

**Demco** manufacturing  
*Dethmers Manufacturing Company*

**DOING OUR BEST TO PROVIDE YOU THE BEST**

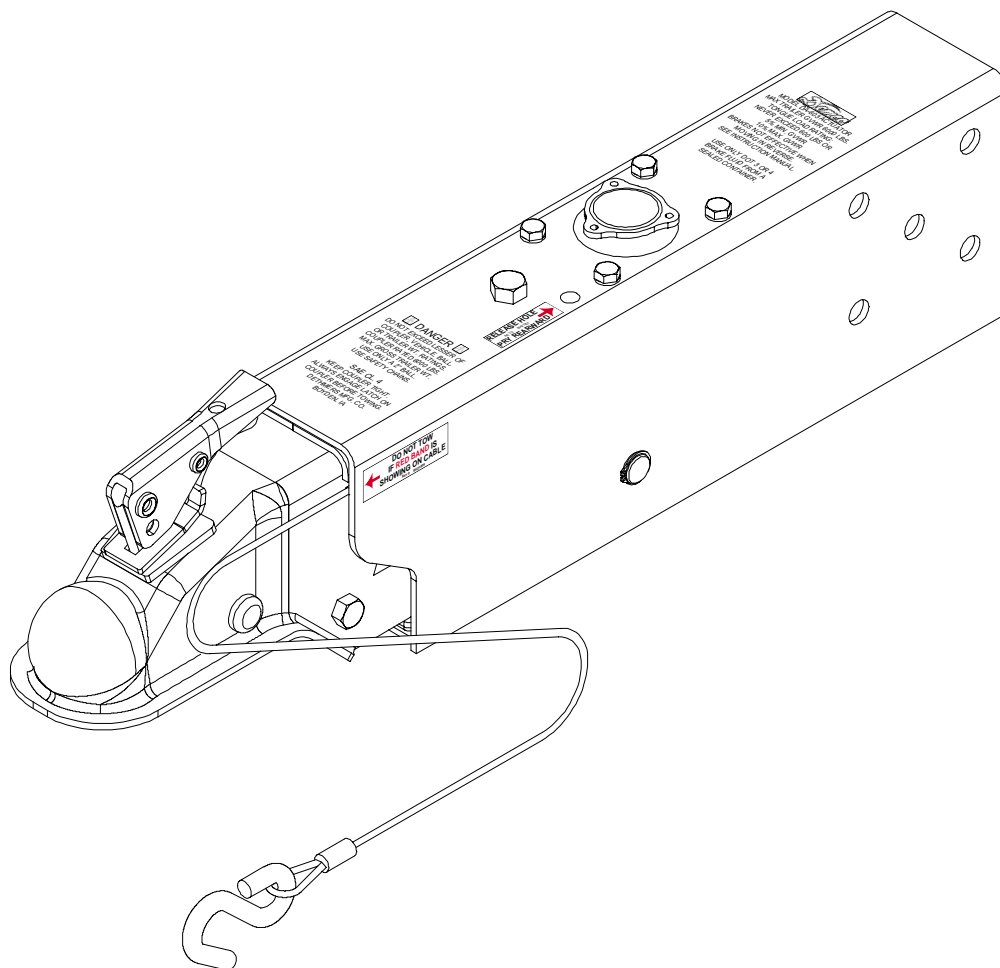
# DA603 & DA603T

## BRAKE ACTUATOR

### OPERATORS MANUAL

ASSEMBLY  
CALIBRATION  
OPERATION  
REPLACEMENT PARTS

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



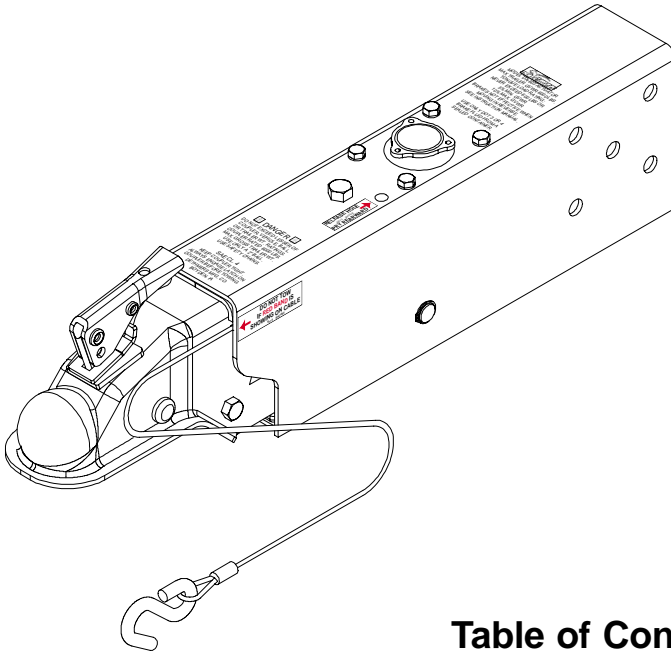
# DEMCO MODEL DA603/ DA603T ACTUATOR

Model DA603/ DA603T is a hydraulic surge brake actuator for trailers with two or four wheels. When brakes are applied on the towing vehicle, forward inertia of trailer toward towing vehicle applies brakes on trailer in direct relation to manner brakes are applied on towing vehicle. Brake towing vehicle hard and brakes on trailer are applied hard. Master cylinder push rod spring assembly protects system from hydraulic pressure overload.



