



# ***SDI*** ***E-CLIK***

***SDI E-CLIK***  
***Installation Manual***  
***Polaris Xpedition***  
***& Ranger***

# SDi E-CLIK Electronics Polaris Ranger/Xpedition/1500 Installation Manual

## E-CLIK Electronics Package Content

1. ECU + Hardware
2. IMU + Bracket and Hardware
3. Touch Screen Controller + Bracket and Hardware
4. ECU + Touch Screen Placement Templates
5. Wiring Harnesses + Zip Ties
  - a. ECU Main Plug
  - b. Power Harness
  - c. Front Shocks Harness
  - d. Rear Shocks Harness
  - e. Data Harness
  - f. **(Optional)** HS Button Harness
  - g. **(Optional)** Switch Harness with Switches

## Required Tools

1. Ratchet
2. 10mm Socket
3. 4mm Allen Key
4. T20 Torx Key
5. T40 Torx Key
6. Small Flathead Screwdriver
7. Power Drill + ¼" Drill Bit or Step Bit
8. Plastic Clip Removal Tool
9. Cutting Pliers
10. Utility Knife

## Estimated Installation Time

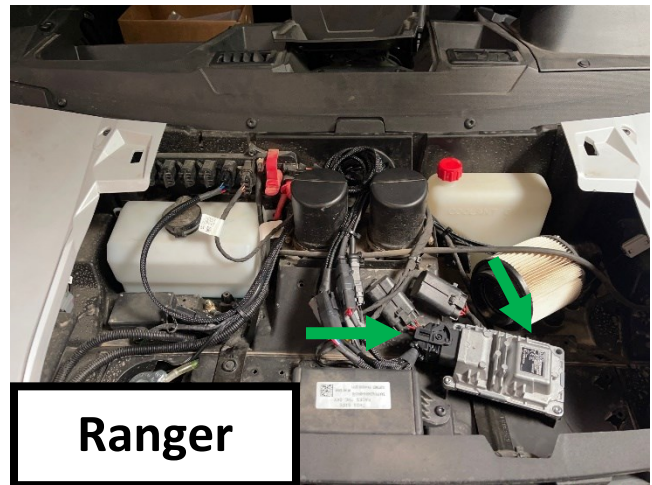
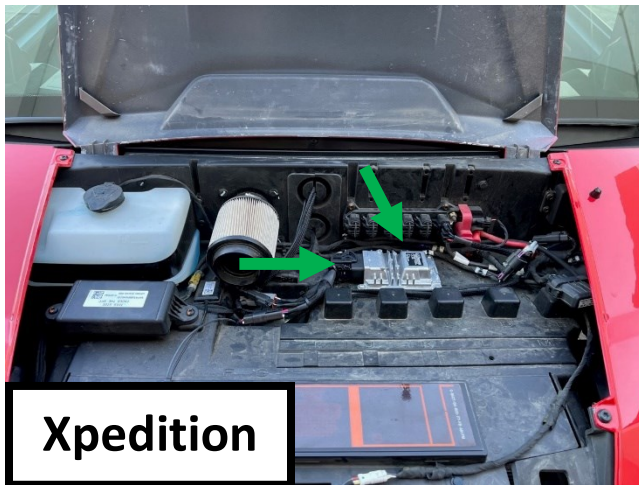
1 to 2 hours



# SDi E-CLIK Electronics Polaris Ranger/Xpedition/1500 Installation Manual

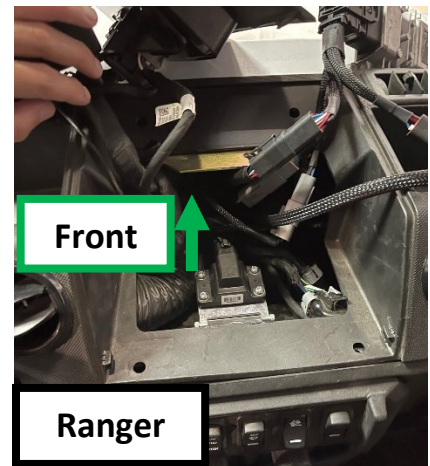
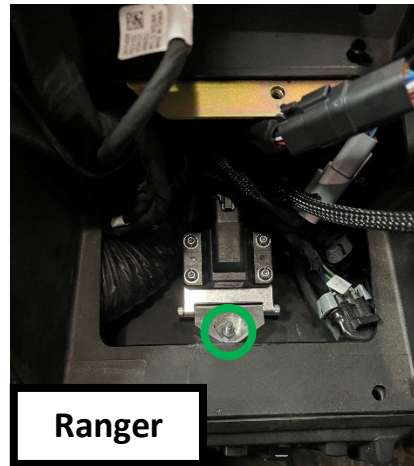
## 1. Install ECU for Ranger / Xpedition / Ranger 1500

