












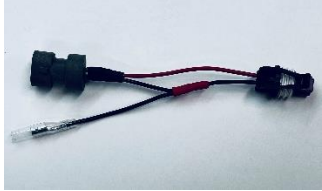












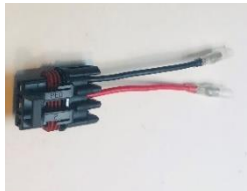



Turn Signal/Horn Kit 7202

<p>Before you begin</p>	<p>STOP! THIS KIT IS DESIGNED TO BE COMPATIBLE WITH</p> <ul style="list-style-type: none"> • Polaris General / 4, all years, • Polaris Ranger 900, including CREW, all years, • Polaris Ranger 1000, including CREW, all years, • Polaris Ranger, all 2015 and newer models, including CREW <p>IF YOUR VEHICLE IS NOT ONE OF THESE MODELS, DO NOT PROCEED. Contact Ryco Motorsports or your local dealer for the correct kit.</p>		
<p>Digital Copy</p>	 <p>To access a digital copy of these instructions scan this QR code, or email RycoMoto@gmail.com and specify the kit number.</p> <p>HINT: The text and photos can then be enlarged digitally if needed.</p>		
<p>Where do I start?</p>	<p>Please read and follow the instructions.</p> <p>If you are a guy and, like most of us, feel you can install this without taking the time to read the instructions, then you should ask your significant other to read them to you. I put a lot of effort into creating the instructions, and I feel bad when no one reads them. Answers to all your questions should be covered in the installation instructions. We've included a lot of photos for those of you who are visual and don't enjoy words.</p>		
<p>What tools do I need?</p>	<ul style="list-style-type: none"> • 10 mm or 5/16" socket/nut driver or flat blade screwdriver • 9/32" and 1/4" diameter drill bit, 3/4" stepped drill bit • Polaris pliers or flat blade screwdriver • Phillips screwdriver • 10 mm wrench • wire stripper • wire cutter <ul style="list-style-type: none"> • 10 mm socket • center punch • drill motor    		
<p>What's in the Box?</p>	<p>Let's become familiar with the items you will be installing on your vehicle.</p> <p>NOTE: Not all items will be used in each installation, which varies by vehicle model.</p>		
<p>TURN SIGNAL/HORN SWITCH</p>  <p>The connectors interface with the various kit components.</p>	<p>SELF-CANCELING FLASHER RELAY</p>  <ul style="list-style-type: none"> - 3 pin connector - No marking tape 	<p>RYCO POWER, GROUND & HORN HARNESS</p>  <ul style="list-style-type: none"> - 4 pin connector - GREEN marking tape 	
<p>CABLE TIE</p> 	<p>HORN</p> 	<p>PLASTIC SPACER</p>  <p>NOTE: Only one PLASTIC SPACER is in the kit.</p>	






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	<p>BRAKE INTERFACE ADAPTER</p> 	<p>BRAKE STROBE INTERFACE</p>  <p>- 2 pin connector - No marking tape</p>	<p>INSTRUMENT CLUSTER INDICATOR HARNESS</p>  <p>- 3 pin connector - BLUE marking tape</p>
	<p>DASH INDICATORS HARNESS</p>  <p>- 3 pin connector - BLUE marking tape</p>	<p>FRONT TURN SIGNAL HARNESS</p>  <p>- 4 pin connector - RED marking tape</p>	<p>REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION</p>  <p>- 3 pin connector - RED marking tape</p>
	<p>REAR TURN SIGNAL HARNESS – REAR CONNECTION</p>  <p>- 3 pin connector - RED marking tape</p>	<p>SOLDERLESS CONNECTORS</p> 	<p>PLATE HOLDER</p> 
	<p>SELF-TAPPING SCREWS</p> 	<p>FLANGE BOLT and LOCK NUT</p> 	<p>LICENSE PLATE LIGHT</p> 
	<p>PARALLEL TAP</p>  <p>NOTE: This photo shows one PARALLEL TAP open, and another PARALLEL TAP folded closed.</p>	<p>POWER AND GROUND ADAPTER</p> 	<p>TERMINAL BLOCK ADAPTER</p> 
<p>Installation Steps</p>	<p>NOTE: Where possible run new cables alongside the existing wires, and use existing cable ties/anchors where practical.</p> <p>IMPORTANT: Ensure that the wiring and installed hardware do not contact moving components or hot surfaces.</p>		



