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7	NATIONAL TRANSPORTATION SAFETY BOARD
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g	Office of Railmad, Pipeline and Hazardous Materials Investigations
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14	MECHANICAL GROUP FACTUAL REPORT
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17	DCA16FR005
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21	Union Pacific Railroad Head-on Collision/Derailment with Injuries
22	
23	Granger, Wyoming
24	March 14, 2016
25	
26 27	
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32	Factual Report Prepared by:Date: March 18, 2016
33	J.A. Southworth
34	
35	

1	Mechanical Group
2	
3	James A. Southworth
4	Group Chairman/Railroad Accident Investigator/Investigator-In-Charge
5	National Transportation Safety Board
6	Office of Railroad, Pipeline and Hazardous Materials Investigations
7	490 L'Enfant Plaza, S.W.
8	Washington, DC 20594
9	
10	
11	Donald Jonuska
12	Motive Power and Equipment
13	Federal Railroad Administration—Region VIII
14	Office of Safety
15	2436 Hillside Drive
16	Soda Springs, Idaho 83276
17	
18	
19	Scott Sloboth
20	General Superintendent, Mechanical – Northern Region
21	Union Pacific Railroad
22	1400 Douglas Street, Stop 1080
23	Omaha, Nebraska 68179—1080
24	
25	
26	
27	

Accident

2		
3	NTSB Accident Number:	DCA16FR005
4	Date of Accident:	March 14, 2016
5	Time of Accident:	9:41 p.m. (MDT)
6	Railroad Owner:	Union Pacific Railroad (UP)
7	Train Operator:	UP (for both trains)
8	Type of Train and No:	EB Local LCK41of the 14th
9	Crew Members:	1 Engineer, 1 Conductor, 1 Brakeman
10	Type of Train and No:	WB KG1LAC of the 13th
11	Crew Members:	1 Engineer, 1 Conductor
12	Injuries:	2
13	Location of Accident:	Granger, WY
14		

Summary

For a summary of the accident, refer to the Accident Summary report, within this docket.

Parties to the investigation include the Federal Railroad Administration (FRA), Union
Pacific Railroad (UP), Brotherhood of Locomotive Engineers and Trainmen (BLET), Sheet Metal
and Rail Transportation (SMART) and Brotherhood of Maintenance of Way Employes
(BMWED).



Figure 1. This is an aerial view on March 15, 2016, looking south at the derailment area. The red downward arrow
 identifies the point of collision (impact); the yellow arrow shows the position and EB direction of travel of the stopped
 local train, LCK41; the blue arrow identifies the WB direction of travel of the striking train; the green upward arrow

identifies the "as found" position of the locomotives. Note: the striking moved the stopped train about 118' west.

4

Circumstances Prior to the Accident

Eastbound (EB) Train LCK41-14 (local train)

5 On Monday, March 14, 2016, a UP train crew, consisting of an locomotive engineer, a 6 conductor, and a brakeman, reported for duty at 2:00 p.m. MDT at Kemmerer, Wyoming. The 7 crew took charge of train LCK41-14 (LCK41). The train consisted of 2 locomotive and 45 loads 8 of coal and no empty cars. The total train length was 2,430 feet and about 6,345 trailing tons. 9 After completing a brake test and review of track bulletins, the crew departed eastbound.

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- 11 12

Westbound (WB) Train KG1LAC-13 (intermodal freight train):

The KG1LAC-13, an intermodal freight train, with a UP train crew that consisted of an locomotive engineer and a conductor, reported for duty at Green River, WY at 7:30 p.m. MDT. The crew took charge of the train and departed westbound. The westbound train originated at Chicago, Illinois (Global 1 Yard) and was destined for Los Angeles, CA.

The intermodal train consisted of 3 locomotives and 129 loads and no empty cars. The train
 was 9,104 feet in total length with 8,171 trailing tons.

21 Accident Narrative

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Train movement:

Both trains had no car restrictions and were authorized to operate at the maximum authorized track speed of 49 mph for movement on either main track in the vicinity of Granger and 30 mph on Granger siding.¹ The maximum authorized speed was reduced to 49 mph due to the suspension of the signal system. The Evanston Subdivision is predominantly a 70 mph territory between MP 817.3 and 993.6 with permanent speed restrictions listed in UP Timetable No. 5 for the Evanston Subdivision.

