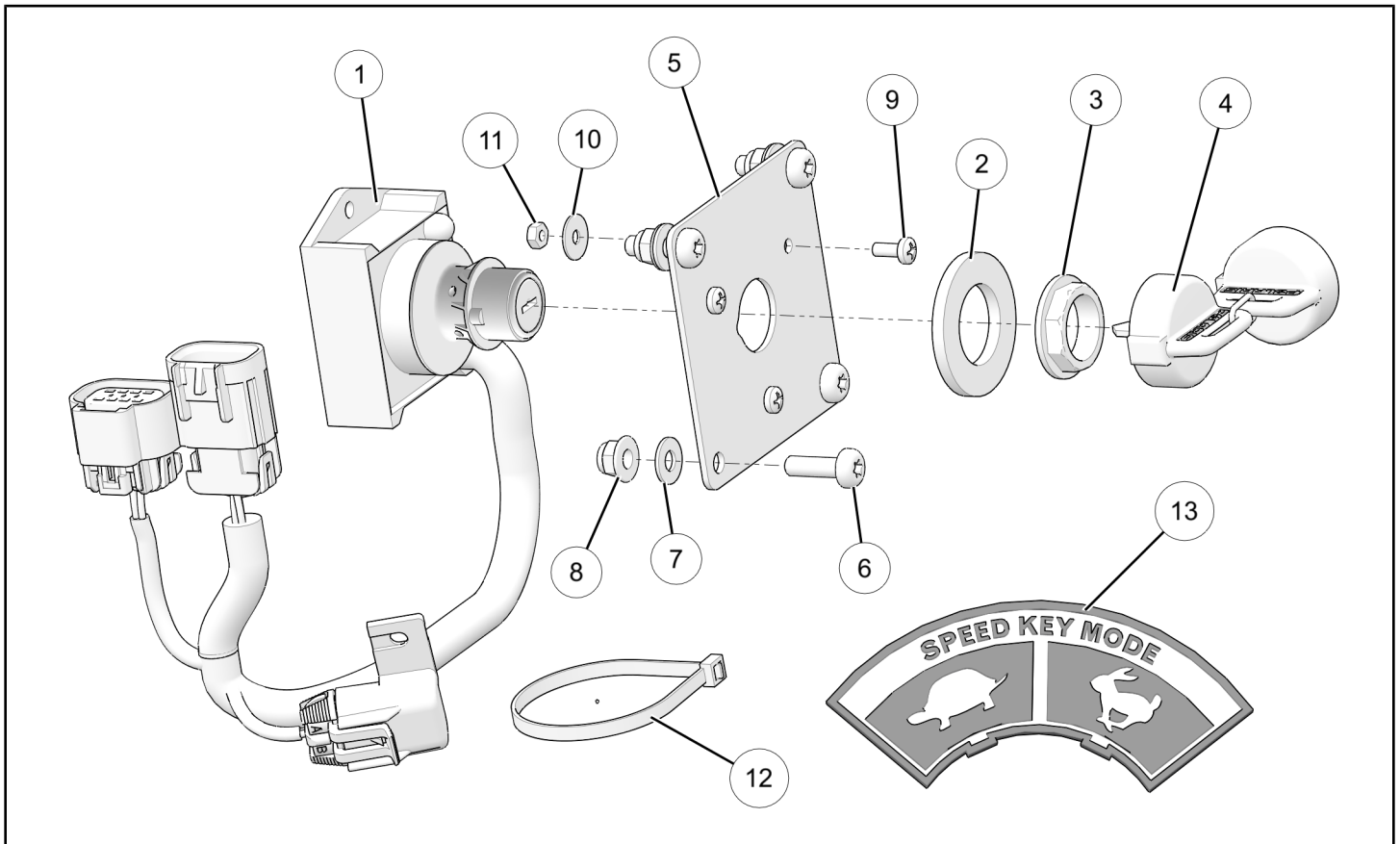# SPEEDKEY® KIT

P/N 2883054

APPLICATION

GEM® e2, e4, e6®, eL XD

BEFORE YOU BEGIN

Read these instructions and check to be sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

KIT CONTENTS

This Kit includes:

REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Module, Speedkey®	2412656
2	1	. Spacer, Speedkey®	7557091
3	1	. Nut, Speedkey®	-
4	2	. Key, Speedkey®	-
5	1	Bracket, Speedkey®	5264640
6	4	Screw, Torx® Head, M6 X 1.0 X 20 mm	7518546
7	4	Washer, .25 X .563 X .047	7558203
8	4	Nut, Hex Flange Head, Nylon Locking, M6 X 1.0	7547453

