

# SUPERPRESSURE

## LITTLE RICHARD PNEUMATICALLY OPERATED VALVE

44-19730	20K NORMALLY CLOSED
44-19730LS	20K NORMALLY CLOSED & LIMIT SWITCH
44-19730OX	20K NORMALLY CLOSED OXYGEN SERVICE
44-19731	60K NORMALLY CLOSED
44-19731LS	60K NORMALLY CLOSED & LIMIT SWITCH
44-19749-1	100K NORMALLY CLOSED
44-19749-1LS	100K NORMALLY CLOSED & LIMIT SWITCH
44-19790	20K NORMALLY OPEN
44-19790LS	20K NORMALLY OPEN & LIMIT SWITCH
44-19790OX	20K NORMALLY OPEN OXYGEN SERVICE
44-19791	60K NORMALLY OPEN
44-19791LS	60K NORMALLY OPEN & LIMIT SWITCH
44-19799-1	100K NORMALLY OPEN
44-19799-1LS	100K NORMALLY OPEN & LIMIT SWITCH

### This Manual is for:

**Part No.** : \_\_\_\_\_  
**Sales Order No.** : \_\_\_\_\_  
**Serial No.** : \_\_\_\_\_  
**Date Manufactured** : \_\_\_\_\_

**NEWPORT SCIENTIFIC, INC.**  
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<b>44-19730</b>	<b>Little Richard 20K PSI Normally Closed</b>
44-19730 52076005700 52076006000 56046001200	Little Richard 20K PSI Normally Closed Air Drive 6" Operator Assembly Valve Body Assembly
<b>44-19731</b>	<b>Little Richard 60K PSI Normally Closed</b>
44-19731 52076005700 52076006000 52085012400	Little Richard 60K PSI Normally Closed Air Drive 6" Operator Assembly Valve Body Assembly
<b>44-19749-1</b>	<b>Little Richard 100K PSI Normally Closed</b>
44-19749-1 52076005700 52076006000 63171001001	Little Richard 100K PSI Normally Closed Air Drive 6" Operator Assembly Valve Body Assembly
<b>44-19790</b>	<b>Little Richard 20K PSI Normally Open</b>
44-19790 52076005700 52076005900 56046001200	Little Richard 20K PSI Normally Open Air Drive 6" Operator Assembly Valve Body Assembly
<b>44-19791</b>	<b>Little Richard 60K PSI Normally Open</b>
44-19791 52076005700 52076006000 52085012400	Little Richard 60K PSI Normally Open Air Drive 6" Operator Assembly Valve Body Assembly
<b>44-19799-1</b>	<b>Little Richard 100K PSI Normally Open</b>
44-19799-1 52076005700 52076005900 63171001001	Little Richard 100K PSI Normally Open Air Drive 6" Operator Assembly Valve Body Assembly

## I DESCRIPTION

The Newport Scientific, Inc. Little Richard Valve, is a solenoid operated pneumatic piston type pressure valve. The valve is composed of four major components.

- a valve body assembled for the pressure rating of the Little Richard Valve
- a spring-return assembly, one for normally closed mode, another for normally open mode
- a pneumatic actuator cylinder and piston 6 inches in diameter
- a normally closed three-way solenoid valve

The pneumatic piston actuator uses a low pressure (90 psi) air supply controlled by the normally closed, explosion proof, Class 1, Group D solenoid valve.

When electrically energized, the solenoid valve opens to allow air to enter the actuator piston. The piston is connected to the pressure valve stem by an extension shaft, and a spring keeps the actuator shaft in the normally open (NO) or normally closed (NC) position. When air enters the cylinders, spring tension on the piston is overcome and the valve stem is moved to the fully open or fully closed position. When the solenoid valve is de-energized, the air pressure is vented from the actuator cylinder through the exhaust port of the solenoid, (see assembly drawing), and the spring tension returns the valve stem to its normal position.

## APPLICATION

Solenoid valve control of the pneumatic actuator permits the use of the Little Richard Valve for remotely controlled on-off operation, or as a pressure sensitive, contact-type gage in the line. The valve may also be furnished with limit switches for remote indication if the fully open or fully closed positions.

## CONSTRUCTION FEATURES

- The structure containing the pneumatic piston actuator and connecting shaft is constructed of heavy-duty aluminum.
- Valve bodies available:
  - 20,000 psi body with 5/16 inch orifice opening
  - 60,000 psi body with 1/8 inch orifice opening
  - 100,000 psi body with 1/16 inch orifice opening
- Valve body material:
  - for 20,000 and 60,000 psi service, 316 stainless steel
  - for 100,000 psi service, 410 stainless steel, heat treated
  - for oxygen service, Monel 400
- All parts exposed to the flowing medium are made of stainless steel, for oxygen service, Monel, and stellite.
- Stems (replaceable) are made of 440C stainless steel, heat treated
  - for oxygen service, stellite #6B
- Valve seat (replaceable):
  - For 20,000 and 60,000 psi service: 410 stainless steel, heat treated
  - For 100,000 psi service: 17-4PH
  - For oxygen service: stellite #25
- All valves are furnished with 416 stainless steel glands, nuts and sleeves

# SPECIFICATIONS

## COMMON CHARACTERISTICS

**OPERATED AIR PRESSURE:** 90 psi nominal  
**AIR CONNECTIONS:** 1/4 inch NPT  
**VALVE STEM TRAVEL:** 5/16 inch maximum  
**VALVE STEM CLOSURE ANGLE:** 60 degrees  
**SOLENOID VALE:** Normally closed  
**ELECTRICAL POWER:** 115V, 60Hz, 1-phase  
**SOLENOID ENCLOSURE:** Explosion proof