## **WARNING: To Prevent Serious Injury or Death**

- Review following instructions before installation and use of hydraulic brake actuator.
- Dealers or distributors must review these instructions with ultimate user.
- Failure to follow these instructions, or failure to properly maintain braking system after installation, can result in loss of braking action.



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# Warranty Registration

Dethmers Manufacturing Company  
4010 320th Street • Box 189 • Boyden, Iowa 51234  
Toll Free 800-54DEMCO (800-543-3626) • FAX 800-845-6420  
www.demco-products.com

- Ag
- RV
- Rental
- Brakes
- Marine

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
How satisfied are you with our product?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with the dealership/distributor sales staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dealer/Distributor Name _____ City _____ State _____				
How satisfied are you with the company sales staff?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How satisfied are you with the delivery?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you have any contact with a Demco Representative?	YES	NO		
If <b>YES</b> , how satisfied were you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend this product to my family and friends.	YES	NO		
Would you purchase again from DEMCO?	YES	NO		
Since taking delivery, have you been contacted by the dealer?	YES	NO		
Did you have any problems with this DEMCO product?	YES	NO		
If <b>YES</b> , are you satisfied with the company's resolution of your problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why did you purchase this product? \_\_\_\_\_

Please list the specific source of information prompting this purchase.  
\_\_\_\_\_

After purchasing this product, do you see any needed product improvement? \_\_\_\_\_ If yes, what improvement? \_\_\_\_\_

What other products would you like to see DEMCO offer? \_\_\_\_\_

Comments \_\_\_\_\_

Owner's Name: \_\_\_\_\_ Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Model#: \_\_\_\_\_

Serial #: \_\_\_\_\_

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

*Dethmers Manufacturing Company  
4010 320th Street, Box 189  
Boyden, Iowa 51234*

## SAFETY

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND 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 of 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 most extreme situations typically for machine 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, require additional copies, or if your manual is damaged, 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>



## SAFETY...YOU CAN LIVE WITH IT



### EQUIPMENT SAFETY GUIDELINES

Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You the operator, can avoid many accidents by observing and following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

In order to provide a better view, certain illustrations in your owners manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace shield prior to use.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing.

Do not attempt to operate this equipment under the influence of alcohol or drugs.

Review safety instructions with all users.

Operator should be a responsible adult. **DO NOT ALLOW PERSONS TO OPERATE OR ASSEMBLE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice instructions on them.

Never exceed limits of a piece of machinery. If its ability to do a job, or to do so safely is in question-**DON'T TRY IT.**



### SAFETY SIGN CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replacement parts that displayed a safety sign should also display safety sign.
- Safety signs are available from your distributor, dealer parts department, or factory.

## How to install safety signs:

- Be sure that installation area is clean and dry.
- Decide on exact position before you remove backing paper.
- Remove smallest portion of split backing paper.
- Align decal over specified area and carefully press small portion with exposed sticky backing in place.
- Slowly peel back remaining paper and carefully smooth remaining portion of decal into place.
- Small air pockets can be pierced with a pin and smoothed out using piece of decal backing paper.



### **REMEMBER**

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer.



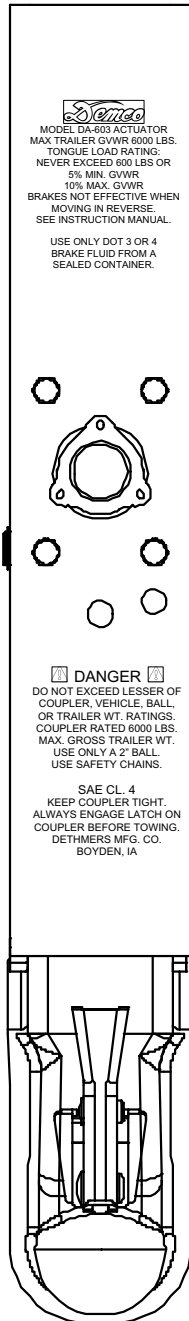
### **BEFORE OPERATION:**

- Carefully study and understand this manual and the Owner's Manual.
- Always wear protective clothing and substantial shoes.
- Give equipment a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs. Follow maintenance safety instructions included in this manual.
- Be sure there are no tools lying on or in equipment.
- Do not use equipment until you are sure that area is clear, especially around children and animals.
- Don't hurry learning process or take equipment for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.
- Make sure that brakes are evenly adjusted.
- Make sure tow rating on vehicle is high enough for what it is towing.
- Do not allow anyone to stand between tongue or hitch and towing vehicle when backing up to equipment.
- Securely attach to towing vehicle. Use appropriately sized hitch ball and/or hitch pin with a mechanical retainer and attach safety chains.
- Criss cross chains under tongue and secure to draw bar cage, mounting loops, or bumper frame.



