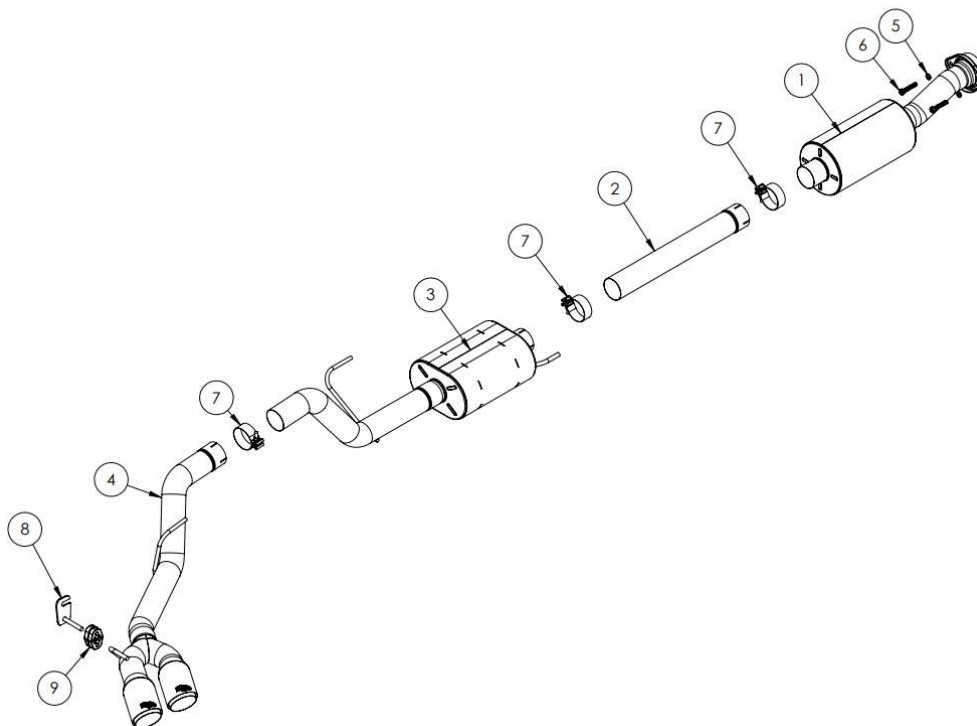




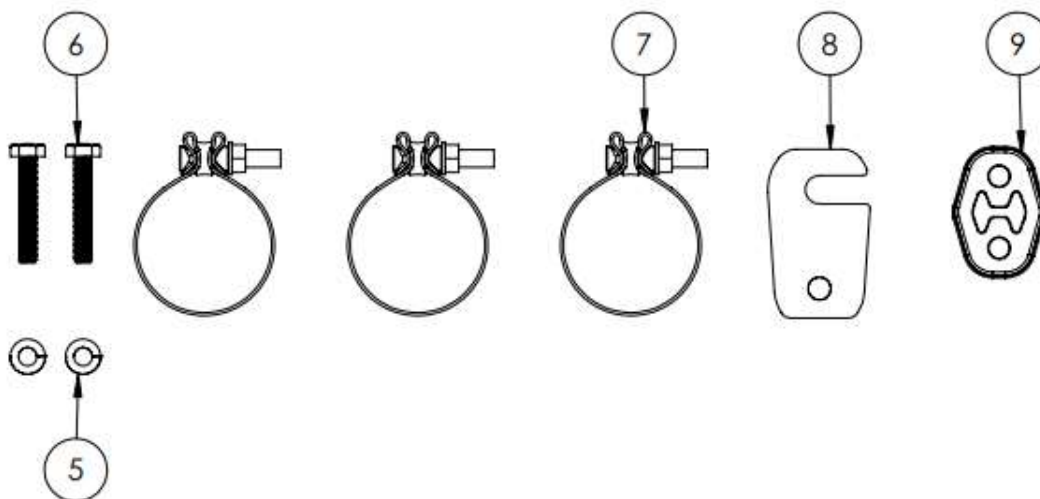
INSTALLATION INSTRUCTIONS:
2021+ FORD F-150 CREW CAB, 5.5' BED
CAT-BACK HOLESHOT EXHAUST
PART # 19650, 19653, 49653

Congratulations, you have purchased the finest exhaust system available for your truck. Your Vance & Hines exhaust is designed and crafted for performance, quality, and style. Please follow the instructions below, check exhaust system for missing or damaged parts and if you need any assistance, please contact our technical support line (562) 921-7461.



