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Rev G, ECO 12-0041

# Owner's Manual



## **Air Devil™** **One-Gallon Shaker**

B4310 Single Gallon Air-Driven Shaker



**Red Devil**

*RED DEVIL EQUIPMENT CO.*

[www.reddevilequipment.com](http://www.reddevilequipment.com)





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# Introduction

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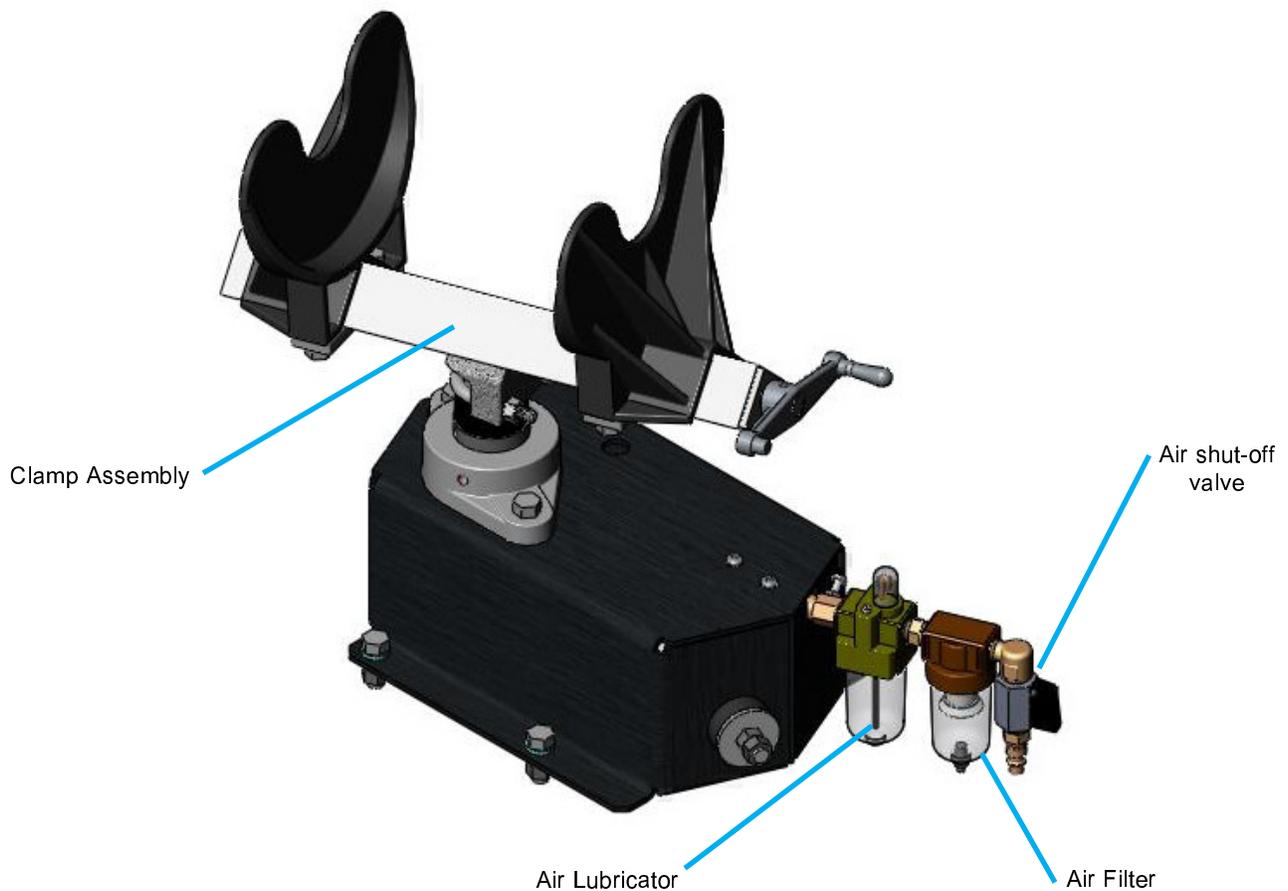
The **RED DEVIL EQUIPMENT** Air Devil Paint Mixer is a quality built machine that offers dependable performance throughout its lifetime.

To take full advantage of your mixer's capabilities, you should understand its features and proper operation.

