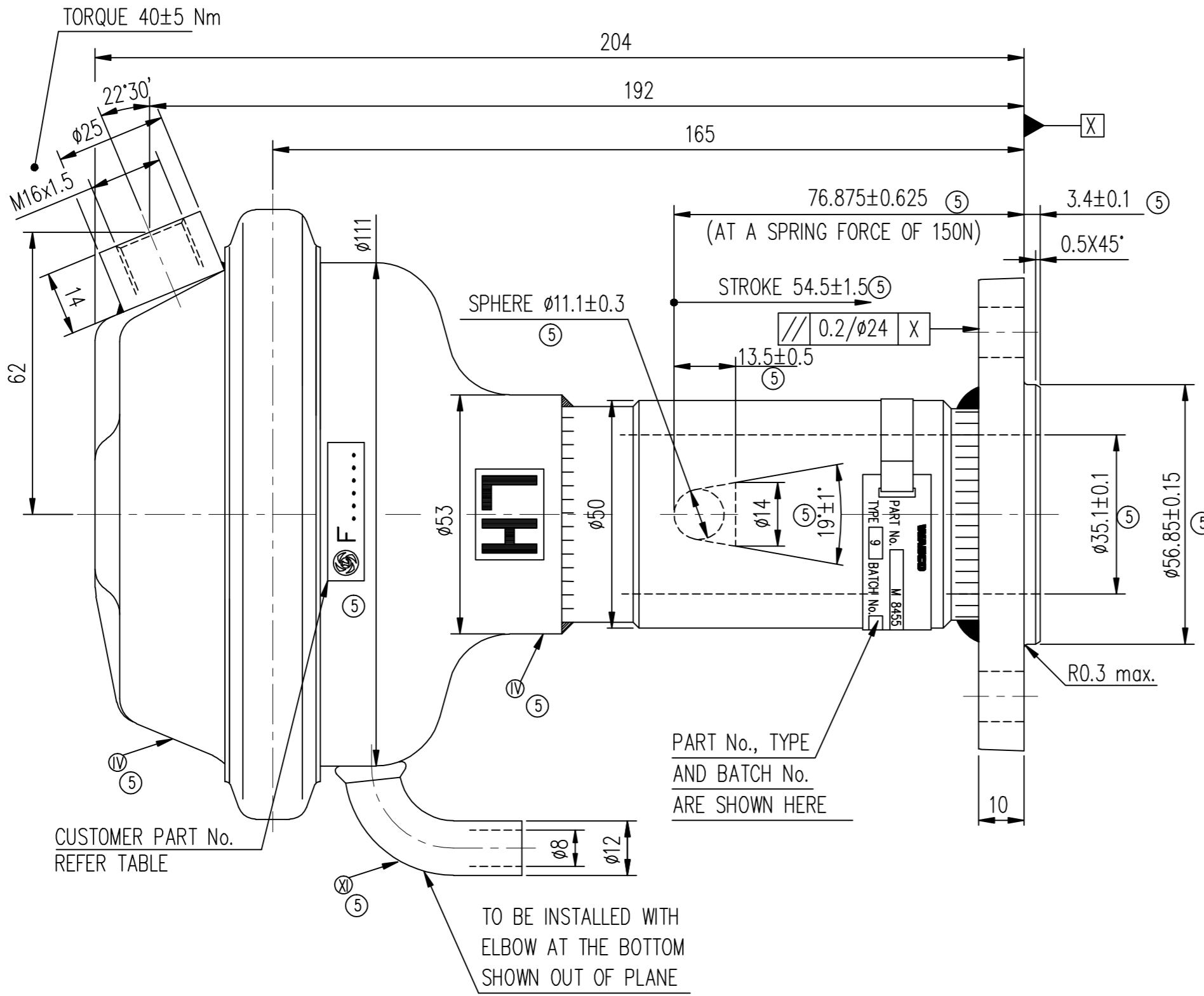


ENGINEERING CHANGES			
ECN No.	DATE	REV	SIGN
7454	13.6.97	1	
Part No. M845360 is redrawn separately (was added in M845340) Part No. M845370 (was added in M845340), M845420 (was separate drawing), M845430 (was added in M845420), M845560 and M845570 (were added in M845540). Drawing redrawn.			GA
7301	22.5.98	2	
Ø111 and Ø53 added. Drawing corrected pictorially inline with NPP assy. Drawing redrawn.			
11374	09.02.09	3	RBS
In Name plate, Company name change from Sundaram Clayton Ltd to WABCO– TVS (INDIA) Ltd. Drawing redrawn.			
12083	16.03.11	4	RBS
Drawing template WABCO was WABCO-TV (India) Ltd. Drawing pictorially modified inline with parts. Drawing redrawn.			
12330	08.05.12	5	SATH
Part Nos. M845420,M845430,M845560, M845570 deleted and made as separate drawing. NSS Hours reviewed and updated Dimensions changed to nominal and bilateral tolerance from upper and lower limits. Customer part label added. Drawing redrawn.			

DO NOT SCALE IF IN DOUBT ASK



XVII	STEEL	NO TREATMENT
XVI	CAST IRON	PLATED
XV	STEEL	ZINC-IRON PLATED
XIV	CAST IRON	NO TREATMENT
XIII	ZINC ALLOY	ANODISED
XII	PLASTIC	NO TREATMENT
XI	RUBBER	NO TREATMENT
X	STAINLESS STEEL	NO TREATMENT
IX	BRASS	NO TREATMENT
VIII	ZINC ALLOY	CHROMATED
VII	ALUMINIUM ALLOY	ANODISED
VI	ALUMINIUM ALLOY	CHROMATED
V	CAST IRON	PAINTED
IV	STEEL	POWDER COATED
III	STEEL	PAINTED
II	STEEL	PHOSPHATED
I	STEEL	ZINC OR ZINC IRON PLATED WITH PASSIVATION
PART CODE	MATERIAL	SURFACE PROTECTION

