



**OPERATION AND MAINTENANCE MANUAL
FOR**

**5,500-150 PSI ADJUSTABLE PRESSURE REGULATOR
(PART NUMBER 22-895401)**

**5,500-300 PSI ADJUSTABLE PRESSURE REGULATOR
(PART NUMBER 22-895400)**

**5,500-175 PSI PRESET PRESSURE REGULATOR
(PART NUMBER 22-895330)**

**5,500-150 PSI CART PRESSURE REGULATOR
(PART NUMBER 22-895300A)**

**5,500-300 PSI CART PRESSURE REGULATOR
(PART NUMBER 22-895300B)**

**PARATECH INCORPORATED
1025 LAMBRECHT ROAD
FRANKFORT, ILLINOIS 60423-1648**

**TELEPHONE (815) 469-3911
FAX (815) 469-47748**

www.paratech.us

Change Record

Change No.	Date	Title or Brief Description	Signature of Validating Officer
1	15 JUL 2001	Updated to incorporate minor changes and corrections.	
2	04 JAN 2002	Updated to incorporate minor changes. (Removed PN 890940 Tetraseal, Replaced with PN 890489, O-Ring	
3	05 MAY 2009	Updated to incorporate change to current parts contained in the regulators. Edited manual from 7 to 4 chapters.	

TABLE OF CONTENTS

Chapter/Paragraph	Title	Page
1.	GENERAL INFORMATION AND SAFETY PRECAUTIONS	
1-1.....	Safety Precautions.....	1-1
1-2.....	Introduction.....	1-1
1-3.....	Equipment Description.....	1-1
1-4.....	Relationship of Units.....	1-1
1-5.....	Reference Data.....	1-1
1-6.....	Equipment, Accessories and Documents Supplied.....	1-1
2.	OPERATION	
2-1.....	Introduction.....	2-1
2-2.....	Preparation.....	2-1
2-3.....	Controls and Indicators.....	2-1
2-4.....	Normal Operating Procedure.....	2-1
2-5.....	Shutdown.....	2-4
3.	TROUBLESHOOTING	
3-1.....	General.....	3-1
4.	CORRECTIVE MAINTENANCE	
4-1.....	Introduction.....	4-1
4-2.....	Adjustments.....	4-1
4-3.....	Alignment.....	4-2
4-4.....	Pressure Regulator Repair.....	4-2

LIST OF ILLUSTRATIONS

Figure	Title	Page
1-1	Pressure Regulators, Assembled.....	1-3
4-1	22-895401 and 22-895400 Adjustable Regulator, Exploded View.....	4-6
4-2	22-895330 Preset Pressure Regulator, Exploded View.....	4-7
4-3	22-895300A and 22-895300B Cart Pressure Regulator, Exploded View.....	4-8

LIST OF TABLES

Number	Title	Page
1-2	Dimensions, Weight and Volumes.....	1-2
3-1	Troubleshooting.....	3-1

SAFETY SUMMARY

The following are general safety precautions that are not related to any specific procedures, and therefore do not appear elsewhere in this publication. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.

Keep the work area clean when maintaining or repairing the pressure regulator.

Personnel not directly involved in operation or maintenance of the pressure regulator should keep a safe distance from the work area.

Wear proper apparel and safety goggles during operation and maintenance of the pressure regulator.

The following warnings and cautions appear in the text of this manual, and are repeated here for emphasis.

WARNING

Do not adjust the pressure regulator to exceed the maximum pressure rating of any component in the system apparatus. (Page 2-1)



Proceed with extreme caution when dealing with high pressure air. Serious injury could occur if compressed air is directed against the skin. When working with high pressure air, always use chip guards, eye protection and other similar protective equipment. (Page 4-1)

WARNING

Serious injury could occur if compressed air is directed against the skin. Do not use compressed air unless the pressure is/has been reduced to 30 psi (2 bar) or less. When working with compressed air, always use chip guards, eye protection and other protective equipment. (Page 4-4)

WARNING

During any corrective maintenance procedure requiring pressure reading(s), be certain qualified personnel use proper tools and calibrated test gauges that are accurate to within $\pm 2\%$ of the indicated reading. If not available, return a pressure regulator requiring servicing to Paratech. (Page 4-1)

CHAPTER 1
GENERAL INFORMATION AND SAFETY PRECAUTIONS

1-1. **SAFETY PRECAUTIONS.**

Refer to the Safety Summary preceding Chapter 1, General Information and Safety Precautions, for safety precautions necessary for the protection of personnel and equipment.

1-2. **INTRODUCTION.**

This technical manual provides instructions for the operation, maintenance, repair, and parts support for the Adjustable and Cart Pressure Regulators, and the Preset Reducer designated in table 1-1 and manufactured by Paratech Incorporated, 1025 Lambrecht Road, Frankfort, Illinois 60423-1648 U.S.A.

1-3. **EQUIPMENT DESCRIPTION.**

1-3.1 The adjustable (22-895401 and 22-895400) and cart (22-895300A and 22-895300B) pressure regulators are self-contained, direct-acting, pressure regulating types utilizing spring-loading to balance the outlet pressure and thereby reduce the effect of decaying or variations in the inlet pressure. The construction of the preset pressure regulator (22-895330) is similar except the regulator lacks the capability to adjust (reduce) the outlet pressure and does not incorporate internal venting.

1-3.2 **22-895401, 150 psi Adjustable and 22-895300A 150 psi Cart Pressure Regulators Only.** These pressure regulators are working air pressure reducing and controlling devices designed to reduce variable inlet pressure of 5,500 psi (379.2 bar) maximum to a constant, relatively low, outlet pressure up to 150 psi (10.3 bar) for use with air bag systems.

1-3.3 **22-895400, 300 psi Adjustable and 22-895300B 300 psi Cart Pressure Regulators Only.** These pressure regulators are working air pressure reducing and controlling devices designed to reduce variable inlet pressure of 5,500 psi (379.2 bar) maximum to a constant, relatively low, outlet pressure up to 300 psi (20.7 bar) for use with rescue support systems and portable, pneumatic impact tools.

1-3.4 **22-895330, 175 psi Preset.** This pressure regulator is a working air preset pressure controlling device designed to reduce variable inlet pressure of 5,500 psi (379.2 bar) maximum to a relatively low, constant outlet pressure of 175 psi (12.1 bar) for use with a pneumatic air gun incorporating a self contained air cylinder.

1-3.5 **22-895401, 150 psi and 22-895400, 300 psi Ad-**

justable and 22-895330 Preset Pressure Regulators Only. The pressure regulator is designed to mate with a CGA-346/347 adapter fitting. However, a CGA-580 nitrogen bottle adapter is available as optional equipment. The standard nipple and knob assembly may also be replaced to permit an optional Euro nipple and nut assembly or a British nipple and knob assembly to be installed in order to interface the pressure regulator with alternate breathing air cylinders.

1-3.6 Each pressure regulator incorporates multiple disc springs acting upon a piston to provide sensitive pressure regulation over a range of varying inlet pressures. The adjusting mechanism (excluding the 22-895330 preset pressure regulator), activated by a hand adjusting knob provides the desired setting sensitivity while maintaining a low operating torque. A 10 micron internal filter is incorporated to prevent internal contamination problems from occurring.

1-4. **RELATIONSHIP OF UNITS.**

Refer to figure 1-1 for a pictorial illustration of the each pressure regulator/reducer.

1-5. **REFERENCE DATA.**

Reference data pertaining to the pressure regulators are summarized for quick reference in table 1-1.

1-6. **EQUIPMENT, ACCESSORIES AND DOCUMENTS SUPPLIED.**

1-6.1 **EQUIPMENT SUPPLIED.** Data pertaining to the dimensions and weight of the pressure regulators/reducer are presented in table 1-2.

1-6.2 **ACCESSORIES.** No accessories are required for operation of the pressure regulators/reducer.

1-6.3 **DOCUMENTS SUPPLIED.** No documents other than this publication are required as supporting literature for the pressure regulators/reducer.

Table 1-1. Reference Data

Manufacturer Paratech, Incorporated
1025 Lambrecht Road
Frankfort, Illinois 60423-1648 U.S.A.

