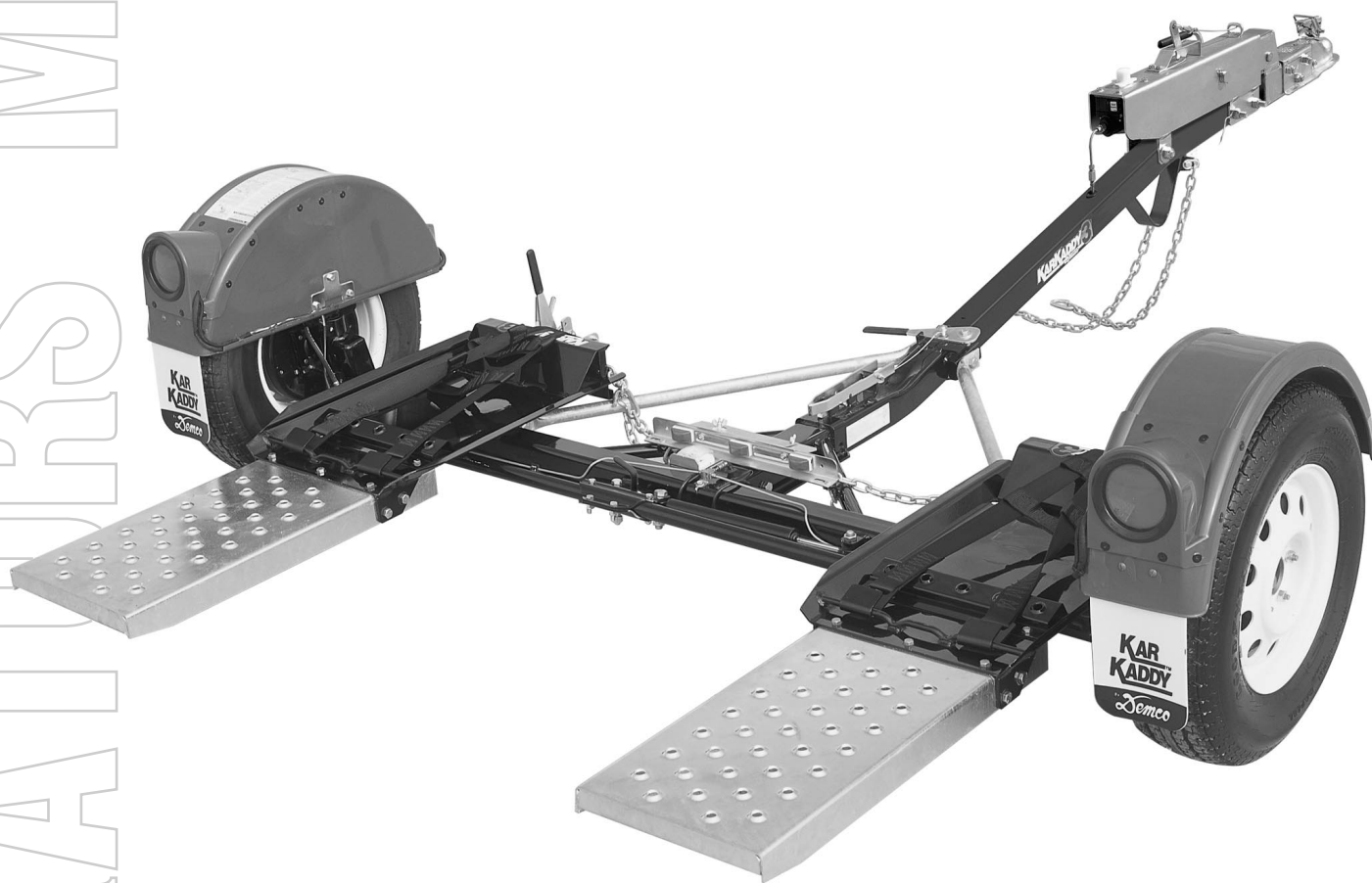


**Demco** manufacturing  
Dethmers Manufacturing Company

# Kar-Kaddy 3

## KK370SB



ASSEMBLY  
CALIBRATION  
OPERATION  
REPLACEMENT PARTS

**READ** complete manual CAREFULLY  
BEFORE attempting operation.

*Doing Our Best To Provide You The Best*

## Introduction

Thank you for purchasing a Demco Kar-Kaddy. We feel you have made a wise choice and hope you are completely satisfied with your new piece of equipment.

## GENERAL INFORMATION

1. Unless otherwise specified, high-strength (grade 5) (3 radial-line head markings) hex head bolts are used throughout assembly of this piece of equipment.
2. Whenever the terms "**LEFT**" and "**RIGHT**" are used in this manual it means from a position behind the Kar-Kaddy and facing forward.
3. When placing a parts order, refer to this manual for proper part numbers and place order by **PART NO. and DESCRIPTION.**

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### "Reporting Safety Defects"

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Dethmers Manufacturing Company (DEMCO).

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Dethmers Manufacturing Company (DEMCO).

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0129 in Washington, D.C. area) or write to:

NHTSA,  
U.S. Department of Transportation  
Washington, D.C. 20590.

You can also obtain other information about motor vehicle safety from the Hotline.

**NOTE:** This is one of a two-manual set. The other manual is titled "Owner's Manual" and contains technical information concerning the specific product that you purchased. Be sure to review both manuals.

## **SAFETY**

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



**THIS SYMBOL MEANS**

**-ATTENTION**

**-BECOME ALERT**

**-YOUR SAFETY IS INVOLVED!**

### **SIGNAL WORDS**

This manual uses the following signal words-- **DANGER**, **WARNING**, and **CAUTION**-- with safety messages. The appropriate signal word has been selected using the following guidelines.

#### **DANGER:**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for tow dolly components which, for functional purposes, cannot be guarded.

#### **WARNING:**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

#### **CAUTION:**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual, or require additional copies, please contact your dealer or Dethmers Mfg. Co., P.O. Box 189, 4010 320th Street, Boyden, IA 51234  
ph: (712) 725-2311 Toll Free: 1-800-543-3626 Fax: (712) 725-2380 <http://www.demco-products.com>

## TOW DOLLY USER GUIDE



### WARNING

Read the following information completely before hooking up, loading, using unloading or unhooking this Tow Dolly.



**FAILURE TO FOLLOW THESE SAFETY INSTRUCTIONS  
MAY LEAD TO DAMAGE TO PROPERTY, SEVERE PERSONAL INJURY, AND/OR DEATH.**

- Read towing instructions in towed vehicle's owner's manual.
- Read towing instructions in towing vehicle's owner's manual. Be certain that your towing vehicle has the capacity to tow a tow dolly and towed vehicle combination. **IF YOU HAVE ANY QUESTIONS ABOUT THIS, DO NOT TOW. CONSULT YOUR DEALER OR CALL DEMCO.**
- Use a 2", 5000 lb. (or greater) capacity ball for a tow dolly without surge brakes and a 2", 6000 lb. (or greater) capacity ball for a tow dolly with surge brakes.
- Make sure towing vehicle's parking brake is fully engaged before starting hookup, loading, unloading, or unhooking of tow dolly.
- Do not load towed vehicle onto tow dolly until tow dolly is completely and properly hooked up to towing vehicle and setting on a level surface.
- Tail lights and stop lights must be hooked up and operating properly at all times.
- Do not load a towed vehicle that exceeds weight or size limits of tow dolly.
- Always have someone safely guide you when driving towed vehicle onto tow dolly.
- Be sure tires of your towed vehicle and tow dolly are in good condition and inflated to proper pressures. Tire pressure may increase during travel—do not bleed off extra pressure.
- Do not back up your towing vehicle when a tow dolly is attached. A tow dolly swivels both at the coupler and at car platform. If you must back up, unload towed vehicle first, disconnect tow dolly and move vehicle and tow dolly separately. Park where you can pull ahead when leaving.
- Do not exceed 55 miles per hour, or any lower posted speed limit.
- Avoid sharp turns or swerves.
- Braking distance increases when using a tow dolly. Use caution and always allow sufficient distance for braking.
- Do not transport passengers or cargo in vehicle being towed.
- Do not unhook tow dolly from towing vehicle until towed vehicle is completely unloaded from tow dolly.

- Allow one tow-vehicle/tow dolly/vehicle-in-tow length for each 10 m.p.h. behind another vehicle.
- ALWAYS check the hitch, tow dolly and vehicle-in-tow at each stop to insure that coupling, chains and tie down equipment remain tight and properly attached. Use tow dolly checklist as an aid.
- NEVER tow without properly installed tire straps and security chains properly attached to frame or other structural member of vehicle-in-tow.
- ALWAYS slow down—40 miles per hour or less—for curves, wet or rough roads, and downgrades. On downgrades, shift into a lower gear and allow engine to help hold speed down.
- ALWAYS be rested. NEVER drive when fatigued.
- AVOID driving at night. Night drivers have three times the fatality rate of day drivers.
- NEVER continue to operate an unstable (swaying or whipping) combination. If this occurs, slowly pull over, reducing speed through your engine rather than braking. When stopped in an off the road location check hitch, tire straps, and chains.
- NEVER pass on hills or curves. Beware of cross winds and wind gusts from passing vehicles.
- NEVER transport passengers or cargo in towed vehicle.
- ALWAYS load vehicle-in-tow facing forward. NEVER back onto tow dolly. For maximum stability steering axle must be on tow dolly.
- ALWAYS disconnect drive shaft of a rear wheel drive/front engine vehicle-in-tow at differential to avoid transmission damage. Secure disconnected parts.
- ALWAYS ensure vehicle-in-tow parking brake is disengaged before towing.
- ALWAYS keep children, pets, and bystanders clear of area while loading and unloading.



### **THE MOST IMPORTANT PART - IS YOU**

Will you read and follow these instructions on how to safely operate this Dethmers Tow Dolly?

If your answer is YES, we thank you for your attitude and believe your towing experience will be a safe and pleasant one.



### **SAFETY CHECKLIST**

While Stopped Check

- That Hitch is Tight
- That Hitch Ball is Tight
- Coupler Lever Lock
- Are Tire Tie Down Straps Tight
- Are Hitch Safety Chains and Vehicle-in-Tow Frame Security Chains Properly Attached
- Are Tire Pressures OK
- Vehicle-in-Tow for Working Lights
- Are Drive Shaft and Battery Cable Disconnected and Secured If Required

When On the Road:

- Reduce Speed
- Think Ahead
- Allow for extra length when turning
- Anticipate Stops/Brake Early
- Stop Often for Rest
- Use Safety Checklist at Each Stop



### **TOWING VEHICLE SIZE AND TOWING CAPACITY**

Towing vehicle must weigh at least 750 lbs. more than weight of vehicle-in-tow. Example: A 2,750 lb. car may tow no more than a 2,000 lb. car.



### **Suspension**

Your tow vehicle's rear springs must be of sufficient strength to support the added loaded tow dolly tongue weight while maintaining tow vehicle in approximately a level position. If rear springs, shock absorbers, or struts, are weak or broken, they must be replaced. In some cases, it may be necessary to add helper springs or air shocks to help support weight properly. Poor wheel alignment, loose steering or worn suspension components can also adversely affect vehicle handling and stability.



### **Sport Utility Vehicles**

Exercise caution when towing with a sports utility (e.g., Jeep or Bronco) type vehicle. Some of these vehicles have a higher than normal center of gravity, and a short wheelbase. This gives them different handling characteristics than the average car or truck.



### **Tires**

You must increase pressure in rear tires of tow vehicle to accommodate extra weight of tow dolly. When cold, inflate rear tires to approximately 6 pounds above their normal operating pressure, but DO NOT exceed pressure limit molded into tire sidewall. Normal pressure should be maintained in tow vehicle's front tires.

Tow dolly tires should be inflated to pressure recommended on operational decal on fender (45 or 50 psi). These are COLD pressures, and will increase when tires are hot from running. DO NOT bleed off this pressure increase. Incorrect tire pressure can adversely affect vehicle handling and gas mileage.



### **Mirrors**

State laws require vehicles towing a tow dolly to be equipped with mirrors on both sides. Inadequate side mirrors create a hazard by limiting rearward vision. If your vehicle is not already so equipped, you should put right and left hand full view, detachable mirrors on. Ask dealer if it has any available for rent if you do not want to purchase them.



## **Engine and Transmission Cooling**

Towing a loaded tow dolly can be quite demanding on engine and transmission cooling systems of tow vehicle, especially if towing long distance or in hilly terrain. Be sure your cooling system is in top shape, and adequate for towing anticipated load. Engine oil should be fresh and of maximum viscosity recommended for your particular engine. Engine cooling may be enhanced by flushing system and installing fresh coolant. Automatic transmissions may need an external oil cooler installed for unusually difficult or extended towing.

Engine and transmission heat increase as vehicle speed increases. To maintain proper cooling, do not exceed 55 m.p.h. regardless of engine size or load.



## **Hitch**

Be certain that hitch and hitch ball are securely attached and that hitch ball is 2" in diameter. A minimum rating of class II (3500 lbs) is required for both hitch and hitch ball.

Some sports utility vehicles are equipped with a bumper type hitch from the factory. **DO NOT USE THESE HITCHES**, since bumper may not have sufficient structural capacity to handle the load. Equip your vehicle with a hitch attached to the undercarriage of your vehicle.



## **Lights**

Lights are required on tow dollies in every state. If your vehicle is not already equipped for tow dolly light hook-up, it will be necessary to install connections now. Your dealer will let you know exactly what is needed for your particular vehicle.



## **Tow Vehicle Loading**

A loaded tow dolly tongue weight (approximately 200 lbs.) contributes to total cargo weight of tow vehicle. Tow vehicle manufacturer's recommended maximum passenger/cargo load must not be exceeded.



## **VEHICLE-IN-TOW**

### Limitations/Cautions

1. Vehicle-in-tow must Not be wider than 76 inches at front doors to prevent damage to doors from contact with tow dolly fenders on turns.
2. Vehicle-in-tow must Weigh no more than 4,400 lbs.

Exceeding these limits may cause damage to tow dolly or vehicles.

Vehicle-in-tow tire tread must fit on ramps without overhanging sides. Track width (distance from left front tire center to right front tire center) must be between 49 and 59 inches.

Low hanging spoilers and air dams may be damaged by contact with tow dolly ramps when loading and unloading. Be sure there is adequate clearance for these. If not, they must be removed before loading.



### **Vehicle-in-Tow Facing Forward**

Vehicle-in-tow must always be facing forward (front wheels on tow dolly).



### **Transmission Damage to Towed Vehicles**

When towing a rear axle driven front engine vehicle, the drive shaft must be disconnected to prevent transmission damage. Simply placing transmission in neutral is not sufficient and will not prevent damage due to a lack of internal lubrication. You must disconnect drive shaft at rear axle and tie or wire it up. The universal joint bearing caps must be taped on to prevent loss of bearings. If you choose to remove drive shaft entirely, it may be necessary to cap transmission tail shaft to prevent fluid loss and possible future damage. Consult your vehicle owner's manual.

Front wheel drive vehicles need not have drive shafts disconnected because the drive wheels are loaded on tow dolly.

