



Locomotive condition  
SD70IAC road [REDACTED]

[REDACTED]

Prepared by:

[REDACTED]

Manager (emeritus)  
Engineering and Project Management

For:

[REDACTED]

SVP - Equipment Sales & Dispositions

[REDACTED]

[REDACTED]

Locomotive road number

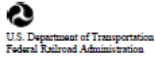
[REDACTED]

## Synopsis



- Acceptable for AAR interchange ... Yes
- Acceptable for revenue producing service ... Yes
- Requires return to service preparation and M12 annual inspection
- Age ...23 years 4 months as of 7/25/2023.
- Logs of maintenance made available ...Yes
- Maintained equivalent to other BNSF power ...Yes
- Modified to AAR/DOT/FRA requirements ...Yes
- FRA Legal ...Yes
- Placed in short term storage – 3/8/2023 and long term storage 6/1/2023
- Condition Assessment is ...2.50 Above Average
- (1 = New, 3= Average, 5 = Scrap)

# Blue Card



## Locomotive Inspection and Repair Record

OMB No. 2130-0004

U.S. Department of Transportation Federal Railroad Administration See reverse for Paperwork Reduction Act Statement

Year: 2019	1. Operated by: BNSF Railway	RR Code: BNSF	2. Owned by: BNSF	RR Code: BNSF
3. Model No. SD70MAC	4. Loco No. BNSF [REDACTED]	If renumbered, Prev. No. BNSF00000000	5. Year Built 2000	Check if new loco. <input type="checkbox"/>
6. Propelled by: DE	7. Horsepower 4000	8. Type of Service: Road <input checked="" type="checkbox"/> Yard <input type="checkbox"/> Other <input type="checkbox"/>	9. Steam Gen. a. No.:	b. Working Pressure _____
Type of Air Brake: CCB1	Air Dryer Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	11. Out of use Credit: 358	12. Last Periodic Inspection Date & Cert: 11/09/2018	b. Place: NORTHTOWN, MN
AFM CAL. 229.29(b) 92 day max. interval	Previous date: 05/18/2019	Date & Cert: 05/25/2019 RANDAL JAMES	Date & Cert: 07/25/2019 DAVID MEGGISON	Date & Cert: 09/06/2019 DAN WADDLE
PERIODIC INSPECTIONS				
Check one: <input type="checkbox"/> 92 days per 229.23(a) <input checked="" type="checkbox"/> 184 days per 229.23(b)(1) only				
13. Date: Mo/Day/Yr	14. Place	15. Items*	16. Person Conducting	17. Certified by
05/25/2019	LINCOLNNE	1	RANDAL JAMES	JOHN FILSDNGER
05/25/2019	LINCOLNNE	2, 3, 4, 7	PETER HOPWOOD JR.	DANIEL FULTON
11/10/2019	ALLIANCENE	1	JUSTIN BECERRA	BRIAN HEINRICH
11/10/2019	ALLIANCENE	2, 3, 4, 7	BURLEY SHUMPERT	GIL TRIMBLE
* 15. Item Code: 1. Brakes 2. Running Gear 3. Cab Equip 4. Mech Equip 5. Elect Equip 6. Steam Gen 7. Safety Appl				
TESTS		18. H&H Test Pressure NA	19. Waiver Part 229 2005-21613	20. Waiver - Other N/A
Type	Interval Not more than:	21. Person Conducting	22. Test Date & Place	23. Certified by
Event Recorder 229.25(d) or 229.27(c)	No. of days: 368	BRIAN HEINRICH	11/10/2019 ALLIANCE, NE	GIL TRIMBLE
Annual Tests 229.27	368 days		NA	
Hand Brake 232.105(c)	368 days	Adm Reinhart	05/05/2023 ALLIANCE, NE	Craig Correll
Air Brakes: Level 1 229.29(c)(1)	368 days	JUSTIN BECERRA	11/10/2019 ALLIANCE, NE	GIL TRIMBLE
Level 2 229.29(c)(2)	No. of days: 2392			
Level 3 229.29(c)(3)	No. of days: 2392			
Hammer and Hydro 229.31	736 days	DRILLED		

In accordance with the Locomotive Inspection Act, 49 USC Chapter 207 and the regulations issued pursuant to that Act, the parts and appurtenances of the locomotive unit have been inspected and all defects disclosed by the inspection have been properly repaired.

