



Effective rear overhang on trailer

Stinger steer configuration

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Effective rear overhang

MOU:

Means the longitudinal distance calculated from the trailer turn centre to the rearmost point **including load on the trailer or semi-trailer.**

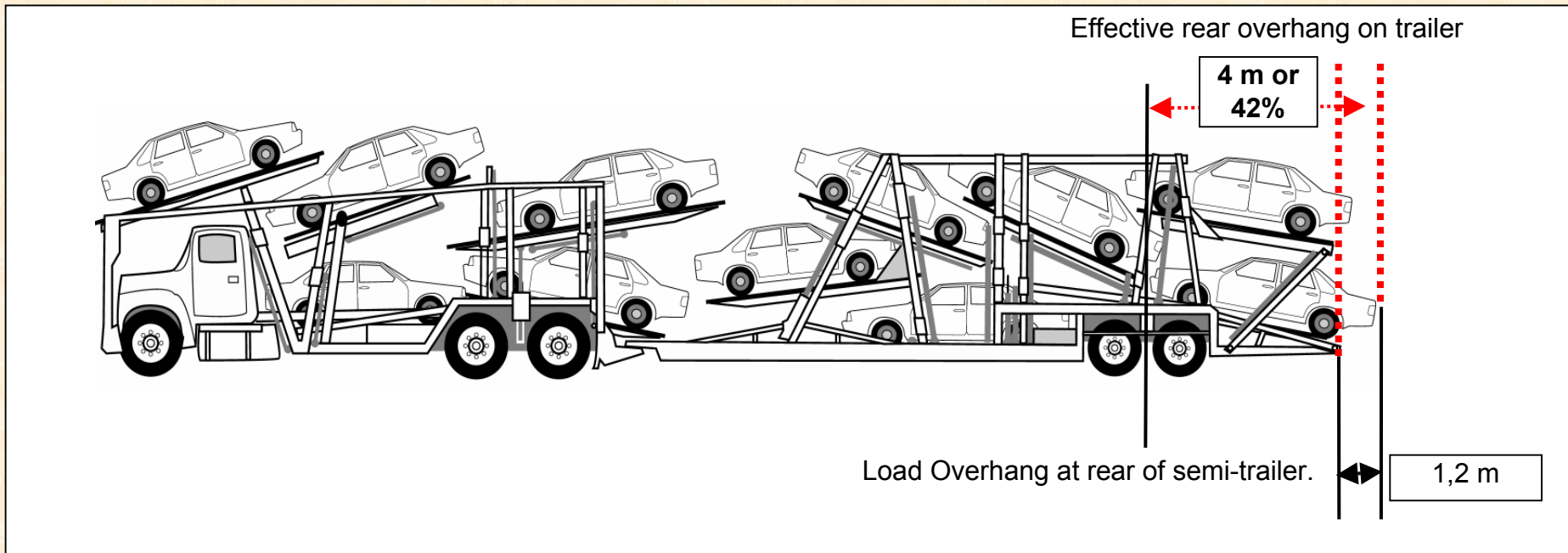
Stinger Steer Auto Carriers
National Standards for Special
Permits (fall 1997):

???

Load overhang at rear

Definition: ???

Recommendations (Agenda Item 8 (a) Meeting June 1999 Toronto): The permit conditions be amended as follow: the additional 1,2 m overhang available at the rear of the semi-trailer be restricted to overhanging cargo only and would not be available for trailer structure.

