

DOTX 219 Geometry Car  
United States Department of Transportation  
AUTOMATED TRACK INSPECTION PROGRAM

# TRACK GEOMETRY INSPECTION REPORT

Rawlins, WY to Cheyenne, WY  
Railroad: UNION PACIFIC RAILROAD (UP)  
Survey Number: 1848  
Mile Post 682 to Mile Post 511



Prepared for:  
United States Department of Transportation  
Federal Railroad Administration  
Office of Safety  
Washington, D.C.

Prepared by:  
ENSCO, Inc.  
5400 Port Royal Rd  
Springfield, VA 22151



Testing Cert. 2411.01

Approved By:

Survey Director:

CLAYTON SHANK

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Signature

Date

Under the U.S. Department of Transportation, Federal Railroad Administration (FRA), Office of Safety Assurance and Compliance, Automated Track Inspection Program and in accordance with 49 CFR 213 Federal Track Safety Standards, this Track Geometry Inspection Report provides a list of exceptions that relate only to the time and date the track was inspected and the required remedial action taken. This compliance report is offered only to the track owner and is not to be reproduced to others in whole or part without the expressed written consent of the FRA and the track owner. FRA requests any reprinting be labeled as a copy of the original.

## NOTES

An Automated Track Inspection Program (ATIP) Track Geometry Inspection Report (TGIR) is generated for each ATIP survey. The TGIR summarizes the data collected and can be used in conjunction with the strip chart. The TGIR is generated electronically onboard the car and hard copies are distributed as follows:

1. One (1) copy is provided to onboard railroad representative, as requested
2. One (1) copy is provided to onboard FRA Inspector, as requested
3. One (1) copy is archived for FRA management

Following ATIP Compliance survey operations, electronic copies of TGIRs are distributed via email, to a list of recipients designated by FRA and railroad management.

The TGIR may consist of ten (10) parts;

1. Cover,
2. Notes,
3. Exception List,
4. Curve Analysis,
5. Exception Summary,
6. Track Quality Index (TQI),
7. GRMS Exception List (if equipped),
8. Class+1 (C+1) Exception List,
9. C+1 Exception Summary,
10. Alinement MCO worksheet.

Track measurement sample frequency is once per foot.

Exceptions may not be reported for Alinement and Profile parameters when ATIP car speed is less than fifteen (15) and five (5) miles per hour, respectively.

Exception List symbols/notes:

\* Federal Track Safety Standard Advisory

+ Maximum curve speed is limited at qualified cant deficiency. However, actual cant deficiency does not exceed 1-inch grace allowed under 49CFR 213.57(b).

Rail Impact Values are unit-less; indicating a location with a large vertical axle acceleration.

Rail Cant Exception denoted with (RSA) indicates possible Rail Seat Abrasion.

The following fields are not applicable for Limited Speed, Ride Quality [in classes 1-5], and Rail Cant:

Limited Class (LC); Posted Class (PC).

All Exception Parameter values are reported in inches, except for the following:

- Limiting Speed (Vmax) expressed in: MPH
- Ride Quality; Carbody Lateral, Carbody Vertical, Truck Lateral expressed in: g (gravitational acceleration)
- Rail Cant; Left (L) and Right (R), NEG[ative] and POS[itive] expressed in: angular degrees (°)

For Alinement exceptions: Negative (-) values indicate rail shifting to the right and Positive (+) values indicate rail shifting to the left, referencing direction of ATIP car travel during testing.

Alinement exceptions reported in turnout paths are considered Federal Track Safety Standard Advisory.

For Rail Cant exceptions: Negative (-) values indicate an outward shift in the rail angle, and Positive (+) values indicate an inward shift in the rail angle. Rail Cant exceptions have a minimum length of 15 feet.

A complete description of the information provided in the TGIR is available at

<https://www.fra.dot.gov/eLib/Details/L04545>

ATIP survey exceptions are available for review the next business day, and ATIP track measurement foot by foot data is available the following week at: [https://tdms.fra.dot.gov/tdms\\_lite](https://tdms.fra.dot.gov/tdms_lite)

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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
0	141		State Line	WY	0	6	B	0	0	7	41.788983	-107.216296
0	142		Railroad	UP -	0	6	B	0	0	7	41.788983	-107.216292
0	143		Railroad	UP -	0	6	B	0	0	7	41.788984	-107.216289
0	144		Subdivision	LARAMI	0	6	B	0	0	7	41.788984	-107.216286
682	202		Down Milepost	682.00	0	7	C	0	0	7	41.789011	-107.216071
682	2643		Class Change	1.00	0	7	C	0	0	7	41.789012	-107.216064
682	2643		Posted Speed	10.00	0	7	C	0	0	7	41.789012	-107.216064
682	2651		Track Change	0.00	0	7	C	0	0	7	41.789016	-107.216035
682	4716		Class Change	3.00	0	10	C	0	0	7	41.788692	-107.208632
682	4716		Posted Speed	40.00	0	10	C	0	0	7	41.788692	-107.208632
682	4739		Track Change	0.00	0	10	E	0	0	6	41.788674	-107.208551
682	5096		Class Change	4.00	0	12	E	0	0	6	41.788374	-107.207310
682	5096		Posted Speed	55.00	0	12	E	0	0	6	41.788374	-107.207310
682	5132		Track Change	0.00	0	13	E	0	0	2	41.788340	-107.207187
681	6239		Down Milepost	681.00	0	14	E	0	0	2	41.787211	-107.203415
681	681		Class Change	5.00	0	14	C	0	0	2	41.786593	-107.201064
681	681		Posted Speed	79.00	0	14	C	0	0	2	41.786593	-107.201064
680	5211		Down Milepost	680.00	0	34	T	0	0	2	41.782882	-107.185307
679	5327		Down Milepost	679.00	0	37	T	0	0	2	41.779143	-107.166483
678	5304		Down Milepost	678.00	0	43	T	0	0	2	41.776669	-107.147493
677	5196		Down Milepost	677.00	0	42	T	0	0	2	41.777199	-107.128532
676	5298		Down Milepost	676.00	0	45	T	0	0	2	41.777688	-107.109160
675	5327		Down Milepost	675.00	0	47	T	0	0	2	41.778256	-107.089709
674	5196		Down Milepost	674.00	0	51	T	0	0	2	41.778773	-107.070726
673	5343		Down Milepost	673.00	0	57	T	0	0	2	41.779300	-107.051209
672	5422		Down Milepost	672.00	0	60	T	0	0	2	41.779834	-107.031422
671	5178		Down Milepost	671.00	0	59	T	0	0	2	41.780339	-107.012507
670	5303		Down Milepost	670.00	0	53	T	0	0	2	41.780668	-106.993137
669	5195		Down Milepost	669.00	0	55	T	0	0	2	41.779869	-106.974176
668	5218		Down Milepost	668.00	0	48	C	0	0	2	41.777378	-106.955428
667	4908		Down Milepost	667.00	0	46	T	0	0	2	41.777306	-106.937493
667	2311		Class Change	4.00	0	43	T	0	0	2	41.777297	-106.929048
667	2311		Posted Speed	65.00	0	43	T	0	0	2	41.777297	-106.929048
666	5456		Down Milepost	666.00	0	44	C	0	0	2	41.774876	-106.918311
665	5236		Down Milepost	665.00	0	52	C	0	0	2	41.765914	-106.903617
664	5390		Down Milepost	664.00	0	57	T	0	0	2	41.762136	-106.884801
663	5199		Down Milepost	663.00	0	55	C	0	0	2	41.758172	-106.866746
662	5248		Down Milepost	662.00	0	54	T	0	0	2	41.760319	-106.847802
662	5390		Class Change	5.00	0	55	E	0	0	2	41.764888	-106.829516

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662	5390		Posted Speed	79.00	0	55	E	0	0	2	41.764888	-106.829516
661	5444		Down Milepost	661.00	0	55	T	0	0	2	41.764995	-106.829375
660	5244		Down Milepost	660.00	0	60	T	0	0	2	41.775246	-106.815965
659	4436		Down Milepost	659.00	0	60	C	0	0	2	41.784850	-106.806421
658	5225		Down Milepost	658.00	0	51	C	0	0	2	41.799041	-106.807548
657	5128		Down Milepost	657.00	0	56	C	0	0	2	41.810265	-106.798222
657	2893		Class Change	4.00	0	51	T	0	0	2	41.813181	-106.788390
657	2893		Posted Speed	65.00	0	51	T	0	0	2	41.813181	-106.788390
656	4874		Down Milepost	656.00	0	49	C	0	0	2	41.815606	-106.781940
655	5231		Down Milepost	655.00	0	50	T	0	0	2	41.826607	-106.769967
654	5263		Down Milepost	654.00	0	46	C	0	0	2	41.832743	-106.753371
653	5311		Down Milepost	653.00	0	49	T	0	0	2	41.832553	-106.734458
652	5475		Down Milepost	652.00	0	51	T	0	0	2	41.836422	-106.715381
651	5179		Down Milepost	651.00	0	55	T	0	0	2	41.836807	-106.696469
650	5227		Down Milepost	650.00	0	52	T	0	0	2	41.834721	-106.678571
649	5330		Down Milepost	649.00	0	49	C	0	0	2	41.830197	-106.660579
648	5410		Down Milepost	648.00	0	42	B	0	0	2	41.832836	-106.641107
647	5250		Down Milepost	647.00	0	46	T	0	0	2	41.842911	-106.628245
646	5246		Down Milepost	646.00	0	48	T	0	0	2	41.854251	-106.616683
645	5140		Down Milepost	645.00	0	45	T	0	0	2	41.861817	-106.600978
644	5546		Down Milepost	644.00	0	51	T	0	0	2	41.866485	-106.581670
644	3182		Class Change	5.00	0	55	T	0	0	2	41.868384	-106.570399
644	3182		Posted Speed	79.00	0	55	T	0	0	2	41.868384	-106.570399
643	5277		Down Milepost	643.00	0	56	T	0	0	2	41.868240	-106.562726
642	5070		Down Milepost	642.00	0	60	T	0	0	2	41.869459	-106.544294
641	5458		Down Milepost	641.00	0	60	T	0	0	2	41.871684	-106.524541
640	5383		Down Milepost	640.00	0	61	C	0	0	2	41.874583	-106.505291
639	5140		Down Milepost	639.00	0	60	T	0	0	2	41.883700	-106.491194
638	5348		Down Milepost	638.00	0	61	C	0	0	2	41.894896	-106.478659
638	989		Class Change	4.00	0	60	T	0	0	2	41.896472	-106.475716
638	989		Posted Speed	65.00	0	60	T	0	0	2	41.896472	-106.475716
638	2663		Class Change	5.00	0	60	E	0	0	2	41.898568	-106.470322
638	2663		Posted Speed	79.00	0	60	E	0	0	2	41.898568	-106.470322
637	5233		Down Milepost	637.00	0	59	T	0	0	2	41.900349	-106.461218
636	5383		Down Milepost	636.00	0	54	T	0	0	2	41.905540	-106.442862
635	5228		Down Milepost	635.00	0	59	T	0	0	2	41.906705	-106.424007
634	5156		Down Milepost	634.00	0	60	T	0	0	2	41.907563	-106.405431
633	5482		Down Milepost	633.00	0	60	E	0	0	2	41.910492	-106.385926
633	470		Concrete Ties Start	0.00	0	60	T	0	0	2	41.910325	-106.384219