Certification of true copy: I certify that this is a true copy of the inspection and repair record of locomotive no. \_\_\_\_\_  
 Attention: A false entry on this form is punishable by fine or imprisonment (18 USC Sec1001)

Officer-in-charge \_\_\_\_\_ Date \_\_\_\_\_

BNSF Substitute for FRA Form F6180-49A

Government property do not remove.

OMB Approval Expires 04/30/2025

**INSTRUCTIONS:** This Locomotive Inspection and Repair Record (Record or F6180-49A) covers a calendar year, except as noted. The Record for the preceding calendar year shall be retained in the locomotive until the first periodic inspection of the new year or until the Record is replaced on April 2 or July 3 (if 184 day eligible) as required by 49 CFR 229.23(g) or, until the locomotive changes ownership (see 2 below.) Enter the requested information in each block. Special instructions are given below.

- OPERATED BY:** Enter the name and code of the primary railroad operating the locomotive at the time this Record is placed in it. Operator changes, including dates, shall be noted in "Remarks." The "RR Code" is as assigned by FRA to the railroad.
- OWNER:** Enter the name and RR Code of the owner. Changes in ownership shall be submitted as final reports.
- LOCOMOTIVE NO.:** Enter digits only. Include letters if they differ from the "RR Code." If renumbered, enter the previous number.
- YEAR BUILT:** Enter the year the locomotive was built and check if new. If remanufactured per 49 CFR 229.5, enter "RM" and the year.
- PROPELLED BY:** Enter Diesel-Electric (D-E), Electric (E), Electric Multiple Unit (EMU), Diesel Multiple Unit (DMU), MU Control Cab (MUC), Non-MU Control Cab (NMUC), Turbine (T), Torque Converter (TC), or Other (O).
- MAXIMUM PICTON TRAVEL:** Enter only "normal" travel. Do not include the manufacturer's tolerance.
- OUT-OF-USE CREDIT:** Enter the number of creditable calendar days the locomotive was out-of-use since the last periodic inspection on the previous F6180-49A. Less than 30 consecutive calendar days for any out-of-use period may not be counted per 49 CFR 229.33. For current periods out-of-use, an entry "Out-of-use from \_\_\_\_\_ to \_\_\_\_\_" shall be made on a Periodic Inspection line and certified when a locomotive which would otherwise be due for inspection is out-of-use. If the locomotive is out of use at the end of the annual reporting period, complete the "To" entry with the last day of the period. An entry shall then be made on the new Record showing the first day of the new reporting period as the "From" date.
- LAST PERIODIC INSPECTION:** When a new Record is placed in the locomotive transfer the last periodic inspection information into block 12 a & b and the last test information into column 24 of the new Record. Tests that are not applicable should be noted "NA".
- AFM CAL.:** Enter the date of the last Air Flow Method Indicator (AFM) calibration from the previous year. Enter and certify subsequent calibrations as they are done.
- PERIODIC INSPECTIONS:** Check 184 days only if the locomotive qualifies per 49 CFR 229.23(b)(1) and the railroad chooses to abide by the requirement for 33 day GMI daily inspections, otherwise check 92 days. Persons making the required inspections shall sign and list the item codes inspected. The employee's supervisor shall certify that the inspections were completed.
- H&H:** Enter the test pressure for the hydrostatic air reservoir test. If the reservoirs are drilled, enter "NA" here and "Drilled" in the Hammer and Hydro line below.
- WAVERS:** Any waiver applicable to this locomotive shall be entered by waiver number in block 19 if a waiver from Part 229, or block 20, if a waiver from any other regulation. Enter explanatory information regarding the scope and content of each waiver under "Remarks".
- TESTS:** The maximum number of days for Event Recorder, Level 2 and Level 3 air brake tests shall be entered per the referenced sections of 49 CFR 229. Where the railroad has chosen to fragment air brake clean, repair and test requirements as permitted under 49 CFR 229.29, a separate air record shall be maintained in the cab of the locomotive and the word "Fragmented" shall be entered in the Level 2 and Level 3 lines.

