

# **Helicopter Tanks**

Owner's Manual

Manufactured by Minden Machine Shop Inc. 1302 K Road Minden NE 68959 1-800 264-6587

Helicopter Tank	
Serial # Date of Purchase	

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## SAFETY AND OPERATION RULES GENERAL SAFETY STATEMENTS

Safety precautions are essential when the use of any mechanical equipment is involved. These precautions are necessary when using, storing, and servicing mechanical equipment. Using this equipment with the respect and caution demanded will considerably lessen the possibilities of personal injury. If safety precautions are over-looked or ignored, personal injury or property damage may occur.

This unit was designed for specific applications. It should not be modified and/or used for any application other than which it was designed. If there are any questions regarding its application, write or call Patriot Equipment. Do not use this unit until you have been advised. For more information, call 1-800-264-6587.

Read this entire manual carefully - know your equipment. Consider the application, limitations, and the potential hazards specific to your unit. Occupational safety is of prime concern to us. This manual was written with the safety of the operator and others who come in contact with the equipment as our prime concern. The manual presents some of the day-to-day work problems encountered by the operator and other personnel. This manual was written to help you understand safe operating procedures for Patriot Helicopter Tanks. We want you as our partner in safety. A copy of this manual should be available to all persons who may operate equipment that use Patriot Helicopter Tanks.

It is your responsibility as an owner, operator, or supervisor to know what specific requirements, precautions, and work hazards exist and to make these known to all other personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required. Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur.

Why is SAFETY important to you?

#### **3 BIG REASONS**

- 1. Accidents disable and kill
- 2. Accidents cost money
- 3. Accidents can be avoided

#### Signal Words

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with safety messages. The appropriate signal word for each message has been selected using the following guidelines:

**DANGER** – An immediate and specific hazard, which will result in severe personal injury or death if proper precautions are not taken.

**WARNING** – A specific hazard or unsafe practice, which could result in severe personal injury or death if proper precautions are not taken.

**CAUTION** – Unsafe practices which could result in personal injury if proper precautions are not taken, or a reminder of good safety practices.

#### SAFETY ALERT SYMBOL



#### BE ALERT! YOUR SAFETY IS INVOLVED

The Symbol Shown Above Is Used To Call Your Attention To Instructions Concerning Your Personal Safety. Watch This Symbol - It Points Out Important Safety Precautions. It Means ATTENTION! Become Alert! Your Personal Safety Is Involved! Read The Message That Follows And Be Alert To The Possibility Of Personal Injury Or Death.

Anyone who will operate or work around a Helicopter Tank shall first read this manual! This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of equipment.

#### **SAFETY EQUIPMENT**

Please, remember safety equipment provides important protection for persons around an auger that is in operation. Be sure ALL safety shields and protective devices are installed and properly maintained. If you find any shields or guards damaged or missing, contact Minden Machine Shop Inc. for the correct items.

#### SERIAL NUMBER

To ensure efficient and prompt service, please furnish us with the model and serial number of your Patriot Helicopter Tank in all correspondence or other contact.



#### SAFETY PROCEDURES

- 1. Use only lifting equipment with the proper capacity when loading or lifting the Patriot Helicopter Tanks. Forklifts with too little capacity may tip towards the front where the lifted weight is.
- 2. Do not use makeshift systems to handle equipment as you may create an unsafe condition.
- 3. Do not attempt to raise the Patriot Helicopter Tank units by hoist or forklift when it is loaded with product.
- 4. Do not operate unit without correct plumbing and guards in place.
- 5. Do not allow any riders on the Patriot Helicopter Tanks.
- 6. In case of any defect or awareness of potential danger, please contact the plant at 1-800-264-6587 immediately.

#### LIGHTING AND MARKING

It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.



