



conEdison

LAST REVIEW DATE:
3/26/12

REVIEW CYCLE:
5 Years

SPECIFICATION: G-2041-1

TITLE: REQUIREMENTS FOR THE
INSTALLATION OF GAS UTILIZATION
EQUIPMENT THAT MIXES PRESSURIZED
OXYGEN WITH NATURAL GAS

VOLUME: 4 and Gas Blue Book

REGISTRATION NO.: GAS0403

**TARGET TRAINING:
GROUPS** Gas Distribution Services, Energy Services

REVISIONS: (See ★)

- 1) Section 2.0 - Deleted New York City Building Code. Revised NYC Fire Dept requirements to specify the NYC Fire Code Section FC 2609.



Gas Operations Standards

**TITLE: REQUIREMENTS FOR THE
INSTALLATION OF GAS UTILIZATION
EQUIPMENT THAT MIXES PRESSURIZED
OXYGEN WITH NATURAL GAS**

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	SCOPE	2
2.0	LEGAL REQUIREMENTS	2
3.0	ORGANIZATIONS APPLICABLE	2
4.0	RESPONSIBILITIES	2
5.0	CUSTOMER'S NATURAL GAS/OXYGEN EQUIPMENT	3
6.0	ATTACHMENTS	4

ENVIRONMENTAL REVIEW BY: S. Marotta		SAFETY REVIEW BY: S. Marotta		
PREPARED BY:	APPROVED BY:	DATE:	VOLUME: 4	PAGE 1 OF
	Tomas Hernandez Acting Chief Gas Engineer		Application and Design;	4



**TITLE: GUIDELINES FOR PREPARING,
REVIEWING, REVISING AND ISSUING
GAS SPECIFICATIONS AND DRAWINGS.**

S. Yapchanyk	Gas Distribution Engineering	3/26/12	Gas Blue Book	PAGES
--------------	------------------------------	---------	---------------	-------

1.0 **SCOPE**

This specification covers the requirements for the installation of gas utilization equipment that mixes pressurized oxygen with natural gas. This mixing equipment is typically torches used in jewelry manufacturing. This specification applies to all new installations and those existing installations where there have been gas piping changes requiring local municipal inspection and/or approval.

★ 2.0 **LEGAL REQUIREMENTS**

NYC Fire Code, Section FC 2609 "Piping Manifolds and Hose Systems for Fuel Gases and Oxygen"
Occupational Safety and Health Administration Requirements
Local Municipal Codes

3.0 **ORGANIZATIONS APPLICABLE**

Bronx, Queens, Manhattan and Westchester Gas Distribution Services; and Energy Services.

4.0 **RESPONSIBILITIES**

- 4.1 The customer shall notify the Company when they plan to install gas utilization equipment that mixes pressurized oxygen with natural gas.
- 4.2 Energy Services shall be responsible for informing customers of the required equipment as detailed in Section 5.0. The required equipment must be provided and installed by the customer.
- 4.3 Energy Services shall be responsible for ensuring that the required equipment detailed in Section 5.0 is in place and that a certificate (i.e. Blue Card) has been received from the authority having jurisdiction prior to issuing a turn-on request to Gas Distribution Services.
- 4.4 Gas Distribution Services shall be responsible for performing an integrity test on gas piping and gassing in all equipment with the assistance of the customer's plumber or mechanical contractor.
- 4.5 No gas service shall be supplied to a customer who has not made the necessary installations of equipment detailed in Section 5.0.



NUMBER:	DATE:	VOLUME: 4 and Gas Blue Book	PAGE 2
G-8215-0	4/6/07	Application and Design	OF 8 PAGES



TITLE: REQUIREMENTS FOR THE INSTALLATION OF GAS UTILIZATION EQUIPMENT THAT MIXES PRESURIZED OXYGEN WITH NATURAL GAS

5.0 CUSTOMER’S NATURAL GAS/OXYGEN EQUIPMENT

Reference attached schematic drawing 359677 for typical installations of natural gas torch boosters and associated equipment.

5.1 A “Check-All” check valve shall be installed downstream of the gas meter. There should be at least 10 pipe diameters of straight pipe upstream of the check valve. Table XVIII of Con Edison’s “Requirements for Gas Service Installations” (Gas Blue Book) lists acceptable “Check-All” check valves.

5.2 Approved flashback arrestors shall be installed upstream of the torch(es) on both the natural gas and oxygen supply lines. The flashback arresters may be installed either on the header pipe that supplies multiple torches **or** on each individual torch. Table XVIII of Con Edison’s “Requirements for Gas Service Installations” (Gas Blue Book) lists acceptable gas and oxygen models for both situations.

5.3 A natural gas torch booster approved by the NYC Fire Department and NYC Department of Buildings (or local municipal codes for Westchester locations) shall be installed as per manufacturer’s guidelines.

NOTE: In this situation, the natural gas torch booster is considered to be an appliance as opposed to the larger natural gas boosters covered in specification G-2040.

5.4 An accessible appliance control valve shall be installed upstream of the natural gas booster.

5.5 Oxygen shall be supplied as required by the NYC Fire Department and NYC Department of Buildings (or local municipal codes for Westchester locations). This supply is typically from an oxygen generator.

5.6 When a natural gas torch booster supplies multiple torches, the authority having jurisdiction may require hard piping from the gas torch booster to each work bench. When multiple torches are supplied, an appliance control valve shall be installed upstream of each individual torch (this is in addition to the appliance control valve specified in 5.4).



