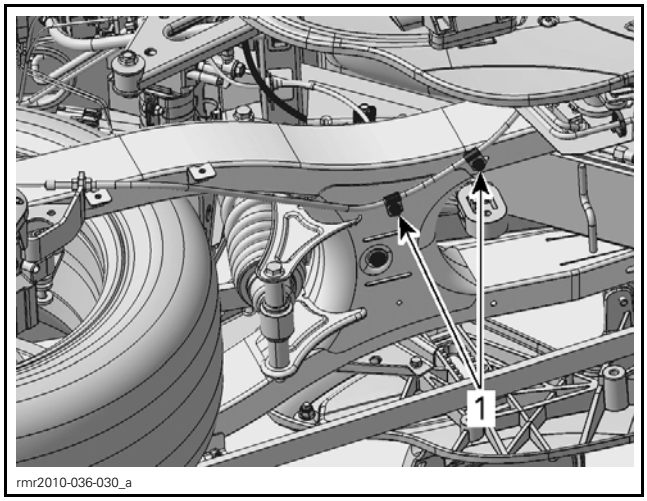
1. Link rod lower bolt

6. Remove cables protector and cables fastener from swing arm.



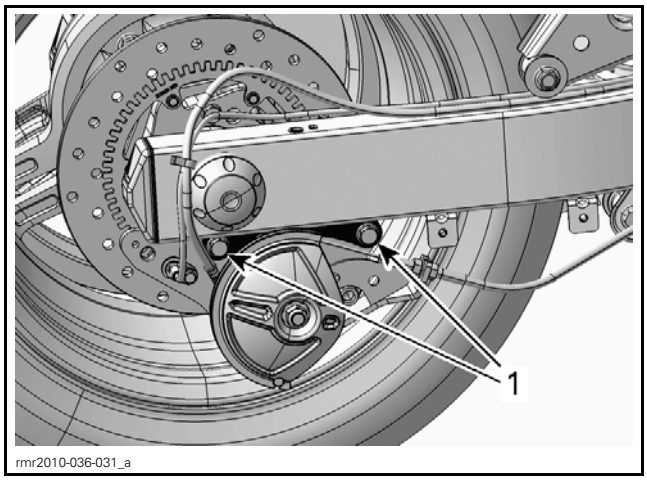
1. Cables protector
2. Cables fastener

7. From underneath swing arm, remove parking brake cable fasteners.



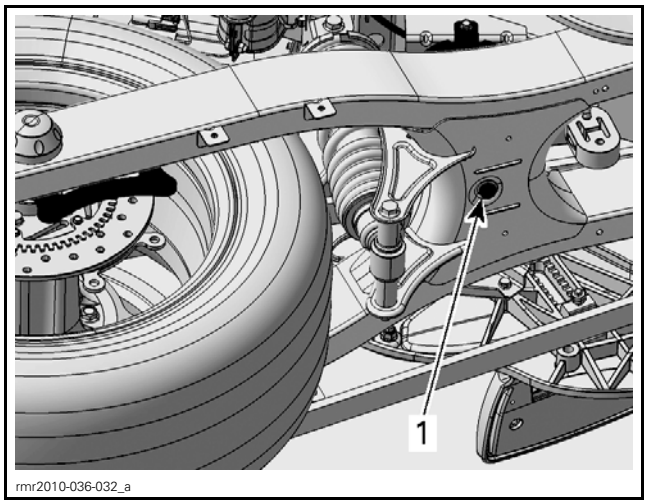
1. Parking brake cable fasteners

8. Remove and discard both caliper screws.



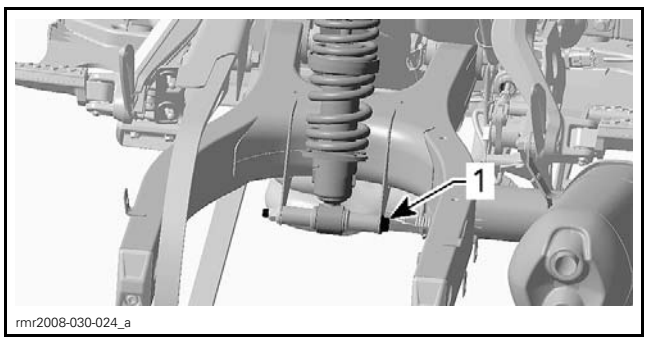
1. Caliper screws

9. From underneath swing arm, remove air spring lower retaining screw.



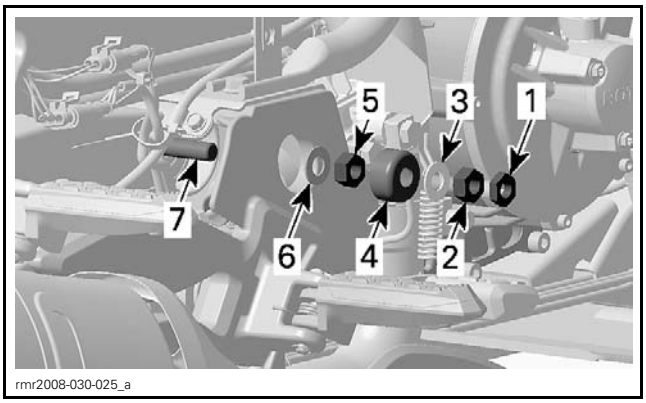
1. Lower retaining screw

10. Place vehicle on a level surface.
11. Lift the rear of the vehicle.
12. Install a jack stand under frame.
13. Remove rear wheel. Refer to *DRIVE BELT AND REAR WHEEL* subsection.
14. Unscrew shock absorber lower bolt.