CAGE Code.....30978

150 Adjustable Pressure Regulator

Part number.....22-895401
 Maximum Inlet Pressure.....5,500 psi (379.2 bar)
 Maximum Regulated Delivery
 Pressure.....150 psi (10.3 bar)
 Overall Weight.....3.6 lbs (1.6 kg)
 Inlet Connection (Standard).....CGA 346/347
 Inlet Connection (Optional)
 Nitrogen.....CGA-580
 Euro.....22-895366
 DIN.....22-895360
 Outlet Connection.....1/4" NPT male nipple

300 Adjustable Pressure Regulator

Part Number.....22-895400
 Maximum Inlet Pressure.....5,500 psi (379.2 bar)
 Maximum Regulated Delivery
 Pressure.....300 psi (20.7 bar)
 Overall Weight.....3.6 lbs (1.6 kg)
 Inlet Connection (Standard).....CGA 346/347
 Inlet Connection (Optional)
 Nitrogen.....CGA-580
 Euro.....22-895366
 DIN.....22-895360
 Outlet Connection.....1/4" NPT male coupling

175 Preset Pressure Regulator

Part Number.....22-895330
 Maximum Inlet Pressure.....5,500 psi (379.2 bar)

Maximum Reduced Delivery

Pressure.....175 psi (12.1 bar)
 Overall Weight.....2.8 lbs (1.3 kg)
 Inlet Connection (Standard).....CGA 346/347
 Inlet Connection (Optional)
 Nitrogen.....CGA-580
 Euro.....22-895366
 DIN.....22-895360
 Outlet Connection.....1/4" NPT male coupling

150 Cart Pressure Regulator

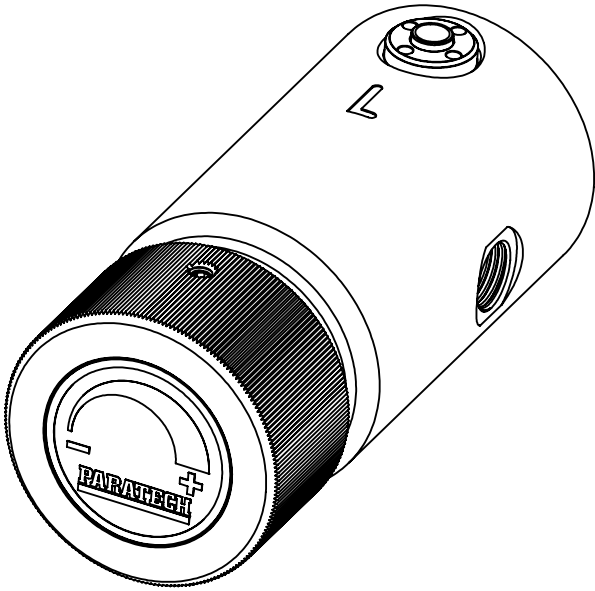
Part Number.....22-895300A
 Maximum Inlet Pressure.....5,500 psi (379 bar)
 Maximum Regulated Delivery
 Pressure.....150 psi (10.3 bar)
 Overall Weight.....2.1 lbs (1.0 kg)
 Inlet Connection.....1/4" NPT
 Outlet Connection.....1/4" NPT

300 Cart Pressure Regulator

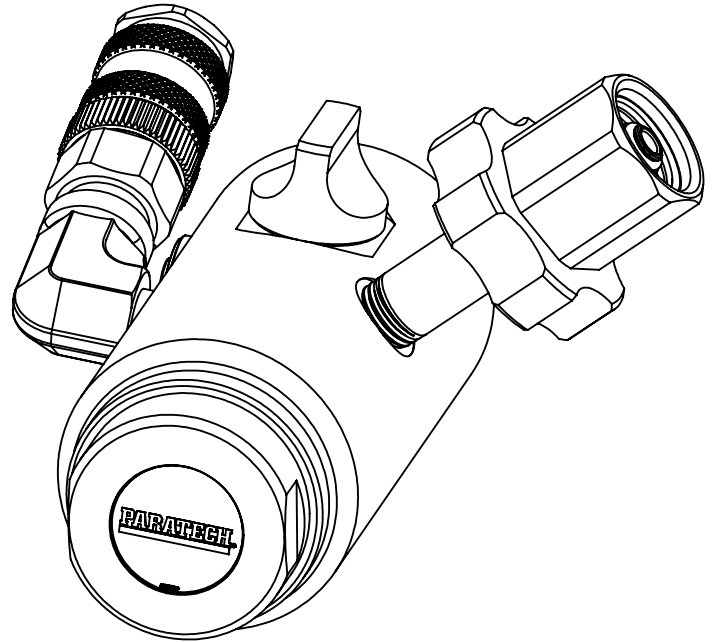
Part Number.....22-895300B
 Maximum Inlet pressure.....5,500 psi (379.2 bar)
 Maximum Regulated Delivery
 Pressure.....300 psi (20.7 bar)
 Overall Weight.....2.1 lbs (1.0 kg)
 Inlet Connection.....1/4" NPT
 Outlet Connection.....1/4" NPT

Table 1-2 Dimensions, Weights and Volumes

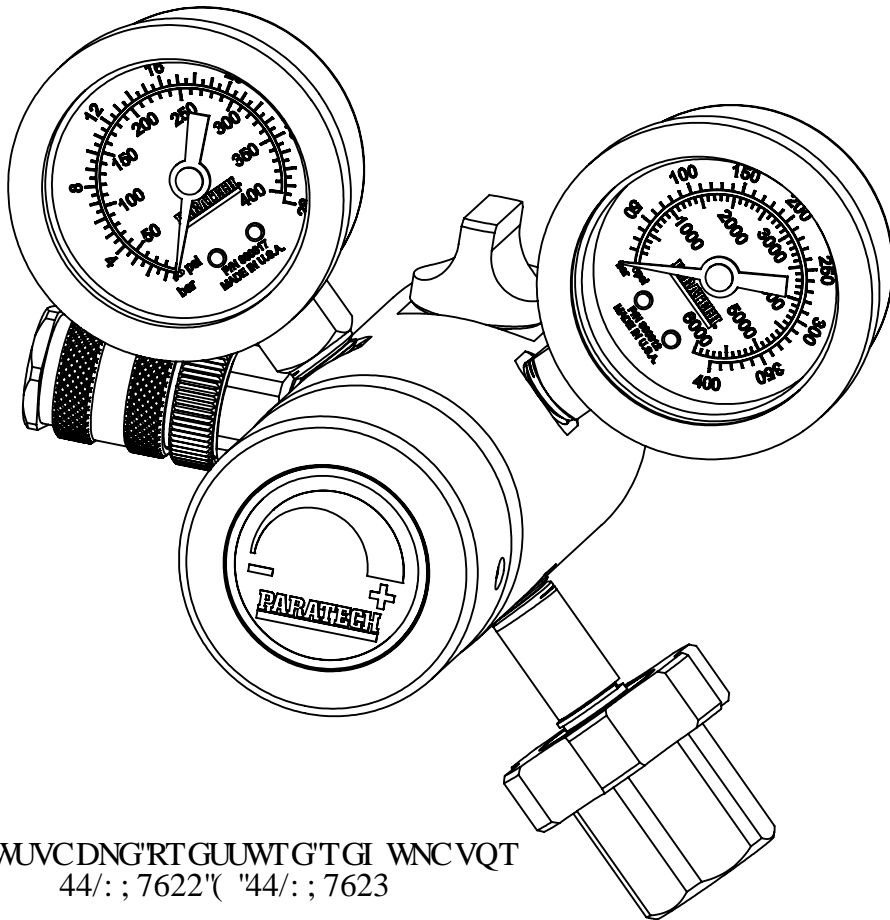
Quantity	Item Name or Nomenclature	CID Number RIC Number or Unit Number	Dimensions in Inches (Millimeters)		Overall Weights in Pounds (Kilograms)		Volume in Cubic Feet (Meters)	
			Uncrated	Crated	Uncrated	Crated	Uncrated	Crated
1	Adjustable Pressure Regulator	22-895401 22-895400	6 long (152) 7.8 wide (198) 5.4 high (137)		3.6 (1.6)		.018 (.0005)	
1	Preset Pressure Regulator	22-895330	5.4 long (137) 2.9 wide (74) 2.4 high (61)		2.8 (1.3)		.013 (.0035)	
1	Cart Pressure Regulator	22-895300A 22-895300B	5.2 long (193) 2.25wide (57.2) 2.4 high (61)		2.1 (1.0)		.010 (.0003)	



ECTV'RTGUWTG'TGI WNCVQTU
44/; ; 7522C("44/; ; 7522D



RTGUGV'RTGUWTG'TGF WEGT"
44/; ; 7552



CFILWUCDNG'RTGUWTG'TGI WNCVQT
44/; ; 7622("44/; ; 7623

Hki wtg'3/30Rtguwtg'Tgi wrvqt II'gf wegt.'Cuugo drgf "Xlgy

2-1. INTRODUCTION.

NOTE

The 22-895300A and 22-895300B cart pressure regulators are part of the working air cart and their operation is fully discussed in the working air cart publication 22-800209.

The pressure regulator is a multi-application working air pressure reducing and controlling device designed to reduce variable inlet pressure of 5,500 psi (379.2 bar) maximum to a constant, relatively low, outlet pressure up to 300 psi (20.7 bar) (22-895400 and 22-895300B pressure regulators), to a constant 175 psi (12.1 bar) (22-895330 preset pressure regulator) or up to 150 psi (10.3 bar) (22-895401 and 895300A pressure regulators).

