# **Hillsboro Industries**

# TRUCK BED

## **W**ARNING

This User's Manual contains safety information and instructions for your truck bed. You must read this manual before installing, loading or towing with your truck bed. You must follow all safety precautions and instructions.

# Hillsboro Industries

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<u>Manufacturer's Notice:</u> All specifications are subject to change without notice and without incorporating them into prior units.

# TRUCK BED

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# 1. GENERAL SAFETY INFORMATION



This manual contains cautions that are marked with the safety alert symbol. All cautions should be carefully read and obeyed!



**WARNING:** This unit is not designed to provide protection for fuel tanks mounted outside of the vehicle frame. Do not mount this unit on a vehicle equipped with tanks mounted outside of vehicle frame.

DO NOT modify truck bed length, width, or height nor obscure lighting provided on the truck bed.

Observe all warnings and recommendations as specified in the vehicle manufactures manual or incomplete vehicle manual.

Use caution when working around fuel tanks and fuel lines. Avoid ignition sources.

Always wear protective clothing and eyewear when operating tools. Observe safe weld procedures and safe tool operation as specified in tool operating instructions.

Check that all lights are functional before and after installation and before operation of the vehicle.

Grease Hinges on side rails and toolboxes every 6 months.

Check and reapply Dielectric grease every year or as needed between lights and harness connections.

Apply grease to gooseneck ball as needed.

DO NOT attach the spare tire to the headache rack.



**WARNING:** Do not place flammable, combustible or living objects in toolboxes. Proximity to vehicle exhaust can create high temperatures in toolboxes.

Maximum allowable weight in toolboxes is 200lbs. Weight must be uniformly distributed over the box floor.

**<u>CAUTION:</u>** Do not place corrosive objects in toolboxes.

# 2. HITCH RATINGS

#### **Truck Bed Gooseneck Hitch Ratings**

Hillsboro Industries has multiple Gooseneck hitches, the best way to know the correct rating is to check the decal on the gooseneck ball plate. If this truck bed is equipped with a factory-installed gooseneck hitch, when the truck bed is properly mounted to a truck, this hitch has the following ratings:

Maximum Gross Trailer Weight = 30000 lbs. or 26000 lbs. Maximum Vertical Tongue Load = 6000 lbs. or 5000 lbs. Hitch Ball Size = 2-5/16 in.

These ratings apply to the hitch components only. Actual towing capacity may be lower depending on the tow vehicle or installed equipment. Refer to the tow vehicle (truck) documentation for vehicle towing capacity ratings.



Do not exceed the towing ratings of this hitch or the tow vehicle.



Do not cut, drill, weld or modify any hitch components except as defined in the bed mounting instructions.

#### **Optional B&W Accessory Compatibility and Ratings**

Some Hillsboro truck beds can be equipped with the Hillsboro B&W socket kit which provides compatibility with available B&W accessory items. The Hillsboro B&W socket kit is only compatible with the 30000 lb gooseneck hitch. This kit may be purchased separately. The Hillsboro B&W socket kit includes the B&W 2-5/16 turnover ball which projects from the bed surface.

#### Hillsboro B&W Socket Kit - Hillsboro part number 74790

Maximum Gross Trailer Weight = 30000 lbs. Maximum Vertical Tongue Load = 6000 lbs. Hitch Ball Size = 2-5/16 in. B&W has several accessory items available for use with the Hillsboro B&W socket kit. The tow ratings of the Hillsboro truck bed with these items installed will never exceed the ratings above and may be lower as defined below. Never exceed the rating stated by B&W for any accessory item. Do not exceed the towing ratings of the tow vehicle

Approved B&W accessory items for use with the Hillsboro B&W socket kit:

MGTW = Maximum Gross Trailer Weight, lbs. MVTL = Maximum Vertical Tongue Load, lbs.

| B&W Part #  | Description   | MGTW                                      | MVTL                                 |
|---|---|---|--------------------------------------|
| RVK3050<br>GNXA4000<br>GNXA4085<br>GNXA4075<br>GNXA4025 | Companion <b>Flatbed</b> 5 <sup>th</sup> Wheel<br>Kingpin<br>4" Extender<br>Eyelet<br>Inverted Ball | 22000<br>30000<br>20000<br>30000<br>30000 | 5500<br>6000<br>5000<br>6000<br>6000 |
| GNXA2050  | Hi-Rise Ball 2-5/16"  | 20000                                     | 5000                                 |

#### **Truck Bed Receiver Hitch Ratings**

Hillsboro Industries has multiple receiver hitches, the best way to know the correct rating is to check the decal on the receiver hitch. If this truck bed is equipped with a factory-installed receiver hitch, when the truck bed is properly mounted to a truck, this hitch has the following ratings:

Weight Carrying Hitch Configuration

Maximum Gross Trailer Weight = 25000 lbs. or 18000 lbs. Maximum Vertical Tongue Load = 2500 lbs. or 1800 lbs.

Weight Distributing Hitch Configuration

Maximum Gross Trailer Weight = 25000 lbs. or 18000 lbs. Maximum Vertical Tongue Load = 2500 lbs. or 1800 lbs.

These ratings apply to the hitch components only. Actual towing capacity may be lower depending on the tow vehicle or installed equipment. Refer to the tow vehicle (truck) documentation for vehicle towing capacity ratings.

# 3. COMPLIANCE WITH SAFETY STANDARDS

It is the responsibility of the final stage manufacturer (installer) to certify that the completed vehicle complies with applicable Federal Motor Vehicle Safety Standards (FMVSS) by properly completing and applying a final stage manufacturer certification label to the vehicle.