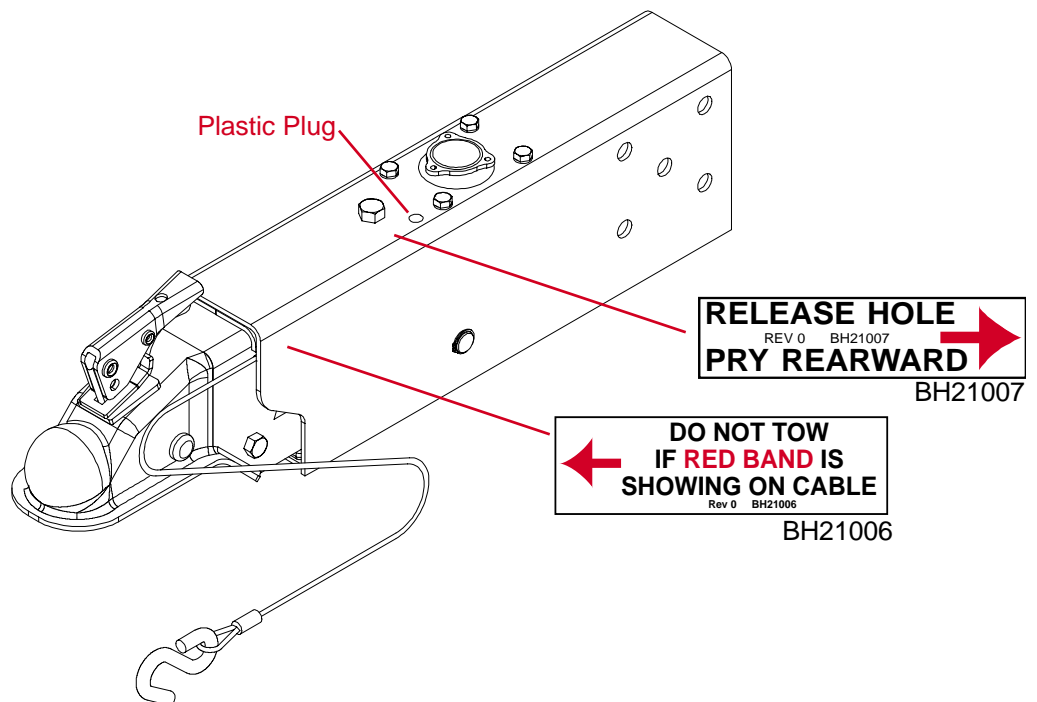
## SAFETY SIGN LOCATIONS

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



Top View Of Actuator showing safety stampings wording and locations. If any stampings are illegible, contact your local authorized dealer or manufacturer.

## Decal location and Safety cable release instructions



If emergency cable of actuator is pulled and locked on, a red band will be visible on the cable when the cable is held straight out.

**Notice:** This procedure should only be performed if the cable was accidentally pulled on by hand. If the cable was pulled on by a vehicle or with any force, all components associated with the emergency catch cam need to be replaced as soon as possible.

### Instructions for releasing the emergency catch cam.

1. Remove plastic plug (#11499) on top of actuator.
2. Use screwdriver to pry emergency catch cam back.
3. Replace plastic plug.



## REMEMBER

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer.





## **DURING OPERATION**

- **SAFETY CHAINS** If equipment is going to be transported on a public highway, safety chains should be obtained and installed. Always follow state and local regulations regarding safety chains and auxiliary lighting when towing equipment on a public highway. Be sure to check with local law enforcement agencies for your own particular regulations. Only safety chains (not an elastic or nylon/plastic tow straps) should be used to retain connection between towing and towed equipment in event of separation of primary attaching system.
- Install safety chains by criss crossing chains under tongue and secure to draw bar cage, mounting loops, or bumper frame.
- Beware of bystanders, **PARTICULARLY CHILDREN!** Always look around to make sure it is safe to start engine of towing vehicle or move equipment. This is particularly important with higher noise levels, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED-** Do not carry passengers anywhere on or in equipment.
- Do not clean, lubricate, or adjust your equipment while it is moving.
- When halting operation, even periodically, set towing vehicles parking brake, shut off engine, and **remove the ignition key**.
- Be extra careful when using on inclines.
- **MANEUVER TOWING UNIT AT SAFE SPEEDS.**
- Avoid loose gravel, rocks, and holes, they can be dangerous for equipment operation or movement.
- Allow for overall length when making turns.
- Keep all bystanders and pets clear of work area.
- Operate towing vehicle from operators seat only.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck hardware on equipment following every 100 hours or 50 miles. Correct all problems. Follow maintenance safety procedures.



## **FOLLOWING OPERATION**

- Following operation, or when unhitching, stop towing vehicle, set brakes, shut off the engine and **remove ignition key**.
- Store unit in an area away from human activity.
- Do not permit children to play on or around stored unit.
- Make sure all parked units are on a hard, level surface and engage all safety devices.
- Wheel chocks may be needed to prevent unit from rolling.



## **HIGHWAY AND TRANSPORT OPERATIONS**

- Adopt safe driving practices:
  - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop.
  - Reduce speed prior to turns to avoid risk of overturning.
  - Always keep towing vehicle in gear to provide engine braking when going downhill. Do not coast.
  - Do not drink and drive!
- Comply with state and local laws governing highway safety on public roads.
- Use approved accessory lighting, flags and necessary warning devices to protect operators of other vehicles on highway during transport. Various safety lights and devices are available from your dealer.
- Local laws should be checked for all highway lighting and marking requirements.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.

- Watch for obstructions overhead and side to side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of equipment when making turns and/or stopping.



