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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE GRANTING OF EEC TYPE APPROVAL AS A COMPONENT
OF MECHANICAL COUPLING DEVICES FOR MOTOR VEHICLES AND THEIR TRAILERS PURSUANT
TO DIRECTIVE 94/20/EC OF 30 MAY 1994 (STU)

Type Approval No(1): e11*94/20*7783*00

Reason(s) for Extension: Not Applicable

Section I

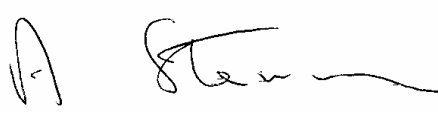
- 0.1 Make(trade name of manufacturer): Witter Tow Bars Ltd
- 0.2 Type and general commercial description(s): Z52B
- 0.3 Means of identification of type if marked on the component(2): Adhesive label
- 0.3.1 Location of that marking: See manufacturer's documentation
- 0.5 Name and address of manufacturer: Witter Tow Bars Ltd
Drome Road
Deeside Industrial Park
Deeside
Flintshire CH5 2NY
United Kingdom
- 0.7 In the case of components and separate technical units, location and method of affixing of the EEC approval mark: See manufacturer's documentation
- 0.8 Name(s) and address(es) of assembly plants: See section 0.5

Job Number VSK206145

An executive agency of the Department for Transport
Date January 2009 Issue 8



Section II

1	Additional information (where applicable):	See Appendix I
2	Technical service responsible for carrying out the tests:	Vehicle Certification Agency
3	Date of test report:	11 November 2009
4	Number of test report:	VSK206145
5	Remarks (if any): See Appendix I	None
6	Place:	BRISTOL
7	Date:	12 NOVEMBER 2009
8	Signature:	 A. W. STENNING Head of Technical and Quality Group

9 The index to the information package lodged with the competent authority that has granted type approval, which may be obtained on request, is attached.

- (1) The EEC type approval number appearing on this document shall consist of all sections outlined in Annex VII to Directive 70/156/EEC as last amended by Directive 92/53/EEC.
The component itself shall be marked as prescribed in the relevant separate Directive.
- (2) If the means of identification of type contains characters not relevant to describe the component types covered by this type approval certificate such characters shall be represented in the documentation by the symbol '?' (e.g. ABC??123??).

to EEC Type Approval Certificate No: e11*94/20*7783*00
concerning the component type-approval of mechanical coupling devices with
regard to Directive 94/20/EC

1 ADDITIONAL INFORMATION

- | | | | |
|-----|---|---|--------|
| 1.1 | Class of type of coupling: | A50-X (Towing bracket and ball on integral support) | |
| 1.2 | Categories or types of vehicles for which the device is designed or restricted: | M1,M2, N1,N2 (upto a maximum mass of 7500kgs) | |
| 1.3 | Maximum D-value*: | 23.41 | kN |
| 1.4 | Maximum vertical load S at the coupling point*: | 286 | kg |
| 1.5 | Maximum load U at the fifth wheel coupling point*: | Not Applicable | tonnes |
| 1.6 | Maximum V-value*: | Not Applicable | kN |
| 1.7 | Instructions for attachment of the coupling type to the vehicle and photographs or drawings of the fixing points at the vehicle given by the manufacturer; additional information if the use of the coupling type is restricted to special types of vehicles: | See Mandocs | |
| 1.8 | Information on the fitting of special towing brackets or mounting plates*: | Not Applicable | |
| 5 | Remarks(1): | None | |

* Delete where inapplicable

(1) Including information as to whether fifth wheel couplings are unsuitable for positive steering.



