



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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## MITTEILUNG

ausgestellt von:

**Kraftfahrt-Bundesamt**

über die Erweiterung der Genehmigung  
für einen Typ eines CNG/LNG-Bauteils nach der Regelung Nr. 110  
einschließlich der Änderung 01

## COMMUNICATION

issued by:

**Kraftfahrt-Bundesamt**

concerning approval extended  
of a type of CNG/LNG component pursuant to Regulation No. 110  
including amendment 01

Nummer der Genehmigung: **010107**  
Approval No.

Erweiterung: **03**  
Extension No.

1. Betreffendes CNG/LNG -Bauteil:  
CNG/LNG component considered:  
**Flexible Kraftstoffleitungen**  
**Flexible fuel lines**

Typ:

type:

**SS-TC8TM12TM12**

2. Fabrik- oder Handelsmarke:  
Trade name or mark:

**Swagelok**

Ausführungen:

variants:

**SS-TC8TM12TM12**

**SS-TC4EC1EC2-xxx-093**

**SS-TC6EC1EC2-xxx-093**

**SS-TC8EC1EC2-xxx-093**

**SS-TC12EC1EC2-xxx-093**



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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2

Nummer der Genehmigung: 010107, Erweiterung 03  
Approval No.:

3. Name und Anschrift des Herstellers:  
Manufacturer's name and address:  
**Swagelok Company**  
**US-Solon, OH 44139**
4. Gegebenenfalls Name und Anschrift des Vertreters des Herstellers:  
If applicable, name and address of manufacturer's representative:  
**entfällt**  
**not applicable**
5. Zur Genehmigung vorgelegt am:  
Submitted for approval on:  
**10.10.2016**
6. Technischer Dienst, der die Prüfungen für die Genehmigungen durchführt:  
Technical service responsible for conducting approval tests:  
**KIWA Nederland B.V.**  
**NL-7300 AC Apeldoorn**
7. Datum des Gutachtens des Technischen Dienstes:  
Date of report issued by that service:  
**06.10.2016**
8. Nummer des Gutachtens des Technischen Dienstes:  
Number of report issued by that service:  
**160700908**
9. Die Genehmigung wird **erweitert**  
Approval **extended**



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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3

Nummer der Genehmigung: 010107, Erweiterung 03  
Approval No.:

10. Grund oder Gründe für die Erweiterung der Genehmigung:  
Reason(s) of extension of approval:  
**eine weitere Ausführung kommt hinzu**  
**further version is added**

**Wechsel des Technischen Dienstes**  
**change of technical service**

11. Ort: **DE-24932 Flensburg**  
Place:
12. Datum: **08.11.2016**  
Date:
13. Unterschrift: **Im Auftrag**  
Signature:

(Jörg Burgkhardt)



14. Die mit dem Antrag auf Erteilung einer Genehmigung oder Erweiterung eingereichten Unterlagen sind auf Anforderung erhältlich.  
The documents filed with the application or extension of approval can be obtained upon request.



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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4

Nummer der Genehmigung: 010107, Erweiterung 03  
Approval No.:

## Anlage Appendix

zur ECE-Typgenehmigungs Mitteilung Nr. **010107, Erweiterung 03**  
to ECE type-approval certificate No.

1. Zusätzliche Angaben zur Typgenehmigung eines Typs eines CNG/LNG-Bauteils nach der Regelung Nr. 110  
Additional information concerning the type approval of a type of CNG/LNG components pursuant to Regulation No. 110
  - 1.11. Flexible Kraftstoffleitungen  
Flexible fuel lines
    - 1.11.1. Arbeitsdruck (Arbeitsdrücke): **max. 30 bar / 3 Mpa / -40 °C up to +120 °C**  
Working pressure(s):
    - 1.11.2. Werkstoff: **Carbon black-filled PTFE core tube  
with type 304 stainless steel  
overbraid. Both ends of the hoses  
have stainless steel end-connections.**  
Material:



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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Nr. der Genehmigung: 010107, Erweiterung 03  
Approval No.:

- Anlage -

## Nebenbestimmungen und Rechtsbehelfsbelehrung

### Nebenbestimmungen

Die Einzelerzeugnisse der reihenweisen Fertigung müssen mit den Genehmigungsunterlagen genau übereinstimmen. Die in der bisherigen Genehmigung enthaltenen Auflagen gelten auch für diese Erweiterung.