- Open the hood of the vehicle.
- Apply the ECU Placement Template under the hood, in a clear fat area.
- Drill the 4x designated holes with a power drill and ¼" drill bit or step bit.
- Mount the ECU using the supplied hardware with 4mm Allen key and 10mm socket (see picture below).
- Secure the ECU Main Plug in the ECU receptacle and lock it.



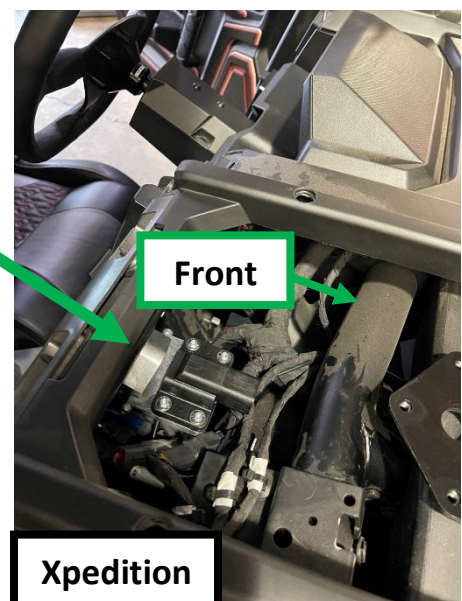
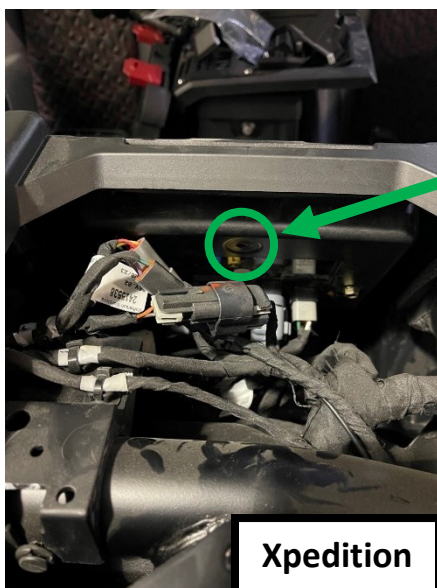
## 2. Install IMU for Ranger

- Remove the center console (see picture below).
- Use a ¼" drill bit to drill a hole at the center of the metal frame (see picture below).
- Place and bolt IMU Bracket on the frame with the IMU connector facing the front of the vehicle (see picture below).
- DO NOT REINSTALL THE CENTER CONSOLE YET, AS MORE HARNESSES STILL NEED TO BE INSTALLED.



## 3. Install IMU for Xpedition

- Remove the center console (see picture below).
- Remove the top M6 bolt from the back of the Factory display (see picture below).
- Place and bolt IMU Bracket on the frame with the IMU connector facing the front of the vehicle, using the supplied M6 bolt (see picture below).
- DO NOT REINSTALL THE CENTER CONSOLE YET, AS MORE HARNESSES STILL NEED TO BE INSTALLED.





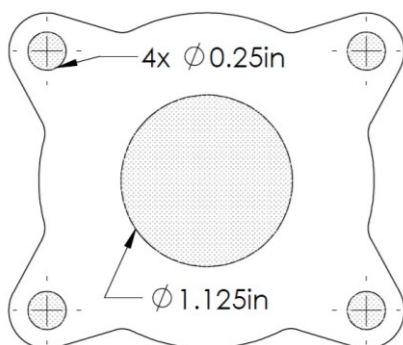
#### 4. Install IMU for RANGER 1500

- Open the hood of the vehicle.
- Remove the M6 bolt from the location shown in the **picture below**.
- Place and bolt IMU Bracket on the frame with the IMU connector facing the front of the vehicle, using the supplied original M6 bolt (**see picture below**).



