



14th Floor, Centre Tower  
3300 Bloor Street West  
Toronto, Ontario  
Canada M8X 2X4  
Tel.: 416.734.3300  
Fax: 416.231.1626  
Toll Free: 1.877.682.8772  
[www.tssa.org](http://www.tssa.org)

March 22, 2012

CYNTHIA FORMANIUK  
ALBERTA BOILERS SAFETY ASSOCIATION  
9410-20 AVENUE  
EDMONTON AB T6N 0A4  
CA

**Service Request Type:** BPV-Fitting Registration  
**Service Request No.:** 730776  
**Your Reference No.:** 2011-02791

Dear CYNTHIA FORMANIUK,

Technical Standards and Safety Authority (TSSA) is pleased to inform you that your submission on February 02, 2012 has been reviewed and registered as follows:

CRN No.: 0B15184.5  
Reference No.: 2011-02791  
Main Design No.: CATALOG- FLANGED CONNECTORS 1/4" THRU 1" #150-2500  
Expiry Date: 22-Mar-2022

Please be advised that a valid quality control system must be maintained for the fitting registration to remain valid until the expiry date.

CRN Note: 1. See attached 4 page, "Part of CRN" for the scope.  
2. The CRN has referenced ABSA's CRN, 0B11767.2.

A stamped copy of the approved registration and invoice for engineering services will be mailed to you shortly. Should you have any questions or require further assistance, however, please contact a Customer Service Advisor at 1.877.682.TSSA (8772) or e-mail [customerservices@tssa.org](mailto:customerservices@tssa.org). We will be happy to assist you. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Charley Dong, P.Eng.

Tel.: 416-734-3436  
Fax: 416-231-6183  
Email: [cdong@tssa.org](mailto:cdong@tssa.org)

**sturner1@parker.com** <sturner1@parker.com>

Thu, Mar 22, 2012 at 2

To: Charley Dong <cdong@tssa.org>

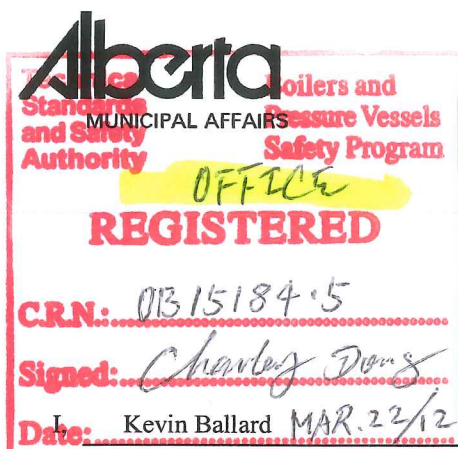
Cc: james.norris1@parker.com

Hello Charley, as per our conversation, please proceed with issuing a new Ontario CRN for this project

Thank you

Susan Turner  
Customer Service- Western Canada  
Parker Hannifin Corporation  
Instrumentation Products Division  
4635 Durham Rd., S  
Grimsby, Ontario  
L3M 4G4

ph 905.309.8255 (direct)  
ph 905.945.2274 (switchboard)  
fax 905.945.2203  
Mailto:sturner1@parker.com



CRN NOTE: (1) SEE ATTACHED PART OF  
CRN FOR THE SCOPE.

(2) ABSA'S CRN, 0B11767.2 IS REFERENCED.

**ABSA**

the pressure equipment safety authority

# **STATUTORY DECLARATION Registration of Fittings**

In this space, show facsimile  
of manufacturer's logo or  
trademark as it will appear on  
the fitting.



Core Engineering Manager

(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)

of Parker Hannifin, IPDE

(name of manufacturer)

located at Riverside Road, Barnstaple, Devon, EX31 1NP

(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act  
(check one)

- ☐ comply with the requirements of \_\_\_\_\_ which specifies the dimensions,  
(title of recognized North American Standard)  
materials of construction, pressure/temperature ratings and identification marking of the fittings, or
- ☒ are not covered by the provisions of a recognized North American standard and are therefore manufactured to  
comply with ASME B31.3 as supported by the attached data which identifies the dimensions,  
materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings  
for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the  
following authority, DNV Mangement Systems as being suitable for the manufacture of these fittings to the  
stated standard. The fittings covered by this declaration, for which I seek registration, are Flanged Connectors

In support of this application, the following information, calculations and/or test data are attached:

Flanged to Compression Connector Flange Hub Wall Thickness Calculations

Flanged Products Catlogue 4190-FP-ACC page 4

DECLARED before me at Barnstaple in the County of Devon

this 9<sup>th</sup> day of December, 2011  
(Month) (Year)

