

I N T R O D U C T I O N

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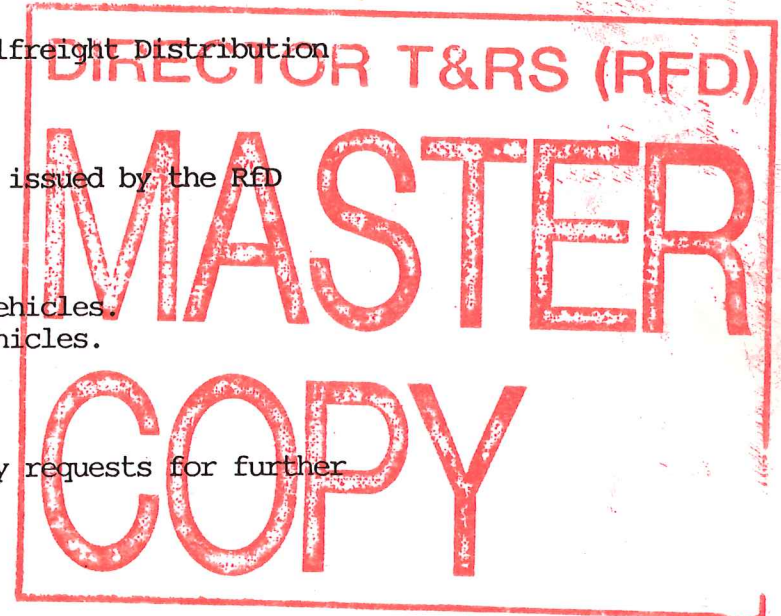
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BRITISH RAILWAYS (BR)Country 70

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ATOMIC FLASK WAGONS

Exchange Conditions 33, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
KYE 529	ATOMIC FLASK CARRYING WAGON	33 70 9986 006-008
KYE 779	176t GLW NUCLEAR FLASK WAGON	83 70 9985 001

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BRITISH RAILWAYS (BR)Country 70

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COIL CARRIERS

Exchange Condition 33

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
KIE 485	88t GLW HOODED COIL CARRIER	33 70 5899 001, 002, 007, 009-017, 024-028, 030-032, 034-036, 038, 048-050, 052, 053, 056, 058-061, 063, 067, 069-074
KIE 585	90t GLW HOODED COIL CARRIER	33 70 5899 075-104
KIE 732	88t GLW HOODED COIL CARRIER	33 70 5899 000, 003-006, 008, 018-023, 029, 033, 037, 039-047, 051, 054, 055, 057, 062, 064-066, 068

BRITISH RAILWAYS (BR)

Country 70

FLAT WAGONS

Exchange Conditions 23, 33

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
KGE 578	40t GLW CONTAINER FLAT	23 70 4424 001-005
KHE 684	4 AXLE 90t GLW FLAT	33 70 4746 100-108, 110-117, 119-121, 123-126, 131-133, 135, 140, 141, 143, 146, 147, 154, 155, 157, 159, 170, 173
KHE 696	4 AXLE 90t GLW FLAT	33 70 4746 183, 185, 187, 191, 193
KIE 749	4 AXLE 90t GLW FLAT	33 70 4666 005, 009; 33 70 4746 118, 127, 130, 134, 136, 138, 161, 169
KIE 750	4 AXLE 90t GLW FLAT	33 70 4666 010-016, 020-033, 035-038, 045-051
KIE 751	4 AXLE 90t GLW FLAT	33 70 4666 017-019, 034, 039-044, 052-054
KHE 764	4 AXLE 90t GLW FLAT	33 70 4746 197

BRITISH RAILWAYS (BR)

Country 70

HOPPERS

Exchange Conditions 23, 33, 43, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
JIE 431	80t GLW BOGIE HOPPER	33 70 9382 000, 006-009, 011, 013-016, 018, 020, 026-030, 034-037, 040-045, 047-054, 058
JIE 518	80t GLW CEREAL HOPPER	33 70 9385 000-029
JIE 538	80t GLW BOGIE HOPPER	33 70 9280 000-029
JIE 561	80t GLW BOGIE HOPPER	33 70 9280 030-080
JIE 570	88t BULK HOPPER	33 70 9280 081
JIE 574	80t GLW BOGIE HOPPER	33 70 9382 100-129
JIE 586	80t GLW BOGIE HOPPER	33 70 9382 010
KKE 589	40t 2 AXLE TWIN SILO	23 70 9192 002
JIE 675	80t GLW POLYBULK HOPPER	33 70 9382 001-005, 012, 017, 019, 031-033, 046
TIE 689	90t GLW PRESSURE DISCHARGE HOPPER	33 70 9292 204, 206, 207, 210-212
KPE 700	90t GLW BOGIE HOPPER	83 70 6905 000-049
KPE 702	90t GLW BOGIE HOPPER	83 70 6905 100-199
JRE 739	90t GLW HOPPER WAGON	33 70 6905 050-073
TIE 759	90t GLW HOPPER	33 70 9292 200-203, 205, 208, 209, 213, 214

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BRITISH RAILWAYS (BR)Country 70

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OPEN WAGONS

Exchange Conditions 33, 43

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
KLE 671	40t GLW OPEN HIGH-SIDED WAGON	43 70 6094 432
JRE 703	90t GLW OPEN BOX WAGON	33 70 6790 000-025, 027, 029-032, 034-099
JRE 745	90t GLW BOX WAGON	33 70 6790 026, 028, 033

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BRITISH RAILWAYS (BR)

Country 70

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PIGGYBACK WAGONS

Exchange Condition 83

DiagramDescriptionVehicle Numbers

KOE 736

65t PIGGYBACK WAGON

83 70 4798 001-099



BRITISH RAILWAYS (BR)

Country 70

TANK WAGONS

Exchange Conditions 23, 33, 34, 43, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
TIE 245	40t GLW 2 AXLE TANK	23 70 7490 240-251
TIE 288	40t GLW 2 AXLE TANK	23 70 7190 203, 205, 208-212, 218, 220-222
TIE 290	40t GLW 2 AXLE TANK	21 70 0780 392, 398
TIE 291	40t GLW 2 AXLE TANK	23 70 7190 400-408
TIE 296	40t GLW 2 AXLE TANK	23 70 7190 200, 201
TIE 313	40t GLW 2 AXLE TANK	23 70 7277 362, 363, 366; 21 70 0780 359-361, 364, 376
TIE 339	40t GLW 2 AXLE TANK	23 70 7397 101, 103-109, 111, 112, 115-117, 121-123
TIE 341	40t GLW 2 AXLE TANK	23 70 7397 125-139
TIE 344	40t GLW 2 AXLE TANK	23 70 7490 000, 001
TIE 385	40t GLW 2 AXLE TANK	43 70 7490 295-298, 357-360
TIE 387	80t GLW BOGIE TANK	33 70 7892 000-011
TIE 391	40t GLW 2 AXLE TANK	23 70 7286 410-413, 415-417
TIE 467	80t GLW BOGIE TANK	33 70 7892 024, 025, 028, 032-041, 043, 044, 046; 33 70 7895 001, 002, 004-008, 013, 016, 018, 021
TIE 494	40t GLW TANK WAGON	23 70 7390 027-031

BRITISH RAILWAYS (BR)

Country 70

TANK WAGONS (Continued)

Exchange Conditions 23, 33, 34, 43, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
TIE 497	80t GLW BOGIE TANK WAGON	33 70 7892 012-023
TIE 554	80t GLW BOGIE TANK WAGON	33 70 7895 153-165
TIE 567	2 AXLE 40t GLW TANK WAGON	23 70 7492 367-370
TIE 581	80t GLW BOGIE TANK WAGON	33 70 7996 001, 002, 003
TIE 599	46t GLW 2 AXLE TANK	43 70 7499 300, 301
TIE 628	40t GLW TANK WAGON	23 70 7490 253, 262, 264, 267-270, 273-275, 277, 279, 282, 283, 291, 294, 406, 408
TIE 656	40t GLW 2 AXLE TANK	23 70 7390 409-415
TIE 661	40t GLW 2 AXLE TANK	23 70 7390 635, 647, 653, 659, 671
KKE 664	40t GLW 2 AXLE TWIN SILO	43 70 9192 003-022
TIE 680	80t GLW BOGIE TANK	83 70 7895 200-203
TIE 686	90t GLW BOGIE TANK	33 70 7899 021-040
TIE 688	90t GLW BOGIE TANK	83 70 7895 204
TIE 704	40t GLW 2 AXLE TANK	23 70 7390 399, 406

BRITISH RAILWAYS (BR)

Country 70

TANK WAGONS (Continued)

Exchange Conditions 23, 33, 34, 43, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
TIE 705	40t GLW 2 AXLE TANK	23 70 7490 409, 414
TIE 708	90t GLW BOGIE TANK	33 70 7890 102, 118, 121, 123-126
TIE 715	80t GLW BOGIE TANK	33 70 7890 200-204
TIE 725	40t GLW TANK WAGON	23 70 7490 418
TIE 727	40t GLW TANK WAGON	23 70 7490 002, 258, 263, 266, 281, 284, 287-290, 293, 407
TIE 728	80t GLW BOGIE TANK	34 70 7899 000
TIE 729	80t GLW BOGIE TANK	33 70 7899 001, 002
TIE 734	90t GLW BOGIE TANK	33 70 7890 100, 101, 103-117, 119, 120, 122
TIE 744	40t GLW TANK WAGON	23 70 7277 365
TIE 746	90t GLW BOGIE TANK	33 70 7899 041, 046-048, 057
TIE 758	90t GLW BOGIE TANK	33 70 7899 042-045, 049-056, 058-060

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BRITISH RAILWAYS (BR)Country 70

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VANS

Exchange Conditions 33, 83

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
KVE 483	80t GLW BOGIE VAN	33 70 2797 000-029
KVE 593	90t GLW BOGIE VAN	83 70 2795 312, 315, 316, 327, 329, 330, 332, 334, 337, 344
KVE 678	80t GLW SLIDING DOOR VAN	83 70 2795 350-364
KVE 762	90t GLW BOGIE VAN	83 70 2795 300-311, 313, 314, 317-326, 328, 331, 333, 335, 336, 338-343, 345-349

BRITISH RAILWAYS (BR)

Country 70

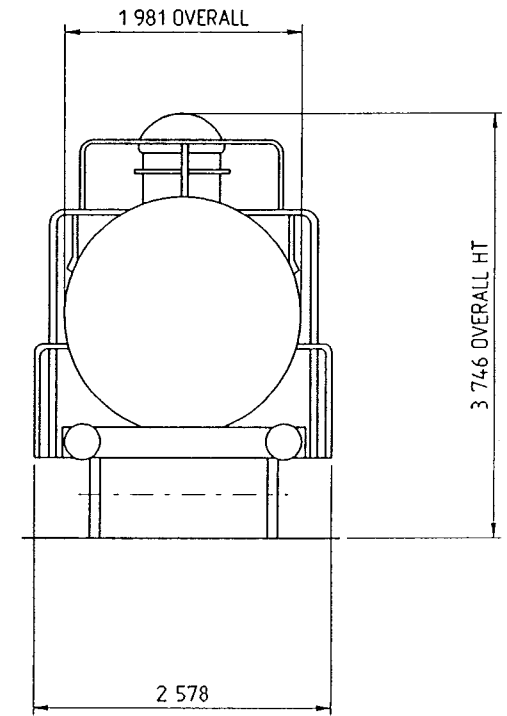
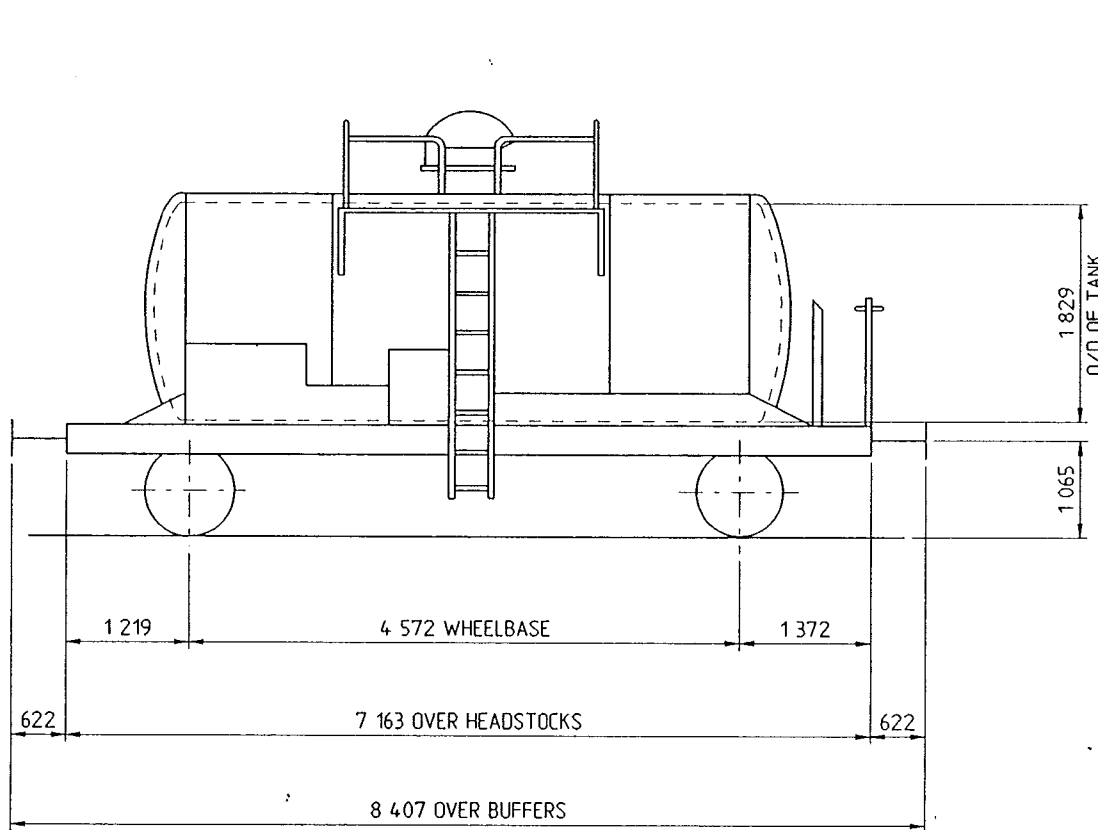
VEHICLE CARRIERS

Exchange Condition 43

<u>Diagram</u>	<u>Description</u>	<u>Vehicle Numbers</u>
PIE 735	39t GLW AUTIC WAGON	43 70 4289 000, 004-006, 008-010, 012-018, 021-027
PIE 738	39t GLW AUTIC WAGON	43 70 4289 001
PIE 755	52t GLW 3 AXLE COMTIC	43 70 4287 002; 43 70 4290 000, 003, 005-008, 011-013
PIE 773	39t GLW AUTIC WAGON	43 70 4289 002, 003, 007, 011, 019, 020



					TOPS INFORMATION							
	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	16t	20t	20t			60 mile/h UP TO -mile/h ABOVE	40 tonne GLW	9 t FORCE UP TO 22 t FORCE ABOVE	29 t GLW	4	6	---
S	16t	20t	20t		CARKND							
120					T I A K							



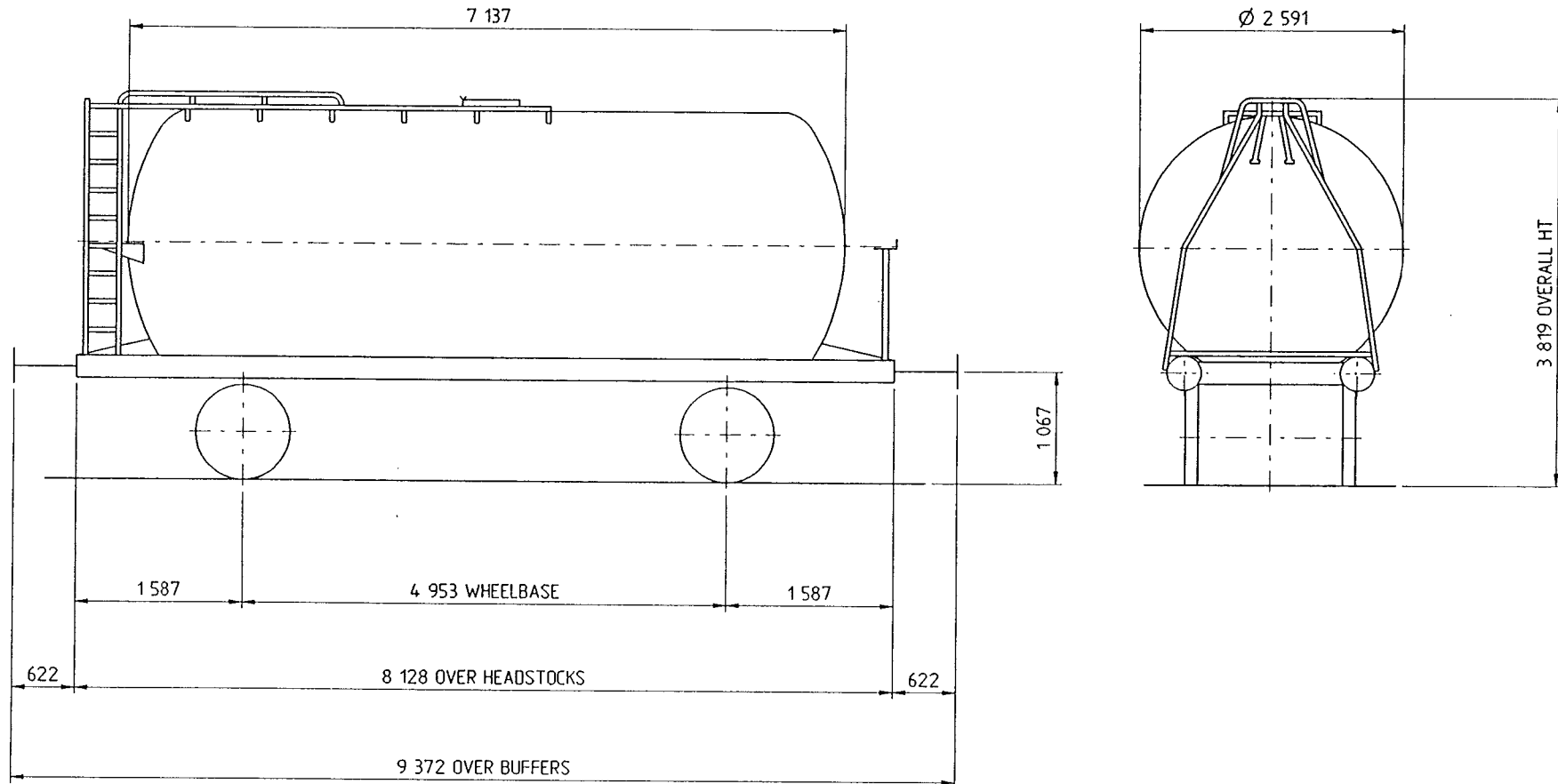
<b>TARE-</b>	16 t
<b>CAPACITY, WEIGHT-</b>	24 t
<b>CAPACITY, VOLUME-</b>	22.6 m <sup>3</sup>
<b>FLOOR AREA-</b>	-
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	4110

<b>BRAKE-</b>	AIR,PLATFORM,SCREW & SIDE LEVER
<b>SUSPENSION-</b>	DOUBLE LINK
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC Ø 400 HD
<b>WHEELS-</b>	Ø 1m
<b>JOURNALS-</b>	Ø 130

<b>TYPE-</b>	Zfkks
<b>WAGON No.-</b>	23 70 7490 240 - 251
<b>BUILDER-</b>	CHAS ROBERTS
<b>OWNER-</b>	ASSOCIATED OCTEL



					TOPS INFORMATION							
90	A 19.7t	B 23.7t	C 27.7t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	40 tonne GLW	8 t FORCE UP TO	21 t GLW	5	6	—
120					T I B L	mile/h ABOVE		18 t FORCE ABOVE				



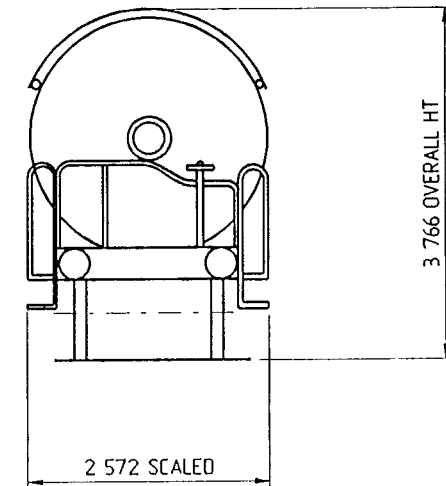
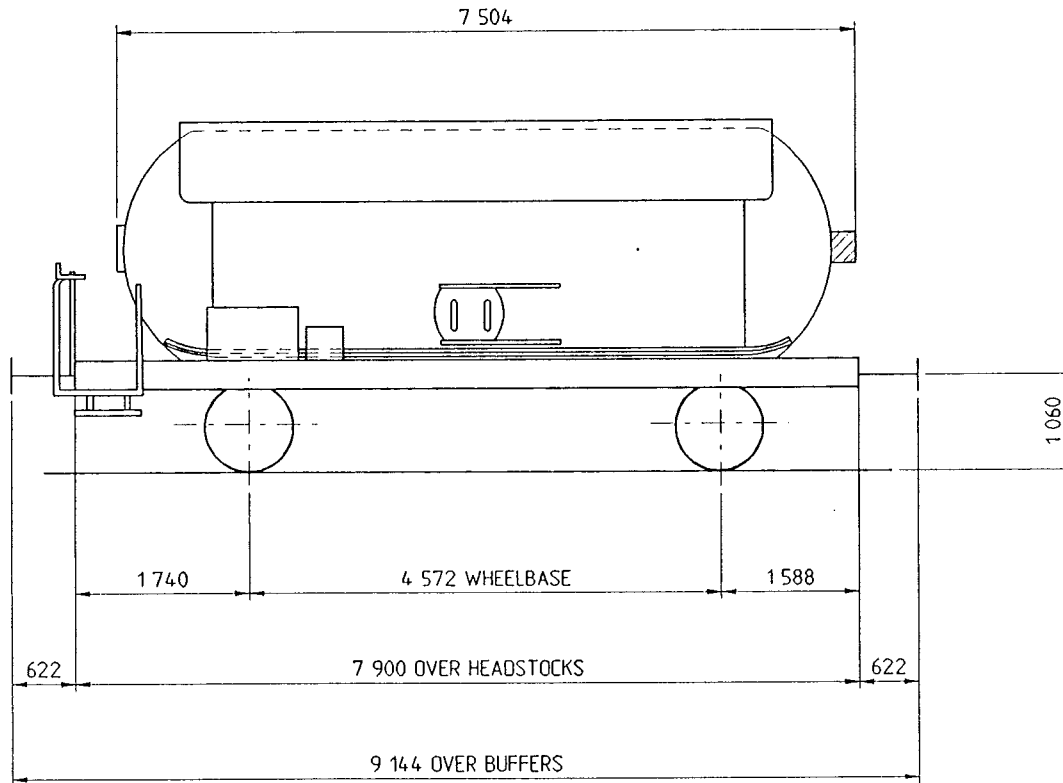
TARE-	12.3 t
CAPACITY, WEIGHT-	27.5 t
CAPACITY, VOLUME-	35.9 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	-
GEN.ARRGT.DRG.No.-	15/1 TK

BRAKE-	AIR, THRO' VAC PIPE, SCREW & SIDE LEVER
SUSPENSION-	-
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅ -
JOURNALS-	∅ -

TYPE-	Ufh
WAGON No.-	23 70 7190 203, 205, 208 - 212, 218, 220 - 222
BUILDER-	POWELL DUFFRYN
OWNER-	CAIB UK LTD



				TOPS INFORMATION								
90	A 7.6 t	B 11.6t	C 15.6t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	40 tonne GLW	12 t FORCE UP TO	30 t GLW	5	6	—
120					T I X L	mile/h-ABOVE-		18 t FORCE ABOVE				



NOTE:- FOR THE TRANSPORT OF GASES UNDER PRESSURE, LIQUIFIED OR DISSOLVED UNDER PRESSURE.

TARE-	24 t
CAPACITY, WEIGHT-	15.6 t
CAPACITY, VOLUME-	32.3 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	4681

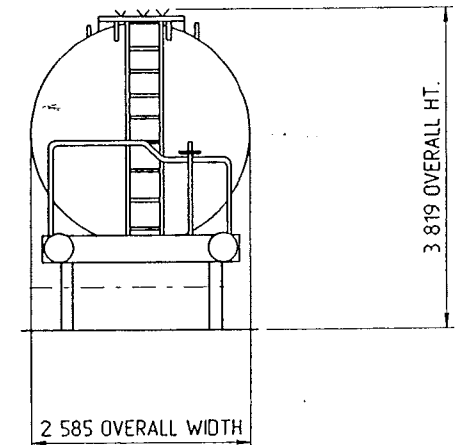
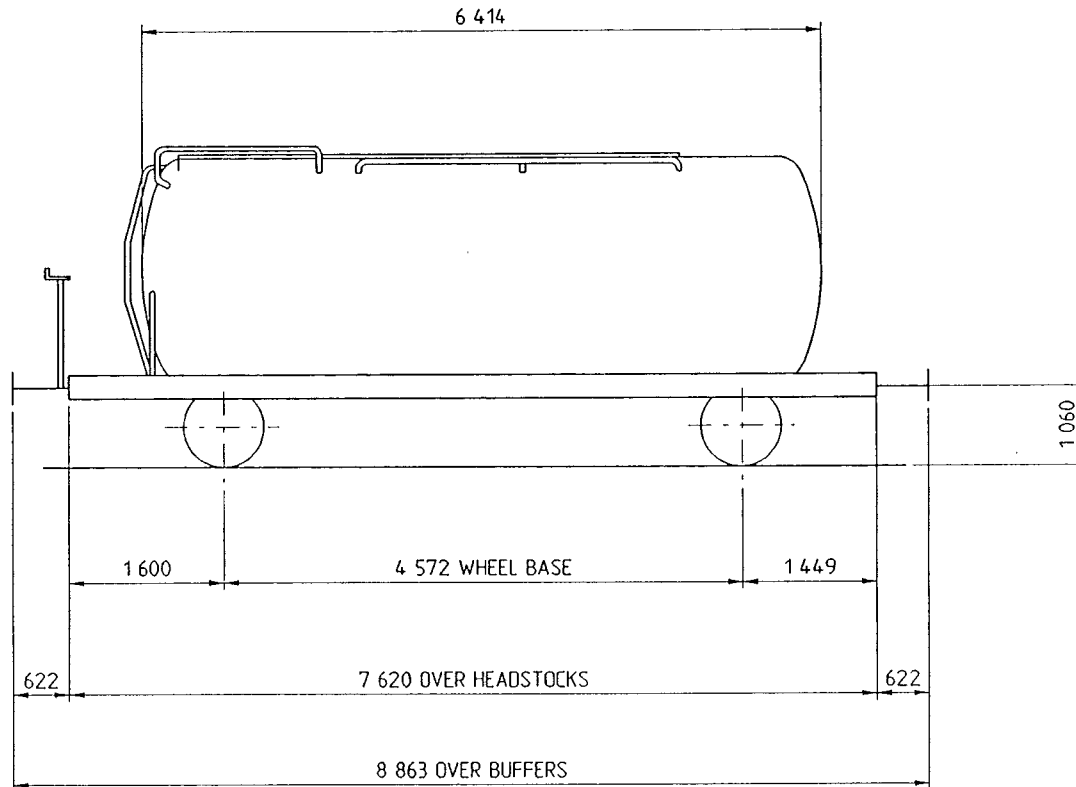
BRAKE-	DUAL
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400 HD.
WHEELS-	Ø 1 m
JOURNALS-	Ø 130

TYPE-	Zfgk
WAGON No.-	21 70 0780 392, 398
BUILDER-	CHAS ROBERTS
OWNER-	EX-TIGER RAIL (RECEIVERS)





					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 4	RA (GLW) 6	DESIGN SHEET —
S	17.7t	21.7t	25.7t	CARKND		60 mile/h UP TO	40 tonne GLW	7 t FORCE UP TO	20 t GLW			
120				T I X L		mile/h ABOVE		18 t FORCE ABOVE				



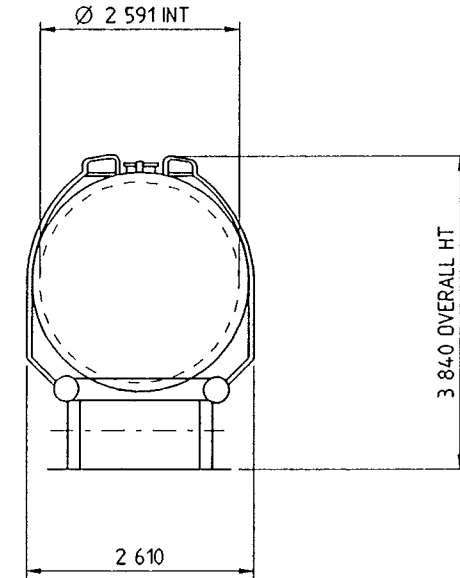
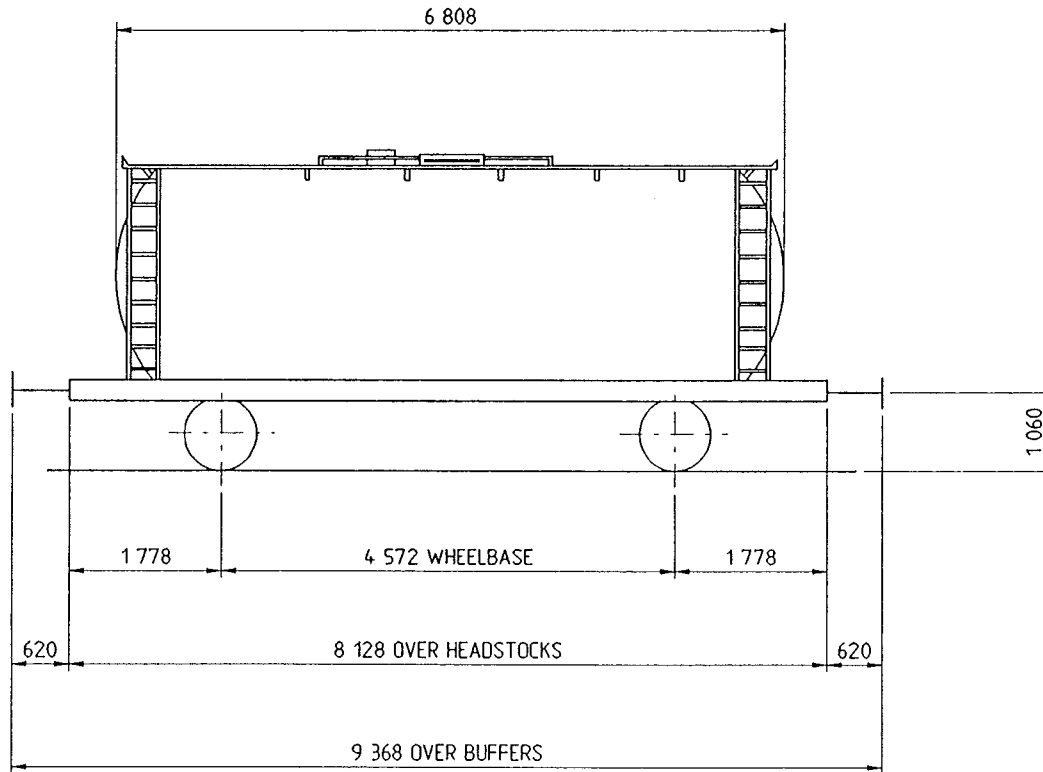
TARE-	14.25 t
CAPACITY, WEIGHT-	25.7 t
CAPACITY, VOLUME-	32m <sup>3</sup> (ALLOWING 4% ULLAGE)
FLOOR AREA-	—
MIN.CURVE-	60m
GEN.ARRGT.DRG.No.-	4750

BRAKE-	VACUUM & AIR
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400 HD.
WHEELS-	Ø 1m
JOURNALS-	Ø 130

TYPE-	Zf
WAGON No.-	23 70 7190 400 - 408
BUILDER-	CHAS ROBERTS
OWNER-	EX-TIGER RAIL (RECEIVERS)



				TOPS INFORMATION								
90	A 19 t	B 23 t	C 27 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	40 tonne GLW	8 t FORCE UP TO	21 t GLW	5	6	—
120					T I X L	— mile/h ABOVE		18 t FORCE ABOVE				



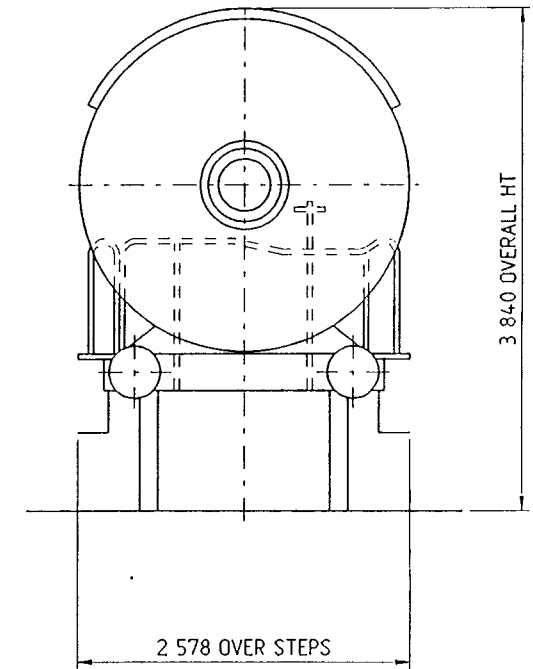
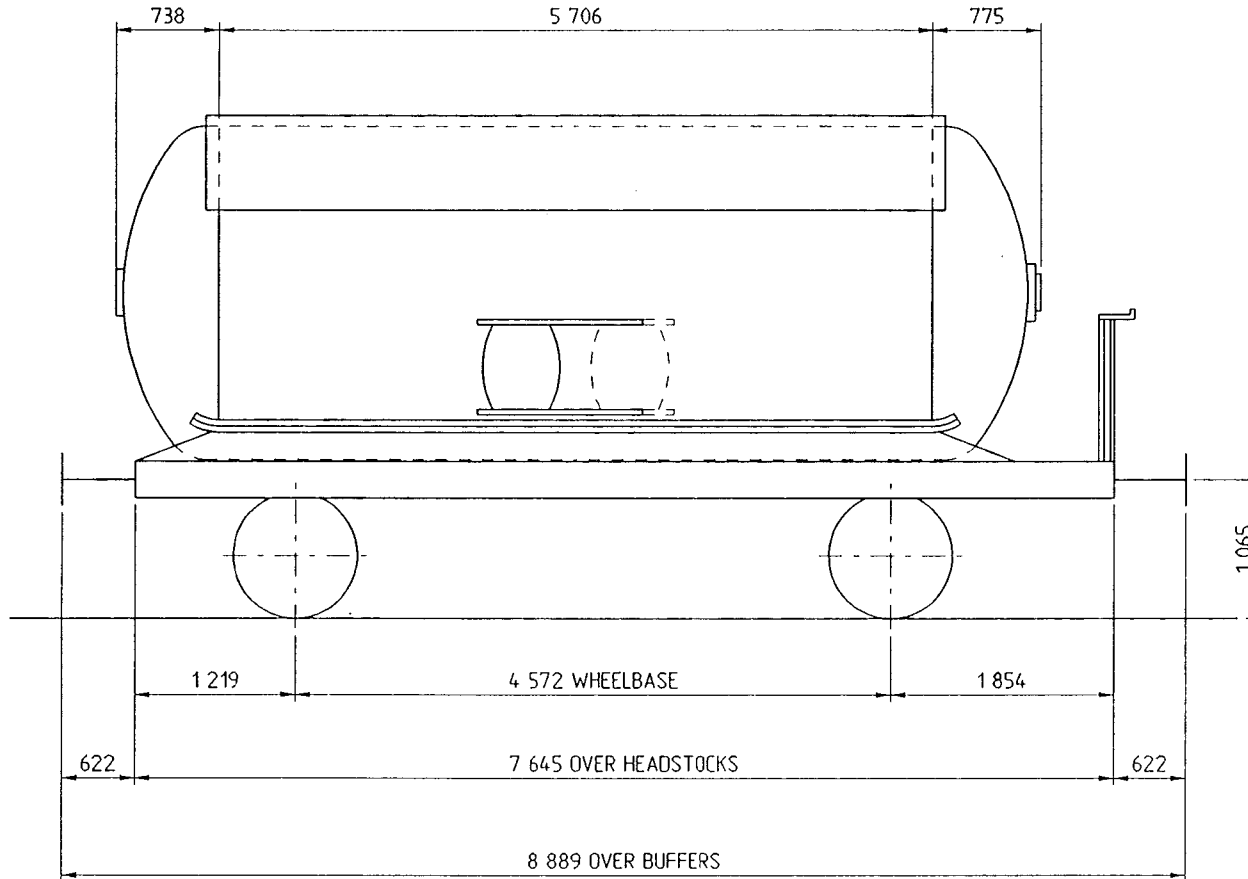
TARE-	13 t
CAPACITY, WEIGHT-	27 t
CAPACITY, VOLUME-	34.6 m <sup>3</sup>
FLOOR AREA-	—
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	O.T. 1000

BRAKE-	DUAL
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400 HD
WHEELS-	Ø 1 m
JOURNALS-	Ø 130

TYPE-	Zf
WAGON No.-	23 70 7190 200, 201
BUILDER-	SENTINEL ( SHREWSBURY )
OWNER-	S. T. S.



					TOPS INFORMATION							
90	A 12 t	B 16 t	C 20 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	40 tonne GLW	12 t FORCE UP TO	21 t GLW		6	—
120					T I X L	mile/h ABOVE		18 t FORCE ABOVE				



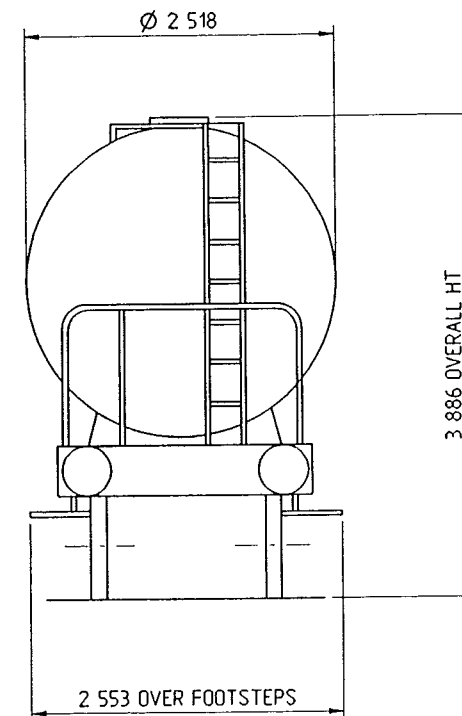
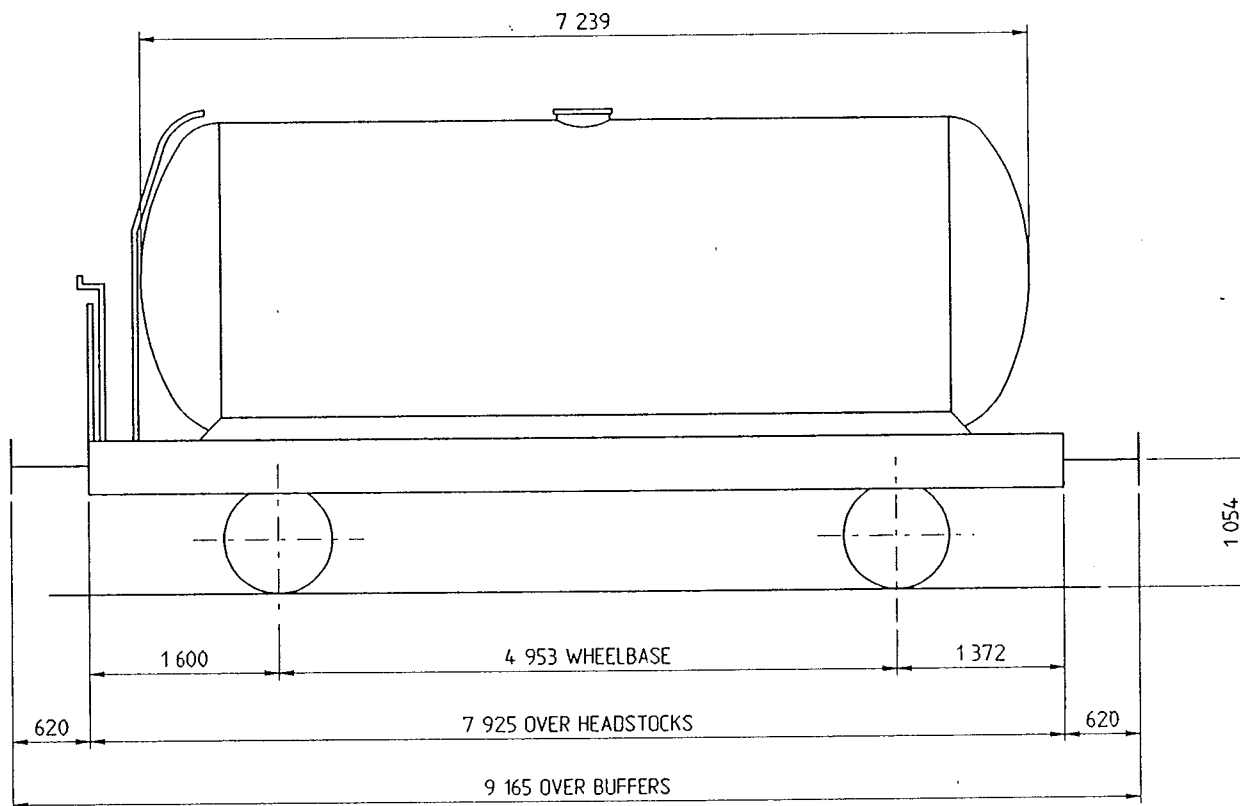
TARE-	20 t
CAPACITY, WEIGHT-	20 t
CAPACITY, VOLUME-	31 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	-
GEN. ARRGT. DRG. No.-	4895/124

BRAKE-	AIR; VACUUM; SCREW & SIDE LEVER
SUSPENSION-	-
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅ -
JOURNALS-	∅ -

TYPE-	Ufh
WAGON No.-	23 70 7277 362, 363, 366 ( ICI ) 21 70 0780 359-361, 364, 376 ( TRL )
BUILDER-	CHARLES ROBERTS
OWNER-	ICI; EX-TIGER RAIL (RECEIVERS)



		TOPS INFORMATION											
90	A	B	C	D		AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	17 t	21 t	25 t			CARKND	60 mile/h UP TO	40 tonne GLW	FORCE UP TO	GLW	5	6	—
120						T I B L	mile/h ABOVE		FORCE ABOVE	VARIABLE LOAD=2+(0.4xt)			



NOTE! STEAM COILS FITTED

TARE-	13 t
CAPACITY, WEIGHT-	27 t
CAPACITY, VOLUME-	33.1 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	SPL00126/3/000

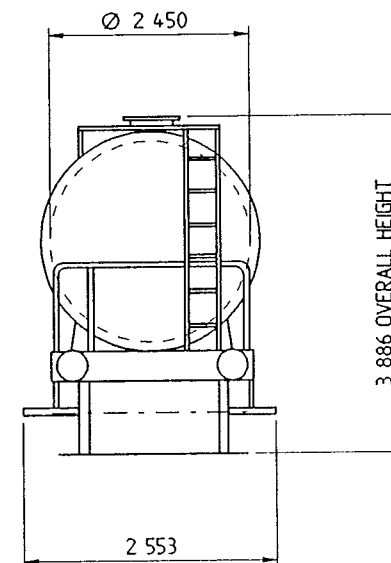
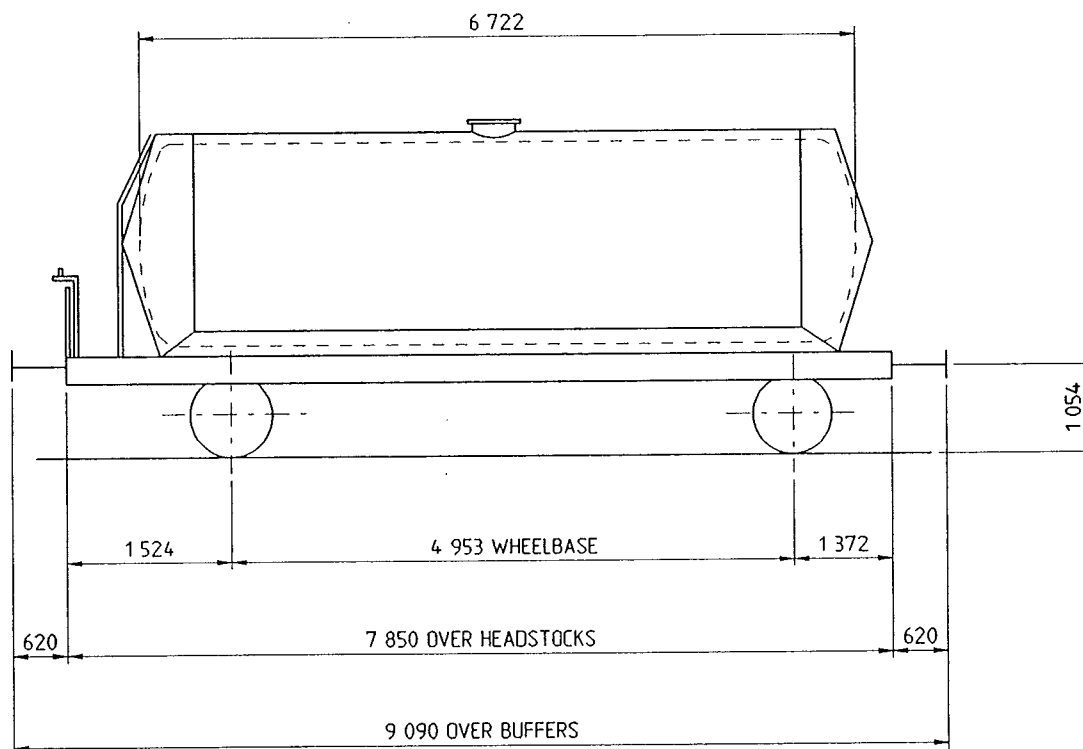
BRAKE-	AIR & VAC THRO'PIPE, PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400
WHEELS-	Ø 1 m
JOURNALS-	Ø

TYPE-	Zefs
WAGON No.-	23 70 7397 101, 103 - 109, 111, 112, 115 - 117, 121 - 123
BUILDER-	ROOTES PRESSINGS
OWNER-	STS

07-07-92 ISSUE 2



TOPS INFORMATION													
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	19 t	23 t	27 t			CARKND	60 mile/h UP TO	40 tonne GLW	FORCE UP TO	GLW VARIABLE LOAD = 3.2+(0.37xt)	5	6	—
120	19 t	23 t	23 t			T I B L	60 mile/h ABOVE		FORCE ABOVE				



NOTE: STEAM COILS FITTED

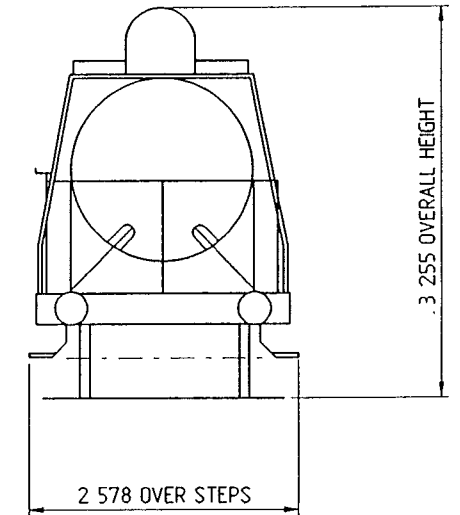
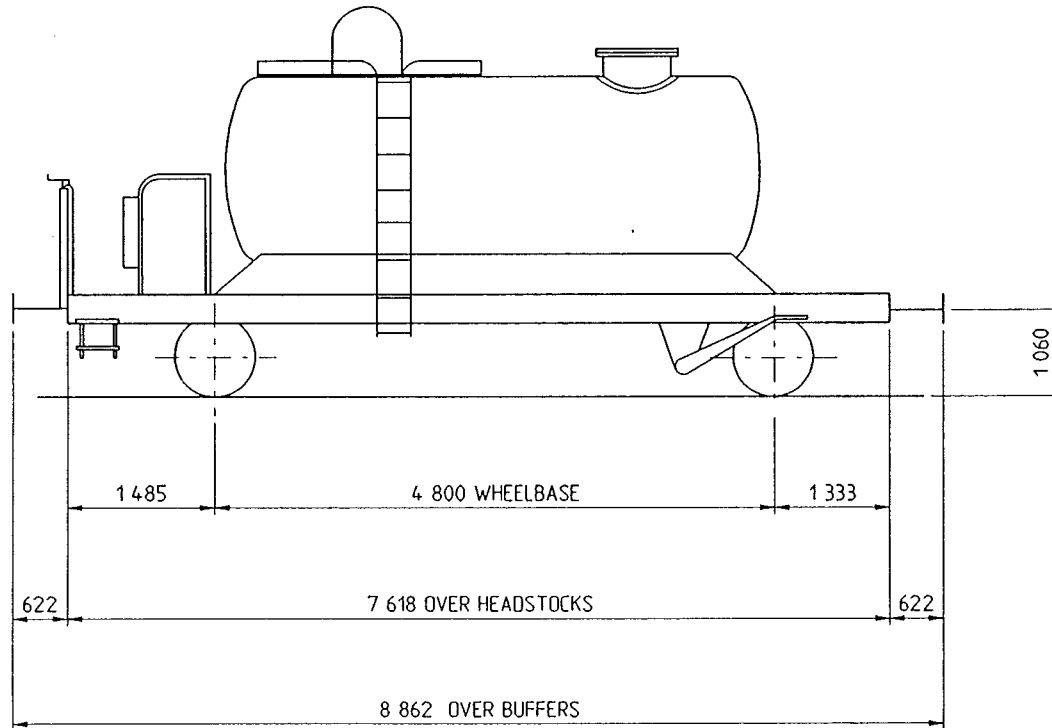
TARE-	13 t
CAPACITY, WEIGHT-	27 t
CAPACITY, VOLUME-	29.8 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	00129/3/000

BRAKE-	AIR & VAC THRO' PIPE
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400
WHEELS-	Ø 1 m
JOURNALS-	Ø 140

TYPE-	Zefs
WAGON No.-	23 70 7397 125 - 139
BUILDER-	ROOTES PRESSING
OWNER-	S.T.S.