#### 5. Install Touch Screen for Xpedition / Ranger 1500 (Suggested Location)

- Move factory installed switched if necessary.
- Apply the Touch Screen Placement Template on the center console.
- Drill the 5x designated holes with a power drill, 1/4" drill bit and step bit (**see picture below**).
- Mount the Touch Screen using the supplied hardware.
- Make sure the Touch Screen Home Button is oriented down (**see picture below**).



## 6. Install Touch Screen for Ranger

- f. Remove the instrument panel from the dashboard (2x retaining clips), and disconnect it.
- g. Separate the instrument panel and bracket by removing the 3x T27 screws.
- h. Place the Touch Screen mounting plate in the back of the instrument panel (see picture below).
- i. Trace, check, and cut a slot in the instrument panel back cover (see picture below).
- j. Reassemble the instrument panel assembly and reinstall the instrument panel bracket back in place.
- k. Install the ECLIK Touch Screen on the Touch Screen mounting plate following the supplied instructions (see picture below).

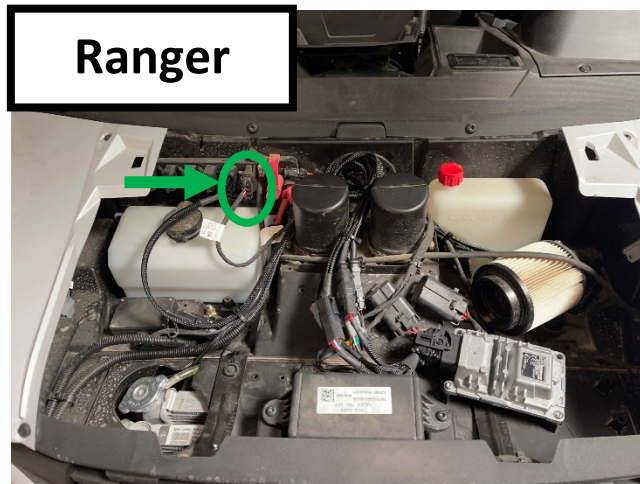
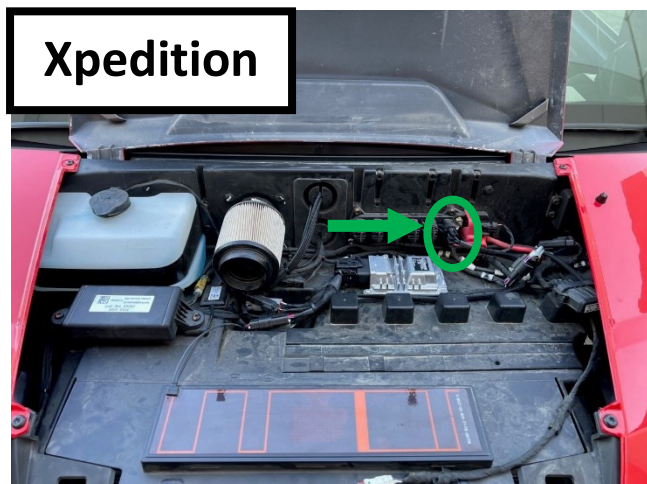




## 7. Install Power Harness for Ranger / Xpedition

*Make sure vehicle ignition is off.*

- l. Refer to wiring diagram for callouts of wire function and color (page 13).
- m. Under the hood, connect the power connector to the accessories power buss of the vehicle (see picture below).
- n. Route the power harness to the SDi ECU.
- o. DO NOT CONNECT THE 4-PIN MALE BLACK CONNECTOR OF THE POWER HARNESS TO THE ECU MAIN PLUG UNTIL FINAL STEP.