31

Upon departing their respective crew reporting locations, both trains proceeded toward 32 their destinations. As both trains arrived at the Granger siding area with the westbound train routed 33 to take a "main 1 to main 1" route at the east end of "long siding", according to the train dispatcher. 34 Prior to the arrival of the intermodal train, train LCK41 had traveled the Pocatello Subdivision and 35 36 entered the Granger siding at MP 844.1, at the west end of the siding. After entering the siding, the local was stopped and waiting for the westbound intermodal train to clear the east switch before 37 moving eastward. The engineer of the local stopped the local train about 1,500' west of the east 38 39 clearance point at the east end before the intermodal was making its approach to the east end. As 40 the westbound intermodal train proceeded into the OS (signal circuit) of CP 844, or the east end of Granger Siding, the train suddenly diverted from main track 1 into the Granger siding at about 41 42 46 mph. A review of event recorder data indicated that the engineer placed the train into emergency immediately; however the westbound proceeded westward and collided with the standing local 43 44 train in the Granger siding. Prior to the collision, the three crewmembers of the local departed the 45 locomotive to safety. Both crewmembers of the intermodal train remained on board through the 46 collision.

¹ Granger siding is 13,456' long and locally is known as the "long siding."

1 Postaccident Investigation

On this portion of the UP, the Evanston Subdivision consists of two main tracks between
milepost 816.9 (Green River) and milepost 936.2. UP officials indicated they operate on average
50 trains daily on the Evanston Subdivision in the Granger area.

According to UP documentation, the 2015 total combined freight tonnage traversing over main track 1 and 2 was 134 gross million tons (GMT).

Point of Impact (POI):

12 Investigators observed and photographed an area where locomotive debris from 13 locomotives was present in the gage of the siding. Investigators formed a consensus that this 14 location indicated the point of impact (POI). Investigators also determined that the POI was at MP 15 844.5, which is about 1500' west of the entrance to the east end of the siding.



Figure 2. This is a view looking east the derailed KG1LAC-13intermodal train derailed cars.

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Figure 3. Collision/impact of lead locomotives. The intermodal train lead locomotive is shown below the red arrow indicating the eastbound direction of travel. The lead locomotive for the coal train is shown below the green arrow indicating the westbound direction of travel.

Post Accident Mechanical Inspection/Testing of Railcars:

1 2 3

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5 6 7

8 On March 15 and 16, 2016, the mechanical group inspected and air brake tested the 10 equipment on LCK41-14. On March 17, 2016 the equipment on KG1LAC-13 was inspected and 11 airbrake tested. There was one locomotive and one car found defective on KG1LAC-13 and 34 12 cars found defective on the LCK41-14.

13	
14	None of the defects discovered were causal concerning this accident.
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16	The defects on KG1LAC-13 included the following:
17	
18	• UP 8456 (Trailing locomotive) Front left inboard vertical handhold bent
19	• SMW 210423; Handbrake wheel loose on shaft
20	
21	The defects on LCK41-14 included:
22	
23	• Five cars with brakes that did not function properly during an air test.
24	• Eighteen cars missing air brake valve internal vent protector diaphragms.
25	• One car missing an air brake valve external vent protector.
26	• Sixteen cars with worn out, broken or missing brake shoes.
27	• Thirteen cars with broken or loose brake steps and end platforms.
28	• One car with a loose handbrake wheel.
29	• Four cars with cracked air lines.
29 30	• Four cars with cracked air lines.

Inspection Records

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Photographic and electronic stored records of inspections and tests are pending a final
write-up after the review. Although not contributory to the accident, as part of the on-going
accident investigation and documentation of the inspected railcars and air brake tests, a qualified
FRA motive power and equipment inspector will conduct an additional inspection of UP's records
to determine compliance FRA regulations.

Parties to the Investigation - Acknowledgment Signatures

12 The undersigned designated *Party to the Investigation* representatives attest that the information 13 contained in this preliminary factual report is a factually accurate representation of the information 14 collected during the investigation, to the extent of their best knowledge and contribution in this 15 investigation.

