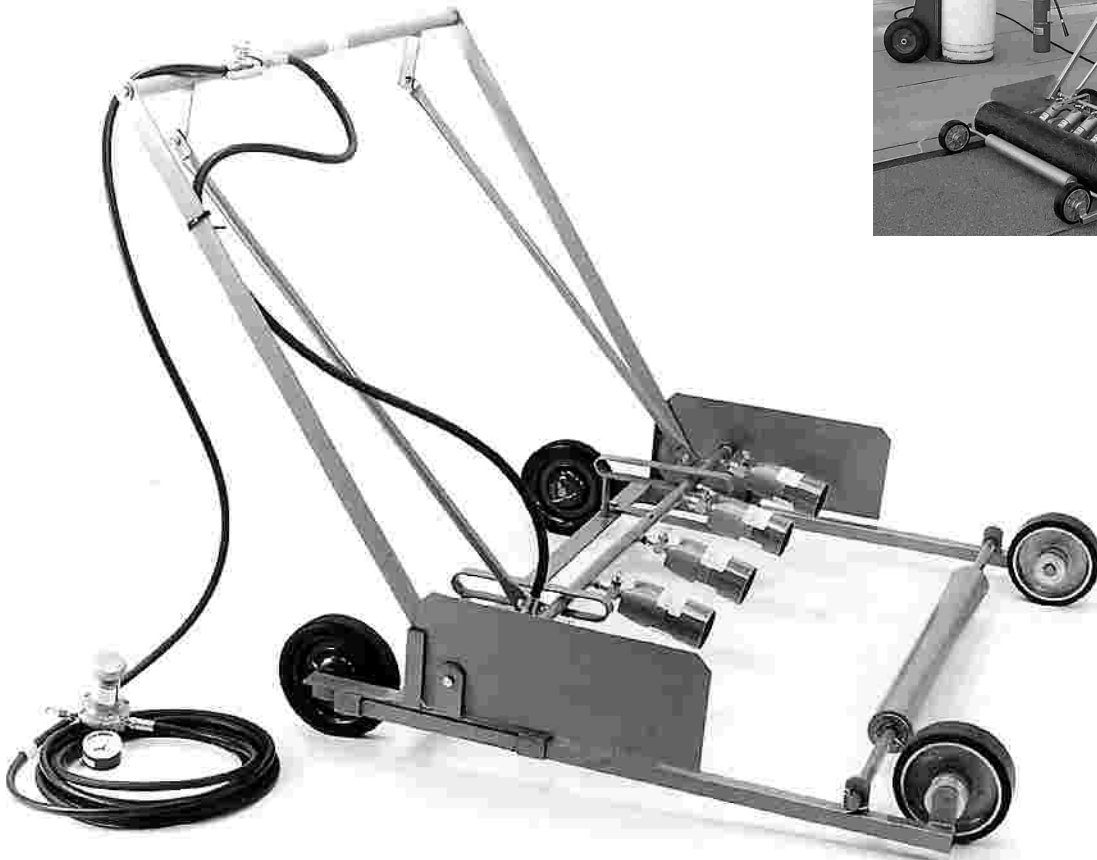


# RED DRAGON

## SPA 540 A & SPA 740 A Modified Bitumen Applicator

### Assembly and Operating Instructions



**FLAME ENGINEERING, INC.**  
PO Box 577 • West Hwy 4 • LaCrosse, KS 67548  
800-255-2469 • 785-222-2873 • Fax 785-222-3619

