A&A MELTERS

WARRANTY

A&A STEEL ENTERPRISES of Canada warrants its product to be free from defects in material and workmanship under normal use and service for a period of one year from date of end-user purchase. Our obligation shall be limited to the repair or replacement of any parts at our option, F.O.B. our factory. Defect of a part or parts of a unit which can be replaced shall not be construed to indicate that the unit is defective. This warranty shall not apply to any part which has been subject to accident, alteration, abuse, misuse, damage or flood, fire or act of god.

A&A STEEL ENTERPRISES of Canada shall not be liable for service, labour or transportation charges or for damages or delay caused by defective material or workmanship or for personal injuries or damages to property caused directly or indirectly by any A&A STEEL product or by its use or operation, or for work done or repairs effected by others. In the case of components purchased by A&A STEEL ENTERPRISES such as controls, gear reduction, motor, pump, etc., the warranty the manufacturer will be extended to the purchaser in lieu of any warranty by the company.

The above warranties are in lieu of all other warranties expressed or implied. No representative or other person is authorised or permitted to make any warranty or assume for the company any liability not strictly in accordance with the foregoing.

Our A&A STEEL melters are designed for long, trouble free life under a wide variety of application conditions with a minimum of maintenance, however, the purchaser and or user should read the maintenance and operation manual before firing and operating any equipment.

January 2021

A & A STEEL ENTERPRISES LTD.
220 Myrnam St. Coquitlam, B.C. Canada V3K 6G4

WARRANTY REGISTRATION CARD

MODEL #:	DATE PURCHASED:	
SERIAL NUMBER:		
CUSTOMER NAME:		
TELEPHONE/FAX		
ADDRESS:		
CITY:	STATE:	ZIP:
DEALER:		
TELEPHONE/FAX:		

A&A STEEL ENTERPRISES MODEL A-380

IMPORTANT NOTE: TO OPERATE YOUR A&A STEEL MELTER SAFELY AND EFFICIENTLY, FOLLOW THESE OPERATING INSTRUCTIONS. FAILURE TO COMPLY MAY RESULT IN VOIDING WARRANTY AND MAY CAUSE SERIOUS INJURIES.

A) INITIAL START UP:

When melter has been purchased and is ready to be placed into service, an overall check should be performed to ensure that the melter is in working order as described in INSPECTION AND FAMILIARIZATION below.

IT IS **VERY IMPORTANT** that the melter is connected to a Liquid DRAW PROPANE GAS cylinder for which it was designed to operate! If connected to a vapour draw propane tank, incorrect heating characteristics will result.

B) INSPECTION AND FAMILIARIZATION:

1. Read operator's manual for the engine, gear reduction unit and this manual thoroughly to become familiar with the operation of your A&A STEEL melter.

2. Ensure all moving components are clear of any objects and are free to move (including interior of melter).

3. Check all mounting bolts are tight, drive belt is correctly aligned and cotter pins and keys are in place.

4. Grease all moving parts, check engine and reduction gear oil levels. Use manufacturers recommended oil, add if required.

5. Ensure all guards are in place and securely mounted.

6. Engage and disengage Agitator Engaging Lever to familiarize yourself with their operation

C) START UP:

1. Move melter to a suitable, level working surface and block wheels (trailer) or lock caster wheels.

2. Follow engine manufacturer's procedures and start engine while Engaging Lever is in the disengaged position. Allow sufficient time for engine to warm up. NOTE: The Agitation Rack may move even though disengaged. This is normal as there may be little or no resistance from the material to prevent it from " free-wheeling ".

CAUTION: Do not wear loose clothing near moving belts or other moving parts.

Once the melter has been inspected and connected to Liquid Draw Propane Gas cylinder, the melter is ready to be charged with the first load of material.

IT IS **VERY IMPORTANT** that the material is of small enough size to allow it to be in direct contact with the bottom surface which allows the heat to be directly transferred to the material in the least amount of time to avoid any excessive heat build-up. When the material has started to melt into a liquid, it will transfer the heat to the rest of the material very quickly.

3. Follow recommended propane safety precautions and propane torch light up procedures, adjust and set outlet pressure to 15 psi(g) working pressure and light torch. Insert lit torch into Torch Holder. Open exhaust stack.

4. Adjust torch to ensure correct position. Tighten Torch Securing Bolt on Torch Holder. Start with low flame for 5 minutes to allow melter to warm up, then open ball valve until firing at a high rate while still maintaining complete combustion (no back flame out of firetube).

   WARNING: DO NOT OVERLOAD! If the Agitator Engaging Lever is engaged in the drive position before the material has melted, excessive solid material may cause damage to the Agitation Rack or drive mechanism.