Towing damages many rear engine vehicle with transaxles. Consult owner's manual for tow suitability.



### **Passengers And Cargo Prohibited in the Vehicle-in-Tow**

Never transport any passengers or cargo in towed vehicle. In addition to being illegal in most states, carrying passengers in a towed vehicle exposes those passengers to risk of exhaust gas asphyxiation.



### **Lighting Requirements**

Even though tow dollies have operating lights, law requires that a vehicle-in-tow be equipped with functioning stop, turn and running lights. Detachable vehicle-in-tow towing lights can be purchased at many rental locations. They can also be purchased at auto supply shops. Follow instructions carefully when installing.



### **TOW DOLLY HOOK UP**

Double Check

After rental company has "hooked up" your tow dolly, it is wise for you to double-check connections both before and during trip.

**ALWAYS FOLLOW HOOK-UP, LOADING, AND UNLOADING INSTRUCTIONS ON FENDER DECALS OF TOW DOLLY. IF YOUR TOW DOLLY DOES NOT HAVE INSTRUCTIONS OR IF THEY ARE ILLEGIBLE, ASK COMPANY FOR A LEGIBLE COPY.**





## TOWING 55 Miles Per Hour

All vehicle combinations have a speed beyond which adequate emergency control cannot be assured. Maximum recommended speed for all tow dolly combinations is 55 m.p.h. **under good road conditions**. As road conditions deteriorate you must reduce the maximum recommended speed.

Posted speed limit is usually the same for trucks and car-trailer combinations. Observe this limit even if it is less than 55 m.p.h.

Please do not be lulled into a false sense of security because your tow dolly tows easily at higher speeds. A road hazard that would be avoidable at 55 m.p.h. can become unavoidable at 65 m.p.h.

If you drop any wheel(s) off the pavement, don't attempt any sharp steering corrections.

Remain off the pavement, decrease your speed until you have regained control, then drive slowly back onto pavement.



### Never Operate An Unstable Combination

Instability (swaying or whipping) of a tow vehicle/ tow dolly combination at low speeds usually increases at higher speeds. If combination begins to whip or sway, steer straight ahead, take your foot OFF the throttle, but **do not brake** until combination has stabilized. Stop in an off the road location and check tow vehicle and tow dolly as soon as possible.

- Review all instructions and be sure you have complied.
- Check that vehicle on tow dolly is loaded with front wheels on tow dolly. Reload if necessary.
- Check that all chains and tie down equipment remain tight and properly attached.
- Check for proper tire inflation all around combination.
- Make sure trunk or bed of towing and towed vehicles are not loaded with cargo.
- Check wheel bearings and lug nuts on both tow vehicle and tow dolly to be sure a wheel has not become loose.
- Check tow vehicle's wheel alignment.
- Finally, be sure you are not exceeding maximum recommended speed (55 MPH).

If you have followed preceding instructions, any instability should be corrected. If situation persists, stop and call for professional assistance from a tow truck operator.



## **BREAKDOWNS**

### Get Off The Road

Immediately park tow vehicle-tow dolly combination in a safe place completely off the highway. Get all occupants out of vehicle and away from roadway.

If you must continue on the highway to reach a safe place off the road, turn on emergency flashers and proceed with caution.

Do not hesitate to proceed on a flat tire if necessary to reach a safe place completely off the highway. Proceed slowly, for road friction could ignite a flat tire and cause a fire.



## **Rough Roads**

To prevent damage to tow vehicle or tow dolly, reduce speed when towing tow dolly over rough roads.



## **Turning**

Avoid U-turns. Avoid turning too sharply. Turning too sharply may cause side of vehicle-in-tow to come in contact with rear of dolly fender and cause damage to both vehicles.



## **“Pro” Driving Tips**

Accidents occur more frequently at night with a tired driver exceeding recommended speed on a downgrade, wet road, or curve. Don't attempt to drive “straight through.” Be rested. Slow down for down-grades, wet roads or curves. Night drivers have three times the fatality rate of day drivers. Avoid driving at night.



## **ACCIDENTS**

Move all vehicles completely off the road.

Get everyone out of the vehicle and off the road. Call police.

**Dethmers Manufacturing Company wants you  
to have a safe towing experience.**

**Read these instructions carefully,  
read fender decals on tow dolly,  
and follow all instructions.**

# BOLT TORQUE

## TORQUE DATA FOR STANDARD NUTS, BOLTS, AND CAPSCREWS.

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

NOTE: Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.



### Torque Specifications

Torque wheel nuts to 120 ft/lbs

#### Bolt Torque for Standard bolts \*

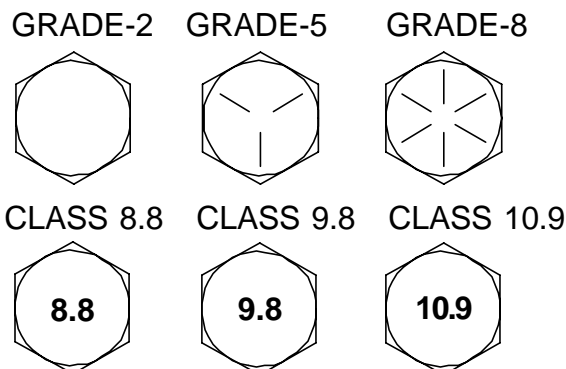
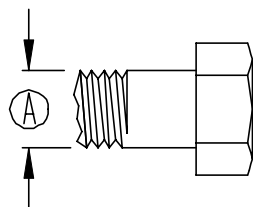
"A"	GRADE 2		GRADE 5		GRADE 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	(8)	9	(12)	12	(16)
5/16"	10	(13)	18	(25)	25	(35)
3/8"	20	(27)	30	(40)	45	(60)
7/16"	30	(40)	50	(70)	80	(110)
1/2"	45	(60)	75	(100)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(130)	150	(200)	225	(300)
3/4"	165	(225)	290	(390)	400	(540)
7/8"	170	(230)	420	(570)	650	(880)
1"	225	(300)	630	(850)	970	(1310)

#### Bolt Torque for Metric bolts \*

"A"	CLASS 8.8		CLASS 9.8		CLASS 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)
20	378	(513)	--	--	515	(689)
22	516	(699)	--	--	702	(952)
24	654	(886)	--	--	890	(1206)

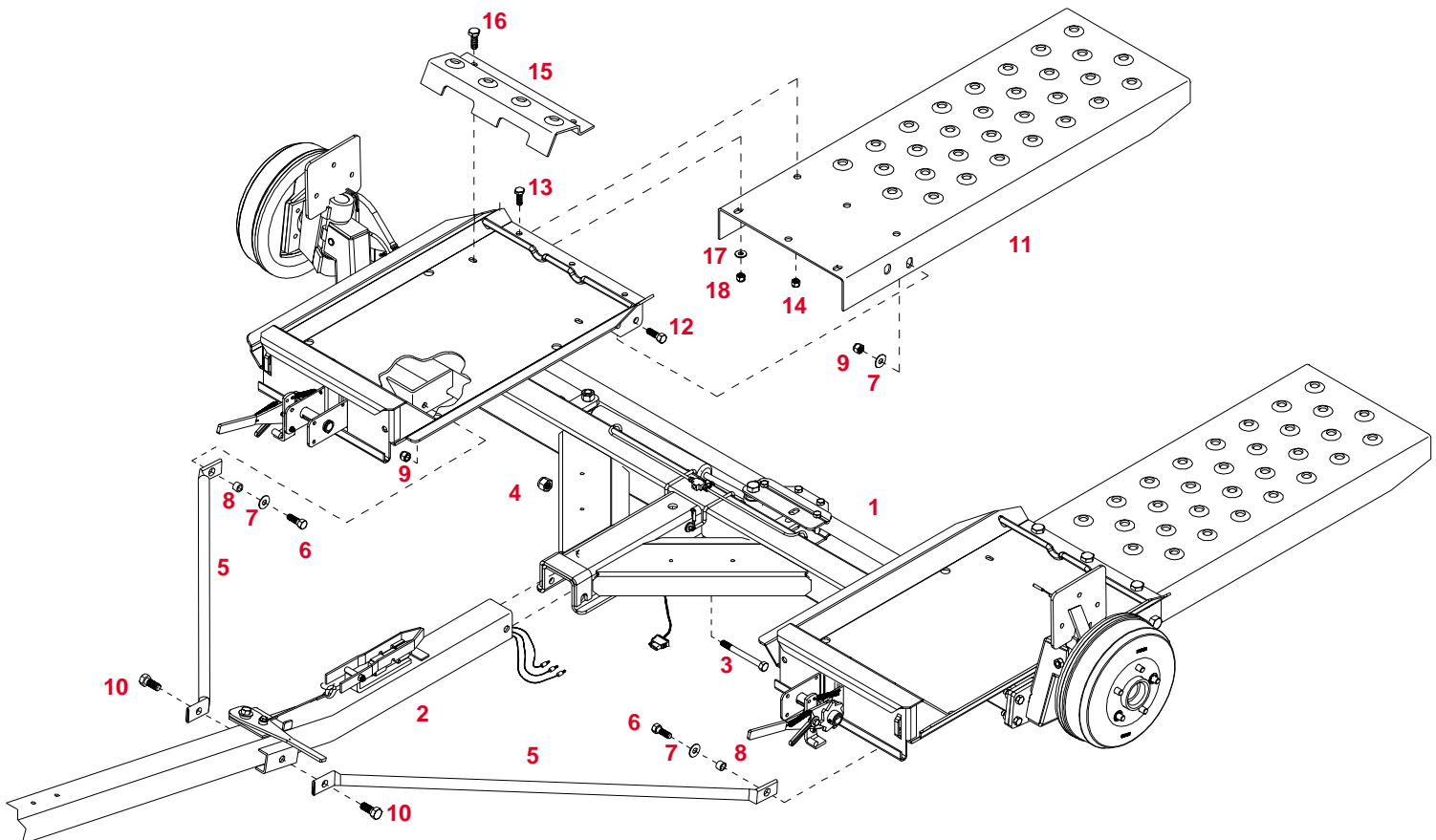
Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

\* GRADE or CLASS value for bolts and capscrews are identified by their head markings.



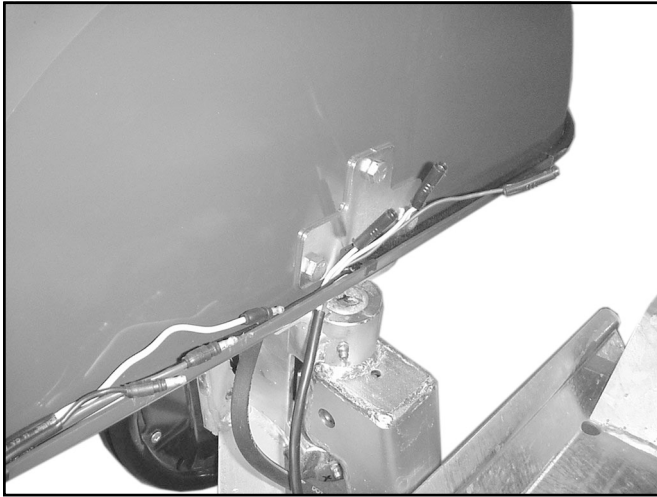
## Tongue and Ramp Assembly Instructions

1. Place the main frame (#1) on blocks or some other sturdy support so that the frame rests approximately 8" - 10" off the ground.
2. With an assistant, place tongue assembly (#2) into main frame channel and position latch on tongue approximately 3" from front of channel. Clamp tongue to main frame and support front of tongue.
3. Locate the four bullet connectors extending out the back of the tongue and plug into the connector protruding from under the main frame channel. Plug into the flat four connector by matching the colors. Do not cross colors when making this connection. Make sure that the two pigtailed for the license plate bracket are out.
4. With an assistant, mount the tongue assembly (#2) to the front of the Kar Kaddy main frame and use a 5/8" x 4-1/2" grade 5 bolt (#3) and lock nut (#4) (torque to 50 ft. lbs). Do not torque over 50 ft. lbs. or bed will not tilt.  
**NOTE:** Brake line and wiring must be above bolt also coupler assembly must be ahead of bolt. Do this by opening tongue about half way.
5. Lay the bracing struts (#5) out along the tow dolly tongue with the back end (the end with the larger hole in it) of the bracing strut toward the main frame. Loosely bolt the back of each bracing strut to the trailer frame as shown using 1/2" x 1-1/2" grade 5 bolt (#6), flatwasher (#7), pivot bushing (#8) and locknut (#9). Hold up the front end (the end with the smaller hole) of each bracing strut to the tongue and secure with two 5/8" x 1-1/4" epoxied hex head bolts (#10). Torque the 1/2" x 1-1/2" bolt with the pivot bushing to 75 ft. lbs. Torque the two 5/8" x 1-1/4" epoxied hex head bolts to 100 ft. lbs.
6. Attach the tilt bed ramps (#11) as shown using four 1/2" x 1-1/4" grade 5 bolts (#12), flat washer (#7) and lock nuts (#9), two on each side of each ramp, and then three 7/16" x 1" grade 8 bolts (#13) and lock nuts (#14) on the top of each ramp. Torque 7/16" bolts to 80 ft. lbs. and torque 1/2" bolts to 75 ft. lbs.
7. Attach rear tire stop (#15) as shown using two 3/8" x 1-1/4" grade 5 bolts (#16), flat washers (#17) and lock nuts (#18). These 3/8" x 1-1/4" bolts will also go through the tilt bed ramps. Torque 3/8" x 1-1/4" bolts to 35 ft. lbs.
8. Repeat steps 6-7 for other side.



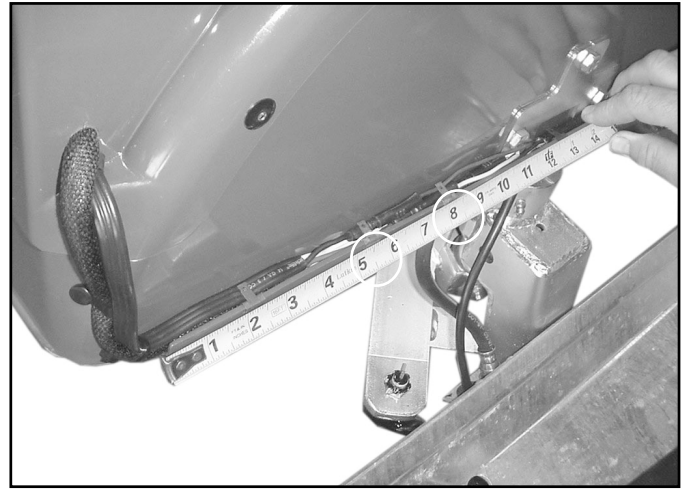
## Fender Assembly Instructions

1. Install fender with fender backup plate (#1) and three 3/8" x 1-1/2" bolts (#2). Put 3/8" nylon lock nuts (#3) inside of fender and tighten.