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633	631	83	L Align 62	-0.86	1	60	T	4	5	2	41.910266	-106.383635
633	2078		Concrete Ties End	0.00	0	60	T	0	0	2	41.909739	-106.378383
632	5078		Down Milepost	632.00	0	60	T	0	0	2	41.908646	-106.367507
631	3183		Down Milepost	631.00	0	61	T	0	0	2	41.907850	-106.355910
630	5321		Down Milepost	630.00	0	60	T	0	0	2	41.906469	-106.336597
629	5422		Down Milepost	629.00	0	61	T	0	0	2	41.903192	-106.317226
628	5281		Down Milepost	628.00	0	59	T	0	0	2	41.900000	-106.298366
627	5264		Down Milepost	627.00	0	60	T	0	0	2	41.896816	-106.279569
626	5301		Down Milepost	626.00	0	60	T	0	0	2	41.893605	-106.260640
625	5211		Down Milepost	625.00	0	60	T	0	0	2	41.892301	-106.241756
624	5220		Down Milepost	624.00	0	60	T	0	0	2	41.893468	-106.222709
623	5421		Down Milepost	623.00	0	59	T	0	0	2	41.894677	-106.202928
622	5367		Down Milepost	622.00	0	59	C	0	0	2	41.894765	-106.183413
621	5313		Down Milepost	621.00	0	61	T	0	0	2	41.887614	-106.166505
620	5239		Down Milepost	620.00	0	59	T	0	0	2	41.880234	-106.150062
619	5185		Down Milepost	619.00	0	60	T	0	0	2	41.872929	-106.133791
618	5371		Down Milepost	618.00	0	61	T	0	0	2	41.865359	-106.116938
617	3495		Down Milepost	617.00	0	60	C	0	0	2	41.860463	-106.105950
616	5304		Down Milepost	616.00	0	60	T	0	0	2	41.853792	-106.088716
615	5290		Down Milepost	615.00	0	60	T	0	0	2	41.847145	-106.071518
614	5362		Down Milepost	614.00	0	60	T	0	0	2	41.839158	-106.055074
613	5447		Down Milepost	613.00	0	60	T	0	0	2	41.830797	-106.038578
612	5352		Down Milepost	612.00	0	60	T	0	0	2	41.822580	-106.022370
611	5293		Down Milepost	611.00	0	59	T	0	0	2	41.816924	-106.004869
610	5204		Down Milepost	610.00	0	56	C	0	0	2	41.810121	-105.988919
609	5236		Down Milepost	609.00	0	54	T	0	0	2	41.796237	-105.985374
608	5397		Down Milepost	608.00	0	56	T	0	0	2	41.781497	-105.984168
608	894	88	Crosslevel	1.11	2	57	T	4	5	2	41.779055	-105.983970
607	5289		Down Milepost	607.00	0	50	T	0	0	2	41.767053	-105.982986
606	5392		Down Milepost	606.00	0	48	T	0	0	2	41.752324	-105.981827
605	4422		Down Milepost	605.00	0	48	T	0	0	2	41.740237	-105.980825
604	4994		Down Milepost	604.00	0	46	C	0	0	2	41.728140	-105.973563
603	5600		Down Milepost	603.00	0	44	C	0	0	2	41.723402	-105.954493
603	3345		Class Change	4.00	0	50	T	0	0	2	41.723805	-105.942316
603	3345		Posted Speed	65.00	0	50	T	0	0	2	41.723805	-105.942316
602	5300		Down Milepost	602.00	0	52	C	0	0	2	41.723672	-105.935219
601	5090		Down Milepost	601.00	0	52	T	0	0	2	41.719809	-105.917945
600	5442		Down Milepost	600.00	0	58	T	0	0	2	41.716970	-105.899015
600	5288		Concrete Ties Start	0.00	0	59	T	0	0	2	41.706246	-105.886775

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599	5330		Down Milepost	599.00	0	59	T	0	0	2	41.706145	-105.886703
599	2106		Concrete Ties End	0.00	0	57	E	0	0	2	41.701714	-105.881902
599	2557		Class Change	5.00	0	56	T	0	0	2	41.700969	-105.880590
599	2557		Posted Speed	79.00	0	56	T	0	0	2	41.700969	-105.880590
598	5117		Down Milepost	598.00	0	53	T	0	0	2	41.696741	-105.873138
597	5150		Down Milepost	597.00	0	58	T	0	0	2	41.688233	-105.858153
596	5351		Down Milepost	596.00	0	54	T	0	0	2	41.680754	-105.841438
595	5146		Down Milepost	595.00	0	57	T	0	0	2	41.674394	-105.824682
594	6078		Down Milepost	594.00	0	38	T	0	0	2	41.666877	-105.804899
594	937		Posted Speed	75.00	0	38	B	0	0	2	41.665716	-105.801850
594	3058		Posted Speed	79.00	0	42	E	0	0	2	41.661962	-105.796065
593	4460		Down Milepost	593.00	0	44	T	0	0	2	41.658820	-105.793129
592	5328		Down Milepost	592.00	0	49	T	0	0	2	41.646877	-105.781988
592	2946	94	<b>Crosslevel</b>	1.16	12	47	T	4	5	2	41.640272	-105.775835
591	5393		Down Milepost	591.00	0	45	T	0	0	2	41.634786	-105.770720
590	5317		Down Milepost	590.00	0	50	T	0	0	2	41.623629	-105.758424
590	2474		Class Change	3.00	0	41	T	0	0	2	41.619061	-105.751768
590	2474		Posted Speed	40.00	0	41	T	0	0	2	41.619061	-105.751768
590	4990		Class Change	5.00	0	39	T	0	0	2	41.614419	-105.744999
590	4990		Posted Speed	79.00	0	39	T	0	0	2	41.614419	-105.744999
589	5192		Down Milepost	589.00	0	39	T	0	0	2	41.614044	-105.744453
589	3515		Class Change	4.00	0	39	T	0	0	2	41.607556	-105.734997
589	3515		Posted Speed	65.00	0	39	T	0	0	2	41.607556	-105.734997
588	5289		Down Milepost	588.00	0	40	T	0	0	2	41.604942	-105.729602
588	1782		Class Change	5.00	0	40	E	0	0	2	41.602284	-105.724234
588	1782		Posted Speed	79.00	0	40	E	0	0	2	41.602284	-105.724234
588	2712		Class Change	3.00	0	39	T	0	0	2	41.600439	-105.721901
588	2712		Posted Speed	40.00	0	39	T	0	0	2	41.600439	-105.721901
588	4063		Class Change	5.00	0	40	T	0	0	2	41.597754	-105.718518
588	4063		Posted Speed	79.00	0	40	T	0	0	2	41.597754	-105.718518
587	5357		Down Milepost	587.00	0	41	T	0	0	2	41.595185	-105.715274
586	5307		Down Milepost	586.00	0	50	C	0	0	2	41.584499	-105.702197
585	5276		Down Milepost	585.00	0	50	T	0	0	2	41.571451	-105.694011
584	5393		Down Milepost	584.00	0	49	T	0	0	2	41.558003	-105.685926
584	1626	95	<b>L Prof 62</b>	-1.42	4	49	T	4	5	2	41.553950	-105.683489
583	5235		Down Milepost	583.00	0	49	T	0	0	2	41.544950	-105.678082
582	5252		Down Milepost	582.00	0	54	T	0	0	2	41.531853	-105.670215
581	5392		Down Milepost	581.00	0	55	T	0	0	2	41.518405	-105.662143
580	5323		Down Milepost	580.00	0	57	T	0	0	2	41.505129	-105.654175