#### **OPERATOR QUALIFICATIONS**

Operation of the Helicopter Tanks shall be limited to competent and experienced persons. In addition, anyone who will operate or work around the Helicopter Tanks must use good common sense. In order to be qualified, they must also know and meet all other requirements, such as:

- 1. Some regulations specify that no one under the age of 18 may operate power machinery. This includes the tractor with Helicopter Tanks. It is your responsibility to know what these regulations are in your own area or situation.
- 2. Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee or user in the safe operation and servicing of all equipment with which the employee or user is, or will be involved."
- 3. Unqualified persons are to stay out of the work area as shown in the work diagrams.
- 4. A person who has not read and understood all operating and safety instruction is not qualified to operate the machine with the Helicopter Tanks.

#### SAFETY OVERVIEW

YOU are responsible for SAFE operation and maintenance of your Patriot Helicopter Tanks.

YOU must ensure that you and anyone who is operates, maintains, or works around the Helicopter Tanks must be familiar with the operating, maintenance, and safety information contained in the manual. This manual will take you step by step through your working day and alerts you to all good safety practices while operating the tanks.

Remember YOU are the key to safety. GOOD PRACTICES protect not only you but also the people around you. Make these practices a working part of your safety program. Be certain EVERYONE operating this machine is familiar with the procedures recommended and follows safety precautions. Remember, most accidents can be prevented. Do not risk injury or death by ignoring any information addressed.

Helicopter Tank owners must give operating instructions to operators before allowing them to operate the tanks. They must be reviewed at least annually thereafter per OSHA regulation 1928.57.

The most important safety device on the equipment is a SAFE OPERATOR. It is the operator's responsibility to read and understand ALL instructions in the manual and to follow them. All accidents can be avoided!

Any person who has not read and understood all operation and safety instructions is not qualified to operate the helicopter tanks. An untrained operator exposes himself and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modifications may impair the functions and/or safety and could affect the life of the equipment.

#### **SAFETY AFFIRMATION**

I have read and understand the operator's manual and all safety signs before operation, maintenance, or adjusting the Helicopter Tanks.

I will allow only trained persons to operate the Patriot Helicopter Tanks. \*An untrained operator is not qualified to operate this equipment.

I have access to a fire extinguisher.

I have all guards in place and will not operate the Patriot Helicopter Tanks without them.

I will not allow riders on the Patriot Helicopter Tanks.

I understand the danger of moving parts (PTO, auger flighting, and pinch points) and will stop engine before servicing.

I am aware of the need to secure the Patriot Helicopter tank to its base.

I understand that any accidents that occur with the Patriot Helicopter Tanks are my responsibilities.

I understand that Minden Machine Shop will not be held responsible for any accidents that involve the Patriot Helicopter Tanks.



#### **SIGN OFF SHEET** (this must be signed annually as part of your safety program)

As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operation and safety procedures with this Helicopter Tank. We include this sign off sheet for your convenience and personal record keeping.

DATE	EMPLOYER SIGNATURE	EMPLOYEE SIGNATURE



#### **MACHINE INSPECTION**

After delivery of your new Helicopter Tanks and/or completion of assembly and before each use, inspection of the equipment is mandatory. This inspection should include, but not be limited to:

- 1. Check to see that all guards are in place, secure, and functional.
- **2.** Are the fasteners tight?
- **3.** Any leaks?
- **4.** Do the valves operate correctly?
- **5.** Any cracks present in the tank or tank saddle?
- **6.** Are all the lids for the tanks secure?
- 7. Do any hoses need secured?
- **8.** Are the Helicopter Tank straps tight?
- **9.** Are the tanks clean?
- 10. How is visibility from the operator seat?

#### **SAFETY DECALS**

- 1. Keep safety decals clear and legible at all times.
- 2. Replace decals and signs that are missing or have become unreadable.
- 3. Safety signs are available from your Dealer or the Manufacture.