#### Notes on FMVSS 105

Installation of a Hillsboro Steel Truck Bed must be in compliance with FMVSS 105 "Hydraulic and Electric brake systems" with respect to vertical and horizontal Center of Gravity. Refer to the Incomplete Vehicle Manual and the table below. The vertical Center of Gravity is at the top surface of the bed floor. Determine the horizontal Center of Gravity from the following

| table:   | Weight, Ib |      | Horizontal Center of     |  |
|----------|------------|------|--------------------------|--|
| Model    | 2500       | 3000 | Gravity from rear of bed |  |
| 81 X 86  | 548        | 567  | 39 3/4"                  |  |
| 81 X 102 | 608        | 630  | 46"                      |  |
| 81 X 112 | 623        | 646  | 51"                      |  |
| 96 X 86  | 592        | 611  | 39 3/4"                  |  |
| 96 X 102 | 658        | 680  | 46"                      |  |
| 96 X 112 | 675        | 698  | 51"                      |  |
| 96 X 136 | 763        | 790  | 61 1/4"                  |  |
|          | Weight,    | lb   | Horizontal Center of     |  |
| Model    | 3500       | 4000 | Gravity from rear of bed |  |
| 81 X 86  | 730        | 749  | 39 3/4"                  |  |
| 81 X 102 | 855        | 877  | 46"                      |  |
| 81 X 112 | 890        | 913  | 51"                      |  |
| 90 X 112 | 945        | 968  | 51"                      |  |
| 90 X 136 | 1098       | 1125 | 61 1/4"                  |  |
| 96 X 102 | 925        | 947  | 46"                      |  |
| 96 X 112 | 965        | 988  | 51"                      |  |
| 96 X 136 | 1120       | 1147 | 61 1/4"                  |  |

| Truck Bed  |   |                                    |   |  |
|--|---|------------------------------------|---|--|
| Model<br>2000 7.0 X 7.0<br>2000 7.0 X 8.5<br>2000 7.0 X 9.33 | <b>Weig</b><br><b>HD</b><br>424<br>469<br>484 | ht, Ib<br>EXT<br>433<br>485<br>503 | Horizontal Center of<br>Gravity from rear of bed<br>45 1/2"<br>55"<br>60 1/2" |  |
| 2000 7.5 X 7.0   | 430   | 439                                | 45 1/2"   |  |
| 2000 7.5 X 8.5   | 482   | 500                                | 55"   |  |
| 2000 7.5 X 9.33  | 497   | 518                                | 60 1/2"   |  |
| 2000 7.5 X 10.5  | 545   | 564                                | 68"   |  |
| 2000 7.5 X 11.33   | 560   | 581                                | 73 1/2"   |  |
| 2000 7.5 X 12.0  | 589   | 614                                | 78"   |  |
| 2000 8.0 X 8.5   | 494   | 514                                | 55"   |  |
| 2000 8.0 X 9.33  | 510   | 533                                | 60 1/2"   |  |
| 2000 8.0 X 10.5  | 560   | 580                                | 68"   |  |
| 2000 8.0 X 11.33   | 576   | 599                                | 73 1/2"   |  |
| 2000 8.0 X 12.0  | 606   | 633                                | 78"   |  |
| 2000 8.5 X 8.5   | 512   | 532                                | 55"   |  |
| 2000 8.5 X 9.33  | 524   | 547                                | 60 1/2"   |  |
| 2000 8.5 X 10.5  | 576   | 596                                | 68"   |  |
| 2000 8.5 X 11.33   | 593   | 616                                | 73 1/2"   |  |
| 2000 8.5 X 12.0  | 624   | 651                                | 78"   |  |
| Model  | Weigh<br>Gl                                   |                                    | Horizontal Center of<br>Gravity from rear of bed                              |  |
| 80 X 84  | 925   | 925                                | 47 1/2"   |  |
| 80 X 102   | 1022  | 1055                               | 55"   |  |
| 80 X 112   | 1115  | 1115                               | 61 1/2"   |  |
| 88 X 112   | 1165  | 1165                               | 61"   |  |
| 88 X 136   | 1350  | 1350                               | 71"   |  |
| 96 X 102   | 1160  | 1160                               | 54 1/2"   |  |
| 96 X 112   | 1225  | 1225                               | 61"   |  |
| 96 X 136   | 1420  | 1420                               | 71"   |  |

| Model           | Weight, Ib | Horizontal Center of<br>Gravity from rear of bed |
|-----------------|------------|--|
| SLT 7.0 X 7.0   | 550        | 47"  |
| SLT 7.0 X 8.5   | 645        | 57 1/2"  |
| SLT 7.0 X 9.33  | 665        | 62 1/2"  |
| SLT 7.5 X 8.5   | 685        | 57 1/2"  |
| SLT 7.5 X 9.33  | 705        | 62 1/2"  |
| SLT 7.5 X 10.5  | 790        | 70 1/2"  |
| SLT 7.5 X 11.33 | 810        | 76"  |
| SLT 7.5 X 12.0  | 890        | 80 1/2"  |
| SLT 8.0 X 8.5   | 810        | 57 1/2"  |
| SLT 8.0 X 9.33  | 842        | 62 1/2"  |
| SLT 8.0 X 10.5  | 920        | 70 1/2"  |
| SLT 8.0 X 11.33 | 952        | 76"  |
| SLT 8.0 X 12.0  | 990        | 80 1/2"  |
| SLT 8.5 X 8.5   | 810        | 57 1/2"  |
| SLT 8.5 X 9.33  | 842        | 62 1/2"  |
| SLT 8.5 X 10.5  | 920        | 70 1/2"  |
| SLT 8.5 X 11.33 | 952        | 76"  |
| SLT 8.5 X 12.0  | 990        | 80 1/2"  |

#### Notes on FMVSS 108

Installation of a Hillsboro Truck Bed results in a vehicle with an overall width greater than 80 inches. To comply with FMVSS 108,"Lamps, Reflective Devices and Associated Equipment", the completed vehicle must have identification lights, amber facing front and red facing rear, centered on the vertical centerline of the vehicle. Identification lights consist of three lights on the same level, as close as practicable to the top of the vehicle with lamp centers spaced not less than 6 inches or not more than 12 inches. Your Hillsboro Truck Bed is equipped with red identification lights facing rearward.

