

# Demco manufacturing

**Dethmers Manufacturing Company**

DOING OUR BEST TO PROVIDE YOU THE BEST

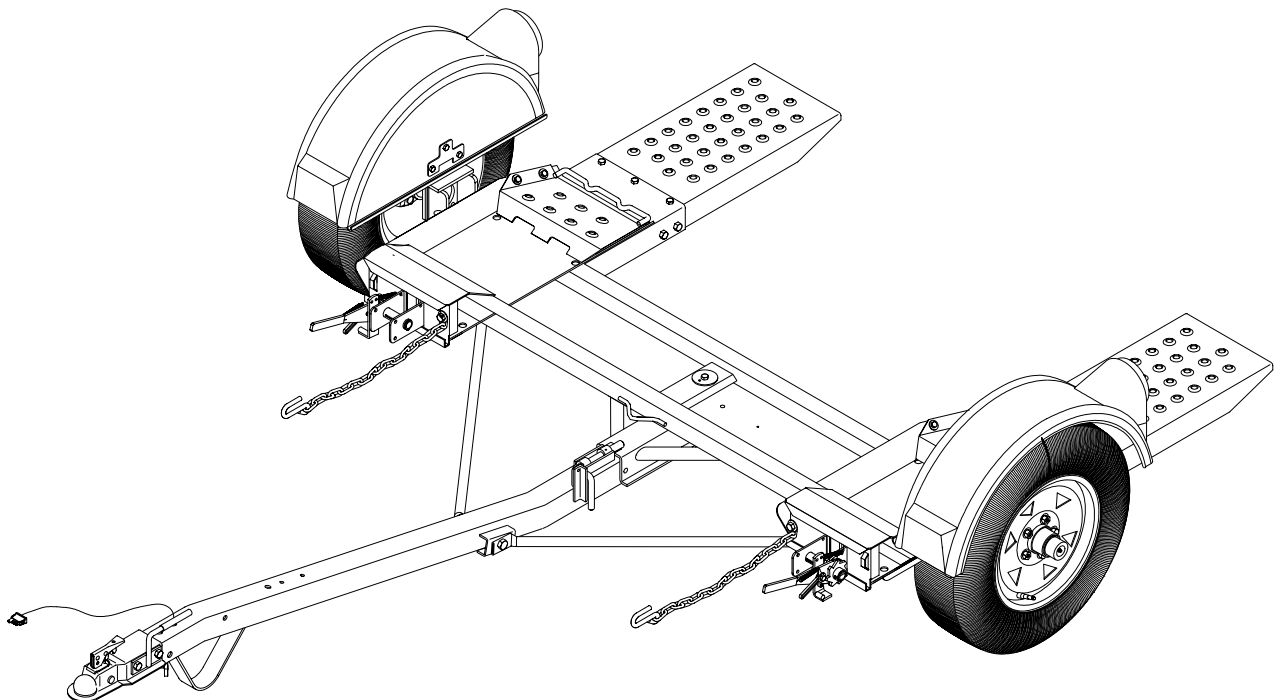
## TOW-IT

### TI110 & TI110SB TOW DOLLY

# OPERATORS MANUAL

ASSEMBLY  
CALIBRATION  
OPERATION  
REPLACEMENT PARTS

READ complete manual CAREFULLY  
BEFORE attempting operation.



**DEMCO** • Dethmers Mfg. Co. • 4010 320th St. • P.O. Box 189 • Boyden, IA 51234  
PH: (712) 725-2311 • Toll Free: 1-800-543-3626 • FAX: 1-800-845-6420  
[www.demco-products.com](http://www.demco-products.com)

## IMPORTANT

We have discovered 1992 and newer model cars that are too wide in the body area to properly fit on a T1110 - 8' wide tow dolly even though the front tire measurement is less than 70".

The 1992 and newer Oldsmobile 88 and 98 are in this category, there may be others. In addition to the standard measurement, always follow weight limitations when using a Demco TOW-IT Tow Dolly.

### T1100 - Standard Unit

3350 lbs. - Total Towed Vehicle Weight

### T1110SB - Brake Unit

3500 lbs. - Total Towed Vehicle Weight



**WARNING:** Exceeding weight limitations or not using a towing vehicle larger and at least 1,000 lbs. heavier than the tow dolly and the towed vehicle combined can result in loss of towing vehicle control, separation of the tow dolly from the towing vehicle, or separation of the towed vehicle from the tow dolly, causing severe personal injury, death, or property damage.

**CAUTION:** All vehicles to be towed on Demco Tow Dollies must be towed with the front axle on the dolly.

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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:

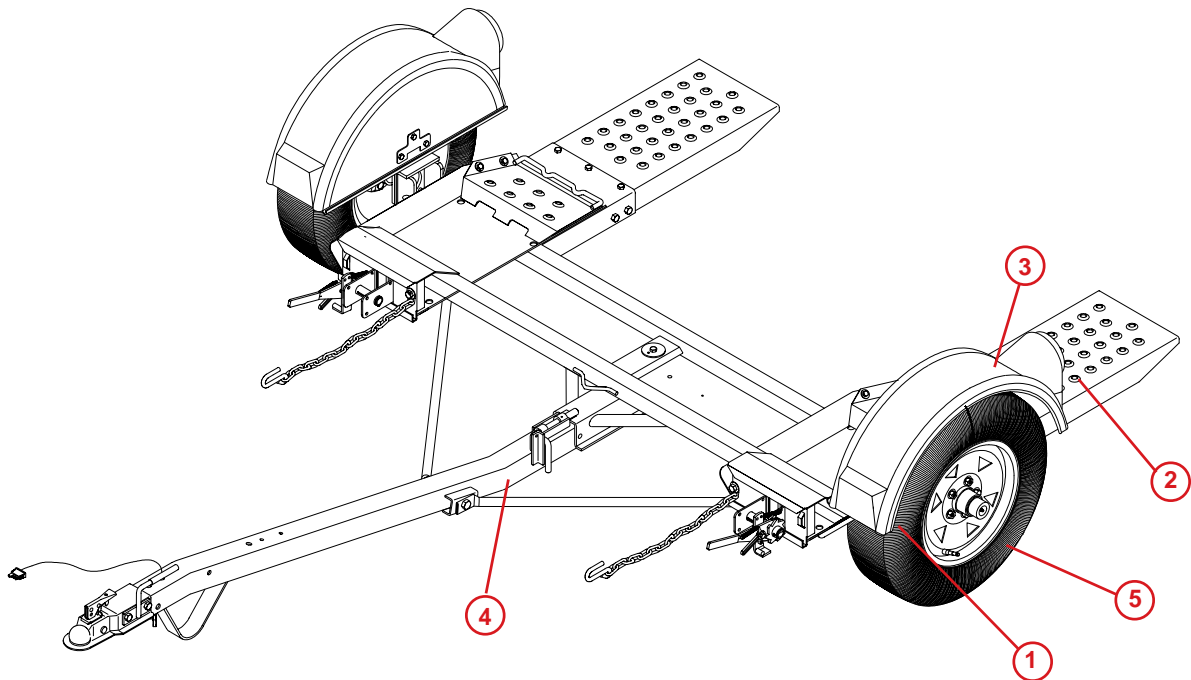
NHTSA,  
U.S. Department of Transportation  
Washington, D.C. 20590.

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



## SAFETY SIGN LOCATIONS

Types of safety sign and locations on Tow It are shown in illustration below. Good safety requires that you familiarize yourself with various safety signs, type of warning, and particular function related to that area, that requires your SAFETY AWARENESS.



### SAFETY DECAL PARTS LIST

| REF. NO. | PART NO. | DESCRIPTION     |
|----------|----------|-----------------|
| 1.       | 04508    | Amber Reflector |
| 2.       | 04804    | Red Reflector   |
| 3.       | RD21007  | Instructions    |
| 4.       | DD21016  | Winch Operation |
| 5.       | DA21001  | Tire Pressure   |

# BOLT TORQUE

## TORQUE DATA FOR STANDARD NUTS, BOLTS, AND CAP SCREWS.

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.

### Bolt Torque for Standard bolts \*

#### Torque Specifications

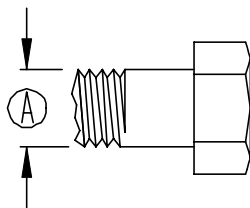
| "A"   | GRADE 2 |       | GRADE 5 |       | GRADE 8 |        |
|-------|---------|-------|---------|-------|---------|--------|
|       | lb-ft   | (N.m) | lb-ft   | (N.m) | lb-ft   | (N.m)  |
| 1/4"  | 6       | (8)   | 9       | (12)  | 12      | (16)   |
| 5/16" | 10      | (13)  | 18      | (25)  | 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 \*

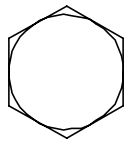
| "A" | CLASS 8.8 |       | CLASS 9.8 |       | CLASS 10.9 |        |
|-----|-----------|-------|-----------|-------|------------|--------|
|     | lb-ft     | (N.m) | lb-ft     | (N.m) | lb-ft      | (N.m)  |
| 6   | 9         | (13)  | 10        | (14)  | 13         | (17)   |
| 7   | 15        | (21)  | 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 cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

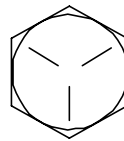
\* GRADE or CLASS value for bolts and capscrews are identified by their head markings.



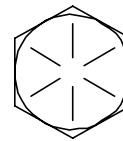
GRADE-2



GRADE-5



GRADE-8



CLASS 8.8



CLASS 9.8



CLASS 10.9





**WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN LOSS OF TOWING VEHICLE CONTROL, SEPARATION 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 Tow-It.

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

Lug Nuts - 75 to 80 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 Tow-It. 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 TI110 tires must be inflated to the recommended 35 PSI.

The TI110SB 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.

All vehicles mounted on the Tow-It 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

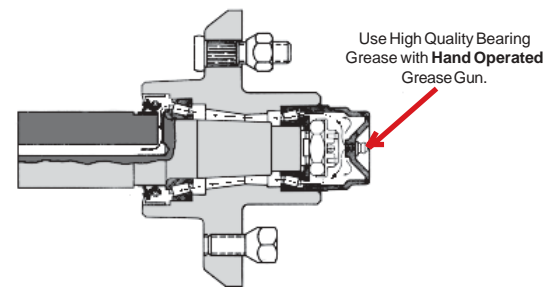
Periodically check all bolts and nuts to ensure proper tension or torque.

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

Grease the center pivot pin grease zerk every **1500 miles**.

Grease the main frame platform skids every **1500 miles**. These grease zerks are readily accessible from under the front tire stop main platform.

Grease the Sure Lube™ Hubs every **3,000 miles**.



## IMPORTANT LOADING INSTRUCTION

### Check your wheel tie-down straps.

Your Tow-It 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 of your 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 of your car and tire size.