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579	5317		Down Milepost	579.00	0	60	T	0	0	2	41.491866	-105.646219
578	5317		Down Milepost	578.00	0	60	T	0	0	2	41.478605	-105.638267
577	5221		Down Milepost	577.00	0	60	T	0	0	2	41.465581	-105.630461
576	5172		Down Milepost	576.00	0	59	T	0	0	2	41.452111	-105.625013
575	5445		Down Milepost	575.00	0	60	T	0	0	2	41.437509	-105.621082
575	3924	96	<b>R Prof 62</b>	-1.43	3	60	T	4	5	2	41.426989	-105.618252
575	3925	97	<b>L Prof 62</b>	-1.46	4	60	T	4	5	2	41.426986	-105.618251
574	5360		Down Milepost	574.00	0	60	T	0	0	2	41.423136	-105.617215
573	5188		Down Milepost	573.00	0	60	T	0	0	2	41.409223	-105.613475
572	5275		Down Milepost	572.00	0	60	T	0	0	2	41.395080	-105.609630
571	5266		Down Milepost	571.00	0	60	T	0	0	2	41.380918	-105.606142
570	5361		Down Milepost	570.00	0	58	T	0	0	2	41.366390	-105.603425
569	5341		Down Milepost	569.00	0	52	T	0	0	2	41.351920	-105.600700
568	5179		Down Milepost	568.00	0	44	T	0	0	2	41.337904	-105.597993
567	5466		Down Milepost	567.00	0	38	C	0	0	2	41.323088	-105.595244
566	5136		Down Milepost	566.00	0	29	T	0	0	2	41.309079	-105.596607
566	3719		Class Change	3.00	0	29	T	0	0	2	41.298940	-105.597701
566	3719		Posted Speed	45.00	0	29	T	0	0	2	41.298940	-105.597701
565	5375		Down Milepost	565.00	0	21	E	0	0	2	41.294772	-105.596137
564	5464		Down Milepost	564.00	0	43	T	0	0	2	41.282625	-105.584066
563	5140		Down Milepost	563.00	0	45	T	0	0	2	41.271218	-105.573149
562	5273		Down Milepost	562.00	0	45	C	0	0	2	41.259505	-105.561977
561	5314		Down Milepost	561.00	0	45	T	0	0	2	41.245214	-105.558936
560	5237		Down Milepost	560.00	0	46	T	0	0	2	41.230983	-105.556725
559	5398		Down Milepost	559.00	0	45	B	0	0	2	41.216315	-105.554435
558	5262		Down Milepost	558.00	0	46	T	0	0	2	41.203063	-105.548956
557	5124		Down Milepost	557.00	0	45	T	0	0	2	41.189041	-105.549072
556	5535		Down Milepost	556.00	0	45	B	0	0	2	41.173932	-105.549156
555	5253		Down Milepost	555.00	0	46	B	0	0	2	41.161990	-105.539358
554	5277		Down Milepost	554.00	0	44	T	0	0	2	41.155002	-105.523119
554	5248		Posted Speed	30.00	0	30	T	0	0	2	41.143828	-105.511682
553	5341		Down Milepost	553.00	0	29	T	0	0	2	41.143586	-105.511567
552	5336		Down Milepost	552.00	0	30	B	0	0	2	41.129402	-105.510183
552	4150		Posted Speed	45.00	0	30	B	0	0	2	41.121123	-105.502249
551	5209		Down Milepost	551.00	0	31	C	0	0	2	41.119423	-105.499174
550	5208		Down Milepost	550.00	0	43	C	0	0	2	41.106223	-105.499827
549	5463		Down Milepost	549.00	0	41	C	0	0	2	41.091889	-105.494849
548	5384		Down Milepost	548.00	0	33	C	0	0	2	41.080364	-105.482810
548	748	114	<b>Gage Wide</b>	58.02	15	32	C	0	3	2	41.079423	-105.480425

Exception Report  
 Exception List Section  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

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 Run Date: 08/17/2018  
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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
548	3774		Track Change	0.00	0	24	E	0	0	2	41.078136	-105.469623
547	5154		Down Milepost	547.00	0	29	E	0	0	2	41.078645	-105.464771
546	5198		Down Milepost	546.00	0	43	C	0	0	2	41.083714	-105.447278
545	8161		Down Milepost	544.00	0	38	T	0	0	2	41.083611	-105.418606
545	504		Class Change	4.00	0	39	B	0	0	2	41.084074	-105.416889
545	504		Posted Speed	50.00	0	39	B	0	0	2	41.084074	-105.416889
545	2528		Down Milepost	544.00	0	39	T	0	0	2	41.083251	-105.409865
543	5251		Down Milepost	543.00	0	36	T	0	0	2	41.083189	-105.391772
542	5452		Down Milepost	542.00	0	40	E	0	0	2	41.093286	-105.378263
541	5253		Down Milepost	541.00	0	41	T	0	0	2	41.098441	-105.361383
541	2714		Class Change	3.00	0	45	T	0	0	2	41.098081	-105.351666
541	2714		Posted Speed	45.00	0	45	T	0	0	2	41.098081	-105.351666
540	5151		Down Milepost	540.00	0	45	C	0	0	2	41.100726	-105.344195
539	5466		Down Milepost	539.00	0	44	T	0	0	2	41.113506	-105.342681
538	5124		Down Milepost	538.00	0	45	E	0	0	2	41.123138	-105.330635
538	870		Class Change	4.00	0	46	T	0	0	2	41.122779	-105.327525
538	870		Posted Speed	70.00	0	46	T	0	0	2	41.122779	-105.327525
537	5436		Down Milepost	537.00	0	54	T	0	0	2	41.122124	-105.311133
537	714		Posted Speed	60.00	0	55	B	0	0	2	41.122310	-105.308561
536	5295		Down Milepost	536.00	0	57	T	0	0	2	41.120576	-105.292170
535	5275		Down Milepost	535.00	0	58	B	0	0	2	41.113239	-105.276155
534	5272		Down Milepost	534.00	0	60	T	0	0	2	41.108049	-105.258402
533	5214		Down Milepost	533.00	0	60	B	0	0	2	41.101347	-105.241910
533	4900		Class Change	3.00	0	50	T	0	0	2	41.098816	-105.224622
533	4900		Posted Speed	50.00	0	50	T	0	0	2	41.098816	-105.224622
532	5355		Down Milepost	532.00	0	50	B	0	0	2	41.098618	-105.222995
531	5097		Down Milepost	531.00	0	50	T	0	0	2	41.097868	-105.205687
530	5413		Down Milepost	530.00	0	47	E	0	0	2	41.101792	-105.187146
529	5294		Down Milepost	529.00	0	47	T	0	0	2	41.099040	-105.168446
529	2265		Class Change	4.00	0	40	T	0	0	2	41.099675	-105.160384
529	2265		Posted Speed	70.00	0	40	T	0	0	2	41.099675	-105.160384
528	5420		Down Milepost	528.00	0	44	C	0	0	2	41.100888	-105.149174
527	5310		Down Milepost	527.00	0	42	T	0	0	2	41.099670	-105.130095
526	5292		Down Milepost	526.00	0	39	T	0	0	2	41.099683	-105.110982
526	1991		Posted Speed	45.00	0	40	T	0	0	2	41.099063	-105.103829
526	3255		Posted Speed	50.00	0	40	C	0	0	2	41.098450	-105.099359
525	5263		Down Milepost	525.00	0	39	T	0	0	2	41.094899	-105.093837
524	5235		Down Milepost	524.00	0	39	T	0	0	2	41.091006	-105.076500
523	5219		Down Milepost	523.00	0	29	T	0	0	2	41.091877	-105.057814



Exception Report  
 Exception List Section  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
523	4893		Posted Speed	70.00	0	43	E	0	0	2	41.094262	-105.040450
522	5444		Down Milepost	522.00	0	46	T	0	0	2	41.094154	-105.038458
521	5274		Down Milepost	521.00	0	67	T	0	0	2	41.093106	-105.019430
520	5246		Down Milepost	520.00	0	60	C	0	0	2	41.090907	-105.000744
520	4645		Posted Speed	60.00	0	60	T	0	0	2	41.090357	-104.983990
520	5049	155	<b>Twist 31ft*</b>	1.32	4	60	B	2	4	2	41.090339	-104.982531
520	5094	159	<b>Warp 62</b>	1.88	62	60	B	3	4	2	41.090337	-104.982369
519	5221		Down Milepost	519.00	0	60	B	0	0	2	41.090327	-104.981905
519	1363		Posted Speed	70.00	0	61	T	0	0	2	41.089519	-104.977117
518	5390		Down Milepost	518.00	0	70	T	0	0	2	41.086008	-104.963304
517	5173		Down Milepost	517.00	0	69	T	0	0	2	41.086823	-104.945170
516	5380		Down Milepost	516.00	0	60	T	0	0	2	41.092449	-104.927188
516	1057		Posted Speed	60.00	0	60	T	0	0	2	41.093551	-104.923653
515	5358		Down Milepost	515.00	0	60	C	0	0	2	41.096453	-104.908631
515	1043		Posted Speed	70.00	0	60	T	0	0	2	41.097549	-104.905154
514	5262		Down Milepost	514.00	0	52	T	0	0	2	41.102686	-104.891490
513	5378		Down Milepost	513.00	0	39	T	0	0	2	41.109230	-104.874060
512	5314		Down Milepost	512.00	0	35	T	0	0	2	41.115683	-104.856818
512	960		Class Change	3.00	0	34	T	0	0	2	41.116848	-104.853706
512	960		Posted Speed	40.00	0	34	T	0	0	2	41.116848	-104.853706
511	5314		Down Milepost	511.00	0	23	C	0	0	2	41.122852	-104.840105
511	2232		Track Change	0.00	0	26	C	0	0	1	41.124882	-104.832490

Notes:

\* Federal Track Safety Standard Advisory

+ Maximum curve speed is limited at qualified cant deficiency. However, actual cant deficiency does not exceed 1-inch grace allowed under 49 CFR 213.57(b).

Rail Impact Values are unitless; indicating a location with a large vertical axle acceleration

Rail Cant Exceptions values indicate degrees.

(RSA) indicates possible Rail Seat Abrasion. The following fields are irrelevant for Cant Exceptions: LC, PC







Exception Report  
 Curve Analysis Section  
 Milepost 682 to Milepost 511

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 Run Date: 08/17/2018  
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Rawlins, WY to Cheyenne, WY

Elevation plus(+) = L Rail High, minus(-) = R Rail High      Curvature plus(+) = Curve to Right, minus(-) = Curve to Left

Track	Starting		Ending		Average		Speed		Limiting Point		Total		Limiting Speed at										
	MP	FT	MP	FT	Len	Spd	Curve	Elev	MP	FT	Curve	Elev	FT	Grp	3.0	4.0	5.0	6.0	7.0	8.0	9.0		
							Deg/Mi	Inches			Deg/Mi	Inches											
2	521	2324	521	3550	1227	67	0/56	1.75	70	81	521	3037	0/59	1.45	0	0	<b>81</b>	89	96	104	111	117	123
2	521	4973	520	1311	1586	60	-0/56	-2.2	70	87	521	5242	-0/57	-2.07	0	0	<b>87</b>	95	103	110	116	123	129
2	520	5046	519	1088	1265	60	1/49	3.84	60	71	519	436	1/57	3.94	0	0	<b>71</b>	76	80	85	89	93	97
2	518	247	518	4553	4307	70	-0/56	-2.05	70	84	518	3686	-0/58	-1.85	0	0	<b>84</b>	93	100	108	114	121	127
2	516	1612	516	1979	368	60	1/48	5.27	60	75	516	1859	1/56	4.61	0	0	<b>75</b>	79	84	88	92	96	100
2	516	1979	516	2402	424	60	1/55	4.86	60	74	516	2071	2/00	4.73	0	0	<b>74</b>	78	83	87	91	95	99
2	516	4616	515	996	1740	60	-0/57	-3.05	60	92	515	585	-1/00	-2.91	0	0	<b>92</b>	99	106	112	119	124	130
2	512	966	512	1537	572	33	-1/08	-0.9	40	68	512	1426	-1/10	-0.82	0	0	<b>68</b>	76	84	91	97	103	109
2	512	4485	511	616	1447	25	0/56	1.31	40	78	512	5064	1/01	1.29	0	0	<b>78</b>	86	94	101	108	114	120
2	511	1448	511	1752	305	27	-1/46	0.25	40	47	511	1590	-1/46	0.27	0	0	<b>47</b>	54	61	68	73	79	84
2	511	1752	511	2022	271	26	1/36	0.24	40	50	511	1870	1/45	0.01	0	0	<b>50</b>	57	63	70	75	80	85
1	511	2022	511	2924	903	26	-0/59	-1.15	40	72	511	2216	-1/03	-0.85	0	0	<b>72</b>	81	89	96	103	109	115

Notes:

+ Maximum curve speed is limited at qualified cant deficiency.  
 However, actual cant deficiency does not exceed 1-inch grace allowed under 49 CFR 213.57(b).

