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 Melters - Model A-210

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 and Locking Pin 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.

Once the melter has been inspected and connected to Liquid Propane Gas, 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 locked 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.

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 locked 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, temperature can rise aprox 50 - 100 degrees Fahrenheit).

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 A&A Steel Enterpises model A-210 can be lifted vertically by utilizing the 4 eye bolts at each corner.

The weight of the A-210 is approximately 2200 lbs. empty.

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

E) LIFTING - MANUALLY:

The model A-210 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 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**

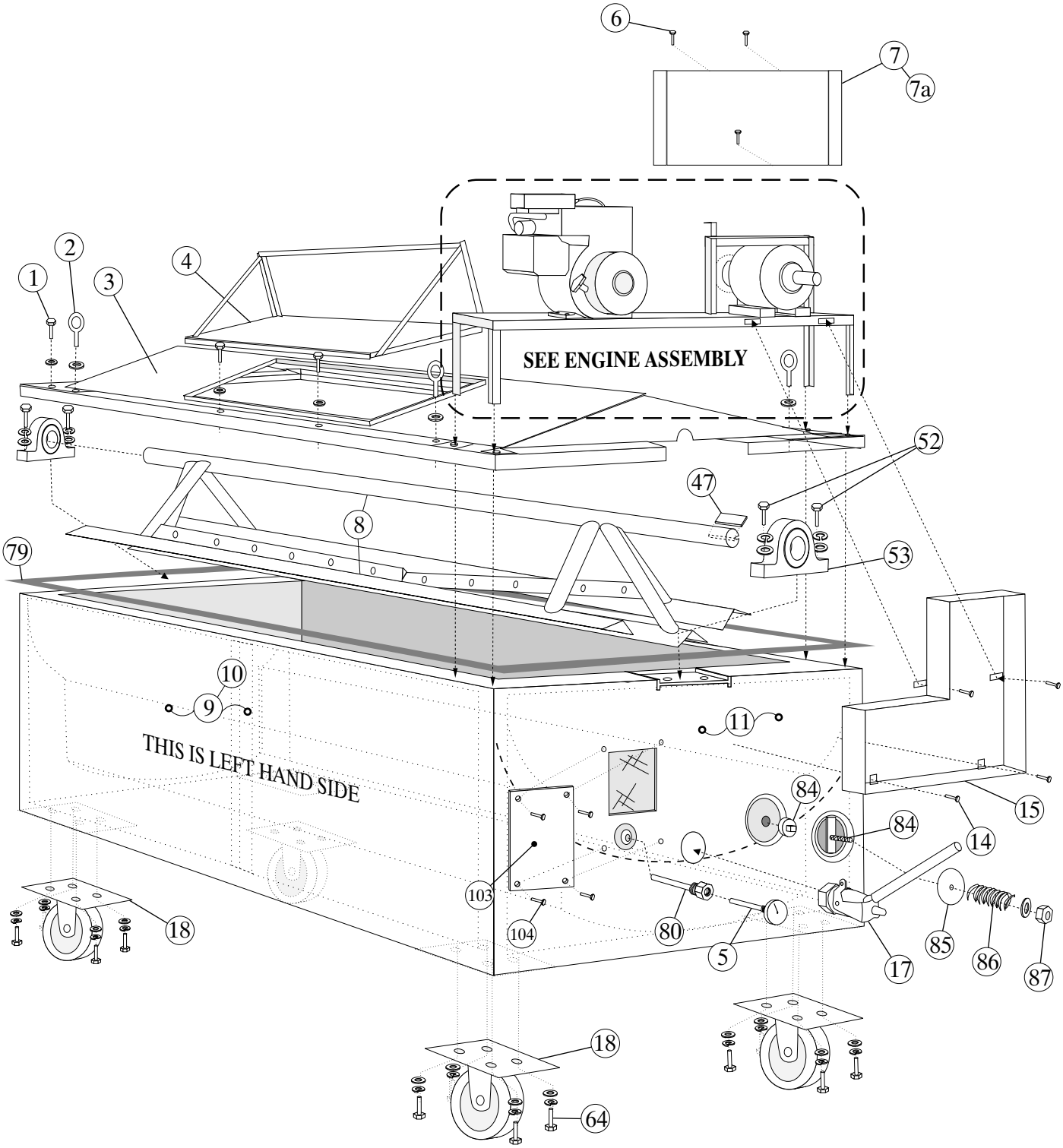
A&A STEEL A-210 Parts List

January 2015

NO. - QUANTITY - DESCRIPTION

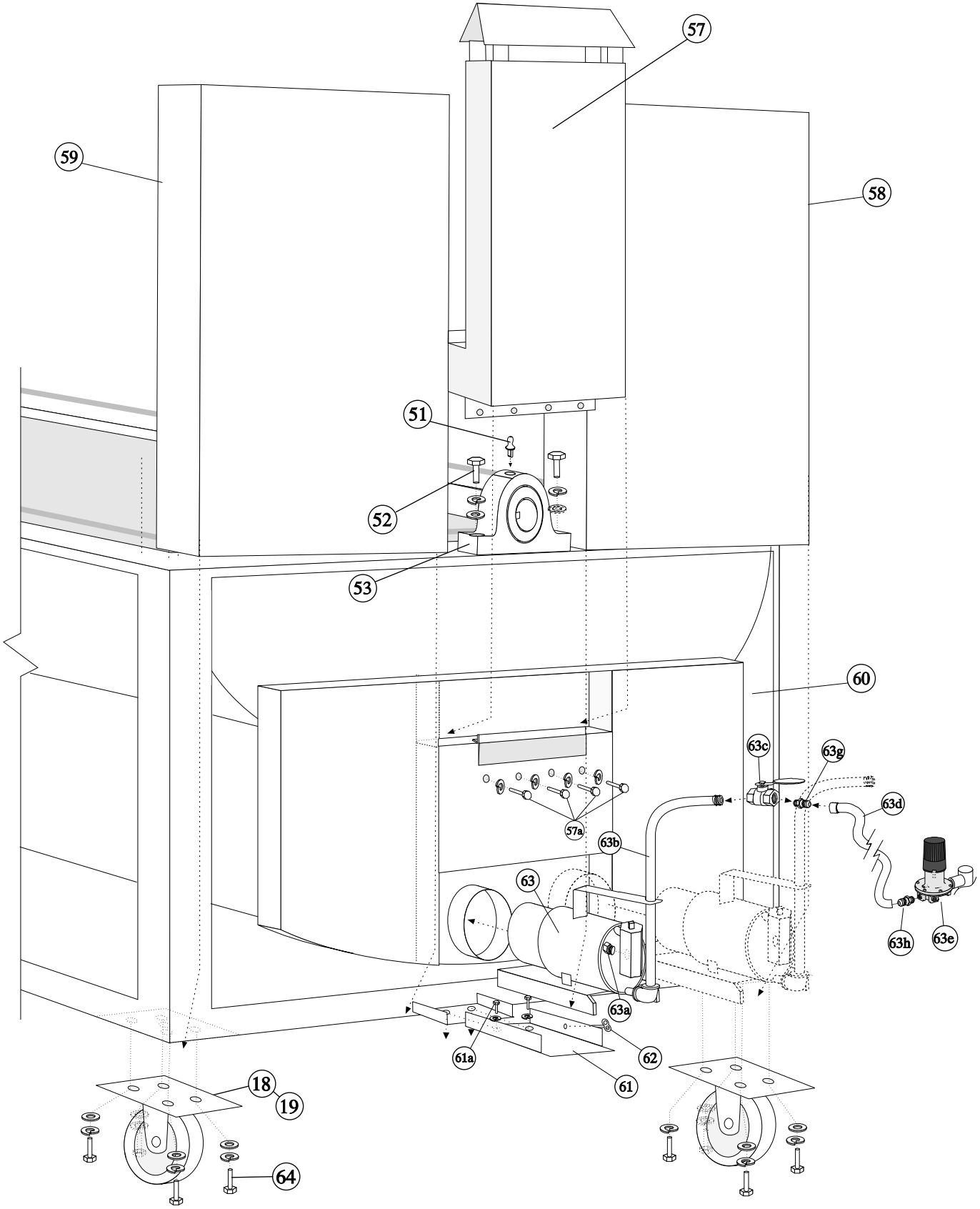
1 - 1/2" x 1 1/4" UNC c/w flat washer
2 - 3/4" x 2" UNC eye bolt c/w washer
3 - top cover
4 - loading door
5 - 4" thermostat (200-700'F)
6 - 1/4" x1" UNC c/w flat washer and "Nylock" nut
7 - reducer drive protective guard
7a - reducer drive protective guard (this style on kettle with pump)
8 - agitation rack (complete assembly)
9 - side cover (left)
10 - side cover (right)
11 - end cover
12 - safety valve protective guard
13 - drain assembly
14 - 1/4" x 1" self taping screws
15 - agitator drive protective guard
16 - safety valve assembly
17 - material tap valve
18 - fixed caster wheel
19 - pivoting caster wheel
20 - BK45H engine drive pulley
