Form No. MSC25436 Rev B

BOSS SNOWPLOW

# Vehicle Headlight Module Wiring Kit

## 2019 and After Ram 1500 (DT) with LED Headlights and 2021 and After Ford F-150 with LED Headlights

**Part No. MSC25011**

**Installation Instructions**

# Safety

Installing this kit will change the weight of your vehicle. Ensure that your vehicle does not exceed the front gross-axle-weight rating (FGAWR), at any time. You may need to weigh the vehicle and add ballast or limit the payload of the vehicle to compensate.

**⚠ DANGER**

**Vehicle engines contain moving parts and can become extremely hot, capable of causing severe burns and serious bodily harm.**

**Shut off the engine and allow it sufficient time to cool down before installing this kit.**

**⚠ DANGER**

**Vehicle batteries can cause dangerous electrical shocks that could lead to severe burns or death.**

**Disconnect your battery before installing this kit.**

# Installation

Determine the left and right sides of the machine from the normal operating position.

# Installing the Kit

## Installing the Wiring Kit for All Vehicles

1. Park the vehicle on a level surface, turn off the engine and remove the key.
2. Disconnect the battery.
3. Ensure that the vehicle firewall is clear of obstructions.

   **⚠ WARNING**

   **Using a drill without wearing eye protection may allow debris to enter the eye, causing personal injury.**

   **When drilling, always wear eye protection.**

4. Drill a 3 cm (1-1/4 inch) diameter hole through the firewall on the driver side of the vehicle.

   **Note:** The hole should be in an easily accessible area.

5. Insert the split rubber grommet into the hole.
6. Pull the plow controller connector and module connector (10-pin Molex Minifit) into the vehicle cab through the hole in the firewall (Figure 1).

   ***Important:*** **Ensure that all wiring is secured in a position that avoids hot or moving parts to prevent damage to the vehicle or plow.**

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*MSC25436*

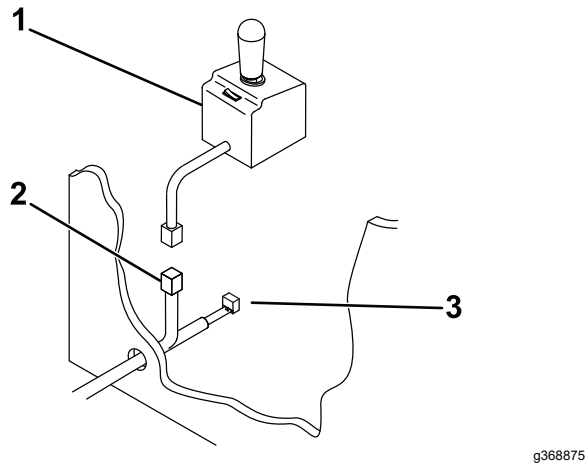


**Figure 1**

1. Plow controller
2. Controller connector
3. Module connector (10-pin)

7. Plug the controller connector into the plow controller.
8. Mount the plow controller.
9. Connect the white/black wire from the wire harness to the small post on the pump solenoid (Figure 2).

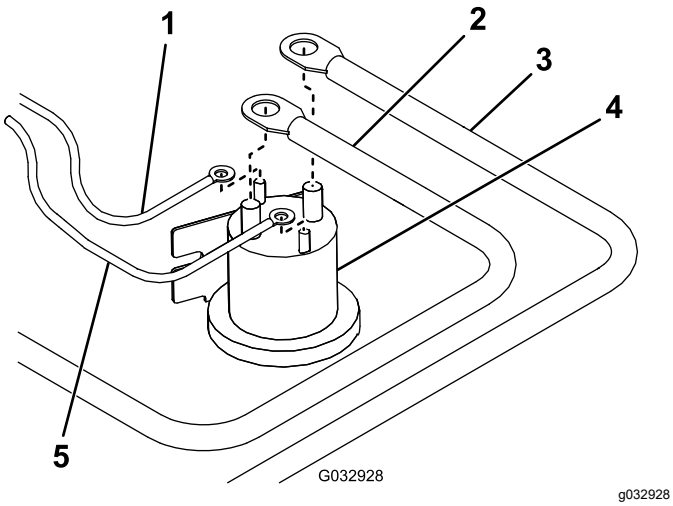


**Figure 2**

1. White/black wire
2. Battery cable
3. Red power/ground cable
4. Pump solenoid
5. Brown wire

10. Connect the brown wire from the wire harness to the other small post on the pump solenoid (Figure 2).

    **Note:** The wires may go on either small post, but should not share a post.

11. Mount the pump solenoid inside the engine compartment of the vehicle, ensuring that it stays in an upright position and does not contact the body, hood, or other conductive material on the vehicle.
12. Connect the red power/ground cable to the large post on the pump solenoid (Figure 2).
13. Connect the battery cable to the other large post on the pump solenoid (Figure 2).

