

The Superior Air - Jacketed Hot Rubber Melters
(Propane, Diesel, & Electric Heat Systems Available)

From the Innovators of Rubber Master Technology

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.

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-500

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 approx 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 The A-500 is aprox. 4,800 lbs empty A-500 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**
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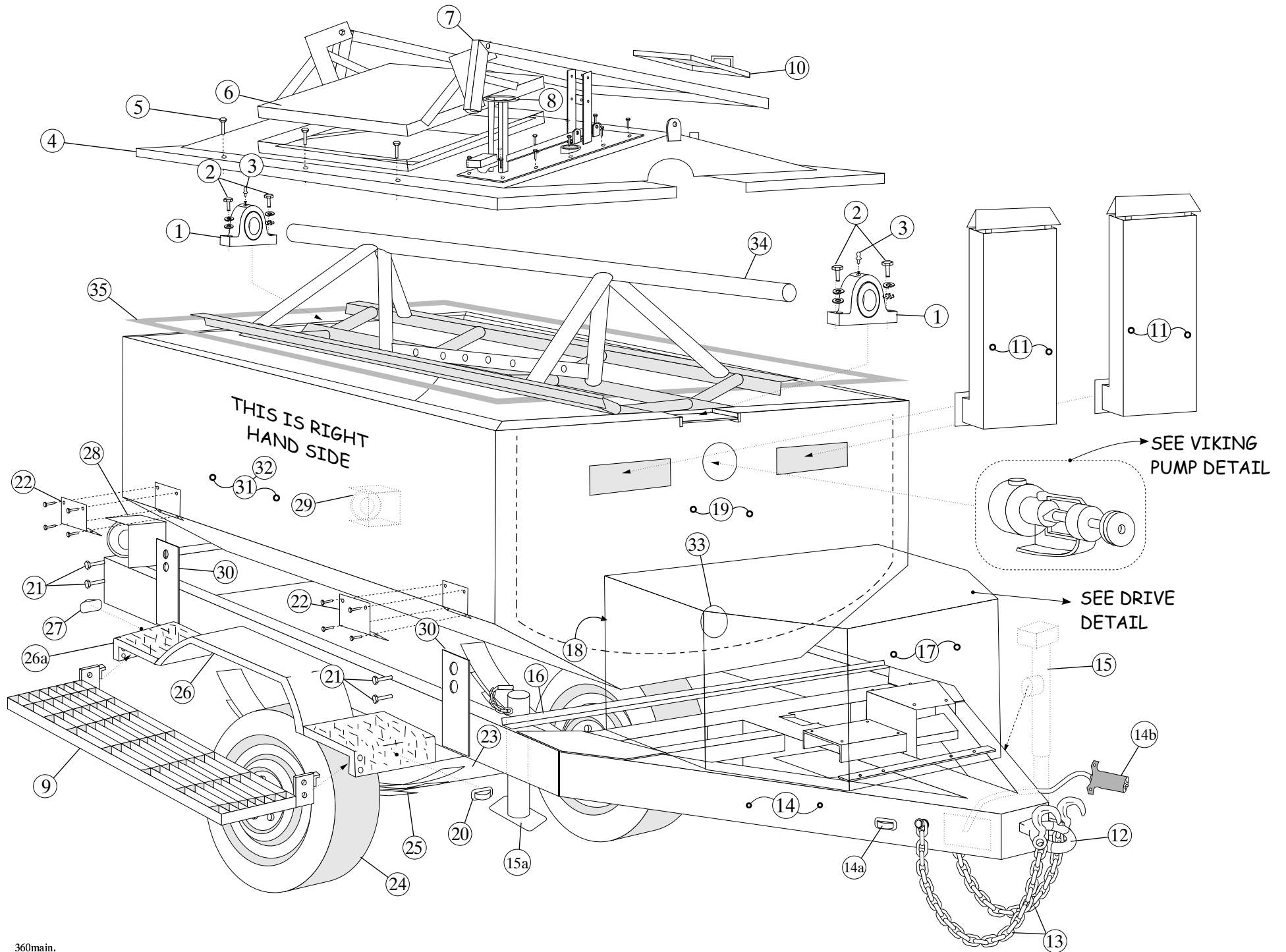
A&A STEEL A-500 Parts List

