

GROUND FORCE

WORLDWIDE

WORLD'S FINEST MINE SUPPORT EQUIPMENT

PARTS & SCHEMATICS MANUAL

RIGID FRAME WATER TANK

SERIAL # 713F14 • 20,000 GALLONS (75,708 LITERS)

Ground Force Worldwide

6001 E. Seltice Way
Post Falls, Idaho 83854
1 (208) 664-9291

info@gfworldwide.com | www.gfworldwide.com

ORIGINAL INSTRUCTIONS

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Printing History: First Edition – November 2011

REVISION	DATE	APPROVED	DESCRIPTION
0	10/17/2019	JWEST	Initial release

Valued Ground Force customer:

Thank you for selecting **Ground Force Worldwide** as your mine equipment supplier. Our business is based on providing our customers with innovative solutions, manufactured of high quality, heavy-duty materials designed to out-perform in the most extreme applications.

Upon purchase of your equipment, we strive to provide superior service throughout the life of your product. Our **Parts & Product Support Department** is here to assist you by answering technical questions, troubleshooting your equipment when needed, and expediting your parts ordering. We stock the most commonly used parts for your equipment and can ship overnight, when needed. Our Parts and Product Support Representatives (PPSRs) are available 24/7.

Ground Force Worldwide proudly provides superior customer service through the life of your equipment. Call us anytime at 1 (208) 664-9291, or e-mail service@gfworldwide.com, and let us assist you.

Sincerely,

Ground Force Worldwide

Documentation Department

CONTACT US

Ground Force Manufacturing, LLC
6001 E. Seltice Way
Post Falls, ID 83854 USA

Phone: +1 (208) 664-9291

Fax: +1 (208) 664-9475

Parts & Product Support E-mail: PPSR@gfworldwide.com

Service Department E-mail: Service@gfworldwide.com

General E-mail: info@gfworldwide.com

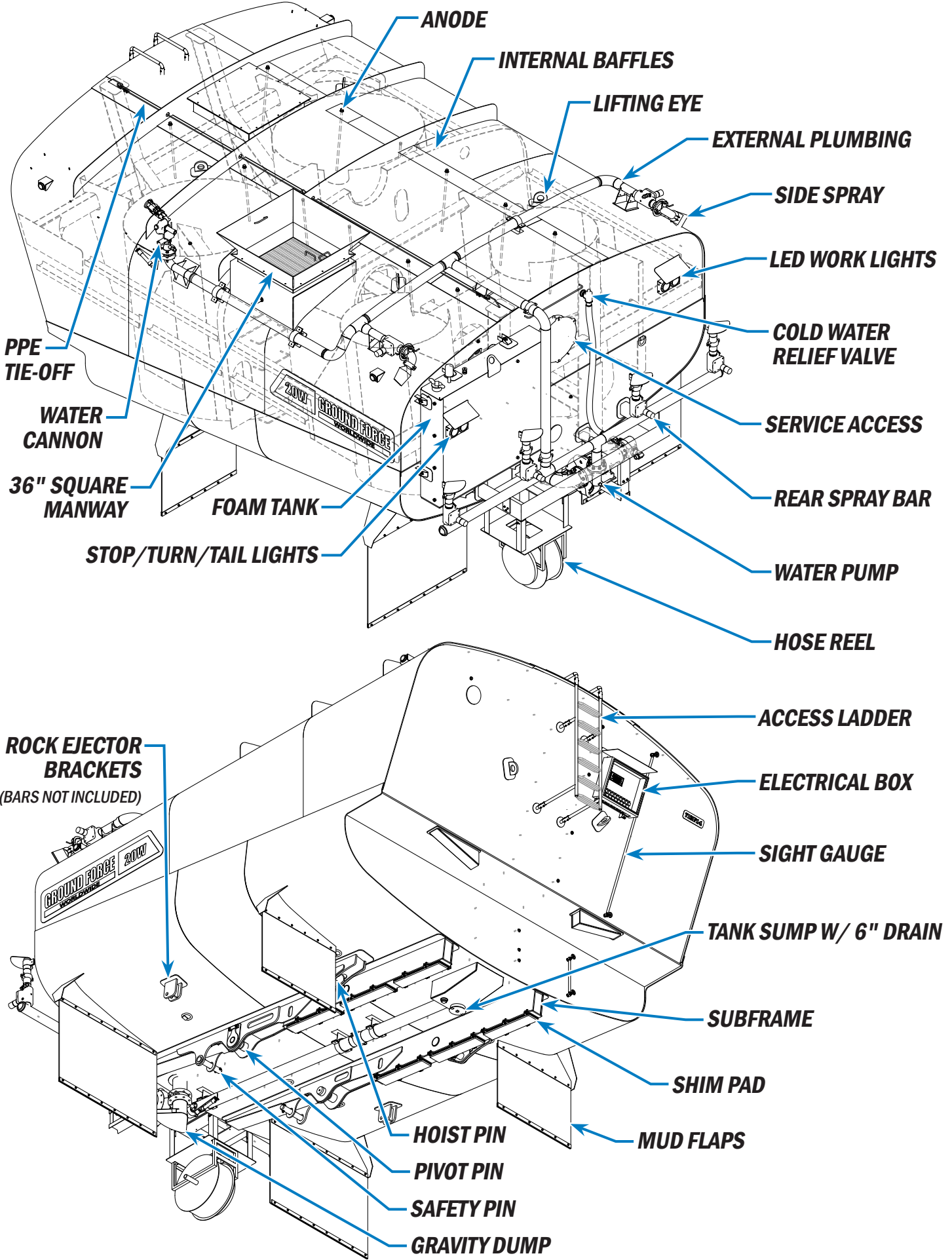
Web: www.gfworldwide.com

PARTS & SCHEMATICS MANUAL

INTRODUCTION

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SPECIFICATIONS

The Ground Force Worldwide Water Tanker is a heavy-duty, custom-engineered water delivery tank, offering solutions for dust suppression, fire fighting and general water truck needs.

Ground Force water tanks are engineered with an internal endoskeleton and dual-radius semi-elliptical design. This allows for an optimal center of gravity while providing the strength needed for the water

tank to last in tough conditions. Ground Force water tanks are fully baffled to break up water flow and increase stability.

WARNING

Do not operate the Ground Force water tank in unsafe conditions. Do not operate the Ground Force water tank in a manner that violates local and site-specific laws and regulations.

713F14

- 20,000 gallon water truck kit for dealer or customer installation on Caterpillar 777
- Ground Force baffling system
- (1) transverse main baffle with 30" offset crawl-throughs
- 36" square manway with trash screen/safety grate; located drivers side rear of tank
- Removable exterior ladder with grab-rail
- Interior ladder for service access
- Tank level tube; fill level device of 1" pipe at the driver's side top of the tank to indicate when tank is full
- Anti-skid coating for top walkway w/ PPE tie-off (safety cable) full length top of tank
- Sump with 6" T-handle drain plug for cleanout
- Externally-mounted water pump (B4)
- Mudflap brackets and mudflaps
- D-ring PPE lanyard tie-off provisions on underside of tank and on rear tank head
- CAT yellow exterior paint
- Tail, turn and stop lights (Betts® brand LED) with water shedders
- Backup lights; backup alarm
- (2) Ground Force body manuals on thumb-drive in English
- Freight terms EXW GFM facility Post Falls, ID, USA
- Clearance lights
- Fill chute
- Provision for low-level shut-off
- Rock ejector brackets (bars not included)

REAR SPRAY BAR

- (4) Staggered hydraulic-operated fan-sprays
- Auto-drain valves on spray valves

6" HYDRAULIC OPERATED DUMP VALVE

- Includes duckbill
- Installed tank center-rear

MOUNTING

- Rear main pin bosses will be fully welded out and line-bored
- Rear pins will include grease zerks

TWO (2) SERVICE ACCESS DOORS

- (1) centerline capped manway at front
- (1) rear head (Davit Hatch) with grab rail hoop above manway

FLOODLIGHTS (2) (UTILIZES BACKUP LIGHTS)

- Mounted on rear of water body
- Includes installation, on/off switch and circuit protection

SPRING REWIND HOSE REEL

- Water hose reel with 50' x 1-1/2" hose and adjustable nozzle
- Mounted on the rear of the machine, and plumbed to existing water plumbing in vicinity of reel
- Includes manual in-line shut-off (isolator) valve
- Air blow-down and control valve for hose draining

CYLINDER LIFT: SPECIFIC FOR CAT 777

- Ground Force will supply upper mounting pins
- Ground Force will supply wing plate brackets; to be used with safety body retaining pins

HYDRAULIC SIDE SPRAYS (2)

- Side spray (2) located at upper quadrant - rear of tank
- External plumbing to side sprays

8" TRIFECTA WATER DAM

- Permanently installed on water tank
- Extends across entire top and partially down each side of tank

FIRE FOAM TANK ONLY

- (1) 200-gallon stainless steel foam reservoir (tank) for fire foam system installed on rear head of tank

SPECIFICATIONS

DOMESTIC FIELD SERVICE

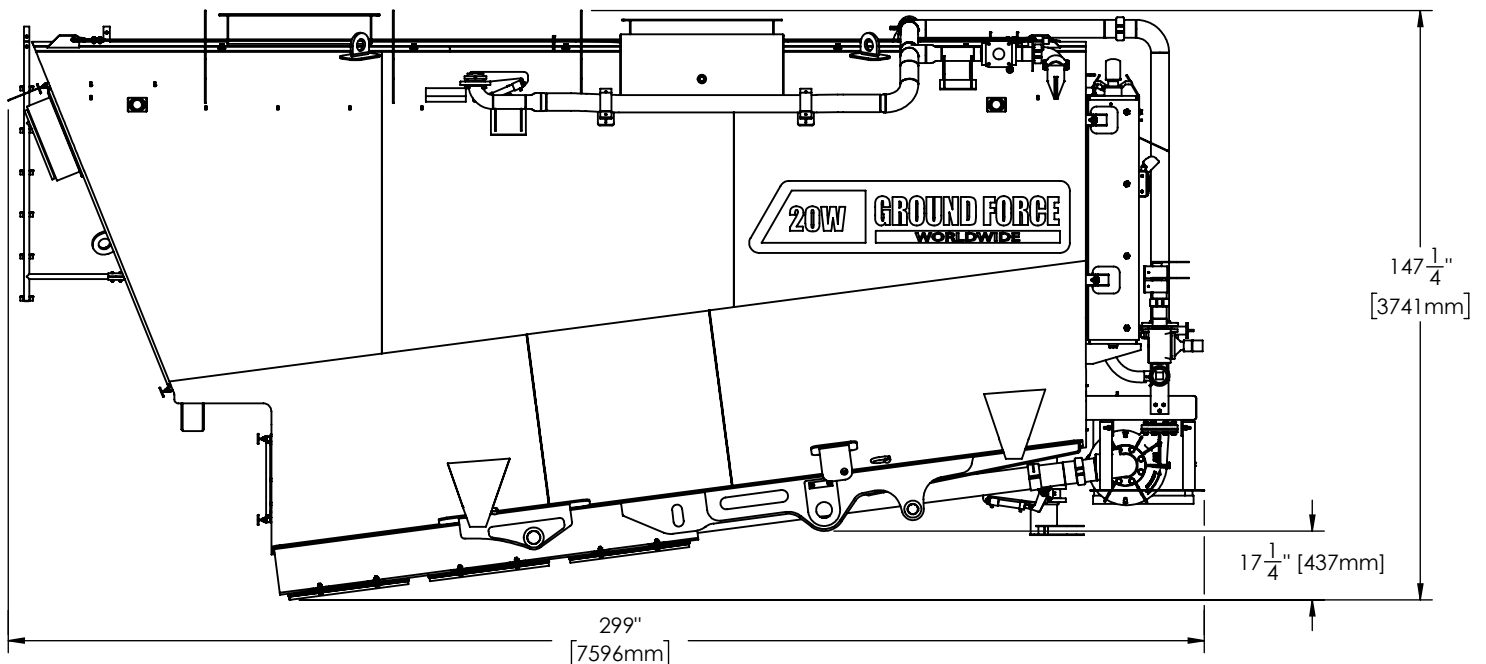
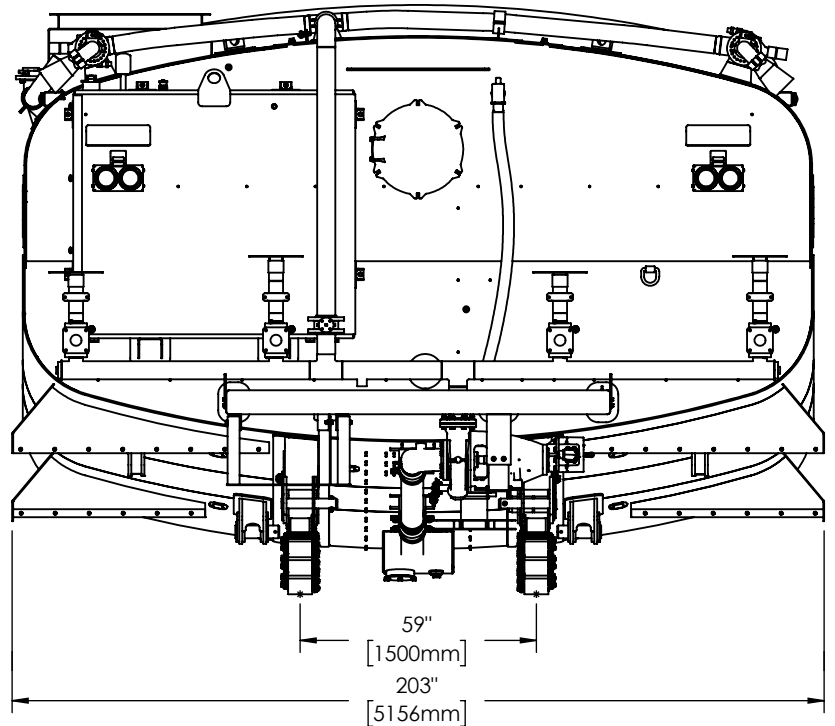
- (1) Ground Force technician to travel to site, provide guidance for field installation, perform commissioning and operator training for **GROUND FORCE PORTION ONLY**: (Open Loop System not included)
- On-site Duration = (4) days, including (1) day of commissioning and operator training; Up to 12 hours per day, including travel; Maximum 72 hours per week Open Loop Systems to provide and install foam system

INTERIOR TANK COATING

- Interior of tank lined with polyurea liner
- Includes all material prep, sand blasting and final coating
- To be contracted to Rhino Linings of CDA

SHIPPING DIMENSIONS

SHIPPING INFORMATION		
WIDTH:	59"	1500 mm
HEIGHT:	147 1/4"	3741 mm
LENGTH:	299"	7596 mm
WEIGHT: (APPROX)	43,000 LBS	19,505 kgs
SHIPPING CRATE INFORMATION		
WIDTH:	48"	1220 mm
HEIGHT:	60"	1525 mm
LENGTH:	96"	2440 mm
WEIGHT: (APPROX)	1,500 LBS	680 kg
SHIPPING COMPANY TO SUPPLY THEIR OWN DUNNAGE		




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SAFETY

 This safety guide is provided by Ground Force Worldwide to assist you in making a safer workplace. Specific regulations at the site of operations supersede all basic recommendations provided in preceding sections.

For more information contact your national, state, or local authority. The following links are provided to assist you in compliance:

[Occupational Safety and Health Administration](#)
[Mine Safety and Health Administration](#)
[Canadian Centre for Occupational Health and Safety](#)
[European Agency for Safety and Health at Work](#)
[Safe Work Australia](#)

GUIDELINES

Equipment and vehicles must be maintained to be safe and reliable. Due to Ground Force Worldwide's global presence and distribution and the myriad of local, state, and federal regulations it is impractical to provide specific details of these regulations. The following are basic guide lines, which do NOT supersede on site requirements and regulations, which MUST be followed.

