



**SPARTAN  
EQUIPMENT®**

# **TRUSS BOOM**



**OWNERS MANUAL  
OPERATOR INSTRUCTIONS  
PARTS BOOK**



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## Reference Information

Write the correct information for your Truss Boom in the space below.  
Always use this number when referring to your Truss Boom.

Truss Boom Serial Number \_\_\_\_\_

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Serial Number Location:

Always use the serial number of the attachment when requesting service information or when ordering parts.  
See view A



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## SafetyInstructions:

“Safety is the Operator’s responsibility!”

The Spartan Equipment Truss Boom is designed to give maximum safety; but no machine design can prevent operator error or carelessness.

The use of this extremely efficient and maneuverable Truss Boom requires a qualified operator who understands the working capabilities of both the skid steer and the Tele-Boom.

Safe operation needs a qualified operator!!

- ◆ Check that the Quick-Tach levers are in the locked position and the wedges are fully engaged into the holes of the Truss Boom.
- ◆ DO NOT permit personnel to be in the work area when operating the skid steer and Truss Boom.
- ◆ DO NOT make any adjustments or repairs on the Truss Boom while the skid steer engine is running.
- ◆ When learning to operate the Truss Boom, do it at a slow rate in an area clear of bystanders.
- ◆ DO NOT operate the Truss Boom near powerlines. Give wide clearance to ALL utility lines.
- ◆ DO NOT go near hydraulic leaks. Always turn off engine before repairing hydraulic hoses.
- ◆ Be aware of work area conditions. ie., excessive slope, obstructions, holes, bumps etc.
- ◆ Know the weight of the materials being handled. Avoid exceeding the Rated Operating Capacity of the skid steer and the Truss Boom model. Ask your dealer for the lifting graph on load limits and Tele-Boom stress calculations.

## Assembly Requirements:

The Truss Boom is designed to fit on most quick-tach skid steer loaders and comes fully assembled except for the hoses to the skid steer and a set of couplers. \*These are not provided because each skid steer has different placements and types of hydraulic hookups.

### Materials Needed:

- 1.) Two (2) pieces of one-half inch ( 1/2") by approximately 30 inches long hydraulic hose with one-half inch (1/2") NPT fittings on both ends. (Hose should be rated at 2500 psi or higher and length may vary dependent on skid steer model.)
  - 2.) One (1) piece "Male" coupler, type depending on skid steer.
  - 3.) One (1) piece "Female" coupler, type depending on skid steer.
- . / Assemble couplers to each hose using thread sealing compound.
  - . / Assemble each hose assembly from above into the fittings on the Truss Boom using thread sealing compound.
  - . / Allow to dry thoroughly before testing for leaks.

## Installing The Truss Boom:

Always inspect the Quick-Tach and Truss Boom mount before installation.

Enter the loader.

With the operator in the seat and appropriate safety restraints in place, start the engine.

Raise the lift arms slightly and tilt the skid steer mounting plate forward.

Drive the loader forward until the top edge of the skid steer mounting plate is completely under the top flange of the Truss Boom. Be sure the Quick-Tach levers do not hit the Truss Boom. See view B next page.



Tilt the skid steer mounting plate backward until the Truss Boom is slightly off the ground.

Stop the engine and exit the loader.

Push down on the Quick-Tach levers until they are fully engaged in the locked position and wedges are fully extended through the mounting frame holes. See view C above.

## Connecting Hydraulics:

The Truss Boom's hydraulic requirements are four (4) gallons per minute at 600 PSI.

**To Connect:** Relieve hydraulic pressure. Remove any dirt or debris from the surface of both the male and female couplers, and from the outside diameter of the male coupler. Visually check the couplers for corroding, cracking, damage, or excessive wear. If any of these conditions exist, the coupler(s) must be replaced.

Install the male coupler into the female coupler and vice versa.

**To Disconnect:** Relieve hydraulic pressure. Rotate the ball release sleeve so that the grooves are aligned with the pins in the female coupler. Push the couplers together to relieve any resistance on the sleeve.

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## Operating the Truss Boom:

The Truss Boom's retracted length is 8 feet 6 inches and extends 20 feet. The Truss Boom will extend four feet manually and eight feet with the two 48-inch hydraulic cylinders.