REF	QTY	PART DESCRIPTION	PART NUMBER
9	3	Screw, Phillips Head, 4mm X 0.7 X 10 mm	7516302
10	3	Washer, 4.3 X 14.0 X 0.8	7556477
11	3	Nut, Hex, M4 X 0.7	7547687
12	1	Cable Tie	7080492
13	1	Decal, Speedkey	7177270
14	1	Label, Calibration Certificate (Not Shown)	7179110
	1	Instructions	9928280

TOOLS REQUIRED

- Safety Glasses
- Digital Wrench®
- Drill
- File, Flat
- File, Round (or equivalent)
- Hole Saw: 23 mm (15/16 inch), Step Drill Bit, or 15/16 Round Hole Punch

- Screwdriver, Phillips
- Socket Set, Metric
- Socket Set, Torx® Bit
- Torque Wrench
- Wrench Set, Metric

IMPORTANT

Your Speedkey® Kit is exclusively designed for your vehicle. Please read the installation instructions thoroughly before beginning. Installation is easier if the vehicle is clean and free of debris. For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence shown.

ASSEMBLY TIME

Approximately 30 minutes

INSTALLATION INSTRUCTIONS

IMPORTANT
Speedkey® can ONLY be enabled using Digital Wrench®. Failure to enable Speedkey® using Digital Wrench® will result in UNRESTRICTED speed operation REGARDLESS of key position.

VEHICLE PREPARATION AND IDENTIFICATION

1. Ensure latest version of Digital Wrench® is installed on your computer and re-flash VCM to ensure latest VCM calibration file is programmed into vehicle.

2. Place gear selector in "N". Apply parking brake. Turn key to "OFF" position and remove from vehicle.
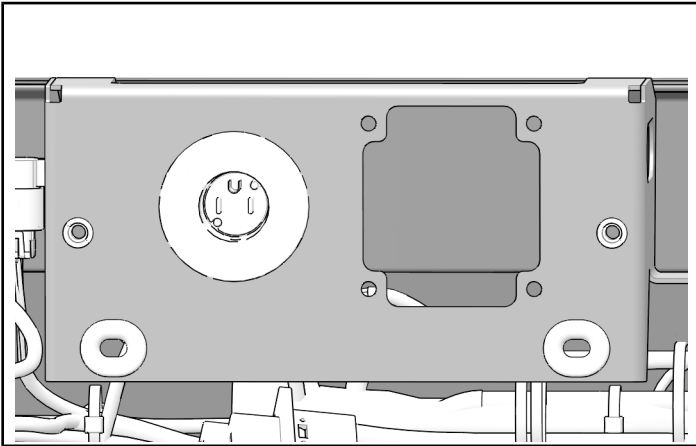
3. Flip open charge port door and remove two thumb screws Ⓐ. Pull hood in direction of arrow (parallel to ground) and remove from vehicle.
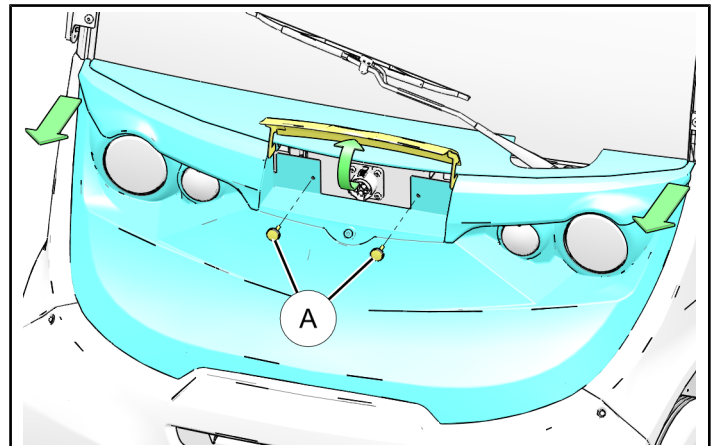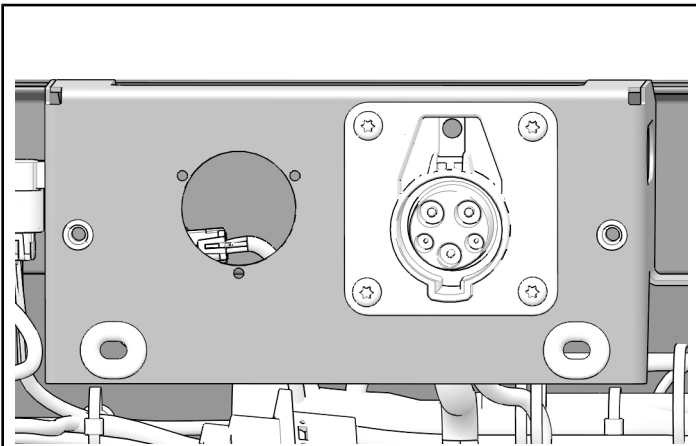
4. **Identify your configuration.**
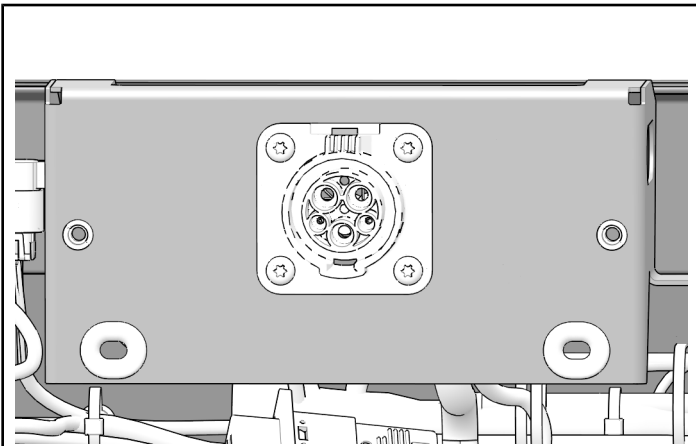   There are three possible configurations of the charging port bracket:

