



Electric Concrete Buggy

User Manual



Model EPB72-16

Operation • Maintenance • Troubleshooting • Parts

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Introduction

Thank you

Thank you for choosing the Electric Concrete Buggy manufactured by Indy Equipment.

This equipment was designed and manufactured in the USA with quality materials and workmanship. With proper use and care, it will provide many years of trouble-free service.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Please contact Indy Equipment if you need assistance, information or additional copies of the manual.

The information in this user manual is in effect at time of printing. The information is subject to change without notice.

Limited warranty

Warranty statement

INDY EQUIPMENT & SUPPLY LLC (IES) warrants to the original purchaser that such equipment, accessories, parts and other products manufactured by IES will be free from defects in workmanship and material for a period of one (1) year after the date of first delivery or for one thousand (1,000) hours of use, whichever comes first; provided that Buyer sends IES notice of such defect within thirty (30) days of its discovery.

Should defects be discovered, the Buyer must clearly establish that (I) the equipment, parts, etc. have been properly installed and set up, maintained and operated within the limits of rated and normal usage and (II) the defect did not result in any manner from the intentional or negligent action or inaction of Buyer. Buyer must also return the defective item or items to IES, Independence, OH for inspection at IES's request. If Buyer cannot establish that conditions (I) and (II) have been met, then this warranty shall not cover the alleged defect. Failure to give notice of defect within such period shall be a waiver of this Warranty and any assistance rendered thereafter shall not extend or revive it. THIS WARRANTY IS LIMITED TO THE BUYER AND IS NOT ASSIGNABLE OR OTHERWISE TRANSFERABLE.

IES MAKES NO WARRANTY WITH RESPECT TO PARTS, COMPONENTS, EQUIPMENT AND ACCESSORIES NOT MANUFACTURED BY IES SUCH AS FIXTURES, BALLASTS, ENGINES, HYDRAULIC PUMPS, FUEL PUMPS,

ALTERNATORS, GENERATORS, WINCHES, TIRES AND ELECTRICAL COMPONENTS. Accessories, assemblies and components included in products of IES, which are not manufactured by IES, are subject only to the warranty of their respective manufacturers. IES makes no other warranty, express or implied, and makes no warranty of merchantability or fitness for any particular purpose. This warranty shall not cover misuse, alteration, abuse, negligence, accident, acts of God, sabotage or any item in which serial numbers have been altered, defaced or removed, but shall be limited to repair or replacement of those parts which, upon inspection by IES, appear to have been defective in material or workmanship.

IES's liability and Buyer's sole and exclusive remedy for a failure of goods to perform as warranted and/or for any and all other claims arising out of the purchase and use of the goods, including negligence on the part of IES, shall be limited to the repair or replacement of defective parts returned, transportation prepaid to IES. IES shall in no event be liable for incidental or consequential or other damages or losses resulting from a breach of warranty such as, but not by way of limitation, labor costs, loss of profits, loss of use of other than equipment, third party repairs, personal injury, emotional or mental distress, improper performance of work, penalties of any kind, loss of service of personnel, or any other damages or losses which may be experienced by the Buyer.

A product warranty certificate must be filled out in its entirety and returned to IES in order to process any warranty claims submitted.

THIS WARRANTY IS EXPRESSLY IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS OF ANY PRODUCT OR GOODS FOR A PARTICULAR PURPOSE) AND ALL OTHER OBLIGATIONS OR LIABILITIES ON IES's PART, AND IES NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IES ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF IES's PRODUCTS. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

Warranty procedure

The specific language of this warranty will determine INDY EQUIPMENT & SUPPLY LLC's obligation in connection with its product. The information presented below should be used as a general guide for implementation of policy. In the event of a component failure during the warranty period it should be repaired as soon as possible, preferably at an authorized INDY EQUIPMENT & SUPPLY LLC service center. If component is manufactured by a company other than INDY EQUIPMENT & SUPPLY LLC, such as Deutz, Honda, Isuzu, Leroy Somer, Lister Petter, Lombardini, Wisconsin, etc., the applicant should pursue repair and/or reimbursement through that manufacturer, and its dealer/distributor network.

To file a claim with INDY EQUIPMENT & SUPPLY LLC, an APPLICATION FOR WARRANTY ADJUSTMENT (AWA) form must be completed in its entirety. Return the completed form within fourteen days of the repair to:

ATTENTION: WARRANTY
INDY EQUIPMENT
6500 Schaaf Road • Independence, OH 44131 USA
Fax: 216-573-7712

INDY EQUIPMENT & SUPPLY LLC will review the AWA form. Should we desire to inspect the defective parts, we will issue you a return authorization for the defective parts. After inspecting the defective part(s), and it is determined that warranty is due, we will then, at the discretion of INDY EQUIPMENT & SUPPLY LLC, credit the applicants account or send replacement parts.

INDY EQUIPMENT & SUPPLY LLC warranty reimbursements:

- \$40.00 for each hour's labor we allow toward a repair.
- Distributors cost of parts not more than the price currently available from INDY EQUIPMENT & SUPPLY LLC.
- One way surface freight charges on parts returned to INDY EQUIPMENT & SUPPLY LLC.

Many repairs are assigned a predetermined labor schedule, which is an average time in which a skilled technician should be able to make a repair. INDY EQUIPMENT & SUPPLY LLC will reimburse not to exceed the predetermined number of hours for a particular repair.

INDY EQUIPMENT & SUPPLY LLC does not reimburse for the following:

- Travel, travel time, nor travel labor.
- Mileage.
- Excessive diagnostic time.
- Repairs of defects, malfunctions, or failures resulting from accidents, abuse, misuse, modifications, alterations, improper servicing or lack of performance of required maintenance service.
- Repairs where defective parts were not shipped back when requested by INDY EQUIPMENT & SUPPLY LLC.
- Regular maintenance such as parts or labor for oil changes, filter changes or filters.
- Repairs where defective parts were not received by INDY EQUIPMENT & SUPPLY LLC after INDY EQUIPMENT & SUPPLY LLC issued a return authorization.

INDY EQUIPMENT

6500 Schaaf Road • Independence, OH 44131 USA

Phone: 1-877-320-INDY (4639)

Fax: 216-573-7712

Safety

How you operate and maintain your equipment directly affects your safety and the safety of others. Therefore, read and understand this manual and any other safety information provided, including safety decals on the equipment.

Indy Equipment cannot anticipate every possible circumstance that might involve a potential hazard. The safety alerts in this manual are therefore not all inclusive.

If you use an operating procedure, installation or work method not specifically recommended, you must satisfy yourself that it is safe for you and for other persons. You must also ensure that the product will not be damaged or made unsafe by the procedure that you use.

Safety alerts

Safety alerts in this manual indicate important messages regarding safety. When you see the symbol and the signal word after, carefully read the message that follows and understand there is a possibility of injury or death if you do not adhere to the requirements of the safety message.



Danger indicates a hazardous situation that, if not avoided, will likely result in death or serious injury.



Warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.



Caution indicates a hazardous situation that, if not followed, could result in minor or moderate injury.

Damage warning, notes and tips



Avoid damage: indicates a situation that could cause equipment or property damage.

Note: A note contains information necessary for proper use of this equipment.

Tip: A tip contains useful information that can improve or optimize use of this equipment.

General safety rules

The general safety rules are included in this section of the manual. Specific safety rules appear throughout the manual.



Warning: To prevent injury and equipment damage, adhere to the following general safety rules:

- Thoroughly read and understand the contents of this manual before installing, operating or maintaining the Electric Concrete Buggy.
- Keep this manual in a location where it can easily be accessed.
- Only allow trained/certified operators—directed by informed and knowledgeable supervision—to operate or service the machine.
- Also follow the instructions on the safety decals attached to the machine (see Figure 1). Replace decals that are worn or missing.
- Comply with OSHA, federal, state, and local regulations.
- Use only factory approved parts to service or repair this machine. (OSHA prohibits the alteration or modification of this machine without written approval of the manufacturer.)

Safety decals



Both sides

Figure 1: Safety decal location

General Description

The Indy Equipment Electric Concrete Buggy model IEPB-16 (Figure 2) is a battery-powered vehicle for transporting concrete, sand and other construction materials.

Designed to meet the needs of interior operation, the buggy is quiet and emission free and requires little maintenance.

The buggy has six batteries and features an onboard battery charger. Power is supplied through a high-torque electric motor drive that turns a heavy duty hydraulic pump. Torque to the front drive wheels is provided by high efficiency hydraulic motors, one for each wheel.

The buggy's dump box has a 16-cubic-foot capacity and is capable of hauling up to 2500 pounds. The dump box tips with power provided by a hydraulic lift. Dump box operation can be done by a hand lever or a foot pedal, which allows the operator to keep both hands on the steering handle. Manual steering is done through the rear wheels.

The buggy is designed for excellent traction and control. A rear-positioned operator platform and a simple control panel provide safe, comfortable and convenient operation.



Figure 2: Overview

Machine identification

The serial number location is on the inside of the left side panel. The serial number is also stamped into the counterweight on the front of the frame.

General specifications

Dimensions:	
- Length (maximum)	111.17 in. (dump box tipped, platform down)
- Length (minimum)	86.7 in. (dump box down, platform folded)
- Width	46.58 in.
- Height	52.38 in. (dump box down)
Ground clearance	6.75 in. (under front wheels)
Wheelbase	42.5 in.
Weight:	
- GVW	2350 lb
- Transport	2100 lb
Maximum load	2500 lb
Maximum speed	5.6 mph, forward and reverse
Turning radius	12 ft 9 in.
Number of occupants	One person, driver only
Dump box capacity (water level)	16 cu ft (0.6 cu yd)
Bucket ground clearance when dumping	4.25 in.
Maximum grade:	
- Fore and aft	10.5% (6°)
- Side to side	10.5% (6°)
Steering	Handle bars to back wheels
Brakes	Dynamic hydrostatic and mechanical foot and parking brake (paddle on front wheels)
Hydraulic oil	Mobil Nuto H68 or equivalent
Hydraulic oil filter	Zinga AE-03 ELE 3 Mic
Hydraulic oil tank capacity	6 gallons
Batteries	Six × 12 V
Average run distance	13 miles (fully loaded)
Full charge time	8 hours (approximately)
Tires	
- Drive	5.70-8, qty four, foam-filled pneumatic
- Steering	4.80-8, qty two, foam-filled pneumatic

Table 1: Model EPB72-16 specifications

Dimensions

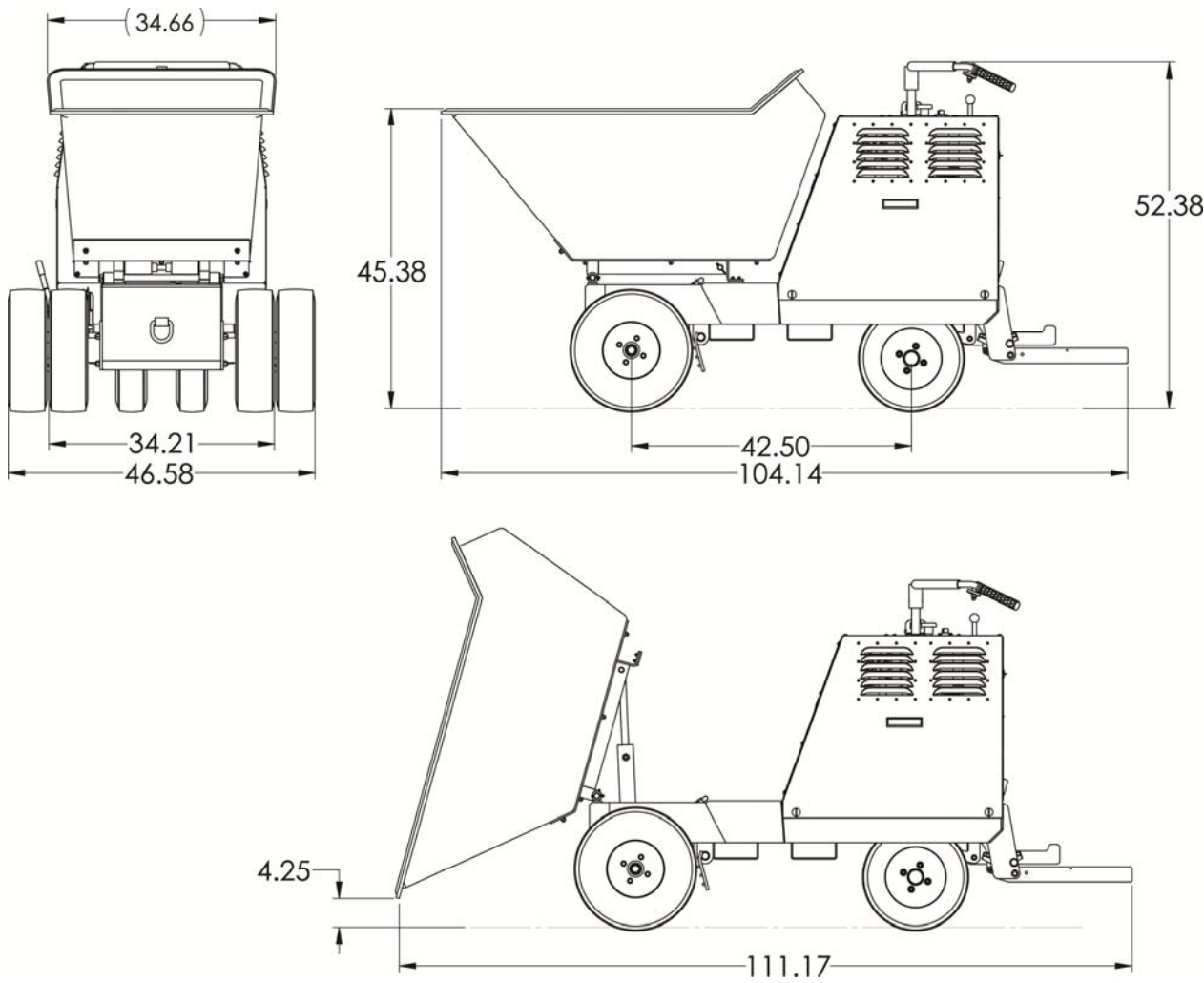


Figure 3: Overall dimensions

Major components



Figure 4: Major components, exterior

System delivery and inspection

Before unpacking, check the equipment for any damage that may have occurred during shipment. Note any damage and immediately contact the carrier to make a damage claim. Also contact Indy Equipment.

Operation



Warning: To prevent serious injury or death as well as equipment damage, adhere to the following:

- Only operate this buggy if you are a qualified and authorized operator. To be qualified, read and understand the operating instructions and safety decals on the buggy, obtain training including actual operation of the buggy, and know the safety rules and regulations for the job site.
- Only operate the buggy if it is in proper operating condition.
- Do not remove or modify any part of the buggy.
- Perform required inspections and lubrications (see page 32). Report any problems immediately. Do not operate the buggy if the inspection reveals a problem.
- Wear all personal protective clothing required for the operations being performed.

Controls and indicators

Before operating the buggy, familiarize yourself with the controls and indicators (Figure 4, Figure 5, and descriptions below).

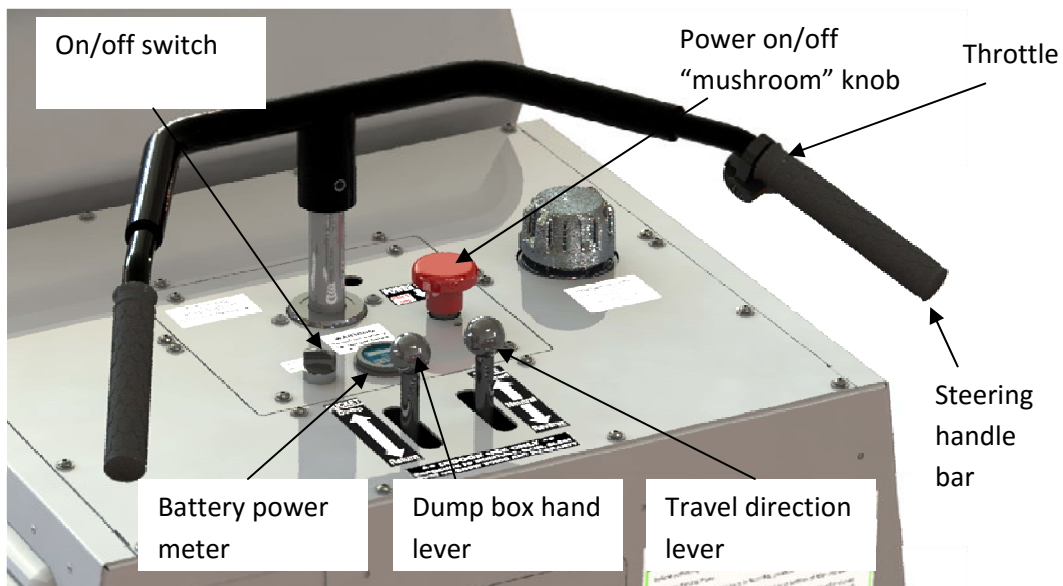


Figure 5: Controls and indicators

Steering handle bar: The steering handle bar is attached to the rear wheels. Rotating the handle bar clockwise steers the unit to the left. Rotating the handle bar counterclockwise steers the unit to the right.

On/off switch: The on/off switch has two-positions. The first position (counterclockwise) is the stop position. The second position (clockwise) is the motor start position.