    **Note:** The wires may go on either large post, but should not share a post.

14. Connect the black power/ground cable:
    - For Ford vehicles—connect the black power/ground cable to the passenger side fender ground stud.
    - For Ram vehicles—connect the black power/ground cable to the engine block.

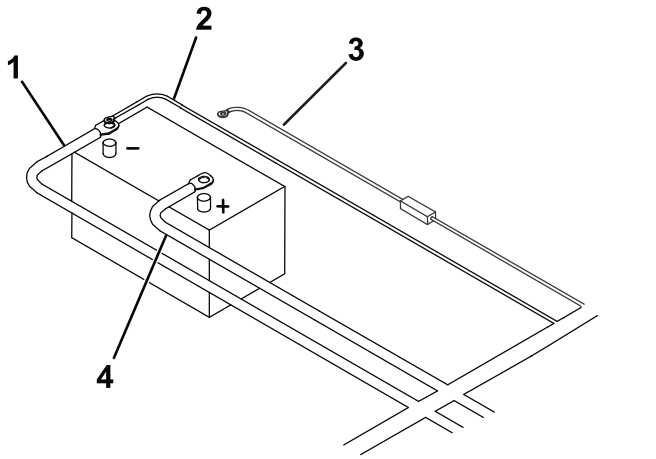


**Figure 3**

1. Black power/ground cable
2. Brown wire
3. Red/white fused wire
4. Red power/ground cable

15. Connect the brown wire:
    - For Ford vehicles—connect the brown wire to the passenger side fender ground stud.
    - For Ram vehicles—connect the brown wire to the engine block.
16. Connect the free end of the battery cable to the positive (+) battery terminal (Figure 3).
17. Connect the red/white fused wire to the positive (+) battery terminal (Figure 3).
18. Mount the truck side, wire harness plow connector to the lower part of the bumper using the control harness mounting bracket (Figure 4).

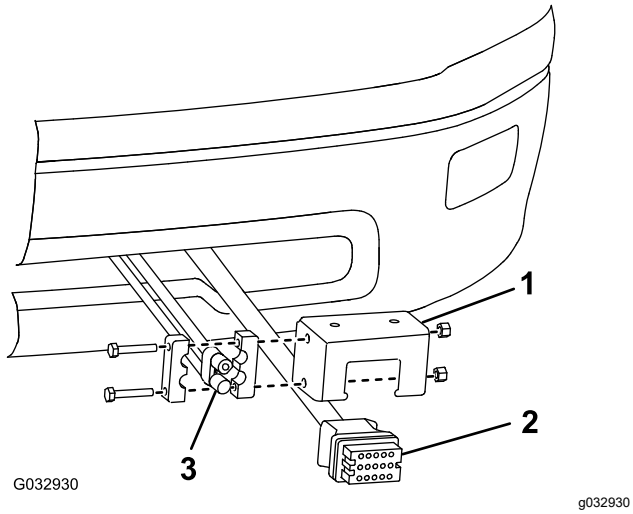


**Figure 4**

1. Control-harness mounting bracket
2. Plow connector
3. Power/ground connector

19. Mount the black and red power/ground connector to the control harness mounting bracket (Figure 4).
20. Mount the relay pack to the inside of the engine compartment using a sheet-metal screw.