## CHARACTERS THAT VARY BY MODEL

MODELS:	20,000 PSI	60,000 PSI	100,000 PSI
MAXIMUM OPERATING PRESSURE:	20,000 PSI	60,000 PSI	100,000 PSI
OPERATING TEMPERATURE*:	-100°F TO 450°F	-100°F TO 450°F	-20°F TO 300°F
VALVE ORIFICE DIAMETER:	5/16 INCH	1/8 INCH	1/16 INCH
INTAKE TUBING CONNECTION:	9/16 INCH HP**	9/16 INCH	1/4"
DISCHARGE TUBING CONNECTION:	9/16" HP**	9/16" HP**	1/4" HP***

\* For 20,000 and 60,000 PSI models, special aluminum foil packing can be used to increase the operating temperature to 1000°F.

\*\* Adapters for 1/4 HP or 3/8 HP are supplied when specified.

\*\*\* Inlet/Outlet openings for 9/16 inch OD AMINCO high-flow tubing can be furnished on special order.

## II INSTALLATION

### IF EQUIPMENT IS RECEIVED IN DAMAGED CONDITION:

Forward an immediate request to the delivering carrier to perform an inspection and prepare a concealed-damage report. Do not destroy container or packing material until contents have been verified. Concurrently report the nature and extent of damage incurred to Newport Scientific, Inc. giving instrument serial and catalog numbers, so that action may be initiated to repair or replace damaged parts or instructions issued for the return of the instrument. Do not return damaged goods to Newport Scientific, Inc. without first securing proper authorization from the Company. The responsibility of Newport Scientific, Inc. ends with delivery to the first carrier; all claims for loss, damage, or non-delivery must be made against the delivering carrier within 10 days of receipt of shipment.

## MOUNTING

Mounting dimensions are shown in assembly drawing. Facilities for mounting are provided as follows:

Two 3/8-16 UNC-2 B tapped side mounting holes 3/4 inch deep at the edge of the cylinder flanges on 2-7/8 inch centers.

Four 11/32 inch flange mounting holes on 5-7/8 inch centers at the corners of the cylinder flange base.

The Little Richard Valve may be mounted in any practical position. Position does not affect operation.

## CONNECTIONS

Valves are packed and shipped with gland nuts finger-tight only and must be tightened before being put into service,

Connect appropriate high pressure tubing to be the inlet and discharge ports of the valve body. Tubing gland nuts should be tightened with a torque wrench as follows:

9/16 inch HP connections, tighten nut to 45 ft-lbs, approximately

3/8 inch HP connections, tighten nut to 28 ft-lbs, approximately

1/4 inch HP connections, tighten nut to 15 ft-lbs, approximately

2. Connect 90 psi air supply to the solenoid valve air inlet port.
3. Connect 115V, 60Hz power line to the solenoid valve either through a control switch, or in series with a contact type pressure gage. Use 1/2 inch NPT threaded conduit or electrical connections to solenoid valve when Little Richard Valve is used in hazardous atmosphere or to handle flammable gases or liquids.

## CHECKOUT AND ADJUSTMENT

### STEM-SEAT SEAL CHECK

Valves are tested by Newport Scientific, Inc. for effective pressure seal. However, in some cases, service conditions require that the stem seat be tighter (i.e., the stem be adjusted slightly longer so that a more positive and effective seal is made to stop the flow of gas or liquid).

To determine the effectiveness of the seat:

1. Operate the valve in the system several times while using low pressure to purge any dirt particles that could cause a faulty seal.
2. Close the valve by energizing the solenoid of a NO valve or de-energize the solenoid of a NC valve. Slowly apply pressure to the system. If leakage occurs, shut off pressure.
3. Open valve by de-energize the solenoid for NO valve or energize solenoid for NC valve.
4. Loosen valve stem lock nut and packing gland nut, and shorten the squared stem by turning it clockwise with a wrench toward the actuator shaft, approximately one full turn.
5. Close valve. Check that stem is free from its valve seat; it will move easily when turned. If stem is not free, open valve and readjust until stem is free and then close valve.
6. Lengthen stem by turning it counterclockwise until it just touches the valve seat. This is the initial position for stem adjustments for both normally open and normally closed valves.
7. Perform procedures in either "To Set Normally Open Valves Only" or "To Set Normally Closed Valves Only" paragraph.

## TO SET NORMALLY OPEN VALVES ONLY

1. De-energize solenoid to open valve. Loosen lock nut and lengthen stem counterclockwise out of the piston shaft to a full turn. Tighten stem lock nut and packing gland nut to torque specified in "Connections" paragraph.
2. Test valve for leaks. If leakage occurs, disassemble the valve and inspect stem and seat for damage. Refer to Maintenance section for disassembly procedures.

## TO SET NORMALLY CLOSED VALVES ONLY

1. Energize solenoid to open valve and lengthen stem as follows:
  - A. When valve is being used to one half of its maximum pressure rating. Open valve, loosen lock nut and gland nut and lengthen stem by turning stem counterclockwise out of the piston shaft from one half to a full turn.
  - B. When used at maximum pressure rating, more spring force is required to keep valve from leaking. Set valve as follows:

Loosen stem lock nut and packing nut. Because spring force is essentially linear with spring compression, 20,000 psi or 60,000 psi NC valves operating between one half of maximum pressure rating and full pressure rating should have the stem extended TWO full turns (counterclockwise) for each additional 10% increase in working pressure over 50%. For example: at 60% use 2 turns; at 70% use 4 turns, etc.