Before operating the machine, read this manual completely. Save this manual for future reference.

**Follow all safety instructions!**

**Fig. 1: B4310 Air Devil paint mixer**





# Safety Precautions

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**Always** follow these safety precautions when operating the RED DEVIL EQUIPMENT Air Devil Paint Mixer:

## INSTALLATION

1. **Before operating the machine**, read this Owner's Manual carefully. Learn the machine's applications and limitations.
2. **Avoid dangerous environments.** Keep the work area well lit and ventilated. Air must be used in the supply line - **do not use Nitrogen or CO<sub>2</sub>**.
3. **Keep the work area clean.** Cluttered areas and benches invite accidents.

## OPERATION

1. **Keep customers away.** All customers should be kept away from the work area. The mixer should be used **only** by properly trained workers.
2. **Never mix aerosol cans.** Cans can explode due to excessive agitation.
3. **Trained, capable operators only.** This mixer is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given permission or instruction concerning use of the mixer by a person responsible for their safety.

## MAINTENANCE

1. **Keep the machine clean.** Clean all surfaces with a mixture of lukewarm water and mild detergent. Never use solvent based cleaners or thinners.
2. **Disconnect from air supply.** When cleaning the mixer or doing any maintenance work, always disconnect the machine from the air supply line.
3. **Service properly.** Follow the maintenance procedures outlined in this manual. If problems occur, contact the RED DEVIL EQUIPMENT Customer Service Department (see back cover of this Owner's Manual).

## WARNING

Air supply must not exceed 135 PSI

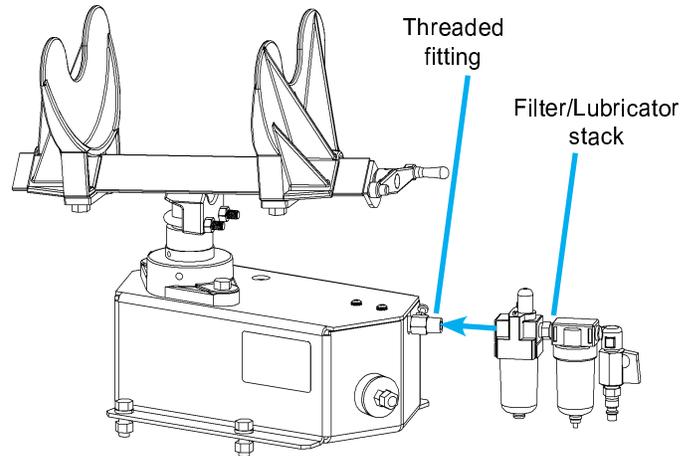


# Installation

## Assembly

The B4310 Air Devil paint mixer is shipped partially assembled. The filter and lubricator stack must be installed on the mixer prior to using. To assemble:

1. Remove and discard all packing material.
2. Check to make sure there is teflon pipe tape on the threaded fitting on the front of the mixer.
3. The air filter, air lubricator, and on/off valve are preassembled to each other. By turning the lubricator, carefully thread this subassembly onto the fitting on the front of the mixer.
4. Stop threading the filter and lubricator stack when it is fully tightened onto the fitting. Make sure that the filter and lubricator are in the upright position, with the clear bowls on the bottom side (**Figure 2**).