#### **How to install Safety Signs**

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

### Safety Decal Location





TS3000

#### AWARNING

#### TO PREVENT SERIOUS INJURY OR DEATH

- REFER TO CHEMICAL SUPPLIERS AND MANUFACTURER RECOMMENDATIONS AND ALL LICENSING RESTRICTIONS OR REGULATIONS
- ALWAYS WEAR RECOMMENDED PROTECTIVE CLOTHING AND EYE PROTECTION WHEN WORKING WITH CHEMICALS
- DISPOSE OF ALL UNUSED CHEMICALS IN AN ECOLOGICALLY SOUND MANNER
- DO NOT LET PASSENGERS RIDE ON TANKS AND BARS

W2 TANKS 2/0

TS3002

The Safety Decals are located on the left side of the saddle and on the lower cross piece as shown. The decals will face towards the outside so they can be seen by the user. The locations are the same for the front mount saddles.

# 2800 lb. LIMIT PER TANK

TS3001

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#### INTRODUCTION

**Model: Helicopter Tanks** 

Thank you for purchasing Minden Machine Shop Inc's Helicopter tanks. We feel you have made a wise choice and hope you are completely satisfied with your Helicopter tanks. If you have any questions regarding the applications of certain solutions or chemicals, contact your chemical supplier and follow chemical manufacturer recommendations as well as all licensing and use restrictions or regulations.



TO AVOID PERSONAL INJURY OR PROPERTY DAMAGE, OBSERVE THE FOLLOWING INSTRUCTIONS:

Chemicals are dangerous. Know exactly what you are going to do and what is going to happen before attempting to work with these products. Improper selection or use can injure people, animals, plants, and soil.

Always wear protective clothing such as coveralls, goggles, and gloves when working with chemicals.

Be sure to dispose of all unused chemicals or solutions in a proper and ecologically sound manner.

#### **GENERAL INFORMATION**

- 1. Unless otherwise specified, high-strength (grade 5) (3 radial-line head markings) hex head bolts are used throughout assembly of the Helicopter Tanks.
- 2. Whenever terms "LEFT" and "RIGHT" are used in this manual it means from a position behind the Helicopter Tanks and facing forward.
- 3. When placing a parts order, refer to this manual for the part numbers and place order by part number and description.

#### 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**

- 1. Carefully study and understand this manual
- 2. Do not wear loose-fitting clothing which may catch in moving parts.
- 3. Always wear protective clothing and footwear.
- 4. It is recommended that suitable hearing and eye protection be worn.
- 5. Operator may come in contact with certain materials which may require specific safety equipment relative to handling of such materials. (Examples: extremely dusty, molds, fungus, bulk fertilizers, etc.)
- 6. Be sure there are no tools lying on or in equipment.

- 7. Use a tractor equipped with a Roll-Over Protection System (ROPS) and fasten your seat belt prior to starting the engine.
- 8. Manufacturer does not recommend usage of tractor with ROPS removed.
- 9. Move tractor wheels to widest recommended settings to increase stability.
- 10. Do not allow anyone to stand between tongue or hitch and towing unit when backing up to equipment.
- 11. Make sure all fasteners are tight and installed.
- 12. Check for leaks and repair any that are found.
- 13. Confirm the tank straps are correctly tightened.
- 14. Inspect the tanks making sure lids are secure and the tanks are in working order.

#### **DURING OPERATION**

Beware of bystanders, **PARTICULARLY CHILDREN!** Always look around to make sure it is safe to start engine machine with Helicopter Tanks. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.

**NO PASSENGERS ALLOWED!** Do not carry passengers anywhere on or in the machine with Helicopter Tanks.

Keep hand and clothing clear of moving parts.

Do not clean, lubricate, or adjust the machine while it is moving.

When halting operations, even periodically, set tractor or towing unit brakes, disengage PTO, shut off engine, and **remove ignition key.** 

Be especially observant of operating area and terrain – watch for holes, rocks, or other hidden hazards. Always inspect area prior to operation.