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<p>1. Determine if the Vehicle Has Indicator Lights</p>	<p>EXPLANATION: On the GENERAL model years 2019 and older, the indicator lights within the instrument cluster are incompatible with the Ryco Moto turn signal kit. The DASH INDICATORS HARNESS can be used on those GENERAL models.</p> <p>Are you installing on a GENERAL model year 2019 or older?</p> <ul style="list-style-type: none"> • If yes, go to Step 2. • If no, determine whether the vehicle has indicator lights in the instrument cluster/digital display. <p>EXPLANATION: Polaris did NOT include vehicle turn signal indicators on some models with the RIDE COMMAND DISPLAY. During the first second of start-up all segments of the instrument panel/display will light up, including indicator lights, if present.</p> <p>Start-up the vehicle and determine whether the vehicle has indicator lights.</p> <ul style="list-style-type: none"> • If yes, the vehicle indicator lights illuminate, then install the INSTRUMENT CLUSTER INDICATOR HARNESS in a later step. • If no, the vehicle does not have indicator lights, then install the DASH INDICATORS HARNESS in a later step. 							
<p>2. Verify Brake Lights</p>	<p>With the engine running, step on the brake pedal, and verify that the brake lights function correctly.</p> <ul style="list-style-type: none"> • If yes, turn off the engine and then continue to Step 3. • If no, adjust the vehicle brake switch until the brake lights function, and then turn off and continue to Step 3. 							
<p>3.</p>	<p>• Gain access for the installation:</p> <table border="1" data-bbox="326 993 1511 1423"> <thead> <tr> <th data-bbox="326 993 500 1062">If installing on a...</th> <th data-bbox="500 993 1157 1062">Then...</th> <th data-bbox="1157 993 1511 1423" rowspan="2">  </th> </tr> </thead> <tbody> <tr> <td data-bbox="326 1062 500 1224">RANGER</td> <td data-bbox="500 1062 1157 1224"> <ul style="list-style-type: none"> • Remove the front access cover (hood). • Using the Polaris pliers that come with the vehicle, remove the plastic rivets that hold the dash top cover in place. • Go to Step 4. </td> </tr> <tr> <td data-bbox="326 1224 500 1423">GENERAL</td> <td data-bbox="500 1224 1157 1423"> <ul style="list-style-type: none"> • Remove the front access cover (hood). • Remove access cover on the passenger side tunnel. • Remove the battery access cover. • Remove the dash storage compartment. • Go to Step 4. </td> </tr> </tbody> </table>	If installing on a...	Then...		RANGER	<ul style="list-style-type: none"> • Remove the front access cover (hood). • Using the Polaris pliers that come with the vehicle, remove the plastic rivets that hold the dash top cover in place. • Go to Step 4. 	GENERAL	<ul style="list-style-type: none"> • Remove the front access cover (hood). • Remove access cover on the passenger side tunnel. • Remove the battery access cover. • Remove the dash storage compartment. • Go to Step 4.
If installing on a...	Then...							
RANGER	<ul style="list-style-type: none"> • Remove the front access cover (hood). • Using the Polaris pliers that come with the vehicle, remove the plastic rivets that hold the dash top cover in place. • Go to Step 4. 							
GENERAL	<ul style="list-style-type: none"> • Remove the front access cover (hood). • Remove access cover on the passenger side tunnel. • Remove the battery access cover. • Remove the dash storage compartment. • Go to Step 4. 							
<p>4. Mount the TURN SIGNAL/HORN SWITCH</p>	<p>NOTE: The TURN SIGNAL/HORN SWITCH should NOT have any components connected to the harness until after the switch is installed, and the switch harness is routed behind the dash.</p> <p>NOTE: Do not remove the shoulder bolt.</p> <p>NOTE: You may need to put some pressure on the bracket to force it over the steering column, and again to align the hole with the shoulder bolt.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>RECOMMENDATION: The TURN SIGNAL/HORN SWITCH is water-resistant. When washing the vehicle, take care not to directly spray the switch. Ryco Moto recommends covering the switch with a plastic bag while washing.</p> </div>							



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- Using the tilt feature, lower the steering wheel to the lowest position.
- Remove the nut on the existing tilt wheel mechanism.
- Push the shoulder bolt so the threaded end is flush with the steering wheel column bracket.
- Slip the U-shaped switch bracket on the **TURN SIGNAL/HORN SWITCH** over the steering column.
- Reinstall the nut on the vehicle shoulder bolt.
- Torque the nut to 10 in-lb.
- Route the **TURN SIGNAL/HORN SWITCH** harness below the steering column and above the tilt mechanism, and then up under the dash towards the center of the vehicle.

5. Connect the Components to the TURN SIGNAL/HORN SWITCH Harness

IMPORTANT: When connecting the components match the color of the marking tape by the connectors (e.g., **RED** marking tape to **RED** marking tape, **GREEN** to **GREEN**, **BLUE** to **BLUE**), rather than match the color of the connectors or the wires.

NOTE: When connecting a component harness to the TURN SIGNAL/HORN SWITCH harness, check that the pins are straight, not bent. The connectors should interface very easily; if there is resistance, it is likely due to a bent pin.

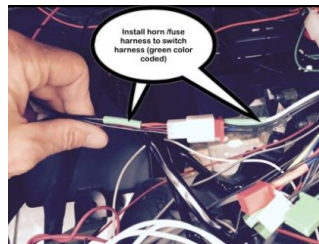
Connect the following to the **TURN SIGNAL/HORN SWITCH** harness:

- **SELF-CANCELING FLASHER RELAY** (3 pin connector with NO marking tape), and
- **RYCO POWER, GROUND & HORN HARNESS** (4 pin **GREEN** marking).

NOTE: Do NOT connect the front or rear turn signal harness to the TURN SIGNAL/HORN SWITCH at this time.

- Secure the **TURN SIGNAL/HORN SWITCH** harness to a cross member using a **CABLE TIE**.








NOTE: The SELF-CANCELING FLASHER RELAY can be bundled and secured with a CABLE TIE to the TURN SIGNAL/HORN SWITCH harness.



Self-Canceling Flasher Relay Feature: The SELF-CANCELING FLASHER RELAY has a timing circuit that will cancel the turn signals after a few minutes. The timer is reset whenever the turn signal switch is returned to the center/off position.



