

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 Melters - Model A-110

IMPORTANT NOTE: TO OPERATE YOUR A & A STEEL MELTERS 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 kettle is in working order as described in INSPECTION AND FAMILIARIZATION below.

IT IS VERY IMPORTANT that the melter is connected to a LIQUID PROPANE GAS cylinder for which it was designed to operate! If connected to a vapour 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 and Locking Pin (see photo marked A,a) to familiarize yourself with their operation (lock in the disengaged position).

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.

IT IS VERY IMPORTANT that the first load of material is of small enough size to allow it to be in direct contact with the bottom surface. This 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.
4. Adjust torch to ensure correct position. Tighten Torch Securing Bolt on Torch Holder. Start with low flame for 5 minutes to allow kettle 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 left 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 by removing Locking Pin and increasing tension slowly.
For units with a pump ensure that all Pump parts are free of Blockage .

Observe:

- material has melted sufficiently 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 remain in the drive position.

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, temperature can rise Aprox 50 -100 degrees Fahrenheit).

7. When material is melting and has become a thick liquid of 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.

D) PUMPING:

1. When the material has melted to a liquid, the pump can now be engaged by removing the pump lever locking pin. The material will be re-circulated inside of the melter.
2. From the rooftop, the operator must pull the 1/2" rope to lift the pump discharge lever. This directs the flow of the material up the piping to the pipe outlet at the pipe discharge area on the roof.
3. To prevent any "freeze-ups", several gallons of hot material should be pumped. This will allow time to heat the vertical piping. Once the pump discharge lever is released, the pump discharge will be bypassed allowing the material in the pipe to flow downwards back to the melter.

E) 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.

F) LIFTING - BY CRANE:

The A&A Steel model A-110 can be lifted vertically by utilizing the 4 eye bolts at each corner.

The weight of the A-110 is approximately 1500 lbs. empty.

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

F) LIFTING - MANUALLY:

The A-110 can be manually lifted utilizing a mechanical lifting device (some major components can be removed to reduce its weight).

1. The melter must be completely empty and cool to the touch.
2. Remove the safety guards.
3. Remove the Connecting Link cotter pins and remove the arm.
4. Remove the Engine/Reduction Unit Mounting Platform. To prevent any gasoline leaks, the gas cap should be tightened and taped shut.

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

5. Remove the melter Top Cover and gasket.
6. Undo the 4 bolts of the bearing blocks and lift upwards to remove the Agitation Rack assembly (see photo marked B,b).
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 lighting up. Start up as outlined earlier.

A&A STEEL AIR JACKETED MELTER MATERIAL PRODUCTION

A&A STEEL A-380

Heated Material Output:

- material capacity: 325 U.S. gallons $325 \text{ gal./hr.} \times 85.0\% = 276 \text{ gal./hr}$
- heat up time: 60 min's (1 hr.) $1478.5 \text{ L /hr.} \times 85.0\% = 1255.8 \text{ L /hr}$
- efficiency: 85 %

Material Production:

- material output: 276 gal./hr. $276 \text{ gal./1 hr} \times 7.8 \text{ lbs./gal.} = 2,152.8 \text{ lbs./hr}$
 - material density: 7.8 lbs./gal. $1255.8 \text{ L /hr} \times .78 \text{ kg. /L} = 979.52 \text{ kg./hr}$
-

A&A STEEL A-210

Heated Material Output:

- material capacity: 170 U.S. gallons $170 \text{ gal./75 hr} \times 78.9 \% = 178.8 \text{ gal./hr}$
- heat up time: 45 min's (0.75 hr.) $773.5 \text{ L / 75 hr} \times 78.9 \% = 813.5 \text{ L /hr}$
- efficiency: 78.9 %

Material Production:

- material output: 178.8 gal./hr. $178.8 \text{ gal./hr.} \times 7.8 \text{ lbs./gal.} = 1394.6 \text{ lbs./hr}$
 - material density: 7.8 lbs./gal. $813.5 \text{ L /hr} \times .78 \text{ kg. /L} = 634.53 \text{ kg./hr}$
-

A&A STEEL A-110

Heated Material Output:

- material capacity: 80 U.S. gallons $80 \text{ gal./58 hr} \times 78.9 \% = 108.8 \text{ gal./hr}$
- heat up time: 35 min's (0.58 hr.) $364 \text{ L/58 hr} \times 78.9 \% = 495 \text{ L /hr}$
- efficiency: 78.9 %

Material Production:

- material output: 108.8 gal./hr. $108.8 \text{ gal./hr.} \times 7.8 \text{ lbs./gal.} = 848.6 \text{ lbs./hr}$
 - material density: 7.8 lbs./gal. $495 \text{ L/hr.} \times .78 \text{ kg./L} = 386.1 \text{ kg./hr}$
-

A&A STEEL A-40

Heated Material Output:

- material capacity: 25 U.S. gallons $25 \text{ gal./4 hr} \times 78.9 \% = 49.3 \text{ gal./hr}$
- heat-up time: 25 min's (0.4 hr.) $113.75 \text{ L /4 hr} \times 78.9 \% = 224.3 \text{ L/hr}$
- efficiency: 78.9 %

Material Production:

- material output: 49.3 gal./hr $49.3 \text{ gal./hr.} \times 7.8 \text{ lbs./gal.} = 384.5 \text{ lbs./hr}$
 - material density: 7.8 lbs./gal. $224.3 \text{ L/hr.} \times .78 \text{ kg/L} = 174.95 \text{ kg/hr}$
 - material density: 7.8 lbs./gal. $495 \text{ L/hr.} \times .78 \text{ kg./L} = 386.1 \text{ kg./hr}$
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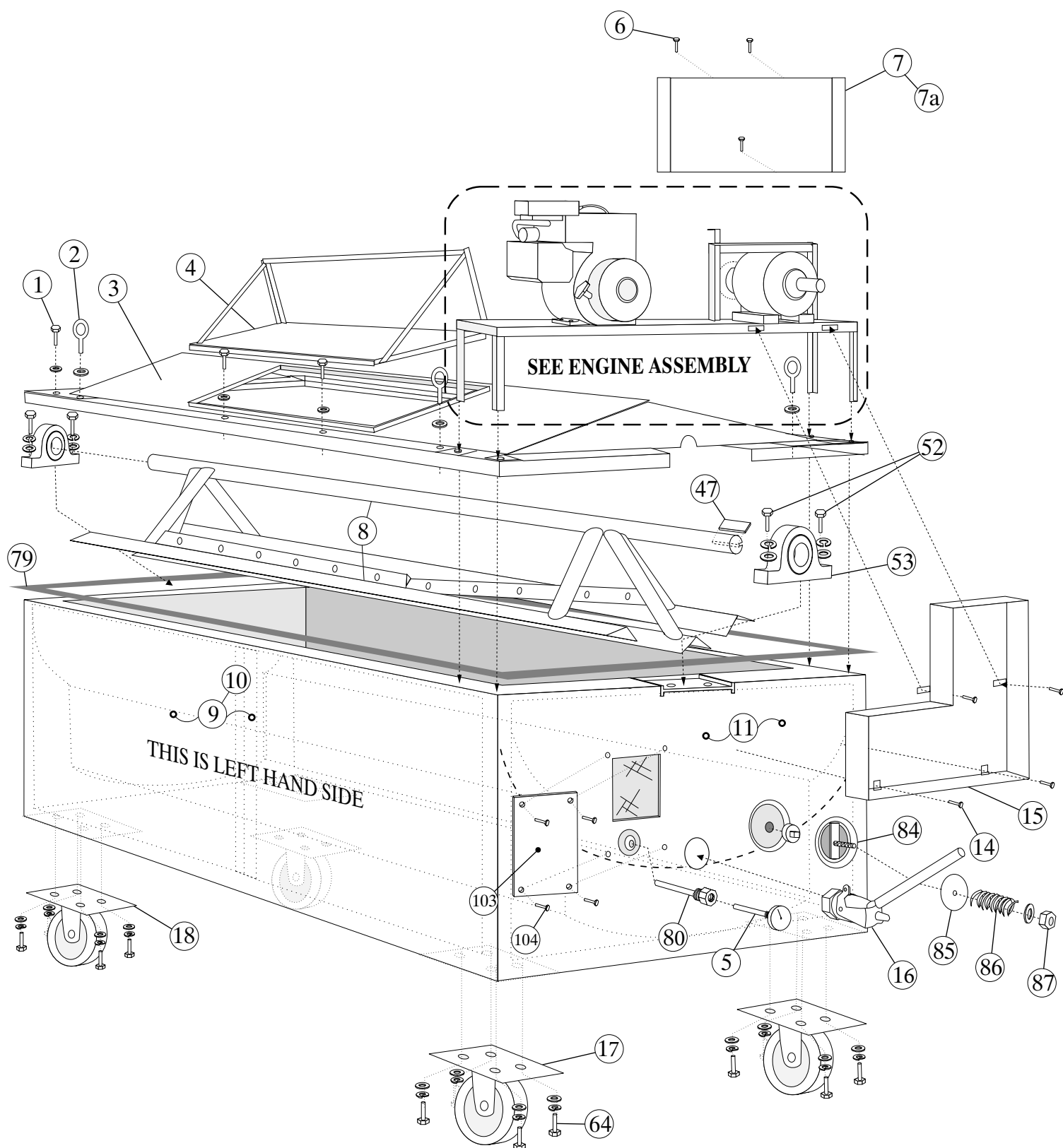
A&A STEEL A-110 Parts List