- **DO NOT** operate near the edge of drop-offs or banks.
- **DO NOT** operate on steep slopes. An overturn may result.
- Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.
   Pick the most level possible route when transporting across fields. Avoid edges of ditches, gullies, and steep hillsides.
- Be extra careful when working on inclines.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Avoid loose gravel, rocks, and holes: they can be dangerous for equipment operations or movement.
- Do not walk or work under raised components or attachments unless securely positioned and blocked.
- Keep all bystanders, pets, and livestock clear of work area.
- Operate towing unit from operators seat only
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck hardware on equipment following every 100 hours of operation.
   Correct all problems. Follow maintenance safety procedures.

#### **FOLLOWING OPERATION**

- Rinse and clean the Helicopter Tanks when finished using them. Properly dispose of any contaminated rinse water.
- Following operation, or when unhitching, stop tractor or towing unit, set brakes, disengage PTO and all power drives, shut off engine and **remove ignition key.**
- Do not permit children to play on or around stored Helicopter Tanks.
- Make sure to store Helicopter Tanks on a hard, level surface. Lower any jacks or storage stands to the lowest position.

#### HIGHWAY AND TRANSPORT OPERATIONS

Adopt safe driving practices:

- Keep brake pedals latched together at all times. NEVER USE INDEPENDENT BRAKING LOSS OF CONTROL OR UPSET MAY RESULT.
- Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop. Keep speed to minimum.
- Reduce speed prior to turns to avoid risk of overturning.
- Always keep tractor or towing unit 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 and movement of farm machinery 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.

Use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

When driving tractor under 20 mph (40 kph) day or night, use flashing amber warning light and a slow moving vehicle (SMV) identification emblem.

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 load ratings. Do not cross bridges rated lower than a gross weight of unit 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 width and weight when making turns, or stopping.

#### PERFORMANCE MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate engine in a closed building. Exhaust fumes may cause asphyxiation.
- Before working on this machine, stop vehicle, set brakes, disengage PTO and all power drives, 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 a safety support and block wheels. Never use a jack to support machine.
- Always use proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Follow torque chart in this manual when tightening bolts and nuts.
- Never use your hands to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate skin.
- Openings in skin and minor cuts are susceptible to infection from hydraulic fluid. WITHOUT IMMEDIATE TREATMENT, SERIOUS INFECTION AND REACTIONS CAN OCCUR.
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- 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 any steps or platform.
- When replacing bolts refer to the owner's manual.
- Refer to bolt torque chart for head identification marking.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.

# Helicopter Tank Assembly Instructions

#### 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 some grade bolt.

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

#### **Bolt Torque for Standard Bolts**

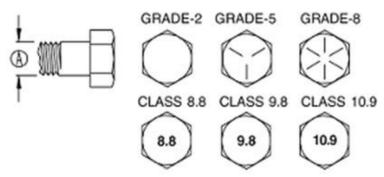
	Grade 2		Grade 5		Grade 8	
Bolt Size A	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	8	9	12	12	16
5/16"	10	13	18	25	25	35
3/8"	20	27	30	40	45	60
7/16"	30	40	50	70	80	110
1/2"	45	60	75	100	115	155
9/16"	70	95	115	155	165	220
5/8"	95	130	150	200	225	300
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650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

**Bolt Torque for Metric Bolts** 

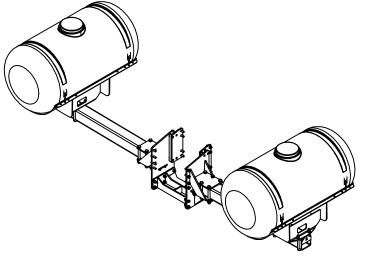
Boit Torque for Metric Boits							
	Clas	Class 8.8		Class 9.8		Class 10.9	
Bolt Size A	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)	
6	9	13	10	14	13	17	
7	15	21	18	24	21	29	
8	23	31	25	34	31	42	
10	45	61	50	68	61	83	
12	78	106	88	118	106	144	
14	125	169	140	189	170	230	
16	194	263	216	293	263	357	
18	268	363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