**REPAIRS:** Special notes relating to repairs performed to restore compliance.

Out of Use Credit			
OOS FROM Date	OOS To Date	OOS No. Days	OOS Place
01/19/2016	08/24/2016	217	GLENDIVERT
04/01/2017	08/21/2017	141	NORTHTOWN, MN

**NOISE:** Enter any noise tests or related information in accordance with 49 CFR 210.31.

**REMARKS:** Additional explanatory or clarifying information.

Main Reservoir Safety Valve Set for 150 PSI

FRA Test Waiver Number 2005-21613 to extend COTS interval.

AFM CAL 229.29(b): Remaining AFM transaction(s) performed within the reporting year

Date Certified by  
 02/04/2020 JAMES RUMPCA  
 05/05/2023 John Lechman

Event Recorder Equipped: EMD FIRE GEN 3

Public reporting burden for this collection of information is estimated to average 15 minutes per response including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. A federal agency may not conduct or sponsor, and a person is not required to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless that collection of information displays a current OMB Number. The OMB control number for this information is 2130-0004. Anyone with comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden, may send them to: Information Clearance Officer, Federal Railroad Administration, 1200 New Jersey Ave. SE, MS-25, Washington, DC 20590

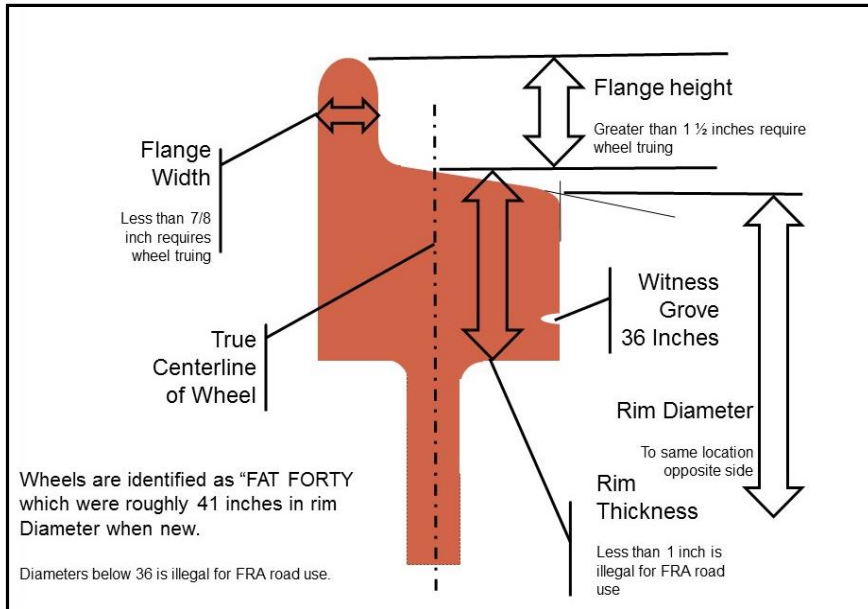
U.S. GOVERNMENT PRINTING OFFICE 2012 461-823/33002

BNSF Substitute for FRA Form F6180-49A

# Wheel / coupler inspections

## BNSF Wheel Report - inches

	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right
	Flange Height		FRA violation yes / no		Flange Thickness		FRA violation yes / no		Rim Thickness		FRA violation yes / no	
1	1.047	1.047	no	no	1.266	1.266	no	no	2.238	2.238	no	no
2	1.047	1.047	no	no	1.266	1.266	no	no	2.125	2.125	no	no
3	1.047	1.047	no	no	1.266	1.266	no	no	2.238	2.238	no	no
4	1.047	1.047	no	no	1.266	1.266	no	no	2.438	2.438	no	no
5	1.047	1.047	no	no	1.266	1.266	no	no	2.438	2.438	no	no
6	1.047	1.047	no	no	1.266	1.266	no	no	2.438	2.438	no	no



