



# 17302 WEIGHT DISTRIBUTING KIT

## INSTALLATION INSTRUCTIONS

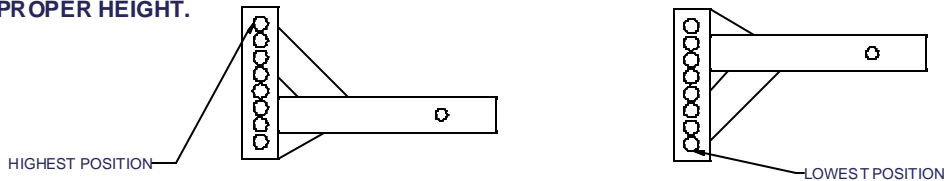
- 1) LINE UP VEHICLE AND TRAILER ON LEVEL PAVEMENT, IN STRAIGHT POSITION, UNCOUPLED.
- 2) **MEASURE TRAILER COUPLER HEIGHT**-LEVEL THE TRAILER AND MEASURE THE DISTANCE FROM GROUND TO TOP OF BALL SOCKET.



- 3) **HITCH BALL SELECTION**- BALL DIAMETER MUST MATCH TRAILER COUPLER SIZE. THE THREE MOST COMMON SIZES ARE 1-7/8, 2" AND 2-5/16". SELECT A BALL WITH 1-1/4" OR 1" THREAD SHANK THAT IS V-5 RATED EQUAL TO OR GREATER THAN TRAILER GROSS VEHICLE WEIGHT RATING.(GVWR)

**WARNING: RAISED BALLS USUALLY HAVE REDUCED LOAD RATING. BALL RATING MUST BE EQUAL TO OR EXCEED TRAILER GVWR.**

- 4) **HITCH BAR LENGTH**- SOME INSTALLATIONS REQUIRE A LONGER BAR. EXTENDED BUMPER GUARDS, PICK-UP TRUCK "CAPS", OR REAR MOUNTED SPARE TIRES CAN LIMIT TURN ANGLES UNLESS A LONGER BAR IS USED. INDIVIDUAL HITCH BARS ARE AVAILABLE IN THREE LENGTHS.
- 5) **ATTACH BALL TO MOUNT**- USE THE PROVIDED BUSHING TO REDUCE HOLE SIZE TO 1" FOR 1" SHANK BALL. ALWAYS USE A LOCKWASHER AND PLACE WASHER NEXT TO NUT. UNLESS OTHERWISE SPECIFIED BY BALL MANUFACTURER. TORQUE BALL NUT TO 450 FT-LBS FOR 1-1/4" NUT, 250 FT LBS FOR 1" NUT AFTER MOUNT IS ATTACHED TO HITCH.
- 6) **ADJUST BALL HEIGHT**- INSERT SHANK BAR INTO YOUR RECEIVER HITCH AND INSTALL 5/8" HITCH PIN. PLACE MOUNT ONTO HITCH BAR USING THE 3/4" HARDWARE PROVIDED, MOVE UP OR DOWN FOR PROPER HEIGHT.



FOR VEHICLES WITH AIR SPRINGS, AIR SHOCKS, OR AUTOMATIC LEVELING SYSTEM, CHECK VEHICLE OWNERS MANUAL FOR PROPER LEVELING PROCEDURES. UNLESS OTHERWISE SPECIFIED, LEVEL THE VEHICLE WITH THE VEHICLE LOADED AS IT WILL BE WHEN TOWING BEFORE SETTING BALL HEIGHT AND ATTACHING TRAILER. WITH AUTOMATIC LEVELING SYSTEM, MAKE SURE THE SYSTEM IS DEACTIVATED BEFORE ADDING TRAILER AND ADJUSTING SPRING BAR LOAD..

- 7) **PICK REFERENCE POINTS** ON FRONT AND REAR BUMPERS. MEASURE AND RECORD THE HEIGHT TO GROUND.