- Ensure that ALL operators have been trained on the equipment they use and operate
- Check vehicles at the beginning of each shift to ensure the parts, equipment and accessories are in safe operating condition. Repair or replace any defective parts or equipment prior to use
- Ensure the service, emergency and park brake systems are operational. Verify audible backup alarm system is operational and working. Headlights, tail lights, and brake lights MUST be operational. Verify the windshield is clear and the windshield wipers are operational
- DO NOT operate vehicle in reverse with an obstructed rear view unless it has a signal alarm capable of being heard above ambient noise levels or a signal observer indicates that it is safe to move vehicle. Some operational areas require a spotter at all times
- Equipment should have roll-over protection, and protection from falling debris as required by law
- Ensure that vehicles used to transport workers have seat belts, firmly secured and adequate for the number of workers to be carried or transported
- DO NOT modify the equipment's capacity or safety features without written approval from the Ground Force Mfg. Engineering Department
- Prior to permitting equipment or vehicles on to an access roadway or grade, verify that the roadway or grade is constructed and maintained to safely accommodate the equipment, vehicles and loads involved
- Vehicles and equipment loaded from the top must have cab shields or canopies to protect the operator while loading
- Verify the Pre-Shift Inspection has been completed and signed off
- Based on site conditions, you may choose to have the chassis supplier lock out the top gears to prevent excessive speed.

WARNING

DO NOT attempt to use this equipment until you have thoroughly read this manual. It includes important safety precautions, detailed starting, operating and maintenance instructions, and parts lists.

2.1 READ INSTRUCTIONS



- Read and follow the Owner's Manual carefully before installing, operating, or servicing equipment. Read safety information at the beginning of the manual and in each section. Heed warning labels on equipment
- Use only genuine replacement parts from manufacturer
- Perform maintenance and service according to the Owner's Manual
- ALWAYS follow National, State, and Local codes

2.2 GENERAL SAFETY HAZARDS



- Always ensure vehicle is CLEAR of personnel before starting vehicle
- Always use wheel chocks when servicing or working on vehicle

2.3 ENGINE EXHAUST CAN KILL



- Operate in open, well ventilated areas or vent exhaust outside

2.4 MOVING PARTS CAN INJURE OR KILL



- Do not operate with doors open or guards off or removed
- Stop engine before servicing
- Keep hands, hair, loose clothing and tools away from moving parts and machinery

2.5 BATTERY FUMES AND EXPLOSIONS



- Follow battery manufacturer's instructions when working on or near a battery
- Stop engine before disconnecting or

connecting battery cables, battery charging cables, or servicing battery

- Always wear a face shield, rubber gloves and protective clothing when working on battery
- Batteries produce explosive gases during normal operation and when being charged. Keep sparks, flames, cigarettes and other ignition sources away from batteries
- Observe correct polarity (+ and -) on batteries
- Disconnect negative cable (-) first and reconnect negative (-) cable last
- DO NOT tip battery
- Replace damaged battery
- Do NOT charge a frozen battery
- Do NOT charge battery in a closed area or where ventilation is restricted
- In case of battery acid getting on face, on skin, or in eyes, flush immediately with water for 5 minutes and seek medical attention as soon as possible

2.6 FIRE HAZARD



- Stop engine while fueling
- DO NOT smoke while fueling
- DO NOT leave nozzle unattended while fueling
- Wipe up spilled fuel and allow fumes to clear before starting engine
- DO NOT overfill tank, fuel expansion may cause overflow

2.7 ELECTRICAL SHOCK CAN KILL



- DO NOT touch electrically live parts with skin or wet clothing
- Insulate yourself from work and use safety ground
- Always wear dry insulated gloves when working on electrical equipment
- Always lockout/tagout equipment before performing electrical work

2.8 FALL HAZARDS



- Equipment operators and maintenance Personnel are susceptible to falls from Equipment during repair and servicing. Prevent falls and slips by following these guidelines:
- ON-SITE FALL HAZARD requirements supersede all of the guidelines listed below. Closely follow on-site safety rules.
- Know and identify what slip, fall and trip hazards are, and what preventative measures are required
- Survey work area on and around equipment for slip and fall hazards and remove hazards from area
- Never jump from equipment to the ground
- Use three points of contact when climbing equipment
- Where there is a danger of falling use a FALL PROTECTION SYSTEM per OSHA AND MSHA requirements.
- Always follow national, state and local codes: <https://www.osha.gov/SLTC/fallprotection/>

2.9 PINCH POINT HAZARDS



- Never place yourself between a piece of heavy equipment or machinery and an immovable object
- Never work within the swing radius of rotating equipment
- Always work at a safe distance from equipment
- Caught-In hazards exist when workers remove or disable guards. Use extra caution when removing this safety equipment as required for servicing
- Never place your hands or body near moving parts
- Gloves, long sleeve shirts, hair, and loose fitting clothing can be hazardous if caught in moving parts
- Never exceed maximum load limits according to the equipment and machinery specifications
- All workers should wear bright protective clothing. Signs that are highly visible should be set up in a way to warn and discourage nonworkers from entering site
- Never forget one simple rule: PARKING BRAKES. They

are easy to operate and can save lives

- Always use wheel chocks when working on or near a vehicle
- Always verify that vehicle is clear before starting

2.10 LOCK-OUT / TAG-OUT



1. IDENTIFY the types of energy sources used, potential hazards, and control devices.
2. NOTIFY all affected employees.
3. TURN OFF all operating controls.
4. LOCATE all energy sources
5. ISOLATE all energy sources by blocking, bleeding and ventilating stored energy as found in springs, hydraulic systems, electrical systems and pneumatic systems.
6. LOCK-OUT all switches and energy controls in the OFF or SAFE position.
7. TEST operating controls. Put all controls in ON position. Be sure no one can get hurt before testing.
8. RETURN all operating controls to the OFF position.
9. PERFORM required task.
10. REMOVE lock-out devices only after the equipment is fully assembled and all affected employees have been notified. Each lock-out device must be removed by the person who put it on.

2.11 COMPRESSED AIR HAZARDS



FOLLOW ON-SITE COMPRESSED AIR HAZARDS SAFETY REQUIREMENTS FOR PLACE OF OPERATIONS. THE FOLLOWING ARE ONLY BASIC GUIDELINES:

- Incorrect installation or operation of this unit could result in equipment failure and personal injury. Only qualified persons should install, operate, and service
- this unit according to the owner's manual, and industry standards, always in compliance with National, State and Local codes
- DO NOT exceed the rated output or capacity of the compressor or any equipment in the compressed air system Before working on the compressed air system, follow the in house (on site) LOCKOUT/TAG-OUT procedure of the unit
- Turn off and follow above lockout/tag out procedure; ensure that the pressure is released from the system, and cannot accidentally be applied
- The air compressor can start up at any time the switch is "on." Use caution any time the switch is on

2.12 CONFINED SPACE SAFETY

Some maintenance procedures on Ground Force Worldwide water trucks require entering the tank itself. Working inside a confined space such as a water tank is highly dangerous. Technicians working inside the tank must follow safety guidelines.

To work safely in a confined space, the entrant must be able to communicate with the attendant who is on duty outside the space. A system of communication must be set up prior to beginning work.

The attendant must always be aware of what is going on inside the space in order to be able to react in event of an emergency.

Oxygen-deficient atmospheres have less than 19.5 percent available oxygen by volume while normal air contains approximately 21 percent oxygen. Deviations from normal concentrations are a major concern in confined spaces.

Ground Force water truck tanks are considered "Permit-Required Confined spaces," based on the following guidelines:

- Contains or has a potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an entrant.
- Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and



tapers to a smaller cross-section.

- Contains any other recognized serious safety or health hazard, ex., reduced visibility, darkness, etc.

Equipment will include at a minimum:

- Ventilation Fans (1 minimum for Assembly, 2 minimum for Fabrication) and hoses.
- A calibrated and tested air monitor.
- PPE appropriate to the tasks or jobs being performed.
- Lighting equipment appropriate to the task or jobs being performed.
- Signs posting the confined space and restricting access.
- Stanchions or other barriers restricting the access of non-permit personnel.

- Radio equipment as necessary to support communication between the attendant(s) and entrant(s)
- Rescue equipment tested and in a place near the confined space and readily available for rescue personnel.
- OSHA requires that a standby person be present with suitable rescue equipment when self-contained breathing apparatus or hose masks with blowers are used in atmospheres immediately dangerous to life or health.

The following are other hazards you should consider when evaluating a confined space:

- Temperature extremes can have an adverse effect on entrants. For example, if a space has been steam-cleaned, it must cool before any entry is made.
- Engulfment hazards such as loose material (grain, sand, coal, etc.) can crust over in a bin and break loose under your weight and trap you during entry.
- Noise can become excessive in a confined space and can not only damage hearing but can affect communication, causing warnings to go unheeded.
- Slick/wet surfaces can cause slips and falls and increase the chances of electric shock.
- Falling objects are a danger if work is being done above the entrant in a confined space.

2.13 FIRE EXTINGUISHER USE

Sound the fire alarm and call the fire department, if appropriate. Identify a safe evacuation path before approaching the fire. Do not allow the fire, heat, or smoke to come between you and your evacuation path. Select the appropriate type of fire extinguisher.



Discharge the extinguisher within its effective range using the PASS method (Pull, Aim, Squeeze, Sweep).

Back away from an extinguished fire in case it flames up again. Evacuate immediately if the extinguisher is empty and the fire is not out. Evacuate immediately if the fire progresses beyond the incipient stage.

Most fire extinguishers operate using the following P.A.S.S. technique:

1. **PULL** - Pull the pin. This will also break the tamper seal.
2. **AIM** - Aim low, pointing the extinguisher nozzle (or its horn or hose) at the base of the fire.
3. **NOTE:** Do not touch the plastic discharge horn on CO2 extinguishers. It gets very cold and may damage skin.
4. **SQUEEZE** - Squeeze the handle to release the extinguishing agent.
5. **SWEEP** - Sweep from side to side at the base of the fire until it appears to be out. Watch the area. If the fire re-ignites, repeat steps 2 - 4.

! WARNING

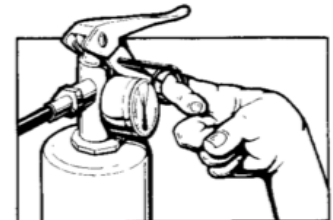
If you have the slightest doubt about your ability to fight a fire, **EVACUATE IMMEDIATELY**

Remember:

If you are called on to use an extinguisher, just think of the word "P.A.S.S."

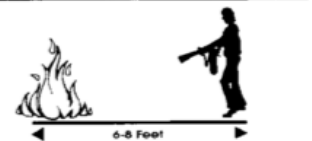
PULL

the safety pin at the top of the extinguisher.



AIM

the nozzle or hose at the base of the flames. Stay between six and eight feet away from the flames.



SQUEEZE

or press the handle.







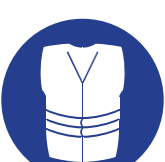



SWEEP

from side to side at the base of the fire until it goes out.



By following these procedures, a fire can be extinguished in the quickest and safest manner possible.

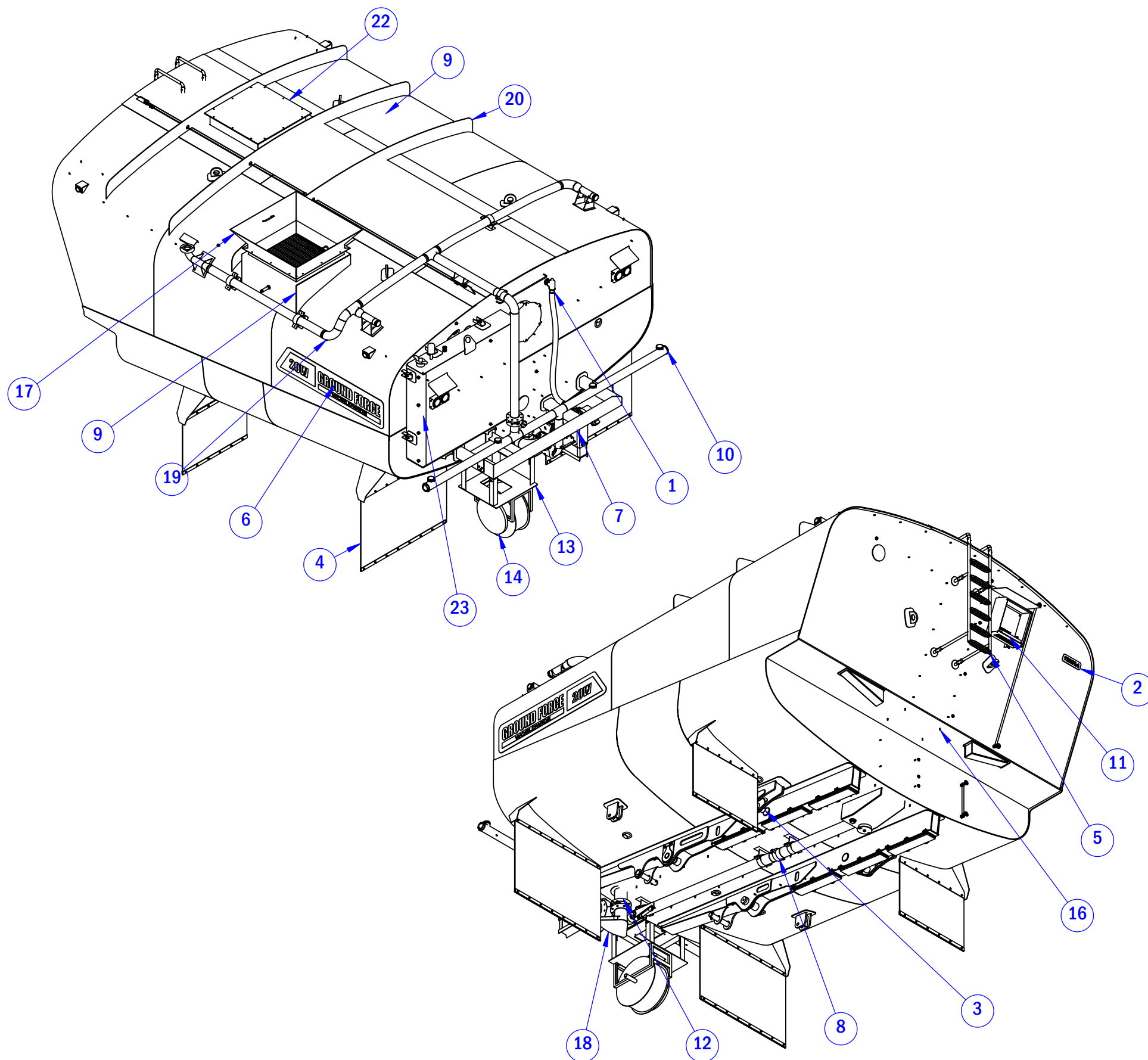
2.14 PERSONAL PROTECTIVE EQUIPMENT

	<ul style="list-style-type: none"> • Hard hats. All persons shall wear suitable hard hats when in an area where falling objects may create a hazard.
	<ul style="list-style-type: none"> • Protective footwear. All persons shall wear suitable protective footwear when in or around an area where a hazard exists which could cause an injury to the feet.
	<ul style="list-style-type: none"> • Eye protection. All persons shall wear safety glasses, goggles, or face shields or other suitable protective devices when in or around an area where a hazard exists which could cause injury to unprotected eyes.
	<ul style="list-style-type: none"> • Safety belts and lines. Safety belts and lines shall be worn when persons work where there is danger of falling; a second person shall tend the lifeline when bins, tanks, or other dangerous areas are entered.
	<ul style="list-style-type: none"> • Reflective clothing. Wear reflective clothing which is highly visible (360 degrees) when the arms are up or down or when the body is in any position and even on top of hard hat.
	<ul style="list-style-type: none"> • Ear protection. Ear protection must be worn when the noise exposure level is above 85 dBA.
	<ul style="list-style-type: none"> • Respirators. A respirator should be worn if there is danger of harmful dusts, fogs, smokes, mists, gases, vapors, and sprays.
	<ul style="list-style-type: none"> • Hand protection. Wear appropriate gloves if there is danger of skin absorption of harmful substances, chemical or thermal burns, electrical dangers, bruises, abrasions, cuts, punctures, fractures or amputations.