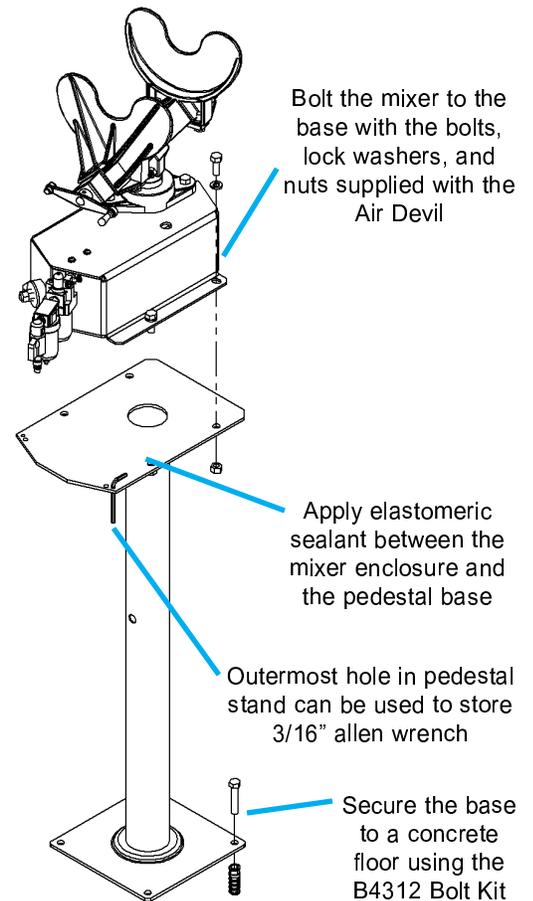


**Fig. 2: Assembling the Air Devil mixer**

## Installing the mixer on the pedestal base

It is **HIGHLY** recommended that the Air Devil mixer be mounted on the optional **B4311 Pedestal Base** and **B4312 Bolt Kit** (sold separately).

1. Prepare the concrete floor for the base:
  - A. Using a 1/4" diameter masonry bit and the pedestal base as a template, drill four pilot holes in the floor. Then, using a 5/8" masonry bit, expand the pilot holes and drill to a depth of 2".
  - B. Insert a lag shield (provided with B4312 Bolt Kit) into each of the four holes, using a hammer if necessary, so that the tops of the lag shields are flush with the floor surface. The end of the lag shield with a round hole should be at the top.
2. Bolt the B4311 Pedestal Base to the floor using the provided lag screws.
3. Apply a bead of elastomeric sealant all around the mixer between the Air Devil and the pedestal base to prevent condensate and oil from leaking around the outside of the mixer.
4. Using the four bolts, lock washers, and nuts provided with the Air Devil, secure the mixer to the pedestal base as shown in Figure 3.
5. Connect the Air Devil mixer to the air supply line using a 1/4" inside diameter hose. The air supply should be at least 70 PSI, but **MUST NOT** exceed 135 PSI. Use a regulator if the supply line is greater than 135 PSI.
6. Fill the air lubricator with air tool oil until the oil is 1/4" from the top of the clear bowl.



**Fig. 3 Installing the mixer on the pedestal base**

**CAUTION:** It is **not** recommended that the Air Devil be bolted down to a benchtop or tabletop surface.



# Operation

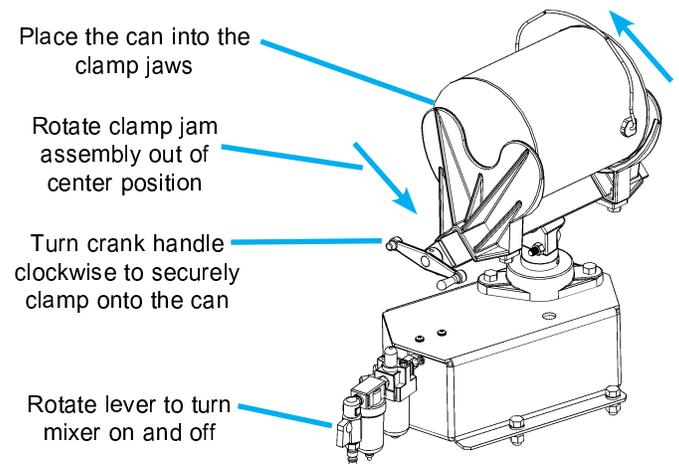
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## Safety Precautions

1. **Before operating the machine**, read this Owner's Manual carefully. Learn the machine's applications and limitations.
  2. **Close can lids tightly**. If the can lid has been opened, reclose it tightly before mixing.
  3. **Do not mix in breakable containers**. No glass, porcelain, or other breakable containers.
  4. **Insert the can carefully** to ensure that it is held securely during the mixing cycle.  
**NOTE: Do not use if can is damaged!**
  5. **Keep the work area clean**. Cluttered areas and benches invite accidents.
  6. **Keep Customers away**. All customers should be kept away from the work area. The mixer should be used **only** by properly trained workers.
  7. **Use only compressed air to supply the machine**. Do NOT use Nitrogen or CO<sub>2</sub>.
- 