## 8. Install Front Shocks Harness

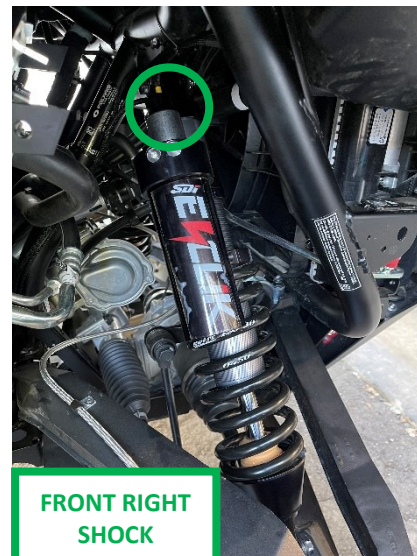
*Make sure vehicle ignition is off.*

Note: You will secure all harnesses at the end once you ensure they are placed properly and functioning correctly.

- p. Refer to wiring diagram for callouts of wire function and color (page 13).
- q. Connect the 4-pin male grey connector of the front shocks harness to the ECU Main Plug.
- r. Run the front left and right shock harness under the hood, down to the shocks.
- s. Connect the “FL” 2-pin male connectors of the driver side shock harness to the front left shock coil.
- t. Connect the “FR” 2-pin male connector of the passenger side shock harness to the front right shock coil.



FRONT LEFT SHOCK



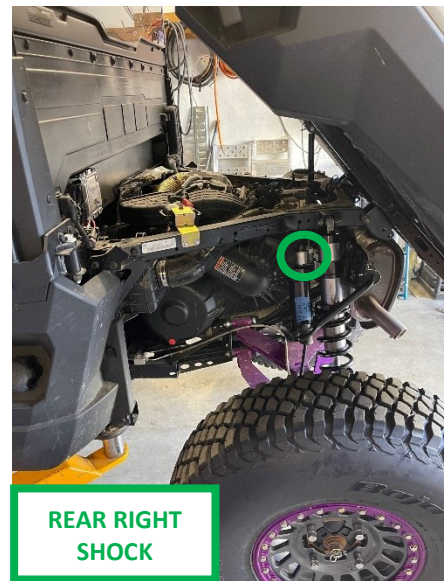
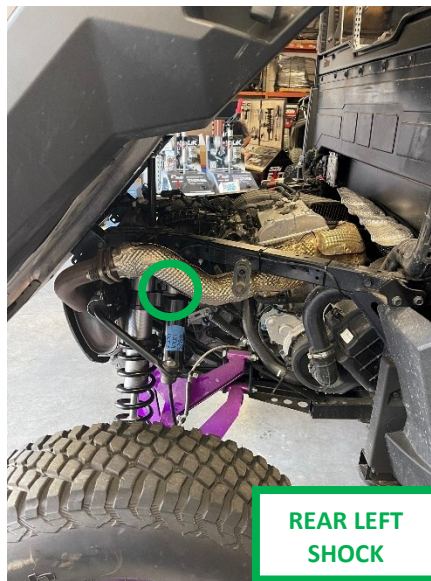
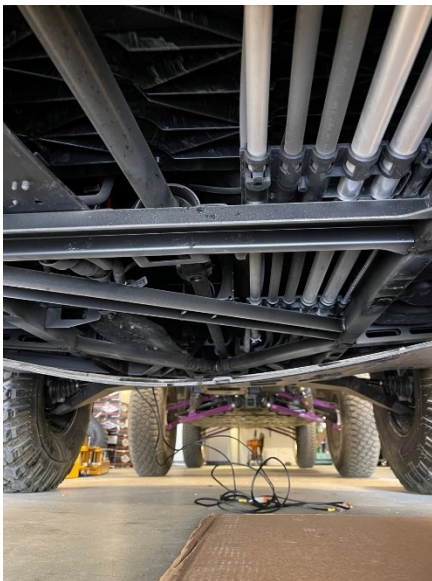
FRONT RIGHT SHOCK

## 9. Install Rear Shocks Harness

*Make sure vehicle ignition is off.*

Note: You will secure all harnesses at the end once you ensure they are placed properly and functioning correctly.