2-2. PREPARATION FOR USE.

- Remove all dust, dirt, oil or grease from the pressure regulator. Do not use pressure regulator without first cleaning off any contaminants .
- Inspect the inlet fitting and outlet nipple/coupling for any damage that will permit air leakage. Do not use the pressure regulator if an air leakage condition exists.
- Close the outlet shut-off valve assembly.
- Turn the adjusting knob assembly full counterclockwise to prevent flow through the pressure regulator.
- Connect the pressure regulator to the working air cylinder supply. Be sure the hand tightening knob/nut is tightened sufficiently to prevent leakage.
- Connect the delivery hose to the quick disconnect delivery nipple/coupling. Be sure the quick disconnect mechanism is fully engaged and locked into position to assure a leak-free connection.

2-3. CONTROLS AND INDICATORS.

2-3.1 CONTROLS. The only controls on the pressure regulator are the shut-off valve assembly and the pressure adjusting knob (excluding 22-895330 pressure regulator preset to 175psi (12.1 bar). The shut-off valve assembly is either opened to permit regulated delivery air to the pressurize the system or closed to prevent (seal off) regulated delivery air from pressurizing the system. The pressure adjustment knob is turned to control the delivery pressure up to 150 psi (10.3 bar) maximum (22-895401 and 895300A pressure regulators) or 300 psi (20.7 bar) maximum (22-895400 and 22-895300B pressure regulators).

2-3.2 INDICATORS 22-895401 and 22-895400 Pressure Regulators Only. Two pressure gauges are provided; the supply pressure gauge and the delivery pressure gauge. The supply pressure gauge is marked in 1000 psi increments from 1000 psi to 6000 psi and is scribed each 100 psi. The supply pressure gauge is also marked each 50 bar from 50 bar to 400 bar and is scribed each 10 bar. The delivery pressure gauge is also marked in 50 psi increments from 50 psi to 400 psi and is scribed each 10 psi. The delivery pressure gauge is also marked each 4 bar from 4 bar to 28 bar and is scribed each 1 bar.

2-4. NORMAL OPERATING PROCEDURE.

- Slowly open the working air cylinder supply to the pressure regulator. The supply pressure will be indicated on the supply pressure gauge.
- Open the delivery shut-off valve assembly to supply delivery air to the system. The delivery pressure should indicate 0 psi on the delivery pressure gauge.

WARNING

Do not adjust the pressure regulator to exceed the maximum pressure rating of any component in the system apparatus.

- 22-895300A, 22-895300B, 22-895401 and 22-895400 Pressure Regulators Only.** Turn the pressure adjusting knob to obtain the desired regulated pressure to the system apparatus. Make the final adjustment in the increase direction to provide the most accurate and consistent pressure settings.
- To stop providing air to the system apparatus , turn the delivery shut-off valve to the closed position.

2-5. SHUTDOWN.

- At the conclusion of its use, shut off the external working air cylinder supply.
- Reduce regulator to zero by turning the pressure the pressure adjusting knob counterclockwise (excluding the 22-895330 pressure regulator that is preset to 175 psi).
- Disconnect the delivery hose from the regulator. Open delivery shut-off valve, turn adjusting knob clockwise to dissipate air in the supply line.
- The high and low pressure gauges should be at zero. Disconnect the air supply line from the pressure regulator.

CHAPTER 3 TROUBLESHOOTING

3-1. **GENERAL**

This chapter contains troubleshooting data in the form of a conventional troubleshooting chart. troubleshooting is required only if malfunctions are detected either during normal operation or during periodic servicing of the

pressure regulator. The pressure regulator troubleshooting guide given in table 3-1. Refer to figure 4-1, 4-2 and 4-3 for parts identified by index numbers in the exploded view drawings.

Table 3-1. Troubleshooting

TROUBLE	PROBABLE CAUSE	REMEDY
Discharge Pressure Increases (indicated on low (discharge) pressure gauge) From Initial Setting .	Worn or otherwise defective main seat (19)	Install new main seat (19).
	Worn or otherwise defective vent seat (14) (excludes 22-895330 preset pressure regulator).	Install new vent seat (14).
	Supply pressure decreasing.	Turn adjusting knob (6) to decrease delivery pressure (excludes 22-895330 preset pressure regulator).
Discharge Pressure to System Apparatus Persists With Shut-off Valve Closed.	Shut-off valve stem worn or otherwise defective.	Replace shut-off valve (26).
	Shut-off valve O-ring seal (27) worn or otherwise defective.	Replace shut-off valve O-ring seal (27).
Relief Valve Relieving at Improper Pressure.	Worn or defective stem with molded deal (33)	Replace stem (33). Adjust relief valve setting (para. 4-2.1).
	Improper relief valve setting.	Adjust relief valve setting (para. 4-2.1).
Working Air Discharging Between Housing (42) and Knob (6).	Worn or otherwise defective piston O-ring seal (12).	Replace piston O-ring seal (12).
	Worn or otherwise defective vent seat (14).	Replace vent seat (14).
	Worn or otherwise defective needle (20).	Replace needle (20).
No Discharge Pressure.	Air cylinder empty.	Fill air cylinder.
	Air cylinder shut off.	Open air cylinder valve.
	Pressure regulator shut off (excludes 22-895330 preset regulator).	Turn pressure adjusting knob (6) clockwise .
	Pressure regulator shut-off valve closed.	Open pressure regulator shut-off valve.
Pressure Regulator Will Not Fit On Air Cylinder.	Wrong outlet valve on air cylinder.	Use air cylinder with CGA 347/346 outlet connection.
	Wrong type of air cylinder.	Use only air cylinder with CGA 347/346 outlet connection.

Table 3-1. Troubleshooting (Continued)

TROUBLE	PROBABLE CAUSE	REMEDY
System Equipment Not Operating Properly.	Improper pressure setting (excludes 22-895330 regulator).	Turn pressure adjusting knob to obtain proper operating pressure for system equipment.
	Defective discharge pressure gauge (excludes 22-895330 preset pressure regulator).	Test discharge pressure gauge and replace as required
Pressure Regulator Leaks At Air Bottle Connection.	Defective seal (41).	Replace seal (41).
	Loose connection.	Tighten connection.
	Worn or damaged seal on air bottle connection valve.	Replace air bottle CGA 347/346 connection valve.

CHAPTER 4 CORRECTIVE MAINTENANCE

4.1 INTRODUCTION.

This chapter provides repair procedures for the pressure regulators designated on the title page of this publication. When referring to figure 4-1, 4-2 and 4-3 for the identification of parts, be certain to refer to the proper illustration shown therein. If it is determined from table 3-1 that repairs are required, proceed with the following:

4-2. ADJUSTMENTS.



Proceed with extreme caution when dealing with high pressure air. Serious injury could occur if compressed air is directed against the skin. When working with high pressure air, always use chip guards, eye protection and other similar protective equipment.

WARNING

During any corrective maintenance procedure requiring pressure reading(s), be certain qualified personnel use proper tools and calibrated test gauges that are accurate to within $\pm 2\%$ of the indicated reading. If not available, return pressure regulator requiring servicing to Paratech.

4-2.1 PRESSURE RELIEF ADJUSTMENT. The only adjustment on all pressure regulators (adjustable as well as preset) is the pressure relief adjustment to assure the maximum regulated pressure does not exceed specified outlet pressure.

a. The relief valve adjustment is made whenever the relieving pressure varies from factory setting by more than $+0-10\%$. Increasing or decreasing spring (34, figure 4-1, 4-2 and 4-3) compression with adjusting screw (35) will result in corresponding pressure relief increase or decrease. Proceed as follows to make this adjustment:

b. Determine whether the pressure relief valve is relieving at a pressure higher or lower than specified pressure.

c.1. 22-895400, 22895401, 895300A and 22-895300B Pressure Adjusting Pressure Regulators Only. Install calibrated test gauges in the supply and delivery pressure lines. With the pressure regulator installed in an operating system and the shut-off valve in the open position, turn pressure adjustment knob (6) until the pressure relief

valve starts relieving. It should be possible to hear air relieving through the relief valve. If the air relieving air cannot be detected audibly, apply a leak detecting film or make a soap and water solution and apply it around the stem (33) and adjusting screw (35). Visually observe for the appearance of bubbles denoting air leakage. Note the pressure setting on the test gauge installed in the delivery pressure line. Delivery pressure gauge (2) should agree with the calibrated test gauge within $\pm 10\%$.

c.2. 22-895330 PRESET PRESSURE REGULATOR ONLY. Install a calibrated test gauge in the supply pressure line. With the pressure regulator installed in an operating system and the shut-off valve in the open position, increase the supply pressure until the pressure relief valve starts relieving. It should be possible to hear the air relieving through the relief valve. If the relieving air cannot be detected audibly, apply a leak detecting film or make a soap and water solution and apply it around the stem (33) and adjusting screw (35). Visually observe for the appearance of bubbles denoting air leakage. Note the pressure setting on the test gauge installed in the supply pressure line.