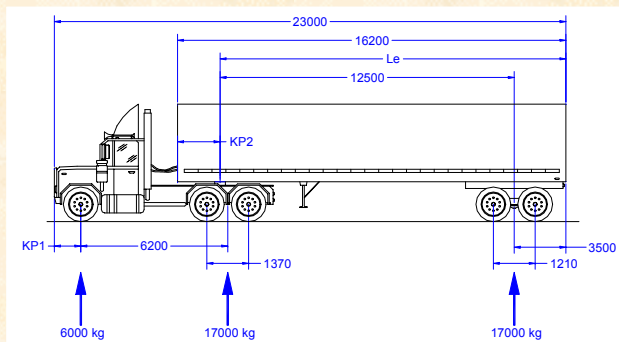


Overhang Quebecer Study by simulation

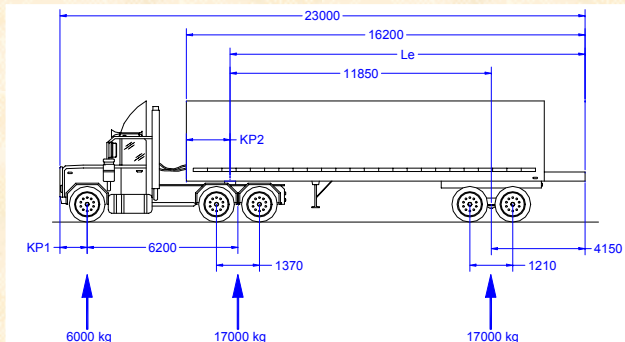
December 10, 2001

Configuration	Length total (m)	KP1	KP2	Length Semi-trailer + load	Le (m)	WBs (m)	E/WBs	Effective rear Overhang (m)	Off tracking (m)	Swing out (m)	
										2,1 m	2,6 m
A	23,0	0,950	0,200	16,200	16,000	12,500	28,0 %	3,500	4,288	1,747	1,896
A1	25,0	0,950	0,200	18,200	18,000	12,500	44,0 %	5,500	4,288	2,036	2,183
B	23,0	0,950	0,200	16,200	16,000	11,850	35,0 %	4,147	3,939	1,880	2,029
C	25,0	0,950	-	15,541	15,541	10,945	42,0 %	4,597	3,442	2,118	2,266
C1	25,0	0,950	-	15,541	15,541	9,710	60,0 %	5.826	2,877	2,487	2,634

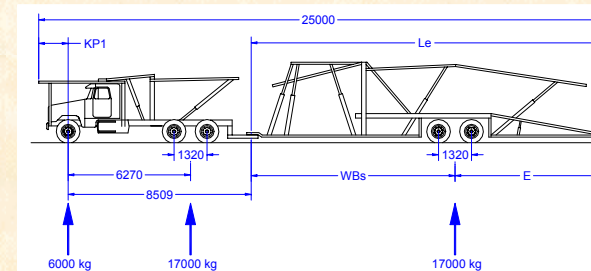
E : effective rear overhang.
WBs : wheelbase of semi-trailer.