## **PERFORMING MAINTENANCE**

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate engine of towing vehicle in a closed building. Exhaust fumes may cause asphyxiation.
- Before working on this unit, stop towing vehicle, set parking brakes, shut off engine and **remove ignition key**.
- Be certain all moving parts and attachments have come to a complete stop before attempting to perform maintenance.
- Always use safety supports and block wheels. Never use a jack to support unit.
- Always use proper tools or equipment for job at hand.
- Use extreme caution when making adjustments.
- Follow torque chart in owners manual when tightening bolts and nuts.
- Openings in skin and minor cuts are susceptible to infection from brake fluid.  
**Without immediate medical treatment, serious infection and reactions can occur.**
- Replace **all shields** and **guards** after servicing and before moving.
- After servicing, be sure all tools, parts and service equipment are removed.
- Do not allow grease or oil to build up on the actuator.
- When replacing bolts, refer to owners manual.
- Refer to bolt torque chart in owners manual for head identification marking.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. Manufacturer will not claim responsibility for use of unapproved parts or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, manufacturer does not accept any liability for injury or warranty.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment

## 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

#### Bolt Torque for Standard bolts \*

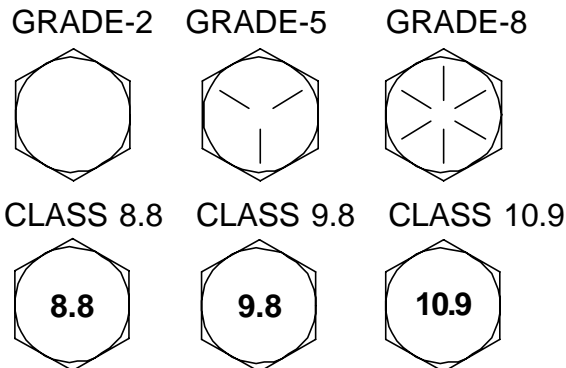
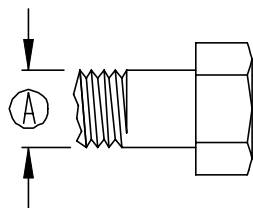
"A"	GRADE 2		GRADE 5		GRADE 8	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	(8)	9	(12)	12	(16)
5/16"	10	(13)	18	(25)	25	(35)
3/8"	20	(27)	30	(40)	45	(60)
7/16"	30	(40)	50	(70)	80	(110)
1/2"	45	(60)	75	(100)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(130)	150	(200)	225	(300)
3/4"	165	(225)	290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

#### Bolt Torque for Metric bolts \*

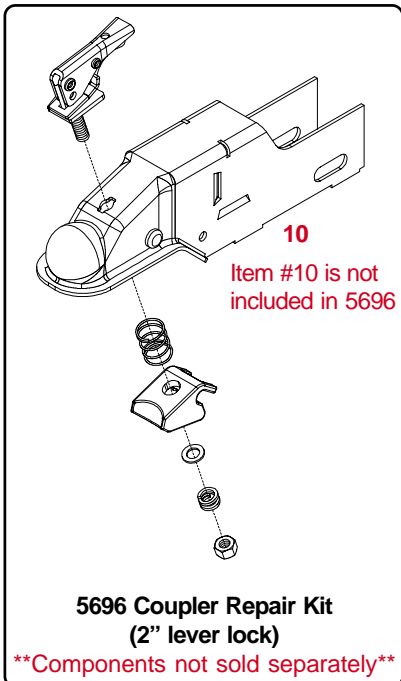
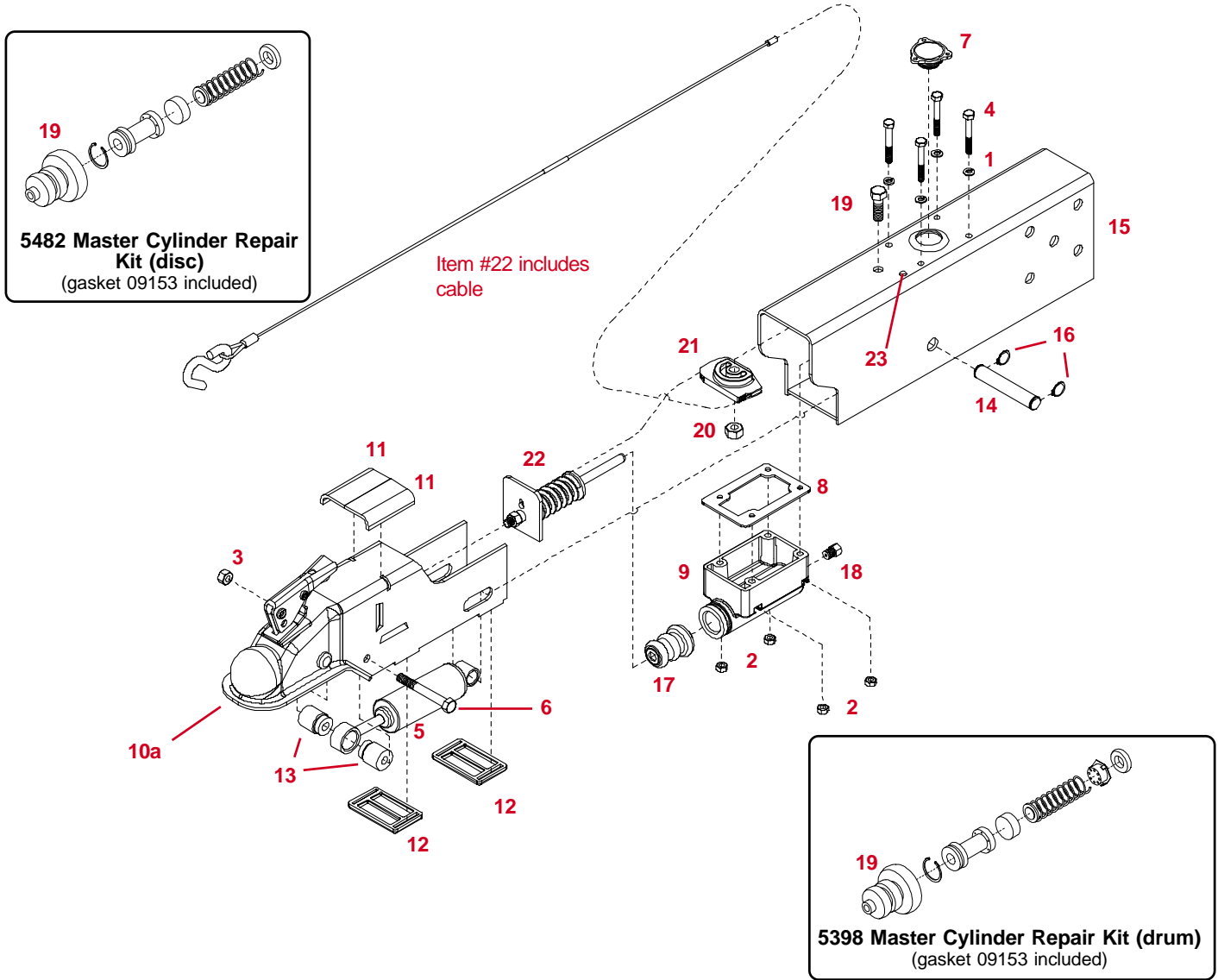
"A"	CLASS 8.8		CLASS 9.8		CLASS 10.9	
	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)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