d. If the pressure noted in the proceeding step c.1 or c.2 is low, spring (34) compression must be increased by tightening adjusting screw (35) after first loosening set-screw (31). If the pressure in proceeding step c.1 or c.2 is high, spring (34) compression must be decreased by loosening adjusting screw (35) after first loosening set-screw (31).

e. In order to turn adjusting screw (35), a spanner wrench must be used. The spanner wrench pins must be no more than 0.100" diameter x 1/2" between centers. Use the spanner wrench and turn the adjusting screw to achieve the desired setting. One-quarter turn of the adjusting will either increase or decrease the relief setting by approximately 5 psi (34.5 kPa) (22-895401, 22-895300A and 895330 pressure regulator) or 10 psi (68.9 kPa) (22-895400 and 22-895300B pressure regulator).

f. At the conclusion of the adjustment, tighten the set-screw (31), connect the pressure regulator to the system equipment and make the final test to determine whether the relief valve assembly is relieving at the proper pressure $+0-10\%$.

g. 22-895330 Preset Pressure Regulator Only. Install calibrated test gauges in the supply and discharge pressure downstream of the discharge calibrated test gauge. With the pressure regulator connected to the supply source capable of providing at least 200 psi (13.8 bar) and the external shut-off valve in the closed position,

increase the supply pressure to at least 175 psi (12.1 bar). Verify the calibrated test gauge indicates 175 psi (12.1 bar). Permit the pressure regulator remain in the static pressurized condition for 10 minutes to verify no fluctuation of the calibrated test gauge. If the test gauge indicates either a higher or lower value, remove cover plate (4) and turn fine adjustment screw (5) until the test gauge denotes 175 psi (12.1 bar) and remains stable after 10 minutes. Then reinstall the cover plate.

4-2.2 OPERATING PRESSURE ADJUSTMENT. The only other adjustment on the adjustable pressure regulators, not the 22-895330 preset pressure regulator, is the normal operating pressure adjustment of the pressure adjusting knob. The pressure adjusting knob adjustment is made prior to and during operation to control and maintain the desired delivery pressure.

4-3. ALIGNMENT.

No alignment is required on any part of the pressure regulator.

4-4. PRESSURE REGULATOR REPAIR.

The following procedures describe one method of complete disassembly of pressure regulator. Work in a clean area and place all disassembled parts on clean shop wipes. If clamping is required, use pads to prevent scratching/scoring/abrading the clamped parts. When repairing the pressure regulator, remove only those parts determined to be broken, cracked, deformed or otherwise damaged. During inspection, parts exhibiting any damage characteristics referenced herein should be replaced with the exception of minor thread damage repair. Since complete disassembly will probably never be required apply only the procedural steps that are applicable to the work to be performed. Refer to the applicable illustrations shown in figure 4-1, 4-2 and 4-3 and proceed as follows:

4-4.1 DISASSEMBLY OF PRESSURE REGULATOR.

NOTE

These instructions presume the pressure regulator has been removed from the system of which it is a part and is an individual assembly/subassembly requiring disassembly/repair/parts replacement.

a. **22-895401 and 22-895400 Pressure Regulators Only.** Carefully unscrew pressure gauges (2 and 3) noting the port position in the main housing (42) from which each is removed to facilitate their proper installation at reassembly. Pull gauge cover (1) off each pressure gauge. Inspect the pressure gauges for obscured, cracked or broken lenses and distorted threads, and the needle for sticking and erratic operation. Use calibrated test gauge and verify accuracy of the pressure gauges are within

±10% of their full scale indications.

b. If the relief valve is properly relieving air at 150 psi (10.3 bar) (22-895401 and 22-895300A pressure regulators), 200 psi (13.8 bar) (22-895330 pressure regulator) or 300 psi (20.7 bar) (22-895400 and 895300B pressure regulators), do not disassemble the relief valve. If the relief valve is relieving but at the wrong pressure, increasing or decreasing spring (34) compression with adjusting screw (35) is required. Refer to paragraph 4-2.1 to adjust relief valve setting. Do not disassemble relief valve unless visual damage of detail parts is noted. It is difficult to reassemble the relief valve assembly due to the required compression of spring (34).

c. Carefully peel label (32) off main housing (42); clean off all adhesive residue from the main housing. Unscrew setscrew (31) and using a spanner wrench (0.100" diameter pins x 1/2" between centers), completely unscrew relief valve assembly and remove from main housing. If seal is worn, cut or otherwise damaged it may permit air leakage around stem (33). This will result in air relieving at a pressure that is reduced from the desired setting. The old stem with molded seal may be reused until a replacement becomes available providing it does not endanger personnel or jeopardize operation of the system equipment. Inspect adjusting screw (35) and main housing (42) screw threads for stripped, battered and cross threads. Minor thread damage can be repaired with a thread chase.

d. **22-895401, 895400 and 22-895330 Pressure Regulators Only.** Remove retaining ring (30) and pull shut-off valve (26) and O-ring seals (27 and 28) from the main housing. Discard the O-ring seals if new seal replacements are available; if not, reuse the removed O-ring seals if they are not visually damaged (no excessive wear, cuts, abrasion or brittleness) and do not endanger personnel or jeopardize operation of the system equipment. If replacements are not available, the damaged seals may permit are leakage around main housing. This will result in the inability to completely shut off the outlet air. Inspect the shut-off valve assembly for scoring on the valve stem that might permit working air leakage when shut-off valve is in the closed position.

e. **22-895401, 22-895400, 895300A and 22-895300B Pressure Regulators Only.** A thread sealant is used on setscrew (7) necessitating the use of a hexagon socket key that is not worn and the application of significant force for its removal. Heating the setscrew with a heat gun (not a torch) will soften the thread sealant and facilitate its removal. Be certain to remove all thread sealant residue. Remove setscrew (7) from adjusting knob (6). Carefully peel label (4) off the adjusting knob; clean off all the adhesive residue from the adjusting knob. Unscrew the adjusting knob, with the attached pressure adjusting screw (5) from rear cap (8). A thread sealant is used between the adjusting knob and pressure

adjusting screw. If the pressure regulation function prior to disassembly was acceptable, and no visual damage is apparent between these parts, do not attempt to remove the pressure adjusting screw from the adjusting knob. If the pressure adjusting screw and adjusting knob must be disassembled, use a 3/16" hexagon socket key. A thread sealant is used between the pressure adjusting screw and the adjusting knob necessitating the use of a hexagon socket key that is not worn and the application of significant force for their disassembly. Heating the pressure adjusting screw with a heat gun (do not use a torch) will soften the thread sealant and facilitate disassembly of these parts. Be certain to remove all thread sealant residue. Unscrew rear cap (8) from main housing (42). Inspect adjusting screw, rear cap and main housing screw threads for stripped, battered and cross threads. Minor thread damage can be repaired with a thread chase. Carefully pull disc guide pin (9) with assembled disc springs (10) from recess in piston (11). Note the orientation, position and number of disc springs on the disc guide pin to assure their proper installation at reassembly. The spring discs should all be uniformly domed with no distortion, chips, slivers or other similar damage. Slide piston (11) out of main housing (42) recess. Remove and discard O-ring seal (12) if a new seal replacement is available. If the old O-ring must be reused and exhibits wear, cuts, abrasion or brittleness, it may cause working air to leak around the piston resulting in reduced delivered air pressure from the regulated setting. This condition is acceptable it does not endanger personnel or jeopardize operation of the system equipment. Visually check the piston outside diameter and main housing bore for scratches, erosion and similar damage that may result in air leakage around the O-ring seal. Remove the vent seat (14) from the piston. Remove and discard O-ring seal (13) if a new replacement is available; if not, reuse the removed O-ring seal if it is not visually damaged (no wear, cuts, abrasion or brittleness). Inspect the vent seat for any damage that would prevent a good seal between the vent seat and needle valve (20).

f. **22-895330 Pressure Regulator Only.** Carefully peel cover plate (4) off rear cap (8); clean off all adhesive residue from rear cap. Unscrew the rear cap, with attached fine adjustment screw (5) from main housing (42). If the preset pressure function (175 psi) prior to disassembly was acceptable, and no visual damage is apparent between these parts, do not attempt to remove the fine adjustment screw from rear cap. If the fine adjustment screw and rear cap must be disassembled, use a 3/16" hexagon socket key. A thread sealant is used between the fine adjustment screw and the rear cap necessitating the use of the hexagon socket that is not worn and the application of significant force for their disassembly. Heating the fine adjustment screw with a heat gun (do not use a torch) will soften the thread sealant and facilitate disassembly of these parts. Be certain to remove all

thread sealant residue. Inspect the fine adjustment screw, rear cap and main housing screw threads for stripped, battered and cross threads. Minor thread damage can be repaired with a thread chase. Carefully pull disc guide pin (9) with assembled disc springs (10) from the recess in the piston (11). Note the orientation, position and number of disc springs on the disc guide pin to assure their proper installation at reassembly. The spring discs should all be uniformly domed with no distortion, chips, slivers or other similar damage. Slide piston (11) out of main housing (42) recess. Remove and discard O-ring seal (12) if a new seal replacement is available; if not, reuse the removed O-ring seal if it is not visually damaged (no excessive wear, cuts, abrasion or brittleness). Visually check the piston outside diameter and the main housing bore for scratches, erosion and similar damage that may result in air leakage around the O-ring seal.