Throttle: The throttle on the steering handle bar adjusts the speed at which the buggy travels. Squeezing the throttle increases speed. Releasing the throttle stops the machine.

Power on/off “mushroom” knob: The red power on/off knob turns the power on the machine so it can be started. Pressing the knob kills all power. Pulling the knob up restores power.

Travel direction lever: The travel direction lever has three positions. Pushing the lever forward sets the machine to forward travel. The center position is for neutral. Pulling the lever back sets the machine for reverse travel.

Brake pedal: Pressing the brake pedal activates the manual brake. Increasing/decreasing pressure increases/decreases braking pressure.

Parking brake lever: Pulling the lever down engages the parking brake. Pushing the lever forward disengages the parking brake.



Warning: Do not use the parking brake for stopping the buggy unless in an emergency (if the automatic brakes fail). Injury or equipment damage could occur.

Dump box: There are two ways to operate the dump box:

Hand lever: The dump hand lever activates the hydraulic dumping mechanism. Pushing the lever forward dumps the box. Pulling the lever back retracts the box to travel position.

Foot pedal: The dump foot pedal activates the dumping mechanism. Rocking the foot pedal forward dumps the box. Rocking the pedal back retracts the box to the travel position.

Battery power meter: The battery power meter (Figure 6) is a combination gauge that displays the state of battery charge (top) and hour meter (bottom).

Battery charge:

- Multicolor 10-bar LED displays state of charge (5 green, 3 yellow, 2 red LEDs).
- Flashing red LED signals “energy reserve” alarm at 70% discharged.
- Double flashing red LEDs signal “empty” alarm at 80% discharged.

Hour meter:

- Monitors use-time throughout the equipment’s lifespan.
- Records and displays up to 99,999.9 hours on its LCD, rolls over and continues to count and display.



Figure 6: Battery power meter

Buzzer: The buggy has a buzzer that activates when the power is on.

Pre-operation inspections

Worksite inspections



Warning: To prevent serious injury or death as well as equipment damage, perform the following worksite inspections:

- Plan your work. Make sure you know where you will make your pickups, dumps and turns. Inspect the entire surface over which you will travel.
- Look for holes, drop offs and obstacles. Look for rough spots.
- On docks, ramps or floors look for weak spots. Ensure that all surfaces are capable of supporting the buggy and load.
- Look for oil spills, wet spots and slippery surfaces. Look for soft soil, deep mud and standing water.
- Clear away trash and debris along travel route. Pick up anything that might damage a tire.
- Make sure aisles, ramps, doorways and passages are clear.
- Check overhead clearances of doorways, canopies and overheads.
- On rough terrain or slopes, look for anything that might cause you to lose control or cause the buggy to tip over.
- Inspect the grade of the path you will travel. Do not travel on any areas that are too steep. The maximum permissible grade for both fore and aft and side to side is 10.5% (6°). See Figure 7 to determine grade.
- Inspect the area for explosive atmospheres, which can result in fires and/or explosions that could cause serious injury or death. Do not operate the concrete buggy in explosive atmospheres.
- Know exactly how much clearance you have under power and communication cables. Never approach power lines with any part of your buggy unless all local, state/provincial and federal (OSHA) required safety precautions have been taken. Use extreme caution.

To determine percent grade, divide the vertical rise by the horizontal run and multiply by 100.

Example:

Rise = 2 ft

Run = 21 ft

Grade = $2/21 \times 100 = 9.5\%$

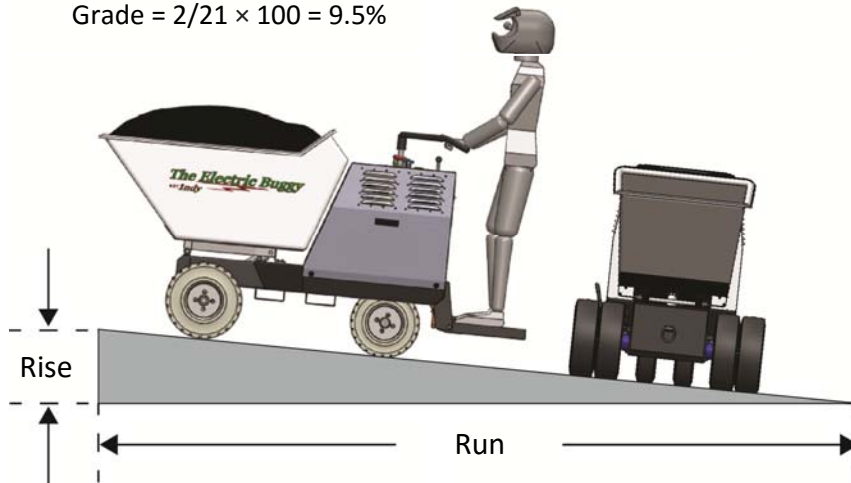


Figure 7: Determining slope grade

Equipment inspections



Avoid damage: To prevent equipment damage, ensure the equipment is clean and functioning properly by performing the daily inspections listed in the maintenance section (see page 32). If the inspection reveals a problem, report it immediately, and do not operate the equipment.



Warning: To prevent serious injury, ensure all panels and guards are in place and all safety decals are in place and legible.

Mounting and dismounting



Warning: To prevent injury or death, take the following precautions when mounting and dismounting the buggy:

- Ensure the buggy is stopped.
- Prior to dismounting, ensure that all controls are in neutral and the parking brake is set.
- Always use “three-point contact,” and face the buggy. (“Three-point contact” means that three of four hands/feet are in contact with the buggy at all times.)
- Clean your shoes and wipe your hands before mounting the buggy.
- Be sure you have secure footing when you step off the buggy.
- Never use control levers as a handhold when climbing on or off the buggy.
- Never step on the foot pedals when climbing on or off the buggy.

Starting the buggy

1. Check the battery power meter to ensure the machine is fully charged.
2. Engage the parking brake.
3. Position the travel direction lever in the center (neutral) position.
4. Pull the power on/off “mushroom” knob up, and wait for the relay to click (about 3 to 5 seconds).
5. Turn the on/off switch on.

Note: If the on/off switch is turned on before the power on/off “mushroom” knob is pulled up, the motor will not start.

Driving the buggy



Warning: To prevent serious injury or death as well as equipment damage, adhere to the following safety practices when traveling with the buggy:

- Keep personnel clear of the buggy. Do not allow anyone to stand/pass in front of the buggy. Do not approach personnel standing in front of fixed objects.
- Do not allow others to ride on the buggy.
- Keep both hands on the steering handle.
- Operate the buggy at a slow speed to become familiar with its speed control operation, brake operation, and steering. Be certain you can control both speed and direction before moving.
- Avoid sudden starts, stops, and direction changes.
- Avoid oil spills or other wet or slippery surfaces that may cause loss of control.
- Maintain clearances from obstacles.
- If the buggy is to travel on uneven/rough terrain, do not ride on the buggy. Instead, raise and secure the operator platform and walk behind the buggy. Do not exceed creep speed.

- Only operate the buggy at full speed when traveling on a flat and level surface. When traveling on surfaces that are not flat and level, DO NOT exceed a creep speed of 10 feet in 5 seconds (120 feet per minute or about 1.4 miles per hour). Because the buggy does not have a speedometer, always apply good judgment when determining a safe and proper creep speed.
- Do not operate on surfaces with holes, drop offs, or obstacles.
- Do not use the buggy on any slope that exceeds 10.5% (6°) grade. Use extra caution when traveling on slopes of less than 10.5% (6°) grade:
 - When possible, ensure that the buggy is facing directly up or down the slope. If you must traverse across the slope, ensure that you do not exceed the permissible side-to-side slope of 10.5% (6°) grade.
 - Travel at creep speed only, and ensure that stopping in a safe manner can be done at all times.
 - Avoid sudden starts, stops, and direction changes.
 - Loaded dump box: Do not travel on slopes with a loaded box facing downhill. Orient the buggy so the box is on the uphill end of the unit (so you, the operator, are on the downhill end of the unit) as shown in Figure 8.
 - Empty dump box: When traveling on slopes with an empty dump box, ensure the box is positioned on the downhill end of the unit (so you, the operator, are on the uphill end of the unit) as shown in Figure 8.

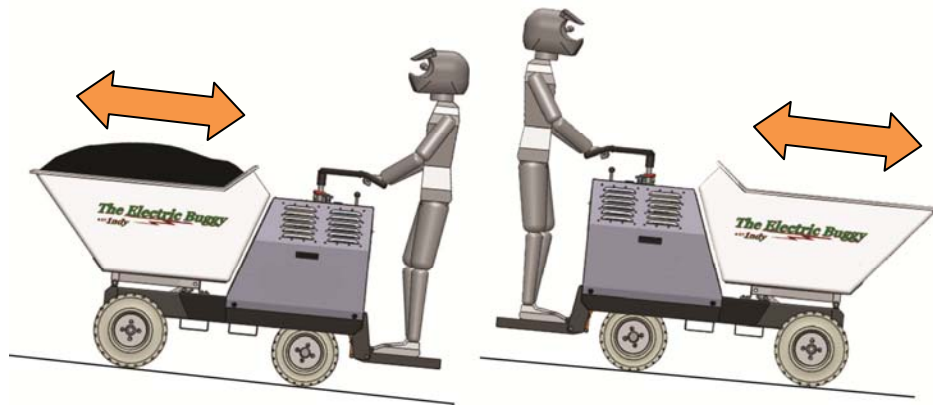


Figure 8: Required orientation on slopes, loaded (left) and empty (right)

Drive the buggy as follows:

1. Release the parking brake.
2. Set the travel direction lever to forward or reverse.
3. Use the throttle to control the speed. Release the throttle to slow the vehicle and apply the dynamic brake.

Note: Because the steering wheel is in the rear, turn the steering handle bar left to turn the vehicle right and vice versa.

Tip: The buggy is equipped with hydrostatic braking, which activates automatically when the throttle is released. To avoid sudden stops, slowly release the throttle to reduce speed gradually. Use the brake pedal when you need extra stopping power.

Filling and dumping



Warning: To prevent serious injury or death as well as equipment damage, adhere to the following safety practices when filling and dumping the dump box:

- Know the rated load capacity of the buggy. Do not exceed the capacity, and account for conditions that can reduce the load that should be carried such as, ground conditions, slopes, etc.
- If there is any question of overloading, separate the load into two or more loads.
- If you cannot see the placement point, use a signal person.
- Before filling or dumping the dump box, stop the buggy and set the parking brake.
- On a slope, face the dump box up hill and block the wheels. Do not dump the buggy when facing downhill on a slope.
- Do not stand in front of or alongside the buggy where you intend to unload.
- Do not dump the buggy towards other personnel.
- Do not touch, lean on, or reach through the dump mechanisms.

Fill and dump the contents of the dump box as follows:

1. Come to a complete stop.
2. Push the dump box hand lever or dump box foot pedal forward to dump the box.
3. Pull the hand lever or press the foot pedal back to retract the box to travel position.

Shutting down the buggy

1. Come to a full stop.
2. Set the parking brake.
3. Set the travel direction lever to neutral position.
4. Turn the on/off switch off.



Warning: If the buggy is parked on a slope, block the wheels to avoid injury or equipment damage.



Avoid damage: The buggy must not be exposed to wet weather. A rain cover for use during storage can be purchased from Indy Equipment.

Charging the batteries

When the battery power meter indicates of charge level of less than 25%, recharge the batteries as follows:

1. Push down on power on/off “mushroom” knob on top of the vehicle to disable the power.
2. Open the charger access door at the rear of the driver’s platform.
3. Pull out the three-prong AC cord, and plug it into a 120 VAC-15 A receptacle (see Figure 9).



Avoid damage: Use only three-prong grounded outlets. Do not use “cheater” adapters for two-blade ungrounded outlets. Be careful when using extension cords. To prevent overheating, use shorter cords with a large wire gage.

4. During charging, look at the light on the charger, which indicates charge level:



Red light: Charging is underway.



Yellow light: Charge level has reached 80%.



Green light: Charging is complete.

5. When charging is complete, unplug the charger cord, and return it to inside the compartment.
6. Close the charger access door.

Tip: Charging the batteries too often will shorten their useful life. Charge the batteries only when they are at less than 25%.



Figure 9: Battery charger and cord

Lifting the buggy

Lift the buggy from either side with a fork lift or a sling using the fork lift ports provided on the chassis.



Figure 10: Forklift ports

Pushing or pulling the buggy

If it is necessary to push or pull the buggy, open the manual bypass valve, which is located under the dump bucket near the front wheels (see Figure 11). Do this by turning the handle 90° counterclockwise to align with the valve.

Opening this valve bypasses the counterbalance valves and allows the front wheels to spin freely. Ensure the manual bypass valve is closed (handle 90 degrees to valve) for normal use.



Figure 11: Manual bypass valve

Transporting the buggy



Warning: To prevent serious injury or death as well as equipment damage when transporting the buggy on a truck bed or trailer, follow these safety practices:

- Know the overall height to avoid contacting overhead obstructions such as bridges, power lines, etc.
- Make sure all tie-downs and blocks are in place and the dump box is completely lowered in the frame.
- If your buggy will be hauled by truck, check the truck and ramp capacities.
- Ensure there are no contents left in the dump box.

Maintenance

Service intervals

Task	Ref. Page	As needed	Daily (before each use)	Monthly	After 200 hours of operation	After 400 hours of operation
Clean the buggy.	33	X				
Check the battery charge level.	33		X			
Check the hydraulic oil level.	33		X			
Inspect the operating controls.	33		X			
Check the throttle.	34		X			
Check the speed control.	34		X			
Check the parking brake hold capacity.	34		X			
Inspect the tires and wheels.	34		X			
Inspect the hydraulic system.	35		X			
Lubricate the steering column.	35			X		
Lubricate the dump box hinge and lift cylinder.	36			X		
Check the battery water level.	37			X		
Change the hydraulic oil and filter.	38				X	
Repack the rear wheel bearings.	38					X

Table 2: Service intervals

Routine maintenance procedures



Warning: Rotating parts can cause serious injury. Do not perform maintenance procedures when the machine is running.

Cleaning the buggy



Warning: Take care during cleaning operations to avoid electrical shock. A wet or damp electrical component may cause a dysfunction in the machine or a short circuit in the electronic system. Only clean the unit after all power has been switched off. Do not use a pressure washer.

- To protect the environment and prevent oxidation to the machine, only use ecological cleaning products with a neutral PH and that have no danger to the skin.
- Use cleaning rags. Do not use abrasive equipment (no scrapers).

Checking the battery charge level

Look at the battery power meter to determine the battery charge level. If the charge level is low, charge the batteries (see page 28).

Checking the hydraulic oil level

1. Turn the hydraulic tank filler/breather cap (see Figure 4) counterclockwise, and remove it
2. Check inside the tank to see if the hydraulic oil level is about half way up to the top of the strainer. If the hydraulic oil is low, fill the tank with **Mobil Nuto H68** hydraulic oil or equivalent.
3. Replace the hydraulic tank filler/breather cap, and turn it clockwise to tighten.

Inspecting the operating controls

Check all operating controls for proper operation and adjustment.

Checking the throttle

Ensure the throttle works freely and returns to the closed position when released. If operation of the throttle is not free, do not attempt to start the buggy.

Checking the speed control

In a level, open area, with travel direction control lever in center (neutral) position and the parking brake engaged, press the throttle. If speed control operation is not free, do not attempt to operate the buggy.

Checking the parking brake holding capacity

With the parking brake engaged, place the direction control lever to forward position. Slowly activate the throttle slightly.

- If the buggy moves, adjust the parking brake in accordance with the parking brake adjustment instructions (page 39).
- If the buggy does not move, release the throttle and disengage the parking brake.

Inspecting the tires and wheels

- Check the tires for damage. Replace damaged tires.
- Check the security of lug nuts. Tighten loose lug nuts.

Inspecting the hydraulic system



Warning: Hydraulic oil under pressure is a skin injection hazard and can cause serious injury or death. Do NOT use your hands or other body parts to check for leaks. If hydraulic oil is injected under the skin, it can cause gangrene. Seek medical help immediately.

Remove the access panels, tip up the dump box, and use a piece of cardboard to check for hydraulic hose leaks. Also check the following:

- The tightness of the whole system.
- The hydraulic piping for crushing, cracks and distortions.
- The hoses for unwinding, points of friction, crushing, cracks, porosity, etc.

Lubricating the steering column

Using a grease gun and a good grade of chassis lubricant, lubricate the grease fitting between and just above the rear wheels (see Figure 12).



Figure 12: Steering column grease fitting

Lubricating the dump box hinge and lift cylinder

1. Tip up the dump box.
2. Using a grease gun and a good grade of chassis lubricant, lubricate the following grease fittings (see Figure 13):
 - Dump box hinge: four grease fittings
 - Lift cylinder: two grease fittings



Figure 13: Dump box hinge and lift cylinder grease fittings

Checking the battery water level



Warning: When working with the batteries, ensure your safety and the safety of others as follows:

- High electrical voltage is present that can cause serious injury or death. Do not touch contacts of batteries or cables.
- When working with or around the batteries, there is a risk of fire or explosion. Use extreme caution when working with these components. Never use an open flame around batteries.
- Before any maintenance or repair work, disconnect the charger from the connector of the battery.
- Batteries contain sulfuric acid, which will cause severe burns to skin and eyes. Use appropriate safety equipment when servicing the batteries. Wear proper personal protective clothing & goggles. If acid is splashed into eyes or on skin, thoroughly rinse with water and consult a doctor immediately. Rinse with water any clothing that contacted acid.