January 2021

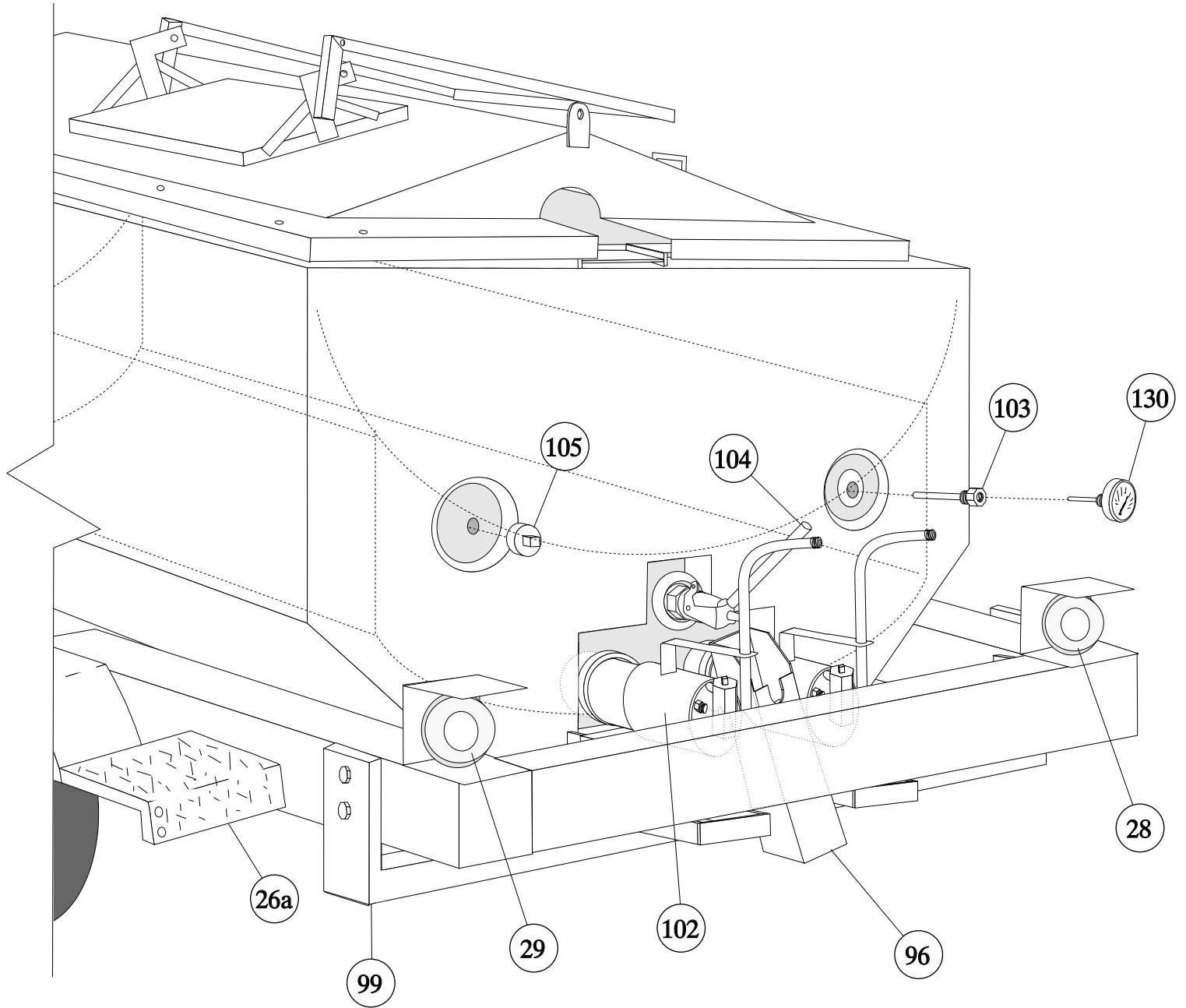
NO. - QUANTITY - DESCRIPTION

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

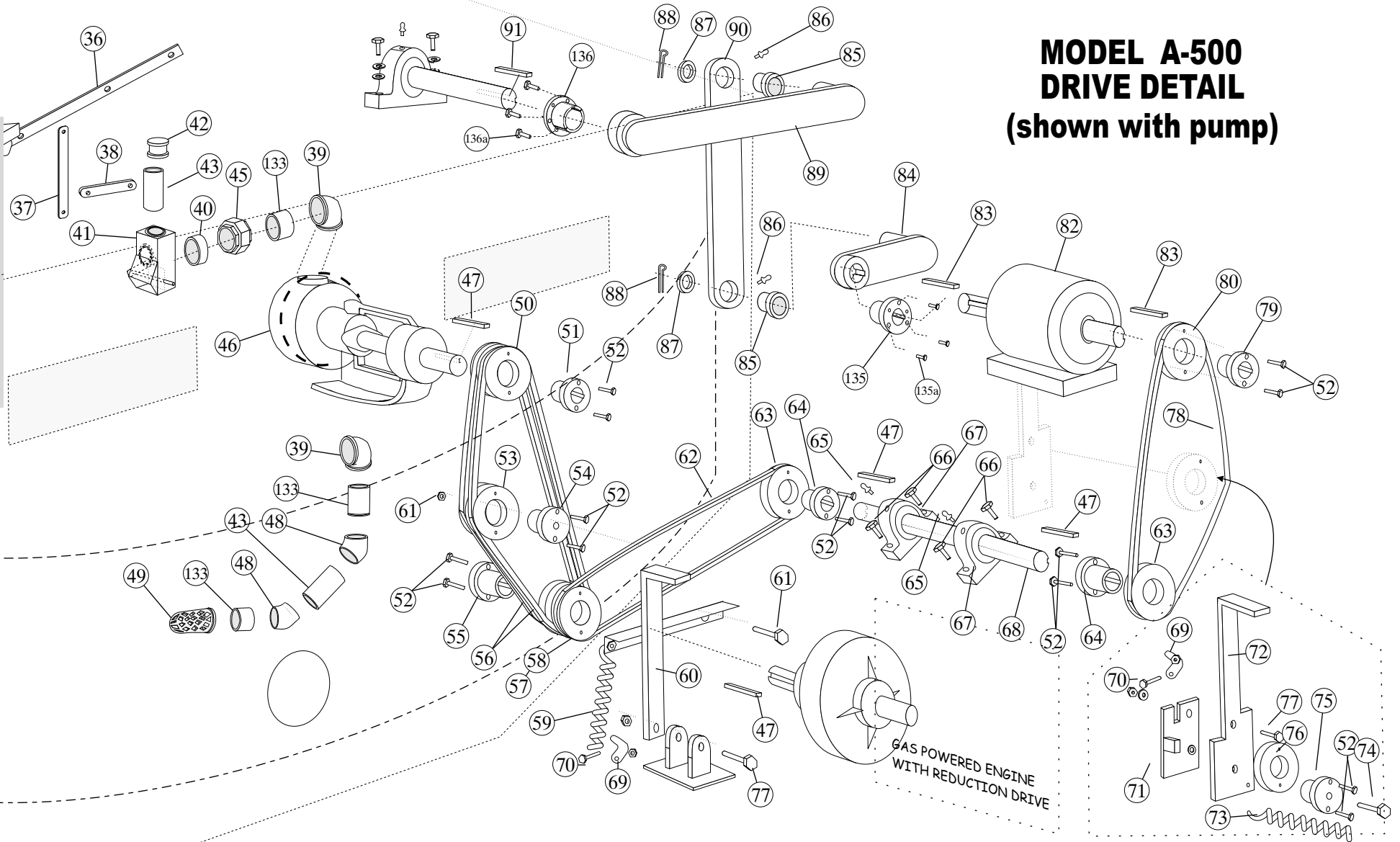
- 82 - Reduction Gear
- 83 - 3/8" Key
- 84 - Reduction Gear Drive Arm
- 85 - Connecting Arm Bearing Brass Bushing
- 86 - 1/8" NPT Grease Nipple
- 87 - 1" Flat Washer
- 88 - 1/8" x 2" Cotter Pin
- 89 - Agitator Drive Arm
- 90 - Connecting Arm
- 91 - 1 - 1/2" Key
- 92 - 49-6C
- 93 - Return fuel line
- 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