#### Notes on FMVSS 111

Installation of a Hillsboro Truck Bed may affect compliance with FMVSS 111, "Rearview Mirrors". Information concerning rearview mirrors and compliance with FMVSS 111 may be obtained from the vehicle manufacturer's Incomplete Vehicle Manuals and Body Builder's Books.

## 4. BED MOUNTING

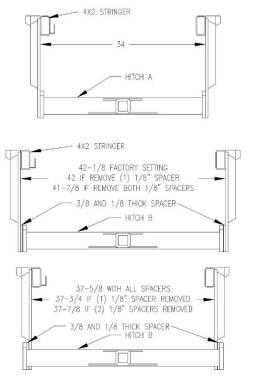
Adjusting Stringer Width (only aluminum truck beds and SLT beds) Before installation, verify truck frame width. The truck frame should measure roughly 34", 37-5/8" or 42", depending on make and year of truck. Outside surfaces of the stringers must match truck frame width. On most trucks, the 1/2" rear receiver hitch plates that drop from the stringers will overlap the truck frame at the rear and at installation they will be bolted to the truck frame. Therefore, the stringers need to be just wide enough to allow the 1/2" plates to clear the truck frame. Even if the stringers are already in the correct position, the hitch bolts and the bed mounting bolts may need to be temporarily loosened to allow the bed to freely slide over the rear of the truck frame.

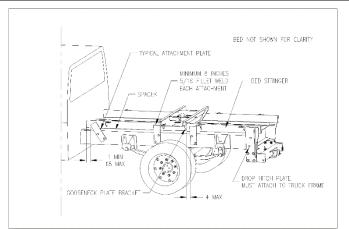
On some trucks it will be necessary to adjust stringer width. First, remove the (8) 5/8" bolts and remove the receiver hitch assembly and spacer plates. Next, remove the 1/2" bolts that attach stringers to the gooseneck plate and to the

gooseneck plate and to the aluminum bed. The aluminum bed mount brackets and gooseneck plate have holes for all 3 width settings. Move stringers to the appropriate location and reinstall 1/2" hardware.

The drawing on this page shows the rear receiver hitch and how to position it and the spacer plates to match the truck frame width. "Hitch A" (34" wide) can only be used in the 34" setting and does not use spacer plates. "Hitch B" (41" wide) is used for the 37-5/8 and the 42" setting and uses spacer plates. As the drawing shows, the 1/8" spacer plate on each side can be removed as needed to exactly match the truck frame width.

Reinstall and tighten hardware. Torque nuts to 65 ft. lbs. for 1/2" hardware and 110 ft lbs. for 5/8" hardware.





Position the bed on top of the truck frame. There should be a 3" gap between the truck bed and the cab. (This is the truck OEM recommended minimum distance) Stringers will need to be spaced off the frame 1-1/2" to allow adequate clearance for vehicle components operating under the bed. Refer to the truck manufacturer's Body Builder Guide for spacer recommendations. Check for proper clearance to vehicle components located under the bed.

Determine the stringer attachment points on your vehicle. Attachment components are not supplied. The 30k gooseneck ball plate requires each stringer to be attached to the vehicle frame a minimum of four places. The 26k gooseneck ball plate requires each stringer be attached in three places. The front attachment must locate between 1 and 18 inches from the end of the stringer. The center attachments must be located from 0 to 4 inches from each end (front and rear) of the gooseneck ball plate for 26k ball plate. One attachment point under the gooseneck ball plate for 26k ball plate. The rear attachment must be 4 inches or less from the truck bed rear drop member.

Each attachment should be a minimum 3/8 inch thick hot rolled steel plate. Do not trim, notch or alter attachment plates in any way that would weaken the attachment joint. The plates should be welded to the stringers with a minimum of 8 inches of 5/16 fillet weld. Observe safe weld procedures. The plates should be bolted to the truck frame. Most frames have existing holes that can be used. If it is necessary to drill holes in the truck frame, refer to the truck Manufacturer's Body Builder Guide for allowable size and location for holes. Each plate will require a minimum of two 5/8" Grade 5 bolts. Bolts may be located no closer than 4 inches on-center and 1 inch from any edge of the attachment plates or the rear hitch plate.

#### Headache Rack Height Adjustment (only aluminum truck beds)

If the headache rack is too tall for your truck, it can be lowered 2-1/2". Remove the 2-1/2" formed riser channel by removing the 8 bolts that secure it. Remove the 4 bottom bolts on each side that bolt the diamond plate headache rack gusset to the headache rack mounts. Lower the headache rack down to the bed and reinstall end bolts. Re-install the 4 bolts that hold the headache rack panel to the bed.

#### Gooseneck Ball Plate Adjustment (only aluminum truck beds)

When adjusting the stringers to match frame width you will need to un-bolt the gooseneck ball plate. After the stringers have been adjusted to the correct width the gooseneck ball plate should then be reattached using the same 1/2" hardware and torque to 65 ft. lbs. The ball should be oriented, so it is closer to the headache rack, this is to provide proper weight distribution of the trailer tongue weight.