    **Note:** Ensure that the relay pack is mounted in the upright position.

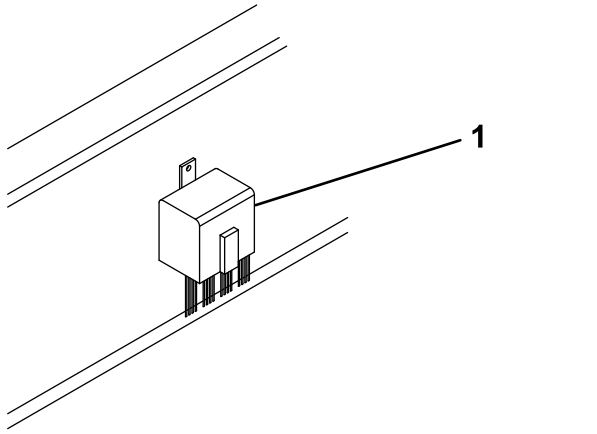


**Figure 5**

1. Relay pack

# Installing the Vehicle Headlight Module and Wiring Kit for Ford F150 Vehicles

1. Remove the trim on top of the display using a plastic trim tool.

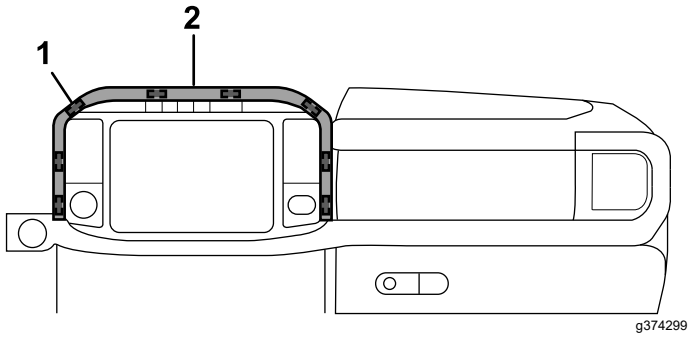


**Figure 6**

1. Clips (8)
2. Top trim

2. Remove the center trim.

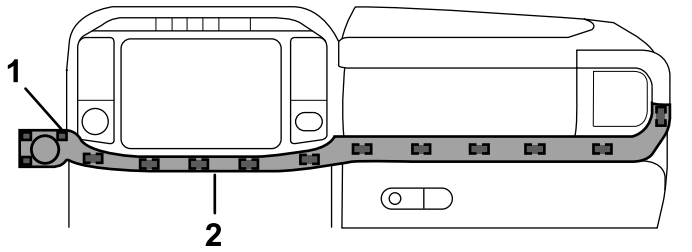


**Figure 7**

1. Clips (14)
2. Center trim

3. Pull down to open the trim panel beneath the steering column.

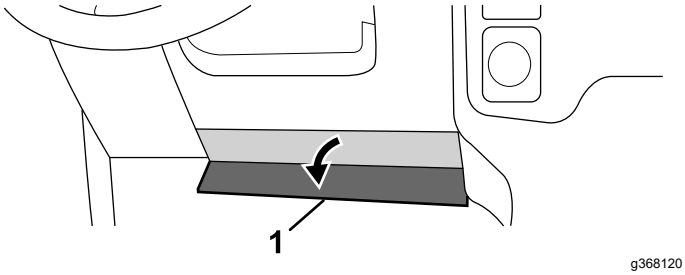


**Figure 8**

1. Trim panel

4. Remove the 2 bolts and steering column trim.

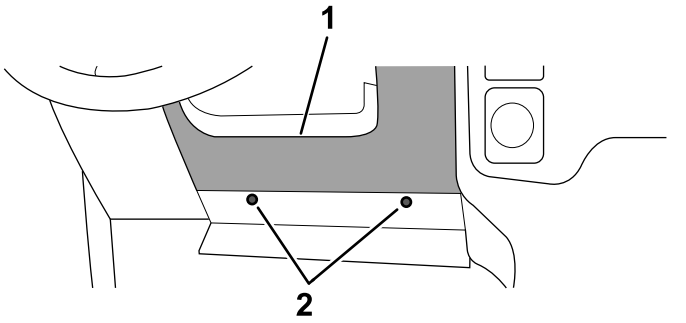


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**Figure 9**

1. Steering column trim 2. Bolts

5. Remove the trim on the left and right sides of the center console.

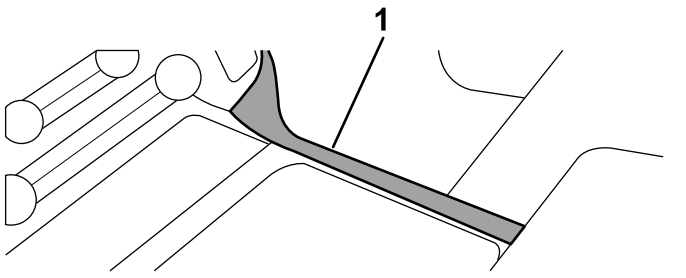


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**Figure 10**

1. Side panel

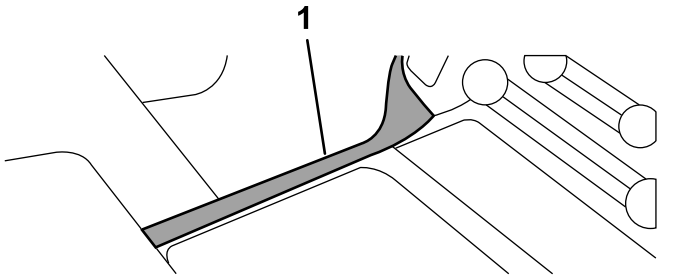


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**Figure 11**

1. Side panel

6. Remove the bolts securing the lower center stack control panel located beneath the display screen.
7. Remove lower center stack control panel and disconnect the wiring.

