

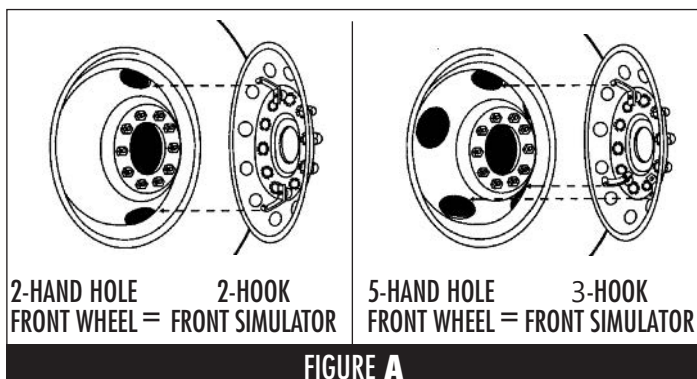
INSTALLATION OF HMS™ HOOK MOUNT SYSTEM ON FRONT WHEELS

TOOLS NEEDED

#3 or #4 Phillips Head Screwdriver

VERY IMPORTANT

Read And Understand These Steps Before Installation!

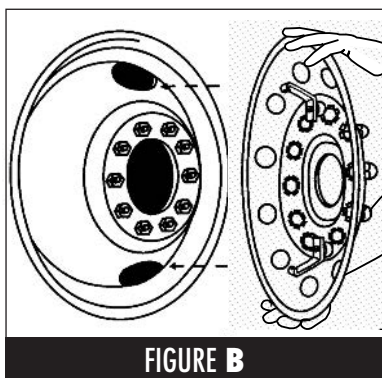


Step 1. Check Wheels Before Installing Simulators

Before you start check your front wheels to determine whether you have an "EVEN" or "ODD" number of hand holes in the wheel. The number of hand holes in the wheel determines the correct HMS Hook Mount System you will need for proper installation of your wheel covers. (See Fig. A).

Note: Certain 4-hand hole wheels require a 4-hook system (not shown).

Step 2. Installing Front Wheel Simulator

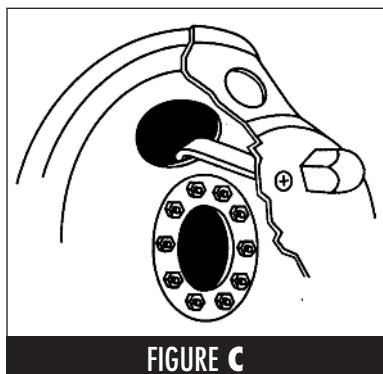


Line up the mounting hooks on the back of the wheel simulator with the hand holes of the wheel. (See Fig. B).

Note: On 2-hand hole wheels and Ford F450-550s with 5-hand hole wheels, one of the hooks must insert into the hand hole that has the air valve.

Gently push the wheel simulator against the wheel until one of the hooks engage into one of the wheel hand holes. (See Fig. C). Then continue one at a time engaging each hook into the other hand holes depending on 2, 3, or 4 hook system.

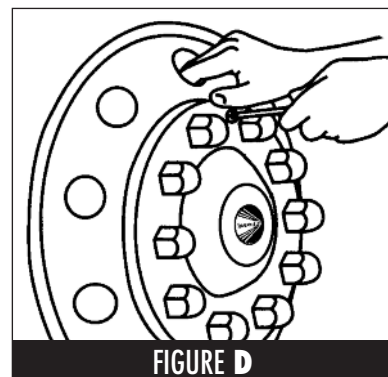
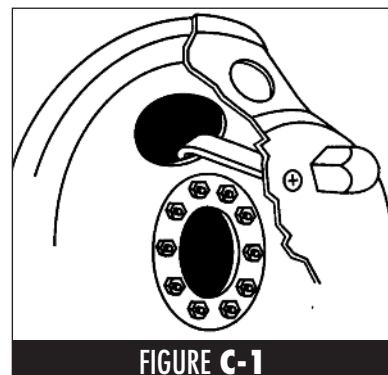
Note: You may have to loosen the Phillips head screws a little before all the hooks will engage.



Step 3. Proper Engagement And Tightening

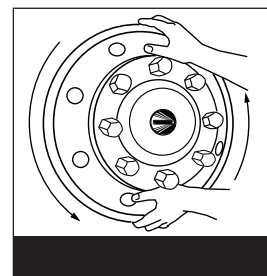
Make sure all the hooks have engaged into the proper hand holes of the wheel. Next begin alternating tightening each Phillips head screw a few turns.

(Very Important: Look into the holes of the simulator where the hooks are and see that the hooks are engaged onto the center portion of the wheel hand holes.) (See Fig. C-1). Next carefully feel with your fingers through the holes in the simulator, to make sure the mounting hooks are fully engaged onto the center of the hand holes (See Fig. D). As you continue alternating tightening each hook, keep your fingers in the holes of the simulator where you're tightening to make sure the hook stays engaged and in the center of the wheel hand holes.



Step 4. Verify Wheel Simulator Is Centered On Wheel

At this point stop alternating tightening the Phillips head screws, and check to see that the simulator is being tightened evenly all the way around the simulator and rim. Slide your hands around the edge of the simulator and rim, making sure the simulator is evenly spaced all the way around the rim. (See Fig. E). If it's not even, you may have to loosen the screws and readjust the simulator so that it is centered around the rim, then repeat the tightening procedure in Step 3.



Step 5. Final Tightening Of Wheel Simulator / Removal

After final checking that the hooks are engaged into the center of the hand holes of the wheel and the simulator is evenly spaced and true all the way around the rim, then continue to alternate tightening the Phillips head screws until the simulator is securely tightened to the wheel. **To Remove The Simulator:** Loosen the Phillips head screws until the hook mounts disengage from the hand holes.