//s//	
	Date
James Southworth, NTSB	
//s//	
	Date
Donald Jonuska, FRA	
//s//	
	Date
Scott Sloboth, UP	

Blue	Cards, Daily Inspecti	ons, Air Slip-KG1LAC-13	
	UP CCS/SC AND/OI Engine No. UP 5 718 Station Cecco 3	PACIFIC RAILROAD FORM 25023 (Rev. 2-93) C&NW ATC DEPARTURE TEST Date 3-13-16 Time 0000 (
	UPRR CCS/SC Tested		
	C&NW ATC Tested	J. J	
-	Your signature certifies test(s)	were performed and results were satisfactory	
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FEDERAL RAILROAD	ADMINISTRATION		In accordan regulations have been i repaired.	ce with the issued pur nspected	e Locomo rsuant to and all de	tive Inspection that Act, the pa fects disclosed	Act, 3 arts and by th	36 State, 913, a d appurtenanc e inspection ha	as amended and t es of the locomoti ave been properly	he ve unit			
REPORTING YEAR :2	2016		IS LOCO.NE	W: No			IF RE	NUMBERED/PRI	EV.INIT&NO:				
1. OPERATED BY: UN	NON PACIFIC RAIL	ROAD	RRCod	e: UP	2. OWNE RRCode:	D BY (Railroad)	:Unior	Pacific Railroad	Company				
3. MODEL NO: C44ACCTE	4. LOCO INIT/NO 5718	: UP	5. YR. BUILT	2001	6. PROP	ELLED BY: D-E	7. HC 4390	RSEPOWER:	8. TYPE OF SE FREIGHT	RVICE:			
9. STEAM GEN.	GEN. #1: N/A WO	RKING	G PRESSURE:	1957			GEN.	#2: N/A WORKI	NG PRESSURE:				
10. MAXIMUM PISTO	N TRAVEL:8 inches		TYPE OF AIF	BRAKE: E	PIC2		AIR D	RYER EQUIPPE	D: YES				
11. OUT OF USE CRE	DIT: 0	Ð	12. LAST PEI	RIODIC INS	PECTION	DATE: 09/08/	2015 F	LACE: NORTH	PLATTE GE WYD,	NE			
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06-06-2016

- K22.2 REMARKS: CARRIERS ENTER ANY OTHER CLARIFYING OR EXPLANATORY INFORMATION. DO NOT USE AFTER: 08/06/2016 EVENT RECORDER EQUIPPED: PULSE TTX-REC-M6W GE INT ALT MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI Continued on page 2 * **a** y *

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BLUECARD

UP 5718

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WAIVER DETAILS :

Sugar

WAIVER FRA-2001-11014 ELECTRONIC DAILY INSPECTION.

UP 5718

WAIVER FRA-2004-17308 ELECTRONIC BLUE CARD.

WAIVER FRA-2005-21179

MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI.IF AFM EQUIPPED, AFM SET AT 64 CFM FOR 120-130 PSI OR 60 CFM FOR 130-140 PSI.

WAIVER FRA-2005-21613

ELECTRONIC AIR BRAKE TESTING FOR EXTENSION OF COTS INTERVAL.

WAIVER FRA-2014-0085

RELIEF FROM REQUIREMENT TO PERFORM TEST PRESCRIBED BY CFR 236.586 ON MICROPROCESSOR BASED AUTOMATIC CAB SIGNAL, TRAIN STOP AND TRAIN CONTROL SYSTEMS.

Certification of true copy.

AN

I certify that this is a true copy of the inspection and repair record of locomotive no. UP 5718 ATTENTION: A false entry on this form is punishable by fine or imprisonment (U.S. Code. Title 18. Sec. 1001).

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FORM FRA F6180-49 A (11/2012) .

(Officer-in-charge)

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3. MODEL NO: GE C44ACCTE	2: GE 4. LOCO INIT/NO : UP 5. YR. B		5. YR. BUILT	: 2004	6. PROP	ELLED BY: D-E	7. HC 4390	RSEPOWER:	8. TY FRE	PE OF SERVICE:
9. STEAM GEN.	GEN. #1: N/A W	ORKING	PRESSURE:		2		GEN.	#2: N/A WORKI	ING PRE	SSURE:
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11. OUT OF USE CRED	IT: 0		12. LAST PE	RIODIC INS	SPECTION	DATE: 07/30/	2015 F	PLACE: NLRK S	ERVICE	TRK, AR
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REMARKS: CARRIERS ENTER ANY OTHER CLARIFYING OR EXPLANATORY INFORMATION. DO NOT USE AFTER: 04/20/2016 EVENT RECORDER E0/JPDED: PULSE TTX-REC-M6W GE INT ALT MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI

