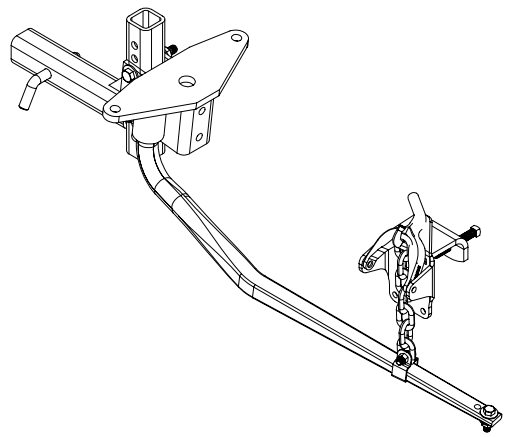
A TOWING PRODUCTS

INSTALLATION / OPERATION INSTRUCTIONS
3204/66071 WEIGHT DISTRIBUTING HITCH SYSTEM



	MAX. TONGUE WEIGHT	MAX. GROSS TRAILER WEIGHT
RATING WHEN USED AS A WEIGHT DISTRIBUTING HITCH WITH SPRING BAR:	400 lb.	4,000 lb.
RATING WHEN USED AS A WEIGHT CARRYING BALL MOUNT WITHOUT SPRING BAR:	350 lb.	3,500 lb.

DO NOT EXCEED TOWING VEHICLE MANUFACTURER'S LOAD RATINGS
DO NOT USE DUAL SWAY CONTROLS (A single sway control can be installed on either left or right side.)
SWAY CONTROL CAN NOT BE USED ON TRAILERS WITH SURGE BRAKES

INTRODUCTION

When a trailer is hitched to a tow vehicle, the tongue weight typically causes the rear of the tow vehicle to lower and the front to raise. See Figure 1.

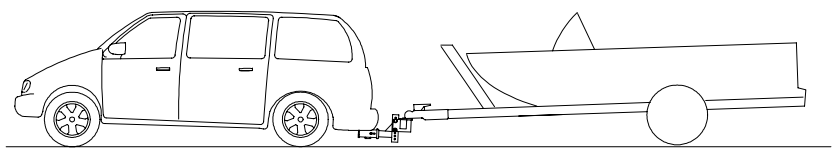


Figure 1

The purpose of a weight-distributing hitch is to remove excessive weight from the rear axle of the tow vehicle and distribute it to the front wheels and the trailer wheels. See Figure 2.