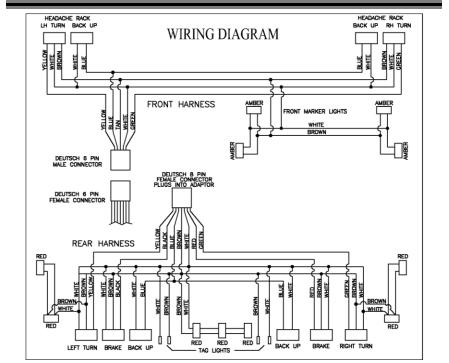
#### Trailer Electrical Socket (only aluminum truck beds)

Hillsboro extruded floor aluminum truck beds are equipped with two holes in the gooseneck ball plate. One of these holes is to be used for running a pigtail with a trailer electrical socket on the end. This pig tail should be 1 to 2 foot long so that it can be coiled in the ball plate box and covered with

the aooseneck hitch lid when it is not being used. The provided grommet should be used in the hole selected for the pigtail, also zip ties should be used on both sides of the grommet to keep the desired length of plug in the ball plate box to prevent dragging. When a trailer is attached route the pigtail so that is not damaged by the safetv chains or trailer coupler.



## 5. WIRING



**NOTE:** Observe all vehicle manufacturer recommendations when working with or connecting to vehicle electrical system. Keep all lights turned off when making electrical connections.

This harness is designed for either combined or separate stop/turn signals. To connect to the harness, all trucks require a make specific adaptor. To purchase an adaptor, contact the selling dealer or Hillsboro Industries. **Please refer to the chart on page 13-15 for adapter part numbers.** 

All wires must be connected for all lights to function. Wire color and function descriptions for separate and combined turn/stop lamps can be found on the following page.

**NOTE:** On newer Ram trucks (box removal), all truck harness wires cut during box removal must be connected to a corresponding light in the bed. Failure to do so may result in a "light out" message on the dash.

Verify that vehicle lighting systems function properly and comply with FMVSS 108 and vehicle manufacturer recommendations.

|              |                    | Separate Stop/Turn              |
|--------------|--------------------|---------------------------------|
| Color        | Combined Stop/Turn | (2003-2005 Dodge, 2003-2007 GM) |
| White        | Ground             | Ground                          |
| Brown        | Marker Rear        | Marker Rear                     |
| Tan          | Marker Front       | Marker Front                    |
| Blue         | Backup             | Backup                          |
| Green        | RH Turn/Brake      | RH Turn                         |
| Yellow       | LH Turn/Brake      | LH Turn                         |
| Red          | RH Turn/Brake      | Brake                           |
| Black or Pur | ple LH Turn/Brake  | Brake                           |

\*When using Hillsboro wiring adapters with '07-14 GM trucks, the red and black (or purple) wire are not used. If hardwiring an '07 and newer Dodge Box delete truck, the red and black (or purple) wires can be used. In these cases, the middle oval light will only function as a marker light. If the red and black (or purple) wires are connected, all six oval lights will be stop/turn and may exceed the maximum current capacity of the truck circuit.

#### LED LIGHTING WITH HILLSBORO TRUCK BEDS

#### Turn Signal Fast Flash Rate

Because LEDs draw significantly less current than traditional incandescent lamps (as low as 1/10<sup>th</sup>), using LED lights in a Hillsboro Truck bed can cause a fast flash rate of the turn signal circuits. The fast flash rate can be corrected in a couple of different ways depending on the make and year of the truck. Please **refer to the tables on the following pages** for more information.

#### **LED Resistor Harness**

Please **refer to the tables on the following pages** to see if resistor harnesses are needed to correct the turn signal fast flash rate.

Hillsboro Industries has developed a LED resistor harness that plugs in between the LED light and the Hillsboro truck bed wiring harness. The resistor harness contains a 6-ohm 50-watt power resistor. The resistor draws the same current (appx. 2 amps) as the original incandescent light and therefore the turn signals flash at the correct rate.

To install the resistor harness, plug it in between the LED stop/turn/tail light and the Hillsboro truck bed harness. The power resistor gets very hot during operation and needs to be mounted to a metal surface (preferably aluminum) which acts as a heat sink. Make sure that all wiring is kept clear of the resistor and heat sink.