PARTS & SCHEMATICS MANUAL

PARTS DRAWINGS

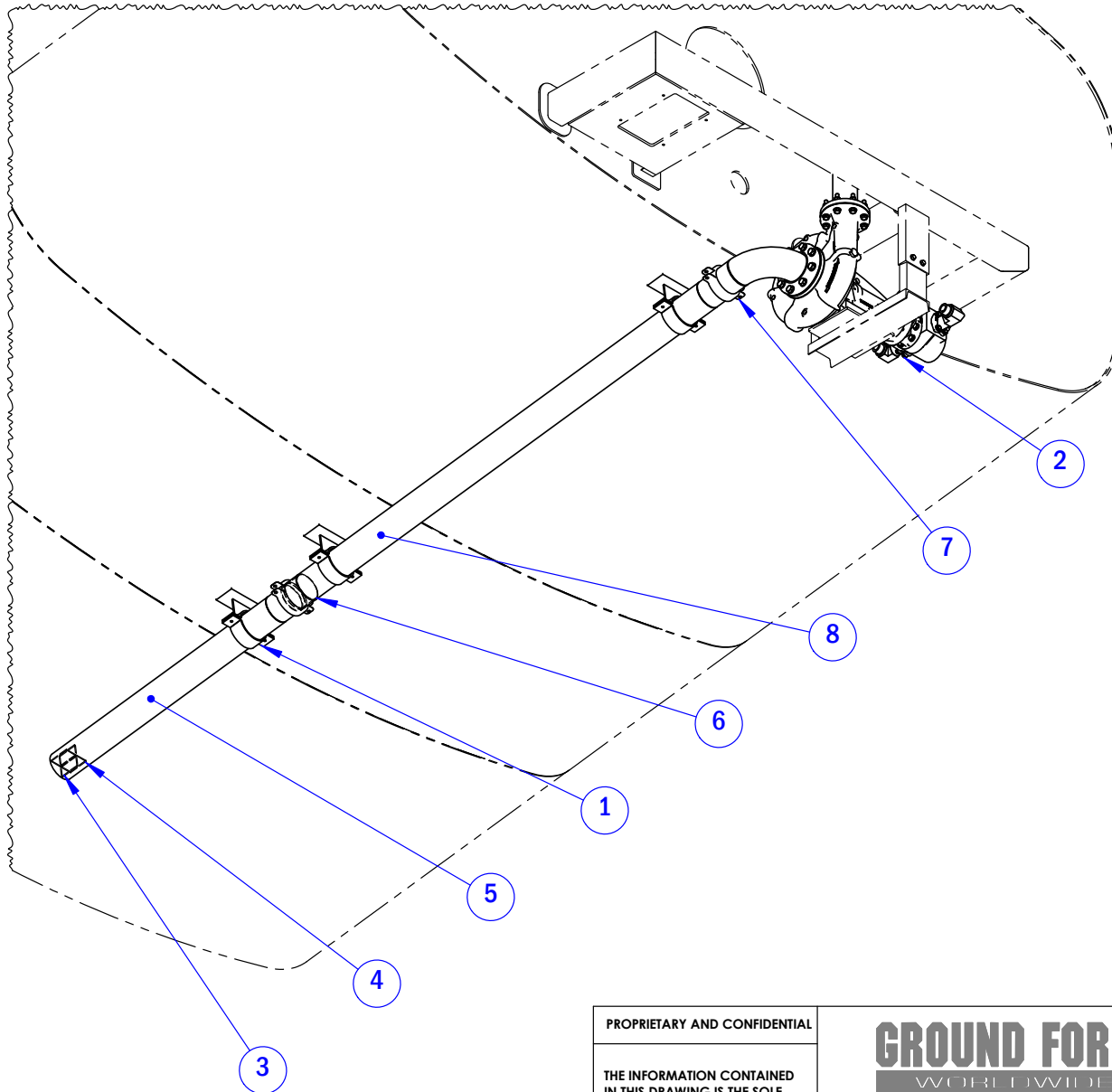
713F14 - OVERALL ASSEMBLY.....	15	932428 - ELECTRICAL COMPONENTS.....	24
929247 - SUCTION LINE ASM	16	914569/914570 - TAIL LIGHTS	25
929262 - WATER PUMP.....	17	924843/924844 - MARKER LIGHTS	26
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914453 - SPRAY HEAD, 6".....	22	932407 - FOAM TANK	31
914621 - HYDRAULIC VALVE	23		



ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	WATER CIRCUIT PRESSURE RELIEF HOSE	7.26	90181152912
2	1	SERIAL NUMBER PLATE	1.530	713F14-SERIAL
3	2	HOIST PIN ASSEMBLY	26.90	91081926552
4	1	MUD FLAP ASSEMBLY	388.79	91081927077
5	1	18K LADDER ASSEMBLY - REMOVABLE	70.90	91081927121
6	1	BRANDING, 20K WATER	120.87	91081929121
7	1	BUMPER/PUMP MOUNT ASSEMBLY - 20K, CHANNEL	470.13	91081929242
8	1	SUCTION LINE ASSEMBLY	625.08	91081929247
9	1	CAT 777 20K GALLON WATER TANK ASSEMBLY	37670.66	91081932379
10	1	REAR SPRAY BAR	190.61	91081932795
11	1	ELECTRICAL LAYOUT, 20K WATER, OPEN LOOP	62.59	91081932428
12	1	DUMP PROVISION, 6"	37.09	91081929244
13	1	HOSE REEL MOUNT - FIXED	86.21	91081928422
14	1	HOSE REEL SRW, 50' X1-1/2", ADJ. NOZ	327.98	91081914620
15	1	KIT, FIELD INSTALLATION MISC PARTS	0.00	91081928854
16	1	20K WATER STUD LAYOUT	3.53	91081932409
17	1	36" SQUARE MANWAY CHUTE	146.98	91081929692
18	1	GRAVITY DUMP, 6" DUCK BILL	82.57	91081930881
19	1	EXTERNAL PLUMBING	352.109	91081932395
20	3	WATER DAM	103.930	90181162232
21	1	36" SQUARE MANWAY FRAME	93.39	91081929428
22	1	CAP PLATE	112.547	90181162331
23	1	200 GALLON FOAM TANK	800.12	91081932407

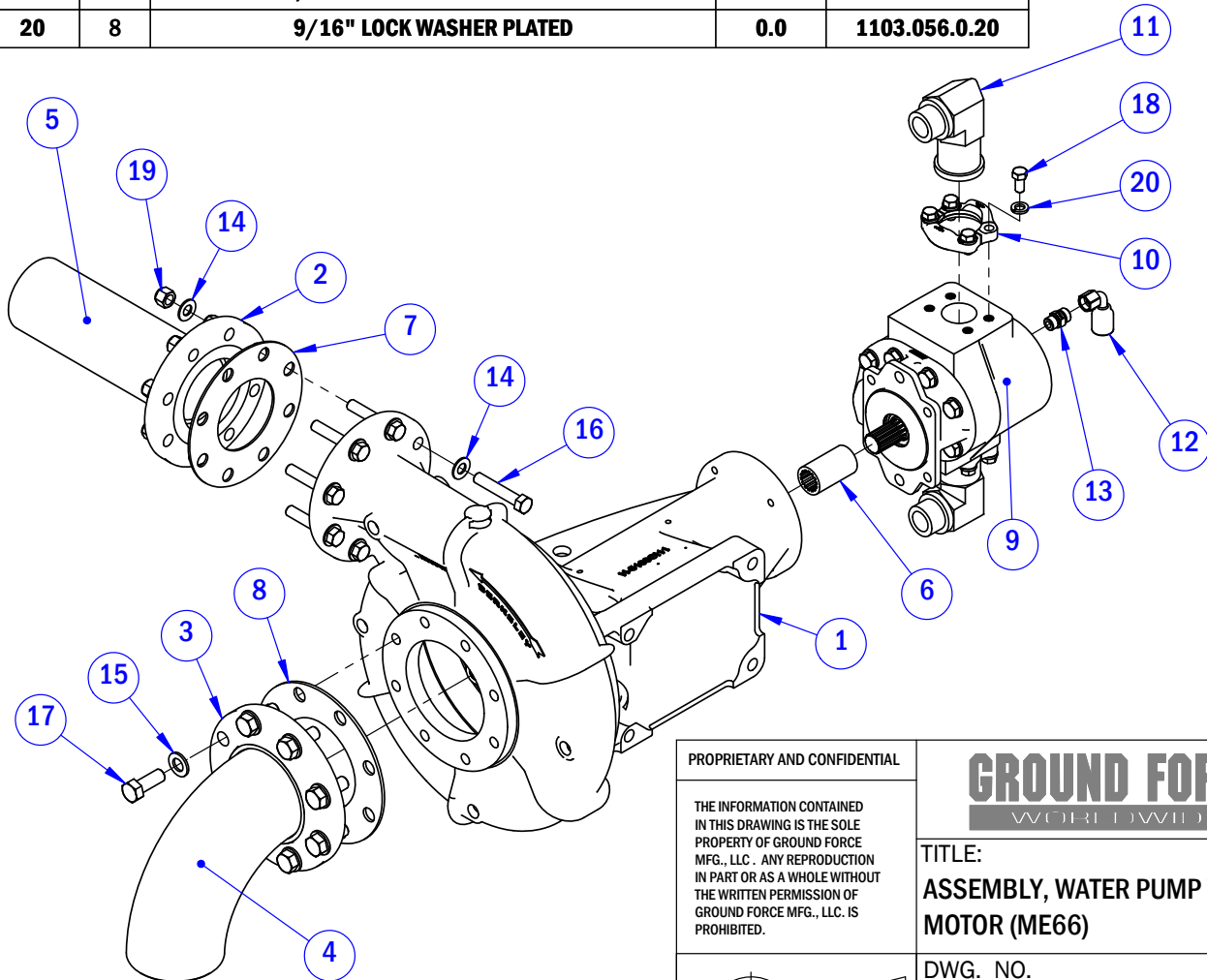
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		TITLE: 20K WT - OVERALL	
		DWG. NO. 713F14	REV 0
		WEIGHT: 41626.91	SHEET 1 OF 1

ITEM	QTY.	DESCRIPTION	WEIGHT	ERP
1	3	PIPE CRADLE	9.9	91081910737
2	1	ASSEMBLY, WATER PUMP W/ HYD. MOTOR (ME66)	369.7	91081929262
3	1	PLATE	1.4	90181133521
4	2	PLATE	0.7	90181133522
5	1	PIPE	67.9	90181133518
6	4	NIPPLE, 5" VICTAULIC	3.7	VIC42-5
7	2	CLAMP, 5" VICTAULIC, BOLT TYPE	7.4	VIC77-5
8	1	PIPE	126.0	90181152932



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		DWG. NO. 929247	REV 0
		WEIGHT: 625.57 SHEET 1 OF 1	

ITEM	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	PUMP WATER 4" X 5" DIRECT MOUNT CW	150.0	12003PM403
2	1	FLANGE 4" ANSI 150# RAISED FACE SL	11.6	4800SM006
3	1	FLANGE 5" 150# SLIP ON	13.1	4800SM073
4	1	ELBOW, 5" LR WELD-ON BIP	14.2	4800SM045
5	1	PIPE	12.2	90181135306
6	1	COUPLER 1-1/4" SPLINE 14 TOOTH FEM	1.0	8357DC001
7	1	GASKET 4" ANSI FLANGE 150#	0.2	4300GA004
8	1	GASKET 5" ANSI FLANGE 150#	0.3	4300GA005
9	1	MOTOR HYDRAULIC 14 TOOTH	1.1	3200HY661
10	2	FLANGE 2" FPT SPLIT 3000PSI	0.1	1812HY007
11	2	FLANGE, 2" CODE 61 1.5" MALE JIC 90 (FG)	0.8	1704-24-32
12	1	HOSE END 1/2" HOSE 1/2" ORF 90 SWIVEL	0.0	1J943-8-8
13	1	CONNECTOR 1/2" ORFS 1/2" ORB STRAIGHT	0.2	FF6400-8-8
14	16	5/8" FLAT WASHER L-9	0.0	0945.062.0.20
15	8	3/4" FLAT WASHER L-9	0.0	0945.075.0.20
16	8	5/8" X 3-1/2" GR8 BOLT PLATED	0.1	0801.062.0350.20
17	8	3/4" X 2" NC GR8 BOLT. PLATED	0.1	0801.075.0200.20
18	8	1/2 X 1 NC GR8 BOLT PLATED	0.0	0801.050.0100.20
19	8	5/8"-11 NC NYLOC NUT PLATED	0.1	0120.062.01.20
20	8	9/16" LOCK WASHER PLATED	0.0	1103.056.0.20



PROPRIETARY AND CONFIDENTIAL

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GROUND FORCE
WORLDWIDE

TITLE:
ASSEMBLY, WATER PUMP W/ HYD. MOTOR (ME66)

DWG. NO.

