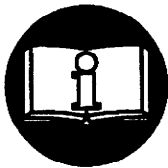


# MODEL 150RMG14C MULTI-VANE® AIR MOTOR for GAS OPERATION

## ⚠ WARNING

This motor is designed for gas operation. It is not totally sealed in dynamic operation since the exhaust must be vented or piped away and there is a possibility of leakage around the output shaft when rotating. Use caution when operating this motor on gas because of the danger of fire, explosion, or inhalation. After reassembling the motor, always test it in accordance with the procedures outlined in this manual. Never install a reassembled motor that has not been tested in accordance with the procedures outlined.



## ⚠ WARNING

**IMPORTANT SAFETY INFORMATION ENCLOSED.  
READ THIS MANUAL BEFORE OPERATING TOOL.**

- Always operate, inspect and maintain this motor in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1).
- For safety, top performance and maximum durability of parts, operate this motor at 225 max. psig (15.5 bar/1551 kPa) air pressure at the inlet with 1-1/4" (32 mm) air supply hose.
- Always turn off the air or gas supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this motor or before performing any maintenance on this motor.
- Keep hands, loose clothing and long hair away from rotating end of motor.
- Check for excessive speed and vibration before operating.
- Motor shaft may continue to rotate briefly after motor shuts off.
- Do not lubricate motors with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

## NOTICE

The use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased tool performance and increased maintenance, and may invalidate all warranties.

Ingersoll-Rand is not responsible for customer modification of tools for applications on which Ingersoll-Rand was not consulted.

Repairs should be made only by authorized, trained personnel. Consult your nearest Ingersoll-Rand Authorized Servicer.

It is the responsibility of the employer to place the information in this manual into the hands of the operator.

Refer All Communications to the Nearest  
Ingersoll-Rand Office or Distributor.

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**INGERSOLL-RAND®**  
**AIR MOTORS**

# WARNING LABEL IDENTIFICATION


## ⚠ WARNING

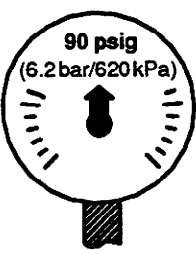
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

	<p><b>⚠ WARNING</b></p> <p>Always wear eye protection when operating or performing maintenance on this tool.</p>
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	<p><b>⚠ WARNING</b></p> <p>Always wear hearing protection when operating this tool.</p>
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	<p><b>⚠ WARNING</b></p> <p>Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.</p>
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	<p><b>⚠ WARNING</b></p> <p>Do not use damaged, frayed or deteriorated air hoses and fittings.</p>
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	<p><b>⚠ WARNING</b></p> <p>Operate at 225 psig (15.5 bar/1551 kPa) Maximum air pressure.</p>
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## PLACING TOOL IN SERVICE

### LUBRICATION



Ingersoll-Rand No. 20    Ingersoll-Rand No. 28

Always use a suitable air line lubricator with this motor.

### INSTALLATION

#### Air Supply and Connections

Always use clean, dry air at 225 psig maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes dust and moisture. Make sure all hoses and fittings are the correct size and are tightly secured.

#### WARNING

Gas-operated motors must be properly sealed to prevent gas leakage. Refer to SEALING PROCEDURES AND TEST when making repairs.

#### — SEALING PROCEDURES AND TEST —

Ingersoll-Rand carefully assembled this motor with specially selected sealing materials to prevent gas leakage and tested this motor to detect leaks.

When reassembling a motor, follow the procedures to properly restore the sealing and to test the motor for leaks:

1. Be sure that all Gaskets (illustrated parts 6, 22, 26 and 34) and the Drive Shaft Seal (33) are in good condition. If they are worn or damaged, replace them.
2. Clean all surfaces contacted by the Gaskets.
3. Use Ingersoll-Rand SMB-431 Plastic Gasket or G.E. RTV-102 White Silicone Rubber Adhesive Sealant to lightly coat both sides of the Motor Housing Gaskets (22) located at each end of the Motor Housing (1), and the Gear Case Cover Gasket (34) located between the Gear Case (23) and Gear Case Cover (32).