Das bisherige Genehmigungszeichen

**E1** 110 R - 010107

wird geändert in:

**E1** 110 R - 010107 "C"

### Rechtsbehelfsbelehrung

Gegen diese Genehmigung kann innerhalb eines Monats nach Bekanntgabe Widerspruch erhoben werden. Der Widerspruch ist **beim Kraftfahrt-Bundesamt, Fördestraße 16, DE-24944 Flensburg**, schriftlich oder zur Niederschrift einzulegen.



# Kraftfahrt-Bundesamt

DE-24932 Flensburg

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2

Nummer der Genehmigung: 010107, Erweiterung 03  
Approval No.:

- Attachment -

## **Collateral clauses and instruction on right to appeal**

### **Collateral clauses**

The individual production of serial fabrication must be in exact accordance with the approval documents. The requirements contained in the previous approval are also valid for this amendment.

### **Instruction on right to appeal**

This approval can be appealed within one month after notification. The appeal is to be filed in writing or as a transcript at the **Kraftfahrt-Bundesamt, Fördestraße 16, DE-24944 Flensburg**.

- NOTES:
- 1.) XXX = CUSTOMER REQUESTED LENGTH
  - 2.) 093 = DESIGNATOR FOR ECE R110 HOSE
  - 3.) EC1 & EC2 REPRESENT END CONNECTIONS FROM TABLE.
  - 4.) LABELS ARE PLACED A MAX OF EVERY 45cm [18"] ALONG HOSE
  - 5.) END CONNECTION ATTACHMENT IS BY EITHER OF TWO EQUIVALENT METHODS.
  - 6.) S AFTER XXX = HOSE LENGTH SPRING GUARD.
  - 7.) LABELS WITH ECE R-110 INFORMATION ARE VISIBLE BETWEEN SPRING GUARD.