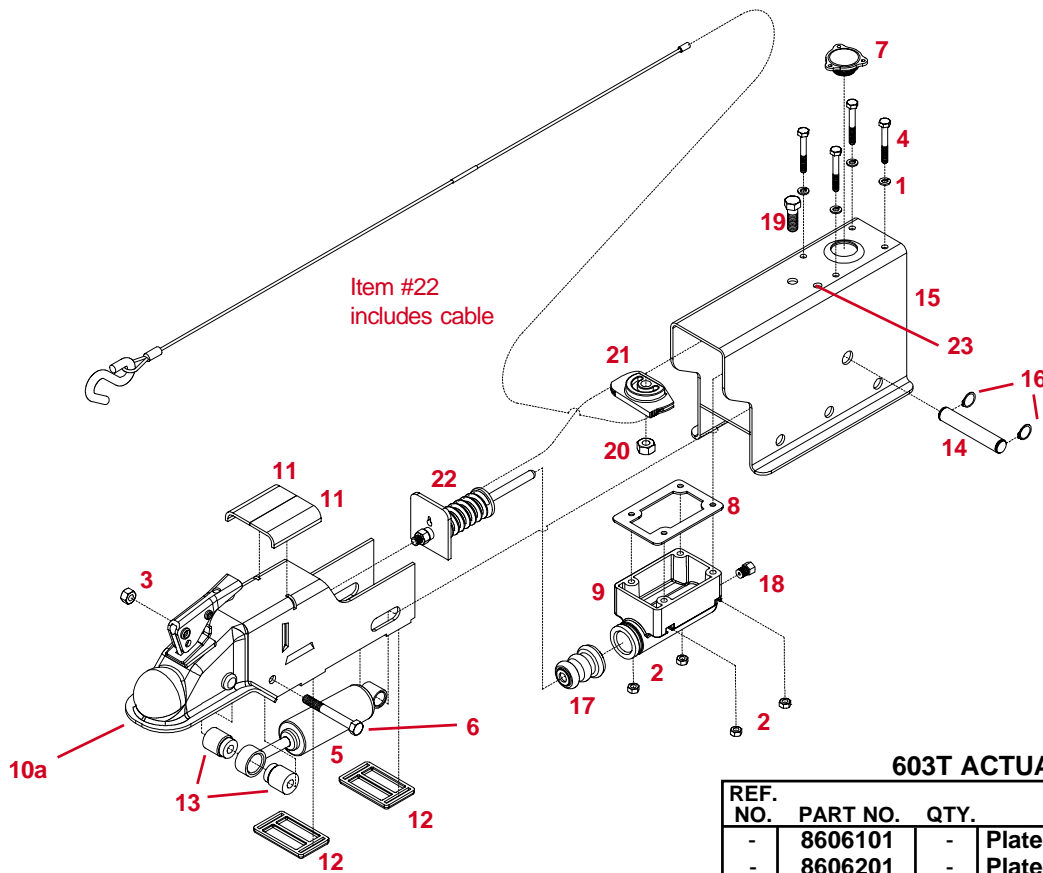
# DA603 BRAKE ACTUATOR PARTS BREAKDOWN



## DA603 ACTUATOR PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	8606301	-	Plated Actuator f/ drum brakes
-	8606401	-	Plated Actuator f/ disc brakes
1.	00057	4	1/4" Lock Washer
2.	00062	4	1/4"-20 UNC Hex Nut
3.	00179	1	3/8"-16 UNC Lock Nut (Center Punch)
4.	00618	4	1/4"-20UNC x 2" Hex Head Bolt (Gr.5)
5.	SB12426	1	Damper
6.	02207	1	3/8"-16UNC x 3" Hex Head Bolt (Gr. 5)
7.	03876	1	3 Tab Fill Cap w/ Diaphragm & O-Ring
8.	09153	1	Master Cylinder Gasket (incl. in 10616 & 11190)
9.	10616	1	Composite Master Cylinder (drum)
-	11190	1	Composite Master Cylinder (disc)
10.	11367-95	1	Coupler/Inner Slider (plated)
10a.	5698	-	Coupler/Inner Slider w/ Lever Lock Assy.
11.	11368	2	Top Plastic Slider
12.	11369	2	Bottom Plastic Slider
13.	11371-95	2	Shock Spacer (plated)
14.	11389-95	1	Rear Shock Pin (plated)
15.	11390-95	1	Outer Case (plated) DA603
16.	11401	2	External Snap Ring
17.	05687	1	Protective Boot (incl. in 10616 & 5398)
18.	SB12098	1	.018 Connector Orifice (Drum Brakes)
-	05679	1	Inverted Flare Adapter (Disc Brakes)
23	11499	1	Plastic plug

# DA603T TOP MOUNT BRAKE ACTUATOR PARTS BREAKDOWN



## 603T ACTUATOR PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	8606101	-	Plated Actuator f/ drum brakes
-	8606201	-	Plated Actuator f/ disc brakes
1.	00057	4	1/4" Lock Washer
2.	00062	4	1/4"-20 UNC Hex Nut