Very Important: After initial installation, the mounting system will seat itself into the wheel. After the first 100 miles check that the simulators are tight and secure to the wheels. If necessary retighten the mounting screws. We recommend that the wheel simulators are checked and inspected periodically to make sure that they are tight and secure to the wheels.

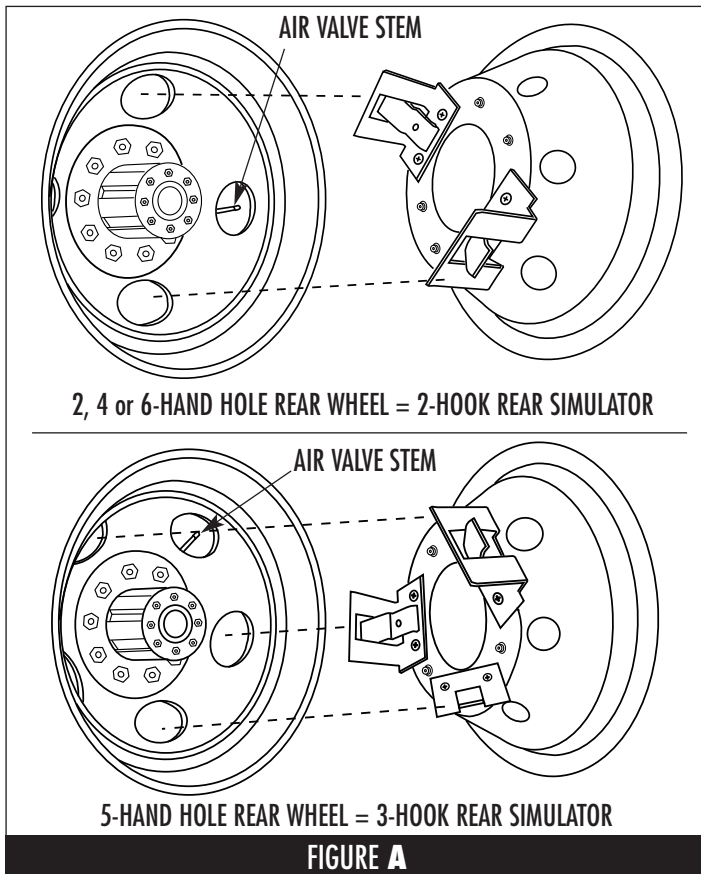
INSTALLATION OF HMST™ HOOK MOUNT SYSTEM ON REAR WHEELS

TOOLS NEEDED

#3 or #4 Phillips Head Screwdriver

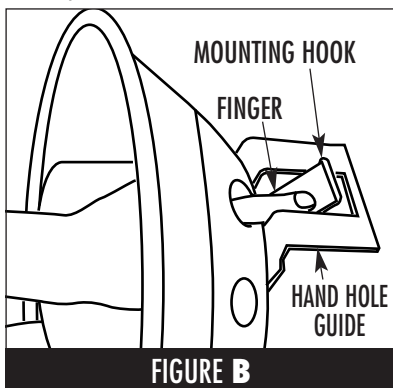
VERY IMPORTANT

Read And Understand These Steps Before Installation!



Step 1. Check Wheels Before Installing Simulators

Check your rear wheels to determine whether you have an “EVEN” or “ODD” number of hand holes in the wheel. The number of hand holes in the wheel determines the correct Hook Mount System you will need to properly install your Rear wheel simulators (See Figure A).

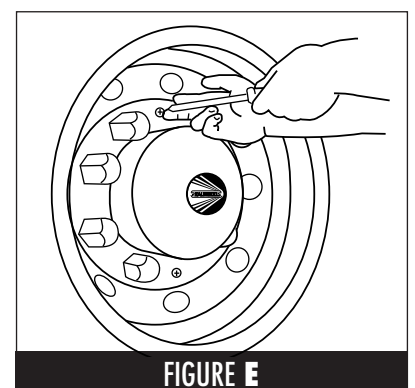
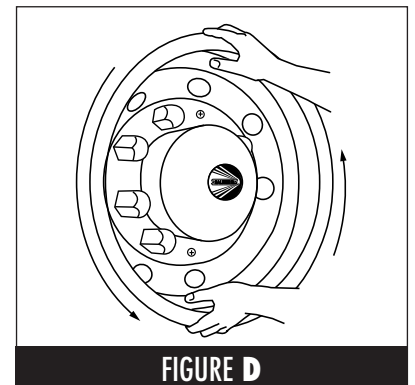
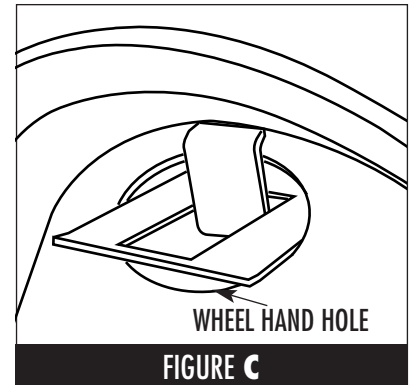


Place a finger into two of the simulator holes where the mounting hooks are and push the mounting hooks back towards the wheel. (See Fig. B). Next align the hand hole guides with the hand holes in the wheel. **NOTE:** Make sure the hand hole guides go into the hand holes opposite the air valve. (See Fig. A) Gently push the simulator in until it is firmly against the rim.