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APPROVAL NUMBER: e11*94/20*7783*00

INFORMATION PACKAGE CONTENTS

INDEX

REVISION NUMBER : Not Applicable

Total number of sheets: 8 (Eight)
Number of separate drawings: 0 (None)
Number of separate photographs: 0 (None)

Reasons for Extension/Revision: Not Applicable



SUBMISSION FOR APPROVAL OF MECHANICAL COUPLING TO 94/20/EC

Ref/Job No: **VSK206145**

Coupling Classification: A-50X

Type/Part No: **Z52B**

CONTENTS:

Sheet 1	Submission document as per 94/20/EC Annex III
Sheet 2	Engineering drawing General Assembly Drawing
Sheet 3	Fitting / Installation Instructions Z52B
Sheet 4	Test Report
Sheet 5	Worst Case Agreement



Information relating to the EEC type approval as a component of mechanical coupling devices for motor vehicles and their trailers (94/20/EC)

0. GENERAL

- 0.1 Make (trade name of manufacturer): **Witter Towbars**
- 0.2 Type and commercial description(s): **Towbar for **ADJUSTABLE COUPLING****
- 0.5 Name and address of manufacturer: **Witter Towbars, Drome Road, Deeside Industrial Park, Deeside, Flintshire, CH5 2NY.**
- 0.7 Location and method of affixing of the EEC approval mark: **Polyester coated aluminium permanent adhesive label fixed to towbar Part **A**.**
- 0.8 Address of assembly plant: **Witter Towbars, Drome Road, Deeside Industrial Park, Deeside, Flintshire, CH5 2NY.**

1. CONNECTIONS BETWEEN DRAWING VEHICLES AND TRAILERS AND SEMI-TRAILERS

- 1.1 A detailed technical description of the mechanical coupling device is provided in the form of drawing numbers:
General Assembly Drawing
- 1.2 Class and type of the coupling device(s): **A-50X (Towing bracket and ball on integral support)**
- 1.3 Maximum D-value: **23.41 kN**
- 1.4 Maximum vertical load S at the coupling point: **286 kg**
- 1.5 Maximum U load at the fifth wheel coupling: **Not applicable**
- 1.6 Maximum V-value: **Not applicable**
- 1.7 Instructions for attachment of the coupling type to the vehicle is provided in the form of a drawing of the fixing points at the vehicle given by the manufacturer, together with the manufacturer's fitting instructions:
Witter Towbars fitting instruction No. Z52B
- 1.8 Information on the fitting of special towing brackets or mounting plates: **Not applicable**

Checked by:	Date:
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SUBMISSION FOR APPROVAL OF MECHANICAL COUPLING TO 94/20/EC

Ref/Job No: **VSK206145**
Coupling Classification: **A-50X**

Type/Part No: **Z52B**

Sample of identification label.