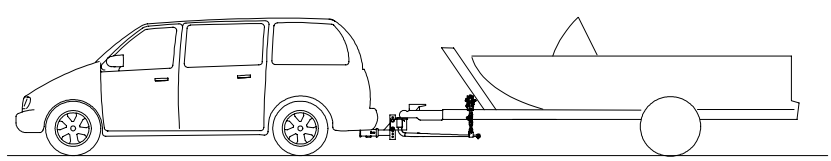
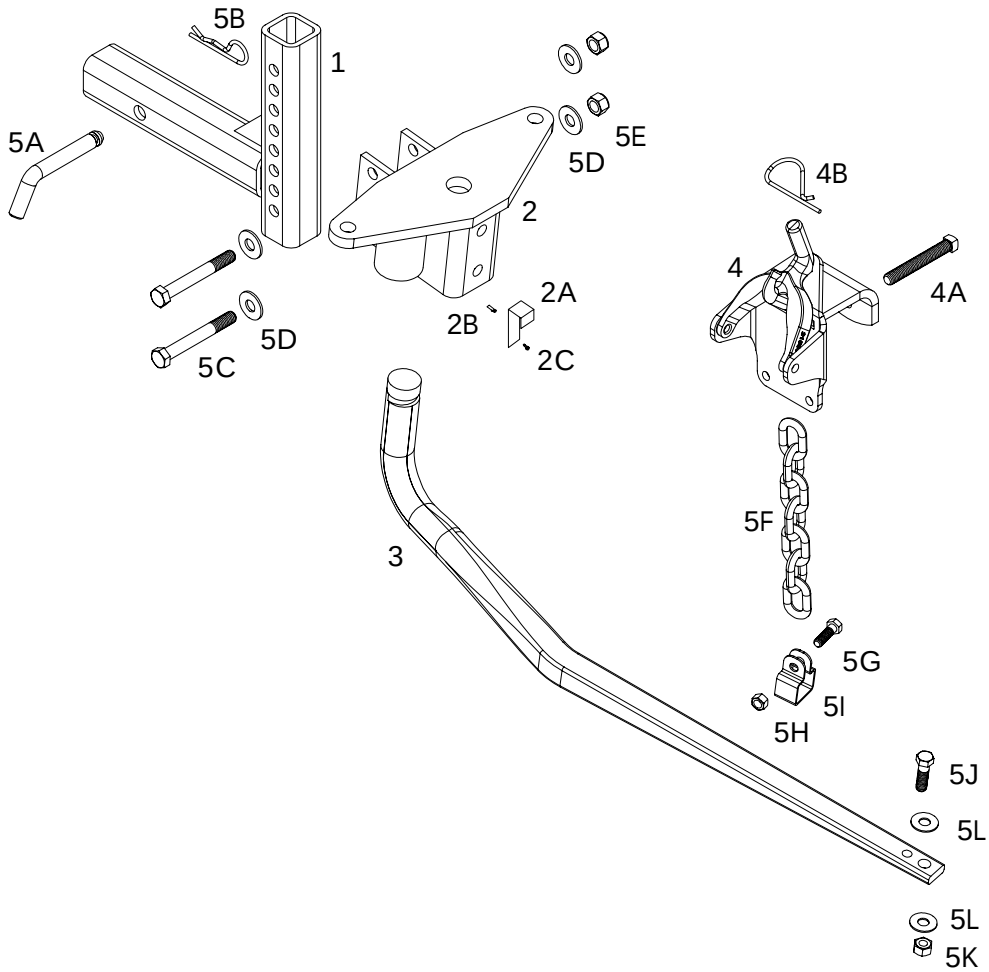


Figure 2



REF.	PART NO.	QTY.	DESCRIPTION
1	7470	1	SHANK ASSEMBLY
2	6268	1	HEAD ASSEMBLY
2A	-	1	RETAINER
2B	-	1	PIN, SPRING BAR RET.
2C	-	1	SCREW, DRIVE
3	7660	1	SPRING BAR
4	100089	1	LIFT UNIT ASSEMBLY
4A	55060	1	BOLT, SQHD 1/2-13X3.5
4B	2867	1	CLIP

REF.	PART NO.	QTY.	DESCRIPTION
5	100112	1	FASTENER KIT
5A	55010	1	PIN, HITCH
5B	55515	1	CLIP
5C	1150016	2	BOLT, 1/2-13X4.0 GR5
5D	55579	4	WASHER, SERRATED 1/2
5E	55576	2	LOCKNUT, 1/2-13
5F	55420	1	CHAIN
5G	1145005	1	BOLT, 3/8-16X1-1/4
5H	55610	1	LOCKNUT, 3/8-16
5I	7414	1	HANGER
5J	1147006	1	BOLT, 7/16-14X1-1/2
5K	55045	1	LOCKNUT, 7/16-14
5L	1160007	2	WASHER, FLAT 7/16

Figure 3

READ ALL INSTRUCTIONS AND CHECK PACKAGE CONTENTS

SETUP DIMENSIONS

1. Line up tow vehicle and trailer on level pavement, in a straight-ahead position, uncoupled.
2. For vehicles with air springs, air shocks or automatic leveling systems, check vehicle owner's manual. Unless otherwise specified, level the vehicle with the vehicle loaded as it **will be** when towing. Deactivate load-leveling system before coupling trailer and adjusting spring bar.

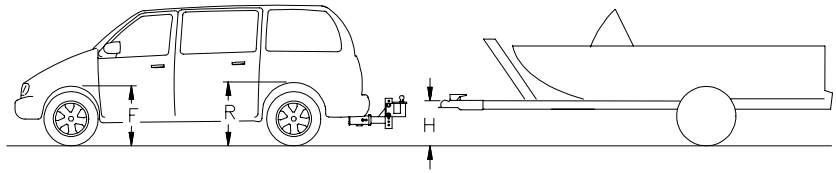


Figure 4

3. Measure and record uncoupled height on front and rear wheel openings to pavement and level trailer coupler height. See figure 3.
   F = _____ R = _____ H = _____

4. Determine uncoupled ball height for tow vehicle. Tow vehicle uncoupled ball height should be greater than coupler height (H) to compensate for tow vehicle settling. Ball height for tow vehicle should be approximately ½" greater than coupler height (H) for most light weight marine trailer applications.