20a - 2BK45H engine drive pulley (On system with pump)
21 - engine drive pulley bushing H 3/4
22 - BK32 H agitator engage pulley
22a - pump engage pulley bearing bushing IDH 1 1/2
23 - agitator engage pulley bearing bush. c/w 1/2" x 2 3/4 UNC bolt
24 - B47 drive belt - (Honda engine)
25 - B45 reduction drive pulley (BK47 5L500)
26 - reduction drive pulley bushing - H 3/4
27 - 3/16" key
28 - 3/16" key
29 - 1/2" UNC "Nylock" nut and flat washer
30 - 1/2" UNC "Nylock" nut and flat washer
31 - right handed agitator engaging lever
32 - agitator lever 5 1/2" return spring
33 - agitator lever locking pin
34 - agitator lever mounting bracket
35 - 1/4" key
36 - reduction unit drive arm
37 - connecting link bushing
38 - 1" flat washer
39 - 1/8" x2" cotter pin
40 - 1/8" NPT grease nipple
41 - connecting link
42 - 1" flat washer
43 - 1/8" NPT cotter pin
44 - 1/8" NPT grease nipple
45 - connecting link bushing
46 - agitator drive arm
47 - 3/8" key
48 - reduction unit
49 - 1/2" x2 1/4" UNC c/w lock washer and nut
50 - gas engine
51 - NTN grease nipple
52 - 5/8" x2 1/2" UNC c/w lock washer
53 - agitator bearing NTN Bearing UCP-P210
54 - 1/4" x 1 1/2" UNC c/w lock washer and nut
55 - engine/reduction unit mounting platform
56 - 1/2" x 1 1/4" UNC c/w lock washer
57 - exhaust stack
57a - 1/4" hex bolt
58 - exhaust cover (right)
59 - exhaust cover (left)
60 - exhaust chamber
61 - torch holder (for Red Dragon or others)
61a - 3/8" UNC bolt c/w lock washer
62 - 1/4" x 1" UNC torch securing bolt
63 - LPG torch burner
63a - torch orifice plug
63b - goose neck
63c - Appollo ball valve
63d - 3/8" x 20' hose
63e - LPG Regulator
63f - M306 Adapter
63g - 486 B Adapter
63h - 486 C Adapter
64 - 1/2" 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
70 - wheel assembly (complete)
71 - amber clearance light