3.	00179	1	3/8"-16 UNC Lock Nut (Center Punch)
4.	00618	4	1/4"-20UNC x 2" Hex Head Bolt (Gr.5)
5.	SB12426	1	Damper
6.	02207	1	3/8"-16UNC x 3" Hex Head Bolt (Gr. 5)
7.	03876	1	3 Tab Fill Cap w/ Diaphragm & O-Ring
8.	09153	1	Master Cylinder Gasket (incl. in 10616 & 11190)
9.	10616	1	Composite Master Cylinder (drum)
-	11190	1	Composite Master Cylinder (disc)
10.	11367-95	1	Coupler/Inner Slider (plated)
10a	5698	-	Coupler/Inner Slider w/ Lever Lock Assy.
11.	11368	2	Top Plastic Slider
12.	11369	2	Bottom Plastic Slider
13.	11371-95	2	Shock Spacer (plated)
14.	11389-95	1	Rear Shock Pin (plated)
15.	11517-95	-	Outer Case (plated) DA603T
16.	11401	2	External Snap Ring
17.	05687	1	Protective Boot (incl. in 10616 & 5398)
18.	SB12098	1	.018 Connector Orifice (Drum Brakes)
-	05679	1	Inverted Flare Adapter (Disc Brakes)
23	11499	1	Plastic plug

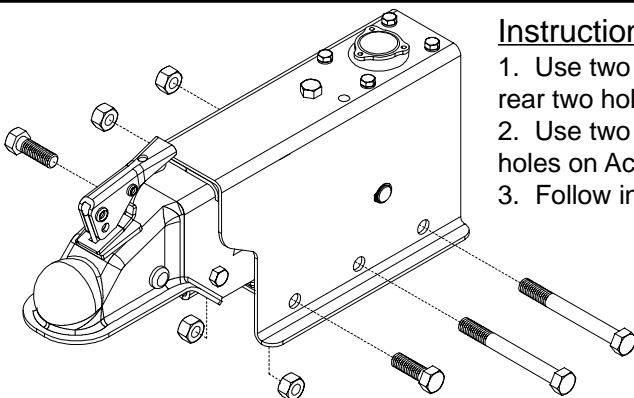
### REPLACEMENT KITS (components not sold separately)

5695 - Emergency Lock Cam Replacement Kit			
19.	----	1	7/16"-14UNC x 1 1/4" Hex Head Bolt (Gr. 5)
20.	----	1	7/16"-14UNC Lock Nut (Center Punch)
21.	----	1	Emergency Catch Cam (black oxide finish)
22.	----	1	Pushrod Assembly (includes cable)
5696 - Coupler Repair Kit (2" lever lock)			
5650 - Master Cylinder Replacement Kit (drum)			
5672 - Master Cylinder Replacement Kit (disc)			

Please order replacement parts by PART NO. and DESCRIPTION.