5. Always open Material Loading Door from the opposite side of melter to prevent injury from spontaneous ignition which may occur due to a sudden rush of incoming air. Add material to centre of Agitation Rack.

6. Once material has BEGUN to melt (about 10 minutes), engage Agitator Engaging Lever gradually increasing tension slowly.

Observe:

- material has melted sufficiently (not completely) to allow complete movement of Agitation Rack, If large chunks of material bind Agitation Rack, allow more time for them to melt,
- drive belt is not slipping,
- all moving parts have a uniform motion.

When confirmed all of the above is correct, the Agitator Engaging Lever can be put in the drive position. Never run machine empty, this can cause damage to the tub.

NOTE: This melter will heat material very quickly and should NEVER be left unattended. Even when the propane torch is extinguished, temperatures will continue to rise due to the remaining thermal energy stored in the Superheated Air Chamber below (Depending on the amount of material in the melter, the temperature can rise aprox 50-100 degrees Farenheit)

7. When material is melting and has become a thick, uniform consistency, more material can be added

8. Check temperature regularly. Heat material to manufacturer' s specifications.

9. Once the material has reached correct temperature, adjust propane torch as necessary.

10. Open material Loading Door (from opposite side), add material to centre of moving Agitation Rack.

11. Add material as required.

C) SHUT DOWN:

1. Upon completion of working period, the melter should be as empty as possible. This will ensure a quick warm up for the following working period and prevent any stress on moving components due to excessive solid material.

2. Remove propane torch. Close all valves.

3. Before transporting, melter should be as empty as possible, cool to the touch and the residual material should be solidified.

D) LIFTING - BY CRANE:

The weight of the A-380 is approximately 3600 lbs. empty, The A-380 can be manually lifted utilizing a mechanical lifting device. (the major components can be removed to reduce its weight)

1. The melter must be completely empty and cool to the touch.

2. Remove the melter Top Cover and Gasket.

3. Remove the safety guards.

4. It should be as empty as possible, cool to the touch and the residual material should be solidified before lifting.

If additional weight reduction is required, the Agitation Rack can be removed as follows.

5. Remove the Connecting Link cotter pins and remove the arm.

6. Undo the 4 bolts of the bearing blocks and lift upwards to remove the Agitation Rack assembly

7. The melter can now be moved to the working location and reassembled in the reverse order.

8. After assembly, a careful inspection should be carried out to ensure proper assembly prior to start up

A&A STEEL AIR JACKETED MELTER MATERIAL PRODUCTION

A&A STEEL A-380

Heated Material Output:

- material capacity: 325 U.S. gallons	325 gal./hr. x 85.0% = **276 gal./hr**
- heat up time: 60 min's (1 hr.)	1478.5 L /hr. x 85.0% = **1255.8 L /hr**
- efficiency: 85 %	

Material Production:

- material output: 276 gal./hr.	276 gal./1 hr x 7.8 lbs./gal. = **2,152.8 lbs./hr**
- material density: 7.8 lbs./gal.	1255.8 L /hr x .78 kg. /L = **979.52 kg./hr**

A&A STEEL A-210

Heated Material Output:

- material capacity: 170 U.S. gallons	170 gal./.75 hr x 78.9 % = **178.8 gal./hr**
- heat up time: 45 min's (0.75 hr.)	773.5 L / 75 hr x 78.9 % = **813.5 L /hr**
- efficiency: 78.9 %	

Material Production:

- material output: 178.8 gal./hr.	178.8 gal./hr. x 7.8 lbs./gal. = **1394.6 lbs./hr**
- material density: 7.8 lbs./gal.	813.5 L /hr x .78 kg. /L = **634.53 kg./hr**

A&A STEEL A-110

Heated Material Output:

- material capacity: 80 U.S. gallons	80 gal./.58 hr x 78.9 % = **108.8 gal./hr**
- heat up time: 35 min's (0.58 hr.)	364 L/.58 hr x 78.9 % = **495 L /hr**
- efficiency: 78.9 %	

Material Production:

- material output: 108.8 gal./hr.	108.8 gal./hr. x 7.8 lbs./gal. = **848.6 lbs./hr**
- material density: 7.8 lbs./gal.	495 L/hr. x .78 kg./L = **386.1 kg./hr**

A&A STEEL A-40

Heated Material Output:

- material capacity: 25 U.S. gallons	25 gal./.4 hr x 78.9 % = **49.3 gal./hr**
- heat-up time: 25 min's (0.4 hr.)	113.75 L /.4 hr x 78.9 % = **224.3 L/hr**
- efficiency: 78.9 %	