The total vertical lifting height varies with machines, but is approximately 30 feet on the majority of machines.

The amount of liftability depends greatly on the angle and length of extension. For example, a much heavier amount can be lifted in a near "straight up" extension mode (retracting the boom all the way down and then lifting straight up), then when extended horizontally "out" from the loader. As with any machinery use, extreme care must be taken to assure safety.

The proper way to lift a load is to first test the load at the desired length to see if the loader is stable. As one tilts the boom upward you are effectively shortening the tipping amount and approximating the lifting capacity of the loader. **EXTREME CAUTION** must be taken as the boom is extended. A small movement of the loader will create a greater movement at the end of the boom. The ground should be relatively free of obstructions and any foreign materials that would cause excessive movement on the end of the boom.

The Truss Boom should always be retracted and lowered to the ground before the operator leaves the machine.

\*Check for appropriate lift charts to correspond to your loader.



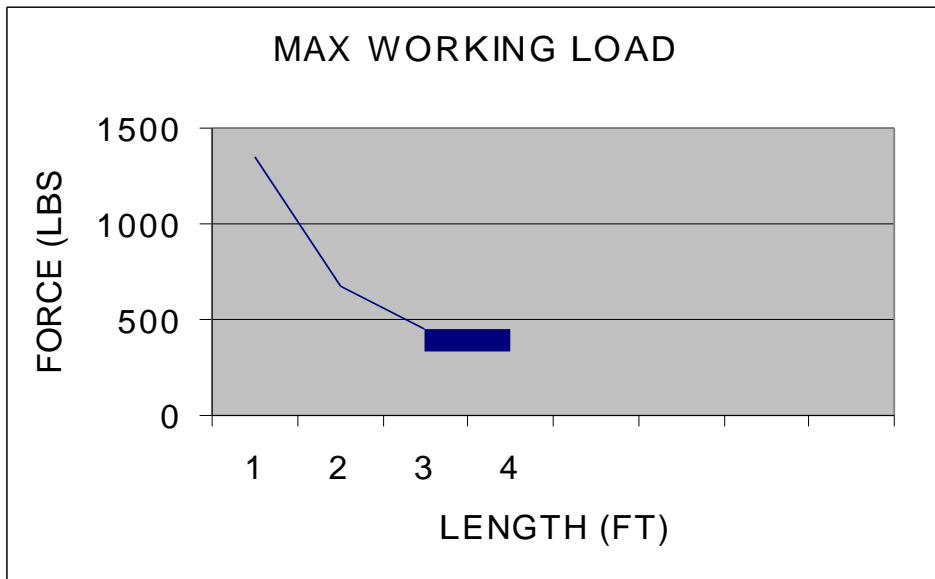
## SE100

This spreadsheet calculates the max force which may be applied to the 2x2x1/4 wall square tube on the T-100 Sheyenne Tele-Boom. The moment of inertia takes into account the 0.56 inch hole

2x2x1/4	
Moment of Inertia (in <sup>4</sup> )=	0.7624 Corrected for round corners, 0.56 dia hole.
Tensile Strength (psi)=	58000
Yield Strength (psi)=	46000
C (in)=	1.085
Length of Tube (ft)=	1
(ft)=	2
(ft)=	3
(ft)=	4

### Max Force

Safety factor:	2.00
<u>Yielding(lbs)</u>	
1 ft=	1347
2 ft=	673
3 ft=	449
4 ft=	337



2x2 x.25B

The above chart is the recommended weights only

## SE200

This spreadsheet calculates the max force which may be applied to the 3x3x1/4 wall square tube on the SE200 Spartan Equipment Truss Boom. The moment of inertia takes into account the 0.56 inch hole.

