

Instructions



2015-2024 FORD F150 2WD

5" REAR DROP KIT

PART NUMBER (PN): 6563

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CONTACT CUSTOMER SERVICE

Hours: M-F 8:00-4:30 (EST)

Email: support@umiperformance.com

Call: +1 (814) 343-6315

Address: 509 Hemlock Street
Philipsburg, PA 16866

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Included Parts

Tools Needed

Part Description	Quantity	PN
Front Leaf Spring Mount - Pass	1	6563PA
Front Leaf Spring Mount - Driver	1	6563DR
Adjustable Rear Lowering Shackle	2	6562
Flip Bracket	2	6563N
U-Bolt Clamp Plate	2	6563S
Rear Viking Shock Kit	1	6569
Bump Stop	2	8.9103
Rear Hardware Kit	1	6563-BK
Extended Length Center Pin	4	6563T
Wedge Shim	2	6563Q
Transmission Spacer	1	6563V

Floor Jack
Jack Stands
Metric socket set up to 27mm
SAE wrench set up to 3/4"
Metric wrench set up to 27mm
Hex Bit socket set
Snap Ring Pliers
Torque wrench up to 150 ft-lbs
Angle grinder with cut off wheel
Dead blow hammer

STEP 1: Rear Disassembly

A) Break the rear lug nuts loose.

IMPORTANT: Do not remove lug nuts, just break them loose.

A) Support the rear of the truck by the frame with properly rated jack stands. The rear differential needs to be able to move up and down. A floor jack can be used under the diff to raise and lower. 2 jacks are best so that the axle can be evenly supported. Ratchet straps can also be wrapped around the axle tubes from the frame if 2 jacks are not available. The rear diff will be totally disconnected from the springs so it's important to keep it stable while also being able to move it up and down.

B) Remove the wheels.

C) Raise the rear diff up slightly to remove the tension from the rear shocks. Using a 15mm wrench/18mm socket, remove the upper and lower shock thru bolts. These can now be set aside. They will be replaced with Viking double adjustable shocks. (Fig 1)

D) Remove the factory bump stops using a 13mm Socket.

E) Mark the leaf springs Driver and Passenger. It's important that the springs get reinstalled on the proper side of the truck.

F) 2015 to 2017 trucks may have a cable operated emergency brake. If yours does, unbolt the bracket from the driver side front spring hanger (10mm socket). Retain the hardware to be used for reinstallation. Remove the bolts securing the E-brake cables and brake lines to the spring saddles. These bolts are too long and will interfere with the flip bracket. Shorter replacement bolts are provided in the kit. (Fig 2)

G) Remove the U-bolts and axle clamps using a 21mm socket. (Fig 3)

H) Lower the floor jack under the rear axle to unload the leaf springs. Careful not to strain the brake lines. Create a couple inches of space between the spring perch and the leaf spring. If your truck has a spacer installed on the leaf, this can be removed now.

I) Unbolt and remove leaf springs from the front leaf spring mount. These bolts cannot be removed without pulling the fuel tank and exhaust. The easiest way to remove these bolts is to cut them. We recommend using a reciprocating saw with a carbide tooth blade. Using a 24mm wrench/socket, loosen the nut enough to expose the shank of the bolt under the head. Cut the bolt heads off being careful not to damage the fuel tank or frame. (Fig 4)

PRO TIP: You should be able to cut both bolts with a single carbide blade. We used 3 normal bimetals the first time we cut them. The carbide blade makes quick work of cutting through the bolts and is worth buying.

J) Support the front of the spring and remove the bolts from the front leaf spring mounts.

K) Using a 24mm socket and a 21mm wrench, remove the lower bolts from the rear leaf spring shackle. The leaf springs can now be removed from the truck with the shackles.