## TESTING LIGHTS BEFORE USE

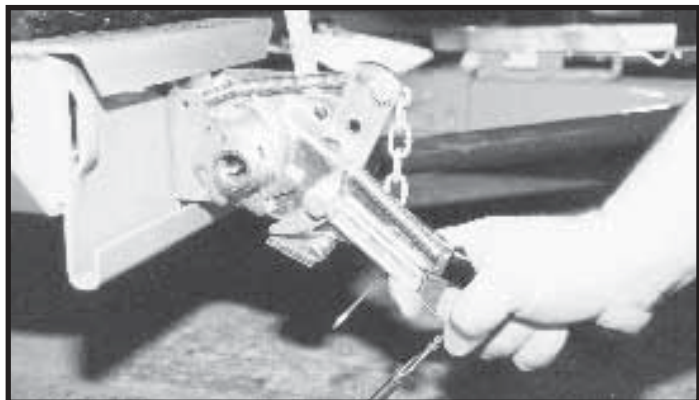
1. Check that the **WHITE** (ground) wire of the wiring harness is connected to the Tow-It frame and the **WHITE** (ground) wire is connected to the frame of the towing vehicle.
2. With headlights in **"ON"** position, the tail lights, the light cluster bar, the license plate light, and the clearance 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 Tow-It 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** and **GREEN** wires have been reversed. Check the plug connection under the tongue of the Tow-It 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.

## LOADING INSTRUCTIONS

Refer to load limits on inside of front cover.



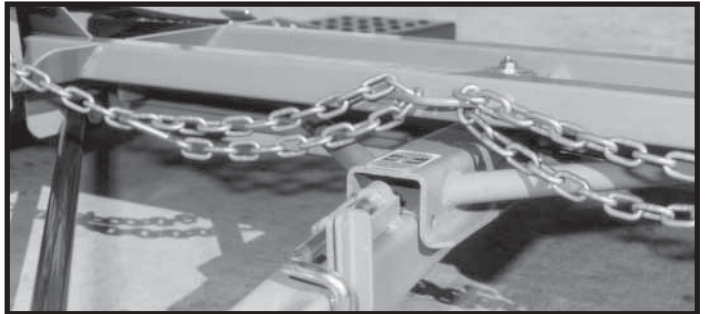
**Step 1.** Secure ball coupler to 2" (3,500 lb. capacity) towing vehicle ball only. Make sure that the hitch and the hitch ball are in good condition and not rusted, loose or stripped. **Recommended ball height is 18" to the top of the ball.** Make sure hitch is locked down and secured with safety clip. Criss-cross safety chains under tongue and secure to towing vehicle frame.



**Step 2.** Ensure that towed vehicle parking brake is fully engaged, then release the tie-down straps. **NOTE:** Tie down straps must be "quick-released" by grasping ratchet pawl and ratchet handle simultaneously and pushing down sharply. This process will permit easy removal of strap from winch. Remove tie-down strap hook from its storage position at the rear of the ramp. Lay the straps on the ground in front of the winches.



**Step 3.** To allow the wheel platform to tilt back for loading:  
1) Swing the bottom of the locking latch (C) toward the hitch far enough to allow locking pin handle to be lifted.



2) Pull locking pin toward the hitch as far as it will go. The wheel platform will tilt back to allow loading.



**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.**

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

TI110 - 70" max. (outside to outside),  
TI110SB 42" min. (inside to inside),  
70" max. (body width)



**Step 5.** 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.

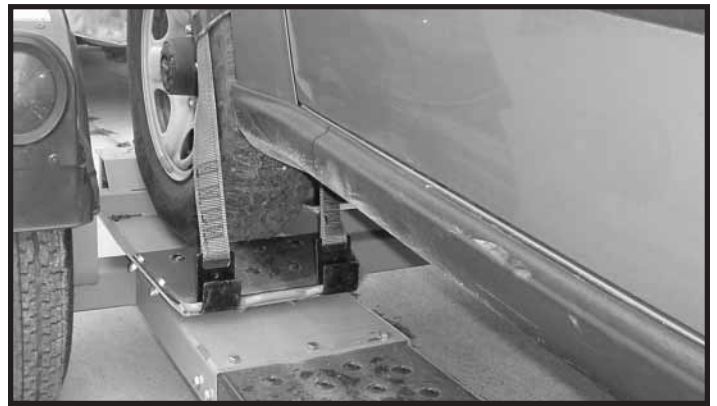


**Step 6.** Drive vehicle onto platform - **Front Forward** - until tires touch the wheel stops at the front of each side of the platform and the platform tilts to a flat position. Make sure the car is centered on the platform. Towed vehicle tires must fit in wheel troughs without overhanging sides. 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.

**IMPORTANT:** Lock the platform in position by pushing locking pin toward platform. Push the handle down as far as possible so locking latch holds it in a locked down position.



**Step 7.** 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 **TOW-IT**.



**Step 8.** Be sure tie-down winch is centered with the tire before tightening straps.



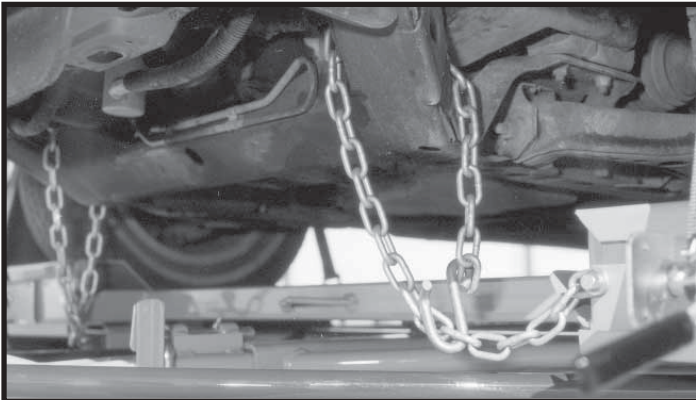
**Step 9.** While tightening straps, pull cross strap forward to ensure even tightening. Tighten straps until each tire starts to flatten against tire stop. After each strap is tight, insert a safety pin in each winch. Disengage towed vehicle parking brake.

**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.**

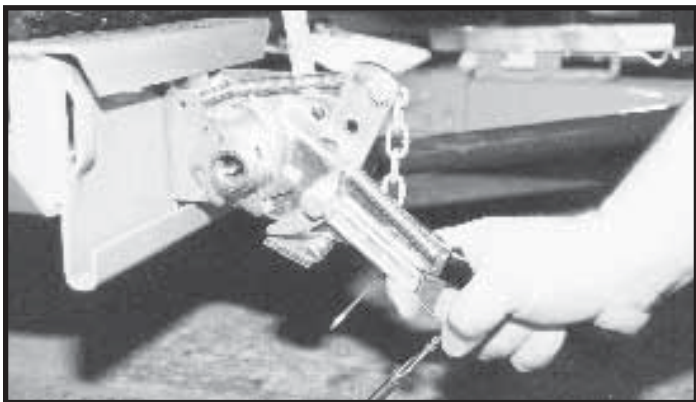
(continue with Step 10 on following page)



**Step 10.** Make sure the tie-down strap is the correct size for the auto tire. The picture above shows a correct fitting strap. See page 1 of this instruction for proper fit and exchange instructions.



**Step 11.** Hook the towed vehicle safety chains to frame of vehicle directly above the area where the chains are mounted on the **TOW-IT**. Leave some slack in the chains to allow suspension movement of the towed vehicle. **Review the safety points on page 1 before moving vehicles.**



**Step 12.** 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 and ratchet handle 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.



**Step 13.** To pull the **TOW-IT** empty, make sure tie-down straps are tightened in the storage position, and towed vehicle safety chains are wrapped up and hooked. Tie-down winch handles should be left in a down position (horizontal) with safety pins in place when towing loaded or empty. **DO NOT ATTEMPT TO PULL TOW-IT 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 Tow-It or exceeding the width limit may result in damage to both car and Tow-It.

### 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 TOW-IT 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.



# DEMCO PRODUCTS - TOW-IT Tow Dolly

## ORIGINAL PURCHASERS LIMITED WARRANTY

### 1. Extent and Duration of this Warranty:

Your Demco Tow-It 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. 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 Tow-It, 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 permanently 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 Tow-It 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 Tow-It 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 Tow-It, 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 Tow-It 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 Tow-It 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 Tow-It 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 state to state.

### 9. Exclusive Warranty:

This is the only express warranty made by Dethmers Manufacturing Co. on your Demco Tow-It and no agent, employee, or other person is allowed to change or add to this warranty.

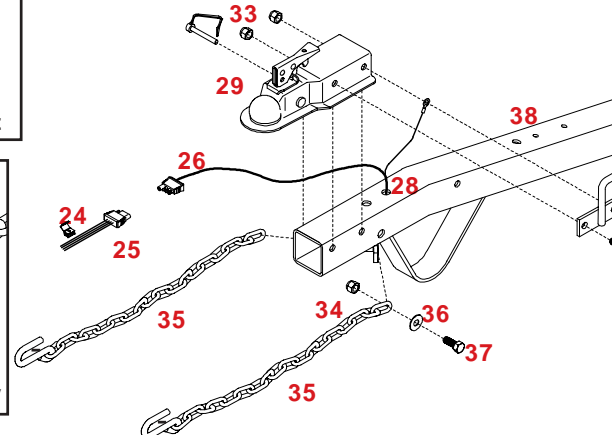
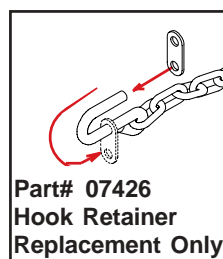
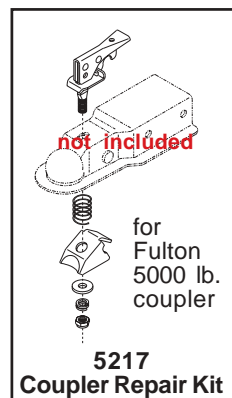
| REF. NO. | PART NO. | QTY. REQ'D | DESCRIPTION                              |
|----------|----------|------------|--|
| 1.       | 5432     | 1          | Left Ratchet Winch Assembly (Plated)     |
| 2.       | 5433     | 1          | Right Ratchet Winch Assembly (Plated)    |
| 3.       | 03569-95 | 1          | Ratchet Frame                            |
| 4.       | 03570-95 | 1          | Left Spool Tube                          |
| -        | 03571-95 | 1          | Right Spool Tube                         |
| 5.       | 03577    | 1          | Heavy Duty External Snap Ring            |
| 6.       | 03574-95 | 1          | Ratchet Handle                           |
| 7.       | 03668    | 1          | 18 Ga. Shim Washer                       |
| 8.       | 03575-95 | 1          | Left Ratchet Gear                        |
| -        | 03576-95 | 1          | Right Ratchet Gear                       |
| 9.       | 03666    | 1          | 5/16" x 1-1/4" Roll Pin                  |
| 10.      | 02243    | 1          | Black Vinyl Hand Grip                    |
| 11.      | 05450    | 1          | Winch Pawl                               |
| 12.      | 01864    | 2          | Winch Pawl Spring SS                     |
| 13.      | 05449    | 1          | Winch Pawl Bushing SS                    |
| 14.      | 00004    | 1          | 5/16" Flatwasher                         |
| 15.      | 05444    | 1          | 3/8"-16 UNC x 3/4" Hex Bolt w/epoxy Gr.5 |
| 16.      | 03572-95 | 1          | Left Ratchet Pawl Arm                    |
| -        | 03573-95 | 1          | Right Ratchet Pawl Arm                   |
| 17.      | 03578    | 1          | 5/16"-18 UNC x 1/2" Shoulder Screw       |
| 18.      | 01998    | 1          | 5/16" Flatwasher SS                      |
| 19.      | 02002    | 1          | 1/4" Flatwasher SS                       |
| 20.      | 02772    | 2          | 1/4"-20 UNC Nylon Locknut                |
| 21.      | 01076    | 1          | 1/4"-20 UNC x 3/4" Hex Hd. Bolt Gr.5     |
| 22.      | 00214    | 1          | 1/4" Flatwasher                          |
| 23.      | 05337    | 1          | Lock Pin w/Cable                         |