Check the battery water level as follows:

1. Disable the power by pushing down on the red power on/off.
2. Twist the latches on the side access panels, and lift the panels off the buggy.
3. Slide open the battery trays (one side at a time) by pushing down on the yellow latches (located on the sides of the tray) and pulling on the bottom of the tray.
4. Unthread the white vent caps from each battery.
5. Using a flashlight (never a flame), check that the fluid covers the top of the plates but is not higher than that.
6. If fluid level is low, add distilled water until the plates are covered. Do not over fill; never fill the cell to the brim.
7. Replace all caps, and slide battery tray back into the buggy until the latch clicks. Replace the side access panels, and twist the latches to secure.

Changing the hydraulic oil and filter

1. Remove the right side cover, slide out the battery tray, and disconnect and remove the three batteries.
2. Place a large enough container under the hydraulic tank drain plug.
3. Using a 3/8-inch wrench, twist off the drain plug, and drain the hydraulic oil. When the oil is drained, remove the container.
4. Twist the drain plug back on, and tighten.
5. Twist off the filter, and replace it with a new one (**Zinga AE-03** or equivalent).
6. Replace and reconnect the batteries. Replace the right side cover.
7. Remove the filler/breather cap (see Figure 2), and refill the hydraulic oil tank with enough **Mobil Nuto H68** hydraulic oil or equivalent to reach the strainer. Replace the filler/breather cap.

Repacking the rear wheel bearings

1. Block the front wheels, and prop up the rear of the machine.
2. Remove the lug nuts, and remove the rear wheels.
3. Remove the hub cap.
4. Remove the cotter pin, castle nut, and washer. Remove the hub.
5. Remove the bearing seal.
6. Clean the shaft, hub bearing, and washer with parts cleaner.
7. Repack the bearing with a good grade of bearing lubricant.
8. Replace the bearing seal. Install the hub, washer, castle nut, a new cotter pin, and the hub cap.
9. Replace the wheels and lug nuts, and tighten.

Adjustments

Parking brake (holding strength)

When the parking brake is engaged, you should not be able to move the buggy. To tighten the brake, push the brake lever up (disengaged), and turn the park brake lever knob clockwise (see Figure 14).



Figure 14: Adjustment knob for parking brake

Directional valve (power)

If the buggy seems to be sluggish or lack power, a minor adjustment to the directional valve will probably fix the problem. Do this as follows:

1. On the left, rear side of the directional valve, locate the 5/8-inch hex head plug (see Figure 15), and remove it.
2. Insert a slotted screwdriver, and turn the pressure relief screw clockwise until it is snug. Do not over tighten.
3. Turn the relief valve screw counterclockwise $\frac{1}{4}$ to $\frac{1}{2}$ turn, or set it with a gauge to 2200 psi.
4. Replace the plug.

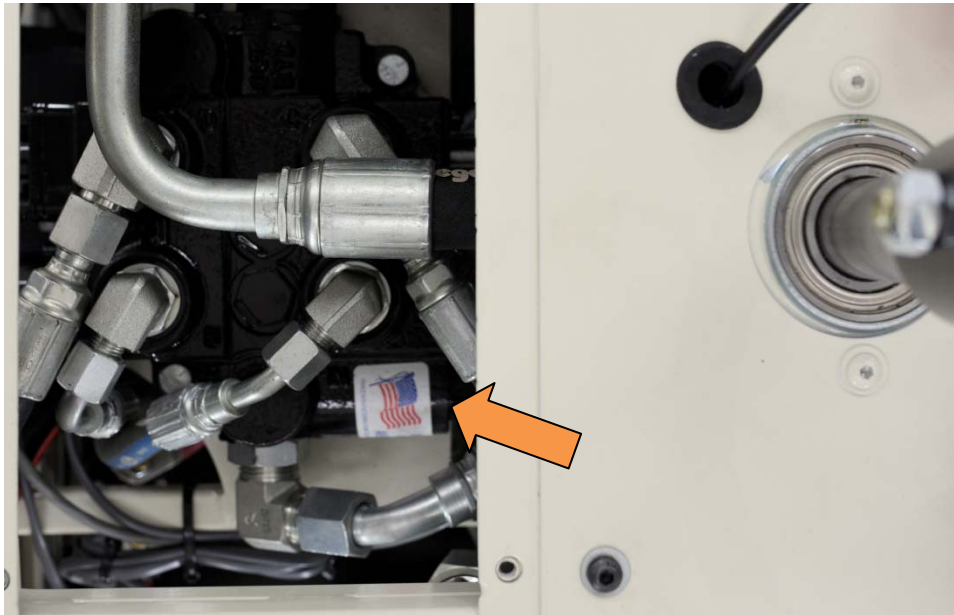


Figure 15: Hex plug that covers the pressure relief screw (view from above)

Counter balance valves (stopping distance)

To shorten or lengthen the stopping distance (the amount of brake applied when releasing the throttle), use a 4 mm hex key to turn the two counter balance valve cartridges (see Figure 16) equally $\frac{1}{4}$ to $\frac{1}{2}$ a turn.

- Clockwise decreases braking.
- Counterclockwise increases braking.

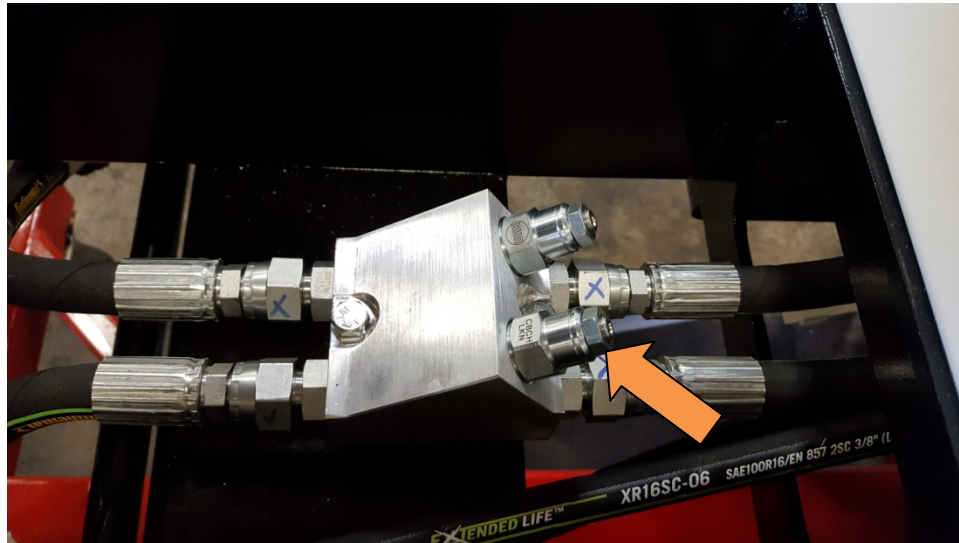


Figure 16: Cross balance valve cartridges

Repair

Tires

In the event you experience damaged tire, repair it as follows:

1. Securely block and support the buggy.
2. Remove the lug nuts, and remove the wheel. With the front inner wheels, also remove the bolts that secure the wheel spacer.
3. Repair or replace the tire.
4. Reinstall the wheel on the buggy. Tighten the fasteners.

Hydraulic drive motors

The hydraulic drive motors are extremely reliable and ordinarily will not need maintenance or repair.

However, should trouble develop in the hydraulic drive motors, it is best to contact their manufacturer, White Drive Products, at 800.323.7298 ext. 2 or techsupport@whitedriveproducts.com.

If necessary, Indy Equipment & Supply LLC will direct you to the proper place for repairs. Please call 877-320-4639

Storing the buggy



Avoid damage: To prevent damage to the buggy during storage, store as follows:

- Do not store the buggy outside.
- Choose a cool and dark secure area, free of dampness and mildew.
- Store the buggy on a level surface.
- Provide adequate protection to avoid damage by rodents and insects, which can damage rubber hoses, electrical wire and other buggy components.

Recommended spare and maintenance parts

Part	Manufacturer name	Manufacturer part code
Hydraulic oil, 6 gallons	Mobil	Nuto H68 (or equivalent)
Hydraulic oil filter	Zinga	AE-03 ELE 3 Mic.
Fuse, 10 A	Bussmann	ATC-10
Fuse, 25 A	Bussmann	Max-25
Fuse, 500 A	Bussmann	ANL-500

Table 3: Recommended spare and maintenance parts list

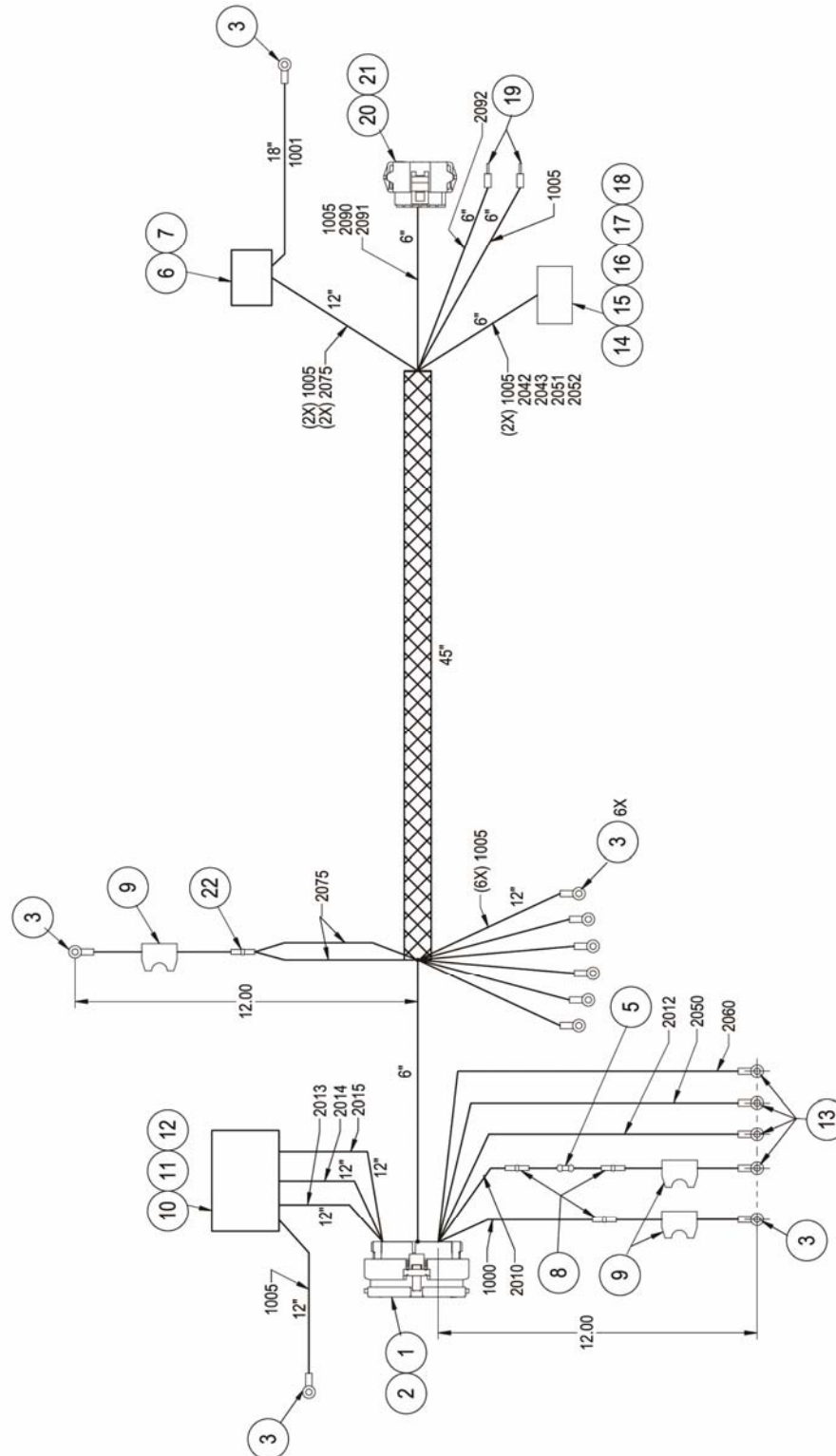
Troubleshooting

Problem	Root Cause	Solution
Buggy doesn't start.	On/off switch already turned on before the power on/off "mushroom" knob is pulled up.	Follow starting sequence, (page 24).
	Batteries drained.	Charge batteries (page 28).
	500 A fuse blown.	Replace fuse (left side of battery charger, visible through access door).
Buggy lacks power.	Directional power valve needs adjustment.	Adjust directional valve (page 40).
	Parking brake engaged.	Disengage parking brake (page 18).
Buggy motor runs but buggy won't move.	Manual bypass valve left open after pushing or pulling.	Close the manual bypass valve (page 30).
Parking brake won't hold buggy.	Parking brake cable needs tightening.	Tighten parking brake cable (page 39).
Parking brake lever too tight to lock.	Parking brake cable needs loosening.	Loosen parking brake cable (page 39).
Batteries won't charge.	25 A fuse blown.	Replace fuse (above battery charger, visible through access door).

Table 4: Troubleshooting

Parts

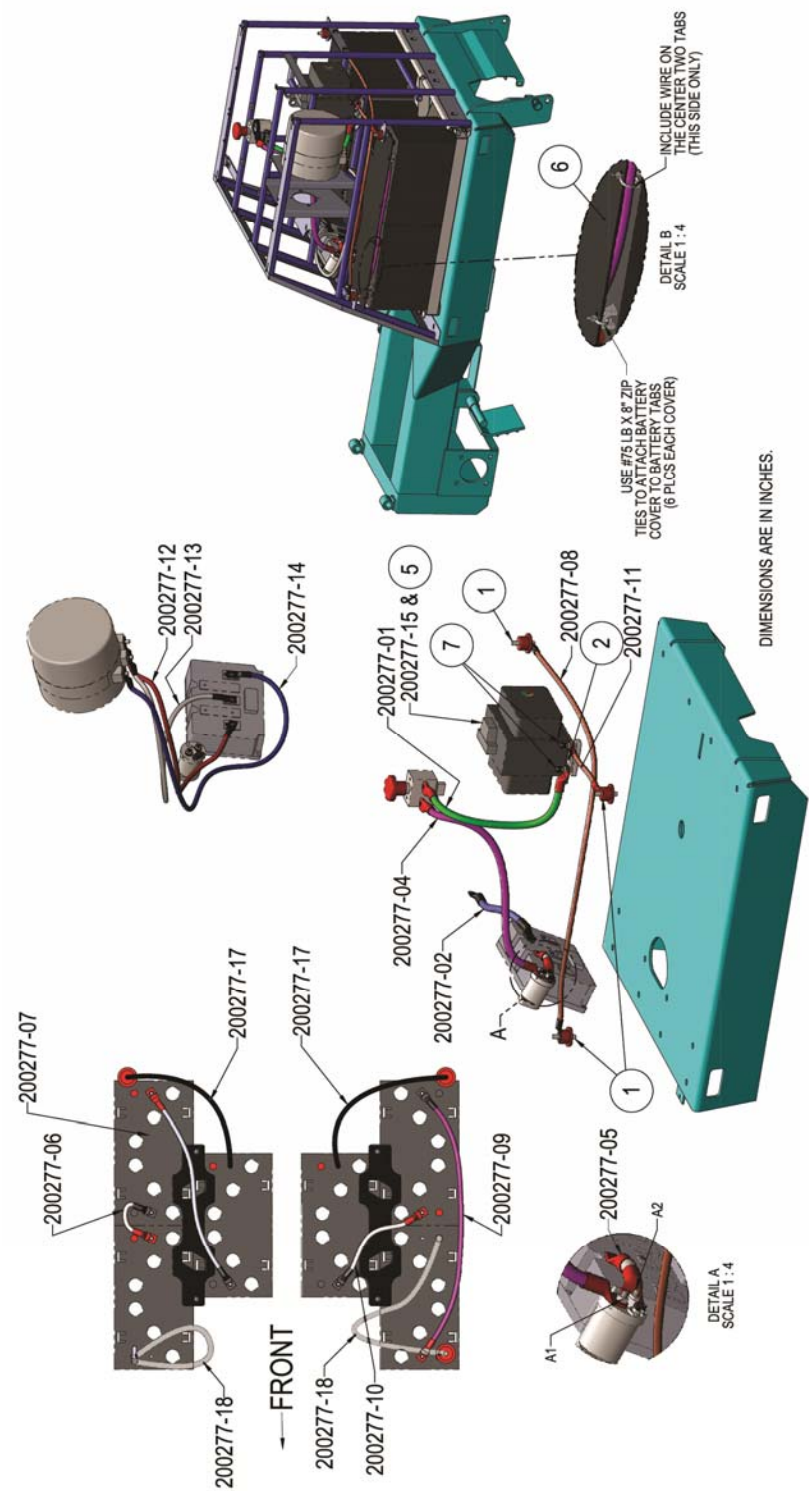
Electrical harness



Item no.	Part number	Description	Qty.
1	200315	PIN TERMINAL TE CONNECTIVITY 770854-1	16
2	200316	CONNECTOR 35 POS. TE CONNECTIVITY 776164-1	1
3	200362	RING TERMINAL 3/8" 20-18AWG WAYTEK 30906 OR EQUIV	10
4	200231	18 AWG WIRE THHN GREY	AR
5	200387	RESISTOR, 10 OHM, 1/4 W, 5% CARBON	1
6	200352	CONNECTOR 8 POS FEM MOLEX 39-01-2085	1
7	200353	TERMINAL FEM CONTACT MOLEX 39-00-0208	8
8	200335	SPLICE, BUTT MOLEX 19199-0007 OR EQUIV	3
9	200129	FUSE HOLDER ATC BUSSMANN HHC OR EQUIV	3
10	200345	CONNECTOR 4 POS RECEPTACLE AMP AT04-4P-SR02BLK	1
11	200346	PIN CONTACT 16-18AWG AMP AT60-16-0122	4
12	200347	WEDGE SOCKET AMP AW4P	1
13	200320	RING TERMINAL RED 1/4" WAYTEK 30954 OR EQUIV	4
14	200354	CONNECTOR 8 POS MALE DELPHI 12047931	1
15	200355	TERMINAL PIN 18AWG DELPHI 12045773	7
16	200356	TERMINAL POS ASSURANCE DELPHI 15324525	1
17	200357	WIRE SEAL RED DELPHI 15324973	7
18	200358	CAVITY PLUG RED DELPHI 12059168	1
19	200359	TERMINAL PIN 18-22AWG RED 3M 81-P-47-NB-A OR EQUIV	2
20	200360	CONNECTOR 3 POS JST SMP-03V-BC	1
21	200361	TERMINAL CONTACT JST SHF-00IT-0.8 BS	3
22	200405	STEP DOWN SPLICE 20-18 AWG WAYEK 28256 OR EQUIV	1