   a. **Configuration 1: 2016**

   b. **Configuration 2: 2016**

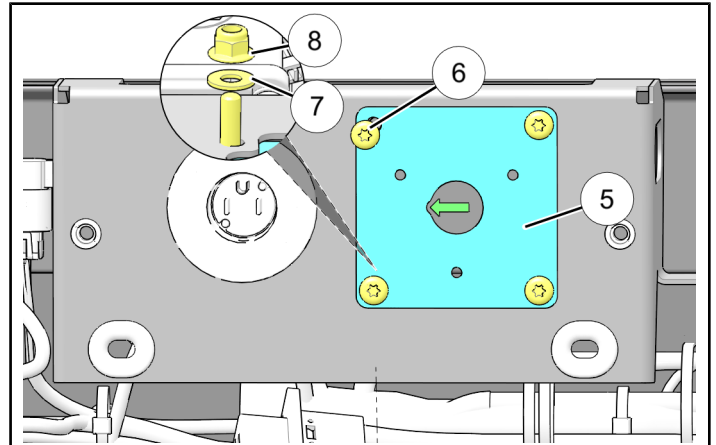   c. **Configuration 3: 2017 and newer**

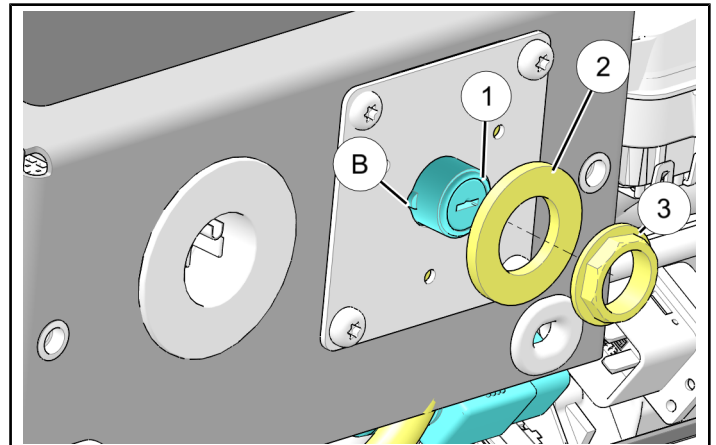## MOUNTING SPEEDKEY® MODULE

1. **Configuration 1: 2016**

   a. Install bracket ⑤ to charge port bracket with four torx® screws ⑥, washers ⑦, and nuts ⑧ as shown. Ensure that bracket is installed with notch oriented to left side of hole as shown with arrow. Counter-hold nuts ⑧ and torque screws ⑥ to specification.