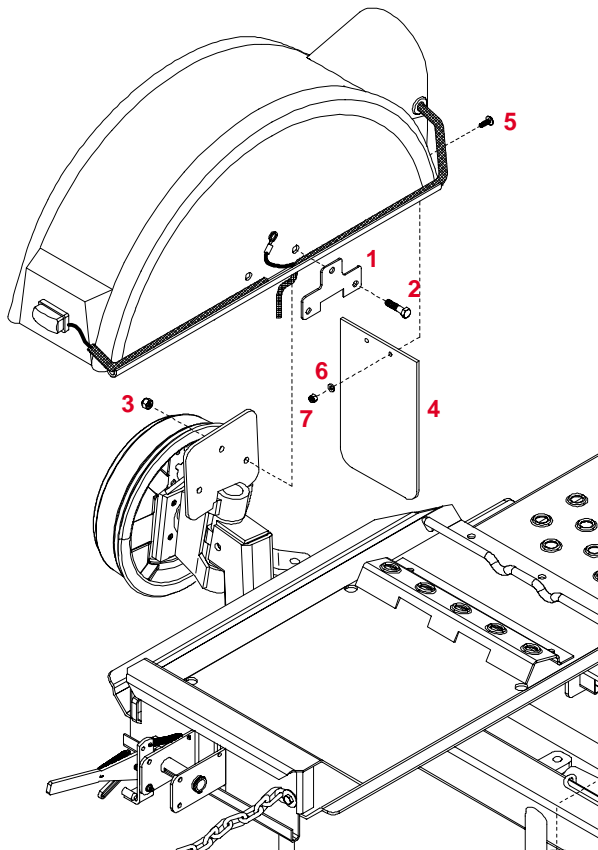


2. Cut nylon wire tie from wiring to brake hose on main frame, (used for shipping purposes only). Fish the three wires from main unit through the hole in fender.

3. On the left side, plug in bullet plugs with white to white, black to brown and yellow to red. On the right side, plug white to white, black to brown and green to red.



4. With a pliers, install two wire clamps on fender. From rear of fender lip, install one clamp at 5-1/2" and one at 8".
5. Mount the mud flaps (#4) to the inside back of the fender using two 1/4" x 3/4" truss head bolts (#5) with flat washers (#6) and lock nuts (#7). Make sure the Kar Kaddy logo on the flap faces the rear.



**▲ WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN LOSS OF TOWING VEHICLE CONTROL, SEPERATION OF THE TOW DOLLY FROM THE TOWING VEHICLE, SEPERATION OF THE TOWED VEHICLE FROM THE TOW DOLLY, CAUSING SEVERE PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.**

### ▲ SAFETY

Safety is of utmost importance at all times. There are several items that must be checked each time before using and while using the Kar Kaddy.

Make sure all bolts are properly tightened and those requiring a set torque are up to specifications:

Tie Rod Castle Nut - 75 ft./lbs.

Lug Nuts - 120 ft./lbs.

Check Lug Nut tension after the first 5 miles and periodically thereafter.

The ball hitch must latch securely around the ball and the safety lock pin or lever must be in position to lock the hitch on the ball.

**RECOMMENDED BALL HEIGHT: 18 inches to the top of the ball on the towing vehicle.**

Hook the towed vehicle safety chains to the frame of the vehicle directly above the area where the chain is mounted on the Kar Kaddy. Leave some slack in the chain to allow suspension movement.

Check to make sure that all lights are in proper working order.

Examine the winches and straps, making sure they are in good conditon.

Be certain the safety lock pins are locking the strap winches.

Retighten straps over the tires after the first 5 miles and every 50 miles thereafter. Ensure that they are tight.

The tires must be inflated to the recommended 50 PSI.

The strap on the optional tongue winch must be in good condition and should be stored neatly on winch when not in use.

**NOTE:** The winch strap must not be left connected to the towed vehicle after it is loaded and strapped down.

Make sure the optional light bar is fastened securely at the rear of the towed vehicle.

The wires to the optional light bar should be run along the car and fastened so as not to damage the finish of the towed vehicle.

**NOTE:** This unit cannot be backed up, when loaded or with the steering lock pin removed.

All vehicles mounted on the Kar Kaddy must be mounted with the front of the vehicle facing forward.

**Rear Wheel Drive:** Disconnect the towed vehicle driveshaft for rear wheel drive vehicles with automatic transmission.

**For manual transmission:** Consult your vehicle owners manual for towing suitability with the drive shaft connected.

### MAINTENANCE

Periodically check all bolts and nuts to insure proper tension or torque.

**Grease the king pin and tie rod end grease zerks every 2500 miles.**

An occasional drop of oil may be required on the moving parts of the tie down winches.

A light film of oil should periodically be applied to steering stabilizer arm to prevent rust.

**NOTE: Proper toe-in is 1/32". This is preset at the factory.**

The operator should periodically have the toe-in checked and adjusted if needed at a qualified alignment shop. Improper toe-in can result in irregular tire wear.

### IMPORTANT LOADING INSTRUCTION

**Check your wheel tie-down straps.**

Your Kar Kaddy is equipped with custom made wheel tie-down straps of a standard size that will fit most tires, however if your tires are too large or too small you will want to exchange these new straps for the proper size straps.

- 1. Tire too large** - This is very obvious the strap will not basket over the tire properly, call us, we will provide at NO Charge on an exchange basis, the proper size strap. You must return your new unused straps and provide us with the Make and Model car and the tire size.
- 2. Tire too small** - This is not as obvious, the basket will fit down over the tire very well, the problems cannot be readily seen. You must tighten the straps down solid and then check on the inside of the tire and be sure the strap, when tightened does not come in contact with any metal that may cause wear or cutting such as strut mounts. If there is contact, you need a smaller strap, call us, we will provide on a NO Charge, exchange basis, the proper size strap. You must return your new unused straps and provide us with the Make and Model car and tire size.

Thank you for Purchasing *Demo* Products.

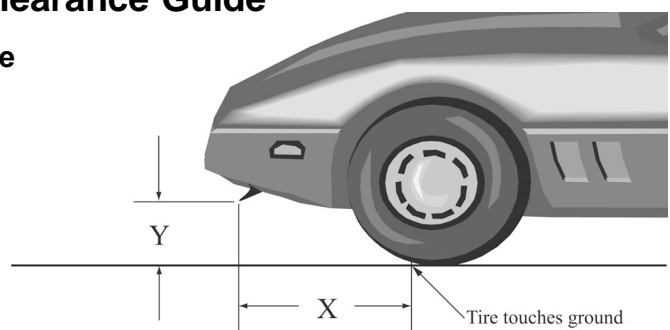
## Loading Angle Clearance Guide

**NOTE: User's responsibility for checking clearance**

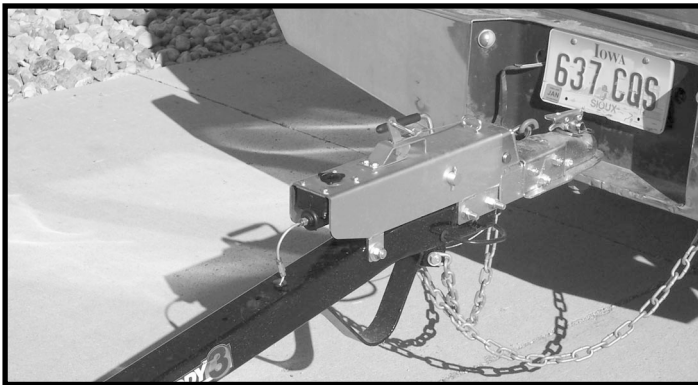
### IMPORTANT:

Using this guideline will reduce the chance of the towed vehicles air dam, or bottom of facia from interfering with tow dolly platform and or tire stop. "X" must be less than 3-1/2 x "Y".

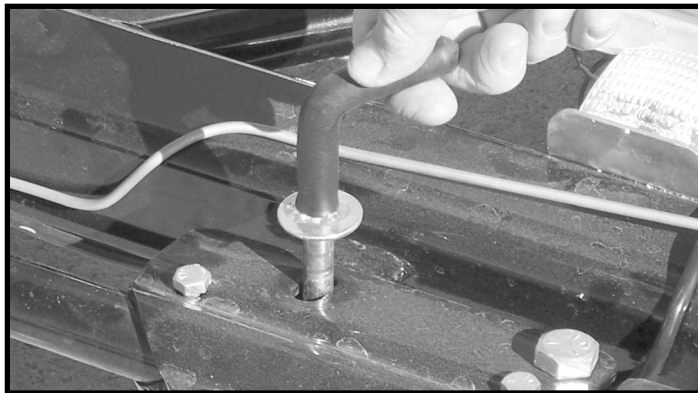
Example: If Y measures 6"  
 $3\text{-}1/2 \times 6 = 21$   
X must measure less than 21"



## LOADING INSTRUCTIONS



**Step 1.** Secure ball coupler to 2" (6,000 lb. capacity) towing vehicle ball only. Make sure that the hitch and the hitch ball are in good condition and not rusted, loose or stripped. **Recommended ball height is 18" to the top of the ball.** Make sure hitch is locked down and secured with safety clip. Criss-cross safety chains under tongue and secure to towing vehicle frame.



**Step 2.** Remove black locking pin **BEFORE** loading vehicle onto the Kar Kaddy. The removal of the locking pin allows "Auto Steer" to operate. When towing the dolly empty, this pin must be in place.



**Step 3.** Loosen wing nut on back of license plate holder, turn the clip on the front to a horizontal position and put license in the "down" position. Turn the clip back so it rests against the back of the light bar to hold the license down and tighten wing nut.

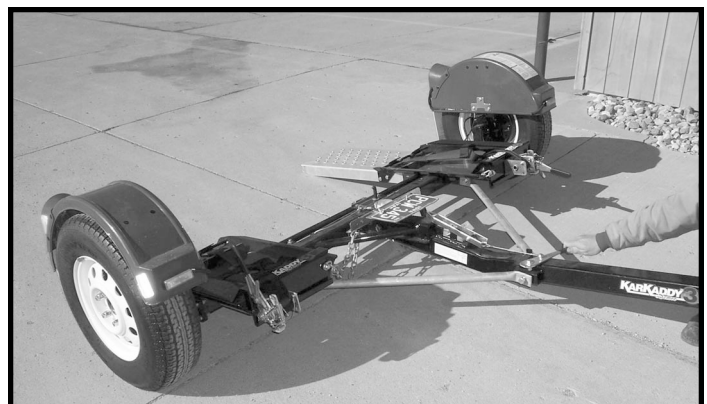
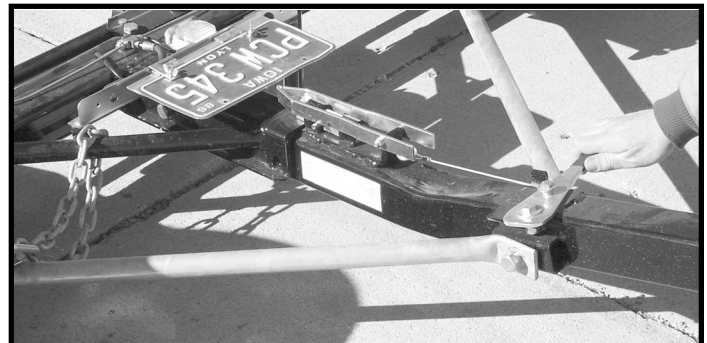
(License must be "UP" with the tow dolly empty).

**IMPORTANT:** Tire tread width or body width of towed vehicle must not exceed:

76" max. (outside to outside),  
42" min. (inside to inside),  
78" max. (body width).



**Step 4.** Before loading (and unloading) towed vehicle make sure platform and towed vehicle are in straight alignment. Tow dolly must be completely and properly hooked up to the towing vehicle. **Towing vehicle must be larger and at least 1000 lbs. heavier than the tow dolly and towed vehicle combined.**



**Step 5.** Grasp bed release handle on tongue and pull toward coupler. This releases the tilt bed to permit loading.



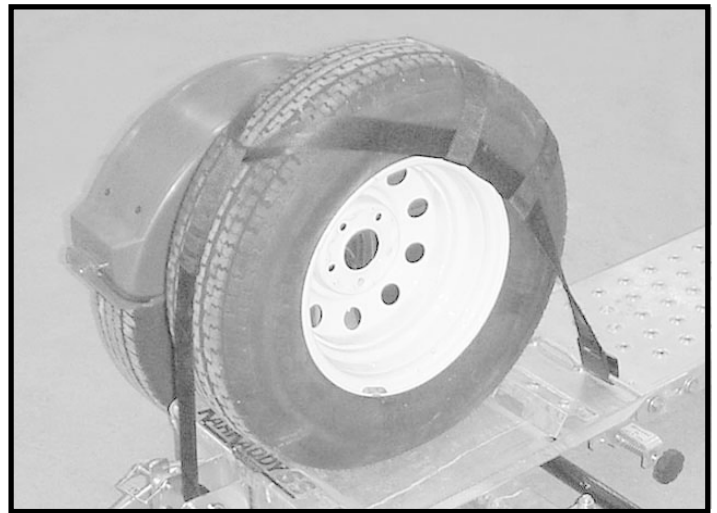
**Step 6.** With someone safely guiding you, slowly drive vehicle onto platform **FRONT FORWARD**. (Any vehicle mounted on tow dolly must be mounted with front of the vehicle facing forward.) Drive the car forward until the tires touch the ramps. Make sure the tire is aligned to ascend onto the ramps.



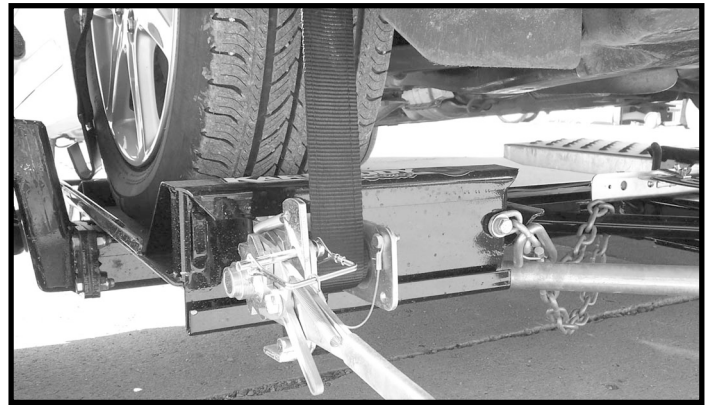
**Step 7.** Drive vehicle onto the platform - **front forward** - until tires touch the wheel stops at the front of each side of the platform and the platform tilts to a flat position. Make sure the car is centered on the platform. Towed vehicle tires must fit in wheel troughs without overhanging sides. Engage towed vehicle parking brake. Shift loaded car into "park" and lock steering wheel with front tires in a straight position. If the car does not have a locking steering column the steering wheel must be tied securely with front tires in a straight position.

**Rear Wheel Drive:** Disconnect towed vehicle driveshaft for rear wheel drive vehicles with automatic transmission.

**For manual transmission:** Consult your vehicle owners manual for towing suitability with the drive shaft connected.



**Step 8.** Place one tie-down strap over each tire and secure hooks to rods located at the rear of each wheel platform. The short side of the hook must face the rear of the Kar Kaddy.



