



## SERVICE INSTRUCTIONS

### MODEL 58H HIGH LIMIT RELAY

SD58H  
Issue: 4  
June 1994

#### DESCRIPTION (See Figure 1)

The Model 58H High Limit Relay maintains an output pressure equal to the input pressure except when the input pressure increases above the high limit setting; at which time the output pressure will be equal to the high limit setting.

The High Limit Relay consists of a pressure regulator and a 1:1 volume booster. The pressure regulator provides the high limit setting pressure to the 1:1 volume booster. The 1:1 volume booster serves as a low signal selector to choose either the input pressure or the reproduced high limit setting pressure as the High Limit Relay output.

The high limit setting pressure is applied to the top of the exhaust diaphragm and forces the valve plunger open. This allows the input pressure to pass to the output and to the bottom of the exhaust diaphragm. As long as the input pressure to the bottom of the exhaust diaphragm is less than the high limit setting pressure on top of the exhaust diaphragm, the Relay output will be equal to its input. If the input pressure

exceeds the high limit setting pressure, the exhaust diaphragm will move upward, the valve plunger will close, and the input pressure will exhaust until it equals the high limit setting pressure. Thus, the High Limit Relay maintains an output pressure equal to the input pressure except when the input pressure increases above the high limit setting; at which time the output pressure will be equal to the high limit setting.

#### GENERAL SPECIFICATIONS

Normal Input and

Output Range..... 3 to 15 psig

Supply Pressure..... Normal — 20 psig  
Minimum — 1 psig above  
limit setting  
Maximum — 50 psig

Max. Input Pressure..... 50 psig

Limit Adjustment..... 0.5-16 psig

Ambient Temp.