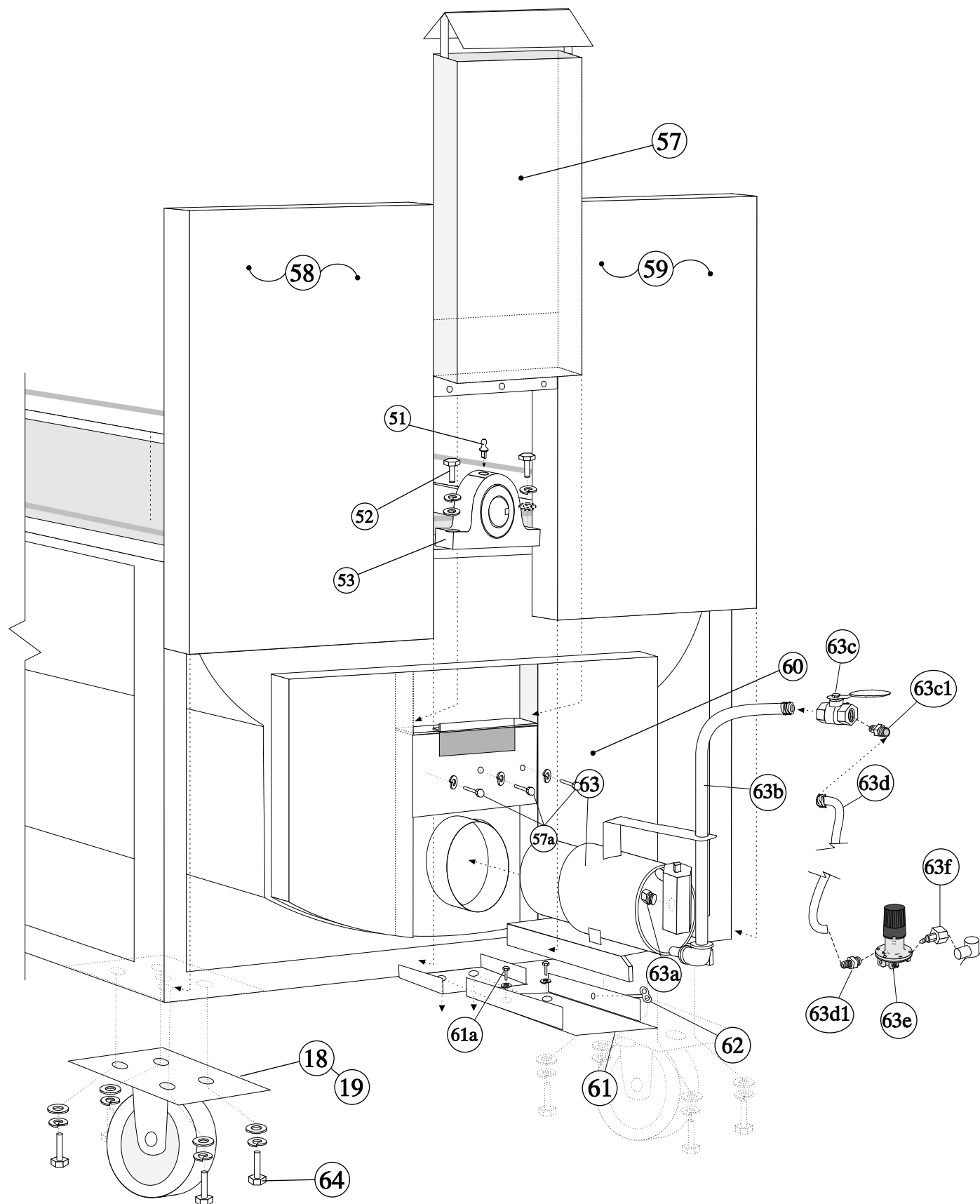
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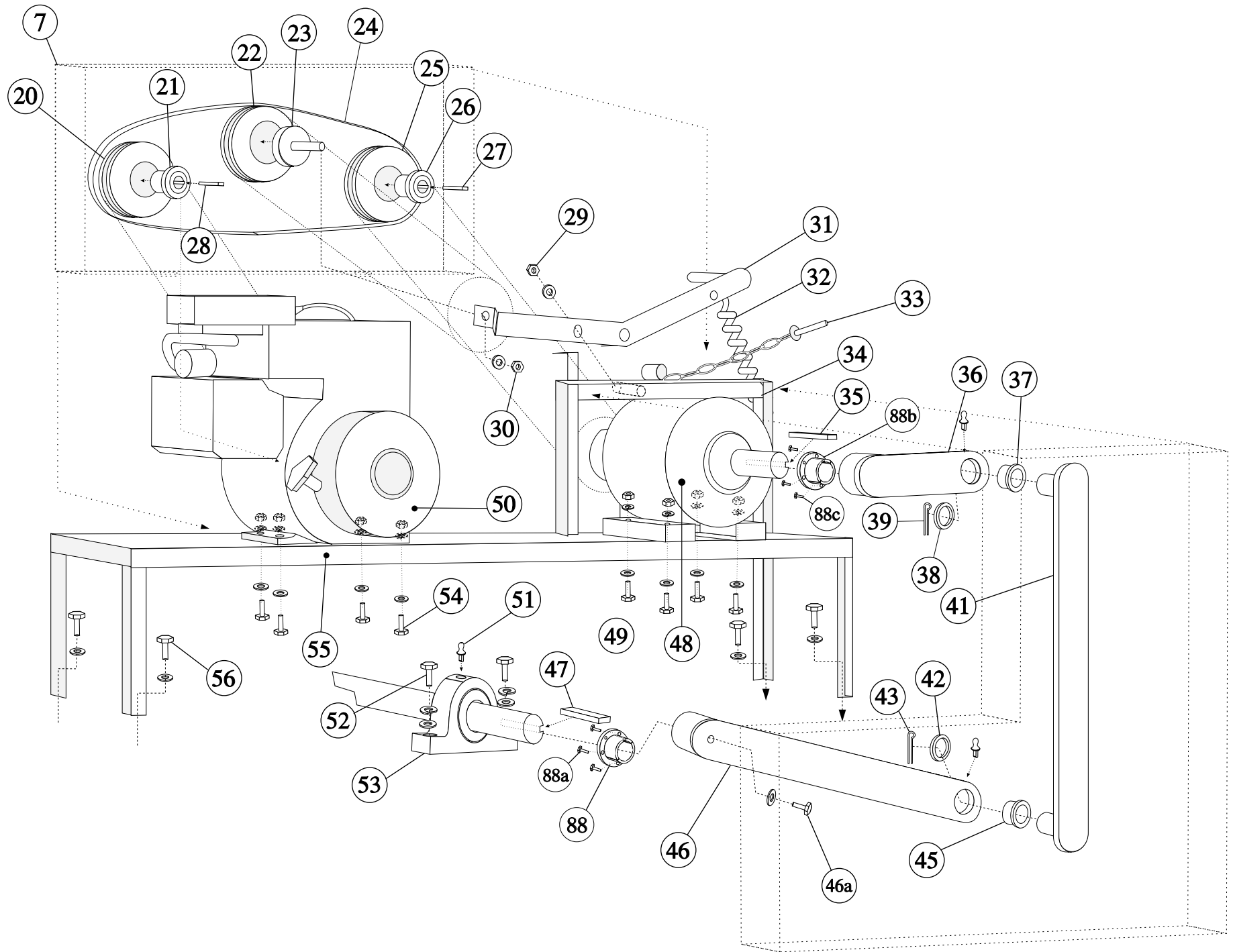
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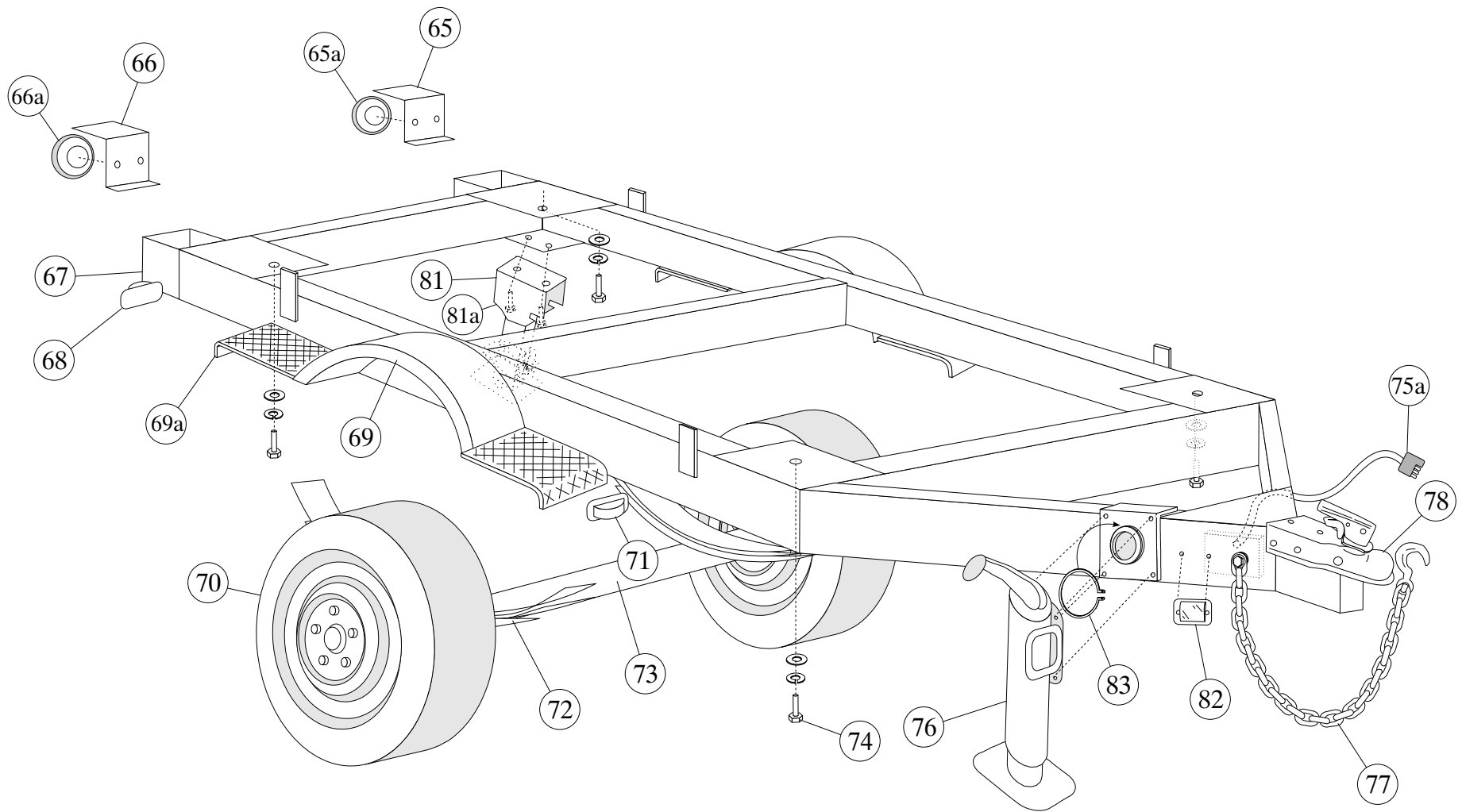
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|--|---|
| 1 - 1/2" x 1 1/4" UNC c/w flat washer | 37 - Connecting Link Bushing |
| 2 - 3/4" x 2" lifting eyebolt
(2000 lb. capacity) | 38 - 1" Flat Washer |
| 3 - top cover | 39 - 1/8" x 2" Cotter Pin |
| 4 - loading door | 40 - 1/8" NPT Grease Nipple |
| 5 - 4" thermostat (200-700°F) | 41 - Connecting Link |
| 6 - 1/4" x 1" UNC c/w flat washer &
"Nylock" nut | 42 - 1" Flat Washer |
| 7 - Reducer Drive Proective Guard | 43 - 1/8" x 2" Cotter Pin |
| 7a - Reducer Drive Protective Guard