For 100,000 psi NC valves, the stem should be extended 1½ turns for each 10% over the 50% maximum working pressure (i.e., at 60% use 1½ turns; for 70% use 3 turns, etc). This setting will result in lower spring fatigue rate. Typical settings at maximum rated pressure are:

- **For 20,000 psi NC Valves at maximum pressure rating** – from point of initial valve seat contact, open the valve and extend the stem out of the piston shaft by turning counterclockwise 9½ full turns.

- **For 60,000 psi NC Valves at maximum pressure rating** – from point of initial valve seat contact, open the valve and extend the stem out of the piston shaft by turning the valve stem counterclockwise 10 full turns.

- **For 100,000 psi NC Valves at maximum pressure rating** - from point of initial valve seat contact, open the valve and extend the stem out of the piston shaft by turning counterclockwise 7½ turns.

2. Tighten stem lock nut and packing gland nut to torque specified in paragraph before testing or operating.

### NOTE

Even though the stem travel between the open and closed positions may seem inadequate by using the actuator piston only, the added thrust due to line pressure on the stem will provide a full port area opening.

3. Test valve for leaks. If leakage is encountered, disassemble the valve and inspect the valve seat and stem for damage. Refer to Maintenance section for disassembly procedures.

### **III MAINTENANCE**

#### **REPLACEMENT OF VALVE STEM, SEAT, OR PACKING**

1. Remove pressure tubing inlet and discharge connections from the valve.
2. Loosen valve-stem lock nut and packing gland nut.
3. Remove the four bolts and spacer stilts from valve body.
4. Unscrew valve stem from air operated piston shaft.
5. Remove stem and/or packing from valve as follows:

##### **20,000 PSI VALVES**

- (1) Remove packing nut.
- (2) Pull them from the valve. The 20,000 psi valve stem has a button tip which enables packing and picking followers to be removed by pulling the stem from the valve.
- (3) Replace appropriate stem and/or packing.
- (4) As the valve is reassembled, lubricate the following interfaces with appropriate lubrication.
  - Between valve stem and packing nut.
  - Threads between packing nut and valve body.
  - Threads between removable seat nut and valve body.
- (5) Tighten packing nut and tubing nuts to the following torque values.
  - Seat nut to about 200 ft-lbs.
  - Packing nut to about 50 ft-lbs.
  - Tubing gland nut, 9/16 inch, about 45 ft-lbs.
  - Tubing gland nut, 3/8 inch, about 28 ft-lbs.
  - Tubing gland nut, 1/4 inch, about 15 ft-lbs.

##### **60,000 PSI VALVES**

- (1) Remove the packing nut.
- (2) Pull stem out from valve. Stems of 60,000 psi valves have needle thread stems that are easily removed.
- (3) Remove seat nut, removable valve seat and thrust washer.
- (4) Tap the packing out (either direction) with a soft 1/4 inch diameter metal bar.
- (5) Replace appropriate stem and/or packing.
- (6) As the valve is reassembled, lubricate the following interfaces with appropriate lubrication.
  - Between valve stem and packing nut.
  - Threads between packing nut and valve body.
  - Threads between removable seat nut and valve body.
- (7) Tighten packing nut and tubing gland nuts to the following torque values:
  - Valve seat nut to about 200 ft-lbs.
  - Packing nut to about 50 ft-lbs.
  - Tubing gland nut, 9/16 inch, about 45 ft-lbs.
  - Tubing gland nut, 3/8 inch, about 28 ft-lbs.
  - Tubing gland nut, 1/4 inch, about 15 ft-lbs.



## 100,000 PSI VALVES

- (1) Remove the packing nut, thrust washer, and the needle-point stem.
- (2) Remove the seat nut, lens ring, and removable valve seat from the other end of the valve body.
- (3) Tap packing out with a soft metal rod, approximately 7/32 inch in diameter.
- (4) Replace packing and/or stem.
- (5) As the valve is re-assembled, lubricate the following interfaces with appropriate lubrication.
  - Between valve stem and packing nut.
  - Threads between packing nut and valve body.
  - Threads between removable seat nut and valve body.
- (6) Tighten nuts to the following torque values:
  - Seat retainer nut to about 200 ft-lbs.
  - Packing nut to about 50 ft-lbs.
  - Tubing gland nut, 9/16 inch, about 75 ft-lbs.
  - Tubing gland nut, 1/4 inch, about 15 ft-lbs.

