

ATTENTION INSTALLER (if other than owner):

Please forward this instruction sheet and the warranty card to the purchaser of this product. These instructions also contain valuable information necessary to the end user.

INTRODUCTION:

These instructions describe the procedure for properly installing KHROME WERKS® Trailer Hitch on 2009- up Harley-Davidson® FLHTCU, FLHX/S, FLHTK, and FLHR models. Review instructions carefully before beginning, as they contain important information. Please retain for future reference. (See pages 3-5 for 2009-13 model installation steps.)

Particularly important information is distinguished in these instructions by the following notations:

NOTE: A NOTE provides key information to make procedures easier or clearer.

CAUTION: A CAUTION indicates special procedures that must

be followed to avoid damage to the motorcycle or accessories.

WARNING: A WARNIN

A WARNING indicates special procedures that must be followed to avoid injury or death to a motorcycle operator or person inspecting or repairing the motorcycle.

NOTE: The Khrome Werks trailer hitch requires about an hour for an experienced mechanic to install (not including wiring). Our hitch does not fit with Harley-Davidson® Genuine Accessory #90200561, Saddlebag Guard Rails. Installation of the Bumper Hitch and the Receiver Hitch is the same.

TOOLS REQUIRED:

1 - T45 Torx key wrench 2 - 1/2" comb.wrench

1 - T40 Torx key wrench 1 - 9/16" comb. wrench

1 - 3/4" comb. Wrench 1 - 7/16" comb.wrench

1 – 3/8" comb. Wrench 1 – #2 Phillips screw driver And/or 3/8" sockets, drivers and torque wrench

Save all hardware except two (2) large, thick fender mounting washers PN 59788-01 and two (2) 5/16" x 11/4" Torx screws.

PROCEDURE for 2014-15 FLHTCU, FLHX/S, FLHTK, FLHR models:

- 1. Remove saddle bags and side covers.
- 2. Remove seat strap and brackets (3/8" wrench or socket).
- 3. Remove the $\frac{1}{4}$ " Phillips head screw at the rear of the seat. Remove seat.
- 4a. **FLHX Models:** Disconnect antenna cable, wiring and rear suspension air filler from the left casting. Remove antenna.
- 4b. All Models except FLHX: Remove the rear suspension air filler from the left casting.
- 5. Remove the four (4) 5/16" hex bolts and washers (1/2" wrench

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BUMPER TRAILER HITCH RECEIVER TRAILER HITCH For 2009-up FLHTCU, FLHX/S, FLHTK, FLHR models Mfg. p/n 720535, 720540, 720545, 720550 (See pkg. label for Dist. p/n)

- 6a. **Models without rails and saddlebag guards:** Remove left and right black lower saddlebag supports. Save all hardware except the two (2) 5/16" x 11/4" Torx screw that connect the saddlebag crossover support to the saddlebag supports.
- 6b. **Models with rails and saddlebag guards:** Remove left and right black lower saddlebag supports and chrome guard. Save all hardware except the two (2) 5/16" x 11/4" Torx screws that connect the saddlebag crossover support to the saddlebag supports.
- 7a. **Models equipped with a Tour-Pak:** Unplug Tour Pak electrical connectors. Remove the four (4) Torx screws securing the Tour-Pak supports. Pivot the Tour-Pak assembly forward and remove. **NOTE:** Use 2 people for this step.
- 7b. **Models without Tour Paks:** Remove left and right plastic strut inserts.
- 8. Remove the two (2) 5/16"-18 x 1¼" Torx screws that secure the left and right saddlebag support castings. Remove castings.
- 9. **All Models:** Loosen the front two (2) 5/16" Torx screws (T40) that secure the fender to the frame struts. Remove the two (2) rear 5/16" Torx screws (T40) that secure the fender to the frame struts. Lower the fender to expose the $\frac{1}{2}$ " nuts and threaded bosses in the rear fender holes.
- 10. Remove the two (2) 1/2" nuts, washers from each side of the fender (3/4" wrench or socket). Discard the two (2) thick washers. Save the threaded bosses from the inside of the fender.
- 11. **Models with two rail OEM rear bumpers:** Loosen the $\frac{1}{2}$ -20 nut and washer inside of the fender that secures the two rail bumper (7/16" wrench or socket).
- 12. **All Models:** Install the hitch weldment. The upper ears of the hitch weldment attach outside of the fender and are secured with the OEM ½" nuts and the threaded bosses.