**Step 9.** Be sure tie-down winch is centered with the tire before tightening straps.

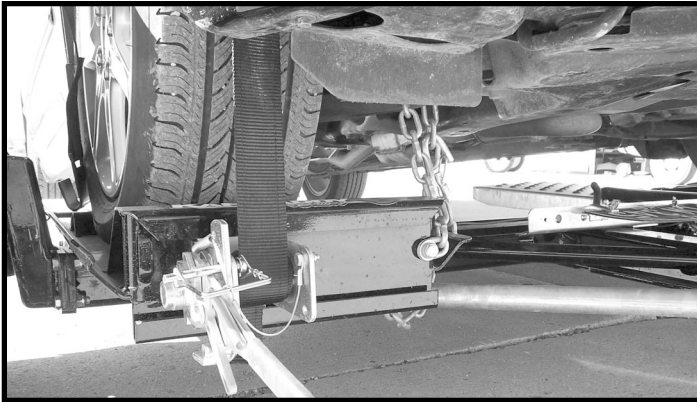


**Step 10.** Thread tie-down strap through the slotted tube on the tie-down winch. Pull approx. 6" of strap through this slot. Begin tightening strap making sure the tail becomes enclosed by the strap coming over the tire. Tighten the straps ensuring that the strap fed through the slot binds between the shaft and the strap being wound onto the winch shaft. While tightening straps, pull cross strap forward to ensure even tightening. **NOTE: Be sure to tighten straps until each tire starts to flatten against tire stop.** After each strap is tight, insert a safety pin in each winch. Disengage towed vehicle parking brake.

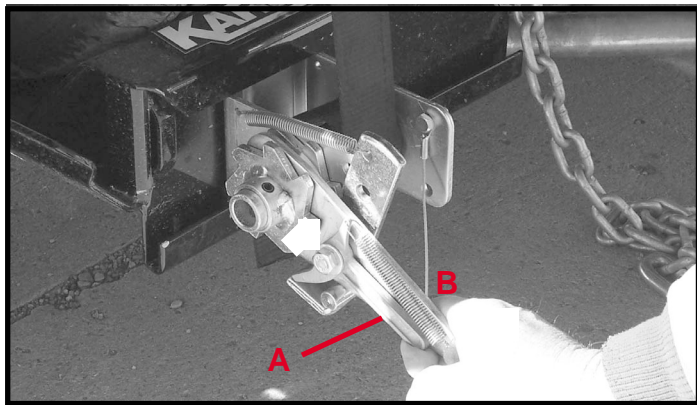
**Straps must be retightened after first 5 miles of travel. Check straps every 50 miles thereafter to ensure they are tight and not rubbing or fraying.**



**Step 11.** Make sure the tie-down strap is the correct size for the auto tire. See page 11 of this instruction for proper fit and exchange instructions.



**Step 12.** Hook the towed vehicle safety chains to frame of vehicle directly above the area where the chains are mounted on the Kar Kaddy. Leave some slack in the chains to allow suspension movement of the towed vehicle.



**Step 13.** TO UNLOAD towed vehicle. Make sure that platform and vehicle are straight. Reinstall driveshaft. Ensure that towed vehicle parking brake is fully engaged, then unhook the towed vehicle safety chains, and release the tie-down straps. **NOTE:** Tie down straps must be "quick - released" by grasping ratchet pawl (A) and ratchet handle (B) simultaneously and pushing down sharply. This process will permit easy removal of strap from winch. Swing the wheel platform locking latch handle forward, towards the coupler. This will allow the platform to tilt as you slowly drive off. Make sure the winch ratchet handles are horizontal. Replace the "Auto Steer" locking pin (for towing empty).

**Step 14.** To pull the Kar Kaddy empty, make sure "Auto-Steer" LOCKING PIN IS IN PLACE and towing vehicle safety chains are up and hooked. Tie-down winch handles should be left in a down position (horizontal) position with safety pins in place when towing loaded or empty. **DO NOT ATTEMPT TO PULL KAR KADDY WITH WHEEL PLATFORM IN LOADING (tilted) POSITION.**

### DAMAGE PREVENTION

Check your vehicle manual or registration for vehicle weight. Towing vehicle must be larger and at least 1,000 lbs. heavier than the towed vehicle and tow dolly combined.

Do not pack goods in car that is being towed. Overloading the Kar Kaddy or exceeding the width limit may result in damage to both car and Kar Kaddy.

### REAR WHEEL DRIVE PRECAUTIONS

Disconnect towed vehicle driveshaft for rear wheel drive vehicles with automatic transmission. Simply placing transmission in neutral is not sufficient to prevent damage to transmission.

For manual transmission: Consult your vehicle owners manual for towing suitability with the drive shaft connected.

**ALL VEHICLES MOUNTED ON THE KAR KADDY MUST BE WITH THE FRONT OF THE VEHICLE FACING FORWARD.**



## SAFETY

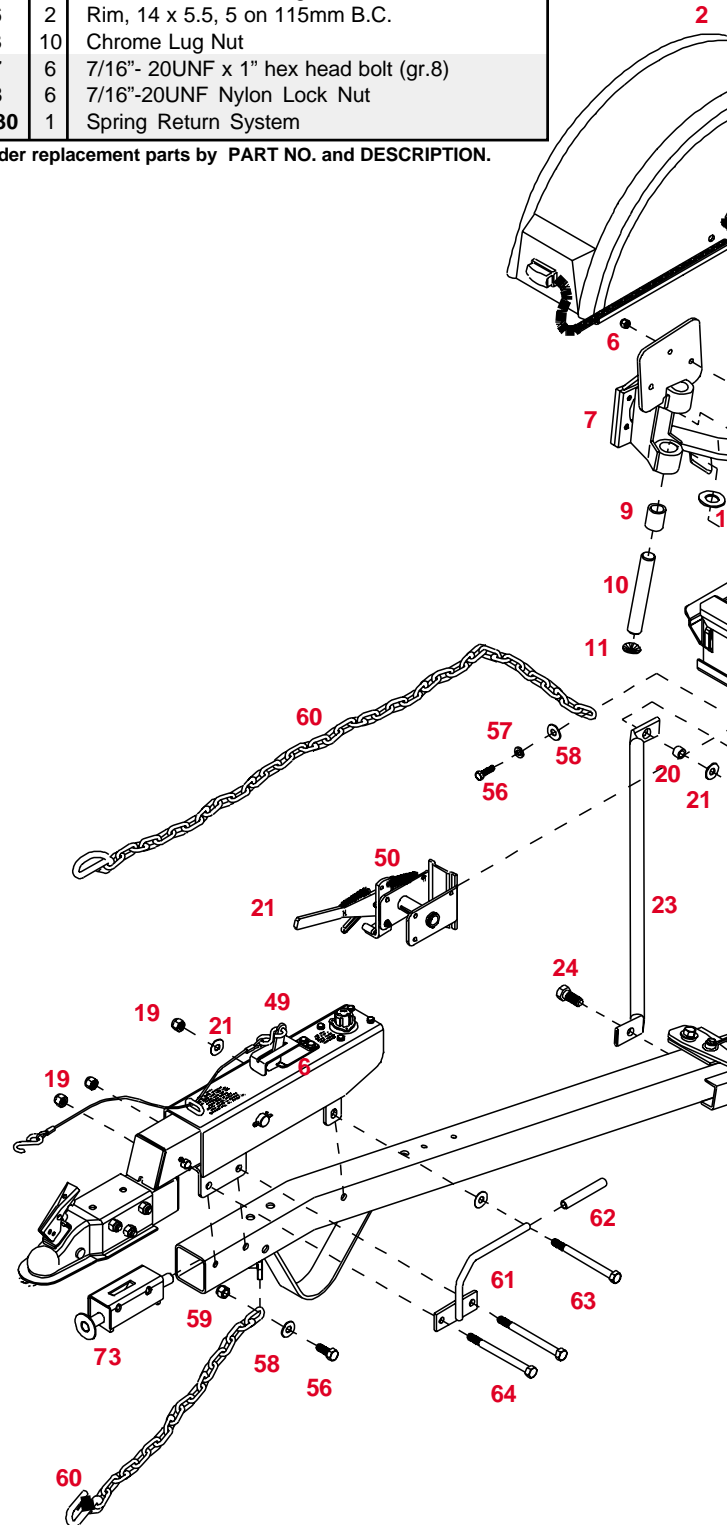
- Examine winches and straps to make sure they are in good condition.
- Check wheel nuts every trip.
- Tires must be inflated to recommended pressure by tire manufacturer.
- Be certain the safety lock pins lock the strap winches.
- Retighten the straps over the tires after the first 5 miles of travel. Check straps every 50 miles thereafter to ensure they are tight and not rubbing or fraying.

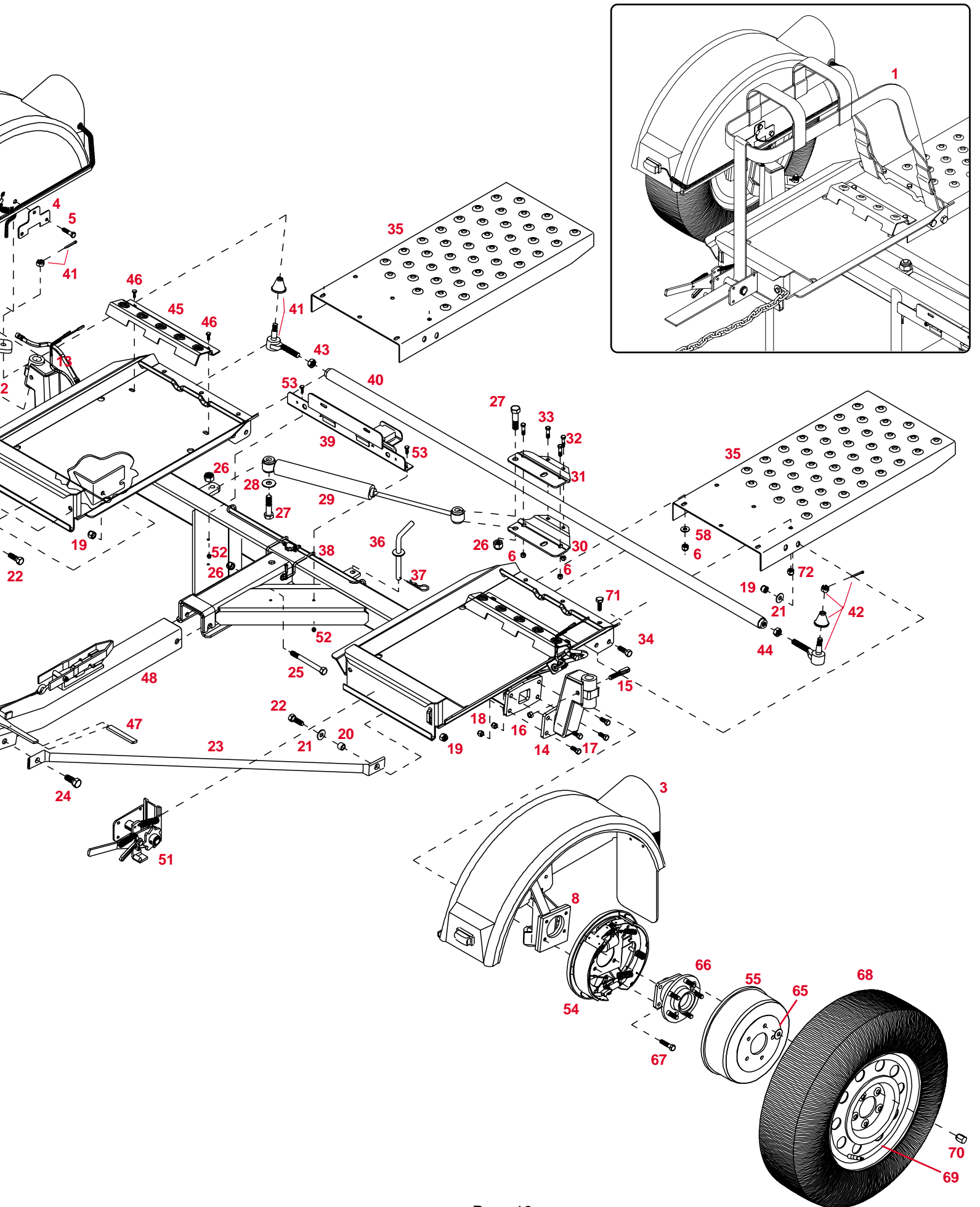
# KK370SB PARTS BREAKDOWN

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	03528	2	Tie-down Strap assembly, Black
2.	5809	1	Right Fender Assembly with Lights
3.	5808	1	Left Fender Assembly with Lights
4.	04424-95	2	Fender Backing Plate
5.	00914	6	3/8"-16UNC x 1-1/2" Hex Head Bolt (gr.5)
6.	02592	18	3/8"-16UNC Nylon Lock Nut
7.	04165-81	1	Right Wheel Carrier
8.	04166-81	1	Left Wheel Carrier
9.	01732	4	1" I.D. x 1-1/4" O.D. x 1-1/2" lg. Bushing (brnz)
10.	11588	2	King Pin (1" x 6-1/2")
11.	01731	4	1-1/4" Dust Cap
12.	05587	2	1" I.D. x 14 GA Narrow Rim Machine Washer
13.	11566-81	1	Right Drop Axle Mount
14.	11550-81	1	Left Drop Axle Mount
15.	11551	2	King Pin Retainer Bolt
16.	03724	2	7/16"-20UNF Center Punched Nut
17.	02377	8	7/16"-20UNF x 1-1/2" Epoxy Bolt (gr.8)
18.	04168	8	7/16"-20UNF Nylon Lock Nut
19.	02178	18	1/2"-13UNC Nylon Lock Nut
20.	02579-95	2	Pivot Bushing
21.	00085	15	1/2" Flatwasher
22.	01254	15	1/2"-13UNC x 1-1/2" Hex Head Bolt (gr.5)
23.	02747-96	2	Bracing Strut
24.	03503	2	5/8"-11UNC x 1-1/4" Epoxy Bolt (gr.5)
25.	02434	1	5/8"-13UNC x 4-1/2" Hex Head Bolt (gr.5)
26.	02587	4	5/8"-13UNC Nylon Lock Nut
27.	02696	2	5/8"-11UNC x 2-3/4" lg. Hex Head Bolt (gr.5)
28.	00477	1	5/8" Flatwasher
29.	01729-35	1	Steering Stabilizer Shock
30.	11553-81	1	Tie Rod Clamp, Bottom
31.	11554-81	1	Tie Rod Clamp, Top
32.	00907	12	3/8"-16UNC x 1" Hex Head Bolt (gr.5)
33.	02494	2	3/8"-16UNC x 2-1/4" Hex Head Bolt (gr.5)
34.	00967	8	1/2"-13UNC x 1-1/4" Hex Head Bolt (gr.5)
35.	04772-96	2	Ramp
36.	01718-95	1	Tie Rod Locking Pin
-	02189	1	Replacement Black Handle Grip for Locking Pin
37.	00182	1	Hair pin
38.	11933-81	1	KK370SB Main Frame
39.	5806	1	License Plate Bracket Assembly
40.	04771-81	1	Tie Rod
41.	5179	1	Right Tie Rod End w/Right Hand Threads
42.	5178	1	Left Side Tie Rod End with Left Hand Threads
43.	01905	1	9/16"-18UNF Jam Nut w/Right Hand Threads
44.	01904	1	9/16"-18UNF Jam Nut w/Left Hand Threads
45.	04773-96	2	Rear tire Stop
46.	00523	4	3/8"-16UNC x 1-1/4" lg. Hex Head Bolt (gr.5)
47.	02243	1	Black Vinyl Hand Grip
48.	07077-81	1	Tongue
49.	09417	1	DA91 Actuator (less coupler)
50.	5433	1	Right Winch assembly
51.	5432	1	Left Winch Assembly
52.	02772	2	1/4"-20UNC Nylon Lock Nut
53.	04176	2	1/4"-20UNC x 3/4" Carriage Bolt
54.	SB24428	1	10" Brake Cluster, RH
-	SB24429	1	10" Brake Cluster, LH
55.	SB40929-30	2	10" Brake Drum
56.	01898	4	7/16"-14UNC x 1-1/4" Hex Head Bolt (gr.5)
57.	00078	2	7/16" Lockwasher
58.	00059	8	3/8" Flat Washer
59.	02771	2	7/16"-14UNC Nylon Lock Nut
60.	02383	4	36" Safety Chain
61.	04017-95	1	Bolt on Handle
62.	02189	1	Rubber Handle Grip
63.	01338	1	1/2"-12UNC x 4-1/2" lg. Hex Head Bolt (gr.5)
64.	01975	2	1/2"-12UNC x 5" lg. Hex Head Bolt (gr.5)
65.	04174	4	Retainer Washer
66.	04369	2	Hub and Spindle
-	02917	-	Replacement 12mm x 1.50mm Stud Bolt
67.	02210	8	7/16"-20UNF x 1-1/4" Epoxy Bolt (gr.8)