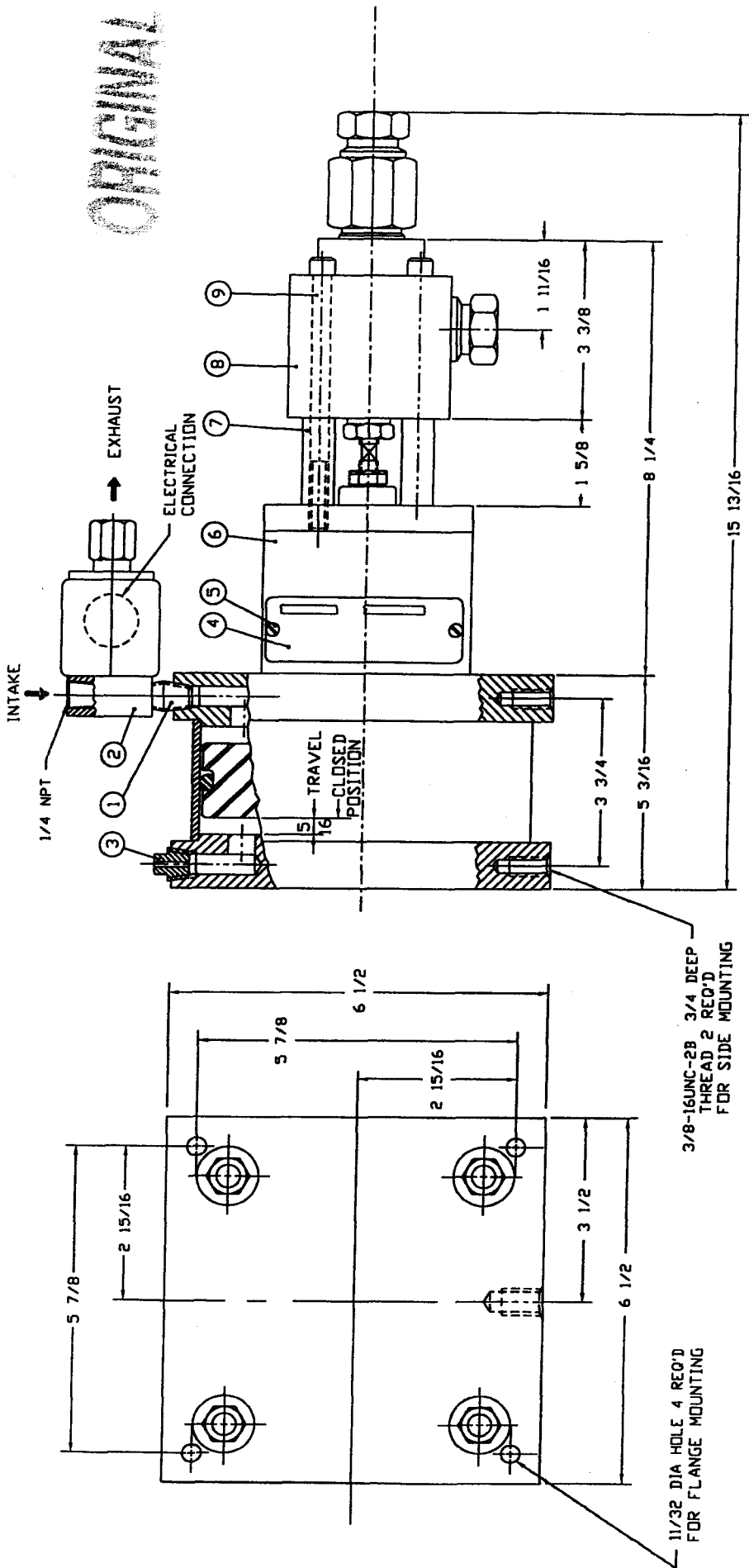
## SPARE PARTS (REFER TO ASSEMBLY DRAWINGS)

	44-19730, -LS 44-19790, -LS	44-19731, -LS 44-19791, -LS	44-19749-1, -LS 44-19799-1, -LS
Stem Packing, Standard Packing (temp. up to 1000°F)	56047000300 44-11471 P1620001700	52085004400 44-13990 P1620027600	P1624000700 44-19213
Seat	56046006200	52085012700	63171001100
Solenoid Valve Thread Lubricant	P0215090600 (Lubriplate 130A)		

## OXYGEN SERVICE

	44-19730OX 44-19790OX		
Stem – Stellite 6B Packing, Standard Seat – Stellite 25	56046003000 44-11471 56046003300		
Solenoid Valve Thread Lubricant	P0215090600 Krytox GPL 206		

ORIGINAL



11/32 DIA HOLE 4 REQ'D FOR FLANGE MOUNTING

3/8-16UNC-2B 3/4 DEEP THREAD 2 REQ'D FOR SIDE MOUNTING

ITEM NO.	REQ. NO.	DESCRIPTION	PART NO.	MATERIAL
9	4	SCREW 5/16-18UNC-2A SKT HEAD 4 3/4 LONG	P202107600	STEEL
8	1	VALVE, ASSEMBLY	56046001200	AS PER SUB-ASSEMBLY
7	4	SPACER	58010001000	STEEL
6	1	DRIVE SUB-ASSEMBLY	52076006000	AS PER SUB-ASSEMBLY
5	2	SCREW, NO. 2 TAPPING TYPE B PAN HD 3/16" LONG	Q2240031109	STEEL
4	1	NAMEPLATE	63070005200	ALUMINUM
3	1	PLUG, VENT	62037001500	BRASS
2	1	SOLENOID, (NORMALLY CLOSED)	P02150906000	AS PER SUB-ASSEMBLY
1	1	NIPPLE, CLOSE	P02020013000	BRASS
ITEM NO.	REQ. NO.	DESCRIPTION	PART NO.	MATERIAL
LIST OF MATERIAL				

SYMBOL		REVISIONS	DATE	APPROVED
A	REVISED AS PER ECD #16599			
B	ADDED REF. TO ITEMS 1,2,3,4,5,6,7,8,9 PER ECD #17583	4-2-81		
C	CHANGED ITEM 4, AS2-63070, WAS 1820-048, AS PER ECD #18582	2-29-84		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 FRACTIONS ±  
 DECIMALS ±  
 ANGLES ±