### Instructions for mounting the DA603T to a trailer tongue

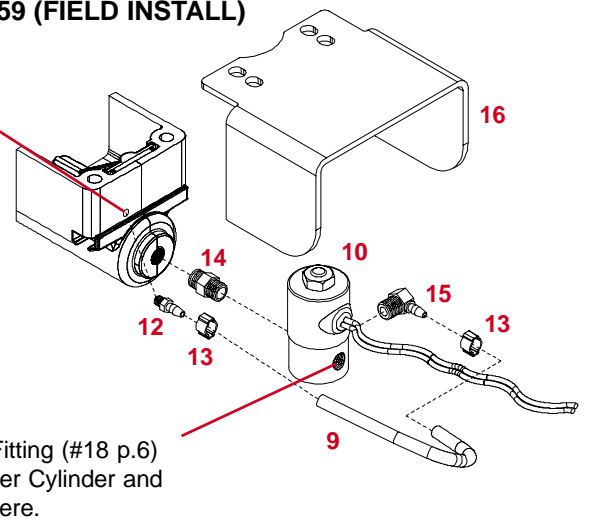
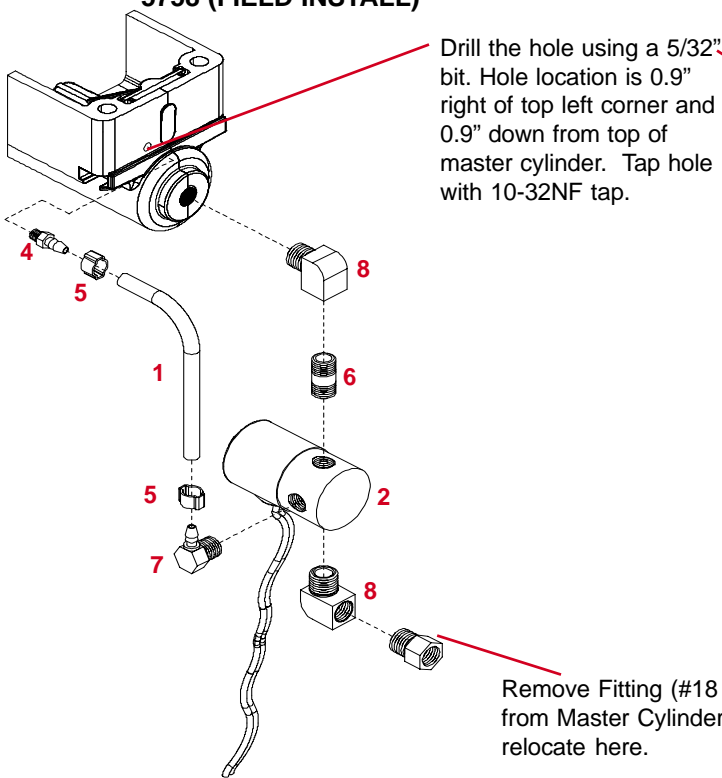
1. Use two 1/2" x 4" Hex Head Bolts Gr. 5 and two 1/2" Nylon Locknuts to attach rear two holes on Actuator. (mounting hardware not supplied)
2. Use two 1/2" x 1" Hex Head Bolts Gr. 5 and two 1/2" Locknuts to attach front holes on Actuator.
3. Follow instructions on page 16 starting with instruction number 2.



## (OPTIONAL) FREE BACKING SOLENOID KIT FOR DA603 & DA603T

**DA603**  
**5697 (FACTORY INSTALL)**  
**5758 (FIELD INSTALL)**

**DA603T**  
**5731 (FACTORY INSTALL)**  
**5759 (FIELD INSTALL)**



**WIRING INSTRUCTIONS:**  
 for solenoids attach one wire to hot reverse lights, and attach other wire to a good ground.

### KIT # 5758 PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	<b>5758</b>	1	<b>Free Backing Solenoid Kit</b>
1.	<b>04594</b>	1	EPDM Black Tubing
2.	<b>05561</b>	1	Solenoid Valve
3.	<b>09153</b>	1	Master Cylinder Gasket (not shown)
4.	<b>10373</b>	1	Brass Fitting Str. .2 HB x 10-32 NF
5.	<b>10374</b>	2	Crimp Sleeve
6.	<b>10375</b>	1	Straight Nipple 1/8" MPT x 1/8" MPT
7.	<b>10376</b>	1	Brass Elbow 1/8" MPT x .2 HB
8.	<b>11436</b>	2	Brass Elbow, male x female, 1/8" NPTF

### KIT # 5759 PARTS LIST

REF. NO.	PART NO.	QTY.	DESCRIPTION
-	<b>5759</b>	1	<b>Top Mount Free Backing Solenoid Kit</b>
9.	<b>04594</b>	1	EPDM Black Tubing
10.	<b>05561</b>	1	Solenoid Valve
11.	<b>09153</b>	1	Master Cylinder Gasket (not shown)
12.	<b>10373</b>	1	Brass Fitting Str. .2 HB x 10-32 NF
13.	<b>10374</b>	2	Crimp Sleeve
14.	<b>10375</b>	1	Straight Nipple 1/8" MPT x 1/8" MPT
15.	<b>10376</b>	1	Brass Elbow 1/8" MPT x .2 HB
16.	<b>11539-35</b>	1	Solenoid Cover plate



### **WARNING To Prevent Serious Injury Or Death:**

- Review all of the following instructions before installation and use of hydraulic brake actuator.
- Dealers or Distributors must review these instructions with ultimate user.
- Failure to follow these instructions, or failure to properly maintain braking system after installation, can result in loss of braking action which could cause severe property damage, personal injury or death.



### **DANGER**

To avoid personal injury or death, do not exceed lowest of (1) the rated capacity of Model DA603/ DA603T actuator, or (2) rated capacity of ball and hitch being used, or (3) trailer's Gross Vehicle Weight Rating (GVWR).

Model DA603/ DA603T brake actuator has a maximum load rating of 6000 lbs. GVWR and 600 lbs. tongue load.



## **CAUTION**

**Do not weld on the outer case without disassembling actuator, damage to inner slider assembly will occur.**

## **INSTALLATION**

The Model DA603 is completely assembled and ready to bolt into place.