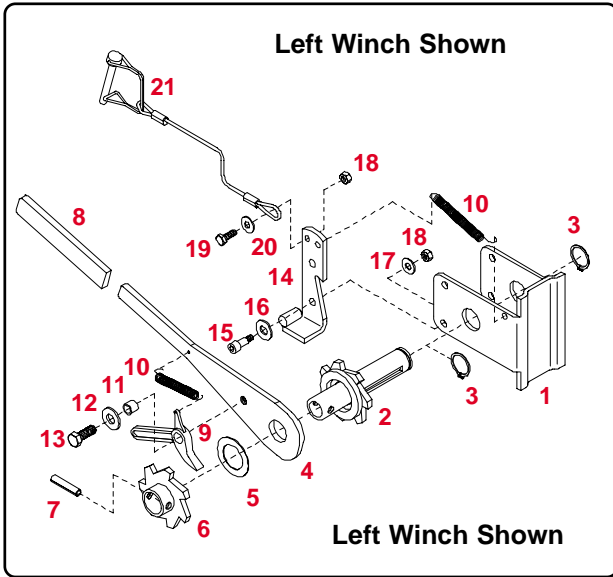
REF. NO.	PART NO.	QTY.	DESCRIPTION
68.	04826	2	ST205/75R14 "C"Range Radial Tire
69.	09296	2	Rim, 14 x 5.5, 5 on 115mm B.C.
70.	02933	10	Chrome Lug Nut
71.	04167	6	7/16"- 20UNF x 1" hex head bolt (gr.8)
72.	04168	6	7/16"-20UNF Nylon Lock Nut
73.	12445-30	1	Spring Return System

Please order replacement parts by **PART NO.** and **DESCRIPTION.**





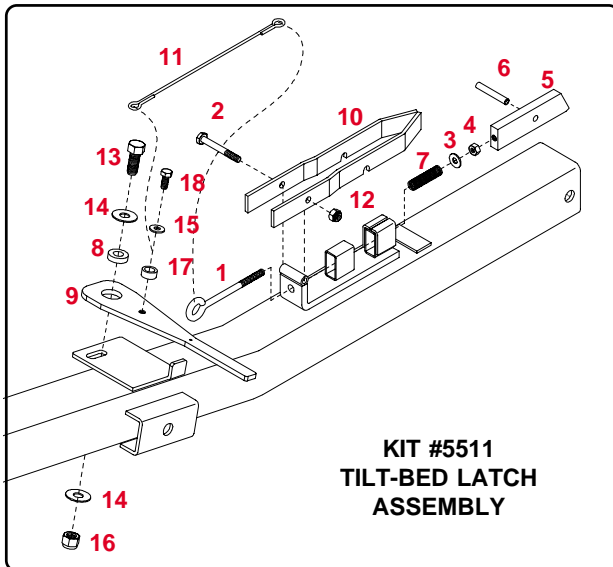
# WINCH ASSEMBLY



REF. NO.	PART NO.	QTY.	DESCRIPTION
	5432	1	<b>Left Ratchet Winch Assembly (Plated)</b>
	5433	1	<b>Right Ratchet Winch Assembly (Plated)</b>
1.	03569-95	1	Ratchet Frame
2.	03570-95	1	Left Spool Tube
-	03571-95	1	Right Spool Tube
3.	03577	2	Heavy Duty External Snap Ring
4.	03574-95	1	Ratchet Handle
5.	03668	1	18 Ga. Shim Washer
6.	03575-95	1	Left Ratchet Gear
-	03576-95	1	Right Ratchet Gear
7.	03666	1	5/16" x 1-1/4" Roll Pin
8.	02243	1	Black Vinyl Hand Grip
9.	05450	1	Winch Pawl
10.	01864	2	Winch Pawl Spring SS
11.	05449	1	Winch Pawl Bushing SS
12.	00004	1	5/16" Flatwasher
13.	05444	1	3/8"-16 UNC x 3/4" Hex Bolt w/epoxy Gr.5
14.	03572-95	1	Left Ratchet Pawl Arm
-	03573-95	1	Right Ratchet Pawl Arm
15.	03578	1	5/16"-18 UNC x 1/2" Shoulder Screw
16.	01998	1	5/16" Flatwasher SS
17.	02002	1	1/4" Flatwasher SS
18.	02772	2	1/4"-20 UNC Nylon Locknut
19.	04055	1	1/4"-20 UNC x 1" Hex Hd. Bolt Gr.5
20.	00214	1	1/4" Flatwasher
21.	05337	1	Lock Pin w/Cable

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

# TILT-BED LATCH ASSEMBLY

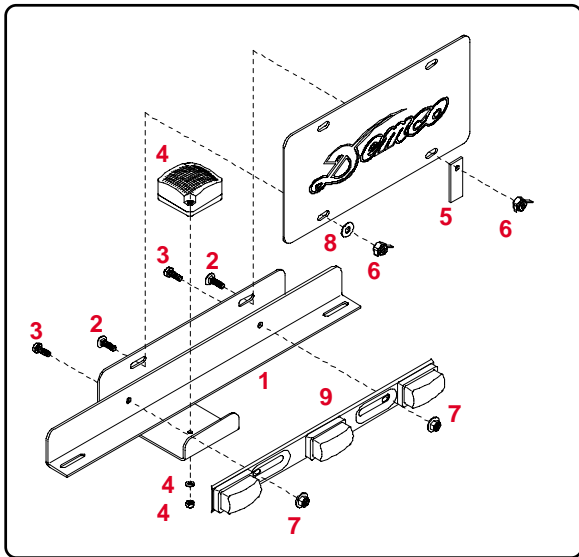


REF. NO.	PART NO.	QTY.	DESCRIPTION
	5511	-	<b>Tilt-Bed Latch Kit</b>
1*	03434	1	5/16"-18 UNC x 4" Eye Bolt
2*	04221	1	5/16"-18 UNC x 2-1/2 Hex Head Bolt (Gr 5)
3*	00004	1	5/16" Flatwasher
4*	00007	1	5/16"-18 UNC Hex Nut
5*	03379-95	1	Latch Block
6*	03435	1	Roll Pin (5/16" x 2-1/4")
7*	03499	1	Latch Spring - Stainless Steel
8.	03382-95	1	Latch Handle Pivot Bushing
9.	03574-95	1	Latch Handle
10.	03381-95	1	Latch Catch
11.	03433	1	Latch Cable
12.	02802	1	5/16"-18 UNC Nylon Insert Locknut
13.	00967	8	1/2"-13UNC x 1-1/4" lg. Hex Head Bolt (gr.5)
14.	00085	1	1/2" Flatwasher
15.	00059	9	3/8" Flat Washer
16.	02178	13	1/2"-13UNC Nylon Insert Locknut
17.	05449	1	Spacer Bushing - Stainless Steel
18.	05444	1	3/8"-16 UNC x 3/4" Epoxied Hex Bolt (Gr 5)

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

\* Items included in 5511 kit

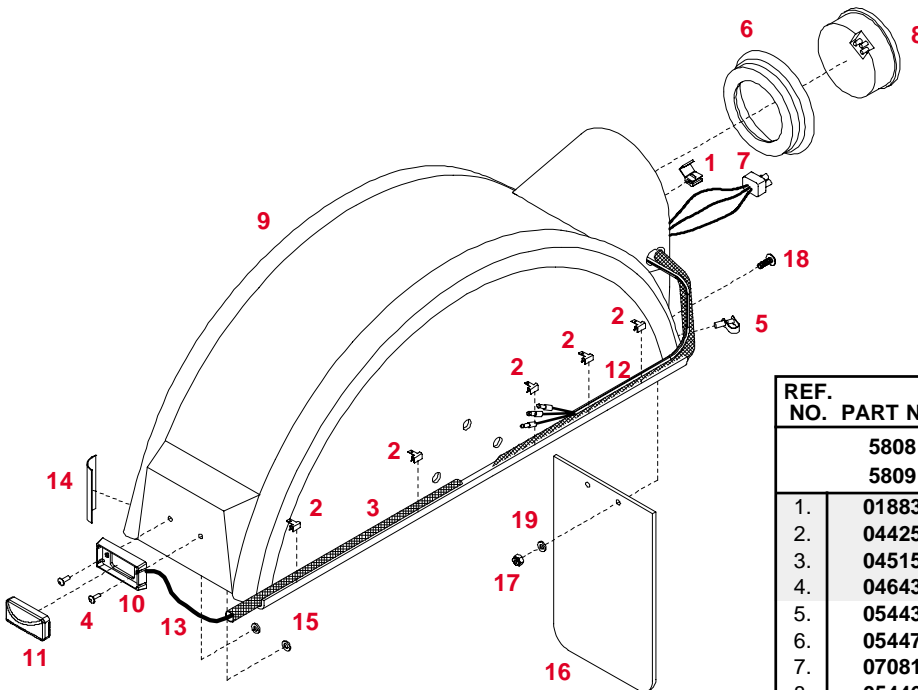
## LICENSE PLATE BRACKET ASSEMBLY



REF. NO.	PART NO.	QTY.	DESCRIPTION
	<b>5806</b>	-	<b>License Plate Bracket and Light Assembly</b>
1.	<b>04505-95</b>	1	License Plate and Light Cluster Bracket
2.	<b>04176</b>	2	1/4"-20UNC X 3/4" Carriage Bolt
3.	<b>02214</b>	2	#10 NC X 1/2" Slotted Truss Head Screw
4.	<b>02163</b>	1	Square License Plate Light w/Washer and Nut
-	<b>02164</b>	-	Clear License Plate Light Lens Only
5.	<b>02580-95</b>	1	License Plate Clip
6.	<b>02770</b>	2	1/4"-20UNC Nylon Insert Wing Nut
7.	<b>01077</b>	2	1/4" NC Serrated Lock Nut
8.	<b>00214</b>	1	1/4"-20UNC Flat Washer
9.	<b>04513</b>	1	3 Cluster Light Bar

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

## FENDER ASSEMBLY



### PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
	<b>5808</b>	-	<b>Left Fender Assembly</b>
	<b>5809</b>	-	<b>Right Fender Assembly</b>
1.	<b>01883</b>	2	Wire Splicer
2.	<b>04425</b>	5	Tinnerman U-clamp
3.	<b>04515</b>	1	17-1/2" Wire Loom
4.	<b>04643</b>	2	9/16" x 5/8" Pop Rivet
5.	<b>05443</b>	1	Nylon Cable Hanger
6.	<b>05447</b>	1	4" Light Grommet
7.	<b>07081</b>	1	Tail Light Wire Harness
8.	<b>05446</b>	1	4" Round Tail Light
9.	<b>12010</b>	1	Left Fender Assembly
-	<b>12011</b>	1	Right Fender Assembly
10.	<b>11973</b>	1	Black Marker Base Mount
11.	<b>11975</b>	1	Yellow Marker Light
12.	<b>11619</b>	1	12" Wire Loom
13.	<b>11974</b>	1	Front Marker Wiring Harness
14.	<b>04508</b>	1	Amber Reflector
-	<b>04804</b>	1	Red Reflector
15.	<b>07490</b>	2	3/16" Washer
16.	<b>01769</b>	1	Kar Kaddy Mud Flap
17.	<b>02772</b>	2	1/4" Nylon Lock Nut
18.	<b>05338</b>	2	1/4" Slotted Truss Head Bolt
19.	<b>00214</b>	2	1/4" Flat Washer

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

# DEMCO PRODUCTS - KAR KADDY ORIGINAL PURCHASER'S LIMITED WARRANTY

## 1. Extent and Duration of this Warranty:

Your Demco Kar Kaddy is warranted to be free from defects in materials and workmanship under normal use and service for a period of one year after date of purchase by the original (first) retail owner, or until it is resold or transferred by the original owner. Hubs used on the KK370SB are warranted for a period of three years after the date of purchase by the original (first) retail owner or until it's resold or transferred by the original owner. Tires and lights are not included in this warranty.

Tires are warranted by the manufacturer against defects in materials and workmanship, but not against road hazards.

Any part of the Demco Kar Kaddy, except tires and lights, found, in the judgement of the manufacturer to be defective in materials or workmanship will be repaired or replaced at the manufacturer's option without charge for parts or labor to the original owner.

## 2. Manufacturer and Warrantor of Tow Dolly:

Dethmers Manufacturing Co.  
4010 320th Street  
P.O. Box 189  
Boyden, IA 51234  
(712) 725-2311

The manufacturer and warrantor of the tires has his name molded into the tires. Tire warranty questions and claims can be taken directly to an authorized dealer of the tire manufacturer.

## 3. Repair or Replacement Procedure:

If your Demco Kar Kaddy develops a defect (except for tires or lights) during the warranty period, promptly notify Dethmers Manufacturing Co. customer service department. Until such notice is received, Warrantor will not be responsible for any repair or replacement.

Upon receipt of notice from you, Warrantor will have a choice of options in replacing any part it determines to be defective:

- a) Warrantor may require you at your own expense to deliver or ship the part to its factory or authorized dealer. Any defective part will be repaired or replaced and returned to you free of charge. Any part returned to Warrantor and found not to be defective will be returned to you freight collect with an explanation.
- b) Warrantor may elect to ship a new part to its dealer to be exchanged free of charge for the defective part returned by you to the dealer.
- c) Warrantor may elect to ship or deliver a replacement part to your address.

Warranty claims on tires should be presented to a local authorized dealer of the tire manufacturer. Provide proof of purchase when making a tire warranty claim.

## 4. Limitations on Warranty Coverage:

Coverage under this warranty will be effective only when a copy of the original invoice, showing the date and location of purchase, accompanies any claim for warranty.