REMOVE ALL BURRS AND SHARP EDGES  
 DO NOT SCALE THIS DRAWING

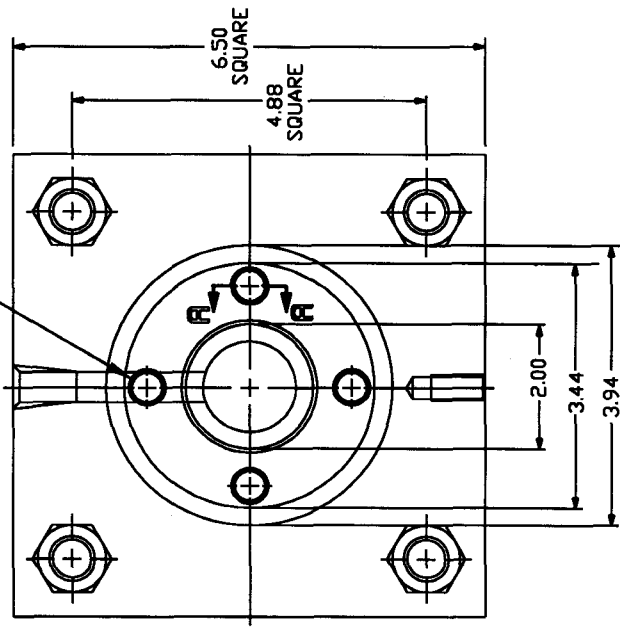
BY: \_\_\_\_\_ NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ FINISH: \_\_\_\_\_  
 PREPARED: \_\_\_\_\_  
 CHECKED: P.Z. / 0-0  
 ENGR/DRGN: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_

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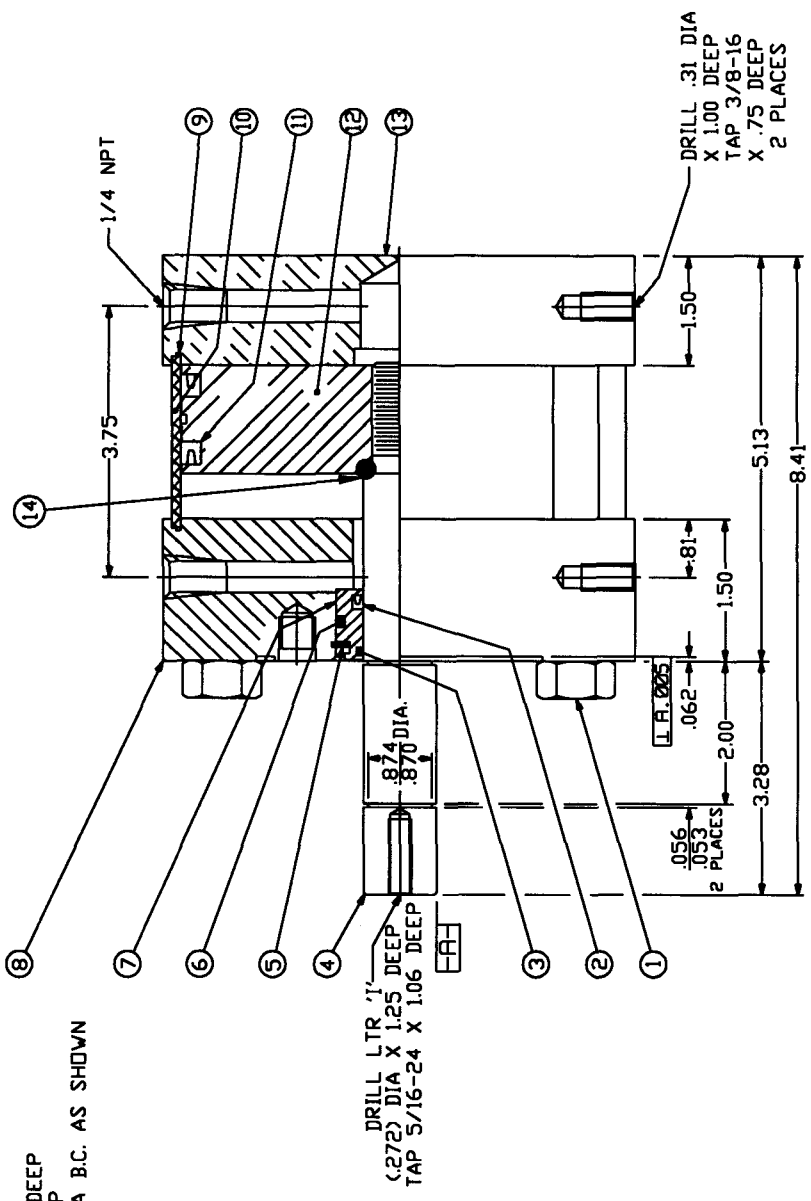
20,000 PSI NORMALLY CLOSED PNEUMATIC OPERATED VALVE ASSEMBLY

CODE IDENT. NO. 59505 SIZE D PART NO. 44-19730 DRAWING NO. 4419730 SCALE WEIGHT SHEET OF

.453 DIA DRILL X 3/4 DEEP  
 TAP 1/2-13 X 5/8 DEEP  
 SPACED ON 2 13/16 DIA B.C. AS SHOWN  
 4 PLACES

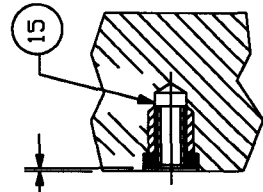


Ⓜ R.005  
 Ⓜ R.005



DRILL LTR '1'  
 (.272) DIA X 1.25 DEEP  
 TAP 5/16-24 X 1.06 DEEP  
 4 PLACES

15 KEYLOCK THREAD INSERT  
 4 REQUIRED 2 PLACES



WITH KEYLOCK THREAD INSERTS  
 INSTALLED

# SECTION A-A

NOTE: SEE SHEET #2 OF THIS  
 DRAWING FOR NOTES,  
 MATERIAL LIST, AND  
 REVISIONS

**UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES:**  
 FRACTIONS ±  
 DECIMALS ±  
 ANGLES ±

**REMOVE ALL BURRS AND SHARP EDGES**

DO NOT SCALE THIS DRAWING

BY	NAME	DATE	FINISH:
PREPARED		1/16/87	
CHECKED			
ENG/DRSM			
APPROVED			

TITLE: LITTLE RICHARD VALVE  
 AIR DRIVE UNIT, 6 IN.