- u. Refer to wiring diagram for callouts of wire function and color (page 13).
- v. Connect the 4-pin female grey connector of the rear shocks harness to the ECU Main Plug.
- w. Run the rear shock harness under the hood, down towards the skid plate.
- x. Remove the vehicle's skid plate (**see picture below**).
- y. Run the rear left and right shock harness under the skid plate, following the stock wire harness or brake lines until the engine location (**see pictures below**).
- z. Route the rear left shock harness along the vehicle's frame all the way to the rear left shock coil (**see picture below**).
- aa. Connect the "RL" 2-pin male connector of the rear left shock harness to the rear left shock coil (**see picture below**).
- bb. Route the rear right shock harness along the vehicle's frame all the way to the rear right shock coil. Be sure to route it behind the heat shield (**see picture below**).
- cc. Connect the "RR" 2-pin male connector of the rear right shock harness to the rear right shock coil (**see picture below**).
- dd. DO NOT REINSTALL THE SKID PLATE YET, AS MORE HARNESSES STILL NEED TO BE INSTALLED.





## 10. Install Data Harness

*Make sure vehicle ignition is off.*

Note: You will secure all harnesses at the end once you ensure they are placed properly and functioning correctly.

- ee. Refer to wiring diagram for callouts of wire function and color (page 13).
- ff. Under the center console, route the 6-pin male black connector of the data harness through the firewall grommet, and then under the hood, towards the ECU.
- gg. Connect the 6-pin male black connector of the data harness to the ECU Main Plug.
- hh. Run the data harnesses under the center console:
  - o Route the Touch Screen Harness under the center console.
  - o Connect and secure the 5-pin circular 90deg connector to the Touch Screen (see picture below).
  - o Route the IMU Harness under the center console.
  - o Connect and lock the 6-pin male red connector of the IMU harness to the IMU sensor (see picture below).

### For Xpedition and Ranger 1500:

1. Route the Diagnostic harness towards the steering wheel.
2. Remove the stock Diagnostic connector cover under the steering wheel.

### For Ranger:

1. Route the Diagnostic harness through the hole in the firewall.
  2. Run the Diagnostic harness under the hood, down towards the skid plate, then under the skid plate following the stock wires, until the battery under the rear passenger seats (see picture below).
  3. Remove the stock Diagnostic connector cover (see picture below).
- o Connect and secure the 8-pin female connector to the vehicle's diagnostic connector (see picture below).
- ii. NOW, REINSTALL THE SKID PLATE, AND THE CENTER CONSOLE.



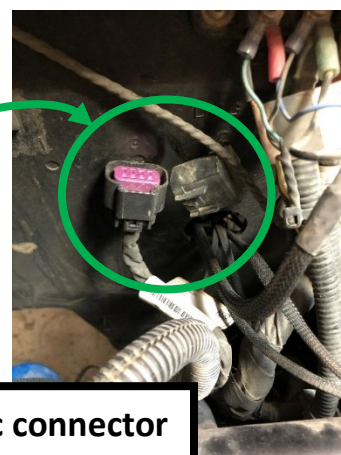
Touch Screen



IMU Sensor



Diagnostic connector



## 11. (Optional) Install Switch Harness

*Make sure vehicle ignition is off.*

Note: You will secure all harnesses at the end once you ensure they are placed properly and functioning correctly.

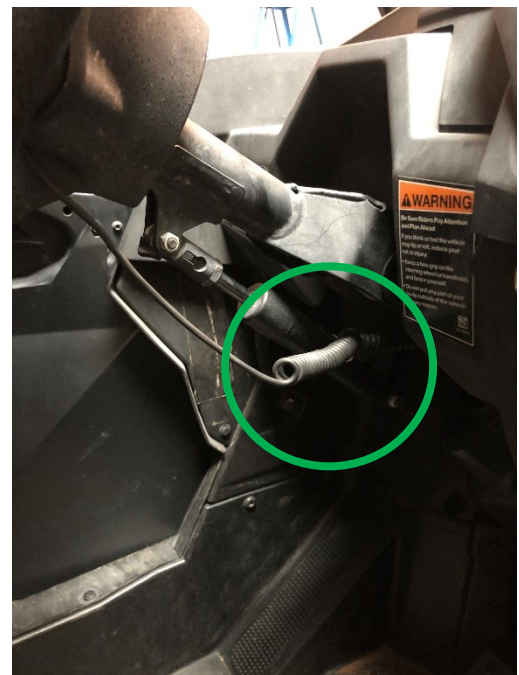
- jj. Refer to wiring diagram for callouts of wire function and color (page 13).
- kk. From under the center console, run the 6-pin female black connector of the switch harness through the firewall grommet, towards the ECU, then connect it to the ECU Main Plug.
- ll. Using a utility knife, cut 2 slots in the center console of the vehicle to host the 2 switches.
- mm. Connect front and rear switches to the switch harness pink connectors.
- nn. Install the front and rear switches in the center console of the vehicle.