**Swagelok**

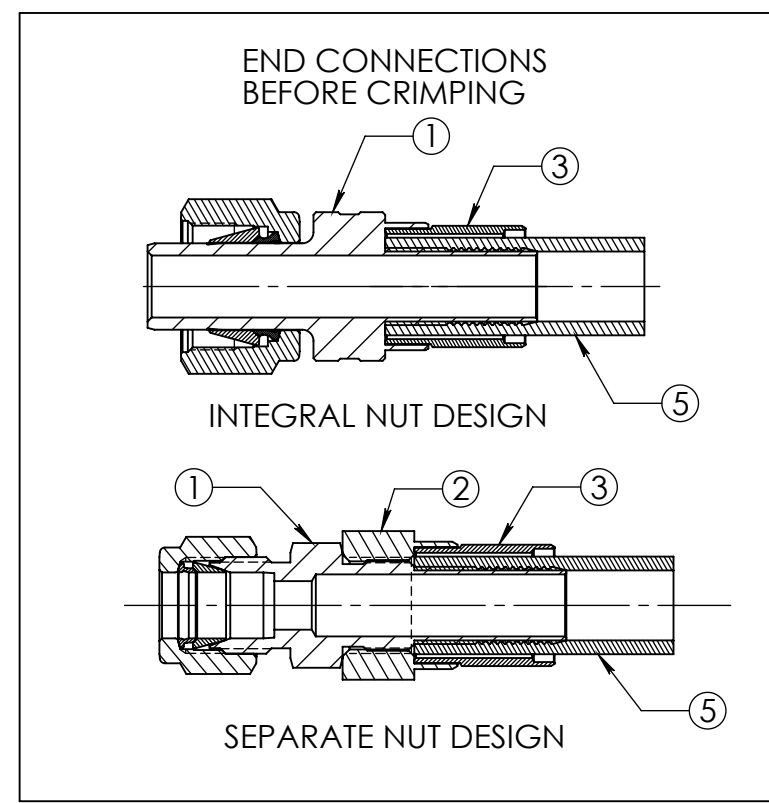
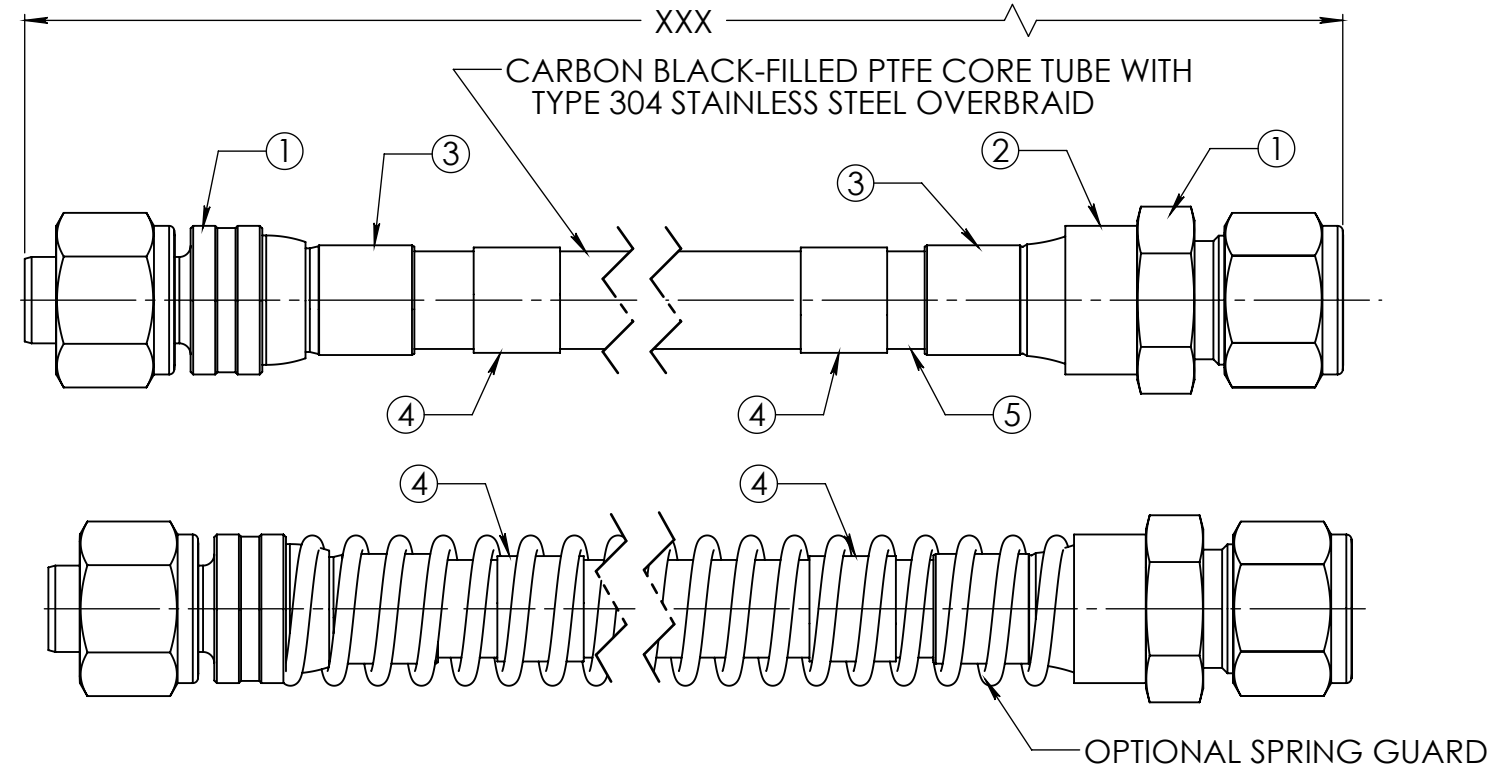
**CNG Class 1**  
-40°C to +120°C(C) **E1** Mo./Yr.