TOPS INFORMATION													
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
	16.5 t	20.5 t	24.5 t			CARKND	60 mile/h UP TO	36 tonne GLW	FORCE UP TO				-GLW- VARIABLE LOAD=2.51+(0.36xt)
S	16.5 t	20.5 t	20.5 t		T	I	B	K	50 mile/h ABOVE	FORCE ABOVE	4	6	
120													



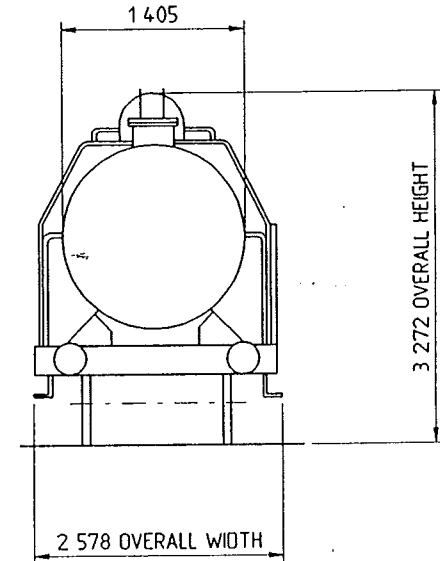
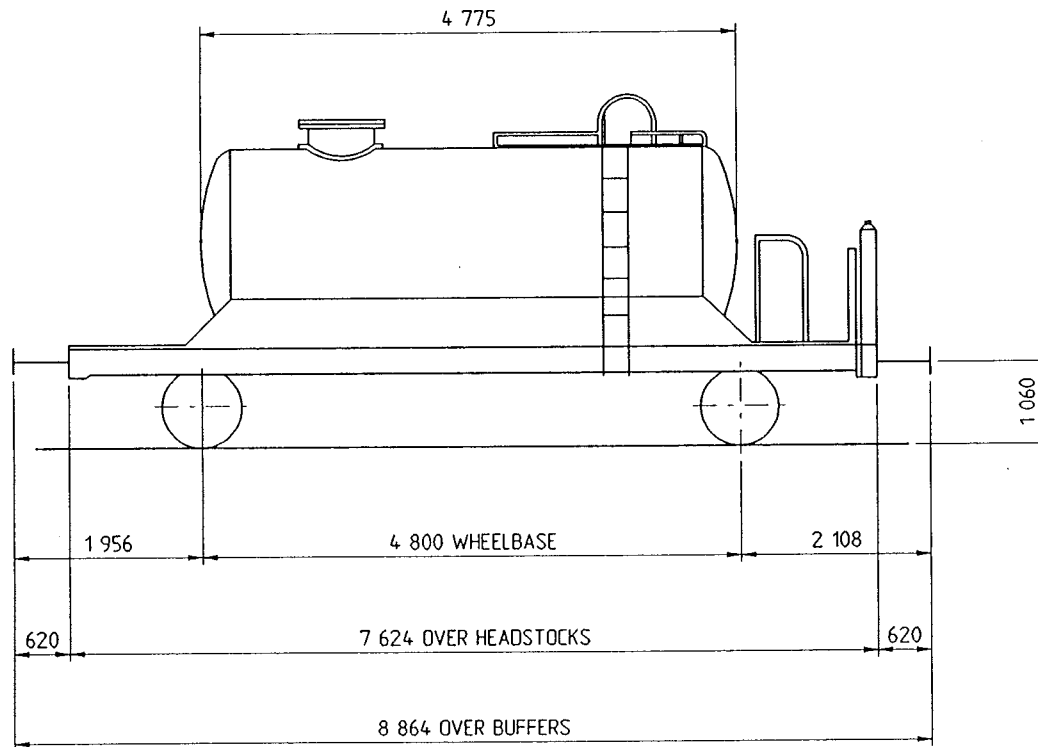
TARE-	15.5 t
CAPACITY, WEIGHT-	24.5 t
CAPACITY, VOLUME-	6.8 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	5426

BRAKE-	AIR & VAC THRO'PIPE; PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	∅ 1 m
JOURNALS-	∅ 130

TYPE-	Zfks
WAGON No.-	23 70 7490 000, 001
BUILDER-	CHAS ROBERTS
OWNER-	ETHYL S.A. BRUSSELS



					TOPS INFORMATION							
90	A 16.3t	B 20.3t	C 24.3t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	16.3t	20.3t	20.3t		CARKND	60 mile/h UP TO	40 tonne GLW	FORCE UP TO	GLW	6	6	W1955
120					T I B L	mile/h ABOVE		FORCE ABOVE	VARIABLE LOAD = -1.25 + (0.59x1)			



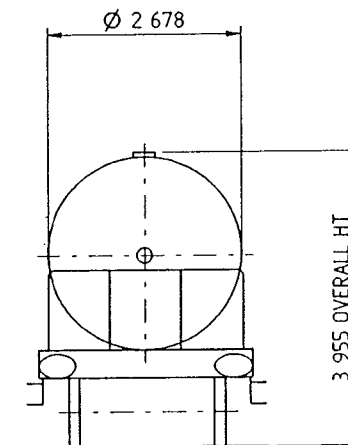
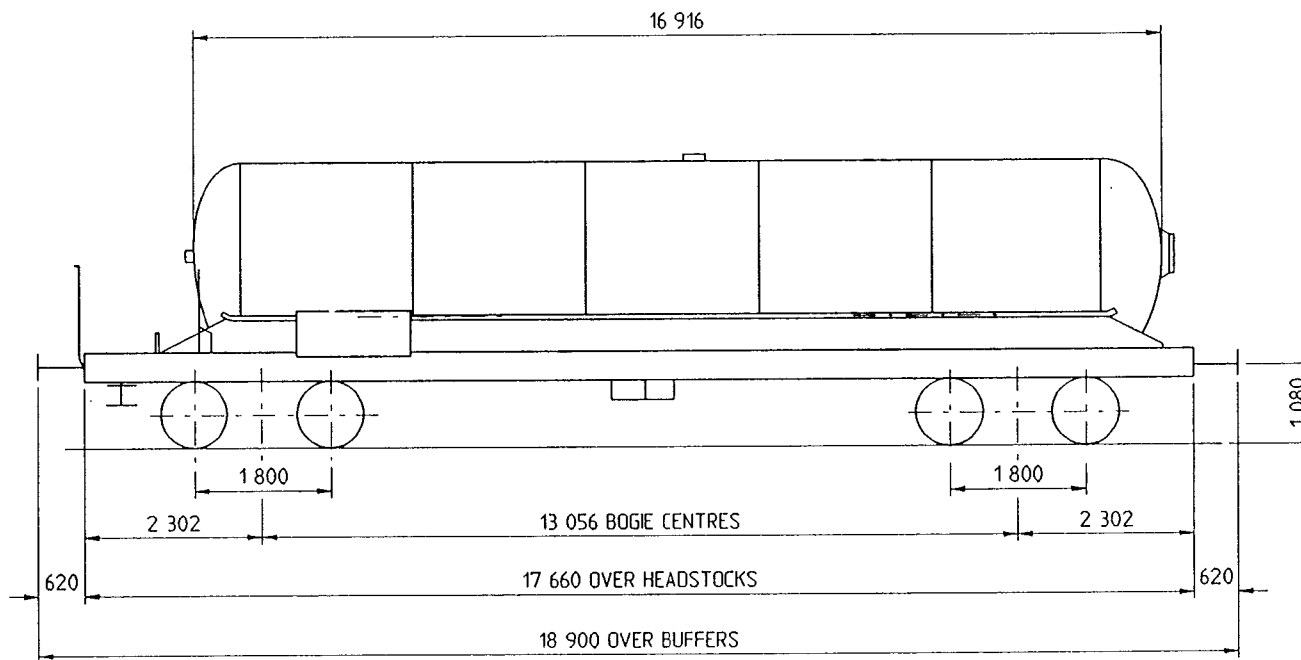
TARE-	15.65 t
CAPACITY, WEIGHT-	24.35 t
CAPACITY, VOLUME-	6.5 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	30 m
GEN. ARRGT. DRG. No.-	5426

BRAKE-	VARIABLE LOAD; AUTO CHANGE OVER; PRESSURE CHANGE
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	I R SPRINGS Ø 400 HD
WHEELS-	Ø 1 000
JOURNALS-	Ø 130

TYPE-	Zfkks
WAGON No.-	43 70 7490 295-298, 357-360
BUILDER-	CHARLES ROBERTS & Co
OWNER-	ETHYL S.A. BRUSSELS



					TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	30.4 t	38.4 t	46.4 t			CARKND	60 mile/h UP TO mile/h ABOVE	80 tonne GLW	20 t FORCE UP TO 57 t FORCE ABOVE				67 t GLW
120													



TARE-	33.520 t
CAPACITY, WEIGHT-	46.4 t
CAPACITY, VOLUME-	91 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	100589

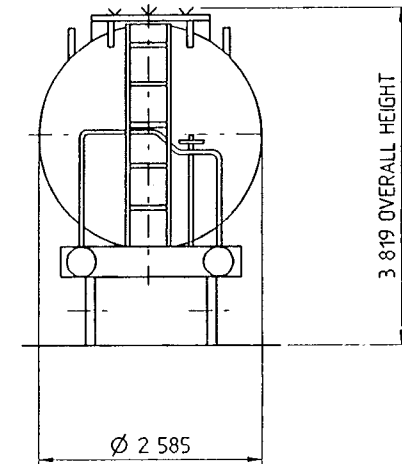
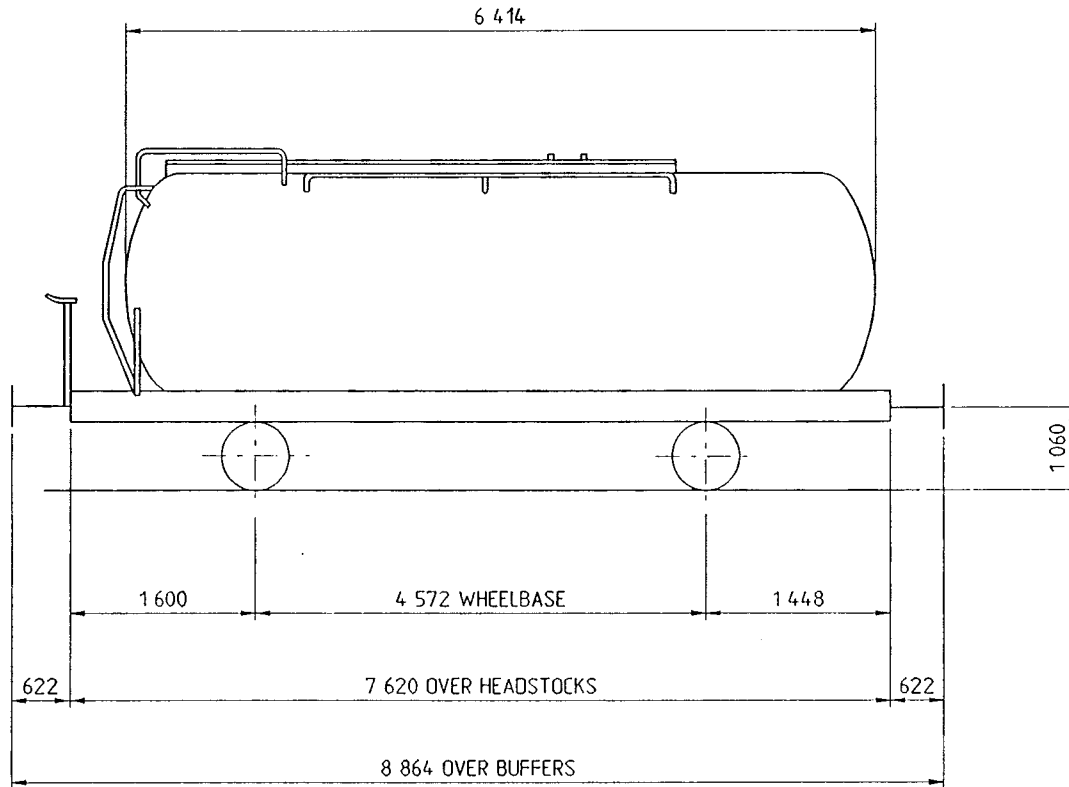
BRAKE-	AIR & VACUUM THROUGH PIPE
SUSPENSION-	Y 25 C BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	Ø 920
JOURNALS-	Ø 140

TYPE-	Zafgkks
WAGON No.-	33 70 7892 000 - 011
BUILDER-	FAUVET GIREL
OWNER-	STORAGE & TRANSPORT SYSTEM





					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	16.5t	20.5t	24.5t		CARKND	60 mile/h UP TO	40 tonne GLW	8 t FORCE UP TO	21 t GLW	6	6	—
120					T I X L	mile/h ABOVE		18 t FORCE ABOVE				



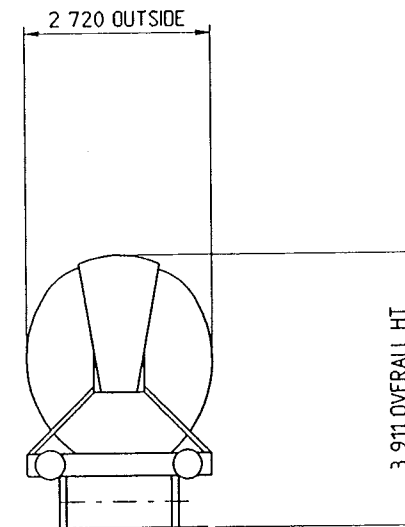
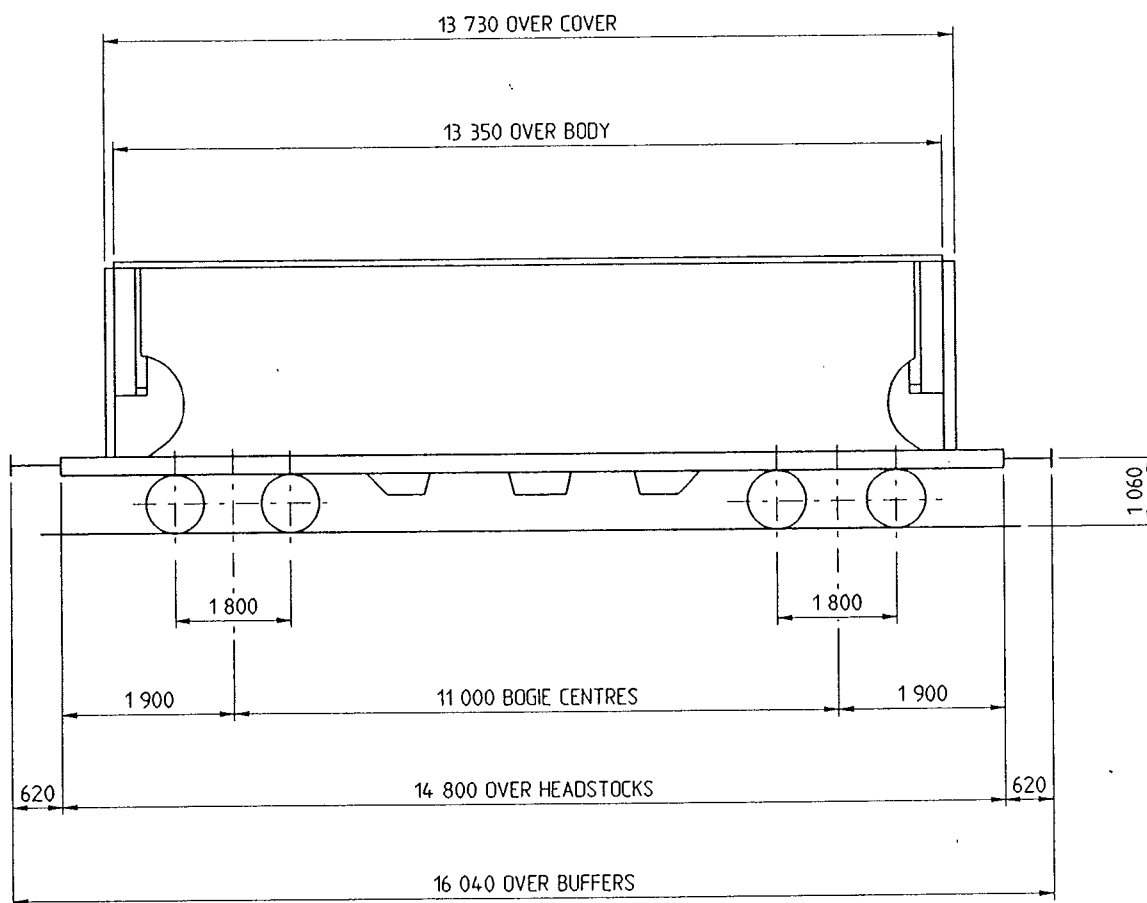
TARE-	15.45 t
CAPACITY, WEIGHT-	24.5 t
CAPACITY, VOLUME-	31.6 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	4750

BRAKE-	AIR; PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400 HD
WHEELS-	Ø 1 000
JOURNALS-	Ø 130

TYPE-	Zfkk
WAGON No.-	23 70 7286 410 - 413, 415 - 417
BUILDER-	CHARLES ROBERTS
OWNER-	EX-TIGER RAIL (RECEIVERS)



				TOPS INFORMATION								
90	A 42 t	B 50 t	C 58 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42 t	50 t	58 t		CARKND	60 mile/h UP TO	80 tonne GLW	16 t FORCE UP TO	47 t GLW	5	7	W1859
120					J I B Y	mile/h-ABOVE-		40 t FORCE ABOVE				



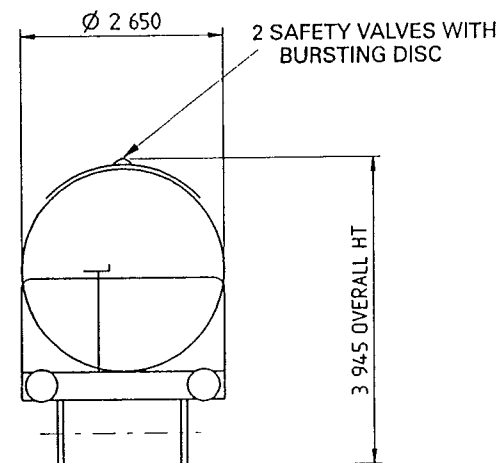
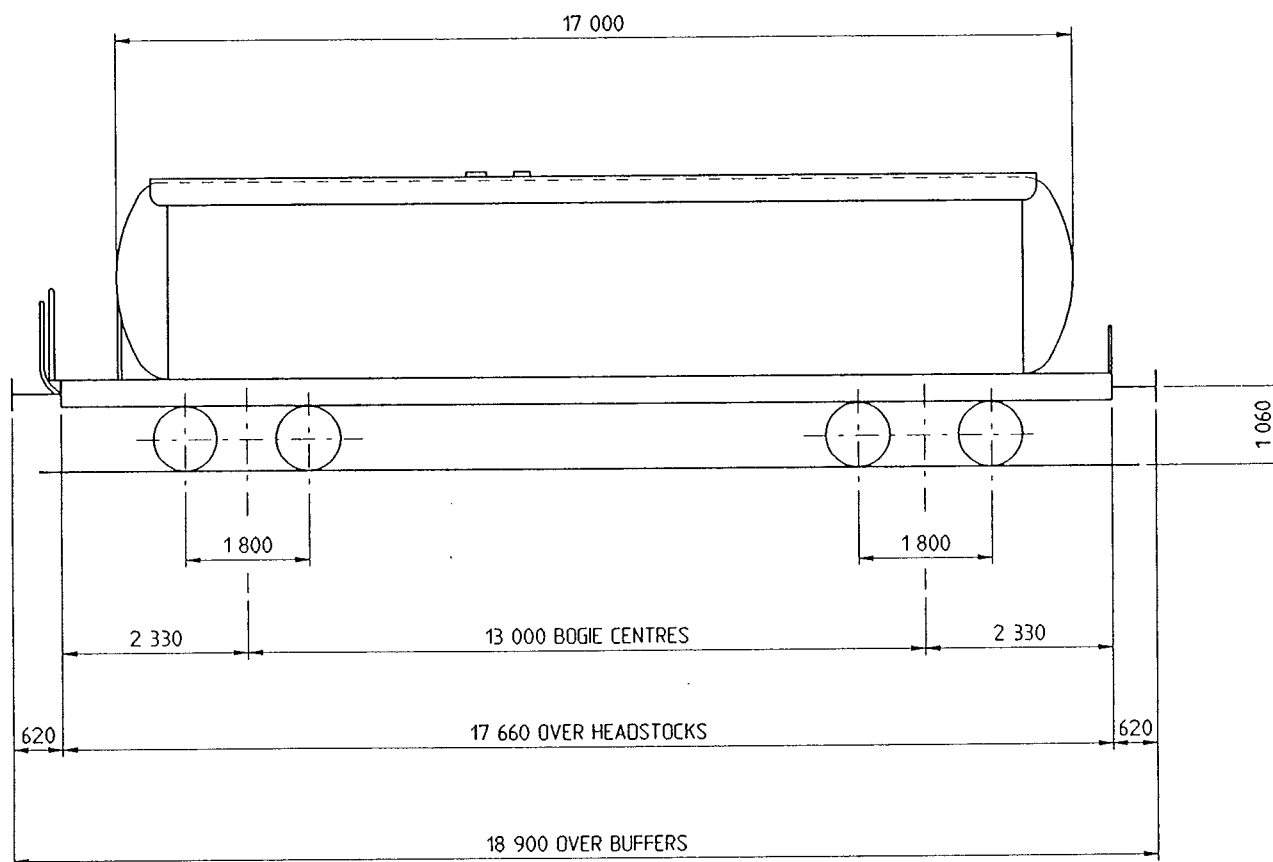
TARE-	22 t 22.65 t
CAPACITY, WEIGHT-	58 t 57.32 t
CAPACITY, VOLUME-	70 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	107075

BRAKE-	AIR; VACUUM THROUGH PIPE
SUSPENSION-	Y25 C BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 460
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafoos
WAGON No.-	33 70 9382 000, 006 - 009, 011, 013 - 016, 018, 020, 026 - 030, 034 - 037, 040 - 045, 047 - 054, 058
BUILDER-	FAUVET - GIREL
OWNER-	CAIB (UK) LTD



TOPS INFORMATION													
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 10	RA (GLW) 7	DESIGN SHEET —	
S	33.9t	41.9t	49.9t			CARKND	60 mile/h UP TO mile/h ABOVE	80 tonne GLW	22 t FORCE UP TO 43 t FORCE ABOVE				51 t GLW
120						T I B Y							



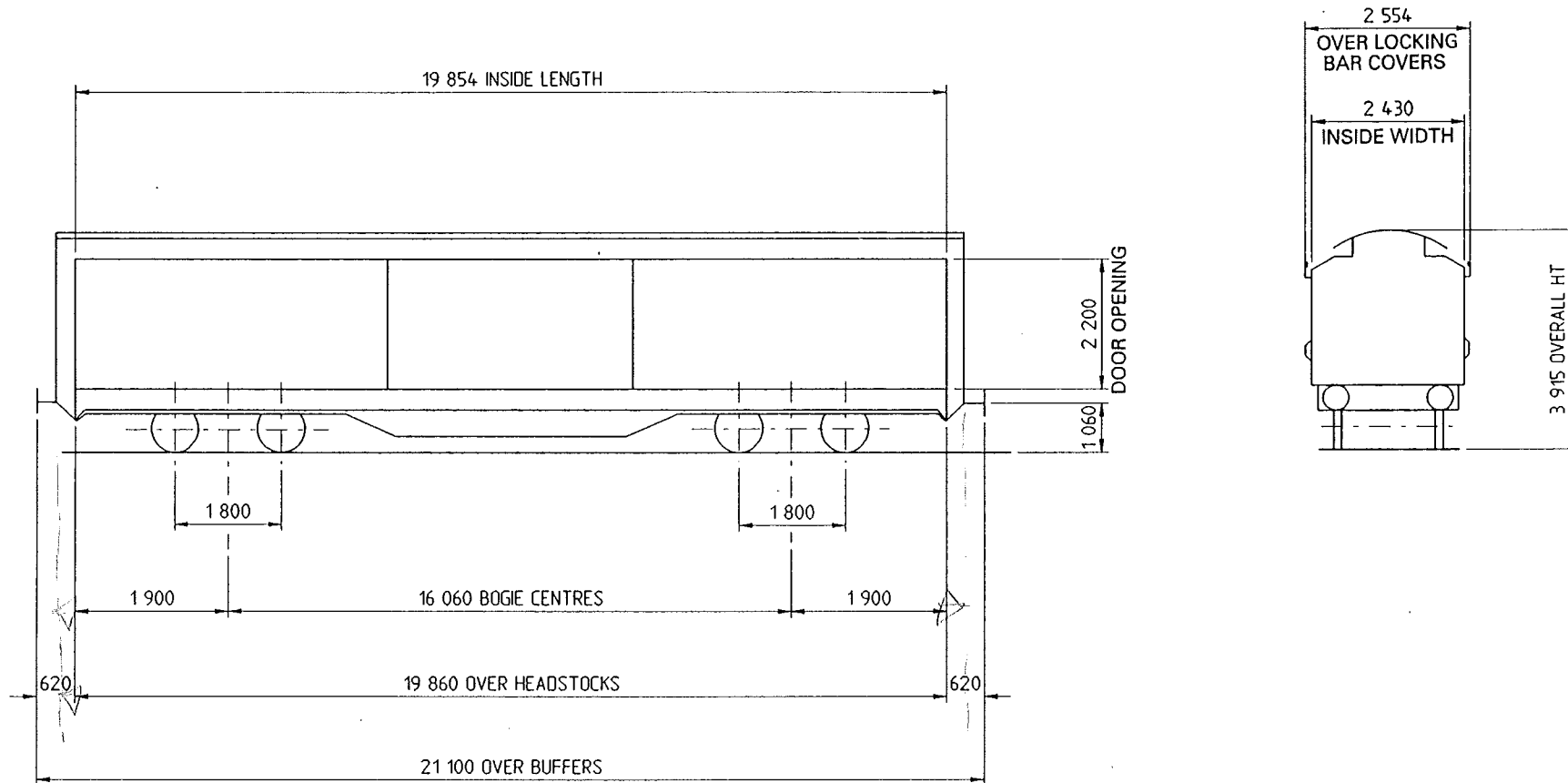
TARE-	30.1 t
CAPACITY, WEIGHT-	49.9 t
CAPACITY, VOLUME-	90 m <sup>3</sup>
FLOOR AREA-	36 m <sup>2</sup>
MIN. CURVE-	-
GEN. ARRGT. DRG. No.-	0-335.01.0034

BRAKE-	AIR; VAC THRO' PIPE
SUSPENSION-	TALBOT BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	RINGFEDER
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafgkks; Zacfs
WAGON No.-	33 70 7892 024, 025, 028, 032 - 041, 043, 044, 046 33 70 7895 001, 002, 004 - 008, 013, 016, 018, 021
BUILDER-	WAGGON UNION
OWNER-	V.T.G.



					TOPS INFORMATION							
90	A 38 t	B 46 t	C 54 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	38 t	46 t	54 t		CARKND	60 mile/h UP TO	80 tonne GLW	18 t FORCE UP TO	44 t GLW	13	6	—
120					K V A B	-mile/h ABOVE-		36 t FORCE ABOVE				



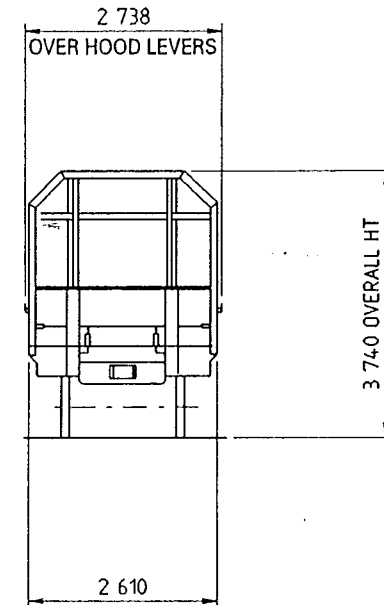
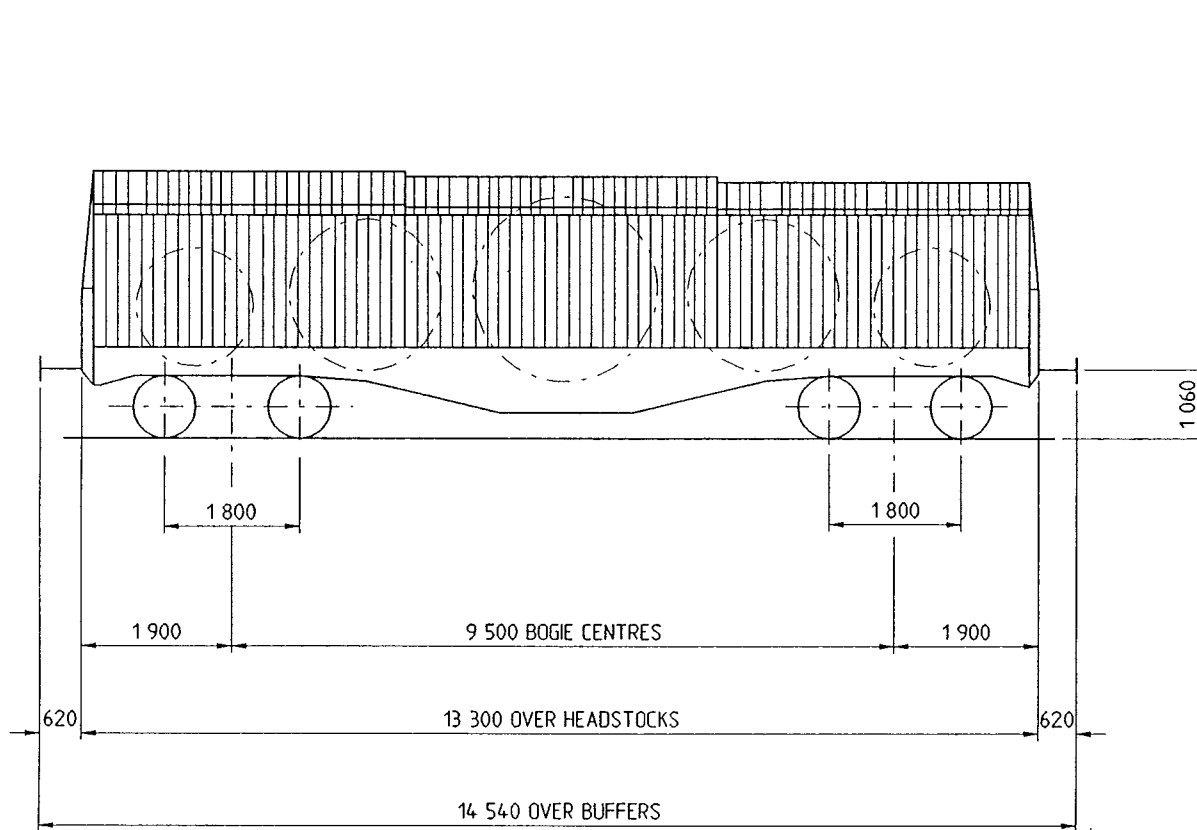
TARE-	26 t
CAPACITY, WEIGHT-	54 t
CAPACITY, VOLUME-	106 m <sup>3</sup>
FLOOR AREA-	48 m <sup>2</sup>
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	W-S-7128

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 CS2
COUPLINGS-	U.I.C.
BUFFERS-	OP 163GT
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Habfis
WAGON No.-	33 70 2797 000-029
BUILDER-	BREL SHILDON
OWNER-	TRANS-EQUIPMENT-FRIBOURG



TOPS INFORMATION														
90	A	B	C	D	**	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 3	RA (GLW) 8	DESIGN SHEET W 2673
S	36.5t	44.5t	54.5t	60.5t		CARKND		60 mile/h UP TO	88 tonne GLW	17 t FORCE UP TO	52 t GLW			
120	00.0 t					K	I	B	C	44 t FORCE ABOVE				



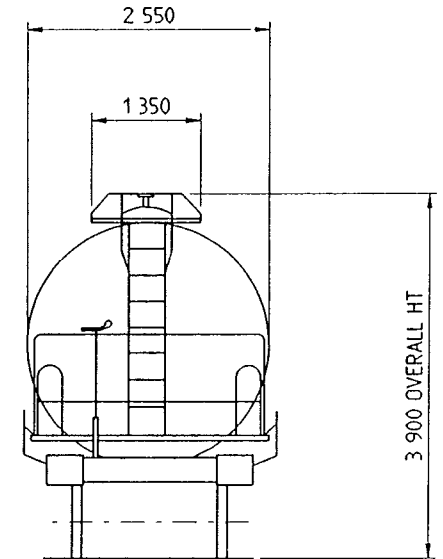
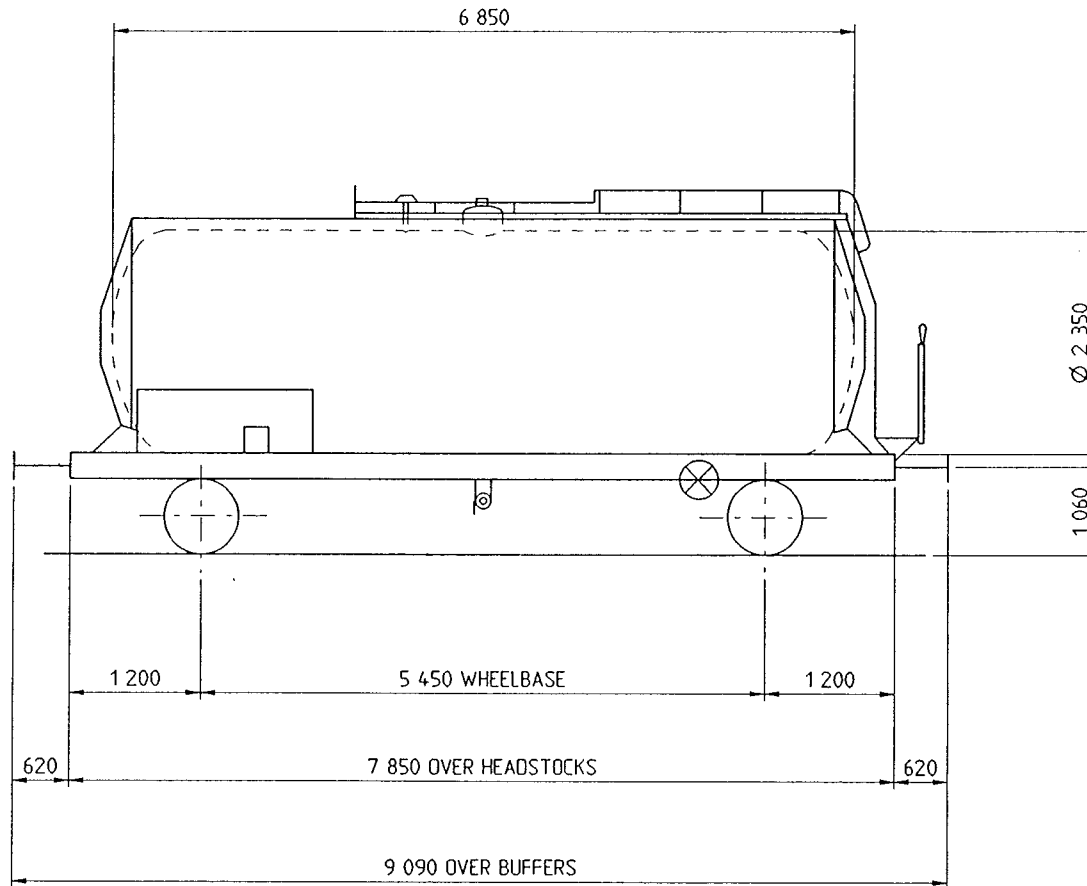
TARE-	27.5 t
CAPACITY, WEIGHT-	60.5 t
CAPACITY, VOLUME-	55 m <sup>3</sup>
FLOOR AREA-	27.5 m <sup>2</sup>
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	113 547.0

BRAKE-	AIR & VAC.THRO'PIPE;SIDE SCREW
SUSPENSION-	LHB 78
COUPLINGS-	U.I.C.
BUFFERS-	RINGFEDER
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Tafhis
WAGON No.-	33 70 5899 001, 002, 007, 009-017, 024-028, 030-032, 034-036, 038, 048-050, 052, 053, 056, 058-061, 063, 067, 069-074
BUILDER-	LINKE-HOFMANN-BUSCH
OWNER-	V.T.G.



					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	20.1t	24.1t	28.1t		CARKND	60 mile/h UP TO	40 tonne GLW	11 t FORCE UP TO	28 t GLW	5	6	—
120					T I A L	mile/h ABOVE		24 t FORCE ABOVE				



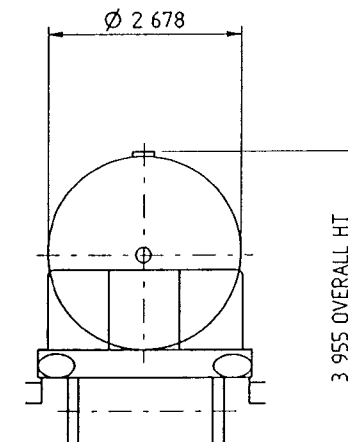
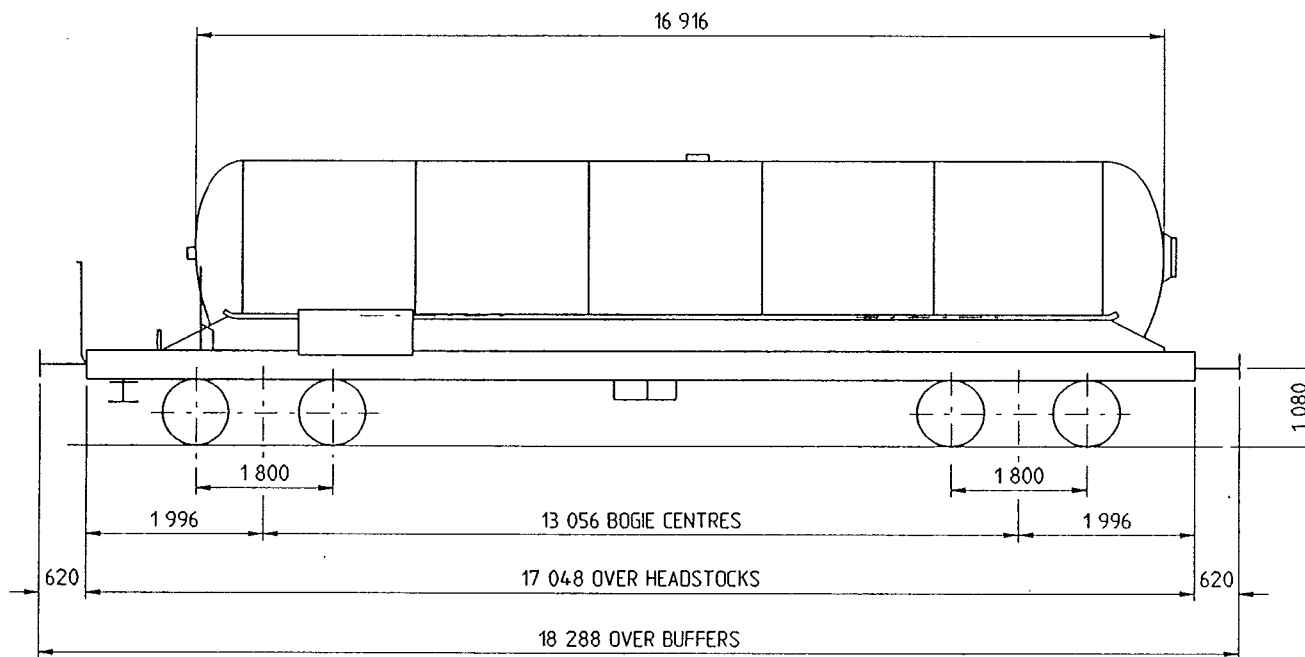
<b>TARE-</b>	11.9 t
<b>CAPACITY, WEIGHT-</b>	28.1 t
<b>CAPACITY, VOLUME-</b>	28 m <sup>3</sup>
<b>FLOOR AREA-</b>	-
<b>MIN. CURVE-</b>	60 m
<b>GEN. ARRGT. DRG. No.-</b>	2-2-0-903

<b>BRAKE-</b>	AIR; PLATFORM & SIDE SCREW
<b>SUSPENSION-</b>	DOUBLE LINK
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC 450 x 340 HD
<b>WHEELS-</b>	∅ 1 000
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Zfs
<b>WAGON No.-</b>	23 70 7390 027-031
<b>BUILDER-</b>	CFPM, FRANCE
<b>OWNER-</b>	S.T.S.



