

## FALCON ASPHALT REPAIR EQUIPMENT

### Technical Specifications For 2017 Two hundred fifty (250) gallon heated and insulated tack tank trailer

#### **SECTION 1: 250-GALLON HEATED / INSULATED REJUVENATOR HOLDING TANK AND NON-HEATED 7-GALLON RELEASE AGENT HOLDING TANK WITH SPRAY SYSTEM:**

- A. Rejuvenator holding tank is:
  - 1. 250-Gallon Capacity
  - 2. Heated by a dedicated diesel burner
  - 3. Insulated with 1" rolled material
  - 4. Constructed of 10 gauge inner wall and 10-gauge outer wall
  - 5. Has a 10" diameter fill opening with a lockable civacon lid
  - 6. Has 1 ½" long-handled molasses valve mounted at the base of the tank
- B. Rejuvenator holding tank has a dedicated diesel fired burner.
  - 1. Spark Ignition system to be powered by a 12-volt battery
  - 2. Dedicated rejuvenator holding tank digital automatic temperature controller regulates the temperature of the material in the rejuvenator holding tank
  - 3. A 90-degree 50/550 thermometer mounted on the rejuvenator holding tank displays the temperature of the material.
- C. Molasses valve extends over the rear frame rail allowing material to be drawn from the rejuvenator holding tank.
- D. Spray system powered by 5 HP Honda motor
- E. Viking HL32 pump with pressure relief valve moves tack and release agent through the spray system hose
- F. Asphalt release agent holding tank has 7-gallon capacity and is non-heated
  - 1. Asphalt release agent acts as the flushing agent in the spray system
- G. Spray system and flush system plumbed with high-pressure hydraulic tubing and fittings
- H. Spray system hose length is 25 feet
- I. Flush material (asphalt release agent) and asphalt rejuvenator material flow is regulated by a manually operated selector valve (single lever adjustment regulates flow of rejuvenator or release agent through the hose)
- J. Ball valve mounted near the spray wand handle regulates material leaving the spray wand

#### **SECTION 2: HOSE REEL FOR REJUVENATOR SPRAY SYSTEM:**

- A. A Retractable hose reel for 25 foot spray system hose
- B. Hose reel must be rated for ½" hose

#### **SECTION 3: TANK CONSTRUCTION:**

- A. WALLS

1. Tank is of double wall construction and has two parallel walls (inner and outer)
  - i. Tank is heated by a stainless-steel flue
2. All walls must be of one-piece, seamless steel construction
  - i. Multi-piece wall construction has seams that allow moisture to wick into the insulation causing the insulation to sag and the steel to rust
3. All front and side tank walls are parallel
4. Zip screws may not be used in the construction of the tank
5. Conspicuity tape applied to trailer per FMCSA requirements
6. Tank includes a 24'X24" clean out port located at top of the tank

#### **SECTION 4: TRAILER TYPE:**

- A. Trailer must be constructed of 2" x 5" x 3 / 16" structural rectangular tubing
- B. Trailer must include a minimum of three cross members and a center support beam, each constructed of 2" x 5" x 3 / 16" structural rectangular steel tubing

#### **SECTION 5: TRAILER CONSTRUCTION:**

- A. Trailer must comply with all state and federal DOT / FMCSA requirements
- B. Tank must be integrated into the trailer frame and not bolted into it
- C. All welds on frame must be continuous
- D. Boxed-in and enclosed gussets continuously welded to the top, side and bottom of the frame at the two-front bends
- E. Gussets continuously welded to the front where the side rails connect to the center rails
- F. Bottom of frame must be a minimum 18" from the ground
- G. Fenders are bolted to the frame
  1. Bolting fenders to the frame enables easy replacement should the fender become damaged. It also helps prevent rust formation because the area behind the fender can be sandblasted, primed and painted
- H. Fenders are fabricated of 16-gauge steel with a 10-gauge backing plate
- I. Trailer includes an 8,000 lb bolt-on drop-leg parking jack
- J. Two safety chains with Grade 70, DOT approved, transport chain and a clevis hook with a safety clip
- K. Junction box to include circuit breakers
  1. Circuit breakers protect the tow vehicle from the 12-volt trailer wiring and the 12-volt trailer wiring from the tow vehicle

#### **SECTION 6: TRAILER AXLES:**

- A. Trailer to be equipped with one 7,000 lb axle with double eye suspension
- B. Trailer GVWR must be a minimum of 7,000 pounds