72 - leaf spring assembly - 85 pair ?
73 - axle assembly
74 - 3/4" x2" UNC kettle securing bolt c/w washers
75 - trailer frame (bare)
75a - 7 blade RV trailer plug
76 - trailer jack
77 - safety chains
78 - hitch (customer choice)
79 - gasket
80 - thermowell sleeve
81 - stabilizer jack
81a - UNC bolt, c/w lock washer, washer, and nut (for Stabilizer Jack)
82 - reflector
83 - snap ring with bracket
84 - 1/2" stud bolt
85 - pressure relief plate
86 - 3/4" compression spring
87 - 1/2" locknut and flat washer
88 -
88a - P 2" bushing (cut to size) Q 1-2
88b - P 1" x 1 1/4" bushing
88c - 3/8" UNC bolt
89 - Left-handed pump engaging lever
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 - BK 42 belt
97 - 1/2" x 2" UNC c/w 2 washers, lock washer, & nut
98 - pump bearing
99 - BK 45 pulley
99a - Transfer Shaft 1" x 18"
100 - BK 48 belt
101 - BK 32 Pulley
102 - 3/4" NPT plug
103 - Pump Cover Plate
103a - Pump Bracket
104 - 3/4" self-screw self tapping screw
105 - Wand Pipe
106 - Wand Spring
107 - Wand Support Arm
108 - 3/8" x 1" bolt, c/w lockwasher, & washer
109 - Model HX4-115 Viking Pump
110 - Nipple (cut to size) 1 1/2" x 24"
111 - Nipple (cut to size) 1 1/2" x 24"
112 - 1 1/2" Coupling Union
113 - C-261 6" Flow Valve Handle Spring 5 1/2"
114 - Pump Activation Rope Bracket
115 - 3/8" x 1 1/4" UNC bolt c/w washer & locknut
116 - Flow Valve Handle
117 - 3/8" x 1 1/4" UNC bolt c/w washer & locknut
118 - 5/16" x 1" UNC bolt, c/w washer & locknut
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 c/w 2, c/w lockwasher & nut
123a - Type B Wand Spring Clamp
123b - Type B Wand Spring Clamp
124 - Type A Wand Spring Clamp
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 (Pump)
132 - Close Nipple (w/ 45 degree end angle)
133 - 1 1/2" Coupling
134 - 1 1/2" x 3" Nipple
135 - 1 1/2" Street Elbow
136 - Intake Screen
137 - Weighted Handle (with pump only kettle)
138 - Interchangeable Wand Applicator Nozzle
138 - Agitator Shaft Repair Kit