					TOPS INFORMATION							
90	A 30.4 t	B 38.4 t	C 46.4 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	30.4 t	38.4 t	46.4 t		CARKND	60 mile/h UP TO	80 tonne GLW	20 t FORCE UP TO	67 t GLW	10	6	—
120					T I A Y	mile/h ABOVE		57 t FORCE ABOVE				



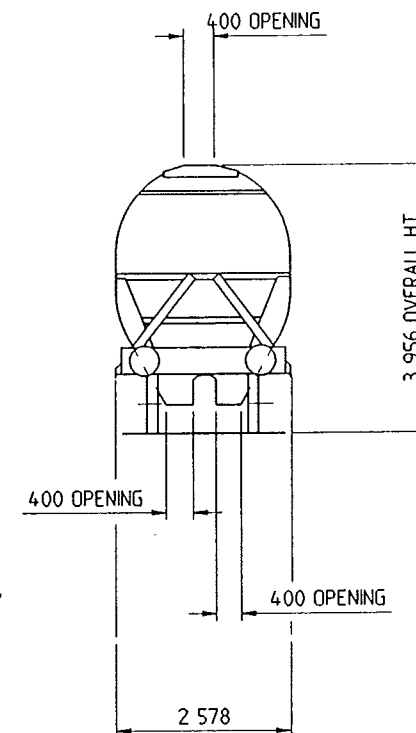
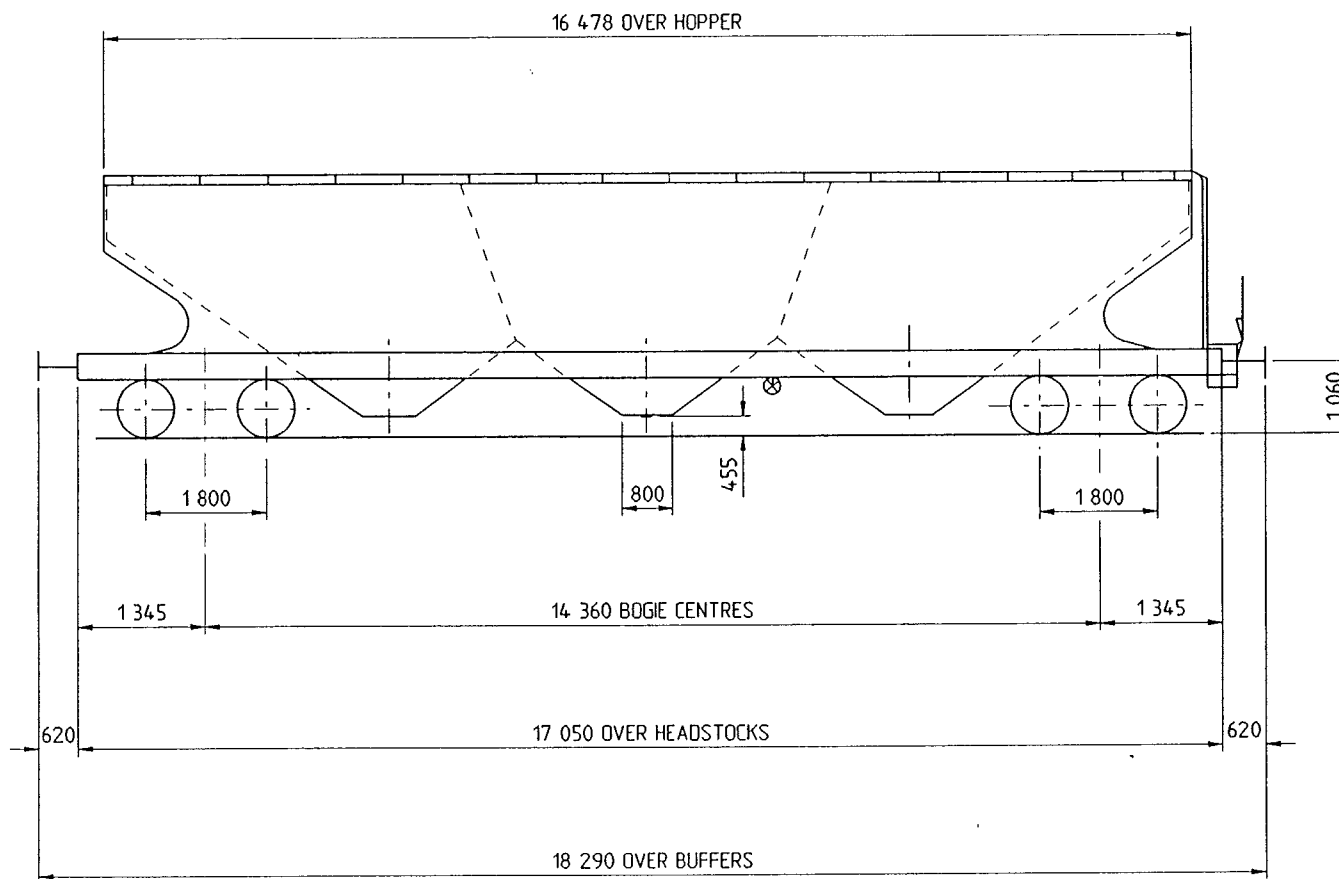
TARE-	33.520 t
CAPACITY, WEIGHT-	46.48 t
CAPACITY, VOLUME-	91.3 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	100589

BRAKE-	AIR
SUSPENSION-	Y 25 C BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	Ø 920
JOURNALS-	Ø 140

TYPE-	Zafgkks
WAGON No.-	33 70 7892 012-023
BUILDER-	FAUVET GIREL
OWNER-	CAIB



				TOPS INFORMATION								
90	A 42.5t	B 50.5t	C 58.5t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42.5t	50.5t	58.5t		CARKND	60 mile/h UP TO	80 tonne GLW	17 t FORCE UP TO	49 t GLW	9	6	W 727
120					J I B Y	mile/h-ABOVE		41 t FORCE ABOVE				



TARE-	21.5 t
CAPACITY, WEIGHT-	58.5 t
CAPACITY, VOLUME-	92 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	30 m LOOSE COUPLED
GEN.ARRGT.DRG.No.-	5800124 -987

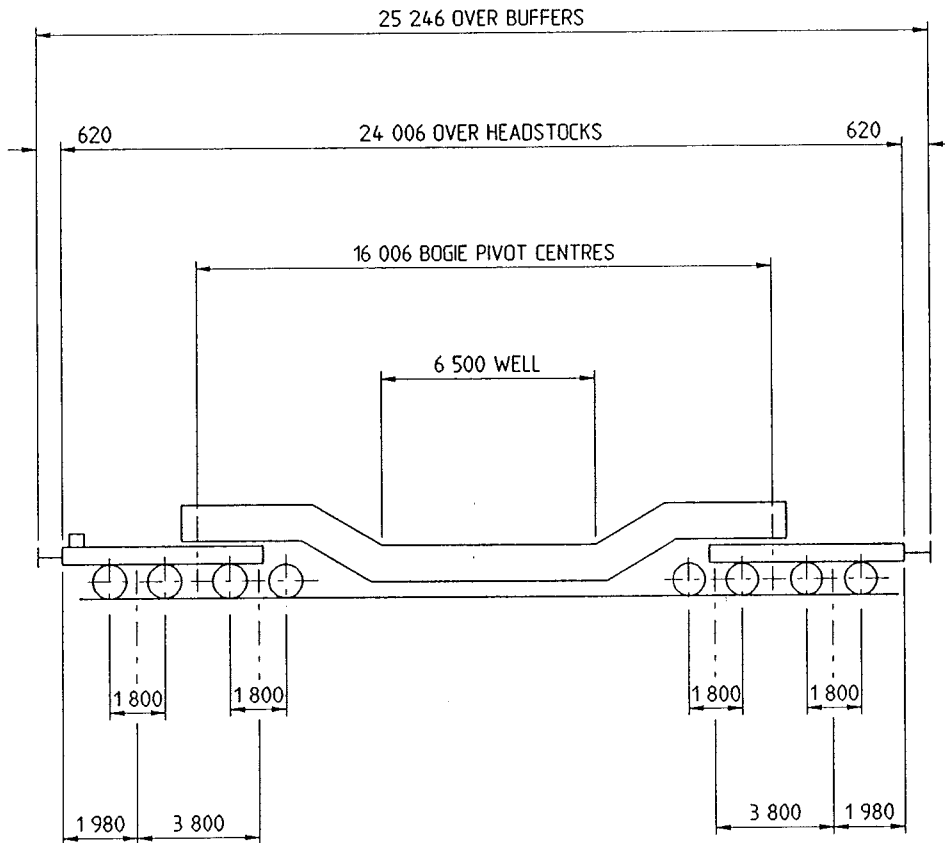
BRAKE-	AIR & VAC THRO' PIPE; SIDE SCREW
SUSPENSION-	Y 25 CS2 BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 41 G-X Ø 450 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Ufgoos
WAGON No.-	33 70 9385 000 - 029
BUILDER-	FAUVET - GIREL
OWNER-	CAIB

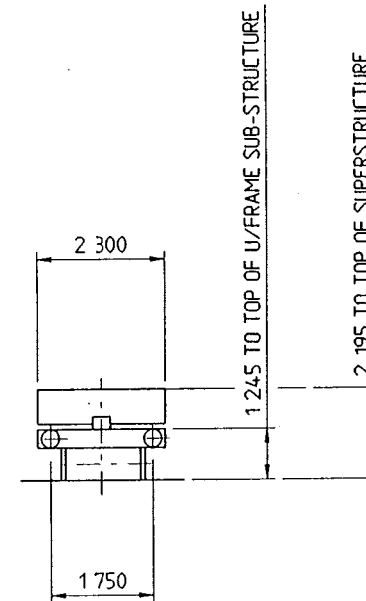




					TOPS INFORMATION							
90	A	B	C	D	AARKND CARKND K Y A F	OPERATING SPEED 75 mile/h UP TO 60 mile/h ABOVE		BRAKE FORCE DATA FORCE UP TO FORCE ABOVE		EXCESS LENGTH 20	RA (GLW) 9	DESIGN SHEET W 830
	61 t	84 t	100 t									
S	61 t	84 t	100 t									
120	61 t	84 t				144 tonne GLW		VARIABLE GLW - 3.38 + ( 0.66 x t )				



NOTE:- THESE WAGONS CAN ONLY TRAVEL WITH A RUNNER WAGON AT EACH END



**LOADING**

QTY	FLASK	WEIGHT (t)
1	EXL 4	101.605
1	EXL 1	76.204
1	EXL 2	81.284
1	SGHW	45.722
1	EXL 3A	81.284
2	REC. MAGNOX	97.541
2	REC. CAGR	105.670
1	TN 12 MK 1	106.575
1	TN 12 MK 2	108.529
1	TN 17 MK 2	83.530

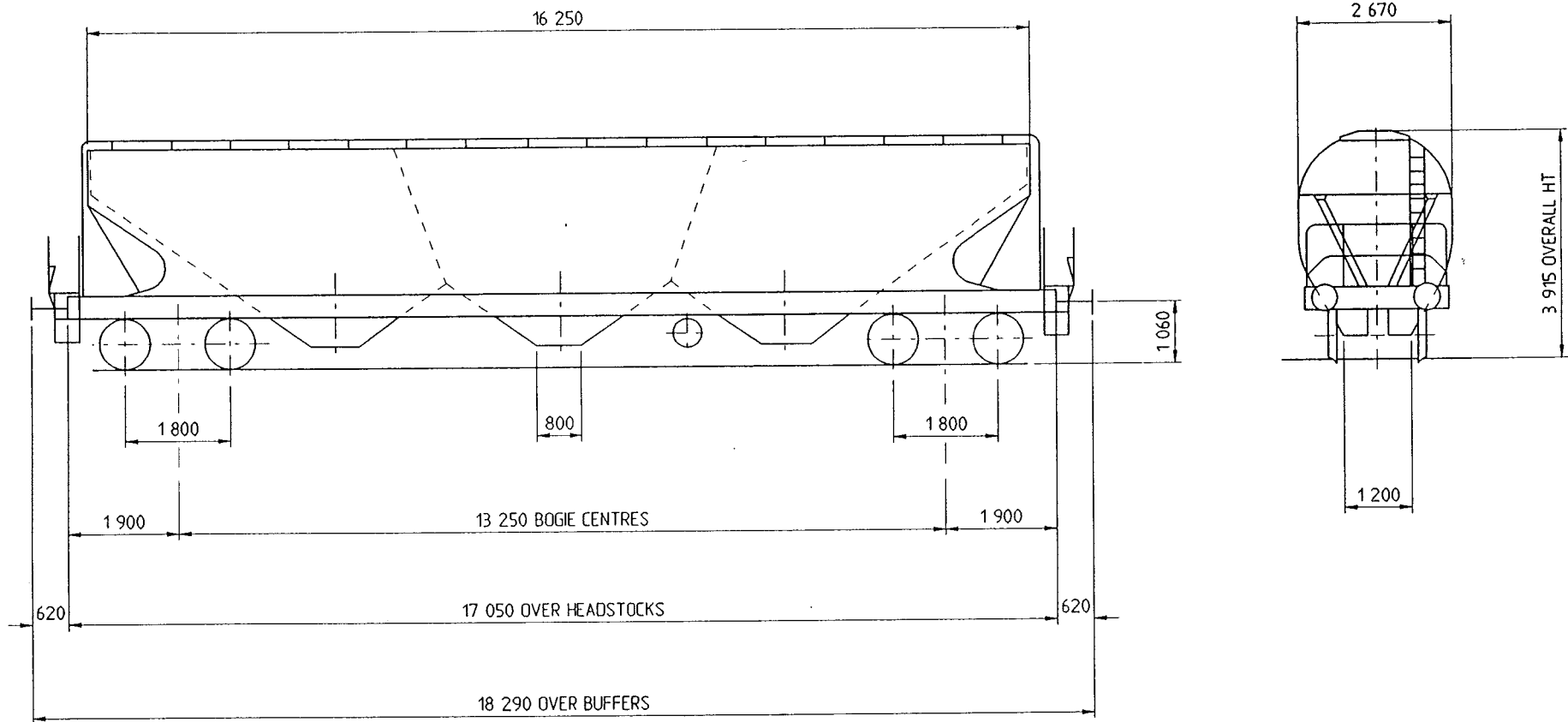
TARE-	60 t
CAPACITY, WEIGHT-	116 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	40 m CLOSE COUPLED 20 m PROPELLED SINGLY
GEN.ARRGT.DRG.No.-	ONF 182443

BRAKE-	AIR; DOUBLE C.I. BLOCKS. SCREW
SUSPENSION-	Y 25 Csim
COUPLINGS-	U.I.C.
BUFFERS-	OP 166 GL. 580 x 400 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uaafiss
WAGON No.-	33 70 9986 006-008
BUILDER-	BREL ASHFORD
OWNER-	B.N.F.L.



TOPS INFORMATION													
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 9	RA (GLW) 7	DESIGN SHEET W1016	
S	41.5t	49.5t	57.7t			CARKND	60 mile/h UP TO	80 tonne GLW	16 t FORCE UP TO				49 t GLW
120	41.5t	49.5t	57.7t			J I A Y	mile/h ABOVE		41 t FORCE ABOVE				



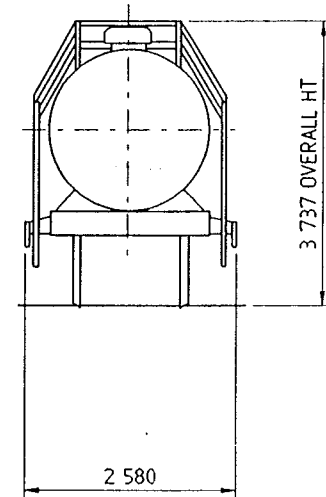
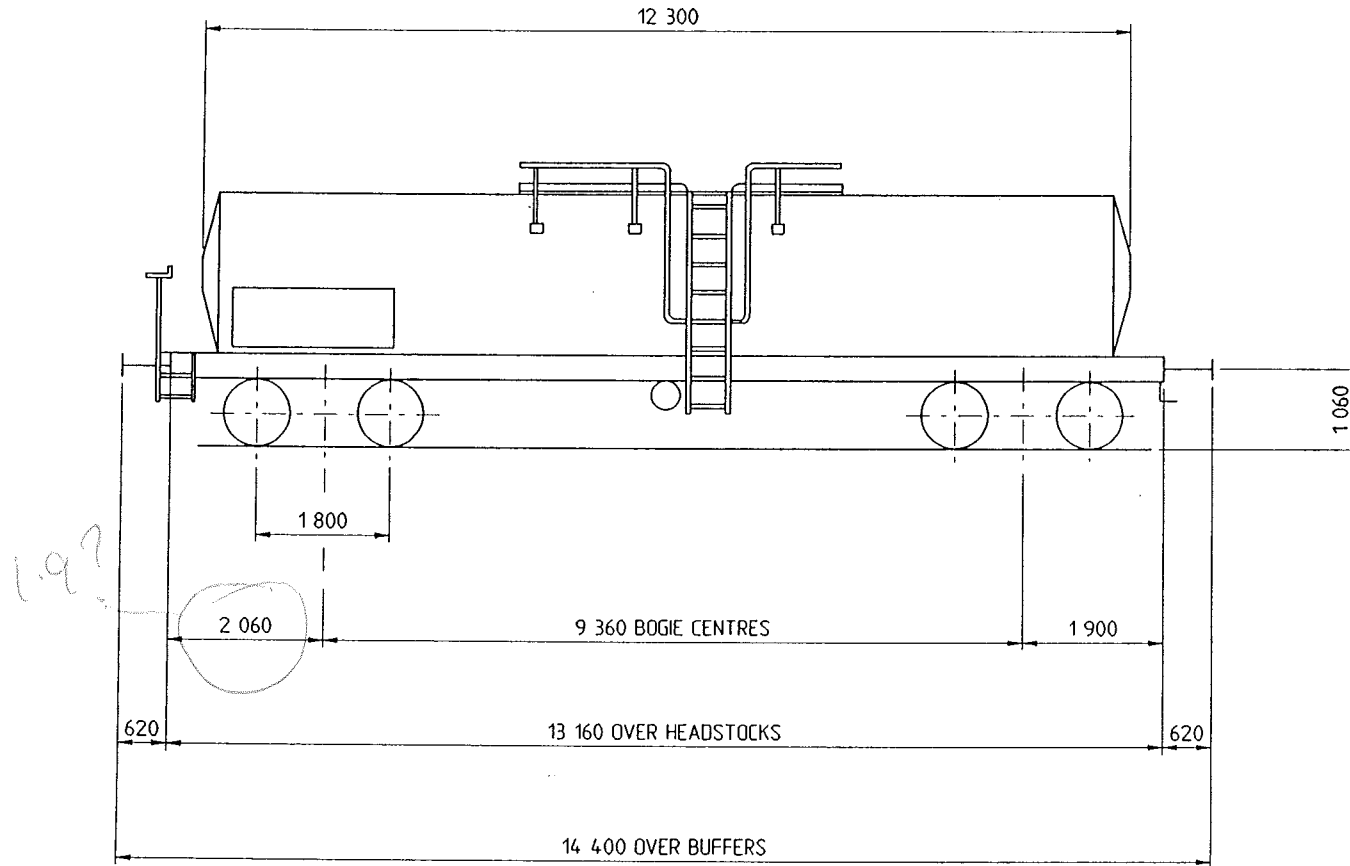
TARE-	22.25 t
CAPACITY, WEIGHT-	57.7 t
CAPACITY, VOLUME-	92 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	4-4-0 1060

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 CS 2
COUPLINGS-	U.I.C.
BUFFERS-	OLEO HYDRAULIC OVAL HEAD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafgoos
WAGON No.-	33 70 9280 000-029
BUILDER-	CFPM, FRANCE
OWNER-	CAIB



				TOPS INFORMATION							
A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	42.2t	50.2t	58.2t		60 mile/h UP TO		14 t FORCE UP TO		3	6	W 1228
S	42.2t	50.2t	58.2t	CARKND	80 tonne GLW		41 t FORCE ABOVE				
120				T I A Y							



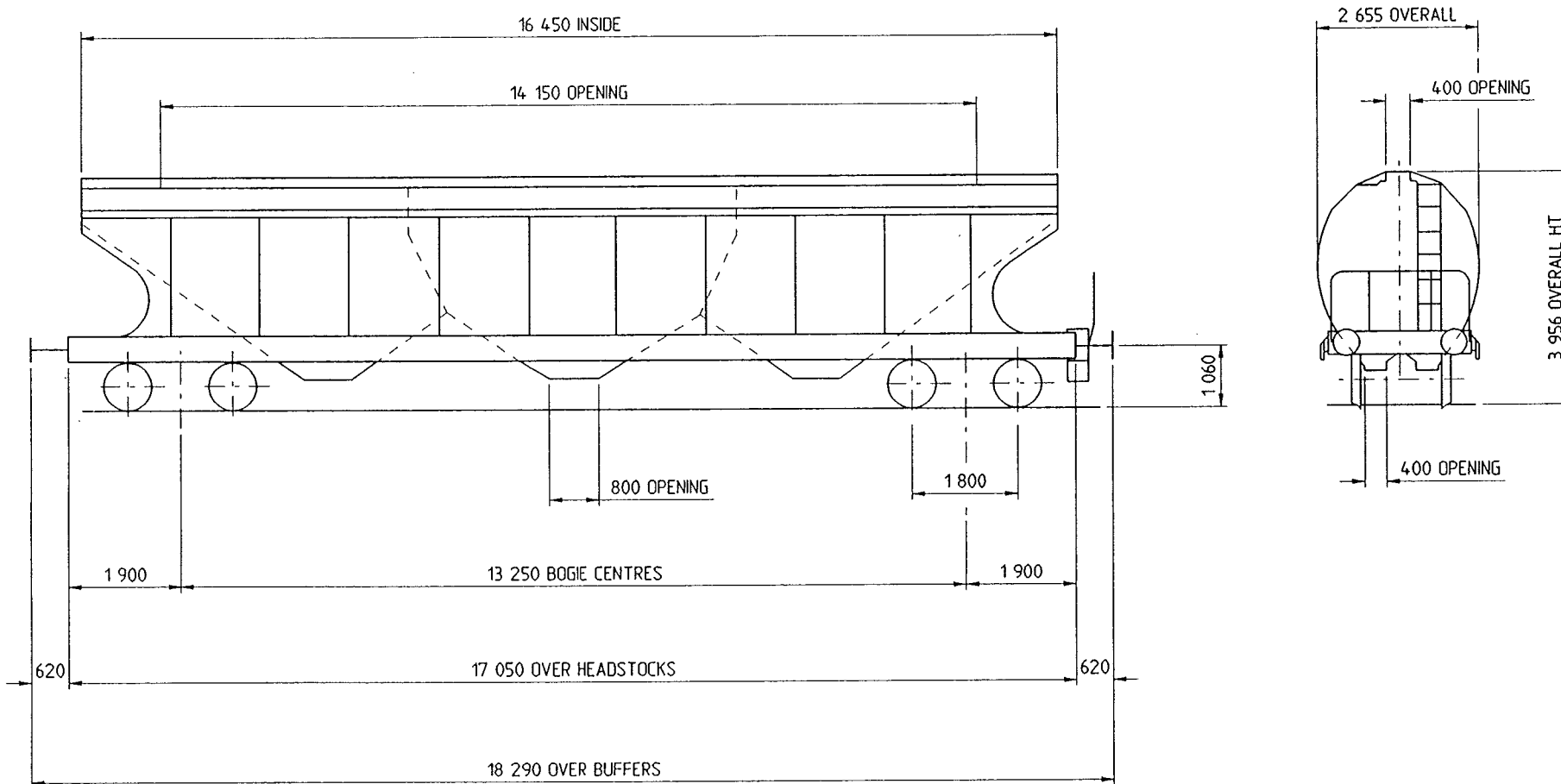
TARE-	21.4 t
CAPACITY, WEIGHT-	58.6 t
CAPACITY, VOLUME-	37 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	0 52413/0/01

BRAKE-	AIR; PLATFORM & SIDE SCREW
SUSPENSION-	DB BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafgkks (3)
WAGON No.-	33 70 7895 153 - 165
BUILDER-	FRANZ KAMINSKI
OWNER-	V.T.G.



TOPS INFORMATION													
90	A	B	C	D		AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42.2t	50.2t	58.2t			CARKND	75 mile/h UP TO	22 tonne GLW	14 t FORCE UP TO	44 GLW	9	6	W 1131
120	00.0 t					J I A Y	60 mile/h ABOVE		41 t FORCE ABOVE				



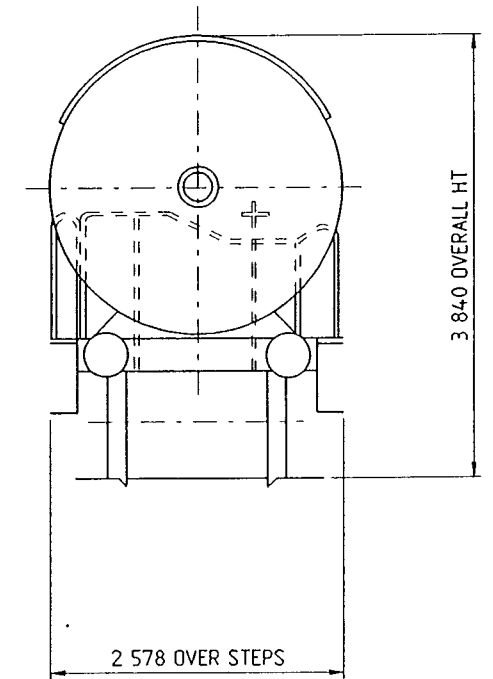
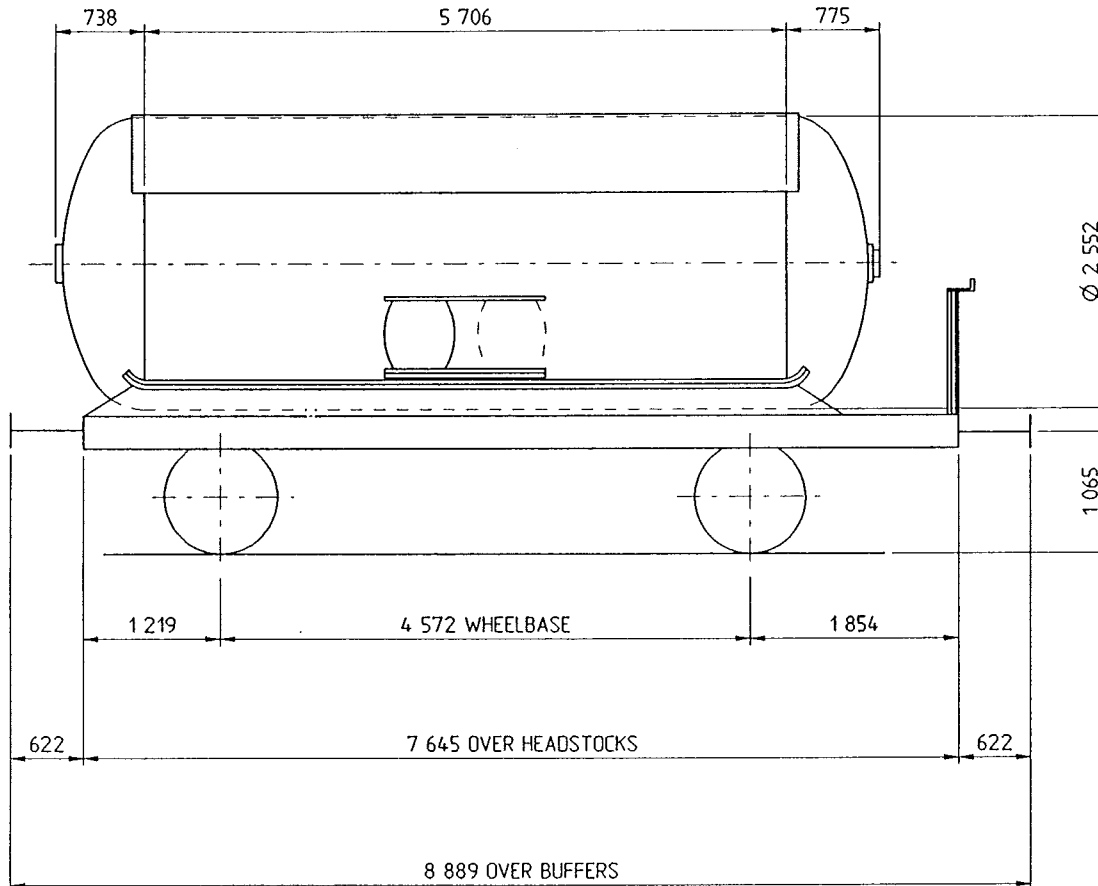
TARE-	21.8t <i>21.76</i>
CAPACITY, WEIGHT-	58.2 t
CAPACITY, VOLUME-	92 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	25 m
GEN.ARRGT.DRG.No.-	118942

BRAKE-	AIR, BLOCK; SIDE SCREW
SUSPENSION-	Y25 CS 2 BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 41 GX
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafgoos
WAGON No.-	33 70 9280 030-080
BUILDER-	FAUVET - GIREL
OWNER-	CAIB



						TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	12 t	16 t	20 t			CARKND	60 mile/h UP TO mile/h ABOVE	40 tonne GLW	12 t FORCE UP TO 18 t FORCE ABOVE				21 t GLW
120													



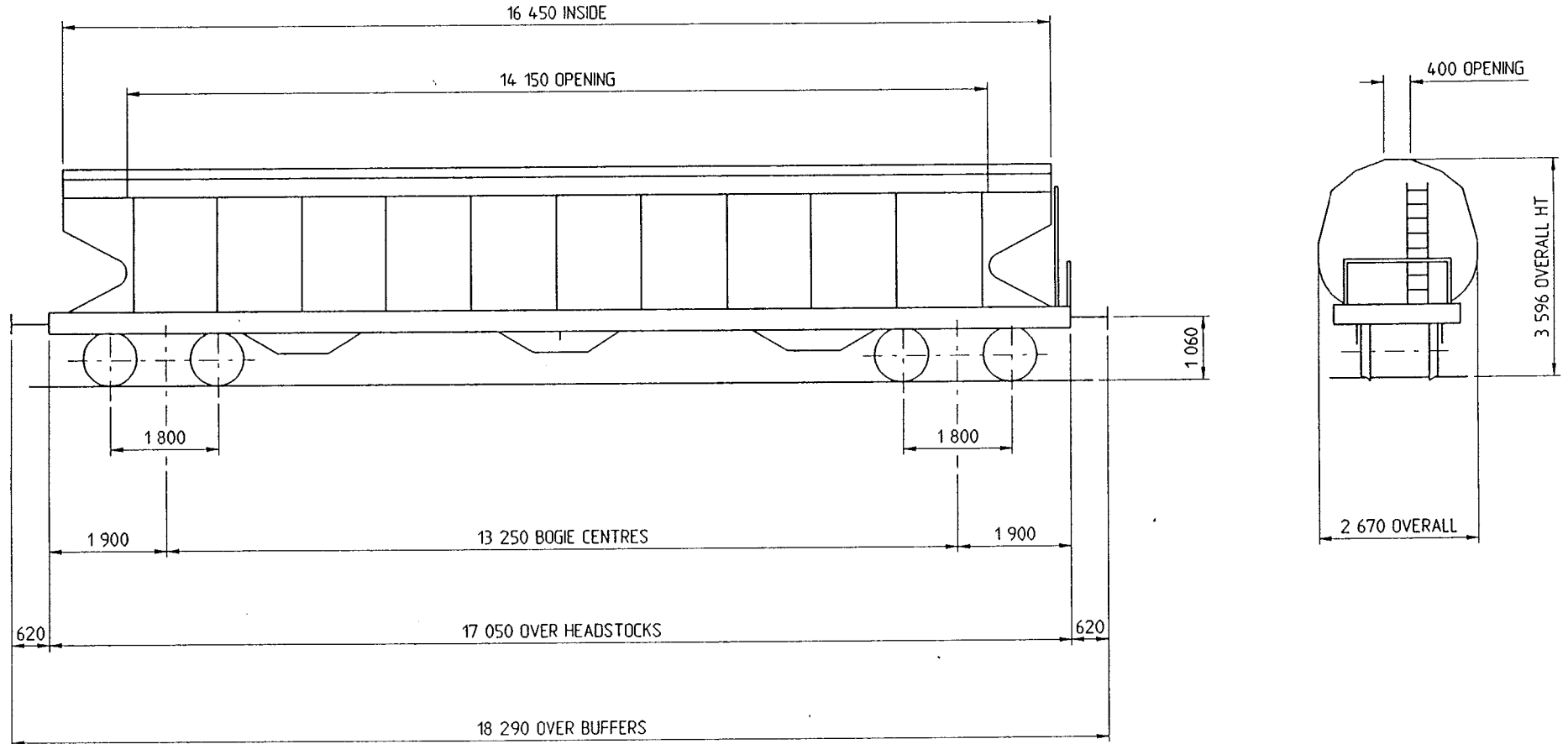
TARE-	20 t
CAPACITY, WEIGHT-	20 t
CAPACITY, VOLUME-	31 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	4895/124

BRAKE-	AIR.VAC.THRO'PIPE;SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zfgkks
WAGON No.-	23 70 7492 367-370
BUILDER-	CHAS ROBERTS LTD
OWNER-	I.C.I.



						TOPS INFORMATION						
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 9	RA (GLW) 8	DESIGN SHEET W1191
S	42.2t	50.2t	58.2t			CARKND	75 mile/h UP TO	23 tonne GLW	14 t FORCE UP TO			
120	00.0 t				J	I	A	Y	41 t FORCE ABOVE			



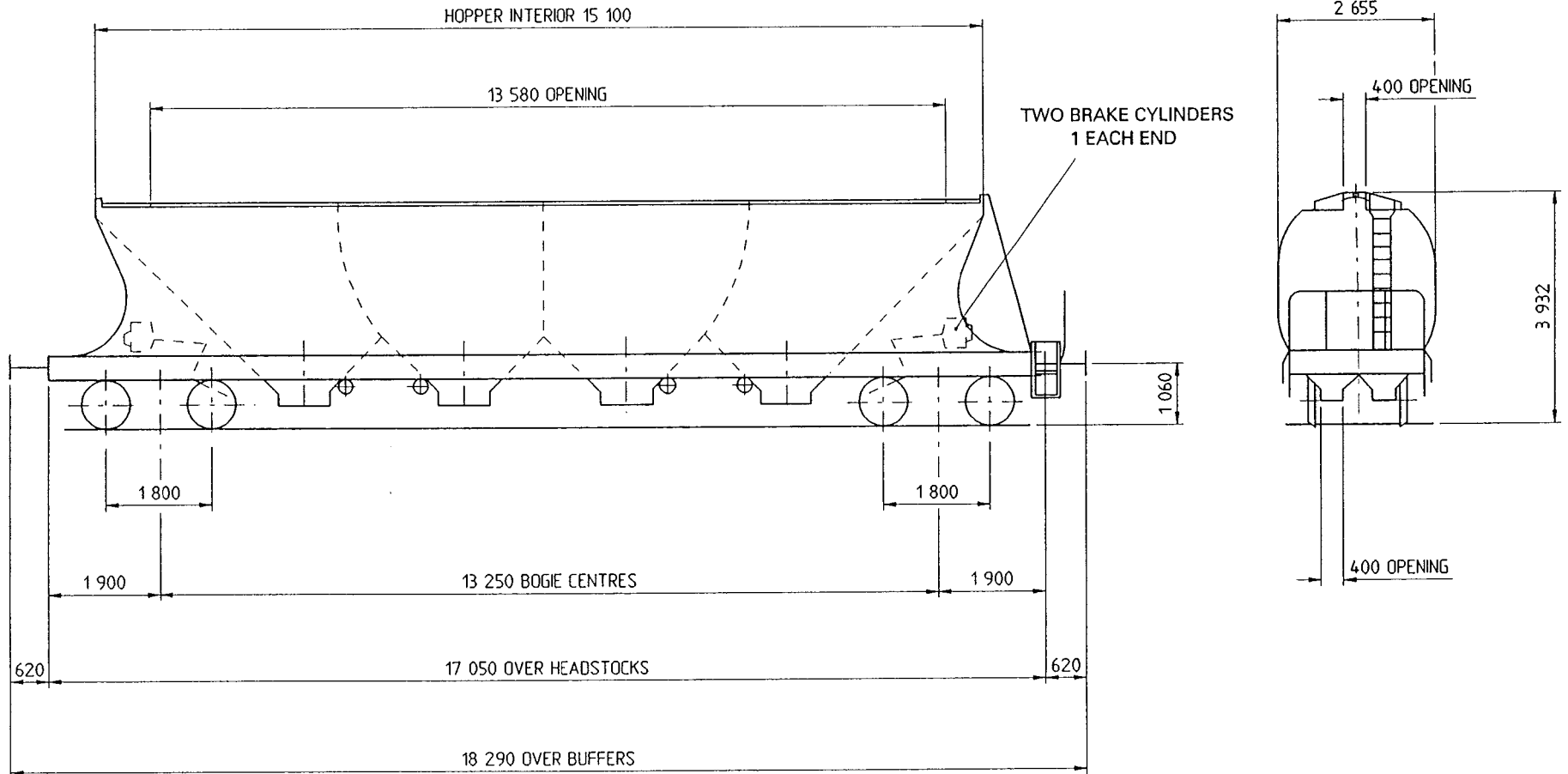
TARE-	22.3 t
CAPACITY, WEIGHT-	65.7 t
CAPACITY, VOLUME-	92 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	25 m
GEN.ARRGT.DRG.No.-	119403

BRAKE-	AIR BLOCK ; SIDE SCREW
SUSPENSION-	Y 25L BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP41GX
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafgoos
WAGON No.-	33 70 9280 081
BUILDER-	FAUVET-GIREL
OWNER-	TRAFFIC SERVICES LTD.



		TOPS INFORMATION												
90	A	B	C	D	AARKND	OPERATING SPEED				BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
	41.4t	49.4t	57.4t			75 mile/h UP TO		22.6 tonne GLW		14 t FORCE UP TO				
S	41.4t	49.4t	57.4t		CARKND	60 mile/h ABOVE				41 t FORCE ABOVE		9	6	W1226
120	00.0 t				J   I   A   Y									



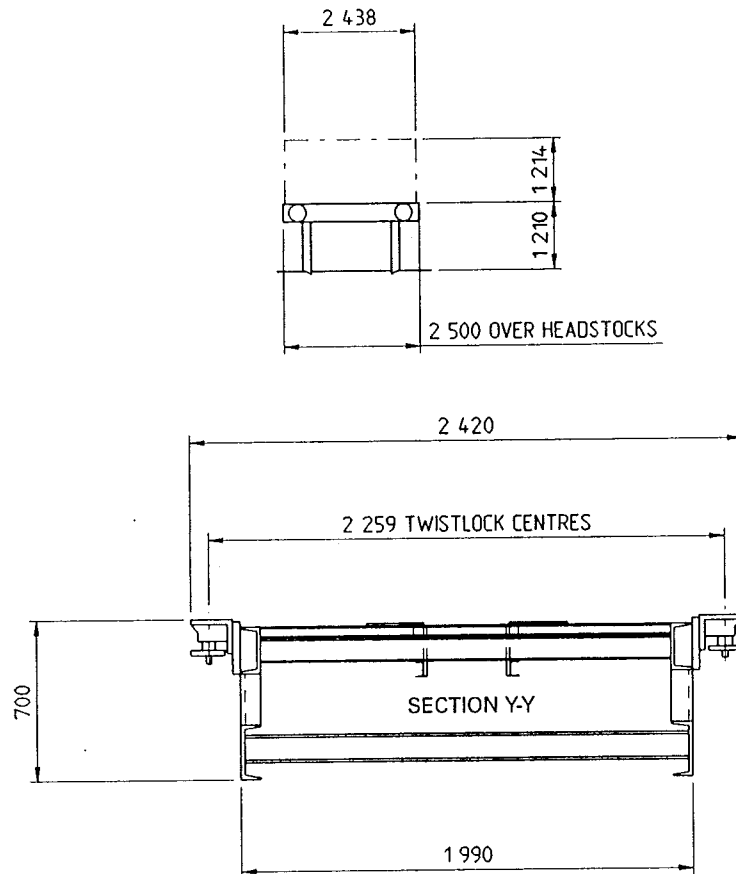
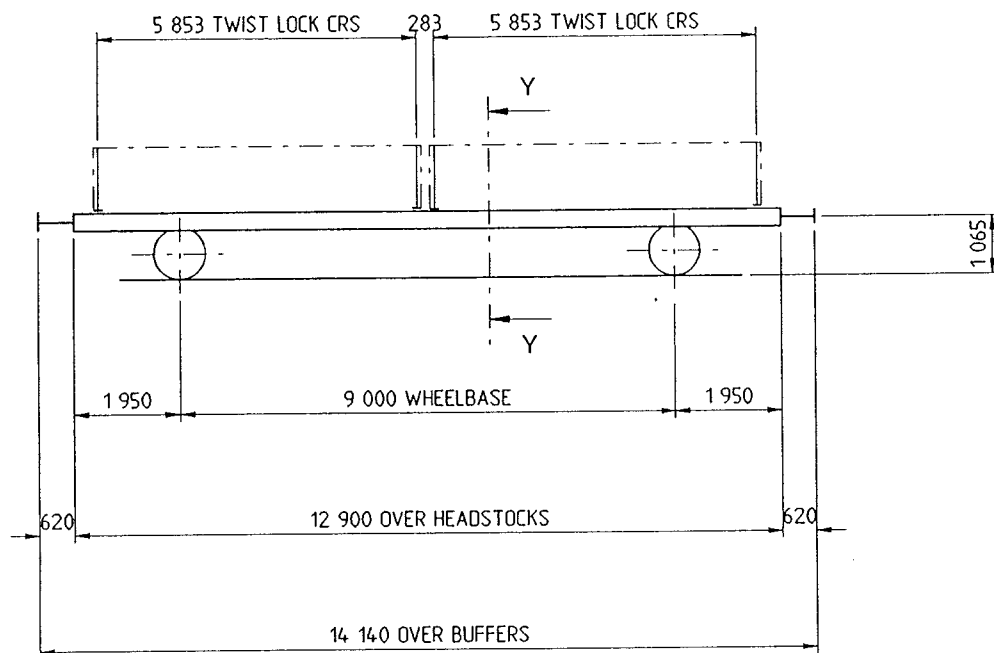
TARE-	22.6 t
CAPACITY, WEIGHT-	57.4 t
CAPACITY, VOLUME-	90 m <sup>3</sup>
FLOOR AREA-	--
MIN. CURVE-	35 m
GEN. ARRGT. DRG. No.-	119 403

BRAKE-	AIR BLOCK ; SIDE SCREW
SUSPENSION-	Y 25 CS2
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 41G X
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafoos
WAGON No.-	33 70 9382 100-129
BUILDER-	FAUVET-GIREL
OWNER-	S.T.S.