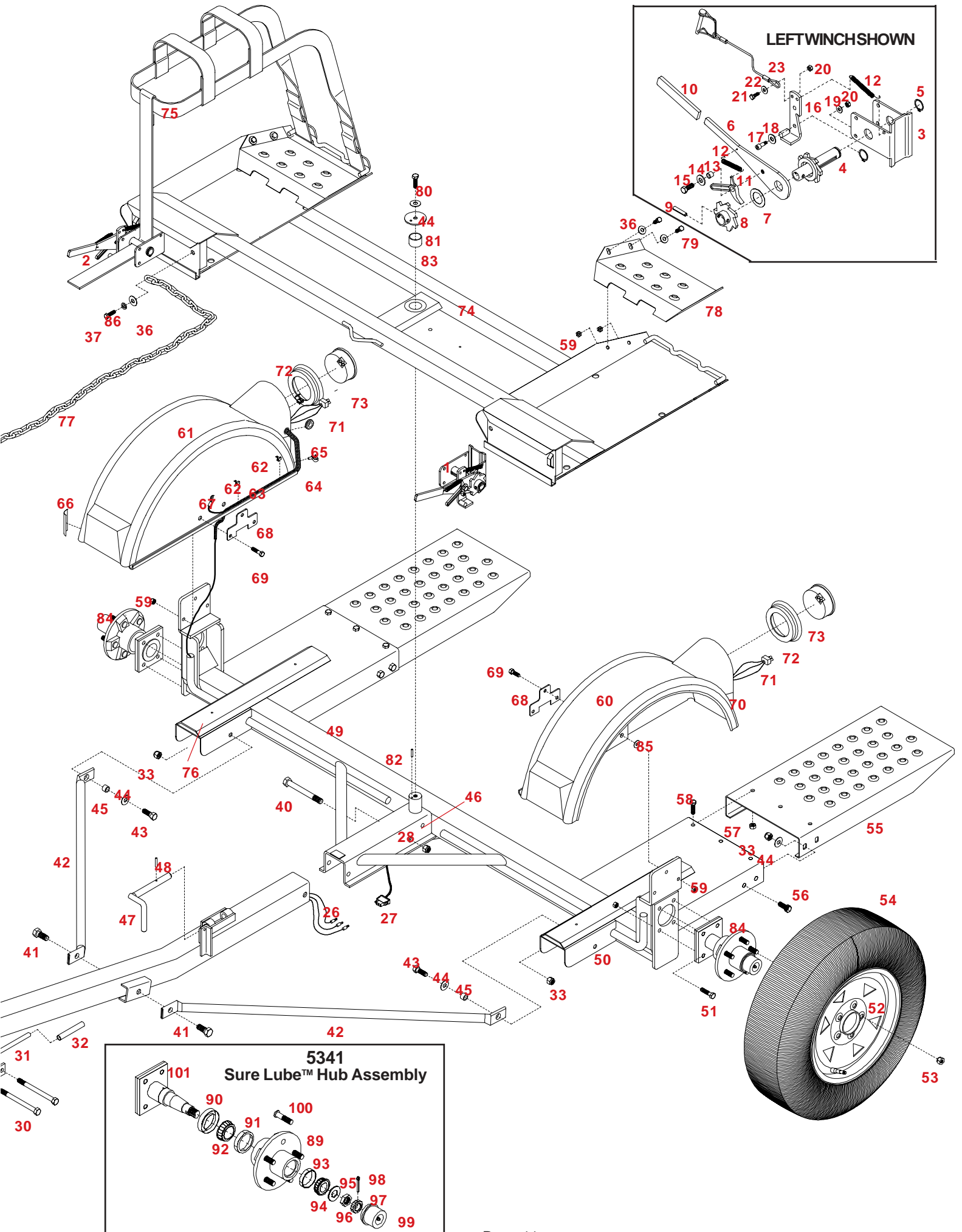
|     |          |    |   |
|-----|----------|----|---|
| 24. | 01883    | 9  | Electrical Wire Splicer                     |
| 25. | 01881    | 1  | Trunk Connector                             |
| 26. | 04785    | 1  | Front Half Trailer Wiring Harness           |
| 27. | 04786    | 1  | Rear Half Trailer Wiring Harness            |
| 28. | 01863    | 2  | 5/8" Grommet                                |
| 29. | 04496    | 1  | Lever Lock Coupler (5,000 lb.)              |
| -   | 01855    | 1  | Safety Lock Pin for coupler                 |
| 30. | 01338    | 2  | 1/2"-13UNC x 4-1/2" Hex Head Bolt (gr.5)    |
| 31. | 02288-95 | 1  | Handle                                      |
| 32. | 02189    | 1  | 1/2" I.D. Handle Grip                       |
| 33. | 02178    | 12 | 1/2"-13UNC Nylon Insert Locknut             |
| 34. | 02771    | 2  | 7/16"-14UNC Nylon Insert Locknut            |
| 35. | 01853    | 2  | 24" Safety Chain with Hook                  |
| -   | 04194    | -  | 7/16" "S" Hook for safety chains            |
| 36. | 00059    | 12 | 3/8" Flatwasher                             |
| 37. | 01898    | 4  | 7/16"-14UNC x 1-1/4" Hex Head Bolt (gr.5)   |
| 38. | 04792-26 | 1  | Tongue                                      |
| 39. | 02587    | 1  | 5/8"-11UNC Nylon Insert Locknut             |
| 40. | 02434    | 1  | 5/8"-11UNC x 4-1/2" Hex Head Bolt (gr.5)    |
| 41. | 03503    | 2  | 5/8"-11 UNC x 1-1/4" Hex Hd. Epoxied Bolt   |
| 42. | 02747-25 | 2  | Bracing Strut                               |
| 43. | 01254    | 2  | 1/2"-13UNC x 1-1/2" Hex Head Bolt (gr.5)    |
| 44. | 00085    | 11 | 1/2" Flatwasher                             |
| 45. | 02579-95 | 2  | Pivot Bushing                               |
| 46. | 04825    | 1  | 3/8" I.D. x 1/2" O.D. Grommet               |
| 47. | 02574-95 | 1  | Lock Pin (Tongue)                           |
| 48. | 02583    | 1  | 3/16" x 1-1/4" Roll Pin                     |
| 49. | 04780-26 | 1  | Undercarriage (09533-26 for T110SB)         |
| 50. | 02209    | 8  | 7/16"-20UNF Hex Nut (gr.8)                  |
| 51. | 02377    | 8  | 7/16"-20UNF x 1-1/2" Epoxied Bolt (gr.8)    |
| 52. | 04782    | 2  | 14 x 6 rim (5 on 4-1/2" BC)                 |
| 53. | 01725    | 10 | 1/2"-20UNF Chrome Lug Nut                   |
| 54. | 04826    | 2  | ST205/75R14 "C" Range BW Radial Tire        |
| 55. | 04323-25 | 2  | Tilt Bed Ramp                               |
| 56. | 00967    | 8  | 1/2"-13UNC x 1-1/4" Hex Head Bolt (gr.5)    |
| 57. | 04168    | 6  | 7/16"-20UNF Nylon Insert Locknut            |
| 58. | 04167    | 6  | 7/16"-20UNF x 1" Hex Head Bolt (gr.8)       |
| 59. | 02592    | 14 | 3/8"-16UNC Nylon Insert Locknut             |
| 60. | 05358    | 1  | Left Fender (w/ wire protector & gr. wire)  |
| 61. | 05357    | 1  | Right Fender (w/ wire protector & gr. wire) |
| 62. | 04425    | 4  | Tinnerman Fender Clamp                      |

| REF. NO. | PART NO. | QTY. REQ'D | DESCRIPTION                                |
|----------|----------|------------|--|
| 63.      | 02298    | 2          | 22-1/2" Wire Protector                     |
| 64.      | 05443    | 2          | Cable Hanger - wire harness                |
| 65.      | 04944    | 2          | Wire Strain Relief                         |
| 66.      | 04508    | 2          | Amber Fender Reflector                     |
| 67.      | 02316    | 2          | White Ground Wire                          |
| 68.      | 04424-95 | 2          | Back-Up Plate for fender                   |
| 69.      | 00914    | 6          | 3/8"-16UNC x 1-1/2" Hex Head Bolt (gr.5)   |
| 70.      | 04804    | 2          | Red Fender Reflector                       |
| 71.      | 02313    | 2          | 3-way Plug Pigtail (tail light)            |
| 72.      | 05447    | 2          | Rubber Mounting Grommet for light          |
| 73.      | 05446    | 2          | Sealed Round Tail Light                    |
| 74.      | 04781-26 | 1          | Upper Half Mainframe                       |
| 75.      | 03528    | 2          | 3-point Tie-Down Strap w/J-Hook & buckle   |
| 76.      | 01674    | 4          | 1/4" Drive Type Grease Zerk                |
| 77.      | 02383    | 2          | 36" Safety Chain with hook                 |
| -        | 04194    | -          | 7/16" "S" Hook for safety chains           |
| 78.      | 04270-25 | 2          | Rear Tire Stop                             |
| 79.      | 00907    | 8          | 3/8"-16UNC x 1" Hex Head Bolt (gr.5)       |
| 80.      | 05570    | 1          | 1/2"-13UNC x 1" Epoxied Bolt (gr.5) w/zerk |
| 81.      | 02578-95 | 1          | 1/2" Special Flatwasher                    |
| 82.      | 02584    | 1          | 3/16" x 3/4" Roll Pin                      |
| 83.      | 04083    | 1          | 1-3/4" O.D. Bronze Bushing                 |
| 84.      | 5341-26  | 2          | SureLube™ Hub and Spindle Assembly         |
| 85.      | 04499    | 6          | 3/8" External Tooth Washer                 |
| 86.      | 00078    | 2          | 7/16" Lock Washer                          |

