

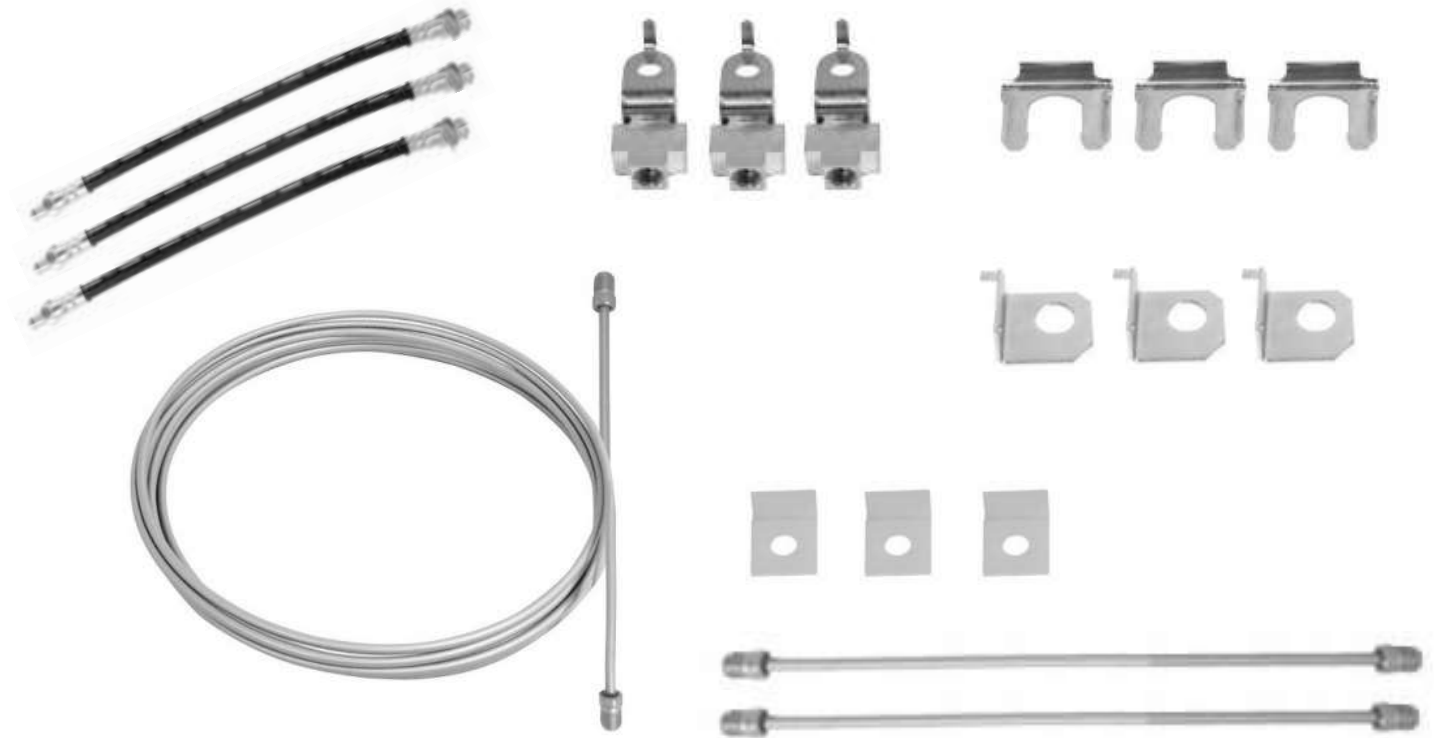


TITAN®



TITAN HYDRAULIC FITTINGS

HYDRAULIC FITTINGS AND TUBING KITS



INSTALLATION, INSTRUCTION AND SERVICE MANUAL

Actuator/Brake/Trailer Dealer – Please provide to consumer.

Consumer – Read and follow instructions. Keep with trailer for reference.