TORQUE
96 in. lbs. (11 Nm)

   b. Insert module cylinder ① through hole into charge port bracket, align tab Ⓑ with corresponding slot in hole, then install spacer ② and nut ③. Hand tighten nut ③. **Do not overtighten nut.**

2. **Configuration 2: 2016**

   a. Install bracket ⑤ to charge port bracket with three screws ⑨, washers ⑩, and nuts ⑪ as shown. Ensure that bracket is installed with notch oriented to left side of hole as shown with arrow. Counter-hold screws ⑨ and torque nuts ⑪ to specification.

TORQUE
22 in. lbs. (2.5 Nm)

   b. Insert module cylinder through hole into charge port bracket, align tab Ⓑ with corresponding slot in hole, then install spacer ② and nut ③. Hand tighten nut ③. **Do not overtighten nut.**
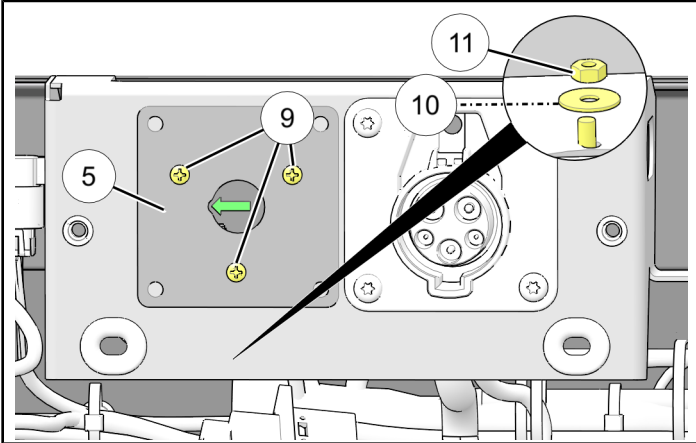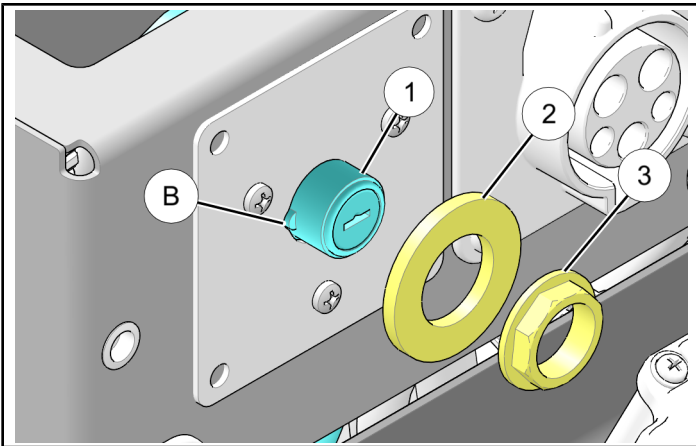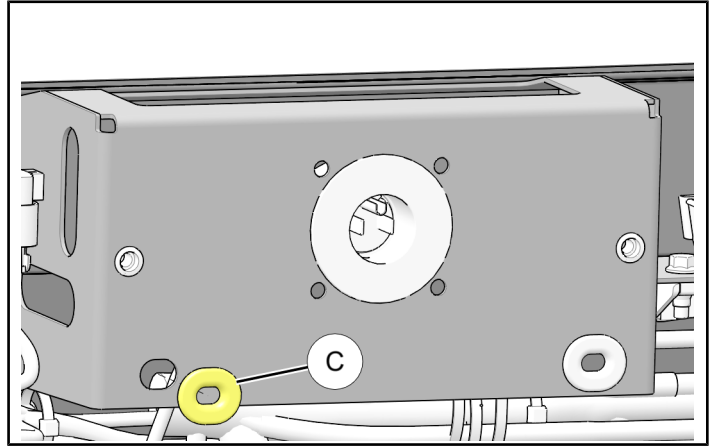

3. **Configuration 3: 2017 and newer**

   a. Remove left rubber grommet Ⓒ and retain.

   b. Template is located on last page of this instruction. Locate REFERENCE DIMENSION on template page.