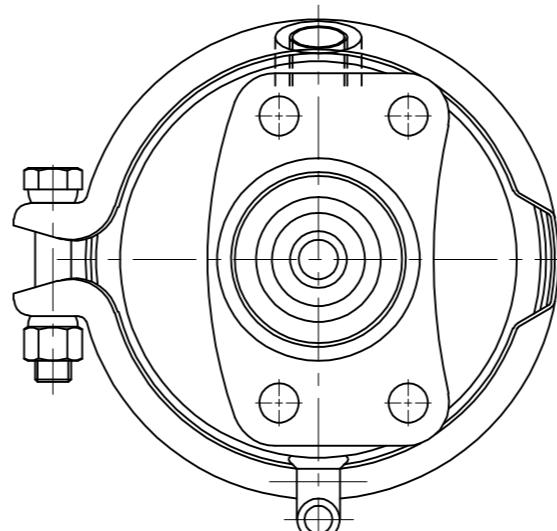
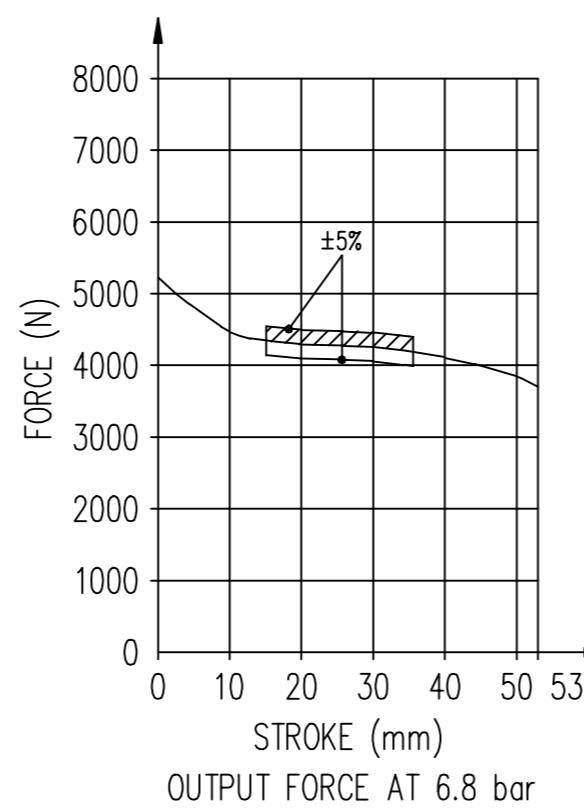