Table 5: Electrical harness parts list

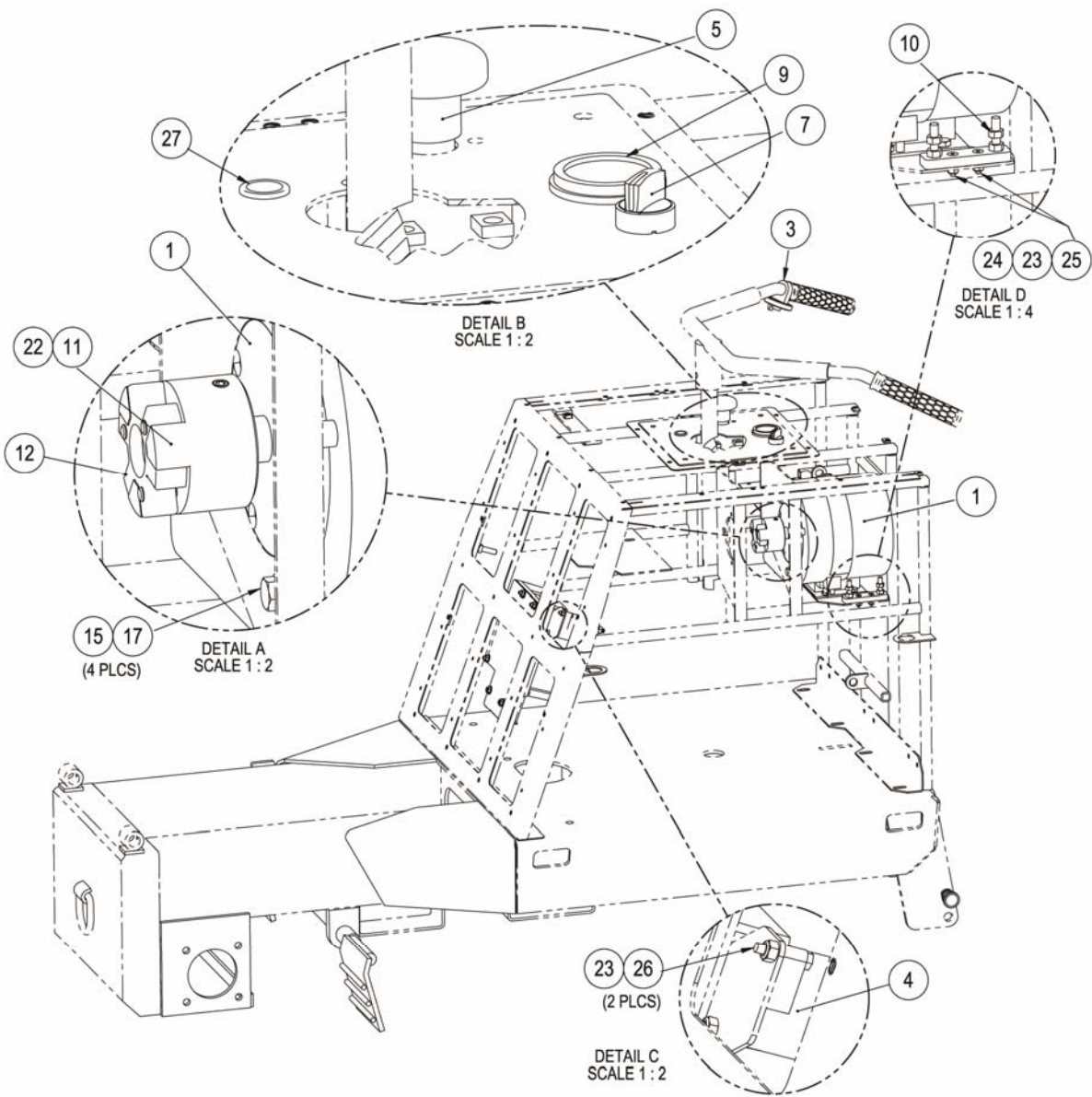
Electrical group



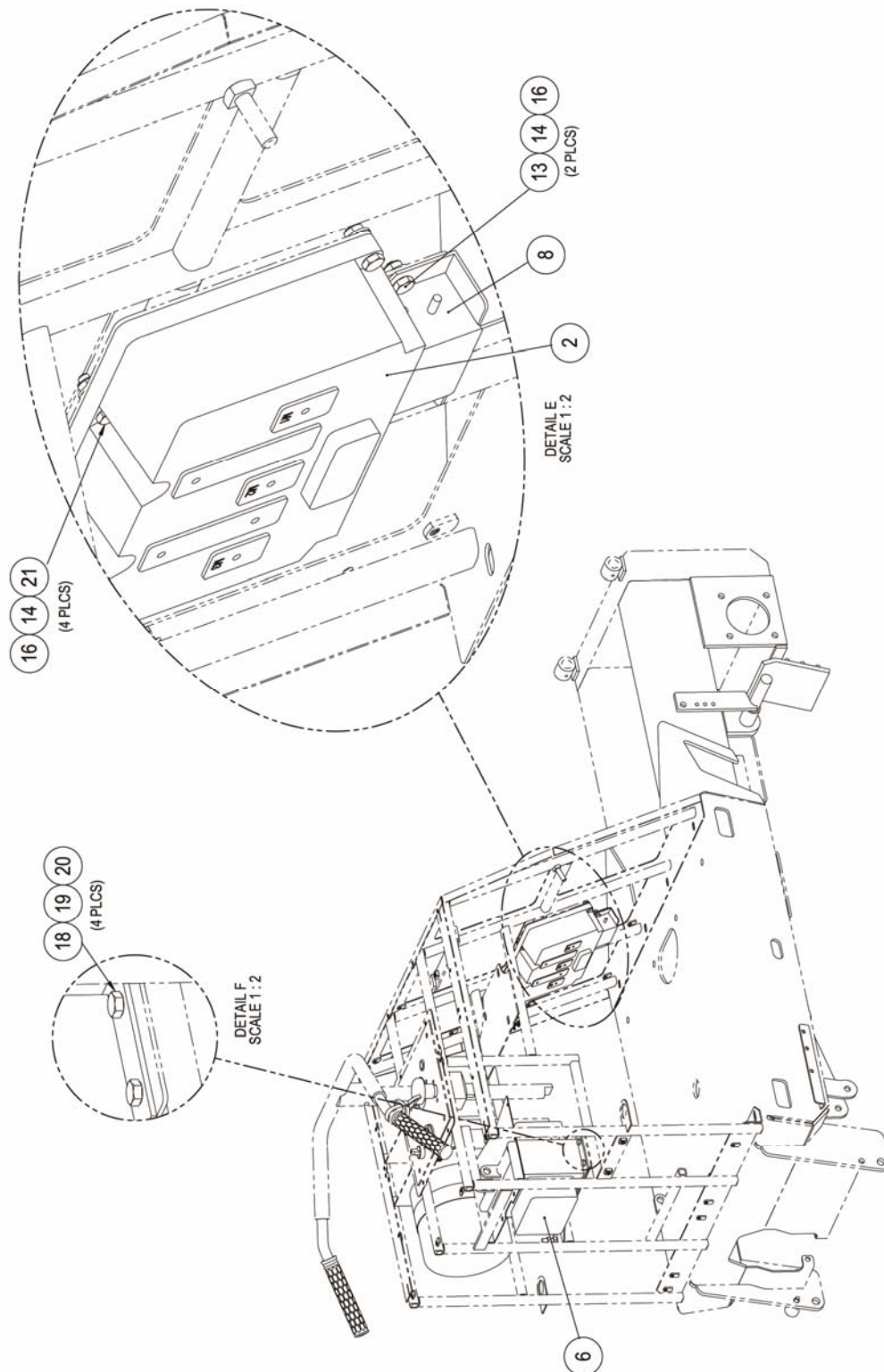
Item no.	Part number	Description	Qty.
1	200123	BATTERY FEEDER STUD	3
2	200307	FUSE 500 A ANL	1
3	200305	FUSE 25 A MAXI	1
4	200116	FUSE 10 A ATC BLADE	3
5	200277	KIT, WIRE, ELEC BUGGY	1
6	200402	BATTERY COVER	2
7	200404	CAP NUT, 5/16-18, BLK PLASTIC	2

Table 6: Electrical group parts list

Electrical component install (1 of 2)



Electrical component install (2 of 2)



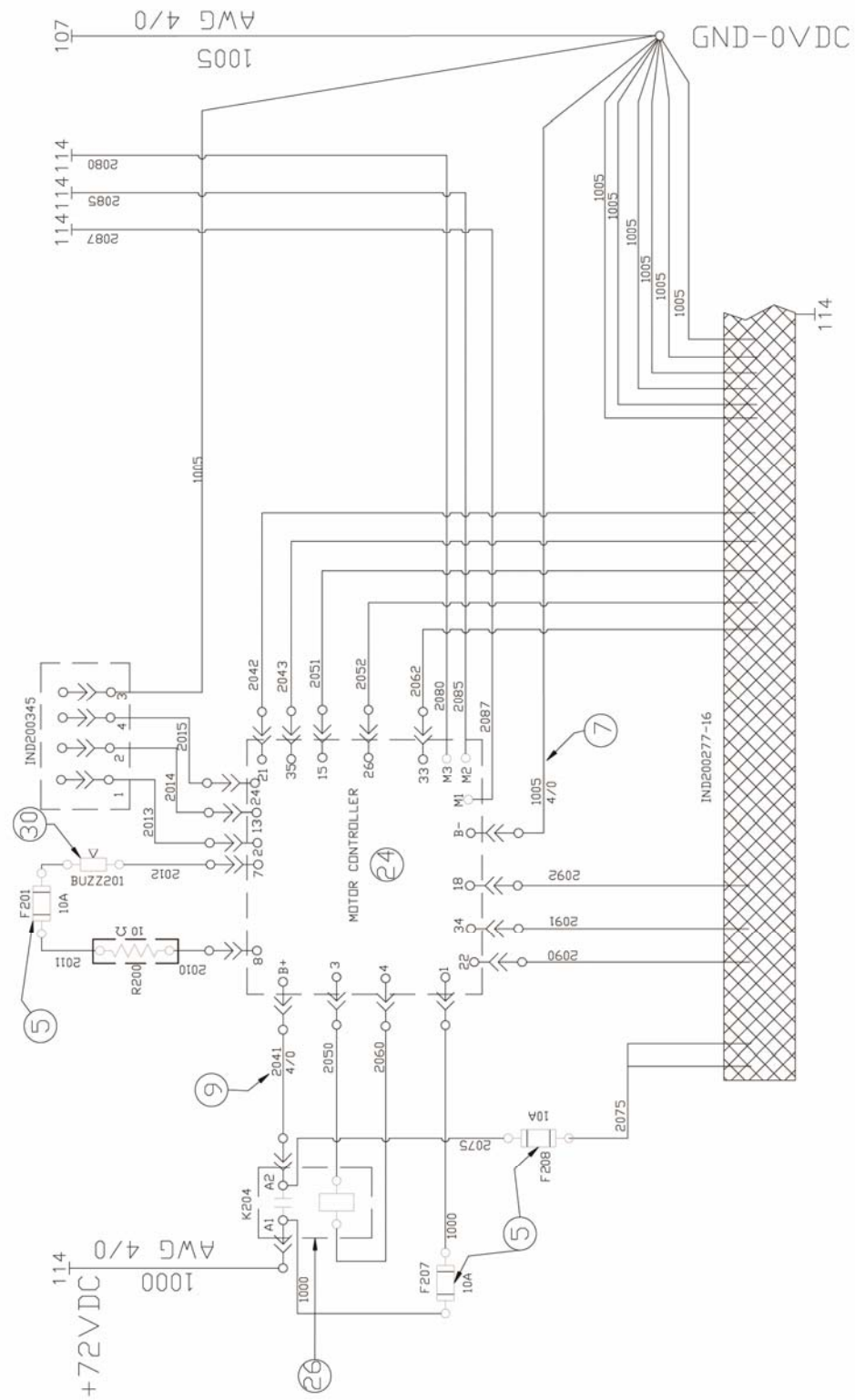
Item no.	Part number	Description	Qty.
1	200302	MOTOR BLDC 72 V	1
2	200303	MOTOR CONTROLLER 72V	1
3	200299	THROTTLE, 5K POT LEVER	1
4	200364	CONTACTOR 24 V 250 A	1
5	200300	SWITCH E-STOP MUSHROOM	1
6	200304	CHARGER BATTERY 72 V 20 A	1
7	200301	SWITCH SELECTOR 22MM 2 POS NO	1
8	200114	ALARM 97 dB	1
9	200306	METER BATTERY PANEL 72 V	1
10	200118	FUSE HOLDER ANL	1
11	200144	COUPLING, FLEX SHAFT, 7/8 BORE	1
12	200145	SPIDER, FLEX COUPLING	1
13	200204	HHCS, 1/4-20 X 0.50, GR5	2
14	200205	FW, 1/4" SAE	6
15	200208	FW, 3/8" SAE	4
16	200211	L-NUT, NYLON, THIN, 1/4-20 GR5	6
17	200242	HHCS, 3/8-16 X .75, GR5, Z	4
18	200245	HHCS, 5/16-18 X .75, GR5 Z	4
19	200246	FW, 5/16" REG, Z	4
20	200247	HEX NUT, 5/16-18, GR5, Z	4
21	200248	HHCS, 1/4-20 X 1.00, GR5	4
22	200249	SHAFT KEY, 3/16 SQ X 1.25	1
23	200251	L-NUT, NYLON, 10-24, GR2, Z	4
24	200252	FW, #10, REG, Z	2
25	200253	SHCS, C-SUNK, 10-24 X .88, Z	2
26	200365	MACH SCRW, 10-24 X 1.0 ZP	2
27	681845	SNAP BUSHING	1

Table 7: Electrical component install parts list

The diagram illustrates a complex marine electrical system. At the top, a shore power source (110VAC 60Hz) is connected to a T106 CHARGER. The system is divided into several sections:

- Power Entry and Distribution:** Shore power enters through a 1000 4/0 wire (8) and a 1001 wire. It passes through a 500A fuse (F100) and a 1006 0.5A fuse (F106) before reaching the T106 CHARGER.
- Battery Banks:** There are four 12V battery banks: BAT100, BAT101, BAT102, and BAT103. Each bank is connected to a terminal block (TB72.1, TB72.2, TB72.3) and has its own set of fuses and wiring.
- Motor and Encoder:** A 14A 110VAC motor (M1) is connected to an ENCODER. The motor is also connected to a THERMISTOR and a TEMP sensor.
- Sensors and Switches:** The system includes a S210 switch, a R210 switch, and a M212 switch. These are connected to various wires and components.
- Wiring and Connections:** The diagram shows a dense network of wires, many of which are labeled with numbers in circles (e.g., 1, 2, 3, 4, 6, 8, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32). These numbers likely correspond to a wire list or legend.
- Grounding:** The system is grounded to a GND-0VDC point.