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<p>6. Install the HORN</p>	<p>IMPORTANT: Do not attempt to adjust the HORN or remove the center mounting nut that attaches the HORN to the horn mounting bracket.</p> <ul style="list-style-type: none"> Determine how to install the HORN: <table border="1"> <thead> <tr> <th data-bbox="326 302 500 369">If installing on a...</th> <th data-bbox="500 302 1511 369">Then...</th> </tr> </thead> <tbody> <tr> <td data-bbox="326 369 500 632">RANGER</td> <td data-bbox="500 369 1511 632"> <ul style="list-style-type: none"> Secure the HORN to the structural crossmember under the hood on the driver's side, as shown, using the provided fastener and lock nut. Ensure the PLASTIC SPACER is installed between the horn mount and the structural crossmember. Go to Step 7.  </td> </tr> <tr> <td data-bbox="326 632 500 852">GENERAL</td> <td data-bbox="500 632 1511 852"> <ul style="list-style-type: none"> Remove the top outboard mounting screw on the coolant overflow tank. Install the HORN using the existing mounting screw. Go to Step 7.  </td> </tr> </tbody> </table>	If installing on a...	Then...	RANGER	<ul style="list-style-type: none"> Secure the HORN to the structural crossmember under the hood on the driver's side, as shown, using the provided fastener and lock nut. Ensure the PLASTIC SPACER is installed between the horn mount and the structural crossmember. Go to Step 7. 	GENERAL	<ul style="list-style-type: none"> Remove the top outboard mounting screw on the coolant overflow tank. Install the HORN using the existing mounting screw. Go to Step 7. 
If installing on a...	Then...						
RANGER	<ul style="list-style-type: none"> Secure the HORN to the structural crossmember under the hood on the driver's side, as shown, using the provided fastener and lock nut. Ensure the PLASTIC SPACER is installed between the horn mount and the structural crossmember. Go to Step 7. 						
GENERAL	<ul style="list-style-type: none"> Remove the top outboard mounting screw on the coolant overflow tank. Install the HORN using the existing mounting screw. Go to Step 7. 						
<p>7.</p>	<ul style="list-style-type: none"> Route the RYCO POWER, GROUND & HORN HARNESS, through the firewall, to the HORN. Install the two flat spade connectors to the HORN terminals. <p>NOTE: Either connector can be installed on either HORN terminal.</p>						
<p>8. Install the BRAKE STROBE INTERFACE</p>	<p>EXPLANATION: The BRAKE STROBE INTERFACE is installed to complete the brake light circuit so the brake lights continue to function as normal, in addition to the taillights functioning as the rear turn signals. The brake strobe feature can be disabled per preference as described in the previous, but the BRAKE STROBE INTERFACE must be installed as described in the following.</p> <p>Brake Strobe Feature: Whenever the service brake is applied, the brake lights strobe six times in the first second, and then remain on at full intensity until the brake pedal is released.</p> <p><u>If you wish to disable the strobe feature, alter the BRAKE STROBE INTERFACE before installation:</u></p> <ul style="list-style-type: none"> On the BRAKE STROBE INTERFACE cut the BLACK ground wire, or remove the BLACK ground wire from the 2 pin connector. Cut the two RED wires going into the BLACK rectangular component. Splice the two RED wires together.  <ul style="list-style-type: none"> Locate the vehicle hydraulic brake switch on the front driver's side. Disconnect the 2 pin connector on the vehicle brake switch wire harness. 						



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- 9.
- Install the **BRAKE INTERFACE ADAPTER** into the mating connectors on the vehicle brake switch wire harness and the vehicle main harness.
 - Connect the **BRAKE STROBE INTERFACE** (2 pin with NO marking) to the **TURN SIGNAL/HORN SWITCH** harness.
 - Reconnect the 2 pin connector on the vehicle brake switch wire harness.
 - Route the **BRAKE STROBE INTERFACE** wire from the **TURN SIGNAL/HORN SWITCH** harness to the **BRAKE SWITCH INTERFACE** wire.
 - Plug the **BRAKE STROBE INTERFACE RED** wire male bullet connector into the **BRAKE INTERFACE ADAPTER** female bullet connector.

10. Install the Indicator Harness

EXPLANATION: Polaris did NOT include turn signal indicators on some models with the RIDE COMMAND DISPLAY. Refer to Step 1.



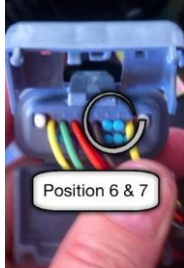

- Determine which INDICATOR HARNESS to install based on the results from Step 1:

If during start-up the vehicle...	And installing on a...	And the model year is...	Then use the...	Go to...
Indicator lights illuminate,	GENERAL,	2020 or newer,	INSTRUMENT CLUSTER INDICATOR HARNESS.	Step 11.
		2019 or older,	DASH INDICATORS HARNESS.	Step 12.
	RANGER,	Any,	INSTRUMENT CLUSTER INDICATOR HARNESS.	Step 11.
Does NOT have indicator lights,	GENERAL or RANGER,	Any,	DASH INDICATORS HARNESS.	Step 12.

11. Install the INSTRUMENT CLUSTER INDICATOR HARNESS

Install the **INSTRUMENT CLUSTER INDICATOR HARNESS** if the vehicle is tested to have indicator lights. Refer to Step 1.

EXPLANATION: On some vehicle models the vehicle indicators may not be compatible with the INSTRUMENT CLUSTER INDICATOR HARNESS as provided. Ryco Motorsports recommends first installing the INSTRUMENT CLUSTER INDICATOR HARNESS; if during testing at the end of the kit install there are no working indicator lights, then follow the additional steps in the Troubleshooting Guide at the end of these instructions.

- Disconnect the multi-pin connector from the back of the interactive digital display or the speedometer assembly (depending on the vehicle) by depressing the single locking tap on the connector, and pulling the connector away from the mating part.

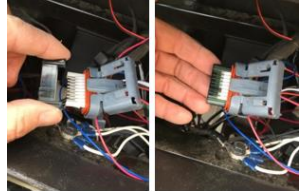


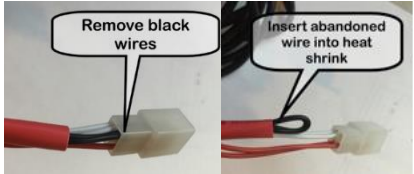
CAUTION: Do not use a metal object to remove the plastic plug covering positions 6 and 7.

HINT: Use your fingernail to easily remove the plastic plug.

- Open the connector cover, and then remove and discard the plastic plugs in positions 6 and 7.
- **This is IMPORTANT!** That's why it's underlined. Remove the clear pin cover on the front side of the connector by depressing the tabs on the sides of the connector.



