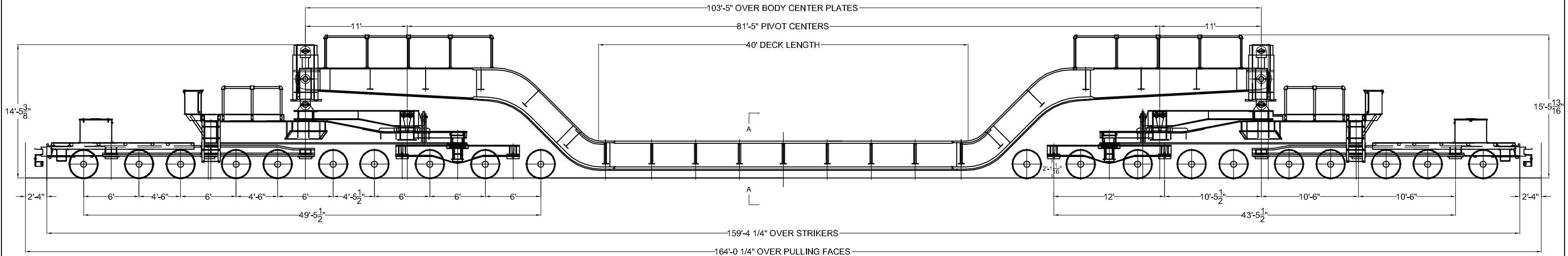


KRL 204002

450-TON 40' DEPRESSED DECK RAILCAR WITH LIFTING & SHIFTING CAPABILITY



ALLOWABLE LOADING

CONCENTRATED LOAD

X	P	TOTAL
2	398.70	797
4	406.72	813
6	415.07	830
8	423.77	848
10	432.84	866
12	442.31	885
14	450.00	900
16	450.00	900
18	450.00	900
20	450.00	900
22	450.00	900
24	450.00	900
26	450.00	900

450-TON 40' DEPRESSED DECK RAILCAR SPECIFICATIONS:

LIGHT WEIGHT	529,700 LBS
MAXIMUM CAPACITY	900,300 LBS
MAXIMUM GROSS	1,430,000 LBS
MAXIMUM AXLE LOAD	71,500 LBS PER AXLE
SPRING TRAVEL	3-11/16"
WHEEL DIAMETER	36"

DECK LENGTH	40'
DECK WIDTH	9' 6"
DECK HEIGHT	ADJUSTABLE

DO NOT HUMP EMPTY OR LOADED.

MAXIMUM SPEED	LOADED: 25 MPH
	EMPTY: 45 MPH

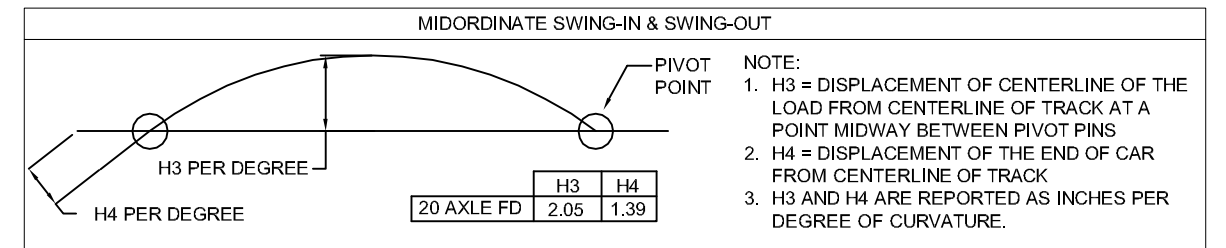
CAR LIFTING & SHIFTING CAPABILITY:

VERTICAL (SEE TABLE "RAILCAR DECK HEIGHT & CG TABLE")
LIFT = +12" FROM NOMINAL
LOWER = -12" FROM NOMINAL

(RUNNING HEIGHT OF RAILCAR DECK IS VARIABLE)

LATERAL
CAPABLE OF SHIFTING CAR BODY 14"
(EITHER SIDE OF CENTER LINE ON TANGENT TRACK)

TRAINED PERSONNEL TO ACCOMPANY & OPERATE THE
DEPRESSED CENTER CAR WHILE UNDER LOAD & IN TRANSIT.



- NOTE:
- H3 = DISPLACEMENT OF CENTERLINE OF THE LOAD FROM CENTERLINE OF TRACK AT A POINT MIDWAY BETWEEN PIVOT PINS
 - H4 = DISPLACEMENT OF THE END OF CAR FROM CENTERLINE OF TRACK
 - H3 AND H4 ARE REPORTED AS INCHES PER DEGREE OF CURVATURE.