MODEL A-210 - MAIN VIEW

A&A STEEL ENTERPRISES



A-210 - EXHAUST VIEW

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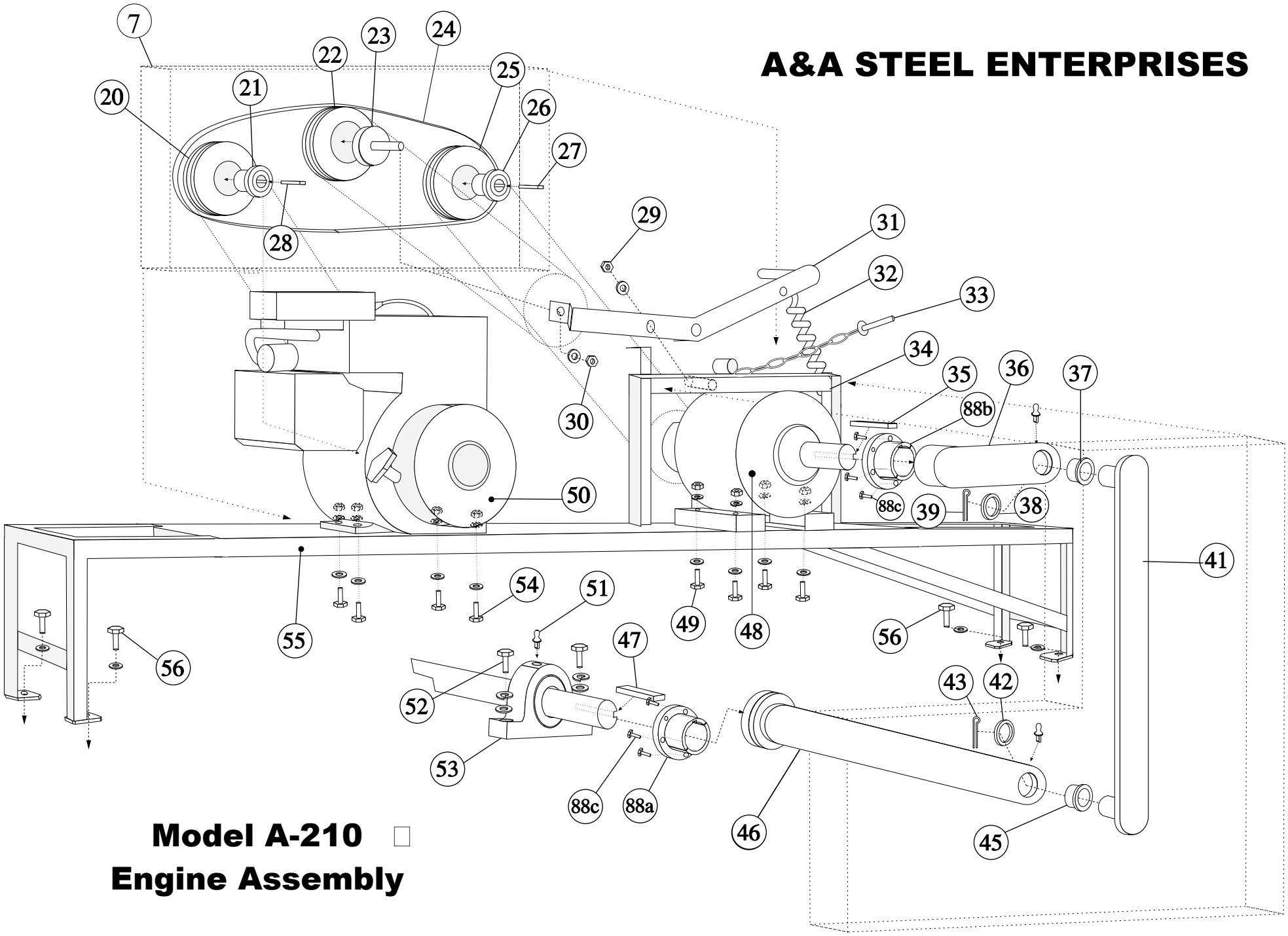
A&A STEEL ENTERPRISES