CAUTION: Make sure that the fender is clean and the back sides of the hitch mounting ears are clean and burr-free so the fender does not get scratched.

NOTE: Tape the fender around the rear fender bolt holes to protect the paint finish.

<u>CAUTION:</u> The threaded bosses must be properly indexed in the fender.

Do not fully tighten the ½" nuts at this time. The lower hitch ears mount to the rear facing side of the saddlebag crossover support bracket and in front of the bumper mounting ears (if equipped). Temporarily install 5/16" Torx screws and nuts through the hitch lower hitch ears and saddlebag crossover support. Final torque the ½" fender nuts (3/4" wrench or socket) and ½" bumper nut (7/16" wrench or socket) at this time (if equipped).

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13. Carefully rotate the fender/hitch assembly in place, install two (2) OEM 5/16"-18 x 11/4" Torx head cap screws. Torque all four (4) fender mount screws.

WARNING: Check inside the fender to see if the rear screw is at least flush with the head of the t-bolt, but no more then one thread protruding inside the fender to maintain tire clearance.

14. **WIRING:** Tie wrap slots are provided in the hitch gusset(s) depending on which model is installed. If using Khrome Werks electrical connection kits follow the provided instructions.

WARNING: Disconnect battery cable (negative cable first) to prevent short circuits before performing any wiring procedures.

- 15. Install the rear suspension air filler to the left saddlebag and install the left and right saddlebag support castings using the OEM hardware.
- 16. Install the black saddlebag/muffler supports and saddlebag guards (if equipped). Install the supplied 5/16"-18 x 1¼" hex head screws and 5/16" flat washers with the OEM flange nuts to connect the lower hitch ears and saddlebag crossover brace to the saddlebag/muffler supports. Use the OEM fasteners to connect the saddlebag/muffler supports to the saddlebag support castings.
- 17. Install seat and seat strap.
- 18. Reinstall saddlebags.
- 19. **Bumper Hitch models:** Install 1 7/8" ball to hitch plate with the provided bolt and washer. Torque to 260 ft-lb (dry). Hitch height is approximately 13".
- 20. **Receiver Hitch models:** Install the 1 7/8" ball to the receiver tongue with the provided bolt and washer. Torque to 260 ft-lb (dry). Note: the receiver tongue may be mounted in the high or low position dependant on the model bike and hitch. (models without OEM bumpers and/or fasciae use the high position). Hitch height is approximately 13". Mud flap mounting holes are drilled in the rear gusset.

WARNING: Insure that the bolt that fastens the ball to the hitch plate or tongue does not bottom out before achieving maximum clamp load.

21. Receiver Hitch models: Install the retaining pin and safety clip.

WARNING: Before riding motorcycle, check all wires and air lines to be sure they are routed properly so they will not get caught up in brake, belts, wheels, trailer, tongue or other moving parts of motorcycle. Take care so wires and air lines are not touching any hot surfaces. Secure wires and air lines by using tie-wraps.

Hooking up your trailer:

22. Lubricate ball and connect trailer, close and secure coupler lever with safety pin or lock. Connect safety chains and test lights. Check torque of all mounting hardware after first usage.

WARNING: Do not operate motorcycle/trailer with faulty turn signals, stop or tail lamps. Inspect all connections and routing of wires if lamps do not function properly.

USE AND CARE: Wash your accessories with the same care you use when washing your motorcycle. Use mild soap and water. DO NOT use abrasive chemicals or cleaners, or high pressure washers.

Optional Chrome Trailer Hitch Electrical Connectors:

6 pin Molex Plug-n-play isolator and a four 4 wire harness with a flat connector. Available under p/n 720750.

6 pin Molex Plug-n-play isolator and a 5 wire harness with a five-pin male female connector. Available under p/n 720751.

6 pin Molex Plug-n-play isolator/convertor and a 5-4 wire harness with a flat connector. Available under p/n 720752.