Exception Report  
 Exception Summary Section  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

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 Run Date: 08/17/2018  
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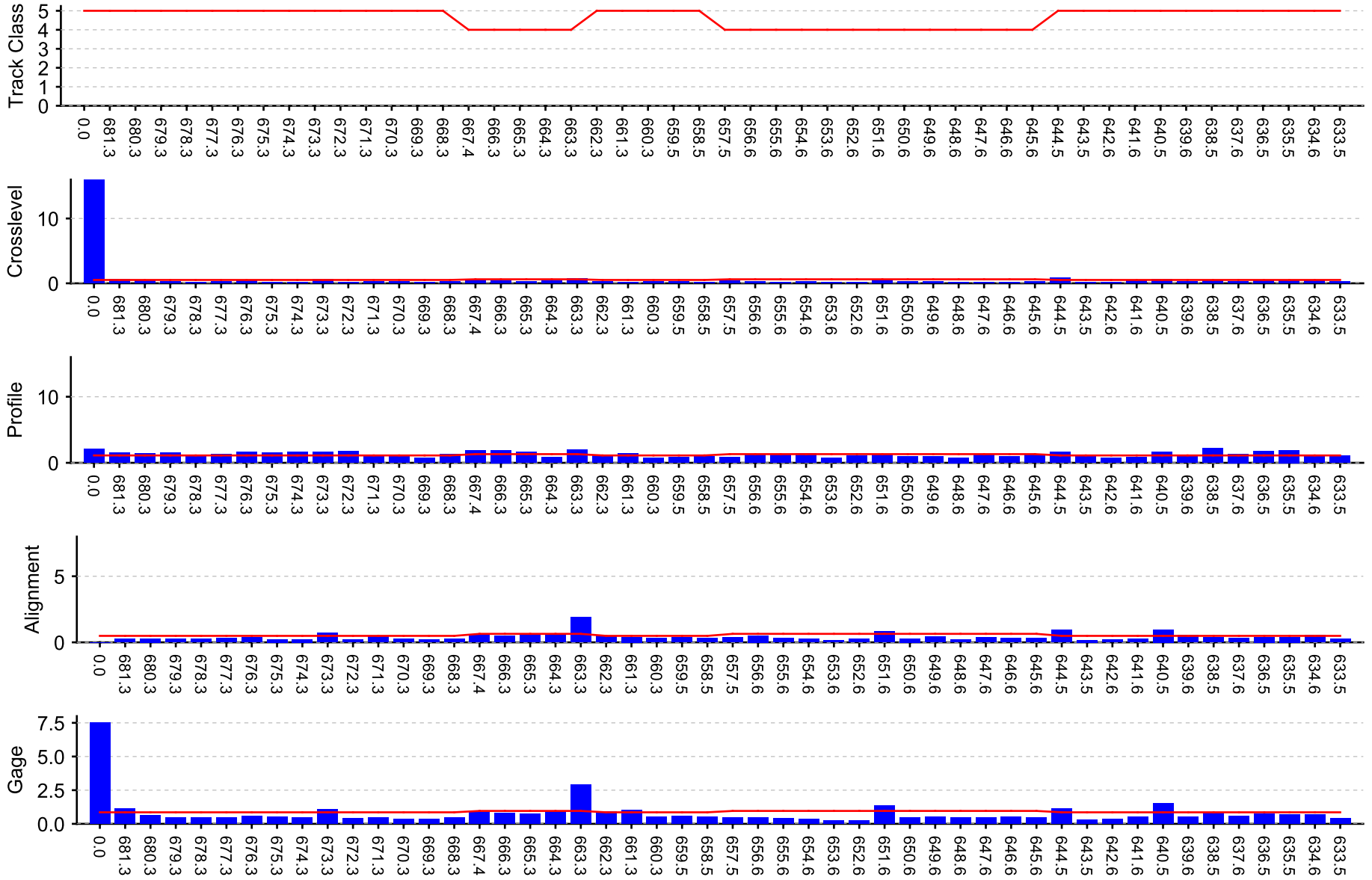
MP	FT	Wide Gage			Tight Gage		Alignment			Crosslevel			Rockoff			Profile			Run Off			Warp			Twist-31			Lmt Spd	Lim	Pst	Trk
		Exc	FT	Drop	Exc	FT	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc			
633	5482	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	2
608	5397	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	2
592	5328	-	-	-	-	-	-	-	-	1	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	2
584	5393	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	4	5	2
575	5445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7	-	-	-	-	-	-	-	-	-	-	-	4	5	2
548	5384	1	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	2
520	5246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	62	-	1	4	1	-	2	4	2
		1	15	1	-	-	1	1	-	2	14	-	-	-	-	3	11	-	-	-	-	1	62	-	1	4	1	-			