**1/4" Medium Pressure Hose 110 R - 010107**

LABEL

LABEL DESCRIPTION:  
BLACK LABEL W/SILVER TEXT  
ADHESIVE TYPE = 3M 468

ITEM	DESCRIPTION
1	END CONNECTION
2	NUT
3	SLEEVE
4	LABEL
5	HOSE



END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGELOK TUBE FITTING	FRACTIONAL - 1/4" and 5/16"	SL4 and SL5
	METRIC - 6MM and 8MM	SM6 and SM8
SWAGELOK TUBE ADAPTER	FRACTIONAL - 1/4" and 5/16"	TA4 and TA5
	METRIC - 6MM and 8MM	TM6 and TM8
MALE PIPE THREADS	NPT - 1/4"	PM4
	ISO 7 - 1/4"	MT4
37° MALE FLARE	1/4"	AN4
SAE MALE (O-RING)	1/8" to 1/4"	ST2,...ST4

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TOLERANCE ON ENGLISH DIMENSIONS UNLESS OTHERWISE SPECIFIED

.XX ±.031  
.XXX ±.015  
ANGLES ±1 DEGREE

-- DIMENSIONS ARE INCHES NEXT TO [MILLIMETERS].

TITLE APPROVAL DRAWING

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SAP CHANGE NUMBER DCN-00023886

**Swagelok**

DWG. NO. SS-TC4EC1EC2-XXX-093

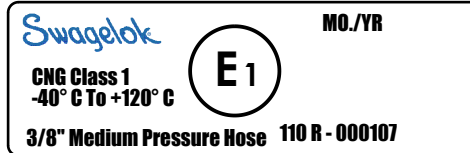
SHEET 1 of 1  
SCALE NONE  
REV. A

NOTES:

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- 2.) 093 = DESIGNATOR FOR ECE R110 HOSE
- 3.) EC1 & EC2 REPRESENT END CONNECTIONS FROM TABLE
- 4.) LABELS ARE PLACED A MAX OF EVERY 18" ALONG HOSE.
- 5.) END CONNECTION ATTACHMENT IS BY EITHER OF TWO EQUIVALENT METHODS.

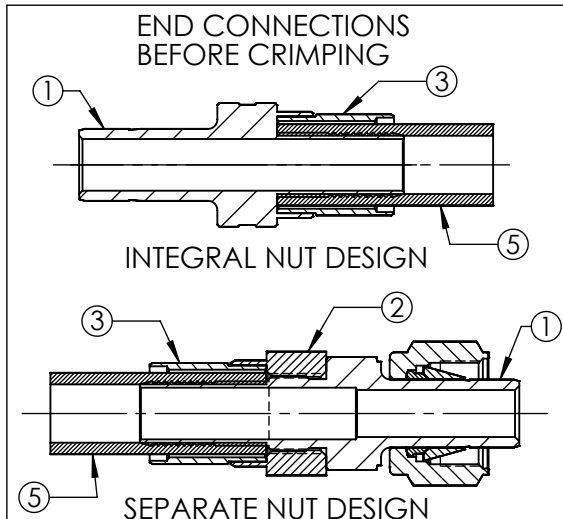
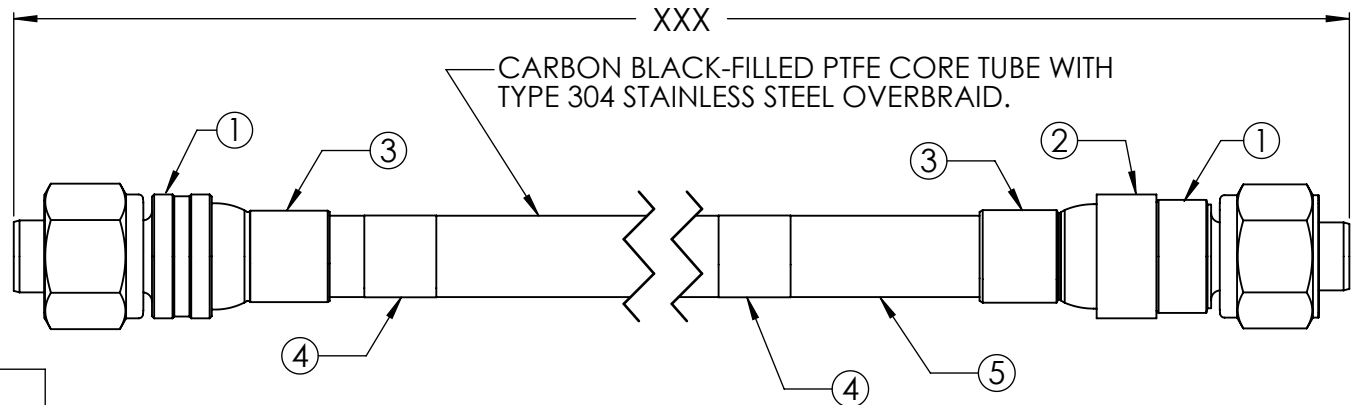
PART NO. SS-TC6EC1EC2-XXX-093