FRONT BUMPER TO GROUND \_\_\_\_\_ REAR BUMPER TO GROUND \_\_\_\_\_

BALL HEIGHT SHOULD BE GREATER THAN COUPLER HEIGHT ( MEASURED IN STEP 2) TO COMPENSATE FOR VEHICLE "SQUAT". CARS WILL SQUAT ABOUT 1/8" FOR EVERY 100 LBS. OF TONGUE WEIGHT. ALLOW 1/16" PER HUNDRED POUNDS FOR TRUCKS AND UTILITY VEHICLES. FOR TRUCKS EQUIPPED WITH EXTRA HEAVY SPRINGS ALLOW 1/32" PER HUNDRED POUNDS.

**EXAMPLE: TRAILER COUPLER MEASURES 18" - TONGUE WEIGHT IS 800 LBS.  
FOR A TRUCK SET THE BALL HEIGHT TO 18 1/2" : 1/16 x 8 = 1/2"**

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- 8) **PRELIMINARY BALL MOUNT ADJUSTMENT-** DETERMINE SPRING BAR HEIGHT "Y" USING TABLE BELOW. INSERT SPRING BAR AND TRUNNION INTO THE HITCH HEAD. SWING BAR OUTWARD TO THE SAME POSITION IT WILL BE WHEN CONNECTED TO THE TRAILER. LIFT UP ON BAR TO REMOVE SLACK. TILT THE HEAD ASSEMBLY UNTIL THE PROPER "Y" DISTANCE AT THE END OF THE SPRING BAR IS ACHIEVED.

COUPLER HEIGHT " X "	COUPLER STYLE		
	A	B	C
15" TO 18"	8"	5 1/2"	6 1/2"
18" TO 20"	9"	6 1/2"	7 1/2"
20" TO 22"	10"	7 1/2"	8 1/2"
22" TO 24"	11"	8 1/2"	9 1/2"
24" TO 26"	12"	9 1/2"	10 1/2"

(SPRING BAR HEIGHT " Y ")

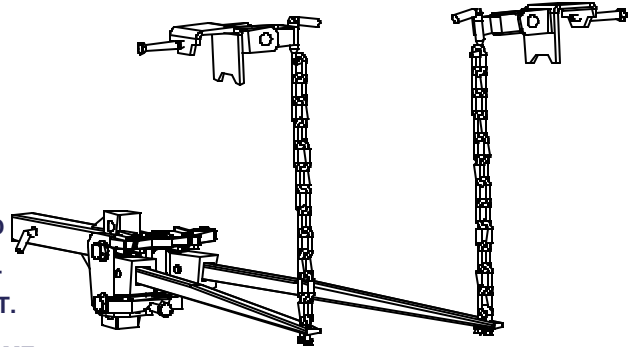
- 9) **INSTALL ADJUSTMENT WASHERS-** WITH THE SPRING BAR DISTANCE DETERMINED ADD THE ADJUSTMENT BOLT AND PROPER AMOUNT OF WASHERS TO THE BACK SIDE OF THE HITCH HEAD TO SET THIS POSITION. AFTER WASHERS ARE INSTALLED INSERT THE ADJUSTMENT BOLT AT THE BOTTOM OF THE HITCH HEAD AND TORQUE TO 85 FT-LBS. WHEN HEAD IS POSITIONED CORRECTLY, TORQUE THE 3/4" HARDWARE TO 300 FT-LBS.

**FINAL LEVELING** - \*\*VEHICLE AND TRAILER SHOULD BE LOADED AND READY FOR TRAVEL BEFORE FINAL LEVELING\*\*.

- 1) ATTACH SPRING BARS USING U-BOLTS, FLAT WASHERS AND LOCKNUTS. LET 2-3 THREADS PROTRUDE BELOW LOCKNUT. CHAIN MUST NOT BIND.

- 2) USING THE TONGUE JACK LOWER COUPLER ONTO BALL AND CLOSE COUPLER.