CODE IDENT. NO. 59505  
 SIZE C  
 PART NO. 52076005700  
 DRAWING NO. 5752076

SCALE FULL WEIGHT SHEET 1 OF 2

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**NEWPORT SCIENTIFIC INC.**

ITEM	QTY	DESCRIPTION	DWG/PART NO.
15	4	KEYLOCK THREAD INSERT	P1811002000
14	1	O-RING	P1604010900
13	1	BOTTOM PLATE	52076006400
12	1	PISTON	52076006500
11	2	SEAL, PISTON	P1825003200
10	1	CYLINDER	52076006600
9	2	SEAL, CYLINDER	P1825012500
8	1	TOP PLATE	52076006700
7	1	RETAINER	52076006800
6	1	RETAINER O-RING	P1825002700
5	1	RETAINER RING	P162002100
4	1	ROD	52076006900
3	1	ROD WIPER	P1825002600
2	1	SEAL, ROD	P1825003100
1	4	STUD WITH NUT	52076007000
		DESCRIPTION	DWG/PART NO.
LIST OF MATERIAL			

NOTES:

1. UNIT MUST BE LEAK FREE WITH AIR AT 100 PSI.
2. DO NOT PAINT OR ANODIZE THIS UNIT.
3. KEYLOCK THREAD INSERTS ARE TO BE INSTALLED BY SUPERPRESSURE, INC.
4. 17-4PH H900
5. ELASTUF A2.
6. TOP AND BOTTOM PLATE ARE ALUMINUM.
7. DIMENSIONS ARE FOR REFERENCE ONLY.
8. PACKING KIT PART # 77053001800

REVISIONS

SYM.	DESCRIPTION	DATE
A	CHANGED FROM ROSAN INSERT TO KEYLOCK INSERT	9-12-01

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES:

FRACTIONS ±  
DECIMALS ±  
ANGLES ±

REMOVE ALL BURRS AND SHARP EDGES  
DO NOT SCALE THIS DRAWING

BY: NAME DATE FINISH:

CHECKED: PZ 9/28

ENGR/ISSN

APPROVED

MATERIAL

SEE CHART

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TITLE  
LITTLE RICHARD VALVE  
AIR DRIVE UNIT, 6 IN.

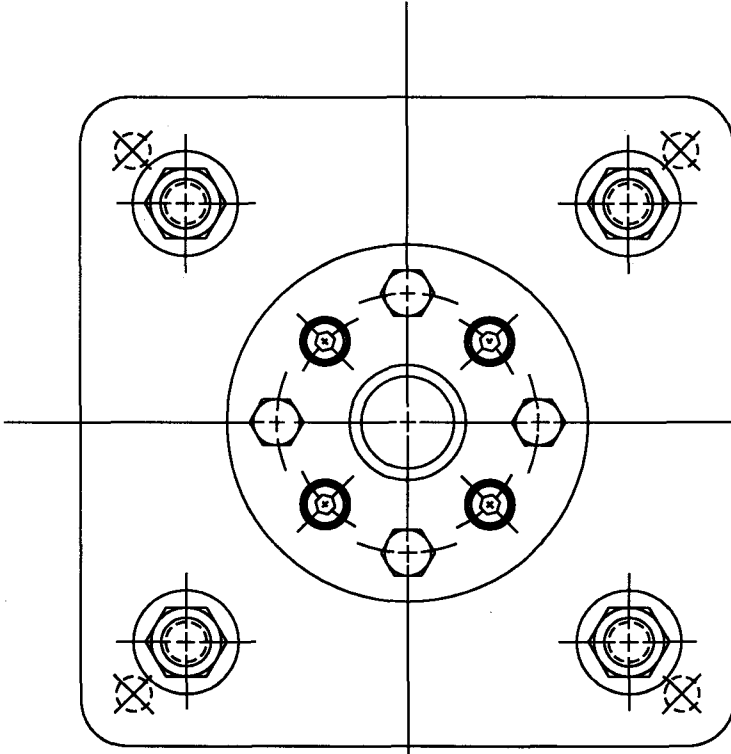
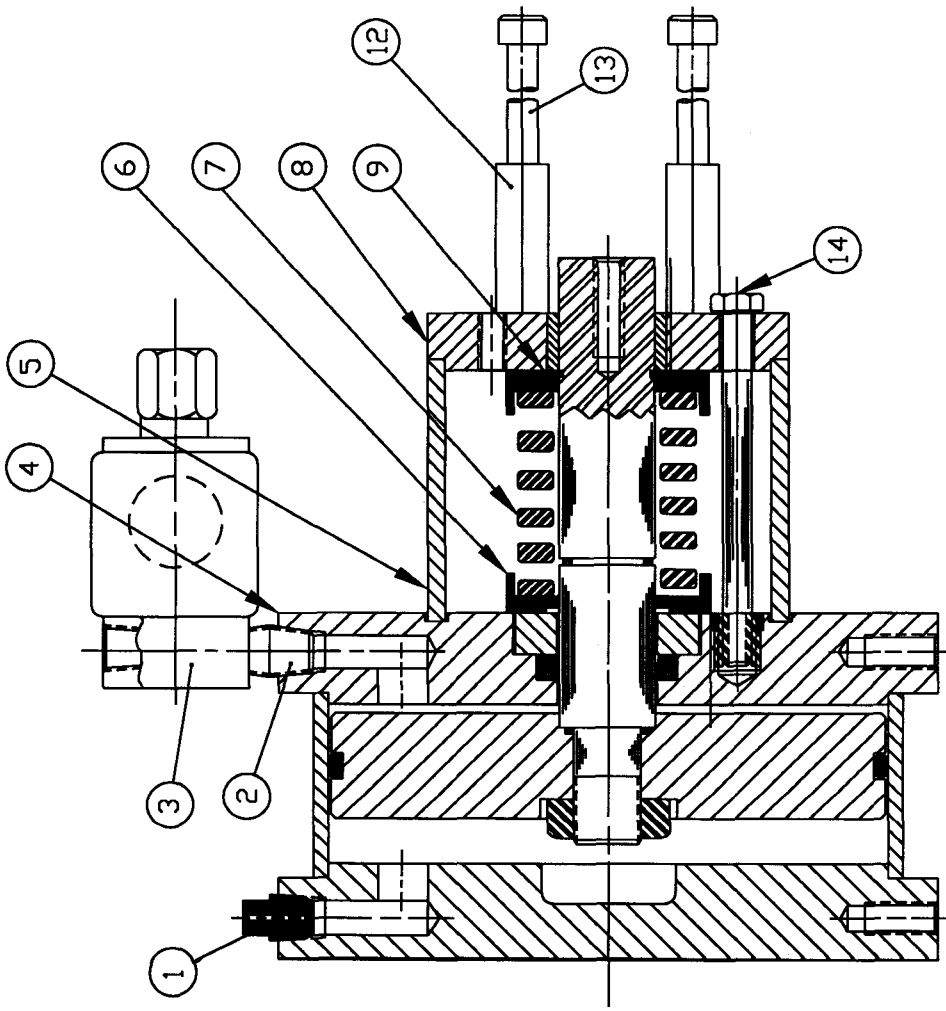
CODE IDENT. NO. 59505  
SCALE C