NUMBER:	DATE:	VOLUME: 4	PAGE 2
G-2041-1	3/26/12	Application and Design; Gas Blue Book	OF 4 PAGES



**TITLE: REQUIREMENTS FOR THE INSTALLATION OF
GAS UTILIZATION EQUIPMENT THAT MIXES
PRESURIZED OXYGEN WITH NATURAL GAS**

6.0 **ATTACHMENTS**

Appendix A - Photograph of a Typical Natural Gas Torch Booster

359677 - "Typical Installation of Natural Gas Torch Booster and Associated Equipment"



NUMBER:	DATE:	VOLUME: 4	PAGE 3
G-2041-1	3/26/12	Application and Design; Gas Blue Book	OF 4 PAGES

Appendix A: Photograph of a Typical Natural Gas Torch Booster



Regulator
(supplied with
torch booster)

**Flashback Arrestor
for Natural Gas**

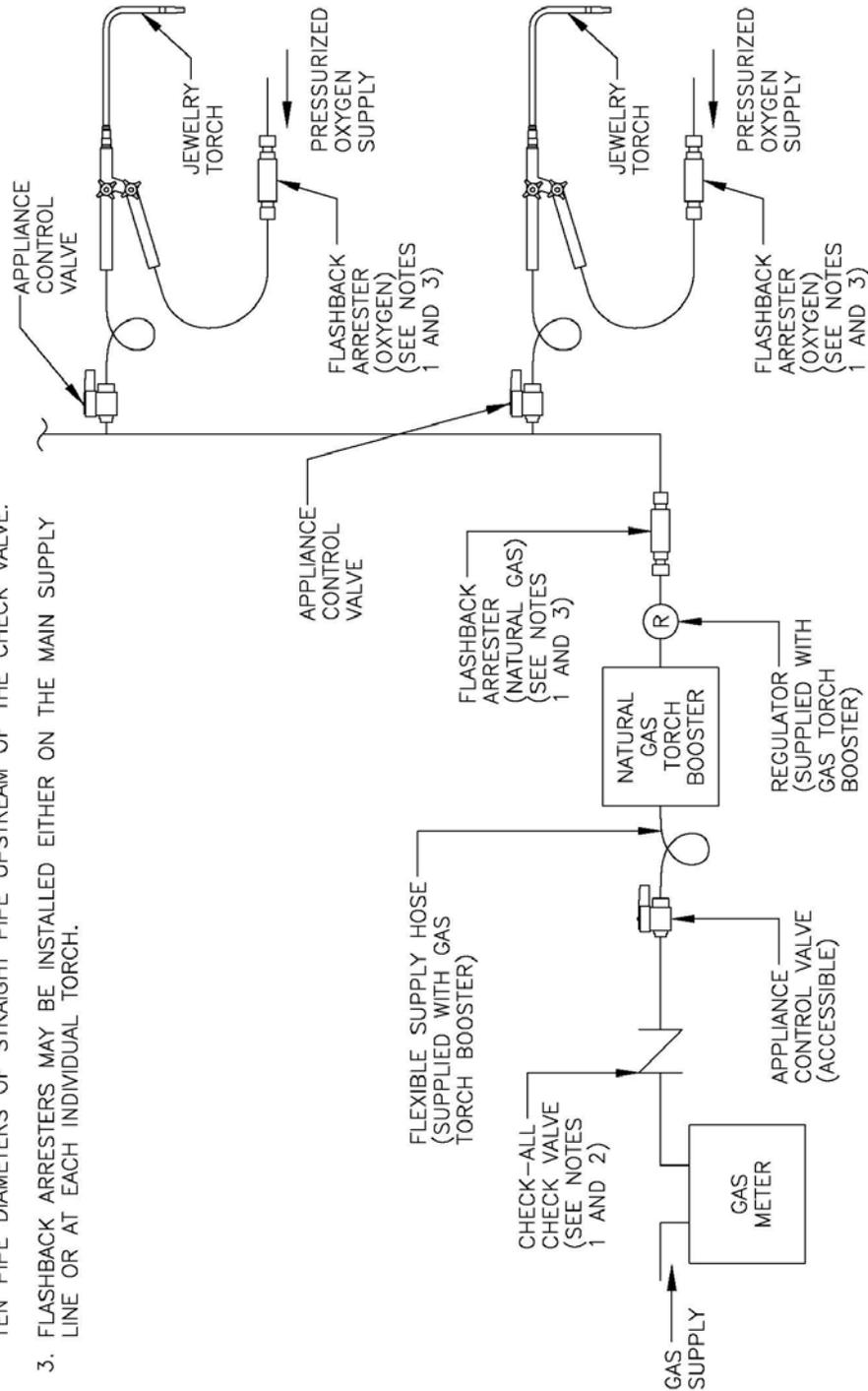
359677-0

REVISIONS

M. BALDOVIN	0
P.L.S.	4/5/07
M.BALDOVIN 3/27/12	1
DELETED REV. NO. FROM REFERENCE SPEC.	
H. D.	3/15/12

NOTES:

1. REFER TO CON EDISON "REQUIREMENTS FOR GAS SERVICES" (TABLE XVIII).
2. CHECK-ALL CHECK VALVE CAN BE INSTALLED IN THE HORIZONTAL OR VERTICAL (WITH FLOW DOWNWARD) POSITION. THERE SHOULD BE AT LEAST TEN PIPE DIAMETERS OF STRAIGHT PIPE UPSTREAM OF THE CHECK VALVE.
3. FLASHBACK ARRESTERS MAY BE INSTALLED EITHER ON THE MAIN SUPPLY LINE OR AT EACH INDIVIDUAL TORCH.



REFERENCE SPECIFICATION G - 2041

TYPICAL INSTALLATION OF NATURAL GAS TORCH BOOSTER AND ASSOCIATED EQUIPMENT

CONSOLIDATED EDISON COMPANY OF N.Y., INC.
GAS OPERATIONS DEPARTMENT

DATE 4/5/07

DWG. 359677 REV. 1