		TOPS INFORMATION											
90	A	B	C	D	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	19.5t	23.5t	27.5t		CARKND		60 mile/h UP TO	40 tonne GLW	7 t FORCE UP TO	21 t GLW	13	6	W 1299
120	19.5t	23.5t	27.5t		K	G	A	D	60 mile/h ABOVE				



NOTE :- TO CARRY ONE CONTAINER 12 192 x 2 438  
 OR 2 CONTAINERS 6 058 x 2 438

TARE-	12 t
CAPACITY, WEIGHT-	28 t
CAPACITY, VOLUME-	--
FLOOR AREA-	--
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	3563

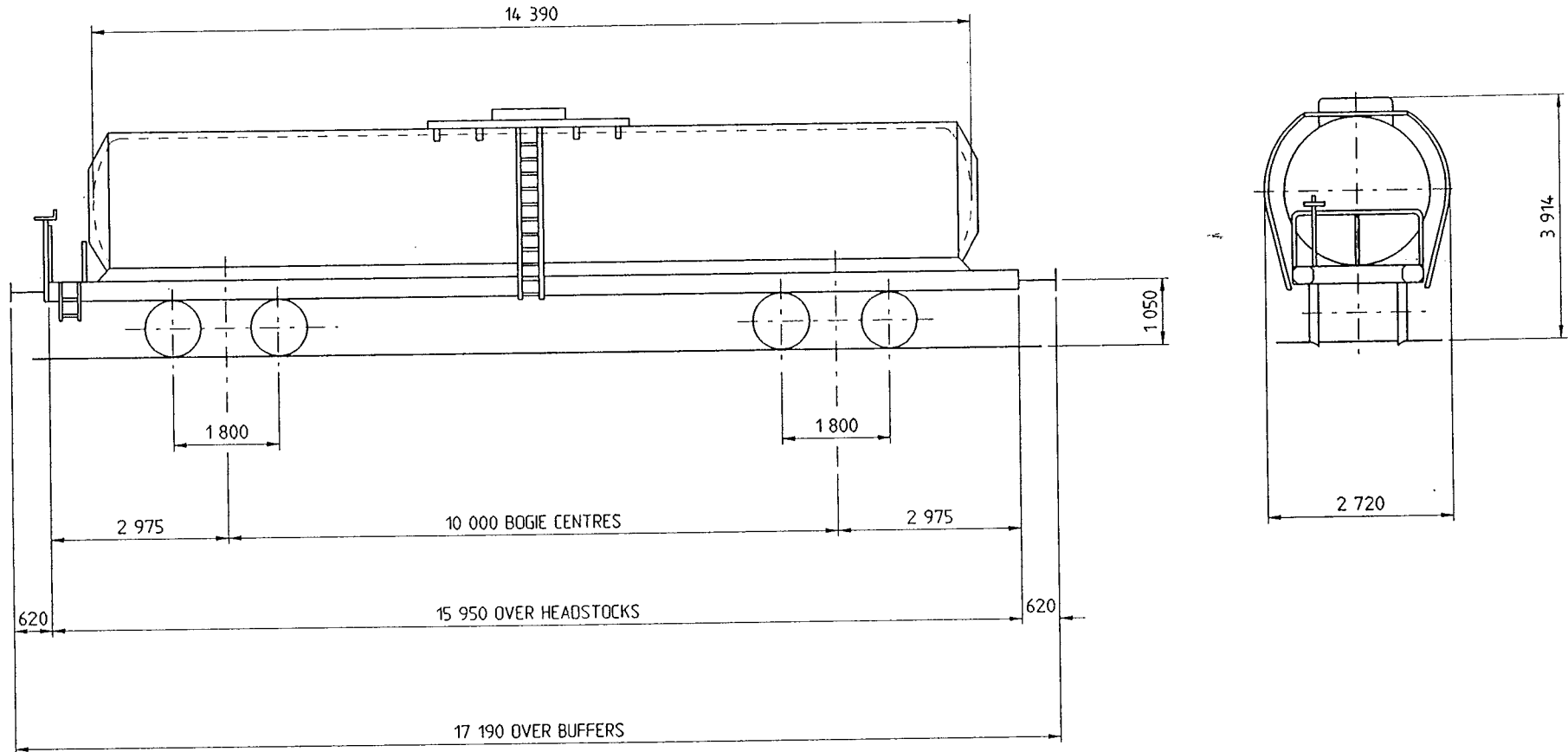
BRAKE-	AIR; SIDE SCREW
SUSPENSION-	BRUNINGHAUS DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	∅ 1 000
JOURNALS-	∅ 130

TYPE-	Lfgs
WAGON No.-	23 70 4424 001-005
BUILDER-	ATELIERS DE JOIGNY
OWNER-	S.T.S.





				TOPS INFORMATION								
90	A 29.7t	B 37.7t	C 45.7t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	29.7t	37.7t	45.7t		CARKND	60 mile/h UP TO	80 tonne GLW	22 t FORCE UP TO	53 t GLW	7	7	W 1373
120					T I A Y	mile/h ABOVE		40 t FORCE ABOVE				



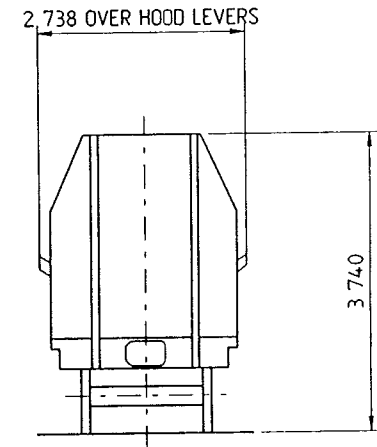
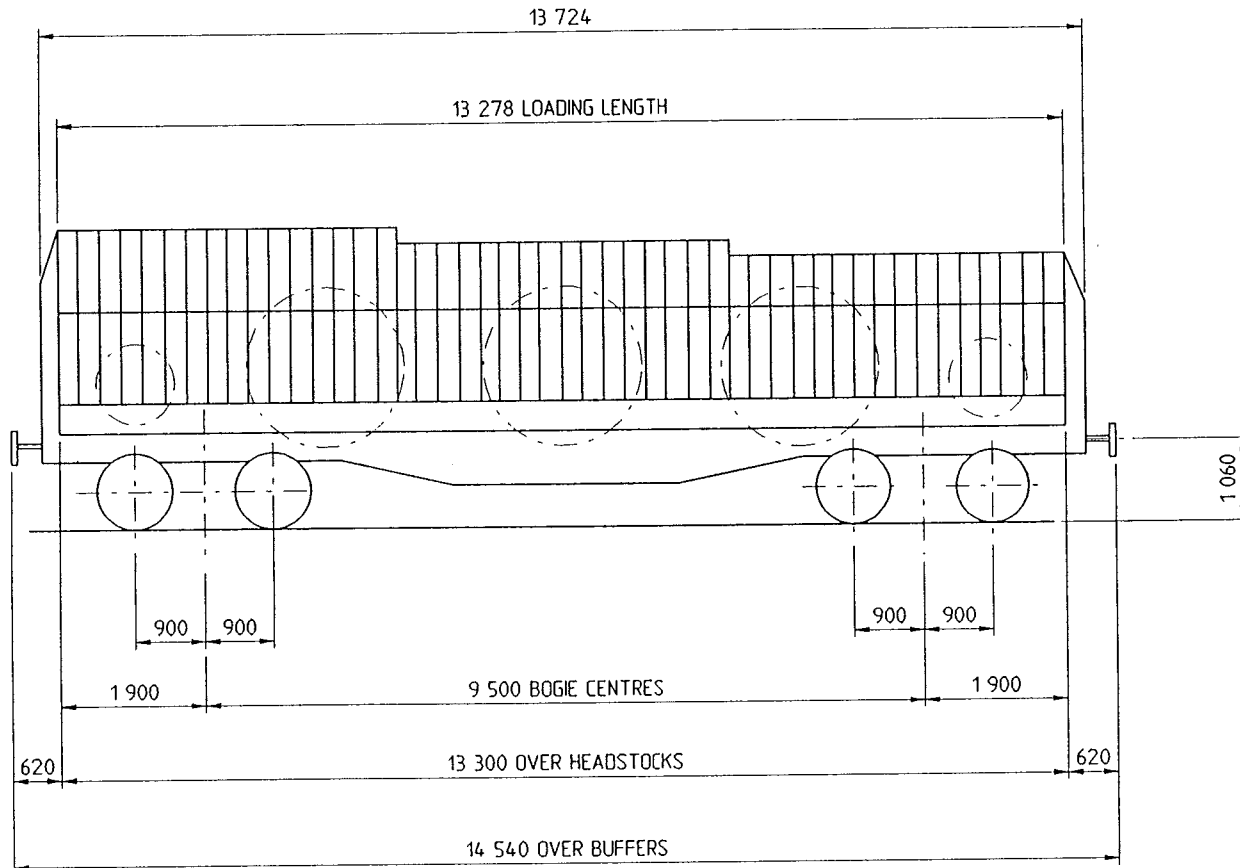
TARE-	34.3 t
CAPACITY, WEIGHT-	45.7 t
CAPACITY, VOLUME-	56.3 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	SL 9002

BRAKE-	AIR BLOCK; PLATFORM & SIDE SCREW
SUSPENSION-	Y25 CS2
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 166 GX
WHEELS-	∅ 920
JOURNALS-	∅ 130

TYPE-	Zacefs
WAGON No.-	33 70 7996 001,2 & 3
BUILDER-	STANDARD WAGON
OWNER-	ASSOCIATED OCTEL



TOPS INFORMATION														
90	A	B	C	D	★★	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	39.0t	47.0t	57.0t	65.0t		CARKND	60 mile/h UP TO 90 tonne GLW		18 t FORCE UP TO 44 t GLW		3	8	W 1355	
120	00.0 t					K I A C	mile/h ABOVE		43 t FORCE ABOVE					



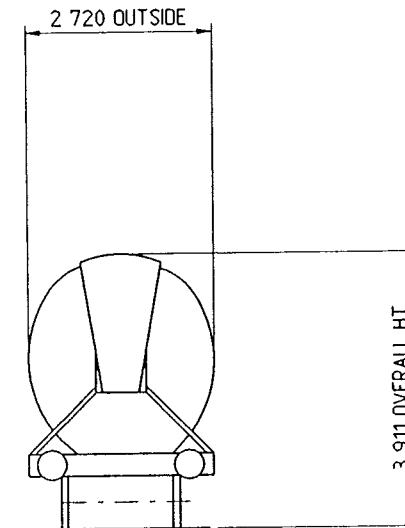
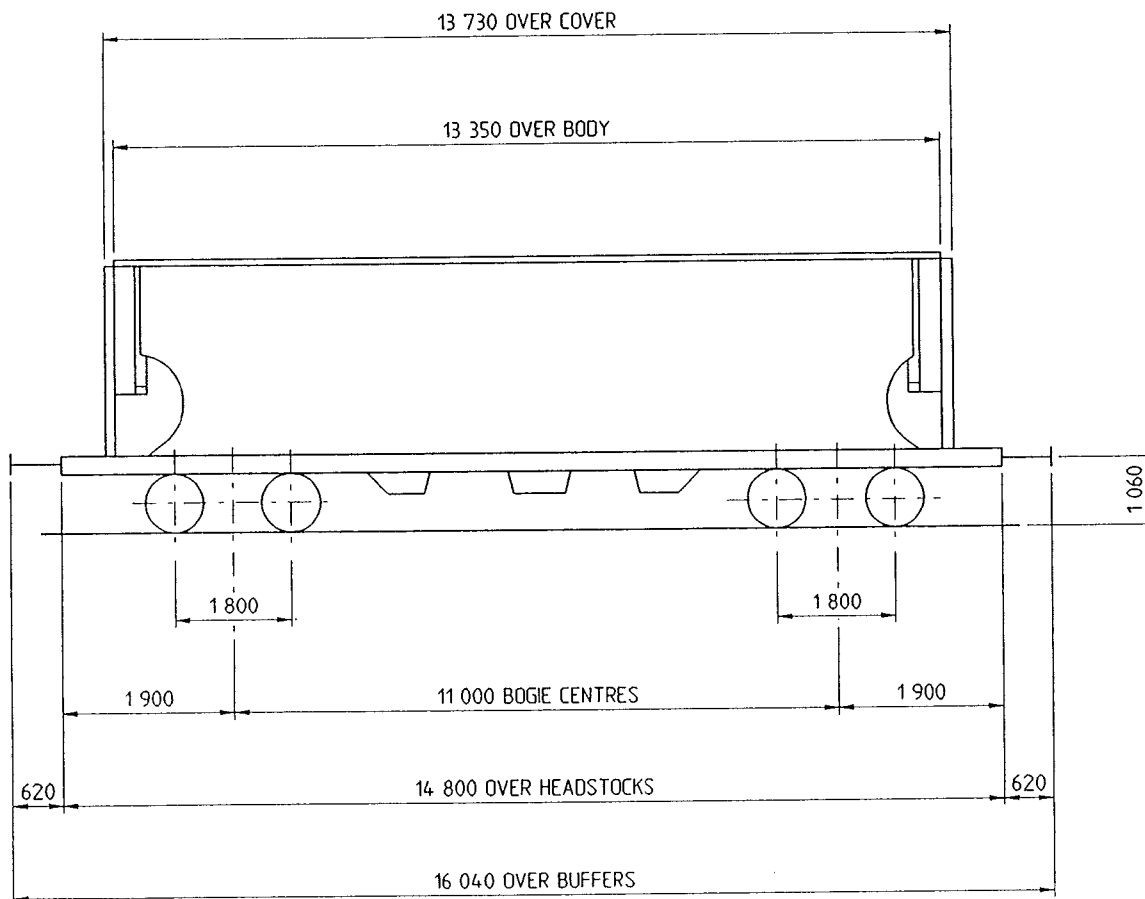
TARE-	24.7 t
CAPACITY, WEIGHT-	65.3 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	35 m SINGLY; 60 m COUPLED
GEN.ARRGT.DRG.No.-	1 13 589. 0.01

BRAKE-	AIR BLOCK
SUSPENSION-	LINKE HOFMANN BUSCH 78
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	RING FEDER
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Tafhis
WAGON No.-	33 70 5899 075-104
BUILDER-	LINKE-HOFMANN-BUSCH
OWNER-	TIPHOOK



					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42 t	50 t	58 t			CARKND	60 mile/h UP TO	80 tonne GLW	16 t FORCE UP TO			
120	42 t	50 t	58 t		J	I	A	Y	40 t FORCE ABOVE	5	7	W1565



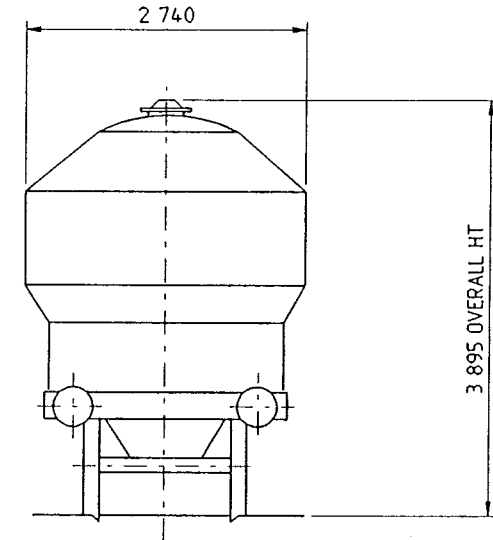
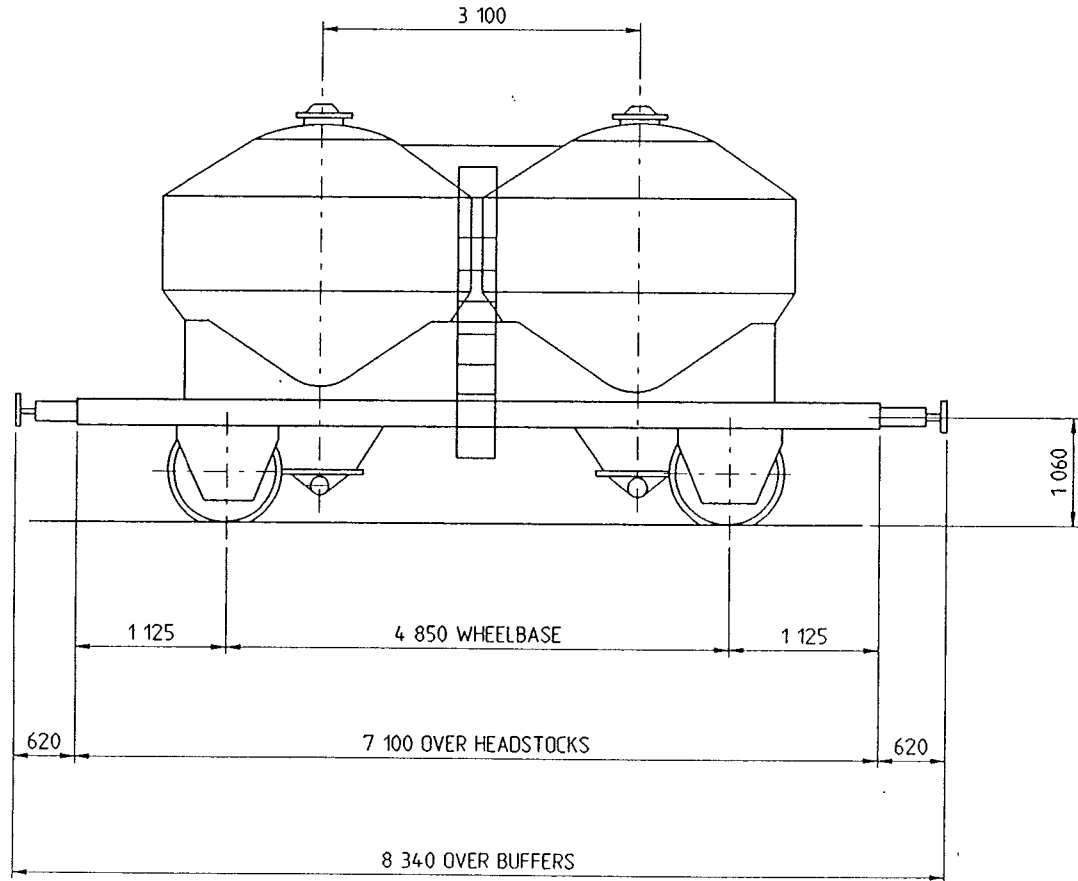
TARE-	22 t
CAPACITY, WEIGHT-	58 t
CAPACITY, VOLUME-	70 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	107075

BRAKE-	AIR
SUSPENSION-	Y25 C BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 460
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Uafoos
WAGON No.-	33 70 9382 010
BUILDER-	FAUVET-GIREL
OWNER-	CAIB (UK) LTD



					TOPS INFORMATION							
90	A 21 t	B 25 t	C 29 t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	21 t	25 t	29 t		CARKND	60 mile/h UP TO mile/h ABOVE 40 tonne GLW		6 t FORCE UP TO 17 t FORCE ABOVE 20 t GLW		4	6	W 1427
120					K   K   A   J							



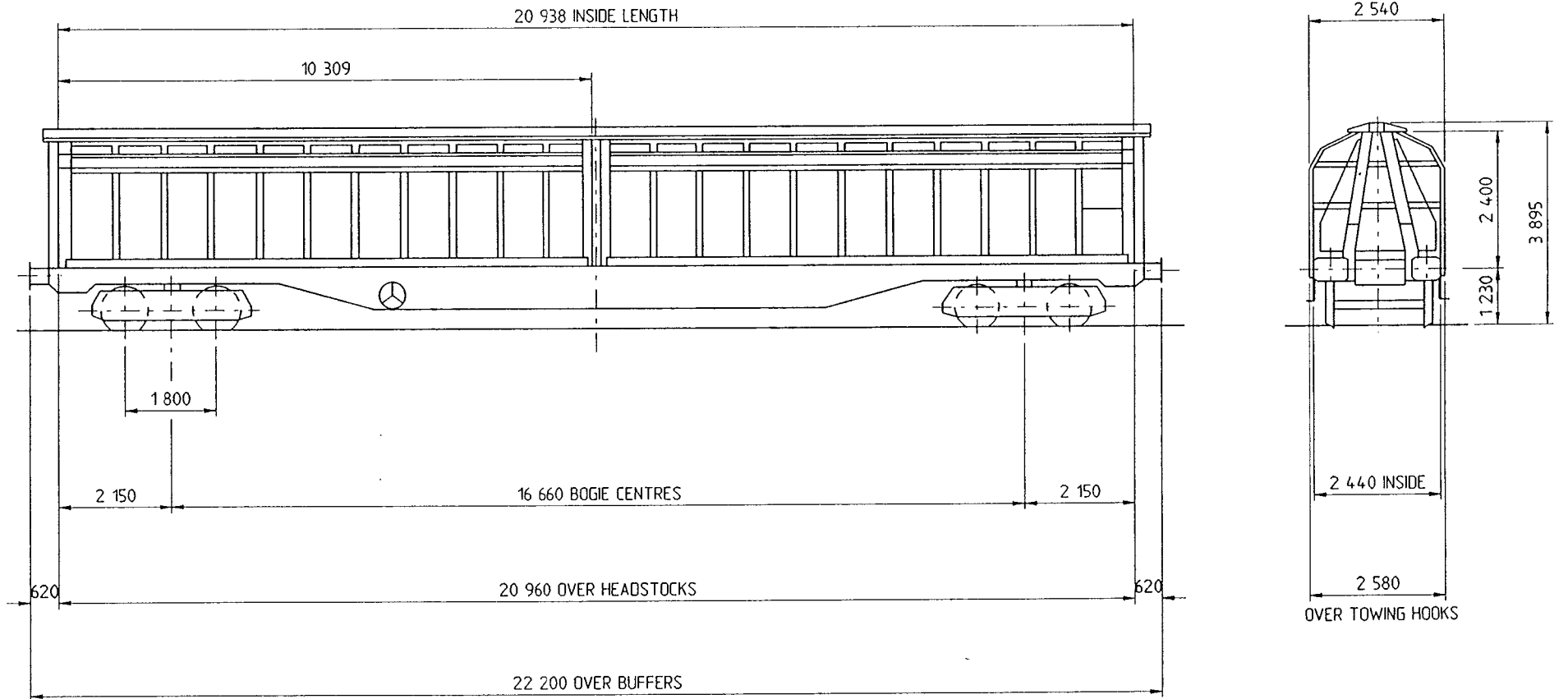
<b>TARE-</b>	11.1 t
<b>CAPACITY, WEIGHT-</b>	28.9 t
<b>CAPACITY, VOLUME-</b>	26.6 m <sup>3</sup>
<b>FLOOR AREA-</b>	-
<b>MIN. CURVE-</b>	60 m
<b>GEN. ARRGT. DRG. No.-</b>	3847

<b>BRAKE-</b>	AIR BLOCK
<b>SUSPENSION-</b>	PARABOLIC
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	U.I.C. RUBBER
<b>WHEELS-</b>	∅ 1000
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Ucfs
<b>WAGON No.-</b>	23 70 9192 002
<b>BUILDER-</b>	CADOUX, FRANCE
<b>OWNER-</b>	STS



					TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	37.5t	45.5t	53.5t	63.5t		CARKND	60 mile/h UP TO	90 tonne GLW	13 t FORCE UP TO				59 t GLW
120						K V A B	mile/h ABOVE		46 t FORCE ABOVE				



<b>TARE-</b>	26.5 t
<b>CAPACITY, WEIGHT-</b>	63.5 t
<b>CAPACITY, VOLUME-</b>	-
<b>FLOOR AREA-</b>	51 m <sup>2</sup>
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	713594.0.01

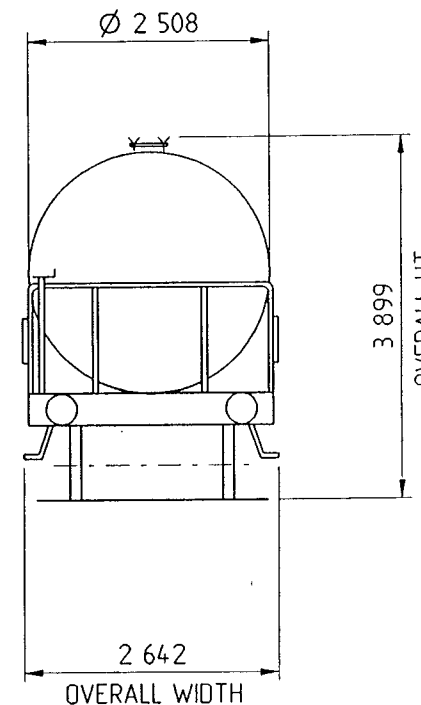
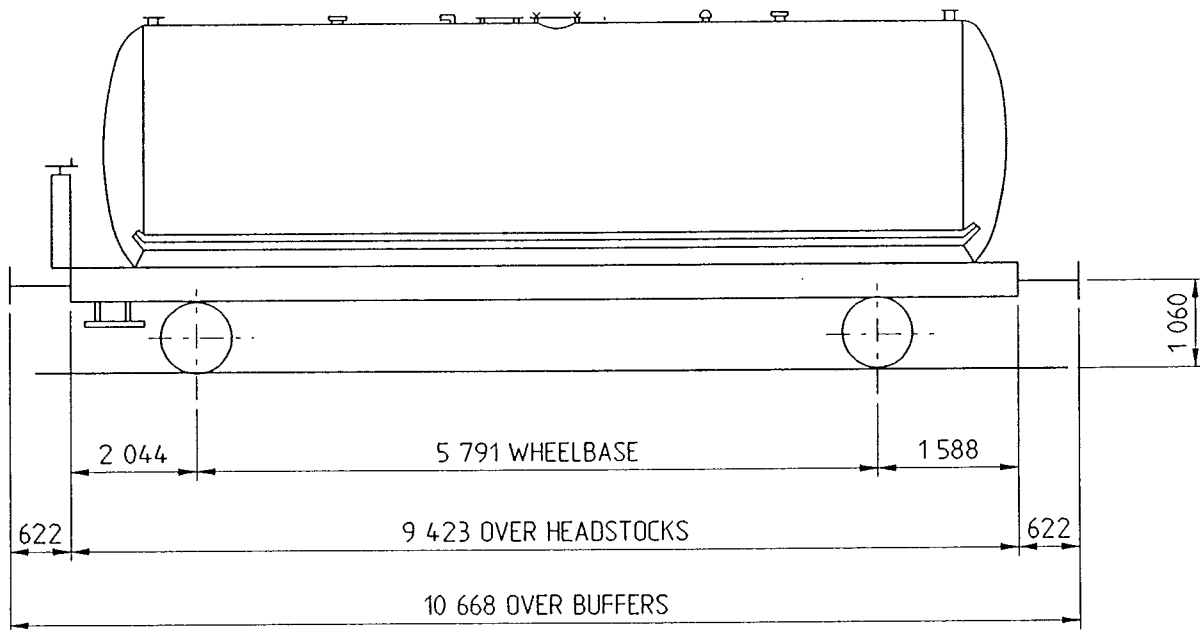
<b>BRAKE-</b>	AIR
<b>SUSPENSION-</b>	LHB 82 BOGIE
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	OLEO 550 x 340 HD
<b>WHEELS-</b>	∅ 920
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Habfis (1)
<b>WAGON No.-</b>	83 70 2795 312, 315, 316, 327, 329, 330, 332, 334, 337, 344
<b>BUILDER-</b>	LINKE HOFMANN-BUSCH
<b>OWNER-</b>	TIPHOOK



		TOPS INFORMATION											
A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET		
	16.5t	20.5t	24.5t		60 mile/h UP TO mile/h ABOVE		46 tonne GLW		VARIABLE LOAD = 0.42+(1.68xt)		7	9	W1537
S	16.5t	20.5t	24.5t	CARKND									
120				T I A L									

NOTE:- SUSPENSION & BARREL MODIFIED BY  
 C.C. CRUMP & CO LTD TO CONVEY ACETONE



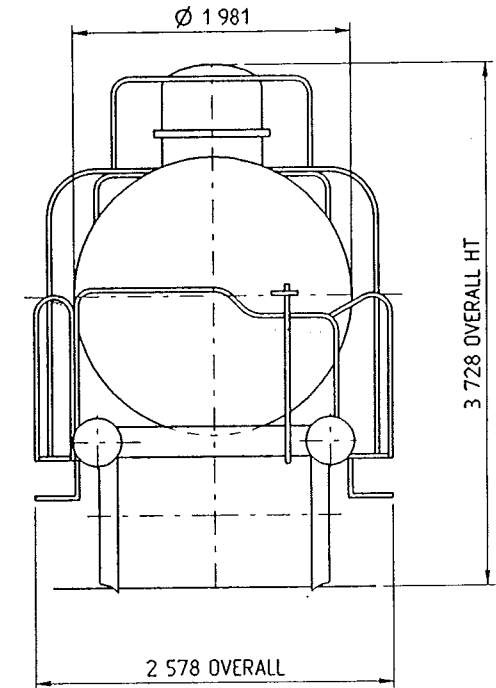
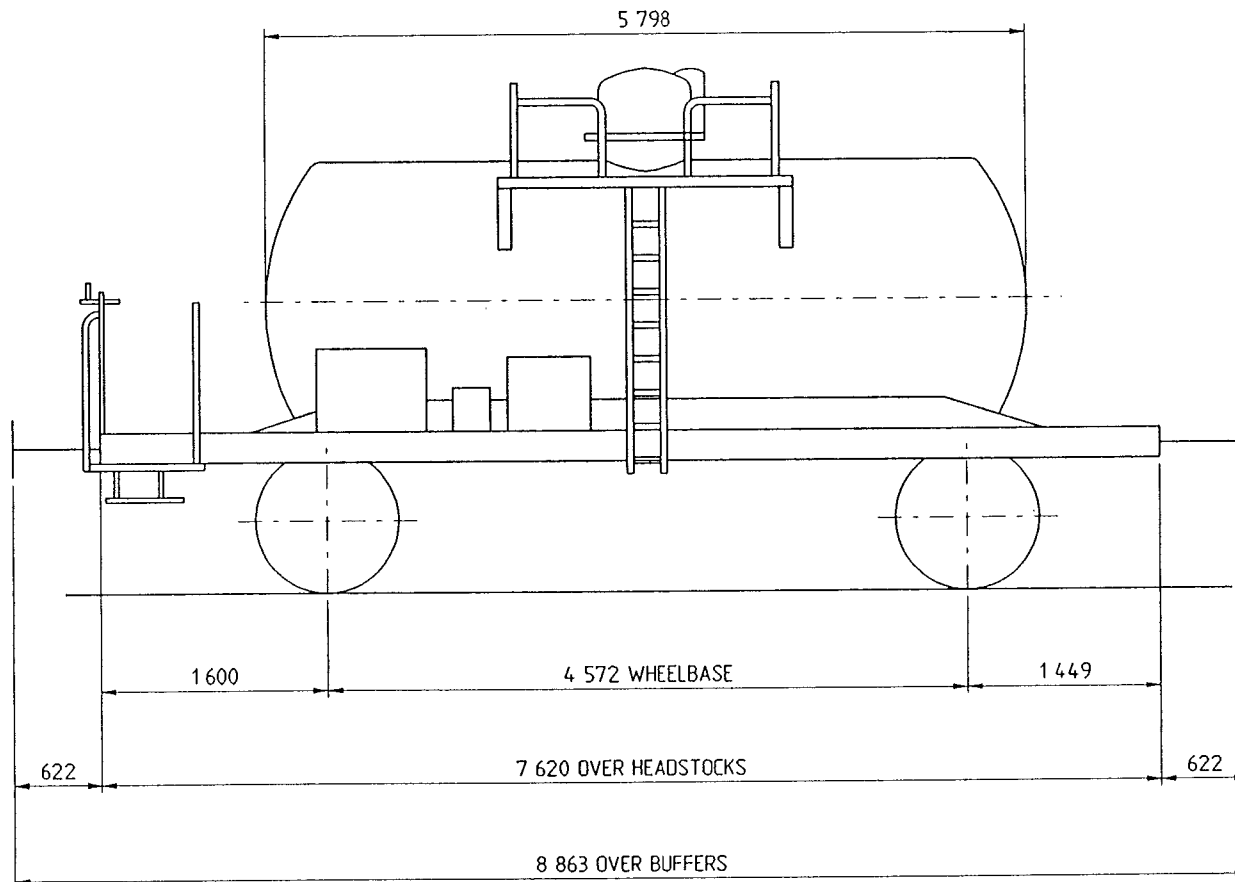
<b>TARE-</b>	15.5 t
<b>CAPACITY, WEIGHT-</b>	30.5 t
<b>CAPACITY, VOLUME-</b>	42.5 m <sup>3</sup>
<b>FLOOR AREA-</b>	—
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	5361

<b>BRAKE-</b>	AIR; PLATFORM SCREW & SIDE LEVER
<b>SUSPENSION-</b>	PARABOLIC SPRINGS
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC Ø400 HD
<b>WHEELS-</b>	Ø 950
<b>JOURNALS-</b>	Ø 140

<b>TYPE-</b>	Zefkks
<b>WAGON No.-</b>	43 70 7499 300, 301
<b>BUILDER-</b>	CHAS ROBERTS (SEE NOTE)
<b>OWNER-</b>	CAIB



				TOPS INFORMATION								
90	A 15.5t	B 19.5t	C 23.5t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	15.5t	19.5t	19.5t		CARKND	60 mile/h UP TO	40 tonne GLW	9 t FORCE UP TO	26 t GLW	4	6	—
120					T I B L	mile/h ABOVE		24 t FORCE ABOVE				

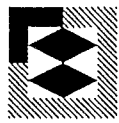


TARE-	16.5 t
CAPACITY, WEIGHT-	23.5 t
CAPACITY, VOLUME-	13 650 l
FLOOR AREA-	-
MIN. CURVE-	-
GEN. ARRGT. DRG. No.-	4710/114

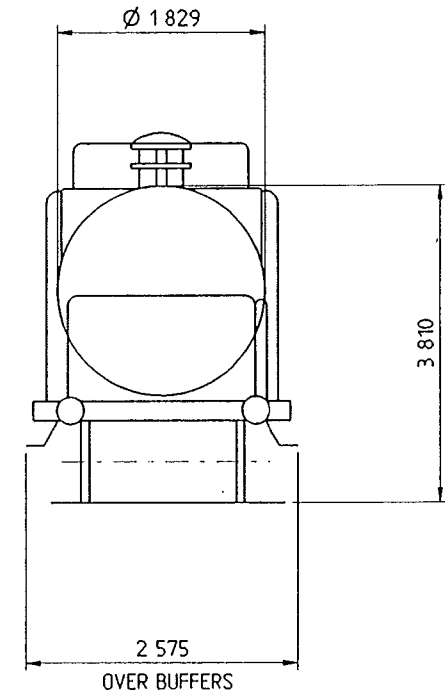
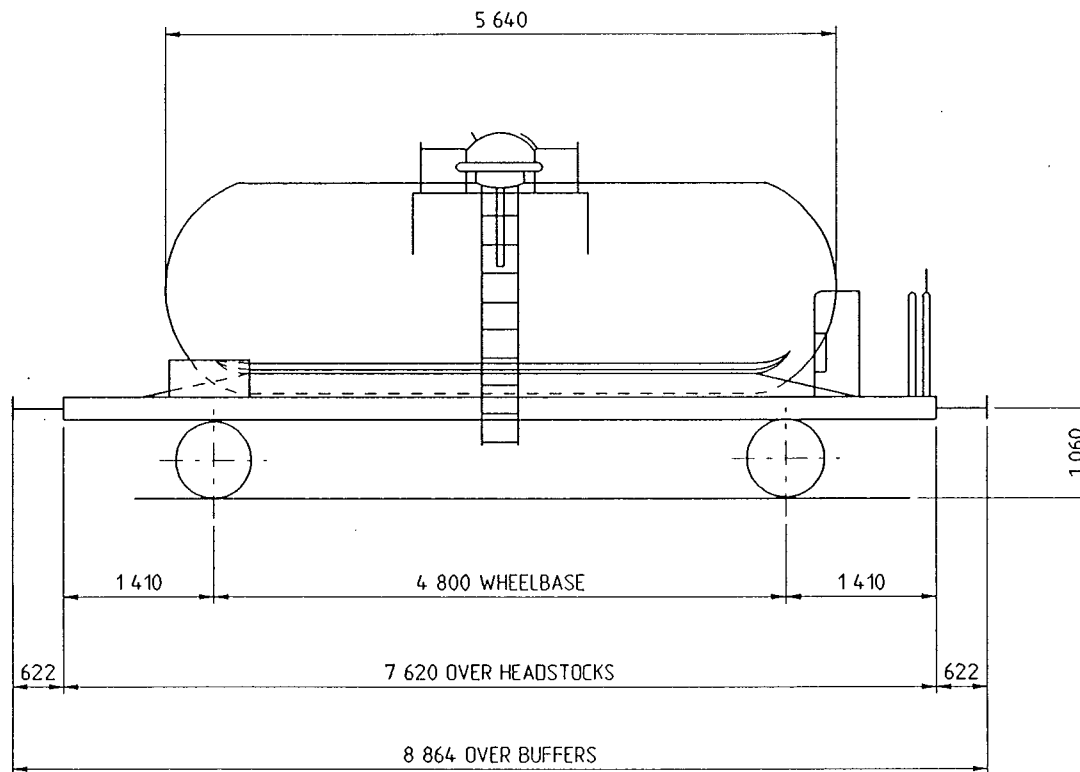
BRAKE-	AIR, VAC THRO' PIPE, SCREW & SD LVR
SUSPENSION-	-
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅
JOURNALS-	∅

TYPE-	Ufns
WAGON No.-	23 70 7490 253, 262, 264, 267-270, 273-275, 277, 279, 282, 283, 291, 294, 406, 408
BUILDER-	PROCOR UK LTD
OWNER-	ASSOCIATED OCTEL

23-07-92 ISSUE 1



					TOPS INFORMATION							
	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	17t	21t	25t			60 mile/h UP TO	40 tonne GLW	9 t FORCE UP TO	26 t GLW	4	6	W2222
S	17t	21t	25t		CARKND	60 mile/h UP TO		22 t FORCE ABOVE				
120					T I A L	-mile/h ABOVE						



TARE-	15 t
CAPACITY, WEIGHT-	25 t
CAPACITY, VOLUME-	13.6 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	77 111/01

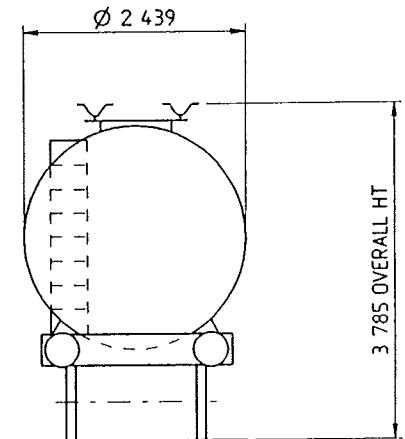
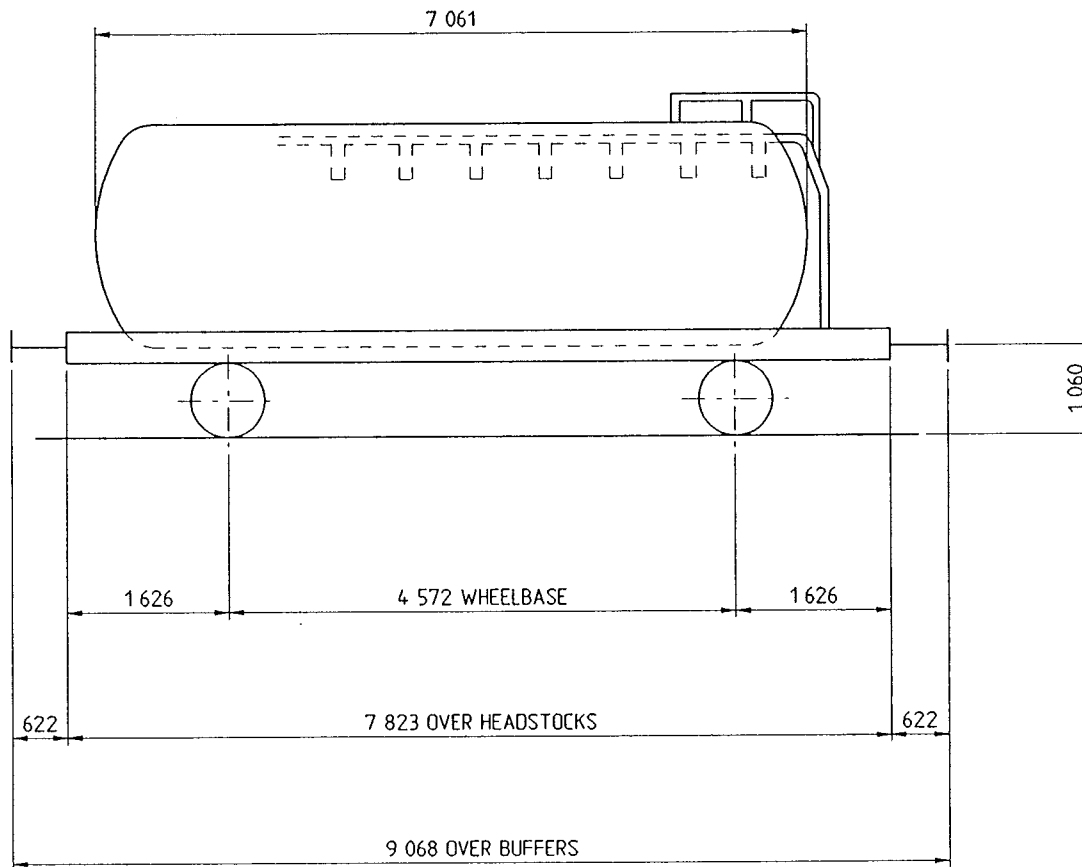
BRAKE-	AIR; PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	BR SCREW COUPLING
BUFFERS-	OLEO SELF CONTAINED
WHEELS-	Ø 1000 P3 PROFILE
JOURNALS-	Ø 130

TYPE-	Zfs
WAGON No.-	23 70 7390 409 - 415
BUILDER-	PROCOR UK LTD
OWNER-	ASSOCIATED OCTEL





TOPS INFORMATION													
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	19.7t	23.7t	27.7t			CARKND	60 mile/h UP TO	40 tonne GLW	8 t FORCE UP TO	24 t GLW	5	6	W 996
120	19.7t	23.7t	27.7t			T I B L	mile/h ABOVE		21 t FORCE ABOVE				



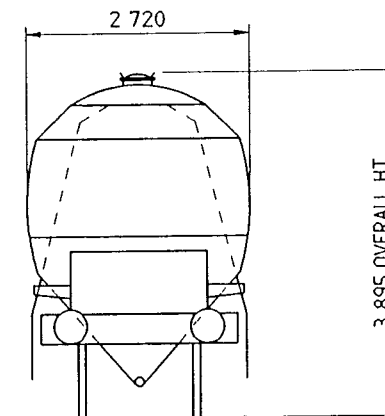
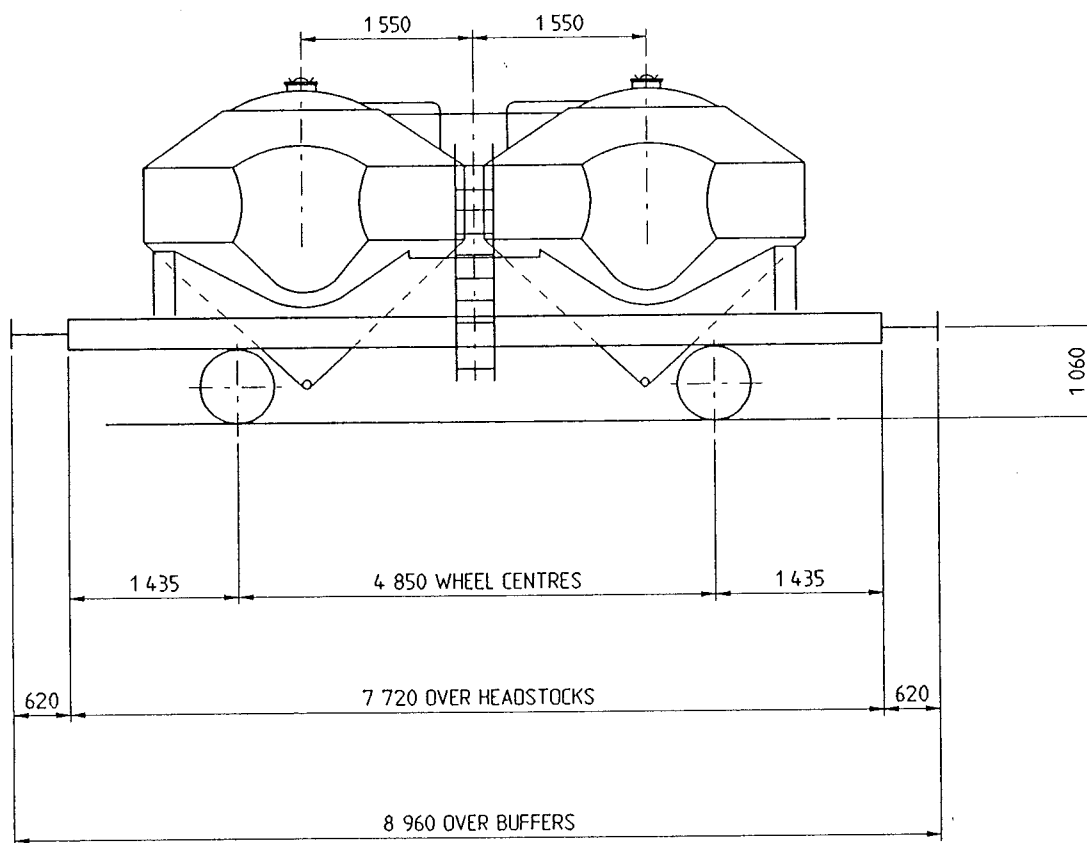
TARE-	12.35 t
CAPACITY, WEIGHT-	27.65 t
CAPACITY, VOLUME-	35 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	A 29720

BRAKE-	SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC
WHEELS-	Ø 1 000
JOURNALS-	Ø 5 ¼ (133)