A Titan Company 2345 East Market Street Des Moines, IA 50317 PHONE: 800-USA-BEAR or 800-872-2327 FAX: 515-365-9212

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Introduction

Thank you for purchasing A TITAN Hydraulic Fitting and Tubing Kit. TITAN tubing kits are designed for single, tandem, and triple axle setups. Tubing kits are designed for compatibility with leaf spring or torsion axle designs.

General Information

Use care when forming tubing. Avoid sharp bends and kinks. If tubing is cut to shorten, use forty-five degree (45°) double flare tube end tools to assure tight leak proof connections per SAE J533. Anchor hydraulic lines at intervals to prevent chafing and vibration. Use hydraulic rubber hoses at points of flexing. Anchor hose ends to avoid stress on steel tubing. Space tubing clips at two to three foot intervals. See actuator and brake instruction manuals for bleeding instructions.

Safety Information

- 1) Brake system installation, maintenance, or repair should ONLY be performed by qualified persons who have training or knowledge of actuators and brake systems
- 2) When installing, maintaining, or repairing TITAN equipment, wear eye protection as well as other necessary personal protective equipment.
- 3) TITAN equipment must be maintained in safe working order at all times. Trailer equipment should be inspected before, during, and after use for wear and damage. Repair or replace components with genuine TITAN products.
- 4) Perform frequent and regular inspection of trailer and equipment. Check for leaks and repair/replace as needed.
- 5) Use DOT3 or DOT4 brake fluid. Failure to use correct brake fluid may result in brake failure.
- 6) Be familiar with state laws in operation of towed vehicles, especially with regard to brake and braking requirements. Towing a trailer may require additional braking time and distance. Allow for this in driving habits while towing.
- 7) Make certain equipped trailer is safely supported at all times during installation, maintenance or repair.
- 8) After every hookup, test and confirm trailer brake system is operating correctly and adequately before transportation on roads.



Installation

(Refer to appropriate diagram for assistance during installation)

1. Install actuator and brakes. Refer to associated installation manuals.
2. Locate and mount hose brackets <5> on trailer frame near each brake. Allow enough slack in brake hose <11> for full wheel movement.
3. Locate and mount tee <7> on trailer frame between axle sets of brakes.
4. Install rubber brake lines <1, 11> and secure with hose clips <6>.
5. Connect remaining tubing <2, 3, 4, and 8, 9, 12 if applicable>, shorten and re-flare per guidelines listed in "General Information"
6. Secure all brake tubing with tube clips <10> or other methods to prevent vibration and rubbing during transport
7. Tighten all hose connections.
8. Bleed brake system. Refer to actuator and brake installation manuals for bleeding instructions.

Tubing Kit Parts List

Ref No.	Part No.	Description	Single Axle 4829900	Tandem Axle 4830000	Triple Axle 4864000
1	0777300	Hydraulic Hose 12-27/32"	1	1	1
2	4336000	19' Brake Tubing 3/16" Diameter	1	1	N/A
3	1062200	17" Brake Tubing	1	2	3
4	1086600	66" Brake Tubing	1	2	3
5	0776300	Hose Bracket	3	5	7
6	0776400	Hose Clip	3	5	7
7	0778500	Frame Tee with Clip	1	3	5
8	1086700	4-1/2" Brake Tubing	N/A	1	2
9	1061900	30" Brake Tubing	N/A	1	2
10	0936600	Tube Clip	4	8	12
11	0776500	Hydraulic Brake Hose 18-7/8"	2	4	6
12	4868600	19' Brake Tubing 1/4" Diameter	N/A	N/A	1
13	4871700	1/4" To 3/16" Adapter	N/A	N/A	2

Note: All tubing is 3/16" steel Bundyweld tubing unless otherwise noted.