   Verify template was printed to proper scale by using ruler or tape measure to verify REFERENCE DIMENSION is exactly 4 inches.

 | IMPORTANT |
   |---|
   | If your measurement is not exactly 4 inches, then reprint template page from electronic file using print setting **"Actual Size"** (not "Fit") to obtain proper 1:1 scale.
Electronic file available from your **Authorized Polaris Dealer**. |

   c. Install template as shown. Use tape to hold template in place.
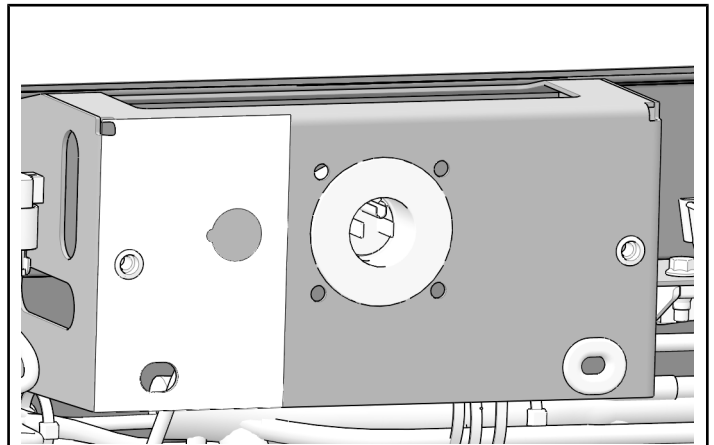
d. Drill a 23 mm (15/16 inch) hole in charge port bracket, then hand file alignment slot at left of hole as shown. Notch should be approximately 9.5 mm (3/8 inch).

<table>
<tr><td>IMPORTANT</td></tr>
<tr><td>Control drill depth to prevent damage to underlying structure or components.</td></tr>
</table>
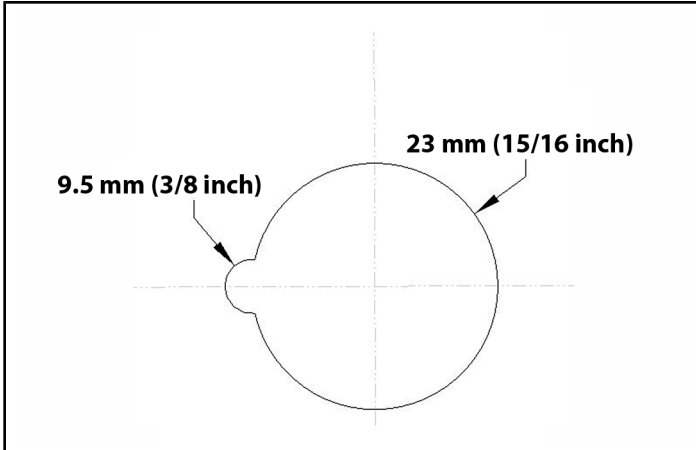
e. File down sharp edges and burrs from hole.

f. Insert module cylinder through hole into charge port bracket, align tab Ⓑ with corresponding slot in hole, then install spacer ② and nut ③. Hand tighten nut ③.**Do not overtighten nut.**
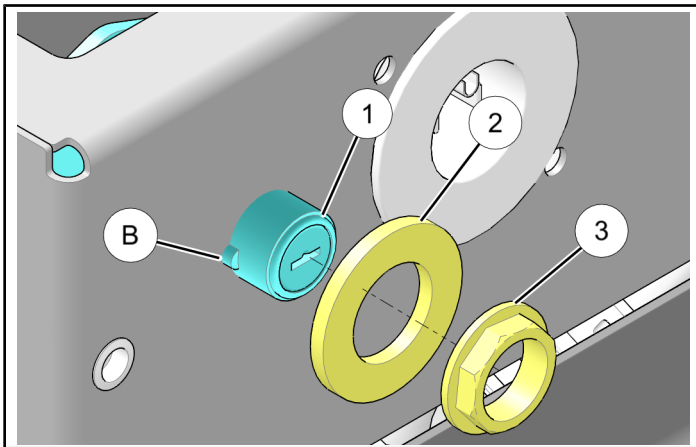
CONNECTING WIRE HARNESS

1. Disconnect diagnostic connector Ⓓ from blank connector Ⓔ.
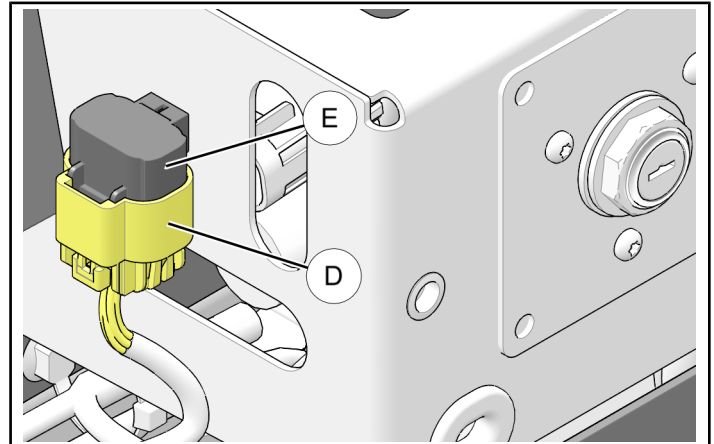
2. Plug Speedkey® diagnostic pass-through connector Ⓕ into diagnostic connector Ⓓ. Plug Speedkey® diagnostic connector Ⓖ into blank connector Ⓔ.

