

Application Note 51399 (Revision NEW, 3/2012) Original Instructions



- Mounts vertically or horizontally
- Boost pressure (air only) up to 15 psi [103 kPa] (no fuel mixture allowed)
- Pre-set positive 0.4 ±0.1 inches of water idle outlet pressure at 1.0 CFM (with no boost applied)
- Designed for use in closedloop systems
- Built to withstand extreme vibration conditions

N-H420 Vaporizer/Regulator

5233-1043 Specification

Woodward reserves the right to update any portion of this publication at any time. Information provided by Woodward is believed to be correct and reliable. However, no responsibility is assumed by Woodward unless otherwise expressly undertaken.

N-H420 Vaporizer/Regulator 5233-1043

General Information

The N-H420 two-stage regulator is an LPG liquid withdrawal, high-pressure regulator with a heat exchanger that will vaporize enough fuel for up to 400 hp (298 kW) engines.

	The N-H420 should be installed and maintained per these instructions and all applicable federal, state, and local laws and codes.
	Per the National Fire Protection Association (NFPA) Standard 37 for Stationary Engine Installation and Use: an enclosure or engine room must have adequate ventilation to prevent an accumulation of flammable vapor/gas. If this is not practical, a detection system must be installed.
IMPORTANT	SPECIAL NOTE IN REGARDS TO NFPA PAMPHLET 58: By NFPA definition, a regulator is not considered a positive shut-off valve. An approved automatic shut-off device is required to be installed. This will shut off the fuel supply should the engine fail while unattended. Shut-off devices come in vacuum- or solenoid-actuated configurations.

Operation

With the N-H420's improved vaporization characteristics, liquid propane enters the regulator and then is vaporized using heat from the engine's coolant. Tank pressure is reduced to approximately 1.5 psi. As negative pressure is transmitted from the carburetor to the regulator, the regulator releases propane vapor to the carburetor.





Installation

The N-H420 should be mounted as close to the carburetor as possible, with the fuel outlet placed in the lowest position for best flow.

Service

The N-H420 should be periodically checked for leakage. If the unit requires service, we suggest you take it to a qualified service technician. If not available, Woodward will furnish a list of repair facilities or provide service information.

No.	Part No.	Description	.Qty.
1	1031-1273	Screw – #8-32 x 0.625 Fillister, SEMS, Split Lock Washer	8
2	3550-1571	Cover - W/ Hole, Secondary Diaphragm, Regulator, N-H420	1
3	6612-1010	Diaphragm – Assy, Secondary, Regulator, N-H420	1
4	1031-1273	Screw – #8-32 X 0.625 Fillister, SEMS, Split Lock Washer	8
5	3550-1555	Cover – Assembly, Pos Pressure, Regulator, N-H420	1
6	N-S3-4	Spring – Primary, Regulator, N-H420	2
7	N-D1-3A	Diaphragm – Assembly, Primary, Regulator, N-H420	1
8	N-P1-3	Pin – Primary Valve, Regulator, N-H420	1
9	1223-1150	Plug – 1/8 NPT Hex Pipe Plug N-2007	4
10	N-B1-1A	Body – with Jet Sub-Assy, LPG, Regulator, N-H420	1
11	N-G1-1	Gasket – Gas & Water Chamber, Regulator, N-H420	1
12	N-C1-3A	Plate – Assembly, Inlet, Natural Gas, Regulator, N-H420	1
13	N00-6402	Screw – 1/4-20 UNC x 5/8 Hex Head, SEMS	4
14	1031-1311	Screw - 10-24 UNC x 0.625, Fil Hd, SEMS w/LW	12

Ordering Information

Part No.

5233-1043

Description

N-H420 Regulator, Orange Spring with Silicone Diaphragm

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication 51399.



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