

# BINKS MODEL 31-296 (1 H.P.) AGITATOR

MODEL 31-295 (1/2 H.P.) OBSOLETE—FOR REFERENCE ONLY

## ⚠ IMPORTANT

Read and following all instructions and safety precautions listed on Page 2 before using equipment. Retain for future reference.

### DESCRIPTION

The air motor is a precision built rotary vane type motor. The vanes take up their own wear and will last 5,000 – 15,000 hours depending upon speed, method of oiling, operating pressure, and the precautions taken in maintaining the motor. The type of shaft seal used does not lend itself to operating pressures above 100 psi. Allowing excess moisture or foreign particles from the air line to enter the motor will reduce operating life.

### INSTALLATION

First install a moisture trap and filter in the air line ahead of motor. For efficiency of output and control of speed use air lines or hose the same size as, or the next pipe size larger than, the intake port of the motor.

### OPERATION

The stalled or starting torque is less than the running torque and will vary depending on the position at which the vanes stop in relation to the air intake port. Operate motor well below available line pressure so that full line pressure can be called upon for overloads on motor. The speed is regulated by the air valve (8). If the duty is continuous or speed is high, use an automatic air line oiler set to feed 1–3 drops per minute. The bearings will receive oil from the rotor chamber during automatic oiling. Use SAE No. 10 non-detergent oil. Lubrication is necessary for the bearings, shaft seals, and rust prevention. Excessive moisture in the air line can cause rust formation in motor and might also cause ice to form on muffler due to expansion of air through the motor. The moisture problem can be corrected by installing a moisture separator in the line and also by installing an aftercooler between the compressor and air receiver.



## PARTS LIST

When ordering, please specify Part No.

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	20-1076	SET SCREW .....	4
2	20-3344	SET SCREW .....	2
3	20-6781	PIN.....	8
4	31-9	COUPLING .....	1
5	31-291	ADAPTER .....	1
6	31-292	SHAFT .....	1
7	57-13-1	NIPPLE .....	1
8	73-159	AIR VALVE .....	1
9	83-1527	MUFFLER .....	1
10	83-2815	AIR MOTOR, 1 H.P. (31-296).....	1
	83-2798	AIR MOTOR, 1/2 H.P. (31-295) .....	*
11	149-844	BLADES .....	8
12	■	HUB .....	2
13	149-851	PADDLE ASSEMBLY.....	2

\*Obsolete—for reference only. ■ Only available in 149-851.

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

## **WARNING**

Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

## **CAUTION**

Hazards or unsafe practices which could result in minor personal injury, product or property damage.

## **NOTE**

Important installation, operation or maintenance information.

## **WARNING**

### Read the following warnings before using this equipment.



#### **READ THE MANUAL**

Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



#### **OPERATOR TRAINING**

All personnel must be trained before operating finishing equipment.



#### **EQUIPMENT MISUSE HAZARD**

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



#### **LOCK OUT / TAG-OUT**

Failure to de-energize, disconnect, lock out and tag-out all power sources before performing equipment maintenance could cause serious injury or death.



#### **AUTOMATIC EQUIPMENT**

Automatic equipment may start suddenly without warning.



#### **PRESSURE RELIEF PROCEDURE**

Always follow the pressure relief procedure in the equipment instruction manual.



#### **KEEP EQUIPMENT GUARDS IN PLACE**

Do not operate the equipment if the safety devices have been removed.



#### **KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY**



#### **WEAR SAFETY GLASSES**

Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



#### **INSPECT THE EQUIPMENT DAILY**

Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



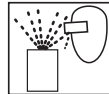
#### **NEVER MODIFY THE EQUIPMENT**

Do not modify the equipment unless the manufacturer provides written approval.



#### **NOISE HAZARD**

You may be injured by loud noise. Hearing protection may be required when using this equipment.



#### **PROJECTILE HAZARD**

You may be injured by venting liquids or gases that are released under pressure, or flying debris.



#### **PINCH POINT HAZARD**

Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



#### **STATIC CHARGE**

Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



#### **WEAR RESPIRATOR**

Toxic fumes can cause serious injury or death if inhaled. Wear a respirator as recommended by the fluid and solvent manufacturer's Safety Data Sheet.



#### **TOXIC FLUID & FUMES**

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, injected or swallowed. LEARN and KNOW the specific hazards or the fluids you are using.



#### **FIRE AND EXPLOSION HAZARD**

Improper equipment grounding, poor ventilation, open flame or sparks can cause a hazardous condition and result in fire or explosion and serious injury.