g. Unscrew cartridge assembly (15) from main housing (42) using a 20mm hexagon socket. Remove and discard O-ring seal (17) if a new seal replacement is available; if not, reuse the removed O-ring seal if it is not visually damaged (no excessive wear, cuts, abrasion or brittleness). Unscrew the end cap (25) and remove ball (24), spring (23), filter (22), needle valve (20), spacer (21), main seat (19) and O-ring seal (18) from cartridge recess. Discard the filter if a new replacement is available. If not, use compressed air to clean: if excessively dirty, clean with hot soap and water solution and soft bristle brush then rinse thoroughly with hot clean water and blow dry immediately with compressed air. Discard O-ring seal (18) if a new seal replacement is available; if not reuse the removed O-ring seal if it is not visually damaged (no excessive wear, cuts, abrasion or brittleness). Inspect the main seat and needle valve for roughness, scratches, scoring, wear tracks and other similar damage that would permit air leakage through the cartridge resulting in erratic regulation. The needle valve should have a polish sealing surface. Check the spring for breakage and collapsed coils.

h. **22-895401, 22-895400 and 22-895330, Pressure Regulators Only.** Remove O-ring seal (41) from groove in nipple (40). Discard the O-ring seal only if a replacement is available. If a replacement is not available and the old seal is worn, cut or otherwise damaged, it may permit air leakage between the nipple and the air bottle when the hand tightening knob (39) is tightened. This will result in incoming working air leakage. The old O-ring seal may be reused until a replacement becomes available providing it does not endanger personnel or jeopardize operation of the system equipment. Remove retaining ring, (38) use an 11/16" hexagon socket or wrench to unscrew the nipple from the main housing(42) remove the hand tightening knob. Inspect the hand tightening knob for wear, stripped or cross threads. Unscrew low pressure nipple (36) or coupling (37) from main housing.

4-4.2. CLEANING

WARNING

Serious injury could occur if compressed air is directed against the skin. Do not use compressed air unless the pressure is/has been reduced to 30 psi (207 kPa) or less. When working with compressed air use chip guards, eye protection and other protective equipment.

- a. No special cleaning procedures are required to clean the disassembled parts of the pressure regulators. Cleaning may be accomplished by washing in a hot soap and water solution. Rinse the parts thoroughly with hot clean water and dry immediately with clean cloth, shop wipes or compressed air. Exercise care not to scratch any polished surface.
- b. Stubborn deposits may be removed with soft bristle or wire brush. Clean thread sealant off part(s) by heating with a heat gun (not a torch). After filter (22) is cleaned, apply compressed air to the bore and blow dry from the inside out.
- c. After cleaning apply a thin coating of metal assembly paste (Paratech Part Number 22-670412) on the female threads on the rear cap (8) and tip of fine adjusting screw and the pressure adjusting screw (5). Apply a thin coating of silicone grease (Paratech Part Number 22-670404) to O-ring seals (12, 13, 17, 18, 27, 28 and 41). Apply a thin coating of dry lithium lubricant to spring discs (10).

4-4.3 REASSEMBLY OF PRESSURE REGULATOR.

- a. Apply a thin coating of silicone grease to O-ring seals (17 and 18). Install O-ring seal (18) onto main seat (19). Insert the seat and seal into the cartridge housing (16) with the seal toward the hexagon. Insert spacer (21), needle valve (20) (with rounded tip through hole in the hexagon), filter (22), spring (23) and ss ball (24) into cartridge housing. Screw end cap into cartridge housing and fully tighten until it is approximately flush with the back of the cartridge housing. Install O-ring seal (17) over the cartridge housing.
- b. **22-895330 Pressure Regulator Only.** Apply a thin coating of silicone grease (Paratech Part Number 22-670404) to O-ring seal (12). Install the O-ring seal in the groove in the outside diameter of piston (11) and slide the piston, boss end first, fully into main housing (42). Apply a thin coating of dry lithium lubricant to both sides of the spring discs (10). Refer to the figure 4-2 inset for the 22-895330 preset pressure regulator and slide quantity of spring discs (10) noted at disassembly on to disc guide pin (9) in the orientation and arrangement shown. Insert the spring discs and disc guide pin fully into the piston recess being careful not to dislodge any of

the spring discs. If fine adjustment screw (5) was disassembled from rear cap (8), screw the rear cap fully into the main housing and torque to 50±5 foot-pounds. Screw the fine adjustment screw into the rear cap until it meets resistance (contact with the disc guide pin). After the pressure regulator is completely assembled, apply thread sealant (Paratech Part Number 22-670406) to the threads of the fine adjustment screw and make the necessary adjustment in accordance with paragraph 4-2.1.g in order to preset the pressure regulator to 175 psi (12.1 bar). If the fine adjustment screw was not disassembled from the rear cap, carefully tighten the rear cap fully into the main housing. After the pressure regulator is completely assembled, it will be necessary to verify the preset 175 psi (12.1 bar) setting has not changed.

c. **22-895401, 22-895400, 22-895300A and 895300B Pressure Regulators Only.** Apply a thin coating of silicone grease (Paratech Part Number 22-670404) to O-ring seals (12 and 18). Install O-ring seal (18) onto vent seat (19) and install vent seat, O-ring seal first, into the recess in piston (11). Install O-ring seal (12) in the groove in the outside diameter of the piston and slide the piston, boss end first, fully into main housing (42). Apply a thin coating of dry lithium lubricant to both sides of the spring discs (10). Refer to the figure 4-1 and 4-3 inset for the 22-895401, 22-895400, 22-895300A and 22-895300B pressure regulators and slide quantity of spring discs (10) (noted at disassembly) on to disc guide pin (9) in the orientation and arrangement shown. Insert the spring discs and disc guide pin fully into piston recess being careful not to dislodge any of the spring discs. Apply a thin coating of metal assembly paste (Paratech Part Number 22-670412) to the internal threads of rear cap (8). Carefully screw the rear cap fully to main housing. If pressure adjusting screw (5) was disassembled from pressure adjusting knob (6) apply thread sealant (Paratech Part Number 22-670406) to threads to upper 1/3 threaded portion under the head of the pressure adjusting screw and screw the pressure adjusting screw fully into the pressure adjusting knob. Screw the pressure adjusting screw fully into the rear cap. Apply thread sealant to the threads of setscrew (7), screw fully into the pressure adjusting knob and then back out one (1) complete revolution.

d. **22-895401, 22-895400 and 22-895330 Pressure Regulators Only.** If spring pin (29) was disassembled, press a new spring pin into the main housing. Apply a thin coating of silicone grease (Paratech Part Number 22-670404) to O-ring seals (27 and 28). Install O-ring seals (27) in their grooves on the shut-off valve shaft and O-ring seals (28) in the recesses on both sides of shaft. Carefully slide the shut-off valve into the main housing being careful not to dislodge or cut the O-ring seals. The knob end of the shut-off valve should be adjacent to the spring pin. Secure the shut-off valve to the main housing with retaining ring (30).