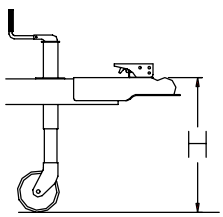


FIGURE 5

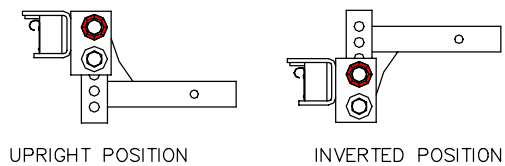


FIGURE 6

INSTALL SHANK, HITCH HEAD AND BALL

1. Insert shank (1) into receiver and install pin (5A) and clip (5B) [See figure 3]. Shank (1) may be inserted in the upright or inverted position depending on uncoupled ball height [See figure 6].
2. Select hitch ball to match trailer coupler socket, having 1" or 1 - 1/4" threaded shank and capacity equal to or exceeding the gross trailer weight. Attach the ball to the head assembly (2) **using a lockwasher** and nut. See ball instructions for proper torque specification.
3. Assemble head to shank as shown in Figure 3.
4. Align head assembly bolt holes to the nearest holes on the shank that corresponds to the ball height **approximately 1/2" to 1" higher** than trailer coupler height **"H"**.
5. Tighten head assembly bolts to 75 lb-ft. for ½-13 GR5 bolts (5C), serrated washers (5D) and locknuts (5E).

ASSEMBLE AND INSTALL SPRING BARS

1. Attach chain (5F) to spring bar (3) using hanger bracket (5I), 3/8-16 X 1-1/4" hex bolt (5G) and locknut (5H) [See figure 3]. Allow 2 - 3 threads to protrude past locknut [See figure 7]. Chain must not bind.

Install 7/16 x 1-1/2" stop bolt (5J), flat washers (5L) and locknut (5K) in the hole closest to the end of the spring bar (3) as shown in figures 3 & 7. Tighten stop bolt to 31 lb-ft.

2. Coat hitch ball lightly with grease (such as Reese or Draw-Tite Hitch Ball Lubricant). Lower coupler onto ball and close coupler latch. **Using the tongue jack, raise the trailer coupler and the rear of the tow vehicle 3" at the ball.**
3. Line up spring bar (3) parallel to trailer frame. Insert them into head sockets and push upward. A "click" will be heard when the retaining pin (2B) engages the spring bar groove.

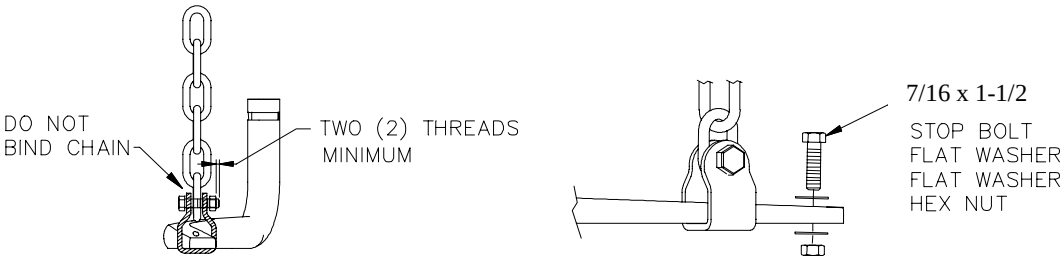


FIGURE 7

4. To remove spring bars, lift up on spring bars and gently pull out retainer (2A). Lower spring bars from head sockets.

INSTALL LIFT UNITS

1. Position lift unit (4) on trailer frame. Lift unit should face driver's side of vehicle [See figure 8].
2. Hold spring bar chain (5F) vertical. Center lift unit (4) with chain [See figure 8].
3. Turn 1/2-13 x 3-1/2 bolt (4A) until it contacts the frame. Then tighten ½ - ¾ turn with wrench. **DO NOT** O**VER TIGHTEN**.