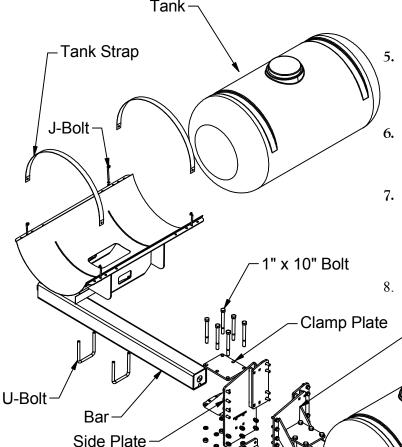
Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

Grade or Class value for bolts and capscrews are identified by their head markings.



#### Completely Assembled





Center Section

#### Helicopter Tank Mounting

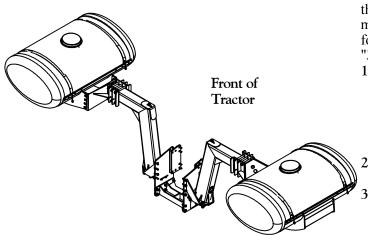
The Helicopter tanks come in numerous configurations, so the installation instructions will cover a broad range of tractor makes and models. Generally, the installation will be similar for all tractor makes and models.

- 1. To begin, mount the side plates of the Helicopter Tanks to the frame of the tractor. All the fasteners are in the kit. While mounting the main brackets to the tractor frame, leave the mounting bolts loose as this will aid later in the installation process. Generally, the Helicopter Tank kit will have a right and left side.
- 2. Install the center section if the Helicopter Tank kit came with one. Leave the fasteners loose for now.
- 3. With the left and right plates installed and the center section in, tighten the bolts. Tighten the frame bolts first and then tighten the bolts in the center section. See the torque chart for correct torque value for the size of bolt.
- 4. Locate the left bar, a clamp plate, 6 1"x10" bolts, lock washers, and nuts. Install the left bar on the left side of the undercarraige assembly. Be sure the outside flat bar is pointing up and the hose access hole is down. The bar will slide in until it contacts the side of the undercarraige. The outside end of the bar will need to be supported until the clamp plate is installed and the 1" bolts, lock washers, and nuts are tightened (See Diagram). Tighten all fasteners. Repeat for the opposite side.
  - Mount the tank saddles on top of the installed bars. The tank saddles will be held in place with 2 7/8" x 9" U-bolts, 4 lock washers, and 4 nuts. Move the tank saddles to the oustside of the bars against the flat stop. Install and tighten the U-bolts.
  - Install the poly tanks into the saddles. Center the tanks so the tank bungs are centered in the tank saddle opening. Have the gallons scale of the tanks facing the towards the tractor operator seat.
- When the tanks are in place, install the tank straps to hold the tanks in place. Be sure to install the straps in the correct area of the tank. The tank straps are held in place with 1/2" j-bolts. Tighten the straps to the tanks. After the first fill of the tanks, it may be necessary to retighten the tank straps.
- Re-torque all bolts after the first 20 hrs of use. Then re-torque the bolts again every 100 hrs of use.

Side Plate

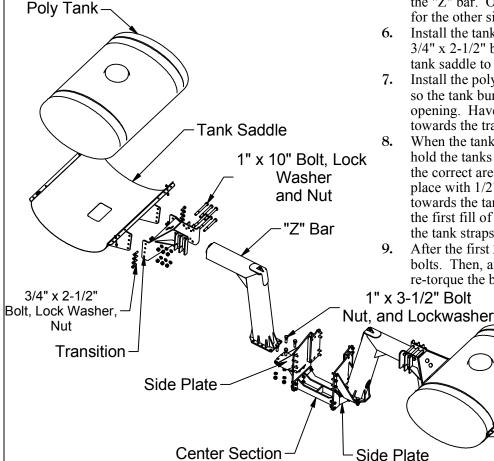
See the packing list for breakdown of parts with part numbers and quantities.