4. Test by plugging the exhaust port with a 1-1/4" pipe plug, applying 50 psig (3.44 bar/344 kPa) air pressure to the inlet and immersing the unit in oil.

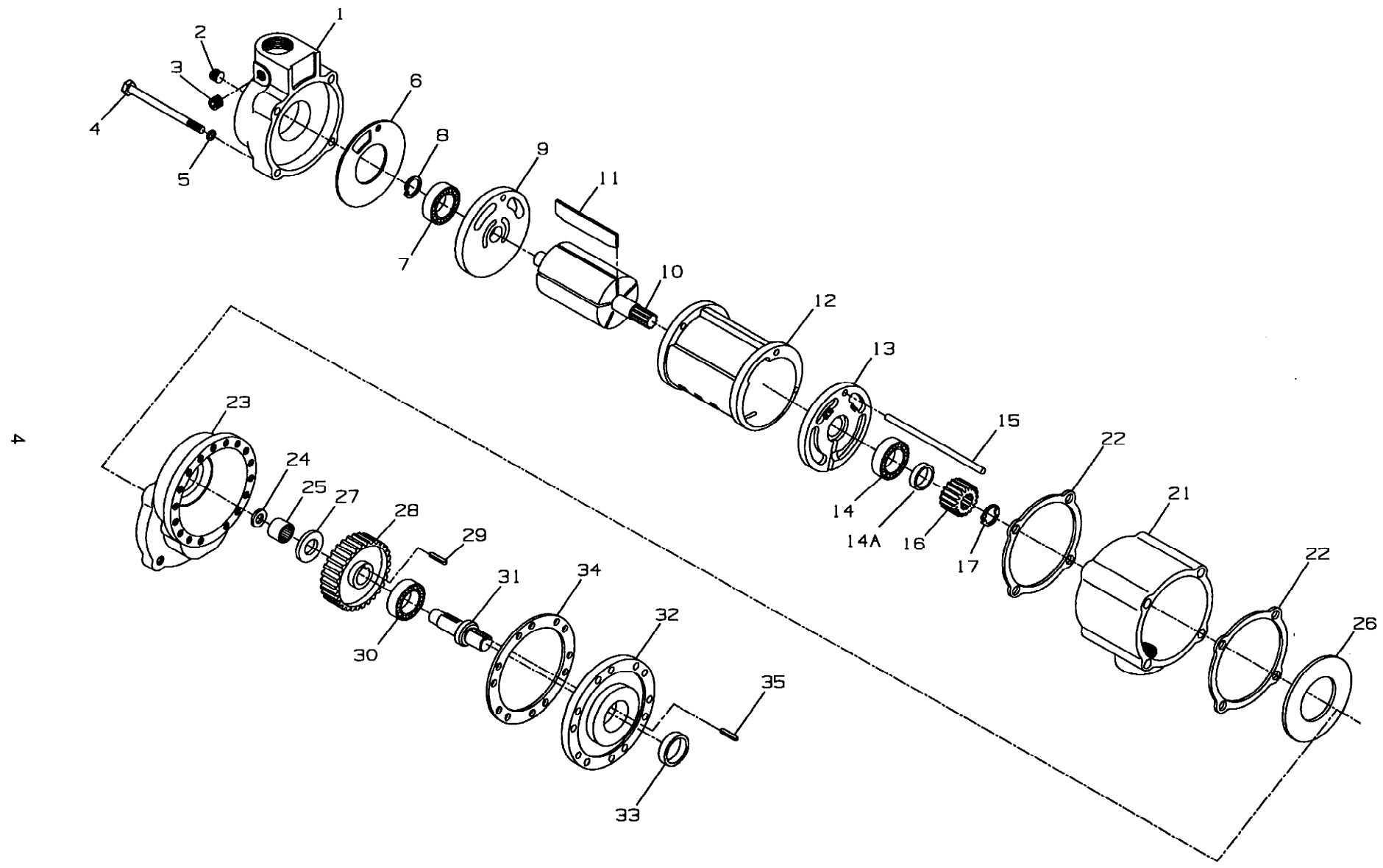
### MAINTENANCE CAUTIONS

1. Never clamp the Cylinder (12) in a vise. When disassembling the Multi-Vane Motor, remove the Rear Rotor Bearing Retainer (8) from the groove in the rotor hub being careful not to distort the Retainer. Pull the Rear Rotor Bearing (7) from the hub.
2. Replace Vanes (11) in sets. Install new ones if any Vane is chipped, cracked, spalled or otherwise visibly damaged.
3. Examine the Cylinder (12) and install a new one if the old one is cracked, broken, or if the bore is worn, excessively wavy, or is gouged to the extent that it cannot be smoothed by light honing.
4. Do not remove the Drive Shaft Rear Bearing (25) from the Gear Case (23) unless replacement is required. Do not attempt to reuse a needle bearing. The Bearing can be easily jacked from the recess by running a 5/16"-18 thread cap screw into the tapped hole in the Bearing Ejecting Washer (24).
5. Examine the area of the Drive Shaft (31) that contacts the Drive Shaft Seal (33) and smooth it with an oil stone if there are any nicks or burrs that might damage the Seal.
6. Examine the Drive Shaft Seal (33) and install a new one in the Gear Case Cover (32) if it is damaged or worn. Never remove a Seal unless it is to be replaced. Never reuse a seal once it has been removed.

#### NOTICE

Be sure to replace the Washer in the recess; then press – do not drive – on the stamped face to install the new Bearing in the Gear Case.