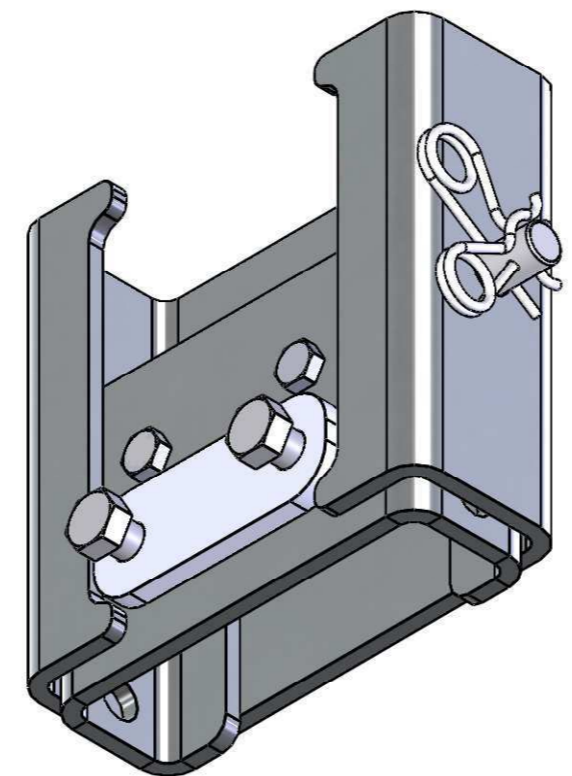
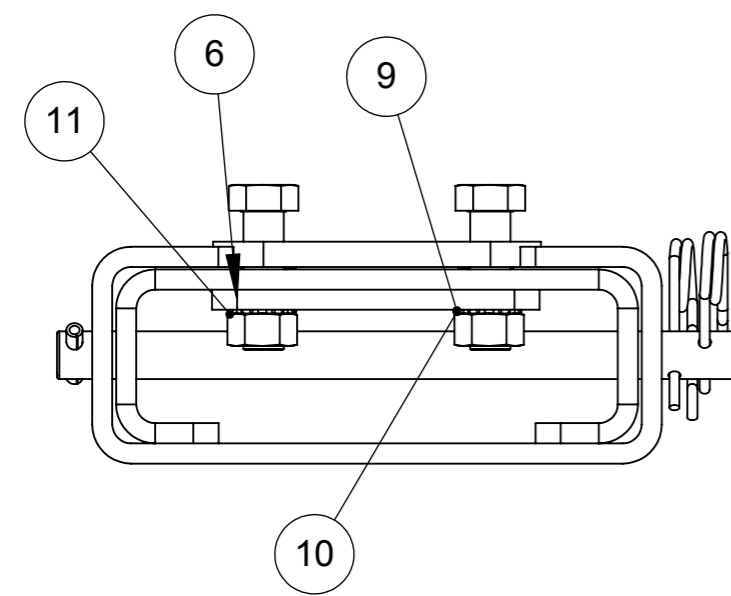
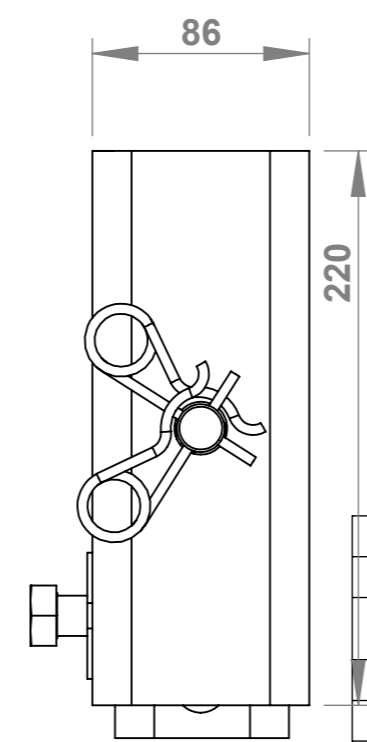
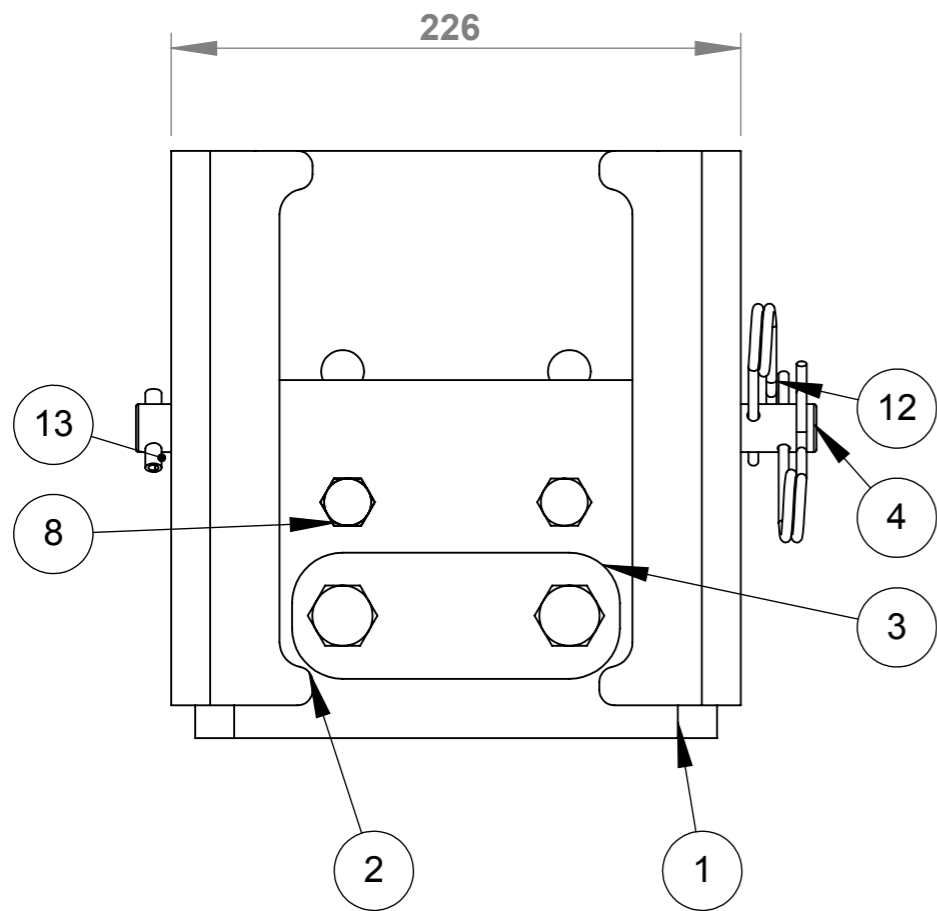
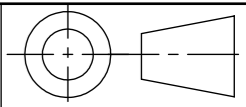
	WITTER TOWBARS			e11
	PART No. PART No.			
VEHICLE MAKE				
TOWBAR CLASS	D VALUE	NOSELOAD	APPROVAL No.	
A50-X	D XX	KN	SXX KG	XX-XXXX
CONSULT HANDBOOK FOR TOWING SPECIFICATIONS				