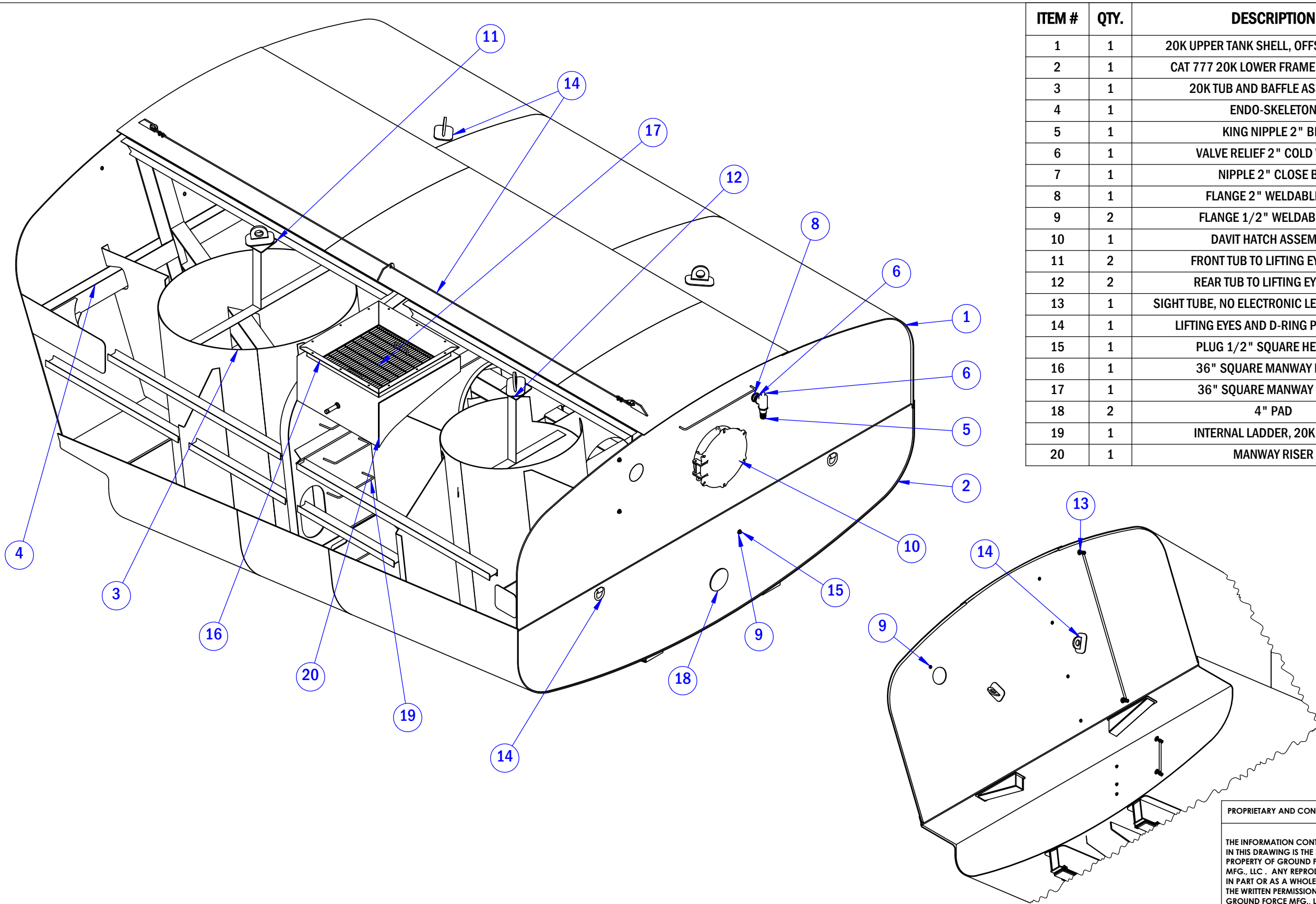
929262

WEIGHT: 369.68

REV

0

SHEET 1 OF 1

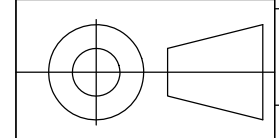


ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	20K UPPER TANK SHELL, OFFSET MANWAY	11827.99	91081932380
2	1	CAT 777 20K LOWER FRAME WELDMENT	12854.06	91081930656
3	1	20K TUB AND BAFFLE ASSEMBLY	8188.08	91081930670
4	1	ENDO-SKELETON	4379.55	91081930666
5	1	KING NIPPLE 2" BIP	0.944	BIP2KN
6	1	VALVE RELIEF 2" COLD WATER	4.908	12300VA001
7	1	NIPPLE 2" CLOSE BIP	0.580	BIP2XCL
8	1	FLANGE 2" WELDABLE BIP	0.62	BIP2PHX
9	2	FLANGE 1/2" WELDABLE BIP	0.11	BIP.5PHX
10	1	DAVIT HATCH ASSEMBLY	62.19	91081927076
11	2	FRONT TUB TO LIFTING EYE TIE IN	83.52	91081927329
12	2	REAR TUB TO LIFTING EYE TIE IN	69.97	91081927330
13	1	SIGHT TUBE, NO ELECTRONIC LEVEL INDICATOR		91081932383
14	1	LIFTING EYES AND D-RING PLACEMENT	97.95	91081930673
15	1	PLUG 1/2" SQUARE HEAD BIP	0.11	BIP.5XPLUG
16	1	36" SQUARE MANWAY FRAME	93.39	91081929428
17	1	36" SQUARE MANWAY GRATE	53.03	91081928430
18	2	4" PAD	6.174	90181162228
19	1	INTERNAL LADDER, 20K WATER	9.41	91081932389
20	1	MANWAY RISER	121.175	91081932386

PROPRIETARY AND CONFIDENTIAL
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TITLE:
CAT 777 20K GALLON WATER TANK ASSEMBLY

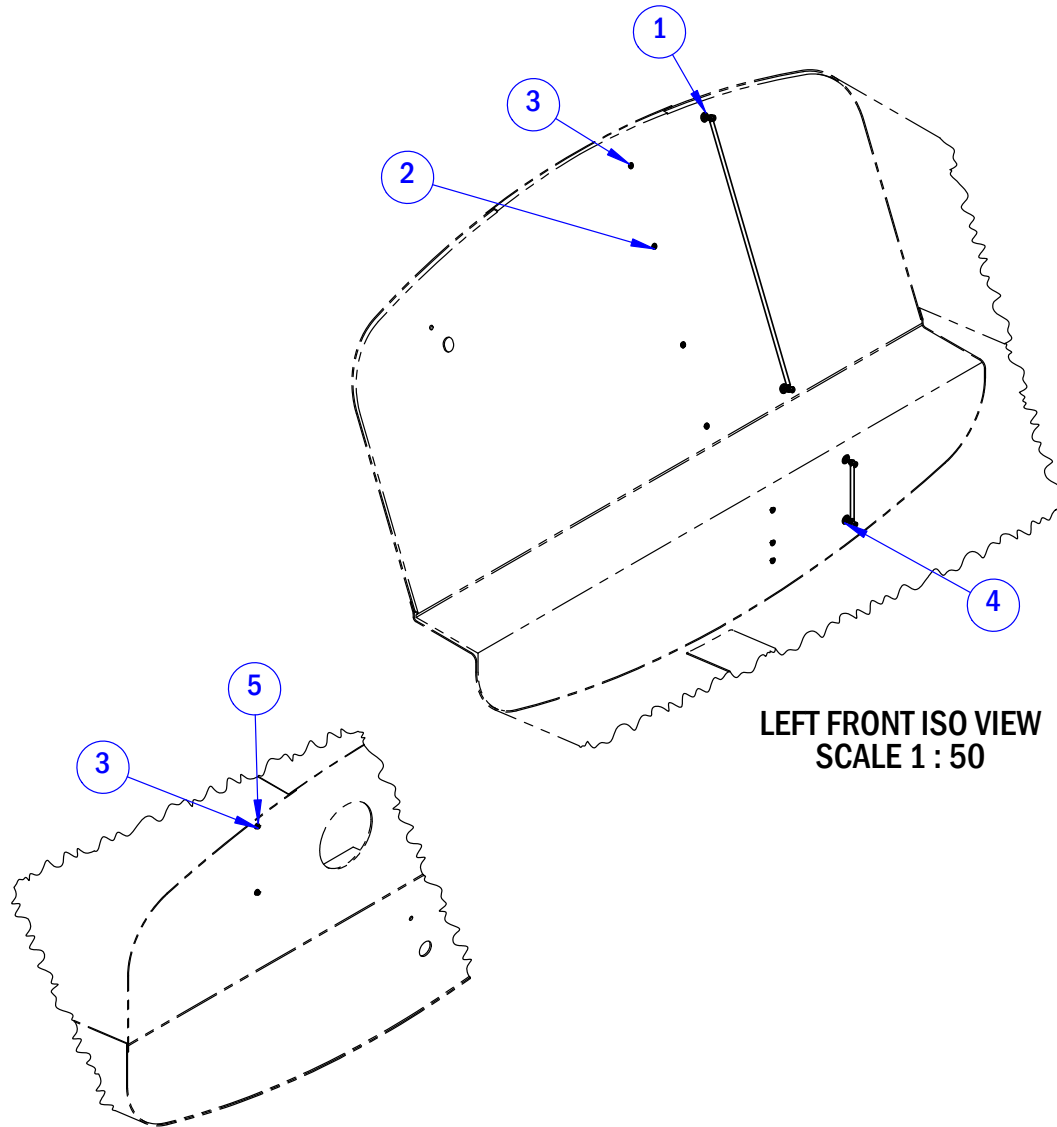


DWG. NO.
932379

WEIGHT: 37670.66 SHEET 1 OF 1

REV
0

ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	FRONT HEAD SIGHT TUBE	3.50	91081927327
2	7	FLANGE, 1/2" NPT #128 WELD	0.126	15130125005
3	9	PLUG 1/2" SQUARE HEAD BIP	0.11	BIP.5XPLUG
4	1	SIGHT TUBE ASSEMBLY	2.44	91081927177
5	2	FLANGE 1/2" WELDABLE BIP	0.11	BIP.5PHX



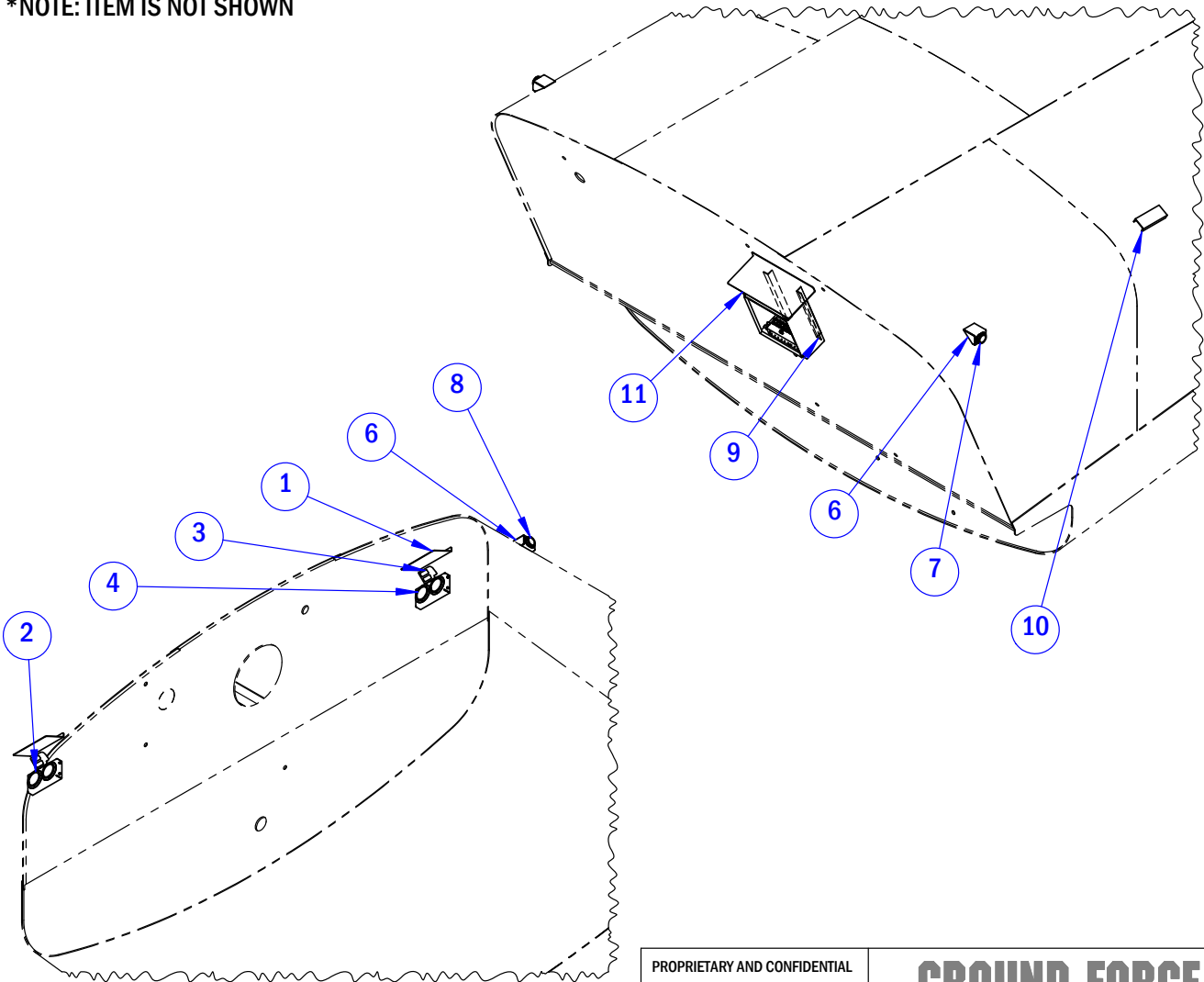
LEFT FRONT ISO VIEW
SCALE 1 : 50


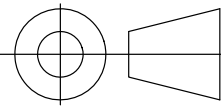
LEFT REAR ISO VIEW
SCALE 1 : 50

PROPRIETARY AND CONFIDENTIAL			
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		DWG. NO.	REV
		932383	0
WEIGHT:		SHEET 1 OF 1	

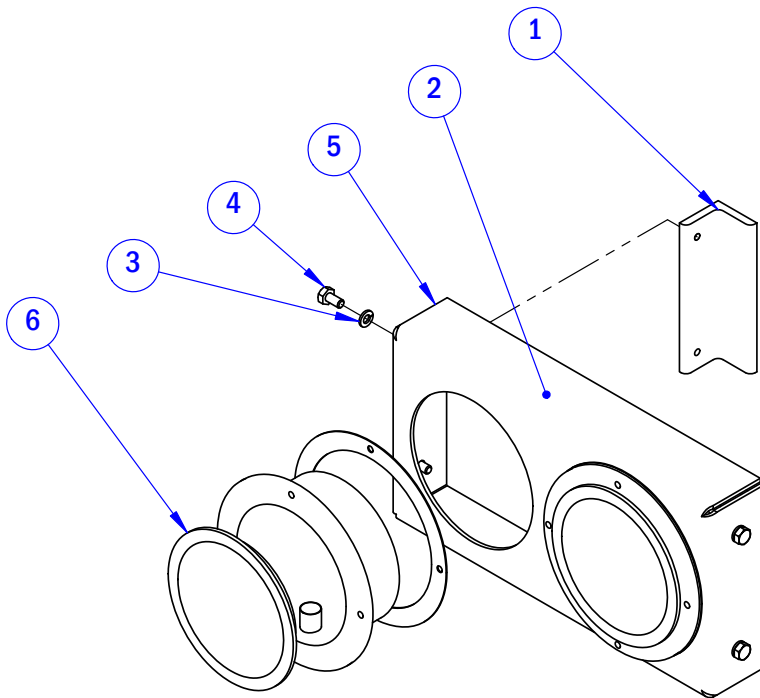
ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	2	LIGHT WATER SHEDDERS	5.24	90181116722
2	1	LAMP, TURN/STOP/TAILO DUAL LH - LED ASSEMBLY	4.82	91081914569
3	2	LAMP, LED 9-32VDC CATERPILLAR	1.45	348-9543
4	1	LAMP, TURN/STOP/TAILO DUAL RH - LED ASSEMBLY	4.82	91081914570
5*	1	BACK UP ALARM, 12-24 VDC 107DECIBEL	0.447	14900SD270
6	4	BRACKET - CLEARANCE SIDE MARKER LIGHTS	2.20	91081910670
7	2	LAMP, CLEARANCE AMBER - 24V LED	0.20	91081924843
8	2	LAMP, CLEARANCE RED - 24V LED	0.20	91081924844
9	2	OPEN LOOP CONTROL BOX MOUNTING ANGLE	5.962	90181159584
10	1	MOUNTING CHANNEL FOR DCWD-0568	4.463	90181159586
11	1	WATER SHEDDER	13.570	90181159577