NOTE:

Optional mounting holes are provided for trailers that do not permit use of ½ - 13 bolt [See figure 9]. **CONSULT TRAILER FRAME MANUFACTURER FOR APPROVAL PRIOR TO DRILLING HOLES.**

3/8" hardware is recommended whether it is self-tapping or nut and bolt.

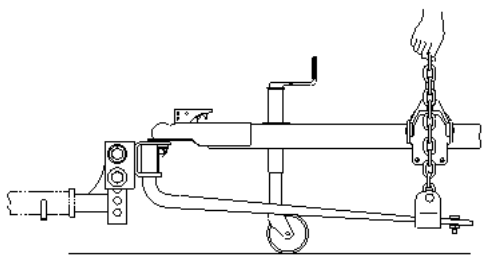


FIGURE 8

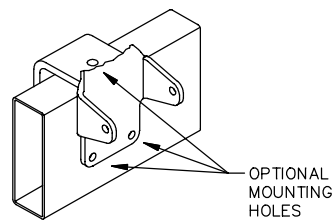


FIGURE 9

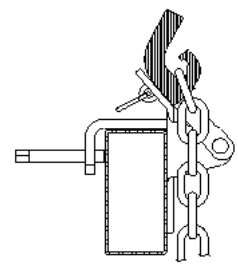


FIGURE 10

CAUTION: FOR SAFE AND PROPER OPERATION, LIFT UNIT MUST BE MOUNTED LEVEL AND WITH THE SPRING BAR CHAINS AGAINST THE TRAILER FRAME (SEE FIGURE 10).

HOOK UP SPRING BARS

The purpose of a weight distributing hitch is to remove excessive weight from the rear axle of the tow vehicle and distribute it to the front wheels and the trailer wheels. A weight distributing system is properly set up and coupled when the tow vehicle has settled front to rear evenly or slightly lower in the rear. Smaller vehicles with front wheel drive have less reserve capacity on the front wheels and should not be completely level but slightly lower in the rear. The amount of leveling or load transfer is adjusted by

engaging different spring bar chain links (5F) with the lift units (4) and changing the angle of the head assembly (2).

SPRING BAR CHAIN CONNECTION

1. With lift unit (4) in raised position, pull straight up firmly on spring bar chain (5F). Note which link is closest to chain hook [See figure 8]. The next lower link will be used for hook up.

NOTE:

BEFORE OPERATING LIFT UNIT, RAISE COUPLED TRAILER WITH THE TONGUE JACK APPROXIMATELY THREE INCHES. THIS WILL REDUCE SPRING BAR TENSION AND MAKE LIFT UNIT OPERATION EASIER.

2. Remove spring clip (4B) from back of lift unit (4).
3. Slide handle over the large hook on the lift unit (4) and lower unit.

WARNING:

KEEP CLEAR OF THE SWING PATH OF ALL MOVING PARTS WHEN OPERATING LIFT UNIT.

4. Attach upper end of desired chain link to lift unit hook, while allowing remaining free links to fall down to the outside of the trailer frame (See figure 11).
5. **There must be at least 6 links between the lift unit and the spring bar.** This is necessary for proper operation of the spring bars during turns(See figure 11),

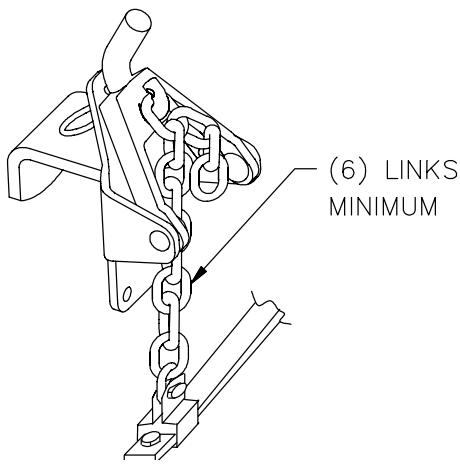
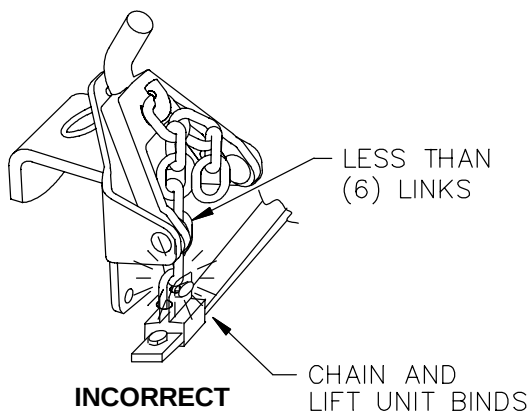