| Hillsboro Industries - GM Adapter and LED Reference Chart  | <b>Adapt</b>          | er and LED              | ) Reference Chart   |                        |
|--|-----------------------|-------------------------|---|------------------------|
|  |                       |                         |   | Updated 10-9-19        |
|  | Wiring Ha             | Wiring Harness Adapter  | LED Light Compatibility   | lity                   |
|  | HI Part #             | HI Part # Plug and Play | Preferred Method  | <b>Resistor Method</b> |
| GM/Chevrolet Pickup Box Removal (2500+)  |                       |                         |   |                        |
| 1999-2002  | 233820 <sup>1,2</sup> | Yes                     | Replace Flasher <sup>4</sup>                                    | 2 Resistors            |
| 2003-2007  | 233820 <sup>1</sup>   | Yes                     | Replace Flasher <sup>s</sup>                                    | 2 Resistors            |
| 2007-2014  | 233820 <sup>1</sup>   | Yes                     | Reprogram Computer <sup>6</sup>                                 | 4 Resistors            |
| 2015   | 233821 <sup>7</sup>   | Yes                     | Reprogram Computer <sup>6</sup>                                 | 4 Resistors            |
| 2016-2019  | 233822 <sup>8</sup>   | Yes                     | Reprogram Computer <sup>6</sup>                                 | 4 Resistors            |
| 2020-Present   | 233824                | Yes                     | Reprogram Computer  | 4 Resistors            |
| GM/Chevrolet Cab/Chassis   |                       |                         |   |                        |
| 1999-2002  | 233820 <sup>1,2</sup> | Yes                     | Replace Flasher <sup>3</sup>                                    | 2 Resistors            |
| 2003-2007  | 233820 <sup>1</sup>   | Yes                     | Replace Flasher <sup>s</sup>                                    | 2 Resistors            |
| 2007-2014  | 233820 <sup>1</sup>   | Yes                     | LED Ready   |                        |
| 2015   | 233821 <sup>7</sup>   | Yes                     | LED Ready   |                        |
| 2016-2019  | 233822 <sup>8</sup>   | Yes                     | LED Ready   |                        |
| 2020-Present   | 233824                | Yes                     | LED Ready   |                        |
| 1. GM adapter plugs directly into rear chassis harness that was originally plugged into right hand side of Rear Junction Block           | arness that           | was originally plu      | gged into right hand side of Rear Junct                         | ion Block.             |
| 2. On a few trucks(1999-2001 and some 2002), the blue wire on pin "C" needs to be moved to pin "F" for the backup lights to be           | the blue wire         | e on pin "C" need       | s to be moved to pin "F" for the backup                         | o lights to be         |
| powered.   |                       |                         |   |                        |
| <ol> <li>Replace standard flasher with LED compatible flasher.</li> <li>Online. Also can use Grote 44090 available from NAPA.</li> </ol> | <u>د</u> .            | l recommends Tri        | H recommends Tridon EP27 from Advanced Auto Parts, Autozone or  | Autozone or            |
| 4. Replace standard flasher with LED compatible flasher.   |                       | I recommends Tri        | HI recommends Tridon EP29 from Advanced Auto Parts, Autozone or | Autozone or            |
| online. Also can use Grote 44120 available at NAPA   | VAPA.                 |                         |   |                        |
| 5. Replace standard flasher with LED compatible flasher module. HI recommends 10383322 from GM/Chevrolet. Also can use Tridon            | e flasher mo          | dule. HI recomme        | ands 10383322 from GM/Chevrolet. Al-                            | so can use Tridon      |
| LM487 from NAPA or Autozone.   |                       |                         |   |                        |
| 6. GM dealer must reconfigure the Body Control Module (BCM) to turn off the lamp out indication. The service bulletin (#81b) can be      | I Module (BC          | CM) to turn off the     | lamp out indication. The service bulle                          | tin (#81b) can be      |
| found at http://www.gmupfitter.com   |                       |                         |   |                        |
| 7. GM adapter plugs directly into Rear Lighting Junction Box the left (Blue) plug in the "L" slot and right (Grey) plug in the "R" slot. | Junction Bo           | the left (Blue) pl      | ug in the "L" slot and right (Grey) plug                        | in the "R" slot.       |
| The service bulletin (#113b) can be found at http://www.gmupfitter.com   | nmg.www//:o           | pfitter.com             |   |                        |
| 8. GM adapter plugs directly into GM wining harness. The service bulletin (#129) can be found at http://www.gmupfitter.com               | ness. The se          | ervice bulletin (#1:    | 29) can be found at http://www.gmupfit:                         | ter.com                |

GM ADAPTER AND LED REFERENCE CHART

|  |                               |                         |   |                        | FOR  |
|--|-------------------------------|-------------------------|---|------------------------|------|
| Hillsboro Industries - Ford Adapter and LED Reference Chart  | Ford Ad                       | apter and L             | ED Reference Chart                      |                        | RD A |
|  |                               |                         |   | Updated 3-21-17        | DA   |
|  | Wiring Ha                     | Wiring Harness Adapter  | LED Light Compatibility                 | lity                   | РТЕ  |
|  | HI Part #                     | HI Part # Plug and Play | Preferred Method                        | <b>Resistor Method</b> | R/   |
| Ford Pickup Box Removal (F250+)  |                               |                         |   |                        |      |
| 1999-2007  | 233810 <sup>1</sup>           | Yes                     | Replace Flasher <sup>2</sup>            | 2 Resistors            | ) L  |
| 2008-2010  | 233812 <sup>1</sup>           | Yes                     | Reprogram Computer <sup>3</sup>         | 2 Resistors            | ED   |
| 2011-2016  | 233813                        | Yes                     | Reprogram Computer <sup>4</sup>         | 2 Resistors            | R    |
| 2017-Present   | 233814                        | Yes                     | Reprogram Computer <sup>5</sup>         | 4 Resistors            | FE   |
| Ford Cab/Chassis   |                               |                         |   |                        | RE   |
| 1999-2007  | 233811                        | Yes                     | Replace Flasher <sup>3</sup>            | 2 Resistors            | NCI  |
| 2008-Present   | 233811                        | Yes                     | Yes, as shipped                         |                        | E C  |
| 1. May not be compatible if truck is equipped with back up camera  | uipped with b                 | ack up camera           |   |                        | НА   |
| 2. Replace standard flasher with LED compatible flasher. HI recommends Tridon EP27 from Advanced Auto Parts, Autozone  | ompatible fla                 | sher. Hl recomm         | ends Tridon EP27 from Advanced Auto     | Parts, Autozone        | RT   |
| or online. Also can use Grote 44090 available from NAPA  | ailable from                  | NAPA.                   |   |                        |      |
| 3. Ford dealer must reconfigure the Smart Junction Box (SJB) to turn off the lamp out indication. The service bulletin Q-158R1   | art Junction                  | Box (SJB) to turn       | off the lamp out indication. The servic | e bulletin Q-158R1     |      |
| can be found at https://fordbbas.com/bulletins   | ulletins                      |                         |   |                        |      |
| <ol> <li>Ford dealer must reconfigure the Body Control Module (BCM) to turn off the lamp out indication. The service bulletin Q-<br/>158R3 can be found at https://fordbbas.com/bulletins</li> </ol> | ty Control Mo<br>com/bulletin | odule (BCM) to tu<br>s  | rn off the lamp out indication. The ser | ice bulletin Q-        |      |
| <ol> <li>Ford dealer must reconfigure the Body Control Module (BCM) to turn off the lamp out indication. The service bulletin Q-<br/>261R1 can be found at https://fordbbas.com/bulletins</li> </ol> | ty Control Mo<br>com/bulletin | odule (BCM) to tu<br>s  | rn off the lamp out indication. The sen | ice bulletin Q-        |      |
|  |                               |                         |   |                        |      |