Note: If the hooks do not go into the hand holes, pull the simulator off and loosen the phillips head screws on the front side of the simulator. Then again with your fingers through the two holes push the mounting hooks back and reinstall the simulator back into the wheel making sure the mounting hooks go into the hand holes of the wheel.

Step 3. Tightening Rear Wheel Simulators

Next with your Phillips head screwdriver turn each screw in until snug (not tight). Next, check to make sure the simulator is firmly against the rim and evenly spaced around the rim, side to side, and top to bottom. (See Fig. D). Also look into the two holes of the simulator where the mounting hooks are and make sure the mounting hooks are properly engaged into the hand holes. If possible, look between the duals to see that the hand hole guides and mounting hooks are engaged properly. (See Fig. C) If all is correct, alternate tightening the Phillips head screw until the simulator is tightened securely to the rim. (See Fig. E) After vehicle has been driven, periodically check to make sure the Phillips head screws are tight.



Removal

To remove simulators, loosen screws until they are back far enough to disengage themselves from the hand holes.

Very Important: After initial installation, the mounting system will seat itself into the wheel. After the first 100 miles check that the simulators are tight and secure to the wheels. If necessary retighten the mounting screws. We recommend that the wheel simulators are checked and inspected periodically to make sure that they are tight and secure to the wheels.

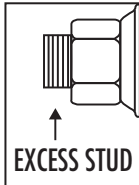
INSTALLATION OF WEDGE LOCK MOUNT SYSTEMS

TOOLS: 1/2" Socket/Ratchet, 1/2" Ratchet Wrench or Wrench, 7/16" Wrench

VERY IMPORTANT
Read & Understand These Steps Before Installation!
BEFORE YOU BEGIN

There is **No Need To Remove Any Lug Nuts** For Installation.

Hub Piloted wheels must have a minimum of 1/4" of excess stud sticking out past the wheel lug nuts.



Before starting, make sure you have the correct Wedge Lock Mounting System for your wheels.

33MM HUB PILOTED SYSTEM

33mm Hub Piloted Wheels.

1 1/2" STUD PILOTED SYSTEM

1 1/2" Stud Piloted Wheels.

Simulator Kit: RWWLH2003AXX
 Bracket Model No.: RWH28408

Simulator Kit: RWWLS2003AXX
 Bracket Model No.: RWS27404

SETTING BRACKET DEPTH

22.5x7.5 Wheels — Lowest Position

22.5x8.25 Wheels — Center Position

22.5x9.00 Wheels — Highest Position

Depending on your wheel size set bracket accordingly:

- 22.5 x 7.5 — lowest position
- 22.5 x 8.25 — center position
- 22.5 x 9 — highest position

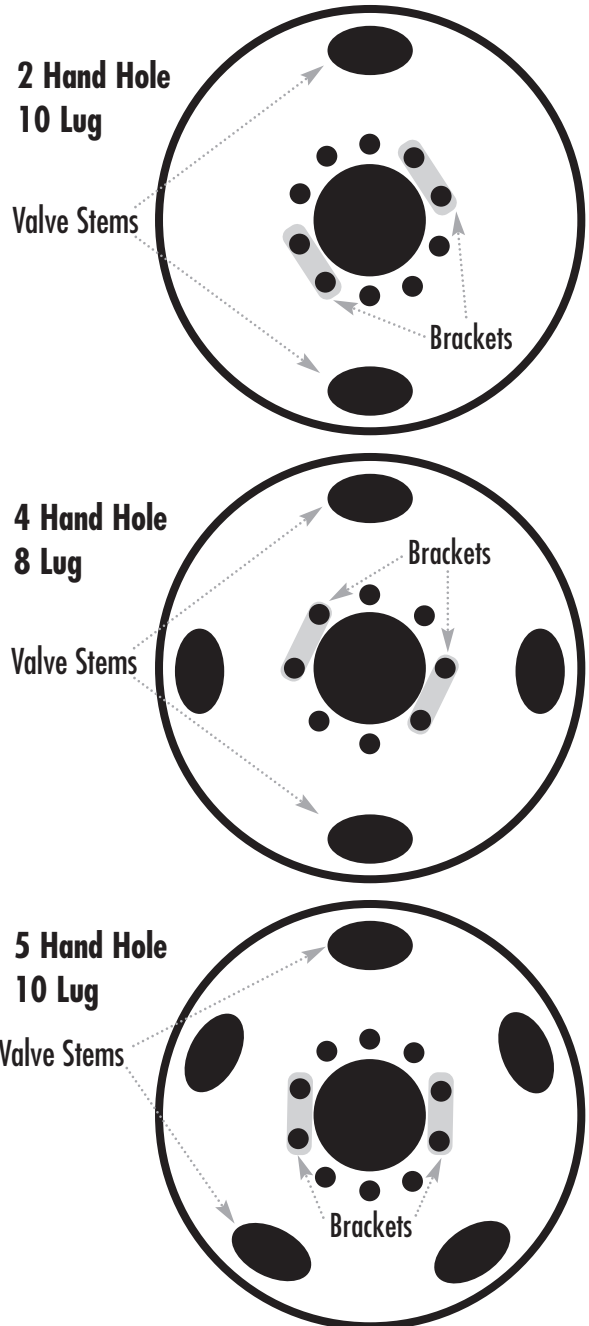
Then securely tighten two nuts on back of bracket.



Step 1. Location of wheel valve stem and determining which wheel studs to attach the Wedge Lock Brackets to.