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LABEL DESCRIPTION:  
BLACK LABEL W/SILVER TEXT  
ADHESIVE TYPE = 3M 468

ITEM	DESCRIPTION
1	END CONNECTION
2	NUT
3	SLEEVE
4	LABEL
5	HOSE



END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGELOK TUBE FITTING	FRACTIONAL - 3/8"	SL6
	METRIC - 8MM and 10MM	SM8 and SM10
SWAGELOK TUBE ADAPTER	FRACTIONAL - 3/8"	TA6
	METRIC - 8MM and 10MM	TM8 and TM10
MALE PIPE THREADS	NPT - 1/4" and 3/8"	PM4 and PM6
	ISO 7 - 1/4" and 3/8"	MT4 and MT6
37° MALE FLARE	3/8"	AN6
SAE MALE (O-RING)	1/4" to 1/2"	ST4,... ST8

CUSTOMER DRAWING



- DRAWING NOT TO SCALE.  
- DIMENSIONS ARE INCHES  
NEXT TO [MILLIMETERS].  
- DRAWING IS SUBJECT TO CHANGE  
WITHOUT NOTICE.

DRAWN BY  
MAM Jun-13-13

APPROVED BY  
CSR-13-05419

TITLE  
3/8" PTFE HOSE W/CARBON BLACK CORE

PART NO. SS-TC6EC1EC2-XXX-093



- NOTES:
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  - 5.) END CONNECTION ATTACHMENT IS BY EITHER OF TWO EQUIVALENT METHODS.
  - 6.) S AFTER XXX = HOSE-LENGTH SPRING GUARD.
  - 7.) LABELS WITH ECE R-110 INFORMATION ARE VISIBLE BETWEEN SPRING GUARD.