BILL OF MATERIALS - ALL

P/N	DESCRIPTION	720535	720540	720545	720550
420285	Washer, 5/16" flat	2	2	2	2
420473	Screw, 5/16"-18 x 1 1⁄4" hex cap	2	2	2	2
7081043	Ball w/bolt & washer	1	1	1	1
410440	½" hitch pin and clip			1	1
720536	Bumper hitch Low	1			
720546	Receiver hitch, low			1	
720551	Receiver hitch, high				1
720541	Bumper hitch High		1		
720572	Hitch tongue		·	1	1

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PROCEDURE For 2009-13 FLHT, FLHX, FLHR, FLTR models:

- 1. Remove saddle bags.
- 2. Remove 1/4" hex screws (7/16" wrench or socket) that secure the upper front saddlebag support brackets and seat strap if equipped. (Ref 1).
- 3. Remove the $\frac{1}{4}$ " Phillips head screw at the rear of the seat. Remove seat.
- 4. Remove the 5/16" Torx screws (T40 Torx) from the rear of the chrome strut covers (Ref 2).
- 5. **FLHX Models:** Disconnect antenna cable, wiring and air line from bottom of the left strut cover (may need to replace plastic retainer or use tie wrap). Remove antenna.
- 6. All Models: Remove strut covers.
- 7. Remove the four (4) 5/16" hex bolts and washers (1/2" wrench or socket) that secure the mufflers to saddlebag supports (Ref 3).
- 8. **Models without rails and saddlebag guards:** Loosen the two (2) 5/16" Torx screws (T40 Torx) that secure the rear upper saddlebag support system and air valve bracket, on left side, to the frame. (Ref 4). Remove the two (2) 5/16" Torx screws and nuts (T40 Torx, ½" wrench) that secure the saddlebag system to the crossover bracket near the lower end of the fender (Ref 5). Loosen, but do not remove the lower two (2) 3/8" Torx screws and nuts (T45, 9/16" wrench) that secure the saddlebag support system to the frame (Ref 6).
- 8. **Models with rails and saddlebag guards:** Loosen the two (2) 5/16" Torx screws (T40 Torx) that secure the rear upper saddlebag support system and air valve bracket, on left side, to the frame. (Ref 4). Remove the two (2) 5/16" Torx screws and nuts (T40 Torx, ½ wrench) that secure the saddlebag system to the crossover bracket near the lower end of the fender (Ref 5). Remove the two (2) upper 3/8" Torx screws (T45 Torx) that secure the saddlebag guards and rails to the top side of the frame. Loosen the two (2) lower 3/8" Torx screws. (Not shown.)
- 9. **All Models:** Loosen the front two (2) 5/16" Torx screws (T40) that secure the fender to the frame struts (Ref 7). Remove and discard the two (2) rear 5/16" Torx screws (T40 Torx) securing the fender to the frame struts (Ref 8). Rotate the loosened saddlebag support system away from the lower crossover bracket so the fender can drop at the rear enough to expose the rear mounting hardware. See the illustration.
- 10. Remove the two (2) rear 1/2" nuts, washers and t-bolts from each side of the fender (3/4" wrench or socket). Discard the two (2) washers (Ref 9).
- 11. **Models with two rail OEM rear bumpers:** Loosen the $\frac{1}{4}$ -20 nut and washer inside of the fender that secures the two rail bumper (7/16" wrench or socket).

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BUMPER TRAILER HITCH RECEIVER TRAILER HITCH 009-up FLHTCU, FLHX/S, FLHTK, FLHR m

For 2009-up FLHTCU, FLHX/S, FLHTK, FLHR models Mfg. p/n 720535, 720540, 720545, 720550 (See pkg. label for Dist. p/n)

12. **All Models:** Install the hitch weldment. The upper ears of the hitch weldment attach outside of the fender using the t-bolts (Ref 10) and $\frac{1}{2}$ " nuts.

CAUTION: Make sure that the fender is clean and the back sides of the hitch mounting ears are clean and burr-free so the fender does not get scratched.

CAUTION: The t-bolts must be properly indexed in the fender. Do not fully tighten the nuts at this time. The lower hitch ears mount to the rear facing side of the saddlebag support crossover bracket and in front of the bumper mounting ears (if equipped). Temporarily install the 5/16" Torx screws and nuts.(Ref 5) Final torque the ½" fender nuts (Ref 9) (3/4" wrench or socket) and ¼" bumper nut (7/16" wrench or socket) at this time. See the illustration.

13. Carefully rotate the fender/hitch assembly in place, install and torque the two (2) supplied 5/16"-18 x 1 ¼" hex head cap screws and 5/16" flat washers (1/2 wrench) (Ref 8).