Material Production:

- material output: 49.3 gal./hr	49.3 gal./hr. x 7.8 lbs./gal. = **384.5 lbs./hr**
- material density: 7.8 lbs./gal.	224.3 L/hr. x .78 kg/L = **174.95 kg/hr**
- material density: 7.8 lbs./gal.	495 L/hr. x .78 kg./L = **386.1 kg./hr**

A&A STEEL A-380 Parts List

January 2021

NO. - QUANTITY - DESCRIPTION

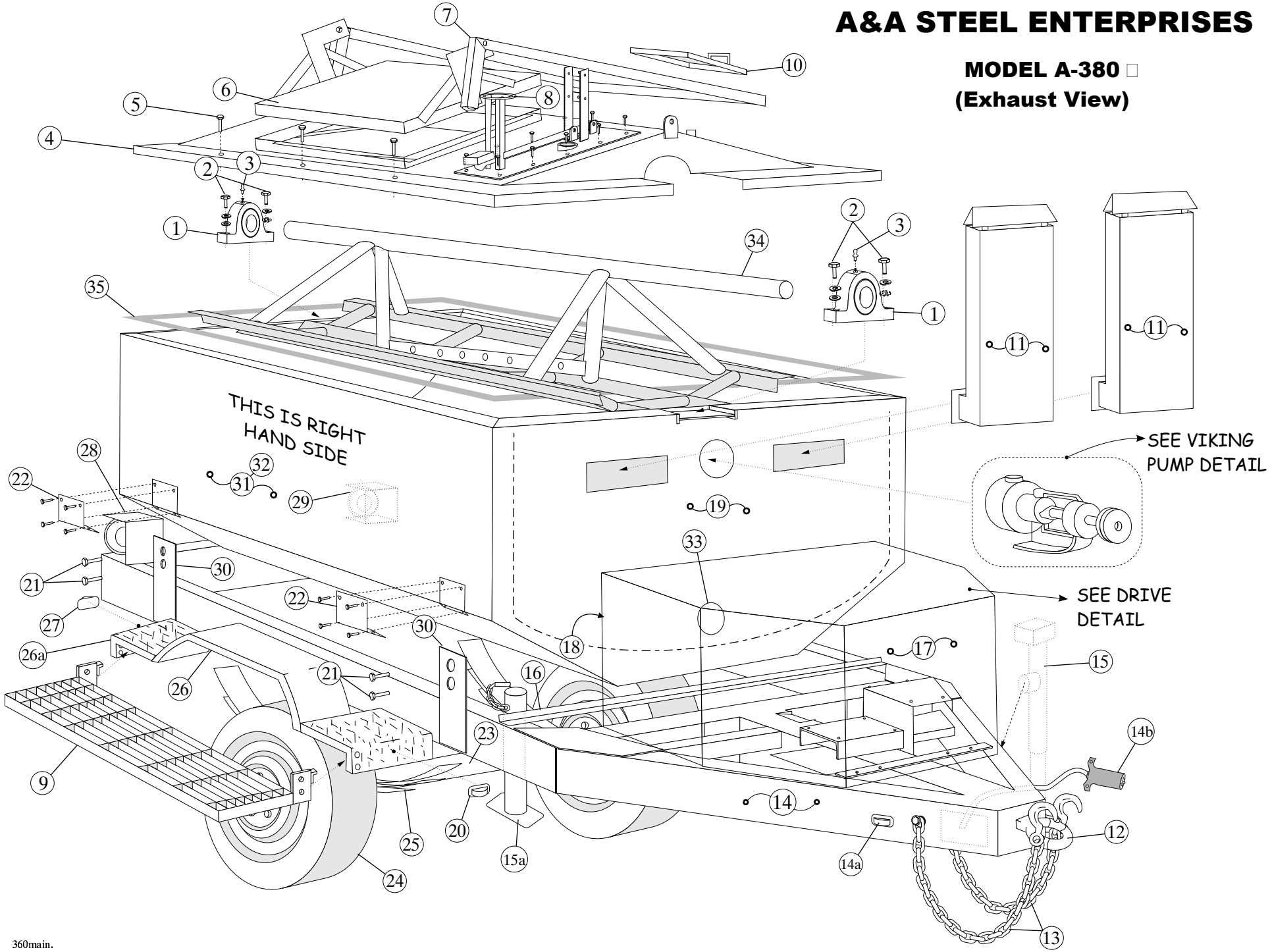
1 - NTN Bearing - UPS-P210
2 - 3/4" 2 1/2" UNC bolt c/w lock washer
3 - PF 1/8" Grease Nipple
4 - Top Cover
5 - 5/8" x 1 1/4" UNC c/w flat washer
6 - Loading Door
7 - Loading Door Lifting Handle
8 - Pump Rope Guide
9 - Folding Grate-Step
10 - Inspection Door
11 - Exhaust Manifold
12 - Trailer Hitch (customers choice)
13 - Dual Safety Chains (right & left)
14 - Trailer Frame
14a - Reflector
14b - 7 blade RV Trailer Plug
15 - Trailer Jack
15a - Stabilizer Leg
15b - Stabilizer Leg Holder
16 - Front Cover Support
17 - Engine Cover
18 - Engine Cover Enclosure
19 - Front Cover
20 - Amber Clearance Light
21 - 5/8" x 1 1/2" UNC bolt c/w
22 - Side Cover Plate
23 - Axle
24 - Wheel Assembly (complete)
25 - Leaf Spring & U-bolts
26 - Fender
27 - Red Clearance Light
28a - Right Tail-light
28b - Right Tail-light Bracket
29a - Left Tail-light
29b - Left Tail-light Bracket
30 - Leg Support Bracket
31 - Side Cover (right hand side)
32 - Side Cover (left hand side)
33 - Safety Valve
34 - Gasket
35 - Gasket
36 - Pump Discharge Lever
37 - Pump Discharge Link
38 - Pump Valve Lever
39 - 90° Street Elbow (male/female)
40 - Close Nipple
41 - Butterfly Valve
42 - Shipping Cap
43 - 6" Nipple
44 - Union (male)
45 - Union (female)
46 - Viking Pump KK124
47 - 1/4" Key
48 - 45° Elbow
49 - Intake Screen
50 - Pump Drive Pulley -2BK36H
51 - Pump Drive Pulley Bushing H x 1 1/8"
52 - 1/4" x 1" UNC bolt
53 - Pump Engage Pulley - 2BK32H
54 - Pump Engage Pulley Idler Bearing IDH 1 1/2"
55 - Engine Drive Pulley Bushing H x 7/8"
56 - B30 Pump Drive Belts
57 - Engine Drive Pulley - 3TB36
58 - Engine Drive Pulley - 3TB36 (single without pump)
59 - Pulley Bracket
60 - Jaw coupling w/ long keystock c/w spider
61 - 1/2" x 2 3/4" UNC bolt
62 - B44 Transfer Shaft Drive Belt
63 - Transfer Shaft Drive Pulley - BK45
64 - Transer Drive Shaft Pulley Bushing H x 1"
65 - 1/4" 28 UNF Grease Nipple
66 - 1/4" Bolts
67 - NTN Bearing - P205
68 - Transfer Shaft
69 - Extension shaft
70 - Reducer belt guard
71 - Plastic washers
72 - Toggle assembly
73 - Agitator toggle mount
74 - 1/2" x 2 3/4" UNC bolt c/w "Nylock" nut
75 - Reduction Gear Engage Lever
76 - Reduction Gear Engage Lever Pulley BK32
77 - Agitator engagement pulley bracket
78 - B41 Drive Belt
79 - Reduction Gear Pulley Bushing H x 1 1/4"
80 - Reduction Gear Pulley - BK45
81 - 3/16" Key