PART NO. 52076005700  
DRAWING NO. 5752076B

WEIGHT

SHEET 2 OF 2

SYN	REVISIONS	DATE	APPROVED
	DESCRIPTION		



ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL
14	4	P2121076000	SCR., HEX HD., 5/16-18UNC-2A X 3-3/4 LG.	STEEL
13	4	P2021077600	SCR., SKT. HD., 5/16-18UNC-2A X 4-3/4 LG.	STEEL
12	4	58010001000	SPACER	STEEL
11	—	N/A		
10	—	N/A		
9	1	P1620021900	RING, INTERLOCKING, *TRUARC*	
8	1	58010001400	FLANGE, VALVE MOUNTING	
7	1	P1632026900	SPRING, COMPRESSION-COLOR CODE SILVER	
6	2	58010001200	RETAINER, SPRING	
5	1	58010001100	SPACER	
4	1	52076005700	AIR DRIVE UNIT	
3	1	P2015090600	SOLENOID, (NORMALLY CLOSED)	BRASS
2	1	P0202001300	NIPPLE, CLOSE	BRASS
1	1	62037001500	PLUG, VENT	MATERIAL

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES:  
 FRACTIONS ±  
 DECIMALS ±  
 ANGLES ±  
 REMOVE ALL BURRS AND SHARP EDGES  
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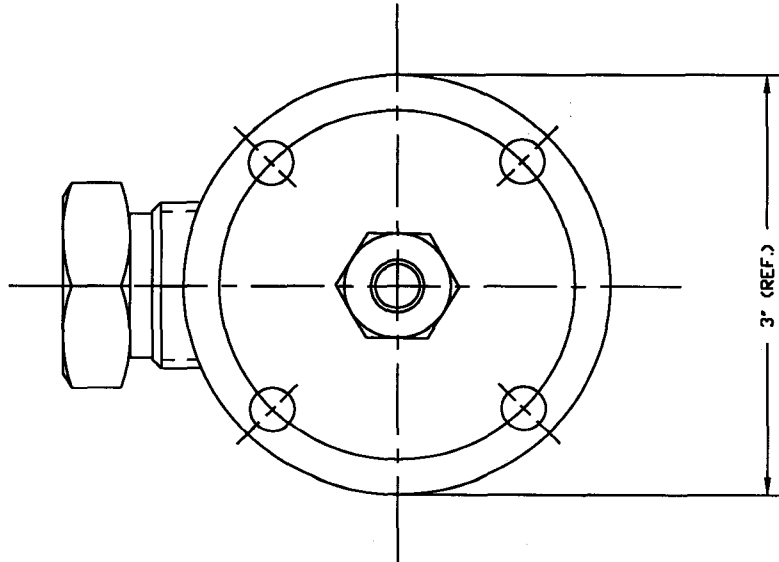
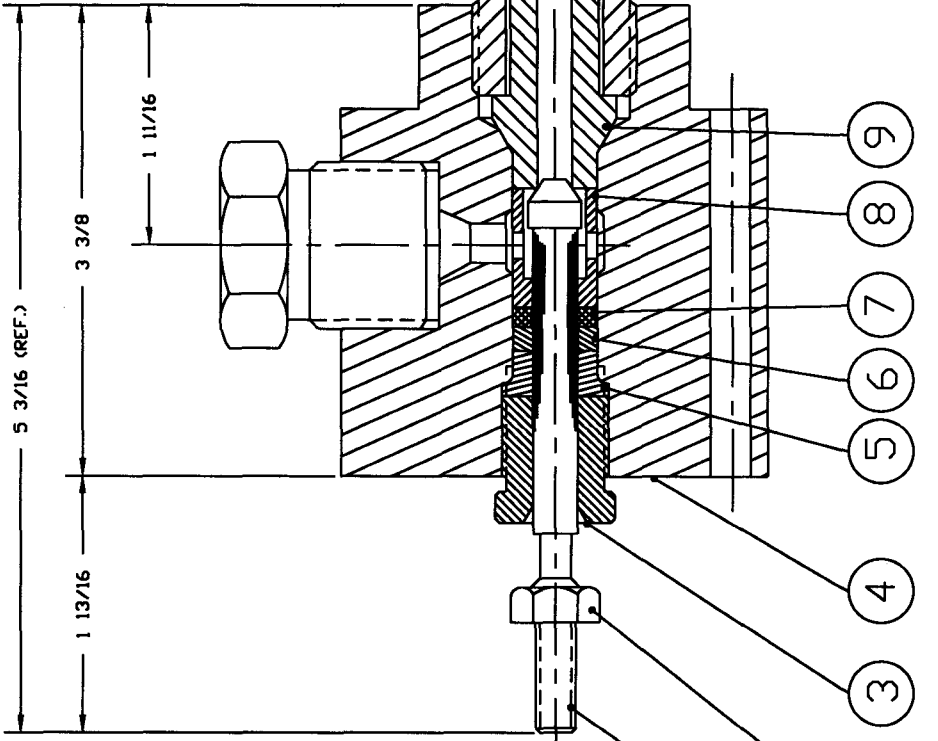
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BY: \_\_\_\_\_ NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PREPARED: \_\_\_\_\_ CHECKED: \_\_\_\_\_ ENGR/RSCH: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
 FINISH: \_\_\_\_\_  
 TITLE: DRIVE UNIT SUB-ASSY  
 NORMALLY CLOSED  
 LITTLE RICHARD  
 CODE DEPT. NO. 59505  
 PART NO. 52076006000  
 DRAWING NO. 6052076  
 SCALE NONE WEIGHT \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_

44-19749-1  
 44-19731  
 44-19730  
 NEXT ASSY USED ON APPLICATION

44-19749-1  
 44-19731  
 44-19730  
 NEXT ASSY USED ON APPLICATION

44-19749-1  
 44-19731  
 44-19730  