## **SECTION 7: TRAILER TIRES:**

- A. 9 x 14.5 Load Range "G" tires on 9-bolt solid steel wheels

## **SECTION 8: TRAILER BRAKES:**

- A. Electric Brakes on all wheels with safety breakaway

## **SECTION 9: TRAILER PINTLE EYE:**

- A. Trailer must attach to towing vehicle using a minimum 2.5" I.D. lunette pintle eye hitch
- B. Pintle eye hitch to be adjustable in height from 18" to 32"

## **SECTION 10: TRAILER LIGHTING:**

- A. FMCSA compliant lighting to include:
  - 1. Two 4" round red stop/tail/turn lights are mounted on rear of hopper

## **SECTION 11: DIESEL TANK HEAT SYSTEM:**

- A. BECKETT DIESEL BURNER
  - 1. Hopper heated by one 105,000 BTU maximum RW Beckett diesel burner
  - 2. Diesel burner fuel solenoid powered by a 12-volt system
  - 3. Burner includes a cad cell (eye) to shut down the flow of fuel if the burner flame is not present
  - 4. A pressurized pump controls the flow of fuel to the diesel burner
  - 5. Diesel burner spark ignition system is powered by a 12-volt battery
  - 6. Burner has automatic recycle on spark system and automatic shutdown safety system
  - 7. Burner has inspection guard that is removable without the use of tools, while standing on the ground
    - i. This burner guard provides easy access to the burner for inspection and maintenance
  - 8. Nozzle shall be .75 GPH
  - 9. **Diesel burner is warranted to continuously operate while the equipment is in tow and while the hopper is raised without the flame blowing out or damaging burner components**
- B. BATTERY
  - 1. One 550 CCA 12-volt deep cell battery is mounted in a battery box on the trailer
- C. DIESEL EXHAUST
  - 1. All exhaust produced by the diesel burner vents through a double chimney on the top of the front tank wall
    - i. Venting of diesel exhaust into the tank is unacceptable because it creates a build-up of diesel fumes / carbon monoxide which the operator is exposed to when the material unloading door (back door) is opened
- D. DIESEL FUEL SYSTEM
  - 1. Trailer has an in-line quick disconnect diesel fuel filter with a water separator
    - i. A fuel filter with a water separator will prevent burner failure due to water in the diesel fuel

2. Fuel tank neck is welded into the fuel tank
  - i. Welding instead of bolting the fuel neck into the tank will prevent moisture from entering the tank at this site
3. Fuel tank includes lockable fuel cap

**E. VOLTAGE INDICATOR AND PROTECTION SYSTEM**

1. Heating system must include a voltage indicator and protection controller to automatically prevent burner from operating below burner manufacturer's required voltage
  - i. See page 4 of RW Beckett 12-volt ADC burner manual

**SECTION 12: TRAILER WIRING:**

- A. Trailer plug-in connector to be 7-pin flat RV, 7-pin round or 6-pin round
- B. All wires shall be THHN, stranded, copper, and color coded
- C. Wiring connections shall be soldered, sealed in shrink-wrap, covered with high temperature corrugated loom and protected by steel conduit
- D. All wiring and enclosures shall be NEMA-3 rated
- E. All wiring is external to the tank walls
  1. Wiring run between hopper walls is prone to heat damage and makes electrical repairs expensive and time-consuming

**SECTION 13: PAINT:**

- A. Paint color is red.
- B. Two coats of epoxy primer and two coats of urethane finish are applied to all parts and entire unit
- C. Entire unit, including all bolt-on parts, are sand blasted prior to painting
- D. All accessory bolt-on parts are painted prior to assembly to chassis
- E. Non-steel parts (wiring, lighting, electrical enclosures, chains, etc.) are not painted. These components/parts are installed after the paint process is complete

**SECTION 15: BATTERY CHARGER:**

- A. A 12-volt marine grade battery charger is mounted on the trailer frame
- B. The battery charger is hard wired to the unit's battery

**SECTION 16: WARRANTY AND DELIVERY:**

- A. One-year warranty
  1. Pass through warranties will not be accepted
  2. Warranty must include the following statement:
    - i. Diesel burner is warranted to continuously operate while the equipment is in tow and while the hopper is raised without the flame blowing out or damaging burner components
- B. Four hours of safety, operation and recycling instruction are required upon delivery of the unit by a factory-trained technician

C. One Operator / Parts / Service Manual is included upon delivery

Operation, Parts and Service Manual must be available online on the manufacturer's website