(print) Kevin Ballard

(sign) Kevin Ballard  
(A Commissioner for Oaths)

Charles Dons  
(Signature of Applicant)

## **For Office Use Only**

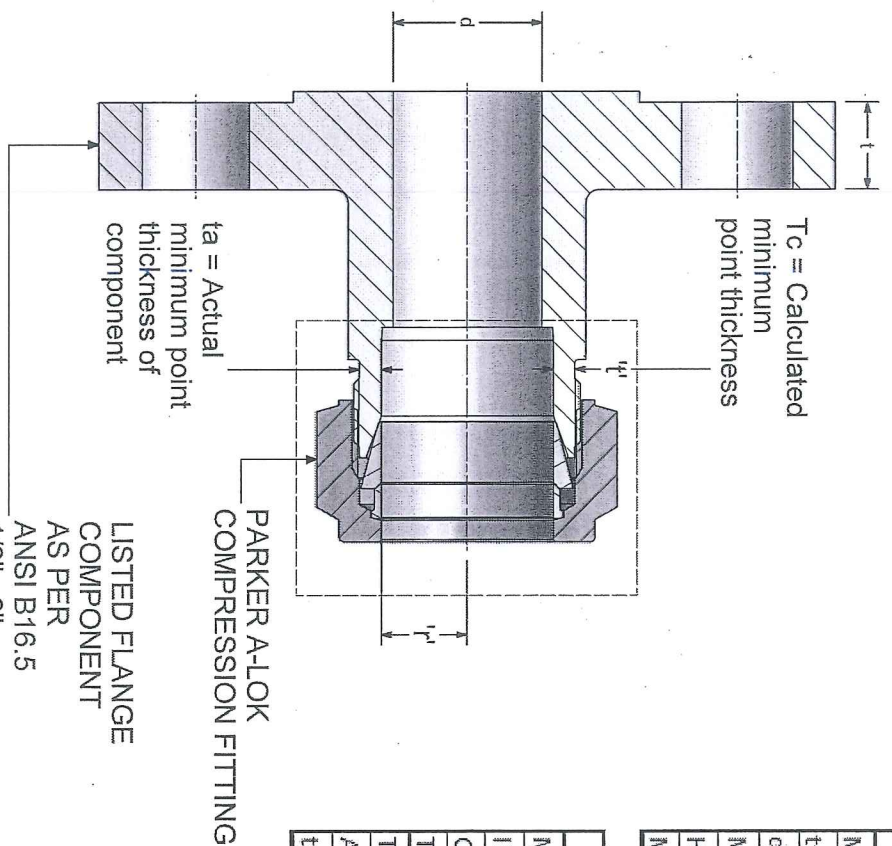
To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard  
B51, Clause 4.2, and is accepted for registration in Category B

Registration Number: 0B15184.5

Date Registered: MAR. 22, 2012

Charles Dons  
(For the Administrator/Chief Inspector of Alberta)  
Expiry Date: MAR. 22, 2022

THIS IS PART OF  
CRN 00315184.5  
Technical Standards & Safety Authority  
Boilers & Pressure Vessels  
Safety Division



1" Flange Spec	
Material:	A182 F316
t =	1.125" / hub thickness = 1.32"
d =	1"
MAWP =	3600psi @ 100°F; 1750psi @ 1000°F
Hydrotest =	7059psi
MDMT =	-325°F

1" A-LOK Spec	
Material:	A182 F316
ID =	1.4515" ± 0.005"
OD =	1.730" ± 0.005"
Thread Engagement =	0.2238"
Thread size =	1 1/2" 20UN
A-LOK CRN =	0A6793.5
t =	0.23" / r = 0.504"

**316 Stainless Steel / A182 F316**  
Table II-2-2.2 Pressure-Temperature  
Ratings for Group 2.2 Materials  
Page 126 / Class 150 to 2500

**Monel 400 / B564 N04400**  
Table II-2-3.4 Pressure-Temperature  
Ratings for Group 3.4 Materials  
Page 139 / Class 150 to 2500

**Alloy 625 / B564 N006625**  
Table II-2-3.8 Pressure-Temperature  
Ratings for Group 3.8 Materials  
Page 143 / Class 150 to 2500