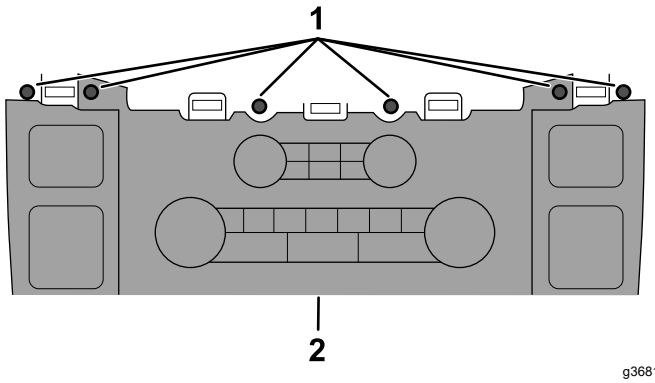


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**Figure 12**

1. Bolts 2. Control panel

8. Remove the bolts on the module bracket.

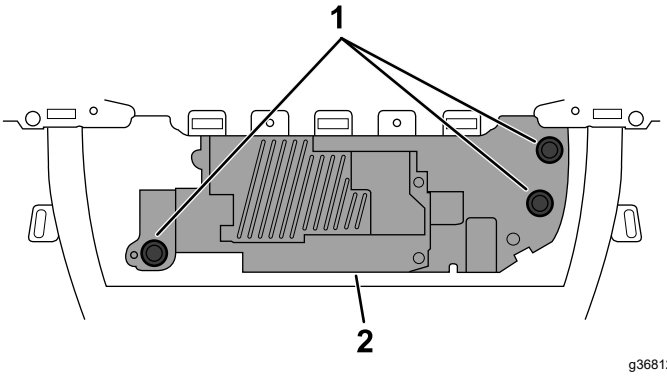


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**Figure 13**

1. Bolts 2. Module

9. Locate the OEM 26-pin connector and disconnect it from the gateway module.

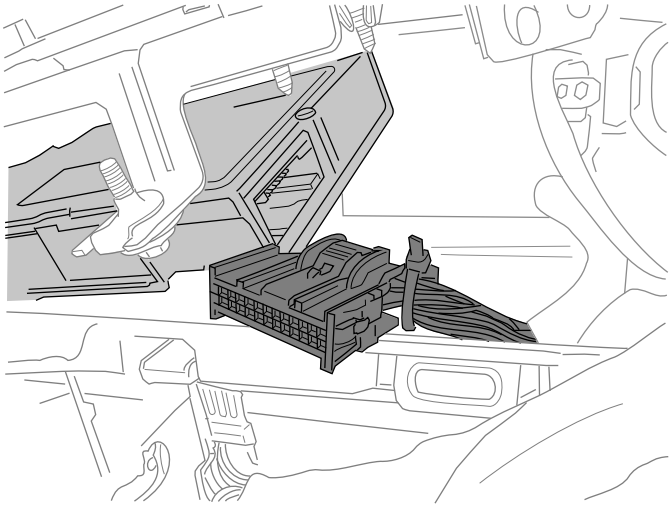

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**Figure 14**

10. Plug the 26-pin connector (black) from the FGIM bridge harness into the mating connector on the OEM Gateway module.

11. Plug the 26-pin connector (white) from the FGIM bridge harness into the mating connector on the FGIM module.

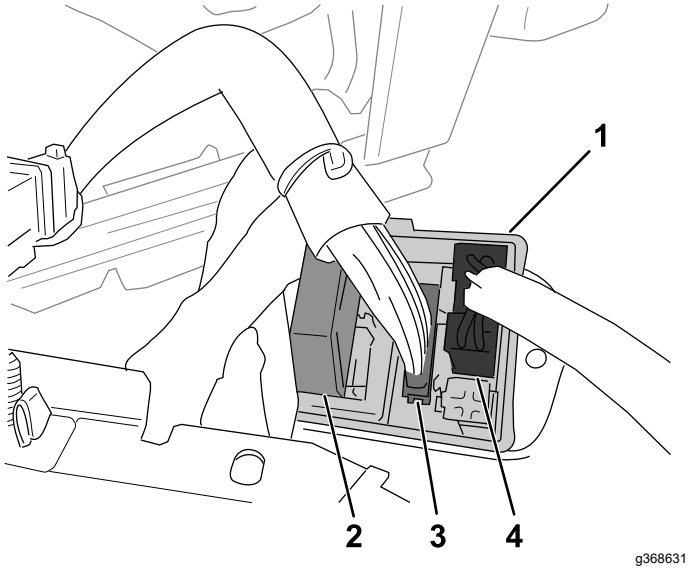


**Figure 15**

1. FGIM module
2. OEM gateway connector
3. 26-pin connector (white)
4. 12-pin connector

12. Locate the 26-pin connector that was originally connected to the OEM Gateway module, and plug it into the mating connector on the FGIM module.
13. Secure the cables with a cable tie.
14. Identify the Ford data link harness and plug the 12-pin connector into the FGIM module.
15. Route the opposite end of the data link harness (6-pin connector) behind the console, under the dash, near the gas and brake pedals.
16. Check to see if your vehicle is compatible with the module; refer to Initializing the Vehicle Headlight Module (page 7).
17. Once the VHM has been initialized, plug in the 10-pin connector from the BOSS vehicle side harness that was routed through the firewall into the VHM module.