*NOTE: ITEM IS NOT SHOWN



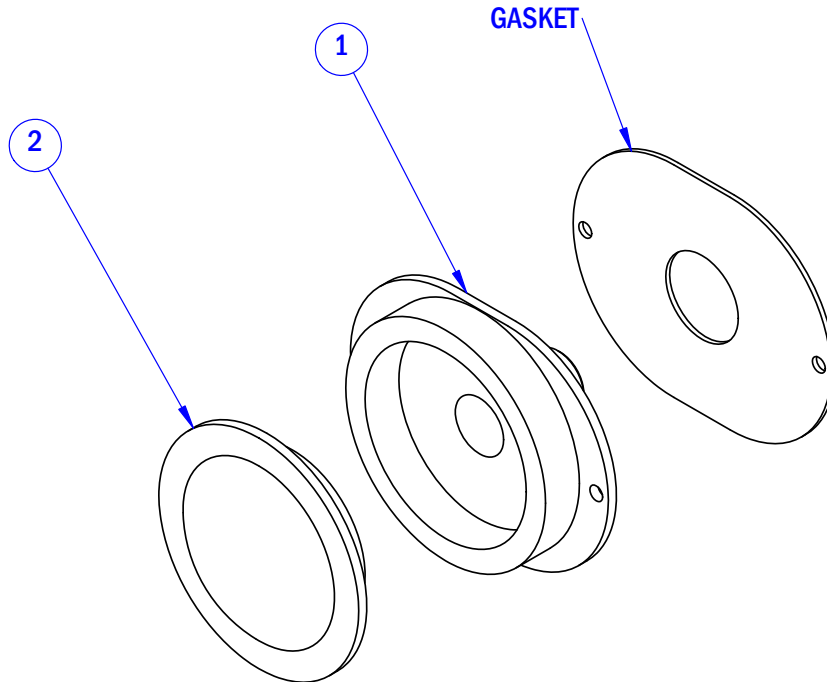
PROPRIETARY AND CONFIDENTIAL			
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		DWG. NO. 932428	REV 0
		WEIGHT: 62.59	SHEET 1 OF 1

ITEM	QTY.	DESCRIPTION	WEIGHT	ERP
1	2	BRACKET, TURN-TAIL-STOP - LIGHT	0.9	90181105350
2	1	LAMP, TURN/STOP/TAIL DUAL LH - 24V LED CONVERSION	2.9	91081923433
3	4	1/4" LOCK WASHER PLATED	0.0	1103.025.0.20
4	4	1/4" X 1/2" NC GR8 BOLT, PLATED	0.0	0801.025.0050.20
5	1	LAMP, RIGHT TURN/STOP/TAIL DUAL	2.0	7813LT033
5	1	LAMP, LEFT TURN/STOP/TAIL DUAL	2.0	7813LT032
6	2	LED LENS KIT, RED 24V FOR 7813LT032/033	1.0	7813LT043



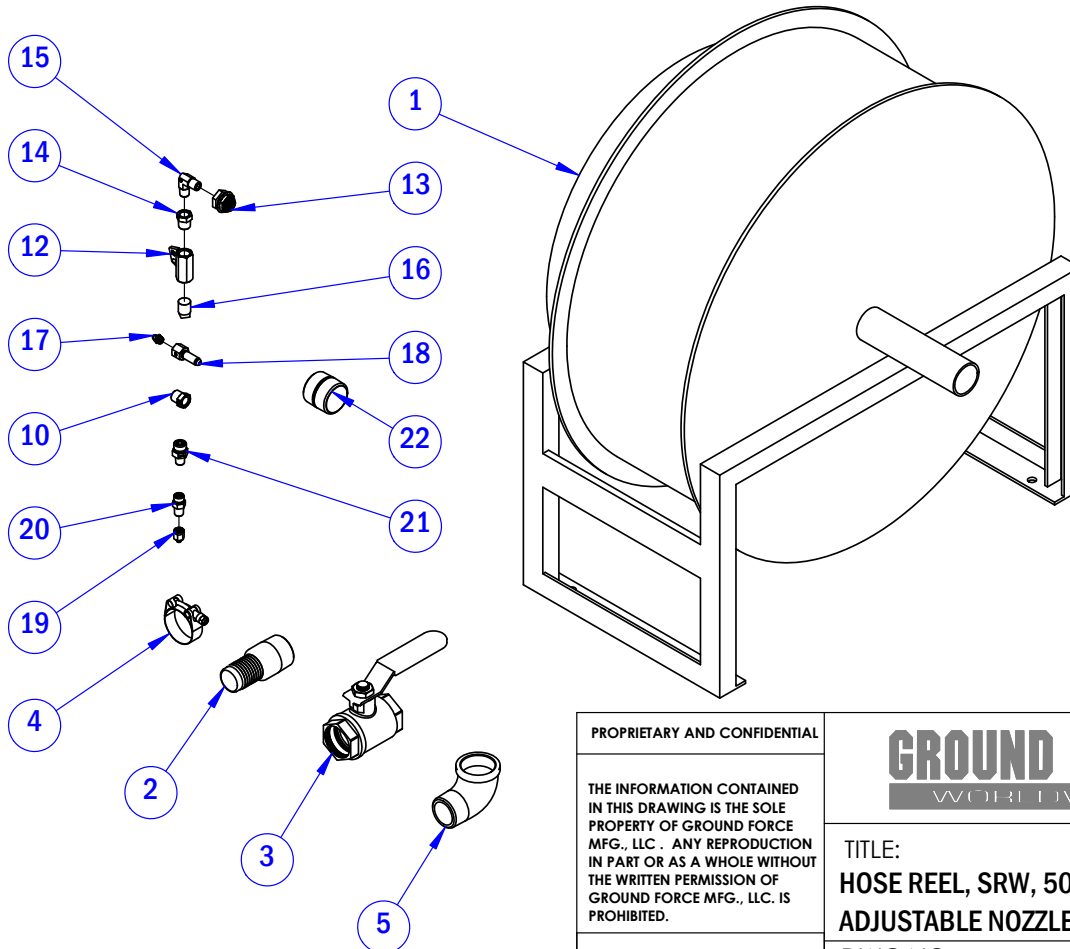
PROPRIETARY AND CONFIDENTIAL		GROUND FORCE WORLDWIDE	
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GROUND FORCE MFG., LLC . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF GROUND FORCE MFG., LLC. IS PROHIBITED.		TITLE: LED LAMP, TURN/STOP/TAIL	
		DWG. NO. 914569/914570	REV 2
		WEIGHT: 4.82 SHEET 1 OF 1	

ITEM	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	HOUSING - MARKER LIGHT - AMBER	0.1	7813LT007
1	1	HOUSING - CLEARANCE LIGHT - RED	0.0	7813LT006
2	1	LENS KIT, LED, AMBER 24V 7813LT007	0.1	7813LT048
2	1	LENS KIT, LED, RED 24V 7813LT006	0.0	7813LT047



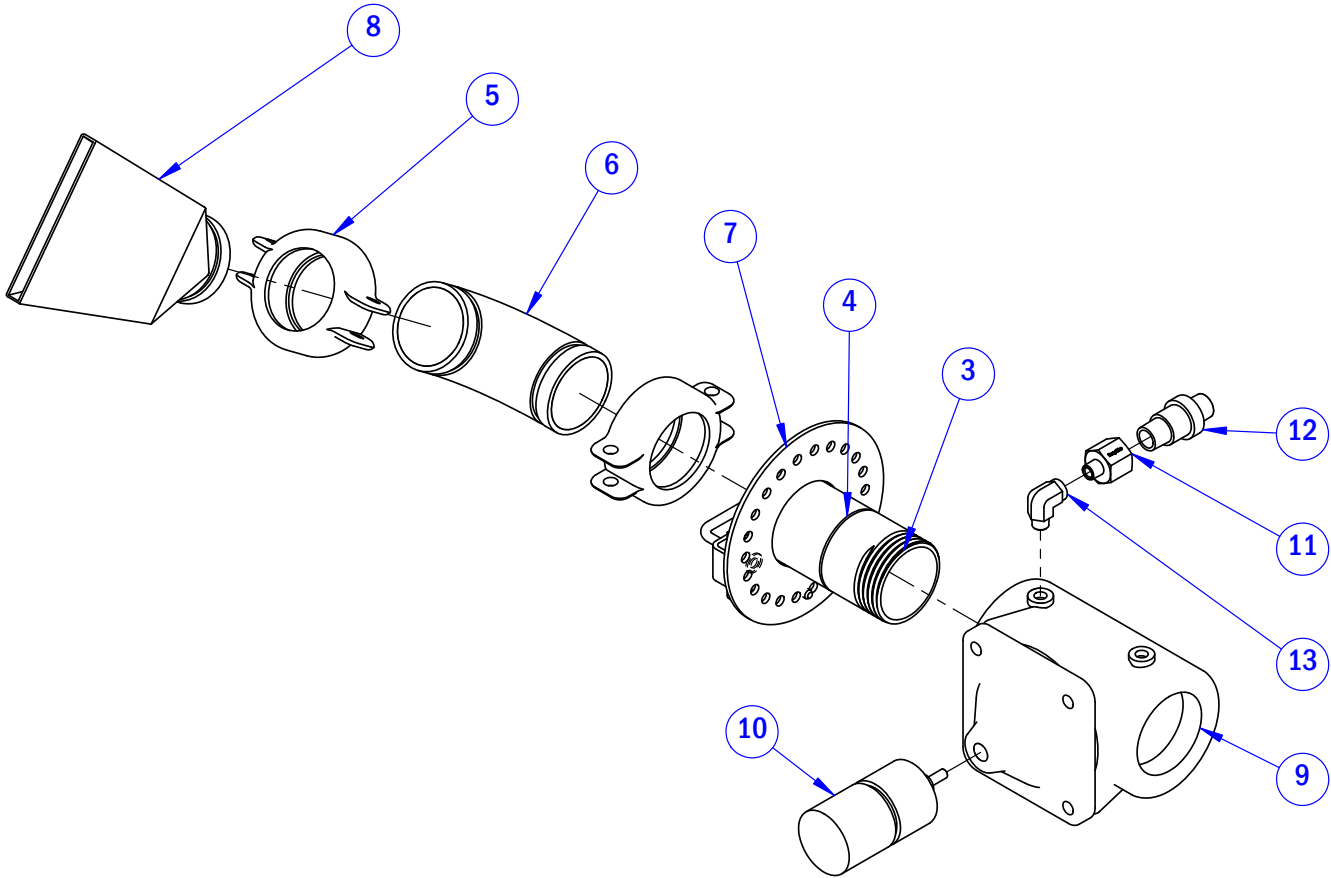
PROPRIETARY AND CONFIDENTIAL		GROUND FORCE WORLDWIDE	
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		DWG. NO. 924843/924844	REV 0
		WEIGHT: 0.20 SHEET 1 OF 1	

ITEM	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	HOSE REEL, 1.5" 600PSI 1.5"X50'SRW	160.00	922-30-31A
2	2	KING NIPPLE, 1-1/2" BIP	0.74	BIP1.5KN
3	1	BALL VALVE 1-1/2" BRASS	4.361	3451VA007
4	4	CLAMP T-BOLT STAINLESS	0.152	TBC188
5	1	ELBOW 1-1/2"X 90 STREET BIP	0.18	BIP1.5X90STR
6	1	HOSE 1.5" X 50' WATER W/MPT ENDS (NOT SHOWN)	167.98	3400HS055
7	1	NOZZLE 1 1/2" ADJUSTABLE (NOT SHOWN)	0.00	15NZIPT-AD-LX
8	1	PLUG 3/8"MPT HEX HEAD (NOT SHOWN)	0.00	5406-6P
9	1	HOSE REEL REMOTE AIR BLOW DOWN	10.00	91081926761
10	1	BUSHING 3/8"MPT 1/4" FPT	0.05	5406-6-4
11	1	HOSE (NOT SHOWN)	1.93	90181143659
12	1	BALL VALVE 3/8" GRIP	0.0	3400VA011
13	1	COUPLING 1/4" FPT BULK-	0.1	W.21204
14	1	BUSHING 3/8"MPT 1/4" FPT	0.1	5406-6-4
15	1	ELBOW 1/4" MPT 90DEG MALE	0.1	5500-4-4
16	1	PLUG, 3/8" BIP SQUARE HEAD	0.1	BIP.375XPLUG
17	2	GREASE ZERK 1/8"PTF M STRAIGHT	0.0	5000
18	2	CONNECTOR 1/4" TUBE 1/8" FPT BH	0.1	2705-2-4-LN
19	2	ZERK ADAPTER 1/4-28 TO 1/8FPT	0.0	3400WH005
20	2	ADAPTER, 1/4" ORFS 1/4" MPT STRAIGHT	0.0	FF2404-4-4
21	1	ADAPTER 3/8" ORFS 1/4" MPT STRAIGHT	0.1	FF2404-6-4
22	1	NIPPLE 1-1/2" X CLOSE BIP	0.34	BIP1.5XCL



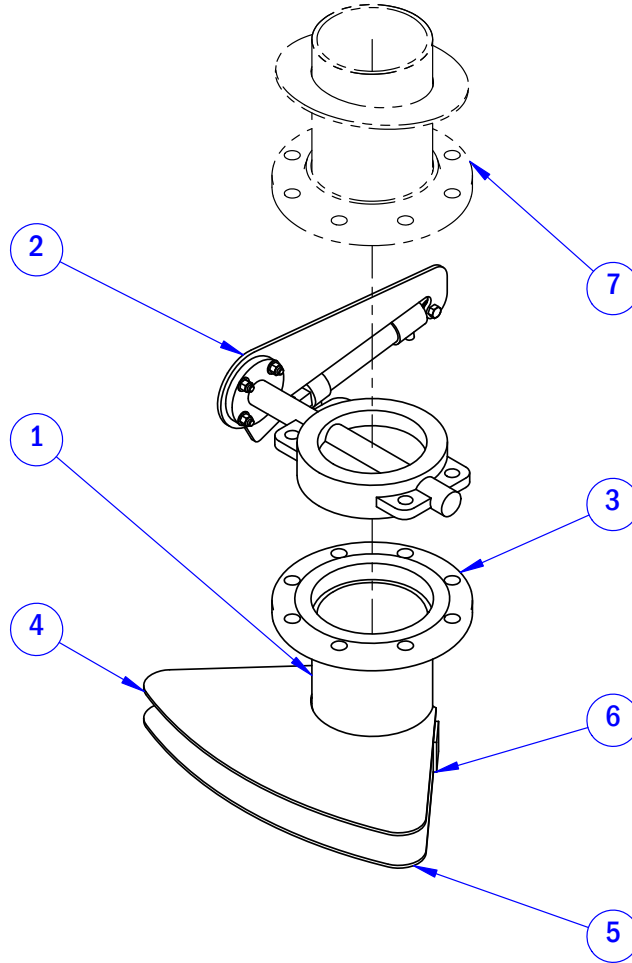
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GROUND FORCE MFG., LLC . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF GROUND FORCE MFG., LLC. IS PROHIBITED.		GROUND FORCE WORLDWIDE	
TITLE: HOSE REEL, SRW, 50'X1-1/2", ADJUSTABLE NOZZLE		DWG NO. 914620/926761	
		REV 2	WEIGHT: 327.98 SHEET 1 OF 1

ITEM	QTY.	DESCRIPTION	LBS.	ERP
1	1	ASSEMBLY, ADJUSTABLE SIDE SPRAY	26.23	91081912414
2	1	VALVE 3" NPT IN-LINE HYD ASSEMBLY	84.48	91081914621
3	1	NIPPLE 3" X 3" NPT WELD-ON	1.74	PN3000
4	1	NIPPLE 3" VICTAULIC	2.12	VIC42-3
5	2	CLAMP 3" VICTAULIC	4.92	VIC77-3
6	1	ELBOW, 3" 90 DEGREE VICTAULIC	4.47	VIC10-3
7	1	SIDE SPRAY ADJUSTER	3.34	91081912204
8	1	SPRAY HEAD, SIDE SPRAY, 3" VIC	4.72	19293104
9	1	VALVE, 3" NPT IN-LINE, HYDRAULIC AC	75.07	91081914622
10	1	CYLINDER 2" BORE 3/4" STROKE 3/8" ROD	8.05	22095662219
11	1	ADAPTER 3/8" MPT 3/4" FPT	0.40	5405-6-12
12	1	VALVE AUTO DRAIN 2/3GPM >10 PSI	0.74	20401573001
13	1	ELBOW 3/8" MPT 90DEG STREET	0.23	5502-6-6



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		TITLE: ASSEMBLY, SIDE SPRAY - HOP-ADJUST	
		DWG. NO. 914447	REV 1
		WEIGHT: 110.71	SHEET 1 OF 1

ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	DUCK BILL MOUNTING PIPE	11.33	90181147801
2	1	6" HYDRAULIC BUTTERFLY ASSEMBLY	37.87	91081924886
3	1	FLANGE 6" 150# ANSI RAISED FACE S	16.06	4800SM077
4	1	6" DUCK BILL - UPPER	7.47	90181112602
5	1	6" DUCK BILL - LOWER	9.42	90181112603
6	2	SPACER TAB	0.21	90181136219
7	1	DUMP PROVISION, 6"	37.1	91081929244

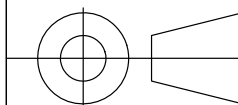


PROPRIETARY AND CONFIDENTIAL

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GROUND FORCE
WORLDWIDE

TITLE:
GRAVITY DUMP, 6" DUCK BILL



DWG. NO.