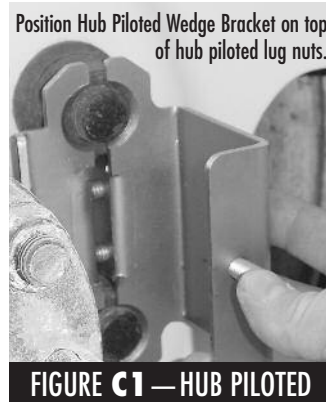
Before attempting to install the Wedge Lock Brackets and the simulators, look at your wheels to see where the valve stems are located. (See Fig. A) Once you locate the valve stems this will then determine which four wheel studs to attach the Wedge Lock Bracket to. (See Fig. A) **Note:** The Wedge Lock Brackets should be positioned opposite of the valve stems, this way the air valve tabs on the simulator will not be positioned too close or too far from the valve stems.

FIGURE A



For Hub Piloted Wheels Use The Directions Below

Step 2. Positioning Bracket On Hub Piloted Wheels

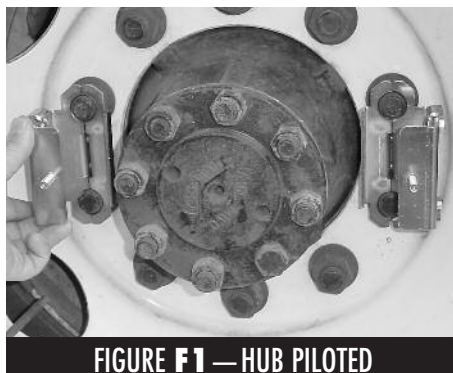


Loosen the 5/16" bolt on the side of the Wedge Lock Bracket. The Hub Piloted Wedge Bracket will slide on top of hub piloted lug nuts (See Fig. B1 and C1).



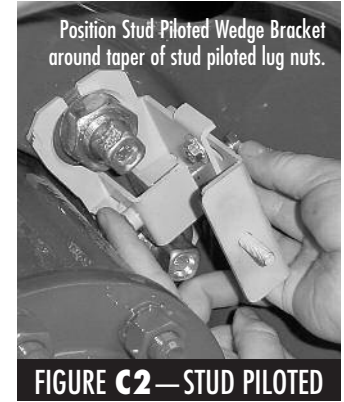
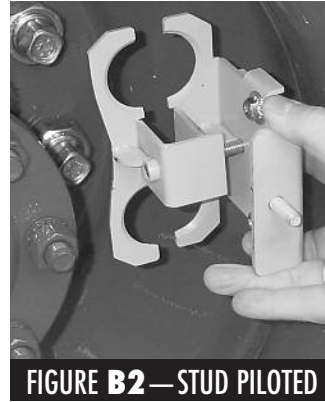
Step 3. Tightening Bracket On Hub Piloted Wheels

Push and hold against the bracket making sure it is firmly on top of the wheel lug nuts. (See Fig. D1) Then hand tighten the 5/16" bolts to bring the two halves of the bracket closer together, and wedging itself into the excess thread of the studs. **NOTE:** One side of the bracket may raise up a little depending what thread of the stud it wedges into, this is normal. Next with a 1/2" wrench (or ratchet wrench) begin tightening the 5/16" bolt. (See Fig. E1) Make sure the bracket is flat across the face and wedging into the threads of the wheel studs, tightening the bolt until the wedge lock bracket is securely tight. Repeat procedure for other side directly opposite. (See Fig. F1)



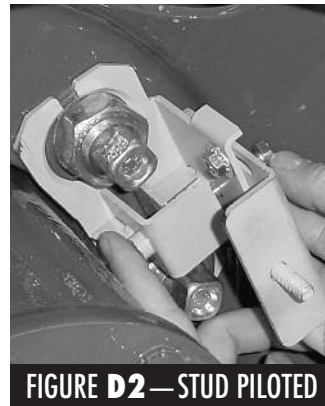
For Stud Piloted Wheels Use The Directions Below

Step 2. Positioning Bracket On Stud Piloted Wheels



Loosen the 5/16" bolt on the side of the Wedge Lock Bracket. The Stud Piloted Wedge Bracket will slide around the bottom taper of the stud piloted lug nuts (See Fig. B2 and C2).

Note: For some stud piloted wheels it may be necessary to separate the bracket completely in order to position the bracket under the lug nut.



Step 3. Tightening Bracket On Stud Piloted Wheels

Push and hold against the bracket making sure it is against the wheel and around the taper of the stud piloted lug nuts. (See Fig. D2) Then hand tighten the 5/16" bolt to bring the two halves of the bracket closer together, and wedging itself around the lug nuts. Next with a 1/2" wrench (or ratchet wrench) begin tightening the 5/16" bolt. (See Fig. E2) Make sure the bracket is secure and wedging around the lug nuts. Repeat procedure for other side directly opposite. (See Fig. F2)



Steps 4 Thru 7 Apply To Stud And Hub Piloted Wheels

Step 4. Installing Air Valve Extensions

If you are using SS Braided Air Valve Extensions, begin by removing the valve caps off the wheel valves. Then install the straight SS Braided Extension onto the inner wheel air valve. (See Fig. G)

Note: Make sure to install the SS Braided Valve Extensions directly to the wheel air valves. Remove any existing solid valve extensions.

Note: A small amount of air will escape during installation until valve seal is made. Once the air stops leaking, a 1/2" wrench may be used to snug the extension to the valve stem. One full turn is all that is required. (**Important:** The valve seal may be damaged if you over tighten.) Next, attach the air valve extension with the U shape end to the (outside wheel) valve stem. After installation, check all fittings to insure there are no leaks. (See Fig. H and I). **Note:** See Fig J for final position of Wedge Lock Brackets and Air Valve Extensions.