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#### NOTE:

Some models of "Z" bar saddle tanks will come with a tie rod that will have to be installed. The tie rod will install at the top of the "Z" bar bracket (above the hood of the tractor) to add stability for larger tank options.



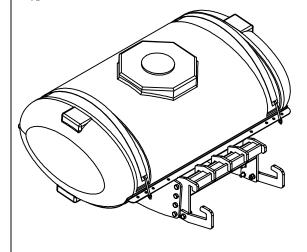
#### Helicopter Tank Mounting - "Z" Bar

The Helicopter tanks come in numerous configurations, so the installation instructions will cover a broad range of tractor makes and models. Generally, the installation will be similar for all tractor makes and models. These directions are for the "Z" bar configuration.

- 1. To begin, mount the side plates of the Helicopter Tanks to the frame of the tractor. All the fasteners are in the kit. While mounting the main brackets to the tractor frame, leave the mounting bolts loose as this will aid later in the installation process. Generally, the Helicopter Tank kit will have a right and left side.
- Install the center section if the Helicopter Tank kit came with one. Leave the fasteners loose for now.
- With the left and right plates installed and the center section in, tighten the bolts. Tighten the frame bolts first and then tighten the bolts in the center section. See the torque chart for correct torque value for the size of bolt.
- 4. Locate the left "Z" bar, 6 1"x 3-1/2"" bolts, lock washers, and nuts. Install the left bar on the left side of the undercarraige assembly. The "Z" bar will slightly angle towards the front of the tractor. The outside end of the bar will need to be supported until the 1" bolts, lock washers, and nuts are tightened (See Diagram). Tighten all fasteners. Repeat for the opposite side.
- 5. Install the transition mount. Install the six 1" x 10" bolts, lock washers, and nuts. Do not tighten at this time. With the bolts installed, slide the transition mount into place. The transition will but up against the tube of the "Z" bar. Once in place, tighten the 1" bolts. Repeat for the other side.
- 6. Install the tank saddle onto the transition. Locate the 8 3/4" x 2-1/2" bolts, lock washers, and nuts. Attach the tank saddle to the transition. See the diagram.
- 7. Install the poly tanks into the saddles. Center the tanks so the tank bungs are centered in the tank saddle opening. Have the gallons scale of the tanks facing the towards the tractor operator seat.
- 8. When the tanks are in place, install the tank straps to hold the tanks in place. Be sure to install the straps in the correct area of the tank. The tank straps are held in place with 1/2" j-bolts. The flat side of the "J" bolts go towards the tank. Tighten the straps to the tanks. After the first fill of the tanks, it may be necessary to retighten the tank straps.
- 9. After the first 20 hours of operation, re-torque all of the bolts. Then, after every 100 hours of operation, re-torque the bolts.

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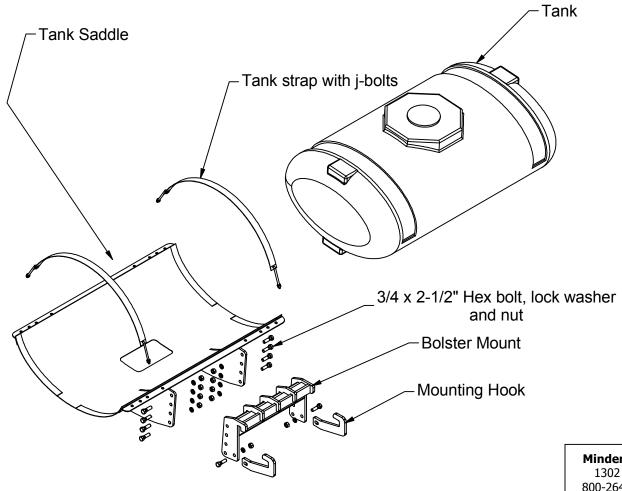
#### Completely Assembled Bolster Type Front Mount Tank



#### Front Mount Tank Mounting - Bolster Type

The front mount tanks come in numerous configurations, so the installation instructions will cover a broade range of tractor makes and models. Generally, the installation procedure will be similar for all tractor makes and models.