TYPE-	Zfs
WAGON No.-	23 70 7390 635, 647, 653, 659, 671
BUILDER-	METRO CAMEL
OWNER-	TRAFFIC SERVICES



				TOPS INFORMATION								
A	B	C	D	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	21.5t	25.5t	29.5t			60 mile/h UP TO mile/h ABOVE		7 t FORCE UP TO 18 t FORCE ABOVE		4	6	W 1589
S				CARKND		40 tonne GLW		20 t GLW				
120				K	K	A	J					



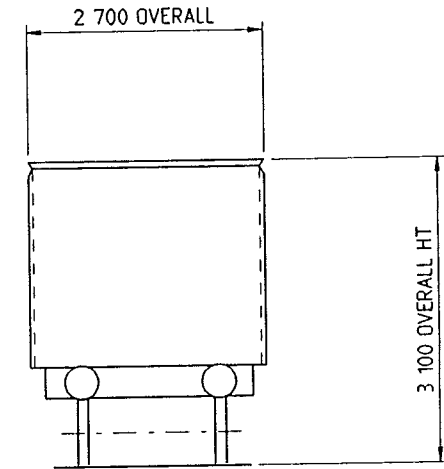
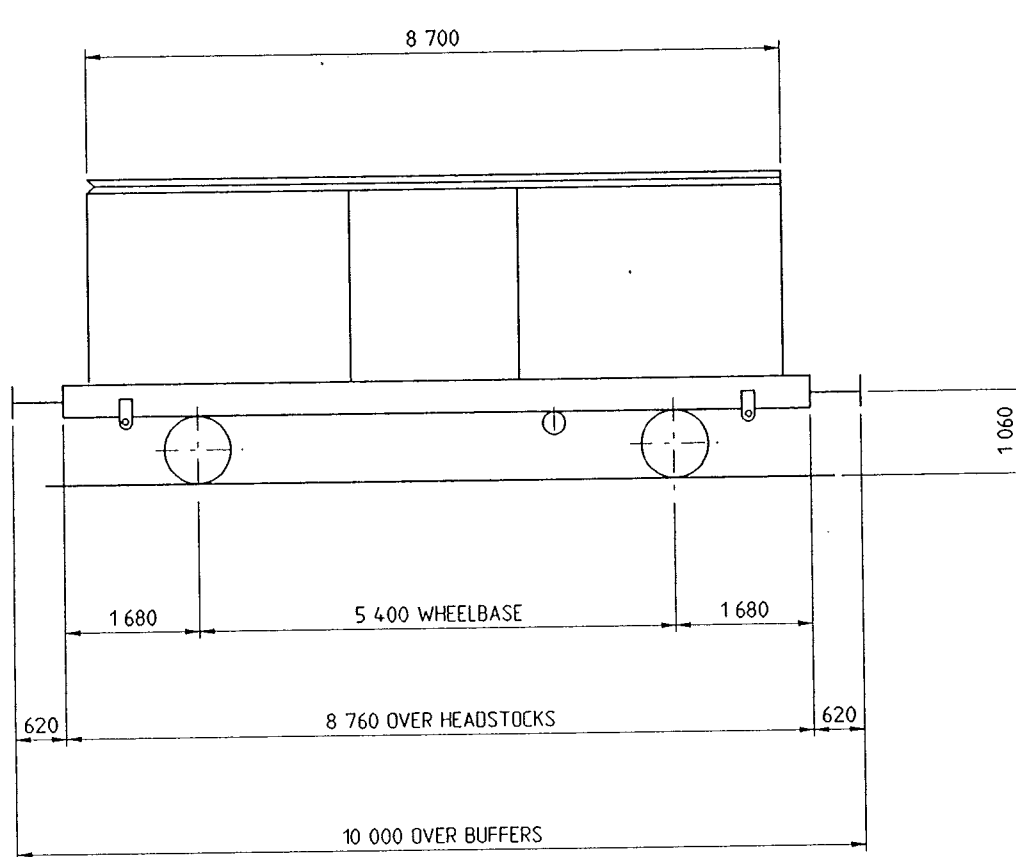
<b>TARE-</b>	10.95 t
<b>CAPACITY, WEIGHT-</b>	29.05 t
<b>CAPACITY, VOLUME-</b>	-
<b>FLOOR AREA-</b>	-
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	3870

<b>BRAKE-</b>	SCREW; AIR BLOCK
<b>SUSPENSION-</b>	DOUBLE LINK PARABOLIC
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC
<b>WHEELS-</b>	∅ 1000
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Ucfs
<b>WAGON No.-</b>	43 70 9192 003-022
<b>BUILDER-</b>	SIMOTRA
<b>OWNER-</b>	S T S



					TOPS INFORMATION								
	A	B	C	D	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	21.5t	25.5t	29.5t				45 mile/h UP TO		7.8 t FORCE UP TO		6	6	W 1630
S					CARKND		mile/h ABOVE		15.5 t FORCE ABOVE				
120					K	L	A	U					



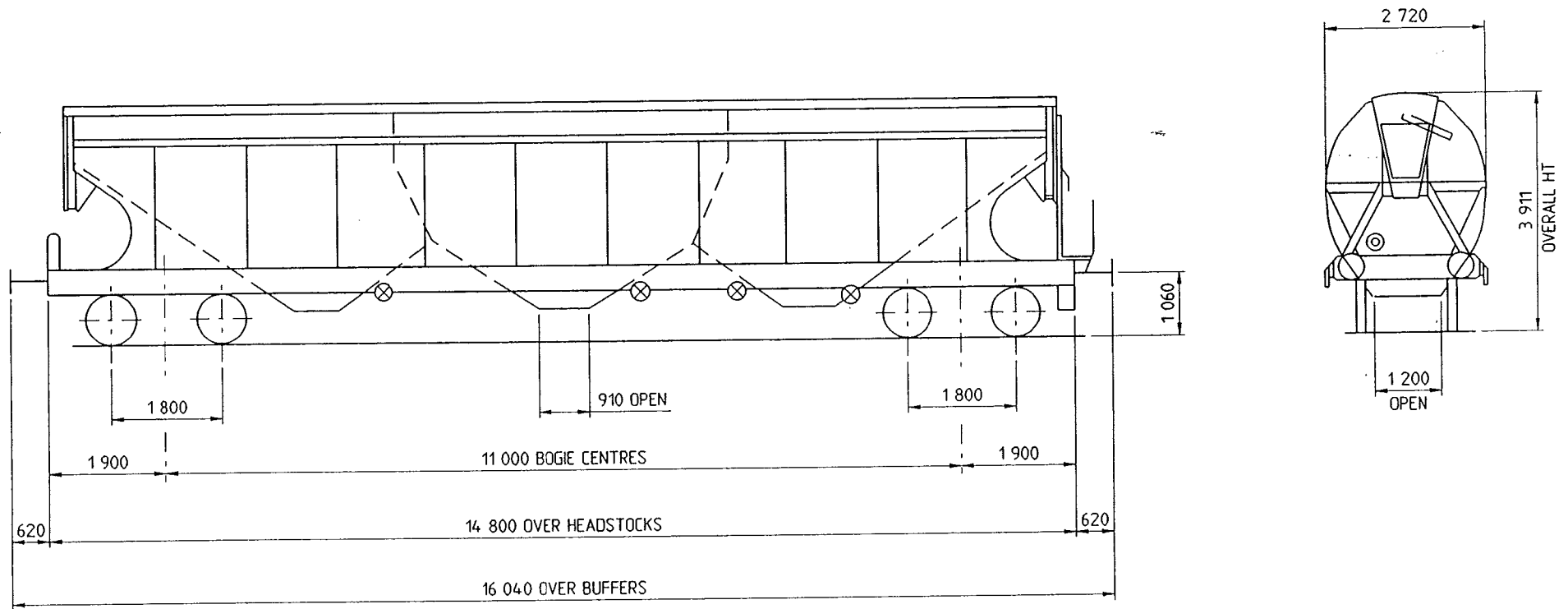
TARE-	10.5 t
CAPACITY, WEIGHT-	29.5 t
CAPACITY, VOLUME-	49 m <sup>3</sup>
FLOOR AREA-	24 m <sup>2</sup>
MIN.CURVE-	-
GEN.ARRGT.DRG.No.-	880

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	B.R. PARABOLIC
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅ 1 m P5
JOURNALS-	∅ 130

TYPE-	Ffs
WAGON No.-	43 70 6094 432
BUILDER-	ATELIERS DE JOIGNY
OWNER-	E. G. STEELE & CO



					TOPS INFORMATION							
90	A 42t	B 50t	C 58t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42t	50t	58t		CARKND	60 mile/h UP TO	80 tonne GLW	16 t FORCE UP TO	47 t GLW	5	7	W2358
120					P I A Y	-mile/h ABOVE-		40 t FORCE ABOVE				W1859
												W1565



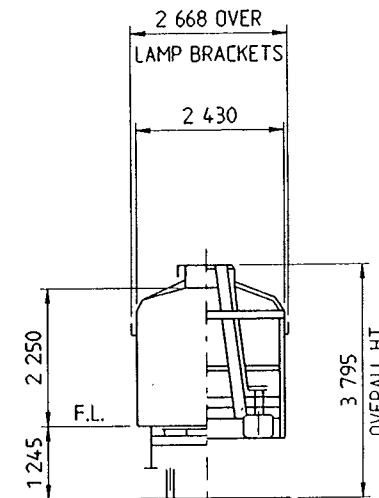
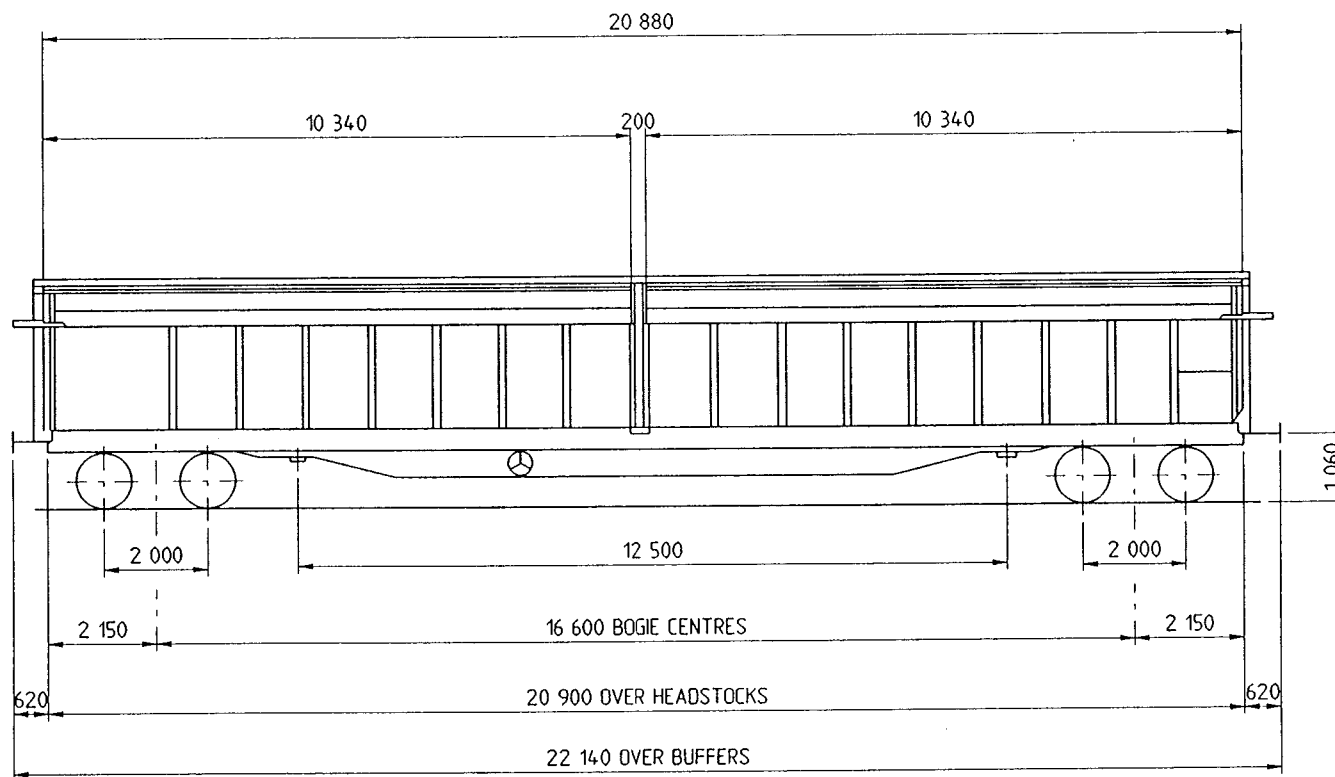
<b>TARE-</b>	21.85 t
<b>CAPACITY, WEIGHT-</b>	58 t
<b>CAPACITY, VOLUME-</b>	70 m <sup>3</sup>
<b>FLOOR AREA-</b>	
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	107 075

<b>BRAKE-</b>	AIR; SIDE SCREW
<b>SUSPENSION-</b>	Y25C BOGIE
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	OP. 41GX
<b>WHEELS-</b>	∅ 920
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Uafoos
<b>WAGON No.-</b>	33 70 9382 001 - 005, 012, 017, 019, 031-033, 046
<b>BUILDER-</b>	FAUVET GIREL
<b>OWNER-</b>	CAIB



					TOPS INFORMATION							
90	A 38t	B 46t	C 54t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	38t	46t	54t		CARKND	60 mile/h UP TO	80 tonne GLW	17 t FORCE UP TO	51 t GLW	15	6	W1816
120	00.0t				K V B B	mile/h ABOVE-		41 t FORCE ABOVE				



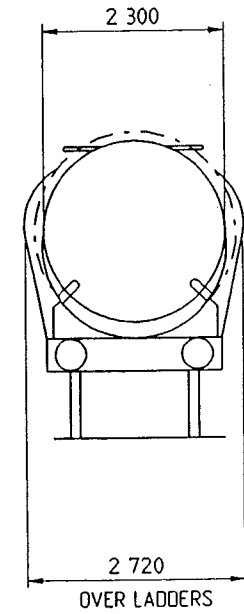
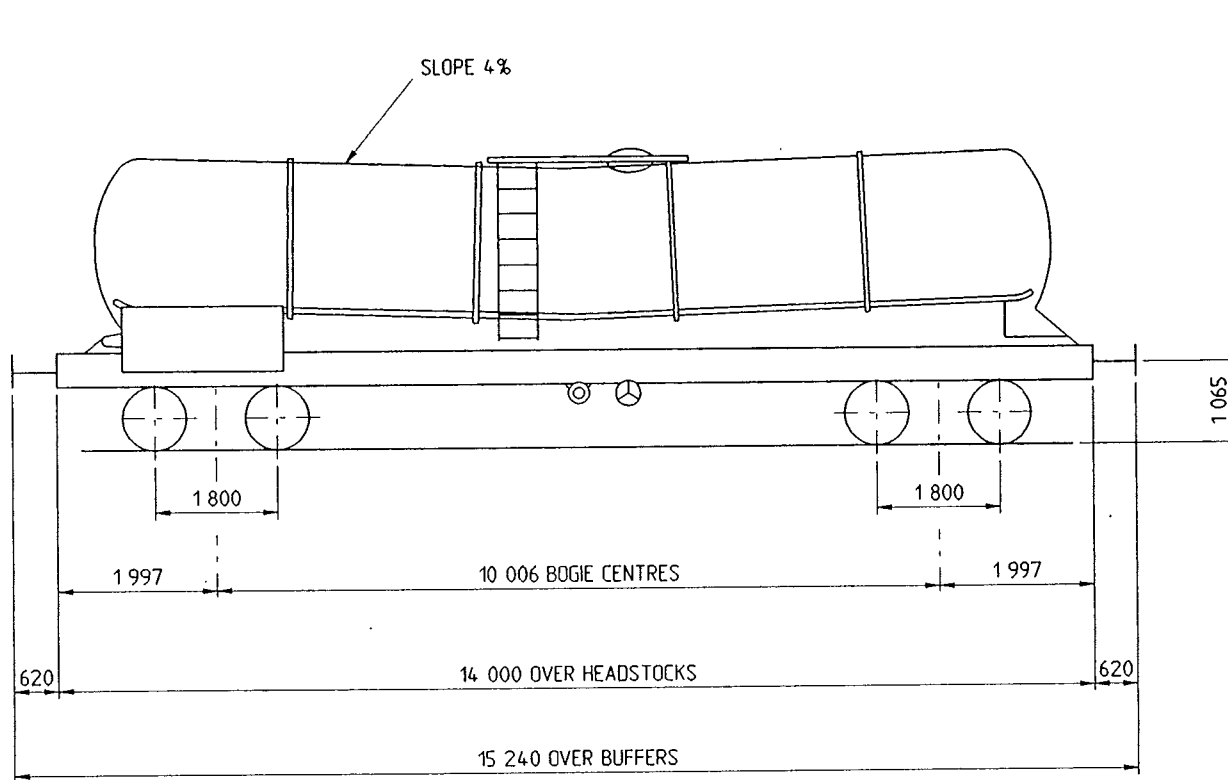
<b>TARE-</b>	26.3 t
<b>CAPACITY, WEIGHT-</b>	53.7 t
<b>CAPACITY, VOLUME-</b>	114 m <sup>3</sup>
<b>FLOOR AREA-</b>	51 m <sup>2</sup>
<b>MIN.CURVE-</b>	60 m
<b>GEN.ARRGT.DRG.No.-</b>	0.135.01.0024

<b>BRAKE-</b>	AIR & VAC THRO PIPE; SIDE SCREW
<b>SUSPENSION-</b>	Y21Cse BOGIE
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	RINGFEEDER 540 x 340 HD
<b>WHEELS-</b>	Ø 920
<b>JOURNALS-</b>	Ø 130

<b>TYPE-</b>	Habfis(1)
<b>WAGON No.-</b>	83 70 2795 350 - 364
<b>BUILDER-</b>	WAGGON UNION
<b>OWNER-</b>	TRANSFESA



				TOPS INFORMATION								
90	A 43t	B 51t	C 59t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	43t	51t	59t		CARKND	60 mile/h UP TO	80 tonne GLW	14 t FORCE UP TO	60 t GLW	4	6	W1825
120					T I A Y	mile/h ABOVE		40 t FORCE ABOVE				



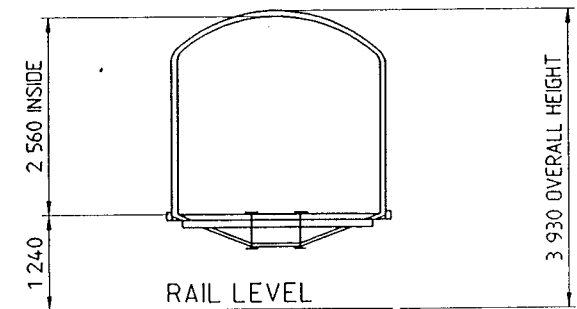
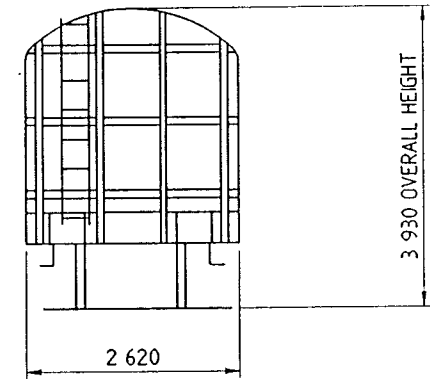
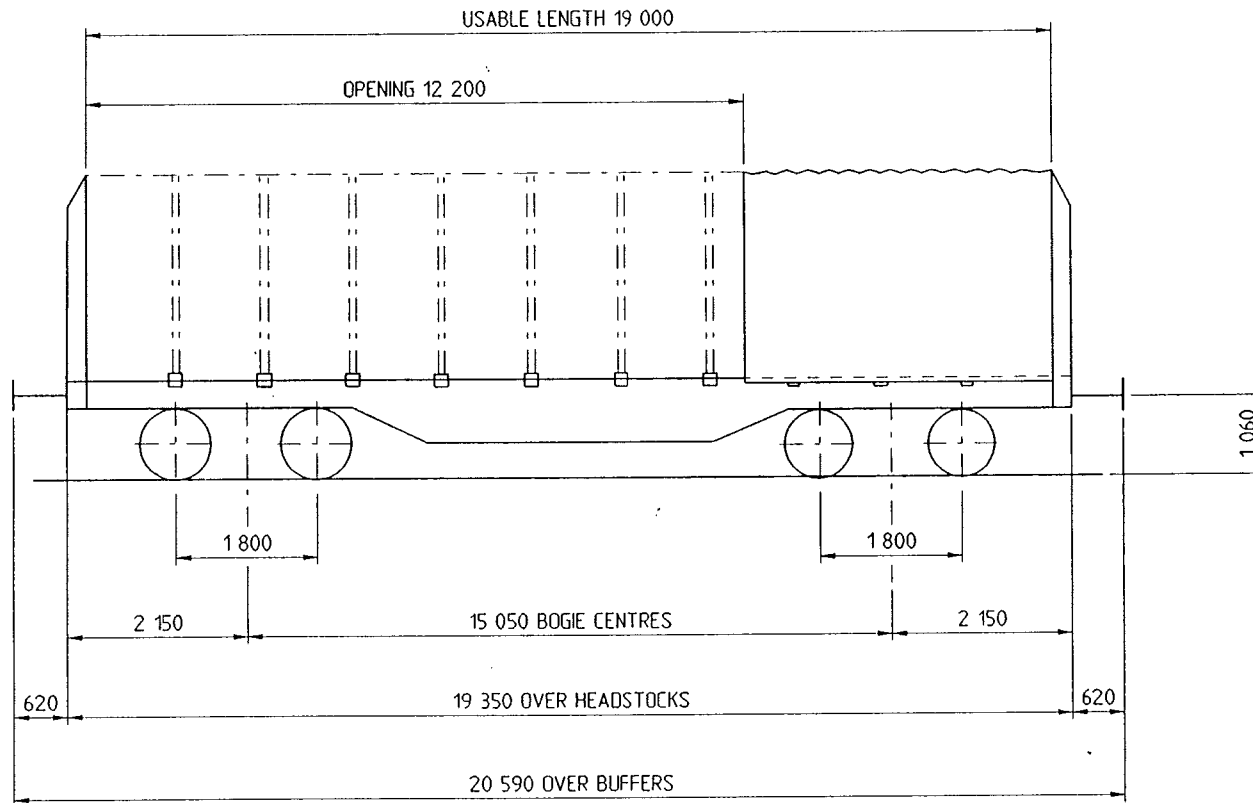
TARE-	21.625 t
CAPACITY, WEIGHT-	58.375 t
CAPACITY, VOLUME-	48 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	55 m
GEN.ARRGT.DRG.No.-	952

BRAKE-	AIR, SCREW
SUSPENSION-	Y25C BOGIES
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OLEO PNEUMATIC
WHEELS-	∅ 920
JOURNALS-	∅ 130

TYPE-	Zacfs
WAGON No.-	83 70 7895 200 - 203
BUILDER-	FAUVET-GIREL
OWNER-	CAIB



				TOPS INFORMATION								
90	A 40.5t	B 48.5t	C 56.5t	D 66.5t	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	40.5t	48.5t	56.5t	56.5t	CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW	13	8	W 1810
120					K H A E	mile/h ABOVE		47 t FORCE ABOVE				



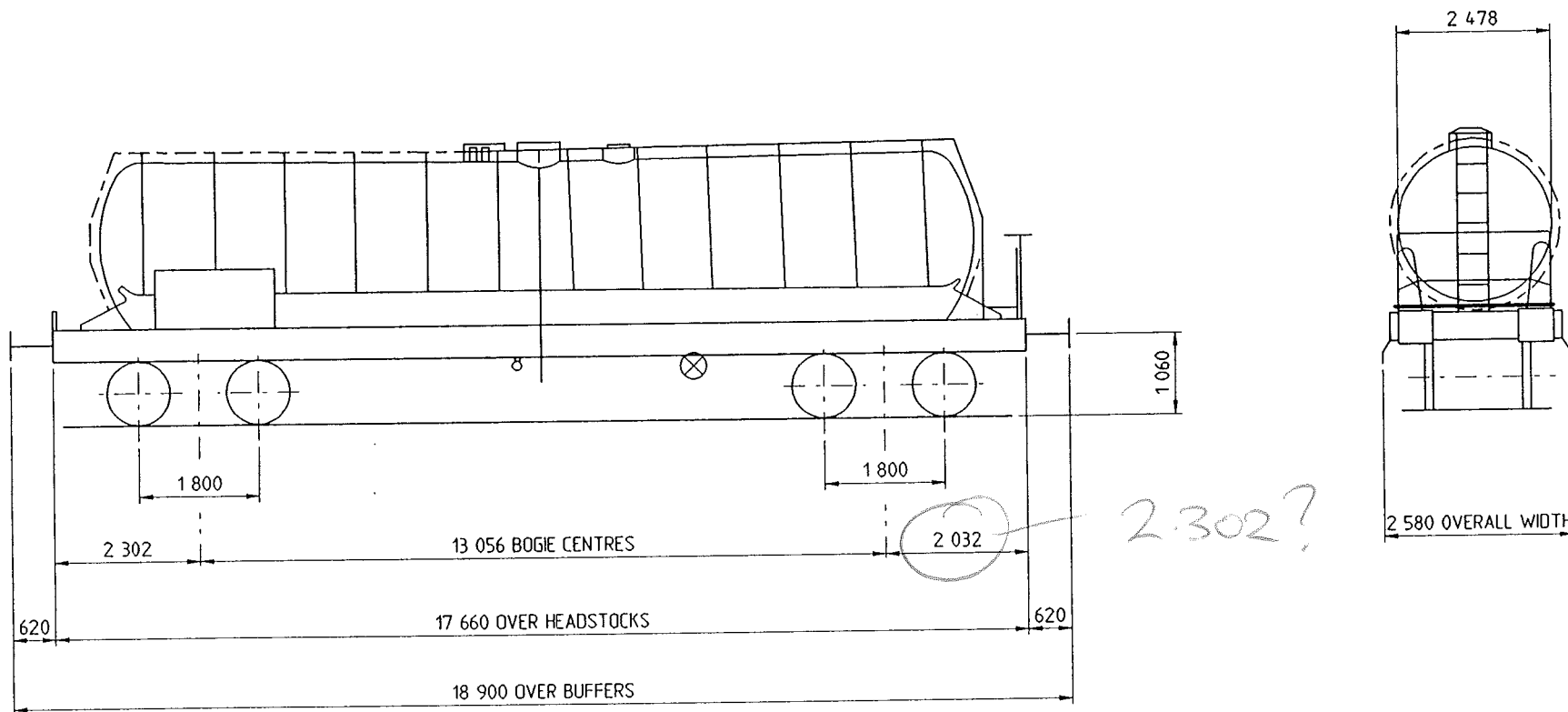
TARE-	23.5 t
CAPACITY, WEIGHT-	66.5 t
CAPACITY, VOLUME-	112 m <sup>3</sup>
FLOOR AREA-	46.5 m <sup>2</sup>
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	89575

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 LS
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 440 x 340 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Sfis (1)
WAGON No.-	33 70 4746 100-108, 110-117, 119-121, 123-126, 131-133, 135, 140, 141, 143, 146, 147, 154, 155, 157, 159, 170, 173
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



TOPS INFORMATION													
90	A	B	C	D	★★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	36.7t	44.7t	54.7t	62.7t		CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW	10	9	W1784
120	00.0t					T I A Y	mile/h ABOVE		47 t FORCE ABOVE				W 2827



TARE-	27.3 t
CAPACITY, WEIGHT-	62.7 t
CAPACITY, VOLUME-	78 m <sup>3</sup>
FLOOR AREA-	—
MIN. CURVE-	—
GEN. ARRGT. DRG. No.-	103525

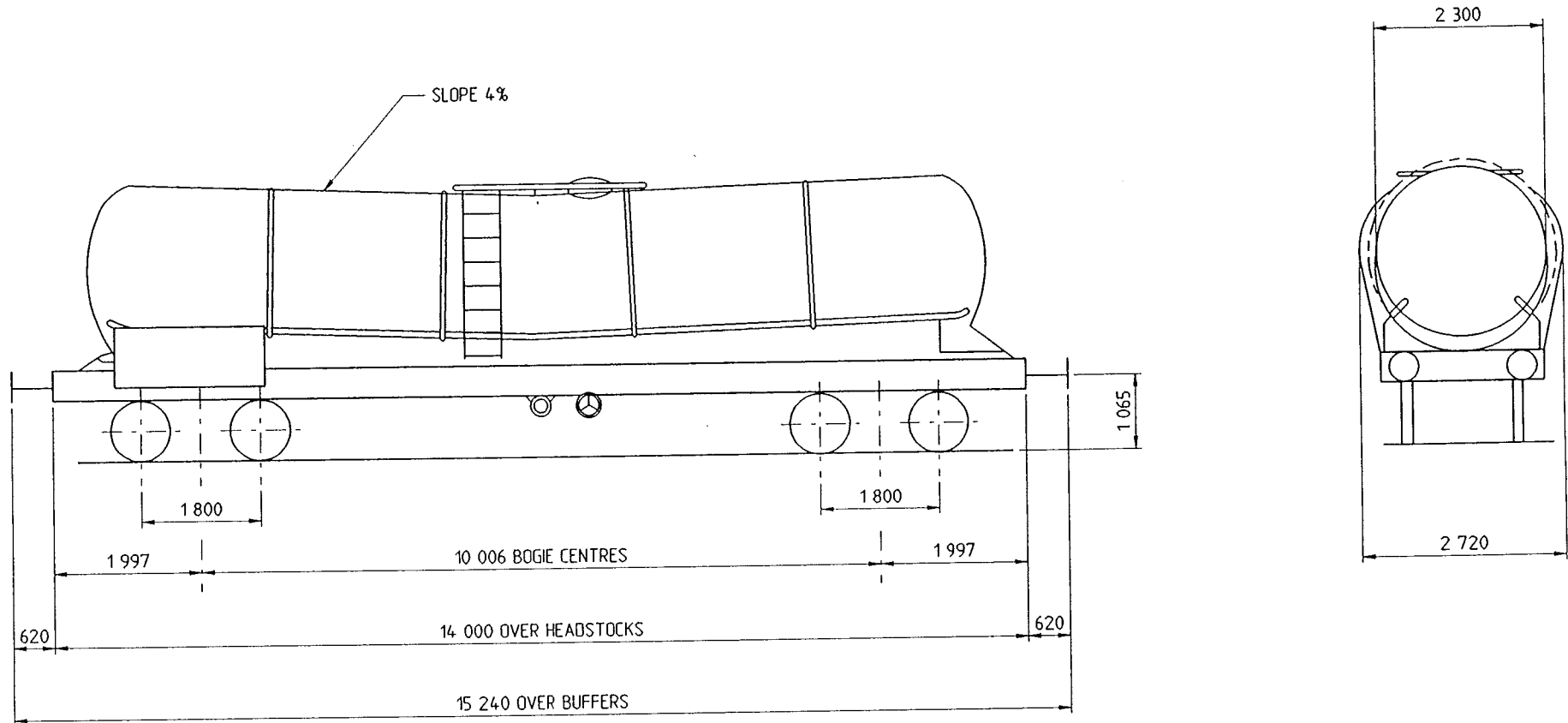
BRAKE-	AIR; SIDE & PLATFORM SCREW
SUSPENSION-	Y25 Ls BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 450 x 350 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs (3)
WAGON No.-	33 70 7899 021 - 040
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK





TOPS INFORMATION												
90	A 43t	B 51t	C 59t	D 69t	AARKND CARKND T I A Y	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 4	RA (GLW) 8	DESIGN SHEET W1826
S	43t	51t	59t	59t		60 mile/h UP TO mile/h ABOVE	90 tonne GLW	14 t FORCE UP TO 40 t FORCE ABOVE	60 t GLW			
120												



TARE-	21.21 t
CAPACITY, WEIGHT-	68.79 t
CAPACITY, VOLUME-	48 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	55 m
GEN.ARRGT.DRG.No.-	952

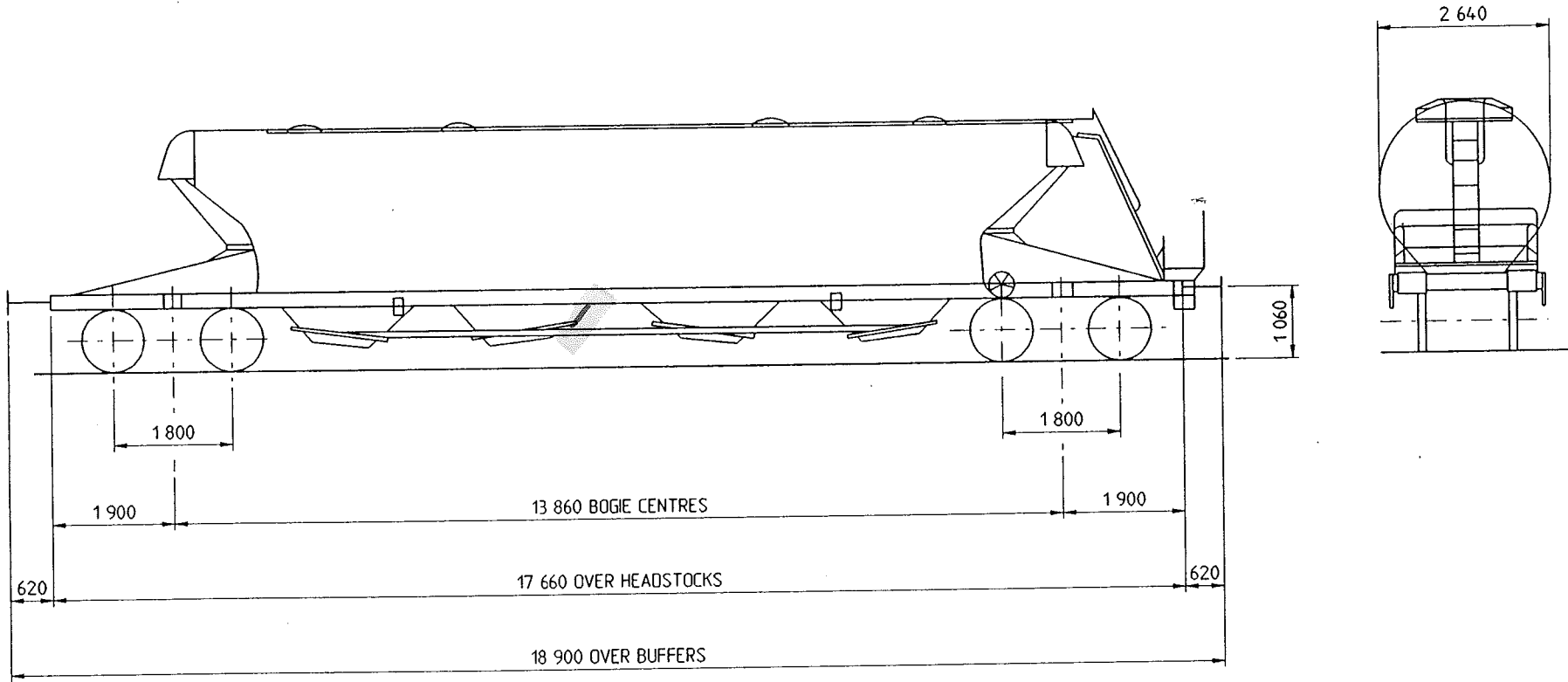
BRAKE-	AIR, SCREW
SUSPENSION-	Y25C BOGIES
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OLEO PNUEMATIC
WHEELS-	∅ 950
JOURNALS-	∅ 140

TYPE-	Zacfs
WAGON No.-	83 70 7895 204
BUILDER-	FAUVET - GIREL
OWNER-	CAIB



TANK

					TOPS INFORMATION							
	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	39.2t	47.2t	55.2t	65.2t		60 mile/h UP TO	90 tonne GLW	14.27 t FORCE UP TO	49 t GLW	10	8	W 1852
S	39.2t	47.2t	55.2t	55.2t	CARKND	60 mile/h ABOVE		47.1 t FORCE ABOVE				
120		00.0			T I A Y							



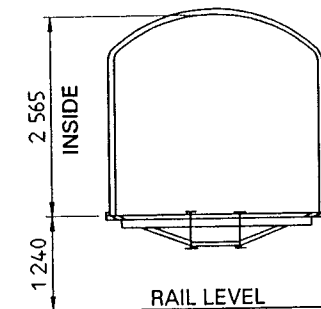
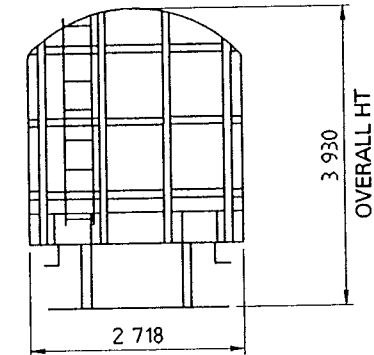
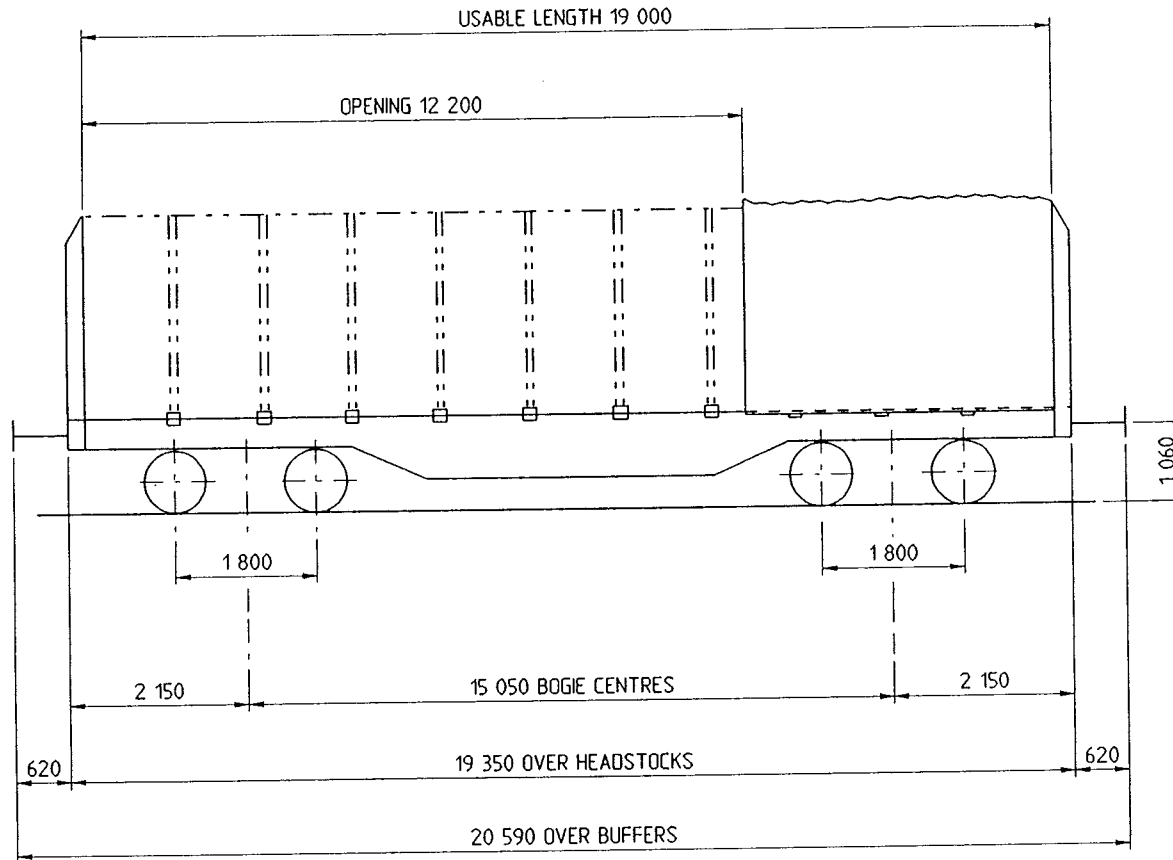
TARE-	25 t
CAPACITY, WEIGHT-	65 t
CAPACITY, VOLUME-	74 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	103 539

BRAKE-	AIR: SIDE SCREW
SUSPENSION-	Y25LS BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	U5N HYDRAULIC
WHEELS-	∅ 920: P10
JOURNALS-	∅ 130

TYPE-	Uacfs (4)
WAGON No.-	33 70 9292 204, 206, 207, 210-212
BUILDER-	ARBEL FAUVET
OWNER-	TIPHOOK



								TOPS INFORMATION					
90	A	B	C	D		AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	40.5t	48.5t	56.5t	66.5t		CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW	13	8	W1974
120	00.0t					K H A E	-mile/h-ABOVE		47 t FORCE ABOVE				W1875
													W1810



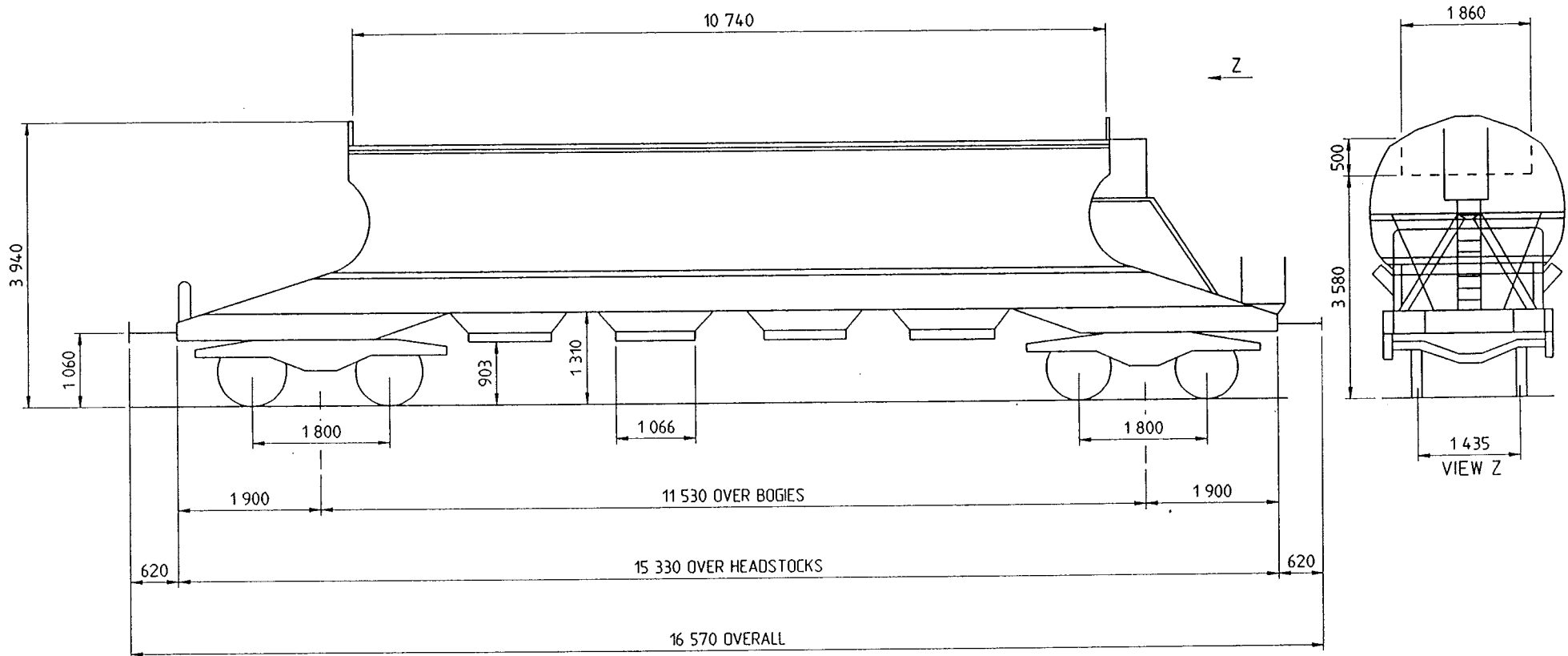
<b>TARE-</b>	23.55 t
<b>CAPACITY, WEIGHT-</b>	66.45 t
<b>CAPACITY, VOLUME-</b>	112 m <sup>3</sup>
<b>FLOOR AREA-</b>	46.5 m <sup>2</sup>
<b>MIN.CURVE-</b>	35 m
<b>GEN.ARRGT.DRG.No.-</b>	89575

<b>BRAKE-</b>	AIR ; SIDE SCREW
<b>SUSPENSION-</b>	Y 25 LS
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC 440x340 HD
<b>WHEELS-</b>	∅ 920
<b>JOURNALS-</b>	∅ 130

<b>TYPE-</b>	Sfis (1)
<b>WAGON No.-</b>	33 70 4746 183, 185, 187, 191, 193
<b>BUILDER-</b>	ARBEL FAUVET RAIL
<b>OWNER-</b>	TIP HOOK