82 - Reduction Gear
83 - 3/8" Key
84 - Reduction Gear Drive Arm
85 - Connecting Arm Bearing Brass Bushing
86 - 1/8" NPT Grease Nipple
87 - 1" Flat Washer
88 - 1/8" x 2" Cotter Pin
89 - Agitator Drive Arm
90 - Connecting Arm
91 - 1 - 1/2" Key
92 - 49-6C
93 - Return fuel line
94 - Filter - burner hose
95 - Drain Valve
96 - Flange mount
97 - Fuel filters
98 - Tank - fuel filter line
99 - 90 degree elbow
100 - 90 degree street elbow
101 - 1/4" x 1" Torch Securing Bolt
102 - LPG Torch
102a - Torch Orifice Plug
102b - Gooseneck
102c - Appollo Ball Valve
102d - 3/8" x 20' hose
102e - Regulator
102f - M306
102g - 48-6C Adaptor
102h - 48-6B Adaptor
103 - Thermowell Sleeve
104 - Material Tap Valve
105 - 3/4" NPT Plug
106 - 3/8" x 1 1/2" UNC Torch Holder, Securing Bolts, c/w Nylock Nut
107 - 3/8 breather
108 - Wand Spring
109 - Wand Support Arm
110 - 3/8" x 1" bolt, c/w lockwasher & Washer
111 - 11-A 1-1/2" nipple
112 - Pump/Wand Activator Bracket
113 - 1 1/2" Coupling
114 - 23 gallon tank
115 - Pump Activation Rope Bracket
116 - 3/8" x 1" UNC Bolt c/w washer &
17a - Flow Valve Handle
117b - Weighted Flow Valve Handle
118 - 3/8" x 1 1/4" UNC, bolt c/w 2 washers & locknut
119 - 5/16" x 1" UNC bolt, c/w washer, lockwasher, & nut
120 - Valve Link Pin
121 - Wand Storage Rack
122 - 1/2" x 1 1/2" UNC bolt, c/w washer
123 - Fuel gauge
124a - Type B Wand Spring Clamp
124b - **2"** Pipe cap - yellow
125 - 2" pipe x 6" long nipple
126 - 1/2" x 25' Flexible Stainless Steel Hose
127 - 1 1/2" x 25' Flexible Stainless Steel Hose
128 - 1 1/2" 600# Brass Full Port Ball Valve
129 - Wand Spreader Arm
130 - 4" Thermometer
131 - 1 1/2" Nozzle
132 - 1 1/2 Viton Camlock Gasket
133 - 2 1/2" x 2" Nipple
134 - 1 1/2" Nipple
135 - P1 1 5/8" Taper Lock Bushing
135a - 5/16" x 1" UNC bolt
136 - Q1-2M Taper Lock Bushing
136a - 3/8" x 1 1/4 UNC bolt
137 - Interchangeable Wand Applicator Nozzle
138 - Hose ring end support
139 - 1/2" uss washer
140 - 1/2" nylock nut
141 - Hose corner support
142 - tower cap
143 - pivot plate
144 - actuator top adjuster
145 - actuator
146 - pump lid plate
147 - 2 x 5/16" x 1-1/4" bolts, washers, nuts
AAS-301 - NX 120 Volt Diesel Burner
AAS-101 - ADC 12 Volt Diesel Burner