## 12. (Optional) Install HS Button Harness

*Make sure vehicle ignition is off.*

Note: You will secure all harnesses at the end once you ensure they are placed properly and functioning correctly.

- oo. Refer to wiring diagram for callouts of wire function and color (page 13).
- pp. Attach the HS Button to the Steering Wheel using the Velcro strap, on the side of your choice (see picture below).
- qq. Run the HS Button harness under the center console, and through the firewall grommet, from the Steering Wheel of the vehicle to the ECU (see picture below).
- rr. Connect the 2-pin female black connector of the HS Button harness to the ECU Main Plug.

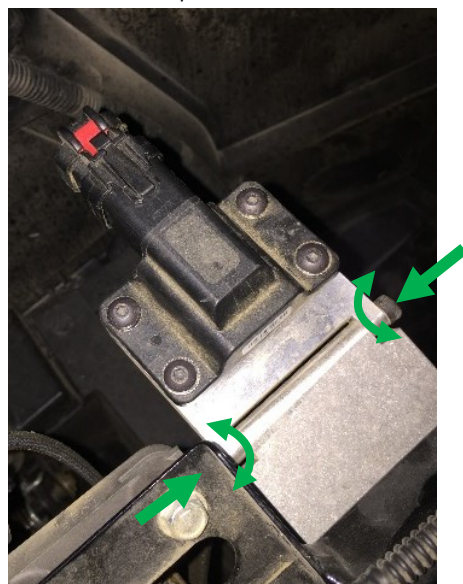




### 13. Final Set Up


























*Make sure vehicle ignition is off.*

- ss. NOW CONNECT THE 4-PIN MALE BLACK CONNECTOR OF THE POWER HARNESS TO THE ECU MAIN PLUG.
- tt. Make sure all connectors are securely plugged in.
- uu. Turn on the ignition.
- vv. Confirm the Switch panel or E-CLIK touch screen controller are powered on.
  - o For touch screen controller:
    - Acknowledge the “Do Not Use While Driving” message by pressing “OK” on the screen.
    - Confirm there are no error messages.
    - Confirm the main menu appears on the screen.
  - o For the Switch panel:
    - Confirm LEDs are illuminated and not blinking.
- ww. Secure all wiring harnesses with supplied zip-ties.
  - o Ensure they are not running close to the vehicle’s exhaust or any potential sources of pinching, chafing or other damage.
- xx. Calibrate/Zero the IMU sensor:
  - o Place the vehicle on a level surface, side to side and front to back.
  - o Turn on the ignition.
  - o Rotate the selector ring on the touch screen display and touch the Output Menu icon.
  - o Swipe right to the tilt angle display menu.
  - o Look at the read out and confirm it is 0-degree pitch and roll.
    - If it is not reading 0-degree pitch and roll, Zero the IMU:
      - Loosen the IMU adjuster bracket with the 4mm Allen Key (**see picture below**).
      - Move the bracket until 0-degree pitch angle is indicated on the screen.
- yy. Tighten the 2 bolts on the IMU adjuster bracket with a 4mm Allen key (**see picture below**).
- zz. Reinstall the center console of the vehicle by bolting the 2x screws using a T40 key.





## Wiring Harness Color Chart

Start	Wire Color	Function	End	Wire Color	Destination
4-Pin Male		Power	3-Pin Male		Battery +
					Battery -
					ACC
4-Pin Male		Front Comp Shocks	2-Pin Male		Front Left Shock
			2-Pin Male		Front Right Shock
4-Pin Female		Rear Comp Shocks	2-Pin Male		Rear Left Shock
			2-Pin Male		Rear Right Shock
2-Pin Male		Front Reb Shocks	2-Pin Male		Front Left Shock
			2-Pin Male		Front Right Shock
2-Pin Female		Rear Reb Shocks	2-Pin Male		Rear Left Shock
			2-Pin Male		Rear Right Shock
6-Pin Male		Data	6-Pin Male		IMU Sensor
			5-Pin Male		Touch Screen
			8-Pin Female		Diagnostic Port
6-Pin Female		Switches	4x Female Connectors		Front Shocks Switch
			4x Female Connectors		Rear Shocks Switch
2-Pin Female		HS Button	Push Button		HS Button