3. Secure harness Speedkey® harness to harness Ⓗ on cross-member behind charge port bracket using cable tie ⑫ as shown.

INSTALL DECAL

1. Install decal ⑬ above and to left of key opening. Turtle icon should line up with key slot.
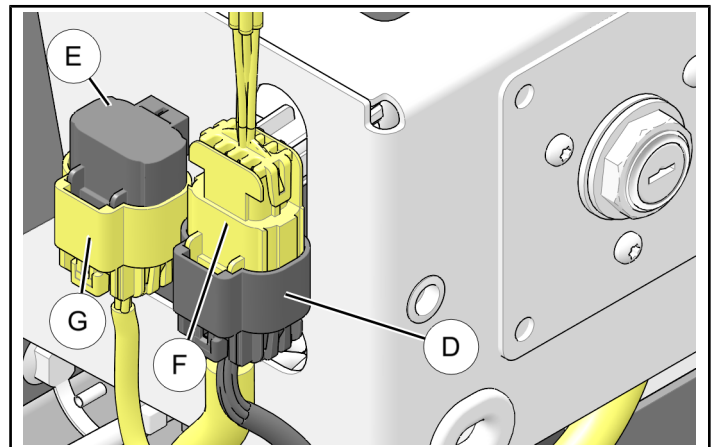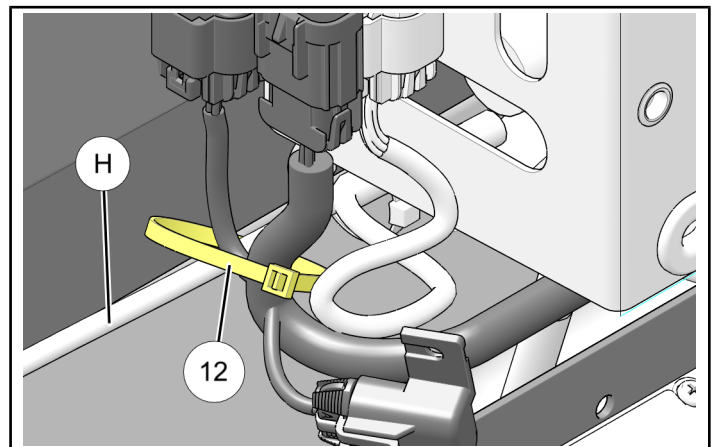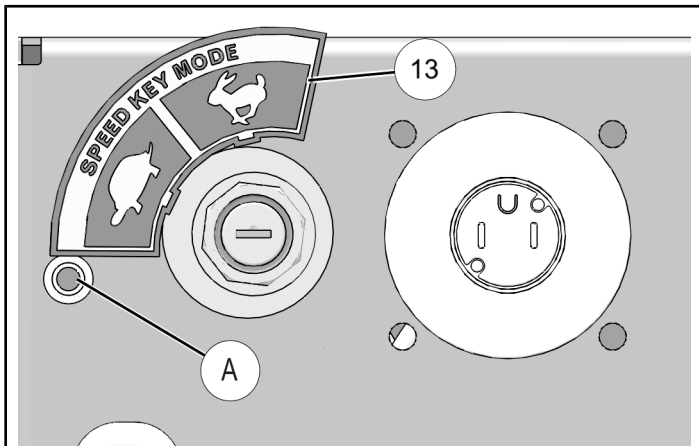
NOTE
Decal will overlap screws and plate edges on different configurations. Do not put sticker over nut inserts meant for thumbscrews Ⓐ.

DIGITAL WRENCH® INSTALLATION INSTRUCTIONS

ENABLING SPEEDKEY®

NOTE
This procedure is only used to enable a **newly** installed Speedkey®. If Speedkey® has already been enabled, and you want to change speed setting or speed mode, proceed to subsection **Changing Speed Setting or Speed Mode**

1. Ensure the following BEFORE beginning:
   a. Reliable internet connection.
   b. Latest version of Digital Wrench® is installed on computer. Log into Polaris® Dealers Website, select **"Service and Warranty"** menu, then **"Digital Wrench® Updates"**.