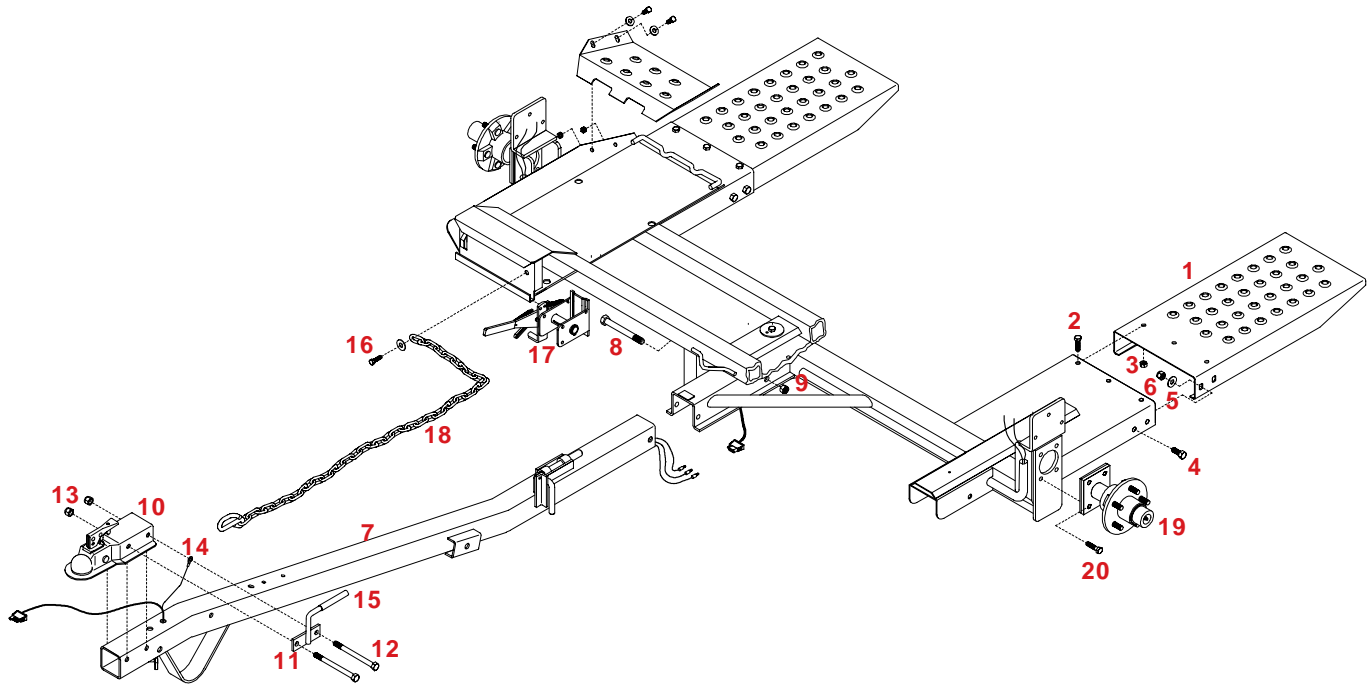
|      |          |   |  |
|------|----------|---|--|
| -    | 5341     | 2 | Sure Lube™ Hub Assembly                |
| 89.  | 01747    | 1 | Hub                                    |
| 90.  | 01743    | 1 | Grease Seal (NOK AD 2548 E)            |
| 91.  | 01744    | 1 | Inner Cup (L68111)                     |
| 92.  | 01745    | 1 | Inner Cone Bearing (L68149)            |
| 93.  | 01748    | 1 | Outer Cup (L44610)                     |
| 94.  | 02264    | 1 | Outer Cone Bearing (L44643)            |
| 95.  | 02265    | 1 | Hardened Tongue Washer                 |
| 96.  | 02266    | 1 | 13/16"-20 UNF Jam Nut                  |
| 97.  | 02267    | 1 | Retainer Adjustment Washer for Jam Nut |
| 98.  | 00116    | 1 | 5/32" x 1-1/2" Cotter Pin              |
| 99.  | 04789    | 1 | Sure Lube Dust Cap                     |
| 100. | 01746    | 5 | 1/2"-20UNF x 1-5/8" lg. Stud Bolt      |
| 101. | 04790-26 | 1 | Spindle                                |

Please order replacement parts by PART NO. and DESCRIPTION.

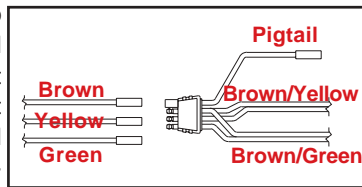




# TOW-IT ASSEMBLY INSTRUCTIONS



- Place the mainframe on blocks or some other sturdy support so that the frame rests approximately 8"-10" off the ground. Attach the tilt bed ramps (#1) as shown using three 7/16" x 1" grade 8 bolts (#2) and lock nuts (#3) on the top of each ramp and four 1/2" x 1-1/4" grade 5 bolts (#4), flatwasher (#5) and locknuts (#6) (two on each side of the ramp). Torque the 7/16" bolts to 80 ft. lbs. and torque the 1/2" bolts to 75 ft. lbs.
- Hold the tongue (#7) up to the front of the tow dolly and locate the three bullet connectors extending out the back of the tongue and plug into the connector protruding from under the mainframe channel. **Do not cross colors when making this connection.**
- Mount the tongue to the front of the tow dolly using one 5/8" x 4-1/2" grade 5 bolt (#8) and locknut(#9) (torque to 50 ft. lbs.). Do not torque over 50 ft. lbs. or the bed will not tilt. Make sure the tongue latch is in the latched position to the tilt bed.
- Secure the coupler (#10) and lift handle (#11) to the front end of the tongue with two 1/2" x 4-1/2" gr.5 bolts (#12) and locknuts (#13). The white ground wire (#14) is attached under the head of the second bolt attaching the coupler. **(It is very important that a good ground is made).** Torque the locknuts to 75 - 80 ft. lbs. Tap a rubber grip (#15) onto the handle with a rubber hammer or a wooden mallet.
- Remove the 7/16" x 1-1/4" bolt (#16), flatwasher, and locknut from the outer front panel of each wheel platform tire stop. Slide the tie-down winch (#17) into the channel at the front of the wheel platforms as shown. Note that #17 is the left winch. **The ratchet handles are to the outside of each winch and ratchet springs are to the top.** Attach two 36" towed vehicle safety chains (#18). Secure one chain to **each** wheel platform tire stop with the 7/16" x 1-1/4" bolt (#16), flatwasher and locknut.



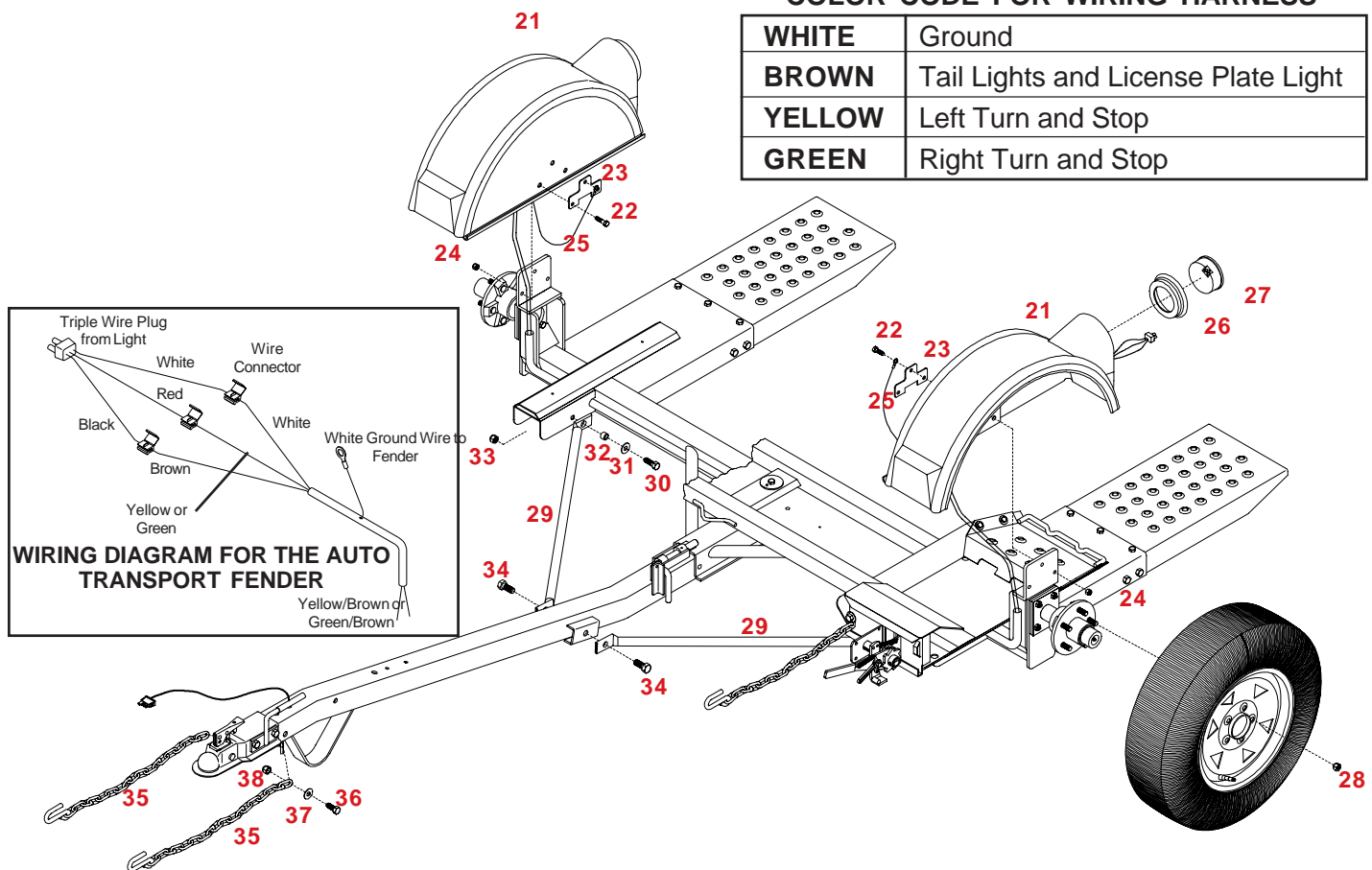
- When assembling the tie-down strap to the tow dolly winch, make sure the tie-down strap does not contain any twists and the overlaps are to the inside. Weave the front of the tie-down strap through the openings in the buckle. The buckle should be approximately 8" from the end of the strap. Thread the strap end through the winch slot. Bring the strap up and thread it back through the buckle again. The buckle should be approximately 1-1/2" - 2" from the winch.  
**(Refer to drawing on page 9 for following steps)**
- Attach Hub and Spindle Assembly (#19) using 7/16" x 1-1/4" Fine Thread Bolts (#20) and hex nuts.
- Bolt the fenders (#21) on using 3/8" x 1-1/2" gr. 5 bolts (#22), back-up plates (#23) and locknuts (#24) in each fender. Mount the fender with the light pocket to the rear. **Attach the white ground wire (#25)** (the end with the eye loop on it) under the center top bolt head.