Avg. Rim Thickness
2.32
Expected mileage remaining
337,600

Coupler Height	
Front	Rear
Legal	Legal

## BNSF Engine oil analysis's

Date	TK	O	FE	PB	CU	SI	B	AL	AG	ZN	CA	CR	PI	VS	PH/ TBN	H2O
04/01/202002/22/202002/12	ALPCH	NN	27283	25232	46475	06050	44374	06060	000	02030	4115386741	00010	1.31.41.31	1514.615.	5.85.75.85	062100548005
/202002/01/202001/17/2020	SPCG	NN	02628	42224	24248	50406	83839	70605	000	30303	7739893980	10101	.31.21.41.	615.115.7	.75.65.35.	460054900548
12/10/201911/30/201911/11	BCDG	NN	29273	23252	49434	06040	35314	06050	000	02030	4125416744	01000	31.31.51.3	15.314.91	75.94.75.8	005400054300
/201911/08/201906/04/2019	BALAL	NN	13730	53125	96955	70806	64040	60805	000	40403	8038744140	10101	1.51.31.31	4.914.714	5.35.866	545005490049
05/24/201905/19/201903/22	ALLCK	NN	32272	30252	58534	06060	40373	05050	00	04030	4357368937	01010	.4	.614.314.		800453004570
/201903/01/2019	CKCG	NN	425	125	649	508	936	504		303	233715	101		614.514		0448004730
	N	NN														

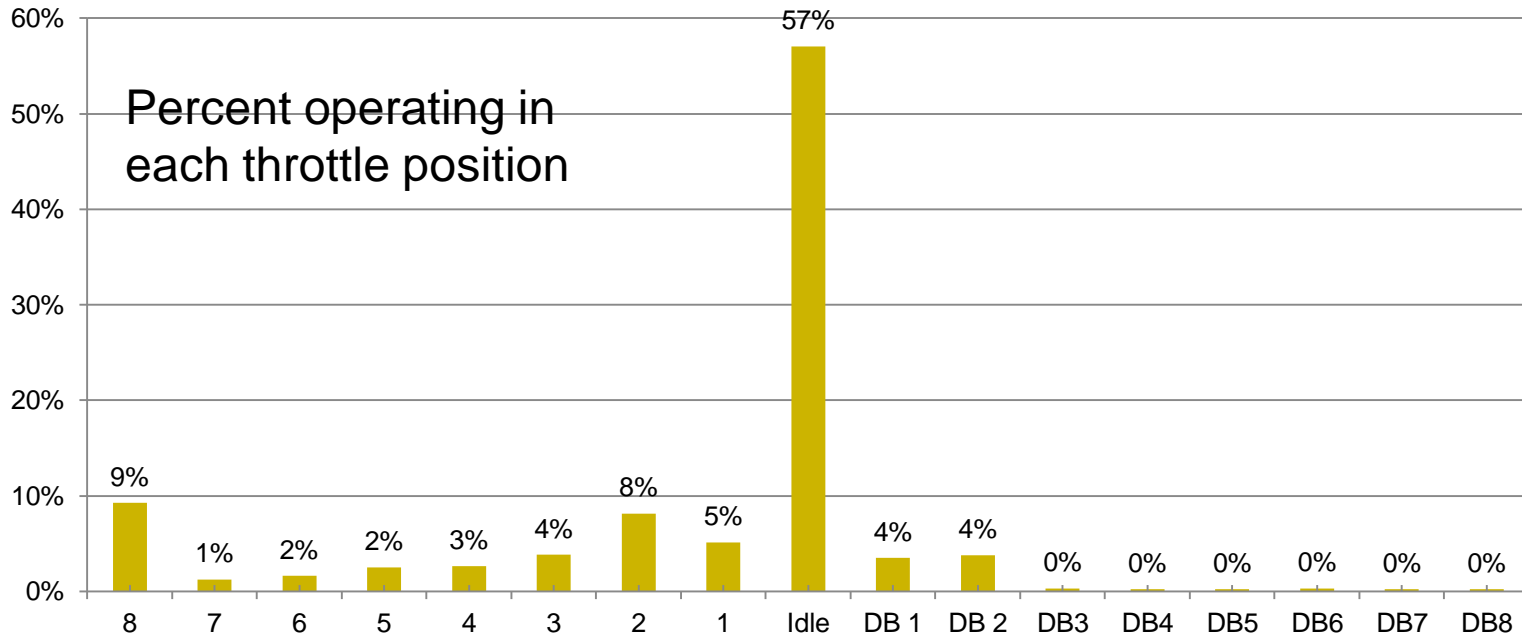
No Issues regarding element measures or abnormal trends