Warrantor has no liability whatsoever and this warranty is null and void if any Demco Kar Kaddy has been misassembled or subjected to neglect, negligence, misuse, accident or operated in any way contrary to the operating and maintenance instructions as specified in the Demco Owner's Manual for that model tow dolly.

This warranty does not cover any tow dolly that has been altered or modified so as to affect the tow dolly's operation, performance or durability, or that has been modified to change the intended use of the tow dolly.

In addition, the warranty does not extend to repairs made

necessary by normal use of parts, accessories or other equipment which in the judgment of Warrantor, are either incompatible with the Demco Kar Kaddy, or affect its operation, performance or durability.

This warranty does not cover:

- 1) normal wear and tear
- 2) road film or gravel damage to paint
- 3) paint
- 4) rust damage
- 5) Any Demco Kar Kaddy that has been loaded in excess of the load capacity stated on the tow dolly identification label.

Warrantor has a policy of continuous product improvement. We reserve the right to change or improve the design of any Demco Kar Kaddy model, including but not limited to state of the art changes, without assuming any obligation to modify any tow dolly previously manufactured.

Warrantor assumes no responsibility to the owner for loss of use of the tow dolly, loss of time, inconvenience or other damage consequential or otherwise, including, but not limited to expense for gasoline, expense of transporting the tow dolly to the dealer and expense of returning the tow dolly, mechanic's travel time, telephone or telegram charges, road service/towing charges, rental of another tow dolly during the time warranty repairs are being performed, travel, lodging, loss or damage to personal property or loss of revenue or earnings.

## 5. Limitations of Implied Warranties:

All implied warranties, if any, expire and terminate upon expiration of this warranty. Some states do not allow limitation on how long an implied warranty lasts, so this limitation may not apply to you.

## 6. Limitation of Consequential Damages:

Warrantor's responsibility under this warranty extends solely to repair or replacement of your Demco Kar Kaddy and its component parts.

Warrantor does not assume responsibility for, nor shall it be liable for, any special, incidental or consequential damages. Some states do not allow the exclusion or limitation on incidental or consequential damages, so the above exclusion or limitation may not apply to you.

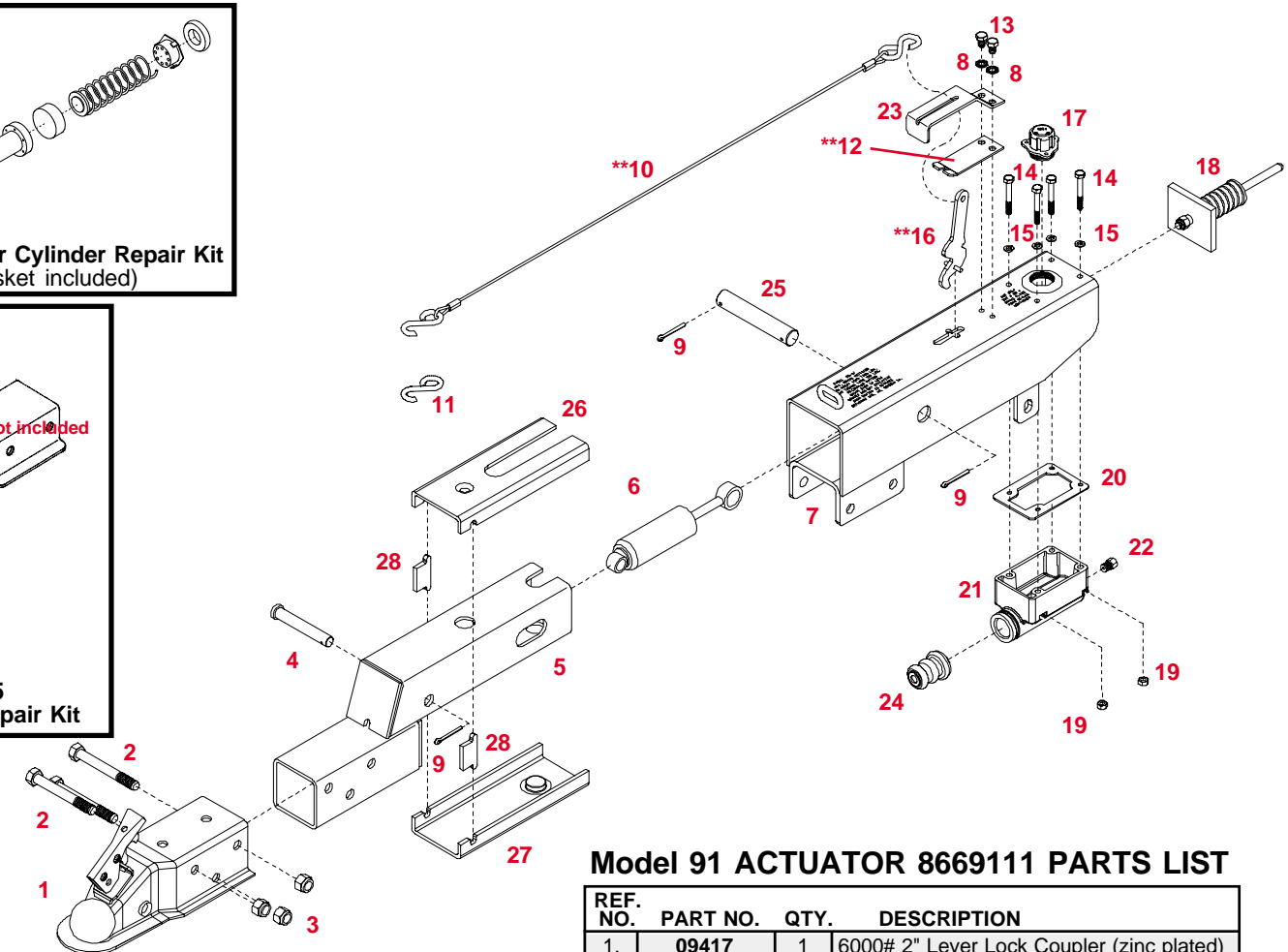
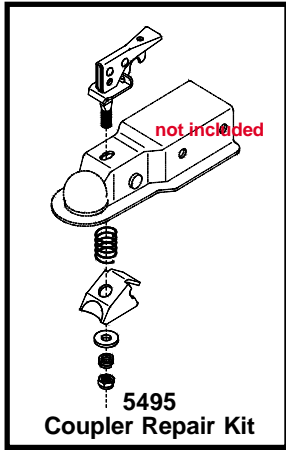
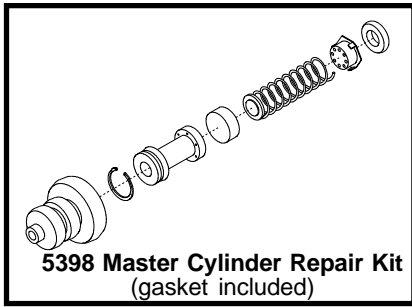
## 7. Use of Vehicle Identification Number (VIN):

The VIN is a 17 digit number located in the lower left corner of the tow dolly identification label. The label is located on the left side of the tow dolly frame. Be sure to include the VIN number in all communications with Warrantor or its dealers concerning the warranty.

## 8. Purchaser's Rights:

This warranty gives you specific legal rights, and you may also have other rights which vary from

# MODEL DA91 ACTUATOR PARTS BREAKDOWN



**2" Lever Lock Coupler  
RATED AT 6000#**

## BLEEDING THE SYSTEM

The first requirement for safe, sure hydraulic braking is the use of quality brake fluid. Use only DOT-3 or DOT-4 brake fluid from a sealed container.

If pressure bleeding equipment is available, follow the manufacturer's instruction in bleeding the system.

**If system must be bled manually, proceed as follows:** Fill master cylinder with fluid. Install bleeder hose on first wheel cylinder to be bled.

Have loose end of hose submerged in brake fluid in glass container to observe bubbling.

By loosening the bleeder screw located in the wheel cylinder one turn, the system is open to the atmosphere through the passage drilled in the screw. Pump actuator with long steady strokes. The bleeding operation is completed when bubbles no longer rise to the surface of the fluid. **Be sure to close bleeder screw securely.**

Repeat bleeding operation at each wheel cylinder. During the bleeding process, replenish the brake fluid, so the level does not fall below the 1/2 full level in the master cylinder reservoir. After bleeding is complete, make sure master cylinder reservoir is filled and filler cap is securely in place.

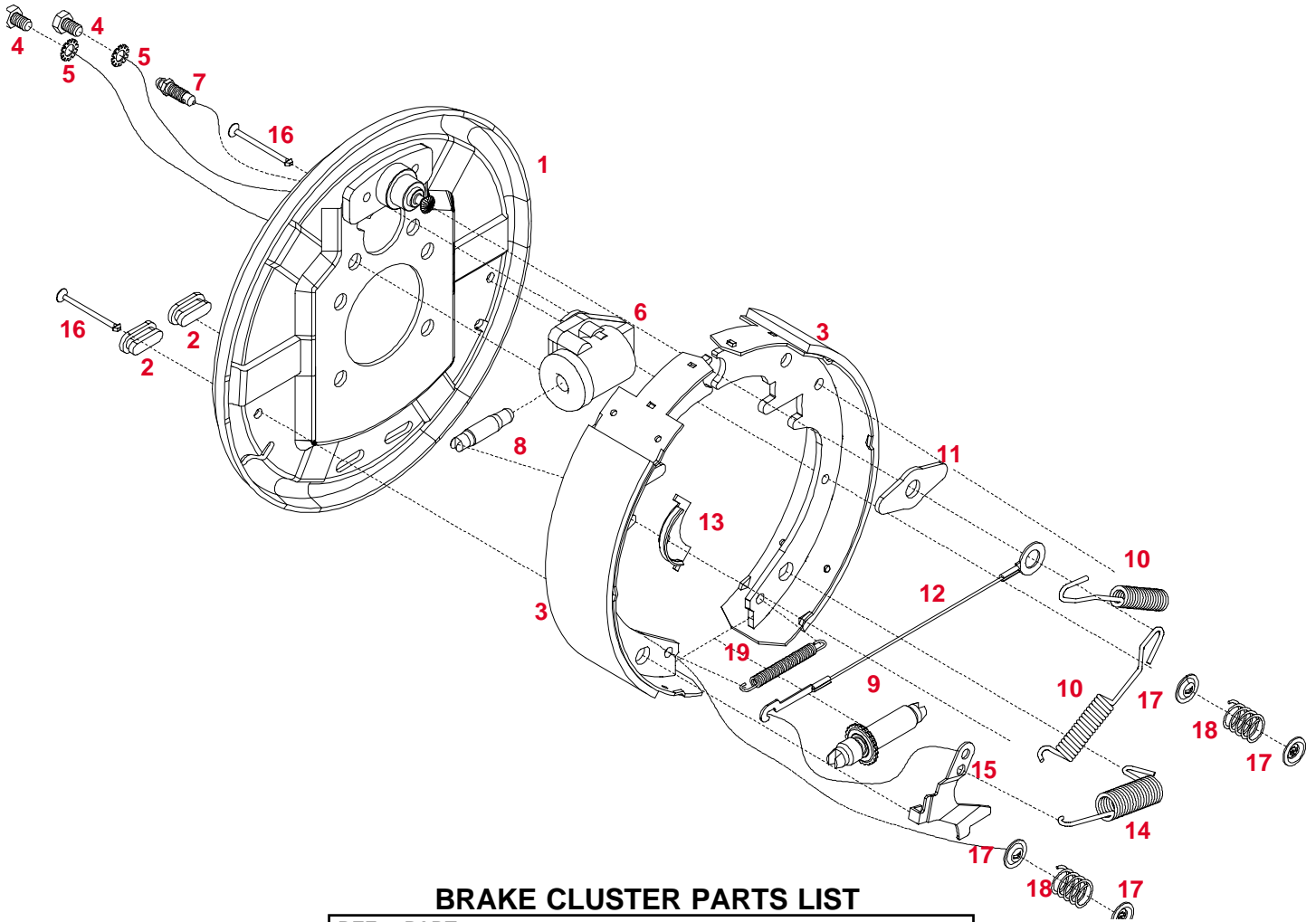
After the bleeding operation has been completed, apply pressure to the system and check the whole brake system for leaks.

## Model 91 ACTUATOR 8669111 PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	09417	1	6000# 2" Lever Lock Coupler (zinc plated)
2.	01896	3	1/2"-13UNC x 4" Hex Head Bolt (gr.5)
3.	02178	3	1/2"-13UNC Nylon Insert Lock Nut
4.	05426	1	Front Shock Pin (drop tube actuators)
5.	11079-95	1	Drop Tube Actuator Slider (plated)
6.	SB12426	1	Damper/ Shock
7.	11164-95	1	3 Bolt Mount Outer Case (plated)
8.	05424	2	5/16" External Tooth Lock Washer
9.	02363	2	5/32" x 1 1/4 Cotter Pin(Qty 3 w/drop tube)
**10.	05408	1	3/32" Cable with hooks
11.	SB10555	-	Replacement S-Hooks ONLY
**12.	05693-95	1	Emergency Lever Spring (plated)
13.	05961	2	5/16"-18UNC x 5/8" Hex Head Bolt (gr.5)
14.	00618	4	1/4"-20UNC x 2" Hex Head Bolt (gr.5)
15.	00057	4	1/4" Lock Washer
**16.	05951	1	Emergency Lever Assembly
17.	03876	1	Master Cylinder Cap w/ Diaphragm & O-ring
-	05849	1	O-Ring Only (not shown)
18.	05977	1	Push Rod Assembly
19.	00062	4	1/4"-20 UNC Hex Nut
20.	09153	-	Plastic Master Cyl. Gasket ONLY
21.	10616	1	Master Cylinder
22.	SB12098	1	.018 Connector Orifice (Drum Brakes)
23.	03866-95	1	Lever Guide (plated)
24.	05687	1	Master Cylinder Protective Boot
25.	05986-95	1	Connecting Pin (plated)
26.	10965	1	Upper Slider
27.	10966	1	Lower Slider
28.	10967	2	Side Spacers
-	5401	-	Lever Replacement Kit (incl. items w/**)
-	5650	-	Master Cyl. Replacement Kit (drum)
-	5495	-	Coupler Repair Kit