2. Connect Digital Wrench® to new pass-through diagnostic port Ⓖ (attached to Speedkey® module harness) and turn key to "ON" position.

3. Enter vehicle information as required.

4. Select **"Special Tests"** menu.

5. Select **"Speedkey® Options"** menu.

6. Follow Digital Wrench® screen prompts until Digital Wrench® provides REQUEST CODE, then proceed to **step 7**.

IMPORTANT
Read each screen COMPLETELY before proceeding to next screen.

7. Copy Digital Wrench® REQUEST CODE exactly as it appears on screen.

TIP
To avoid errors, use keyboard shortcut CTRL+C to copy code. Mouse right-click will not provide copy/paste options.

8. Log into Polaris Dealer Site, select **"Service and Warranty"**, then **"Reflash Authorization"**.

9. Enter REQUEST CODE from Digital Wrench® into Dealer Site "Request Code" field exactly as provided, then select **"Continue"**.

TIP
To avoid errors, use keyboard shortcut Ctrl+V to paste code. Mouse right-click will not provide copy/paste options.

10. Complete all fields as follows:
    a. Ensure "File" drop down menu indicates "Speed Key Enable".
    b. Enter CALIBRATION CARD NUMBER provided in Speedkey® kit.
    c. Enter vehicle VIN, customer name, address, and zip code.

11. Click on **"Authorize"**, then wait for authorization key code. **DO NOT click on "Authorize" more than once.**

NOTE
The CALIBRATION CARD NUMBER provided in this kit is valid for exactly **seven days** from the time **"Authorize"** is selected. During this 7 day period, CALIBRATION CARD NUMBER will ONLY be valid on the originally entered VIN.

12. Copy provided AUTHORIZATION KEY exactly as shown.

TIP
To avoid errors, use keyboard shortcut CTRL+C to copy code. Mouse right-click will not provide copy/paste options.

13. Enter AUTHORIZATION KEY from Dealer Site into Digital Wrench® "Authorization Key" field, then select **"Continue"**.

TIP
To avoid errors, use keyboard shortcut Ctrl+V to paste code. Mouse right-click will not provide copy/paste options.

14. Follow Digital Wrench® screen prompts until Speedkey® enable procedure is complete.

TEST DRIVE

IMPORTANT
Vehicle should be test driven to ensure Speedkey® is working properly before delivery.

1. **Module Failure/Disconnected**
   a. Turn off vehicle and disconnect Speedkey® module from vehicle diagnostic connector. (This removes Speedkey® module from system)
   b. Start vehicle and test drive. Top speed should be limited to 10 mph (16 kph).
   c. Turn off vehicle and reconnect Speedkey® module to diagnostic connector. (This reconnects Speedkey® module to system)

2. **Restricted Speed Mode**
   a. Turn Speedkey® switch key to left position (Restricted Mode).
   b. Start vehicle and test drive. Top speed should be limited to speed set in "Digital Wrench® Installation" section.
   c. Stop vehicle and turn off.

3. **Unrestricted Speed Mode**
   a. Turn Speedkey® switch key to right position (Unrestricted Mode)
   b. Start vehicle and test drive. Vehicle should operate normally with no artificial speed limit.

CHANGING SPEED SETTING OR SPEED MODE

This procedure is used to change speed setting (10 or 15 mph (16 or 24 kph)). Procedure is similar to previous sub-section, **ENABLING SPEEDKEY®**, except as noted.

1. Follow **Steps 1-5** in previous sub-section, **ENABLING SPEEDKEY®**

NOTE
After Speedkey® has been enabled, the "Special Tests" screen may provide slightly different options. However, the "Speedkey® Options" button still remains.

2. Follow Digital Wrench® screen prompts until Digital Wrench® displays screen with current settings of Speedkey®. (For example: "Speedkey® Function is Currently Enabled with Speed Limit 10 MPH/ 16 KPH")

3. Select desired function, then follow Digital Wrench® screen prompts until Speedkey® procedure is complete.

IMPORTANT
If Speedkey® is DISABLED and you want to re-enable Speedkey®**after** seven day limit, it is NOT necessary to purchase a new Speedkey® Kit. Only a new CALIBRATION CARD NUMBER is needed. Contact Polaris® Technical Support for assistance. If Speedkey®is ENABLED and you only want to change speed setting, a new CALIBRATION CARD NUMBER is NOT needed. There is NO time restriction; the seven day limit is NOT applicable.

4. Follow all steps in previous sub-section **TEST DRIVE**.

NOTE
If Speedkey® has been DISABLED, then test drive restricted modes are not applicable.