(calculated) EM 2000 Locomotive Duty Cycle

Average Megawatts per day	8.25
Megawatts since last overhaul	19,232
Total overhauls	3
Normal use	Yes
(calculated) Total vehicle megawatt hours	64,476.77
Meets 24K mW Hour EMD lifecycle projection	Yes

Megawatt hours logged imply normal North American Use

Typical SD70 North American Average Duty Cycle



## Power information:

- ✓ Load Test 1 Th 8
  - Horsepower – 4036
  - Volts – 2352
  - Amps – 1201
  - Kilowatts - 2824

Load Test 2 functions properly but data was not available at the time of this report.

- ✓ TH1 Stall --- 15,000 lbs. TE

## Key information

- ✓ Operated normally per design requirements ---- YES
- ✓ Placed in service ----- October 16th, 2000
- ✓ Age ----- 23 years 4 months
- ✓ EPA Emissions compliance ----- Tier 1 Plus
  - BNSF certifies injectors are in compliance by work effort and age by legal “out of service” credit days.



## Air Brake information

- ✓ NYAB CCB1
- ✓ Complies with Part 211 of Title 49 B – II – 229.29 (f) (2) – (6 ½ year A.B.) waiver 2005-21613
- ✓ Previous 2392 day air brake date ----- 10/22/2015
- ✓ Air Drier equipped ----- Yes
- ✓ Out of Service credit days as of 7/25/23 ----- 502
- ✓ Next required 2392 air brake as of 6/21/23 --- 3/26/2024
- ✓ FRA Legal ----- Yes

## Tractive Horsepower System information:

- ✓ Half Variable Supply weight ----- 415,000 lbs.
- ✓ Engine model ----- 16-710G3c-ES T0 (UTEX)
- ✓ Eng. serial number ----- unavailable at time of this report
- ✓ Alternator model ----- TA17-6/CA7A/B
- ✓ TA17 serial number ----- unavailable at time of this report
- ✓ Air compressor ----- WLA 9D
- Compressor is motor drive ----- No
- ✓ Traction Motors ----- 1TB-2630-0TA02
- ✓ Inverter models TCC1 And TCC2 - 1GE420 050 9010.00 MB74
- ✓ Auxiliary Generator model ----- 3A-8147



## Critical Dates:

- ✓ Laid Up date ----- 6/7/2023 (good order)
- ✓ Placed in short term storage ----- 3/8/2023
- ✓ Long term storage ----- 6/7/2023
- ✓ Out of service credit days ----- 502
- ✓ Next Federal Inspection Due ----- return to service – M12 Annual Inspection
- ✓ 184 day maintenance compliant ----- Yes
- ✓ Last BNSF overhaul ----- 10/22/2015

## General information:

- ✓ Wiring Diagram ----- EMD WD04364
- ✓ PTC Equipped ----- No
- ✓ IDP Equipped ----- No
- ✓ Forward facing camera equipped ----- Yes
- ✓ BNSF oil analysis ----- No Issues
- ✓ Maintained compliant with OEM standards -- Yes
- ✓ Modified per min req of regulatory agencies - Yes