**Total Miles: 170.90**  
**Exceptions per 100 Miles: 5.27**  
**CY17 National Average Exceptions per 100 miles: 7.1**

# Track Quality Index

Milepost 682 to Milepost 511

Rawlins, WY - Cheyenne, WY

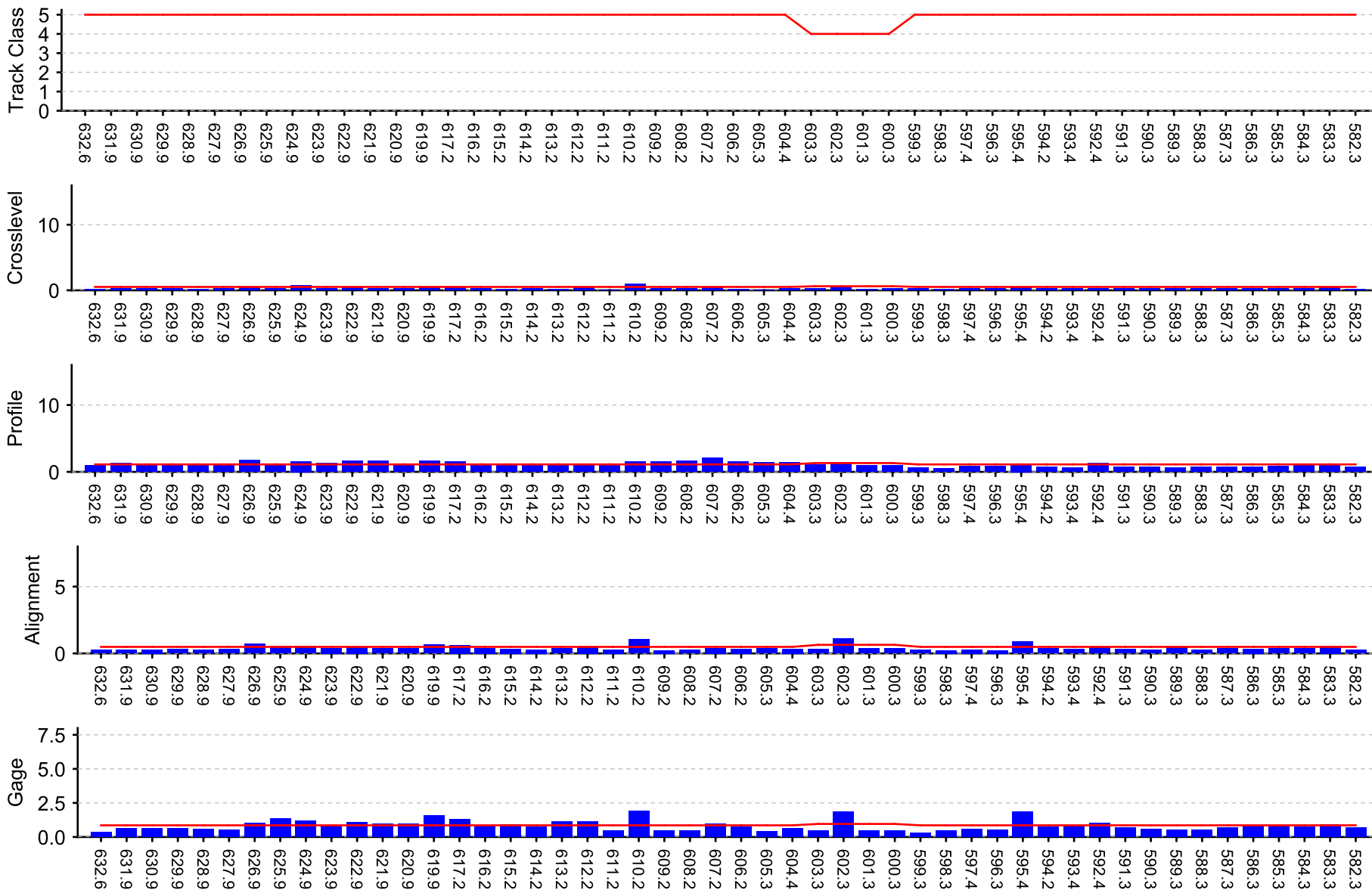


# Track Quality Index

Milepost 682 to Milepost 511

Rawlins, WY

- Cheyenne, WY



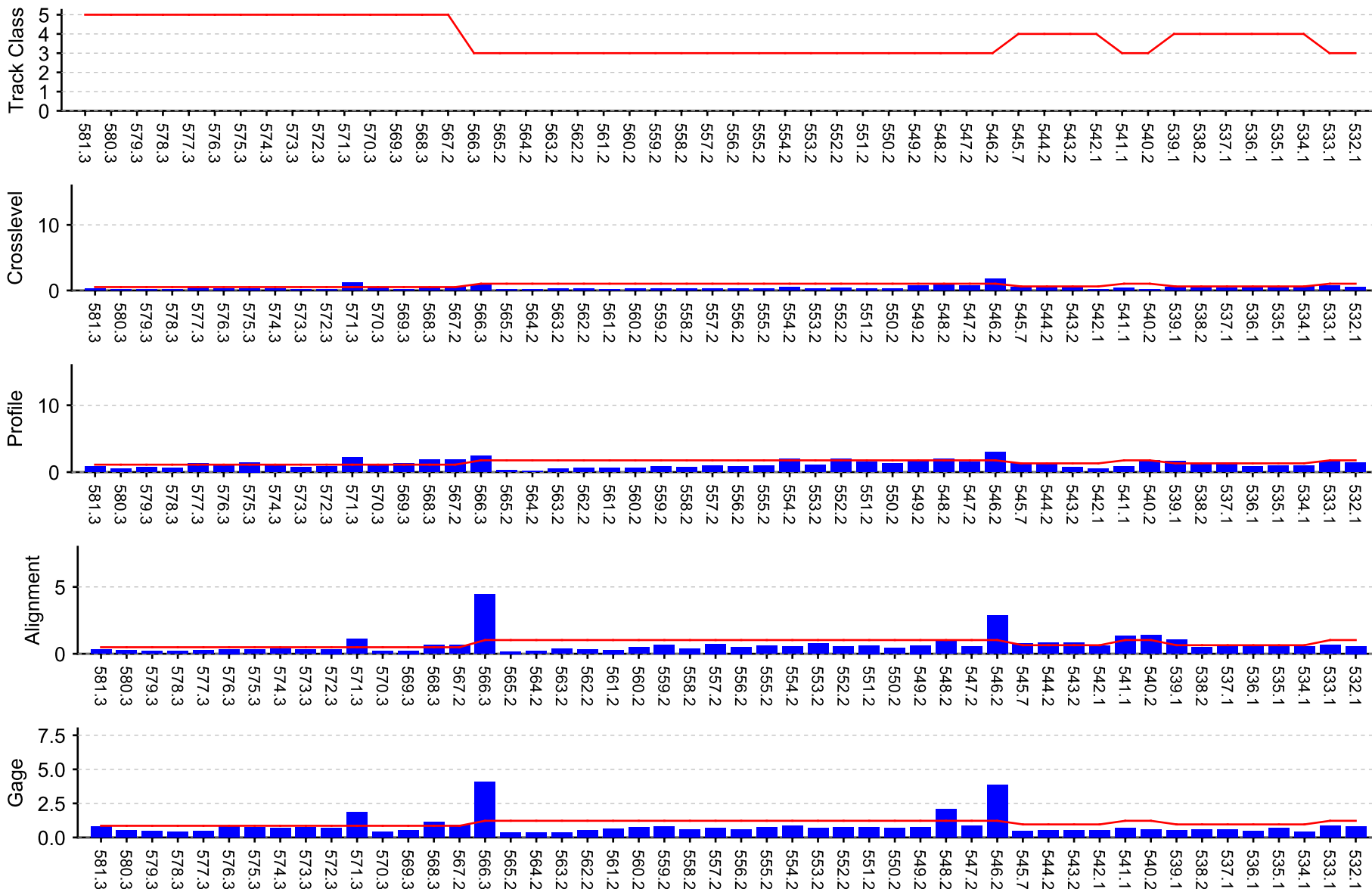


# Track Quality Index

Milepost 682 to Milepost 511

Rawlins, WY

- Cheyenne, WY

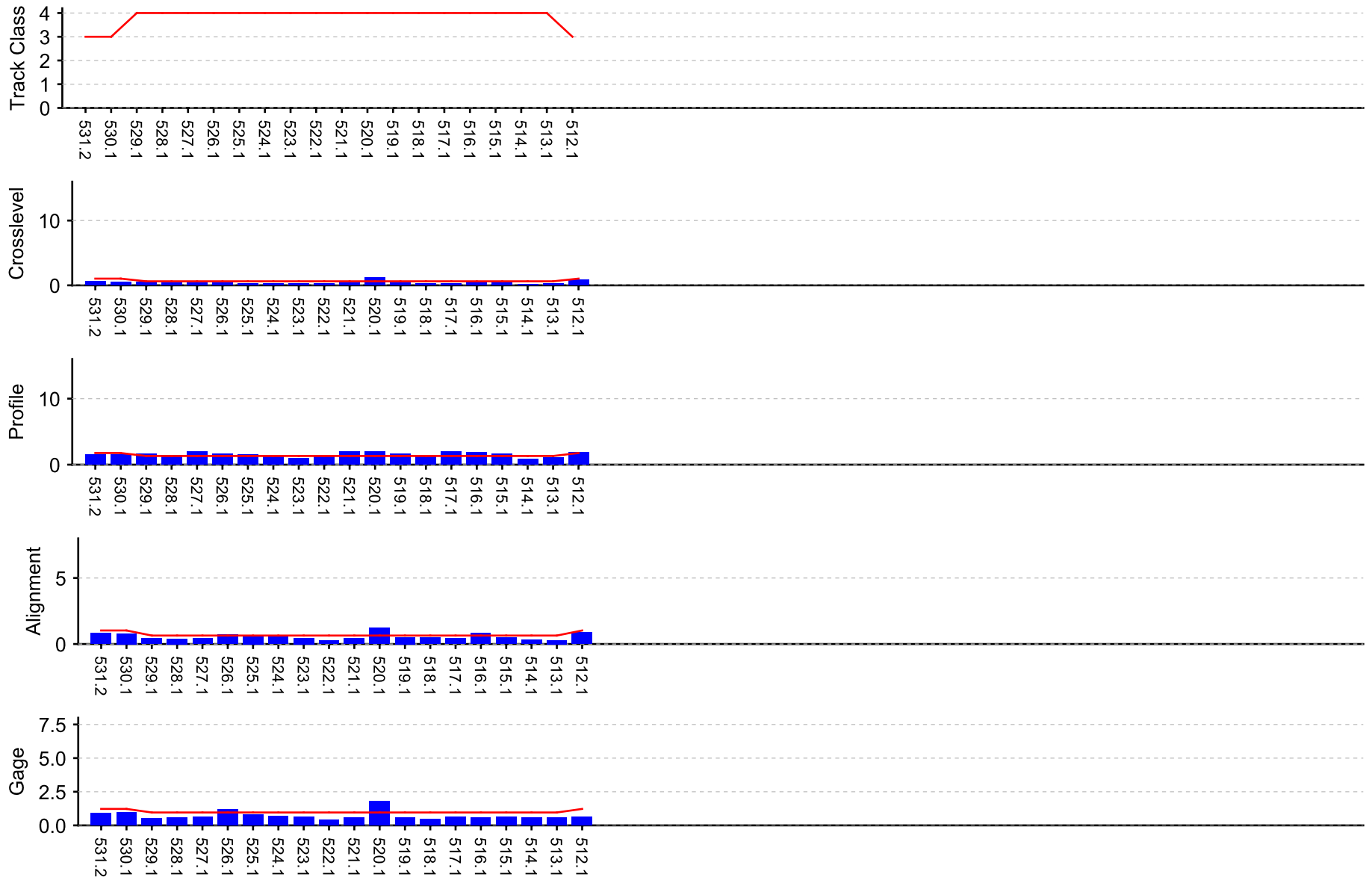


# Track Quality Index

Milepost 682 to Milepost 511

Rawlins, WY

- Cheyenne, WY



Exception Report  
Class Plus 1 Exception List Section  
Milepost 682 to Milepost 511  
Rawlins, WY to Cheyenne, WY

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Run Date: 08/17/2018  
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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
0	141		State Line	WY	0	6	B	0	0	7	41.788983	-107.216296
0	142		Railroad	UP -	0	6	B	0	0	7	41.788983	-107.216292
0	143		Railroad	UP -	0	6	B	0	0	7	41.788984	-107.216289
0	144		Subdivision	LARAMI	0	6	B	0	0	7	41.788984	-107.216286
682	202		Down Milepost	682.00	0	7	C	0	0	7	41.789011	-107.216071
682	2643		Class Change	1.00	0	7	C	0	0	7	41.789012	-107.216064
682	2643		Posted Speed	10.00	0	7	C	0	0	7	41.789012	-107.216064
682	2651		Track Change	0.00	0	7	C	0	0	7	41.789016	-107.216035
682	4716		Class Change	3.00	0	10	C	0	0	7	41.788692	-107.208632
682	4716		Posted Speed	40.00	0	10	C	0	0	7	41.788692	-107.208632
682	4739		Track Change	0.00	0	10	E	0	0	6	41.788674	-107.208551
682	5096		Class Change	4.00	0	12	E	0	0	6	41.788374	-107.207310
682	5096		Posted Speed	55.00	0	12	E	0	0	6	41.788374	-107.207310
682	5129	44	<b>L Align 62</b>	0.86	5	13	E	4	5	6	41.788343	-107.207197
682	5132		Track Change	0.00	0	13	E	0	0	2	41.788340	-107.207187
681	6239		Down Milepost	681.00	0	14	E	0	0	2	41.787211	-107.203415
681	681		Class Change	5.00	0	14	C	0	0	2	41.786593	-107.201064
681	681		Posted Speed	79.00	0	14	C	0	0	2	41.786593	-107.201064
680	5211		Down Milepost	680.00	0	34	T	0	0	2	41.782882	-107.185307
679	5327		Down Milepost	679.00	0	37	T	0	0	2	41.779143	-107.166483
678	5304		Down Milepost	678.00	0	43	T	0	0	2	41.776669	-107.147493
677	5196		Down Milepost	677.00	0	42	T	0	0	2	41.777199	-107.128532
676	5298		Down Milepost	676.00	0	45	T	0	0	2	41.777688	-107.109160
675	5327		Down Milepost	675.00	0	47	T	0	0	2	41.778256	-107.089709
674	5196		Down Milepost	674.00	0	51	T	0	0	2	41.778773	-107.070726
673	5343		Down Milepost	673.00	0	57	T	0	0	2	41.779300	-107.051209
672	5422		Down Milepost	672.00	0	60	T	0	0	2	41.779834	-107.031422
671	5178		Down Milepost	671.00	0	59	T	0	0	2	41.780339	-107.012507
670	5303		Down Milepost	670.00	0	53	T	0	0	2	41.780668	-106.993137
669	5195		Down Milepost	669.00	0	55	T	0	0	2	41.779869	-106.974176
668	5218		Down Milepost	668.00	0	48	C	0	0	2	41.777378	-106.955428
667	4908		Down Milepost	667.00	0	46	T	0	0	2	41.777306	-106.937493
667	2311		Class Change	4.00	0	43	T	0	0	2	41.777297	-106.929048
667	2311		Posted Speed	65.00	0	43	T	0	0	2	41.777297	-106.929048
666	5456		Down Milepost	666.00	0	44	C	0	0	2	41.774876	-106.918311
665	5236		Down Milepost	665.00	0	52	C	0	0	2	41.765914	-106.903617
664	5390		Down Milepost	664.00	0	57	T	0	0	2	41.762136	-106.884801
663	5199		Down Milepost	663.00	0	55	C	0	0	2	41.758172	-106.866746
662	5248		Down Milepost	662.00	0	54	T	0	0	2	41.760319	-106.847802