NON SUBMISSION DATA FOR FILE REFERENCE ONLY

Witter part No: **Z52B**





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Z52A-C-1	8mm SLIDER PLATE	1
2	Z52A-A	8mm SLIDER PLATE	1
3	2FP50-10	FACE PLATE	1
4	Z52B-P-1	19MM O.D. ROUND BD BAR	1
5	BOLT	M16x55x2.0 HT BOLTS	2
6	Z52B-C		1
7	BOLT	M12x30x1.75 HT SETS	2
8	BOLT	M12x25x1.75 HT SETS	1
9	FST-00115	M12x1.75 'T' TYPE NYLOC	2
10	M16 EXT SHAKEPROOF	M16 EXT SHAKEPROOF WASHER	2
11	FST-00119	M16x2.00 FULL NUT	2
12	Special R-Clip		2
13	split pin		1

CONTROLLED DRAWING

DATE OF ISSUE:

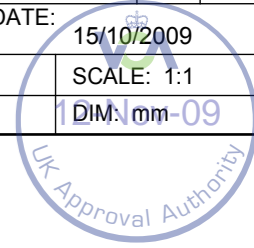
ACCEPTED ON BEHALF OF PRODUCTION:

NAME: SIGNED:

RELEASED FOR PRODUCTION USE:

NAME: SIGNED:

	PART No:	Z52B-GA	Iss.	1	Rel.	0
	DRAWN:	DATE:	15/10/2009			
FINISH:	SCALE: 1:1					
WEIGHT: 10.80 kg	DIM: mm-09					





Fitting Instructions

ADJUSTABLE COUPLING Z52B

Note: Towbar must also carry Type Approval for use with this coupling – please contact Witter Towbars for vehicle /towbar list.