- 3) HOLD THE SPRING BAR AWAY FROM YOU ( TRUNNION RIBBED SIDE UP) . SET THE BOTTOM KNOB OF THE TRUNNION INTO THE LOWER SOCKET OF THE HITCH HEAD AND THEN SLIDE THE TOP KNOB INTO THE TOP SOCKET BEHIND THE LOCKING LEVER. THE SPRING BARS WILL FIT ON EITHER SIDE AS THEY ARE NOT MADE RIGHT AND LEFT.



- 4) POSITION THE SNAP UP BRACKETS ON TRAILER " A " FRAME SO THAT THE CHAIN ON THE END OF THE SPRING BAR IS APPROXIMATELY VERTICAL. TURN THE 1/2" x 4" HEX BOLT UNTIL IT CONTACTS THE FRAME. TIGHTEN THE BOLT 1/4" TURN.

**DO NOT OVER TIGHTEN !**

- 5) CHECK TO SEE THAT THERE IS ROOM FOR BAR AND CHAIN MOVEMENT WHEN TURNING A CORNER.

- 6) RAISE THE TRAILER TONGUE AND REAR OF VEHICLE 5- 8" WITH A JACK. WITH SNAP UP IN RAISED POSITION, PULL UP ON SPRING BAR CHAIN. NOTE WHICH LINK IS CLOSEST TO CHAIN HOOK. LOWER SNAP UP BRACKET AND SLIP NEXT LOWER LINK OVER HOOK. IF THERE ARE LESS THAN FIVE LINKS BETWEEN HOOK AND U-BOLT ADJUST HITCH HEAD ANGLE AND REPEAT PROCEDURE. SLIDE THE SNAP UP BRACKET HANDLE OVER THE LIFT UNIT AND RAISE. BE SURE THE YOKE PASSES "OVER CENTER". SLIDE THE SAFETY PIN THROUGH THE SMALL HOLE IN THE HOOK UP BRACKET TO LOCK IN PLACE. REPEAT FOR OTHER SIDE.

- 7) LOWER THE JACK AND THE VEHICLE SHOULD SETTLE EVENLY, WITHIN ABOUT 1/2". RE-MEASURE FRONT AND REAR BUMPER REFERENCE POINTS. IF FRONT HAS SETTLED MORE THAN REAR, INCREASE THE NUMBER OF LINKS BETWEEN THE HOOK UP BRACKETS AND THE SPRING BARS. IF REAR HAS SETTLED MORE THAN FRONT, REDUCE THE NUMBER OF LINKS BETWEEN THE HOOK UP BRACKETS AND THE SPRING BARS. IT IS PREFERRED THAT THE REAR OF THE VEHICLE SETTLE THE SAME OR MORE THAN THE FRONT.

NOTE: SOME SURGE BRAKES WILL NOT WORK WITH WEIGHT DISTRIBUTING HITCHES. CHECK WITH MANUFACTURER. DO NOT USE SWAY CONTROL DEVICES WITH SURGE BRAKES.

- 8) **MAINTENANCE-** LUBRICATE THE MOUNTING SOCKETS AND SPRING BAR TRUNNIONS TO PREVENT WEAR. WHEN HOOKING UP PLACE ONE DROP OF OIL ON THE TOP AND A SECOND DROP ON THE FORWARD SIDE OF UPPER TRUNNION. PLACE A DROP OF OIL ONTO THE REAR SIDE OF LOWER TRUNNION BEFORE INSERTING TRUNNION INTO HITCH HEAD. USE A HEAVY WEIGHT OIL AND LUBRICATE THE HITCH BALL REGULARLY. TRUNNIONS SHOULD BE LUBRICATED EACH TOWING DAY. IT IS NOT NECESSARY TO UNHOOK THE SPRING BARS, THE HITCH HEAD HAS TWO OIL HOLES IN THE TOP PLATE FOR UPPER TRUNNION LUBRICATION AND THE LOWER TRUNNIONS CAN BE LUBRICATED BY ADDING OIL TO THE LOWER SOCKETS. EXCESS OIL, DIRT, AND GRIT SHOULD BE WIPED OUT EVERY TIME TRAILER IS UNCOUPLED.