Please order replacement parts by **PART NO.** and **DESCRIPTION**

# 10" SELF-ADJUSTING BRAKE CLUSTER and DRUM PARTS BREAKDOWN



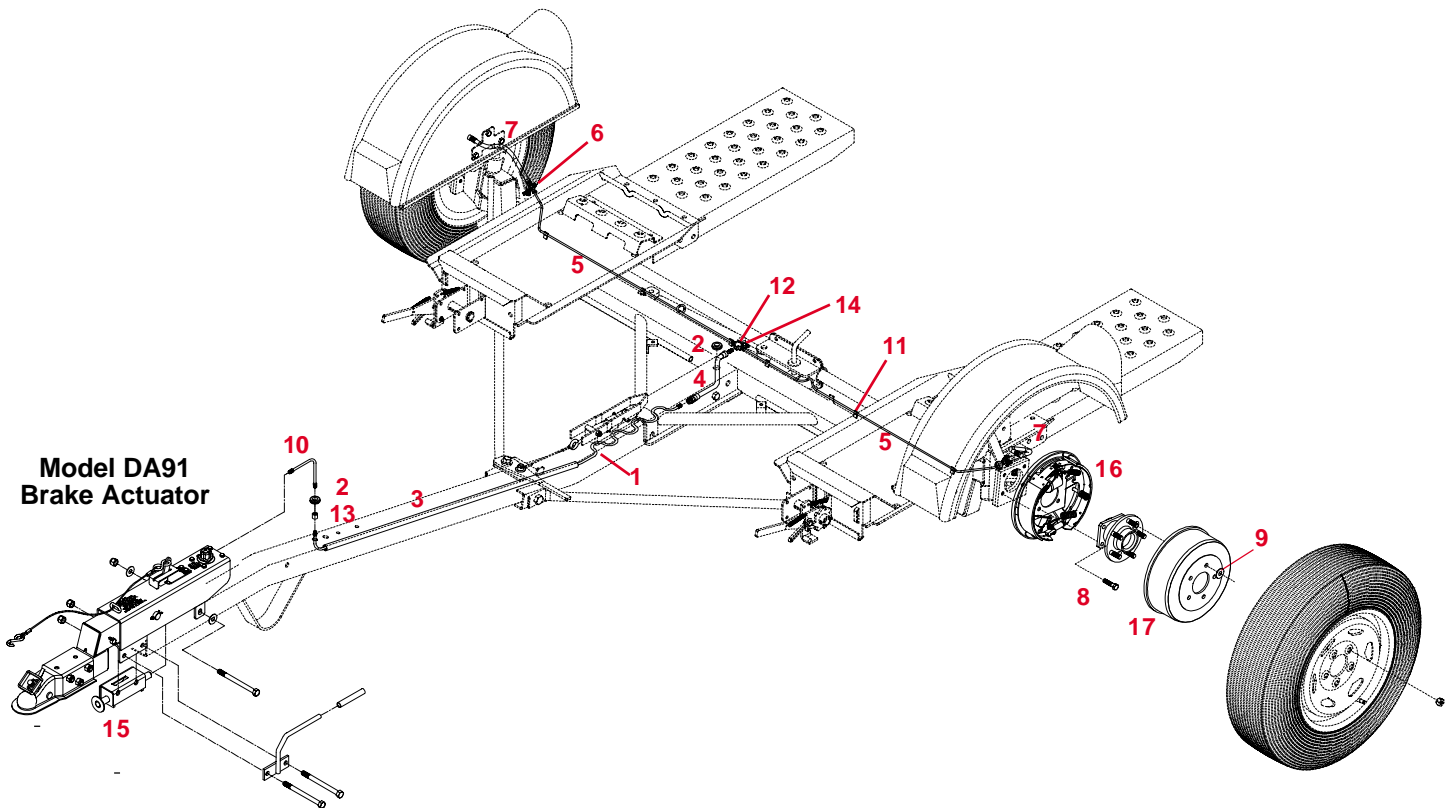
## BRAKE CLUSTER PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	SB24429	-	Left Hand Cluster (shown above)
-	SB24428	-	Right Hand Cluster
1.	SB23871-80	1	Back Plate Assembly - (NDH Hub Mounting)
2.	SB9254	2	Cover Plate - Adjusting Hole
3.	SB10954	1	Brake Shoe Kit (includes 2 Primary & 2 Secondary)
4.	04305	2	5/16"-18UNC-Gr5 x 1/2" Hex Hd Bolt
5.	05424	2	5/16" External Tooth Washer
6.	SB9776	1	Wheel Cylinder Assembly - Right
-	SB9777	1	Wheel Cylinder Assembly - Left
7.	05431	1	Bleeder - replacement
8.	SB9783	1	Push Rod
9.	SB24047	1	Adjusting Screw Assembly - "R" (for LEFT cluster)
-	SB24048	1	Adjusting Screw Assembly - "L" (for RIGHT cluster)
10.	SB10958	2	Spring - Shoe
11.	SB10961-95	1	Shoe Guide
12.	SB23937	1	Cable
13.	SB23936	1	Cable Guide
14.	SB23724	1	Spring - Adjusting Screw
15.	05415-95	1	Lever - Right
-	05414-95	1	Lever - Left
16.	SB10959	2	Pin - Shoe Hold Down
17.	SB9789	4	Cup Shoe Hold Down
18.	05983	2	Spring - Shoe Hold Down
19.	03380	1	Spring
-	SB15845	1	Wheel Cylinder Repair Kit (includes spring, cup and boot)
-	SB40929-30	2	10" Brake Drum

Please order replacement parts by PART NO. and DESCRIPTION.  
Brake shoe kit can be ordered for one complete axle only.



# SURGE BRAKES PARTS BREAKDOWN



## SURGE BRAKES PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	SB566	1	66" Brake Line
2.	01863	2	Rubber Grommet
3.	02746	1	54" Protective Hose
4.	SB7H67	1	7" Brake Hose (rubber)
5.	SB541	2	41" Brake Line
6.	SB7764	2	Rubber Brake Line Clip
7.	02032	2	12" Brake Hose (rubber)
8.	02210	8	7/16"-20UNF x 1-1/4" Epoxied Bolt (gr.8)
9.	04174	4	12mm Retainer Washer (2 per drum)
10.	SB5045	1	4-1/2" Brake Line
11.	02549	4	Rubber Protector
12.	SB7785	1	3/16" Brake Line Tee
13.	SBD10	1	Union Fitting
14.	05960	1	5/16" x 1/2" Self-Threading Bolt
15.	12445-30	1	Spring Return System
16.	SB24429	-	Left Brake Cluster
--	SB24428	-	Right Brake Cluster
17.	SB40929-30	-	10" Brake Drum

Please order replacement parts by **PART NO.** and **DESCRIPTION.**

## BLEEDING THE SYSTEM

The first requirement for safe, sure hydraulic braking is the use of quality brake fluid. Use only DOT-3 or DOT-4 brake fluid from a sealed container.

If pressure bleeding equipment is available, follow the manufacturer's instruction in bleeding the system.

**If system must be bled manually, proceed as follows:** Fill master cylinder with fluid. Install bleeder hose on first wheel cylinder to be bled.

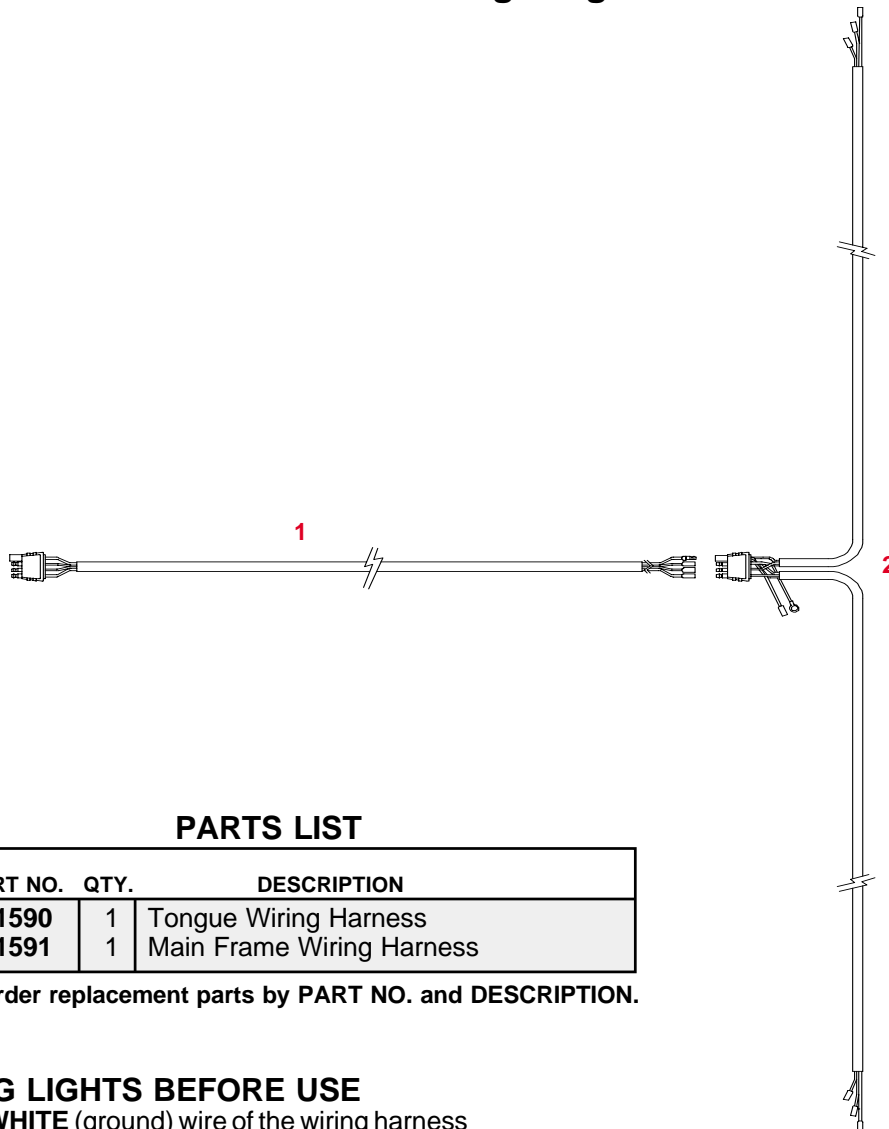
Have loose end of hose submerged in brake fluid in glass container to observe bubbling.

By loosening the bleeder screw located in the wheel cylinder one turn, the system is open to the atmosphere through the passage drilled in the screw. Pump actuator with long steady strokes. The bleeding operation is completed when bubbles no longer rise to the surface of the fluid. **Be sure to close bleeder screw securely.**

Repeat bleeding operation at each wheel cylinder. During the bleeding process, replenish the brake fluid, so the level does not fall below the 1/2 full level in the master cylinder reservoir. After bleeding is complete, make sure master cylinder reservoir is filled and filler cap is securely in place.

After the bleeding operation has been completed, apply pressure to the system and check the whole brake system for leaks.

# Wiring Diagram



## PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
1.	11590	1	Tongue Wiring Harness
2.	11591	1	Main Frame Wiring Harness

Please order replacement parts by PART NO. and DESCRIPTION.

## TESTING LIGHTS BEFORE USE

1. Check that the **WHITE** (ground) wire of the wiring harness is connected to the Kar Kaddy frame and the **WHITE** (ground) wire is connected to the frame of the towing vehicle.
2. With headlights in "ON" position, the tail lights, the light cluster bar, the license plate light, and the clearance lights should be lighted.
3. Start engine and have someone depress brake pedal. Brake lights of tow dolly and towing vehicle should come "on" and "off" simultaneously with each application.
4. Turn left turn signal on. Left turn light of Kar Kaddy and towing vehicle should flash simultaneously. Should the turn signal lights of the trailer function opposite to those of the towing vehicle, it is probable that the **YELLOW (Driver side)** and **GREEN (Passenger side)** wires have been reversed. Check the plug connection under the tongue of the Kar Kaddy to make sure wire colors are not crossed at that point. If plug connection is incorrect, correct problem by reversing yellow and green wire connection on the towing vehicle.

## COLOR CODE FOR WIRING HARNESS

<b>WHITE</b>	Ground
<b>BROWN</b>	Tail Lights, License Plate Lights, Light Cluster Bar & Clearance Lights
<b>YELLOW</b>	Left Turn and Stop
<b>GREEN</b>	Right Turn and Stop

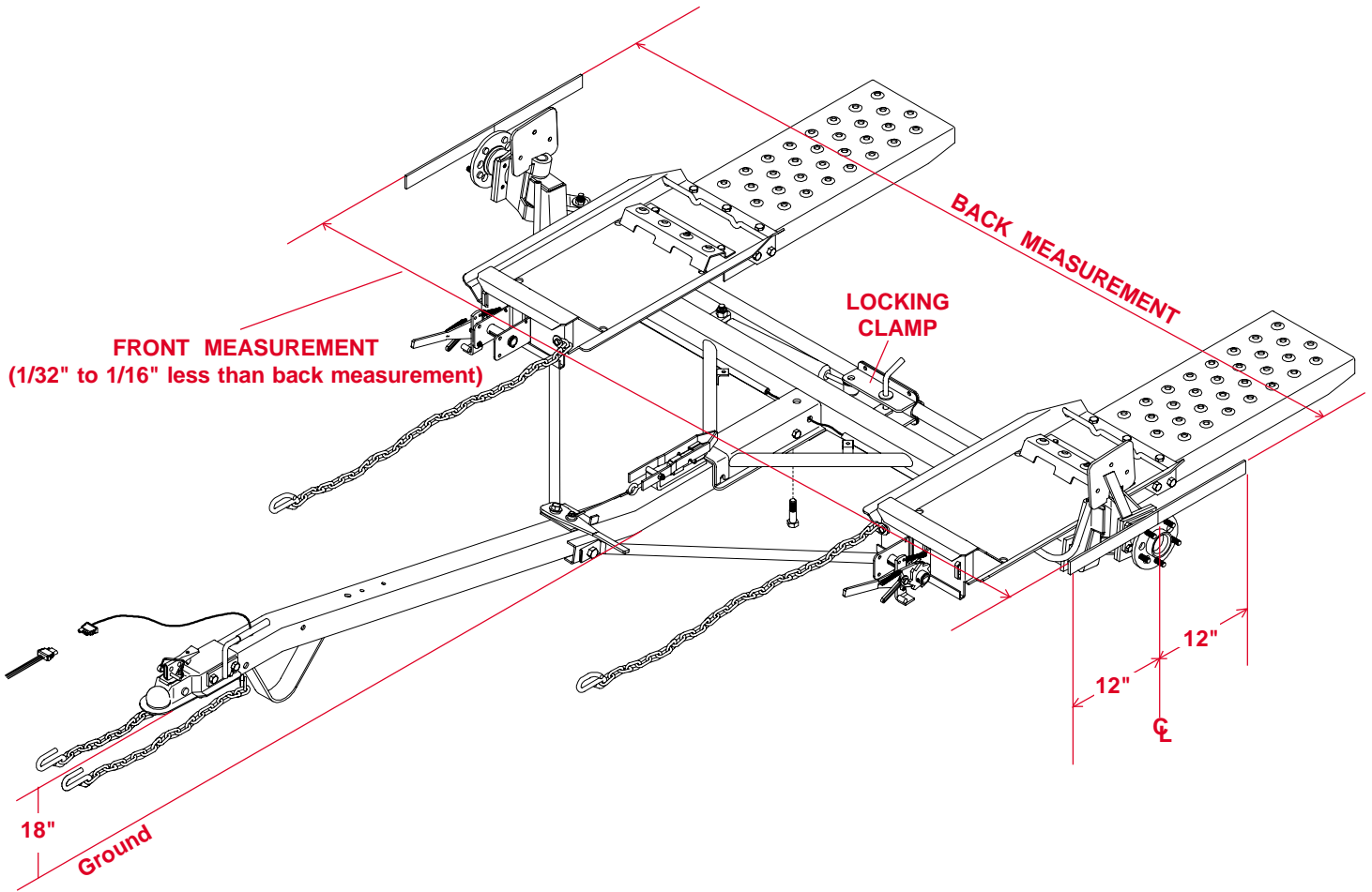
## WIRING OF THE TOWING VEHICLE

Connect wiring to towing vehicle, keeping in mind the color code indicated below.