## Mixing Procedure

1. **Make sure the can lid is securely attached.**
2. **Load and clamp the can into the machine for mixing:**
  - A. Turn the handle counter-clockwise to open the clamping jaws about 1/2" wider than the length of the container.
  - B. Insert the can and turn the handle clockwise to secure the can for mixing (**see Figure 4**). Before turning on the mixer, always be sure that the container is held tightly - but don't use excessive pressure that could damage the can or clamping assembly.
3. **Rotate the clamp jam fully to the left or right before starting.**
3. **Rotate the ball valve lever 1/4 turn counter-clockwise to turn the mixer on.**



**Fig. 4: Clamping Process**

**NOTE: IF THE MIXER PREVIOUSLY STOPPED EXACTLY IN THE CENTER POSITION, IT MAY NOT START SHAKING. ROTATE OFF CENTER.**

If this happens, turn the valve lever off and rotate the clamp jaw assembly by hand out of the center position, then rotate the valve lever again to turn the mixer on.

4. **The time required for mixing will vary** according to many factors, including type and color of paint, amount of paint, container size, and air pressure. Do not leave the machine unattended during mixing. When enough time has elapsed, rotate the on/off lever 1/4 turn clockwise to shut the mixer off.



# Maintenance

**CAUTION: Always disconnect mixer from air supply before servicing!**

## Cleaning

Keep the machine clean. Clean all surfaces with a mixture of lukewarm water and mild detergent. Never use solvent based cleaners or thinners.

To preserve the appearance of the machine do not use abrasives to clean machine surfaces.

## Lubrication

• **Internal air cylinder bearing:**  
Grease every 6-12 months. Center the the clamp jaw assembly with the mixer enclosure to line up the internal grease zerk fitting with the access hole (**Figure 5**). Using a grease gun, apply 1-2 squirts of high pressure lithium grease (Mobil 1 Universal or similar) to the zerk fitting.

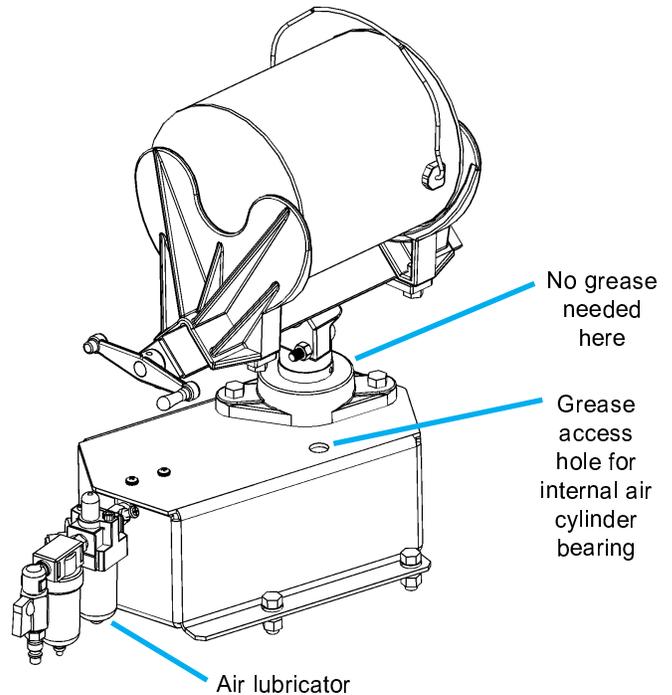
• **Main shaft bearings:**  
No re-lubrication is required.

• **Clamp screw:**  
Apply grease as required for smooth clamping operation.

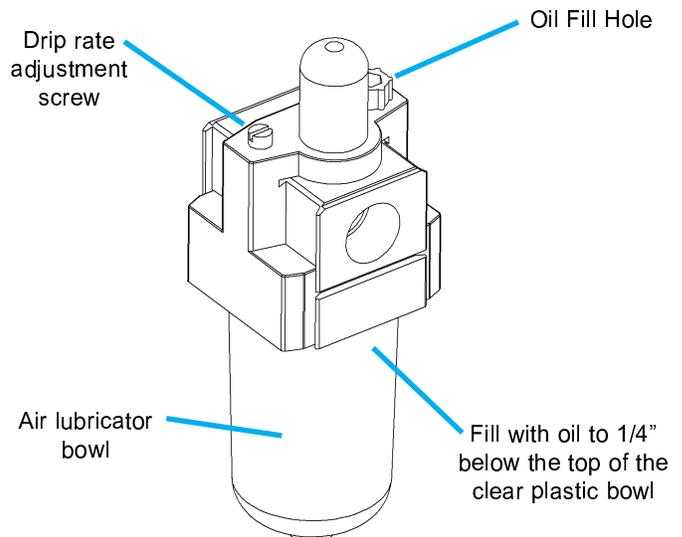
• **Air lubricator drip rate:**  
Adjust the drip rate adjustment screw as necessary to maintain a drip rate of 1 drop every 30 seconds (**Figure 6**).

