



Customer TTZ130236

Test facility

Customer number

Job number 5

Telephone

Fax

Remark

Test user

EPS708 -3

Type number 0445115039	--	Type designation CRI 3-16	Revision date 26.06.2013	Compensation X
Manufacturer Bosch	Component CRI	Type Piezo	Control point 	Temperature 40 °C

Complaint

Problem

Remark

	Injector A	Injector B	Injector C	Injector D	Injector E	Injector F
Serial number	AB5CC1YA26	SB5UC1XCL5	SARDC1WAEH			
Date of manuf.						
Repair ID						
Repair res.						
Leak test						
IMA identifier	----	GMTNNAI	----			

7 Conditioning Flow meas.

Conditioning test bench

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	1000	→ ←	40.0	→ ←	30.00	→ ←	125	→ ←	2500	→ ←	10.0	→ ←	20		----
	250	↓↑	20.0	↓↑	2.0				600	↓↑	5.0	↓↑	10		100
=	999	=	37.2	=	30.1					=	10.0	=	20.0	=	100

8 Start test Flow meas.

Start test Injector

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	1000	→ ←	40.0	→ ←	30.00	→ ←	110	→ ←	2500	→ ←	10.0	→ ←	20		----
	250	↓↑	20.0	↓↑	2.0				600	↓↑	5.0	↓↑	10		----
=	999	=	37.5	=	30.0					=	10.0	=	20.1	=	30

p kPa \bar{Q} mm³/H \bar{Q} mm³/H \bar{Q} mm³/H



Type number	Type designation	Revision date	Compensation
0445115039	CRI 3-16	26.06.2013	X
Manufacturer	Component	Control point	Temperature
Bosch	CRI		40 °C

Serial number	Injector A	Injector B	Injector C	Injector D	Injector E	Injector F
	AB5CC1YA26	SB5UC1XCL5	SARDC1WAEH			
Date of manuf.						

	----	→ ← 65.0	→ ← 65.0	→ ← 65.0
		↓ ↑ 35.0	↓ ↑ 35.0	↓ ↑ 35.0
		/A= 77.5	/B= 77.9	/C= 77.8

9 Back pressure Flow meas.
 Back pressure prepare

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	1000	→ ←	40.0	→ ←	30.00	→ ←	125	→ ←	2500	→ ←	10.0	→ ←	20		----
	250	↓ ↑	20.0	↓ ↑	2.0				600	↓ ↑	5.0	↓ ↑	10		120
=	999	=	39.5	=	29.9					=	10.0	=	20.0	=	120

10 Conditioning Flow meas.
 Pressure step for ISA

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	2000	→ ←	40.0	→ ←	130.0	→ ←	125	→ ←	700	→ ←	10.0	→ ←	20		----
	250	↓ ↑	20.0	↓ ↑	2.0				2000	↓ ↑	5.0	↓ ↑	10		5
=	1999	=	39.5	=	128.9					=	10.1	=	20.0	=	5

11 Conditioning Flow meas.
 Conditioning for ISA

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	2000	→ ←	40.0	→ ←	160.0	→ ←	125	→ ←	700	→ ←	10.0	→ ←	20		----
	250	↓ ↑	20.0	↓ ↑	5.0				2000	↓ ↑	5.0	↓ ↑	10		35
=	1999	=	39.7	=	160.1					=	10.0	=	19.9	=	35

12 Warm up Flow meas. °C
 Warm up Testbench for ISA = 40

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
→ ←	2000	→ ←	40.0	→ ←	160.0	→ ←	125	→ ←	700	→ ←	10.0	→ ←	20		----
	250	↓ ↑	1.0	↓ ↑	5.0				2000	↓ ↑	5.0	↓ ↑	10		----
=	1999	=	39.7	=	160.1					=	10.1	=	20.0	=	0

13 ISA detection ISA calibration
 ISA detection

n	/min		°C	p	MPa	U	V	t	μs	p	kPa	p	kPa		s
---	------	--	----	---	-----	---	---	---	----	---	-----	---	-----	--	---



Type number	Type designation	Revision date	Compensation
0445115039	CRI 3-16	26.06.2013	X
Manufacturer	Component	Control point	Temperature
Bosch	CRI		40 °C

Serial number	Injector A	Injector B	Injector C	Injector D	Injector E	Injector F
	AB5CC1YA26	SB5UC1XCL5	SARDC1WAEH			
Date of manuf.						