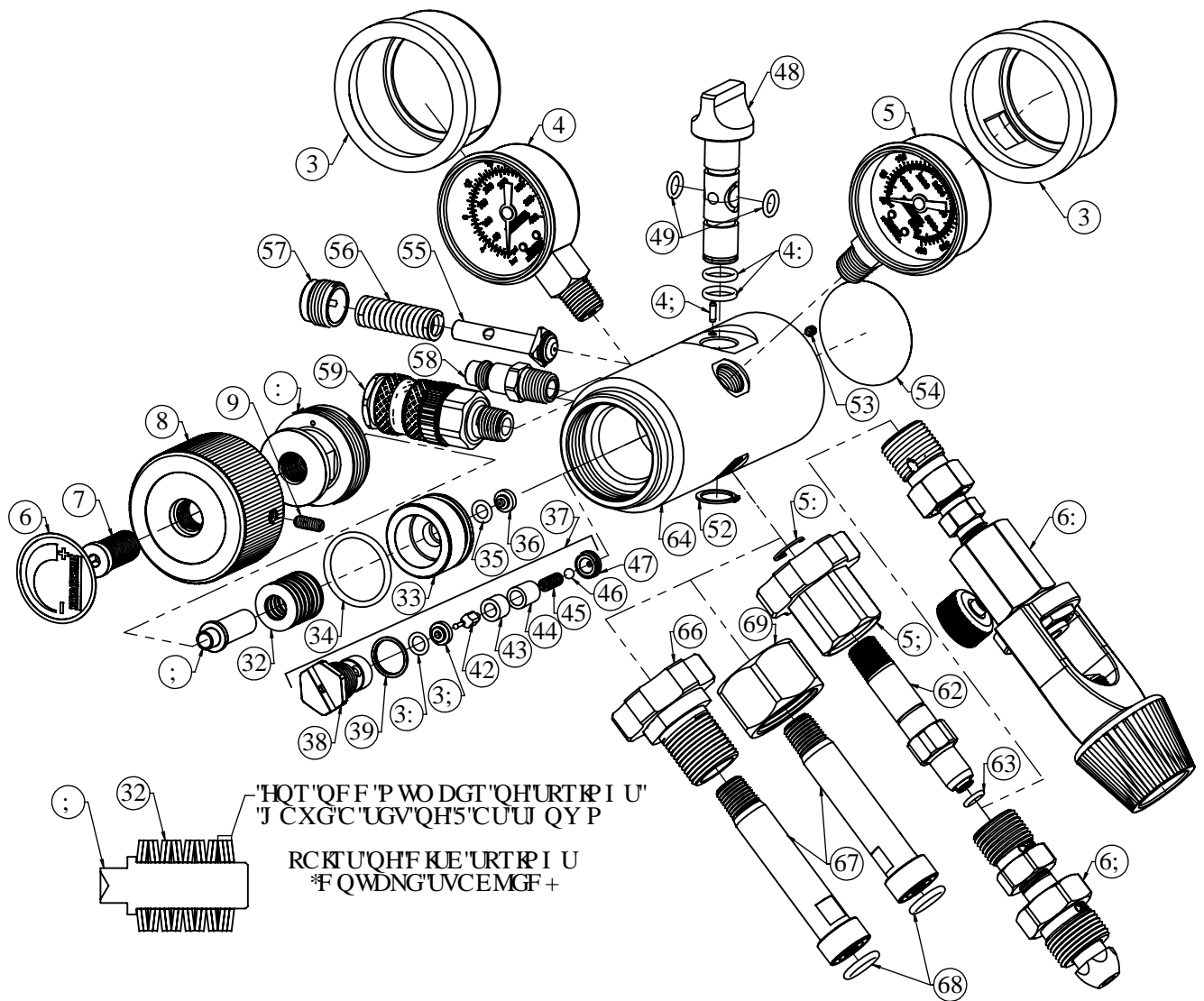
e. Install the relief stem and spring (34) in the pressure relief bore in the main housing (42). Thread adjusting screw (35) partially into the pressure relief recess. The pressure relief must be adjusted in accordance with paragraph 4-2.1 after the pressure regulator is completely assembled. Do not install set screw (31) or label (32) until the pressure relief adjustment is made.

f. **22-895401 and 895400 Pressure Regulators Only.** Install gauge covers (1) over pressure gauges (2 and 3). Wrap teflon tape around the gauge NPT male threads and fully tightened into the main housing (42). The gauges should be orientated to face the adjusting knob assembly with the low pressure gauge, 0-400 psi (0-28 bar) installed in the hole closest to the pressure adjusting knob (6).

g. **22-895401, 22-895400 and 895330 Pressure Regulators Only.** Apply teflon tape to NPT male threads of low pressure nipple (36) coupling (37) and fully tighten into the main housing (42). Slide nipple (40) through hand tightening knob (39) apply teflon tape to NPT male threads. Use 11/16" hexagon socket or wrench securely tightly in main housing (42). Secure nipple to had tightening knob together with retaining ring (38). Install new O-ring seal (41) in its groove in the nipple.

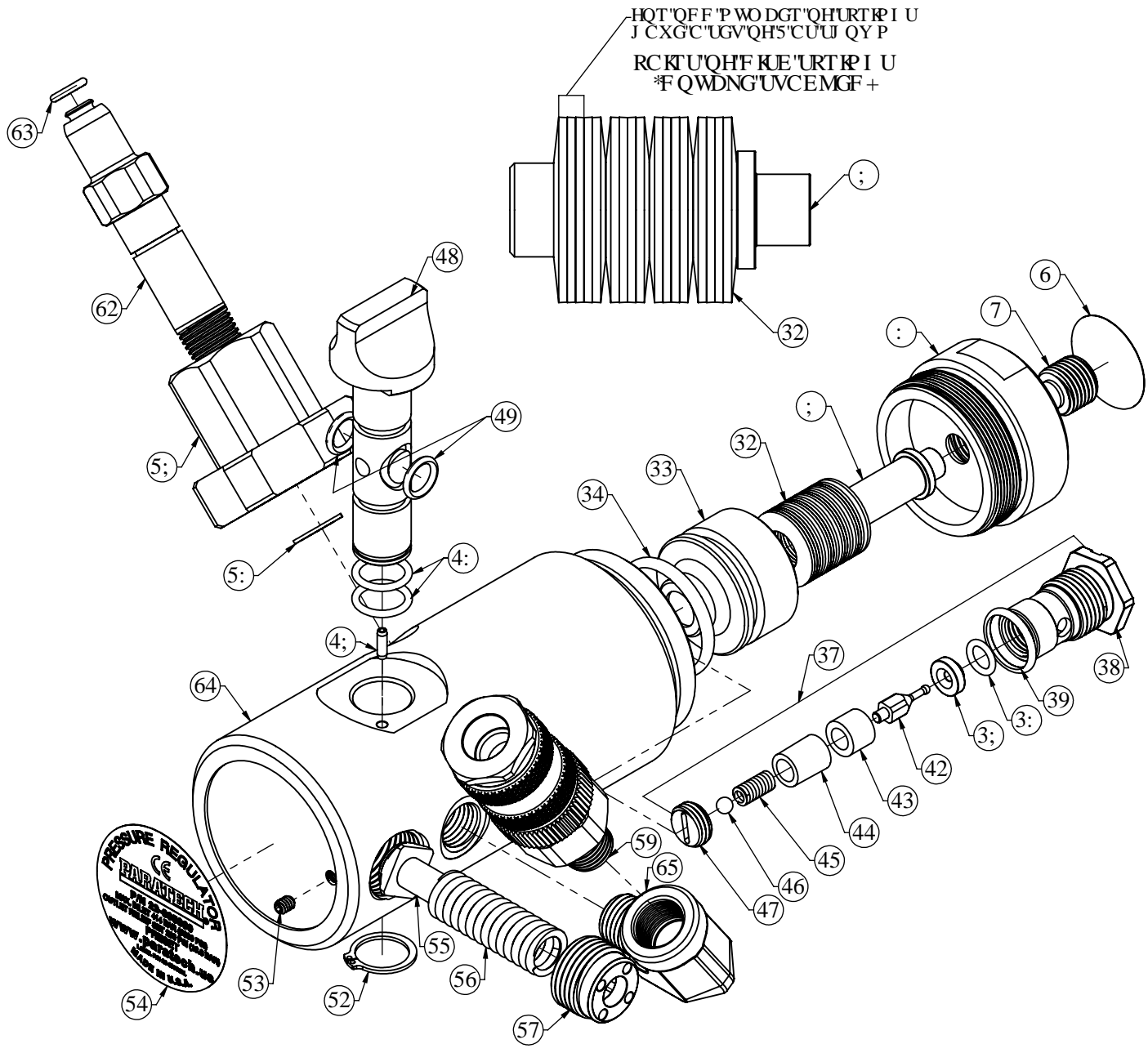
Hk Wtg (PFGZ PWO DGT	FGLUETRVQIP	S V	RCTV PWO DGT	Hk Wtg (PFGZ PWO DGT	FGLUETRVQIP	S V	RCTV PWO DGT
6/3	RKUVQP V RGTGI WNCVQT 357RUK	3	"44/; 7623	/49	0Q/TRP I .7B8'Z'092.'RQN WTVGJ 0; 2	4	"44/; 26; 3
6/3	TGI WNCVT 357RUK; DCT+Y IFP	3	"44/; 7623F	/4;	0Q/TRP I .CU235*9B8'Z'092+DP 92	4	"44/772396
6/3	UVTWICKI WP TGI WNCVQT 522RUK	3	"44/; 7622	/4;	0URTPI RP .5154'Z'7B8.'ULU	3	"44/; 2; 57
6/3	TGI WNCVQT 522RUKY IFP	3	"44/; 7622F	/52	0TGVOTPI .GZVDCUE.; B8SUI CHV	3	"44/; 26; 9
/3	0I CWI GEQXGT 45Y II QNG	4	"44/; 28; 8	/53	0UGVUET .%8/54'Z'5B8'N.'ULU'EWRRV	3	"44/7722; 3
/4	0I CWI G4S'622'RUK4: DCT'316S'N"	3	"44/; 2839	/54	0NCDGN.TPF.'HQT'357'RUKTGI 0%44/; 7623(' '44/; 7623F+	3	"44/; 7623N
/5	0I CWI G8222'RUK636'DCT'316S'N	3	"44/; 2834	/54	0NCDGN.TPF.'HQT'522'RUKTGI 0%44/; 7622(' '44/; 7622F+	3	"44/; 7622N
/6	0NCDGN'30SF'K'HQT'TGI 0MP QD	3	"44/; 7533	/55	0UVGO 'Y KJ 'O QNF GF 'UGCN	3	"44/; 2; 420