FOR MATERIAL AND PROCESS SPECIFICATIONS REFER TO GENIIC PROCESS CONTROL SHEET		ALL DIMENSIONS IN UNLESS OTHERWISE STATED	
FOR PART MARKING DETAILS REFER TO PART MARKING SPECIFICATION		DRAWING TITLE :	
THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPERTY TO PARKER HANNIFIN P.L.C. THIS DRAWING IS DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF PARKER HANNIFIN. WILL NOT BE USED TO THE DETRIMENT OF PARKER HANNIFIN, AND WILL BE RETURNED UPON REQUEST BY PARKER HANNIFIN.		FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS	
ISSUE NO.	1	DESCRIPTION OF REVISION	NEW RELEASE
E.C.N NO.	N/A	DRAWN BY: ZN	DRAWING DATE: 22/06/2011
DATE	12/04/2011	Approvals using electronic PDM WORKFLOW (GSP/05/29)	

INCH	METRIC	ANGULAR	UNLESS STATED PROJECTION
(.001" ± .010")	(.0254 ± .254mm)	± .125°	3rd ANGLE
(.001" ± .005")	(.0254 ± .127mm)	± .062°	

GENERAL MFG FINISH 63min CLAL 1.6min RA  
GEOMETRICAL TOLS TO BS-508 PART 3.  
ALL THREAD TOLERANCES ARE TO BE IN  
ACCORDANCE WITH PARKER IPD ESST01.

PART SIMILAR TO

DO NOT SCALE IF IN DOUBT ASK

FCB CRN Report Revision 2

**Parker**  
Parker Hannifin Ltd  
Instrumentation Products Division Europe  
Riverside Road  
Stoke-on-Trent  
Staffordshire  
ST4 6JG  
+44 (0)1271 313131



Material - 316 Stainless Steel / SA-182 (CXD, per ABSA'S CRN 0B11767.2.) MAR. 21/12

1/4" CWP (PSI) @					
Flange Rating		A-LOK Rating		Flange Rating	
Class	100°F Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6000	2915	10300	7931	6000
1500	3600	1750	10300	7931	3600
900	2160	1050	10300	7931	2160
600	1440	700	10300	7931	1440
300	720	350	10300	7931	720
150	275	20	10300	7931	275

1/2" CWP (PSI) @					
Flange Rating		A-LOK Rating		Flange Rating	
Class	100°F Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6000	2915	6700	5159	X
1500	3600	1750	6700	5159	3600
900	2160	1050	6700	5159	2160
600	1440	700	6700	5159	1440
300	720	350	6700	5159	720
150	275	20	6700	5159	275

1" CWP (PSI) @					
Flange Rating		A-LOK Rating		Flange Rating	
Class	100°F Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	X	X	X	X	X
1500	3600	1750	4700	3619	3619
900	2160	1050	4700	3619	3619
600	1440	700	4700	3619	3619
300	720	350	4700	3619	3619
150	275	20	4700	3619	3619

X = Products no to be submitted  
Minimum Design Metal Temperature: ~~425°F~~ 325°F

(CXD, per ABSA'S CRN 0B11767.2) MAR. 21/12

THIS IS PART OF  
CRN 0B15184.5  
Technical Standards & Safety Authority  
Boilers & Pressure Vessel  
Safety Division

FOR MATERIAL AND PROCESS SPECIFICATIONS REFER TO GENERIC PROCESS CONTROL SHEET		ALL DIMENSIONS IN UNLESS OTHERWISE STATED		REMOVE ALL SHARP EDGES AND BURRS	
FOR PART MARKING DETAILS REFER TO PART MARKING SPECIFICATION		DRAWING TITLE: FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS		UNLESS STATED 3rd ANGLE PROJECTION	
THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPERTY OF PARKER HANNIFIN P.C. THIS DRAWING IS FURNISHED ON THE UNDERSTANDING THAT THE DRAWING AND THE INFORMATION IT CONTAINS WILL NOT BE COPIED OR DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF PARKER HANNIFIN. WILL NOT BE USED TO THE DETRIMENT OF PARKER HANNIFIN, AND WILL BE RETURNED UPON REQUEST BY PARKER HANNIFIN.		DRAWING NO. 1 New Release		Parker Hannifin Ltd Instrumentation Products Division Europe Beverly Road Ex31 1NP +44 (0)1271 313131	
ISSUE NO. 1		DRAWN BY: ZN		PART SIMILAR TO	
E.C.N NO. N/A		22/06/2011		DO NOT SCALE IF IN DOUBT ASK	
DATE 12/04/2011		Approvals using electronic PDM WORKFLOW (31/05/20)			



Material - Alloy 400 / SB 564 N<sup>o</sup>4400 CRN / MAR 21/12 PER ABCAS CRN 01311767.2

1/4" CWP (PSI) @				3/8" CWP (PSI) @			
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F
2500	5000	3960	9800	4214	5000	3960	6100
1500	3000	2375	9800	4214	3000	2375	6100
900	1800	1435	9800	4214	1800	1435	6100
600	1200	950	9800	4214	1200	950	6100
300	900	475	9800	4214	900	475	6100
150	230	110	9800	4214	230	110	6100