• **Refilling the air lubricator:**

- Method 1
  - Use only air tool oil.
  - Fill air lubricator whenever it becomes low.
  - Remove the cap on the oil fill hole, using a 3/16" allen wrench if necessary.
  - Drip the air tool oil into the fill hole until the oil level is 1/4" from the top of the clear bowl on the air lubricator (**Figure 6**).
  - Replace the cap on the oil fill hole - **finger tight only - any tighter may damage the cap.**
- Method 2
  - Remove bowl by unscrewing it from the lubricator.
  - Fill bowl with air tool oil to 1/4" below the top surface.
  - Replace bowl on the lubricator.



**Fig. 5: Lubrication points**



**Fig. 6: Air Lubricator**



## Maintenance (continued)

**CAUTION: Always disconnect mixer from air supply before servicing!**

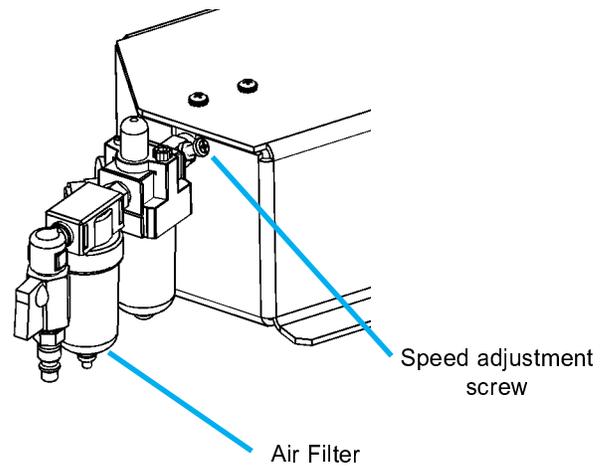
### General Maintenance and Adjustments

- **Air Filter:**

Replace the air filter element as needed when it becomes dirty or when the shake speed of the mixer slows down. Replacement elements are available from Red Devil Equipment (part no. 9785717). To replace the filter element, unscrew the clear plastic bowl from the air filter and replace the filter element, then replace the plastic bowl on the filter.

- **Adjusting the shake speed:**

If you need to modify the shake speed of the mixer, you can do so by adjusting the speed control screw at the front of the mixer (**Figure 7**). Turn the screw clockwise to restrict the air flow and reduce speed, or counter-clockwise to increase the shake speed. Be sure to tighten the locking nut on the adjustment screw after any adjustment is made.



**Fig. 7: Air Filter & Speed Adjustment**



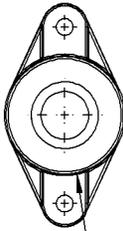
# Troubleshooting

**CAUTION: Always disconnect mixer from air supply before servicing!**

PROBLEM	CAUSE	REMEDY
Mixer doesn't shake when turned on	Air pressure low or restricted	Check air supply lines
	Shake arm stopped exactly in center position	Turn off mixer, move shake arm to either side, and restart mixer
	Air lubricator not dripping oil	Adjust drip rate, re-fill oil or replace o-ring if necessary
Mixer runs slowly or stops	Air pressure low or restricted	Check air supply lines
	Dirty or clogged air filter	Replace air filter
	Low oil level	Refill oil level to proper amount
	Speed adjustment screw in too far	Turn adjust screw counter-clockwise to allow more air flow and increase speed
	Oil too thick	Replace oil with air tool oil
	Air cylinder worn	Replace air cylinder if there is no compression
Mixer shake angle less than 20 degrees (see next page)	Air lubricator not dripping oil	Adjust drip rate, re-fill oil or replace o-ring if necessary
	Air cylinder worn	Replace air cylinder
Excessive vibration	Loose bolts holding Air Devil mixer to pedestal base	Re-tighten Air Devil to pedestal base
	Air flow may be too high	Adjust air flow with the speed control screw
Loud mechanical banging noise during operation	Clamp jaws loose on paint can	Re-tighten clamp jaws on can
	Air flow may be too high	Adjust air flow with the speed control screw
	Loose bolts on main flange bearings (item 5 on pg 11)	Tighten bolts (36 ft-lbs of torque)
	Bearings worn or damaged	Contact a RED DEVIL EQUIPMENT customer service representative
Paint can won't fit properly into clamping plates	Paint can damaged	Fix or replace paint can
	Paint can not a size supported by Air Devil mixer	Do not shake this paint can in Air Devil