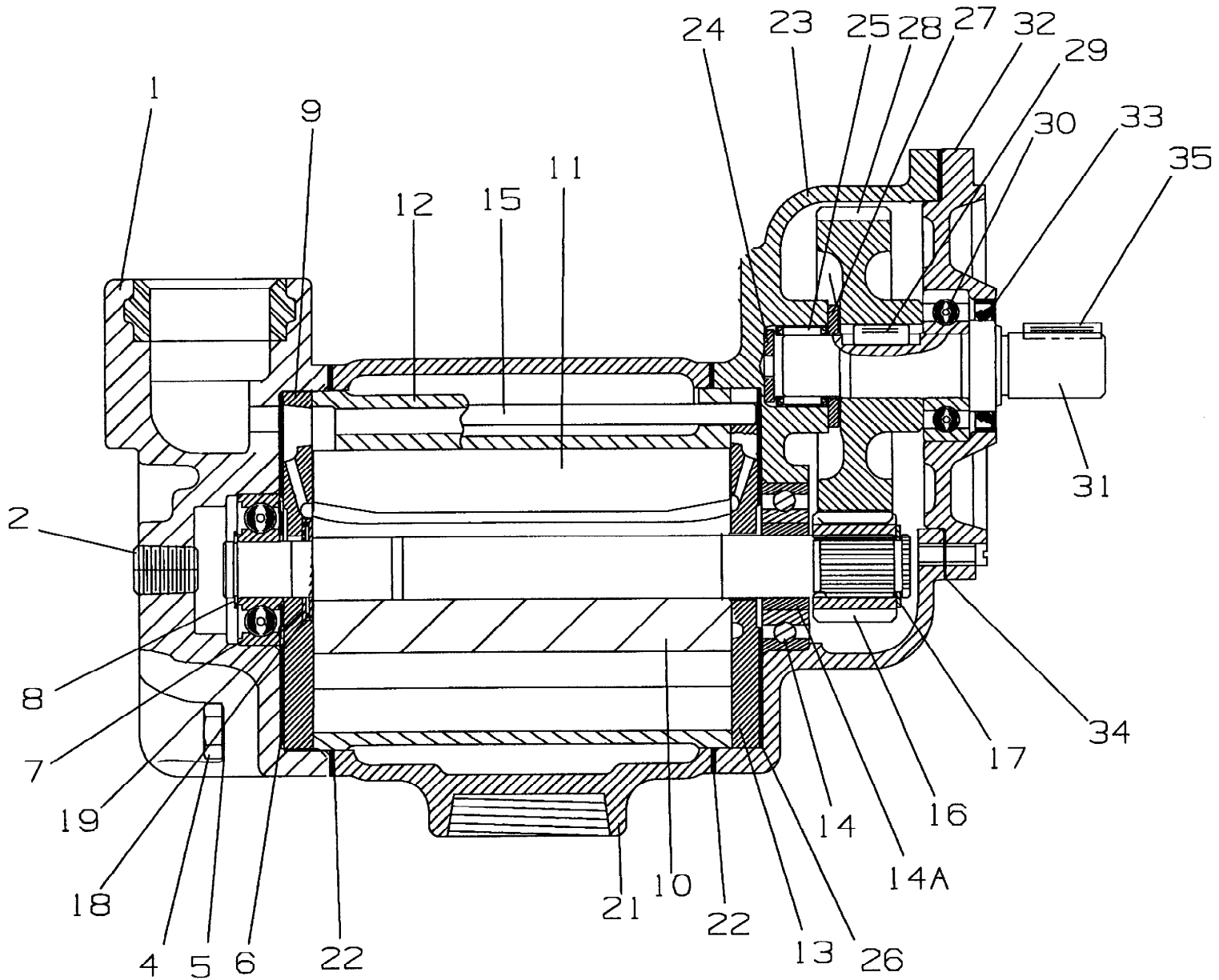
**MAINTENANCE SECTION**



**Size 150RMG14**

**(Dwg. TPA738-1)**

5



**Size 150RMG14C**

**(Dwg. TPC416-1)**

**MAINTENANCE SECTION**

**PART NUMBER FOR ORDERING** 

**PART NUMBER FOR ORDERING** 

1	Motor Housing Cover Assembly .....	150BMP-A102A	16	Rotor Pinion .....	101BMPD-17
2	Housing Cover End Plug (3) .....	HSPPS-3	• 17	Rotor Pinion Retainer .....	10BM-69
3	Lubricator Port Plug (2) .....	HSPPS-3	20	Front Rotor Bearing Ring .....	VRSM-280
*	Nameplate .....	150BM-301	21	Motor Housing .....	10BM-40
*	Nameplate Screw (3) .....	R4K-302	• 22	Motor Housing Gasket (2) .....	150BMP-283
4	Motor Housing Cover Cap Screw (4) ...	107-25	23	Gear Case Assembly .....	150RMG14C-37
• 5	Cover Cap Screw Seal Washer (4) .....	D02-504	24	Bearing Ejecting Washer .....	10BM-25
• 6	Motor Housing Cover Gasket .....	150LF-283	• 25	Drive Shaft Rear Bearing .....	10BM-399
• 7	Rear Rotor Bearing .....	R3H-24	• 26	Gear Case Gasket .....	150LF-284
• 8	Rear Rotor Bearing Retainer .....	G57-729	27	Drive Gear Thrust Washer .....	10BM-15
• 9	Rear End Plate .....	150LF-11A	28	Drive Gear .....	10BMC-9
10	Rotor .....	150RMG14C-53	29	Drive Gear Key .....	10BM-610
• 11	Vane Packet (set of 5 Vanes) .....	10BM-42-5	• 30	Drive Shaft Front Bearing .....	150RMG14-24
• 12	Cylinder .....	150RMG14C-3	31	Drive Shaft .....	150RMG14-8
• 13	Front End Plate .....	150LF-11A	32	Gear Case Cover Assembly .....	150RMG14C-A478
• 14	Front Rotor Bearing .....	150LF-400	• 33	Drive Shaft Seal .....	150RMG14-271
• 14A	Front Rotor Bearing Spacer .....	150RMG14C-65	34	Gear Case Cover Gasket .....	150RMG14-285
15	Cylinder Dowel .....	10BM-98	35	Drive Shaft Key .....	205-61

- To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

# NOTES