SPEEDKEY® OPERATION INSTRUCTIONS

Description

Kit installation permits key-holder to select one of two speed modes depending on key position: Restricted and Unrestricted.

- RESTRICTED speed mode: Vehicle top speed is limited to 10 or 15 mph (16 or 24 kph), depending on setting chosen during installation. Restricted speed setting must be entered by an **Authorized Polaris Dealer** using Digital Wrench® Service Tool.

- UNRESTRICTED speed mode: Vehicle top speed is NOT limited; full speed is available.

IMPORTANT
Speedkey® can ONLY be enabled using Digital Wrench®. Failure to enable Speedkey® using Digital Wrench® will result in UNRESTRICTED speed operation REGARDLESS of key position.

If Speedkey® has been enabled and Speedkey® is disconnected, damaged, or module fuse opens, vehicle speed will be limited to 10 mph (16 kph).

Green LED lamp on Speedkey® module is intended for dealer servicing and testing. LED will illuminate for one second when vehicle ignition key is turned "ON", and will also illuminate in restricted speed mode during communication between module and vehicle ECM. In unrestricted speed mode, lamp is normally off.

OPERATION

1. Place gear selector in "N". Apply parking brake. Turn key to "OFF" position.

IMPORTANT
Vehicle ignition key must be in "OFF" position.

2. Insert Speedkey® into module, select desired speed mode, then REMOVE Speedkey®.
   - Left position: **Restricted mode:** Vehicle top speed limited to 10 or 15 mph (16 or 24 kph), depending on setting chosen during installation.

   - Right position **Unrestricted mode:** Vehicle top speed is NOT limited; full speed is available.

3. Turn ignition switch back to "ON" position. Speedkey® mode is communicated to vehicle ECM.

4. Store key in secure location.

TROUBLESHOOTING

Vehicle speed is limited to 10 mph (16 kph) regardless of key position:
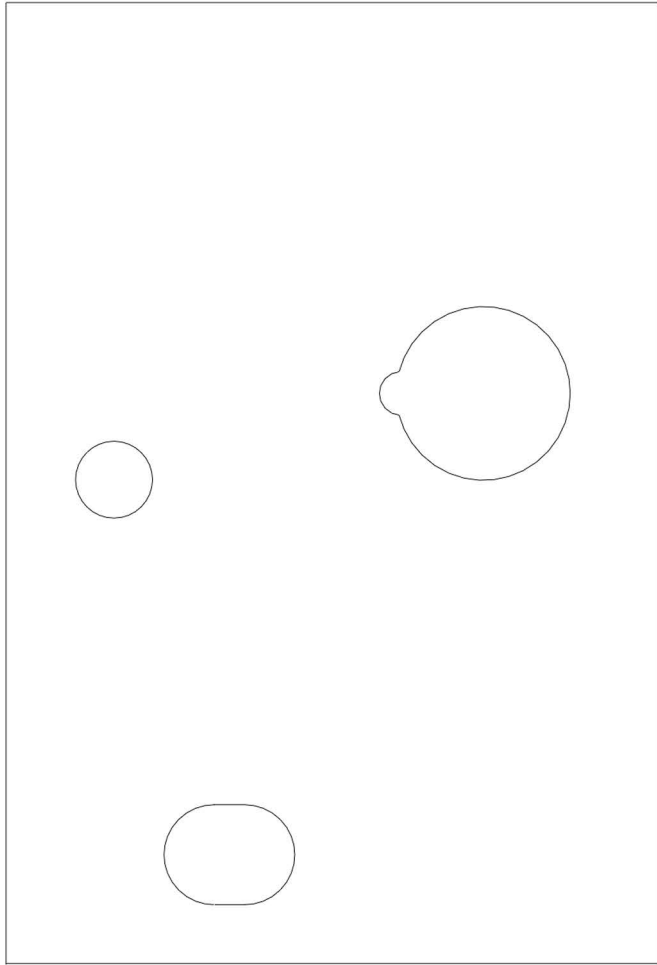
- Check 2 amp fuse on Speedkey® module harness.

- Verify Speedkey® module is connected to vehicle diagnostic port, and all connections are secure.

- Verify Speedkey® module and associated wiring are not damaged.

FEEDBACK FORM

A feedback form has been created for the installer to provide any comments, questions or concerns about the installation instructions. The form is viewable on mobile devices by scanning the QR code or by clicking **HERE** if viewing on a PC.

FEEDBACK FORM

4 inches (101.6 mm)