### 3x3x1/4

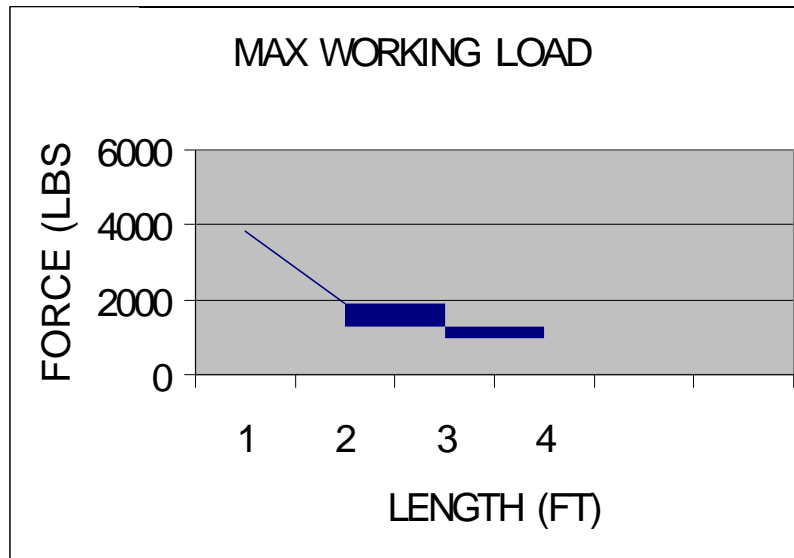
Moment of Inertia (in <sup>4</sup> )=	3.152 Corrected for round corners, 0.56 dia hole
Tensile Strength (psi)=	58000
Yield Strength (psi)=	46000
C (in)=	1.579
Length of Tube (ft)=	1
(ft)=	2
(ft)=	3
(ft)=	4

### Max Force

Safety factor: 2

Yielding (lbs)