ITEM #	PART #	DESCRIPTION	QTY
1	F100RB	RESONATOR ASM	1
2	F105RB	MIDPIPE (CREW CAB SHORT BED)	1
3	F110RB	MUFFLER ASM	1
4	F113RM or F114RP-S or F115RB-S	TAILPIPE POLISHED TWIN SLASH ASM TAILPIPE BLACK ELIMINATOR ASM TAILPIPE BRUSHED ELIMINATOR ASM	1
5	A954HW	M10 X 1.5 SPLIT LOCK WASHER	2
6	A956HW	M10 X 1.5 EXHAUST FLANGE BOLT	2
7	A965HW	TORCA 3.50 DIAMETER BAND CLAMP	3
8	A887HW	FORD F150 LEAF SPRING PERCH	1
9	A962HW	EXHAUST HANGER ISOLATOR	1

HARDWARE:



TOOLS REQUIRED:

- 3/8" OR 1/2" DRIVE RATCHET
- 1/2" DRIVE TORQUE WRENCH
- 6" RATCHET EXTENSION
- 16MM DEEP SOCKET
- 17MM SOCKET
- 24MM DEEP SOCKET
- RESIDUE FREE CLEANING SOLVENT
- MUFFLER STANDS (OPTIONAL)
- SPRAY LUBRICANT (OPTIONAL)

STOCK EXHAUST REMOVAL:

STEP 1:

LOOSEN THE FACTORY EXHAUST CLAMP BETWEEN THE MUFFLER AND THE RESONATOR.



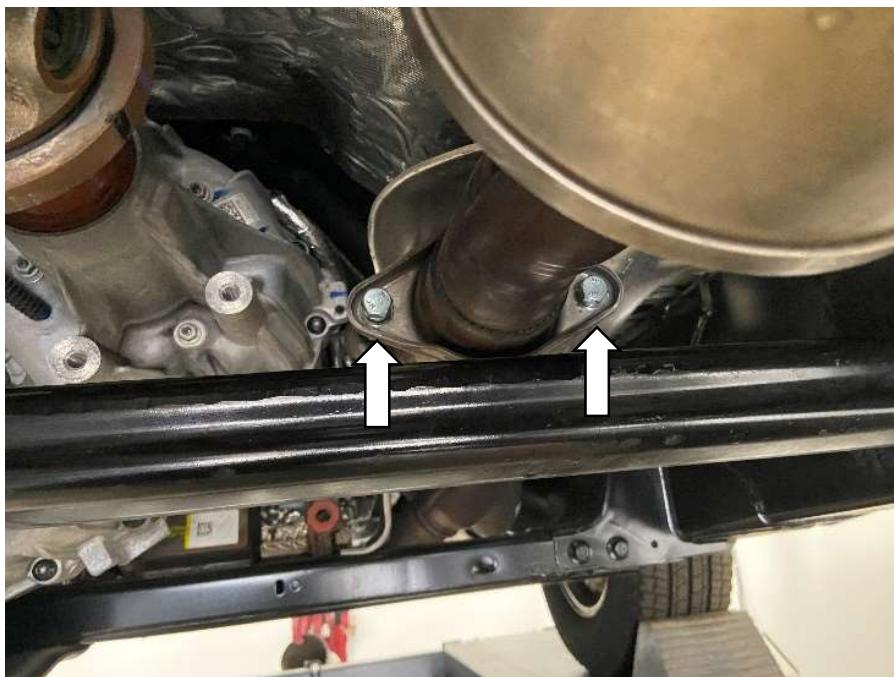
STEP 2:

PULL REAR EXHAUST SECTION OUT OF RUBBER HANGERS AND REMOVE FROM VEHICLE.
NOTE: IT MAY BE NECESSARY TO USE SPRAY LUBRICANT TO AID IN REMOVAL OF HANGER RODS.



STEP 3:

REMOVE THE TWO FACTORY BOLTS HOLDING THE RESONATOR IN PLACE AND REMOVE THE RESONATOR FROM VEHICLE



EXHAUST INSTALLATION:

STEP 1:

LOOSEN PASSENGER SIDE REAR SHACKLE TO LEAF SPRING BOLT AND NUT ENOUGH TO SLIDE SUPPLIED LEAF SPRING PERCH ONTO BOLT. LEAF SPRING PERCH NEEDS TO BE INSTALLED OUTBOARD OF REAR SHACKLE WITH HANGER ROD POINTING OUTWARD AND AWAY FROM SPARE TIRE.



STEP 2:

USING SUPPLIED M10 BOLT AND LOCK WASHER, CAREFULLY INSTALL RESONATOR ONTO OEM FLANGE. FINGER TIGHTEN ONLY AT THIS TIME. BE SURE THE SMALL DRAIN HOLE (LOCATED ON THE CENTER OF RESONATOR) IS FACING DOWNWARD. SUPPORT RESONATOR WITH A STAND OR ASSISTANT.