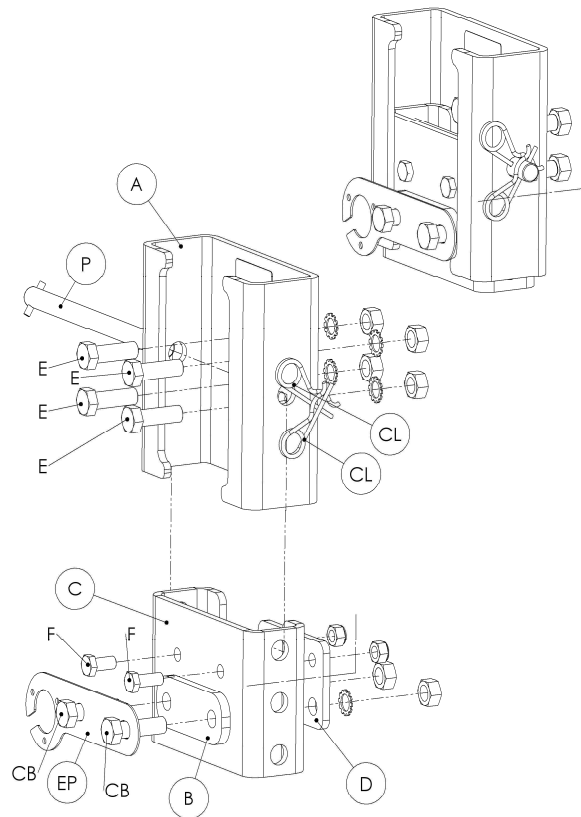
MATERIALS

A	1	Fixed Slider
B	1	10mm Coupling Packer
C	1	Adjustable Slider
D	1	Spreader plate
E	4	M16 x 50 x 2.0 Bolts, Nuts and Lock Washers
F	2	M12 x 50 x 1.75 Bolts and Nyloc Nuts
CL	2	'R' clips
P	1	Pin
EP	1	Electrical Plate
CB	2	M16 x 65 x 2.0 Bolts, Nuts and Lock Washers

FITTING

1. Attach Fixed Slider (A) to Towbar face plate using bolts (E) and fully tighten Bolts.
2. Insert Adjustable Slider (C) inside Fixed Slider (A) and temporarily fix using Pin (P).
3. Attach Towball/Coupling (not supplied) using fixings (CB) and (F) with Spreader Plate (D) on forward face. and Electrical Plate (EP) and Packer fitted as shown.
4. Fully Tighten all bolts.
5. Adjust Slider to desired height and secure with Pin (P) and 'R' clips (CL).

Recommended torque settings: Grade 8.8 bolts: M8 - 24Nm, M10 - 52 Nm, M12 - 80 Nm, M14 - 130 Nm, M16 - 200 Nm
Grade 10.9: M12 – 120Nm, M10 – 70Nm M8- 35Nm



W0001XXXU-FIT\$010802220000



* TEST 't' IN LOWER PIN POSITION. ON LOWER * COUPLING HOLES



TEST REPORT & WORST CASE DATA

EC 94-20

Q.A.D.7

TOWBAR PART NO. / SOURCE Z52B	VCA JOB NUMBER VSK206145	TEST NO. TR/09/26
VEHICLE MANUFACTURER WITTER	MODEL ADJUSTABLE COUPLING	TYPE NO. EC94-20

MAX GROSS VEHICLE WEIGHT (T) 7500 kg	MAX. TRAILER WEIGHT (C) 3500 kg
'Dc' VALUE 23.41 kN	MAX. VERT LOAD (S) 286 kg
BATCH CODE Photo	ACTUAL TEST LOAD 14.05 kN
'L' SEE WORST CASE 55+25 mm	'H' SEE WORST CASE 75 mm
TEST ANGLE (±) $\frac{120 \times D_c}{9.81} = 286.36$	FREQUENCY 10 Hz

CYCLES COMPLETED	DISPLACEMENT			OBSERVATIONS		
	START (o)	TOTAL	+ PULL	- PUSH	+ LOAD (kN)	- LOAD (kN)
0	2.888	1.514	1.375	14.05	14.176	<i>[Signature]</i>
799750	+3.058	+1.703	-1.352	14.091	-14.097	<i>[Signature]</i> * COUPLING BOLT CHANGED *
2050000	+3.422	+1.701	-1.730	14.091	-14.103	<i>[Signature]</i>
1,000,000	+3.619	+1.701	1.729	14.091	-14.104	<i>[Signature]</i>
1,400,000	+3.619	+1.714	1.378	14.00	-14.01	<i>[Signature]</i>
2,000,000	+3.418	+1.715	1.379	14.05	14.02	<i>[Signature]</i> 2/7/09

Is Number Plate Obscured by Towball? **NO** Is Demountable Towball Required? **NO**