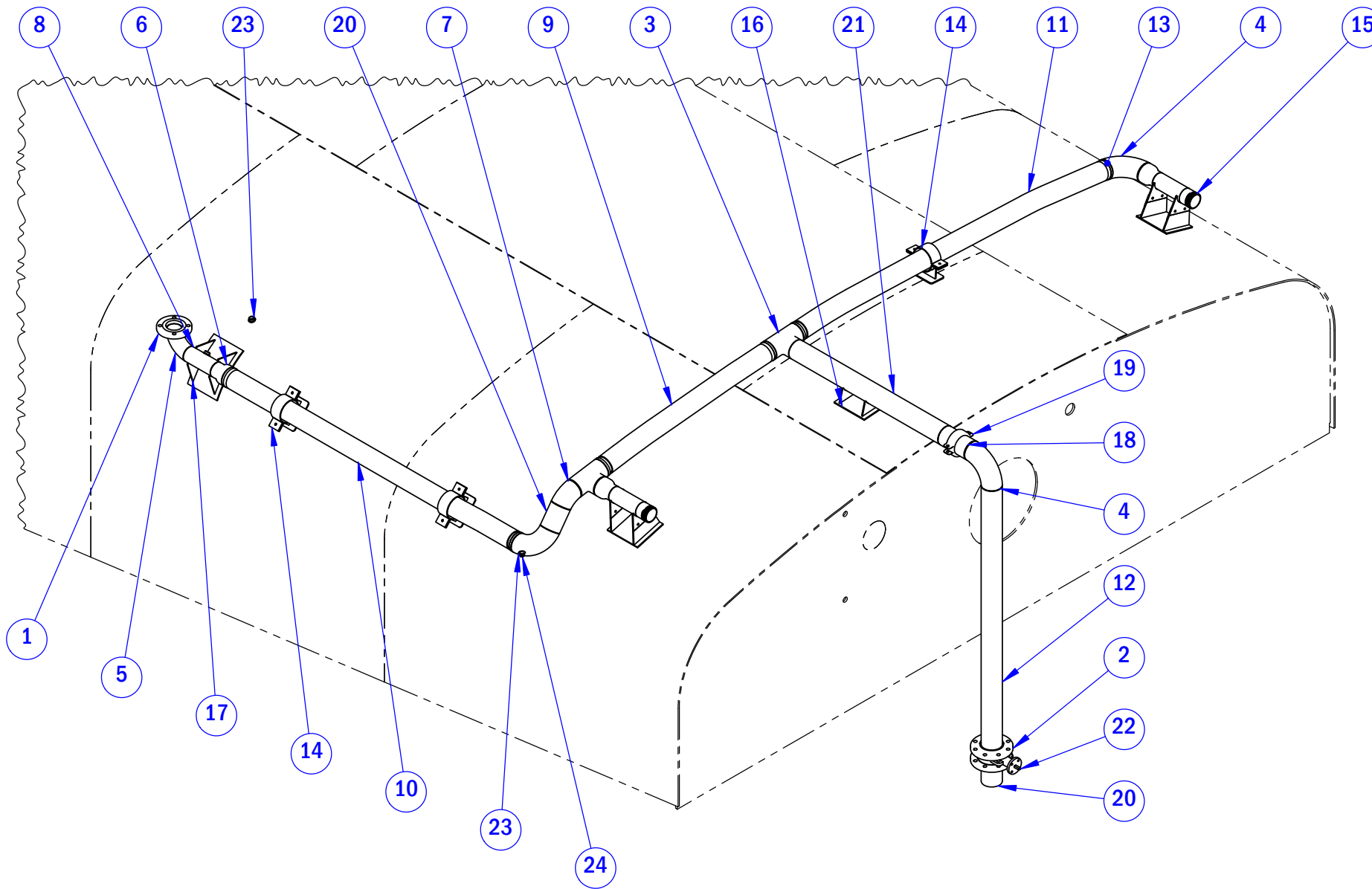
930881

REV

0

WEIGHT: 82.57

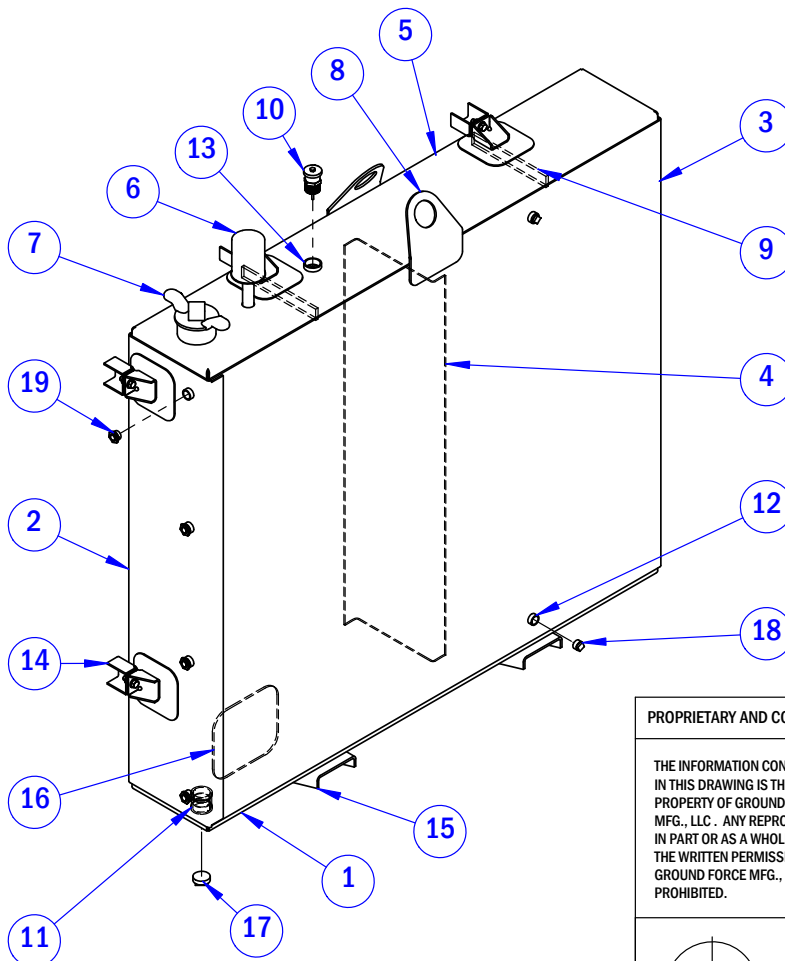
SHEET 1 OF 1



ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	FLANGE 3" 150# ANSI RAISED FACE	8.421	4800SM039
2	2	FLANGE 4" ANSI 150# RAISED FACE SL	11.606	4800SM006
3	2	TEE, 4" STANDARD BUTT-WELD	8.701	4800SM026
4	3	ELBOW 4" 90DEG LR WELD	8.422	4800SM029
5	1	ELBOW 3" 90 DEG. STD.	4.401	4800SM002
6	1	REDUCER 4" X 3" BUTT-WELD	3.079	4800SM027
7	1	ELBOW, 4" 45DEG LR WELD	4.15	4800SM063
8	1	PIPE	5.024	90181159965
9	1	HOSE	4.285	90181162298
10	1	HOSE	7.443	90181162299
11	1	HOSE	8.220	90181162300
12	1	RISER	60.485	90181162309
13	6	MODIFIED 4" KING NIPPLE	2.65	91081931831
14	3	PIPE CRADLE	6.441	91081931854
15	2	MONITOR SUPPORT	22.788	91081932400
16	1	4" PIPE SUPPORT	7.098	91081932406
17	1	MONITOR SADDLE	11.076	91081932408
18	2	NIPPLE 4" VICTAULIC	2.899	VIC42-4
19	1	CLAMP 4" VICTAULIC BOLT TYPE	5.970	VIC77-4
20	2	PIPE	4.919	90181162339
21	1	PIPE	39.889	90181162384
22	1	VALVE 4" BUTTERFLY 150# FLANGE	19.90	20169040
23	3	FLANGE 1/2" WELDABLE BIP	0.106	BIP.5PHX
24	1	PLUG 1/2" SQUARE HEAD BIP	0.11	BIP.5XPLUG

PROPRIETARY AND CONFIDENTIAL		
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TITLE:		EXTERNAL PLUMBING
DWG. NO.	REV	
932395	1	
WEIGHT: 352.109	SHEET 1 OF 1	

ITEM #	QTY.	DESCRIPTION	WEIGHT	ERP
1	1	FOAM TANK - BOTTOM	57.570	90181114285
2	1	FOAM TANK- SIDE	274.067	90181162349
3	1	FOAM TANK- SIDE	274.194	90181114283
4	1	FOAM TANK-BAFFLE	42.516	90181114286
5	1	FOAM TANK- TOP	57.302	90181114284
6	1	FILTER ASSEMBLY	8.535	91081913064
7	1	3" TOP FILL	8.56	91081913063
8	2	LIFTING EYE - LIGHT BIN - GENERAL	4.071	90181100732
9	2	FLAT BAR	1.87	90181137440
10	1	VENT, 5 PSI PRESSURE ALUMINUM	0.330	15300SD006
11	3	COUPLER 1.5" NPT 304 STAINLESS	0.885	S1.5XCPL
12	6	HALF COUPLER 3/4" NPT SS	0.127	S.75X.5CPL
13	1	HALF COUPLER 1-1/4 T304 STAINL	0.266	S1.25X.5CPL
14	6	PRODUCT TANK FEET ASSEMBLY-RIGID	3.79	91081932424
15	2	TANK MOUNT	12.011	90181114244
16	2	APPURTENANCE PAD	6.098	90181113488
17	3	PLUG 1-1/2" SQUARE HEAD BRASS	0.58	B1.5XPLUG
18	2	PLUG, 3/4" SQUARE HEAD, BRASS	0.18	B.75XPLUG
19	4	SIGHT GLASS 3/4" NPT STAINLESS	0.109	23392649022



PROPRIETARY AND CONFIDENTIAL

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GROUND FORCE
WORLDWIDE

TITLE:
200 GALLON FOAM TANK

DWG. NO.

932407

REV

1

WEIGHT: 800.12

SHEET 1 OF 1

GROUND FORCE

WORLDWIDE


WORLD'S FINEST MINE SUPPORT EQUIPMENT

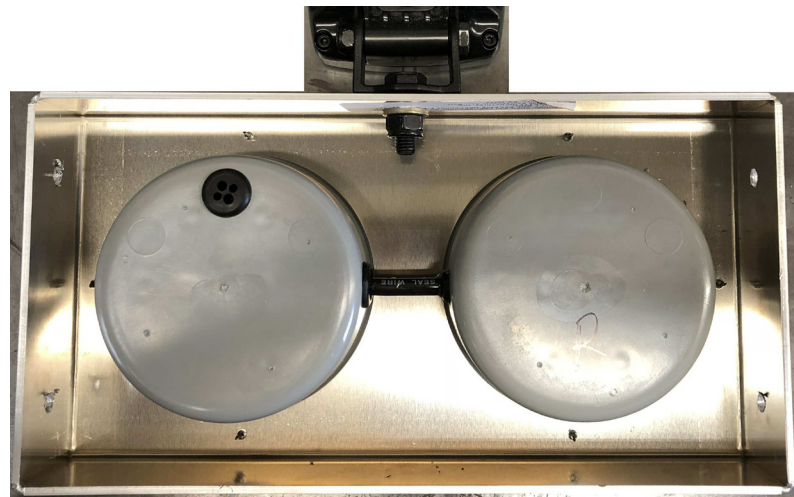
PARTS & SCHEMATICS MANUAL

SCHEMATICS

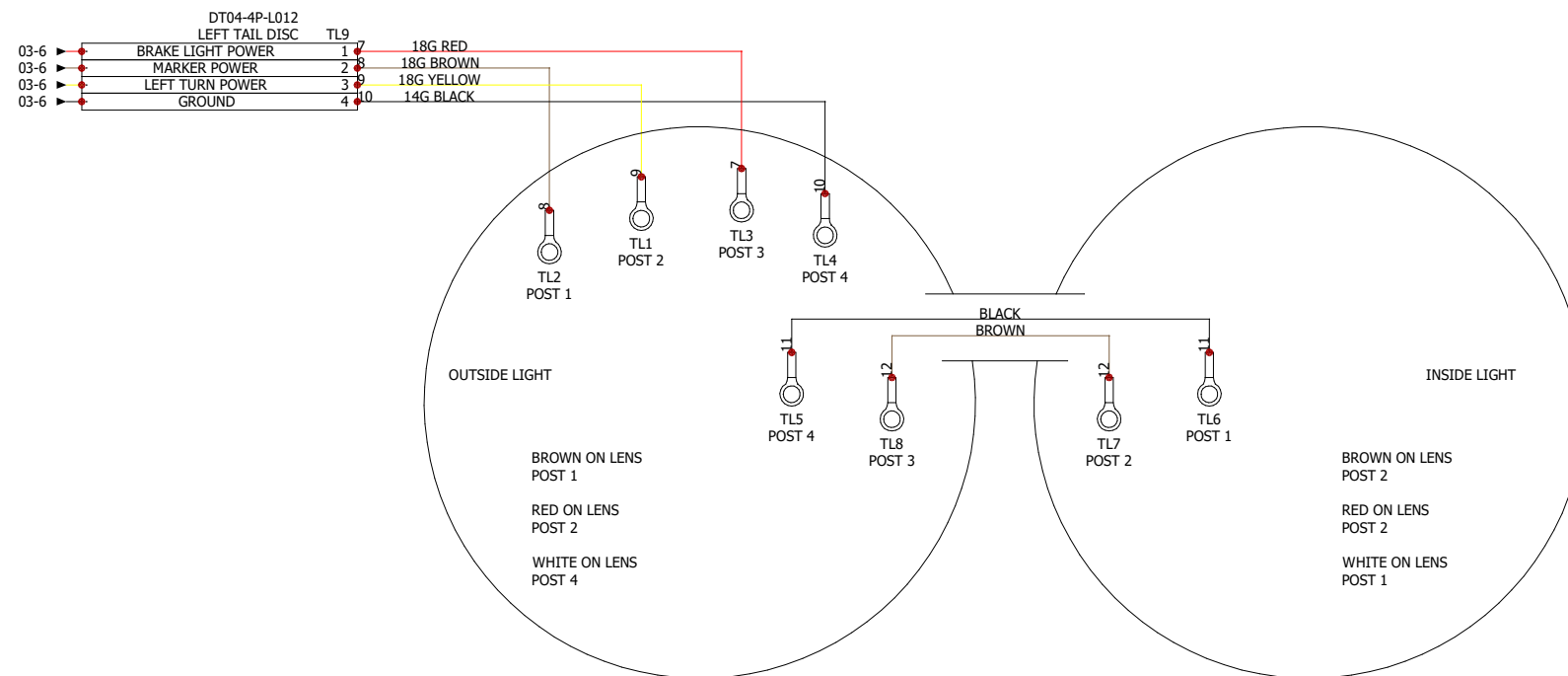
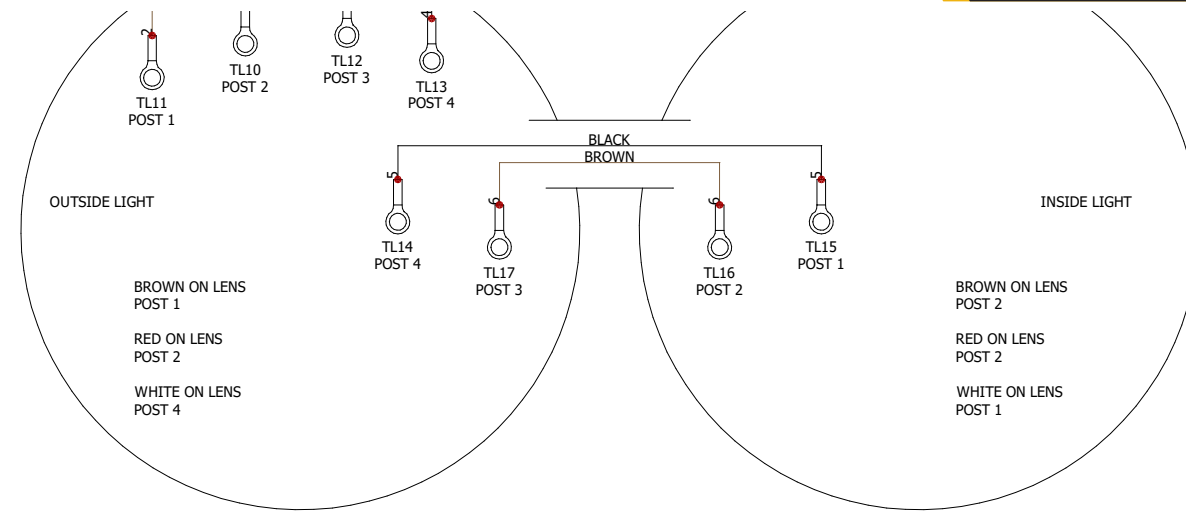
E-713F14