/7	0UETGY .RTGUUCFIOMP QD.TGI NVT	3	"44/; 7548	/56	0URTPI .397'RUK'34'DCT+TGNKGH%44/; 7623(' '44/; 7623F+	3	"44/; 2; 49
/8	0MP QD.F KUE'TGI	3	"44/; 7567	/56	0URTPI .522'RUKTGN'XCXNG%44/; 7622(' '44/; 7622F+	3	"44/9; 832:
/9	0UGVUET .%82/46'Z'34S'NI .EWR.UU	3	"44/; 74; 3	/57	0CFLMUPPI UET/'TGNKGH	3	"44/; 2; 43
/:	0TGCT'ECRHQT'F KUE'TGI WNY MP QD	3	"44/; 7566	/58	0P RRRNG'316S'O CNG%44/; 7623(' '44/; 7623F+	3	"44/; 28; 3
/;	0RRP '7420 O F KUE' WFG	3	"44/; 7544	/59	0ERNI .316S'P RVO '7QRGP%44/; 7622(' '44/; 7622F+	3	"44/; 2926
/32	0F KUE'URTPI '42Z320Z30 O N'307	39	"44/; 7495		0P RRRNG(' P WVCUUJ .EI C'569'568%44/; 7622(' '44/; 7623+	3	"44/; 7572
/33	0RRUVQP .XGP V TGI 0	3	"44/; 7639	/5;	0TGV0ETGUEGP VTRPI .34SUI CHV	3	"44/23799;
/34	0Q/TRP I .CU343*3B8'Z'025+DP 92	3	"44/; 7469	/5;	0J CPF/VK J 'P WVEI C'569'568	3	"44/; 7578
/35	0Q/TRP I .CU232*316'Z'092+DP; 2	3	"44/; 7735	/62	0P RRRNG'8222'RUK*Y IP Q'UET+	3	"44/; 7573
/36	0UGCV.XGP V.ECTVT0TGI WNCVQT	3	"44/; 763;	/63	0Q/TRP I .316Z'092.'RQN WTVGJ CPG; 2	3	"44/7723; 7
/37	0ECTVTIF I GCUU 'HQT'TGI WNCVQT	3	"44/; 762;	/64	0J QWUPI 'HQT'TGI '7QTCPI G%44/; 7622(' '44/; 7622F+	3	"44/; 7628
/38	0ECTVTIF I GJ QWUPI .TGI 0	3	"44/; 7635	/64	0J QWUPI 'HQT'TGI '7DNCEM%44/; 7623(' '44/; 7623F+	3	"44/; 7627
/39	0Q/TRP I .CU237*3B8'Z'092+DP 92	3	"44/; 7474	F RP	0P RRRNG(' P WVCUUJ '7F RP .%44/; 7623F(' '44/; 7622F+	3	"44/; 7582
/3:	0Q/TRP I .CU232*316'Z'092+DP; 2	3	"44/; 7735	/66	0J CPF 'P WVCUUJ '7F RP	3	"44/; 7586
/3;	0UGCV.O CRP .ECTVT0TGI WNCVQT	3	"44/; 7634	/67	0P RRRNG/'F RP	3	"44/; 7589
/42	0P GGF NG.O CRP TGI XCXNG.ECTVT0	3	"44/; 7633	/68	0Q/TRP I .CU333*9B8'Z'025+DP 92	3	"44/; 3376
/43	0URCEGT'HQT'ECTVTIF I G	3	"44/; 7636	GWTQ,	0P WY(' P RRRNG'CUUJ .GWTQ*QRVQIP CN+	3	"44/; 7588
/44	0HKNVGT.UR VGT0HQT TGI WNCVQT	3	"44/; 7637	/69;	0P WY'HQT'GWTQ'P RRRNG	3	"44/; 7587
/45	0URTPI .P GGF NGXCXNG	3	"44/; 7444	/67;	0P RRRNG/'F RP	3	"44/; 7589
/46	0DCNN.7154.'662'E'UU'1 TCF G'46"	3	"44/; 3357	/68;	0Q/TRP I .CU333*9B8'Z'025+DP 92	3	"44/; 3376
/47	0GPF'ECR.ECTVTIF I G	3	"44/; 7638	/6;	0UEWDC'CF CRVGT'CUUGO DN '5222RUK*QRVQIP CN+	3	"44/; 7597
/48	0XCXNGMP QD.; 2FGI .NQP I	3	"44/; 2555	/6;	0CFRVT'EI C/568'O C'K'Z'EI C7: 2P K'7QRVQIP +	3	"44/; 75: 2