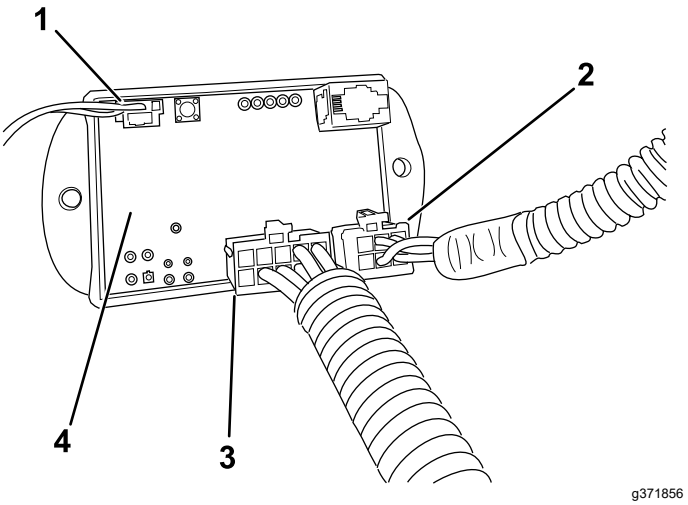


**Figure 16**

1. Highbeam indicator connector
2. 6-pin connector
3. 10-pin connector
4. VHM (vehicle headlight module)

18. Secure the FGIM module behind the gateway module.
19. Route the highbeam indicator connector from the dash to the VHM module and plug it in.
20. Mount the highbeam indicator to the instrument cluster, using double sided tape, so that this is visible to the driver.
21. Install the trim onto the vehicle.
22. Secure the VHM module and wire harness under the dash.

# Installing the Vehicle Headlight Module and Wiring Kit for Ram Vehicles

1. Locate and remove the white 16-pin OBDII data link connector under the left side of the steering column.
2. Plug the red connector from the data link harness into the OBDII connector.
3. Mount the white connector, from the VHM data link harness, under the left side of the steering column where you removed the OBDII connector.
4. Locate the STAR connector bank, with the black base, next to the parking brake.

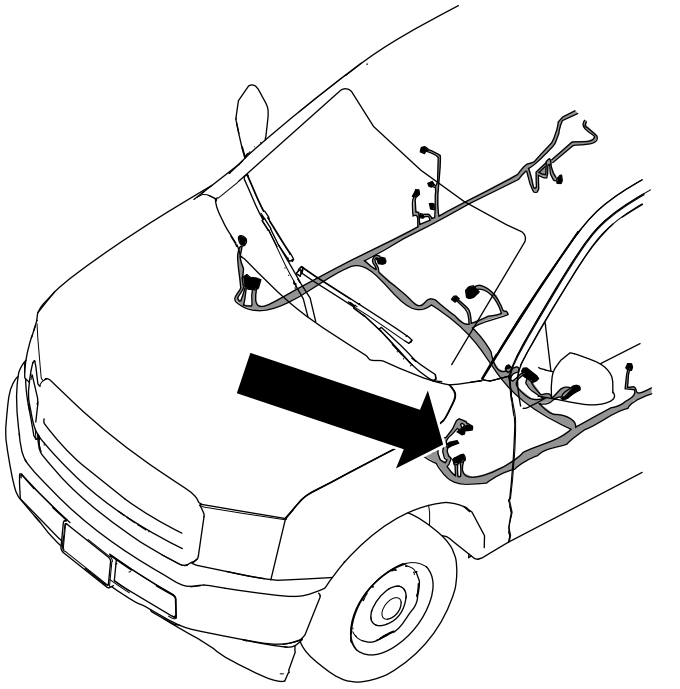

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**Figure 17**

5. Plug the 2-pin data link harness connector with the yellow and brown wires into any of the unused port on the STAR connector bank with the black base.