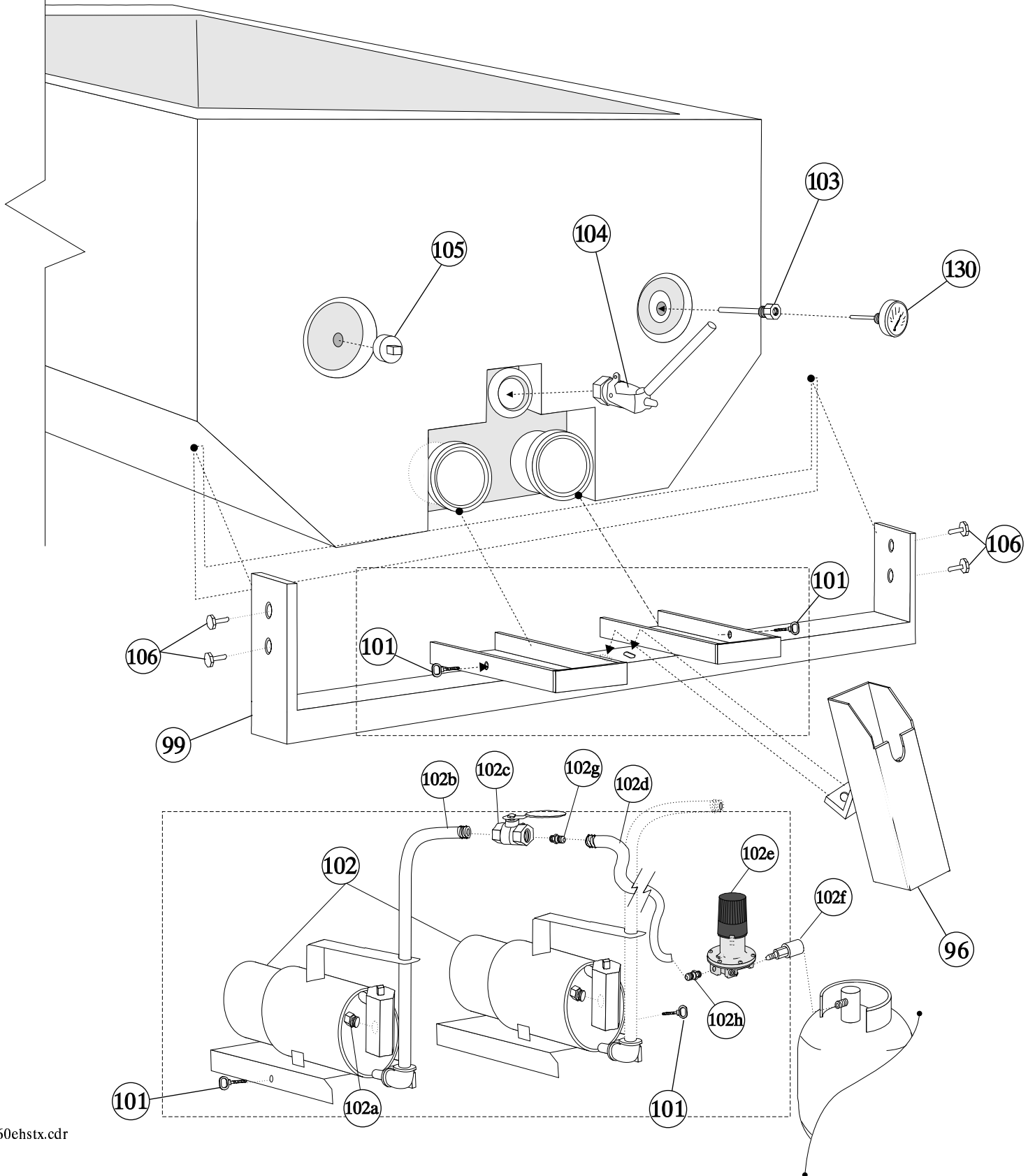
A-500 (Exhaust End)



