

INSTALLATION OF R-230 REAR MOUNTING KIT 2019-PRESENT FORD RANGER

INSTALLATION SAFETY PRECAUTIONS

If any installation problems are encountered, please call G&B Specialties, Inc. for technical assistance before continuing with the installation process.



- Failure to heed to any of the following warnings could result in severe bodily injury and/or equipment damage.
- Read and understand this manual completely before attempting installation of the equipment.
- Installation instructions provided below only address the Rafna railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- Beware of all pinch points on the railgear and keep all parts of the body clear.
- Always disconnect the vehicle's battery when welding on the vehicle or railgear to protect the vehicle's electrical system.
- Ensure all removed components are given to the vehicle owner after the installation of the railgear. These components must be re-installed if the railgear is removed from the vehicle.
- Railway Company rules governing rail travel must always be observed.
- Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating (GAWR), or the wheel or tire load ratings are exceeded.

INSTALLATION OF REAR MOUNTING KIT

The following procedure details the installation of the rear mounting kit. The hardware required for this installation is listed in Table 1.

Table 1: Rear Mounting Kit Installation Parts

Part Number	Description	QTY
R-31352D	Rear Mounting Bracket, Drivers Side	1
R-31352P	Rear Mounting Bracket, Passengers Side	1
R-31360	Spacer, Tow Hitch/Bumper	2
R-31361	Washer, Frame	1
R-31362	Spacer, Frame	1
R-20042	Railgear Mounting Shim - 1/2" Thick	4
R-20041	Railgear Mounting Shim - 1/4" Thick	2
R-20043	Railgear Mounting Shim - 1" Thick	4
R-20040	Railgear Mounting Shim - 3/4" Thick	4
R-990KIT-285 (Railgear Mounting)	5/8" UNC Gr.8 Bolt X 2.50"	4
	5/8" UNC Gr.8 Bolt X 3.50"	4
	5/8" UNC Gr.8 Bolt X 4.50"	4
	5/8" UNC Gr.8 Bolt X 5.50"	4
	5/8" UNC Gr.8 Bolt X 6.50"	4
	5/8" Type- A Flat Washer Gr.8	8
	5/8" UNC GR.8 Nylock Nut	4
R-990KIT-468 (Mounting Bracket Install)	7/16" UNC Gr.8 Bolt X 4.25"	1
	7/16" UNC Gr.8 Bolt X 4.50"	1
	7/16" Type- A Flat Washer Gr.8	4
	7/16" UNC GR.8 Nylock Nut	2

1. Remove the original spare tire and spare tire heat shield from under the bed if so equipped. This will not be re-installed.
2. Remove the rear bumper.
3. Remove the tow hitch from the rear of the frame.
4. Place each mounting bracket against the underside and inside of the frame rails as shown. (Figure 1) Brackets should sit flush with the frame. The holes on the bottom of the bracket should line up with the bolt holes for the tow hitch.
5. The exhaust will need to be modified to allow the Passenger's Side mounting bracket to mount properly. Any modifications must comply with the Ford Motor Vehicle Regulations.
6. For the Driver's Side, note the hole that lines up with the bracket on the inside of the frame. This hole will need to be opened to 15/32" for mounting.

7. For the Passenger's Side, mark the location of the hole on the inside of the frame using the bracket as the template. **NOTE:** The tow hitch bolts can be installed to hold the bracket in place while marking hole location. Remove bracket and drill a 15/32" hole through the frame.
8. Attach each bracket to the inside of the frame as shown. (Figure 1) For the Driver's Side, install the frame spacer and frame washer. Frame spacer may need to be ground for proper fit in frame.
9. Using the OEM tow hitch bolts, install the tow hitch to the bottom of the brackets.
10. Ensure the mounting brackets are tight to the underside and inside of the frame and are aligned with each other.
11. Tighten and torque the Driver's Side 7/16" fastener to 70 ft-lbs dry. The frame spacer should prevent the frame from deforming, but if observed before reaching the 70 ft-pounds, stop torqueing.
12. Tighten the Passenger's Side 7/16" fastener to 40 ft-lbs dry or until the frame is observed deforming.
13. Apply thread locking compound and torque the OEM tow hitch bolts to factory specifications.
14. Remount the bumper using the bumper spacers if needed. If additional spacers/brackets are needed, fabricate such that the bumper mounts in the original location.
15. The supplied railgear mounting shims are to be used as required when mounting the railgear to the rear mounting brackets.