RAILCAR DECK HEIGHT & CG TABLE:

WEIGHT OF LOAD:	CAPACITY OF RAILCAR:	NOMINAL DECK HEIGHT (ATR):	MAXIMUM DECK HEIGHT (ATR):	MINIMUM DECK HEIGHT (ATR): *	CLEARANCE AT MIN HEIGHT (ATR):	EST CG AT NOMINAL (ATR):	MINIMUM RUNNING HT (ATR):	EST CG AT MIN RUNNING HT (ATR):
0.000 KIPS	0%	55.00 IN	67.00 IN	43.00 IN	5.00 IN	57.10 IN	43.00 IN	52.00 IN
225.075 KIPS	25%	52.60 IN	64.60 IN	40.60 IN	2.60 IN	56.10 IN	41.00 IN	51.20 IN
450.150 KIPS	50%	50.25 IN	62.25 IN	38.25 IN	0.25 IN	55.10 IN	41.00 IN	51.20 IN
675.225 KIPS	75%	47.50 IN	59.50 IN	38.00 IN	0.00 IN	53.90 IN	41.00 IN	51.20 IN
900.300 KIPS	100%	45.50 IN	57.50 IN	38.00 IN	0.00 IN	53.10 IN	41.00 IN	51.20 IN

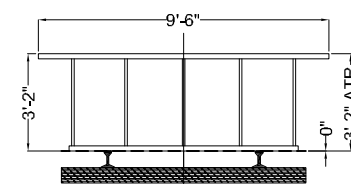
* RAILCAR DECK CAN BE LOWERED TO JUST ABOVE TOP OF RAIL FOR MOVEMENT UNDER AN OVERHEAD RESTRICTION.

STABILITY OF CAR ON CURVES (ASSUMES LEVEL TRACK - NO SUPERELEVATION)

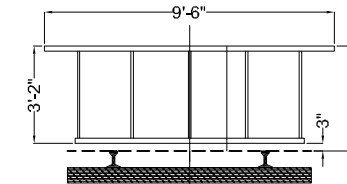
MINIMUM RECOMMENDED TRACK RADIUS (IN FEET)	LOAD ON CENTER	LOADED CAR LOAD SHIFTED TO INSIDE OF CURVE				LOADED CAR LOAD SHIFTED TO OUTSIDE OF CURVE			
		3"	6"	9"	14"	3"	6"	9"	14"
440 FT		340	290	260	220	500	650	920	3280
	13°	17°	20°	22°	26°	11°	9°	6°	2°

WHEEL LOAD TABLE - FOR DISPLACED SIDE - STRAIGHT TRACK

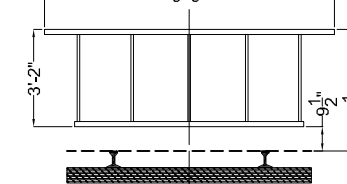
GROSS WEIGHT	DISPLACED DISTANCE IN INCHES							
	0	2	4	6	8	10	12	14
1,430,000	35,750	37,730	39,700	41,680	43,650	45,630	47,600	49,580



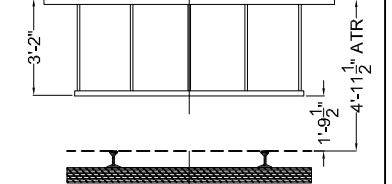
VIEW A-A
MINIMUM DECK
HEIGHT AT 75%
CAPACITY



VIEW A-A
MINIMUM RUNNING
HEIGHT AT 75%
CAPACITY



VIEW A-A
NOMINAL DECK
HEIGHT AT 75%
CAPACITY



VIEW A-A
MAXIMUM DECK
HEIGHT AT 75%
CAPACITY

EMERGENCY CONTACT NUMBERS:

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ALEX LOYA (832) 253-7044

SHEET 1 OF 2

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GENERAL ARRANGEMENT
450-TON 40' DEPRESSED
CENTER FLAT CAR

KRL 204002

450-TON 40' DEPRESSED DECK RAILCAR WITH LIFTING & SHIFTING CAPABILITY

COOPER RATING AT 71.5 KIPS PER AXLE

SPAN FT	BENDING		END SHEAR		FLOOR BEAM REACTION	
	FT-KIPS	E	KIPS	E	KIPS	E
6	107	71.4	85	72.5	91	68.3
8	148	73.9	96	70.0	120	68.7
10	215	76.3	101	67.5	140	70.2
12	283	70.8	125	71.2	171	73.1
13	326	68.6	130	70.6	185	75.0
14	382	69.4	135	70.2	196	75.4
15	436	69.7	142	70.8	207	75.9
16	487	69.6	148	69.4	221	77.8
18	596	70.2	164	70.4	251	82.6
20	711	69.0	176	70.4	275	84.0
25	1113	73.0	211	74.4	339	89.6
30	1573	76.7	243	77.2	394	91.4
35	2131	81.5	280	81.0	440	90.2
40	2759	84.2	311	82.5	474	87.6
45	3454	86.3	330	80.9	501	84.2
50	4243	89.8	366	83.6	522	80.8
60	5942	91.8	416	84.4	555	72.1
70	7726	90.5	464	84.0	577	65.0
80	9509	87.8	496	79.9	599	59.9
90	11295	84.3	517	75.3	637	57.9
100	13080	80.9	536	71.5	696	58.4
110	14864	74.3	562	69.6	762	59.7
120	16652	72.2	587	67.5	817	59.7
130	18437	67.7	622	67.1	865	59.6
140	20223	65.0	665	67.6	905	58.5
150	22023	62.9	702	68.3	940	57.8
160	24088	60.3	743	67.8	971	56.2
170	26568	59.3	783	68.6	998	55.0
180	29439	59.5	820	68.2	1022	53.4
200	36182	60.7	878	67.0	1062	50.5
225	44910	61.3	942	65.4	1103	47.1
250	53687	60.8	990	63.0	1136	44.0
275	62485	59.6	1036	60.9	1163	41.2
300	71326	58.1	1059	57.9	1185	38.6
350	89081	54.5	1114	53.4	1220	34.3
400	106868	50.8	1158	49.5	1246	30.8

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SHEET 2 OF 2

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