**NOTE: It is advantageous to wire the fender lights prior to attaching the wheels.**

- Cut off stripped ends of the wiring harness, cut off stripped end of the white ground wire. The yellow/brown wires must be run to the left tail light pocket. The green/brown wires must be run to the right tail light pocket. Start at either fender, pull the loom at the center of the fender downward and push the green/brown (or yellow/brown) wires upward through the loom until it comes out the loom by the light pocket. Push the white ground wire through the slit in the top of the loom in the fender trough and push the wire toward the light pocket.
- Make sure all three wires are coming out the fender wire loom. Slide the rubber fender grommet over the wires and up close to the wire loom. Push the hollow looped end of the loom hanger into the small hole under the fender pocket in the side of the fender. Leave the holder open. Pull the three wire pigtail wires through the hole in the fender pocket outward. When wiring the pigtail into the tow dolly

## COLOR CODE FOR WIRING HARNESS

|               |                                     |
|---------------|-------------------------------------|
| <b>WHITE</b>  | Ground                              |
| <b>BROWN</b>  | Tail Lights and License Plate Light |
| <b>YELLOW</b> | Left Turn and Stop                  |
| <b>GREEN</b>  | Right Turn and Stop                 |



harness at the fender pocket, the wire ends **SHOULD NOT** be stripped. Use the wire connectors to make all contacts. Lay the wire in the connector, pinch securely with a pliers, closing the wire connector. Splice the white wire of the pigtail to the white ground wire from the fender. Splice the black wire to the brown wire. Splice the green (or yellow) wire to the red wire of the pigtail. The connections are made on the outside of the fender pocket and pushed into the fender pocket through the pocket hole. Pull the wires back into the fender pocket and push the strain relief into the fender with the wire loom close to the clip. Wrap the loom hanger tie around the wire loom and insert the peg into the fender.

11. Push the round rubber light seal (#26) into the light pocket. Be sure the lip is secured in the light housing. Plug the pigtail into the fender light. Push the round light (#27) into the rubber seal until it snaps in firmly. Wire the other fender in the same manner.
12. Attach the tire/rim assembly to the mainframe. Use the supplied lug nuts (#28) and torque to 75 - 80 ft. lbs.
13. Lay the bracing struts (#29) out along the tow dolly tongue with the back end (the end with the larger hole in it) of the bracing strut toward the mainframe. Loosely bolt the back of each bracing strut to the trailer frame as shown using 1/2" x 1-1/2" grade 5 bolt (#30), flatwasher (#31), pivot bushing (#32) and locknut (#33). Hold up the front end (the end with the smaller hole) of each bracing strut to the tongue, align holes and secure with a two 5/8" x 1-1/4" epoxied bolt (#34). Torque the 1/2" x 1-1/2" bolt with the pivot bushing to 75 ft. lbs.

14. Attach the two 24" transport safety chains (#35) to the two holes in the angle located under the tongue using two 7/16" x 1-1/4" grade 5 bolts (#36), flatwashers (#37), and locknuts (#38). Torque bolts to 50 ft. lbs.

## WIRING OF THE TOWING VEHICLE

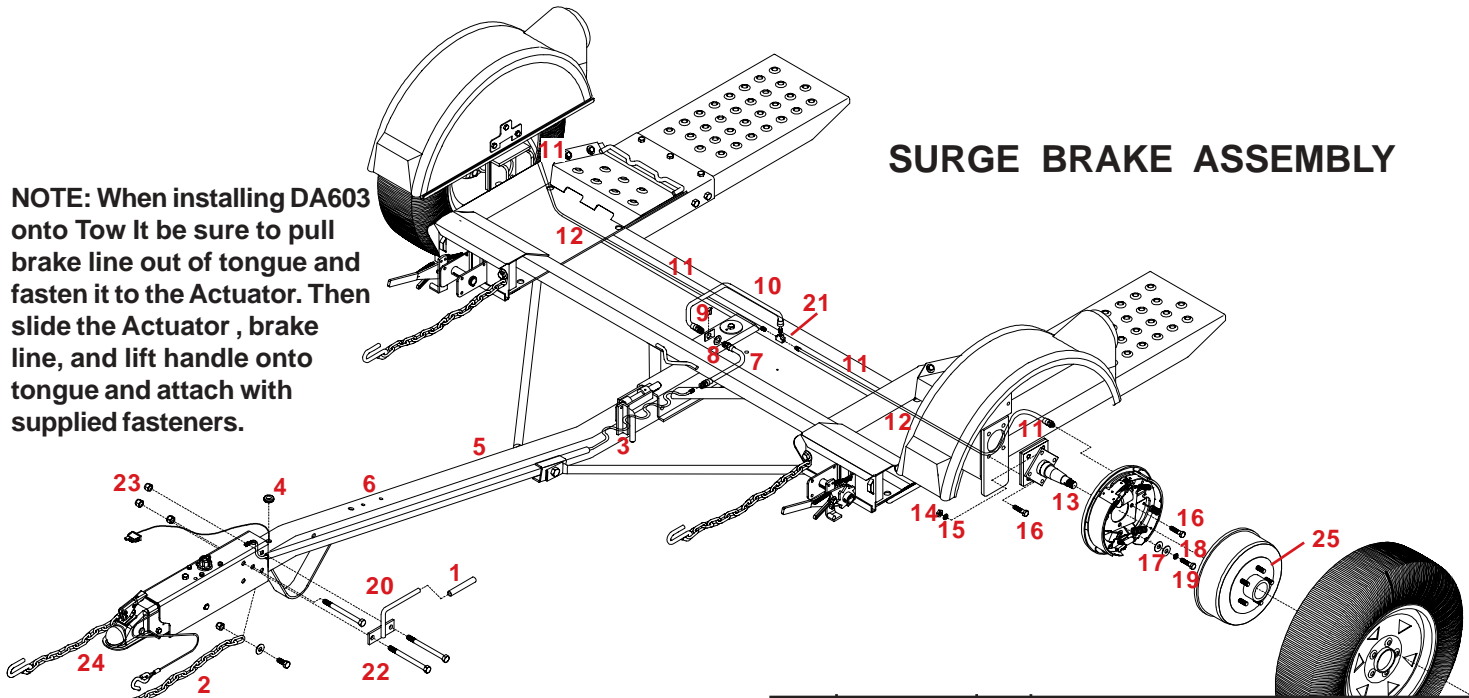
Connect wiring to towing vehicle, keeping in mind the color code indicated below.

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 X) 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 TOW-IT turn signals. If normal operation does not occur when connected to the TOW-IT, a heavy duty replacement flasher may be obtained through auto parts outlets.

# SURGE BRAKE ASSEMBLY

**NOTE:** When installing DA603 onto Tow It be sure to pull brake line out of tongue and fasten it to the Actuator. Then slide the Actuator, brake line, and lift handle onto tongue and attach with supplied fasteners.



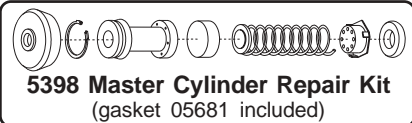
## BRAKE LINES PARTS LIST

| REF. NO. | PART NO. | QTY. REQ'D. | DESCRIPTION                  |
|----------|----------|-------------|------------------------------|
| 1.       | 02189    | 1           | Handle Grip                  |
| 2.       | 02383    | 2           | 36" Safety Chain             |
| 3.       | SB587    | 1           | 80" Brake Line               |
| 4.       | 01863    | 1           | 5/8" Rubber Grommet          |
| 5.       | 02746    | 1           | 54" Protective Hose          |
| 6.       | 04792-26 | 1           | Tongue                       |
| 7.       | SB7H66   | 1           | 7" Brake Hose                |
| 8.       | 00496    | 1           | 5/8" x 14 Ga. Machine Washer |
| 9.       | SB7764   | 1           | Retaining Clip               |
| 10.      | SB512    | 1           | 12" Brake Line               |
| 11.      | 02549    | 4           | Rubber Brake Line Protector  |
| 12.      | SB544    | 2           | 44" Brake Line               |

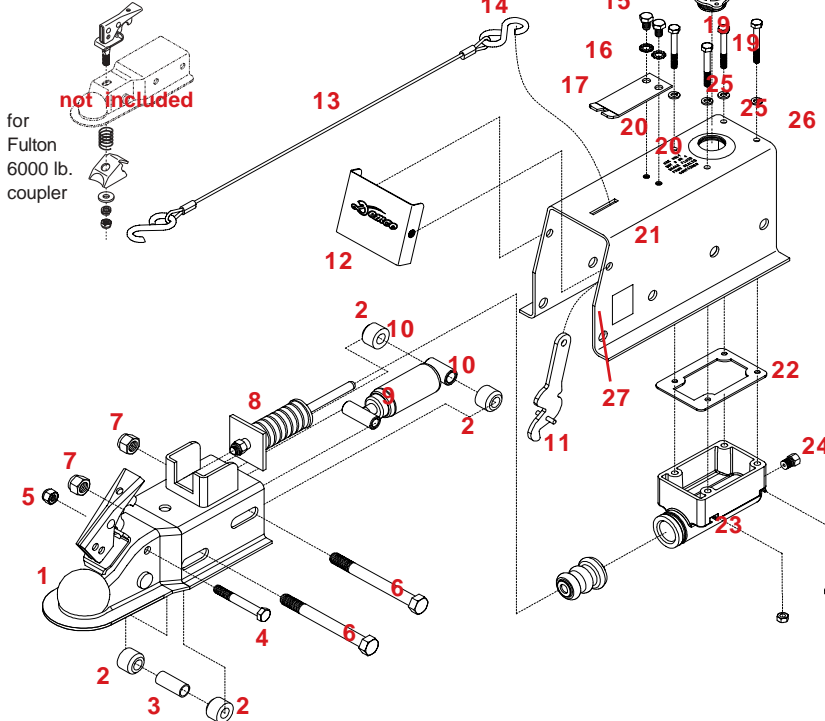
|     |          |   |  |
|-----|----------|---|--|
| 13. | 04791-26 | 2 | Spindle w/Brake Flange                     |
| 14. | 02209    | 6 | 7/16"-20UNF Hex Nut (Gr.8)                 |
| 15. | 00078    | 6 | 7/16" Lockwasher                           |
| 16. | SB8798   | 6 | 7/16"-20UNF x 1-1/8" Knurled Shoulder Bolt |
| 17. | 00059    | 4 | 3/8" Flatwasher                            |
| 18. | 00060    | 2 | 3/8" Lockwasher                            |
| 19. | 00907    | 2 | 3/8"-16UNC x 1" Hex Head Bolt (Gr.5)       |
| 20. | 02288-95 | 1 | Handle                                     |
| 21. | SB7785   | 1 | Tee, Brass                                 |
| 22. | 01338    | 3 | 1/2" -13 UNC x 4-1/2" Hex Head Bolt, Gr. 5 |
| 23. | 02178    | 3 | 1/2" -13 UNC Nylon Insert Locknut          |
| 24. | 8606301  | 1 | Model DA603 plated drum brake Actuator     |
| 25. | 10415    | - | Gr. 8 Stud (Replacement only)              |
| -   | SB15545  | 4 | 10" Brake Drum                             |
| -   | SB23715  | - | Left Hand Cluster                          |
| -   | SB23714  | - | Right Hand Cluster                         |