- 1. Remove the front tractor weights from the mounting bolster. Store the weights in a safe area where they cannot fall over and cause an injury.
- 2. Locate the bolster mount for the front mount tank.
- 3. Mount the bolster mount onto the front bolster of the tractor.
- 4. Use the side hook plates to to fasten in place. Connecting the pieces with the 3/4" x 2-1/2" bolts, lock washers, and nuts. Tighten the fasteners.
- 5. Locate the 8; 3/4" x 2-1/2" bolts, lock washers, and nuts. Mount the front saddle assembly to the bolster mount. Tighten the fasteners.
- 6. Insert the tank into the saddle, center it, and make sure the lower sump is centered in the saddle cutout.
- 7. Use the straps, j-bolts, lock washers, and nuts to keep the straps in place and mount in the correct areas of the tank and the tank saddle. The flat side of the "J" bolt will face the tank. Tighten the straps when set. The tank straps may need to be retightened after the first tank fill.
- 8. Torque all fasteneres to the correct specification.
- 9. After the first 20 hours of use, re-torque all the bolts. Re-torque the bolts every 100 hours of use after that.

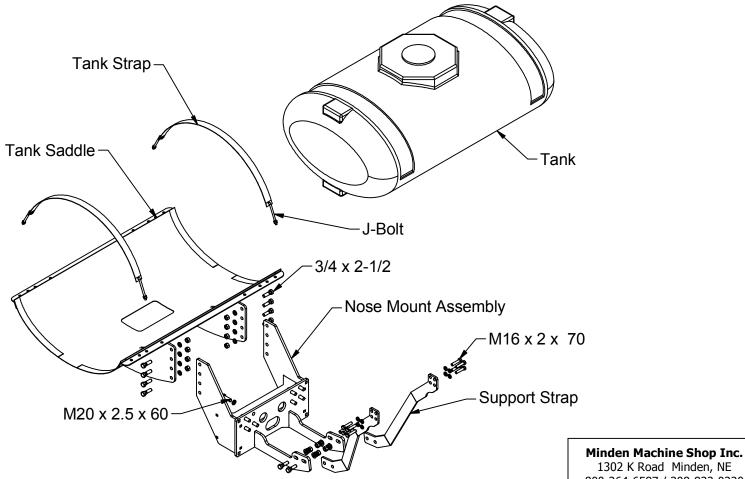


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#### Front Mount Tank Mounting - Nose Mount Type

The front mount tanks come in numerous configurations, so the installation instructions will cover a broad range of tractor brands and models. Generally, the installation procedure will be similar for all tractor makes and models.

- Remove the front tractor weights from the mounting bolster. Store the weights in a safe area where they cannot fall over and cause an
- Remove the bolster mount from the tractor. The bolster will be 2. heavy so use a correctly rated lifting aid to remove the part.
- 3. Clean the area of any debri.
- Locate the bolts and lock washers that will mount the nose mount assembly.
- 5. Install the nose mount assembly to the tractor. Install all the fasteners to mount and then tighten the fasteners.
- The Nose Mount may have additional support brackets to install. Install them at this time. See the diagram that came with the parts. Mount the support brackets and then tighten the fasteners.
- Locate the 8; 3/4" x 2-1/2" bolts, lock washers, and nuts. Once located, mount the tank saddle to the Nose Mount assembly. When all of the fasteners have been installed, tighten all of the fasteners.
- 8. Install the tank into the tank saddle. Center the tank making sure the lower sump is centered in the sump cutout.
- Locate the tank straps and "J" bolts. Install the tank straps at the correct location on the tank and saddle assembly. The flat head of the "J" bolt should face the tank. Once the tank and the straps are in place, tighten the tank straps. The tank straps may need to be retightened after the first tank fill.
- 10. After the first 20 hours of use, re-torque all the bolts. Re-torque the bolts every 100 hours of use after that.