A&A STEEL ENTERPRISES

MODEL A-380

(Exhaust View)



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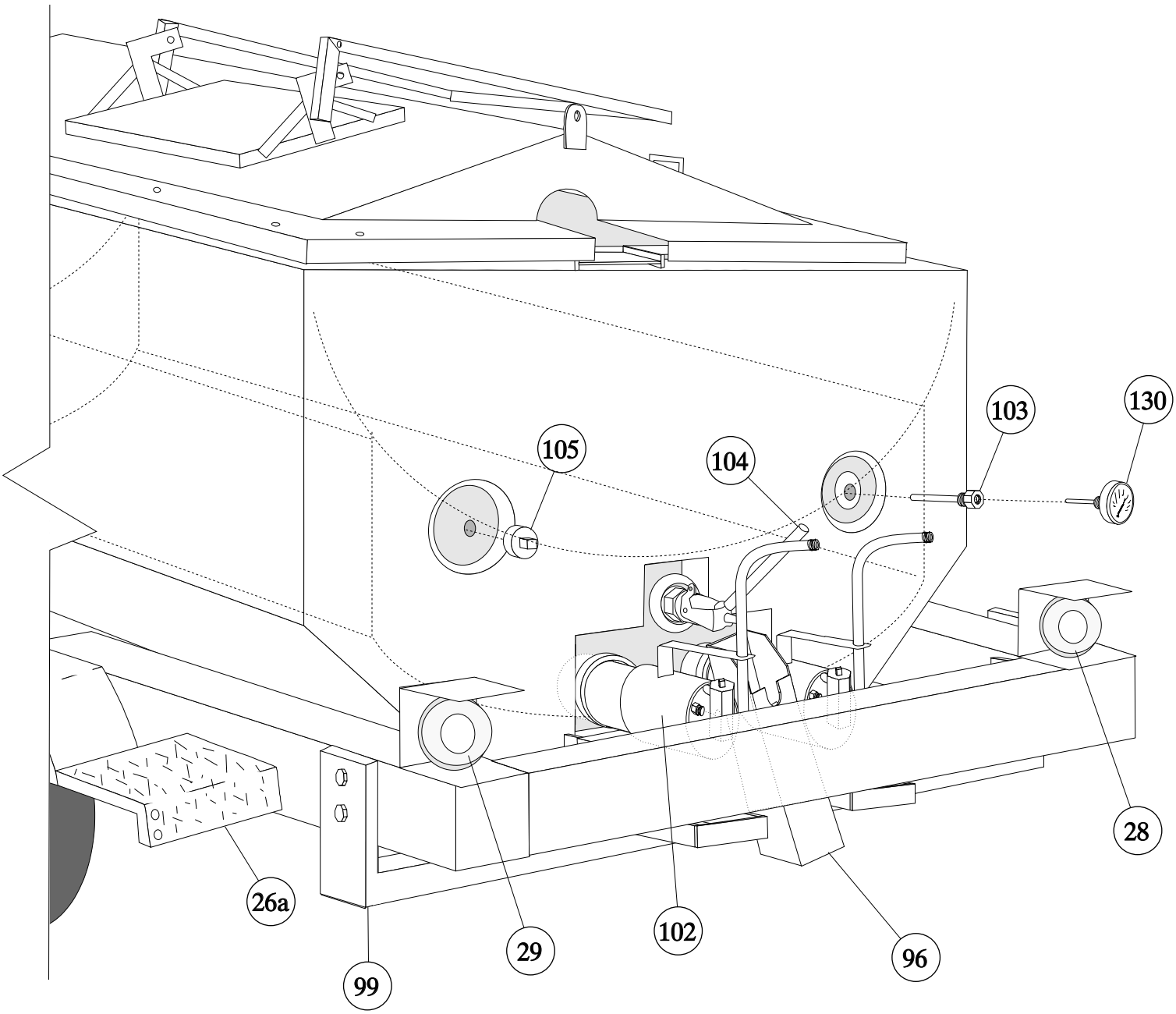
A&A STEEL ENTERPRISES