TOPS INFORMATION																
90	A	B	C	D	★ ★★	AARKND				OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW) 8	DESIGN SHEET W 1995 W 2870
S	41.0t	49.0t	59.0t	59.0t		CARKND				60 mile/h UP TO	90 tonne GLW	12 t FORCE UP TO	49 t GLW			
120	00.0t					K	P	A	X	mile/h-ABOVE		36 t FORCE ABOVE				



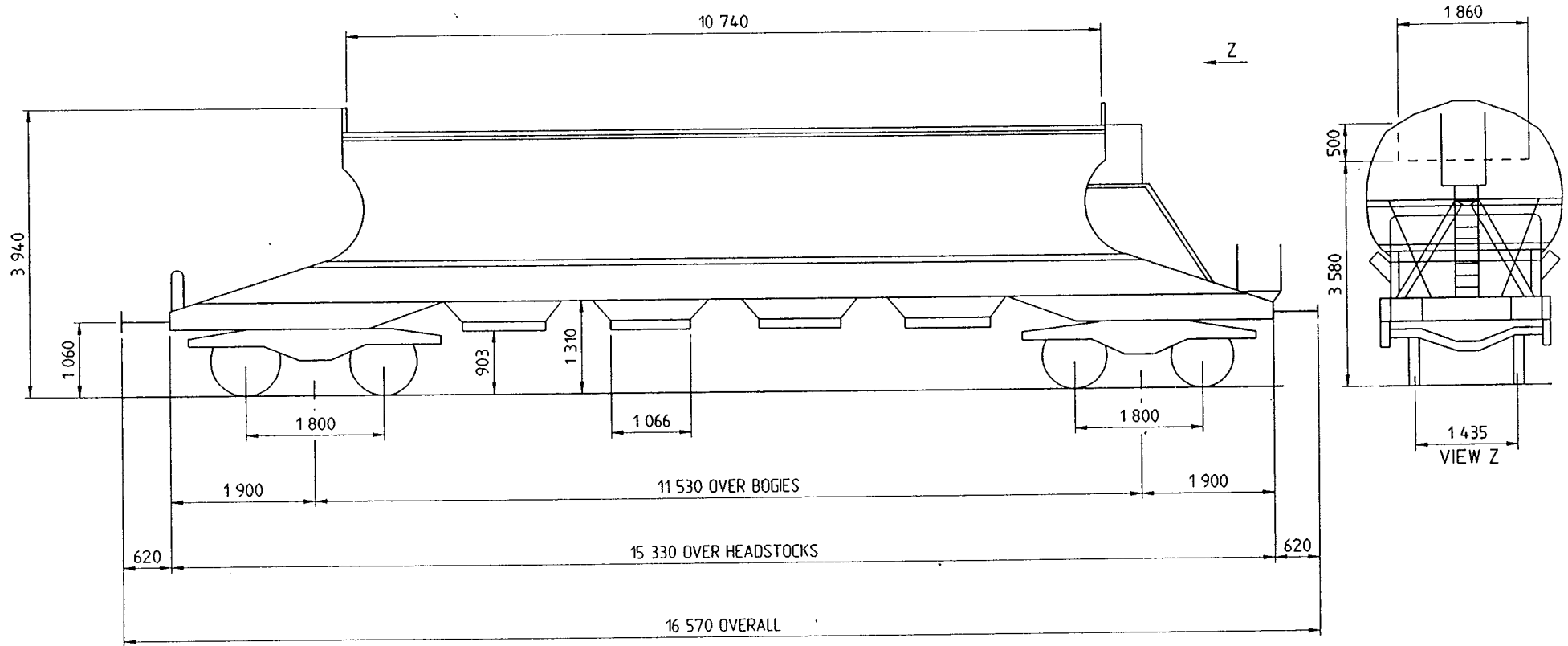
TARE-	22.66 t
CAPACITY, WEIGHT-	67.34 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	

BRAKE-	DUAL; 'THRO VAC & AIR PIPES , SCREW
SUSPENSION-	Y 25 Lsd
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 169 GX 550 x 340
WHEELS-	∅ -
JOURNALS-	∅ -

TYPE-	Fafps (5)
WAGON No.-	83 70 6905 000-049
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



TOPS INFORMATION													
90	A	B	C	D	★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW) 8	DESIGN SHEET W 2035 W 2174 W 2309
S	41.0t	49.0t	59.0t	59.0t	★★	CARKND	60 mile/h UP TO	90 tonne GLW	12 t FORCE UP TO	49 t GLW			
120	0.00 t					K P A X	mile/h ABOVE		36 t FORCE ABOVE				



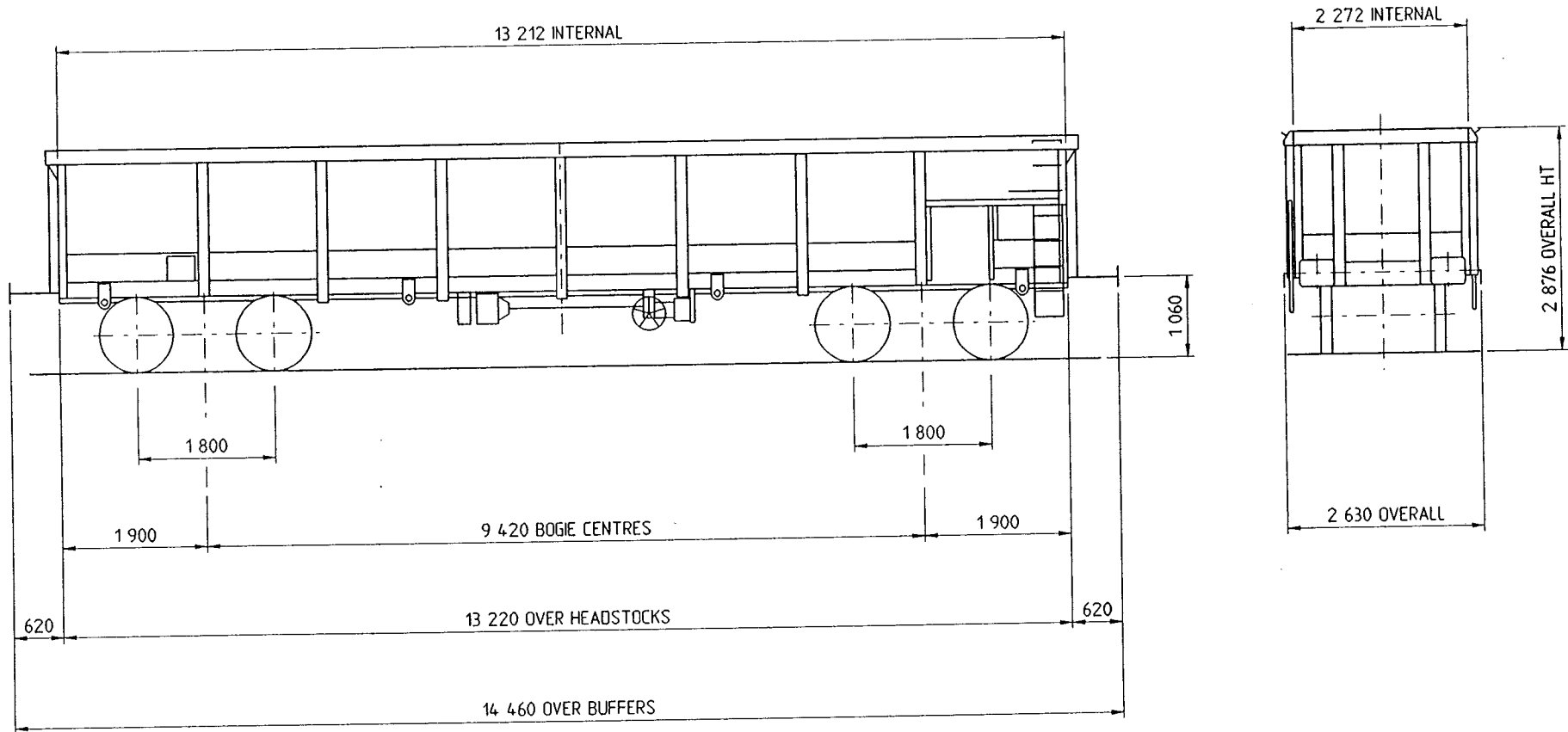
TARE-	22.99 t
CAPACITY, WEIGHT-	67.01 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	-

BRAKE-	DUAL; THRO VAC & AIR PIPES, SCREW
SUSPENSION-	Y 25 Lsd
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 169 GX 550 x 340
WHEELS-	∅ -
JOURNALS-	∅ -

TYPE-	Fafps (5)
WAGON No.-	83 70 6905 100-199
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



TOPS INFORMATION													
90	A 42.8t	B 50.8t	C 60.8t	D 68.8t	★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW) 8	DESIGN SHEET W 2170 W 2036 W 2865
S	42.8t	50.8t	60.8t	60.8t	★★	CARKND	60 mile/h UP TO mile/h ABOVE	90 tonne GLW	11 t FORCE UP TO 34 t FORCE ABOVE	43 t GLW			
120	00.0 t					J	R	A	H				



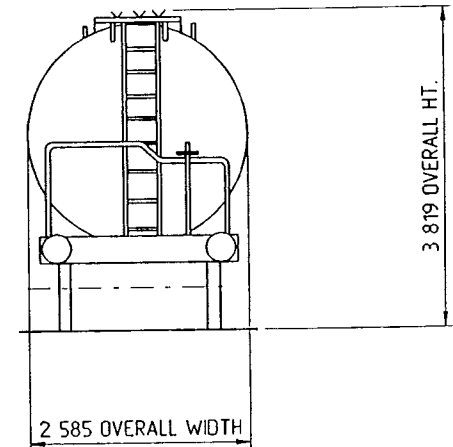
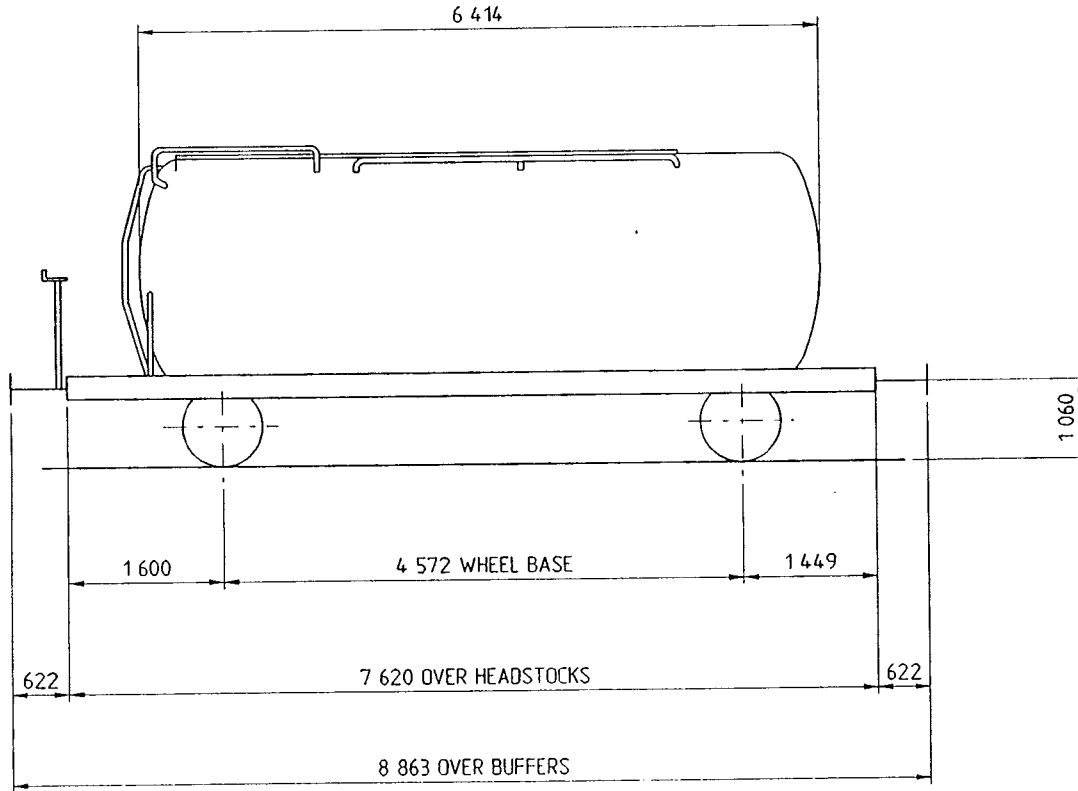
TARE-	22.18 t
CAPACITY, WEIGHT-	67.82 t
CAPACITY, VOLUME-	50 m <sup>3</sup>
FLOOR AREA-	30 m <sup>2</sup>
MIN.CURVE-	45 m
GEN.ARRGT.DRG.No.-	59506

BRAKE-	AIR / BLOCK
SUSPENSION-	Y25Lsd BOGIES
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 169 GX 550 x 340
WHEELS-	Ø 920
JOURNALS-	Ø -

TYPE-	Fafns(5)
WAGON No.-	33 70 6790 000-025, 027, 029-032, 034-099
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



					TOPS INFORMATION											
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET				
	17.7t	21.7t	25.7t			CARKND	35 mile/h UP TO mile/h ABOVE	40 tonne GLW	9 t FORCE UP TO 22.5 t FORCE ABOVE				22 t GLW	4	6	W 2050
	S															
120																



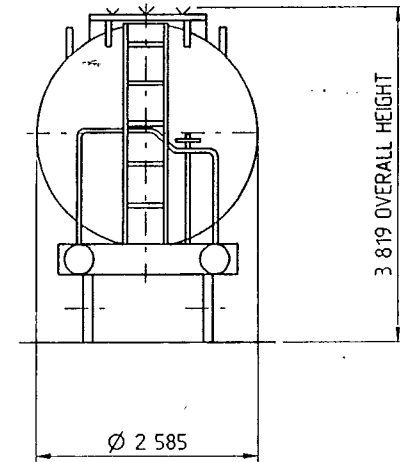
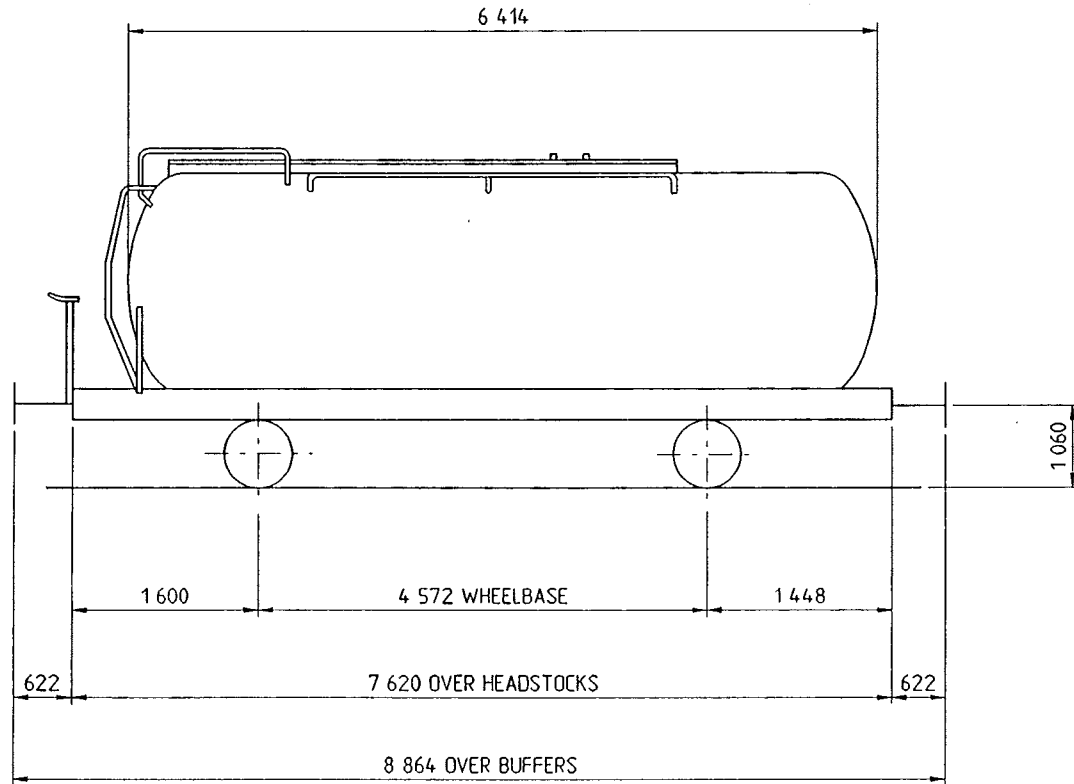
TARE-	13.28 t
CAPACITY, WEIGHT-	26.72 t
CAPACITY, VOLUME-	32 m <sup>3</sup> (ALLOWING 4% ULLAGE)
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	4750

BRAKE-	AIR
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø 400 HD
WHEELS-	Ø 1 m
JOURNALS-	Ø 130

TYPE-	Zfs
WAGON No.-	23 70 7390 399, 406
BUILDER-	CHAS ROBERTS
OWNER-	EX-TIGER RAIL (RECEIVERS)



					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	35 mile/h UP TO	40 tonne GLW	9 t FORCE UP TO	22 t GLW	6	6	W 2051
120					T I A L	mile/h ABOVE		22.5 t FORCE ABOVE				W 2200



TARE-	12.9 t
CAPACITY, WEIGHT-	27.1 t
CAPACITY, VOLUME-	31.6 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	4750

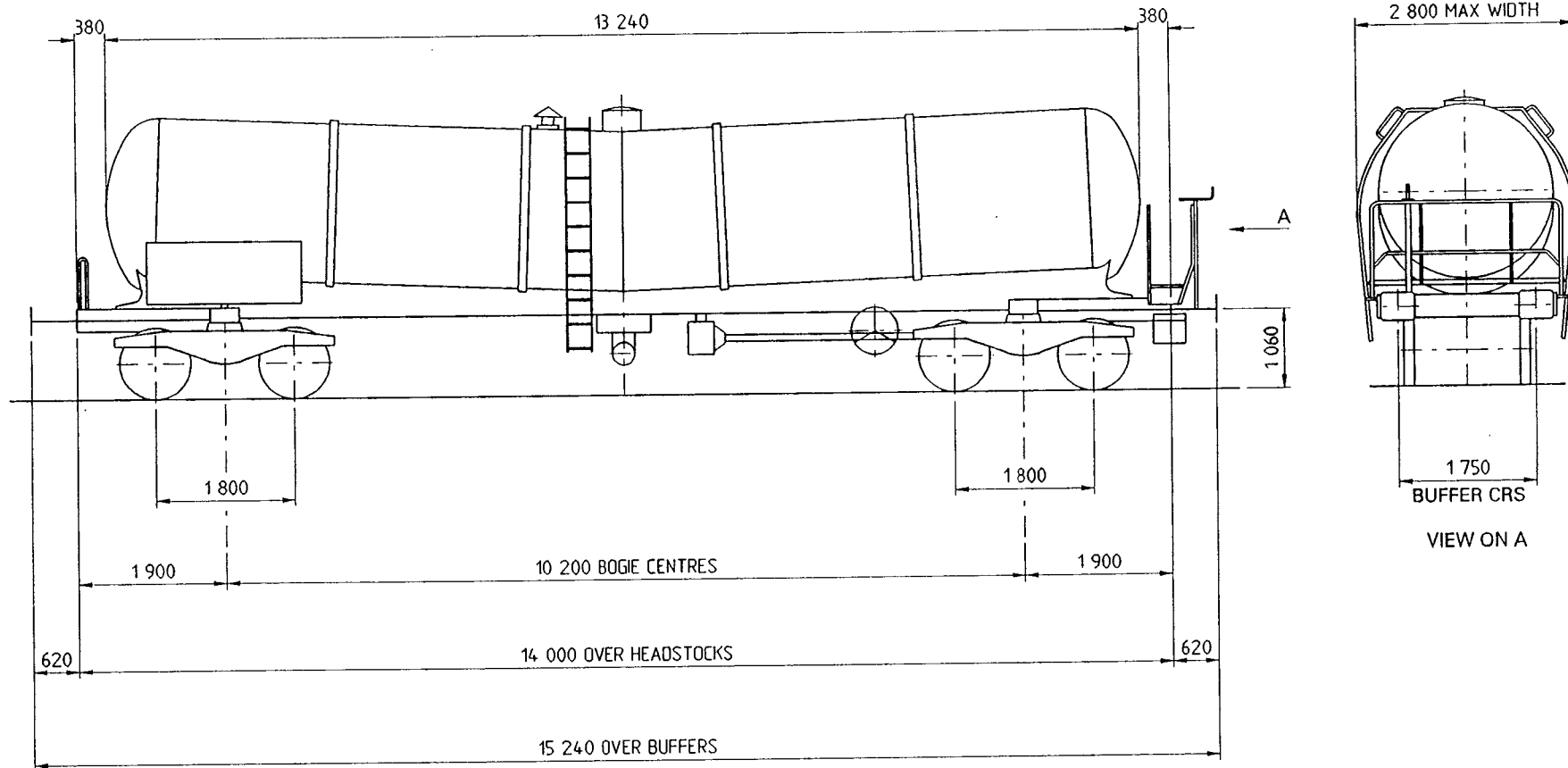
BRAKE-	AIR; PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC Ø400 HD
WHEELS-	Ø 1 000
JOURNALS-	Ø 130

TYPE-	Zfkks
WAGON No.-	23 70 7490 409, 414
BUILDER-	CHARLES ROBERTS
OWNER-	EX-TIGER RAIL (RECEIVERS)





					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
	41.5t	49.5t	57.5t	67.5t		60 mile/h UP TO 90 tonne GLW mile/h ABOVE		25 t FORCE UP TO 51 t FORCE ABOVE	43 t GLW			
S	41.5t	49.5t	57.5t	57.5t	CARKND							
120	00.0t				T I A Y							



TARE-	21.4 t
CAPACITY, WEIGHT-	68.6 t
CAPACITY, VOLUME-	48 000 l
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	38051 990 002

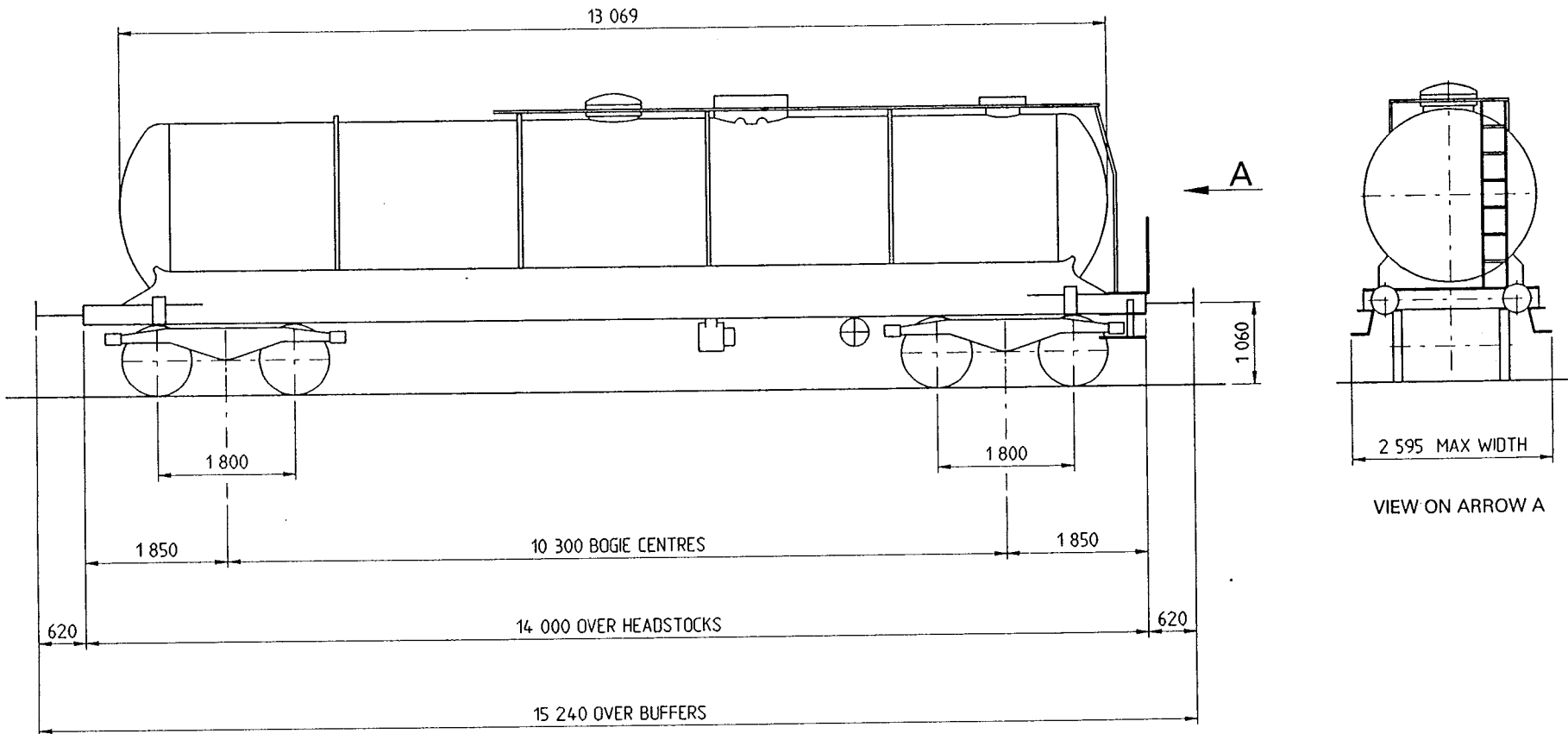
BRAKE-	AIR, BLOCK; SIDE WHEEL, END PLTFM
SUSPENSION-	Y25 LSD
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 550 x 340
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs
WAGON No.-	33 70 7890 102, 118, 121, 123-126
BUILDER-	A.N.F.
OWNER-	LEASE PLAN UK Ltd. - NACCO UK Ltd.

31-07-92 ISSUE 1



				TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	80 tonne GLW	25 t FORCE UP TO	42 t GLW			
120					T I A Y	60 mile/h ABOVE		50 t FORCE ABOVE				



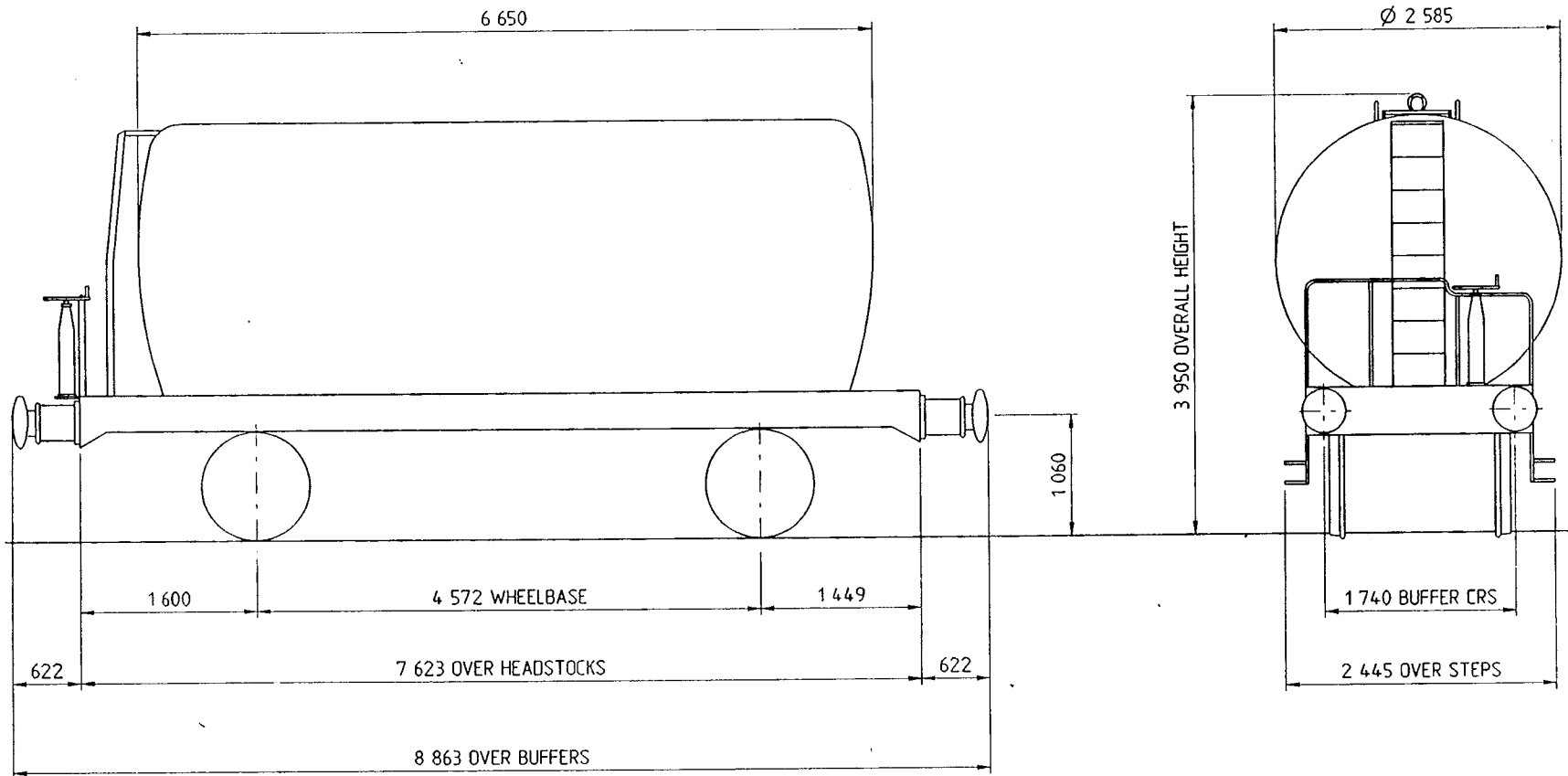
TARE-	23.11 t
CAPACITY, WEIGHT-	56.89 t
CAPACITY, VOLUME-	52 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	

BRAKE-	AIR; SCREW & PLATFORM SCREW
SUSPENSION-	Y25 CS2 BOGIES
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OLEO PNEUMATIC OP 164 GX
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs
WAGON No.-	33 70 7890 200-204
BUILDER-	CAIB/JOIGNY
OWNER-	CAIB



					TOPS INFORMATION							
90	A 16.5t	B 20.5t	C 24.5t	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	40 tonne GLW	9 t FORCE UP TO	22 t GLW	4	6	W 2209
120					T I A L	mile/h ABOVE		22.5 t FORCE ABOVE				W 2051



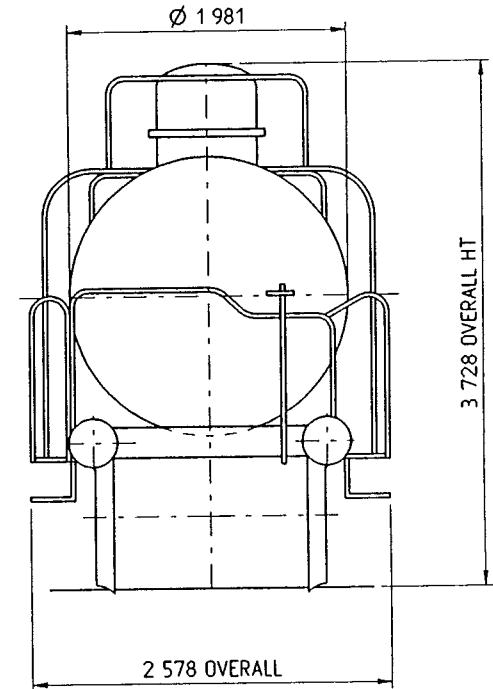
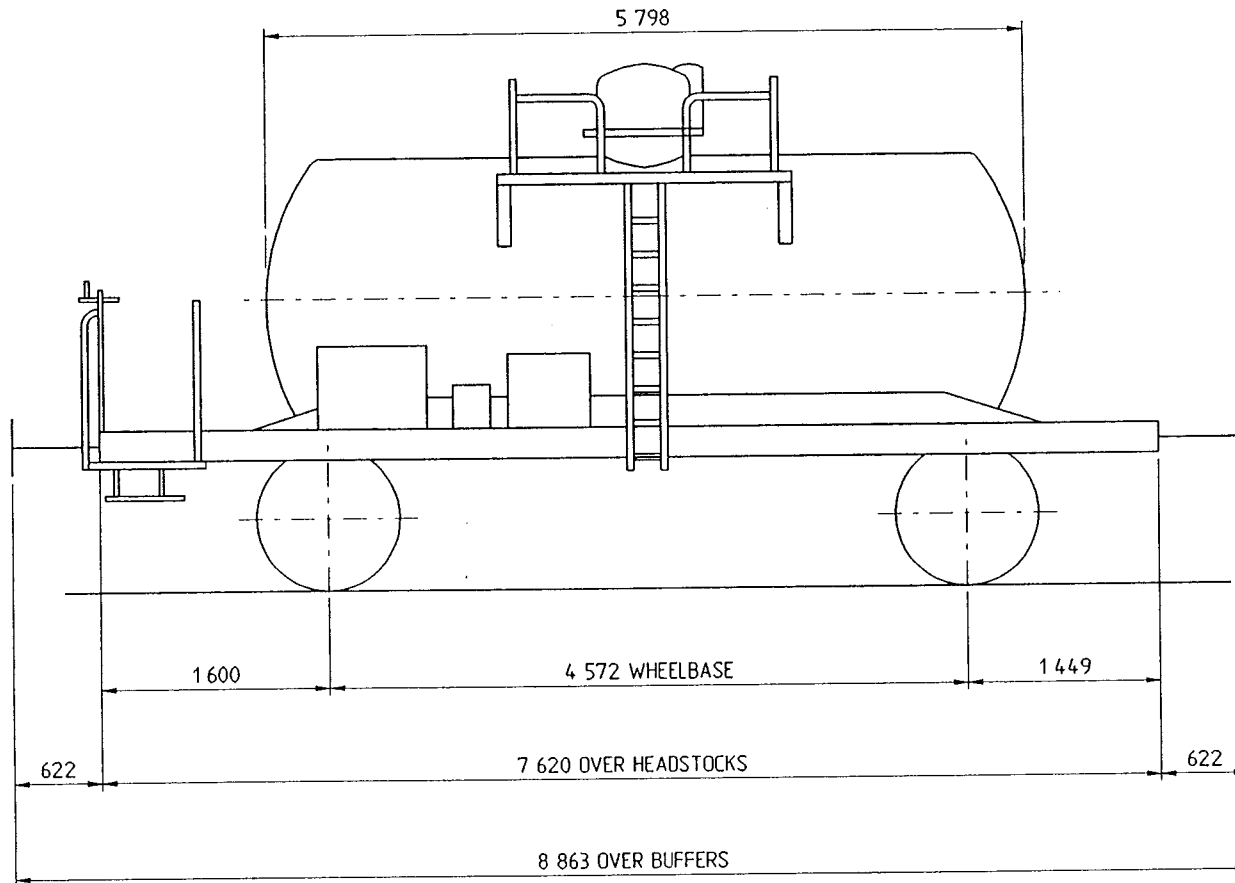
TARE-	12.9 t
CAPACITY, WEIGHT-	27.1 t
CAPACITY, VOLUME-	31.6 m <sup>3</sup>
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	

BRAKE-	AIR; PLATFORM SCREW & SIDE LEVER
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC $\varnothing 400$ HD
WHEELS-	$\varnothing 980$
JOURNALS-	$\varnothing 130$

TYPE-	Zfkk
WAGON No.-	23 70 7490 418
BUILDER-	MODIFIED BY C.C. CRUMP
OWNER-	EX-TIGER RAIL (RECEIVERS)



					TOPS INFORMATION							
	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
90	15.5t	19.5t	23.5t			60 mile/h UP TO mile/h ABOVE	40 tonne GLW	9 t FORCE UP TO 24 t FORCE ABOVE	26 t GLW	4	6	W 2225
S	15.5t	19.5t	19.5t		CARKND							
120					T I A L							



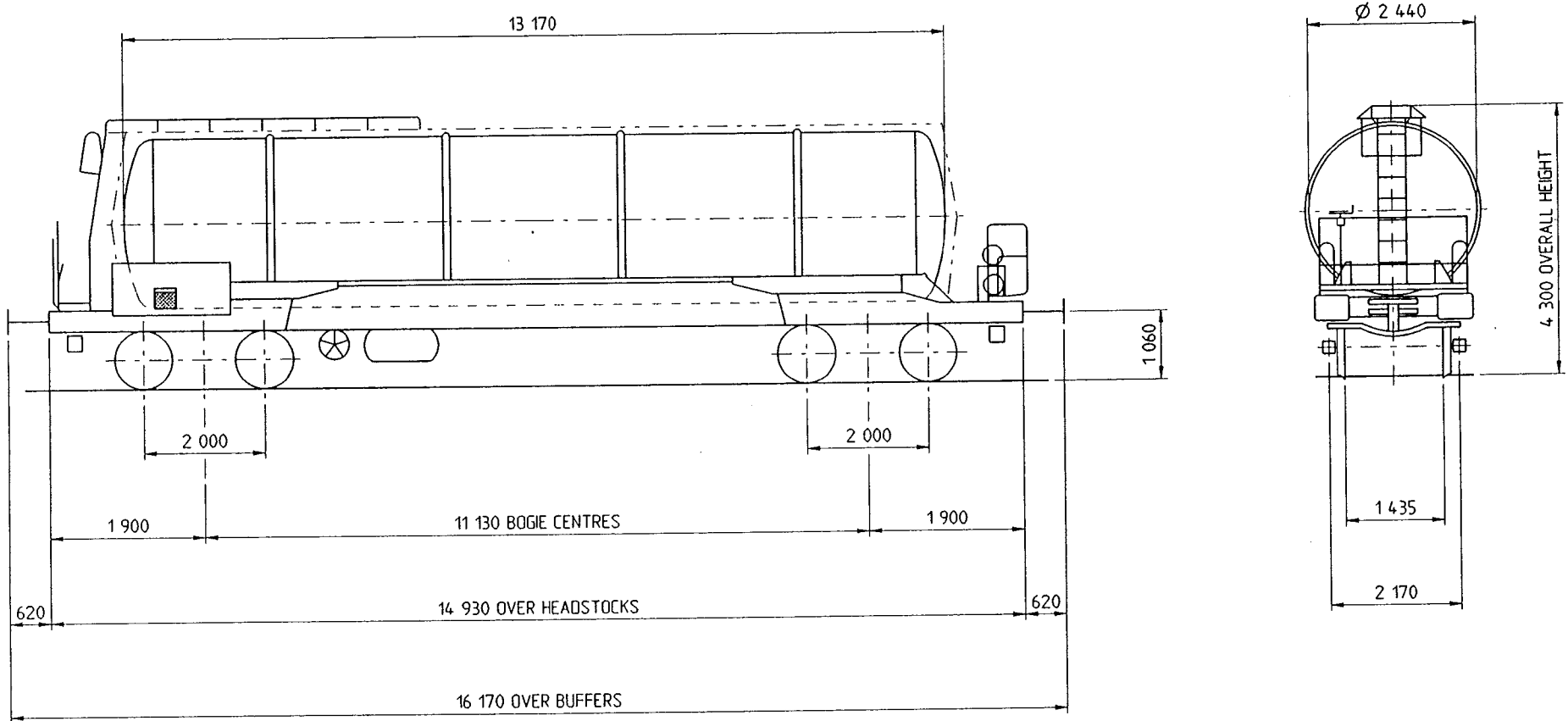
TARE-	16.5 t
CAPACITY, WEIGHT-	23.5 t
CAPACITY, VOLUME-	13 650 l
FLOOR AREA-	-
MIN.CURVE-	-
GEN.ARRGT.DRG.No.-	4710/114

BRAKE-	AIR, SCREW & SIDE LEVER
SUSPENSION-	-
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅
JOURNALS-	∅

TYPE-	Ufns
WAGON No.-	23 70 7490 002, 258, 263, 266, 281, 284, 287-290, 293, 407
BUILDER-	CHAS ROBERTS
OWNER-	OCTEL CO LTD



				TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	42.8t	50.8t	58.8t			60 mile/h UP TO mile/h ABOVE		21 t VBF 16 t ABF 44 t VBF 41 t ABF FORCE UP TO FORCE ABOVE				
120	00.0 t				CARKND	T	I	X	Y			



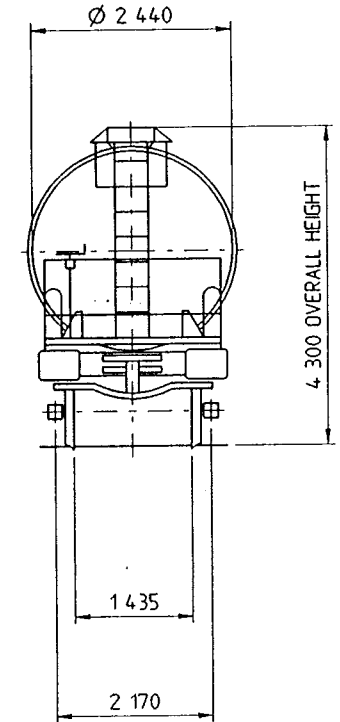
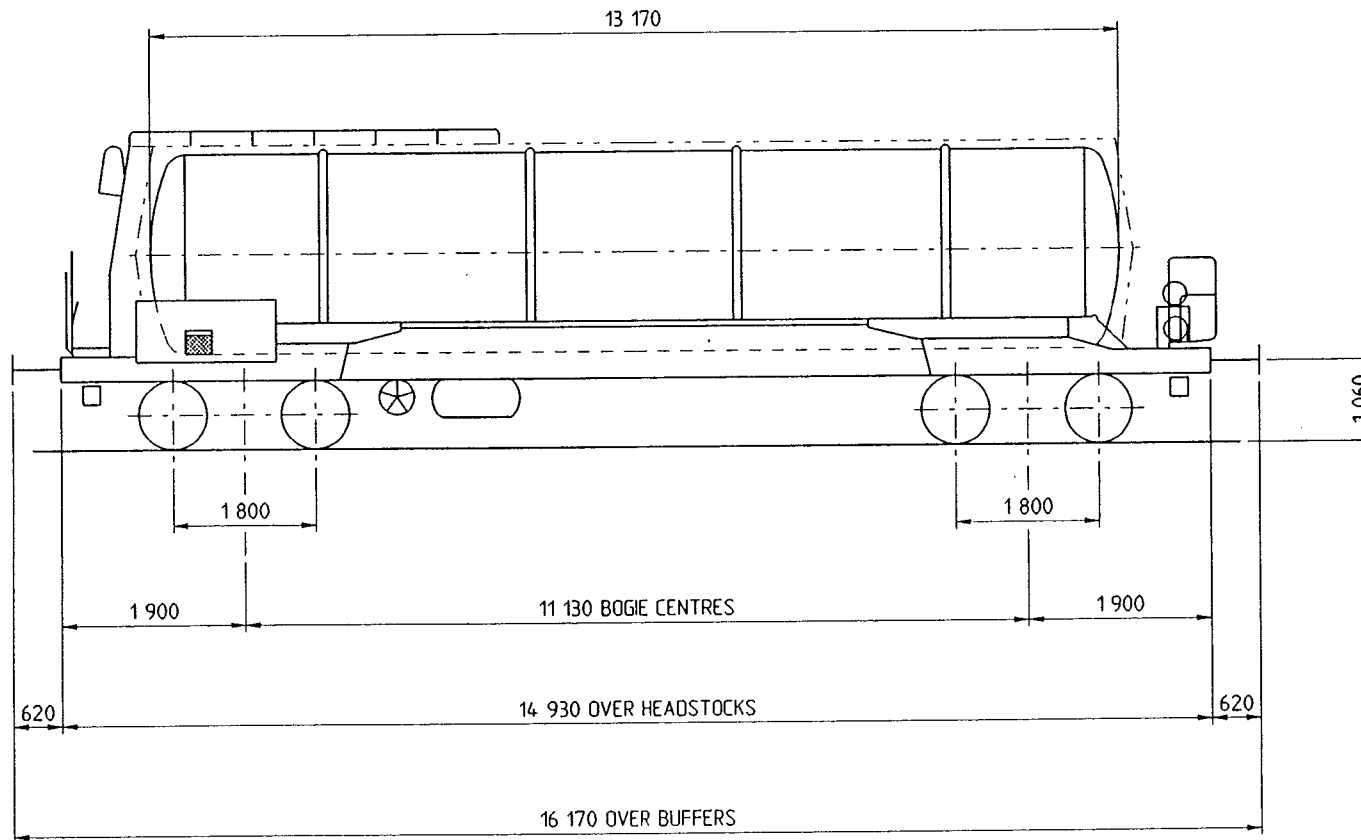
TARE-	21.2 t
CAPACITY, WEIGHT-	58.8 t
CAPACITY, VOLUME-	57 470 l
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	ONF 182443

BRAKE-	AIR; PLATFORM & SIDE SCREW
SUSPENSION-	Y25 CS2 BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 560 x 370
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs(3)
WAGON No.-	34 70 7899 000
BUILDER-	C.F.M.F.
OWNER-	CAIB