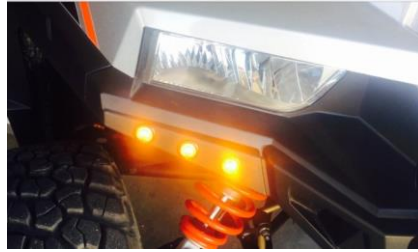
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	<ul style="list-style-type: none"> • Install the INSTRUMENT CLUSTER INDICATOR HARNESS RED pin/wire in position 6. • Install the INSTRUMENT CLUSTER INDICATOR HARNESS GREEN harness pin/wire in position 7. <p>IMPORTANT: The pins must be seated completely.</p> <p>This is IMPORTANT! That's why it's underlined:</p> <ul style="list-style-type: none"> • <u>Verify the new pins match the installation depth of the existing pins.</u> • Reinstall the clear pin cover. • Route the new wire adjacent to the existing wires. • Close the back cover. • Connect the INSTRUMENT CLUSTER INDICATOR HARNESS (3 pin BLUE marking) to the TURN SIGNAL/HORN SWITCH harness. • Reinstall the connector to the interactive digital display or the speedometer assembly. <p>EXPLANATION: The standard instrument cluster turn signal indicator <u>double arrow flashes regardless</u> of the direction of the switch.</p> <ul style="list-style-type: none"> • Go to Step 13 "Install the FRONT TURN SIGNAL HARNESS".  
<p>12. Install the DASH INDICATORS HARNESS</p>	<p>NOTE: Carefully insert the lights into the grommets to prevent damage to the wires and resistor.</p> <p>HINT: A little warmth and moisture help when installing the grommets, and again when installing the lights into the grommets.</p> <ul style="list-style-type: none"> • Mark the desired locations in the dash for the two DASH INDICATORS HARNESS LED lights, where they are visible to the driver. • Drill two 9/32" mounting holes in the dash for the indicator lights. • Seat the rubber grommets into the drilled holes, and then carefully push the lights into the grommets from the rear, until the light is flush or slightly protruding. • Connect the DASH INDICATORS HARNESS (3 pin BLUE marking) to the TURN SIGNAL/HORN SWITCH harness. 
<p>13. Install the FRONT TURN SIGNAL HARNESS</p>	<p>Front Running Lights Feature: The front turn signal lights are running lights, and illuminate at 60% intensity when the vehicle ignition is on, and then flash at full intensity when the turn signals are activated.</p> <p><u>If you wish to disable the running light feature,</u></p> <ul style="list-style-type: none"> • On the FRONT TURN SIGNAL HARNESS remove the BLACK wire in the 4 position connector. <p>NOTE: Use a very fine flat blade screwdriver or similar tool to depress the metal tab on the pin joining the two black wires.</p> <ul style="list-style-type: none"> • Push the pin out of the 4 position connector, and tuck the pin into the red heat shrink or tape it out of the way. 



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HINT: 1 1/4"-1 1/2" spacing between the holes and the corner of the headlight frame, as shown, and approximately 5/8" down from the horizontal edge of the headlight frame, works well.



GENERAL



RANGER

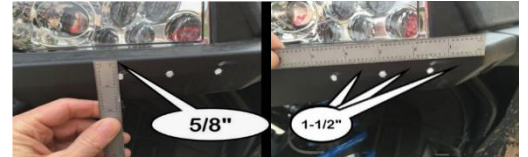


ALTERNATE FRONT TURN SIGNAL LIGHT PLACEMENT EXAMPLES

- Determine the locations of the front lights as desired.
- Mark the locations using a center punch.

NOTE: Use of a stepped drill is recommended.

- Drill a 3/4" diameter hole for each front turn signal light.
- To allow access to route the **FRONT TURN SIGNAL HARNESS** through the firewall to the **TURN SIGNAL/HORN SWITCH** harness, drill a 3/4" hole in the firewall on the driver side.
- From the front side of the firewall, route the **FRONT TURN SIGNAL HARNESS** 4 pin connector and cables through the drilled hole in the firewall.
- Connect the **FRONT TURN SIGNAL HARNESS** (4 pin **RED** marking) to the **TURN SIGNAL/HORN SWITCH** harness.



NOTE: The tags on the FRONT TURN SIGNAL HARNESS are marked "L" for the driver's side, and "R" for the passenger side.

HINT: A little warmth and moisture helps to slip everything together.

- Route the **FRONT TURN SIGNAL HARNESS** lights to the front corners of the vehicle.
- Slide the rubber flange gaskets on each light back onto the wire.
- Slip each light through the applicable drilled hole, fold each flange gasket, and then push the gasket through its respective hole.
- Install each flange gasket into its hole, with the flange of the gasket towards the front of the vehicle.
- Seat each light into its flange gasket with a gentle pulling and rocking motion.
- Rotate each light within its gasket to orient the lights in the same relative position.





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14. Install the REAR TURN SIGNAL HARNESS

EXPLANATION: Two REAR TURN SIGNAL HARNESSES are provided in the kit but only one harness will be used. The following steps and questions determine which harness to use based on the vehicle, and advise how to install the applicable harness. There are three possible installations.

Are you installing on a GENERAL?

- If yes, **go to Step 16** "Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION".
- If no, remove the two fasteners securing the taillight assembly on the drivers side, and then determine if the vehicle **taillight** harness connect to the taillight with a 4 pin connector.



NOTE: The 4 pin connector will have only 3 wires with one open position.

Does the vehicle **taillight** harness connect to the taillight with a 4 pin connector?

- If yes, **go to Step 15** "Install the REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION".
- If no, the taillight harness connects to the taillight with a 3 pin connector, reinstall the taillight, and then **go to Step 16** "Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION".



15. Install the REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION



EXPLANATION: Use the REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION.