## DA66 ACTUATOR PARTS (REPLACEMENT ONLY)

### ACTUATOR PARTS LIST

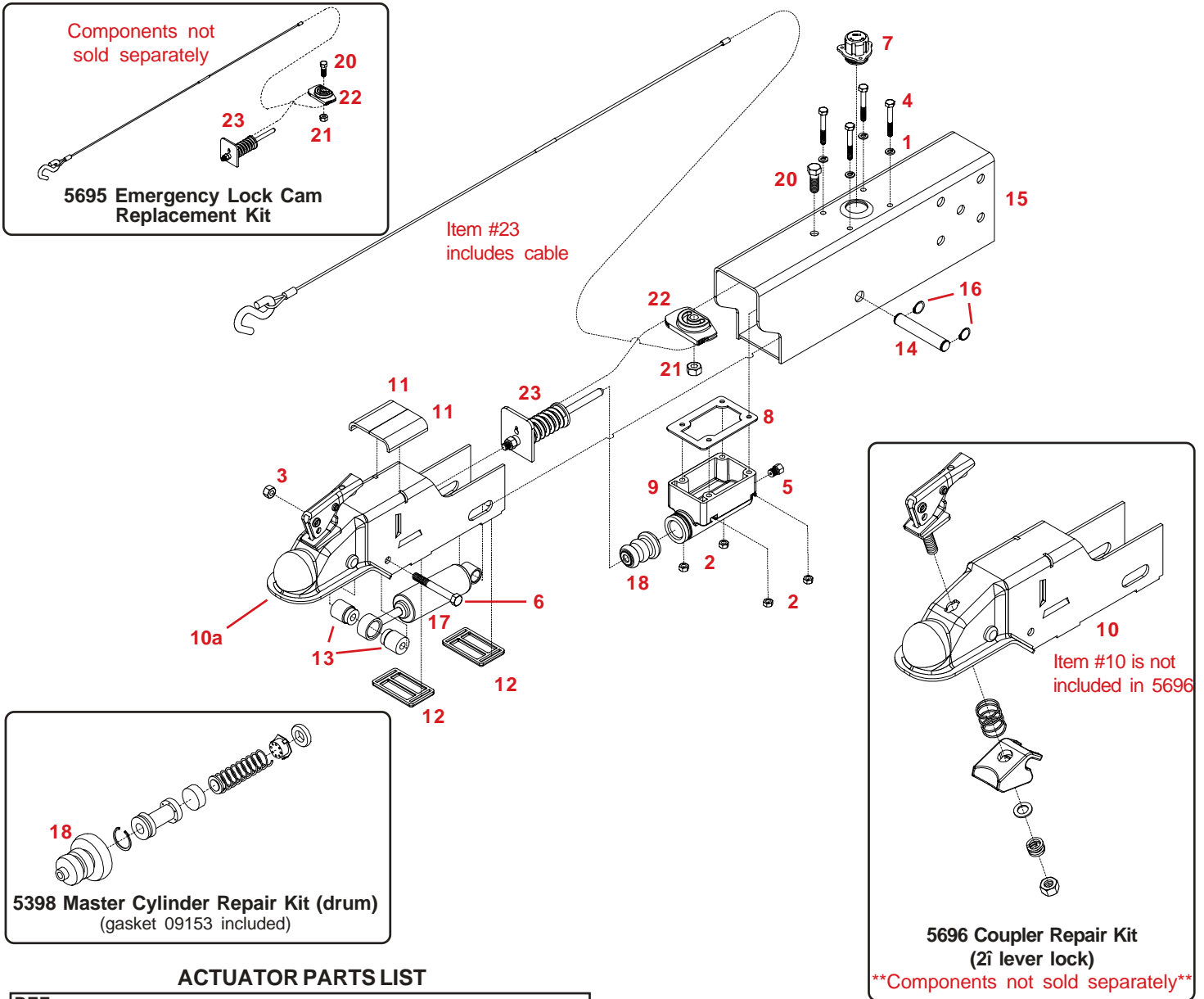


### 5495 Coupler Repair Kit



| REF. NO. | PART NO. | QTY. REQ'D. | DESCRIPTION                               |
|----------|----------|-------------|---|
| -        | 8606701  | 1           | Brake Actuator complete (incl. ref. 1-24) |
| 1.       | 07599-95 | 1           | 6000# 2" Ball Coupler (Fulton)            |
| 2.       | SB23278  | 4           | Roller                                    |
| 3.       | 05957-95 | 1           | Front Roller Spacer                       |
| 4.       | 02166    | 1           | 3/8"-16UNC x 2-3/4" Hex Head Bolt (gr.5)  |
| 5.       | 07176    | 1           | 3/8"-16UNC Stover Lock Nut                |
| 6.       | 05684    | 2           | 1/2"-13UNC x 4-7/16" Hex Head Bolt (gr.5) |
| 7.       | 02178    | 2           | 1/2"-13UNC Nylon Insert Lock Nut          |
| 8.       | 05959    | 1           | Push Rod Assembly                         |
| 9.       | 05692    | 1           | Damper/ Shock                             |
| 10.      | 05958-95 | 2           | Rear Roller Spacer                        |
| 11*      | 05951    | 1           | Emergency Lever                           |
| 12.      | 05955-95 | 1           | Front Cover                               |
| 13*      | SB24700  | 1           | 2' Cable with S-Hooks                     |
| 14.      | SB10555  | 2           | Replacement S-Hook ONLY                   |
| 15.      | 05960    | 2           | 5/16"-18UNC x 1/2" Self-Tapping Screw     |
| 16.      | 05424    | 2           | 5/16" External Tooth Lock Washer          |
| 17*      | 05693-95 | 1           | Emergency Lever Spring                    |
| 18.      | 03876    | 1           | Master Cylinder Cap                       |
| 19.      | 01076    | 4           | 1/4"-20UNC x 3/4" Hex Head Bolt Gr 5      |
| 20.      | 00057    | 2           | 1/4" Lock Washer                          |
| 21.      | 03564-95 | 1           | Outer Case                                |
| 22.      | 05681    | 1           | Replacement Master Cyl. Gasket ONLY       |
| 23.      | 5650     | 1           | Composite Master Cylinder Kit w/ 09153    |
| 24.      | SB12098  | 1           | 1/8" pipe - 3/16" inverted Flare Fitting  |
| 25.      | 05695    | 2           | 1/4" Internal Tooth Lock Washer           |
| 26.      | 05966-95 | 1           | Rear Cover                                |
| 27.      | BH21004  | 1           | Decal, "Preset Fasteners"                 |
| -        | 5400     | -           | Lever Replacement Kit (incl. items w/*)   |
| -        | 5398     | -           | Master Cylinder Repair Kit w/ gasket      |
| -        | 5495     | -           | Coupler Repair Kit                        |

# DA603 BRAKE ACTUATOR PARTS BREAKDOWN



## ACTUATOR PARTS LIST

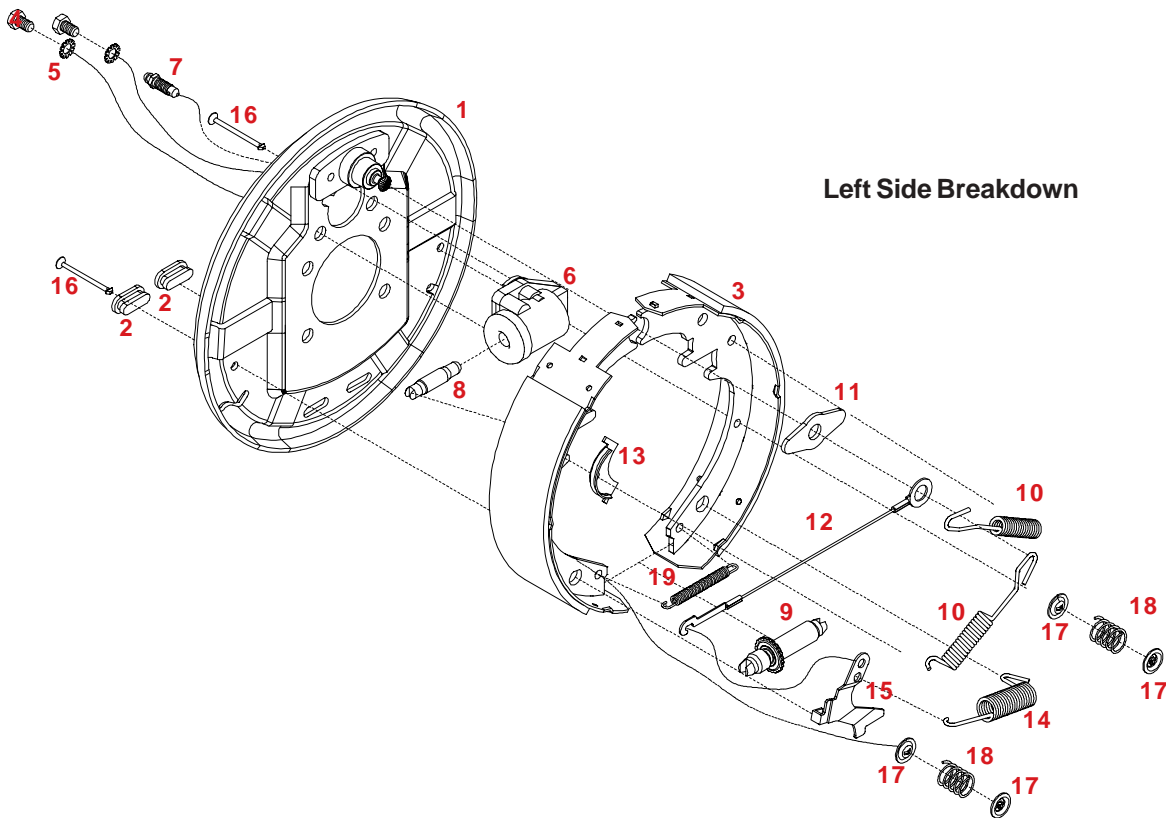
| REF. NO. | PART NO.        | QTY. | DESCRIPTION                                     |
|----------|-----------------|------|---|
| -        | <b>8606301</b>  | -    | <b>Plated Actuator f/ drum brakes</b>           |
| 1.       | <b>00057</b>    | 4    | 1/4" Lock Washer                                |
| 2.       | <b>00062</b>    | 4    | 1/4"-20 UNC Hex Nut                             |
| 3.       | <b>00179</b>    | 1    | 3/8"-16 UNC Lock Nut (Center Punch)             |
| 4.       | <b>00618</b>    | 4    | 1/4"-20UNC x 2" Hex Head Bolt (Gr.5)            |
| 5.       | <b>SB12098</b>  | 1    | .018 Connector Orifice (Drum Brakes)            |
| 6.       | <b>02207</b>    | 1    | 3/8"-16UNC x 3" Hex Head Bolt (Gr. 5)           |
| 7.       | <b>03876</b>    | 1    | 3 Tab Fill Cap w/ Diaphragm & O-Ring            |
| 8.       | <b>09153</b>    | 1    | Master Cylinder Gasket (incl. in 10616 & 11190) |
| 9.       | <b>10616</b>    | 1    | Composite Master Cylinder (drum)                |
| 10.      | <b>11367-95</b> | 1    | Coupler/Inner Slider (plated)                   |
| 10a.     | <b>5698</b>     | -    | Coupler/Inner Slider w/ Lever Lock Assy.        |
| 11.      | <b>11368</b>    | 2    | Top Plastic Slider                              |
| 12.      | <b>11369</b>    | 2    | Bottom Plastic Slider                           |
| 13.      | <b>11371-95</b> | 2    | Shock Spacer (plated)                           |
| 14.      | <b>11389-95</b> | 1    | Rear Shock Pin (plated)                         |
| 15.      | <b>11390-95</b> | 1    | Outer Case (plated)                             |
| 16.      | <b>11401</b>    | 2    | External Snap Ring                              |
| 17.      | <b>SB12426</b>  | 1    | Damper  |
| 18.      | <b>05687</b>    | 1    | Protective Boot (incl. in 10616 & 5398)         |