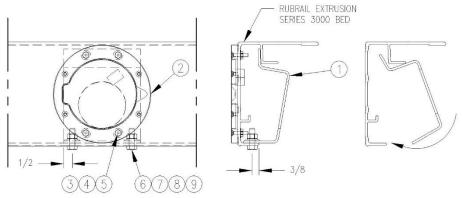
| Hillsboro Industrie  | s - Ram                        | Adapter and I  | Hillsboro Industries - Ram Adapter and LED Reference Chart  |                           |
|--|--------------------------------|--|---|---------------------------|
|  |                                |  |   | Updated 10-9-19           |
|  | Wiring F                       | Wiring Harness Adapter   | LED Light Compatibility   | ility                     |
|  | HI Part #                      | Plug and Play  | Preferred Method  | Resistor Method           |
| Ram Pickup Box Removal (2500+)   |                                |  |   |                           |
| 1999-2002  | 233803 <sup>1</sup>            | No   | Replace Flasher <sup>2</sup>  | 2 Resistors               |
| 2003-2005  | 233803 <sup>1</sup>            | N  | Install (4) Resistor Hamesses <sup>3</sup>  | 4 Resistors               |
| 2006-2009  | 233803 <sup>1</sup>            | Q  | Install (2) Resistor Harnesses <sup>4</sup>   | 2 Resistors               |
| 2010-2011  | 233803 <sup>1</sup>            | N  | Reprogram Computer <sup>5</sup>   | 2 Resistors               |
| 2012-Present   | 233803 <sup>1</sup>            | No   | Multiple Methods <sup>6,7,8</sup>   | 2 Resistors               |
| Ram Cab/Chassis  |                                |  |   |                           |
| 2006-2009  | 233830                         | Yes  | Install (2) Resistor Harnesses <sup>4</sup>   | 2 Resistors               |
| 2010-2011  | 233830                         | Yes  | Reprogram Computer <sup>5</sup>   | 2 Resistors               |
| 2012-2015  | 233830                         | Yes  | Multiple Methods <sup>6,7</sup>   | 2 Resistors               |
| 2016-Present   | 233830                         | Yes  | LED Ready   |                           |
| 1. 233803 is a generic adapter with butt connectors to hard wire to truck.                                     | t connectors                   | to hard wire to truck.   |   |                           |
| <ol> <li>Replace standard flasher with LED compatible Also can use Grote 44090 available from NAPA.</li> </ol> | compatible fla<br>m NAPA.      | asher. HI recommend  | <ol> <li>Replace standard flasher with LED compatible flasher. HI recommends Tridon EP27 from Advanced Auto Parts, Autozone or online.<br/>Also can use Grote 44090 available from NAPA.</li> </ol>   | Autozone or online.       |
| 3. Ram recommends using a power re-  | sistor that ma                 | atches the original lan  | 3. Ram recommends using a power resistor that matches the original lamps resistance. Hillsboro part 233805 is a resistor hamess that  | resistor hamess that      |
| plugs between the light and the truck bed harness<br>for I H and RH turn and 2 on the ston lamo circuit        | ed harness.                    | 2003-2005 trucks ha  | plugs between the light and the truck bed harmess. 2003-2005 trucks have separated stop and turn signals and require 4 resistors, 1each for I H and RH turn, and 2 on the stop lamb circuit   | uire 4 resistors, 1each   |
| 4. In order to use LED lights, Ram reco  | ommends us                     | ing a power resistor th  | 4. In order to use LED lights, Ram recommends using a power resistor that matches the original lamps resistance. Hillsboro part 233805  | Hillsboro part 233805     |
| is a resistor hamess that plugs betwee   | en the light ar                | nd the truck bed hame  | is a resistor hamess that plugs between the light and the truck bed hamess. 2 resistors are required, 1 for LH and 1 for RH turn signals.   | 1 for RH turn signals.    |
| <ol><li>Ram dealers can turn "off" bulb outs<br/>file in the TIPM module. For more info</li></ol>              | ge detection<br>visit http://w | <ul> <li>This is done by hav<br/>ww.rambodybuilder.co</li> </ul> | 5. Ram dealers can turn "off" bulb outage detection. This is done by having a dealer add the sales code "LBQ" to the vehicle configuration<br>file in the TIPM module. For more into visit http://www.rambodybuilder.com/2010/docs/dcdm/dcdmextlitmod.pdf | he vehicle configuration  |
| 6. Ram has multiple methods from gro<br>commercial/body-builders-guide.html                                    | unding a wire                  | e to dealer reprogramn   | <ol><li>Ram has multiple methods from grounding a wire to dealer reprogramming. For detailed info visit https://www.ramtrucks.com/ram-<br/>commercial/body-builders-guide.html</li></ol>  | ntrucks.com/ram-          |
| 7. Some new Ram trucks come with B   | ulb out detec                  | ction on the back up c   | 7. Some new Ram trucks come with Bulb out detection on the back up circuit, to correct this we need to install additional resistors on the  | litional resistors on the |

Ram wining, on the left and right back up lamp circuits. For detailed info visit http://www.rambodybuilder.com/

# Truck Bed

#### 6. FUEL FILLER ASSEMBLY INSTALLATION

## 3000 and 4000 Series beds



- Always wear protective clothing and eyewear when operating tools.
- Observe safe tool operation as specified in tool operating instructions.
  - Keep all ignition sources away from vehicle when working with the fuel tank filler pipe
  - Fuel tank filler pipe must be installed according to vehicle manufacturer requirements.
  - · Follow all warnings and cautions within the vehicle manual.