		TOPS INFORMATION													
90	A	B	C	D	AARKND				OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 6	RA (GLW) 6	DESIGN SHEET W 2235 W 920
	S	42.8t	50.8t	58.8t		CARKND				60 mile/h UP TO mile/h ABOVE	80 tonne GLW	16 t FORCE UP TO 41 t FORCE ABOVE			
120	00.0 t				T	I	A	D							



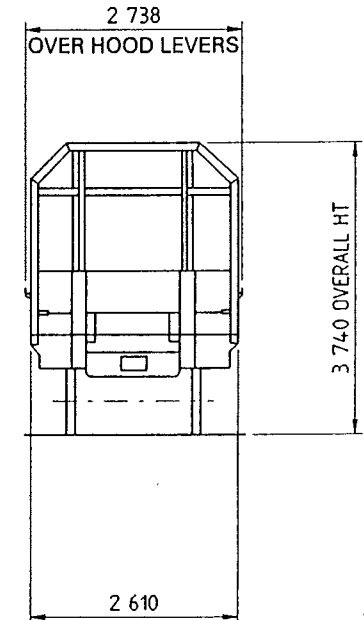
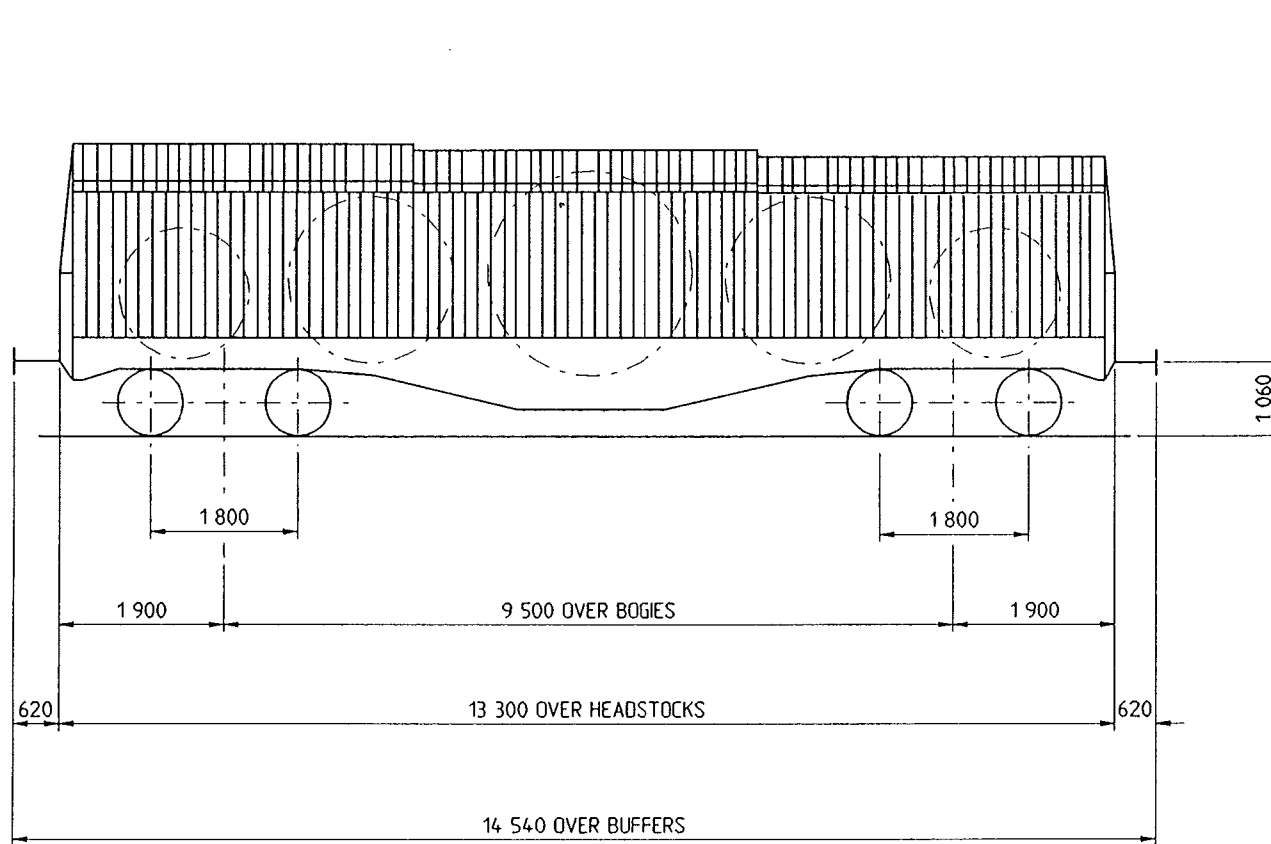
TARE-	21.2 t
CAPACITY, WEIGHT-	58.8 t
CAPACITY, VOLUME-	58 970 l
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	ONF 182443

BRAKE-	AIR; PLATFORM & SIDE SCREW
SUSPENSION-	Y25 CS2 BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 560 x 370
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs(3)
WAGON No.-	33 70 7899 001, 002
BUILDER-	C.F.M.F
OWNER-	CAIB



					TOPS INFORMATION							
90	A 36.5t	B 44.5t	C 52.5t	D 60.5t	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	36.5t	44.5t	52.5t	52.5t	CARKND	60 mile/h UP TO	88 tonne GLW	17 t FORCE UP TO	52 t GLW	3	8	W 2256
120					K I A C	mile/h ABOVE		44 t FORCE ABOVE				



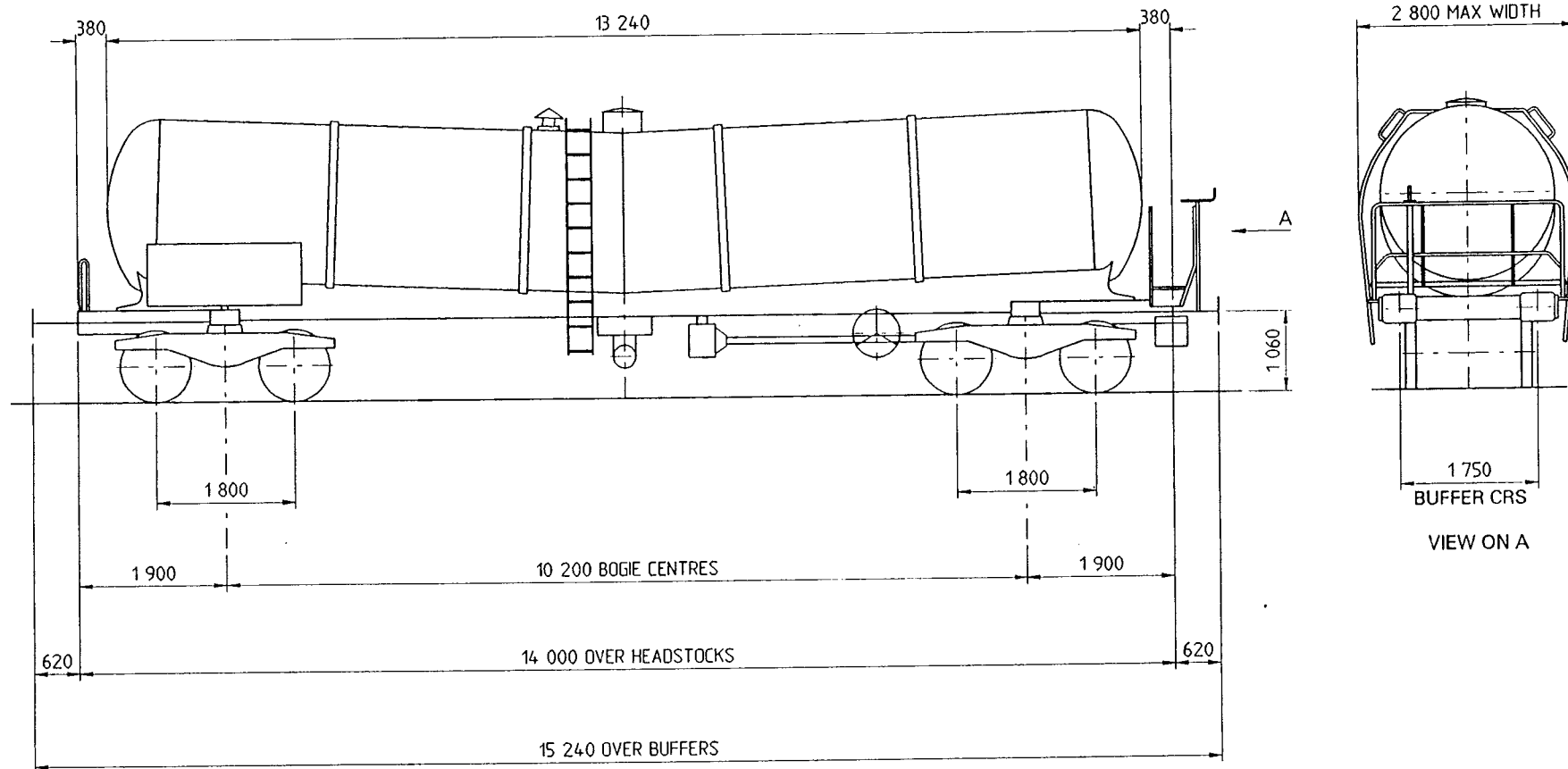
<b>TARE-</b>	27.5 t
<b>CAPACITY, WEIGHT-</b>	60.5 t
<b>CAPACITY, VOLUME-</b>	55 m <sup>3</sup>
<b>FLOOR AREA-</b>	27.5 m <sup>2</sup>
<b>MIN.CURVE-</b>	35 m
<b>GEN.ARRGT.DRG.No.-</b>	113 547.0

<b>BRAKE-</b>	AIR; SIDE SCREW
<b>SUSPENSION-</b>	LHB 78
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	RINGFEDER
<b>WHEELS-</b>	Ø 920
<b>JOURNALS-</b>	Ø 130

<b>TYPE-</b>	Tafhis
<b>WAGON No.-</b>	33 70 5899 000, 003-006, 008, 018-023, 029, 033, 037, 039-047, 051, 054, 055, 057, 062, 064-066, 068
<b>BUILDER-</b>	MODIFIED BREL
<b>OWNER-</b>	V.T.G./ CAIB



					TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	41.5t	49.5t	57.5t	57.5t		CARKND	60 mile/h UP TO	90 tonne GLW	25 t FORCE UP TO				43 t GLW
120	00.0t					T I A Y	mile/h ABOVE		51 t FORCE ABOVE				



TARE-	21.4 t
CAPACITY, WEIGHT-	68.6 t
CAPACITY, VOLUME-	48 000 l
FLOOR AREA-	-
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	38051 990 002

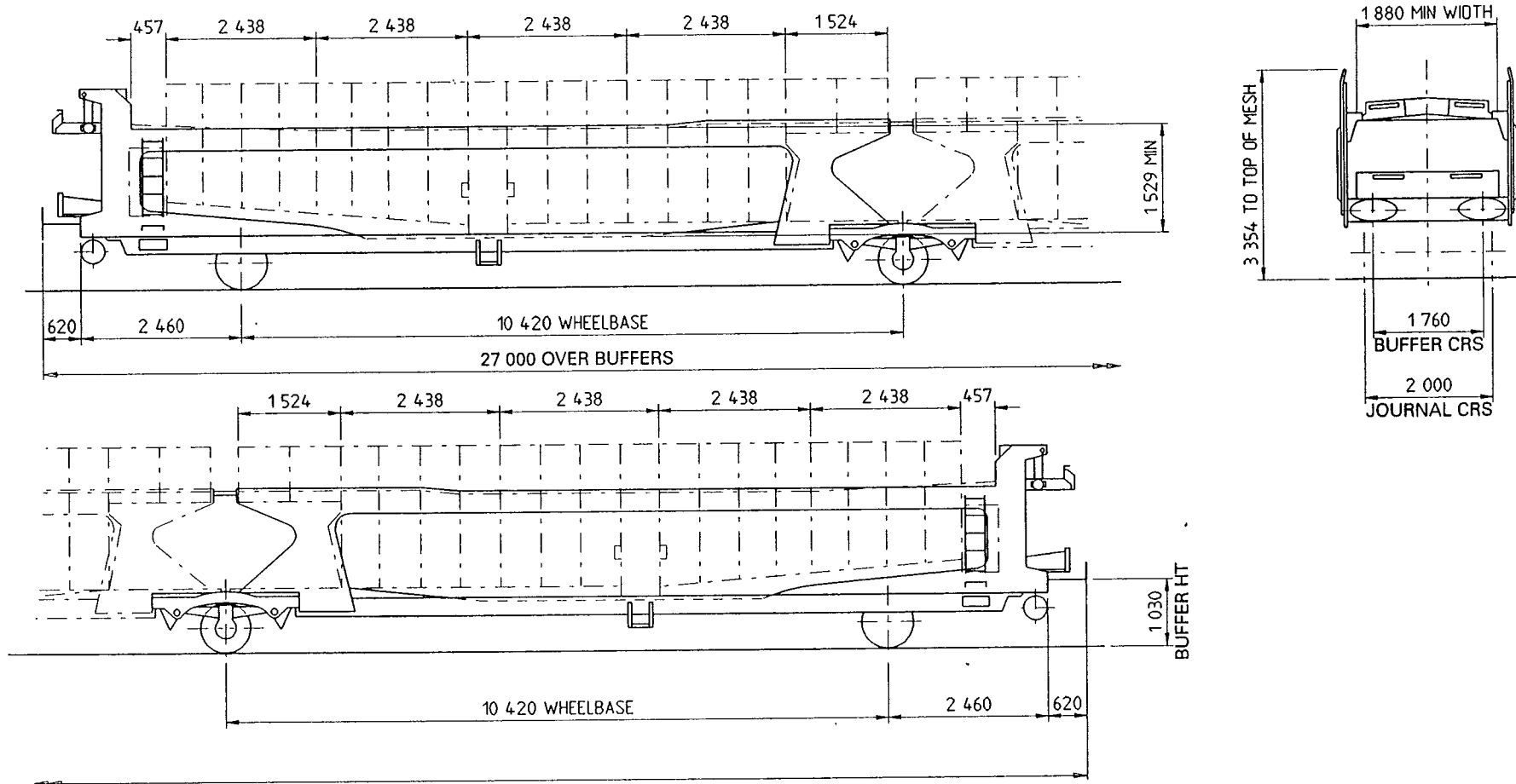
BRAKE-	AIR, BLOCK; SIDE WHEEL, END PLTFM
SUSPENSION-	Y25 LSD
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 550 x 340
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs
WAGON No.-	33 70 7890 100, 101, 103-117, 119, 120, 122
BUILDER-	A.N.F.
OWNER-	LEASE PLAN UK Ltd. - NACCO UK Ltd.





TOPS INFORMATION													
90	A	B	C	D		AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	12.0t	12.0t	12.0t			CARKND	75 mile/h UP TO	39 tonne GLW	15.3 t FORCE UP TO	34 t GLW	23	2	W 2829
120	00.0 t					P I A A	- mile/h ABOVE		18.9 t FORCE ABOVE				W 1457



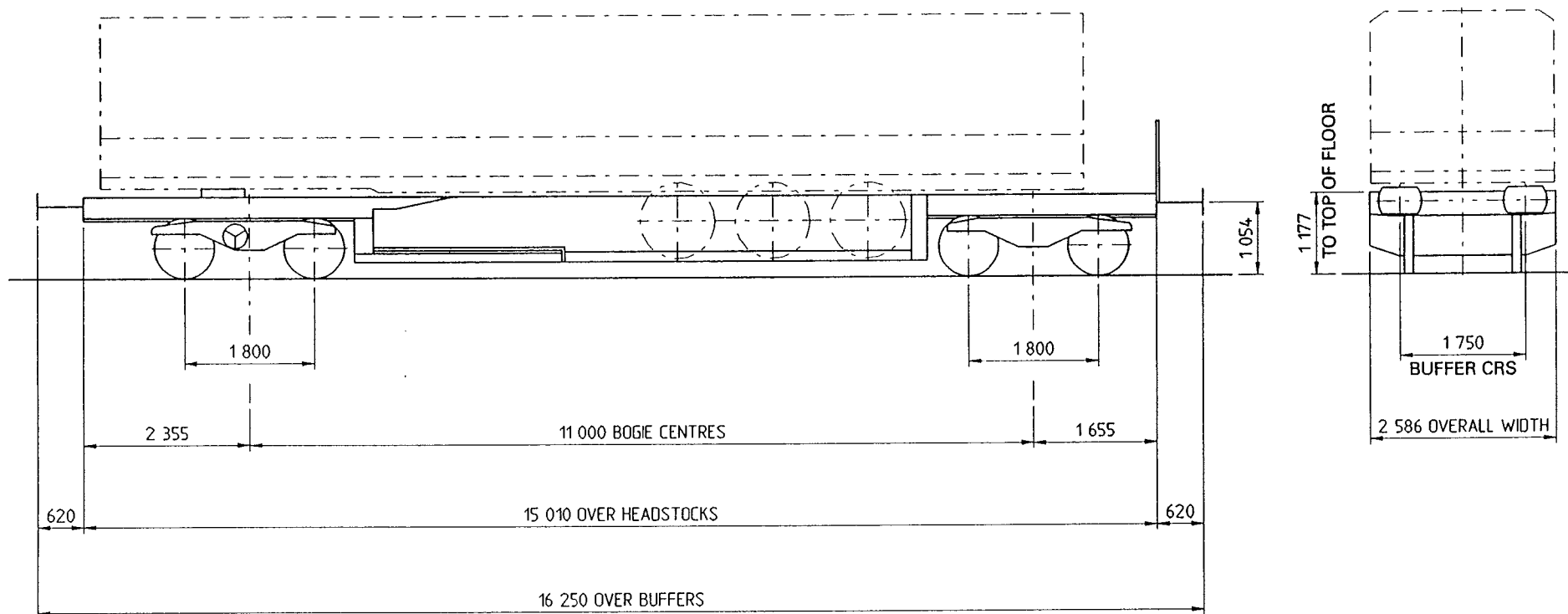
<b>TARE-</b>	27.16 t
<b>CAPACITY, WEIGHT-</b>	11.84 t
<b>CAPACITY, VOLUME-</b>	-
<b>FLOOR AREA-</b>	-
<b>MIN.CURVE-</b>	60 m SINGLY & CLOSE COUPLED
<b>GEN.ARRGT.DRG.No.-</b>	PD DRG PDW 12919/E

<b>BRAKE-</b>	AIR, BLOCK & HAND SCREW
<b>SUSPENSION-</b>	UIC DOUBLE LINK
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC 568 x 340 FLAT TOP OVAL HDS
<b>WHEELS-</b>	Ø 840
<b>JOURNALS-</b>	Ø 130 ROLLER BEARINGS

<b>TYPE-</b>	Laefs(1)
<b>WAGON No.-</b>	43 70 4289 000, 004-006, 008-010,012-018, 021-027
<b>BUILDER-</b>	POWELL DUFFRYN
<b>OWNER-</b>	TIPHOOK



					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S					CARKND	60 mile/h UP TO	45 tonne GLW	<del>FORCE UP TO</del> VARIABLE <del>GLW</del> <del>FORCE ABOVE</del> -5.25+(0.874xt)			3	W 2572
120					K O A A	75 mile/h ABOVE						



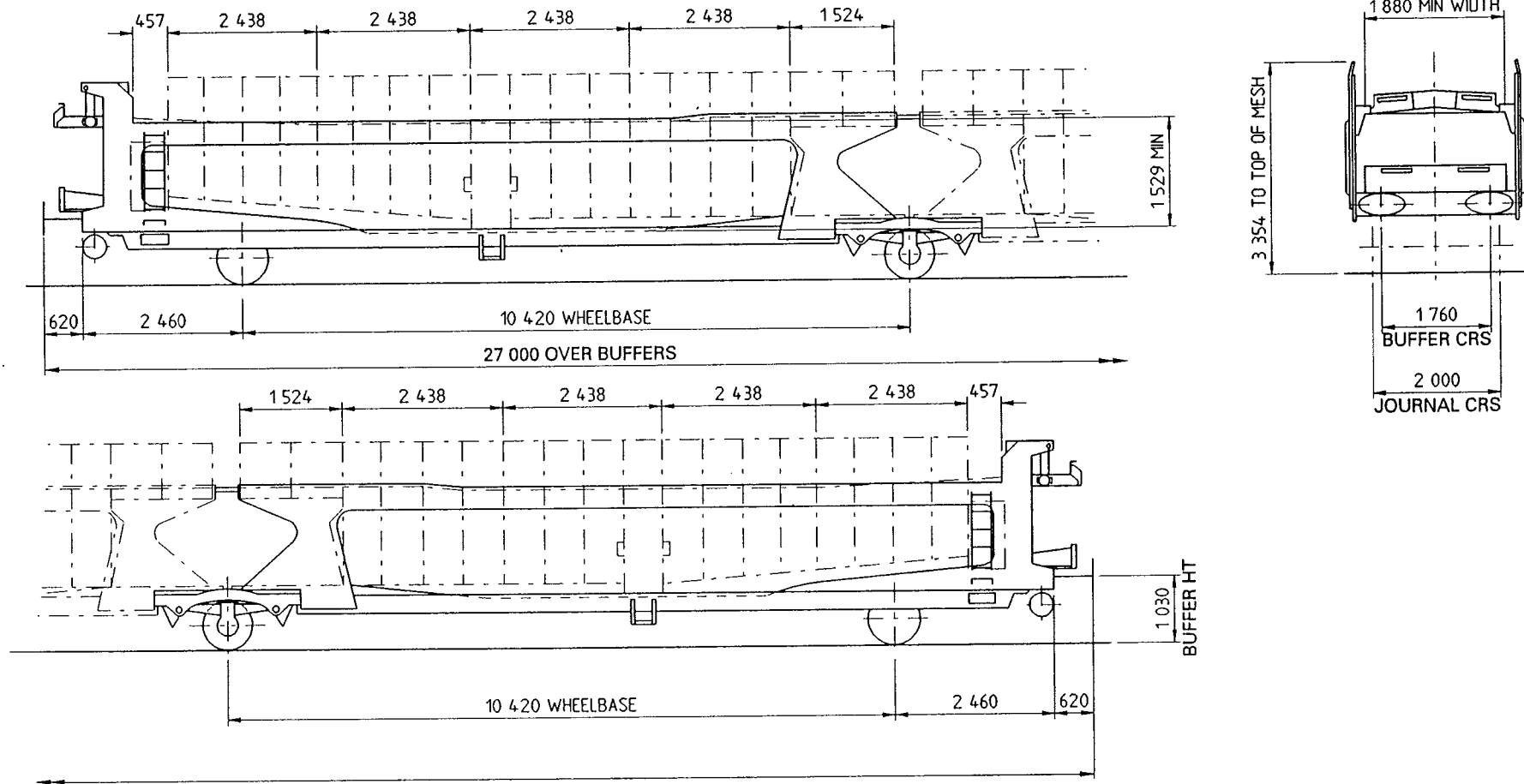
TARE-	28 t
CAPACITY, WEIGHT-	37 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN. CURVE-	60 m
GEN. ARRGT. DRG. No.-	582000

BRAKE-	AIR; SCREW
SUSPENSION-	Y27 SS1 BOGIES
COUPLINGS-	UIC SCREW
BUFFERS-	HYDRAULIC OP169 GX 550 x 340
WHEELS-	Ø 840
JOURNALS-	Ø -

TYPE-	Sdfkmss
WAGON No.-	83 70 4798 001-099
BUILDER-	RAUTARUUKKI FINLAND
OWNER-	TIPHOOK



					TOPS INFORMATION					EXCESS LENGTH 23	RA (GLW) 1	DESIGN SHEET W 2830 W 2383 W 1457
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA				
S	12.0t	12.0t	12.0t		CARKND	75 mile/h UP TO 39 tonne GLW mile/h ABOVE		15.3 t FORCE UP TO 18.9 t FORCE ABOVE 34 t GLW				
120	00.0 t				P I A A							



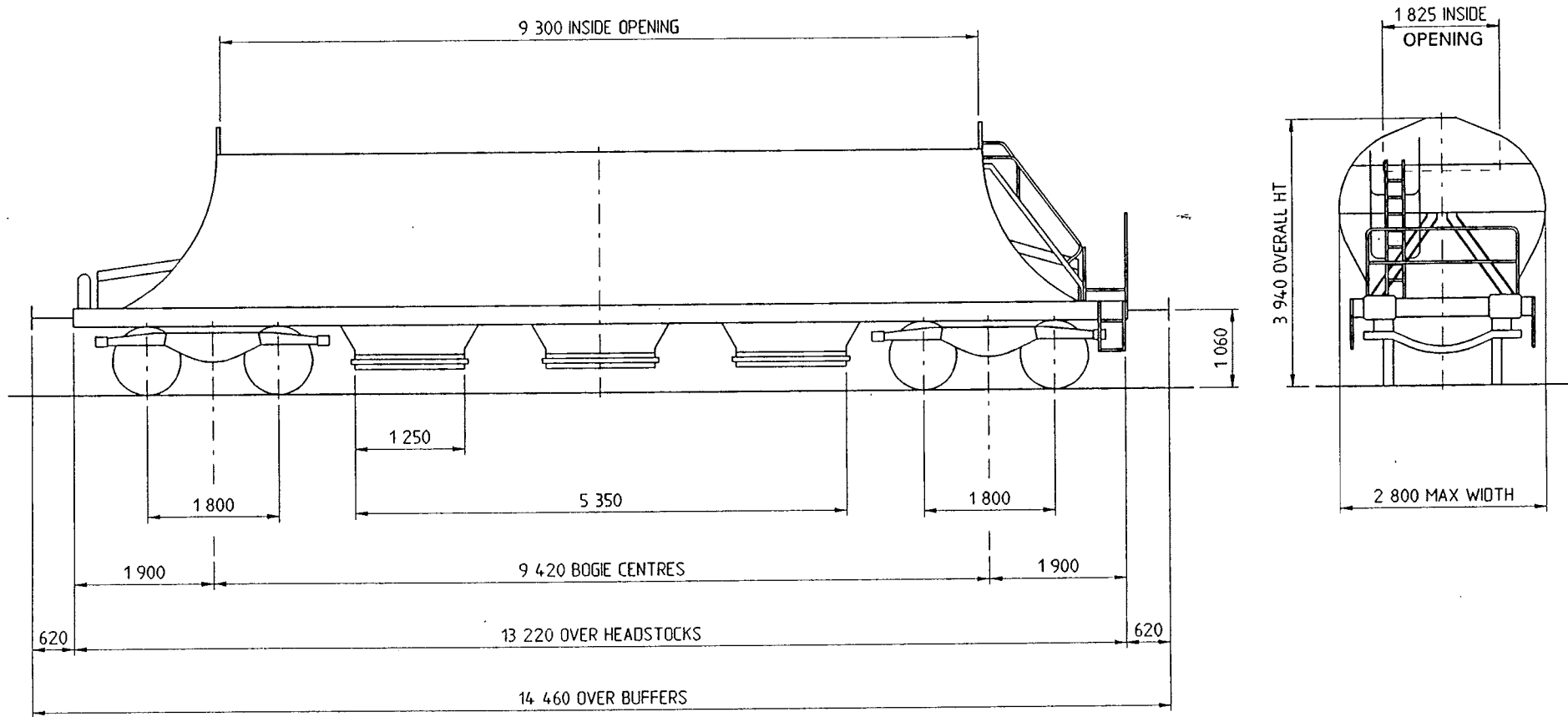
<b>TARE-</b>	27.16 t
<b>CAPACITY, WEIGHT-</b>	11.84 t
<b>CAPACITY, VOLUME-</b>	-
<b>FLOOR AREA-</b>	-
<b>MIN.CURVE-</b>	60 m SINGLY & CLOSE COUPLED
<b>GEN.ARRGT.DRG.No.-</b>	PD DRG PDW 12919/E

<b>BRAKE-</b>	AIR, BLOCK & HAND SCREW
<b>SUSPENSION-</b>	UIC DOUBLE LINK
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC 568 x 340 FLAT TOP OVAL HDS
<b>WHEELS-</b>	Ø 840
<b>JOURNALS-</b>	Ø 130 ROLLER BEARINGS

<b>TYPE-</b>	Laefs(1)
<b>WAGON No.-</b>	43 70 4289 001
<b>BUILDER-</b>	POWELL DUFFRYN
<b>OWNER-</b>	TIPHOOK



					TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
	16t	18t	20.5t	22.5t		CARKND	60 mile/h UP TO mile/h ABOVE	90 tonne GLW	11.83t FORCE UP TO 35.57t FORCE ABOVE				42 t GLW
	S												
120												W 2415	



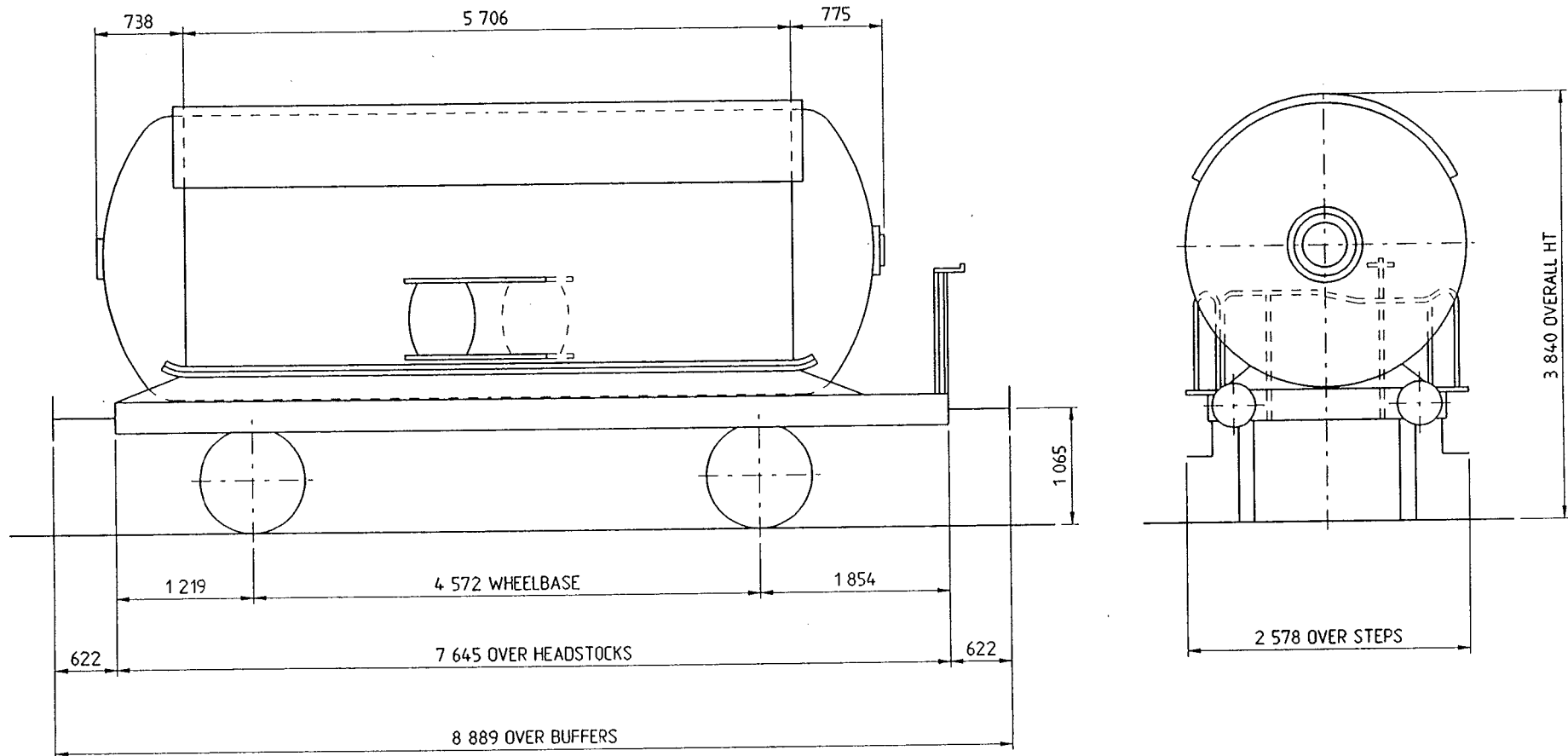
<b>TARE-</b>	22.5 t
<b>CAPACITY, WEIGHT-</b>	67.5 t
<b>CAPACITY, VOLUME-</b>	54 m <sup>3</sup>
<b>FLOOR AREA-</b>	-
<b>MIN.CURVE-</b>	35m
<b>GEN.ARRGT.DRG.No.-</b>	59506 0-602 713

<b>BRAKE-</b>	AIR; SCREW
<b>SUSPENSION-</b>	Y25 LSD BOGIES
<b>COUPLINGS-</b>	INTERNATIONAL SCREW
<b>BUFFERS-</b>	HYDRAULIC OP164GX 550 x 340
<b>WHEELS-</b>	Ø 920
<b>JOURNALS-</b>	Ø -

<b>TYPE-</b>	Fafps(5)
<b>WAGON No.-</b>	33 70 6905 050-073
<b>BUILDER-</b>	ARBEL FAUVET RAIL
<b>OWNER-</b>	LOMBARD NORTH CENTRAL BANK ECC QUARRIES Ltd.



					TOPS INFORMATION							
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
	12 t	16 t	20 t			CARKND	60 mile/h UP TO	40 tonne GLW	12 t FORCE UP TO			
S					T I A L	60 mile/h ABOVE		18 t FORCE ABOVE			6	W 2537
120												



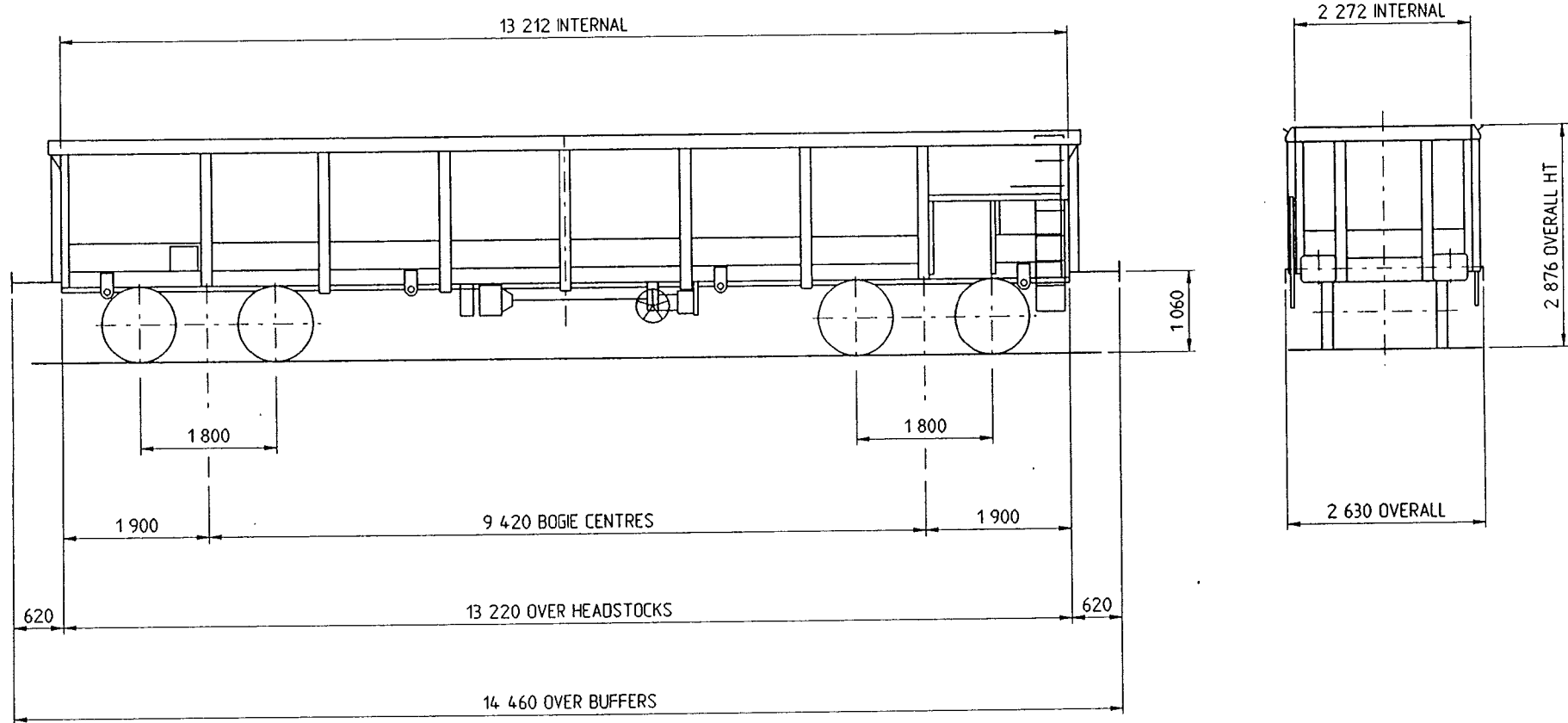
TARE-	20 t
CAPACITY, WEIGHT-	20 t
CAPACITY, VOLUME-	31 m <sup>3</sup>
FLOOR AREA-	-
MIN.CURVE-	-
GEN.ARRGT.DRG.No.-	4895/124

BRAKE-	AIR; SCREW & SIDE LEVER
SUSPENSION-	-
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	-
WHEELS-	∅ -
JOURNALS-	∅ -

TYPE-	Ufh
WAGON No.-	23 70 7277 365
BUILDER-	CHARLES ROBERTS
OWNER-	ICI



TOPS INFORMATION													
90	A	B	C	D	★ ★★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET W 2557 W 2170 W 2036 W 2866
S	42.8t	50.8t	60.8t	60.8t		CARKND	60 mile/h UP TO	90 tonne GLW	11 t FORCE UP TO	43 t GLW			
120	00.0 t					J	R	A	H	34 t FORCE ABOVE			



TARE-	22.18 t
CAPACITY, WEIGHT-	67.82 t
CAPACITY, VOLUME-	50 m <sup>3</sup>
FLOOR AREA-	30 m <sup>2</sup>
MIN.CURVE-	45 m
GEN.ARRGT.DRG.No.-	59506

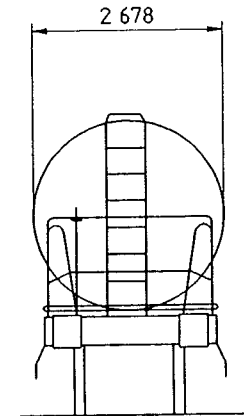
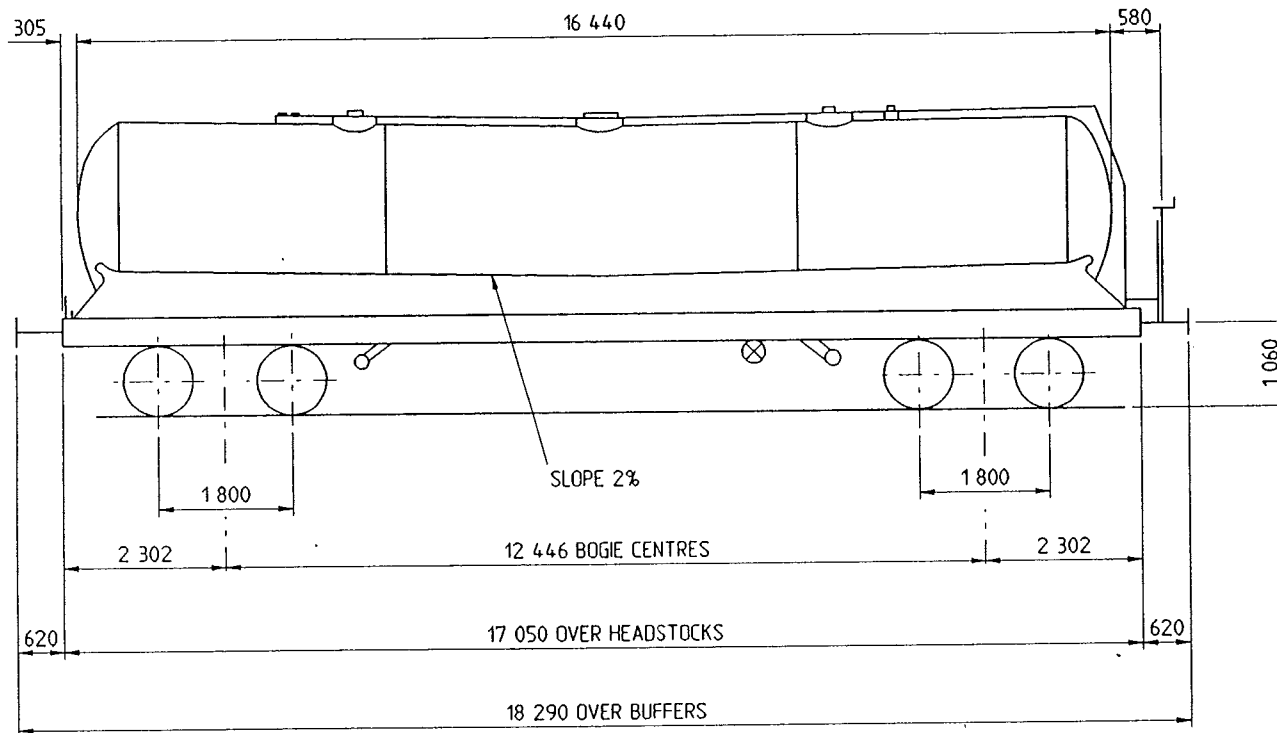
BRAKE-	AIR / BLOCK
SUSPENSION-	Y25Lsd BOGIES
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OP 169 GX 550 x 340
WHEELS-	Ø 920
JOURNALS-	Ø -

TYPE-	Fafns(5)
WAGON No.-	33 70 6790 026, 028, 033
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK

30-07-92 ISSUE 1



					TOPS INFORMATION								
90	A	B	C	D	★ ★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 9	RA (GLW) 8	DESIGN SHEET W 2823 W 2820 W 2562 W 2546 W 1850
S	39.3t	47.3t	57.3t	65.3t		CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW			
120	00.0t			T		I	A	Y	47 t FORCE ABOVE				



TARE-	24.368 t
CAPACITY, WEIGHT-	65.632 t
CAPACITY, VOLUME-	90 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	103529

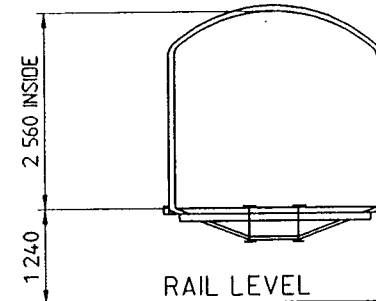
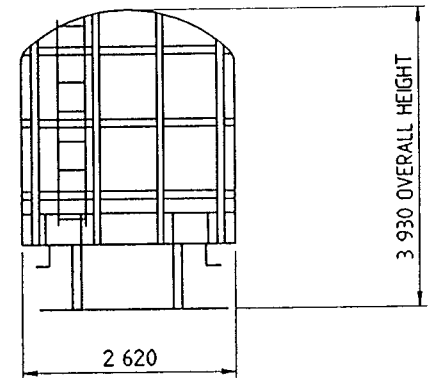
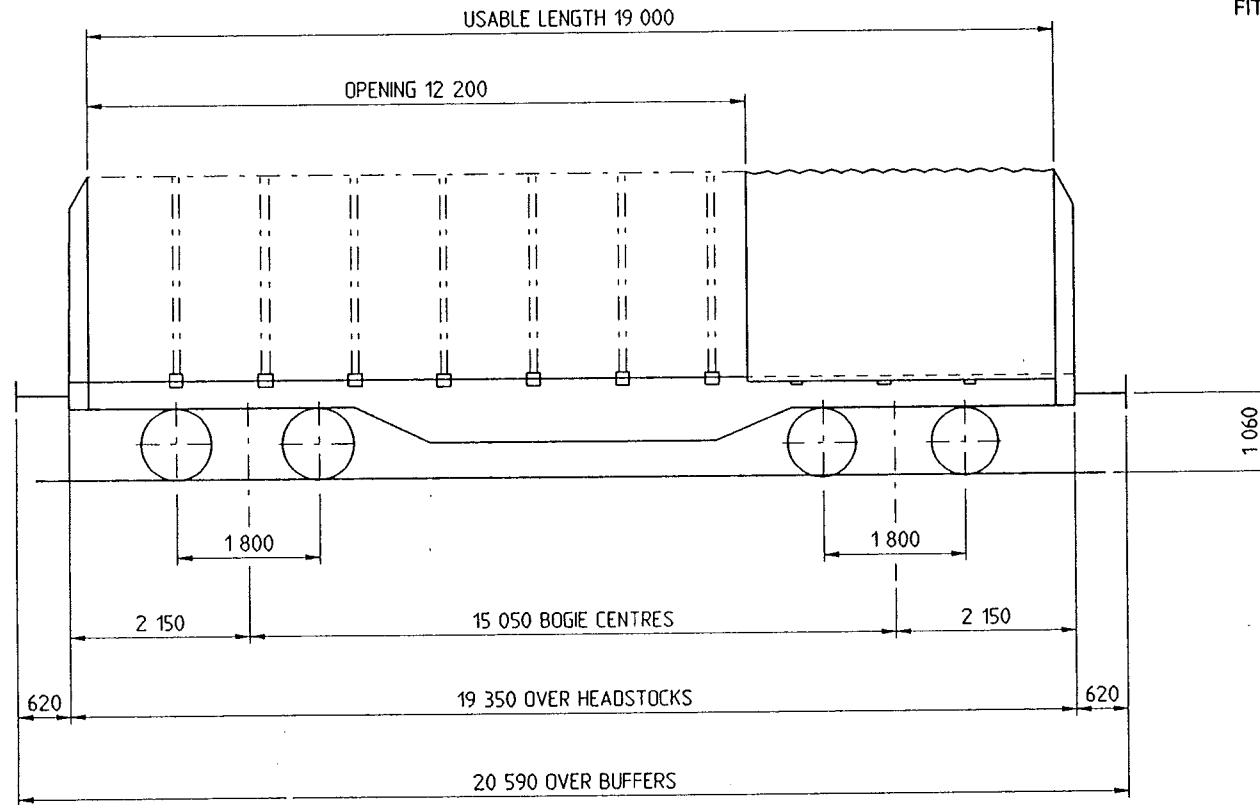
BRAKE-	AIR; PLATFORM & SIDE SCREW
SUSPENSION-	Y25 Ls BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 345 x 265 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs (3)
WAGON No.-	33 70 7899 041, 046-048, 057
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



				TOPS INFORMATION									
90	A	B	C	D	★★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	34.0t	42.0t	52.0t	60.0t		CARKND	60 mile/h UP TO	90 tonne GLW	34 t FORCE UP TO	49 t GLW	13	8	W 2782
120	00.0 t			K I A A		mile/h ABOVE	59 t FORCE ABOVE					W 2580	W 1810

NOTE. THESE VEHICLES ARE PERMANENTLY FITTED WITH 6 COIL CRADLES.