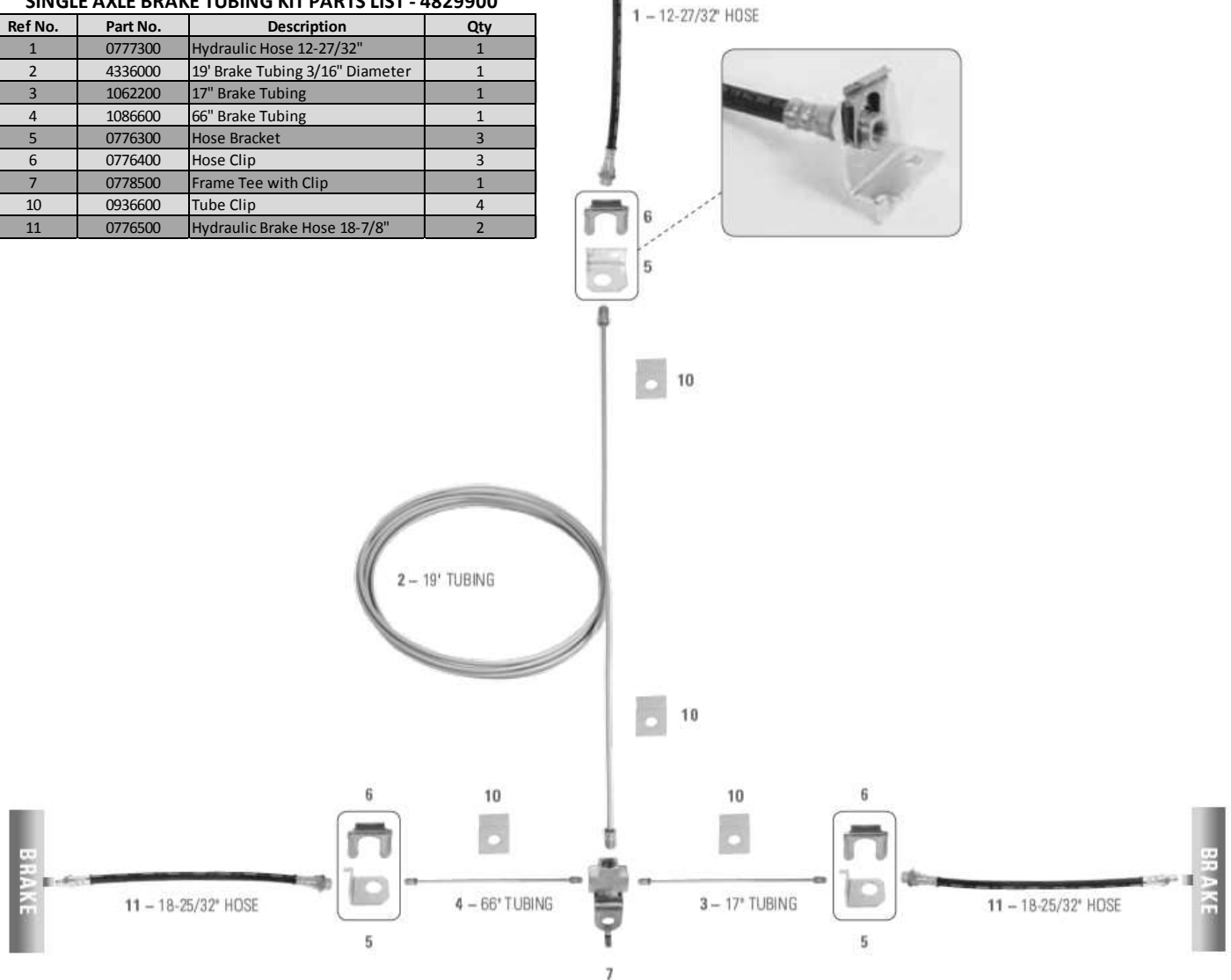


Single Axle Tubing Kit



SINGLE AXLE BRAKE TUBING KIT PARTS LIST - 4829900

Ref No.	Part No.	Description	Qty
1	0777300	Hydraulic Hose 12-27/32"	1
2	4336000	19' Brake Tubing 3/16" Diameter	1
3	1062200	17" Brake Tubing	1
4	1086600	66" Brake Tubing	1
5	0776300	Hose Bracket	3
6	0776400	Hose Clip	3
7	0778500	Frame Tee with Clip	1
10	0936600	Tube Clip	4
11	0776500	Hydraulic Brake Hose 18-7/8"	2