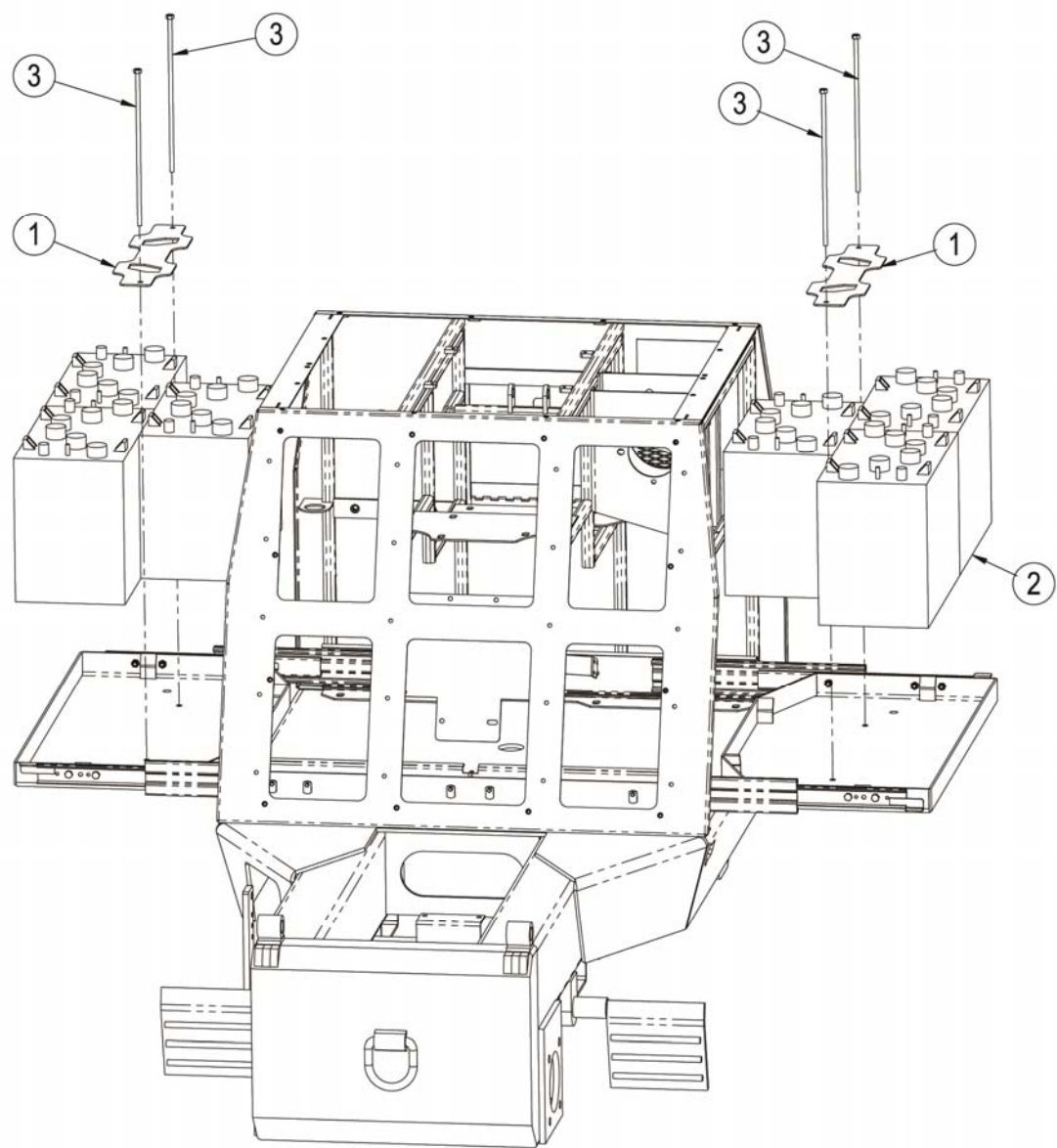
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Item no.	Part number	Description	Qty.
1	200307	FUSE 500 A ANL	1
2	200107	TERMINAL BATTERY POSITIVE	5
3	200110	TERMINAL BATTERY NEGATIVE	4
4	200305	FUSE 25 A MAXI	1
5	200116	FUSE 10 A ATC	3
6	200277-01	CABLE 4/0 19"	1
7	200277-02	CABLE 4/0 12.5"	1
8	200277-04	CABLE 4/0 24"	1
9	200277-05	CABLE 4/0 5"	1
10	200277-06	CABLE 1/0 6.6"	1
11	200277-07	CABLE 1/0 18.9"	1
12	200277-08	CABLE 1/0 50.75"	1
13	200277-09	CABLE 1/0 24"	1
14	200277-10	CABLE 1/0 14.1"	1
15	200277-11	CABLE 1/0 8.75"	1
16	200277-12	CABLE 1/0 32.5"	1
17	200277-13	CABLE 1/0 43.4"	1
18	200277-14	CABLE 1/0 42.25"	1
19	200277-15	FUSE HOLDER ASSY MAXI	1
20	200277-16	WIRE HARNESS ASSY	1
21	200277-17	BRAIDED STRAP 18"	2
22	200277-18	BRAIDED STRAP 24"	2
23	200302	BLDC MOTOR 72 V	1
24	200303	CONTROLLER 72V 350 A	1
25	200299	THROTTLE LEVER	1
26	200364	CONTACTOR 24 V 500 A	1
27	200300	SWITCH E-STOP DC 250 A	1
28	200304	CHARGER BATTERY 72 V 20 A	1
29	200301	SWITCH SELCTRO 2 POS NO	1
30	200114	ALARM 97 dB	1
31	200306	METER BATTERY 72 V	1
32	200118	FUSE HOLDER ANL	1

Table 8: Electrical schematic parts list

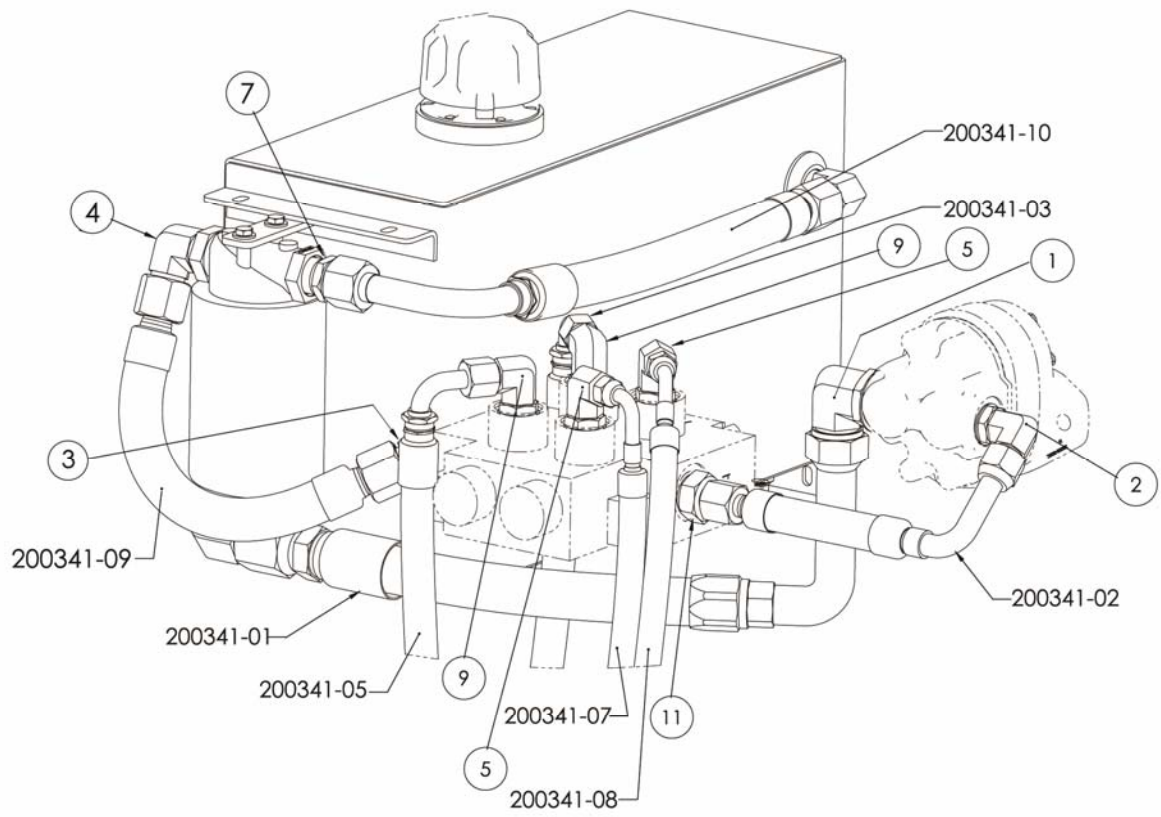
Batteries



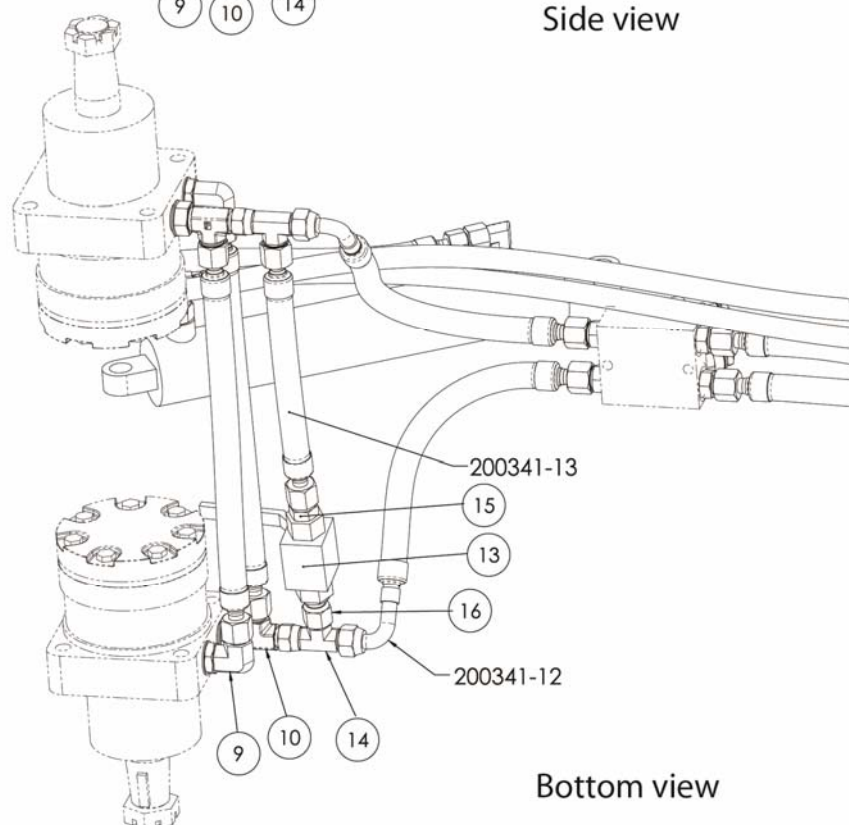
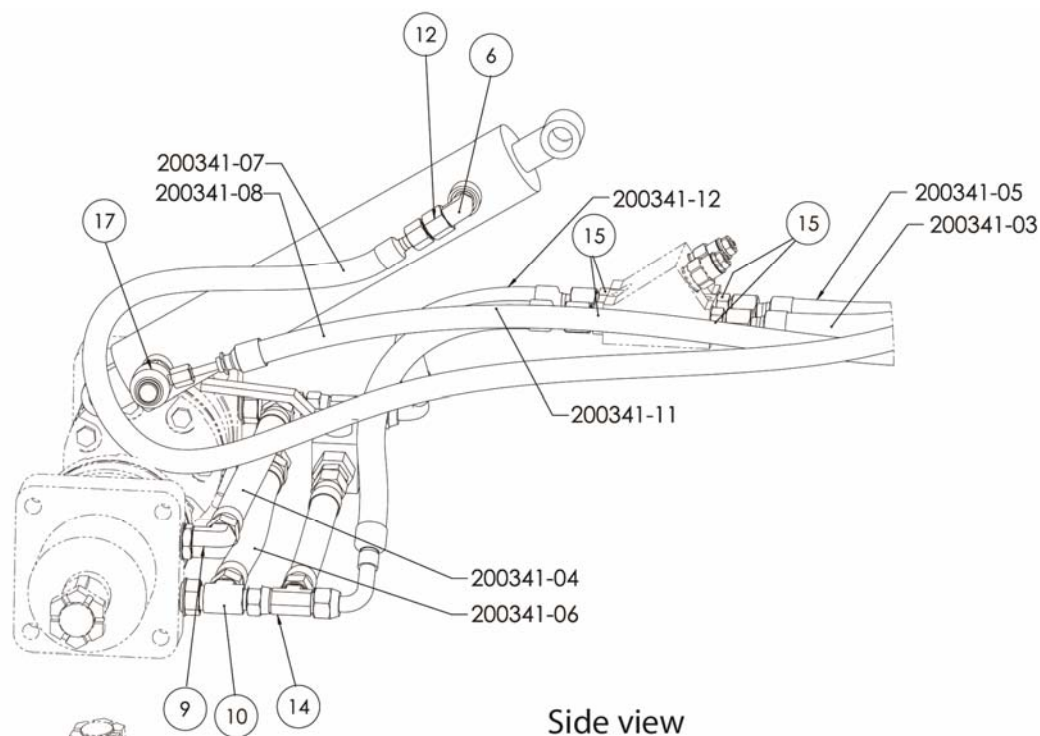
Item no.	Part number	Description	Qty.
1	200098	BRKT, BATTERY HOLD DOWN	2
2	200104	BATTERY 12 V	6
3	200157	WLDT, BATT HOLD DOWN ROD	4

Table 9: Batteries parts list

Hydraulic components (1 of 2)



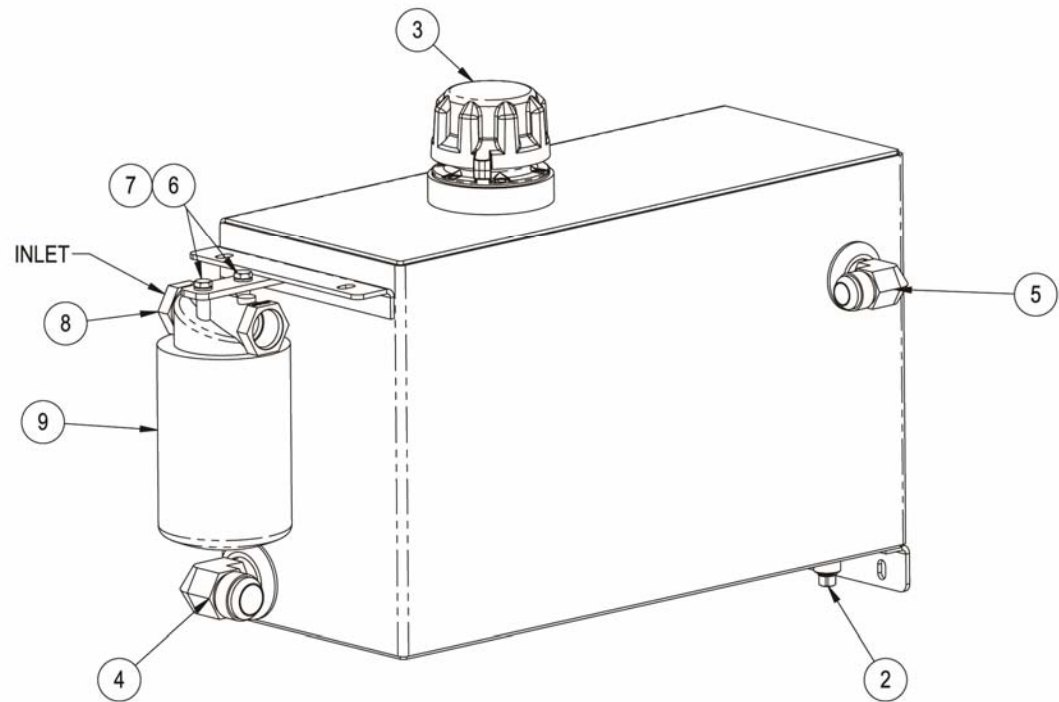
Hydraulic components (2 of 2)



Item no.	Part number	Description	Qty.
1	200176	ADPT, 90, -16 MJIC-16 MORB	1
2	200177	ADPT, 90, -10 MORB-10 MJIC	1
3	200180	ADPT, 45, -12 MORB-12 MJIC	1
4	200181	ADPT, 90, -12 MNPT-12 MJIC	1
5	200182	ADPT, 90, -10 MORB-06 MJIC	2
6	200184	ADPT, 90, -4 MORB -6 MJIC	1
7	200327	ADPT, STR, -12 MNPT -12MJIC	1
8	200341	KIT, HYD HOSE	1
9	200342	ADPT, 90, -10 MORB-08 MJIC	4
10	200343	TEE, -08 MJIC -10 MORB-08 MJIC	2
11	200344	ADPT, STR, -12 MORB -10 MJIC	1
12	200376	ORIFICE, 0.045, 6MJIC-6FJIC	1
13	200392	BALL VALVE, HP	1
14	200393	TEE,-8 FJIC -8 MJIC-8 MJIC	2
15	200394	ADPT, STR, -8 MORB -8 MJIC	5
16	200395	ADPT, STR, -8 MORB -8 FJIC	1
17	200403	-04MB LIVE SWIVEL TO -04MJIC	1