1/2" CWP (PSI) @				3/4" CWP (PSI) @			
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F	Max Temp (700°F)	100°F
2500	5000	3960	6200	2666	5000	3960	5400
1500	3000	2375	6200	2666	3000	2375	5400
900	1800	1435	6200	2666	1800	1435	5400
600	1200	950	6200	2666	1200	950	5400
300	900	475	6200	2666	900	475	5400
150	230	110	6200	2666	230	110	5400

1" CWP (PSI) @			
Flange Rating		A-LOK Rating	
Class	100°F	Max Temp (700°F)	100°F
2500	5000	3960	4300
1500	3000	2375	4300
900	1800	1435	4300
600	1200	950	4300
300	900	475	4300
150	230	110	4300

X = Products no to be submitted

\*\*\* = Max working temperature rated in standard class is 900° F. Ref Page 66 ASME B16.34 1996

Minimum Design Metal Temperature: - 325 °F

THIS IS PART OF  
CRN 01315184-5  
Technical Standards & Safety Authority  
Boilers & Pressure Vessels  
Safety Division

FOR MATERIAL AND PROCESS SPECIFICATIONS REFER TO GENERIC PROCESS CONTROL SHEET		ALL DIMENSIONS IN UNLESS OTHERWISE STATED		REMOVE ALL SHARP EDGES AND BURS	
FOR PART MARKING DETAILS REFER TO PART MARKING SPECIFICATION		DRAWING TITLE:		UNLESS STATED	
THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPERTY OF PARKER HANNIFIN P.L.C. THIS DRAWING IS FURNISHED ON THE UNDERSTANDING THAT THE DRAWING AND THE INFORMATION IT CONTAINS WILL NOT BE COPIED OR REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF PARKER HANNIFIN. WILL NOT BE USED TO THE DETRIMENT OF PARKER HANNIFIN AND WILL BE RETURNED UPON REQUEST BY PARKER HANNIFIN.		FLANGE TO COMPRESSION CONNECTOR FLANGE HUB WALL THICKNESS CALCULATIONS		3rd ANGLE PROJECTION	
ISSUE NO.	1	DESCRIPTION OF REVISION	NEW RELEASE	GENERAL: M/C FINISH 63µm CLA/1.6µm RA GEOMETRICAL TOL'S TO BS.308 PART 3. ALL THREAD TOLERANCES ARE TO BE IN ACCORDANCE WITH PARKER IPD ESSTO1.	
E.C.N NO.	N/A	DRAWN BY:	ZN	PART SIMILAR TO	
DATE	12/04/2011	APPROVED USING ELECTRONIC PDM WORKFLOW (GSP/05/25)	22/06/2011	DO NOT SCALE IF IN DOUBT ASK	





Material - Alloy 625 SB 564 / CND/MAR.21/12 PER ABSA'S CRN, 0311767.2

1/4" CWP (PSI) @				3/8" CWP (PSI) @				
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6250	3030	6800	4964	6250	3030	8700	6351
1500	3750	1820	6800	4964	3750	1820	8700	6351
900	2250	1090	6800	4964	2250	1090	8700	6351
600	1500	725	6800	4964	1500	725	8700	6351
300	750	365	6800	4964	750	365	8700	6351
150	290	20	6800	4964	290	20	8700	6351

1/2" CWP (PSI) @				3/4" CWP (PSI) @				
Flange Rating		A-LOK Rating		Flange Rating		A-LOK Rating		
Class	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)	100°F	Max Temp (1000°F)
2500	6250	3030	6800	4964	6250	3030	4400	3212
1500	3750	1820	6800	4964	3750	1820	4400	3212
900	2250	1090	6800	4964	2250	1090	4400	3212
600	1500	725	6800	4964	1500	725	4400	3212
300	750	365	6800	4964	750	365	4400	3212
150	290	20	6800	4964	290	20	4400	3212

Minimum Design Metal Temperature: - 20 °F

X = Products no to be submitted.