FIGURE 11



INCORRECT

FIGURE 12

CAUTION: FAILURE TO CONNECT THE SPRING BAR CHAIN CORRECTLY AND PROVIDE AT LEAST 6 LINKS BETWEEN LIFT UNIT AND SPRING BAR CAN RESULT IN DAMAGE TO THE LIFT UNIT. FIGURE 12 SHOWS INCORRECT SPRING BAR CHAIN HOOK UP.

6. Use handle to raise lift unit (4). Use both hands on the handle and maintain control at all times.
7. Insert spring clip (4B).
8. Retract trailer tongue jack so hitch is now carrying the full trailer weight.

ADJUST HOOKUP (IF NECESSARY)

A weight distributing system is properly set up and coupled when the tow vehicle has settled with the front wheel opening “F” at the original uncoupled dimension measured and slightly lower in the rear ”R”. See Figure 13.

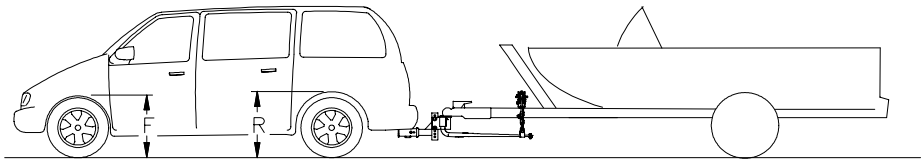
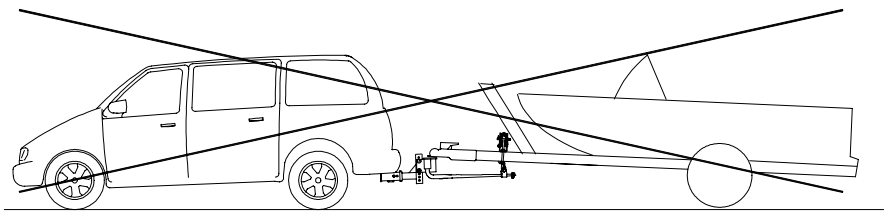


Figure 13

- This will assure the front wheel load remains unchanged. This results in good handling and the desired load on the rear axle and trailer axle.
- The front of the vehicle should never settle more than the rear. See Figure 14. If necessary increase the number of chain links between lift unit and spring bar.
- Mini-vans and small sport utility vehicles will typically settle with the front wheel opening “F” at the original dimension to 1/2” higher than original. This is will still allow acceptable front wheel loads, good handling and the desired load on the rear axle and trailer axle.
- If the rear suspension sags too much, additional leveling is required. The front wheel opening “F” may **ONLY** be settled lower than the original dimension **IF** the rear wheel opening “R” has settled by a greater amount (At least 1”).



INCORRECT – Too much weight transfer to front axle.
Figure 14

- When the desired settling is achieved, mark the hooked chain link with paint for future reference.

NOTE:
SURGE BRAKES usually require a small amount of fore-aft movement for their actuating mechanisms to function. To avoid restricting movement, it may be necessary to increase the number of chain links between the lift unit and the spring bar. **CHECK TRAILER AND/OR SURGE BRAKES OPERATING INSTRUCTIONS FOR SPECIAL REQUIREMENTS REGARDING WEIGHT DISTRIBUTING HITCHES.**

CHECK ALL CONNECTIONS BEFORE TOWING

Check the following: pin and clip securing shank to receiver, head to shank fasteners, ball nut, coupler latch, lift unit bolts, safety chains, lights and turn signals, and braking system, including breakaway switch.