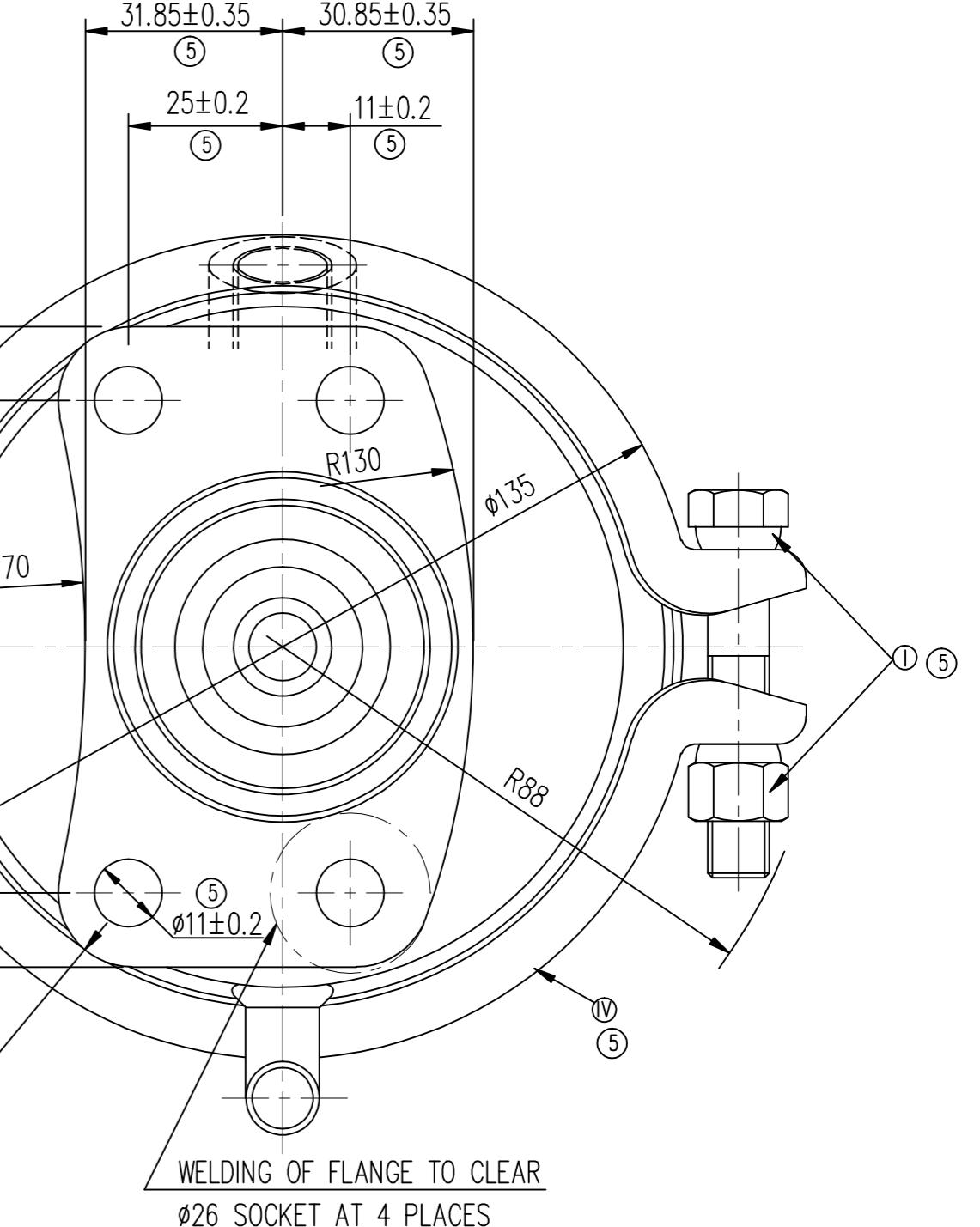
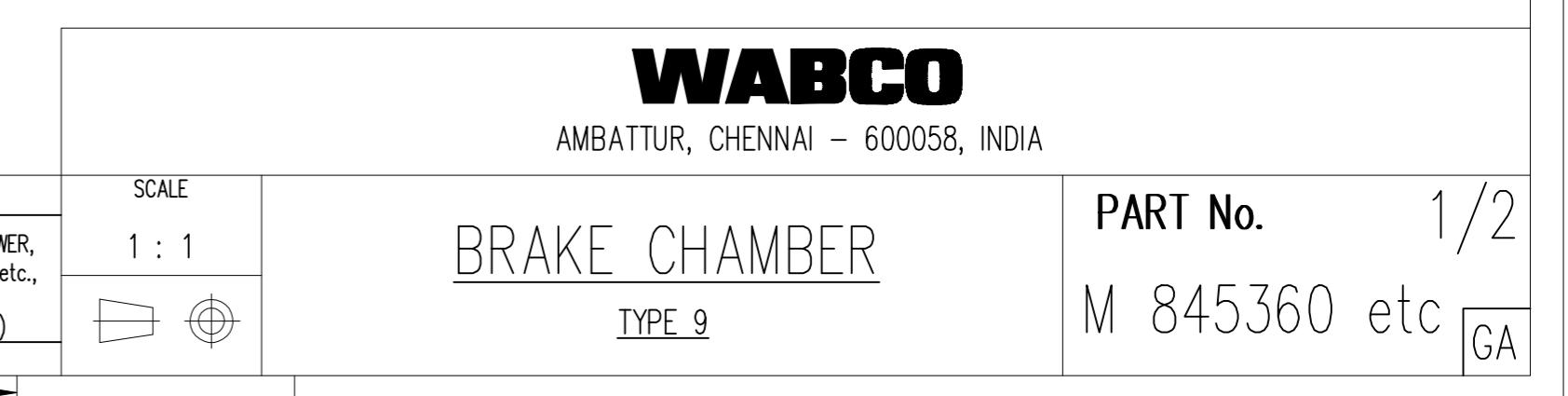