A-380
(Exhaust End)



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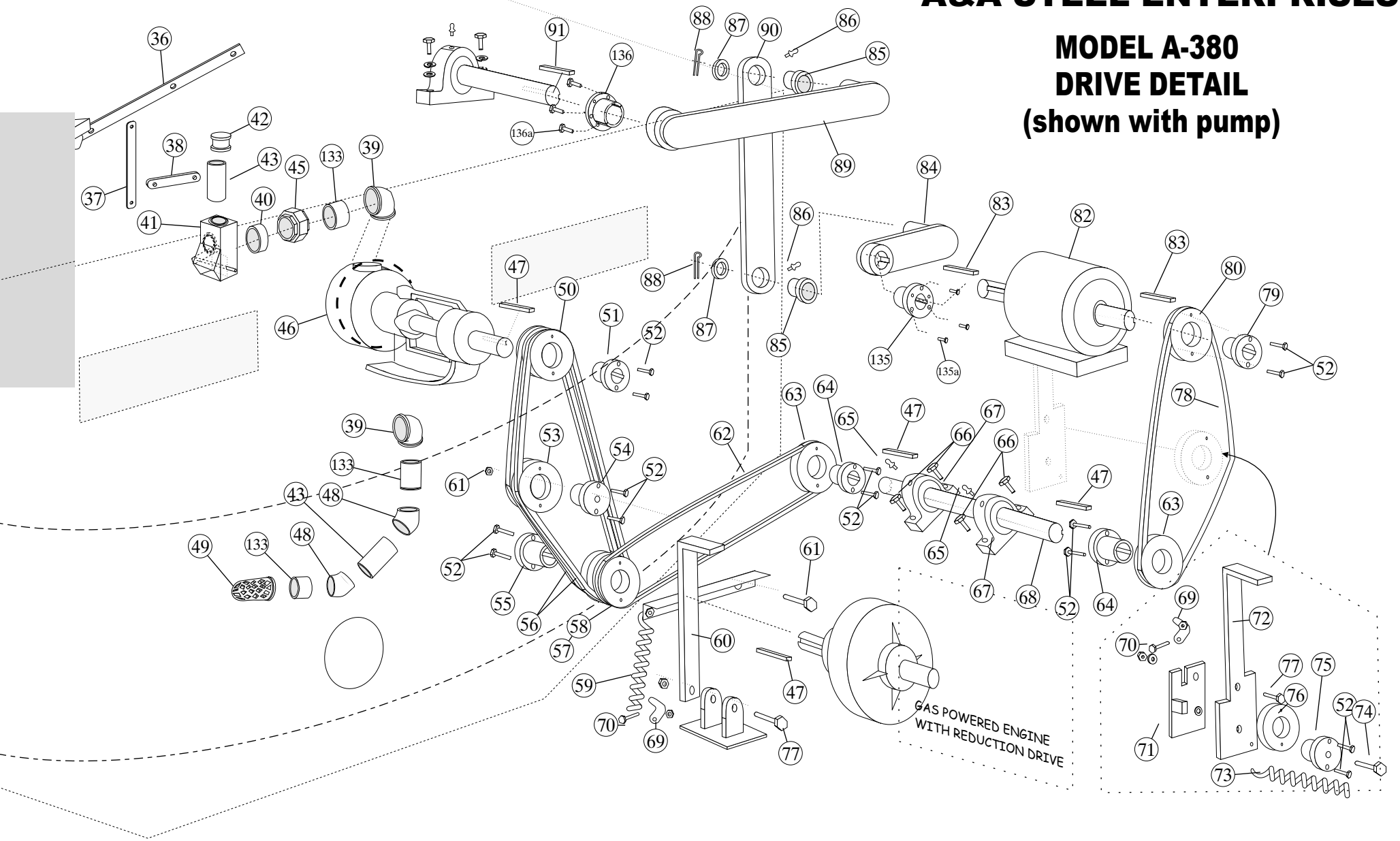
A&A STEEL ENTERPRISES