Locate and identify all components supplied with the kit.

| PartQuantity |   | Description                   |
|--------------|---|-------------------------------|
| 1            | 1 | Filler Plate (Fuel or DEF)    |
| 2            | 1 | Aluminum Fuel Door            |
| 3            | 4 | #10-24x1 Flat Hex Head Screws |
| 4            | 4 | 3/16 Flat Washer              |
| 5            | 4 | 3/16 Lock Nut                 |
| 6            | 2 | 5/16x1 Hex Head Bolt          |
| 7            | 2 | 5/16 Hex Nut                  |
| 8            | 2 | 5/16 Lock Washer              |
| 9            | 2 | 5/16 Flat Washer              |

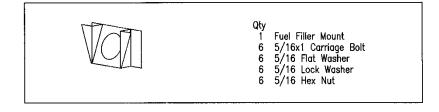
Determine the desired location along the side of the bed for the fuel filler installation. Location must avoid interference with bed cross members and side rail hinges. Cut a 4-1/8" (min.)-4-1/2" (max.) diameter hole in the side of the bed rub rail located on fuel filler centerline and centered vertically on the rub rail. Remove all burrs remaining after cutting.

Position fuel door against side of rub rail, centered on hole cutout. Make sure door is rotated so that the door will open toward the front of the truck. Using the holes in the fuel door as a guide, drill (4) 3/16" holes in the rub rail. Remove door and drill out holes to 7/32". Install the door to the rub rail using provided hardware.

Rotate filler plate into position as shown below. Center filler plate with fuel door. Drill 2 holes up through bottom rub rail lip and filler plate. Install 5/16" hardware to attach filler plate.

Fasten fuel filler pipe flange to filler mount as required by vehicle manufacturer specifications.

# 2000, 2500 and 3500 Series beds



WARNING: Keep all ignition sources away from vehicle when working with Fuel Tank Filler Pipe.

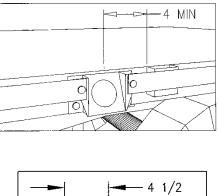


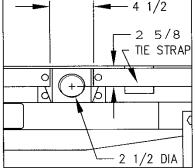
**<u>CAUTION:</u>** Fuel Tank Filler Pipe must be installed according to vehicle manufacturer requirements. Follow all warnings and cautions within the vehicle manual.

Locate and identify all components supplied with the Fuel Filler Mounting Kit. Hardware is packaged in a padded envelope. Determine the desired location along the side of the bed for the fuel filler installation. Location must avoid interference of fuel tank fill tube with bed crossmembers and be no closer than 4 inches to any stake pocket. Mark selected filler centerline on tie strap and bed. Remove 4 1/2 inches of tie strap centered on fuel filler centerline. Cut a 2 1/2 inch diameter hole in the side of the bed located on fuel filler centerline and 2 5/8 inches downward from the top surface of bed. Remove all burrs remaining after cutting.

Insert fuel tank fill pipe through hole in bed side. Connect fuel tank fill pipe to tank according to vehicle manufacturer requirements.

Slide fuel filler mount down from the top behind tie strap and over fuel fill pipe, until the top of the mount is flush with the top of tie strap. Clamp fuel filler mount in place. Drill upper 3/8 inch holes through tie strap, both flanges of filler mount, and bed. Upper holes are centered vertically on the tie strap and 1/2 inch from cut edge, 2 places. Drill lower 3/8 inch holes

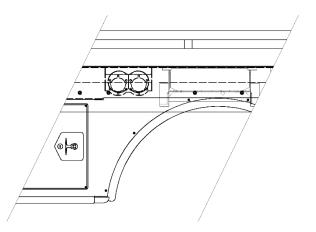




through filler mount and bed. Lower holes are 3/8 inch from bottom and edge of filler mount, 2 places.

Install carriage bolts from outside. Install flat washer, lock washer and hex nuts, 6 places. Tighten nuts to approximately 13 ft. lbs. Fasten fuel filler pipe flange to filler mount as required by vehicle manufacturer specifications.

# STA beds





**WARNING:** Keep all ignition sources away from vehicle when working with Fuel Tank Filler Pipe. Installation requires cutting, grinding, and painting.



<u>Caution</u>: Fuel Tank Filler Pipe must be installed according to vehicle manufacturer requirements. Follow all warnings and cautions within the vehicle manual.

Determine the desired location along the side of the bed that closely aligns with the fuel/ DEF tank. Remove the knockout panel in the desired location.

Sand or grind the tabs left behind from the knockout panel smooth. Use primer and paint of matching color to touch up the broken tab locations and the fuel/ DEF mounting bracket.

Install the fuel filler tube (not supplied by Hillsboro Industries) per instructions supplied with filler tube.

# <u>GII beds</u>



**WARNING:** Keep all ignition sources away from vehicle when working with Fuel Tank Filler Pipe. Installation requires cutting, grinding, and painting.



<u>Caution:</u> Fuel Tank Filler Pipe must be installed according to vehicle manufacturer requirements. Follow all warnings and cautions within the vehicle manual.

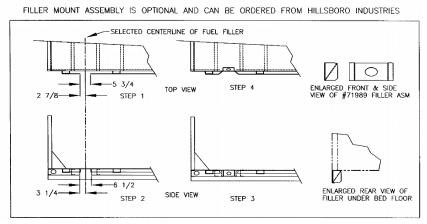
Determine the desired location along the side of the bed that closely aligns with the fuel inlet of the tank to install the fuel fill dish. Location must avoid interference of fuel tank fill tube with bed crossmembers and be no closer than 2" to any stake pocket. Cut a 4-15/16" diameter hole in the left-hand side of the bed as shown in illustration above. Top edge of the hole should be a minimum of 1" below the top surface of the bed.

Insert fill dish into hole and verify fit. Remove filler and paint all surfaces damaged by cutting. Use primer and paint of matching color.