# Assembly Instructions

## To Assemble:

1. Slide left and right roller support arm into main frame until flush with main frame. Make sure the axle points in and the tabs point up. Tighten set screws.
2. Slide roller axle into tab on left and right roller support arms and secure with 3/4" shaft collar.
3. Using 2" x 5/16" bolt and two hex nuts on each bolt, install wind shields and then the side handle support to main frame.
4. Using 1 1/2" x 7/16" bolt, attach handle to side handle support. NOTE: DO NOT OVER TIGHTEN - THE HANDLE MUST SWIVEL!
5. Using 5/16" x 3/4" bolts, install push rods to torch manifold with lock washer and nut (place star washer between torch manifold and push rod tabs to provide friction). DO NOT TIGHTEN COMPLETELY!
6. Attach opposite end of push rods to tabs on handle using 5/16" x 1" bolt and two nuts on each bolt. DO NOT OVER TIGHTEN - THIS CONNECTION MUST SWIVEL!
7. Install 7" x 1.5" red wheels with metal spacer on main frame. Secure with 5/8" shaft collar provided.
8. Using washers for proper spacing, install gray wheels on roller support arms and secure with 3/4" shaft collar. Wheels should be adjusted to roll 1/2" inside seam of roofing material.
9. Adjust angle of torch manifold and tighten push rods securely to torch manifold.
10. Using pipe thread compound, install 8" nipple into 90 degree elbow on the manifold.
11. Attach the 3/8" swivel end of the 3 1/2' LPG hose to the 8" nipple. (DO NOT use pipe thread compound)
12. Attach 25' LPG hose to valve on handle. (USE pipe thread compound)
13. Attach opposite end of 25' LPG hose to "out" port on regulator. (USE pipe thread compound)
14. Attach P.O.L. fitting to "in" port on regulator. (USE pipe thread compound)
15. Remove hex plug on side of regulator and install pressure gauge. (USE pipe thread compound)
16. Attach P.O.L. fitting into valve on vapor-withdrawal cylinder. (DO NOT use pipe thread compound)