INSPECTION OF TOWBAR AT END OF TEST

Pass Test complete

TESTED IN ACCORDANCE WITH EC 94/20

TEST ENGINEER: *[Signature]*

WITNESS: *[Signature]*

DATE: *[Signature]*

PASSED

- (1) $D_c = \frac{T \times C}{1000(T + C)} \times g$ (where $g = 9.81 \text{ m s}^{-2}$) (2)
- (2) Test Load = 0.6 D_c
- (3) If towball centre line is above rearmost towbar mounting point (with the vehicle in the laden condition) the test angle is negative, otherwise it is positive.
- (4) If $\frac{120 \times D_c}{g} > S$ Test angle is 15°. If $< S$ Test angle is 20°.

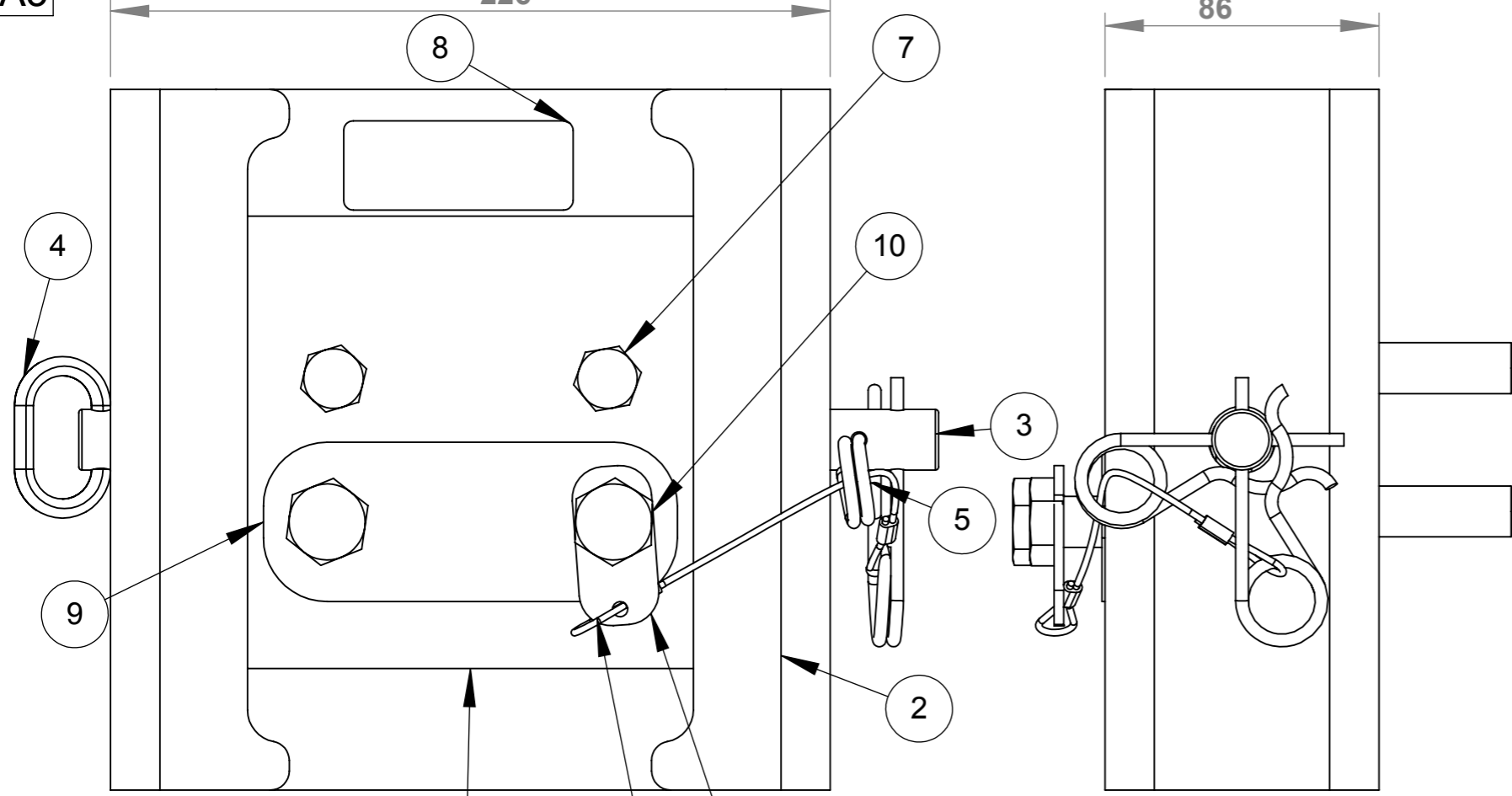
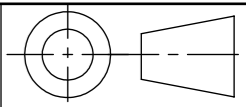