1 ft=	3826
2 ft=	1913
3 ft=	1275
4 ft=	957



3X3X.25B

The above chart is the recommended weights only

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PARTS

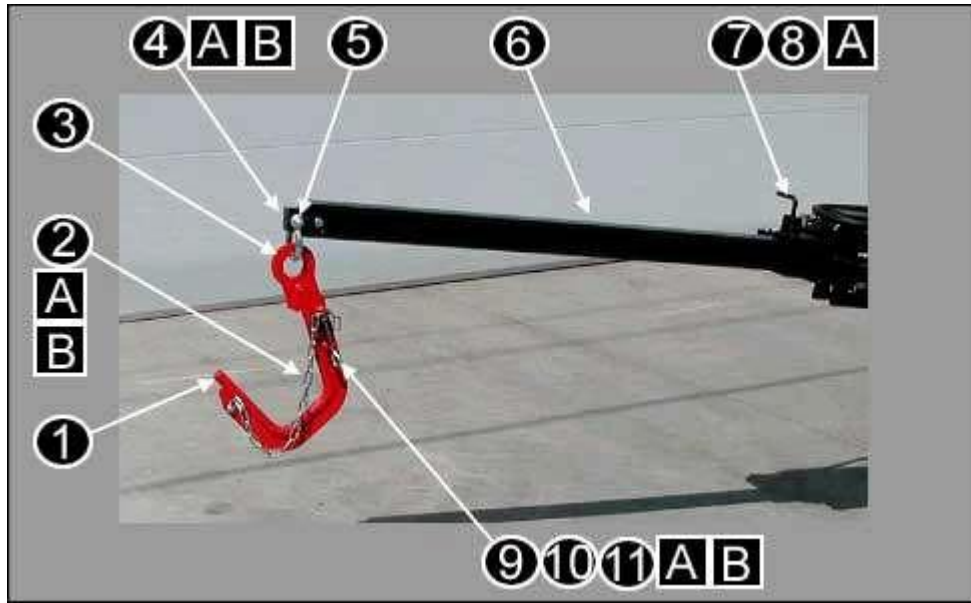
SECTION

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SE100

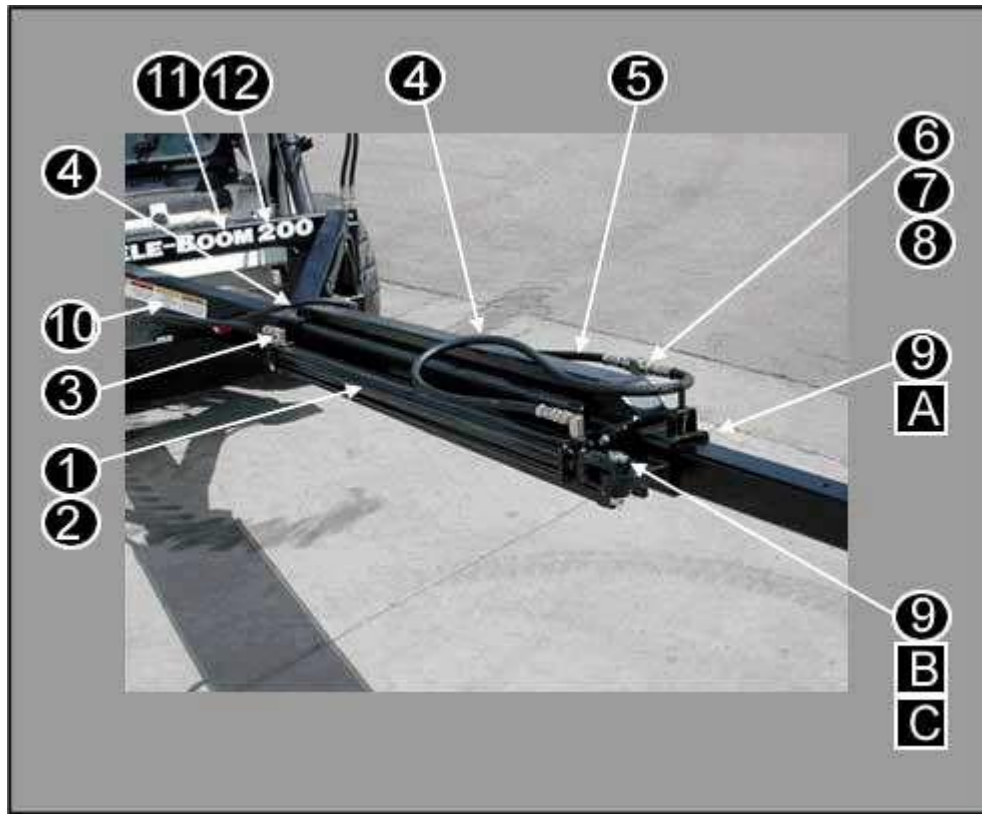
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SE200