Exception Report  
Class Plus 1 Exception List Section  
Milepost 682 to Milepost 511  
Rawlins, WY to Cheyenne, WY

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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
662	5390		Class Change	5.00	0	55	E	0	0	2	41.764888	-106.829516
662	5390		Posted Speed	79.00	0	55	E	0	0	2	41.764888	-106.829516
661	5444		Down Milepost	661.00	0	55	T	0	0	2	41.764995	-106.829375
660	5244		Down Milepost	660.00	0	60	T	0	0	2	41.775246	-106.815965
659	4436		Down Milepost	659.00	0	60	C	0	0	2	41.784850	-106.806421
658	5225		Down Milepost	658.00	0	51	C	0	0	2	41.799041	-106.807548
657	5128		Down Milepost	657.00	0	56	C	0	0	2	41.810265	-106.798222
657	2893		Class Change	4.00	0	51	T	0	0	2	41.813181	-106.788390
657	2893		Posted Speed	65.00	0	51	T	0	0	2	41.813181	-106.788390
656	4874		Down Milepost	656.00	0	49	C	0	0	2	41.815606	-106.781940
655	5231		Down Milepost	655.00	0	50	T	0	0	2	41.826607	-106.769967
654	5263		Down Milepost	654.00	0	46	C	0	0	2	41.832743	-106.753371
654	2399	72	<b>Crosslevel</b>	1.16	6	47	T	4	5	2	41.831474	-106.744766
653	5311		Down Milepost	653.00	0	49	T	0	0	2	41.832553	-106.734458
652	5475		Down Milepost	652.00	0	51	T	0	0	2	41.836422	-106.715381
651	5179		Down Milepost	651.00	0	55	T	0	0	2	41.836807	-106.696469
651	1865	73	<b>Twist 31ft*</b>	0.90	5	58	B	4	5	2	41.837781	-106.689773
650	5227		Down Milepost	650.00	0	52	T	0	0	2	41.834721	-106.678571
649	5330		Down Milepost	649.00	0	49	C	0	0	2	41.830197	-106.660579
648	5410		Down Milepost	648.00	0	42	B	0	0	2	41.832836	-106.641107
647	5250		Down Milepost	647.00	0	46	T	0	0	2	41.842911	-106.628245
647	4906	78	<b>Twist 31ft*</b>	-0.94	87	49	E	4	5	2	41.853694	-106.617683
646	5246		Down Milepost	646.00	0	48	T	0	0	2	41.854251	-106.616683
646	4630	79	<b>Twist 31ft*</b>	-0.91	4	45	E	4	5	2	41.861384	-106.602755
645	5140		Down Milepost	645.00	0	45	T	0	0	2	41.861817	-106.600978
644	5546		Down Milepost	644.00	0	51	T	0	0	2	41.866485	-106.581670
644	3182		Class Change	5.00	0	55	T	0	0	2	41.868384	-106.570399
644	3182		Posted Speed	79.00	0	55	T	0	0	2	41.868384	-106.570399
643	5277		Down Milepost	643.00	0	56	T	0	0	2	41.868240	-106.562726
642	5070		Down Milepost	642.00	0	60	T	0	0	2	41.869459	-106.544294
641	5458		Down Milepost	641.00	0	60	T	0	0	2	41.871684	-106.524541
640	5383		Down Milepost	640.00	0	61	C	0	0	2	41.874583	-106.505291
639	5140		Down Milepost	639.00	0	60	T	0	0	2	41.883700	-106.491194
638	5348		Down Milepost	638.00	0	61	C	0	0	2	41.894896	-106.478659
638	989		Class Change	4.00	0	60	T	0	0	2	41.896472	-106.475716
638	989		Posted Speed	65.00	0	60	T	0	0	2	41.896472	-106.475716
638	2663		Class Change	5.00	0	60	E	0	0	2	41.898568	-106.470322
638	2663		Posted Speed	79.00	0	60	E	0	0	2	41.898568	-106.470322
637	5233		Down Milepost	637.00	0	59	T	0	0	2	41.900349	-106.461218

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636	5383		Down Milepost	636.00	0	54	T	0	0	2	41.905540	-106.442862
635	5228		Down Milepost	635.00	0	59	T	0	0	2	41.906705	-106.424007
634	5156		Down Milepost	634.00	0	60	T	0	0	2	41.907563	-106.405431
633	5482		Down Milepost	633.00	0	60	E	0	0	2	41.910492	-106.385926
633	470		Concrete Ties Start	0.00	0	60	T	0	0	2	41.910325	-106.384219
633	2078		Concrete Ties End	0.00	0	60	T	0	0	2	41.909739	-106.378383
632	5078		Down Milepost	632.00	0	60	T	0	0	2	41.908646	-106.367507
631	3183		Down Milepost	631.00	0	61	T	0	0	2	41.907850	-106.355910
630	5321		Down Milepost	630.00	0	60	T	0	0	2	41.906469	-106.336597
629	5422		Down Milepost	629.00	0	61	T	0	0	2	41.903192	-106.317226
628	5281		Down Milepost	628.00	0	59	T	0	0	2	41.900000	-106.298366
627	5264		Down Milepost	627.00	0	60	T	0	0	2	41.896816	-106.279569
626	5301		Down Milepost	626.00	0	60	T	0	0	2	41.893605	-106.260640
625	5211		Down Milepost	625.00	0	60	T	0	0	2	41.892301	-106.241756
624	5220		Down Milepost	624.00	0	60	T	0	0	2	41.893468	-106.222709
623	5421		Down Milepost	623.00	0	59	T	0	0	2	41.894677	-106.202928
622	5367		Down Milepost	622.00	0	59	C	0	0	2	41.894765	-106.183413
621	5313		Down Milepost	621.00	0	61	T	0	0	2	41.887614	-106.166505
620	5239		Down Milepost	620.00	0	59	T	0	0	2	41.880234	-106.150062
619	5185		Down Milepost	619.00	0	60	T	0	0	2	41.872929	-106.133791
618	5371		Down Milepost	618.00	0	61	T	0	0	2	41.865359	-106.116938
617	3495		Down Milepost	617.00	0	60	C	0	0	2	41.860463	-106.105950
616	5304		Down Milepost	616.00	0	60	T	0	0	2	41.853792	-106.088716
615	5290		Down Milepost	615.00	0	60	T	0	0	2	41.847145	-106.071518
614	5362		Down Milepost	614.00	0	60	T	0	0	2	41.839158	-106.055074
613	5447		Down Milepost	613.00	0	60	T	0	0	2	41.830797	-106.038578
612	5352		Down Milepost	612.00	0	60	T	0	0	2	41.822580	-106.022370
611	5293		Down Milepost	611.00	0	59	T	0	0	2	41.816924	-106.004869
610	5204		Down Milepost	610.00	0	56	C	0	0	2	41.810121	-105.988919
609	5236		Down Milepost	609.00	0	54	T	0	0	2	41.796237	-105.985374
608	5397		Down Milepost	608.00	0	56	T	0	0	2	41.781497	-105.984168
607	5289		Down Milepost	607.00	0	50	T	0	0	2	41.767053	-105.982986
606	5392		Down Milepost	606.00	0	48	T	0	0	2	41.752324	-105.981827
605	4422		Down Milepost	605.00	0	48	T	0	0	2	41.740237	-105.980825
604	4994		Down Milepost	604.00	0	46	C	0	0	2	41.728140	-105.973563
603	5600		Down Milepost	603.00	0	44	C	0	0	2	41.723402	-105.954493
603	3345		Class Change	4.00	0	50	T	0	0	2	41.723805	-105.942316
603	3345		Posted Speed	65.00	0	50	T	0	0	2	41.723805	-105.942316
602	5300		Down Milepost	602.00	0	52	C	0	0	2	41.723672	-105.935219