RIO TINTO MINERALS - BORON 20,000 GALLON WATER TANK (OL)

0	8/28/2019	MStolley	
REV.	DATE	NAME	CHANGES
 GROUND FORCE WORLDWIDE WORLD'S FINEST MINE SUPPORT EQUIPMENT			R
			JOB NUMBER: 713F14 User data 1 User data 2



TL18



TL9

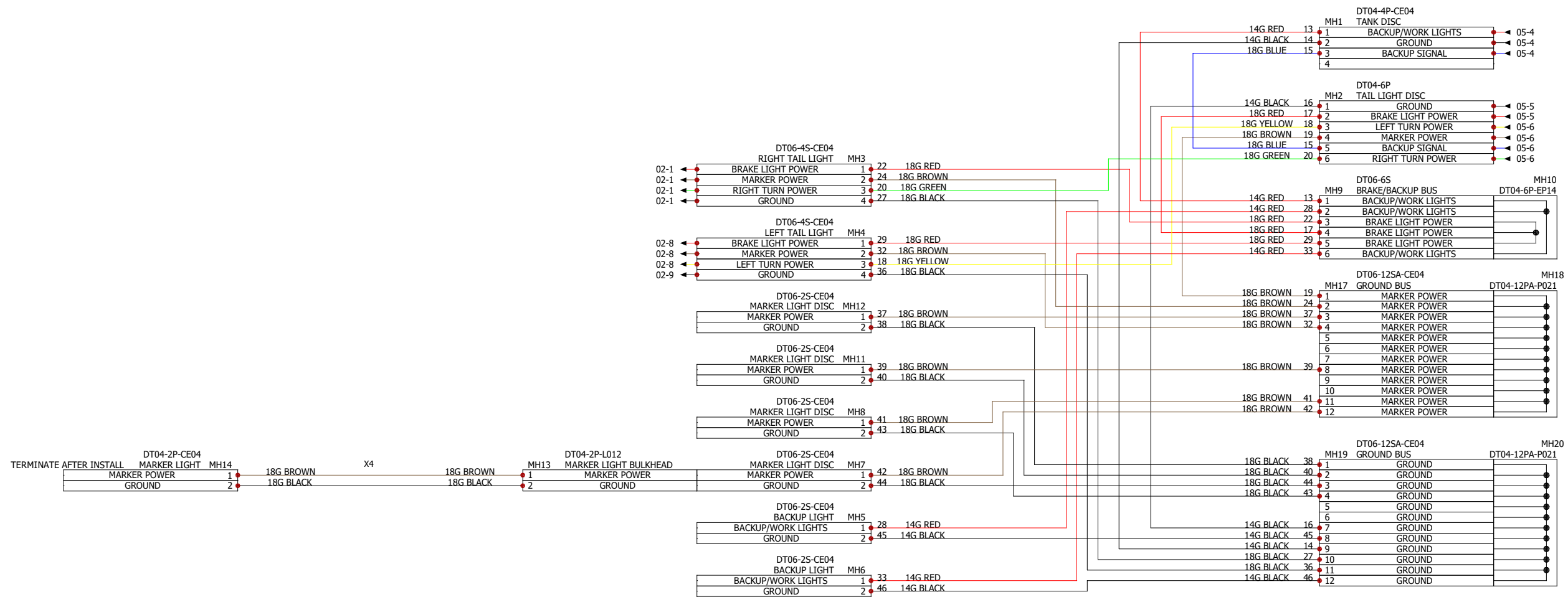
GROUND FORCE
WORLDWIDE
 WORLD'S FINEST MINE SUPPORT EQUIPMENT

JOB NUMBER: 713F14
 20,000 GALLON WATER TANK (OL)

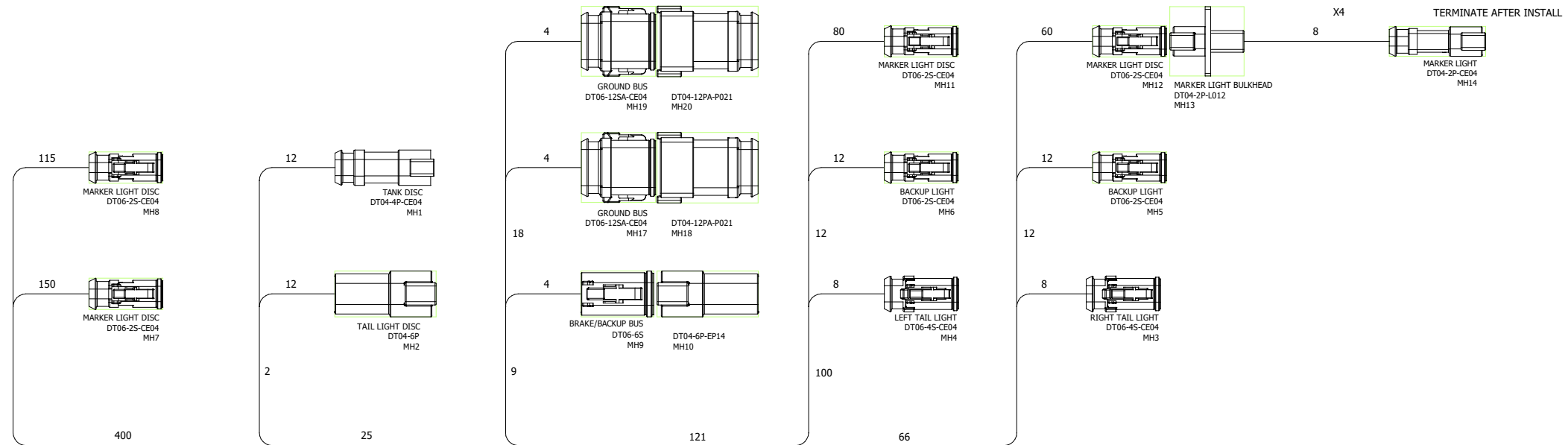
RIO TINTO MINERALS - BORON

LOCATION: L1 MAIN HARNESS

0	8/28/2019	MStolley	
REV.	DATE	NAME	CHANGES



0	8/28/2019	MStolley	
REV.	DATE	NAME	CHANGES



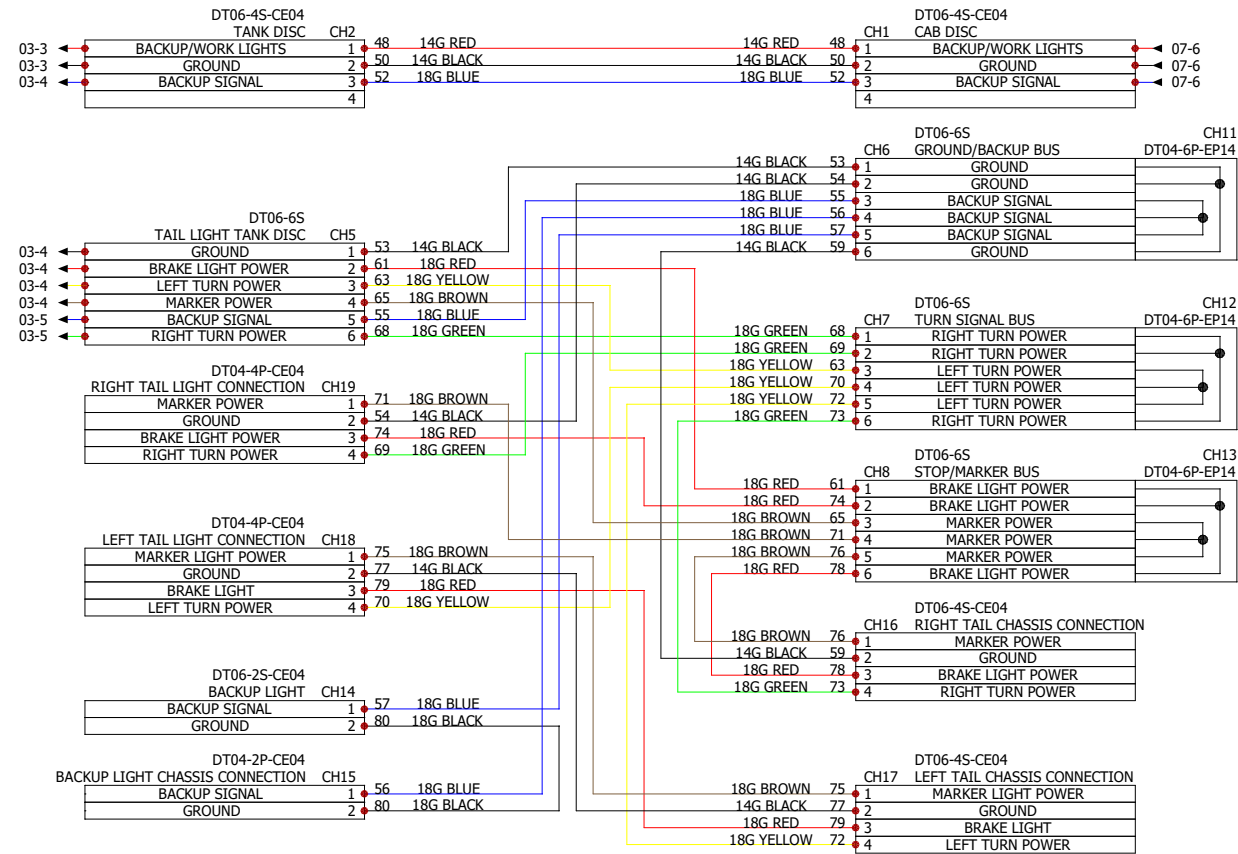
GROUND FORCE
WORLDWIDE
 WORLD'S FINEST MINE SUPPORT EQUIPMENT

JOB NUMBER: 713F14
 20,000 GALLON WATER TANK (OL)

RIO TINTO MINERALS - BORON

LOCATION: L2 L1 MAIN HARNESS

0	8/28/2019	MStolley	
REV.	DATE	NAME	CHANGES

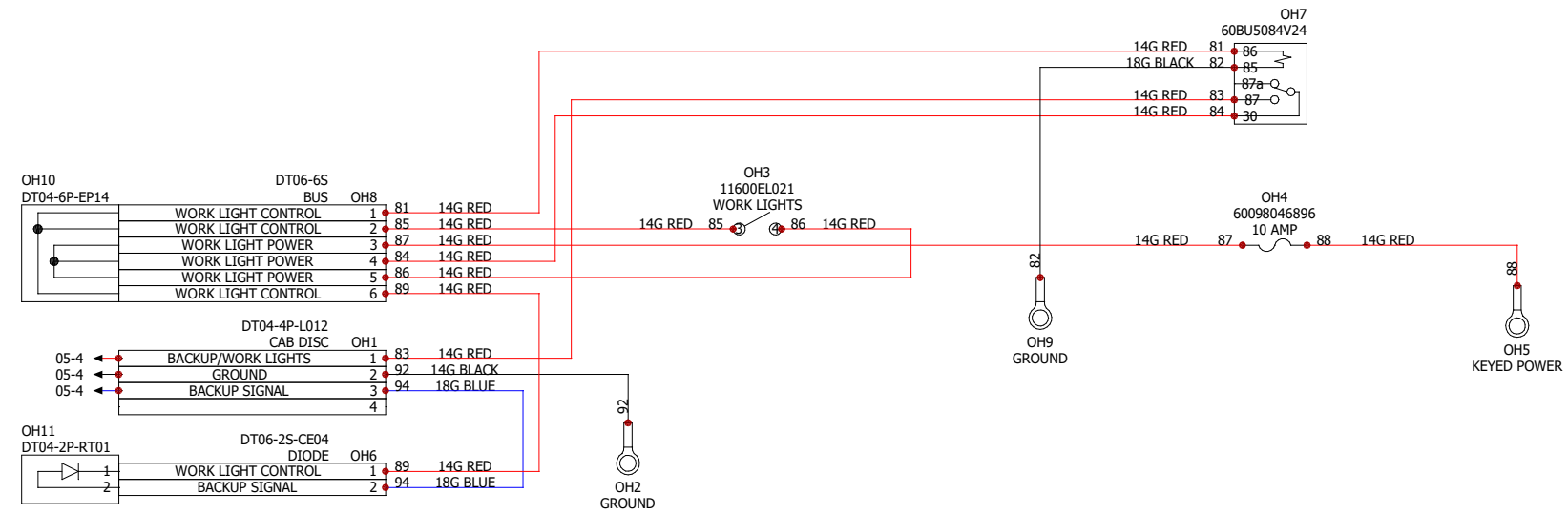


JOB NUMBER: 713F14
20,000 GALLON WATER TANK (OL)

RIO TINTO MINERALS - BORON

LOCATION: L3 L1 REAR CHASSIS

REV.	DATE	NAME	CHANGES
0	8/28/2019	MStolley	

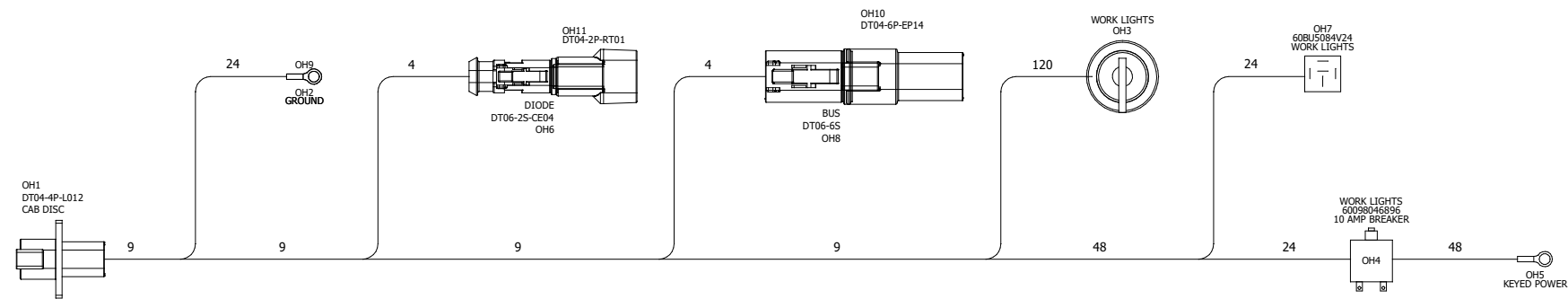


JOB NUMBER: 713F14
20,000 GALLON WATER TANK (OL)