1302 K Road Minden, NE 800-264-6587 / 308-832-0220

# Minden Machine Shop Inc LIMITED WARRANTY

Minden Machine Shop Inc warrants all products manufactured by it to be free of defect in material and workmanship for a period of one (1) year from the date of purchase.

This Minden Machine Shop Inc. warranty does not cover:

- 1. Parts and accessories supplied by Minden Machine Shop Inc. but manufactured by others. Minden Machine Shop Inc. will facilitate the other manufacturer warranty for the benefit of the purchaser but will not be bound thereby (example: augers, motors, trailers, tanks, etc.).
- 2. Products that have been altered by anyone other than a Minden Machine Shop Inc. employee or are used by the purchaser, for purposes other than what was intended at time of manufacture or used in excess of the "built specifications".
- 3. Products that are custom manufactured by Minden Machine Shop Inc. utilizing the purchaser's design which deviates from Minden Machine Shop Inc. normal production line manufactured or customized features of the products.
- 4. Malfunctions or damages to the product from misuse, negligence, customer alteration, accidents or product abuse due to incoming material or poor material flow ability or lack of required performance or required maintenance (e.g., poor material flow ability caused by incoming wet fertilizer or hot soybean meal, etc).
- 5. Loss of time, inconvenience, loss of material, down time or any other consequential damage.
- 6. Product use for a function that is different than designed intent (e.g., storing soybean meal in grain bin, unacceptable material in the bin such as hot bean meal when product originally designed for other application, etc).
- 7. Minden Machine Shop Inc is not responsible for any equipment that this product is attached to or mounted on.

To activate this warranty, the purchaser must make contact in writing with Minden Machine Shop Inc. with in one (1) year of date of purchase. After contact, Minden Machine Shop Inc. has the right to determine the cause and qualify the legitimacy of the claim. Minden Machine Shop Inc., upon acceptance of a warranty claim, shall have a reasonable time to plan any repair or replacement and may affect repair or replacement out of its factory or through contract with a local repair service. If a purchaser after warranty notice is made, chooses to make the repair itself, Minden Machine Shop Inc. must approve any expenses before they are incurred to be responsible for customer reimbursement. Minden Machine Shop Inc. shall be liable on a warranty claim for repair or replacement of any defective products and this is the purchaser's sole and exclusive remedy. Minden Machine Shop Inc. will not be liable for any other or further remedy including claims for personal injury, property damage or consequential damage. The law of the Sate of Nebraska shall govern and any such claim and any issues with regard to the same shall be resolved in the Nebraska District Court for the county of Kearney.

#### **RETURN OF MERCHANDISE**

Merchandise may not be returned without written approval from the factory. All returns must have a return authorization number. Obtain this number before the return and show it on all return items. A 15% restocking charge is made on merchandise returned. Returned merchandise must be shipped pre-paid.

#### RECEIVING MERCHANDISE AND FILING CLAIMS

When receiving merchandise it is important to check both the number of parts and their description with packing slip. The consignee must make all claims for freight damage or shortage within 10 days from the date of delivery.

When the material leaves the factory it becomes the property of the consignee. It is the responsibility of the consignee to file a claim on any possible damage or loss. Please list your preferred routing on purchase orders.

#### **MODIFICATIONS**

It is the policy of Minden Machine Shop Inc. to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

#### WARRANTY REGISTRATION

To register equipment, or file a claim, copy and paste the words on this page into an email or word document, fill out the appropriate information completely, and email it to <a href="mailto:larry@mindenmachine.com">larry@mindenmachine.com</a> with the subject as EQUIPMENT WARRANTY, or fill it out and fax it to 308-832-1340.

Dealer Information:	Not Applicable, check here: [ ]
Dealer Name:	
Address:	
City:	
State:	
Zip Code:	
Phone #:	
Email:	
End User Information:	
Purchaser:	
Address:	
City:	
State:	
Zip Code:	
Phone #:	
Email:	
Equipment:	
Serial #:	
Date Of Purchase: /	