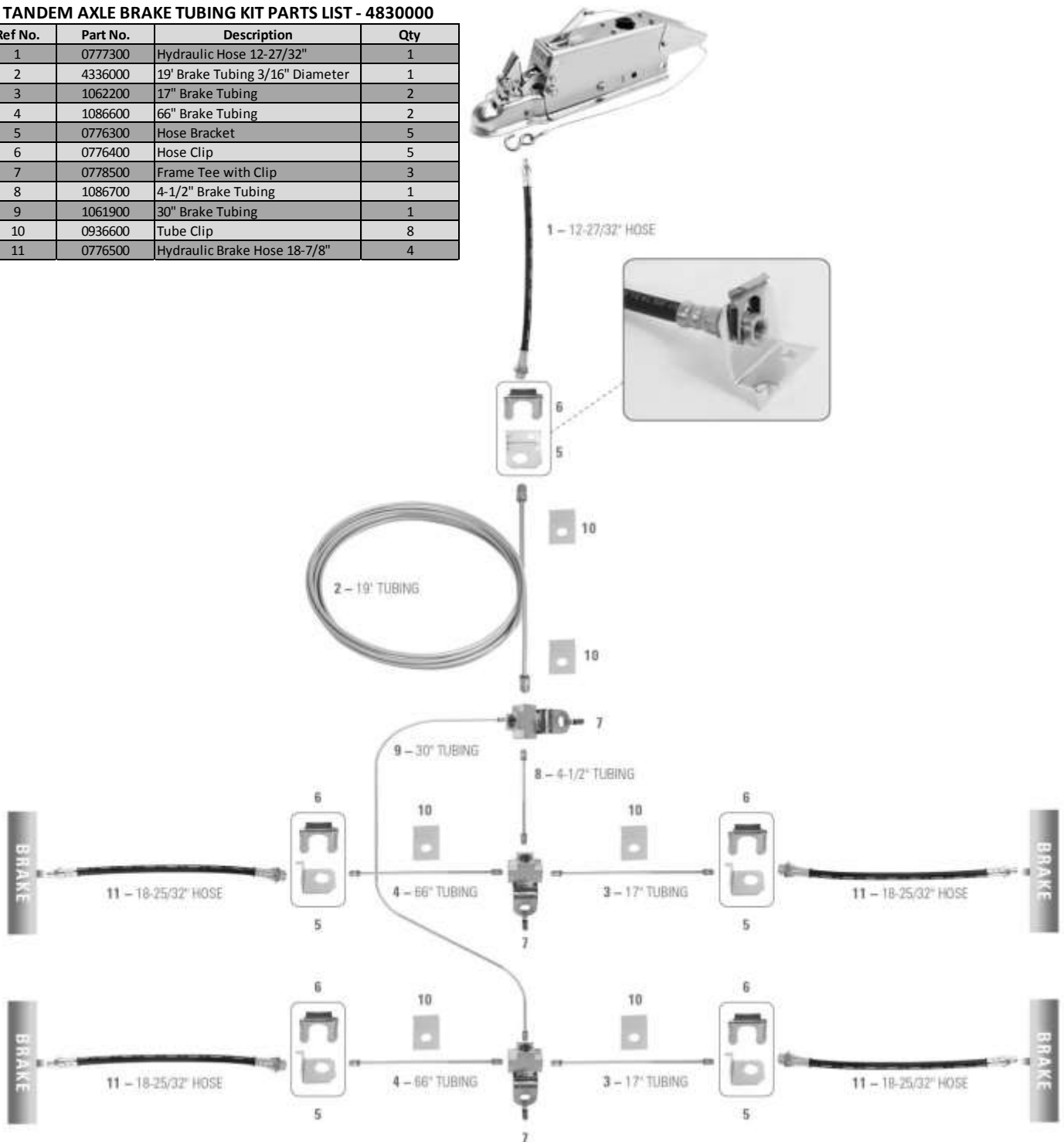


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Tandem Axle Tubing Kit

TANDEM AXLE BRAKE TUBING KIT PARTS LIST - 4830000

Ref No.	Part No.	Description	Qty
1	0777300	Hydraulic Hose 12-27/32"	1
2	4336000	19' Brake Tubing 3/16" Diameter	1
3	1062200	17" Brake Tubing	2
4	1086600	66" Brake Tubing	2
5	0776300	Hose Bracket	5
6	0776400	Hose Clip	5
7	0778500	Frame Tee with Clip	3
8	1086700	4-1/2" Brake Tubing	1
9	1061900	30" Brake Tubing	1
10	0936600	Tube Clip	8
11	0776500	Hydraulic Brake Hose 18-7/8"	4