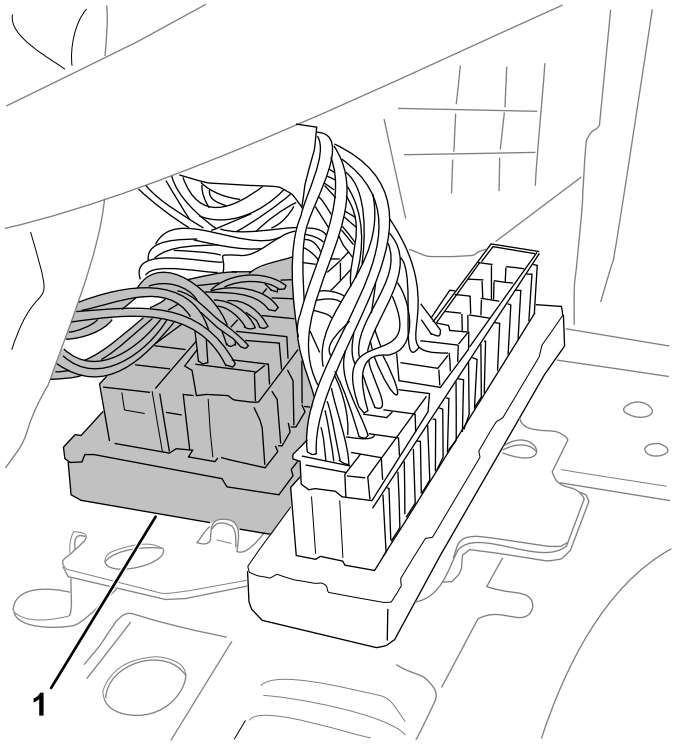


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**Figure 18**

1. STAR connector bank

6. Check to see if your vehicle is compatible with the module; refer to Initializing the Vehicle Headlight Module (page 7).
7. Once the VHM has been initialized, plug in the 10-pin connector from the BOSS vehicle side harness that was routed through the firewall into the VHM module.
8. Route the highbeam indicator connector from the dash to the VHM module and plug it in.
9. Mount the highbeam indicator to the instrument cluster, using double sided tape, so that this is visible to the driver.
10. Secure the VHM module and wire harness under the dash.

## Initializing the Vehicle Headlight Module

Turn the vehicle key to the ON position.

For Ford vehicles, plug the other end of the data link harness into the 6-pin connector on the VHM module.

For Ram vehicles, plug the other end of the data link harness into the 6-pin connector on the VHM module

**Note:** The VHM initialization process requires the key to be in the ON position before the connectors are plugged into the VHM module.

The vehicle headlight module (VHM) reads the VIN to verify the vehicle make, model, model year, and engine type and verifies compatibility.

If the VIN is accepted, all of the LED lights on the VHM will illuminate green for 3 seconds.

If the VIN is not accepted, all of the LED lights on the VHM will cycle, momentarily stopping on a corresponding LED, indicating an error with the following:

- LED 1–vehicle manufacturer
- LED 2–vehicle model
- LED 3–vehicle engine type
- LED 4–vehicle model year

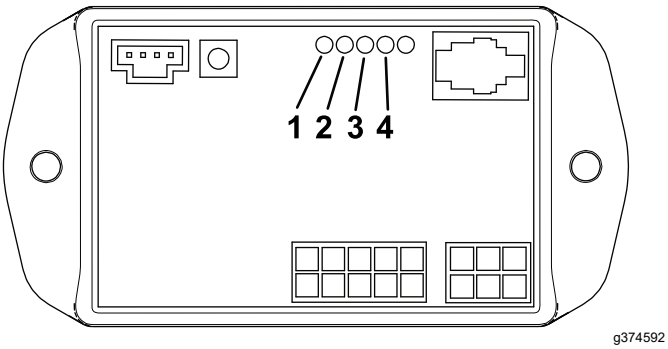


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**Figure 19**

1. LED 1 (manufacturer)
2. LED 2 (model)
3. LED 3 (engine type)
4. LED 4 (model year)

Ensure that all connections are correct when the VIN is not accepted.

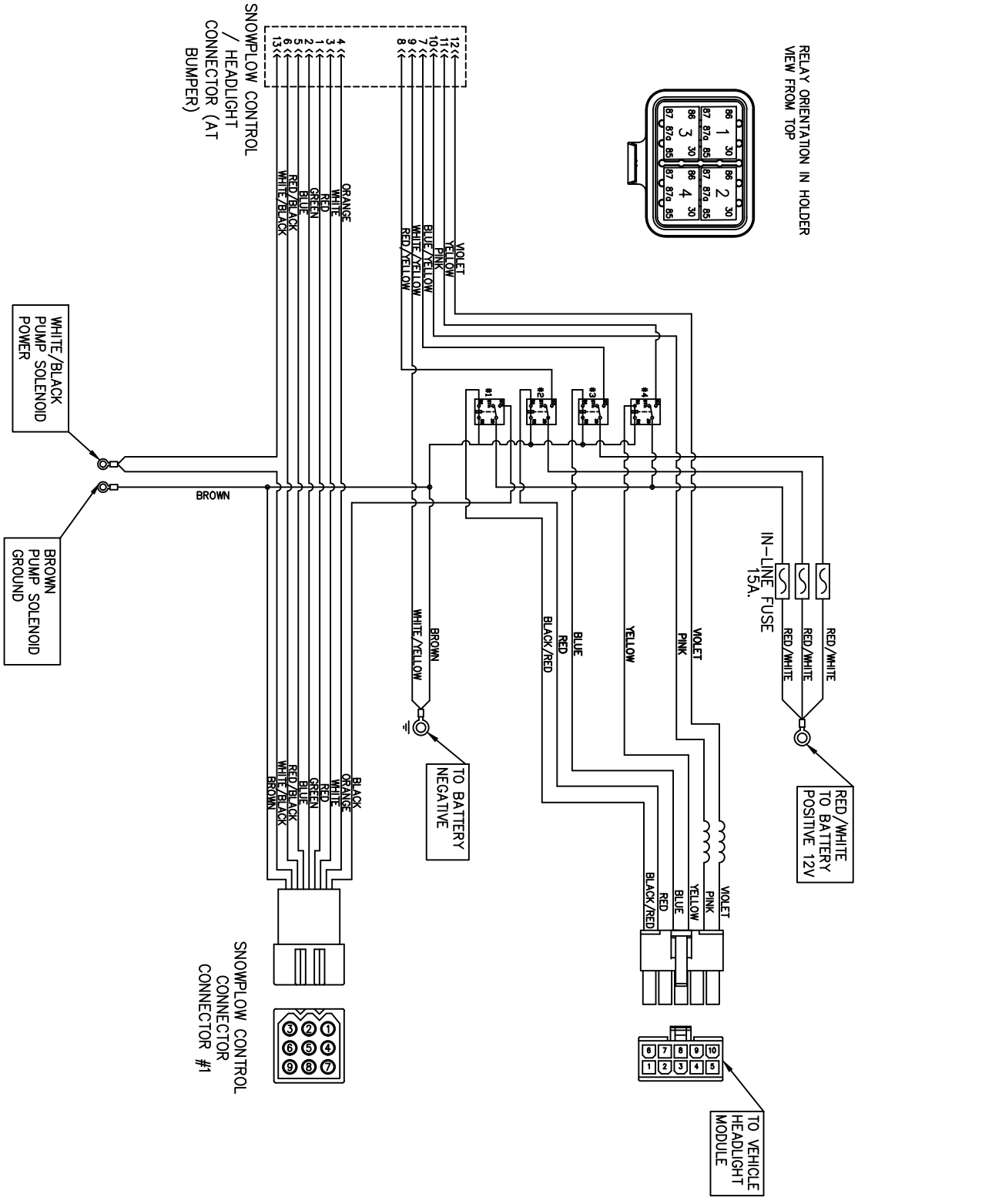
The vehicle may not be compatible with the device if all connections are correct and the device does not recognize the VIN.