**TO CHECK THE SHAKE ANGLE OF THE AIR DEVIL MIXER**

**1. PLACE THIS EDGE AGAINST THE ROUND SURFACE OF THE MAIN BEARING CASTING**



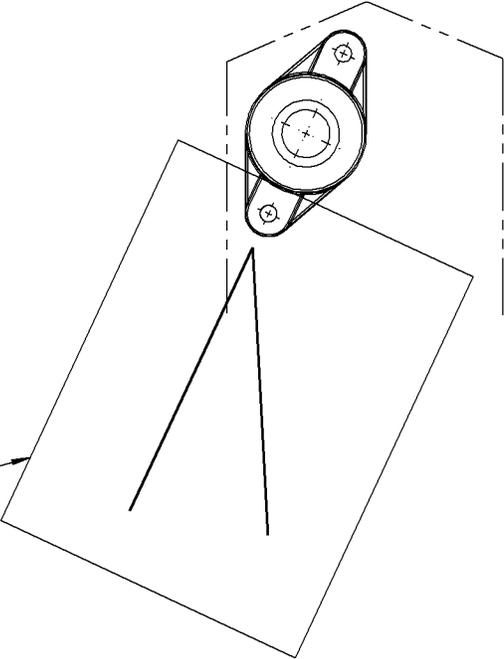
**ROUND SURFACE ON BEARING**

**28°**

**3. CHECK THE SHAKE ANGLE AGAINST THESE 2 LINES**

**2. ALIGN THIS LINE WITH THE BOLTS ON THE MAIN BEARING**

**ANGLE CHECK SHEET**





## **Parts List**

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### **How to Order Replacement Parts**

Replacement parts can be ordered from RED DEVIL EQUIPMENT CO. by mail, telephone, or FAX:

RED DEVIL EQUIPMENT CO.  
14900 21st Ave North  
Plymouth, MN 55447

763-533-2969  
800-221-1083  
763-533-0015 (FAX)

If you need help in determining the proper part(s) to order call and ask for Customer Service.

Always indicate the Model No. and Serial No. of the Mixer when ordering replacement parts.

### **General Parts Replacement Policies**

While your Mixer is under warranty, do not attempt on-site repair or parts replacement without first contacting RED DEVIL EQUIPMENT CO. (to protect your warranty).

After the warranty expires, on-site servicing and parts replacement are available from RED DEVIL EQUIPMENT CO. Contact Customer Service for arrangements and costs.

Subsequent service cost quotations may be affected unless RED DEVIL EQUIPMENT CO. replacement parts (or their approved equivalent) are used.

### **Restocking Fee**

A restocking fee will be charged on all **unused** parts which are returned.