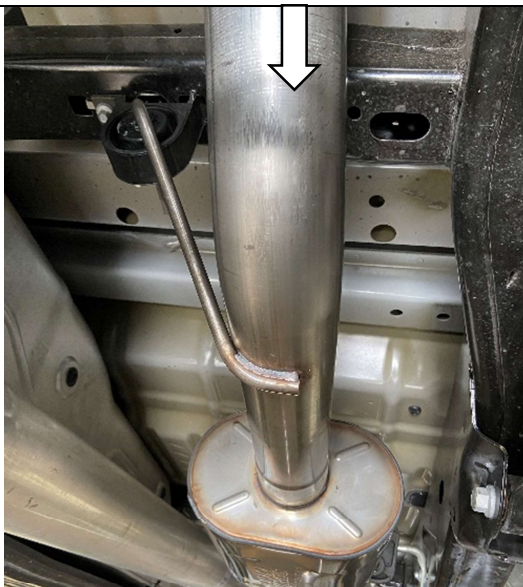
STEP 3:

INSTALL THE MIDPIPE INTO THE MUFFLER INLET ALONG WITH A CLAMP. LOOSELY SECURE CLAMP IN PLACE WITH NUT ACCESSIBLE.



STEP 4:

SLIDE CLAMP ONTO THE MIDPIPE INLET AND POSITION MUFFLER ASSEMBLY INTO POSITION BY RAISING THE MUFFLER OUTLET ABOVE AXLE AND THEN SLIDING THE MUFFLER HANGER RODS INTO THE OEM BUSHINGS. INSERT THE MIDPIPE INTO THE RESONATOR ASSEMBLY. NOTE: STAMPED MUFFLER LOGO FACES DOWNWARDS. USE OF SPRAY LUBRICANT ON OEM BUSHINGS WILL AID IN INSTALLATION

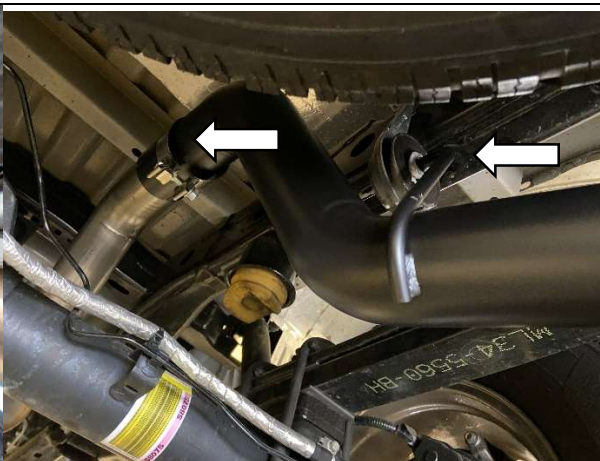


STEP 5:

SLIDE A CLAMP ON THE TAILPIPE INLET AND INSERT THE FORWARD HANGER INTO THE OEM BUSHING AND THEN TAILPIPE INLET INTO THE MUFFLER OUTLET.



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STEP 6:

INSTALL PROVIDED EXHAUST ISOLATOR ONTO THE REAR TAILPIPE HANGER ROD AND THE REAR LEAF SPRING PERCH. NOTE: USE OF SPRAY LUBRICANT WILL AID IN INSTALLATION.



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STEP 7:

ADJUST THE EXHAUST FOR PROPER ALIGNMENT. TIGHTEN BOLTS AND CLAMPS STARTING AT THE FRONT.

1. TORQUE RESONATOR M10 BOLTS
2. SNUG TORCA CLAMPS
3. TORQUE SHACKLE TO LEAF SPRING BOLT AND NUT
4. CHECK TIP ALIGNMENT AND ADJUST AS NECESSARY
5. TORQUE TORCA CLAMPS

BOLT TORQUE:

RESONATOR M10 BOLTS : 30 FT-LB

TORCA BAND CLAMPS: 43 FT/LBS

SHACKLE TO LEAF SPRING BOLT AND NUT: 173 FT-LB

AFTER INSTALLATION AND BEFORE STARTING VEHICLE, COMPLETELY CLEAN EXHAUST PIPES, MUFFLER, AND TIPS WITH CLEANING SOLVENT AND A CLEAN SOFT CLOTH. NOTE: ANY RESIDUE, OIL, OR FINGERPRINTS WILL STAIN THE FINISH WHEN THE METAL HEATS UP.