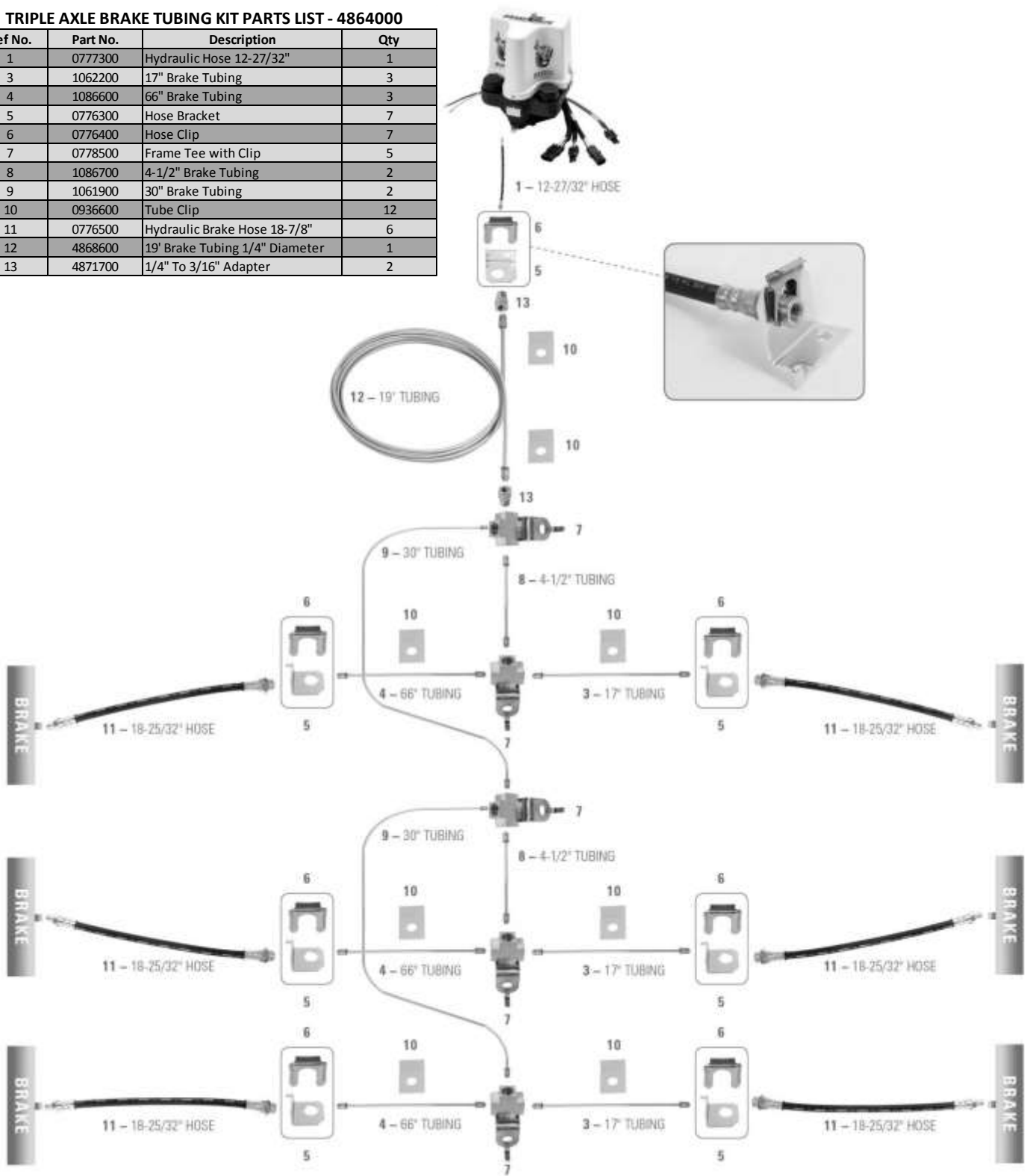


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Triple Axle Tubing Kit

TRIPLE AXLE BRAKE TUBING KIT PARTS LIST - 4864000

Ref No.	Part No.	Description	Qty
1	0777300	Hydraulic Hose 12-27/32"	1
3	1062200	17" Brake Tubing	3
4	1086600	66" Brake Tubing	3
5	0776300	Hose Bracket	7
6	0776400	Hose Clip	7
7	0778500	Frame Tee with Clip	5
8	1086700	4-1/2" Brake Tubing	2
9	1061900	30" Brake Tubing	2
10	0936600	Tube Clip	12
11	0776500	Hydraulic Brake Hose 18-7/8"	6
12	4868600	19' Brake Tubing 1/4" Diameter	1
13	4871700	1/4" To 3/16" Adapter	2



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LIMITED WARRANTY

Limited Warranty Titan Tire Corporation (TITAN) warrants its products to be free from defects in material and workmanship for one year from date of delivery to the original purchaser when properly installed, used, and maintained by the purchaser.

This warranty does not apply to damage or loss caused by any or all of the following circumstances or conditions:

- Freight damage.
- Parts, accessories, materials or components not obtained former approved in writing by TITAN.
- Misapplication, misuse and failure to follow the directions or observe cautions and warnings on installation, operation, application, inspection or maintenance specified in any TITAN quotations, acknowledgements, sales literature, specification sheet or installation instructions and service manual ("applicable literature")

If any TITAN products are found upon TITAN's examination to have been defective when supplied, TITAN will either: credit the purchaser's account for the purchase price of the TITAN product; or repair the product. TITAN has sole discretion in choosing which option to provide. For this LIMITED WARRANTY to apply, TITAN must receive notice of the alleged defect within 30 days of either the discovery of the alleged defect or the expiration of the warranty period, whichever is earlier. Any claim not made within this period shall conclusively be deemed waived.