Swagelok

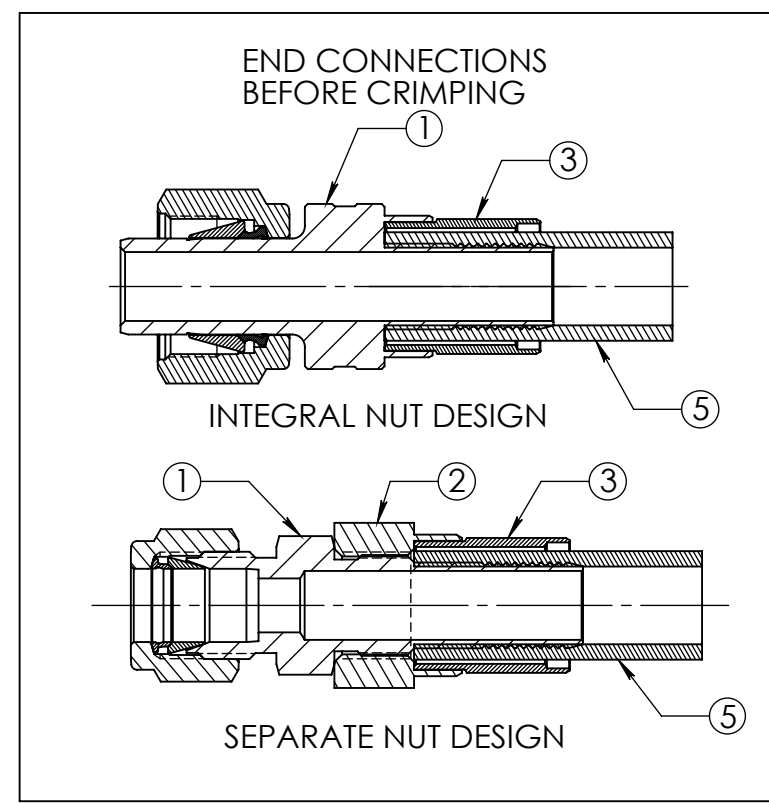
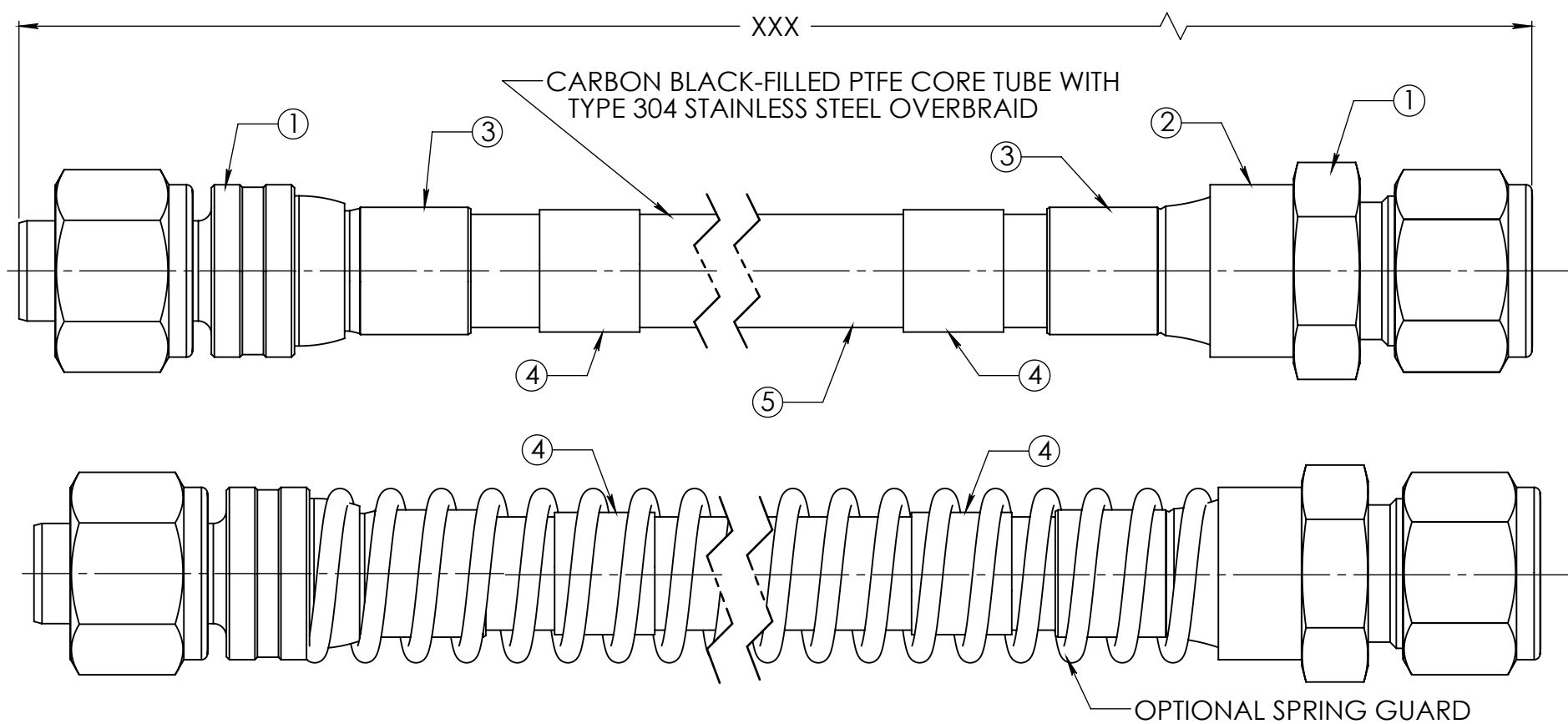
**E1** Mo./Yr.

