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PART #	DESCRIPTION
92003	22-23 F150 LIGHTNING REAR CAMBER CAM KIT

COMPONENTS INCLUDED	
(1) 194030 22 LIGHTNING CAM PLATE, DRV-OUTER (1) 194031 22 LIGHTNING CAM PLATE, DRV-INNER (1) 194032 22 LIGHTNING CAM PLATE, PASS-OUTER	(1) 194033 22 LIGHTNING CAM PLATE, PASS-INNER (1) 92003H 22-23 F150 LIGHTNING REAR CAMBER CAM HARDWARE KIT (1) 92003T 22-23 F150 LIGHTNING REAR CAMBER CAM TOOL KIT
HARDWARE INCLUDED	
(16) 605953 ROLL PIN, 7/32 X .500	
92003H REAR CAMBER CAM HARDWARE KIT	
(4) 605301 1/2-13 X 1.250 HHCS GR8 YZINC (4) 605322 1/2-13 C-LOCK NUT GRC CZINC	(8) 605330 1/2 SAE FLAT WASHER GR8 YZINC
92003T REAR CAMBER CAM TOOL KIT	
(1) 194030-TOOL DRILL TEMPLATE, LIGHTNING CAM KIT (1) 197007 BUSHING, LIGHTNING CAM KIT (1) 295001 HOLE SAW, 20MM X 3/8-24 (1) 295002 DRILL BIT, 1/4" X 6"	(1) 297080 MANDREL, HOLE SAW, 3/8-24 X 6.25" (1) 605132 3/8IN MIL SPEC WASHER .687X.385X.072, MS20002-6 (2) 605346 1/2-13 FINISH NUT
TOOLS REQUIRED	
JACK JACK STANDS PRY BAR SCREW DRIVER OR CLIP REMOVAL TOOL STRAP DRILL 11/32" DRILL BIT DIE GRINDER WITH CARBIDE BURR SMALL ANGLE SANDER	TORQUE WRENCH 8MM SOCKET / WRENCH 10MM SOCKET / WRENCH 15MM SOCKET / WRENCH 27MM SOCKET / WRENCH 30MM SOCKET / WRENCH 5/16 SOCKET / WRENCH 9/16 SOCKET / WRENCH
TECH NOTES	
N/A	



WARNING!

**** READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED SEVERE FRAME, SUSPENSION AND TIRE DAMAGE MAY RESULT TO THE VEHICLE!**

**** ICON VEHICLE DYNAMICS RECOMMENDS THAT YOU EXERCISE EXTREME CAUTION WHEN WORKING UNDER A VEHICLE THAT IS SUPPORTED WITH JACK STANDS.**

**** ICON VEHICLE DYNAMICS RECOMMENDS ALL INSTALLATION TO BE PERFORMED BY A PROFESSIONAL SHOP/SERVICE TECHNICIAN. PRODUCT FAILURE CAUSED BY IMPROPER INSTALLATION WILL NOT BE COVERED UNDER ICON'S WARRANTY POLICY.**

5. Secure the wheel/hub end of the arm from over drooping with a strap.

6. Loosen and remove the 2 arm pivot bolts (xxmm) and drop the front of the arm down out of the frame pockets.

7. We will be modifying the fixed pivot hole into a slotted hole and adding 4 pin holes to locate the cam plates

8. The supplied drill template has 2 overlapping index holes in the upper corner. The top one is for the inner side of the pivot pocket on each side. The lower one is for the outer side.

INSTALLATION

- Lift vehicle and securely place heavy duty jack stands under the manufacturer recommended lifting locations for the front of the vehicle. Take care when lifting the vehicle, and allow 3-4" of ground clearance from the tire. Remove rear tires. NEVER WORK UNDER AN UNSUPPORTED VEHICLE. Remove the wheels.
- Refer to instruction 91836 for removal of factory strut.
- Disconnect the position height sensor bracket.
- Disconnect the clips holding the wires routed down the suspension arm. [FIGURE 1 & 2]



FIG.1



FIG.2

9. Locate the template on the outside of the pocket. using the centering bushing on the back side through the original hole secure with supplied bolt and non locking finish nut. Secure the orientation of the template with a bolt and finish nut in the upper indexing hole. [FIGURE 3]

FIG.3



10. Using the supplied 20mm hole saw and arbor drill the lower hole that will form the slot.

11. Drill the (4) 1/4" pin holes. The kit comes with an extra long reach drill bit to drill the back side holes. It is not necessary to use the long drill for the front side holes. You may want to use a standard length drill bit in this location and save the long drill for the back side.

12. Remove the template and relocate it to the back side of the pocket. This time using the lower hole for orientation. [FIGURE 4 & 5]

FIG.4



FIG.5



13. You may need to remove the splash guard from the front corner of the fender to make room for the drill motor or use a right angle drill.

14. Going through the previously drilled holes and using the long reach 1/4" drill bit drill 4 pin holes and the 20mm hole.

15. With all the holes drilled there is still some material between the upper and lower 20mm holes that need to be removed to form the slot. Using a carbide burr and/or a cut off wheel or small sander remove the material. Using the cam bolt check that the slot is wide enough and the bolt can go up and down in the slot. [FIGURE 6 & 7]

FIG.6

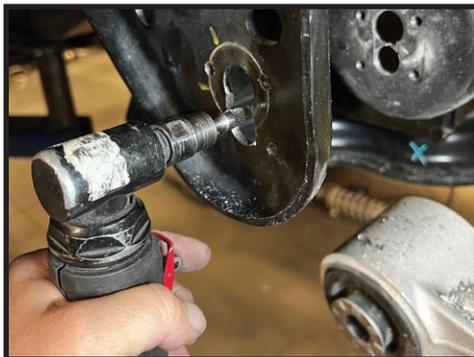


FIG.7



16. Repeat this process on the other side.

17. It is recommended that raw cut and drilled surfaces be painted to prevent future rust.

18. Position the cam plates on the sides of the arm pocket and loosely secure with supplied bolt and lock nut. [FIGURE 8]

FIG.8



19. Raise the suspension arm back into the pivot pockets. Reinstall the factory inner cam bolt and supplied outer cam bolt. Once the cam bolts are snug but not tight go back and tighten the 1/2" bolt securing each cam plate to the frame

20. Refer back to the shock instructions for reassembly of the rest of the system.

21. The factory inner cam controls toe in, and the new cam bolt controls camber.

22. These pivots should be fully tightened with the vehicle at ride height in conjunction with a proper rear wheel or 4 wheel alignment.

VERIFY ALL FASTENERS ARE PROPERLY TORQUED BEFORE DRIVING VEHICLE.

RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 100 MILES AND PERIODICALLY THEREAFTER.

ICON VEHICLE DYNAMICS LIMITED LIFETIME WARRANTY

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ICON Vehicle Dynamics' obligation under this warranty is limited to the repair or replacement, at ICON Vehicle Dynamics' discretion, of the defective product. Any and all costs of removal, installation or re-installation, freight charges and incidental or consequential damages are expressly excluded from this warranty. Items that are subject to wear are not considered defective when worn and are not covered.

ICON Vehicle Dynamics components must be installed as a complete kit as shown in our current application guide. Any substitutions or exemptions of required components will immediately void the warranty. Some finish damage may happen to parts during shipping and is not covered under warranty.

This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been improperly installed, modified or customized subject to accident, negligence, abuse or misuse.



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