# Operation

To turn the plow lights on, put the vehicle headlight switch to the PARK light position.

To turn the plow lights off, put the vehicle headlight switch to the AUTO/OFF position.

# Schematics

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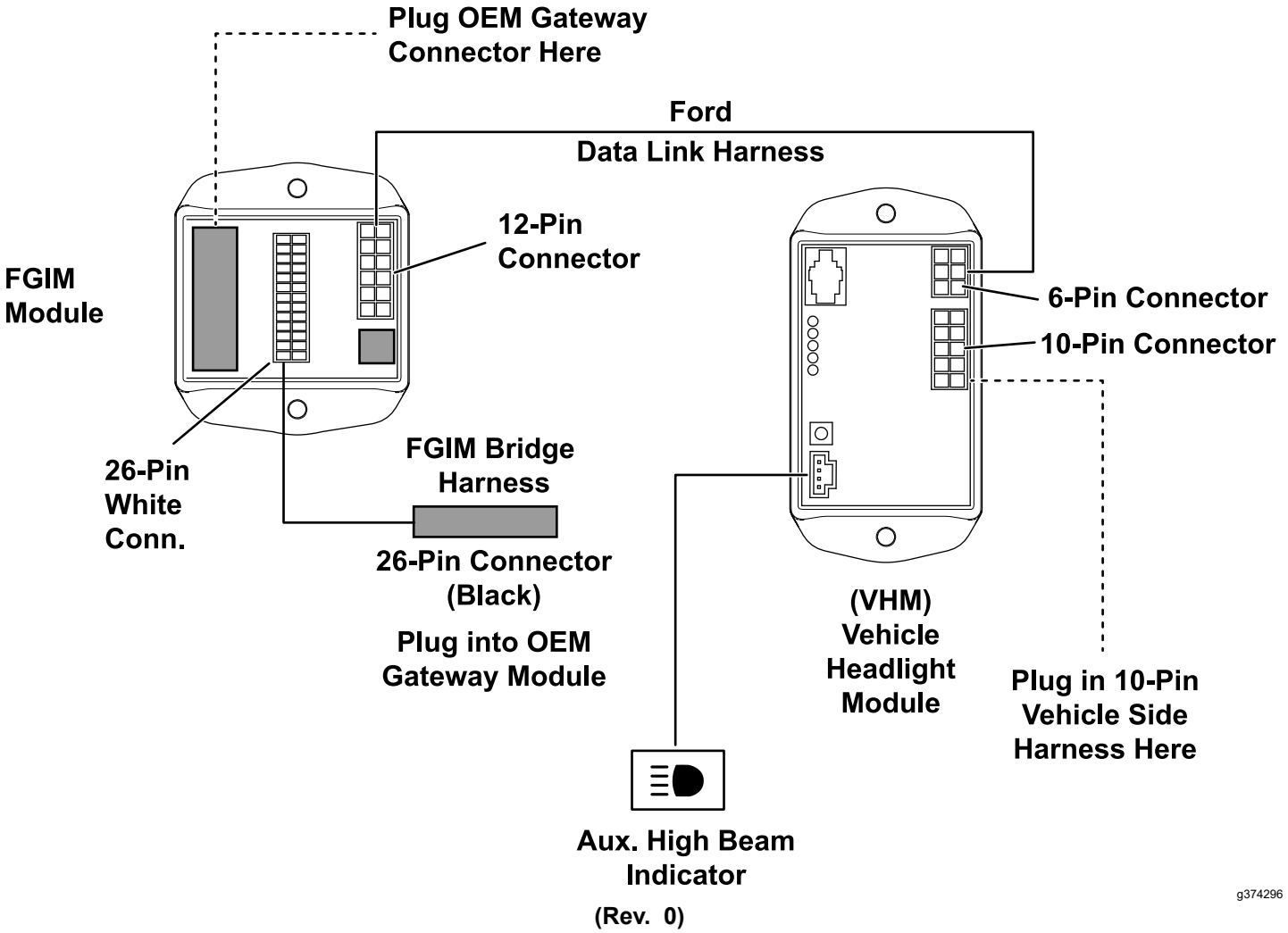