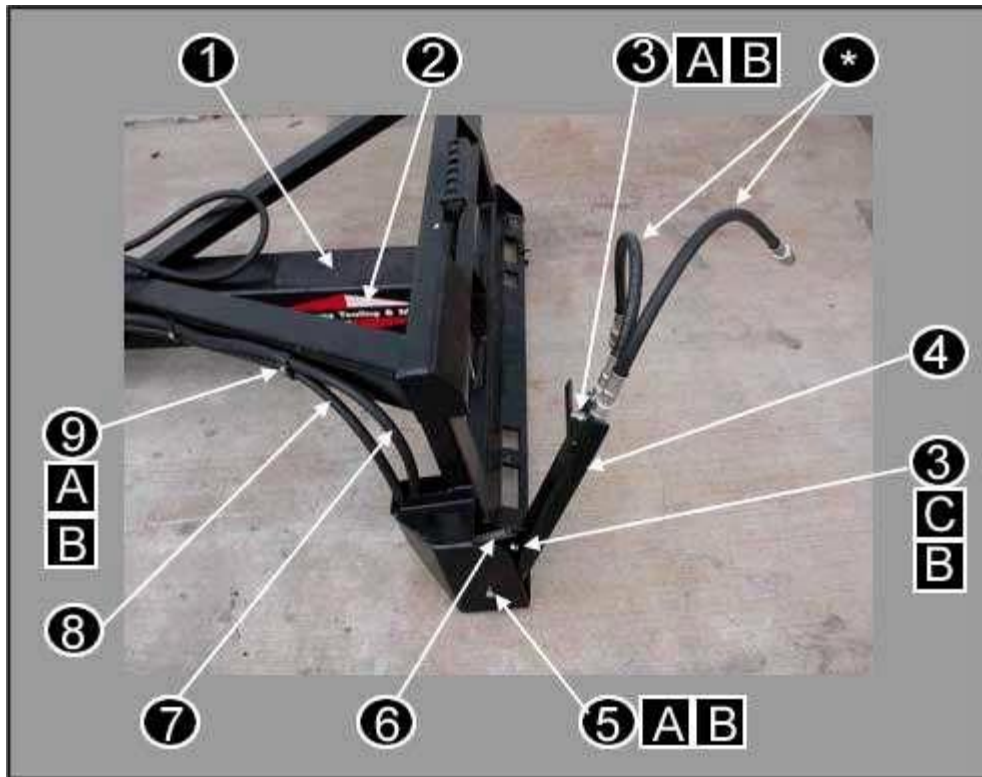


ITEM	PART #	DESCRIPTION	QTY
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1	SE300-2-1008	HOOK WITH SAFETY ASSY	1
2	SE300-3-1173	SAFETY CHAIN	1
2A	SE900-01055	5/16 X ¾ BOLT, GR 5	1
2B	SE900-06137	5/16 SERR FLANGE NUT	1
3	SE300-2-1006	HOOK WLDMT	1
4	SE300-3-1138	END LINK SE100	1
4	SE300-3-1172	END LINK SE200	1
4A	SE900-01237	½ X 3 BOLT, GR5 SE100	1
4A	SE900-01241	½ X 3-1/2 BOLT, GR 5 SE200	1
4B	SE900-06504	1/2NC TOPLOCK NUT	1
5	SE300-3-1105	CLEVIS & PIN	1
6	SE300-2-1015	THIRD STAGE EXTENSION	1
7	SE300-3-1130	ADJUSTING PIN	1
7A	SE900-29134	3/16 X 1-1/2 ROLL PIN	1
8	SE200-3-2735	SPRING	1
9	SE300-3-1148	EYE PIN	1
9A	SE900-11178	3/8 FLAT WASHER	1
9B	SE900-23023	1/8 X ¾ COTTER PIN	1
10	SE300-3-1149	EYE PIN TUBE	1
11	SE300-3-1114	EYE PIN SPRING	1



ITEM	PART #	DESCRIPTION	QTY
1	SE905-21202	2" X 48" HYD CYLINDER W/ PINS	2
2	SE905-21204	CYLINDER PINS (SEPARATELY)	4
3	SE904-08025	ELBOW, 8MJ-8MB 90	2
4	SE904-06043	½ X 59" HOSE, 8FJX-8FJX	2
5	SE904-06041	½ X 12" HOSE, 8FJX-8FJX	1
6	SE904-08024	TEE, 8MJ-8MJ-8MB	2
7	-	( NOT USED)	-
8	-	( NOT USED)	-
9	SE300-3-1150	CYLINDER BRACE (BOTH SIDES)	2
9A	SE900-03434	3/8 X ½ SERR. FLG BOLT (FAR SIDE)	2
9B	SE900-06137	3/8 X ¾ SERR. FLANGE BOLT	2
9C	SE900-06139	3/8-16UNC SERR. FLANGE NUT	2
10	SE300-3-1103	CAUTION STRIP DECAL	1
11	SE300-3-1101	TRUSS BOOM DECAL	1
12	SE300-3-1111	NUMBER "2" DECAL	1



ITEM	PART #	DESCRIPTION	QTY
1	SE300-3-1106	SAFETY TREAD	1
2	SE300-3-1102	SPARTAN EQUIPMENT LOGO DECAL	2
3	SE310-3-1151	HOSE HOLD DOWN BLOCK	2
3A	SE900-01067	5/16 X 2 HEX HD BOLT	1
3B	SE900-06137	5/16 SERR. FLANGE NUT	2
3C	SE900-01063	5/16 X 1-1/2 HEX HD BOLT	1
4	SE300-2-1011	HOSE SHIELD	1
5	SE310-3-1150	HOSE SHIELD BUSHING	1
5A	SE900-01129	3/8 X 3-1/2 HEX HD BOLT	1
5B	SE900-06139	3/8 SERR. FLANGE NUT	1
6	SE310-3-1152	HOSE SHIELD SPRING	1
7	SE904-06041	1/2 X 123" HOSE, 8FJX-8FJX	1
8	SE904-06042	1/2 X 75" HOSE, 8FJX-8FJX	1
9	SE310-3-1167	HOSE CLAMP	2
9A	SE900-01063	5/16 X 1-1/2 HEX HD BOLT	2
9B	SE900-06137	5/16 SERR. FLANGE NUT	2