FIG. 1 (RH)



PART No.	FIG.	REMARKS	CUSTOMER PART No.
M 845360	BASIC	LH	F4230200 (5)
M 845370	FIG. 1	RH	F7863300 (5)

PRODUCT SPECIFICATION No. PS 65C
WORKING PRESSURE : 8.5 bar
OPEN PORT AND FLANGE FACE ARE FITTED WITH CLOSURE
PLUG AND COVER RESPECTIVELY
WEIGHT: 3.1 Kg
TAG COLOUR : GREEN
300 HOURS MINIMUM OF NSS IS APPLICABLE TO PRESSURE PLATE ASSEMBLY,
NON PRESSURE CYLINDER ASSEMBLY, CLAMP RING.
240 HOURS MINIMUM OF NSS IS APPLICABLE FOR CLAMP RING BOLT/NUT.

WABCO

AMBATTUR, CHENNAI – 600058, INDIA

PART No. 1/2
M 845360 etc GA

WABCO INDIA LIMITED Research and Development Product specification PRODUCT: Brake Chamber	No. PS 65C Sheet 1 of 3
---	----------------------------

1. Scope:

This specification covers the function, technical data and also lays down the endurance test, environmental tests and other tests the product shall pass.

2. Function:

The unit is used to actuate the foundation brakes when air pressure is applied to the inlet port.

3. Technical data:

3.1	Working medium	Air
3.2	Normal working pressure	8.1 bar
3.3	Maximum working pressure	10 bar
3.4	Normal thermal range of operation	+10°C to +50°C
3.5	Extreme thermal range of operation	-25°C to +80°C
3.6	Overall dimensions	As specified in GA drawing
3.7	Output characteristics	As specified in GA drawing

4. Leak test:

Leak is checked by applying soap solution around all joints and holes with an inlet air pressure of 8.1 bar. The maximum permissible leak is 10 cc/min (at standard atmospheric condition.)