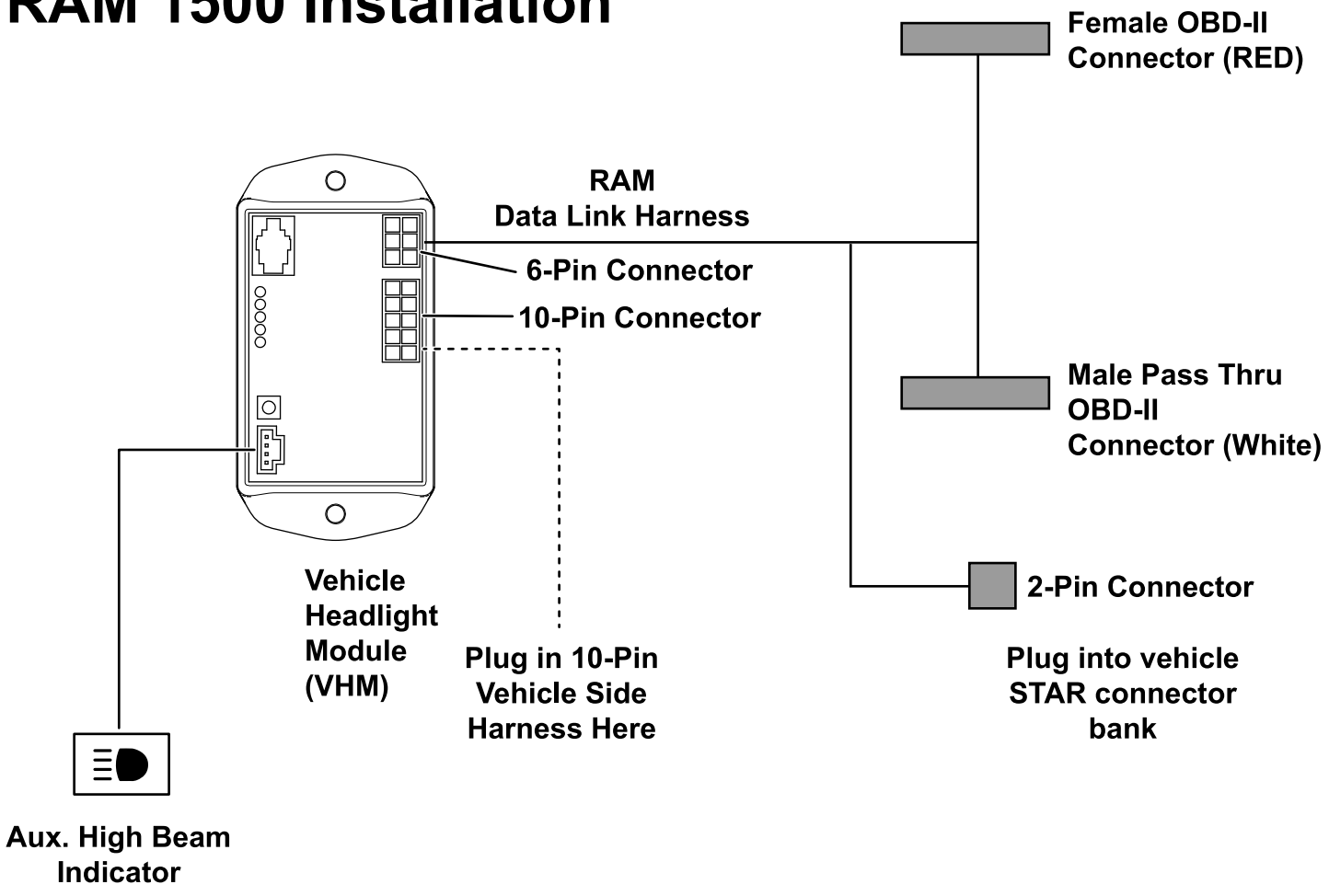
**(Rev. 0)**

# Ford F-150 Installation




(Rev. 0)

# RAM 1500 Installation

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# Notes:

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