If requested by TITAN, purchaser shall return the alleged defective product to TITAN for examination at TITAN's direction and expense. TITAN will not pay for expenses incurred in returning a product to TITAN without TITAN's prior written authority. TITAN shall not be liable for any other expenses purchaser incurs to remedy any defect. Purchasers waive subrogation on all claims under any insurance.

Limitation of Liability It is expressly agreed that the liability of TITAN is limited and TITAN does not function as an insurer. THE REMEDIES SET FORTH IN THIS WARRANTY SHALL CONSTITUTE THE EXCLUSIVE REMEDIES AVAILABLE TO THE PRUCHASER OR USER AND ARE IN LIEU OF ALL OTHER REMEDIES, EXPRESS OR IMPLIED. THE LIABILITY OF TITAN, WHEATHER IN CONTRACT, IN TORT, UNDER ANY WARRANTY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE OF THE PARTICULAR PRODUCT MANUFACTURED, SOLD OR SUPPLIED BY TITAN.

To Obtain Technical Assistance To enable TITAN to respond to a request for assistance or evaluation of customer or user operation difficulty, please provide at a minimum the following information by calling 1-800-872-2327 or within Iowa 1-515-265-9200:

- Model number, serial number and all other data on the specific component which appears to be involved in the difficulty.
- The date and from whom you purchased your TITAN product.
- State your difficulty, being sure to mention at least the following: Application, Nature of load involved, and Weight of the load.

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THIS WARRANTY DOES NOT COVER NOR EXTEND TO INCIDENTAL OR CONSEQUENTIAL DAMAGE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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