5. Endurance test:

5.1 The unit is subjected to endurance test of 10^6 under the following conditions:

Inlet pressure : 8.1 bar
Frequency : 15 cycles/min
Stroke : 47 mm

Compiled by	SATH	Issue no.	1	2	3	
Checked by	ASK	ECN no.	-	-	12315	
Approved by	KPN	Date	30.1.92	21.7.92	25.04.12	

WABCO INDIA LIMITED Research and Development Product specification PRODUCT: Brake Chamber	No. PS 65C Sheet 2 of 3
---	----------------------------

5.2 After this test the unit shall pass the leak test clause 4 with a maximum permissible leakage of 250 cc/min (at standard atmospheric condition).

6. Environmental tests:

6.1 Dry heat test:

The unit is kept in a chamber at a temperature of 80°C for 16 hours. After this test, the unit shall pass the leak test as per clause 4 and also meet the output characteristics as given in the GA drawing.

6.2 Short term exposure to excess heat:

The unit is kept in a chamber at a temperature of 110°C for 1 hour. After this test, the unit shall pass the leak test as per clause 4 and also meet the output characteristic as given in the GA drawing.

6.3 Low temperature test:

The unit is kept in a chamber at a temperature of -25°C for 16 hours. After this test, the unit shall pass the leak test as per clause 4 and also meet the output characteristic as given in the GA drawing.

6.4 Salt spray test:

Test unit to be tested as assembly, as per ASTM B 117. Corrosion resistance requirement to meet as per GA drawing. No parent metal corrosion permitted after the test. Corrosion of fasteners, which are not detrimental to product performance, is acceptable. The unit shall be subjected to leak test and performance test as per clause nos. 4 and 3.7 before and after the test.

7. Vibration test:

The unit is subjected to a vibration test of 10^7 cycles at a frequency of 50 Hz and $\pm 16g$ acceleration. The unit is also actuated at a frequency of 15 cycles/min. at 8.1 bar pressure during vibration test. There shall not be any structural failure during the test.

Compiled by	SATH	Issue no.	1	2	3	
Checked by	ASK	ECN no.	-	-	12315	
Approved by	KPN	Date	30.1.92	21.7.92	25.04.12	

WABCO INDIA LIMITED Research and Development Product specification PRODUCT: Brake Chamber	No. PS 65C Sheet 3 of 3
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8. High pressure test:

This unit is subjected to a pressure of 16 bar for 2 minutes. The unit shall then pass leak test as per clause 4 and also meet the performance requirements. When hydraulic pressure is applied, there shall not be any structural failure up to 24 bar.

9. Tests for regular production batches:

All units produced in regular production shall be subjected to leak test as per clause 4.

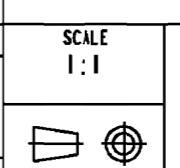
Compiled by	SATH	Issue no.	1	2	3	
Checked by	ASK	ECN no.	-	-	12315	
Approved by	KPN	Date	30.1.92	21.7.92	25.04.12	

SIGN	DATE	MATERIAL	----
DRN	SATH	08.05.12	ALTERNATE MATERIAL
CHO	ASK	08.05.12	SURFACE PROTECTION
APD	KPN	08.05.12	RAW PART No.

CONFIDENTIAL DRAWING
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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS IN mm.
REMOVE BURRS AND SHARP EDGES FROM FINISHED PARTS.
ALL DIMENSIONS ARE AFTER SURFACE PROTECTION/ TREATMENT.
MALE THREAD TO IS 14962 (PART3) 6H : 2001
FEMALE THREAD TO IS 14962 (PART3) 6H : 2001

GENERAL TOLERANCES			
RANGE OF NOMINAL DIMENSIONS (\pm mm)		FORCE, POWER, PRESSURE etc..	
\leq	$>$	\leq	\leq
50	180	400	400
1	2	3	4
		3	10



WABCO
AMBATTUR, CHENNAI - 600058, INDIA
BRAKE CHAMBER
TYPE 9

PART No.
M845360_S2
2/2

GA