Figure 1: Rear Shock Removal



Figure 2: E-Brake cable mounts



Figure 3: U-Bolt Removal



Figure 4: Cut Front Spring Mount Bolt

INSTALLATION INSTRUCTION

FIGURES FOR REFERENCE

STEP 2: Rear Assembly

A) Now that both leaf springs are removed from the truck, the packs need to be modified to accept the flip bracket. Use a set of locking pliers to hold onto the leaf spring alignment pins (Fig 5) and remove the nuts with a 19mm socket. Remove the pins and set aside. These will be replaced with new pins. The nuts will be reused on the bottom side of the leaf spring.



Figure 5: Leaf Spring Alignment Pin Removal

B) Separate the springs and remove the factory shims. New offset shims are included in the kit. As you can see in (Fig 6), there are 2 different shims. 6563G is used in the middle of the spring and 6563H is used on the bottom. Install with the holes offset to the front of the truck. If you have a 2wd truck with a composite spring, the notch on 6563G is meant to fit onto the notch in the spring. Reinstall with supplied extended length center pins with the nuts on the bottom of the spring pack (Fig 7). Torque to 55 ft/lbs.

D) Install the new adjustable leaf spring shackles onto the leaf springs using the supplied M16 hardware (Fig 8). The bolt needs to be installed in the same direction as factory. Insert bolt from the frame side. Nut towards the outside. Do not torque yet.

C) Locate 6563DR and 6563PA in the kit (Fig 9). These are the new front leaf spring mounts. DR and PA refer to the side of the truck they are installed on. Mount the new leaf spring mounts in their corresponding location using the supplied hardware (Fig 9). 3/4-16 bolts (1-1/8" wrench) are used on the front hole and M18x2.5 (27mm wrench) are used where the spring formerly bolted up (Fig 10). Torque both to 200 ft/lbs.

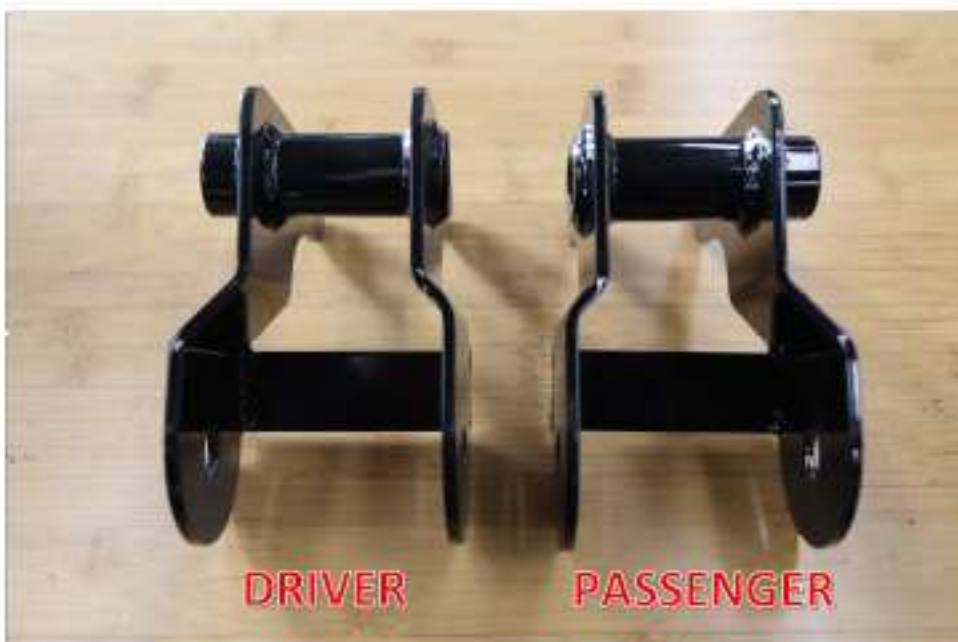


Figure 9: Front leaf spring mounts



Figure 6: Offset Shims



Figure 7: Spring Pack Reassembly



Figure 8: Adjustable Rear Shackles



Figure 10: Installed Front Leaf Spring Mount

INSTALLATION INSTRUCTION

FIGURES FOR REFERENCE

STEP 2 Cont:

E) We are now ready to reinstall the leaf spring packs. Raise the rear differential up so that there is enough clearance to get the spring packs back in under the axle (Fig 11). Place



Figure 11: Leaf Spring Install

F) Using the supplied hardware, bolt the spring onto the front spring mount (Fig 12.) and the adjustable rear shackle. The hole adjustment on the rear shackle changes the rear ride height approximately $\frac{1}{2}$ " per hole. The bottom hole is #1; top hole is #4. For a 5" drop in the rear, start on hole #2. The amount of drop will be more if your truck had a factory spacer block. Do not torque yet.

G.) Once both leaf springs are back in the truck, it is time to install the flip bracket and get the spring pack secured to the axle. Locate the flip brackets and inspect. As seen in (Fig 14), one side of the flip bracket is higher than the other. The higher side has a notch cut into it. The notched side faces the front or rear based on what spring pack you have. For a steel leaf spring, the notch faces the front. For a composite spring, the notch faces the rear. Insert the flip bracket up into the bottom of the spring saddle in the correct orientation based on which spring pack you have (Fig 16).

H) Place the angle shim onto the spring pack with the thick side to the front (Fig 15).



Figure 15: Install Angle Shim



Figure 12: Installed Front Leaf Spring Mount



Figure 13: Installed Adjustable Leaf Spring Shackle



Figure 14: Flip Bracket

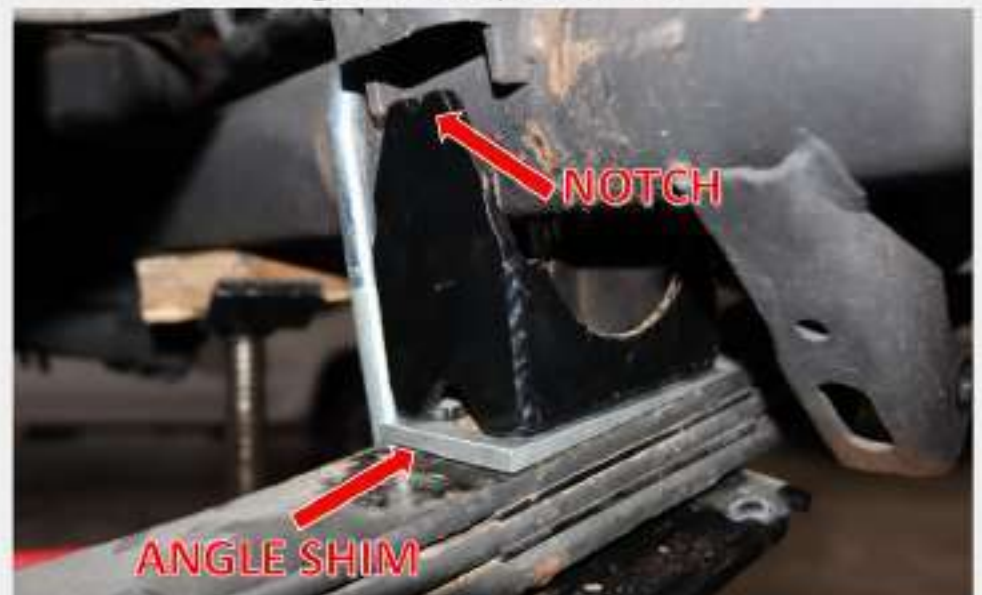


Figure 16: Flip Bracket Install

STEP 2 Cont:

I) Once you have both flip brackets and shims placed, you can lower the differential back onto the spring pack. Make sure to line up the front 2 holes of the flip bracket with the spring locating pins. Refer back to Figure 16 for correct placement.