Re-insert the fuel fill dish into hole. Install the fuel filler tube (not supplied by Hillsboro Industries) per instructions supplied with filler tube. The fuel fill dish may be rotated to adjust the angle/slope that the fuel fill tube exits the dish.

Secure fuel fill dish with hardware through the four mounting holes in the flange of fuel fill dish.

# GI and SLT beds



**WARNING:** Keep all ignition sources away from vehicle when working with Fuel Tank Filler Pipe. Installation requires cutting, grinding, welding and painting.

**<u>Caution</u>**: Fuel Tank Filler Pipe must be installed according to vehicle manufacturer requirements. Follow all warnings and cautions within the vehicle manual.

#### Installation Steps

1. Select a location midway between two crossmembers that closely aligns with the fuel inlet of the tank to install the Fuel Filler Assembly. Cut a 5 3/4" length out of the left-hand tie strap as shown in Step 1 in illustration above. Grind ends of tie strap smooth.

2. Cut a 6 1/2" section out of the left-hand flange of the bed as shown in Step 2. Grind edges smooth.

3. Place #71989 Filler Assembly below bed and push upward/outward against the flange, centered in the opening. See Step 3 and enlarged rear view. Weld in place.

4. Bend a 2 5/8" length of each cut end of tie strap towards the bed as shown in Step 4. Weld in place.

5. Paint all surfaces damaged by cutting and welding. Use enamel primer and paint of matching color.

6. Install the fuel filler tube (not supplied by Hillsboro Industries) per instructions supplied with filler tube.

# 7. MANUFACTURER'S WARRANTY

#### ALUMINUM TRUCK BED PRODUCTS FROM HILLSBORO INDUSTRIES

Hillsboro Industries (HI) warrants the aluminum frame of its aluminum truck bed product line against structural failure (including weld failure) for (3) three years from the date of purchase by the original owner. This includes weld failures and failure of extrusions, decking and headache rack. All other items are warranted for 1 year or as covered by the items manufacturer.

Warranty on any HI product used by the customer in the transportation of goods for compensation or in rental enterprises will be one-half of the above-stated length.

This warranty applies to the original owner only. All warranty claims must be submitted through an authorized HI dealer for processing.

Hillsboro Industries will not be responsible for any damage caused by the abuse, misapplication or misuse of their products.

Any part or workmanship, subject to this warranty, if defective, as determined solely by HI, will be repaired or replaced, at the option of HI, without charge. Photos may be required by HI to assess extent of damage. If repairs or replacements are made at a location other than HI, reimbursement to the original owner will be made at an amount not to exceed the amount HI would charge for the parts and labor. All parts for warranty consideration must be returned to Hillsboro Industries\* freight prepaid. All warranty claims must be filed with HI no later than 30 days after the warranty period expires.

COMPONENTS NOT MANUFACTURED BY HI MAY BE COVERED BY THE WARRANTY OF THEIR RESPECTIVE MANUFACTURERS, BUT ARE NOT COVERED BY THE HI WARRANTY.

#### STEEL TRUCK BED PRODUCTS FROM HILLSBORO INDUSTRIES

Hillsboro Industries (HI) warrants the steel frame of its steel truck bed product line against structural failure (including weld failure) for (1) one year from the date of purchase by the original owner. This includes weld failures and failure of decking and headache rack.

Paint carries a (2) two-year warranty - offered directly from PPG on their Delfleet Essentials line. Qualifying claims will be processed by one of over 200 qualified PPG Warranty Specialists located across the nation. Paint warranty does not cover wear, deterioration, damage from cleaning solvents, road debris, rock chips, salt, sand or other road/weather conditioners.

Warranty on any HI product used by the customer in the transportation of goods for compensation or in rental enterprises will be one-half of the above-stated length.

This warranty applies to the original owner only. All warranty claims must be submitted through an authorized HI dealer for processing.

Hillsboro Industries will not be responsible for any damage caused by the abuse, misapplication or misuse of their products.

Any part or workmanship, subject to this warranty, if defective, as determined solely by HI, will be repaired or replaced, at the option of HI, without charge. Photos may be required by HI to assess extent of damage. If repairs or replacements are made at a location other than HI, reimbursement to the original owner will be made at an amount not to exceed the amount HI would charge for the parts and labor. All parts for warranty consideration must be returned to Hillsboro Industries\* freight prepaid. All warranty claims must be filed with HI no later than 30 days after the warranty period expires.

COMPONENTS NOT MANUFACTURED BY HI MAY BE COVERED BY THE WARRANTY OF THEIR RESPECTIVE MANUFACTURERS, BUT ARE NOT COVERED BY THE HI WARRANTY.

#### HOW TO FILE FOR WARRANTY

- First contact the selling dealer and process the claim through the dealer.
- Any HI product found to have defective material or workmanship must be serviced or corrected through an authorized HI dealer. All warranties must then be authorized by a Hillsboro Industries factory representative. Hillsboro Industries will not make reimbursements for any repairs and or adjustments made without prior written consent from the HI factory.
- Always provide the HI serial number of the truck bed

HI neither assumes nor authorizes any person to create or assume for it any obligation or liability in connection with its products or to undertake any responsibility to any purchaser for representation or warranty made by a dealer beyond those expressly set forth herein.

HI shall not be held liable for consequential commercial damages resulting from any breach of this warranty or any other warranty, all of which are expressly disclaimed, for any delay in the performance of this warranty due to causes beyond its control.

THESE EXPRESS WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT ANY LIMITATION CONTAINED HEREIN IS PROHIBITED BY ANY STATE OR FEDERAL LAW, SUCH LIMITATION IS VOID.

For more information see your dealer or contact: \*Hillsboro Industries 220 Industrial Road Hillsboro, Kansas 67063 Call toll free 1.800.835.0209