Table 10: Hydraulic components parts list

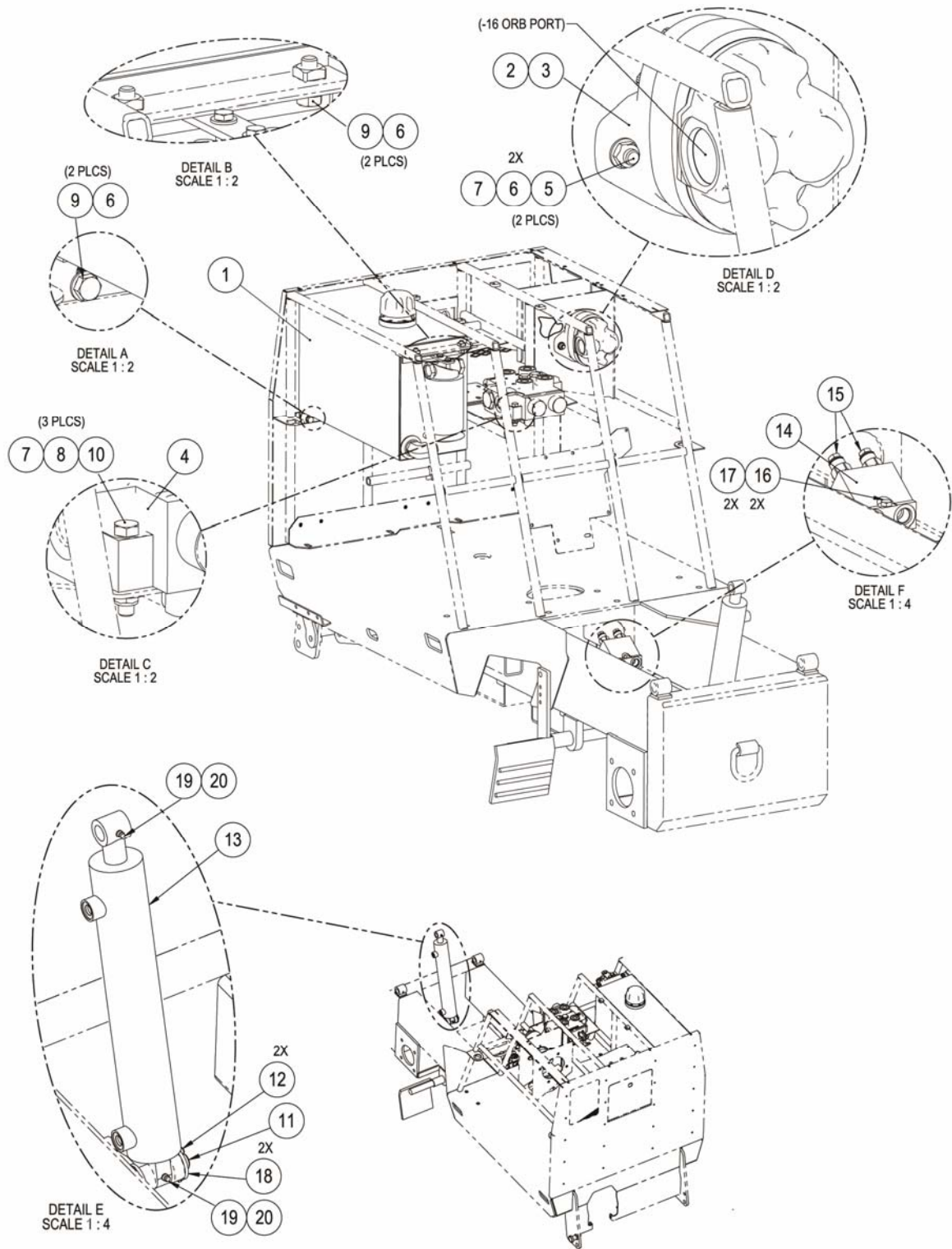
Hydraulic oil reservoir



Item no.	Part number	Description	Qty.
1	200036	WLDT, HYD TANK, 6 GAL	1
2	200045	PLUG, MAGNETIC, 1/4" NPT	1
3	200079	FILLER BREATHER	1
4	200175	ADPT, 90,-16 MNPT-16 MJIC	1
5	200181	ADPT, 90,-12 MNPT-12 MJIC	1
6	200204	HHCS, 1/4-20 X 0.50, GR5	2
7	200205	FW, 1/4" SAE	2
8	898330	RETURN FILTER HEAD	1
9	W8163	RETURN FILTER	1

Table 11: Hydraulic oil reservoir parts list

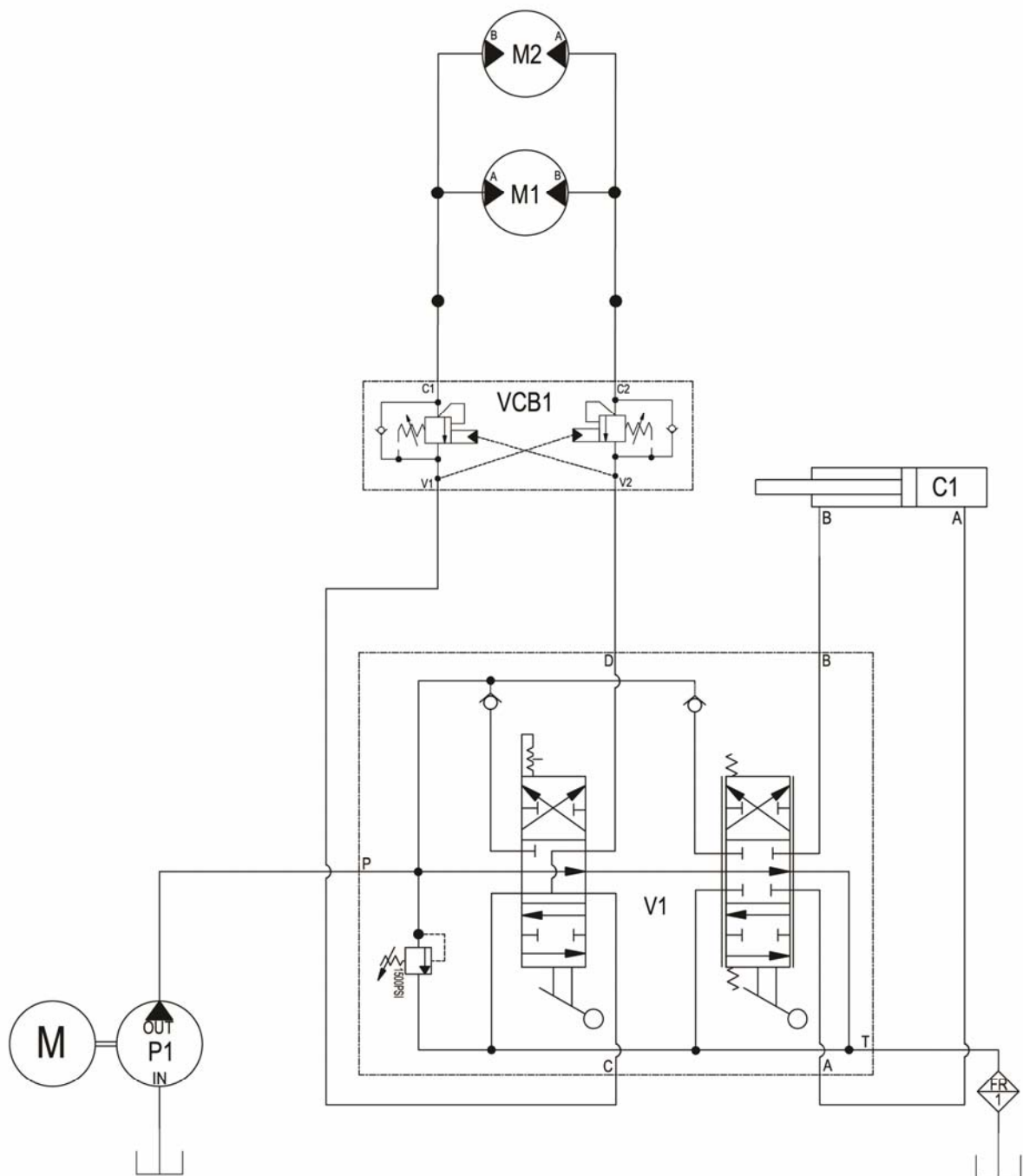
Hydraulic system install



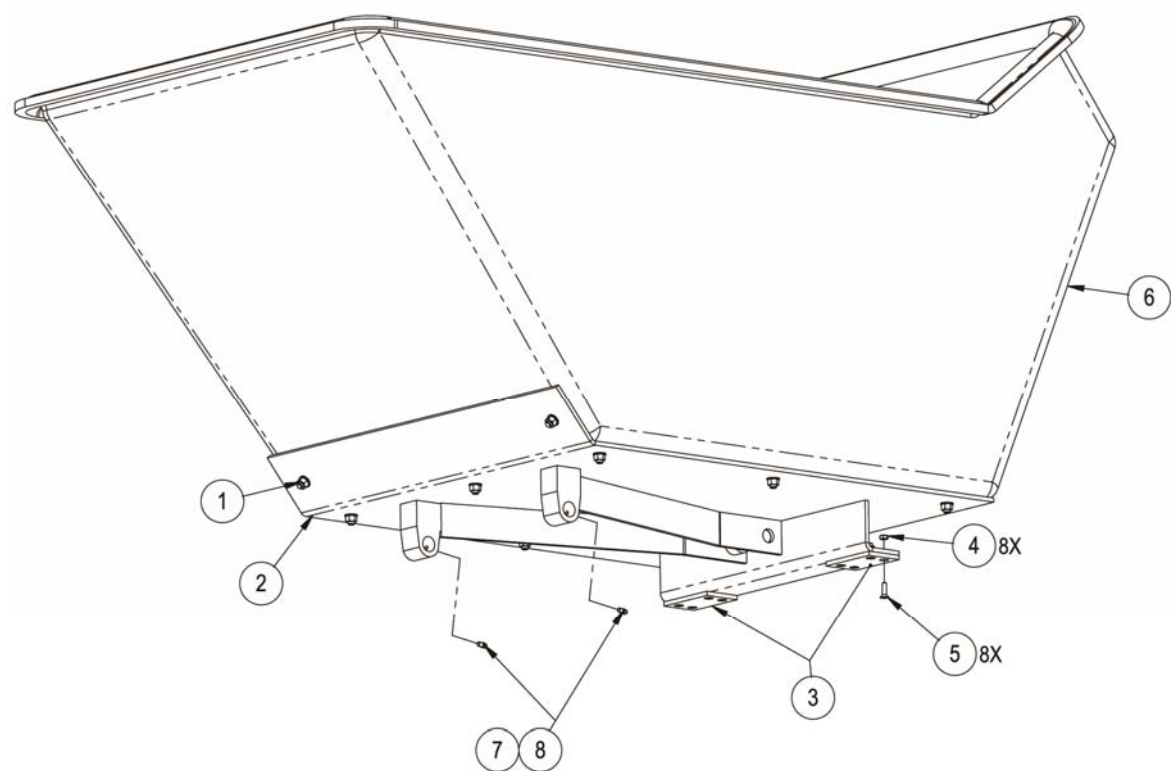
Item no.	Part number	Description	Qty.
1	200038	ASSY, HYD TANK, 6 GAL	1
2	200143	COUPLING, FLEX SHAFT, 3/4" BORE	1
3	200286	GEAR PUMP 1.03 IN3	1
4	200287	VALVE,DIRECTIONAL CONTROL	1
5	200207	HHCS, 3/8-16 X 1.25, GR5	2
6	200208	FW, 3/8" SAE	8
7	200221	L-NUT, NYLON, THIN, 3/8-16 GR2	5
8	200222	FW, 3/8" REG	3
9	200242	HHCS, 3/8-16 X 0.75, GR5, Z	4
10	200243	HHCS, 3/8-16 X 2.00, GR5, Z	3
11	W470795	PIN	1
12	796075	COTTER PIN	2
13	W8396	CYL, BUCKET	1
14	200389	BLOCK, INLINE	1
15	200390	CARTRIDGE, CBCH-LKN	2
16	200397	HHCS, 5/16-18 X 2.0, GR5 Z	2
17	200324	L-NUT, NYLON, 5/16-18 GR5	2
18	993870	WASHER, 3/4"	2
19	794550	GREASE FITTING	2
20	796555	CAPLUG	2

Table 12: Hydraulic system install parts list

Hydraulic schematic



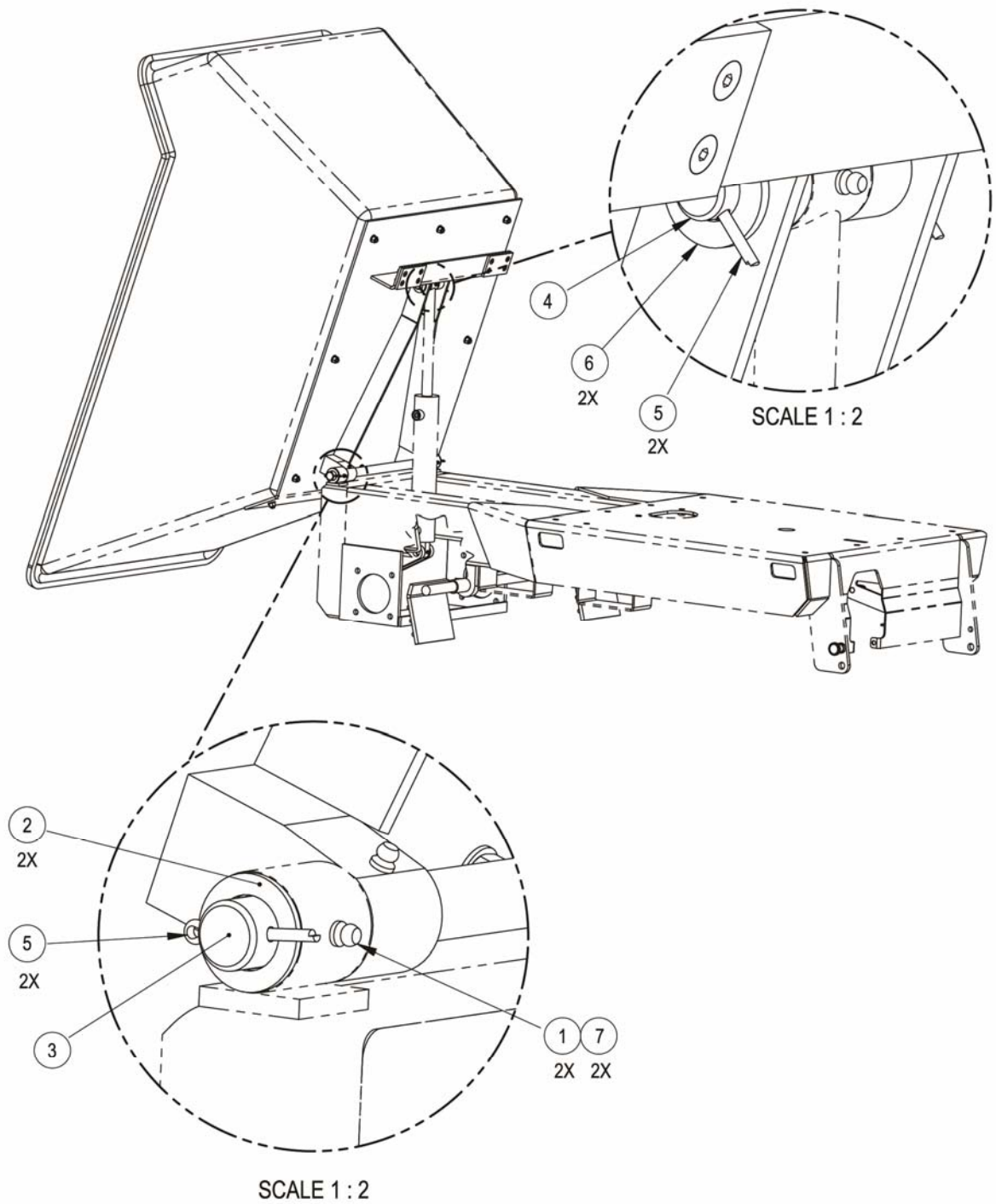
Dump box



Item no.	Part number	Description	Qty.
1	108830	BUCKET MOUNTING HARDWARE	10
2	200198	WLD, BUCKET BASE	1
3	200210	PAD, BUCKET BASE	2
4	200211	L-NUT, NYLON, THIN, 1/4-20 GR5	8
5	200224	SHCS, C-SUNK, 1/4-20 X 0.88, Z	8
6	610652	BUCKET, 16 CF	1
7	796555	CAPLUG	2
8	796580	FITTING, GREASE	2