THIS IS PART OF  
CRN 0315184-5  
Technical Standards & Safety Authority  
Boilers & Pressure Vessels  
Safety Division

FOR MATERIAL AND PROCESS SPECIFICATIONS REFER TO GENERIC PROCESS CONTROL SHEET		ALL DIMENSIONS IN UNLESS OTHERWISE STATED		REMOVE ALL SHARP EDGES AND BURRS	
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THIS DRAWING CONTAINS INFORMATION THAT IS CONFIDENTIAL AND PROPERTY OF PARKER HANNIFIN P.O. THIS DRAWING IS DISCLOSED TO OTHERS EXCEPT WITH THE WRITTEN CONSENT OF PARKER HANNIFIN. WILL NOT BE USED TO THE DETRIMENT OF PARKER HANNIFIN, AND WILL BE RETURNED UPON REQUEST BY PARKER HANNIFIN.		DRAWING BY: ZN		Parker Hannifin Ltd Riverside Road Barnstable Devon EX31 1NP +44 (0)1271 313131	
ISSUE NO.	1	DESCRIPTION OF REVISION New Release			
E.C.N NO.	N/A	GRAND DATE 22/06/2011			
DATE	12/04/2011	Approvals using electronic PDM WORKFLOW (SAP/PS/25)			

October 13, 2011

Susan Turner  
PARKER HANNIFIN CANADA IPD  
4635 DURHAM RD S  
GRIMSBY, ON

Dear Susan Turner,

The design submission, tracking number 2011-02791, originally received on May 04, 2011 was surveyed and accepted for registration as follows:

**CRN :** 0B11767.2

**Accepted on:** October 13, 2011

**Reg Type :** New Design

**Expiry Date:** October 13, 2020

**Drawing No. :** SCOPE OF REGISTRATION 3 PAGES As Noted

**Fitting Desc:** FLANGED CONNECTORS, 1/4" THRU 1" ##150 THRU 2500

Design registered in the name of : PARKER HANNIFIN IPDE

**The registration is conditional on your compliance with the following notes:**

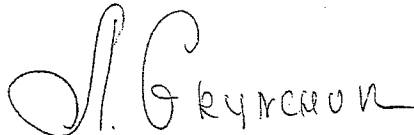
*This registration is valid if the A-loks CRN 0A6793.52 that is part of the registration will be renewed after December 3, 2011.*

*This registration is valid until the indicated expiry date only if the Manufacturer maintains a valid quality management system approved by an acceptable third-party agency until that date. Should the approval of the quality management system lapse before the expiry date indicated above, this registration shall become void.*

**An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.**

Enclosed are stamped prints for your reference.

Sincerely,



GRYNCHUK, MILLA  
Design Survey Engineer





STATUTORY DECLARATION  
Registration of Fittings

In this space, show facsimile  
of manufacturer's logo or  
trademark as it will appear on  
the fitting.



I, Kevin Ballard,

Core Engineering Manager

(company title, e.g. vice president, plant manager, chief engineer) (must be in a position of authority)

of Parker Hannifin, IPDE

(name of manufacturer)

located at Riverside Road, Barnstaple, Devon, EX31 1NP

(plant address)

do solemnly declare that the fittings listed hereunder, which are subject to the Safety Codes Act  
(check one)

☐ comply with the requirements of \_\_\_\_\_ which specifies the dimensions,  
(title of recognized North American Standard)

☒ are not covered by the provisions of a recognized North American standard and are therefore manufactured to  
comply with ASME II, VIII, ANSI B16.5 as supported by the attached data which identifies the dimensions,  
materials of construction, pressure/temperature ratings and the basis for such ratings, and the marking of the fittings  
for identification.

I further declare that the manufacture of these fittings is controlled by a quality control program which has been verified by the  
following authority, DNV Management Systems as being suitable for the manufacture of these fittings to the  
stated standard. The fittings covered by this declaration, for which I seek registration, are See attached drawing

In support of this application, the following information, calculations and/or test data are attached:  
Catalog 4190-FP-ACC FCB CRN Report (Sheets 1 & 2)

N.B: CRN OA6793.5 also exists with respect to a portion of this design

DECLARED before me at Barnstaple in the County of Devon

this 20th day of April, 2011  
(Month) (Year)

(print) KEVIN BALLARD

KS Ballard  
(Signature of Applicant)

(sign) Michael T. O'Brien  
(A Commissioner for Oaths)

Notary Public MICHAEL THOMAS O'BERTON

For Office Use Only

To the best of my knowledge and belief, the application meets the requirements of the Safety Codes Act and CSA Standard  
B51, Clause 4.2, and is accepted for registration in Category A

Registration Number: 0B11767.2

WILLAGHTCHUK

(For the Administrator/Chief Inspector of Alberta)

Date Registered: Oct 13 2011

Expiry Date: 2020-10-13

The information you provide is necessary only for the administration of the programs as required by the Alberta Safety Codes Act and Regulations in the Boiler Discipline.

THE FITTINGS are registered to ASME B31.3  
See the acceptance letter and the scope of registration  
attached L.R