Configurations A et A1

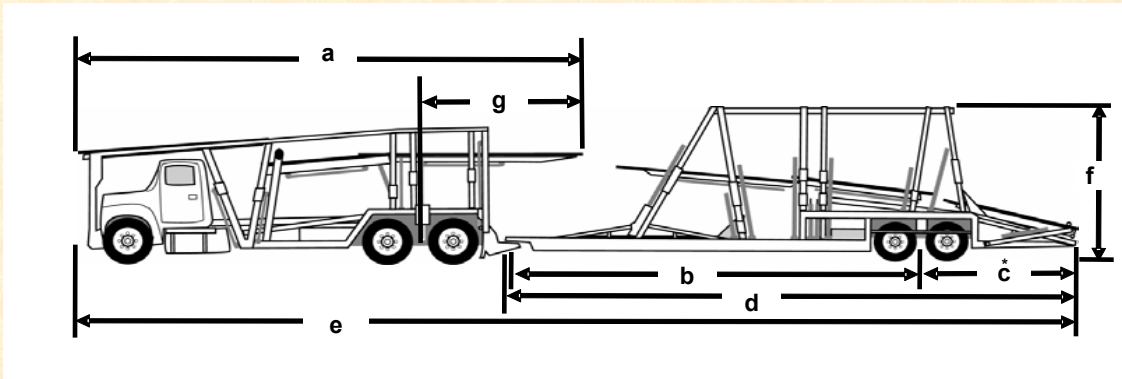


Configuration B



Configurations C et C1

Effective rear overhang



Fabricant	Année	Nb véh.	tractor length		wheelbase semi-trailer		effective rear overhang				semi-trailer length			overhall length		overhang tractor						
			a1	a2	b	42%*b	c1	%=c1/b*100	c2	%=c2/b*100	c2-c1	d1	d2	d2-d1	e1	e2	e2-e1	e1-d-2,23	g1	g2	g2-g1	
Cottrell	1986	7	10,77	11,85	10,4	4,37	3,64	35%	5,21	50%	1,57	14,35	15,92	1,57	22,89	25,54	2,65	6,31	4,46	5,54	1,08	
Teal	1987	4	10,87	11,78	9,68	4,07	4,21	43%	5,74	59%	1,53	14,17	15,7	1,53	23	25,25	2,25	6,6	4,27	5,18	0,91	
Teal	1988	2	9,63	10,62	10,52	4,42	4,92	47%	5,89	56%	0,97	15,11	16,08	0,97	23,24	25,2	1,96	5,9	3,73	4,72	0,99	
Teal	1989	2	9,55	10,48	10,57	4,44	4,84	46%	5,77	55%	0,93	15,8	16,73	0,93	23,1	24,97	1,87	5,07	4,48	5,41	0,93	
Autovan	1989	3	9,45	10,3	9,85	4,14	3,97	40%	4,79	49%	0,82	14,16	14,98	0,82	22,34	24,01	1,67	5,95	3,5	4,35	0,85	
Autovan	1990	6	9,47	10,29	9,88	4,15	3,99	40%	4,79	48%	0,8	14,26	15,06	0,8	22,34	23,96	1,62	5,85	3,62	4,44	0,82	
Cottrell	1990	3	9,86	11,28	9,7	4,07	4,01	41%	5,01	52%	1	14,1	15,1	1	23,15	25,12	1,97	6,82	3,04	4,46	1,42	
Delavan	1991	2	10,3	11,04	8,97	3,77	5,3	59%	5,68	63%	0,38	14,65	15,03	0,38	22,87	23,99	1,12	5,99	4,31	5,05	0,74	
Delavan	1992	3	10,05	11,02	8,99	3,78	5,27	59%	5,86	65%	0,59	14,66	15,25	0,59	22,84	24	1,16	5,95	4,1	5,07	0,97	
Delavan	1993	5	7,18	8,14	9,42	3,96	4,83	51%	5,64	60%	0,81	14,62	15,43	0,81	22,92	24,69	1,77	6,07	1,11	2,07	0,96	
Bankhead	1995	1	10,41	11,43	9,45	3,97	4,19	44%	5,6	59%	1,41	13,94	15,35	1,41	23,02	25,21	2,19	6,85	3,56	4,58	1,02	
Bankhead	1996	1	9,61	10,85	10,72	4,50	3,63	34%	4,52	42%	0,89	14,76	15,65	0,89	23,03	24,92	1,89	6,04	3,57	4,81	1,24	
Delavan	1996	12	8,2	9,09	9,45	3,97	4,86	51%	5,59	59%	0,73	14,69	15,42	0,73	22,99	24,61	1,62	6,07	2,13	3,02	0,89	
Cottrell	1996	5	9,72	10,57	9,7	4,07	3,87	40%	4,95	51%	1,08	13,99	15,07	1,08	22,88	24,57	1,69	6,66	3,06	3,91	0,85	
Cottrell	1998	20	9,88	10,86	10,08	4,23	3,92	39%	4,37	43%	0,45	14,3	14,75	0,45	22,98	24,02	1,04	6,45	3,43	4,41	0,98	
Cottrell	1999	1	9,57	10,89	10,08	4,23	3,94	39%	5	50%	1,06	13,33	14,39	1,06	22,99	24,72	1,73	7,43	2,14	3,46	1,32	
Cottrell	2001	29	10,29	10,97	10,07	4,23	4,13	41%	4,98	49%	0,85	14,49	15,34	0,85	23,18	24,31	1,13	6,46	3,83	4,51	0,68	
total =		106						max=	59%		65%	1,57		1,57			2,65					



Quebec Situation Effective rear overhang Stinger-Steer Auto Carriers

- Most part of Quebec Auto Carriers accept that the load overhang limit is included in the effective rear overhang limit
- The impact on Stinger-Steer **Van & Truck Carriers** is most important than Stinger-Steer car carriers .



Quebec Situation - Special Permits

Stinger-Steer (MOU)

188 permits

Province	Carrier	number of permits
Alberta	877599 Alberta Ltd	1
Nouveau-Brunswick	Mike's Transport inc.	1
Ontario	Allied Systems Canada Cie	171
Ontario	CCT Auto Trans Inc.	2
Ontario	L. Hansen's Forwarding LTD	4
Ontario	Pinder Transport Ltd.	3
Ontario	Transdrive Transportation Services Inc.	1
Québec	Bruce Auto Transport International Inc.	2
Québec	Paszkowski Transport Inc.	2
Québec	Transport A. Laberge & Fils	1
Total =		188