#### **MEDICAL ALERT**

Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor you suspect an injection injury.
- Show the doctor this medical information or the medical alert card provided with your airless spray equipment.
- Tell the doctor what kind of fluid you were spraying or dispensing.



#### **GET IMMEDIATE MEDICAL ATTENTION**

To prevent contact with the fluid, please note the following:

- Never point the gun/valve at anyone or any part of the body.
- Never put hand or fingers over the spray tip.
- Never attempt to stop or deflect fluid leaks with your hand, body, glove or rag.
- Always have the tip guard on the spray gun before spraying.
- Always ensure that the gun trigger safety operates before spraying.

**CA PROP  
65**

#### **PROP 65 WARNING**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.  
FOR FURTHER SAFETY INFORMATION REGARDING THIS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).**

Binks reserves the right to modify equipment specification without prior notice.

## Binks MODEL 83-2815 AIR MOTOR ASSEMBLY

(MODEL 83-2798 OBSOLETE—FOR REFERENCE ONLY)

### SPEED

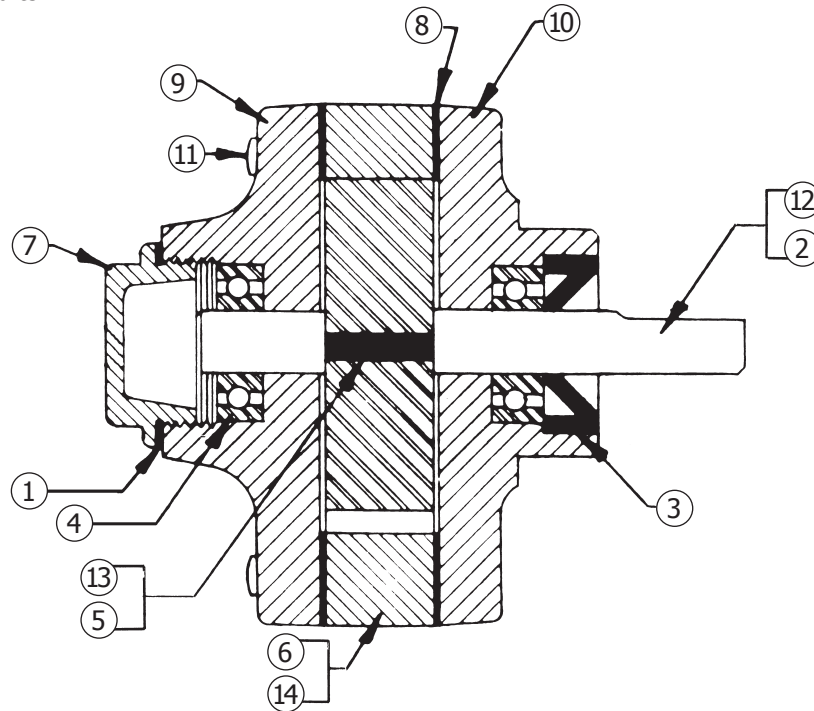
The speed of the air motor is regulated by the air adjusting valve, part number 73-159 (see page 1). The speed of the propeller shaft is determined by the fluid, but it should never exceed 3,000 RPM.

### LUBRICATION—AIR MOTOR

The bearings are pre-lubricated and sealed. However, every 100 hours insert a few drops of SAE 10 non-detergent oil into the air inlet to lubricate the vanes and housing surfaces.

### AIR SUPPLY

The air supply to the motor should be 60 PSI, minimum, for best results.



## PARTS LIST

When ordering, please specify Part No.

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	QS-181*▲	GASKET .....	1
2	37-89	ROTOR (83-2798) .....	1
3	37-90*▲	OIL SEAL .....	1
4	37-91*▲	BEARING .....	2
5	37-92*	VANE (83-2798) .....	4
6	37-93	BODY (83-2798) .....	1
7	37-96	END CAP .....	1
8	37-337*▲	GASKET, END CAP .....	2
9	37-412	PLATE, DEAD END .....	1
10	37-413	PLATE, DRIVE END .....	1
11	37-415	FILLISTER HEAD SCREW .....	12
12	37-482	ROTOR (83-2815) .....	1
13	37-484▲	VANE (83-2815) .....	4
14	37-1045	BODY (83-2815) .....	1

\* Repair Kit Parts for 83-2798. Order 6-183.

\* Also available in Repair Kit 6-183. Please order separately.

▲ Also available in Repair Kit 6-197. Please order separately.

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## WARRANTY POLICY

Binks products are covered by Carlisle Fluid Technologies one year materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. For specific warranty information please contact the closest Carlisle Fluid Technologies location listed below.

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