(this style on kettle with pump) | 44 - 1/8" NPT Grease Nipple |
| 8 - Agitation Rack (complete assembly) | 45 - Connecting Link Bushing |
| 9 - Side Cover (left) | 46 - Agitator Drive Arm |
| 10 - Side Cover (right) | 46a - 3/8" x 1 1/2" bolt, c/w washer |
| 11 - End Cover | 47 - 3/8" Key, custom |
| 12 - Safety Valve Protective Guard | 48 - Reduction Unit |
| 13 - Drain Assembly | 49 - 1/2" x 2 1/4" UNC c/w lock washer & nut |
| 14 - 1/4" x 1" UNC bolt c/w flat washers | 50 - 5.5 Hp Honda Gas Engine |
| 15 - Protective Arm Guard | 51 - NTN Grease Nipple |
| 16 - material tap valve | 52 - 5/8" x 2 1/2" UNC c/w Lock Washer |
| 17 - fixed caster wheel | 53 - Agitator Bearing |
| 18 - pivoting caster wheel | 54 - 1/4" x 1 1/2" UNC c/w lock washer & nut |
| 19 - BK45H engine drive pulley | 55 - Engine/Reduction Unit Mounting Platform |
| 20 - BK45H - Engine Drive Pulley | 56 - 1/2" x 1 1/4" UNC c/w lock washer |
| 20a - 2BK45H - Engine drive pulley
- (on unit with a pump) | 57 - Exhaust Stack |
| 21 - engine drive pulley bushing H 3/4" | 57a - 1/4" hex bolt |
| 22 - BK32 H agitator engage pulley | 58 - Exhaust Cover (right) |
| 22a - pump engage pulley bearing bushing
IDH 1 1/2 | 59 - Exhaust Cover (left) |
| 23 - Agitator Engage Pulley Bearing
Bushing c/w 1/2" x 2 3/4" UNC Bolt | 60 - Exhaust Chamber |
| 24 - B47 Drive Belt (Honda Engine) | 61 - Torch Holder |
| 25 - B45 Reduction Drive Pulley | 61a - 3/8" UNC bolt c/w lock washer |
| 26 - Reduction Drive Pulley Bushing | 62 - 1" UNC Torch Securing bolt |
| 27 - 3/16" Key | 63 - LPG Torch |
| 28 - 3/16" Key | 63a - Torch Orifice Plug |
| 29 - 1/2" UNC "Nylock" nut, c/w flat washer | 63b - Gooseneck |
| 30 - 1/2" UNC "Nylock" nut, c/w flat washer | 63c - Appollo Ball Valve |
| 31 - Right-handed Agitator Engaging Lever | 63c1 - 48-6C Hose Fitting |
| 32 - Agitator Lever 6" Return Spring | 63d - 3/8" x 20' Hose |
| 33 - Agitator Lever Locking Pin | 63d1 - 48-6B Hose Fitting |
| 34 - Agitator Lever Mounting Bracket | 63e - 67G/102 Regulator |
| 35 - 1/4" Key | 63f - M306 Brass Adaptor |
| 36 - Reduction Unit Drive Arm | 63g - 486B Fittings |
| | 63h - 486C Fittings |
| | 64 - 3/8" x 1 1/2" UNC c/w washer |
| | 65 - Left Tail-light Bracket |
| | 65a - Left Tail-light |
| | 66 - Right Tail-light Bracket |
| | 66a - Right Tail-light |
| | 67 - Bumper (left & right) |