1. Shock absorber lower bolt

15. Through the RH driver's footrest hole, remove:
    – The lock nut
    – The positioning nut
    – The washer
    – The spacer
    – The swing arm nut and its washer.



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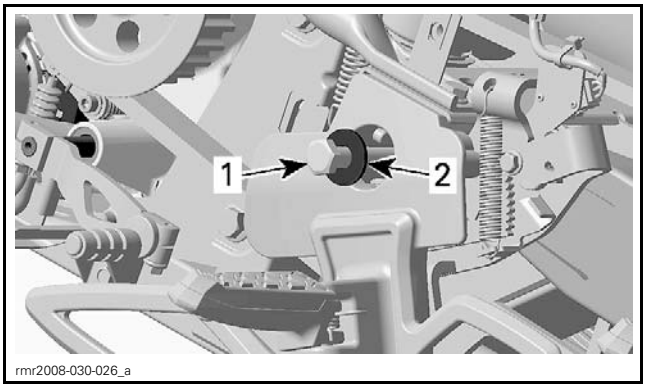
1. *Lock nut*
2. *Positioning nut*
3. *Washer*
4. *Spacer*
5. *Swing arm nut*
6. *Washer*
7. *Swing arm bolt*

16. Remove swing arm bolt with its washer.



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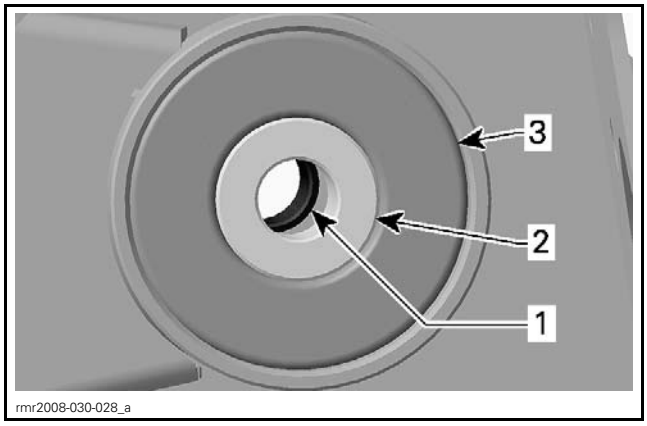
1. *Swing arm bolt*
2. *Washer*

17. Insert a long punch through RH inner sleeve and push out the LH inner sleeve from swing arm.



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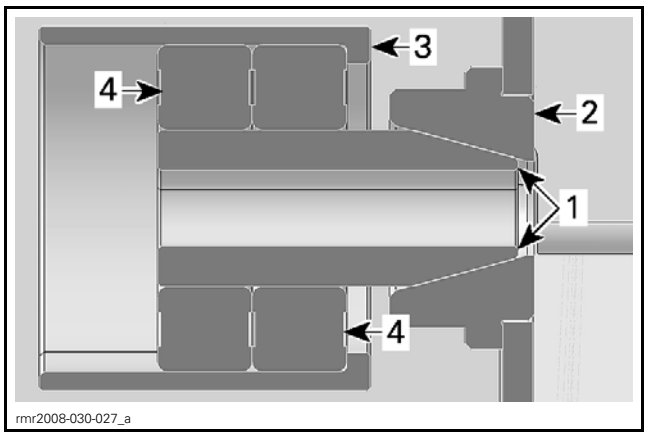
VIEW FROM RIGHT SIDE OF SWING ARM
1. *LH inner sleeve*
2. *RH inner sleeve*
3. *RH bearing*



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CROSS SECTION OF FRAME AND SWING ARM (LEFT SIDE)
1. *Push inner sleeve here*
2. *Frame*
3. *Swing arm*
4. *Swing arm bearings*

18. Insert a long punch through LH bearing and push out the RH inner sleeve.
19. Discard inner sleeves.
20. Remove the swing arm.

Swing Arm Inspection

Check swing arm for cracks, bending or other damages.

Check if bearings turn smoothly and freely.

Replace all damaged parts.

Swing Arm Disassembly

Using the BLIND HOLE BEARING PULLER SET (P/N 529 036 117), remove swing arm bearings.