Stinger-Steer

147 permits

New York	Superior Auto Sales inc.	1
Ontario	Doubon Enterprises Inc.	4
Ontario	INTERCITY EXPRESS AUTOMOBILE CARRIERS INC.	7
Ontario	Leaseway Motorcar Transport Canada Ltd.	58
Ontario	Oakwood Transport/1129387 Ontario Ltée	8
Ontario	Transdrive Transportation Services Inc.	6
Québec	2967-1716 Québec inc.	1
Québec	9077-1718 Québec inc.	1
Québec	9113-5970 Québec Inc.	1
Québec	G.T.X. Transport Inc.	1
Québec	Searail Ltd	1
Québec	Transport A. Laberge & Fils	13
Québec	Transport Car-Fre Itée	12
Québec	Transport J.T. Pednault Inc.	1
Terre-Neuve	East Can Transport Services Ltd	5
Nouvelle-Écosse	Neil Curry Trucking Limited	4
Ontario	938896 Ontario Ltd./Tontal Cartage	6
Ontario	Allied Systems Canada Cie	10
Ontario	Pinder Transport Ltd.	1
Québec	9113-5970 Québec Inc.	1
Québec	G.T.X. Transport Inc.	1
Québec	Pièces d'Autos Fernand Bégin Inc.	1
Québec	Transport A. Laberge & Fils	3
Total =		147



Quebec proposition

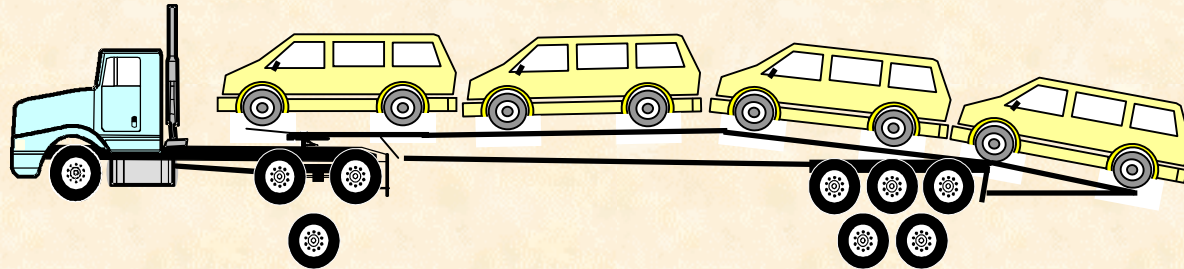
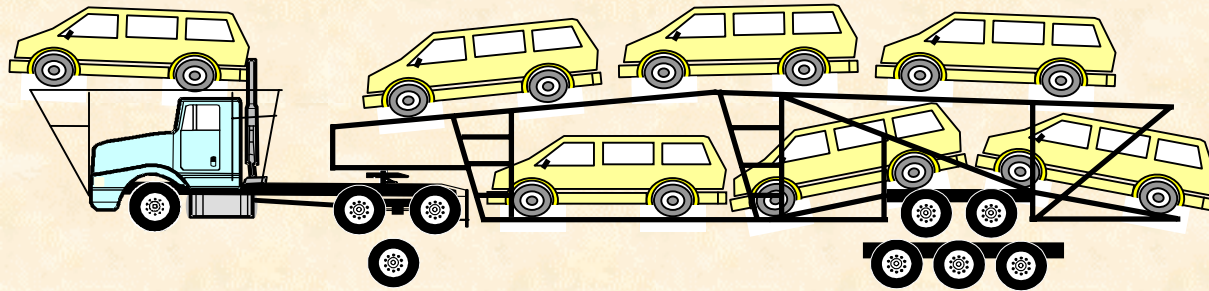
Definition of Stinger-Steer Car Carriers effective rear overhang

= Definition of MOU

Straight trucks =	4 m
Tractor + semi-trailer =	35 % of semi-trailer wheelbase (4,38 m max)
Tractor + semi-trailer + lift truck =	42 % of semi-trailer wheelbase (5,25 m max)
Stinger-Steer Car Carriers =	4 m or 42 % trailer wheelbase whichever is greater including the load

High-Mount

??? National Standards for Special Permits ???



High-Mount

Requests of Quebec industry

- use same national standards of stinger steer auto carriers
 - overall length = 23 m empty
 - = 25 m full
- set the limit of kingpin Setback at 2,5 to 3 m;
- carry damaged car





Kingpin setback situation

1,3 m to 2,87 m



Length semi-trailer situation

MOU definition: Means the longitudinal dimension from the front of the cargo carrying section of the semi-trailer to its rear, **exclusive of any extension in length caused by equipment or machinery at the front that is not designed for the transportation of goods.**



Effective rear overhang situation

30 % to 62% of wheelbase



High-Mount Quebec situation

Statistic of Special permits:

Stinger steer (MOU)	=	188	45%
Stinger steer	=	147	35%
High-mount (MOU)	=	29	7%
High-mount	=	58	13%

High-Mount Quebec proposition

- Evaluate the situation in each administration
- Elaborate National Standards for high-mount
- Modify the length definition in MOU regarding the extensions of auto-carriers