- On the driver side of the vehicle unplug the existing taillight harness at the taillight connector, and then plug in the **REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION** connector marked "Drivers side".
- Plug the vehicle harness connector into the mating connector on the **REAR TURN SIGNAL HARNESS**.
- Remove the two fasteners securing the taillight assembly on the passenger side.
- Route the short leg of the **REAR TURN SIGNAL HARNESS** to the passenger side rear taillight.
- On the passenger side of the vehicle unplug the existing taillight harness at the taillight connector and then plug the **REAR TURN SIGNAL HARNESS** connector marked "Passenger side" with the licence plate light power and ground pigtail into the taillight connector.
- Plug the vehicle harness connector into the mating connector on the **REAR TURN SIGNAL HARNESS**.
- Remove the center tunnel access panel on the passenger side.
- Remove the battery cover.


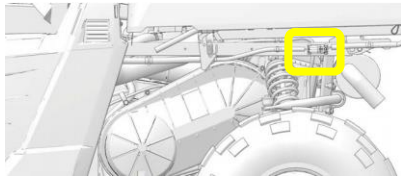
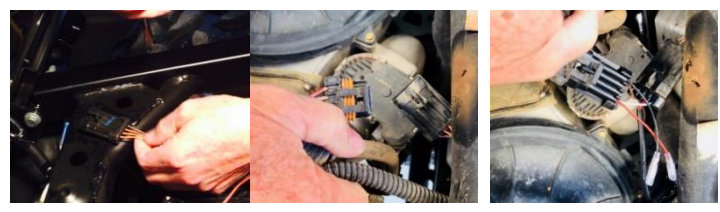



NOTE: Ensure the wiring does not contact moving components or hot surfaces.

EXPLANATION: Only two pins of the REAR TURN SIGNAL HARNESS 3 pin connector are used.

- Route the long leg of the **REAR TURN SIGNAL HARNESS** cable alongside the existing wires, where practical, to the front of the vehicle.
- From the front side of the firewall, route the **REAR TURN SIGNAL HARNESS CONNECTION 3** pin connector through the grommet in the firewall.
- Connect the **REAR TURN SIGNAL HARNESS** (3 pin **RED** marking) to the **TURN SIGNAL/HORN SWITCH** harness.
- **Go to Step 19** "Install the LICENSE PLATE LIGHT and PLATE HOLDER".



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<p>16. Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION</p>	<p>EXPLANATION: Use the REAR TURN SIGNAL HARNESS – REAR CONNECTION.</p>  <ul style="list-style-type: none"> From the front side of the firewall, route the REAR TURN SIGNAL HARNESS – REAR CONNECTION 3 pin connector through the grommet in the firewall. Connect the REAR TURN SIGNAL HARNESS (3 pin RED marking) to the TURN SIGNAL/HORN SWITCH harness. Remove the center tunnel access panel on the passenger side, battery cover, and seats, and route the REAR TURN SIGNAL HARNESS cable, alongside existing wires where practical, to the rear of the vehicle. Lift the dump bed to provide access. Locate the connector on the driver side near the dump bed hinge. Is it a 4 pin connector? <ul style="list-style-type: none"> If yes, go to Step 17 "Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION on a 4 pin connector". If no (i.e., it's a 3 pin connector), go to Step 18 "Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION without a 4 pin connector". 
<p>17. Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION on a 4 pin connector</p>	<ul style="list-style-type: none"> Unplug the vehicle 4 pin connectors. Connect the REAR TURN SIGNAL HARNESS 4 pin connectors to the vehicle 4 pin connectors. Go to Step 19 "Install the LICENSE PLATE LIGHT and PLATE HOLDER". 
<p>18. Install the REAR TURN SIGNAL HARNESS – REAR CONNECTION without a 4 pin connector</p>	<p>EXPLANATION: Neither the taillight connectors nor the driver side connector by the dump bed hinge will be used for this installation.</p>   <ul style="list-style-type: none"> Return the dump bed to the normal down and locked position. Prepare the REAR TURN SIGNAL HARNESS – REAR CONNECTION by cutting and discarding the 4 pin connectors from the provided REAR TURN SIGNAL HARNESS. Remove 1/8"- 3/16 inches of insulation from the RED and BLACK wires on the REAR TURN SIGNAL HARNESS. <p>NOTE: You MUST cut the vehicle ORANGE wires, and connect to the RED and BLACK wires on the REAR TURN SIGNAL HARNESS. If you splice into the wires, rather than cut the wires, the lights will not function properly.</p> <ul style="list-style-type: none"> Remove the floorboard access panel and seats. Route the REAR TURN SIGNAL HARNESS cable to the rear of the vehicle. Locate the vehicle rear taillight wire harness at the extreme rear of the vehicle under the dump bed (i.e. center tee position). At the point where the vehicle rear taillight wire harness splits into the two taillights, expose the two ORANGE wires. Cut the two ORANGE wires approximately 2 to 3 inches on the taillight side of the tee. Strip approximately 1/8" of the wire insulation from the wire <u>going to the taillight</u>. 



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How to Use the SOLDERLESS CONNECTORS:

- Unscrew the SOLDERLESS CONNECTOR end piece, and slip it over the wire of the component to connect.
- Start to screw the end piece back in place, and push the wire of the component being connected, so it is seated in the SOLDERLESS CONNECTOR.
- Tighten the end pieces.



Connect the **REAR TURN SIGNAL HARNESS** to the vehicle taillight **ORANGE** wires, as follows:

- Attach the **REAR TURN SIGNAL HARNESS – REAR CONNECTION BLACK** wire to the RIGHT taillight vehicle **ORANGE** wire, using the **SOLDERLESS CONNECTOR**.
- Attach the **REAR TURN SIGNAL HARNESS – REAR CONNECTION RED** wire to the LEFT taillight vehicle **ORANGE** wire, using the **SOLDERLESS CONNECTOR**.
- Abandon the cut vehicle **ORANGE** wires COMING FROM THE FRONT OF THE VEHICLE, and tuck the ends back into the factory wire harness sleeve and/or tape over with electrical tape.