**CNG Class 1**  
-40°C to +120°C(C)

**1/2" Medium Pressure Hose** **110 R - 010107**

LABEL DESCRIPTION:  
BLACK LABEL W/SILVER TEXT  
ADHESIVE TYPE = 3M 468

ITEM	DESCRIPTION
1	END CONNECTION
2	NUT
3	SLEEVE
4	LABEL
5	HOSE



END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGELOK TUBE FITTING	FRACTIONAL - 3/8" to 5/8"	SL6, .....SL10
	METRIC - 10MM to 16MM	SM10,... SM16
SWAGELOK TUBE ADAPTER	FRACTIONAL - 3/8" to 5/8"	TA6,... TA10
	METRIC - 10MM to 16MM	TM10,... TM16
MALE PIPE THREADS	NPT - 3/8" and 1/2"	PM6 and PM8
	ISO 7 - 3/8" and 1/2"	MT6 and MT8
37° MALE FLARE	1/2"	AN8
SAE MALE (O-RING)	3/8" TO 5/8"	ST6,... ST10

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.XX ±.031  
.XXX ±.015  
ANGLES ±1 DEGREE

-- DIMENSIONS ARE INCHES NEXT TO [MILLIMETERS].

TITLE APPROVAL DRAWING

SAP CHANGE NUMBER DCN-00023886

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**Swagelok**


DWG. NO. SS-TC8EC1EC2-XXX-093

SHEET 1 of 1  
SCALE NONE  
REV. A

NOTES:

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- 4) END CONNECTION ATTACHMENT IS BY EITHER OF TWO EQUIVALENT METHODS
- 5) S AFTER XXX = HOSE-LENGTH SPRING GUARD.
- 6) LABELS WITH ECE R-110 INFORMATION ARE VISIBLE BETWEEN SPRING GUARD