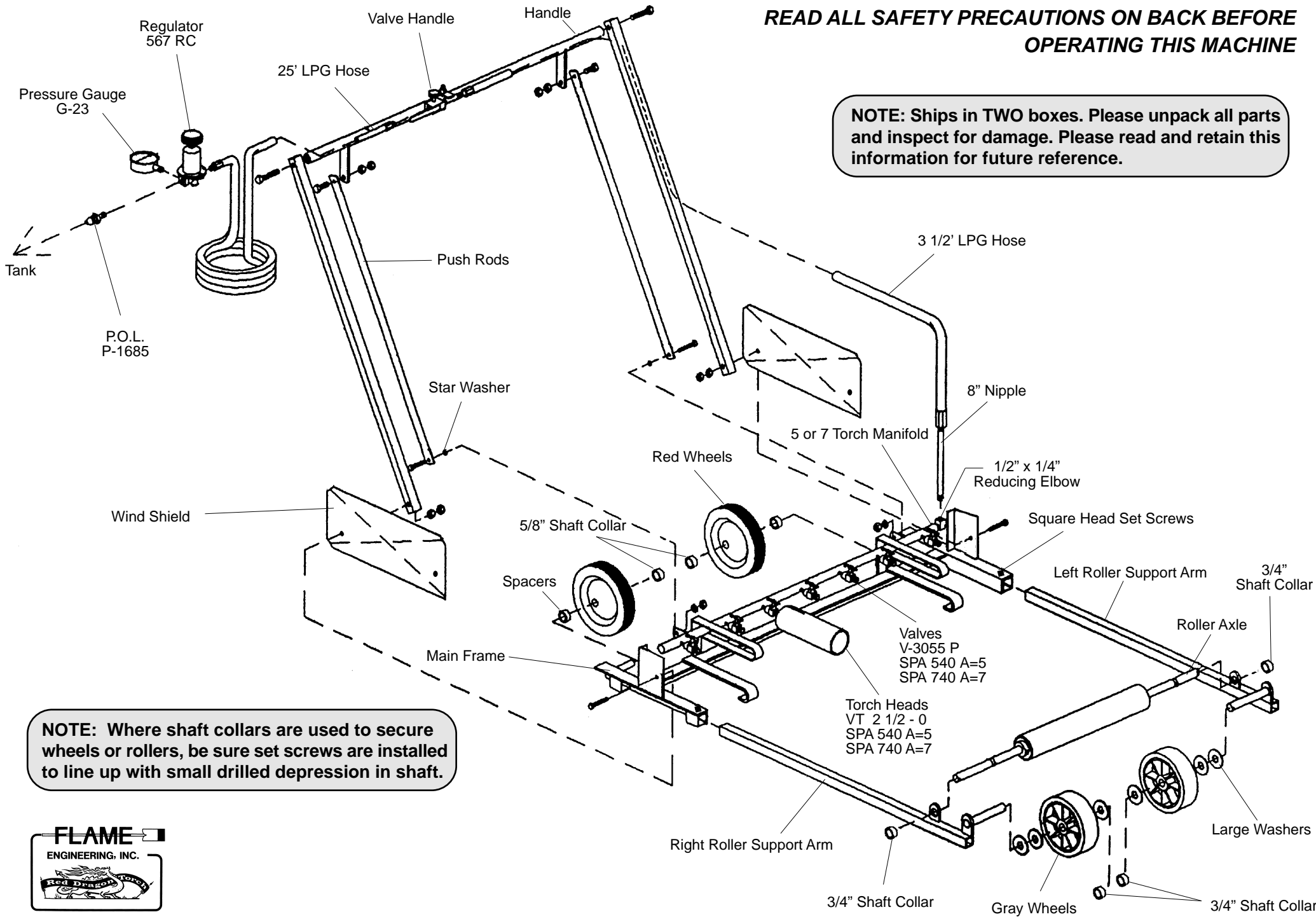


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**READ ALL SAFETY PRECAUTIONS ON BACK BEFORE OPERATING THIS MACHINE**

**NOTE: Ships in TWO boxes. Please unpack all parts and inspect for damage. Please read and retain this information for future reference.**



**NOTE: Where shaft collars are used to secure wheels or rollers, be sure set screws are installed to line up with small drilled depression in shaft.**



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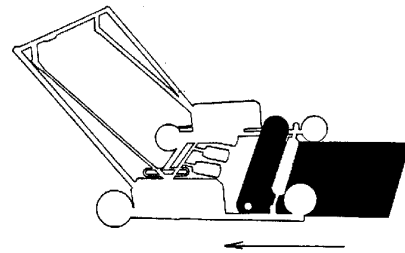
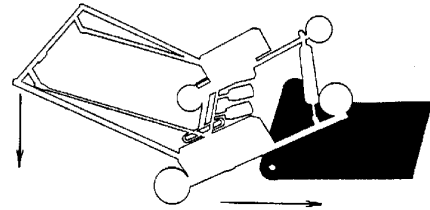
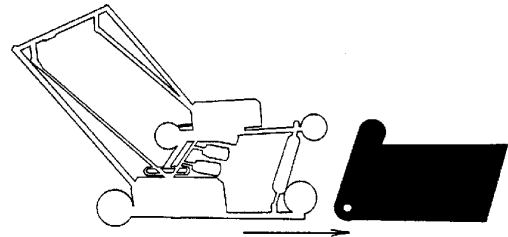
## IMPORTANT: READ ALL SAFETY PRECAUTIONS BEFORE OPERATING THIS MACHINE

- **DO NOT** use this machine without a perimeter warning system
- This machine uses open flames. Care should be taken to prevent personal injury or property damage.
- When hoisting machine onto roof, **DO NOT** attach hoist around or near hoses, valves, burners or LPG lines.
  - Visually inspect all hoses, valves and LPG lines every day for loose connections, cracks, or damage.
  - Always keep a full ABC class fire extinguisher nearby while operating this machine.

## Operating Instructions

### To Operate Red Dragon Modified Bitumen Applicator:

1. Set roll of modified bitumen material (Refer to manufacturer's recommended procedure).
2. Hand torch tail of roll (18-24 inches).
3. Light and adjust burners (See Lighting Instructions below).
4. Position the machine over the roll of roofing material as shown.
5. Squeeze trigger on pilot valve and walk backward pulling the machine towards you. Exercise extreme caution when walking backward with machine. **DO NOT OPERATE MACHINE WITHIN 8' OF ROOF EDGE!**
6. As machine is being moved, torch to roll distance can be adjusted by rotating handle.



### BEFORE LIGHTING

- Check for **leaks** each day with soapy water (or commercial leak detector) **before operating machine.**
- **DO NOT USE ANY EQUIPMENT** with leaks present. **Repair leaks before operating machine.**
- Follow instructions on operator safety card packed with this unit.

## Lighting Instructions

### To Light the Red Dragon Modified Bitumen Applicator Burners:

1. Open all burner valves (located behind each burner).
2. Close adjustable pilot valve on handle
3. Open Fuel Supply
4. Open pilot valve approximately 1/4 turn.
5. Light each burner with spark lighter.
6. Adjust regulator to 20-60 lbs. Lower pressure settings conserve fuel. Use the lowest setting that will allow you an adequate rate of application.
7. Adjust burner valves to provide balance flame across roll.



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