- 68 - Red Clearance Light
- 69 - Fender
- 69a - Checkerplate Step
- 70 - Wheel Assembly (complete)
- 71 - Amber Clearance Light
- 72 - Leaf Spring Assembly -76.32 pair 4 bolt
- 73 - Axle Assembly
- 74 - 3/4" x 2" UNC Kettle Securing Bolt, c/w washers
- 75 - Trailer Frame
- 76 - Traler Jack
- 77 - Safety Chain
- 78 - Hitch (customer choice)
- 79 - Gasket
- 80 - Thermowell Sleeve
- 81 - Stabilizer Jack
- 81a - UNC Bolt, c/w lock washer, washer, & nut (for stabilizer jack)
- 82 - Reflector
- 83 - Snap Ring
- 84 - 1/2" Stud Bolt
- 85 - Pressure relief plate
- 86 - 3/4" Compression Spring
- 87 - 1/2" Locknut and Flat Washer
- 88 - P 1" x 1 1/2" bushing (cut to size)
- 88a - 5/16" x 1" UNC bolt
- 88b - P 1" x 1/4" bushing (cut to size)
- 88c - 5/16" UNC bolt
- 89 - Left-handed Pump Handle
- 89a - Pump Lever 6" Return Spring
- 90 - Pump Drive Protective Guard
- 91 - 1" Nylock nut c/w 2 washers
- 92 - Pump Lever Mounting Bracket
- 93 - Pump Lever Locking Pin
- 94 - Transfer Shaft Mounting Plate
- 95 - BK 45 Pulley
- 96 - B32 Belt
- 97 - 3/4" x 2 1/2" UNC, c/w 2 washers, lock washer, & nut
- 98 - Pump Bearing
- 99 - BK 45 Pulley
- 100 - B35 Belt
- 101 - BK 45 Pump Pulley (smaller for more speed)
- 102 - 3/4" NPT Plug
- 103 - Pump Cover Plate
- 104 - 5/16" x 3/4" Self Taping Screw
- 105 - Wand Pipe
- 106 - Wand Spring
- 107 - Wand Support Spring
- 108 - 3/8" x 1" Bolt, c/w lockwasher & washer
- 109 - Model HX4-115 Viking Pump
- 110 - Nipple (cut to size)
- 111 - Wand Activator Bracket
- 112 - 1 1/2" Coupling
- 113 - C-261 6" Flow Valve Handle Spring
- 114 - Pump Activation Rope Bracket
- 115 - 3/8" x 1 1/4" UNC bolt c/w washer, lockwasher & locknut
- 116 - Flow Valve Handle
- 117 - 3/8" x 1 1/4" UNC, bolt c/w 2 washers & locknut
- 118 - 5/16" x 1" UNC bolt, c/w washer, lockwasher, & nut
- 119 - Valve Link Pin - 5.00 Weighted
- 120 - Wand Storage Rack
- 121 - 1/2" x 1 1/2" UNC bolt, c/w washer
- 122 - 1/2" x 2" UNC bolt, c/w lockwasher & nut
- 123a - Type B Wand Spring Clamp
- 123b - Type B Wand Spring Clamp
- 124 - Type A Wand Spring Clamps
- 125 - 1/2" x 1 3/4" UNC Bolt, c/w washer, lockwasher, & nut
- 126 - 1 1/2" x 25' Flexible Stainless Steel Hose
- 127 - 1 1/2" 600# Brass Full Port Ball Valve
- 128 - Wand Spreader Arm
- 129 - 1 1/2" Nozzle
- 130 - 1 1/2" Viton Camlock Gasket
- 131 - Butterfly Valve
- 132 - Close Nipple
- 133 - 1 1/2" Coupling
- 134 - 90° Elbow (male/female)
- 135 - Intake Screen
- 136 - Weighted Handle (with pump only kettle)
- 137 - Interchangeable Wand Applicator Nozzle
- 138 - Agitator Shaft Repair Kit









A&A Melters

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220 Myrnam Street
Coquitlam, BC
Canada, V3K 6G4

Toll Free: 1-888-469-4480
Phone: 1-604-469-4480
Fax: 1-877-694-8714
Email: ryan@aamelters.com
Website: www.aamelters.com

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