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601	5090		Down Milepost	601.00	0	52	T	0	0	2	41.719809	-105.917945
600	5442		Down Milepost	600.00	0	58	T	0	0	2	41.716970	-105.899015
600	5288		Concrete Ties Start	0.00	0	59	T	0	0	2	41.706246	-105.886775
599	5330		Down Milepost	599.00	0	59	T	0	0	2	41.706145	-105.886703
599	2106		Concrete Ties End	0.00	0	57	E	0	0	2	41.701714	-105.881902
599	2557		Class Change	5.00	0	56	T	0	0	2	41.700969	-105.880590
599	2557		Posted Speed	79.00	0	56	T	0	0	2	41.700969	-105.880590
598	5117		Down Milepost	598.00	0	53	T	0	0	2	41.696741	-105.873138
597	5150		Down Milepost	597.00	0	58	T	0	0	2	41.688233	-105.858153
596	5351		Down Milepost	596.00	0	54	T	0	0	2	41.680754	-105.841438
595	5146		Down Milepost	595.00	0	57	T	0	0	2	41.674394	-105.824682
594	6078		Down Milepost	594.00	0	38	T	0	0	2	41.666877	-105.804899
594	937		Posted Speed	75.00	0	38	B	0	0	2	41.665716	-105.801850
594	3058		Posted Speed	79.00	0	42	E	0	0	2	41.661962	-105.796065
593	4460		Down Milepost	593.00	0	44	T	0	0	2	41.658820	-105.793129
592	5328		Down Milepost	592.00	0	49	T	0	0	2	41.646877	-105.781988
591	5393		Down Milepost	591.00	0	45	T	0	0	2	41.634786	-105.770720
590	5317		Down Milepost	590.00	0	50	T	0	0	2	41.623629	-105.758424
590	2474		Class Change	3.00	0	41	T	0	0	2	41.619061	-105.751768
590	2474		Posted Speed	40.00	0	41	T	0	0	2	41.619061	-105.751768
590	4990		Class Change	5.00	0	39	T	0	0	2	41.614419	-105.744999
590	4990		Posted Speed	79.00	0	39	T	0	0	2	41.614419	-105.744999
589	5192		Down Milepost	589.00	0	39	T	0	0	2	41.614044	-105.744453
589	3515		Class Change	4.00	0	39	T	0	0	2	41.607556	-105.734997
589	3515		Posted Speed	65.00	0	39	T	0	0	2	41.607556	-105.734997
588	5289		Down Milepost	588.00	0	40	T	0	0	2	41.604942	-105.729602
588	1782		Class Change	5.00	0	40	E	0	0	2	41.602284	-105.724234
588	1782		Posted Speed	79.00	0	40	E	0	0	2	41.602284	-105.724234
588	2712		Class Change	3.00	0	39	T	0	0	2	41.600439	-105.721901
588	2712		Posted Speed	40.00	0	39	T	0	0	2	41.600439	-105.721901
588	4063		Class Change	5.00	0	40	T	0	0	2	41.597754	-105.718518
588	4063		Posted Speed	79.00	0	40	T	0	0	2	41.597754	-105.718518
587	5357		Down Milepost	587.00	0	41	T	0	0	2	41.595185	-105.715274
586	5307		Down Milepost	586.00	0	50	C	0	0	2	41.584499	-105.702197
585	5276		Down Milepost	585.00	0	50	T	0	0	2	41.571451	-105.694011
584	5393		Down Milepost	584.00	0	49	T	0	0	2	41.558003	-105.685926
583	5235		Down Milepost	583.00	0	49	T	0	0	2	41.544950	-105.678082
582	5252		Down Milepost	582.00	0	54	T	0	0	2	41.531853	-105.670215
581	5392		Down Milepost	581.00	0	55	T	0	0	2	41.518405	-105.662143

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580	5323		Down Milepost	580.00	0	57	T	0	0	2	41.505129	-105.654175
579	5317		Down Milepost	579.00	0	60	T	0	0	2	41.491866	-105.646219
578	5317		Down Milepost	578.00	0	60	T	0	0	2	41.478605	-105.638267
577	5221		Down Milepost	577.00	0	60	T	0	0	2	41.465581	-105.630461
576	5172		Down Milepost	576.00	0	59	T	0	0	2	41.452111	-105.625013
575	5445		Down Milepost	575.00	0	60	T	0	0	2	41.437509	-105.621082
574	5360		Down Milepost	574.00	0	60	T	0	0	2	41.423136	-105.617215
573	5188		Down Milepost	573.00	0	60	T	0	0	2	41.409223	-105.613475
572	5275		Down Milepost	572.00	0	60	T	0	0	2	41.395080	-105.609630
571	5266		Down Milepost	571.00	0	60	T	0	0	2	41.380918	-105.606142
570	5361		Down Milepost	570.00	0	58	T	0	0	2	41.366390	-105.603425
569	5341		Down Milepost	569.00	0	52	T	0	0	2	41.351920	-105.600700
568	5179		Down Milepost	568.00	0	44	T	0	0	2	41.337904	-105.597993
567	5466		Down Milepost	567.00	0	38	C	0	0	2	41.323088	-105.595244
566	5136		Down Milepost	566.00	0	29	T	0	0	2	41.309079	-105.596607
566	3719		Class Change	3.00	0	29	T	0	0	2	41.298940	-105.597701
566	3719		Posted Speed	45.00	0	29	T	0	0	2	41.298940	-105.597701
565	5375		Down Milepost	565.00	0	21	E	0	0	2	41.294772	-105.596137
564	5464		Down Milepost	564.00	0	43	T	0	0	2	41.282625	-105.584066
563	5140		Down Milepost	563.00	0	45	T	0	0	2	41.271218	-105.573149
562	5273		Down Milepost	562.00	0	45	C	0	0	2	41.259505	-105.561977
561	5314		Down Milepost	561.00	0	45	T	0	0	2	41.245214	-105.558936
560	5237		Down Milepost	560.00	0	46	T	0	0	2	41.230983	-105.556725
559	5398		Down Milepost	559.00	0	45	B	0	0	2	41.216315	-105.554435
558	5262		Down Milepost	558.00	0	46	T	0	0	2	41.203063	-105.548956
557	5124		Down Milepost	557.00	0	45	T	0	0	2	41.189041	-105.549072
556	5535		Down Milepost	556.00	0	45	B	0	0	2	41.173932	-105.549156
555	5253		Down Milepost	555.00	0	46	B	0	0	2	41.161990	-105.539358
554	5277		Down Milepost	554.00	0	44	T	0	0	2	41.155002	-105.523119
554	5248		Posted Speed	30.00	0	30	T	0	0	2	41.143828	-105.511682
553	5341		Down Milepost	553.00	0	29	T	0	0	2	41.143586	-105.511567
552	5336		Down Milepost	552.00	0	30	B	0	0	2	41.129402	-105.510183
552	4150		Posted Speed	45.00	0	30	B	0	0	2	41.121123	-105.502249
551	5209		Down Milepost	551.00	0	31	C	0	0	2	41.119423	-105.499174
550	5208		Down Milepost	550.00	0	43	C	0	0	2	41.106223	-105.499827
549	5463		Down Milepost	549.00	0	41	C	0	0	2	41.091889	-105.494849
549	5264	113	<b>Gage Wide</b>	57.63	5	34	C	3	4	2	41.080578	-105.483142
548	5384		Down Milepost	548.00	0	33	C	0	0	2	41.080364	-105.482810
548	748	115	<b>Gage Wide</b>	58.02	21	32	C	0	4	2	41.079423	-105.480425

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548	3774		Track Change	0.00	0	24	E	0	0	2	41.078136	-105.469623
548	4299	132	<b>Gage Wide</b>	57.61	2	24	C	3	4	2	41.078063	-105.467746
548	4922	133	<b>Gage Wide</b>	57.63	6	28	E	3	4	2	41.078402	-105.465550
547	5154		Down Milepost	547.00	0	29	E	0	0	2	41.078645	-105.464771
546	5198		Down Milepost	546.00	0	43	C	0	0	2	41.083714	-105.447278
545	8161		Down Milepost	544.00	0	38	T	0	0	2	41.083611	-105.418606
545	504		Class Change	4.00	0	39	B	0	0	2	41.084074	-105.416889
545	504		Posted Speed	50.00	0	39	B	0	0	2	41.084074	-105.416889
545	2528		Down Milepost	544.00	0	39	T	0	0	2	41.083251	-105.409865
543	5251		Down Milepost	543.00	0	36	T	0	0	2	41.083189	-105.391772
543	1773	140	<b>Twist 31ft*</b>	-0.92	11	35	B	4	5	2	41.085454	-105.386097
543	5192	141	<b>R Align 62</b>	-0.80	8	40	C	4	5	2	41.092842	-105.379000
543	5193	142	<b>L Align 62</b>	-0.80	9	40	C	4	5	2	41.092844	-105.378998
542	5452		Down Milepost	542.00	0	40	E	0	0	2	41.093286	-105.378263
542	3062	143	<b>Twist 31ft*</b>	1.03	7	41	B	3	5	2	41.097823	-105.368944
542	3073	144	<b>Twist 31ft*</b>	0.92	5	41	B	4	5	2	41.097839	-105.368910
541	5253		Down Milepost	541.00	0	41	T	0	0	2	41.098441	-105.361383
541	2714		Class Change	3.00	0	45	T	0	0	2	41.098081	-105.351666
541	2714		Posted Speed	45.00	0	45	T	0	0	2	41.098081	-105.351666
540	5151		Down Milepost	540.00	0	45	C	0	0	2	41.100726	-105.344195
539	5466		Down Milepost	539.00	0	44	T	0	0	2	41.113506	-105.342681
538	5124		Down Milepost	538.00	0	45	E	0	0	2	41.123138	-105.330635
538	870		Class Change	4.00	0	46	T	0	0	2	41.122779	-105.327525
538	870		Posted Speed	70.00	0	46	T	0	0	2	41.122779	-105.327525
537	5436		Down Milepost	537.00	0	54	T	0	0	2	41.122124	-105.311133
537	714		Posted Speed	60.00	0	55	B	0	0	2	41.122310	-105.308561
536	5295		Down Milepost	536.00	0	57	T	0	0	2	41.120576	-105.292170
535	5275		Down Milepost	535.00	0	58	B	0	0	2	41.113239	-105.276155
534	5272		Down Milepost	534.00	0	60	T	0	0	2	41.108049	-105.258402
534	2760	145	<b>Rev Elevation</b>	-1.16	6	60	E	4	5	2	41.105171	-105.249212
533	5214		Down Milepost	533.00	0	60	B	0	0	2	41.101347	-105.241910
533	3257	147	<b>R Prof 62</b>	-1.75	5	53	T	4	5	2	41.099438	-105.230505
533	3258	148	<b>Crosslevel</b>	1.27	6	53	T	3	5	2	41.099438	-105.230501
533	4900		Class Change	3.00	0	50	T	0	0	2	41.098816	-105.224622
533	4900		Posted Speed	50.00	0	50	T	0	0	2	41.098816	-105.224622
532	5355		Down Milepost	532.00	0	50	B	0	0	2	41.098618	-105.222995
531	5097		Down Milepost	531.00	0	50	T	0	0	2	41.097868	-105.205687
530	5413		Down Milepost	530.00	0	47	E	0	0	2	41.101792	-105.187146
529	5294		Down Milepost	529.00	0	47	T	0	0	2	41.099040	-105.168446