 NEXT ASSY USED ON APPLICATION



D44-19790	44-19790
D44-19730	44-19730
D44-19650	44-19650
D44-19620	44-19620
NEXT ASSY	USED ON
APPLICATION	

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES:  
 FRACTIONS ±  
 DECIMALS ±  
 ANGLES ±

REMOVE ALL BURRS AND SHARP EDGES  
 DO NOT SCALE THIS DRAWING

BY: NAME DATE FINISH:  
 PREPARED: 7/20/78  
 CHECKED:  
 ENGR/DRAWN:  
 APPROVED:  
 MATERIAL:

NEWPORT SCIENTIFIC INC.  
 SUPERPRESSURE®

TITLE: PNEUMATIC OPERATED VALVE BODY ASSY - 20,000 PSI

CODE DEPT. NO. SIZE WEIGHT SCALE NONE  
 59505 C

PART NO. 56046001200  
 DRAWING NO. 1256046

AS PER CHART SHEET OF

ITEM	QTY.	DESCRIPTION	PART NO.	MATERIAL
12	2	GLAND NUT	45-11363	416 ST. ST.
11	2	SLEEVE	45-11366	416 ST. ST.
10	1	REMOVABLE SEAT NUT	56046000900	416 ST. ST.
9	1	REMOVABLE VALVE SEAT	56046006200	17-4 PH ST. ST.
8	1	PACKING FOLLOWER	56046001000	416 ST. ST.
7	1	PACKING	44-11471	GLASS FILLED TEFLON
6	1	PACKING FOLLOWER UPPER	62147000900	420 ST. ST.
5	1	THRUST SLEEVE	P1602071300	416 ST. ST.
4	1	GLAND NUT	56046004700	316 ST. ST.
3	1	BODY	52085009402	416 ST. ST.
2	1	NUT, HEX-5/16-24UNF-2A	81052040700	C. R. S.
1	1	VALVE STEM	56047000300	440 C. ST. ST.

- NOTES:
- A. AT ASSEMBLY, LUBRICATE ONLY THE FOLLOWING INTERFACES:  
 1. BETWEEN ITEMS 1 AND 3  
 2. BETWEEN ITEMS 3 AND 4 (THREADS)  
 3. BETWEEN ITEMS 4 AND 10 (THREADS)
- B. TIGHTEN PACKING NUT (ITEM - 3) TO A TORQUE OF 50 FT. LBS. APPROX.
- C. TIGHTEN GLAND NUTS (ITEM - 12) HAND TIGHT FOR PACKING AND SHIPPING ONLY.
- D. TIGHTEN GLAND NUTS (ITEM - 12) TO A TORQUE OF 45 FT. LBS. WITH TUBING INSTALLED.
- E. TIGHTEN SEAT NUT (ITEM - 10) TO A TORQUE OF 200 FT. LBS. APPROX.