1. Bolt the actuator to 3" square tongue with three 1/2" x 4-1/2" bolts Gr.5 and 1/2" nylon insert lock nuts. (Actuator can also be used on a 3" x 4" or a 3" x 5" rectangular tongue. Use four 1/2" x 4-1/2" bolts and locknuts instead of three.) Thin wall tongues require 3/4" O.D. x 11 gauge wall tubing as spacers inside the tongue. Tighten bolts to 75 - 80 ft. lbs. torque. Make sure coupler is free to telescope inside of outer case.
2. Connect and tighten all brake lines.
3. Fill the Master Cylinder (#9 p.13) with DOT 3 or 4 brake fluid.
4. Bleed the brake system using a pressure-type brake bleeder or manually, as follows:
  - a. Insert a long screwdriver underneath coupler right behind the shock spacer (#13). Using short strokes, pry forward the push plate (#22 p.13), pumping the Master Cylinder until the brake fluid within the Master Cylinder stops bubbling.
  - b. Attach a bleeder hose to the bleeder valve on one of the wheels and submerge the other end of the hose into a clean, transparent container partially filled with brake fluid. Loosen the bleeder valve one turn and, watching the hose in the transparent container, use the screwdriver to pump the Master Cylinder as long as air bubbles continue to leave the hose. When the bubbles stop, close the bleeder valve, move to the next wheel, and repeat the process until all the brakes have been bled. (Note: Check the fluid level in the Master Cylinder frequently while bleeding the brakes (every 4 or 5 strokes). Refill as necessary to keep the level above half full.)
5. Once bleeding is completed, refill master cylinder to within 1/2" of top and attach cap (#7) securely.

## **MAINTENANCE**

1. Frequently check brake fluid level. (Fluid must be approved, clean and uncontaminated.)
2. Make sure actuator mounting bolts are secure, and coupler is free to telescope inside outer case.
3. Inspect actuator, replace bent, worn or damaged parts.
4. Be constantly aware of systems braking quality, make periodic checks as described in brakes owners manual. Consult certified brake specialist to make necessary adjustments or repairs. Failure to do so could result in loss of braking.



# DEMCO BRAKE PRODUCTS - LIMITED WARRANTY

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

Your Demco brake product 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 original owner when properly installed, used and maintained by purchaser.

When this Demco brake product is used as part of complete Demco braking system (actuators, brake lines, and back plates), Demco warrants system to be free from defects in materials and workmanship for two years when properly installed, used, and maintained by purchaser.

Any part of Demco brake system found to be defective in materials or workmanship will be repaired or replaced at manufacturers option without charge for parts or labor to original owner.

## 2. **Manufacturer and Warrantor of Brake Actuator:**

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

## 3. **Repair or Replacement Procedure:**

If your Demco brake product develops a defect during 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 timely 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 part to its factory or authorized dealer. Any defective part will be repaired or replaced and returned to you or your authorized dealer free of charge. Any part returned to warrantor and found not to be defective will be returned to you freight collect with explanation.
- b) Warrantor may ship a new part to dealer to be exchanged free of charge for defective part returned by you.
- c) Warrantor may ship or deliver a replacement part to you at your address.

## 4. **Limitations on Warranty Coverage:**

Coverage under this warranty will be effective only when a copy of original invoice, showing 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 brake product has been misassembled or subjected to damage or neglect, negligence, misuse, accident or operated in any way contrary to operating and maintenance instructions as specified in Demco owners manual for that product.

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

In addition, warranty does not extend to repairs made necessary by abnormal use, damage, unreasonable use including failure to provide reasonable and necessary maintenance, or by use of parts, accessories or other equipment which are incompatible with Demco brake products or affect its operation, performance or durability.

## DEMCO BRAKE PRODUCTS - LIMITED WARRANTY CONTINUED

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 brake product that has been loaded in excess of load capacity stated on identification label.
- 6) Accessory parts, materials or components.

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

Warrantor assumes no responsibility to owner for loss of use of product, loss of time, inconvenience or other damage consequential or otherwise, including, but not limited to expense for gasoline, expense of transporting product to dealer and expense of returning product, mechanics travel time, telephone, telegram, fax, overnight delivery, or postage charges, road service/towing charges, rental during 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 brake product 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 exclusion or limitation of incidental or consequential damages, so above exclusion or limitation may not apply to you.

### 7. **Purchasers Rights:**

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

### 8. **Exclusive Warranty:**

This is the only express warranty made by Dethmers Manufacturing Co. on your Demco product and no agent, employee, or other person is allowed to change or add to this warranty. This warranty extends solely to repair or replacement of your Demco brake product and its component parts. Warrantor does not assume any liability or responsibility not expressly covered by this limited warranty. This warranty supersedes all prior warranties, written or implied.

### **DISCLAIMER**

No other express warranty has been made or will be made on behalf of warrantor with respect to Demco brake product or its instruction, operation, repair or replacement. Warrantor shall not be responsible for damage, loss or damage to personal property, whether direct or indirect, and whether arising in contract or tort.

## NOTES



**DETHMERS MFG. COMPANY**

**P.O. BOX 189**

**4010 320th St., BOYDEN, IA. 51234**

**PH: (712) 725-2311 FAX: (712) 725-2380**

**TOLL FREE: 1-800-54DEMCO (1-800-543-3626)**

**[www.demco-products.com](http://www.demco-products.com)**