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529	2265		Class Change	4.00	0	40	T	0	0	2	41.099675	-105.160384
529	2265		Posted Speed	70.00	0	40	T	0	0	2	41.099675	-105.160384
529	2934	149	<b>R Prof 62</b>	1.42	8	36	B	4	5	2	41.100206	-105.158067
529	2958	150	<b>Twist 31ft*</b>	1.04	3	36	B	3	5	2	41.100225	-105.157984
529	2974	151	<b>R Prof 62</b>	-1.47	6	36	B	4	5	2	41.100237	-105.157928
528	5420		Down Milepost	528.00	0	44	C	0	0	2	41.100888	-105.149174
527	5310		Down Milepost	527.00	0	42	T	0	0	2	41.099670	-105.130095
526	5292		Down Milepost	526.00	0	39	T	0	0	2	41.099683	-105.110982
526	1991		Posted Speed	45.00	0	40	T	0	0	2	41.099063	-105.103829
526	3255		Posted Speed	50.00	0	40	C	0	0	2	41.098450	-105.099359
525	5263		Down Milepost	525.00	0	39	T	0	0	2	41.094899	-105.093837
524	5235		Down Milepost	524.00	0	39	T	0	0	2	41.091006	-105.076500
523	5219		Down Milepost	523.00	0	29	T	0	0	2	41.091877	-105.057814
523	4893		Posted Speed	70.00	0	43	E	0	0	2	41.094262	-105.040450
522	5444		Down Milepost	522.00	0	46	T	0	0	2	41.094154	-105.038458
521	5274		Down Milepost	521.00	0	67	T	0	0	2	41.093106	-105.019430
521	2314	152	<b>R Prof 62</b>	-1.36	1	68	T	4	5	2	41.092642	-105.011082
521	3696	153	<b>R Prof 62</b>	-1.45	3	62	T	4	5	2	41.091982	-105.006171
520	5246		Down Milepost	520.00	0	60	C	0	0	2	41.090907	-105.000744
520	4645		Posted Speed	60.00	0	60	T	0	0	2	41.090357	-104.983990
520	5049	156	<b>Twist 31ft*</b>	1.32	10	60	B	2	5	2	41.090339	-104.982531
520	5065	157	<b>Twist 31ft*</b>	1.09	4	60	B	3	5	2	41.090338	-104.982473
520	5075	158	<b>R Align 31</b>	-0.87	3	60	B	4	5	2	41.090338	-104.982437
520	5094	160	<b>Warp 62</b>	1.88	62	60	B	3	5	2	41.090337	-104.982369
519	5221		Down Milepost	519.00	0	60	B	0	0	2	41.090327	-104.981905
519	983	161	<b>Twist 31ft*</b>	-0.90	2	60	E	4	5	2	41.089848	-104.978420
519	1363		Posted Speed	70.00	0	61	T	0	0	2	41.089519	-104.977117
518	5390		Down Milepost	518.00	0	70	T	0	0	2	41.086008	-104.963304
517	5173		Down Milepost	517.00	0	69	T	0	0	2	41.086823	-104.945170
516	5380		Down Milepost	516.00	0	60	T	0	0	2	41.092449	-104.927188
516	1057		Posted Speed	60.00	0	60	T	0	0	2	41.093551	-104.923653
516	1703	162	<b>Twist 31ft*</b>	0.87	2	60	B	4	5	2	41.094223	-104.921496
516	1708	163	<b>Twist 31ft*</b>	0.86	1	60	B	4	5	2	41.094228	-104.921479
516	1713	164	<b>Twist 31ft*</b>	0.92	7	60	B	4	5	2	41.094233	-104.921462
516	1728	165	<b>Twist 31ft*</b>	0.93	5	60	B	4	5	2	41.094248	-104.921412
516	1741	166	<b>Twist 31ft*</b>	0.89	6	60	B	4	5	2	41.094261	-104.921368
516	1755	167	<b>Twist 31ft*</b>	0.88	4	60	B	4	5	2	41.094275	-104.921321
516	1759	168	<b>Warp 62</b>	1.76	62	60	B	3	5	2	41.094279	-104.921307
516	2205	169	<b>Twist 31ft*</b>	-0.86	3	60	E	4	5	2	41.094644	-104.919765

Exception Report  
 Class Plus 1 Exception List Section  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

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MP	FT	Seq#	Parameter	Value	Length	Speed	TSC	LC	PC	Track	Latitude	Longitude
516	2249	170	<b>Warp 62</b>	1.65	62	60	E	4	5	2	41.094671	-104.919610
516	4128	172	<b>L Prof 62</b>	-1.81	8	59	T	4	5	2	41.095694	-104.912965
516	4129	171	<b>R Prof 62</b>	-1.38	1	59	T	4	5	2	41.095695	-104.912961
515	5358		Down Milepost	515.00	0	60	C	0	0	2	41.096453	-104.908631
515	1043		Posted Speed	70.00	0	60	T	0	0	2	41.097549	-104.905154
515	2831	173	<b>R Align 62</b>	0.87	1	58	T	4	5	2	41.099724	-104.899362
515	2868	174	<b>L Align 62</b>	-0.90	3	58	T	4	5	2	41.099769	-104.899243
515	2975	175	<b>Crosslevel</b>	1.31	20	58	T	3	5	2	41.099899	-104.898896
514	5262		Down Milepost	514.00	0	52	T	0	0	2	41.102686	-104.891490
513	5378		Down Milepost	513.00	0	39	T	0	0	2	41.109230	-104.874060
512	5314		Down Milepost	512.00	0	35	T	0	0	2	41.115683	-104.856818
512	960		Class Change	3.00	0	34	T	0	0	2	41.116848	-104.853706
512	960		Posted Speed	40.00	0	34	T	0	0	2	41.116848	-104.853706
511	5314		Down Milepost	511.00	0	23	C	0	0	2	41.122852	-104.840105
511	2232		Track Change	0.00	0	26	C	0	0	1	41.124882	-104.832490

Notes:

\* Federal Track Safety Standard Advisory

+ Maximum curve speed is limited at qualified cant deficiency. However, actual cant deficiency does not exceed 1-inch grace allowed under 49 CFR 213.57(b).

Rail Impact Values are unitless; indicating a location with a large vertical axle acceleration

Rail Cant Exceptions values indicate degrees.

(RSA) indicates possible Rail Seat Abrasion. The following fields are irrelevant for Cant Exceptions: LC, PC

Exception Report  
 Class Plus 1 Exception Summary Section  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

MP	FT	Wide Gage			Tight Gage		Alignment			Crosslevel			Rockoff			Profile			Run Off			Warp			Twist-31			Lmt Spd	Lim	Pst	Trk
		Exc	FT	Drop	Exc	FT	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc	FT	Drop	Exc			
682	5096	-	-	-	-	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6	
654	5263	-	-	-	-	-	-	-	-	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	2	
651	5179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	-	-	4	5	2		
647	5250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	87	-	-	4	5	2		
646	5246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	-	4	5	2		
549	5463	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	2		
548	5384	1	21	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4	2		
548	3774	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	2		
543	5251	-	-	-	-	-	2	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11	-	-	4	5	2		
542	5452	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	12	1	-	3	5	2		
534	5272	-	-	-	-	-	-	-	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	2		
533	5214	-	-	-	-	-	-	-	1	6	1	-	-	-	1	5	-	-	-	-	-	-	-	-	-	-	3	5	2		
529	2265	-	-	-	-	-	-	-	-	-	-	-	-	-	2	14	-	-	-	-	-	-	1	3	1	-	3	5	2		
521	5274	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	-	-	-	-	-	-	-	-	-	-	4	5	2		
520	5246	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	1	62	1	2	14	2	-	2	5	2		
519	5221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	4	5	2		
516	5380	-	-	-	-	-	-	-	-	-	-	-	-	-	2	9	-	-	-	-	-	2	124	1	7	28	-	3	5	2	
515	5358	-	-	-	-	-	2	4	-	1	20	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	2		
		4	34	1	-	-	6	29	-	4	38	2	-	-	-	7	32	-	-	-	-	3	186	2	17	166	4	-	-	-	

**Total Miles: 170.90**  
**Exceptions per 100 Miles: 23.99**  
**CY17 National Average Exceptions per 100 miles: 7.1**

Exception Report  
 Alignment 62 MCO Stations  
 Milepost 682 to Milepost 511  
 Rawlins, WY to Cheyenne, WY

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	<b>MP</b>	<b>FT</b>	<b>Parameter</b>	<b>Value</b>	<b>Length</b>	<b>Speed</b>	<b>TSC</b>	<b>LC</b>	<b>PC</b>	<b>Track</b>	<b>Latitude</b>	<b>Longitude</b>
	633	631	L Align 62	-0.86	1	60	T	4	5	2	41.910266	-106.383635
	<b>MP</b>	<b>FT</b>	<b>LAlign62</b>	<b>LAlignMCO</b>	<b>RAlign62</b>	<b>RAlignMCO</b>	<b>Curve</b>	<b>Xlevel</b>	<b>Gage</b>			
1	633	569	-0.09	-0.13			0.05	0.01	56.48			
2	633	585	0.09	0.03			0.04	0.13	56.47			
3	633	600	0.58	0.58			0.0	0.03	56.49			
4	633	616	0.15	0.14			0.0	0.12	56.52			
5	633	631	-0.86	-0.92			-0.04	0.05	56.12			
6	633	646	-0.4	-0.46			-0.07	0.25	56.13			
7	633	662	0.41	0.39			-0.06	0.31	56.7			
8	633	677	0.09	0.03			-0.05	0.16	56.61			
9	633	693	-0.19	-0.27			-0.04	0.1	56.61			
	<b>AVG</b>			<b>-0.07</b>								