Model A-210

Engine Assembly

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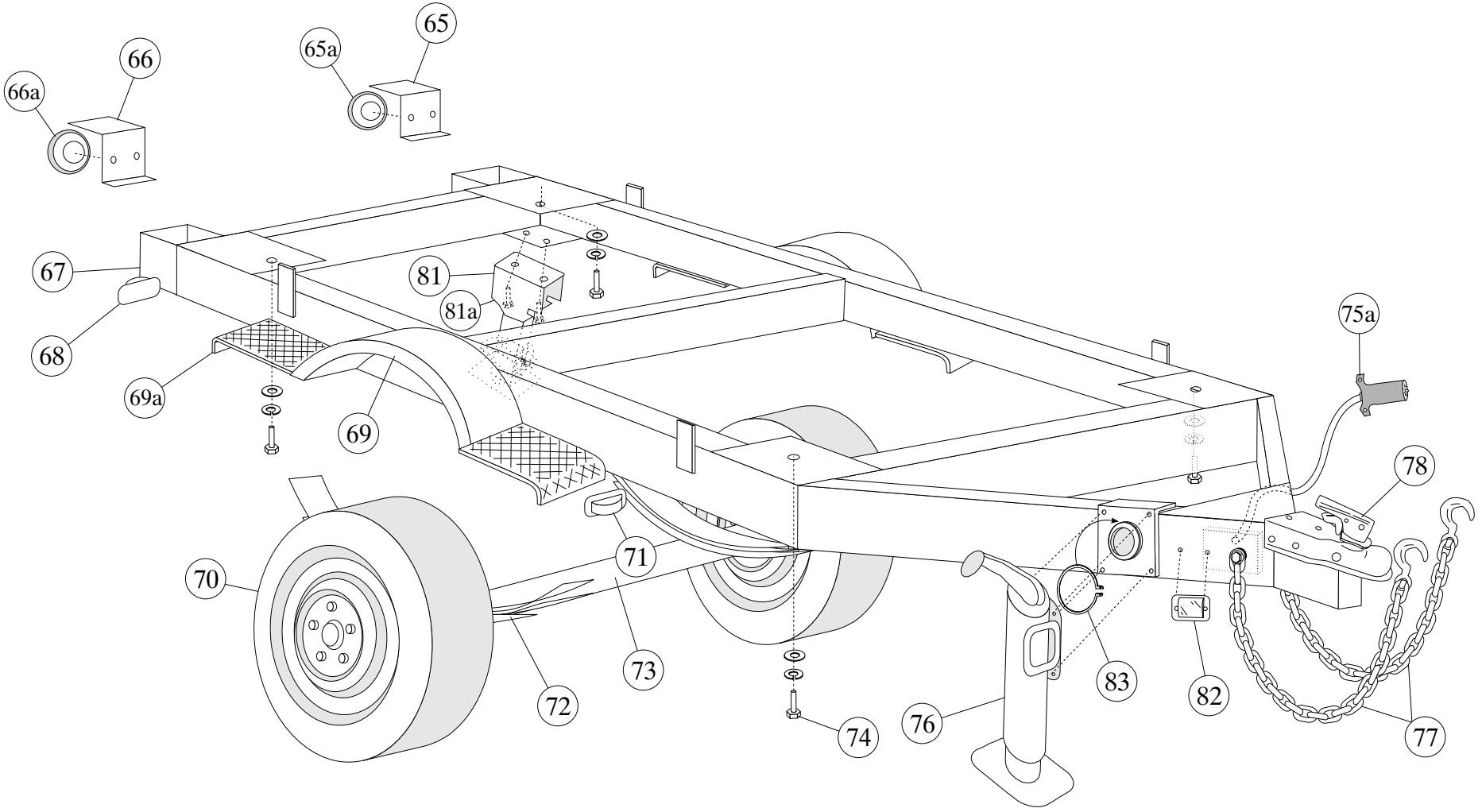
Model A-210 TRAILER



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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