RIO TINTO MINERALS - BORON

LOCATION: L4 CAB HARNESS

0	8/28/2019	MStolley	
REV.	DATE	NAME	CHANGES



GROUND FORCE
WORLDWIDE
 WORLD'S FINEST MINE SUPPORT EQUIPMENT

JOB NUMBER: 713F14
 20,000 GALLON WATER TANK (OL)

RIO TINTO MINERALS - BORON

LOCATION: L4 CAB HARNESS

REV.	DATE	NAME	CHANGES
0	8/28/2019	MStolley	

GROUND FORCE

WORLDWIDE

WORLD'S FINEST MINE SUPPORT EQUIPMENT

PARTS & SCHEMATICS MANUAL

MASTER PARTS LIST

GROUND FORCE
WORLDWIDE

MASTER PARTS LIST -
20,000 GALLON WATER
BODY KIT

713F14

PART NUMBER	DESCRIPTION	PICTURE
BODY/CHASSIS COMPONENTS		
12700GA149	O-RING, 6" FOR 12700WH149	
12700WH149	PLUG, 6"NPT TANK TRUCK NO BREATHER	
1451	DRAIN COCK, 1/2" MPT 3/4"	
32100.75X6	SKIRTBOARD 3/4" X 6" X 10' W/10GA	
4300GA036	BELTING, 3/8" X 36" WIDE	
4300GA048	BELTING, 3/8" X 48" WIDE	
6700WH021	CABLE 3/8" AIRCRAFT	

6700WH023	CLIP 3/8" WIRE ROPE	
6700WH024	THIMBLE 3/8"	
841008555SB	MANHOLE 20" CAM-LATCH 35 PSI WITH 6" WELD COLLAR	
TYGON.75	HOSE, 3/4"ID 1"OD CLEAR FUEL	
ELECTRICAL COMPONENTS		
348-9543	LAMP, LED 9-32VDC CATERPILLAR	
7813LT006	LAMP, RED CLEARANCE, 12VDC	
7813LT047	LENS KIT, LED, RED 24V 7813LT006	
7813LT007	LAMP, AMBER CLEARANCE, 12VDC	
7813LT048	LENS KIT, LED, AMBER 24V 7813LT007	

7813LT032	LAMP TURN/STOP/TAIL DUAL LH 12VDC	
7813LT033	LAMP TURN/STOP/TAIL DUAL RH 12VDC	
7813LT043	LENS KIT, LED RED 24V 7813LT032/33	
FOAM SYSTEM COMPONENTS		
12700GA146	O-RING FOR 12700WH146	
12700WH146	PLUG, 3" NPT TANK TRUCK,NO BREATHER	
15300SD006	VENT, 5 PSI PRESSURE ALUMINUM	
23392649022	SIGHT GLASS 3/4"NPT STAINLESS	
9777FI008	FILTER/BREATHER, DESICCANT 25MICRON	
T-TRUCK2	HOSE, 2"TANK TRUCK PETROLEUM	

HOSE REEL COMPONENTS		
922-30-31A	HOSE REEL, 1.5" 600 PSI 1.5:X50'SRW	
3400HS055	HOSE, 1.5" X 50' WATER W/MPT ENDS	
15NZIPT-AD-LX	NOZZLE, 1 1/2" ADJUSTABLE	
T-TRUCK1.5	HOSE 1-1/2" TANK TRUCK PETRO	
3400VA011	BALLVALVE, 3/8" GRIP	
3451VA007	BALLVALVE, 1-1/2" BRASS	
WATER PUMP COMPONENTS		
108WHD	DRAIN COCK, 1/2" MPT	
12003PM403	PUMP, WATER, 4" X 5" DIRECT MOUNT CW	

B82472	PACKING GLAND	
H05105	WATER PUMP SHAFT	
L05976	IMPELLER	
M14761	PACKING RING SET (4 required)	
S06271	VOLUTE GASKET	NO IMAGE AVAILABLE
S10964	BERKLEY SLINGER, WATER	
26000975616	PACKING SEAL TOOL, 14" OAL FLEX-SHAFT (2 NEEDED)	
3200HY661	MOTOR HYDRAULIC 14 TOOTH	
4300GA004	GASKET, 4" ANSI FLANGE 150#	

4300GA005	GASKET, 5" ANSI FLANGE 150#	
8357DC001	COUPLER, 1-1/4" SPLINE 14 TOOTH FEMALE	
VIC77-4	CLAMP, 4" VICTAULIC, BOLT TYPE	
VIC77-5	CLAMP 5" VICTAULIC BOLT TYPE	
MISC COMPONENTS		
12300VA001	VALVE, RELIEF 2" COLD WATER	
1913GA001	GASKET, 3" CORK/BUNA	
1913GA002	GASKET 5" CORK/BUNA	
4300GA003	GASKET, 3" ANSI FLANGE 150#	

GROUND FORCE

WORLDWIDE

WORLD'S FINEST MINE SUPPORT EQUIPMENT

PARTS & SCHEMATICS MANUAL

WARRANTY

LIMITED WARRANTY

- A. GROUND FORCE MANUFACTURING, LLC (GFM) warrants that the specialty equipment manufactured by (GFM), including accessory equipment and parts manufactured by (GFM), shall be free from:
1. Defects in material and workmanship furnished by (GFM) and used in the fabrication thereof;
 2. Defects arising from the selection of materials or processes of manufacture;
 3. Defects in the design thereof in view of the state of the art on the date hereof.
- The foregoing warranty shall apply also to accessories, equipment, and parts manufactured to (GFM) detailed design and specifications and supplied to (GFM) by other manufacturers.
- B. (GFM) makes no warranty with regard to component parts not manufactured by (GFM), but agrees to assign to the purchaser all of its rights under any original manufacturer's warranty covering such component parts and agrees to assist the purchaser in making such contacts with the manufacturer of such component parts as may be necessary to protect its right under the warranty covering them.
- C. In case of defects in materials, defects in workmanship, defects arising from the selection of material or processes of manufacture, or defects inherent in the design, such defects must become apparent in the machine, accessory, equipment, or part manufactured by (GFM) within one calendar year or 5,000 hours of operations, whichever shall first expire after the equipment is commissioned by the original purchaser. It is required that the original purchaser complete the Product Registration Form within 45 days from the time the equipment is placed into service. Failure to complete the Product Registration Form will void the warranty. The date of commissioning must be within 12 months from the original date of invoice by GFM. End user must provide all information, which is relevant to the warranty, to GFM upon request. GFM reserves the right to determine what information is relevant. The extent of (GFM) liability under this warranty, as to defects in materials, defects in workmanship, defects arising from the selection of material or processes of manufacture, or defects inherent in the design, is limited to the repair of such defects, or to the repair or replacement (with a new or rebuilt similar item, free from the defect in question) of any accessory, equipment, or part manufactured by (GFM), which is defective in any such respects.
- D. The (GFM) Limited Warranty does not cover, and (GFM) makes no warranty with respect to:
1. Defects not reported and defective items not returned to (GFM) within the warranty period;
 2. Failure and damages due to misapplication, lack of proper maintenance, abuse, improper installation, or abnormal conditions of temperature, moisture, dirt or corrosive matter;
 3. Failure due to operation, intentional or otherwise, in any improper manner;
 4. Damage caused by components, or parts, or accessories built by others, or which were not manufactured, nor installed, nor sold by (GFM);
 5. Damage that results from continued use of equipment after a defect has become apparent;
 6. Item(s) which have/has in any way been altered by anyone other than an authorized representative of (GFM);
 7. Damage which occurs during shipment, or otherwise, without the fault of (GFM);
 8. Taxes, consumables, environmental fees, or surcharges;
 9. Freight, transportation, or shipping;
 10. Rental expenses;
 11. Travel expenses, including travel labor, mileage, lodging and meals;
- E. (GFM) shall in no way be liable for any expenses incurred by the purchaser in any attempt to repair, replace, or rework any originally defective item of sale. (GFM) shall in no way be liable for any losses, costs, forfeiture or damages (including loss of profits, liabilities of the purchaser, its customers, or third persons, and all other consequential damages), whether direct or indirect, and whether or not resulting from, or contributed to by the default, or negligence of (GFM), its agents, employees and subcontractors, which might be claimed as a result of the defect, use, or failure of the item delivered.

Except as stated, there is no warranty, express or implied, in connection with the design, manufacture, sale, service or use of the machinery, accessories, equipment and parts sold by (GFM). (GFM) liability on its warranty shall in no event exceed the cost of the item of sale.

This warranty policy supersedes, merges and voids all negotiations, prior discussions, agreements, and understandings, whether oral or written. This warranty policy may not be altered or amended except by a document executed by officers of each party.

DISTRIBUTOR WARRANTY POLICY

GROUND FORCE MANUFACTURING, LLC (GFM) will allow warranty claims for repairs on (GFM) manufactured equipment per the terms laid out in this warranty policy. All claims must follow the rules set forth in this policy; no other payment schedule will be recognized by (GFM). Proper procedure, including paper work, must be followed for warranty to be considered. The following warranty schedule will be applicable:

- Labor will be credited at 80% of the Distributor's prevailing in-shop service charge (at the time the repair is performed) up to, but not to exceed \$80 per hour for straight time, or \$100 per hour for approved overtime.
- Normally only straight time labor rate based on a 10 hour/day schedule will be paid. Overtime labor rate applies to labor over 10 hours worked on any day on (GFM) equipment ONLY. For example, if the technician works for a number of hours on other equipment and their hours move into overtime pay when they are working on (GFM) equipment, only straight time labor will be paid until they have worked for 10 hours on the (GFM) equipment, irrespective of how many hours they have been working. Any exceptions for warranty payment to be made on overtime labor claims must be pre-approved by the (GFM) Product Support Department. Otherwise all labor hours submitted for payment will be paid at straight time.
- A warranty job number must be assigned by (GFM) and referred to in any billing. The warranty job number expires 90 days from the date it is assigned by (GFM).
- All warranty labor hours are subject to review by (GFM) Product Support Department for validity. Excess labor hours charged due to Distributor's technicians' inexperience or lack of training on the servicing of (GFM) equipment is not covered under warranty.
- All warranty work, which may entail major repair of (GFM) equipment, is subject to being performed by (GFM) technicians dispatched from (GFM) plant rather than by Distributor's technicians. The decision whether to have (GFM) technicians perform said repair work is solely at the discretion of (GFM). Major repair work performed by Distributor without pre-approval from (GFM) is subject to claim denial.
- Warranty expenses incurred because of the failure of a component part used by (GFM) in the manufacture of equipment (GFM) builds is subject to coverage under the warranty of the component manufacturer in regard to the cost of the part, mileage, and to the labor cost for replacing it. (GFM) will submit non-GFM manufactured parts returned to (GFM) for warranty consideration to the component manufacturer; credit will be issued for the part if deemed payable by the component manufacturer (parts are billed for, when shipped, as per (GFM) Parts Warranty Policy).
- Warranty claims must be made in writing, utilizing the proper forms provided to the Distributor by (GFM). A detailed labor report will be required for warranty labor consideration.
- Claims arising from defects in materials, defects in workmanship, defects arising from the selection of material or processes of manufacture, or defects inherent in the design will be credited within 60 days from receipt of the warranty claim documentation at (GFM) if allowed.
- Warranty claims arising from component parts not manufactured by (GFM) will be credited per the respective manufacturer's warranty once the respective manufacturer has settled the claim.

This warranty policy supersedes, merges and voids all negotiations, prior discussions, agreements, and understandings, whether oral or written. This warranty policy may not be altered or amended except by a document executed by officers of each party.

Effective April 2, 2018

WARRANTY PARTS

GROUND FORCE MANUFACTURING, LLC (GFM) utilizes parts made by many vendors. All vendor component parts have their respective manufacturer's warranties. (GFM) makes no warranty with regard to component parts not manufactured by GFM, but agrees to assign to the purchaser all of its rights under any original manufacturer's warranty covering such component parts, and agrees to assist the purchaser in making such contacts with the manufacturer of such component parts as may be necessary to protect its right under the warranty covering them.

HOW TO FILE A CLAIM

1. Locate the (GFM) serial number (six digits).
2. Prepare a PO for the replacement part and shipping
3. Call (GFM) at (208) 664-9291 with the serial number of your (GFM) equipment and the purchase order number and request to speak with the Parts and Product Support Representative for your area. Alternatively, you can also e-mail the serial number and purchased order number to the Parts and Product Support Representative for your area.
4. (GFM) will ship the part out to you, along with a Return Materials Authorization (RMA).
5. Replace the failed part and return it, along with the RGA, to the address instructed on the RGA.
6. Upon arrival, (GFM) will route the part to the appropriate vendor for warranty consideration.
7. The vendor will report their findings to (GFM) and either deny the claim or issue a credit.
8. (GFM) will forward the vendor's findings to you, the customer. If a credit is issued, by the vendor, (GFM) will pass the credit on to you by issuing a credit to your account.

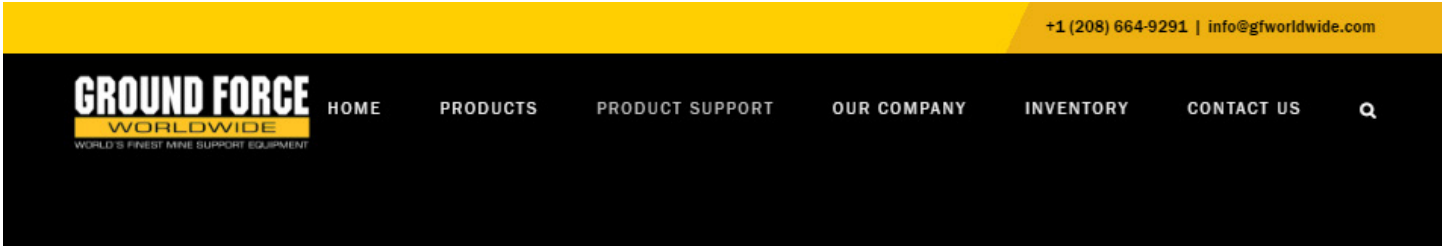
Effective August, 2016

PRODUCT REGISTRATION

(Must be completed and submitted within 45 days of commissioning to activate warranty coverage)

Please visit our Web site to submit your product registration form online.

[GROUND FORCE PRODUCT REGISTRATION](#)



GROUND FORCE WORLDWIDE PRODUCT REGISTRATION

We believe in our products and strive to provide you with World-class service! To do so, we offer a Product Registration form to make sure we have all the necessary information to communicate with you efficiently. Please take a moment to fill in this form and submit to us. We will use the information to better serve you. Thank you for choosing Ground Force Worldwide!

Product Registration Form must be submitted within 45 days of commissioning to activate warranty coverage.

[PRODUCT REGISTRATION FORM](#)

? QUESTIONS? CONTACT OUR PRODUCT SUPPORT DEPARTMENT.

Service@gfworldwide.com | +1 (208) 664-9291



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