NOTE: If you connect the REAR TURN SIGNAL HARNESS wires to the **ORANGE** wires coming from the front of the vehicle, the rear turn signals and brake lights will not function.

19. Install the LICENSE PLATE LIGHT and PLATE HOLDER



NOTE: Prior to drilling the mounting holes, verify that the license PLATE HOLDER clears the supports, etc., with the bed in the travel, dump, and extended dump position (i.e., dump cylinder pin removed).

IMPORTANT: Use the flange nut provided with the LICENSE PLATE LIGHT. Do NOT overtighten the nut on the LICENSE PLATE LIGHT. The LICENSE PLATE LIGHT body is aluminum, and the threads can be stripped quite easily.

EXPLANATION: The LICENSE PLATE LIGHT is installed in the single hole where the light will shine down on the license plate.

- Using the **PLATE HOLDER** as a guide, mark the location of the two mounting holes.
- Drill two pilot holes in the metal tube under the bed to mount the **PLATE HOLDER**.
- Using the **SELF-TAPPING SCREWS** provided, secure the **PLATE HOLDER** to the frame of the vehicle.
- Mount the license plate (when available) using the provided **FLANGE BOLTS** and **LOCK NUTS**.
- Determine how to install the **LICENSE PLATE LIGHT**:



If the installation used the REAR TURN SIGNAL HARNESS...	And the vehicle is...	Go to...
– TAILLIGHT CONNECTOR, 	Any model,	Step 20.
– REAR CONNECTOR, 	A General,	Step 21.
	A Ranger 1000, Another Ranger,	



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20. Install the LICENSE PLATE LIGHT and PLATE HOLDER on REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION

- At the **REAR TURN SIGNAL HARNESS – TAILLIGHT CONNECTION** connector on the passenger side of the vehicle locate the short **RED** and **BLACK** wires with female bullet connectors.
- Route the **LICENSE PLATE LIGHT** wires to the **REAR TURN SIGNAL HARNESS** 4 pin connector red red and black wires:
 - Connect the **LICENSE PLATE LIGHT RED** wire to the **RED** wire.
 - Connect the **LICENSE PLATE LIGHT BLACK** wire to the **BLACK** wire.
- Reinstall the taillight assemblies.
- Go to Step 23 “Connect to the Main Power”.**

21. Install the LICENSE PLATE LIGHT and PLATE HOLDER on GENERAL or RANGER 1000

- At the **REAR TURN SIGNAL HARNESS – REAR CONNECTION** 4 pin connector locate the short **RED** and **BLACK** wires with female bullet connectors.
- Route the **LICENSE PLATE LIGHT** wires to the **REAR TURN SIGNAL HARNESS** 4 pin connector red red and black wires:
 - Connect the **LICENSE PLATE LIGHT RED** wire to the **RED** wire.
 - Connect the **LICENSE PLATE LIGHT BLACK** wire to the **BLACK** wire.
- Go to Step 23 “Connect to the Main Power”.**

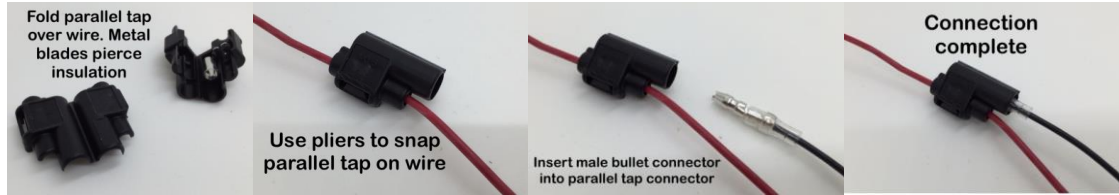
22. Install the LICENSE PLATE LIGHT and PLATE HOLDER on another RANGER

- At the rear taillight (either side) or at the center tee position locate the **RED/WHITE** (12 volt DC) and **BROWN** (ground) wires leading to the vehicle rear taillight assembly.
- Push the sleeve back to expose the **RED/WHITE** wire and **BROWN** wire for approximately 3 to 4 inches.



How to install a PARALLEL TAP: The wire colors may not match your application but are for illustration.

NOTE: Check the orientation of the PARALLEL TAP connectors to ensure access for the male connector, prior to seating the PARALLEL TAP connector with pliers. You can unplug the connector to allow easier access.

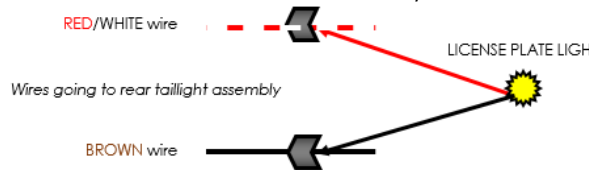


- Install a **PARALLEL TAP** connector on the **RED/WHITE** wire and **BROWN** wires, referring to “How to Install a PARALLEL TAP” in Step 8 as needed.

NOTE: Check the orientation of the PARALLEL TAP connectors to ensure access for the male connectors, prior to seating the terminal with pliers.

Route the **LICENSE PLATE LIGHT** wires to the **PARALLEL TAPS** installed on the **RED/WHITE** wire and **BROWN** wires:

- Connect the **LICENSE PLATE LIGHT RED** wire to the **RED/WHITE** wire.
- Connect the **LICENSE PLATE LIGHT BLACK** wire to the **BROWN** wire.





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23. Connect to the Main Power

EXPLANATION: Beginning with model year 2018, some RANGER 1000 vehicles have the Polaris Pulse Electrical System; beginning with model year 2019 the GENERAL has this system as well. The Ryco Moto kit ties into the Polaris Pulse when available.