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## TRUSS BOOM ATTACHMENTS

### ROTATING TREE-SAW

SE303-0-1000

SEE SEPARATE OWNERS' MANUAL

### PALLET FORK

SE301-0-1000

### SHEET CARRIERS SHORT

SE302-0-1000

### LONG

SE302-0-1001

### KITS

### HOOK-UP HOSES

**TRUSS BOOM  
SE100& SE200**

**SPECIFICATIONS**

UNIT WEIGHT / SE100 - 540 LBS

UNIT WEIGHT / SE200 - 675 LBS

MAXIMUM LOAD CALCULATIONS – SEE PAGES 6 & 7

RETRACTED LENGTH – 8' 6" EXTENDED

LENGTH (BOOM ONLY) – 20' 6"

EXTENDED LENGTH – APPROX 30 FEET W/ SKID STEER BOOM LIFTED





TREE-SAW  
MODEL S E 21

SPECIFICATIONS

UNIT WEIGHT – 126 LBS

CUTTING B A R LENGTH – 21”

CHAIN SIZE – .404 PITCH

CHAIN OILER

HYDRAULIC REQUIREMENTS – 14 GAL/MIN

ELECTRIC ROTATION – 350 DEGREES

LENGTH – RETRACTED / 13’ 9” – EXTENDED / APPROX 33’ w/ BOOM ARMS



## PALLET FORK

### SPECIFICATIONS

UNIT WEIGHT – 78 LBS      MAXIMUM LOAD – 600 LBS  
FORKS – 32" LONG, 25-1/2" WIDE, 21-1/2" BETWEEN FORKS  
STRAIGHT SHANK HEIGHT OF 11"; TOTAL OVERALL HEIGHT OF 33"  
CONSTRUCTED OF 2" X 2" SQUARE TUBING



## SHEET CARRIER

### SPECIFICATIONS

UNIT WEIGHT – 60 LBS

OPEN HEIGHT – 52-1/2"    CLOSED HEIGHT – 3"

OPEN WIDTH – 57"    CLOSED WIDTH – 24"

UPPER AND LOWER PEGS AVAILABLE IN 5" OR 7-1/2"

CONSTRUCTED OF 1-1/2" X 1-1/2" SQUARE TUBING



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## TRUSS BOOM WARRANTY

SPARTAN EQUIPMENT warrants each new product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components, not to exceed twelve consecutive months from the date of delivery of the new SPARTAN EQUIPMENT product to the original purchaser.

Genuine SPARTAN EQUIPMENT replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will it cover any merchandise or components thereof, which in the opinion of the company, has been subject to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through SPARTAN EQUIPMENT.

The company in no way warrants engines, batteries, tires or other trade accessories since these items are warranted separately by their respective manufacturers.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgement shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to SPARTAN EQUIPMENT. This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property.

Except as set forth above, SPARTAN EQUIPMENT shall have no obligation of liability of any kind on account of any of its equipment and shall not be liable for special or consequential damage. SPARTAN EQUIPMENT makes no other warranty, express or implied, and, specifically, SPARTAN EQUIPMENT disclaims any implied warranty of merchantability of fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties of incidental or consequential damages, so the limitations or exclusions in this warranty may not apply.

This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

SPARTAN EQUIPMENT reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify or enlarge neither this warranty nor the exclusions, limitations and reservations.

I have read and understand the above instructions and warranty. Please complete both copies. Warranty is invalid until signed and dealer copy is returned to the dealer.

6/03

SERVICE DEPARTMENT  
(888) 888-1085  
For Fax and E-mail Orders  
support@spartanequipment.com  
WARRANTY

In order to provide you with the most UP-TO-DATE Warranty information, Spartan Equipment Warranty Statement and Warranty Procedures along with Warranty Registration and Claim Forms have been moved to our website at  
<https://www.spartanequipment.com/pages/warranty-submission-claim-form.html>