A3

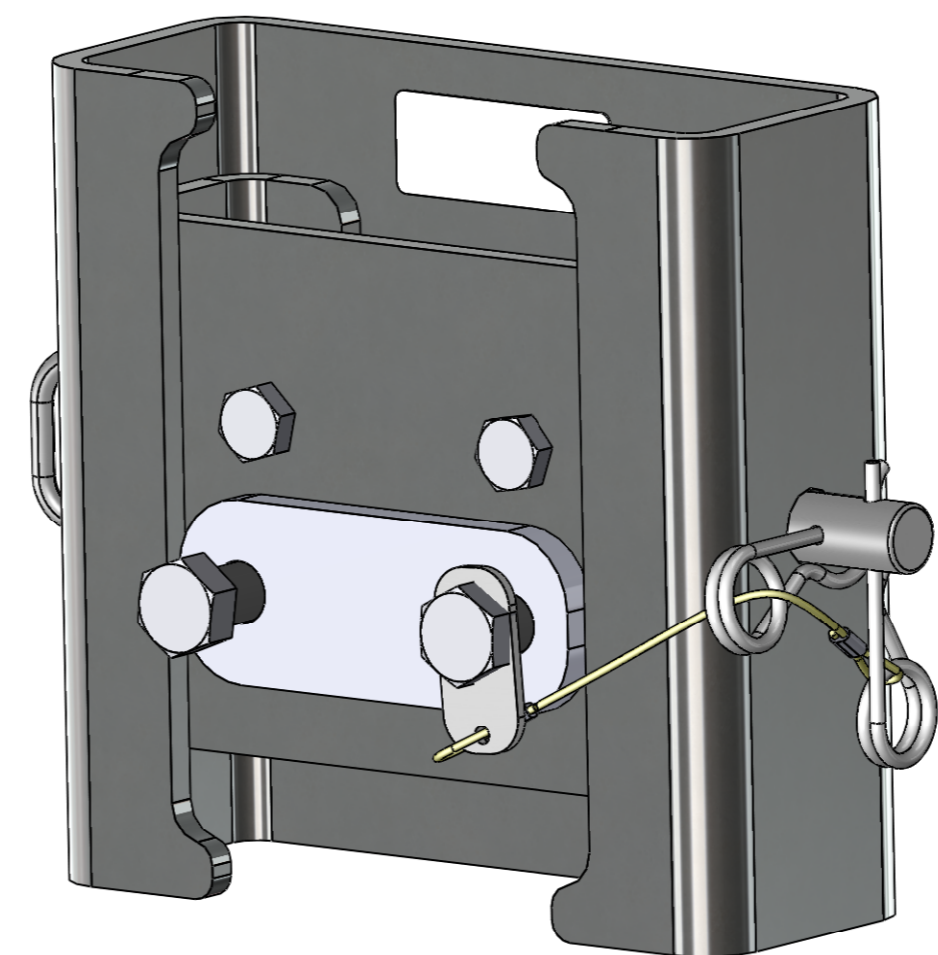
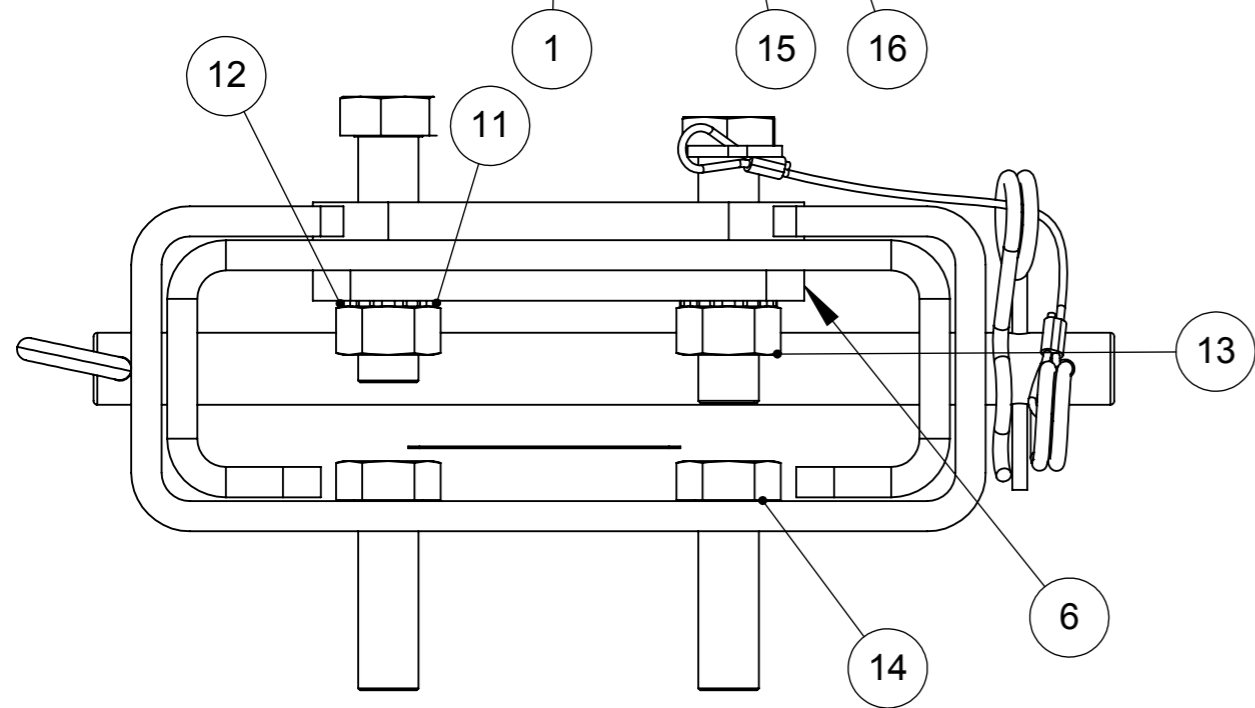
226