MODEL A-380
DRIVE DETAIL
(shown with pump)



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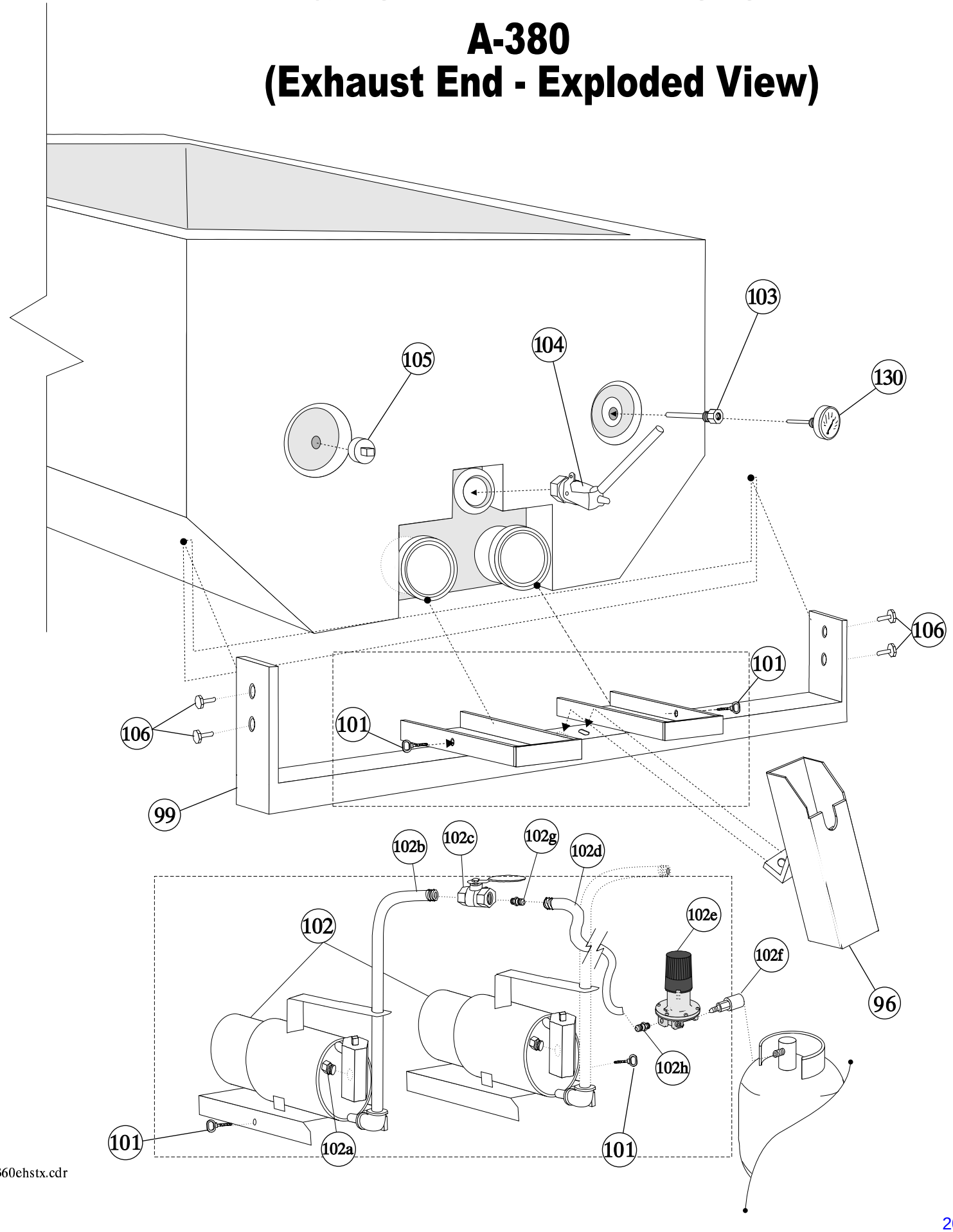
A&A STEEL ENTERPRISES