Continued on page 2

04/20/2016

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U.S DEPARTMENT OF	TRANSPORTATION	N	UNION PACIFIC RAILROAD LOCOMOTIVE INSPECTION AND REPAIR RECORD									
FEDERAL RAILROAD	In accordance with the Locomotive Inspection Act, 36 State, 913, as amended and the regulations issued pursuant to that Act, the parts and appurtenances of the locomotive uni have been inspected and all defects disclosed by the inspection have been properly repaired.											
REPORTING YEAR :20	IS LOCO.NEV	W: No		inter an	IF RENUMBERED/PREV.INIT&NO:							
1. OPERATED BY: UNIC	ON PACIFIC RAILF	ROAD	RRCod	e: UP	2. OWNE RRCode	ED BY (Railroad) : UP	:Union	Pacific Railroad	Comp	bany		
3. MODEL NO: SD70M 4. LOCO INIT/NO : UP 4269			5. YR. BUILT:	2000	6. PROP	ELLED BY: D-E	7. HORSEPOWER: 4000			TYPE OF SERVICE REIGHT		
9. STEAM GEN.	D. STEAM GEN. GEN. #1: N/A WORKING						GEN.	#2: N/A WORKI	NG P	RESSURE:		
10. MAXIMUM PISTON	10/31	TYPE OF AIR	BRAKE: 3	0CDW		AIR D	RYER EQUIPPE	D: YE	S			
11. OUT OF USE CRED	IT: 49		12. LAST PER	L 12. LAST PERIODIC INSPECTION DATE : 09/30/2015 PLACE: PROVISO, IL								
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* 15. ITEM CODE: APPL. [8] EVENT RECC	[1] BRAKES [2] RU DRDER	NNING	GEAR [3] CA	AB EQUIP	[4] MECH	H. EQUIP . [5] EL	ECT. E	QUIP [6] STEA	M GE	N. [7] SAFETY		
TESTS	18. H&H TEST PRESSURE DRIL	19.WAIVER PART - 229: WAIVER FRA-2014-0085					20. WAIVER - OTHER:					
TYPE / INTERVAL NOT MORE THAN			21. PERSON CONDUCTIN	G	22. TES PLACE	T DATE AND	23. CERTIFIED BY			. PREVIOUS TEST ATE AND PLACE		
HAND BRAKE 232.105(c)/368 days						2			07 R1	7/12/2015 N LITTLE DCK RAMP, AR		
ANNUAL TESTS 229.27/368 days								19	07 R	7/12/2015 N LITTLE DCK RAMP, AR		
L1 229.29(C1)(A1) (1) F	ILTERS ONLY/368	days .	1	- A.		a nagh			07 R	7/12/2015 N LITTLE DCK RAMP, AR		
L2&L3 229.29(C2/C3)(3	30CDW)/1472 days				Sec.					03/2012 N LITTLE CK RAMP, AR		
EVENT RECORDER 22 days	29.25(d) or 229.27(c)	/368	SEE COLUM ABOVE	N 15	:	8				7/12/2015 N LITTLE DCK RAMP, AR		
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REMARKS: CARRIERS ENTER ANY OTHER CLARIFYING OR EXPLANATORY INFORMATION. DO NOT USE AFTER: 04/05/2016 EVENT RECORDER EQUIPPED: PULSE TTX REC-13 MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI

Continued on page 2

UP 4269	BLUECARD	UP 4269
VAIVER DETAILS :		
WAIVER FRA-2014-0085		
RELIEF FROM REQUIREMENT TO PERFORM TEST PRES RAIN STOP AND TRAIN CONTROL SYSTEMS.	CRIBED BY CFR 236.586 ON MICROPROCESSOR B	ASED AUTOMATIC CAB SIGNAL,
OUT OF SERVICE DETAILS :	the end of the second sec	
OUT OF SERVICE 06/03/2012 TO 07/21/2012 49 DAYS A	AT N LITTLE ROCK RAMP, AR OS	
Certification of true copy.		
certify that this is a true copy of the inspectio	on and repair record of locomotive no. U	1001)
	y nile of implicit ment (0.0. odde. mie 10. dec.	01/06/2016
	(Officer-in-charg	e) DATE
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Blue Cards, Daily Inspections, Air Slip- LCK41-14