FIGURE G



FIGURE H



FIGURE I

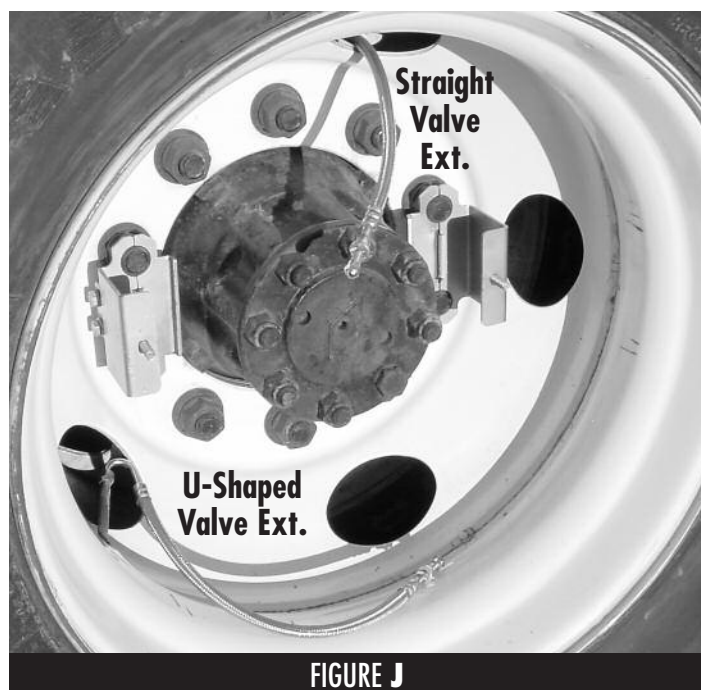


FIGURE J



FIGURE K

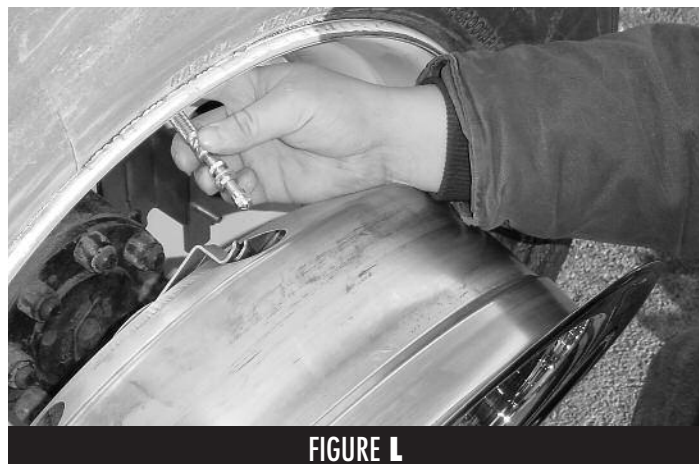


FIGURE L

Step 5. Installing The Simulator Onto The Bracket And Wheel

Hold the simulator up to the wheel and align the two 3/8" holes of the simulator with the two 5/16" threaded studs on the brackets. (See Fig. K) **Note:** If the simulator does not line up with the two bracket studs, it may be necessary to slightly adjust the bracket position by slightly loosening or tightening the 5/16" bolt on the bracket.) At the same time from the backside of the simulator put the braided air valve extensions into the two holes of the simulator where the air valve tabs are located. From the front side of the simulator pull the braided extensions through the holes where the valve tabs are located (See Fig. K and L). Continue to place the simulator onto the bracket studs until the simulator is fully onto the bracket studs and wheel. (See Fig. M).

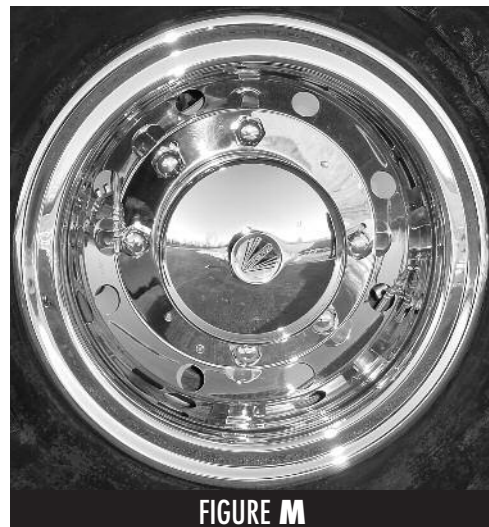
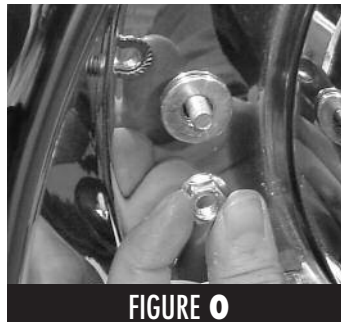
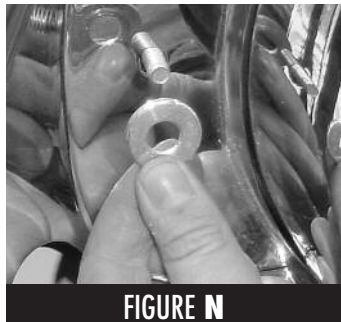
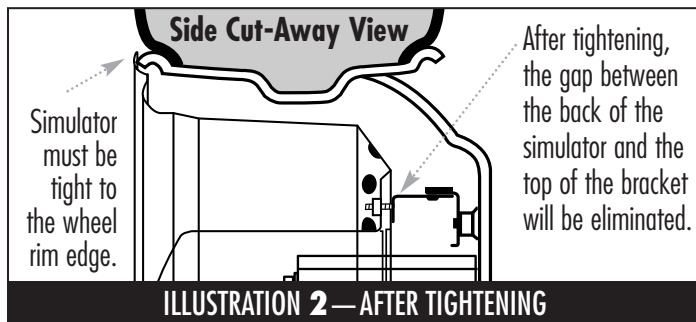
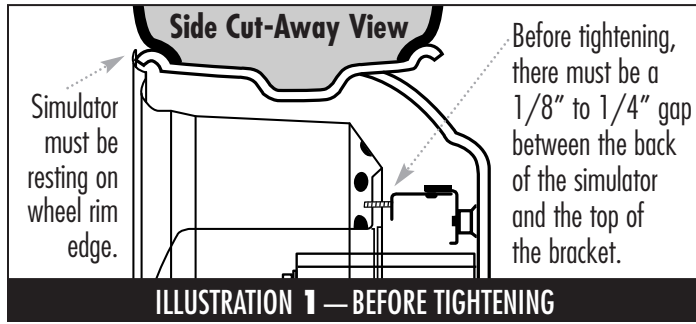