2000	40.0	160.0	125	700	10.0	20	----
250	1.0	5.0	$\frac{n}{min}$ 2000	5.0	10	10	----
= 1999	= 40.6	= 160.4		= 10.0	= 20.5	= 42	

p / kPa	ISA /	ISA /	ISA /
1000	$\rightarrow \leftarrow$	$\rightarrow \leftarrow$	$\rightarrow \leftarrow$
	A =	B =	C =

14 Conditioning
 Pressure step for VL point

Flow meas.

n /min	°C	p MPa	U / V	t μs	p kPa	p kPa	s
$\rightarrow \leftarrow$ 1000	$\rightarrow \leftarrow$ 40.0	$\rightarrow \leftarrow$ 130.0	$\rightarrow \leftarrow$ ----	$\rightarrow \leftarrow$ 500	$\rightarrow \leftarrow$ 10.0	$\rightarrow \leftarrow$ 20	----
$\rightarrow \leftarrow$ 250	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ $\frac{n}{min}$ 400	$\rightarrow \leftarrow$ 5.0	$\rightarrow \leftarrow$ 10	$\rightarrow \leftarrow$ 150	----
= 994	= 40.1	= 129.9		= 10.0	= 20.1	= 150	

15 Warm up
 Warm up Testbench

Flow meas.

°C
 = 40

n /min	°C	p MPa	U / V	t μs	p kPa	p kPa	s
$\rightarrow \leftarrow$ 1000	$\rightarrow \leftarrow$ 40.0	$\rightarrow \leftarrow$ 130.0	$\rightarrow \leftarrow$ ----	$\rightarrow \leftarrow$ 500	$\rightarrow \leftarrow$ 10.0	$\rightarrow \leftarrow$ 20	----
$\rightarrow \leftarrow$ 250	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ $\frac{n}{min}$ 400	$\rightarrow \leftarrow$ 5.0	$\rightarrow \leftarrow$ 10	$\rightarrow \leftarrow$ 150	----
= 994	= 40.1	= 130.1		= 9.9	= 20.0	= 0	

16 Conditioning
 Conditioning for VL point

Flow meas.

n /min	°C	p MPa	U / V	t μs	p kPa	p kPa	s
$\rightarrow \leftarrow$ 1000	$\rightarrow \leftarrow$ 40.0	$\rightarrow \leftarrow$ 160.0	$\rightarrow \leftarrow$ ----	$\rightarrow \leftarrow$ 540	$\rightarrow \leftarrow$ 10.0	$\rightarrow \leftarrow$ 20	----
$\rightarrow \leftarrow$ 250	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ $\frac{n}{min}$ 400	$\rightarrow \leftarrow$ 5.0	$\rightarrow \leftarrow$ 10	$\rightarrow \leftarrow$ 400	----
= 998	= 40.4	= 160.0		= 9.9	= 20.0	= 400	

17 VL
 Measure point VL

IMA setting
C,

Flow meas.

n /min	°C	p MPa	U / V	t μs	p kPa	p kPa	s
$\rightarrow \leftarrow$ 1000	$\rightarrow \leftarrow$ 40.0	$\rightarrow \leftarrow$ 160.0	$\rightarrow \leftarrow$ ----	$\rightarrow \leftarrow$ 540	$\rightarrow \leftarrow$ 10.0	$\rightarrow \leftarrow$ 20	----
$\rightarrow \leftarrow$ 250	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ 1.0	$\rightarrow \leftarrow$ $\frac{n}{min}$ 400	$\rightarrow \leftarrow$ 5.0	$\rightarrow \leftarrow$ 10	$\rightarrow \leftarrow$ 150	----
= 998	= 40.5	= 160.1		= 10.0	= 19.8	= 98	



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0445115039	CRI 3-16	26.06.2013	
Manufacturer	Component	Control point	Temperature
Bosch	CRI		40 °C

Serial number	Injector A	Injector B	Injector C	Injector D	Injector E	Injector F
	AB5CC1YA26	SB5UC1XCL5	SARDC1WAEH			
Date of manuf.						

p / kPa	Q / mm³/H	Q / mm³/H	Q / mm³/H
1000	→K← 46.7	→K← 46.7	→K← 46.7
	↓↑ 5.5	↓↑ 5.5	↓↑ 5.5
	/A= 43.8	/B= 44.5	/C= 35.9
p / kPa	Q / mm³/H	Q / mm³/H	Q / mm³/H
1000	→K← 11.5	→K← 11.5	→K← 11.5
	↓↑ 4.5	↓↑ 4.5	↓↑ 4.5
	/A= 10.5	/B= 10.7	/C= 10.8

18 Conditioning
Conditioning for VE point

Flow meas.