n <u>Tx887</u>	Date
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CUT-OUT SEAL NO.	Signed
W ATC Tested	
MAG VALVE CUT-OUT SEAL NO.	Signed
Your signature certifies test(s) were perfe	ormed and results were satisfactory
2-WAY EOT ARMING N	IOTIFICATION
AIR BRARE TEST IN 2-WAY EOT ARMING N Class I Brake Test-Initial Transiection ha below, as prescribed in CFR 232.205. LOCATION CRATTING DATES TRAIN LC (C4) -141 Not ENGINE NUMBERS: 5155, 37 QUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST 50.76 YAL	Schictly
AIR BRARE TEST NO 2-WAY EOT ARMING N Class I Brake Test-Initial Terminal Inspection ha below, as prescribed in CFR 232.205. LOCATION CLASS I DATE OF THE INFORMATION DATES TRAIN LCK4/1-14/ NG ENGINE NUMBERS: 5155, 37 QUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST QUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST QUALIFIED PERSON DATES CERTIFYING EOT WAS ARMED AND WORKING Smith X	ATTIME <u>33-1414</u> 17:20 as been performed on the train identified as TIME <u>33-1414</u> 17:20 boot CARS <u>45</u> 80 <i>Shickey</i> attime <u>33-14</u> 17:30 d
AIR BRARE TEST IN 2. WAYE COT ARRINGS N Class I Brake Test-Initial Terminal Inspection ha below, as prescribed in CFR 232.205. LOCATION DESTRICT THE INFORMATION DATES TRAIN LCR41-141 NC ENGINE NUMBERS: 5155, 37 OUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST 57.76 XA QUALIFIED PERSON DATES CUALIFIED PERSON DATES CHARTING EOT WAS ARMED AND WORKING SFILL X FRONT END DEVICE #	ADDITICATION as been performed on the train identified asTIME <u>33-1414 / 17:2</u> boot CARS <u>45</u> gd <u>Shicks</u> asTIME <u>33-14 / 17:2</u> d
AIR BRARE TEST NO 2-WAY EOT ARMING N Class I Brake Test-Initial Terminal Inspection ha below, as prescribed in CFR 232.205. LOCATION LOCA	ATX MODEL VES NO
AIR BRAKE TEST NO 2-WAY EOT ARMINEN Class I Brake Test-Initial Terminal Inspection ha below, as prescribed in CFR 232.205. LOCATION LOCAT	ATX MODEL V_{YES}
AIR BRAKE TEST NO 2-WAY EOT ARMINEN Class I Brake Test-Initial Terminal Inspection ha below, as prescribed in CFR 232.205. LOCATION CATENTIAL TOTAL TRAIN LCR41 -144 No ENGINE NUMBERS: 5155 , 37 QUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST SCITLY QUALIFIED PERSON CERTIFYING EOT WAS ARMED AND WORKING SCITLY FRONT END DEVICE # REAR END DEVICE # REAR END DEVICE # REAR END DEVICE # KEAR CAR/CAB NO. TILX 44	ATX MODEL V_{YES}
Class I Brake Test-Initial Terminal Inspection habelow, as prescribed in CFR 232.205. LOCATION CATCOLOGY DATES TRAIN LC.(24) -14 No ENGINE NUMBERS: 5155, 37 QUALIFIED PERSON(S) PARTICIPATING IN AIR BRAKE TEST Son: 14 YA QUALIFIED PERSON(S) PARTICIPATING IN DATE: COLOGY DEPENDENT OF THE SON CATCOLOGY ARMED AND WORKING Son: 14 YA FRONT END DEVICE # REAR CAR/CAB NO. TILLX 44 BRAKE PIPE LEAKAGE	Strike 33-1414 17:20 as been performed on the train identified stime 33-1414 17:20 boot CARS 45 30 5400444 TMMODEL US 97240
Class I Brake Test-Initial Terminal Inspection habelow, as prescribed in CFR 232.205.	Strike 33-1414 / 17:20 as been performed on the train identified strike 33-1414 / 17:20 b.of CARS 45 30 30 Strike 33-14 / 10:20 ATX MODEL VES 97,400 PSI 000000000000000000000000000000000000
AIR BRAKE TEST IN UNDERSON CLASS I Brake Test-Initial Terminal Inspection has below, as prescribed in CFR 232.205. LOCATION CARACTERISTIC IN THE INFORMATION INTO INTO INTO INTO INTO INTO INTO	Shirth as been performed on the train identified as the state of the train identified astime 33-1411 111 32 32 32 33 34 35 36 37 38 39 </td