J) Now that the axle is sitting on top of the leaf springs, the viking shocks can be installed. Unbox the shocks and locate 6563R shock spacers. Install the shock spacers into the shock eye bushings using a dead blow hammer. (Fig 17). Use a silicon based lubricant such as SuperLube on the spacers and shock bushings



Figure 31: Shock Spacers Install

K) Once the U-bolts and clamp plates are installed, there is very little clearance to install the driver side lower shock bolt. Due to this, the bolt needs to be installed before those items and from the outside in (Fig 18). Use the provided M12 hardware to bolt the shocks into the factory shock mounts. The shocks can be either body up or body down. This makes no difference in performance but we have found that body down provides the most clearance when using the factory shock mounts. On the 21+ year trucks, the driver side shock will interfere with the top mount if installed body up. Torque shock bolts to 90 ft/lbs.

PROTIP: Now is a good time to set a starting point on compression and rebound for the rear shocks. We have found that 8 clicks on compression and 12 clicks on rebound is a good starting point. Further adjustment may be needed based on desired shock characteristics.

L) Now that the axle is in place on top of the springs (Fig 19), the U-bolts and bottom clamp plate can now be installed. Set the U-Bolts over the axle tubes and lift the clamp plate up through the U-Bolts. The offset holes on the clamp plate go towards the front. See Fig 20.

M) Use the provided 5/8 nuts and washers to secure the U-bolts to the clamp plate. (Fig 21). Torque U-Bolts nuts to 125 ft/lbs.



Figure 18: Driver Side Lower Shock Bolt



Figure 19: Seated Axle tube



Figure 20: U-Bolt Clamp Plates



Figure 21: Install U-Bolts

INSTALLATION INSTRUCTION

STEP 2 Cont:

N) Use a 8mm hex key socket and the provided M10 button head bolts to install the new bump stops (Fig 22). Torque bump stop bolts to 50 ft/lbs.

O) The mounts securing the brake lines and E-brake cables can now be reinstalled with the new M10 hardware. (Fig 23)(Fig 23b)

P) For 2015-17 trucks with a cable actuated E-Brake, the driver side mount securing the cable to the front leaf spring mount can now be reinstalled. Before doing so, the mount needs to be notched out slightly to fit with the new leaf spring mount. Use an angle grinder and remove material slowly stopping to check fitment. See Fig 24 for notch location. Torque factory installed mount bolts to manufacturer specs.



Figure 24: Clearance E-Brake Cable Mount

Q) The flip brackets combined with the wedge shim have been designed to properly locate the rear axle to eliminate driveline vibrations.

For trucks with a 2 piece driveshaft, depending on the amount lowered, it may be necessary to relocate the carrier bearing. Our 6573 Carrier Bearing Bearing relocation kit will move the carrier bearing up to improve all angles on the 2 piece driveshaft and is adjustable in 1/4" increments. Please visit www.umiperformance.com for more information on this kit.

Included in this kit is a 1/4" spacer for the transmission mount. This can be used to fine tune the pinion angle if necessary.

If the truck exhibits any driveline vibration, take the truck to a reputable driveline shop immediately. **Do not drive the truck with severe driveline vibration as there could be damage done to the U-Joints.**

R) The wheels can now be reinstalled and the truck sat back on the ground. Be sure to torque lug nuts to 150 ft/lbs. Wheel stands will make the next step much easier but aren't absolutely necessary.

S) With the weight of the vehicle on the suspension, torque the rear spring hanger bolts as well as the front spring mount bolts. The rear bolts get torqued to 150 ft/lbs and the front gets torqued to 200 ft/lbs.

T) Once torqued, Grease the rear spring hanger until you can see grease squeeze out from between the Delrin bushing and factory mount (Fig 25).

FIGURES FOR REFERENCE



Figure 22: Install Bump Stops



Figure 23: E-Brake cable mounts



Figure 23b: Brake Line Mounts



Figure 25: Grease Rear Spring Shackle