1. Make certain towing vehicle lights are **"OFF"**.
2. Connect **YELLOW** wire to left turn signal and stop wire in the left rear of towing vehicle with the wire splicer (01883) supplied.
3. Connect **GREEN** wire to the right turn signal and stop wire.
4. Connect **BROWN** wire to tail light wire.
5. **VERY IMPORTANT** - connect **WHITE** wire to frame body of towing vehicle. This is the common ground, and a clean metal - to - metal contact must be made.

**CAUTION:** Many flashers for vehicle turn signals will not carry the additional load of Kar Kaddy turn signals. If normal operation does not occur when connected to the Kar Kaddy, a heavy duty replacement flasher may be obtained through auto parts outlets.

# KAR-KADDY TOE-IN ADJUSTMENT



## MEASURING THE TOE-IN

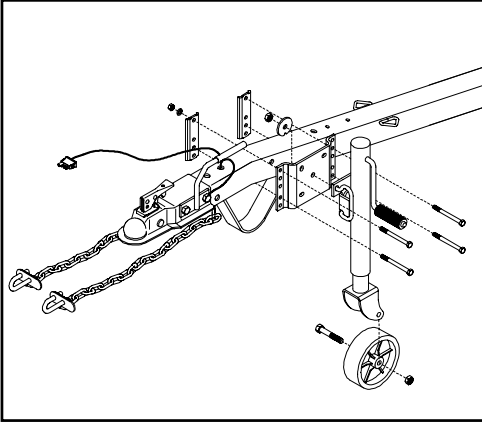
Have the tongue in a "hooked-up" position with the ball coupler 18" off the ground. Jack up the axle just enough to allow you to take the wheels off and put blocks under the axle. Take the wheels off.

Find two 24" long bars, these could be a level, a square or a straight piece of iron bar. Clamp one bar tight to the face of each hub with 12" extending forward and backward of the center of the spindle. The bars must be parallel to the platform the car sits on. Measure across the back end of the bars and then across the front end. The front measurement should be 1/32" to 1/16" less than the back measurement. If the unit needs to be adjusted, this must be done by adjusting the tie rod.

## TOE-IN ADJUSTMENT

1. Put a mark on each side of the locking clamp on the tie rod.
2. Loosen the locking nuts on each end of the tie rod and then the six bolts on the tie rod locking clamp.
3. Turn the tie rod whichever direction is needed until you have a front measurement of 1/32" to 1/16" less than the back measurement.
4. Hold the tie rod and tighten the locknuts on each end.
5. Measure again to make sure the toe-in measurement has not moved.
6. Tighten the locking clamp bolts while holding clamp between the marks you previously put on the tie rod.
7. Reassemble the rest of the Kar Kaddy unit.

## OPTIONAL WHEEL JACK



### WHEEL JACK PARTS LIST

-	KK2WJ	1	Optional Wheel Jack w/ hardware
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Please order replacement parts by PART NO. and DESCRIPTION.

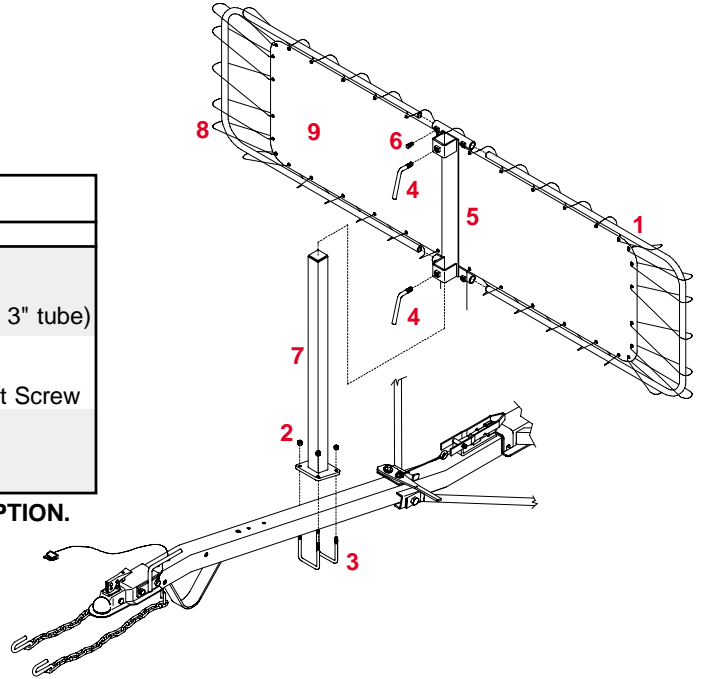
\* All options may not mount on tow dolly simultaneously.\*

## OPTIONAL DEFLECTOR PARTS BREAKDOWN

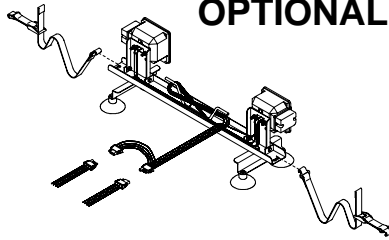
### OPTIONAL DEFLECTOR PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
<b>5762 Optional Deflector</b>			
1.	02055-30	2	Deflector Framework
2.	02592	4	3/8"-16UNC Nylon Insert Lock Nut
3.	02759	2	3/8"-16UNC Square U-Bolt (fits around 3" tube)
4.	00161-95	2	Lock Handle
5.	02054-30	1	Deflector Slide Mount
6.	00095	4	3/8"-16UNC x 3/4" lg. Square Head Set Screw
7.	02743-30	1	Deflector Upright Post
8.	02165	1	Deflector Lacing Cord (1/8" x 25 ft.)
9.	11710	1	Deflector Fabric

Please order replacement parts by PART NO. and DESCRIPTION.



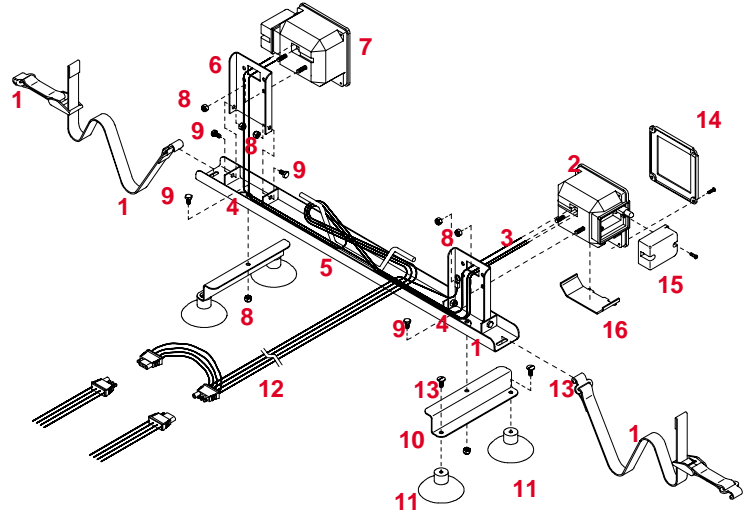
## OPTIONAL LIGHT BAR (KKLB) PARTS BREAKDOWN



### LIGHT BAR PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
<b>KKLB Kar Kaddy Light Bar (complete)</b>			
1.	01772	2	Nylon Security Strap with hooks & tightener
2.	01857	1	Left Tail/ Brake and Signal Light w/Lenses
3.	01773	1	Brown Jumper Wire
4.	01886	4	Wire Holder (metal)
5.	02385-30	1	Light Bar Framework
6.	02386-30	2	Adjustable Light Bracket
7.	01856	1	Right Tail/ Brake and Signal Light w/Lenses
8.	02772	10	1/4"-20UNC Nylon Insert Locknut
9.	00092	6	1/4"-20UNC x 1/2" Hex Head Bolt
10.	01777-30	2	Light Bar "Z" Bracket
11.	01778	4	3" Suction Cup w/Bolt (#13)
12.	02198	1	Light Bar Wiring Harness (new style)
13.	00068	4	1/4"-20UNC x 3/4" Hex Head Bolt
14.	01911	-	Large Red Lens
15.	01912	-	Small Red Lens
16.	01890	-	Clear Lens

Please order replacement parts by PART NO. and DESCRIPTION.



### COLOR CODE FOR WIRING HARNESS

<b>WHITE</b>	Ground
<b>BROWN</b>	Tail Lights, License Plate Lights, Light Cluster Bar & Clearance Lights
<b>YELLOW</b>	Left Turn and Stop
<b>GREEN</b>	Right Turn and Stop



# Warranty Registration

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\_\_\_\_\_

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Purchase Date: \_\_\_\_\_

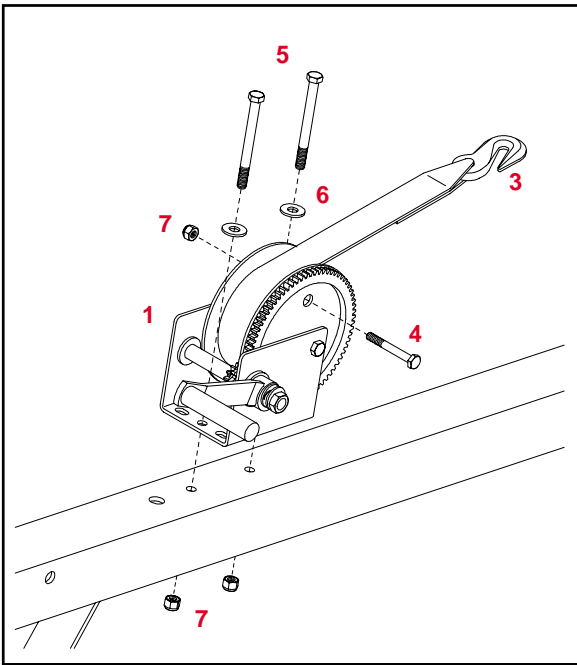
Owner's Signature: \_\_\_\_\_

**Please return to DETHMERS MFG. CO. By FAX or tri-folding this form to the backside, it is pre-addressed.**

Postage

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## OPTIONAL WINCH



### PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
	<b>KK2W</b>	<b>1</b>	<b>Optional Winch</b>
1.	<b>04620</b>	1	Winch Mechanism (1400 capacity)
-	<b>04621</b>	-	Replacement Handle
3.	<b>01738</b>	1	Strap Assembly (includes strap & hook)
4.	<b>02207</b>	1	3/8"-16UNC x 3" Hex Hd. Bolt (gr.5)
5.	<b>02769</b>	2	3/8"-16UNC x 4" Hex Head Bolt (gr.5)
6.	<b>00059</b>	2	3/8" Flatwasher
7.	<b>02592</b>	3	3/8"-16UNC Nylon Insert Locknut

Please order replacement parts by PART NO. and DESCRIPTION.

\* All options may not mount on tow dolly simultaneously.\*

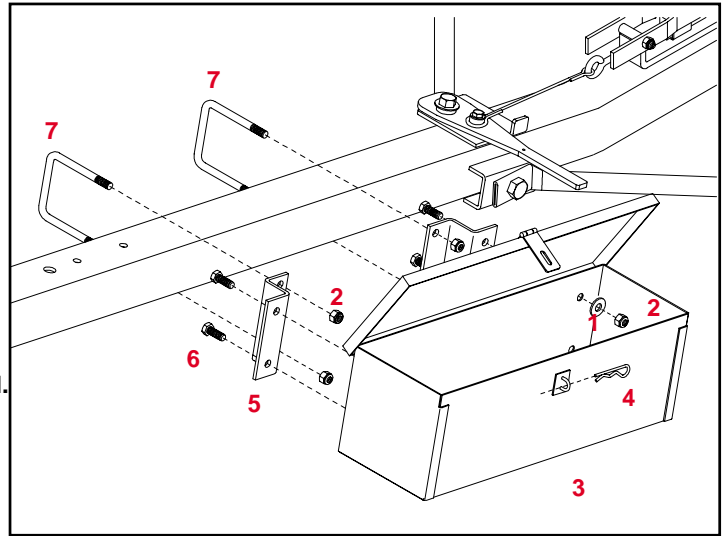
## OPTIONAL TOOL BOX

### PARTS LIST

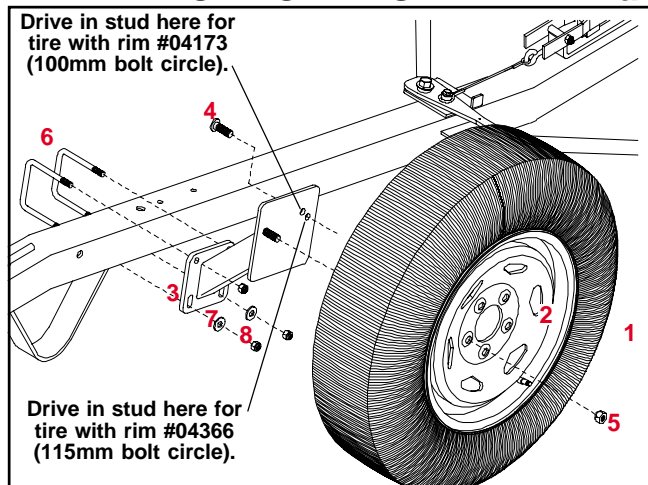
RKTB	1	Optional Tool Box
1.	<b>00059</b>	4 3/8" Flatwasher
2.	<b>02592</b>	8 3/8"-16UNC Nylon Insert Locknut
3.	<b>01888-30</b>	1 Tool Box
4.	<b>00182</b>	1 Small Hair Pin
5.	<b>02742-30</b>	2 Mounting "Z" Bracket
6.	<b>00907</b>	4 3/8"-16UNC x 1" Hex Head Bolt (gr.5)
7.	<b>02759</b>	2 3/8"-16UNC x 3" Square U-Bolt

Please order replacement parts by PART NO. and DESCRIPTION.

\* All options may not mount on tow dolly simultaneously.\*



## OPTIONAL SPARE TIRE and MOUNT PARTS BREAKDOWN



-	<b>RK4ST</b>	<b>1</b>	<b>Optional Spare Tire and Rim</b>
1.	<b>N/A</b>	1	ST205/75R 14"x"C" BSW Radial Tire
2.	<b>09296</b>	1	6" x 14" Rim 115mm Bolt Circle
	<b>RKSTM</b>	<b>1</b>	<b>Spare Tire Mounting Bracket</b>
3.	<b>02193-30</b>	1	Spare Tire Bracket
4.	<b>02917</b>	1	Stud Bolt (12mm x 1.5)
5.	<b>02933</b>	2	Wheel Nut (12mm) Chrome
6.	<b>02759</b>	2	3/8"-16UNC Square U-Bolt
7.	<b>00059</b>	2	3/8" Flatwasher
8.	<b>02592</b>	4	3/8"-16UNC Nylon Insert Locknut
-	<b>KK6TC</b>		<b>Optional Spare Tire Cover</b>

Please order replacement parts by PART NO. & DESCRIP

\* All options may not mount on tow dolly simultaneously.\*



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