CNG CLASS 1  
-40 °C to +120 °C (C)  
3/4 in. WORKING PRESSURE OF 30 BAR

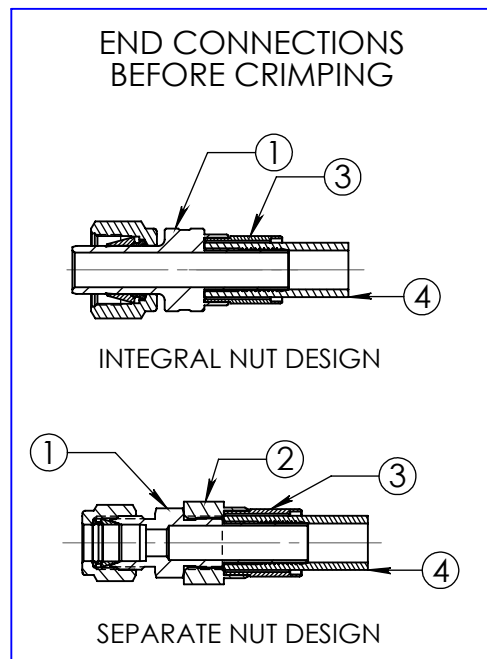
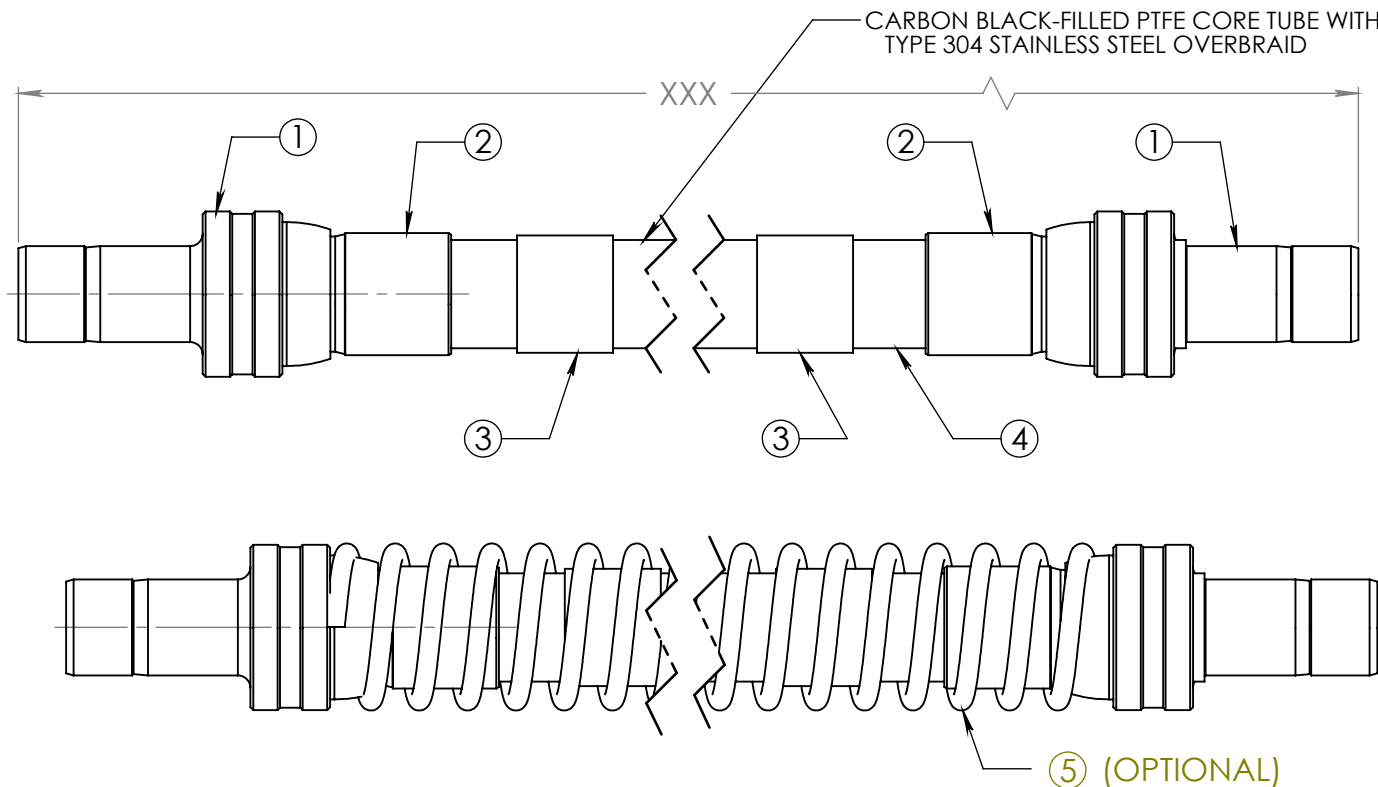
Mo./Year

110R-010107

LABEL DESCRIPTION:  
BLACK LABEL W/SILVER TEXT  
ADHESIVE TYPE = 3M 468

LABEL

ITEM	DESCRIPTION	MATERIAL
1	END CONNECTION	316 SS
2	SLEEVE	316 SS
3	LABEL	AL
4	HOSE	304 SS + PTFE
5	SPRING GUARD	302 SS



END CONNECTION	SIZE	PART NUMBER DESIGNATOR
SWAGELOK TUBE ADAPTER	METRIC - 16MM to 20MM	TM16,... TM20

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES  
 .XX ±.01  
 .XXX ±.005  
 .XXXX ±.0015  
 ANGLES ±30 MINUTES  
 INTERPRET DIM. AND TOL. PER ASME Y14.5M-1994

TITLE	3/4" PTFE HOSE W/CARBON BLACK CORE
MATERIAL	SAP CHANGE NUMBER
	DCN-00093918



DWG. NO. SS-TC12-ECE-APPROVAL

SHEET	1 of 1
SCALE	0.75:1
REV.	A