



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	6
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
	—	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.



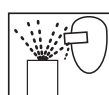
NEVER MODIFY THE EQUIPMENT

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.

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 MODEL 83-2815 AIR MOTOR ASSEMBLY

(MODEL 83-2798 OBSOLETE—FOR REFERENCE ONLY)

SPEED

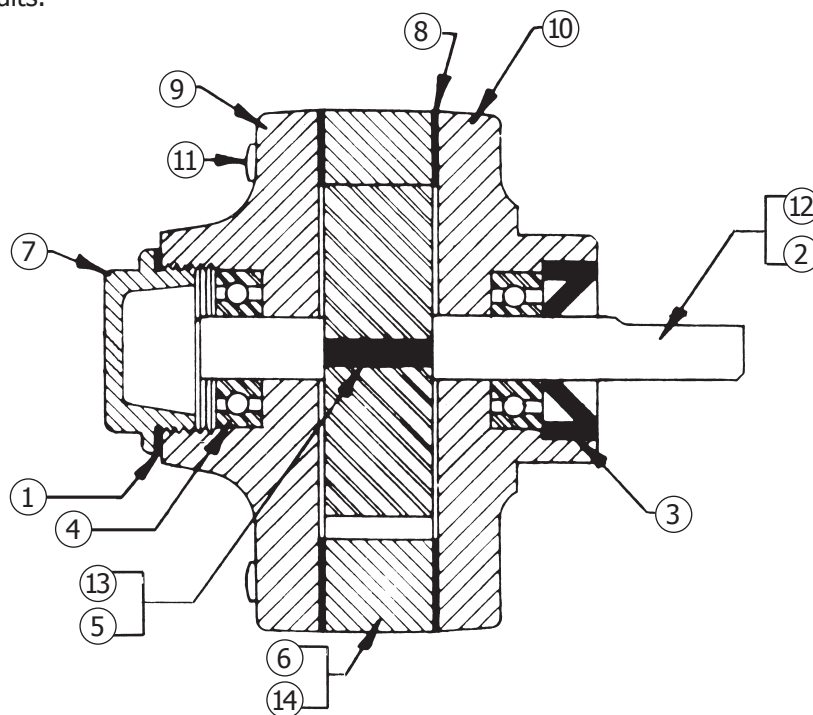
The speed of the air motor is regulated by the air adjusting valve, part number 73-159 (see page 1). The speed of the propeller shaft is determined by the fluid, but it should never exceed 3,000 RPM.

AIR SUPPLY

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

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.



PARTS LIST

When ordering, please specify Part No.

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

WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

For technical assistance or to locate an authorized distributor, contact one of our international sales and customer support locations.

Region	Industrial / Automotive	Automotive Refinishing
Americas	Tel: 1-800-992-4657 Fax: 1-888-246-5732	Tel: 1-800-445-3988 Fax: 1-800-445-6643
Europe, Africa, Middle East, India	Tel: +44 (0)1202 571 111 Fax: +44 (0)1202 573 488	
China	Tel: +8621-3373 0108 Fax: +8621-3373 0308	
Japan	Tel: +81 45 785 6421 Fax: +81 45 785 6517	
Australia	Tel: +61 (0) 2 8525 7555 Fax: +61 (0) 2 8525 7575	

For the latest information about our products, visit www.carlisleleft.com

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