Table 13: Dump box parts list

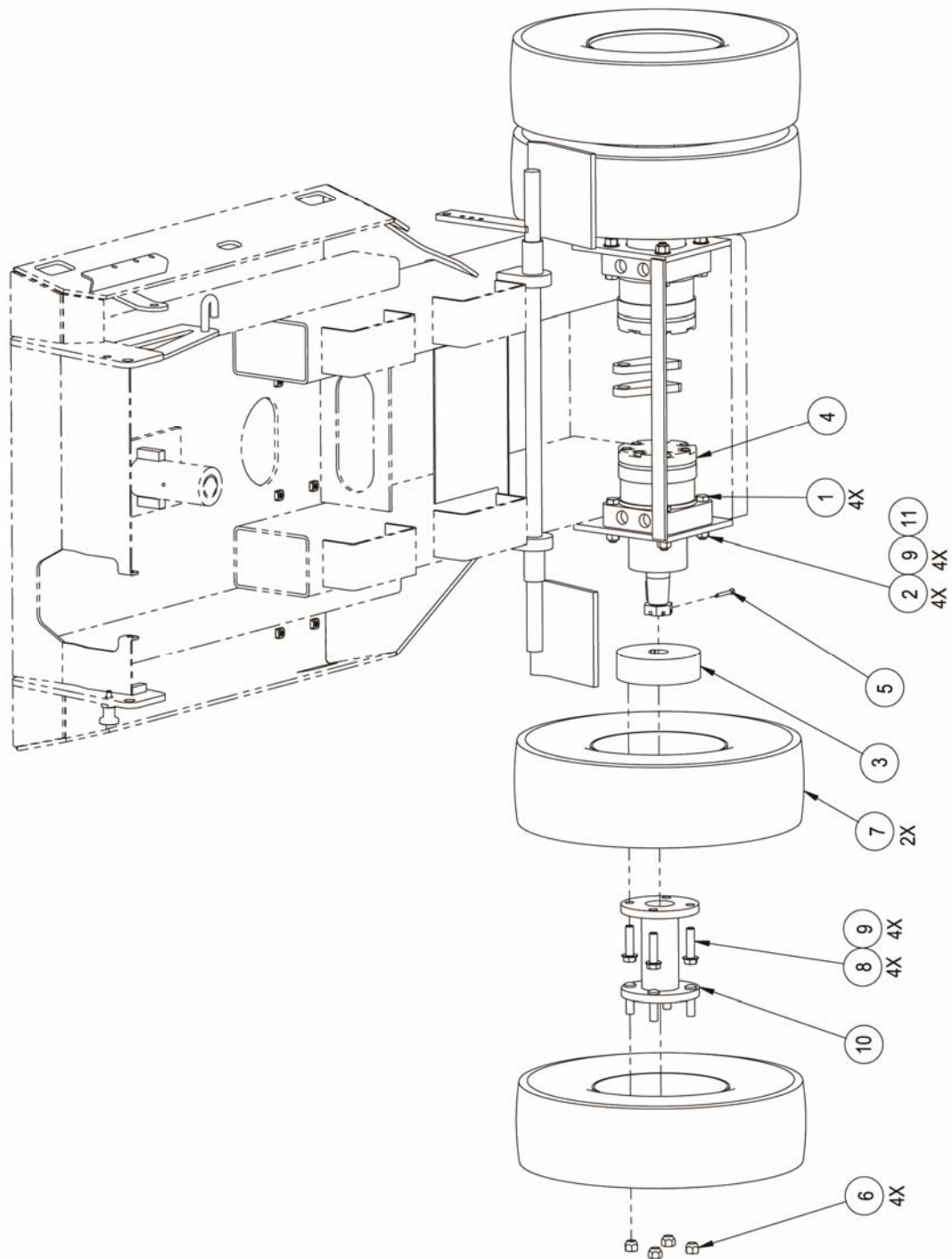
Dump box mounting



Item no.	Part number	Description	Qty.
1	796580	FITTING, GREASE	2
2	996200	WASHER	2
3	W8046	PIVOT PIN	1
4	W8122	PIN	1
5	796075	COTTER PIN	4
6	993870	WASHER, ¾"	2
7	796555	CAPLUG	2

Table 14: Dump box mounting parts list

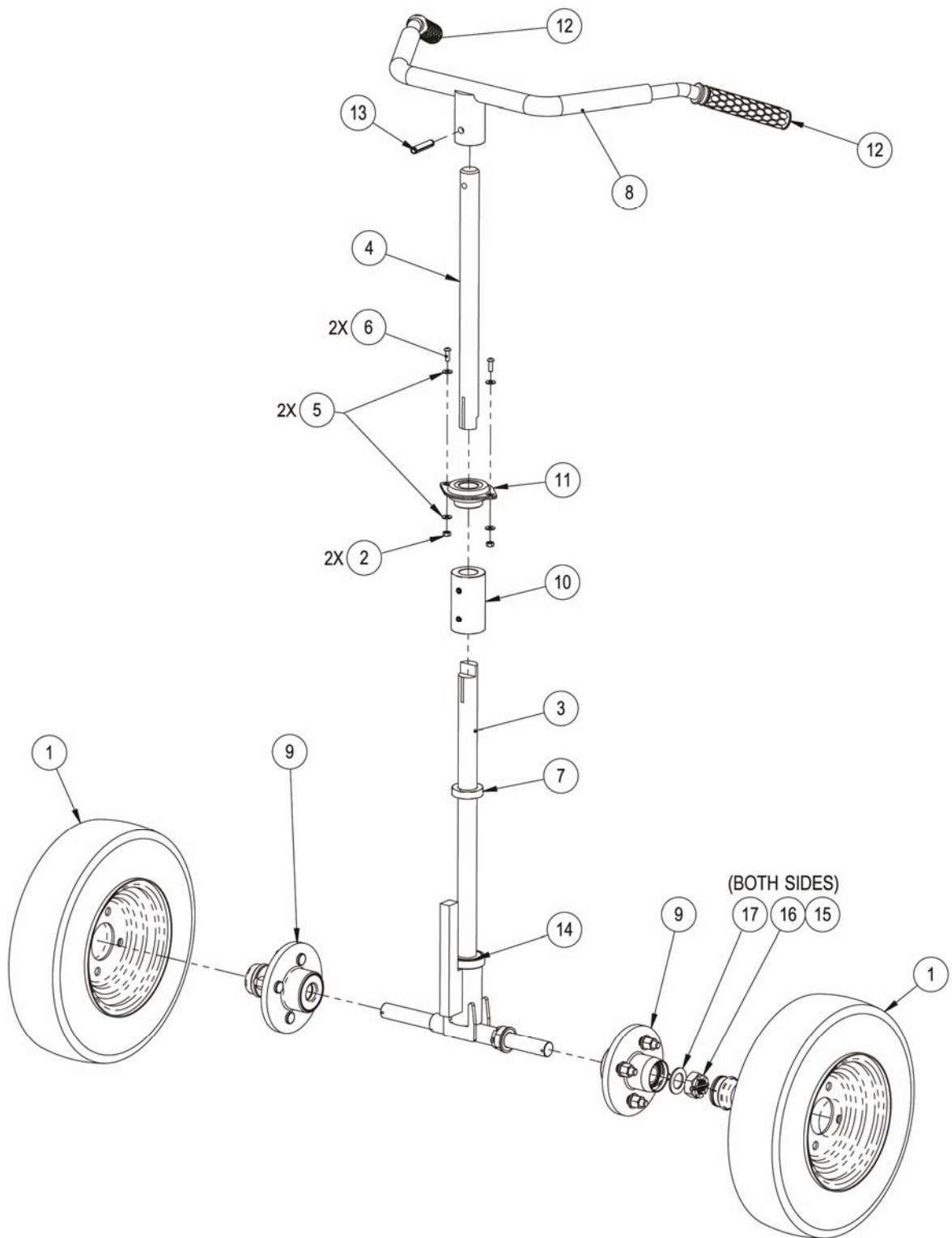
Drive wheels



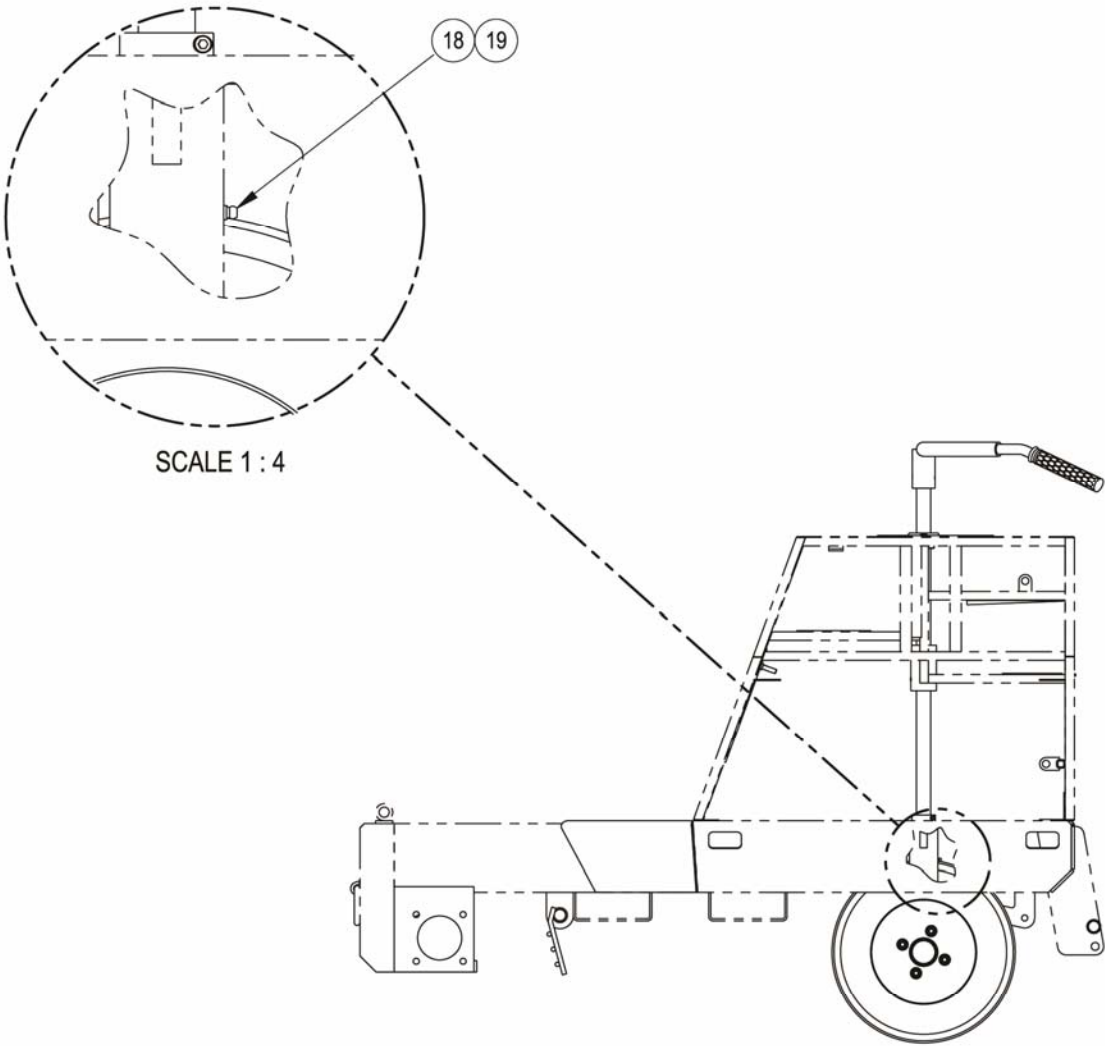
Item no.	Part number	Description	Qty.
1	200229	HHCS, 1/2-13 X 2.5, GR8	8
2	200231	HEX NUT, 1/2-13, GR8	8
3	511730	HUB, WHEEL	2
4	760146	DRIVE MOTOR	1
5	797000	COTTER PIN, 5/32 x 2 zp	1
6	840376	NUT, LUG	8
7	842017	WHEEL ASSY., 570/8 FOAM FILLED	4
8	990820	SCREW	8
9	991650	LOCK WASHER, 1/2"	16
10	W450065	SPACER, WHEEL	2
11	200388	LOCTITE, BLUE	AR

Table 15: Drive wheels parts list

Steering system (1 of 2)



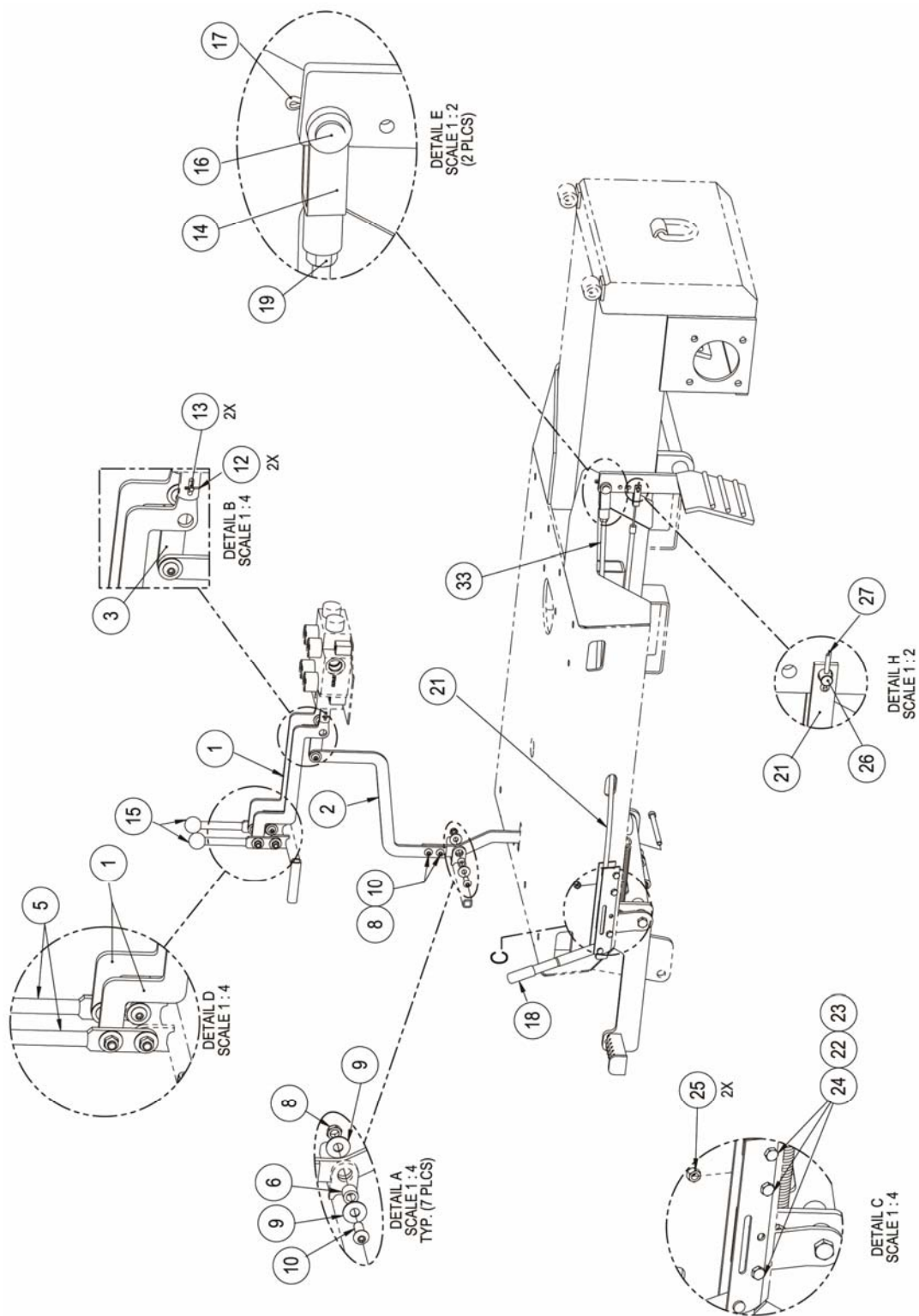
Steering system (2 of 2)



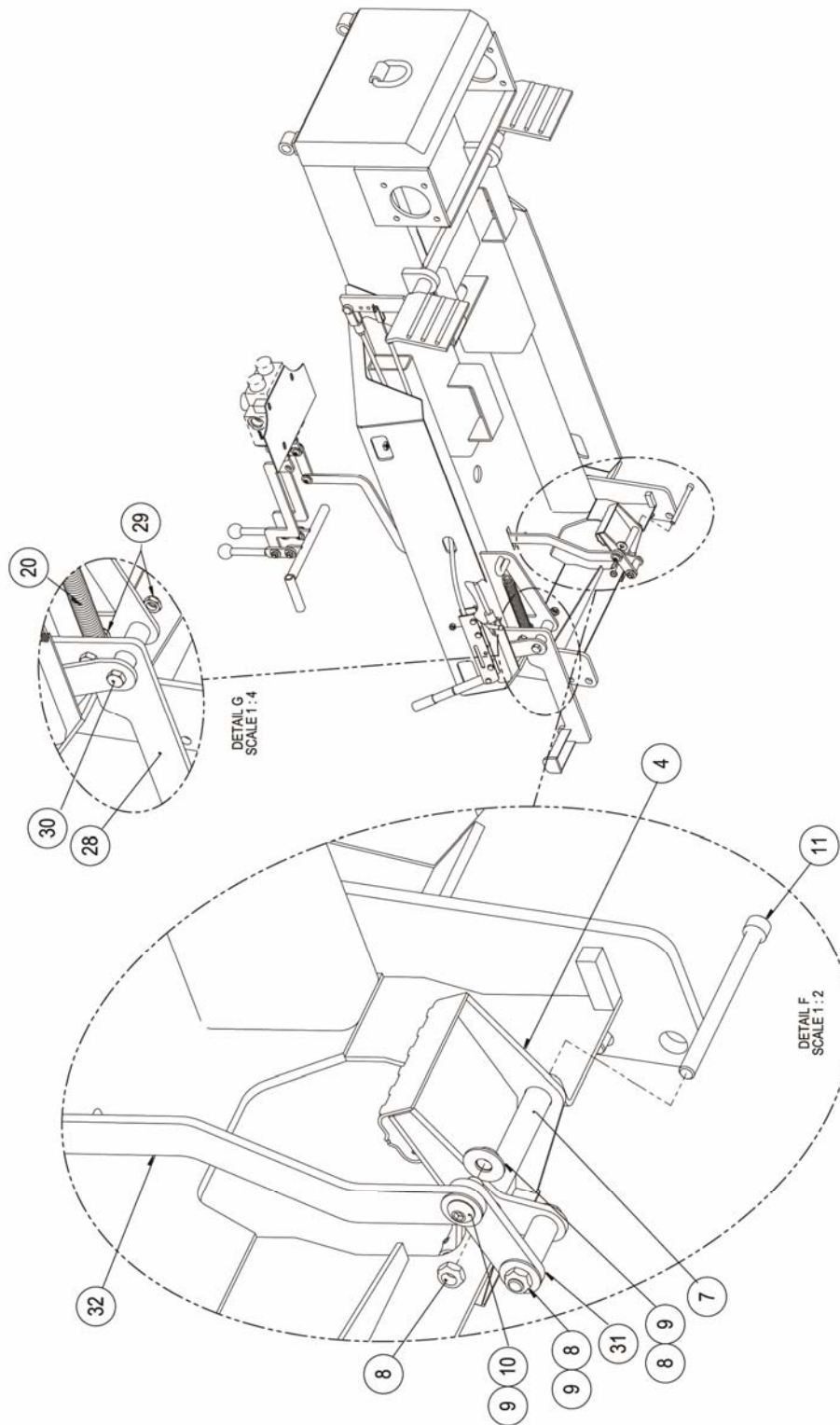
Item no.	Part number	Description	Qty.
1	842012	WHEEL ASSY., 480/8 FOAM FILLED	2
2	200156	HEX NUT, 1/4"-20, GR5	2
3	200159	WLDT, STEERING SHAFT	1
4	200161	SHAFT, UPPER STEERING	1
5	200205	FW, 1/4" SAE	4
6	200226	BHS, SOCKET, 1/4-20 X 0.75, Z	2
7	200227	SHAFT COLLAR, 1.25", Z	1
8	500815	HANDLE BAR	1
9	760160	WHEEL HUB (W/ 4 LUGS)	2
10	760670	SPLIT COUPLING	1
11	760680	FLANGE BEARING	1
12	796035	GRIP	2
13	980451	ROLL PIN	1
14	W4033	THRUST BEARING	1
15	796075	COTTER PIN	2
16	994510	NUT, CASTLE, 1-14 UNF GR2	2
17	200391	WSHR, NARROW, 1" TYPE B	2
18	796580	FITTING, GREASE	1
19	796555	CAPLUG	1