TARE-	29.5 t
CAPACITY, WEIGHT-	60.5 t
CAPACITY, VOLUME-	112 m <sup>3</sup>
FLOOR AREA-	46.5 m <sup>2</sup>
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	89575

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 LS
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 440 x 340 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

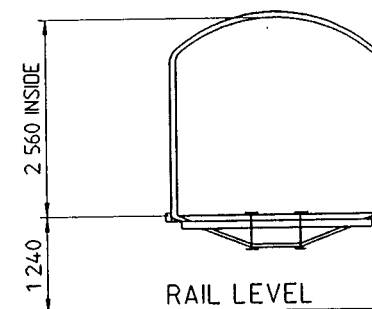
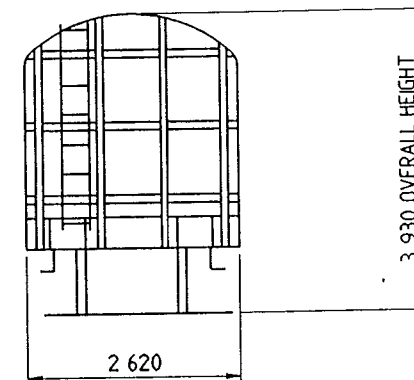
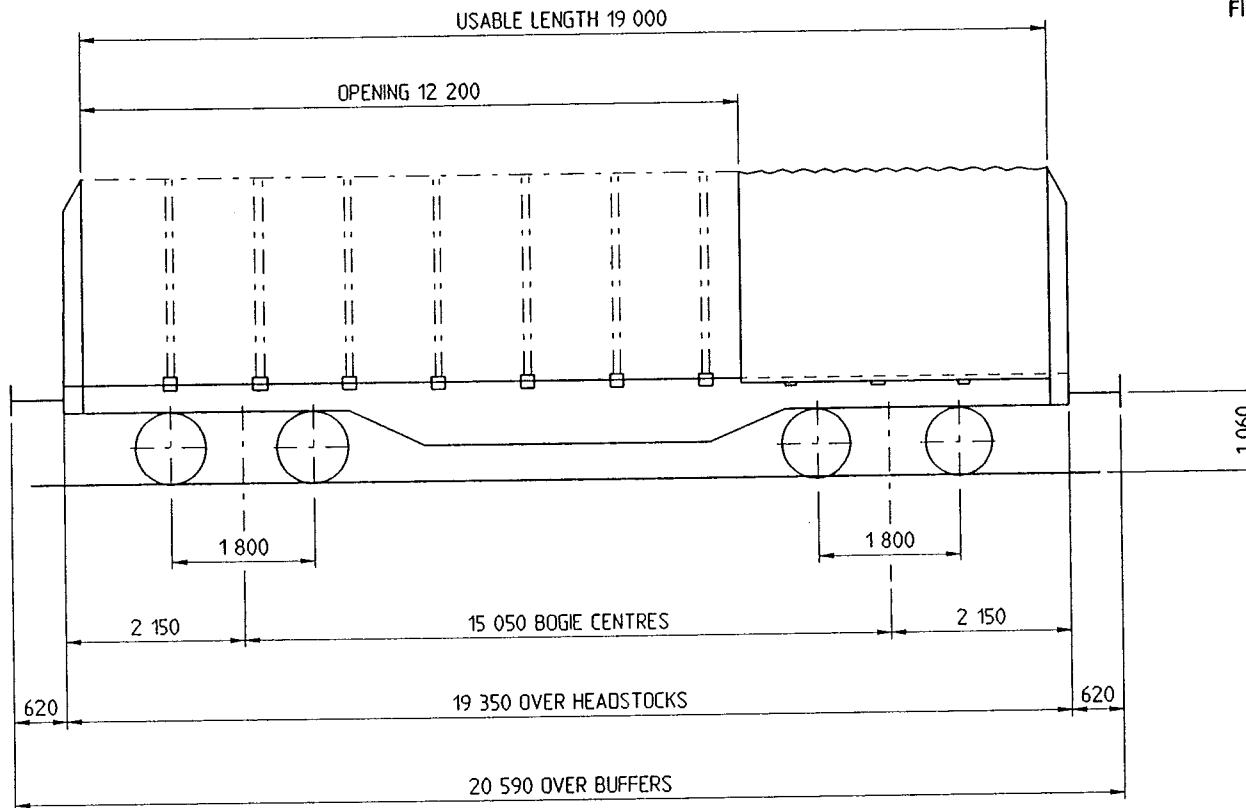
TYPE-	Sfhis (1)
WAGON No.-	33 70 4666 005, 009 33 70 4746 118, 127, 130, 134, 136, 138, 161, 169
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK





TOPS INFORMATION													
90	A	B	C	D	★ ★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	34.0t	42.0t	52.0t	60.0t		CARKND	60 mile/h UP TO 90 tonne GLW		34 t FORCE UP TO 49 t GLW		13	8	W 2785
120	00.0 t					K I A A	mile/h ABOVE		59 t FORCE ABOVE				W 2585
													W 1810

NOTE. THESE VEHICLES ARE PERMANENTLY FITTED WITH 5 COIL CARRIERS.



TARE-	30 t
CAPACITY, WEIGHT-	60 t
CAPACITY, VOLUME-	112 m <sup>3</sup>
FLOOR AREA-	46.5 m <sup>2</sup>
MIN. CURVE-	35 m
GEN. ARRGT. DRG. No.-	89575

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 LS
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 440 x 340 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

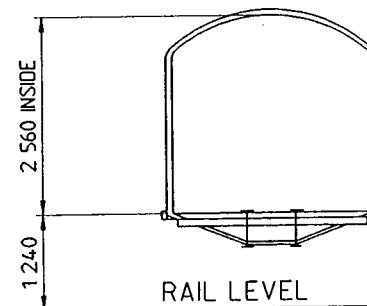
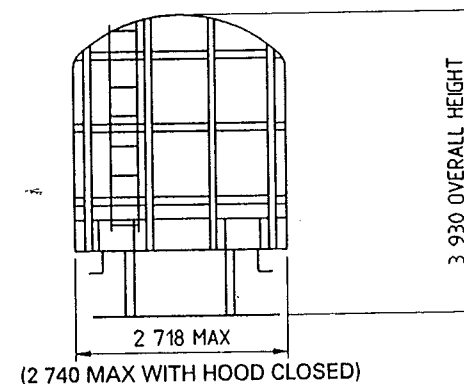
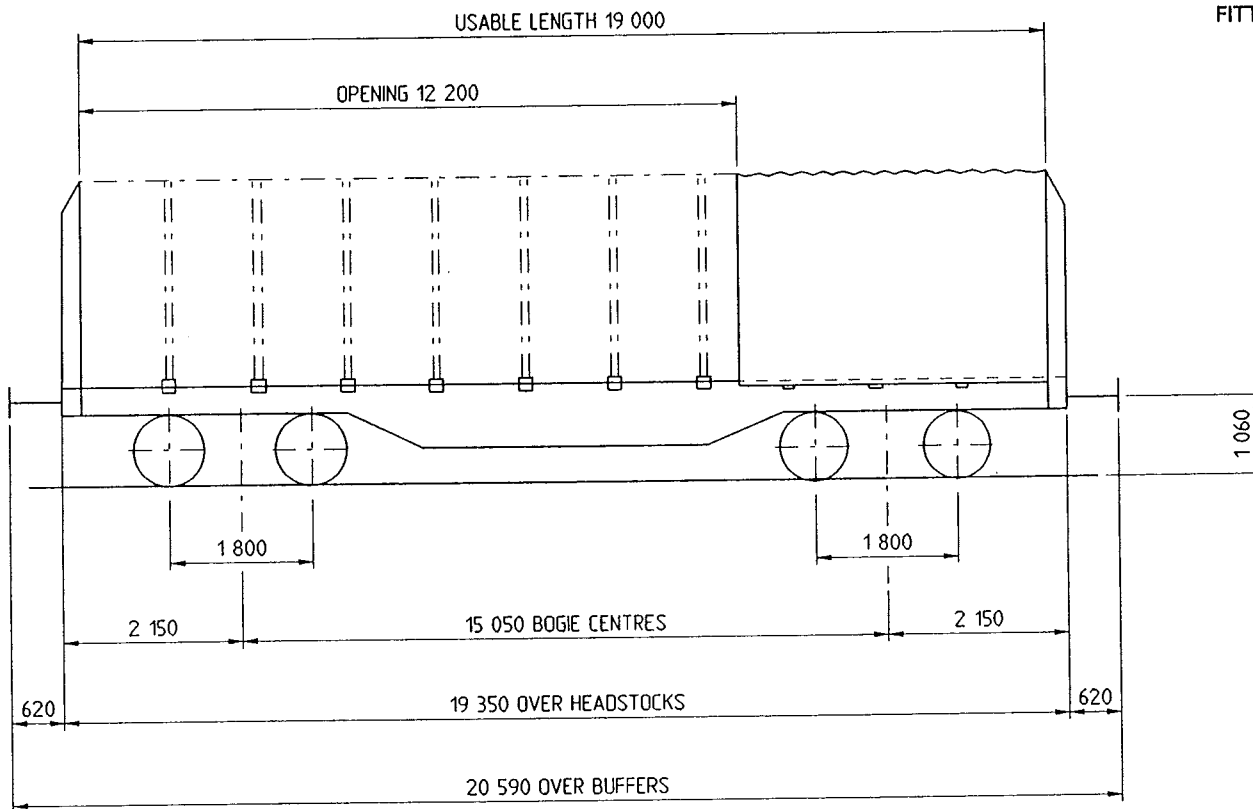
TYPE-	Sfhis (1)
WAGON No.-	33 70 4666 010-016, 020-033, 035-038, 045-051
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK

30-07-92 ISSUE 1



					TOPS INFORMATION								
90	A	B	C	D	★ ★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	34.0t	42.0t	52.0t	60.0t		CARKND	60 mile/h UP TO mile/h ABOVE 90 tonne GLW		34 t FORCE UP TO 59 t FORCE ABOVE 49 t GLW		13	8	W 2786 W 2588 W 1974 W 1875 W 1810
120	00.0t					K I A A							

NOTE. THESE VEHICLES ARE PERMANENTLY FITTED WITH 5 COIL CRADLES.



TARE-	30.01 t
CAPACITY, WEIGHT-	59.99 t
CAPACITY, VOLUME-	112 m <sup>3</sup>
FLOOR AREA-	46.5 m <sup>2</sup>
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	89575

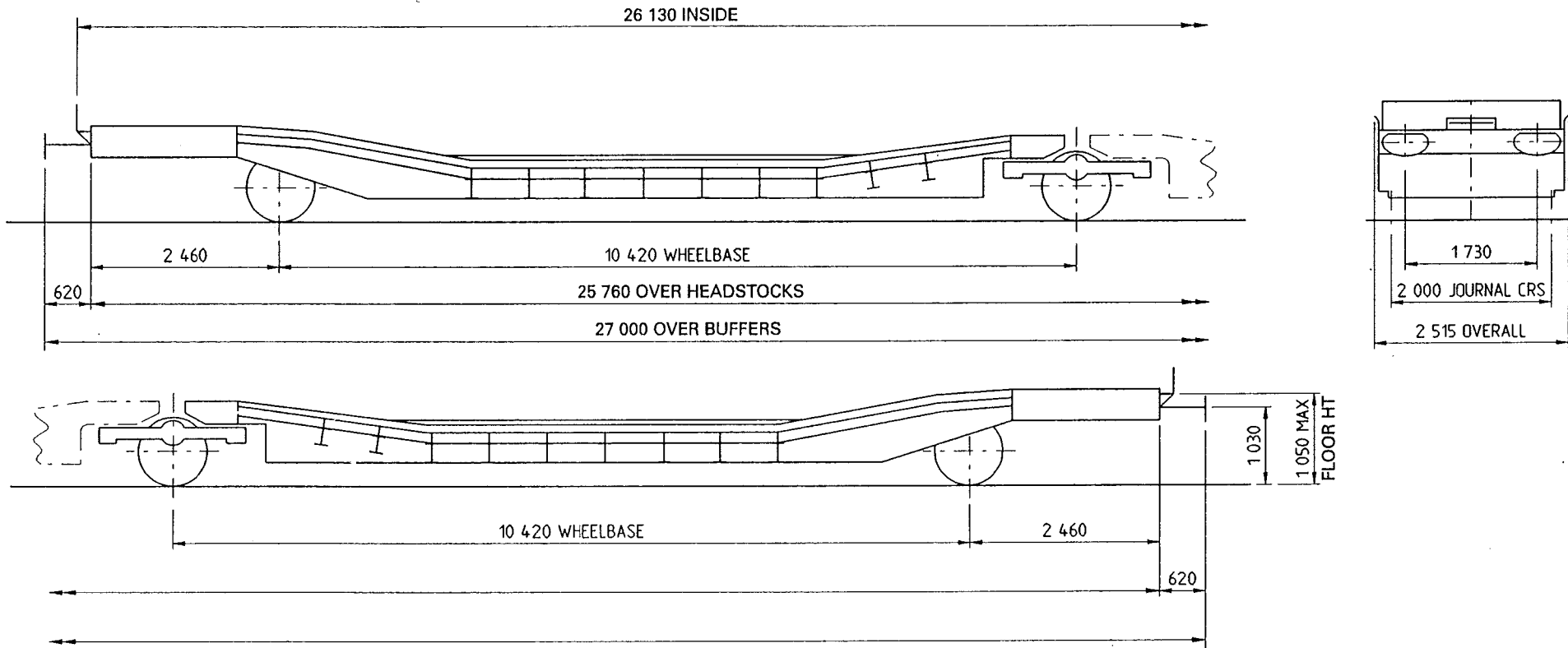
BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 LS
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 440 x 340 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Sfhis (1)
WAGON No.-	33 70 4666 017-019, 034, 039-044, 052-054
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK

30-07-92 ISSUE 1



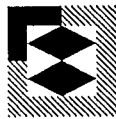
				TOPS INFORMATION								
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	23.0t	29.0t	29.0t		CARKND	75 mile/h UP TO mile/h ABOVE		-FORCE UP TO- -FORCE ABOVE		11 CON VCL 12 FOLLWR	4	W 2828 W 2629 W 980 W 979
120	00.0 t				P I A H			VARIABLE -GLW- 2.9+(0.555xt)				



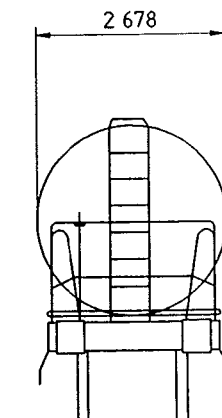
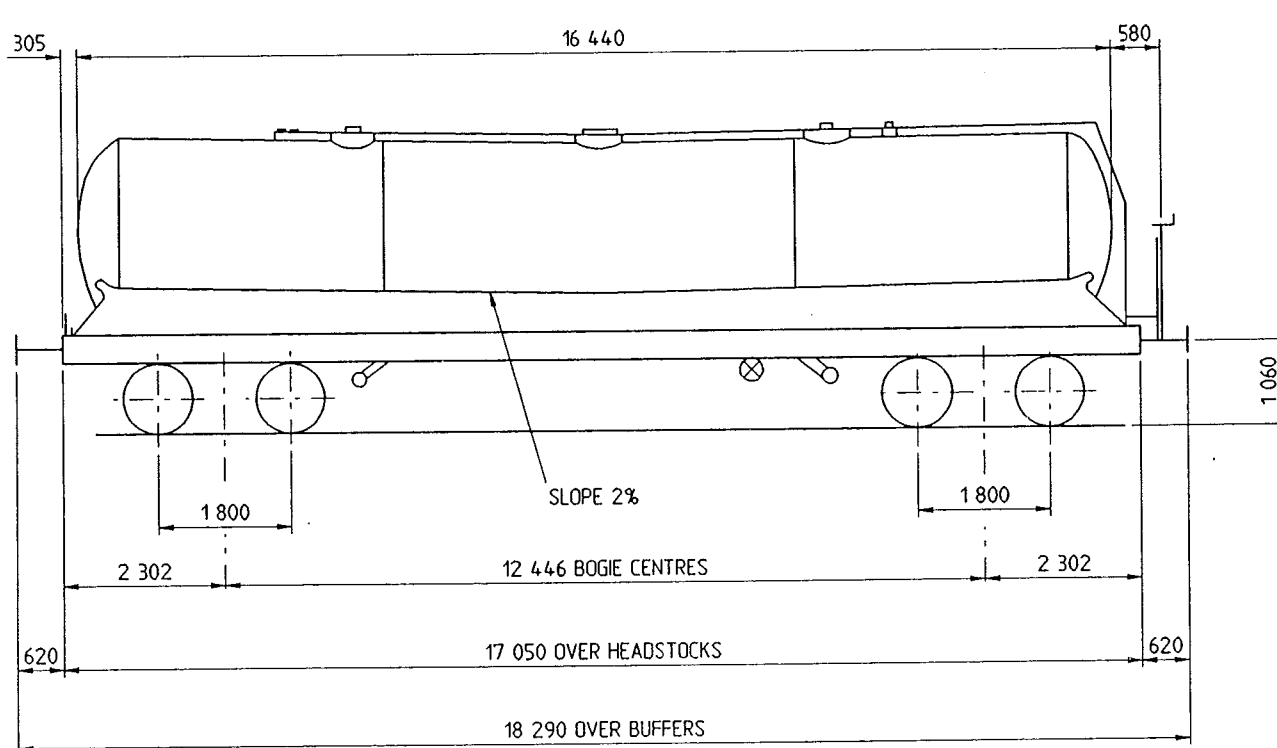
TARE-	25.1 t
CAPACITY, WEIGHT-	27 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	-
GEN.ARRGT.DRG.No.-	5800 121 246

BRAKE-	AIR BLOCK, HAND SCREW
SUSPENSION-	DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC, 568 x 340 FLAT TOP OVAL
WHEELS-	Ø 952
JOURNALS-	Ø 130

TYPE-	Ladfs(1)
WAGON No.-	43 70 4287 002 43 70 4290 000, 003, 005-008, 011-013
BUILDER-	W H DAVIS
OWNER-	TIPHOOK



					TOPS INFORMATION								
90	A	B	C	D	★ ★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 9	RA (GLW) 8	DESIGN SHEET W 2639 W 2722 W 2821 W 2824 W 2825
S	39.3t	47.3t	57.3t	65.3t		CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW			
120	00.0t					T I A Y	mile/h ABOVE	47 t FORCE ABOVE					



TARE-	24.725 t
CAPACITY, WEIGHT-	65.275 t
CAPACITY, VOLUME-	90 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	103529

BRAKE-	AIR; PLATFORM & SIDE SCREW
SUSPENSION-	Y25 Ls BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 345 x 265 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Zafs (3)
WAGON No.-	33 70 7899 042-045, 049-056, 058-060
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK

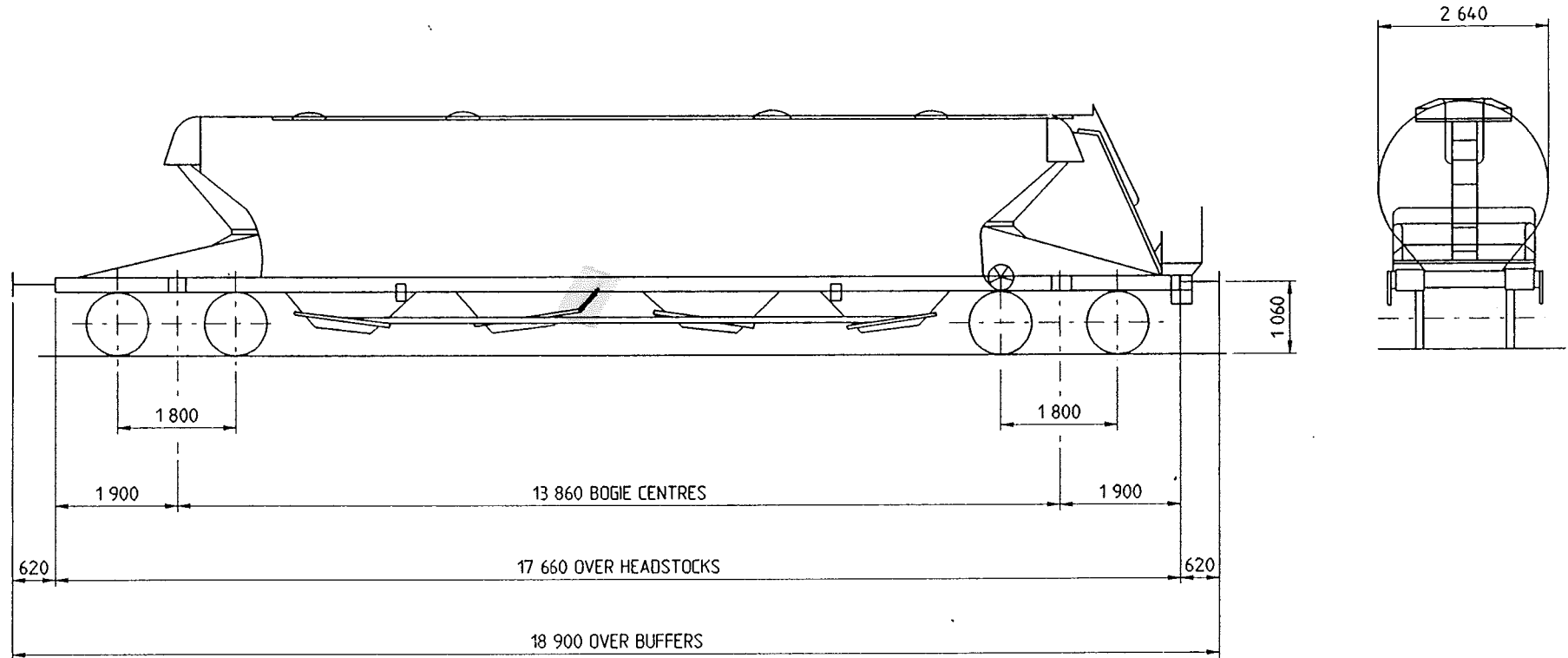


TANA

90t GLW HOPPER

TIE 759

				TOPS INFORMATION								
90	39.2t	47.2t	55.2t	65.2t	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
S	39.2t	47.2t	55.2t	55.2t	CARKND	60 mile/h UP TO	90 tonne GLW	14.27 t FORCE UP TO	49 t GLW	10	8	W 2617
120		00.0			T I A Y	mile/h ABOVE		47.1 t FORCE ABOVE				W 1852



TARE-	25.6 t
CAPACITY, WEIGHT-	64.4 t
CAPACITY, VOLUME-	74 m <sup>3</sup>
FLOOR AREA-	—
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	103 539

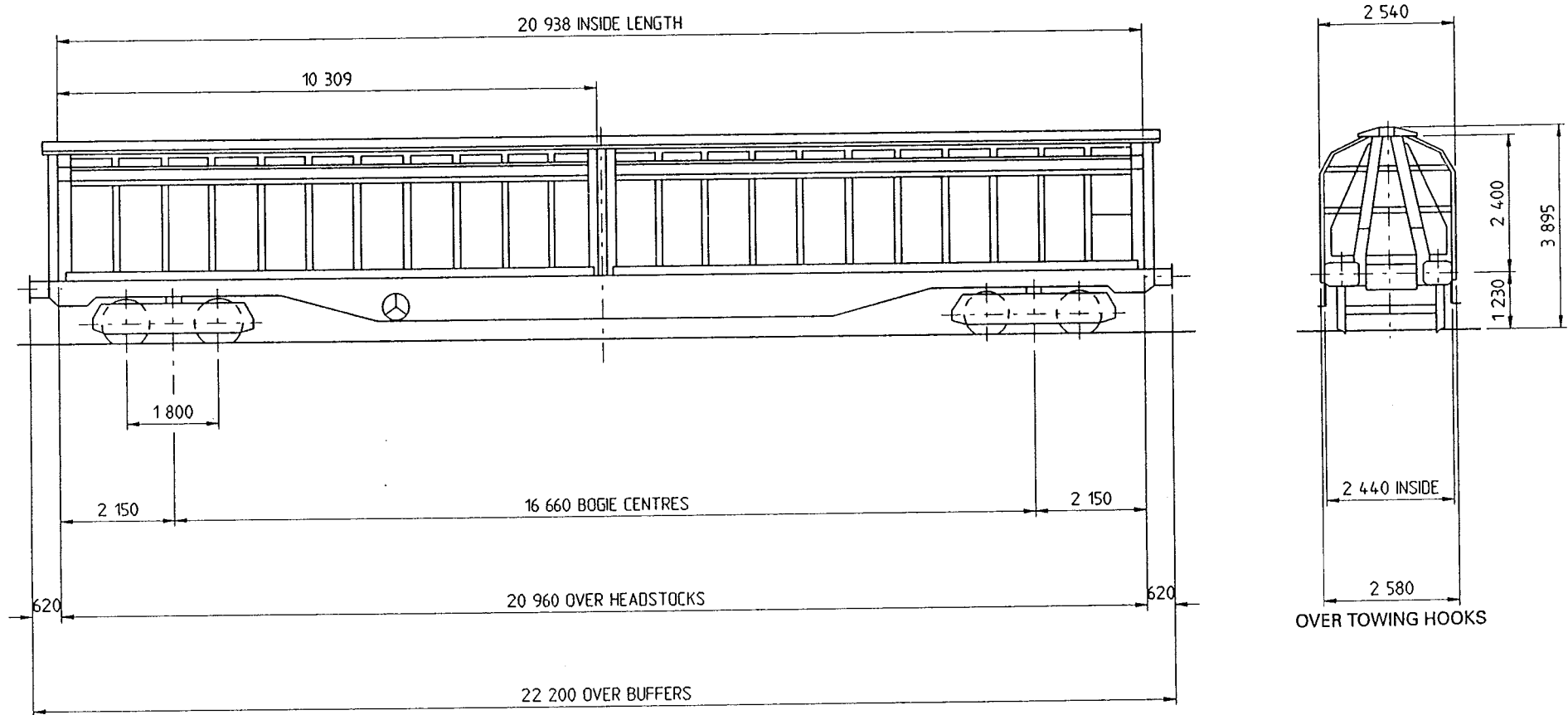
BRAKE-	AIR: SIDE SCREW
SUSPENSION-	Y25LS BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	U5 HYDRAULIC
WHEELS-	Ø 920: P10
JOURNALS-	Ø 130

TYPE-	Uacfs (4)
WAGON No.-	33 70 9292 200-203, 205, 208, 209, 213, 214
BUILDER-	ARBEL FAUVET
OWNER-	TIPHOOK

29-07-92 ISSUE 2



				TOPS INFORMATION										
90	A	B	C	D	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET	
S	37.0t	45.0t	55.0t	63.0t	★ ★	CARKND		60 mile/h UP TO	90 tonne GLW	13 t FORCE UP TO	59 t GLW	15	8	W2674 W1458
120	00.0 t					K	V	A	B	46 t FORCE ABOVE				



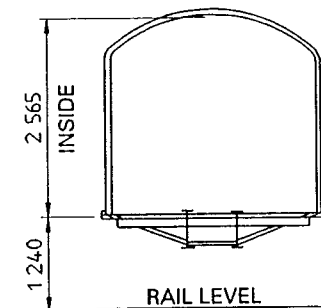
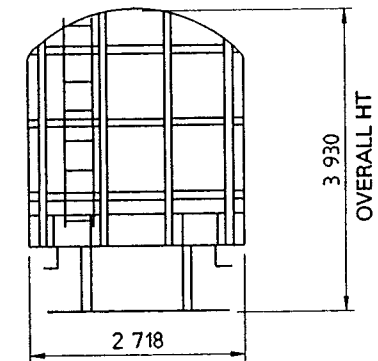
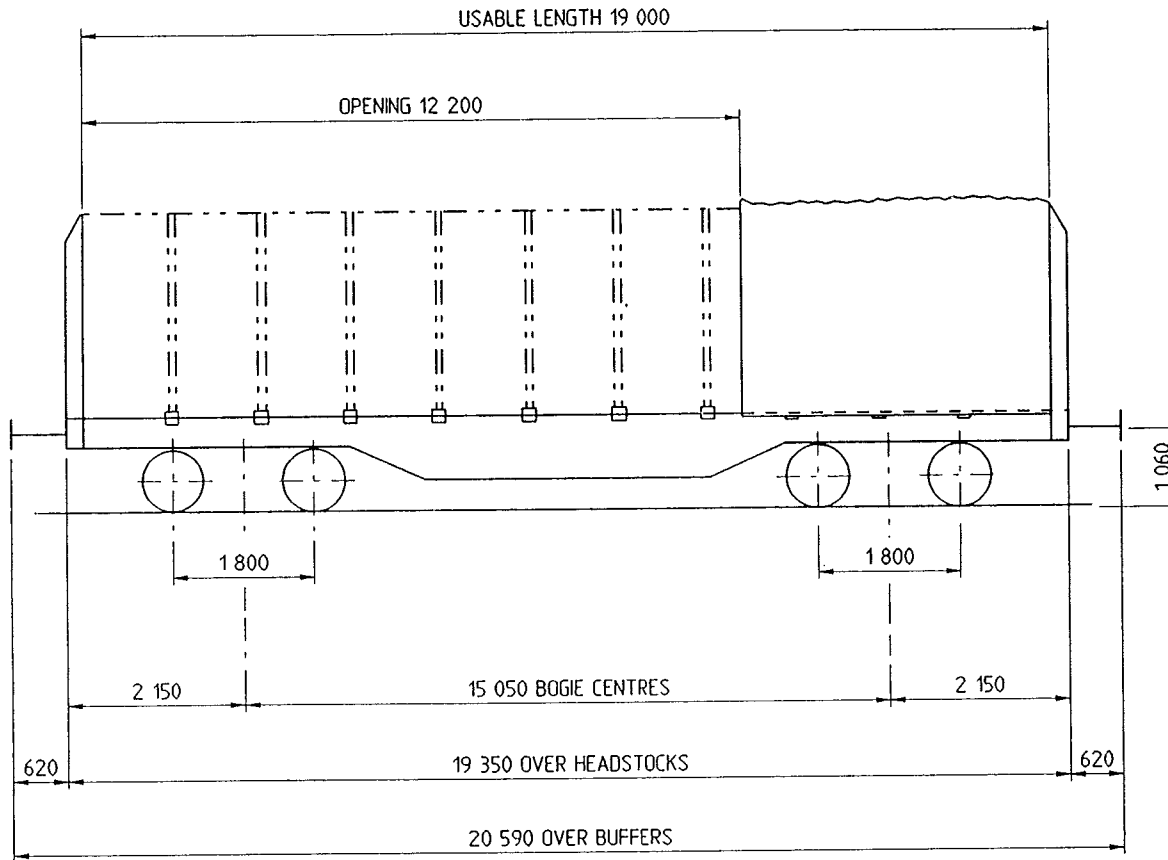
TARE-	26.5 t
CAPACITY, WEIGHT-	63.5 t
CAPACITY, VOLUME-	-
FLOOR AREA-	51 m <sup>2</sup>
MIN.CURVE-	60 m
GEN.ARRGT.DRG.No.-	713594.0.01

BRAKE-	AIR
SUSPENSION-	LHB 82 BOGIE
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	OLEO 550 x 340 HD
WHEELS-	∅ 920
JOURNALS-	∅ 130

TYPE-	Habfis (1)
WAGON No.-	83 70 2795 300-311, 313, 314, 317-326, 328, 331, 333, 335, 336, 338-343, 345-349
BUILDER-	LINKE-HOFMANN-BUSCH
OWNER-	VTG (302 & 321 ONLY) TIPHOOK



TOPS INFORMATION													
90	A	B	C	D	★★	AARKND	OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH 13	RA (GLW) 8	DESIGN SHEET W 2701 W 2784
S	34.0t	42.0t	52.0t	60.0t		CARKND	60 mile/h UP TO	90 tonne GLW	14 t FORCE UP TO	49 t GLW			
120	00.0t					K	H	A	E	47 t FORCE ABOVE			



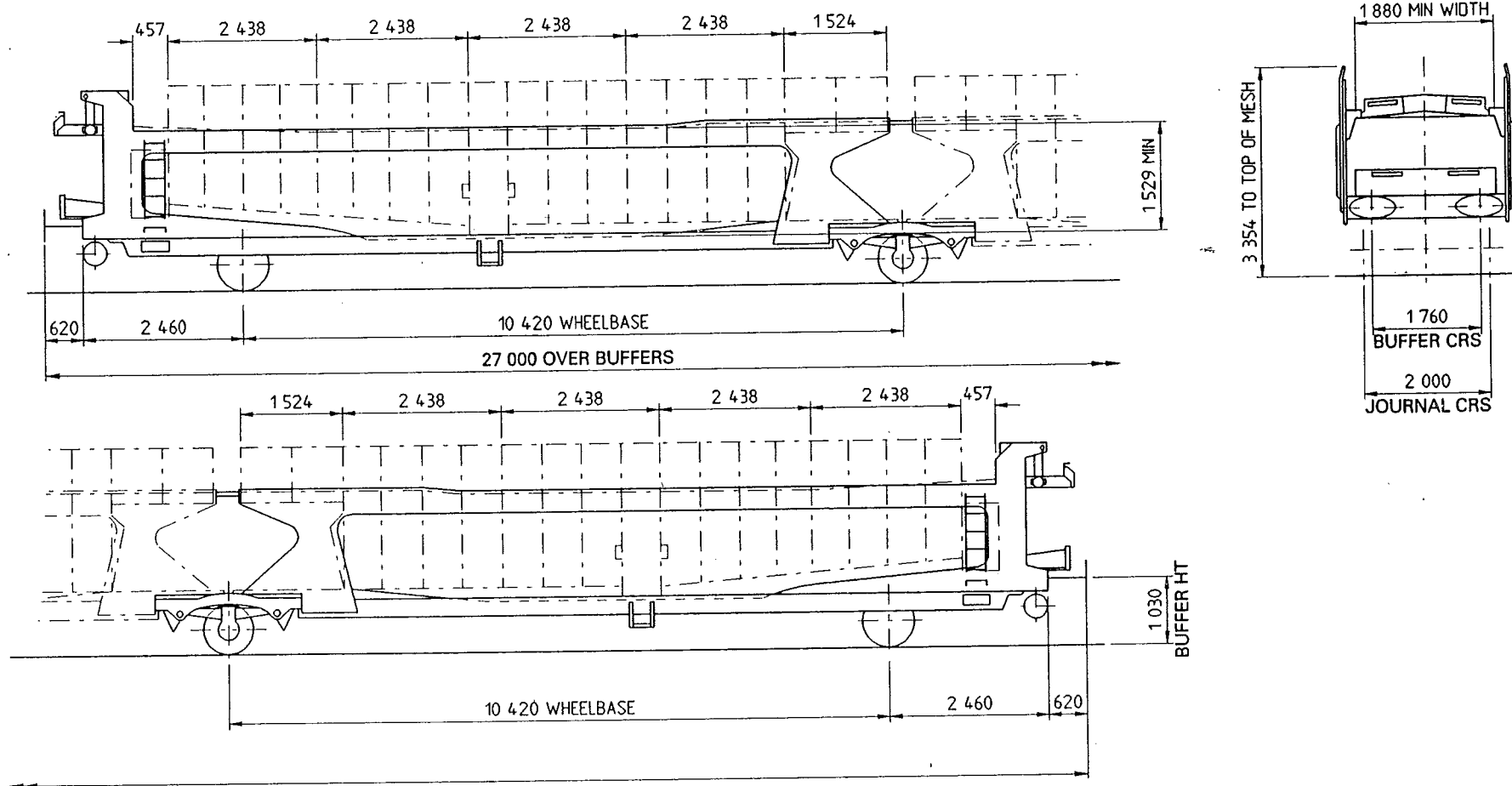
TARE-	23.55 t
CAPACITY, WEIGHT-	66.45 t
CAPACITY, VOLUME-	112 m <sup>3</sup>
FLOOR AREA-	46.5 m <sup>2</sup>
MIN.CURVE-	35 m
GEN.ARRGT.DRG.No.-	89575

BRAKE-	AIR; SIDE SCREW
SUSPENSION-	Y 25 LS
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 440 x 340 HD
WHEELS-	Ø 920
JOURNALS-	Ø 130

TYPE-	Sfis (1)
WAGON No.-	33 70 4746 197
BUILDER-	ARBEL FAUVET RAIL
OWNER-	TIPHOOK



				TOPS INFORMATION						EXCESS LENGTH 23	RA (GLW) 1	DESIGN SHEET W 2831 W 2750 W 1457
90	A	B	C	D	AARKND	OPERATING SPEED		BRAKE FORCE DATA				
S	12.0t	12.0t	12.0t		CARKND	75 mile/h UP TO	39 tonne GLW	15 t FORCE UP TO	34 t GLW			
120	00.0 t				P I A A	mile/h ABOVE		18 t FORCE ABOVE				



TARE-	27.16 t
CAPACITY, WEIGHT-	11.84 t
CAPACITY, VOLUME-	-
FLOOR AREA-	-
MIN.CURVE-	60 m SINGLY & CLOSE COUPLED
GEN.ARRGT.DRG.No.-	PD DRG PDW 12919/E

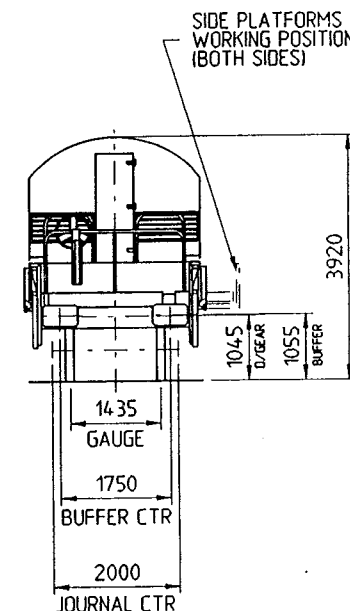
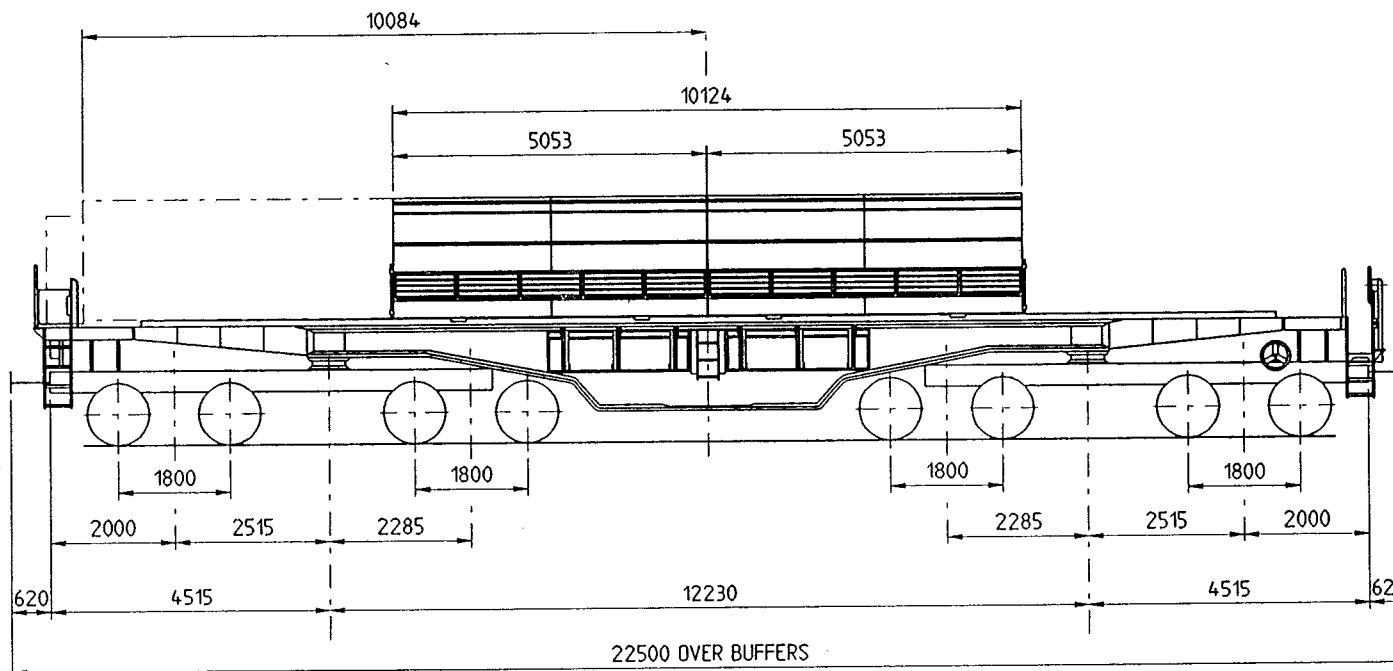
BRAKE-	AIR, BLOCK & HAND SCREW
SUSPENSION-	UIC DOUBLE LINK
COUPLINGS-	INTERNATIONAL SCREW
BUFFERS-	HYDRAULIC 568 x 340 FLAT TOP OVAL HDS
WHEELS-	Ø 840
JOURNALS-	Ø 130 ROLLER BEARINGS

TYPE-	Laefs(1)
WAGON No.-	43 70 4289 002, 003, 007, 011, 019, 020
BUILDER-	POWELL DUFFRYN
OWNER-	TIPHOOK





				TOPS INFORMATION									
90	A	B	C	D	AARKND		OPERATING SPEED		BRAKE FORCE DATA		EXCESS LENGTH	RA (GLW)	DESIGN SHEET
	S				CARKND		60 mile/h UP TO	158 tonne GLW	FORCE UP TO	VARIABLE GLW			
	120				K	Y	A	F	FORCE ABOVE	-3.073 + (0.533 x t)			



TARE WEIGHT	FLASK		AXLE LOAD	G.L.W.
	TYPE	WEIGHT		
56.00 (ESTIMATED)	NTL 15	35.6	11.45	91.6
	NTL 3M	56.0	14.0	112.0
	NTL 3/3A	59.0	14.375	115.0
	NTL 11	81.2	17.15	137.2

TARE WEIGHT	FLASK		AXLE LOAD	G.L.W.
	TYPE	WEIGHT		
56.00 (ESTIMATED)	NTL14	86.8	17.85	142.8
	CASTOR S1	100.0	19.5	156.0
	EXL 6	102.0	19.75	158.0
	VIT.RES.	120.0	22.0	176.0

NOTE. ALL WEIGHTS AND PAYLOADS IN TONNES. PAYLOAD FOR FIRST OFF WAGON WILL BE LIMITED TO 102 TONNES, (ie EXL 6 FLASK GIVING A GLW OF 158 TONNES) UNTIL 120 TONNE FLASK BECOMES AVAILABLE.

TARE-	56 t
CAPACITY, WEIGHT-	SEE NOTE
CAPACITY, VOLUME-	---
FLOOR AREA-	---
MIN.CURVE-	60 m SINGLY
GEN.ARRGT.DRG.No.-	91071/01

BRAKE-	SINGLE PIPE AIR, PLATFORM SCREW
SUSPENSION-	Y25 Lsim
COUPLINGS-	U.I.C. SCREW
BUFFERS-	OP 364 GL
WHEELS-	Ø 130 mm
JOURNALS-	Ø 920 mm

TYPE-	Uaafis
WAGON No.-	83 70 9985 001
BUILDER-	BOMBARDIER PRORAIL LTD
OWNER-	NTL