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UP 5155				B	LUECA	RD			UP 5155		
U.S DEPARTMENT	OF TRANSPORTATION	V	UNION PAG	CIFIC RAILR	OAD LOCO	DMOTIVE INSPE	ECTION	AND REPAIR RE	ECORD .		
FEDERAL RAILROAI	In accordance with the Locomotive Inspection Act, 36 State, 913, as amended and the regulations issued pursuant to that Act, the parts and appurtenances of the locomotive un have been inspected and all defects disclosed by the inspection have been properly repaired.										
REPORTING YEAR :	IS LOCO.N	EW: No	elalones	ander serie og se	IF RENUMBERED/PREV.INIT&NO:						
1. OPERATED BY: UI	RRCo	ode: UP	2. OWNE RRCode	ED BY (Railroad) : UP) :Union	Pacific Railroad (Company				
3. MODEL NO: SD7	OM 4. LOCO INIT/NO 5155	: UP	5. YR. BUIL	T: 2004	6. PROP	ELLED BY: D-E	7. HORSEPOWER: 4000		8. TYPE OF SERVICE: FREIGHT		
9. STEAM GEN.	GEN. #1: N/A WC	RKING	PRESSURE		1		GEN.	#2: N/A WORKIN	NG PRESSURE:		
10. MAXIMUM PISTO	N TRAVEL:8 inches	No.	TYPE OF A	IR BRAKE: 3	BOCDW	ana baittean	AIR DRYER EQUIPPED: YES				
11. OUT OF USE CR	EDIT: 0	- 10	12. LAST PI	ERIODIC IN	SPECTION	DATE : 10/20/	/2015 PI	LACE: GLOBAL	4, IL		
AFM CAL. 229.29(b)	9(b) 91 day max. Previo interval 10/20		us Date: Date & C 2015 01/16/20 SCHWAR		ert: Date & Cert: 6 T A TZ		Date & Cert:		Date & Cert:		
PERIODIC INSPECTIONS		0	CHECK ON	ECK ONE:		2 DAYS PER 29.23(a).		184 DAYS PER 229.23(b)(1)ONLY.			
13. DATE	14. PLACE	15. ITI	EMS * 16. PER CONDU		SON CTING	15. ITEMS *		16. PERSON CONDUCTING	17. CERTIFIED BY		
O/S FROM: 01/16/2	016 TO: 01/16/2016				6.0						
01/16/2016 NPLATTE SERVICE 1-4 & TK, NE			7 SEEFFE		ENBECK	ECK 5		G R KORTE	T A SCHWARTZ		
* 15. ITEM CODE: APPL. [8] EVENT REC	[1] BRAKES [2] RU CORDER	NNING	GEAR [3]	CAB EQUIP	[4] MECH	I. EQUIP [5] EL	ECT. E	QUIP [6] STEAI	M GEN. [7] SAFETY		
TESTS 18. H&H TEST PRESSURE DRILLED			19.WAIVER WAIVE WAIVE WAIVE	PART - 229 R FRA-2001 R FRA-2005 R FRA-2005 R FRA-2014	: -11014 . -17308 . 5-21179 . I-0085		20. W	NVER - OTHER:			
TYPE / INTERVAL NOT MORE THAN			21. PERSO CONDUCTI	N ING	22. TEST PLACE	DATE AND	23. CERTIFIED BY		24. PREVIOUS TEST DATE AND PLACE		
HAND BRAKE 232.105(c)/368 days									08/01/2015 YARD CENTER, IL		
ANNUAL TESTS 229.27/368 days									08/01/2015 YARD CENTER, IL		
L1 229.29(C1)(A1) (1) FILTERS ONLY/368 days									08/01/2015 YARD CENTER, IL		
L2&L3 229.29(C2/C3)(30CDW)/1472 days								04/20/2013 N LITTLE ROCK RAMP, AR		
EVENT RECORDER days	229.25(d) or 229.27(c).	/368	SEE COLUI ABOVE	MN 15					08/01/2015 YARD CENTER, IL		