Limits..... - 40°F to + 180°F

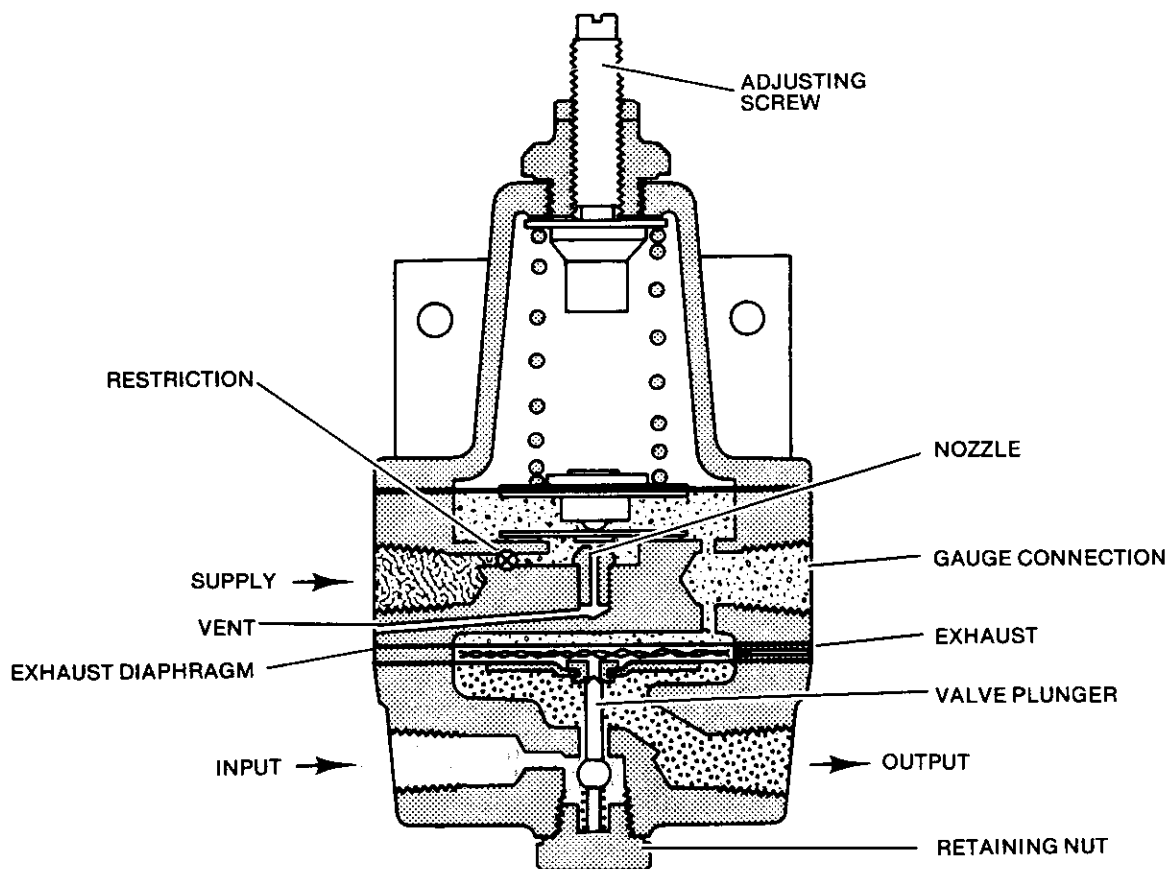


FIGURE 1 Schematic

## INSTALLATION

### GENERAL

Refer to Figure 2 for mounting dimensions and connections.

All connections are 1/4" N.P.T. Use pipe sealant sparingly, and then only on the male threads. A non-hardening sealant is strongly recommended.

#### Caution

Input pressures in excess of 100 psig may cause damage.

### SUPPLY AIR REQUIREMENTS

The Relay should be connected to a source of clean, dry, oil-free instrument air. Failure to do so will increase the possibility of a malfunction or a deviation from the specified performance.

The requirements for a high quality instrument air supply can be found in the Instrument Society of America's "Quality Standard for Instrument Air", (ISA-S7.3).

## MAINTENANCE

### PREVENTATIVE MAINTENANCE

A clean, dry, oil-free instrument air (see SUPPLY AIR REQUIREMENTS) should be used. Providing an instrument air filter for the supply air system will prevent most difficulties arising from a dirty air supply. A periodic check of the filter element and regular blow-down of the dripwell is recommended.

## CLEANING

### Restriction Screw

The restriction screw, sealing screw, cleaning wire and restriction wrench are all located in the center housing. To clean the restriction screw, turn off the supply air and remove the sealing screw with a screwdriver. Remove the restriction screw with the restriction wrench and run the cleaning wire through the restriction to clean it. In stubborn cases, the restriction screw can be soaked in solvent to dissolve the blockage.

### Valve Plunger

To clean the valve plunger and its supply and exhaust seats, it must be removed from the Relay. Turn off the input pressure and remove the retaining nut on the bottom forging. The valve plunger and spring will drop out when this nut is removed. Clean the valve plunger with a non-abrasive solvent. The supply and exhaust seats in the Relay must also be clean. The supply seat is readily accessible; the exhaust seat can be reached by using a tobacco pipe cleaner. Again use a non-abrasive solvent.

### LUBRICATION

An occasional application of light grease to the adjusting screw threads and the screw-end socket will facilitate easy turning of the adjusting screw. No other lubrication is required or recommended.