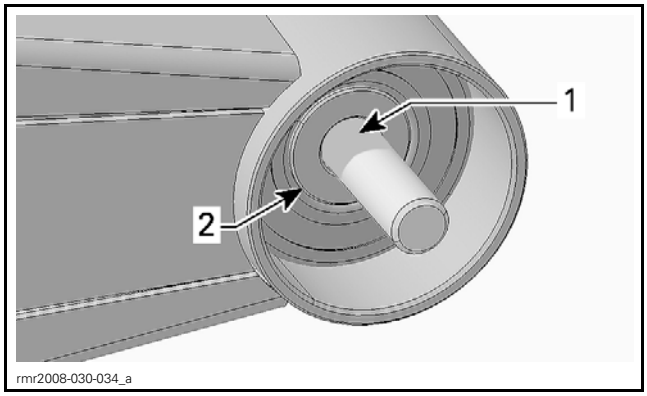
Discard them.

Swing Arm Assembly

Using a press and an appropriate bearing installer, install NEW bearings.

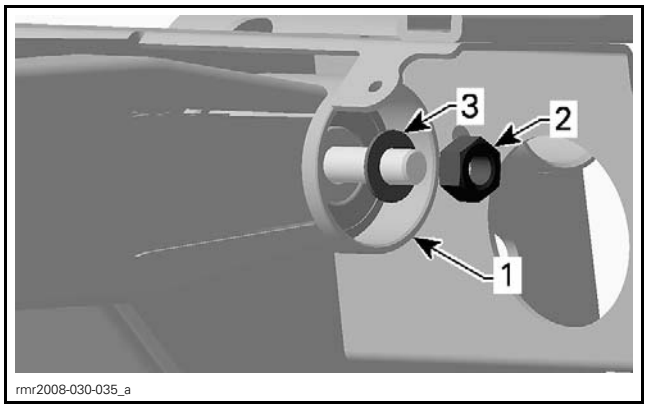
Swing Arm Installation

1. Apply XPS SYNTHETIC GREASE (P/N 293 550 010) on inner sleeves.
2. Insert NEW inner sleeves into bearings, the tapered side first. Do not push sleeves completely.
3. Align swing arm bores with tapered openings in frame.
4. Push inner sleeves completely to retain swing arm to frame.
5. From the LH side, insert the swing arm bolt with its washer.
6. Apply LOCTITE 243 (BLUE) (P/N 293 800 060) on threads of swing arm bolt.



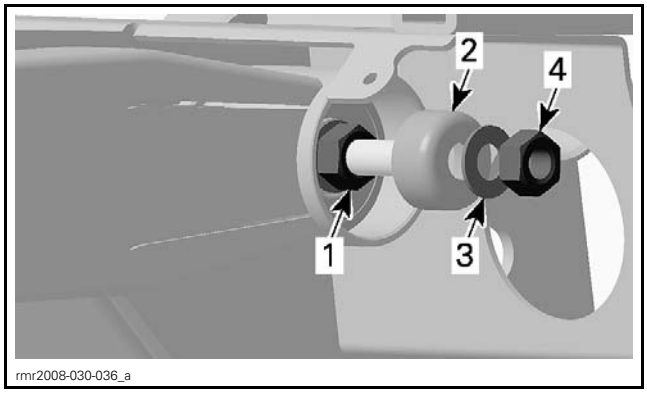
1. Apply threadlocker here (shaded portion)
2. RH inner sleeve

7. Install a washer and the swing arm nut.



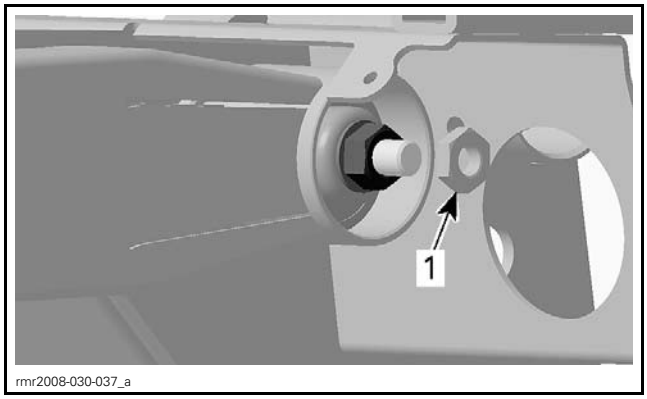
1. RH swing arm
2. Swing arm nut
3. Washer

8. Torque swing arm nut to 90 N•m (66 lbf•ft).
9. Move swing arm up and down. The swing arm must move freely and smoothly.
10. Install the spacer, the washer and the positioning nut.



1. Swing arm nut
2. Spacer
3. Washer
4. Positioning nut

11. Torque positioning nut to 3 N•m (27 lbf•**in**).
12. Install the lock nut.



1. Lock nut

13. Secure positioning nut with a wrench and tighten lock nut to 55 N•m (41 lbf•ft).

14. Install **NEW** caliper screws.
15. Install all other removed parts.