# Air Devil Mixer - Exploded View

## AIR CYLINDER KIT

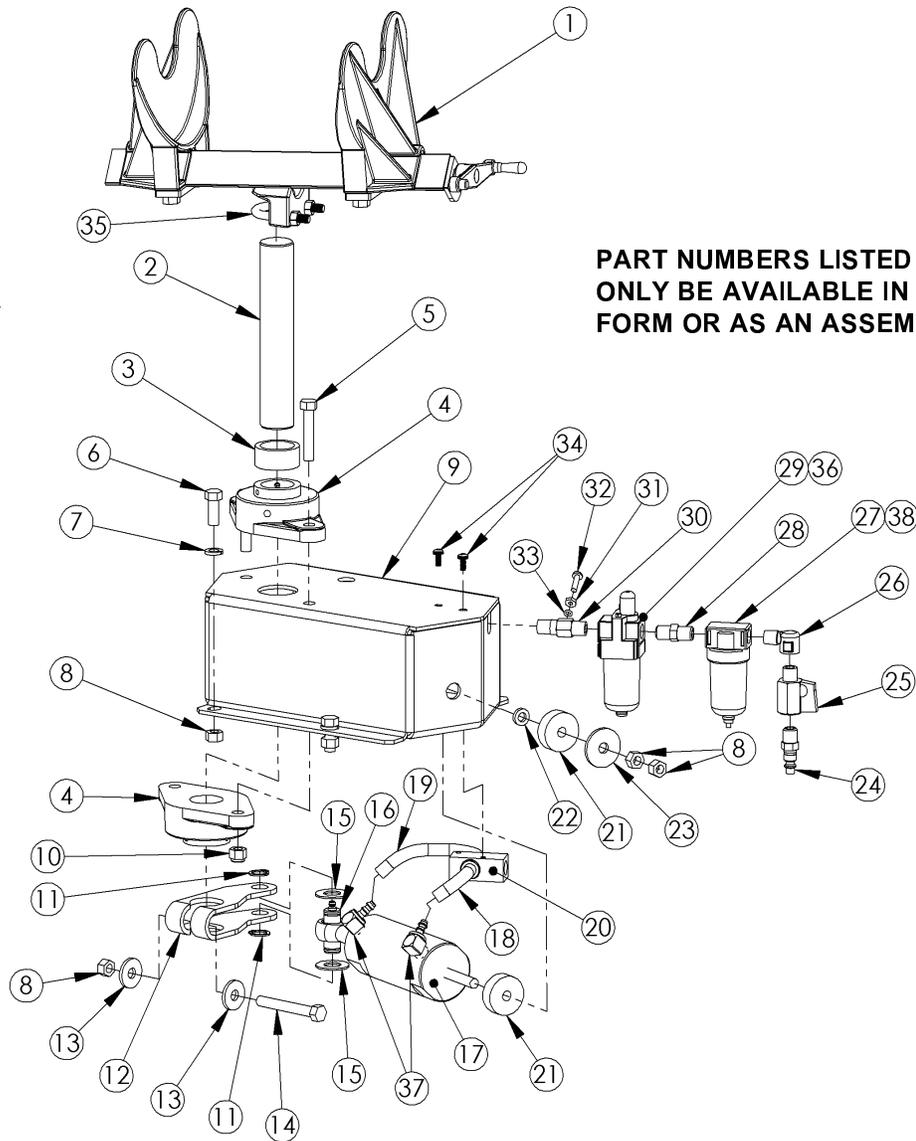
**6785758 - includes items:**

- 8 Nut, Hex 3/8-16
- 11 Retaining Ring
- 12 Arm
- 13 Washer, Thick 3/8
- 14 Screw, Hex
- 15 Thrust Washer
- 16 Pin Assembly
- 17 Air Cylinder Assembly
- 18 Hose, Short
- 19 Hose, Long
- 37 Elbow

## SHUTTLE KIT

**6785759 - includes items:**

- 18 Hose, Short
- 19 Hose, Long
- 20 Shuttle Assembly



**PART NUMBERS LISTED MAY ONLY BE AVAILABLE IN KIT FORM OR AS AN ASSEMBLY**

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
1	9785691 Clamp Jaw Assembly	21	9785690 Isolator
2	9785685 Shaft	22	9785723 O-ring, square
3	9785718 Spacer	23	9785698 Washer, Hardened 3/8
4	9785684 Bearing, Flanged, 1.25 Bore	24	9780568 Connector, .25 NPT x .25 Air
5	9690800 Screw, Hex 3/8-16 x 2.00	25	9785702 Ball Valve, .25 NPT
6	9780886 Screw, Hex 3/8-16 x 1.00	26	9785757 Elbow, 1/4"
7	9780402 Washer, Split Lock 3/8	27	9785701 Air Filter
8	9389500 Nut, Hex 3/8-16	28	9785704 Nipple, Hex, .25 NPT
9	9785683 Enclosure	29	9785700 Air Lubricator
10	9780193 Nut, Nylon Lock 3/8-16	30	9785689 Bulkhead Fitting
11	9785521 Retaining Ring, External, .625	31	9760540 Nut, Hex #10-32
12	9785686 Arm	32	9781209 Screw, Pan Hd #10-32 x .75
13	9785699 Washer, Thick 3/8	33	9785696 O-ring
14	9780403 Screw, Hex 3/8-16 x 2.75	34	9785703 Screw, Pan Hd #10-32 x .50 SEMS
15	9785688 Thrust Washer	35	9785741 U-bolt replacement for clamp
16	9785733 Pin Assembly	36	9785750 O-ring replacement for air lubricator
17	9785705 Air Cylinder Assembly	37	9780732 Elbow
18	9785679 Hose, Short	38	9785717 Air filter replacement
19	9785680 Hose, Long	---	9785737 Replacement air tool oil
20	9785692 Shuttle Assembly	---	9785739 Allen wrench, 3/16"