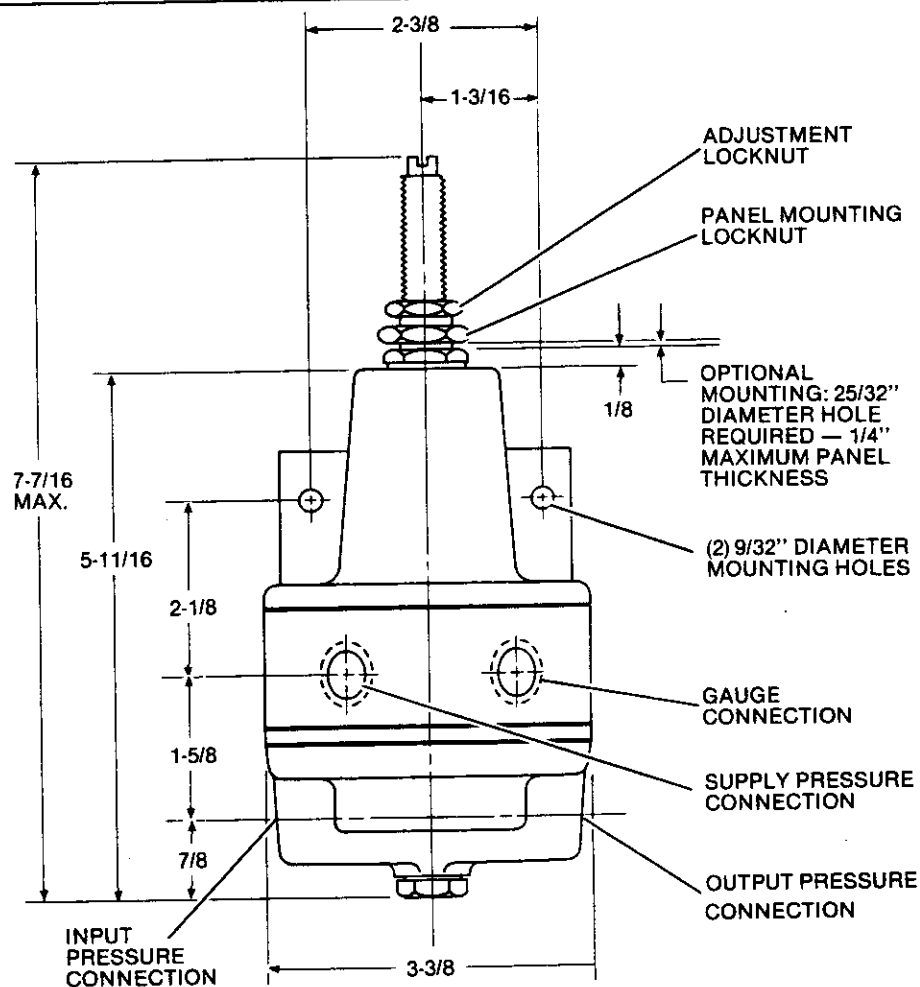


FIGURE 2 Installation

## RETURN FOR REPAIR

### TO RETURN EQUIPMENT

- Call the Service Department at (215) 646-7400, ext 4RMA (4762) weekdays between 8:00 a.m. and 4:45 p.m. Eastern Time to obtain an RMA number. Mark the RMA number prominently on the outside of the shipment.
- When calling for an RMA number, provide the reason for the return. If returning equipment for repair, failure information (e.g., error code, failure symptom, installation environment) will be requested. A purchase order number will also be needed.

### MATERIAL SAFETY DATA SHEET

- A Material Safety Data Sheet (MSDS) must be included with each item being returned that was stored or used anywhere hazardous materials were present.

### PACKAGING

- Package assembly in original shipping materials. Otherwise, package it for safe shipment or contact the factory for shipping recommendations.

An electronic module must be placed inside a static shielding bag to protect it from electrostatic discharge.

## WARRANTY

The Company warrants all equipment manufactured by it and bearing its nameplate, and all repairs made by it, to be free from defects in material and workmanship under normal use and service. If any part of the equipment herein described, and sold by the Company, proves to be defective in material or workmanship and if such part is within twelve months from date of shipment from the Company's factory, returned to such factory, transportation charges prepaid, and if the same is found by the Company to be defective in material or workmanship, it will be replaced or repaired, free of charge, f.o.b. Company's factory. The Company assumes no liability for the consequence of its use or misuse by Purchaser, his employees or others. A defect in the meaning of this warranty in any part of said equipment shall not, when such part is capable of being renewed, repaired or replaced, operate to condemn such equipment. This warranty is expressly in lieu of all other warranties, guaranties, obligations, or liabilities, expressed or implied by the Company or its representatives. All statutory or implied warranties other than title, are hereby expressly negated and excluded.

Warranty repair or replacement requires the equipment to be returned to one of the following addresses.

Equipment manufactured or sold by MOORE PRODUCTS CO.

MOORE PRODUCTS CO.  
Sumneytown Pike  
Spring House, PA 19477 USA

Equipment manufactured or sold by MOORE PRODUCTS CO. (CANADA) INC.

MOORE PRODUCTS CO. (CANADA) INC.  
2KM West of Mississauga Rd. Hwy. 7  
Brampton, Ontario, Canada

Equipment manufactured or sold by MOORE PRODUCTS CO. (UK) LTD.

MOORE PRODUCTS CO. (UK) LTD  
Copse Road,  
Lufton, Yeovil,  
Somerset, BA22 8RN, England

Warranty will be null and void if repair is attempted without authorization by a member of the Moore Products Co. Service Department.