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IF IN DOUBT - ASK



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Z52A-C-1	8mm SLIDER PLATE	1
2	Z52A-A	8mm SLIDER PLATE	1
3	Z52B-P-1	19MM O.D. ROUND BD BAR	1
4	D RING	end stop	1
5	Special R-Clip	Pin clips	2
6	Z52B-C	3mm spreader plate	1
7	BOLT	M12x30x1.75 HT SETS	2
8	LBL-00003	TYPE APPROVAL LABEL	1
9	2FP50-10	FACE PLATE	1
10		M16x65x2.0 HT SETS	2
11	FST-00115	M12x1.75 'T' TYPE NYLOC	2
12	M16 EXT SHAKEPROOF WASHER	M16 EXT SHAKEPROOF WASHER	2
13	FST-00119	M16x2.00 FULL NUT	2
14		M16x50x2.0 HT BOLTS	4
15	safety cord		1
16	Z52B-CL	cord attachment bracket	1



CONTROLLED DRAWING

DATE OF ISSUE:

ACCEPTED ON BEHALF OF PRODUCTION:

NAME: SIGNED:

RELEASED FOR PRODUCTION USE:

NAME: SIGNED:

	PART No:	Iss.	Rel.
	Z52B-GA	1	0
DRAWN:	DATE:		12/11/2009
FINISH:	SCALE:		1:1
WEIGHT: kg	DIM:		mm-09