FIGURE M

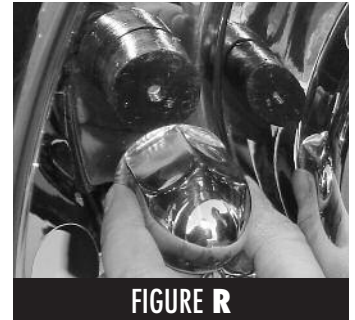
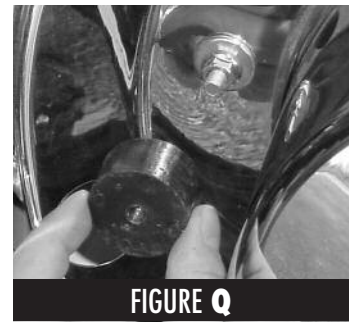
Important: At this point the simulator will not rest against the bracket. There must be a 1/8" to 1/4" gap between the back of the simulator and the top of the bracket. (See Illustration 1 below.) If there is not a gap, remove simulator and adjust the height of the bracket. Next place a flat washer and 5/16" serrated nut onto each bracket stud, and begin alternating tightening these 5/16" nuts. (See Fig. N, O and P) As you tighten the 5/16" serrated nuts, the simulator will draw down to the bracket, the gap between the back of the simulator and the top of the bracket will then be eliminated. At this point, the simulator must be tight to the rim edge and true and even all the way around the rim edge. (See Illustration 2 below.)



Step 6. Installing Lug Nut Covers

After the 5/16" serrated nuts have been tightened securely, install lug nut covers in the following order (See Fig. Q and R):

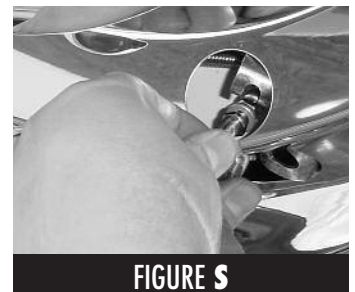
- Thread the poly-mounts onto the excess portion of the bracket studs until they are tight over the previously tightened 5/16" serrated nuts.
- Next firmly push the Stainless Steel Lug Nut Covers onto the poly-mounts.



Step 7. Attaching Braided Extensions To Valve Tabs

Once the simulator is tightened to the wheel, push the excess braided extension back into the simulator hole and clip the threaded portion of the braided extension (between the two extension nuts) onto the Air Valve Tab (See Fig. S and T).

Note: One of the valve nuts should be on the backside of the Air Valve Tab and the other valve nut should be on the front side of the Air Valve Tab. (See Figure U). Then tighten the outer nut on top of the Air Valve Tab with a 7/16" wrench. (See Figure V). You are now finished.



IMPORTANT: We recommend that the wheel simulators are checked and inspected periodically to make sure that they are tight and secure to the wheels. If necessary retighten the mounting bolts and nuts.

Reverse process to remove simulators.

ADJUSTABLE RING MOUNTING SYSTEM (RWUN2001XK, RWUN2001DK, RWUN2401XK, RWUN2401DK)

TOOLS NEEDED

7/16" Wrench • 1/2" Socket Wrench

VERY IMPORTANT

Read And Understand These Steps Before Installation!

Step 1.

Installing Valve Extensions (XK Model)
Double Ended Valve Caps (DK Model)

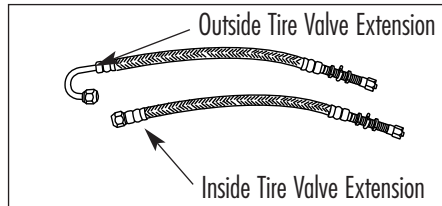


FIGURE A — XK MODELS ONLY

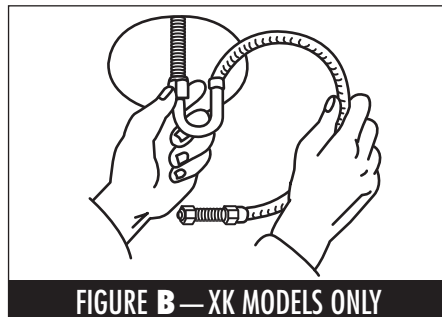


FIGURE B — XK MODELS ONLY

XK Models— Make sure to install the S.S. Braided Valve Extensions directly to the wheel air valves. Remove any existing solid valve extensions. Next, attach the air valve extension with the "straight fitting" to inner wheel first. (See Fig. A) This should be installed directly to the wheel air valve stem. **Note:** A small amount of air will escape during installation until valve seal is made. Once air stops leaking, use a 1/2" wrench to snug hose to valve stem. One turn is all that is required. **The valve seal may be damaged if you overtighten.** Next, attach air valve extension with U-shape end to (outside wheel) valve stem. (See Fig. B) After installation, check all fittings to insure there are no leaks.