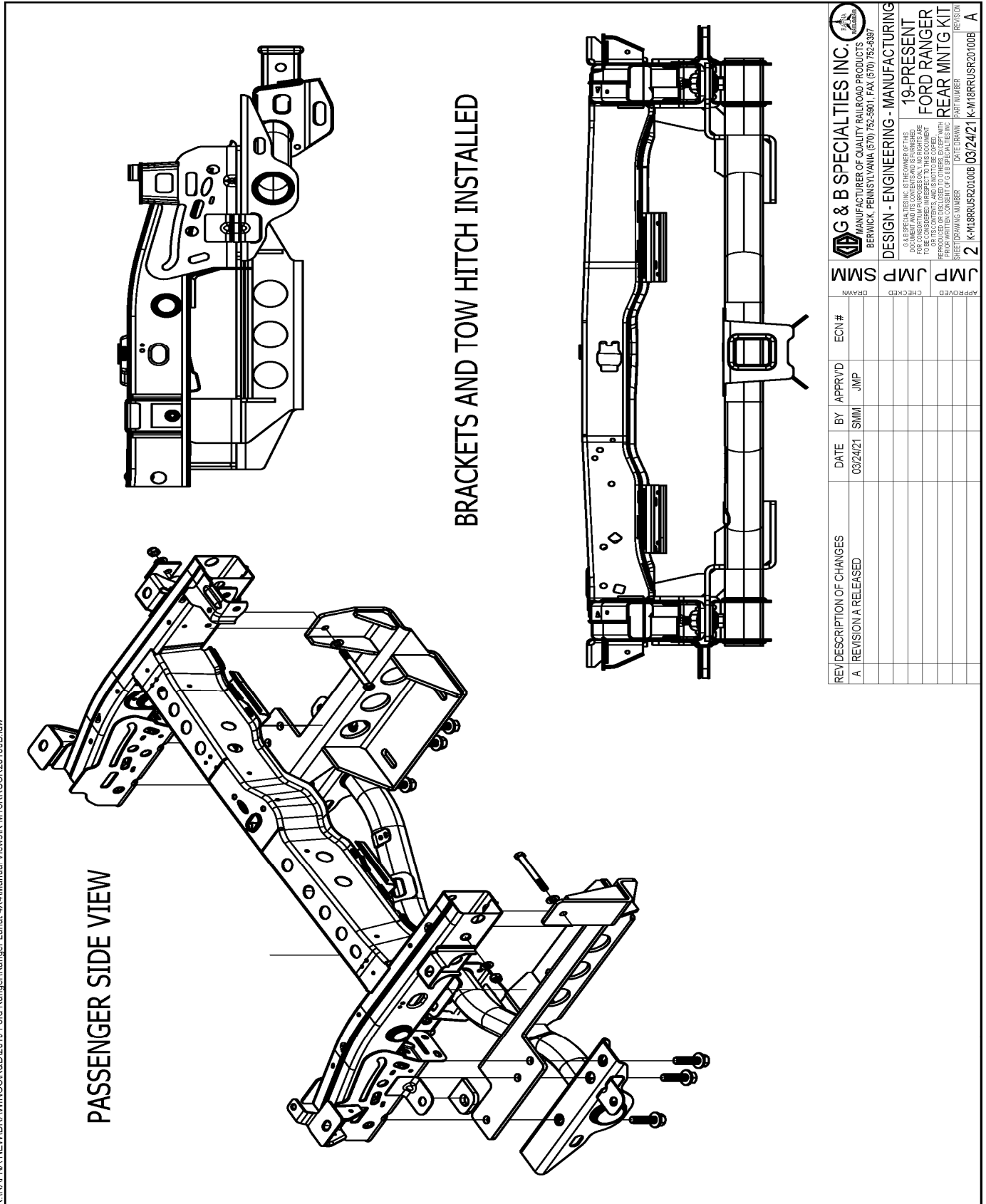


Figure 2: Alternate Installation Views

OPERATION AND SERVICE OF R-230 REAR MOUNTING KIT 2019-PRESENT FORD RANGER

OPERATION AND SERVICE SAFETY PRECAUTIONS

If any operating, services or parts problems are encountered, please call G&B Specialties, Inc. for technical assistance.



- Failure to heed to any of the following warnings could result in severe bodily injury and/or equipment damage.
- Read and understand this manual completely before attempting operation of the railgear equipped vehicle.
- Operating instructions provided below only address the Rafna railgear equipment. Applicable railway company procedures and policies must be adhered to.
- Railway company rules governing rail travel must always be observed.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.

OPERATION AND SERVICE OF REAR MOUNTING KIT

With the rear mounting kit installed on this vehicle, it may be operated as normal.

Never operate the vehicle if the Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating Front or Rear (GAWR), or the wheel or tire load ratings are exceeded.

The rear mounting kit must be serviced regularly to avoid damage to the equipment. Table 2 below provides the Recommended Service Schedule and Table 3 provides Standard Fastener Torque Values.

Table 2: Recommended Service Schedule

Service Required	Initial 100 km (62 Miles) of road and/or rail use	Daily	Weekly	Monthly
Inspect front/rear mounting kit fasteners (re-torque if required)		✓	✓	✓

Table 3: Standard Fastener Torque Values

Fastener Size	Torque Value (ft-lbs) Dry
1" UNC Gr. 8 Fasteners	250
3/4" UNC Gr. 8 Fasteners	175
5/8" UNC Gr. 8 Fasteners	150
1/2" UNC Gr. 8 Fasteners	100
7/16" UNC Gr. 8 Fasteners	70
3/8" UNC Gr. 8 Fasteners	40
1/4" UNC Gr. 8 Fasteners	12