**ERROR CODE CHART**

Error Code	Source	Error Description	Action
1014	ECU	Battery Low	1. Check vehicle's battery
1015	ECU	Battery High	1. Check vehicle's battery
1016	ECU	Temperature Low	-
1017	ECU	Temperature High	-
5000	IMU	Disconnected / Malfunction	1. Check connection between ECU and IMU 2. Replace IMU Harness
9000	Front Left Shock	Open Circuit	1. Check connection between ECU and Front Left Shock, 2. Replace Front Shocks Harness
9001	Front Left Shock	Short Circuit to Power	1. Check connection between ECU and Front Left Shock, 2. Replace Front Shocks Harness
9002	Front Left Shock	Short Circuit to Ground	1. Check connection between ECU and Front Left Shock, 2. Replace Front Shocks Harness
9003	Front Left Shock	Deviation of Current	1. Check connection between ECU and Front Left Shock, 2. Replace Front Left Shock Solenoid Coil
9004	Front Right Shock	Open Circuit	1. Check connection between ECU and Front Right Shock, 2. Replace Front Shocks Harness
9005	Front Right Shock	Short Circuit to Power	1. Check connection between ECU and Front Right Shock, 2. Replace Front Shocks Harness
9006	Front Right Shock	Short Circuit to Ground	1. Check connection between ECU and Front Right Shock, 2. Replace Front Shocks Harness
9007	Front Right Shock	Deviation of Current	1. Check connection between ECU and Front Right Shock, 2. Replace Front Right Shock Solenoid Coil
9024	Rear Left Shock	Open Circuit	1. Check connection between ECU and Rear Left Shock, 2. Replace Rear Shocks Harness
9025	Rear Left Shock	Short Circuit to Power	1. Check connection between ECU and Rear Left Shock, 2. Replace Rear Shocks Harness
9026	Rear Left Shock	Short Circuit to Ground	1. Check connection between ECU and Rear Left Shock, 2. Replace Rear Shocks Harness
9027	Rear Left Shock	Deviation of Current	1. Check connection between ECU and Rear Left Shock, 2. Replace Rear Left Shock Solenoid Coil
9028	Rear Right Shock	Open Circuit	1. Check connection between ECU and Rear Right Shock, 2. Replace Rear Shocks Harness
9029	Rear Right Shock	Short Circuit to Power	1. Check connection between ECU and Rear Right Shock, 2. Replace Rear Shocks Harness
9030	Rear Right Shock	Short Circuit to Ground	1. Check connection between ECU and Rear Right Shock, 2. Replace Rear Shocks Harness
9031	Rear Right Shock	Deviation of Current	1. Check connection between ECU and Rear Right Shock, 2. Replace Rear Right Shock Solenoid Coil
9040	Front Rebound	Open Circuit	1. Check connection between ECU and Front Shocks Rebound, 2. Replace Front Shocks Rebound Harness
9041	Front Rebound	Short Circuit to Power	1. Check connection between ECU and Front Shocks Rebound, 2. Replace Front Shocks Rebound Harness
9042	Front Rebound	Short Circuit to Ground	1. Check connection between ECU and Front Shocks Rebound, 2. Replace Front Shocks Rebound Harness
9043	Front Rebound	Deviation of Current	1. Check connection between ECU and Front Shocks Rebound, 2. Replace Front Shocks Rebound Solenoid Coil
9044	Rear Rebound	Open Circuit	1. Check connection between ECU and Rear Shocks Rebound, 2. Replace Rear Shocks Rebound Harness
9045	Rear Rebound	Short Circuit to Power	1. Check connection between ECU and Rear Shocks Rebound, 2. Replace Rear Shocks Rebound Harness
9046	Rear Rebound	Short Circuit to Ground	1. Check connection between ECU and Rear Shocks Rebound, 2. Replace Rear Shocks Rebound Harness
9047	Rear Rebound	Deviation of Current	1. Check connection between ECU and Rear Shocks Rebound, 2. Replace Rear Shocks Rebound Solenoid Coil