REMARKS: CARRIERS ENTER ANY OTHER CLARIFYING OR EXPLANATORY INFORMATION. DO NOT USE AFTER: 04/16/2016 EVENT RECORDER EQUIPPED: BACH-SIMPSON CHM MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI

4-16-16

Continued on page 2

UP 5155

BLUECARD

UP 5155

01/17/2016

DATE

2

WAIVER DETAILS :

WAIVER FRA-2001-11014 ELECTRONIC DAILY INSPECTION.

WAIVER FRA-2004-17308 ELECTRONIC BLUE CARD.

WAIVER FRA-2005-21179 MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI.IF AFM EQUIPPED, AFM SET AT 64 CFM FOR 120-130 PSI OR 60 CFM FOR 130-140 PSI.

WAIVER FRA-2014-0085

RELIEF FOR REQUIREMENT TO PERFORM TEST PRESCRIBED BY CFR 236,586 ON MICROPROCESSOR BASED AUTOMATIC CAB SIGNAL, TRAIN STOP AND TRAIN CONTROL SYSTEMS.

Certification of true copy.

I certify that this is a true copy of the inspection and repair record of locomotive no. UP 5155 ATTENTION: A false entry on this form is punishable by fine or imprisonment (U.S. Code. Title 18. Sec. 1001).

FORM FRA F6180-49 A (11/2012) .

(Officer-in-charge)

TYPE / INTERVAL NOT MORE THAN	21. PERSON CONDUCTING	22. TEST DATE AND PLACE	23. CERTIFIED BY	24. PREVIOUS TEST DATE AND PLACE
HAND BRAKE 232.105(c)/368 days	A WORK STATION	03/26/2015 HINKLE SERVICE TK, OR	R S TAINSH	06/10/2014 DENVER DIESEL, CO
ANNUAL TESTS 229.27/368 days	D G NEAL	10/01/2015 NPLATTE SERVICE TK, NE	T J GOFF	06/10/2014 DENVER DIESEL, CO
L1 229.29(C1)(A1) (1) FILTERS ONLY/368 days	R D MUEHLENKAMP	10/01/2015 NPLATTE SERVICE TK, NE	T J GOFF	06/10/2014 DENVER DIESEL, CO
L2&L3 229.29(C2/C3)(30CDW)/1472 days	n ne o tali dala da la dala da la da la Na da la d	na hine de parte al na hine de parte al di contra		06/10/2014 DENVER DIESEL, CO
EVENT RECORDER 229.25(d) or 229.27(c)/368 days	SEE COLUMN 15 ABOVE	GP WBM DCP (06/10/2014 DENVER DIESEL, CO