DK Models —

Remove valve caps and install double end valve caps. (See Fig. C)

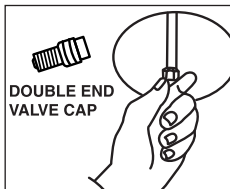


FIGURE C — DK MODEL

Step 2. Find Correct Position

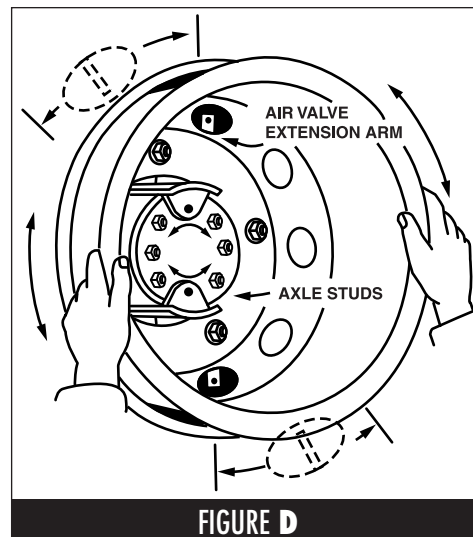


FIGURE D

Simulator and mounting ring are loosely assembled together for ease of installation. Place the simulator and ring assembly onto the wheel and rotate it until the valve extension arms are just to the right or left of the hand holes in the wheel that contain the air valve extensions. (See Fig. D) At the same time identify two axle studs that position themselves closest to the slide bracket holes. (See Fig. E) Next, take the simulator off of the wheel and remove the two axle nuts that were previously identified. **NOTE:** The mounting ring brackets are pre-set at the factory to a 7" bolt circle. If this 7" setting does not line up with your axle bolt circle, loosening the nuts on the "BACK" of the mounting ring allows adjustment of the bolt circle from 7 1/4" to minimum of 5 1/4".

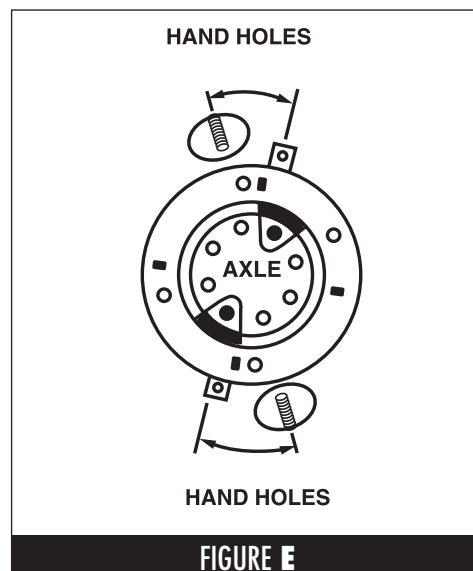


FIGURE E

Step 3. Loosen Keps Nuts

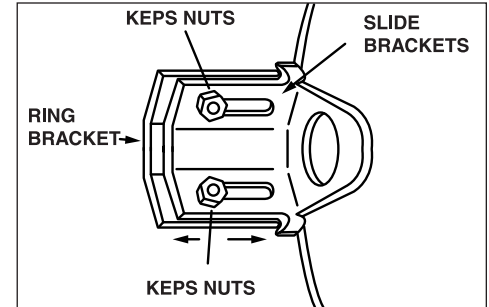


FIGURE F

The slide brackets are factory shipped semi-tight. Before proceeding, loosen the keps nuts and make sure slide brackets move easily in slots. (See Fig. F)

Step 4. Secure Brackets

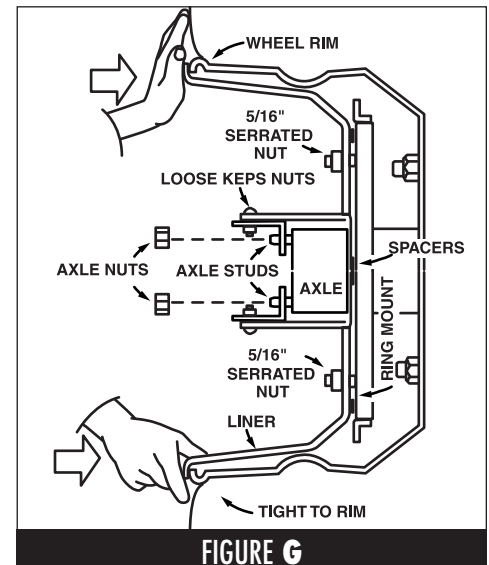


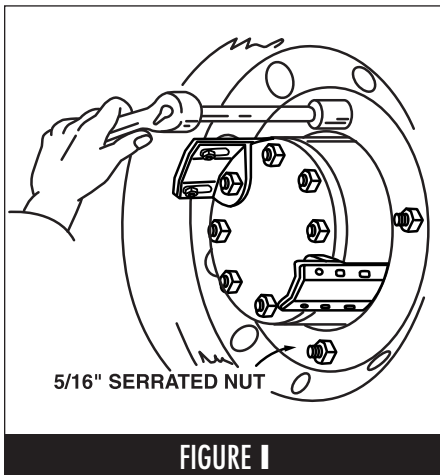
FIGURE G

Install the simulator on the wheel with the brackets on the axle studs from which the axle nuts have been removed. Replace the axle nuts and tighten them securely. With the keps nuts loose, push the liner into the wheel as far as it will go, making sure that it is tight against the wheel all the way around the rim. (See Fig. G) **TIGHTEN THE 2 KEPS NUTS ON EACH BRACKET SECURELY.** (See Fig. H) **NOTE:** On some wheels the 1/4" carriage bolts on the slide brackets may have to be moved to another square hole to allow the liner to fit tight against the rim.