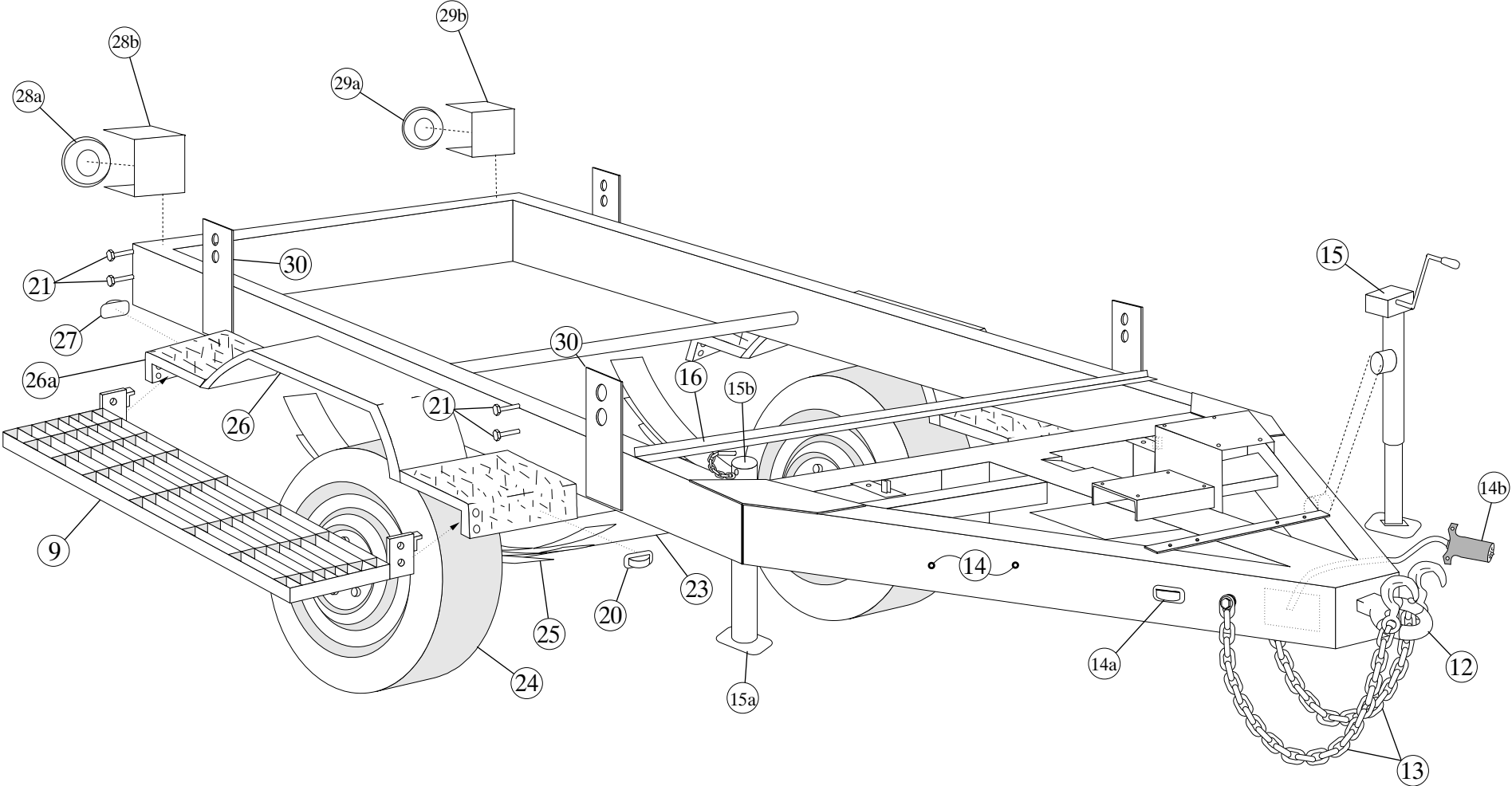
MODEL A-500 DRIVE DETAIL (shown with pump)



A-500 (Exhaust End - Exploded View)



A-5 0 0 TRAILER



A&A Melters

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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