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→K← 2000	→K← 40.0	→K← 120.0	→K← ---	→K← 165	10.0	20	→K← ---
250	↓↑ 1.0	↓↑ 1.0		n/min 400	↓↑ 5.0	↓↑ 10	→K← 300
= 1999	= 40.6	= 120.0			= 10.0	= 19.6	= 300

19 VE
Measure point VE

IMA setting
C,

Flow meas.

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→K← 2000	→K← 40.0	→K← 120.0	→K← ---	→K← 165	10.0	20	→K← ---
250	↓↑ 1.0	↓↑ 1.0		n/min 400	↓↑ 5.0	↓↑ 10	→K← ---
= 1998	= 40.6	= 120.0			= 10.0	= 19.2	= 49

p / kPa	Q / mm³/H	Q / mm³/H	Q / mm³/H
1000	→K← 1.9	→K← 1.9	→K← 1.9
	↓↑ 1.5	↓↑ 1.5	↓↑ 1.5
	/A= 1.6	/B= 1.4	/C= 1.1

20 Conditioning
Conditioning for LL point

Flow meas.

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→K← 1000	→K← 40.0	→K← 25.00	→K← ---	→K← 520	10.0	20	→K← ---
250	↓↑ 1.0	↓↑ 1.0		n/min 400	↓↑ 5.0	↓↑ 10	→K← 250
= 1000	= 40.2	= 25.0			= 10.0	= 19.8	= 250

21 LL
Measure point LL

IMA setting
C,

Flow meas.



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Manufacturer	Component	Control point	Temperature
Bosch	CRI		40 °C

Serial number	Injector A	Injector B	Injector C	Injector D	Injector E	Injector F
	AB5CC1YA26	SB5UC1XCL5	SARDC1WAEH			
Date of manuf.						

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→ ← 1000	→ ← 40.0	→ ← 25.00	→ ← ----	→ ← 520	→ ← 10.0	→ ← 20	→ ← ----
250	↓↑ 1.0	↓↑ 1.0		400	↓↑ 5.0	↓↑ 10	----
= 1000	= 40.0	= 24.9			= 10.0	= 20.0	= 48

p kPa	\bar{Q} mm³/H	\bar{Q} mm³/H	\bar{Q} mm³/H
1000	→ ← 3.7	→ ← 3.7	→ ← 3.7
	↓↑ 2.7	↓↑ 2.7	↓↑ 2.7
	/A= 2.2	/B= 2.3	/C= 1.6

22 Conditioning
 Conditioning for EM point

Flow meas.

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→ ← 1000	→ ← 40.0	→ ← 80.00	→ ← ----	→ ← 460	→ ← 10.0	→ ← 20	→ ← ----
250	↓↑ 1.0	↓↑ 1.0		330	↓↑ 5.0	↓↑ 10	300
= 998	= 40.2	= 80.0			= 10.0	= 20.0	= 300

23 EM
 Measure point EM

X IMA setting
A, C,

Flow meas.

n /min	°C	p MPa	U V	t μs	p kPa	p kPa	s
→ ← 1000	→ ← 40.0	→ ← 80.00	→ ← ----	→ ← 460	→ ← 10.0	→ ← 20	→ ← ----
250	↓↑ 1.0	↓↑ 1.0		330	↓↑ 5.0	↓↑ 10	----
= 998	= 40.3	= 80.0			= 10.0	= 20.0	= 40

p kPa	\bar{Q} mm³/H	\bar{Q} mm³/H	\bar{Q} mm³/H
1000	→ ← 19.2	→ ← 19.2	→ ← 19.2
	↓↑ 4.3	↓↑ 4.3	↓↑ 4.3
	/A= 16.6	/B= 16.7	/C= 16.4