, 'F GP QVQUQTF GTGF 'CP F 'UWRRNKG' UGRCTCVGN|



Hk wtg/6/3'44/; ; 7623(' '44/; ; 7622'Cf lwucdrg'Rt guwtg'Tgi wrcvt.'Gzr mqf gf 'Xlgy

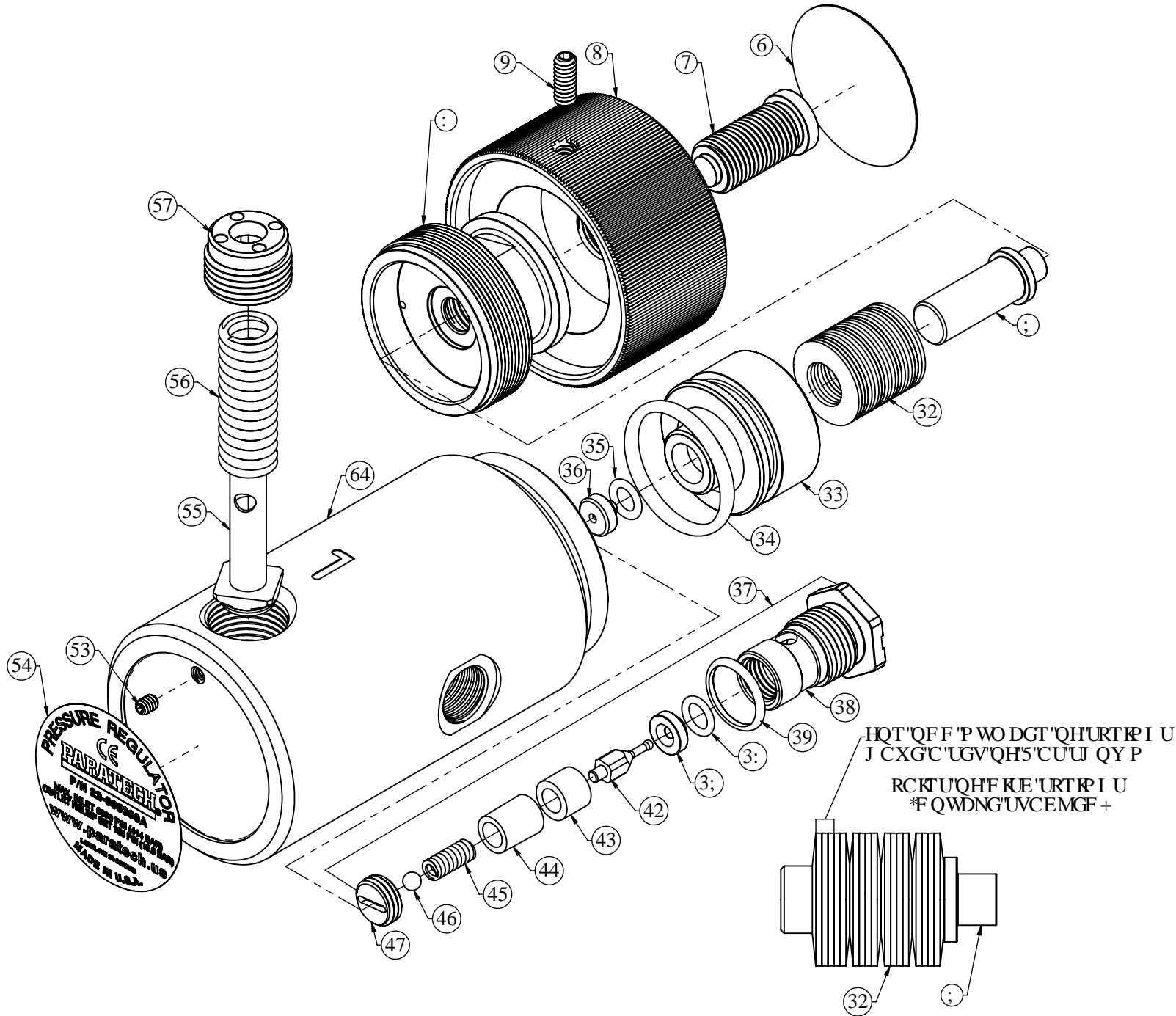
HK WFG "CPF" RFGZ" PWO DGT	F GUETHRVQP	S V I	RCTV PWO DGT	HK WFG "CPF" RFGZ" PWO DGT	F GUETHRVQP	S V I	RCTV PWO DGT
/64	TGI WNCVQT.'RTGUGV.'397RUK*34'DCT+	3	""44/; ; 7552	/47	ØGPF'ECR'ECTVTHF I G	3	""44/; ; 7638
/6	ØNCDGN'3SF IC'RNCVGEQXGT	3	""44/; ; 755;	/48	ØXCNXG'MP QD'; 2'F GI .NQPI	3	""44/; ; 2555
/7	ØUETGY.'HHP'G'CFIØ'RTGUGV	3	""44/; ; 7546	/49	ØØQ/TRP I .7B8'Z'Ø92.'RQNJ WIGVJ CP G'; 2	4	""44/; ; 26; ;
/:	ØTGCT'ECR'HQT'RTGUGV	3	""44/; ; 755;	/4:	ØQ/TRP I .CU'235'*9B8'Z'Ø92+'DP 92	4	""44/772396
/;	ØRRP "/42ØO'F'KUE'T WFG	3	""44/; ; 7544	/4:	ØURTRP I 'RØ'5'54'Z'7'B8'UUD	3	""44/; ; 2; 57
/32	ØF'KUE'URTP I '42'Z'32Ø'Z'3	39	""44/; ; 7494	/52	ØTGVØTRP I .GZ'VDCUE.'; B8\$'UJ CHV	3	""44/; ; 26; 9
/33	ØRKUVQP.'RTGUGV'TGI WNCVQT	3	""44/; ; 7639R	/53	ØUGV'UET.'Ø8/54'Z'5'B8'N.'UUD'EWR'RV	3	""44/7722; 3
/34	ØQ/TRP I 'CU'343'*3/3 B8'Z'Ø25+'DP 92	3	""44/; ; 7469	/54	ØNCDGN'TP F.'RTGUGV'397'RUK'TGI 0	3	""44/; ; 7552N
/37	ØECTVTHF I G'CUUGØDNJ 'HQT'TGI WNCVQT	3	""44/; ; 762;	/55	ØUVGO 'Y KJ 'Ø QNF GF 'UGCN	3	""44/; 2; 420
/38	ØECTVTHF I G'J QWURP I .TGI WNCVQT	3	""44/; ; 7635	/56	ØURTRP I .397'RUK*34'DCT+'TGNKGH	3	""44/; ; 2; 49
/39	Ø'Q/TRP I .CU'237.'* B8'Z'Ø92+'DP; 2	3	""44/; ; 7474	/57	ØCF'LMUVRP I 'UET'/TGNKGH	3	""44/; ; 2; 43
/3:	Ø'Q/TRP I .CU'232.'*3'6'Z'Ø92+'DP; 2"	3	""44/; ; 7735	/59	ØERNI '3'6SP RVO "/ØRGP	3	""44/; ; 2926
/3:	Ø'UGCV.'Ø'ØP.'ECTVTHF I G'WNCVQT	3	""44/; ; 7634		ØP'RRNG'(' P'W'CUUJ 'EI C'569'568	3	""44/; ; 7572
/42	Ø'P'GGF'NG.'Ø'ØP'TGI 'XCXNG	3	""44/; ; 7633	/5:	ØTGVØETGUEGP VTRP I '34\$'UJ CHV	3	""44/23799;
/43	Ø'URCEGT'HQT'ECTVTHF I G	3	""44/; ; 7636	/5:	ØJ CP F/VØ J V'P'W'EI C'569'568	3	""44/; ; 7578
/44	Ø'HKNVGT.'UR VGTØHQT'ECTVTHF I G	3	""44/; ; 7637	/62	ØP'RRNG'8222'RUK'Y P+	3	""44/; ; 7573
/45	Ø'URTRP I .P'GGF'NG'XCXNG	3	""44/; ; 7444	/63	ØQ/TRP I .3'6'Z'Ø92.'RQNJ WIGVJ CP G'; 2	3	""44/7723; 7
/46	Ø'DCNN'7'54'662'E'UUI TCF'G'46	3	""44/; ; 3357	/64	ØJ QWURP I .RTGUGV'TGI WNCVQT	3	""44/; ; 7629C
				/65	ØUMTGGV'GNDQY '3'6SP RV'UU	3	""44/; 2328;



HQT'QF F' PWO DGT'QHURTRP I U
J CXG'C'UGVQH5'CUUI QY P
RC KT U'QHF KUE'URTRP I U
*F QWDNG'UVCEMGF +

Hki wtg'6/4044/; ; 7552'Rt gvg'Rt guwtg'Tgf wegt.'Gzr mf gf 'xkgy

Hi WTG CPF "RFGZ" PWO DGT	F GUETRVIQP	S V	RCTV P WO DGT	Hi WTG CPF "RFGZ" P WO DGT	F GUETRVIQP	S V	RCTV P WO DGT
7/3	ECTV'TGI WNV'T'522RUKT'H J V'UHF G	3	"44/; 7522D	/3:	0Q/TRP I 'CU'232*3 16'Z'092+DP; 2	3	"44/; 7735
7/3	ECTV'TGI WNV'T.'372'RUK'NGHV'UHF G	3	"44/; 7522C	/3:	0UGCV.'O CRP .ECTV'TO TGI WNCVQT	3	"44/; 7634
/6	0NCDGN.'30'S'F IC'HQT'TGI 0MP QD	3	"44/; 7533	/42	0P GGF NG.'O CRP 'TGI 'XCXNG.'ECTV'TO	3	"44/; 7633
/7	0UETGY .'RTGUUCF LOMP QD.'TGI NVT	3	"44/; 7548	/43	0URCEGT'HQT'ECTV'TF I G	3	"44/; 7636
/8	0MP QD.'F K'E'TGI	3	"44/; 7567	/44	0HKNVGT.'UR VGT'0HQT'TGI WNV'T	3	"44/; 7637
/9	0UGV'LET.'*62/46'Z'3 14'S'NI .EWR.'UU	3	"44/; 74; 3	/45	0URTRP I .P GGF NG'XCXNG	3	"44/; 7444
/:	0TGCT'ECR'HQT'F K'E'TGI WNY IMP QD	3	"44/; 7566	/46	0DCNN'7 154'662'E'UUI TCF G'46	3	"44/; 3357
/:	0RRP'7'420 O F K'E'I WFG	3	"44/; 7544	/47	0GPF 'ECR.'ECTV'TF I G	3	"44/; 7638
/32	0F K'E'URTP I '42Z.3204Z.30 O 'N'307"	39	"44/; 7495	/53	0UGV'LET.'*8/54'Z'5 B8N.'ULU'EWR'RV	3	"44/7722; 3
/33	0RRVQP .XGP V'TGI 0	3	"44/; 7639	/54	0NCDGN'TPF .ECTV.'522'RUK'TGI WNO	3	"44/; 7522N
/34	0Q/TRP I 'CU'343'3/3 B8Z'025'DP 92	3	"44/; 7469	/54	0NCDGN'TPF .ECTV.'372'RUK'TGI WNO	3	"44/; 7522T
/35	0Q/TRP I 'CU'232*3 16Z'092+DP; 2	3	"44/; 7735	/55	0UNGO 'Y K/V 'O QNF GF 'UGC N	3	"44/; 2; 420
/36	0UGCV.'XGP V.'ECTV'TO TGI WNCVQT	3	"44/; 763;	/56	0URTRP I '397'RUK'34'DCT+'TGNKGH	3	"44/; 2; 49
/37	0ECTV'TF I G'CUU 'HQT'TGI WNCVQT	3	"44/; 762;	/56	0URTRP I '522'RUK'TGN'XCXNG	3	"44/9; 832.
/38	0ECTV'TF I G'J QWURP I .TGI 0	3	"44/; 7635	/57	0CFDWURP I 'UET'/'TGNKGH	3	"44/; 2; 43
/39	0Q/TRP I .CU'237*3; B8Z'092+DP 92	3	"44/; 7474	/64	0J QWURP I .ECTV'TGI WNCVQT.'NGHV'"	3	"44/; 7524D
				/64	0J QWURP I .ECTV'TGI WNCVQT.'TR J V"	3	"44/; 7524C



Hi wtg'6/5044/; ; 7522C(' "44/; ; 7522D'Ectv'Rtguwtg'Tgf veqt.'Gzr nqf gf 'xkgy