IMPORTANT: The LED lights and SELF-CANCELING FLASHER RELAY are polarity sensitive: The RYCO POWER,GROUND & HORN HARNESS **RED** fused wire **MUST** be connected to the 12 volt DC (positive side), and the **BLACK** ground wire must be connected to the vehicle ground wire. If this is not done correctly, the horn will work, but the turn signals will not function.

WARNING: Damage to the SELF-CANCELING FLASHER RELAY may occur if the wires are installed backwards.

- Determine how to connect to the main power:

If installing on...	Then...
A 2018 or newer RANGER 1000 (i.e. Polaris Pulse),	Go to Step 24.
A 2019 or newer GENERAL (i.e. Polaris Pulse),	
A 2018 or older GENERAL,	Go to Step 25.
A 2017 or older RANGER 1000,	
Another RANGER models,	Go to Step 26.

24. Connect to the Main Power on a vehicle with Polaris Pulse

- Locate the Polaris Pulse bar on the passenger side of the vehicle in the front compartment.
- Remove and discard one of the vehicle plugs and install the **POWER AND GROUND ADAPTER** in its place.
- Route the **RYCO POWER, GROUND & HORN HARNESS BLACK** fused wires through the grommet in the firewall towards the terminal block.
- Connect the **RYCO POWER, GROUND & HORN HARNESS BLACK** ground wire to the **POWER AND GROUND ADAPTER** female bullet connector on the **BLACK** (ground) wire.
- Connect the **RYCO POWER, GROUND & HORN HARNESS BLACK RED** fused wire to the **POWER AND GROUND ADAPTER** female bullet connector on the **RED** wire (12 volt DC).
- Go to Step 27 "Test"**.



25. Connect to the Main Power on a 2018 or older GENERAL or 2017 or older RANGER 1000

- Locate the terminal block on the passenger side of the vehicle in the front compartment.
- Loosen the center and passenger side terminals marked as ground and accessory.
- Loosen one terminal block mounting screw on the ground side.
- Install the **TERMINAL BLOCK ADAPTER RED** wire split ring terminal under the nut on the stud marked "Accessory," and one **BLACK** wire split ring terminal under the nut on the stud marked "Ground."



IMPORTANT: Do not attach the **TERMINAL BLOCK ADAPTER RED** wire to the stud marked "Battery". If this is done the running lights will stay on continually, and the turn signal/horn kit will remain powered, running the battery down.


- Install the remaining **BLACK** wire terminal pin under the terminal block mounting screw.
- Tighten the nuts and screw.

NOTE: Do not overtighten.

- Route the **RYCO POWER, GROUND & HORN HARNESS BLACK** fused wires through the grommet in the firewall towards the terminal block.
- Connect the **BLACK** ground wire to the **TERMINAL BLOCK ADAPTER** female bullet connector on the **BLACK** wire (ground).
- Connect the **RYCO POWER, GROUND & HORN HARNESS BLACK RED** fused wire to the **TERMINAL BLOCK ADAPTER** female bullet connector on the **RED** wire (12 volt DC).
- Go to Step 27 "Test"**.



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<p>26. Connect to the Main Power on other RANGERS</p>	<p>NOTE: The center ORANGE wire on the auxiliary power outlet is 12 volt DC, and the BROWN wire is ground. The auxiliary power outlet is active when the ignition key is in the "ON" position.</p> <p>NOTE: Either top or bottom auxiliary power plug works equally well.</p> <ul style="list-style-type: none"> Locate the vehicle's ORANGE and BROWN wires leading to the back side of the auxiliary power outlet (i.e., the cigarette lighter outlet, for you ol' timers), and then unplug those wires from the auxiliary power plug. <p>NOTE: Check the orientation of the PARALLEL TAP connectors, to ensure access for the male connectors on the power and ground wires, when the wires are reconnected to the auxiliary power outlet terminals, prior to seating the terminal with pliers.</p> <ul style="list-style-type: none"> Install a PARALLEL TAP connector on the vehicle's BROWN and ORANGE wires, as shown, referring to "How to Install a PARALLEL TAP" in Step 8 as needed. <p>Connect the RYCO POWER,GROUND & HORN HARNESS to the PARALLEL TAP connectors on the auxiliary power outlet wires:</p> <ul style="list-style-type: none"> Connect the RYCO POWER, GROUND & HORN HARNESS RED wire to the vehicle RED wire. Connect the RYCO POWER, GROUND & HORN HARNESS BLACK wire to the vehicle BROWN wire. Reconnect the vehicle's BROWN and ORANGE wires to the auxiliary power outlet terminals. 
<p>27. Test</p>	<ul style="list-style-type: none"> Double check all the connectors. Start the vehicle's engine. Verify that the turn signals, four-way flasher, indicators, horn, brake, and license plate light work correctly. Refer to the Troubleshooting Guide at the end of this document. <div style="border: 1px solid black; padding: 5px;"> <p>Four-Way Flasher Feature: With either the key on or the engine running, pull the red lever on the TURN SIGNAL/HORN SWITCH to activate all four turn signal lights. To deactivate the four-way flashers move the TURN SIGNAL/HORN SWITCH black lever either direction.</p> <p>NOTE: The SELF-CANCELING FLASHER RELAY feature means the four-way flasher will time out after a few minutes. If the four-way flasher feature is used regularly, contact Ryco Motorsports for a different flasher relay without the self-canceling feature.</p> </div>
<p>28. Done</p>	<p>IMPORTANT: Ensure that the wiring and installed hardware do not contact moving components or hot surfaces.</p> <ul style="list-style-type: none"> Once all the cabling is in place and functionality is verified, double check the routing, and secure with CABLE TIES. Bundle any extra cable length, and secure with the CABLE TIES. Reinstall the dash cover and front access panel, floorboard access panel, seats, etc.