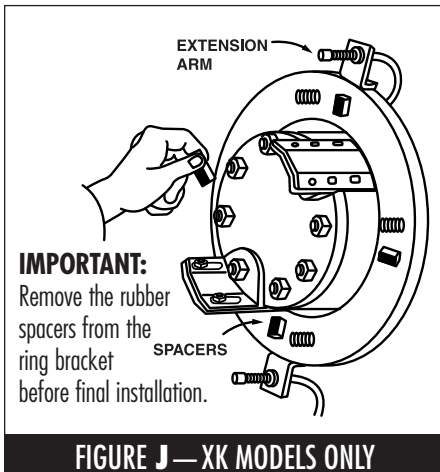
FIGURE H

Step 5. Remove The Serrated Nuts And Liner



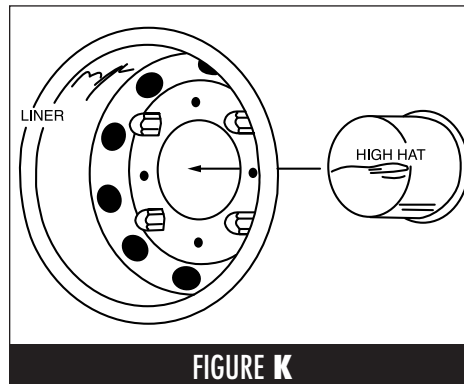
With a 1/2" socket, remove the four 5/16" serrated nuts on the liner and remove the liner from the wheel and ring bracket. (See Fig. I)

Step 6. Secure Valve Extensions (For XK Models Only)

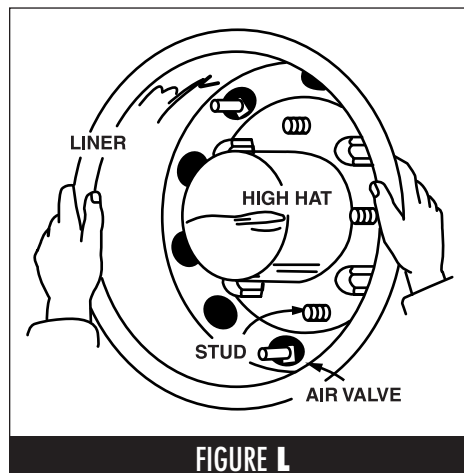


VERY IMPORTANT: Remove the rubber spacers from the ring bracket (See Fig. J) and with a 7/16" wrench, attach the air valve extensions to the valve extension arms on the mounting ring. **NOTE:** Adjust back nut all the way down to the bottom of the thread and make sure 5/16" lock washers are installed on the outside, after the valve extensions have been inserted through extension arms. Secure valve extensions with remaining nuts.

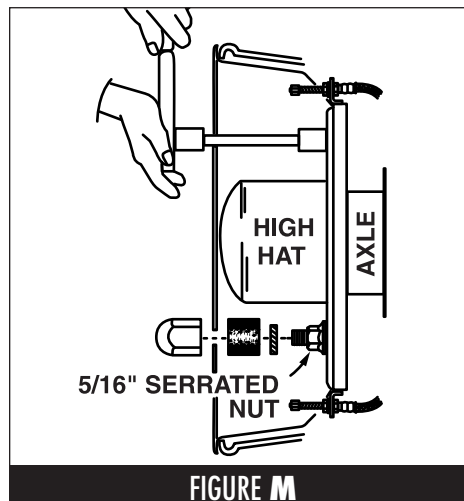
Step 7. Position High Hat And Mount Simulator



Carefully slide the high hat into the simulator. (See Fig. K)

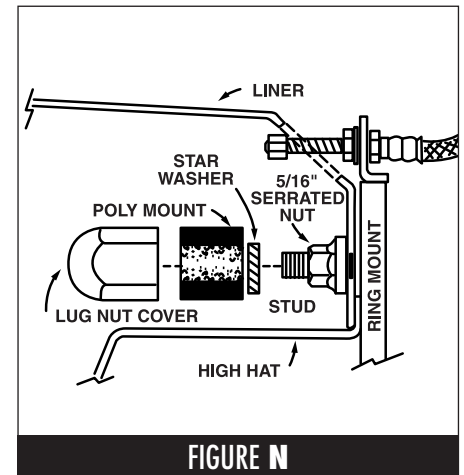


Then place the simulator and high hat together back onto the 4 studs of the mounting ring (See Fig. L)



Next, attach the four serrated 5/16" nuts with socket wrench. **NOTE:** Make sure to alternate tightening until all four serrated nuts are tight. (See Fig. M)

Step 8. Install Lug Nut Covers



In the following order: Fit the internal STAR lock washers over the 5/16" nuts, HAND SCREW the poly mounts over the 5/16" nuts, and then press the stainless steel lug nut covers over the poly mounts until they bottom out against the simulator. (See Fig. N) You will notice that the air valve extensions automatically line up with the holes in the liner for easy access using a standard air chuck. For removal of simulator, you will note that the four lug nut covers installed over the poly mounts are slightly different.

VERY IMPORTANT: Check to see that the liner is even and snug to the rim all the way around the wheel, it is recommended that you check installation after 200 miles and periodically thereafter.