WARNING: Check inside the fender to see if the screw is at least flush with the head of the t-bolt, but no more then one thread protruding inside the fender to maintain tire clearance.

14. Remove the lower mounting ear Torx screws and nuts (Ref 5) temporarily installed in Step 12. Reposition the saddlebag supports system to the frame. For the final time insert the two (2) 5/16" Torx screws thru the bumper mounting ears (if equipped), lower hitch ears, saddlebag support crossover bracket and saddlebag support systems' lower brackets. Install and torque the nuts. Reinstall and torque the remaining saddlebag support system and air line bracket hardware.

CAUTION: Models with saddlebag guards and rails: The end of the screws that secure the saddlebag rails to the rear of the saddle bag supports may contact the vertical hitch tubes on one or both sides. If contacting, insert one of the supplied 5/16" flat washers under each the screw heads (Not shown).

15. **WIRING:** Routing the trailer wiring is easier to do before reinstalling the strut covers. Tie wrap slots are provided in the gusset(s) depending on which hitch model is installed. If using Khrome Werks 5-pin connection kit follow instructions provided with KW #720585.

WARNING: Disconnect battery cable (negative cable first) to prevent short circuits before performing any wiring procedures.

NOTE: Trailers that combine brake/turn signal lights will require a turn signal conversion kit (sold separately – see your dealer).

WARNING: Before riding motorcycle, check all wires and air lines to be sure they are routed properly so they will not get caught up in brake, belts, wheels, trailer, tongue or other moving parts of motorcycle. Take care so wires and air lines are not touching any hot surfaces. Secure wires and air lines by using tie-wraps.

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- 16. **All Models:** Place the factory chrome strut covers in position. Check to see if the covers have clearance on their bottom edge at the hitch upper ears. (Ref 11) If contacting, either shim the covers out with flat washers or trim the struts bottom edges until clearance is achieved. Coat the raw edge with paint to protect from rust. FLHX models: Secure air line and fascia light wiring to bottom side of left strut cover. Reinstall antenna.
- 17. Install seat.
- 18. Install rear strut cover Torx screws (Ref 2), front saddlebag mounts and seat strap, if equipped (Ref 1).
- 19. Reinstall saddlebags.
- 20. **Bumper Hitch models:** Install 1 7/8" ball (Ref 12) to hitch plate with the provided bolt (Ref 13) and washer (Ref 14). Hitch height is approximately 13".
- 21. **Receiver Hitch models:** Install the 1 7/8" ball (Ref 12) to the receiver tongue with the provided bolt and washer (Ref 13, 14). Note: the receiver tongue may be mounted in the high or low position dependant on the model bike and hitch. (Road Glides and Road King Classics use the high position). Hitch height is approximately 13". Mud flap mounting holes are drilled in the rear gusset.

WARNING: Insure that the bolt that fastens the ball to the hitch plate or tongue does not bottom out before achieving maximum clamp load.

22. Receiver Hitch models: Install the retaining pin and safety clip.

Hooking up your trailer:

23. Lubricate ball and connect trailer, close and secure coupler lever with safety pin or lock. Connect safety chains and test lights. Check torque of all mounting hardware after first usage.

WARNING: Do not operate motorcycle with faulty directionals, stop or tail lamps. Inspect all connections and routing of wires if lamps do not function properly.

USE AND CARE: Wash your accessories with the same care you use when washing your motorcycle. Use mild soap and water. DO NOT use abrasive chemicals or cleaners, or high pressure washers.

Optional Chrome Trailer Hitch Receptacles:

Five-pin male female connector with 8 pin AMP multilock Plug-n-play wire harness. Available under p/n 720585

Five-pin male female connector with 8 pin AMP multilock Plug-n-play isolator relay/wire harness. Available under p/n 720582

Five-pin male female connector with 8 pin Molex Plug-n-play isolator relay/wire harness. Available under p/n 720583*

*Accessory five-to-four convertor harness for use with 720583. Available under p/n 720595

Five-pin male female connector with 6 pin Molex Plug-n-play isolator relay/wire harness. Available under p/n 720584

Five-to-four converter with 8 pin AMP multilock Plug-n-play isolator relay/wire harness. Available under p/n 720760.