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Troubleshooting Guide															
Does It Work Correctly?	Front Turn Signals	Indicator Lights	Horn	Brake Lights	Rear Turn Signals	License Plate Light									
Scenario 1	✓	✓	✓	✓	✓	✓	Resolution Go riding!								
Scenario 2	✓	✓	✓	No	✓	✓	BRAKE STROBE INTERFACE not installed correctly. Refer to Step 8.								
Scenario 3	✓	No	✓	✓	✓	✓	<p>Do the indicator lights illuminate?</p> <table border="1"> <thead> <tr> <th>If...</th> <th>Then...</th> </tr> </thead> <tbody> <tr> <td>Yes, but only one side of the indicator lights flash,</td> <td> <p>Test when the engine is running.</p> <p>EXPLANATION: On some machines, when the machine is keyed on but the engine is not running, the Instrument Cluster Indicator flashes only when the left turn signal is activated, or vice versa.</p> </td> </tr> <tr> <td>Yes, but the indicator lights do not flash,</td> <td> <p>EXPLANATION: On some vehicles, the dash indicators do not flash, but stay on solid when the turn signal switch is activated. After installation if you find this is the case for your vehicle and you want the indicator to flash, contact Ryco Motorsports by email or phone, and provide your mailing address. Ryco Motorsports will send you a POLARIS DASH INDICATOR DIODE ASSEMBLY, at no charge, to enable the indicators to flash. The dash diode assembly comes with instructions, and takes about five minutes to install.</p> </td> </tr> <tr> <td>No,</td> <td> <ul style="list-style-type: none"> • Ensure the clear plastic cover is removed, and the pins are seated correctly. Refer to Step 11. • If the pins are verified and the indicator does not illuminate, the Instrument Cluster Indicator Harness may need to be altered: On the Ryco Instrument Cluster Indicator Harness remove the blue marking tape. If there is a resistor on each wire, cut out the resistor, splice the wires back together, and re-connect. • If after altering the Ryco Instrument Cluster Indicator Harness the indicator lights do not illuminate when the turn signal is activated, the vehicle indicators are not compatible with the kit. Refer to Step 12 to install the DASH INDICATORS HARNESS. <p>NOTE: The INSTRUMENT CLUSTER INDICATOR HARNESS can be abandoned in place, and then disconnect the INSTRUMENT CLUSTER INDICATOR HARNESS from the 3 pin connector with the BLUE marking.</p> </td> </tr> </tbody> </table>	If...	Then...	Yes, but only one side of the indicator lights flash,	<p>Test when the engine is running.</p> <p>EXPLANATION: On some machines, when the machine is keyed on but the engine is not running, the Instrument Cluster Indicator flashes only when the left turn signal is activated, or vice versa.</p>	Yes, but the indicator lights do not flash,	<p>EXPLANATION: On some vehicles, the dash indicators do not flash, but stay on solid when the turn signal switch is activated. After installation if you find this is the case for your vehicle and you want the indicator to flash, contact Ryco Motorsports by email or phone, and provide your mailing address. Ryco Motorsports will send you a POLARIS DASH INDICATOR DIODE ASSEMBLY, at no charge, to enable the indicators to flash. The dash diode assembly comes with instructions, and takes about five minutes to install.</p>	No,	<ul style="list-style-type: none"> • Ensure the clear plastic cover is removed, and the pins are seated correctly. Refer to Step 11. • If the pins are verified and the indicator does not illuminate, the Instrument Cluster Indicator Harness may need to be altered: On the Ryco Instrument Cluster Indicator Harness remove the blue marking tape. If there is a resistor on each wire, cut out the resistor, splice the wires back together, and re-connect. • If after altering the Ryco Instrument Cluster Indicator Harness the indicator lights do not illuminate when the turn signal is activated, the vehicle indicators are not compatible with the kit. Refer to Step 12 to install the DASH INDICATORS HARNESS. <p>NOTE: The INSTRUMENT CLUSTER INDICATOR HARNESS can be abandoned in place, and then disconnect the INSTRUMENT CLUSTER INDICATOR HARNESS from the 3 pin connector with the BLUE marking.</p>
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Does It Work Correctly?	Front Turn Signals	Indicator Lights	Horn	Brake Lights	Rear Turn Signals	License Plate Light	Resolution
Scenario 4	✓	✓	✓	No	No	✓	The REAR TURN SIGNAL HARNESS RED and BLACK wires were connected to the wrong ends of the cut vehicle taillight wires. Refer to Step 14.
Scenario 5	✓	✓	✓	✓	✓	No	Ensure that the LICENSE PLATE LIGHT RED power and BLACK ground wires are connected correctly (i.e. cables are not reversed). Refer to Step 19.
Scenario 6	No	No	✓	No	No	No	Ensure that the RYCO POWER, GROUND & HORN HARNESS RED main power and BLACK ground wires are connected correctly (i.e., the cables are not reversed). Refer to Step 23.
Scenario 7	No	No	No	✓	✓	No	Ensure that the RYCO POWER, GROUND & HORN HARNESS BLACK ground wire is connected to a good ground. Refer to Step 23.
Scenario 8	No	No	✓	✓	No	✓	If the turn signal lights illuminate but do not flash, then the SELF-CANCELING FLASHER RELAY is damaged or defective. Contact Ryco Motorsports by email or phone, provide your shipping address, and we will send you a replacement, at no charge, to correct the problem.
Scenario 9	No	No	No	✓	No	✓	If the vehicle blows a fuse when the key is turned on, check for a bent pin on the connection between the RYCO POWER, GROUND & HORN HARNESS and the TURN SIGNAL/HORN SWITCH harness.
Scenario 10	If a set of lights does not work, check for a bent pin on the connection between the light harness and the TURN SIGNAL/HORN SWITCH harness.						