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LOCATION	DATE	TIME	OK	NIC	QUAL	-	
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UP 3780				BL	UECA	RD		ι	JP 3780		
U.S DEPARTMENT	OF TRANSPORTATIO	N	UNION PACI	FIC RAILRO	DAD LOCO	OMOTIVE INSPE	CTION	AND REPAIR REC	CORD		
FEDERAL RAILROAD ADMINISTRATION			In accordance with the Locomotive Inspection Act, 36 State, 913, as amended and the regulations issued pursuant to that Act, the parts and appurtenances of the locomotive uni have been inspected and all defects disclosed by the inspection have been properly repaired.								
REPORTING YEAR :2015			IS LOCO.NEW: No					IF RENUMBERED/PREV.INIT&NO:			
1. OPERATED BY: UI	NION PACIFIC RAIL	ROAD	RRCod	le: UP	2. OWN RRCode	ED BY (Railroad) :: UP	:Union	Pacific Railroad Co	ompany		
3. MODEL NO: SD70M 4. LOCO INIT/NO : UP 3780			5. YR. BUILT:	: 2004	6. PROF	ELLED BY: D-E	7. HORSEPOWER: 4000		8. TYPE OF SERVIC FREIGHT		
9. STEAM GEN.	GEN. #1: N/A WO	ORKING	PRESSURE:				GEN.	#2: N/A WORKING	PRESSURE:		
10. MAXIMUM PISTON TRAVEL:8 inches			TYPE OF AIR BRAKE: 30CDW					AIR DRYER EQUIPPED: YES			
11. OUT OF USE CR	EDIT: 118		12. LAST PER	RIODIC INS	PECTION	DATE: 11/19/	/2014 P	LACE: NLRK SER	VICE TRK, AR		
AFM CAL. 229.29(b)	29(b) 91 day max. Previo interval 11/18		Dus Date: Date & C 2014 D2/15/20 DUARTE		ert: 5 R	R Date & Cert: R 04/04/2015 M ZUNIGA		Date & Cert: 07/03/2015 J A KLAFKA	Date & Cert: 10/01/2015 T J GOFF		
PERIODIC INSPECTIONS			CHECK ONE:	:		92 DAYS PER 229.23(a).		184 DAYS PER 229.23(b)(1)ONLY.			
13. DATE	14. PLACE	15. ITEMS *		* 16. PERSON CONDUCTIN		N 15. ITEMS *		16. PERSON CONDUCTING	17. CERTIFIED B		
O/S FROM: 04/01/2	015 TO: 04/04/2015	1				_		and the second second			
04/04/2015	04/04/2015 HINKLE, OR 1-4 &		7 M L COLE			5		L T JOHNSON	M P ZUNIGA		
O/S FROM: 07/03/2	015 TO: 07/03/2015	1		1							
07/03/2015	HOUSTON SERVICE TK, TX	1-4 &	7	J HESSONG		5		S D GALLANT	J A KLAFKA		
O/S FROM: 09/30/2	L015 TO: 10/01/2015	1					-				
10/01/2015	NPLATTE SERVICE TK, NE	1-4 &	7	S C DEMI	LT	5		D G NEAL	T J GOFF		
O/S FROM: 10/01/2	015 TO: 10/01/2015	1									
10/01/2015	01/2015 NPLATTE SERVICE 8 TK, NE		195	D G NEAL	-				K R NELSEN		
* 15. ITEM CODE: APPL. [8] EVENT REG	[1] BRAKES [2] RU CORDER	INNING	GEAR [3] CA	AB EQUIP	[4] MECH	I. EQUIP [5] EL	ECT. E	QUIP [6] STEAM	GEN. [7] SAFETY		
TESTS	18. H&H TEST PRESSURE DRIL	.LED	19.WAIVER P WAIVER WAIVER WAIVER WAIVER	PART - 229: FRA-2001- FRA-2004- FRA-2005- FRA-2014-	-11014 , -17308 , -21179 , -0085		20. W	AIVER - OTHER:			
			WAIVER	FRA-2014-	0085		a a				

UP 3780

BLUECARD

UP 3780

2

REMARKS: CARRIERS ENTER ANY OTHER CLARIFYING OR EXPLANATORY INFORMATION. DO NOT USE AFTER: 04/01/2016 EVENT RECORDER EQUIPPED: PULSE TTX-REC-M6W MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI WAIVER DETAILS :

WAIVER FRA-2001-11014 ELECTRONIC DAILY INSPECTION.

WAIVER FRA-2004-17308 ELECTRONIC BLUE CARD.

WAIVER FRA-2005-21179 MAIN RESERVOIR SAFETY VALVE SET FOR 150 PSI.IF AFM EQUIPPED, AFM SET AT 64 CFM FOR 120-130 PSI OR 60 CFM FOR 130-140 PSI.

WAIVER FRA-2014-0085

RELIEF FROM REQUIREMENT TO PERFORM TEST PRESCRIBED BY CFR 236.586 ON MICROPROCESSOR BASED AUTOMATIC CAB SIGNAL, TRAIN STOP AND TRAIN CONTROL SYSTEMS.

OUT OF SERVICE DETAILS :

OUT OF SERVICE 11/27/2014 TO 01/11/2015 46 DAYS AT MANKATO, MN OS OUT OF SERVICE 07/04/2014 TO 09/14/2014 72 DAYS AT LOST LOCOMOTIVE, NE OS

Certification of true copy.

I certify that this is a true copy of the inspection and repair record of locomotive no. UP 3780 ATTENTION: A false entry on this form is punishable by fine or imprisonment (U.S. Code. Title 18. Sec. 1001).

FORM FRA F6180-49 A (11/2012) .

01/01/2016 DATE

(Officer-in-charge)