Table 16: Steering system parts list

Mechanical controls (1 of 2)



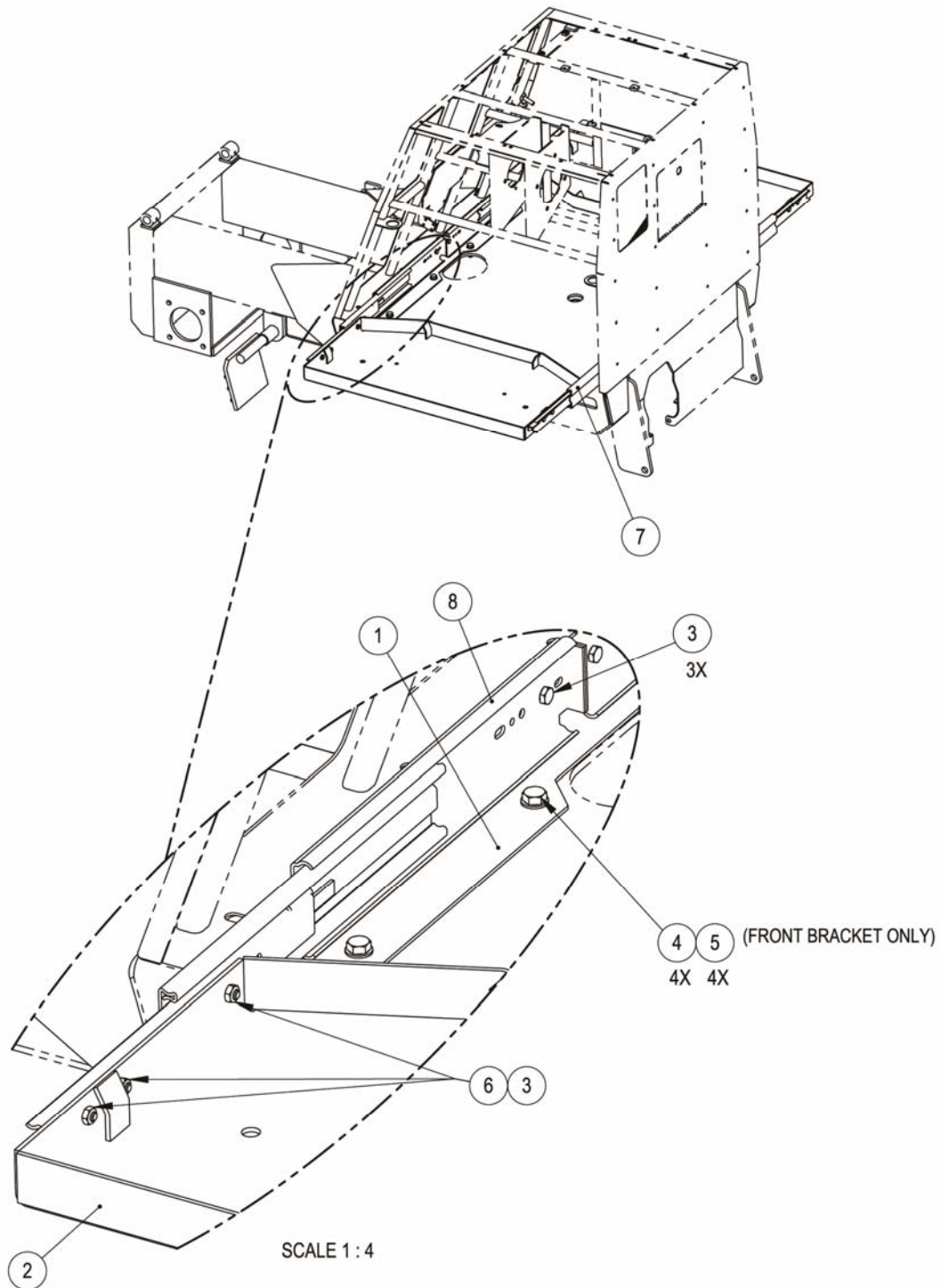
Mechanical controls (2 of 2)



Item no.	Part number	Description	Qty.
1	200134	LINKAGE, CONTROL, UPPER	2
2	200135	LINKAGE, BUCKET CONTROL, MID	1
3	200137	LINKAGE, BUCKET CONTROL, HORZ	1
4	200138	WLDT, PEDAL	1
5	200216	WLDT, CONTROL LEVER	2
6	200219	BUSHING, SPACER	7
7	200220	TUBE, PEDAL PIVOT	1
8	200221	L-NUT, NYLON, THIN, 3/8-16 GR2	12
9	200222	FW, 3/8" REG	17
10	200232	BHS, SOCKET, 3/8-16 X 1.0, Z	10
11	200233	SHCS, 3/8-16 X 4.75	1
12	200234	COTTER PIN	2
13	200238	CLEVIS PIN, 1/4" X 1.13, Z	2
14	796400	YOKE END	2
15	796545	KNOB, SHIFT	2
16	980375	CLEVIS PIN	2
17	796075	COTTER PIN	2
18	W4784	LEVER, PARKING BRAKE	1
19	981115	NUT	2
20	796010	SPRING	1
21	796616	CABLE, PARKING BRAKE	1
22	981065	WASHER	3
23	981885	NUT	3
24	981105	SCREW	3
25	300324	L-NUT, NYLON, 5/16-18 GR5	2
26	200326	CLEVIS PIN, 1/4 X 11/16, ZP	1
27	200325	COTTER PIN	1
28	200366	WLDT, BRAKE PEDAL	1
29	200374	L-NUT, NYLON, THIN, 1/2-13 GR2	2
30	200372	HHCS, 1/2-13 X 4.00, GR5 ZP	1
31	200385	LINK, DUMP PEDAL	1
32	200136	LINKAGE, BUCKET CONTROL, LOW	1
33	200406	ROD, FOOT BRAKE	1

Table 17: Mechanical controls parts list

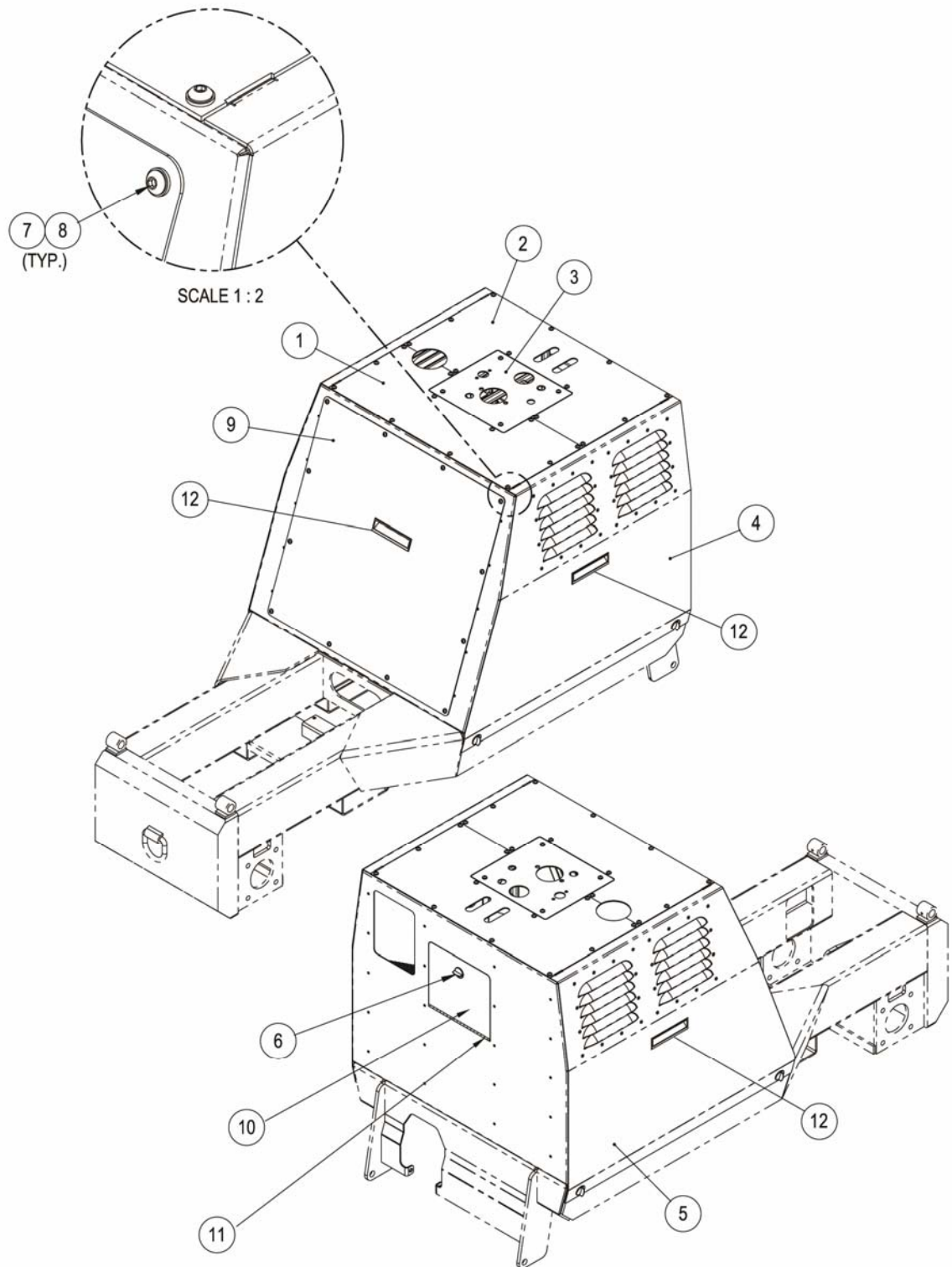
Battery tray



Item no.	Part number	Description	Qty.
1	200092	WLDT, DRAWER SLIDE MNT	1
2	200095	WLDT, BATTERY TRAY	2
3	200204	HHCS, 1/4-20 X 0.50, GR5	24
4	200207	HHCS, 3/8-16 X 1.25, GR5	4
5	200208	FW, 3/8" SAE	4
6	200211	L-NUT, NYLON, THIN, 1/4-20 GR5	12
7	200318	DRAWER SLIDE, 400 LB, 14", RH	2
8	200319	DRAWER SLIDE, 400 LB, 14", LH	2

Table 18: Battery tray parts list

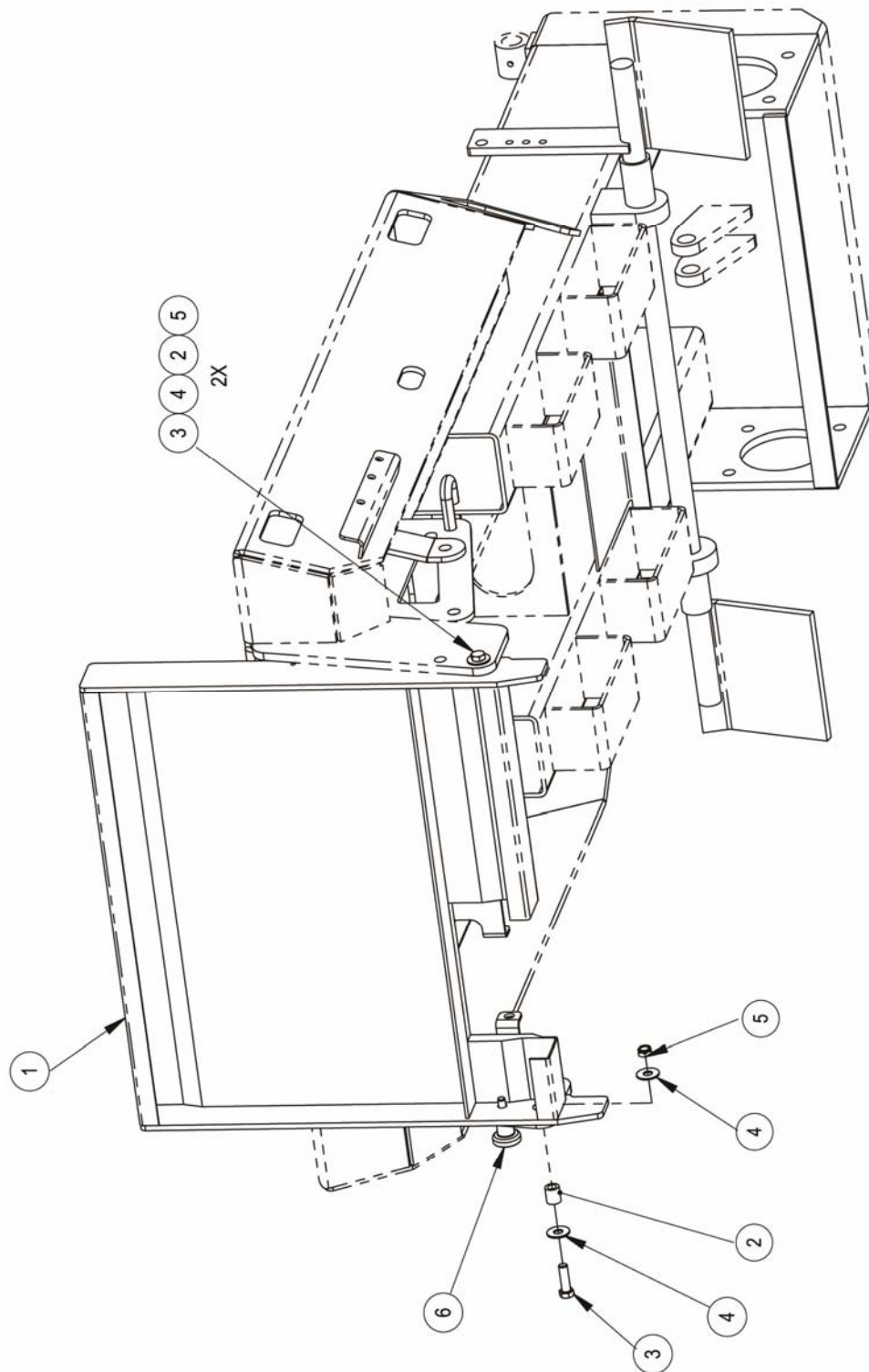
Panels



Item no.	Part number	Description	Qty.
1	200053	SHT, ENCLOSURE, TOP, FRNT	1
2	200054	SHT, ENCLOSURE, TOP, REAR	1
3	200058	WLDT, ENCLOSURE, TOP CENTER	1
4	200060	ASSY, DOOR, LH	1
5	200061	ASSY, DOOR, RH	1
6	200063	CAM LATCH	1
7	200205	FW, 1/4" SAE	40
8	200206	BHS, SOCKET, 1/4-20 X 0.50, BLK	40
9	200225	ASSY, ENCLOSURE PANEL, FRONT	1
10	200149	DOOR, CHARGER ACCESS	1
11	200150	HINGE, CHARGER DOOR	1
12	200062	RECESSED HANDLE, SNAP IN	3

Table 19: Panels parts list

Operator platform



Item no.	Part number	Description	Qty.
1	200030	WLDT, OP PLATFORM	1
2	200167	TUBE, SPACER	2
3	200207	HHCS, 3/8-16 X 1.25, GR5	2
4	200222	FW, 3/8" REG	4
5	200221	L-NUT, NYLON, THIN, 3/8-16 GR2	2
6	200351	PLUNGER PIN, WELD ON	

Table 20: Operator platform parts list

Appendices

Battery handling, maintenance and test procedures

Quick charge operating instructions

Service record

Type

Date

[illegible]

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