LUBRICATION

1. **SPRING BAR AND HEAD SOCKET SHOULD BE LUBRICATED EACH TOWING DAY. FAILURE TO DO SO WILL RESULT IN EXCESSIVE SPRING BAR AND HEAD SOCKET WEAR.** Use a heavy oil or grease (such as Hitch Ball Lubricant P/N 6939 or P/N 58117).
2. Excessive oil, dirt, and grit should be wiped out of socket whenever trailer is uncoupled.

3. Clean hitch ball and coupler socket. Coat ball lightly with grease (such as Hitch Ball Lubricant P/N 6939 or P/N 58117).

⚠ WARNING

FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH, VEHICLE CRASH, AND / OR PROPERTY DAMAGE

DO NOT USE TWO (2) FRICTION SWAY CONTROL UNITS ON THIS SYSTEM.
This unit is designed for only one (1) sway control device to be used on either side of trailer.

SWAY CONTROL CAN NOT BE USED ON TRAILERS WITH SURGE BRAKES

COUPLED BALL HEIGHT SHOULD NEVER BE GREATER THAN UNCOUPLED BALL HEIGHT. Front wheel overload and loss of rear wheel traction can result. This can lead to unstable handling, reduced braking ability, and a tendency to "jackknife" when turning.

USE EXTREME CAUTION WHEN BACKING UP AND TURNING. DO NOT ALLOW TOW VEHICLE AND TRAILER TO MANEUVER INTO A "JACKKNIFE" POSITION. Components of the hitch and sway control, if applicable, may be forced into damaging contact. If a "jackknife" maneuver has occurred, examine all towing system components for damage or loosening immediately. Repair or replace any damaged components before resuming towing.

DO NOT TOW MULTIPLE TRAILERS. Towing multiple trailers may cause severe instability, loss of control and structural failure.

DO NOT ATTEMPT TO HOOK-UP OR TOW WITH A FRONT WHEEL DRIVE VEHICLE WITH THE REAR WHEELS REMOVED. This will cause severe instability, loss of control and structural failure.

TOWING TIPS

DRIVING - Good habits for normal driving need extra emphasis when towing. The additional weight affects acceleration and braking, and extra time should be allowed for passing, stopping and changing lanes. Signal well before a maneuver to let other drivers know your intentions. Severe bumps and badly undulating road can damage your towing vehicle, hitch, and trailer, and should be negotiated at a slow, steady speed. **IF ANY PART OF YOUR TOWING SYSTEM "BOTTOMS OUT", OR IF YOU SUSPECT DAMAGE MAY HAVE OCCURRED IN ANY OTHER WAY, PULL OVER AND MAKE A THOROUGH INSPECTION. CORRECT ANY PROBLEMS BEFORE RESUMING TRAVEL.**

CHECK YOUR EQUIPMENT

Periodically check the condition of all your towing equipment and keep it in top condition.

TRAILER LOADING

Proper trailer loading is important. Heavy items should be placed close to the floor near the trailer axle. The load should be balanced side-to-side and firmly secured to prevent shifting. Tongue weight should be about 10 - 15 percent of the gross trailer weight for most trailers. Too low a percentage of tongue weight often produces a tendency to sway. Load the vehicles prior to set up.

SWAY CONTROL

A sway control can help minimize the effects of sudden maneuvers, wind gusts and buffeting caused by other vehicles. Use of a sway control is recommended for trailers with large surface areas, such as travel trailers, and for trailers with low tongue weight percentage.

TIRE INFLATION

Unless specified otherwise by the towing vehicle or trailer manufacturer, tires should be inflated to their maximum recommended pressure.

TOWING VEHICLE AND TRAILER MANUFACTURERS' RECOMMENDATIONS

Review the owner's manual for your towing vehicle and trailer for specific recommendations, capacities, and requirements.

PASSENGERS IN TRAILERS
Trailers should **NOT** be occupied while being towed, under any circumstances.

TRAILER LIGHT, TURN SIGNALS AND ELECTRIC BRAKES
Always hook up trailer lights, turn signals, electric brakes and break-away switch connection (if equipped). Even for short trips.

REMOVE HITCH HEAD WHEN NOT TOWING - Remove hitch head from towing vehicle receiver when not towing. This will prevent contamination of head pockets, reduce chance of striking hitch head on driveway ramps or other objects, and minimize damage in event of a rear-end collision.