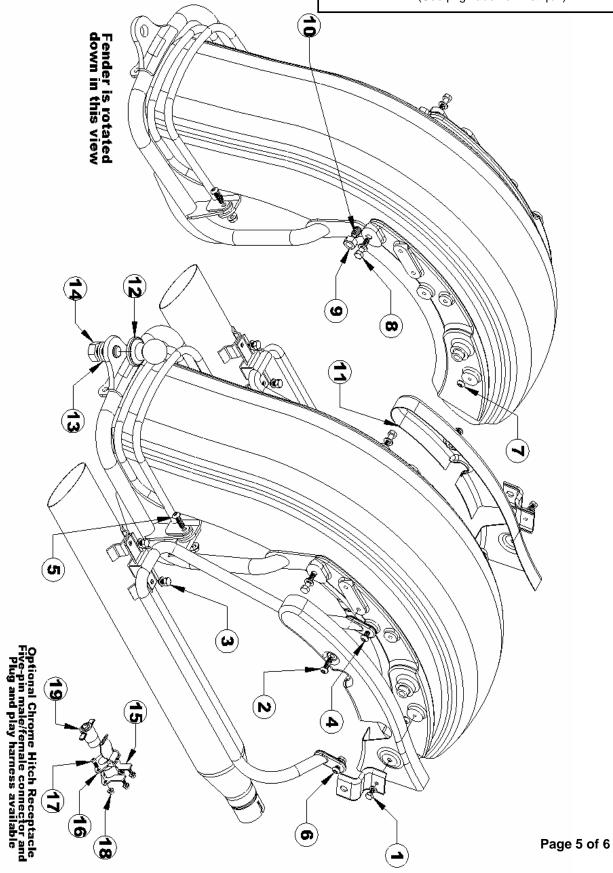
Five-to-four converter with 6 pin Molex Plug-n-play isolator relay/wire harness. Available under p/n 720761.

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ADDITIONAL WARNINGS

For all-around best handling of motorcycle, tongue weight should be 10% of the gross weight of the trailer, but maximum tongue weight cannot exceed 30 lbs.

NOTE: Gross weight includes weight of trailer and all its contents, not to exceed 300 lbs.

REMEMBER:

- A. Tow only those trailers equipped with a 1 7/8" coupler to match the 1 7/8" ball supplied with the hitch. We recommend only trailers from reputable suppliers, designed for motorcycle towing, and with a proven history of good handling. Towing a trailer with poor handling can result in severe injury or death from an accident.
- B. When connecting to trailer, always make sure ball is tight on hitch, and that coupler is tight on ball. When connecting to trailers equipped with hand wheel couplers, hand-tighten only. Do not tighten with a wrench. Periodically, check these areas for tightness.
- C. Always use approved safety chains, and have them securely attached. Cross the safety chains under the tongue of the trailer so that the tongue will not drop to the road if it becomes separated from the hitch. Always leave just enough slack so that you can turn with your rig. And, never allow safety chains to drag on the ground.
- D. Trailer tire pressure should be inflated to maximum allowable pressure, unless otherwise recommended by the trailer manufacturer. Rear motorcycle tire pressure should be inflated to maximum allowable pressure (refer to tire side wall marking) and checked periodically.

- E. Towing a trailer requires a certain amount of experience. Before setting out on an extended ride, get to know your rig. Check the trailer hitch, coupler, safety chains, electrical connector, lights and tires. After loading the trailer, weigh the trailer and then the tongue, separately, to see if the weights are proper. If not, you may be able to get them right by simply shifting the items around in the trailer. When pulling a trailer with a motorcycle, extra distance must be allowed for stopping, and a slower speed when cornering must be used. The motorcycle and trailer combination is now longer, so allow more passing distance. Reduce speed when traveling downhill (may have to downshift). Use extra caution and don't exceed your riding capabilities. During the trip, check occasionally to be sure that the load is secure, and that the lights are still working.
- F. The coupler is susceptible to physical damage when trailer is parked. Prop tongue off ground when trailer is not in use. Carefully inspect coupler for damage or missing parts before each hook-up.
- G. If trailer sways or bounces while towing, SLOW DOWN BY REDUCING SPEED GRADUALLY and STOP TOWING immediately. Unless cause can be determined, i.e., shifted load, low tire pressure etc., which can be corrected, do not resume towing.
- H. If motorcycle is involved in an accident or spill, with or without trailer attached, hitch must be inspected for physical damage before towing.
- I. Periodically, inspect hitch to insure it is not bent or cracked and check tightness of all hardware relating to trailer hitch assembly and trailer.

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