## REPLACEMENT KITS (components not sold separately)

| <b>5695</b> |      | - | <b>Emergency Lock Cam Replacement Kit</b>    |
|-------------|------|---|--|
| 20.         | ---- | 1 | 7/16"-14UNC x 1 1/4" Hex Head Bolt (Gr. 5)   |
| 21.         | ---- | 1 | 7/16"-14UNC Lock Nut (Center Punch)          |
| 22.         | ---- | 1 | Emergency Catch Cam (black oxide finish)     |
| 23.         | ---- | 1 | Pushrod Assembly (includes cable)            |
| <b>5696</b> |      | - | <b>Coupler Repair Kit (2 1/2 lever lock)</b> |
| <b>5398</b> |      | - | <b>Master Cylinder Repair Kit (drum)</b>     |

Please order replacement parts by PART NO. and DESCRIPTION.

# 10" BRAKE CLUSTER PARTS LIST



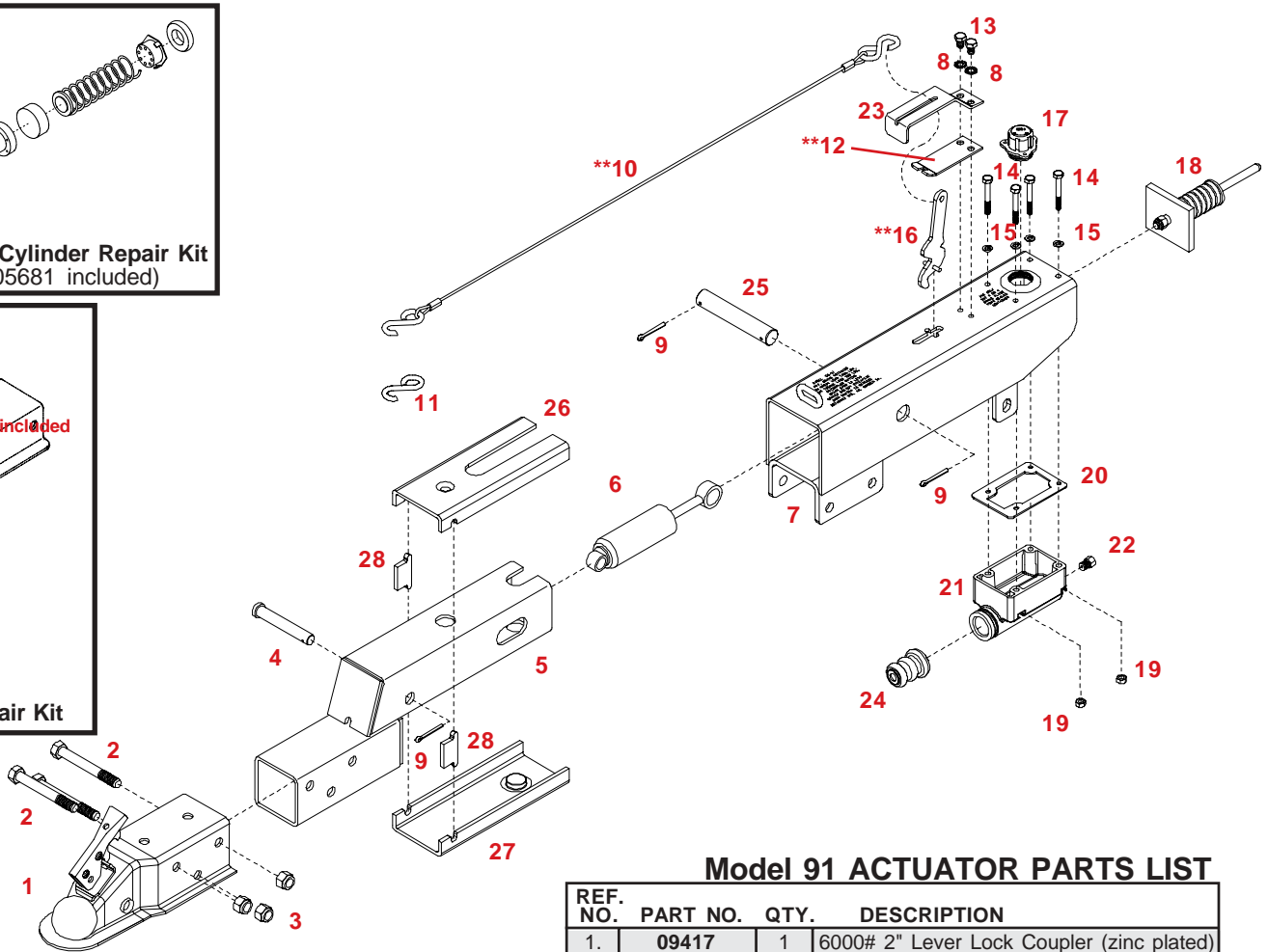
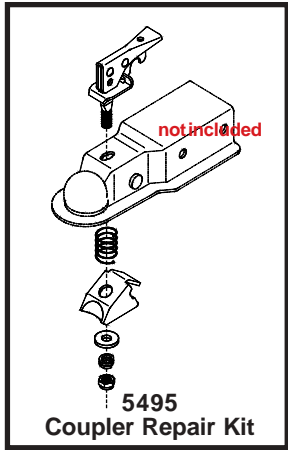
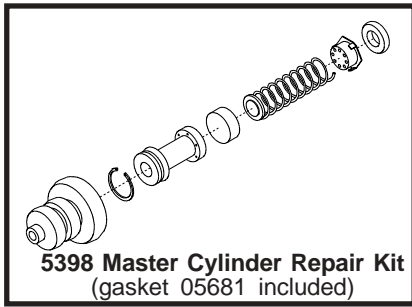
## 10" BRAKE CLUSTER PARTS LIST

| REF. NO. | PART NO.   | QTY. | DESCRIPTION   |
|----------|------------|------|---|
| -        | SB23715    | -    | Left Hand Cluster (shown above)                     |
| -        | SB23714    | -    | Right Hand Cluster                                  |
| 1.       | SB24636-30 | 1    | Back Plate Assembly                                 |
| 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                      |
| -        | 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.      | 05414-95   | 1    | Lever - Left  |
| -        | 05415-91   | 1    | Lever - Right                                       |
| 16.      | SB10959    | 2    | Pin - Shoe Hold Down                                |
| 17.      | SB9789     | 4    | Cup Shoe Hold Down                                  |
| 18.      | 05983      | 2    | Spring - Shoe Hold Down                             |
| 19.      | 03880      | 1    | Spring - Adjusting Screw Retainer                   |
| -        | SB15845    | 1    | Wheel Cylinder Repair Kit (w/ spring, cup, & boot)  |
| -        | SB15545A   | 1    | 10" Hub/Drum (w/ bearings, seals, nuts, & dust cap) |
| -        | SB15545    | 4    | 10" Brake Drum                                      |

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



# MODEL DA91 ACTUATOR PARTS BREAKDOWN



**2i 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.

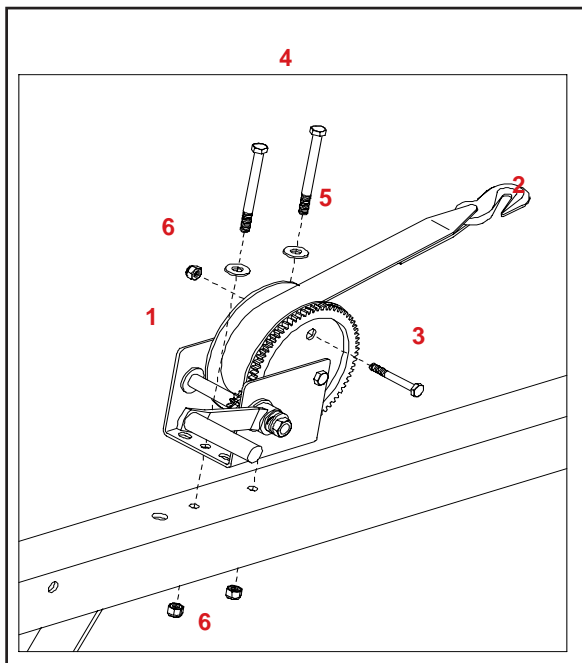
After the bleeding operation has been completed, apply pressure to the system and check the whole brake system for leaks.