## THREE YEAR LIMITED WARRANTY



Your Air Devil Pneumatic Shaker was inspected and tested prior to shipment and is warranted to be free of original defects in materials and workmanship for three years (36 months) from the date of purchase.



Your Warranty Registration (found on page 14 of your Owner's Manual) must be completed and returned to Red Devil Equipment Company along with Proof-of-Purchase no later than 30 days after purchase, in order to validate and activate your warranty. Claims will only be accepted on machines in which the Warranty Registration has been completed and returned to Red Devil Equipment Company no later than 30 days after the purchase date.

Claims are void if the shaker is not installed, lubricated, and operated in accordance with the manufacturer's operating instructions outlined in the Owner's Manual. Please read your Owner's Manual to ensure proper operation and maintenance of the Air Devil Pneumatic Shaker.

The Manufacturer's liability is limited to repair or replacement at the Red Devil Equipment Company factory. No returns may be made directly to the factory prior to obtaining an Equipment Return Authorization (ERA) number. Authorized returns must be sent to the factory freight pre-paid, with the ERA number clearly displayed on the outside of the box. Failure to meet these requirements may result in a refusal on your claim.

### IMPORTANT REMINDERS

#### Installation:

- Use the B4312 Bolt Kit (or equivalent) to secure the pedestal base to the floor.
- Apply a bead of elastomeric sealant between the Air Devil and the pedestal base.
- Securely fasten the Air Devil to the pedestal base using the 4 bolts, lock washers, and nuts provided.
- Connect the Oiler and Air Filter according to the Owner's Manual.

#### Maintenance:

- Maintain proper air lubricator drip rate of 1 drip per 30 seconds with air tool oil.
- Replace air filter element when it becomes dirty or when the shake speed begins to decrease.

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# AIR DEVIL WARRANTY REGISTRATION

**(FAX THIS SHEET TO 763-533-0015 TO VALIDATE WARRANTY)**

Note: To obtain warranty protection, please complete this sheet and fax it to 763-533-0015 within 30 days of date of purchase

Model # \_\_\_\_\_ Serial # \_\_\_\_\_ Date Purchased \_\_\_\_\_

Your company name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone # \_\_\_\_\_

Type of business  Body Shop  Industrial Paint Operation  Other \_\_\_\_\_

What is the system air line pressure? \_\_\_\_\_ PSI

How many cans of paint do you typically shake per week? \_\_\_\_\_

What container sizes do you mix?  pints  quarts  gallons  other \_\_\_\_\_

How are you sealing your containers?  mallet  lid press  by hand  other \_\_\_\_\_

How did you hear about the Air Devil Shaker?

Tradeshow  Website - which one? \_\_\_\_\_

Word of mouth  Red Devil customer  Supplier salesman

Other \_\_\_\_\_

Supplier's name \_\_\_\_\_

Supplier's city, state, & zip code \_\_\_\_\_

**FAX TO: 763-533-0015**

**ATTN: Warranty Department**

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***For sales or service, please contact  
Customer Service:***

**Red Devil Equipment Co.  
Attn: Customer Service Dept.  
14900 21st Ave N  
Plymouth, MN 55447**

**U.S. Tel. 800.221.1083  
International 763.533.2969  
Fax 763.533.0015  
[info@reddevilequipment.com](mailto:info@reddevilequipment.com)**



**[www.reddevilequipment.com](http://www.reddevilequipment.com)**

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