A-380
(Exhaust End - Exploded View)



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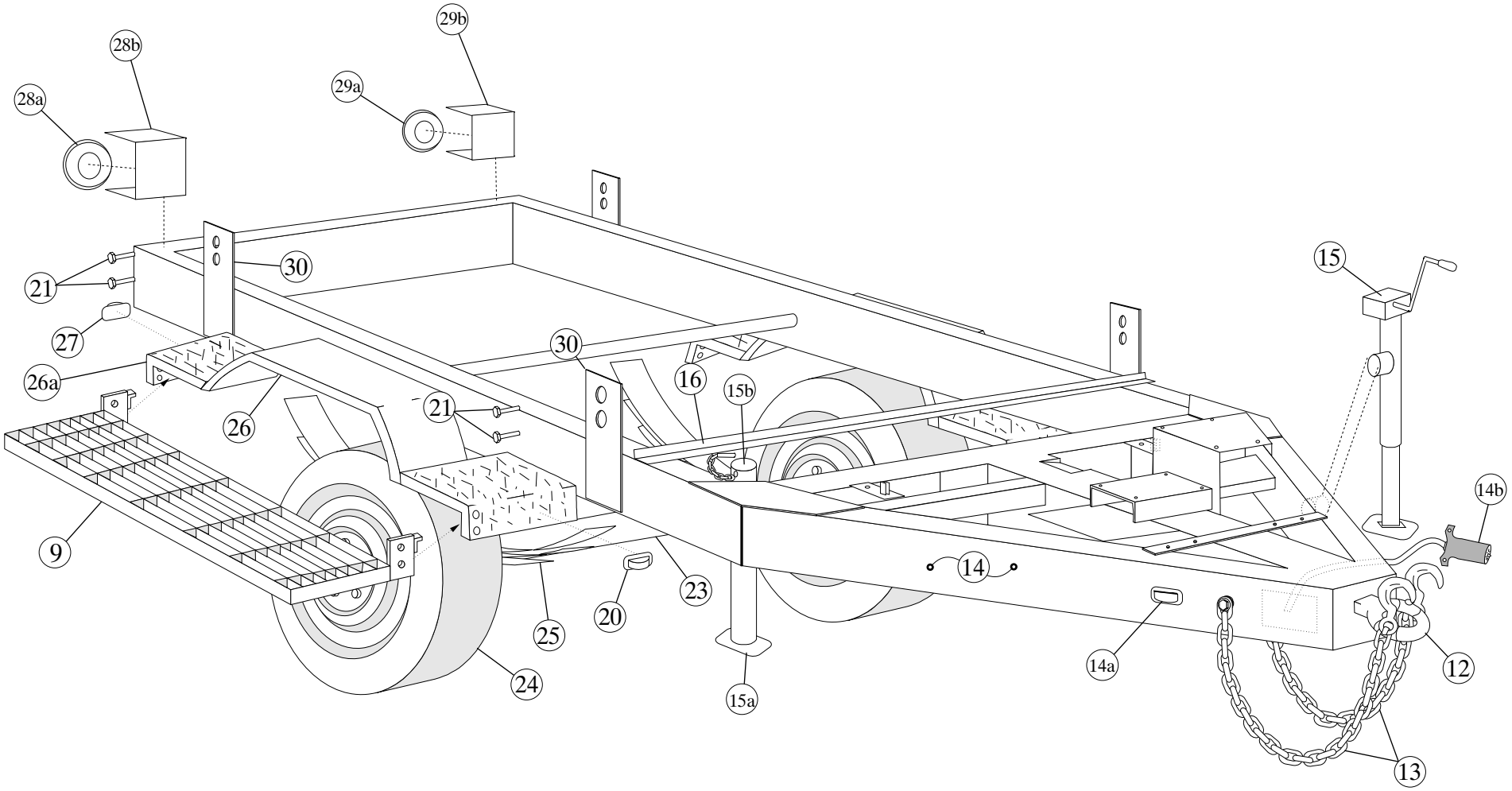
A-380 TRAILER



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Recommended Maintenance schedule

Daily - Check motor and crankcase oil level, trailer lights, torch alignment, Breakaway battery charge

50 hours - Check all nuts, bolts, belts, pulley alignments + grease all nipples

100 hours - Clean air filter, change motor oils, and check propane fittings for leaks

300 hours – Clean sediment bowl in motor

500 hours – Check all drive arm bolts, bushings, wheel nuts, gear box oil level, tire pressure

1000 hours – Clean tub out, pull agitator, check clearances between tub and agitator, check pillow block bearings, brakes, wheel bearings, material valve, kettle mounting bolts, safety chains, coupler