## Model 91 ACTUATOR 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                             |
| -        | 11190    | -    | Master Cylinder                             |
| 22.      | SB12098  | 1    | .018 Connector Orifice (Drum Brakes)        |
| -        | 05679    | 1    | Inverted Flare Adapter (Disc 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**

## OPTIONAL WINCH



### PARTS LIST

| REF. NO.                     | PART NO. | QTY. REQ'D. | DESCRIPTION                            |
|------------------------------|----------|-------------|--|
| <b>KK2W 1 Optional Winch</b> |          |             |  |
| 1.                           | 04620    | 1           | Winch Mechanism (1400 capacity)        |
| -                            | 04621    | -           | Replacement Handle                     |
| 2.                           | 01738    | 1           | Strap Assembly (includes strap & hook) |
| 3.                           | 02207    | 1           | 3/8"-18UNC x 3" Hex Hd. Bolt (gr.5)    |
| 4.                           | 02769    | 2           | 3/8"-16UNC x 4" Hex Head Bolt (gr.5)   |
| 5.                           | 00059    | 2           | 3/8" Flatwasher                        |
| 6.                           | 02592    | 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.\*

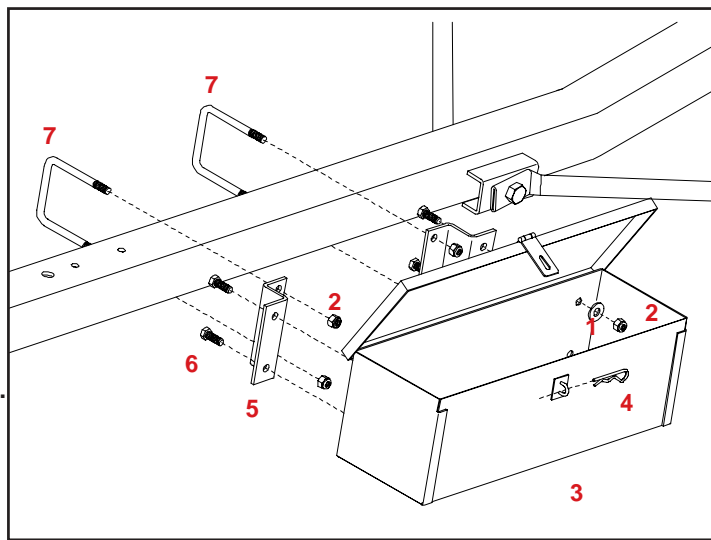
## OPTIONAL TOOL BOX

### PARTS LIST

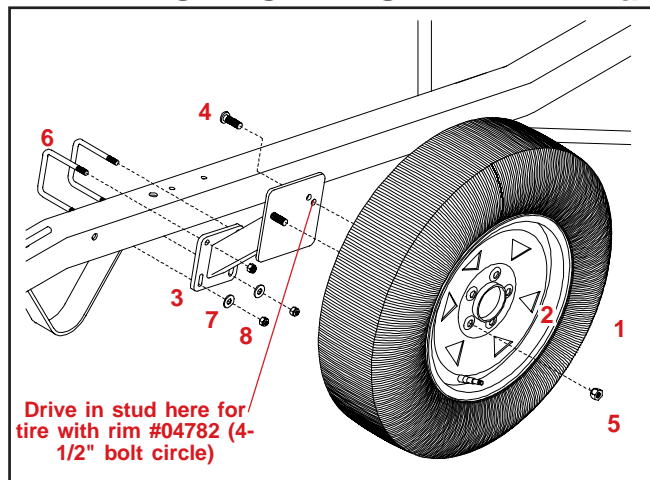
| KK2TB | QTY.     | Optional Tool Box                      |
|-------|----------|--|
| 1.    | 00059    | 4 3/8" Flatwasher                      |
| 2.    | 02592    | 8 3/8"-16UNC Nylon Insert Locknut      |
| 3.    | 01888-25 | 1 Tool Box                             |
| 4.    | 00182    | 1 Small Hair Pin                       |
| 5.    | 02717-25 | 2 Mounting "Z" Bracket                 |
| 6.    | 00907    | 4 3/8"-16UNC x 1" Hex Head Bolt (gr.5) |
| 7.    | 02759    | 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

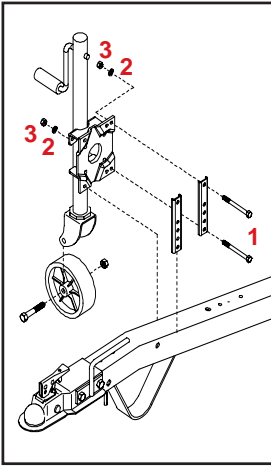


| REF. NO.                                     | PART NO. | QTY. REQ'D. | DESCRIPTION                       |
|--|----------|-------------|-----------------------------------|
| <b>KK10STB 1 Optional Spare Tire and Rim</b> |          |             |                                   |
| 1.   | 04826    | 1           | ST205/75R 14"x"C" BSW Radial Tire |
| 2.   | 04782    | 1           | 6" x 14" Rim 4-1/2" Bolt Circle   |
| <b>KK6STM 1 Spare Tire Mounting Bracket</b>  |          |             |                                   |
| 3.   | 02193-25 | 1           | Spare Tire Bracket                |
| 4.   | 02917    | 1           | Stud Bolt (12mm x 1.5)            |
| 5.   | 02933    | 2           | Wheel Nut (12mm)                  |
| 6.   | 02759    | 2           | 3/8"-16UNC Square U-Bolt          |
| 7.   | 00059    | 2           | 3/8" Flatwasher                   |
| 8.   | 02592    | 4           | 3/8"-16UNC Nylon Insert Locknut   |
| <b>KK6TC Optional Spare Tire Cover</b>       |          |             |                                   |

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

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

## OPTIONAL WHEEL JACK



### WHEEL JACK PARTS LIST

| - KK2WJ QTY. Optional Wheel Jack w/ hardware |       |   |                           |  |
|--|-------|---|---------------------------|--|
| 1.   | 02769 | 4 | 3/8" UNC x 4" Bolt, Gr. 5 |  |
| 2.   | 00060 | 4 | 3/8" Lock Washer          |  |
| 3.   | 00061 | 4 | 3/8" Hex Head Nut         |  |

Please order replacement parts by PART NO. and DESCRIPTION.

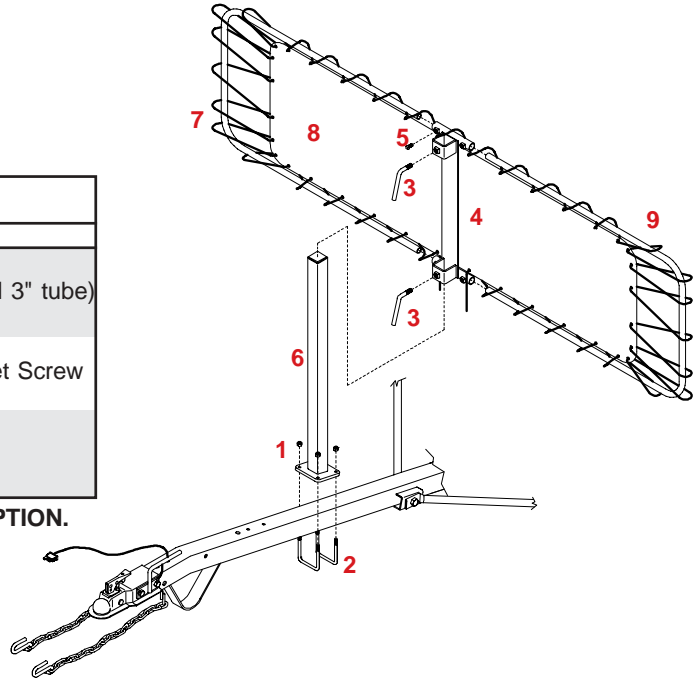
\* All options may not mount on tow dolly simultaneously.\*

## OPTIONAL DEFLECTOR PARTS BREAKDOWN

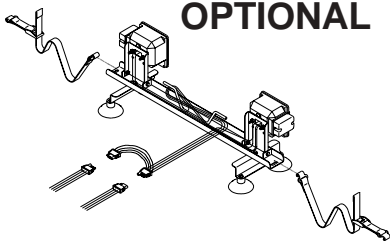
### OPTIONAL DEFLECTOR PARTS LIST

| REF. NO.                        | PART NO. | QTY. REQ'D. | DESCRIPTION                                    |
|---------------------------------|----------|-------------|--|
| <b>KK2DF Optional Deflector</b> |          |             |  |
| 1.                              | 02592    | 4           | 3/8"-16UNC Nylon Insert Lock Nut               |
| 2.                              | 02759    | 2           | 3/8"-16UNC Square U-Bolt (fits around 3" tube) |
| 3.                              | 00161-95 | 2           | Lock Handle                                    |
| 4.                              | 02054-25 | 1           | Deflector Slide Mount                          |
| 5.                              | 00095    | 4           | 3/8"-16UNC x 3/4" Ig. Square Head Set Screw    |
| 6.                              | 02743-25 | 1           | Deflector Upright Post                         |
| 7.                              | 02165    | 1           | Deflector Lacing Cord (1/8" x 25 ft.)          |
| 8.                              | 02161    | 1           | Deflector Fabric                               |
| 9.                              | 02055-25 | 2           | Deflector Framework                            |

Please order replacement parts by PART NO. and DESCRIPTION.



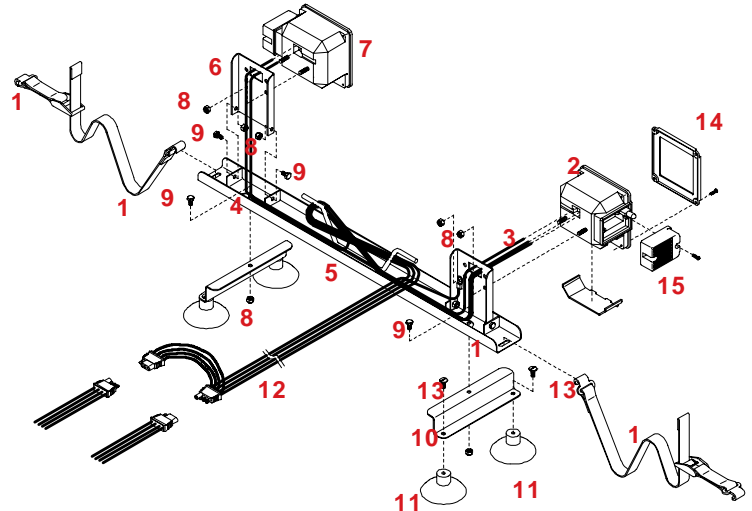
## OPTIONAL LIGHT BAR (KKLB) PARTS BREAKDOWN



### LIGHT BAR PARTS LIST

| REF. NO.                                   | PART NO. | QTY. REQ'D. | 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.   | 02385-25 | 1           | Light Bar Framework                         |
| 6.   | 02386-25 | 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.  | 01777-25 | 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                              |

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   |



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