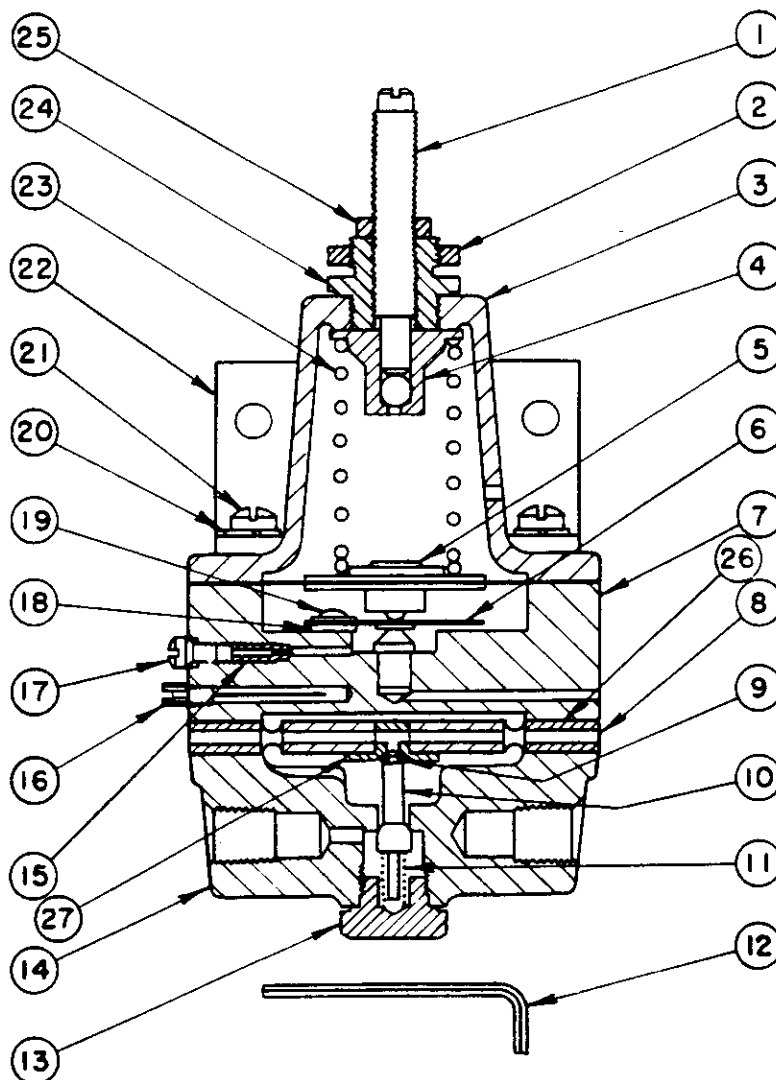
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MOORE PRODUCTS CO.  
SPRING HOUSE, PA.

**PARTS LIST**  
**MOORE HIGH-LIMIT RELAY—MODEL 58H**

Drawing  
No. 7095-11

B/M 7095S13



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
* 1	4647-6	Adjusting Screw	1	*16	1518-4	Cleaning Wire	1
2	3603-14	Mounting Nut	1	*17	2900-23	Sealing Screw	1
3	7095-9	Top Housing	1	18	3850-7	Washer (Lower)	2
4	1447-24	Spring Seat Assy.	1	19a	3092-17	Washer (Upper)	2
5	2932-10	Top Diaphragm Assy.	1	19b	Screw	4-40 x 3/8 Bind. Hd. Self Tapping	2
6	1447-11	Nozzle Seat Assy.	1	20	Lockwasher	1/4, Stil., W.N.P.	6
7	7095-2	Center Housing Assy. (Includes Items 6, 15, 16, 17, 18, 19A, 19B)	1	21a	Screw	1/4-20 x 2-1/4 Lg., Stil., W.N.P.	3
8	7095-34	Diaphragm Ring	1	21b	Screw	1/4-20 x 2-1/2 Lg., Stil., W.N.P.	3
* 9	2938-16	"O" Ring	1	22	1145-19	Mounting Bracket	1
*10	7095-20	Plunger	1	23	572-37	Spring (Blue)	1
*11	2155-7	Spring	1	24	2155-165	Bushing	1
*12	3092-33	Restriction Wrench	1	25	3603-5	Locknut	1
*13	2155-6	Retaining Nut	1	*26	12197-1	Diaphragm	1
14	1803-29	Bottom Forging	1	*27	7095-31	Diaphragm Assy.	1
*15	2900-22	Restriction	1	* —	2155-225	Filter Screen (not shown)	3

\* Recommended On-Hand Spare Parts. Always Specify Model Number and Serial Number When Ordering Spare Parts.