

BURLINGTON NORTHERN GRAIN HOPPERS



Edited by *David G. Casdorff*

FREIGHT CARS JOURNAL

Issue 46 Vol.9 No. 6 June 1992

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SUBSCRIPTION INFORMATION

Subscription/membership for four (4) issues (not per year): \$20.00 (USA). \$22.00 (Canada). \$35.00 (Other Countries). \$50.00 (Institutions). Please make checks payable to *Freight Cars Journal*. Send dues/subscriptions to: *Freight Cars Journal* P.O. Box 2480, Monrovia, CA 91017. Published by the Society of Freight Car Historians.

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Freight Cars Journal is published for the Society by AG PRESS, Manhattan, KS. Printed in the United States of America.

NOTICE

During the changeover to the new layout and electronic processing, I failed to include the volume numbers on *Freight Cars Journal* issues 41-44. These should all be volume 9, numbers 1-4. This issue is volume 9, number 6. Volume 9 will cover all issues published during 1992.

Front Cover

BN 449306 is part of the series, 448925-449424, built by Pullman-Standard 12-79 = 1-80. D.G.Casdorff photo.

Burlington Northern's 466000-466999 and related Trinity 4750 cu.ft. covered hoppers

by James Kinkaid

This series represents one of Trinity's latest production efforts, and was produced at their Greenville, PA plant. The cars, utilized in grain, (and to a lesser extent, chemical) service have a capacity of 4750 cu.ft., are of a three bay design, features a four piece continuous FRP hatch and gravity outlets. The hoppers are identified as A, B, and C, with a hopper "C" located on the handbrake end of the car. Hoppers "A" and "C" have a capacity of 1656 cu.ft., while the middle hopper, "B", has a capacity of 1438 cu.ft.

The car design falls within Plate C guidelines, and the Burlington Northern cars are certified to a gross weight of 286000 lbs, these being 110 ton cars. The BN and KCS cars have average load limits and light weights of 198600/64400 lbs. The CSX and ITLX cars average light weight are 2000 lbs less, (with a corresponding higher load limit).

The BN cars that I inspected were equipped with Elcon National's Peacock brand, model D 5600 handbrake, Sloan slack adjuster and ASF 6-1/2 x 12 Ride Control trucks. Truck springing is as follows (OC=outer coils, IC=inner coils, IIC=inner/inner coils):

- 7 OC D5
- 7 IC D5
- 2 IIC D6A

The BN and ITLX cars are placarded as having "AAR test wheels" installed.

Interestingly enough, with only four production lots, at least three different braking arrangements have been installed. By far the most interesting is the Burlington Northern

version, which is equipped with a fabricated (welded) brake reservoir and empty/load equipment is installed. The empty/load system is controlled via a load sensing valve which is buried beneath the BL bolster, and is connected to the truck sideframe via a threaded rod. This system is plumbed into a smaller air reservoir which is mounted on the bolster end plate, then to a relay valve above the main system reservoir. The small reservoir's exact function is unknown to this author, but it is probably an accumulator, which would buffer the pneumatic signal from the empty/load sense valve as the car gyrates while moving (if I'm wrong, and any readers know its correct function, please write and let us know). The BN cars' reservoir is mounted low and on the right hand side of the car. The KCS cars also have a fabricated reservoir which is mounted like the BN cars, but the KCS cars lack the empty/load feature.

The CSX and ITLX cars not only lack the empty/load devices, but they have a conventional two-piece cast air-reservoir, which is mounted high on the left hand side of the car. Many of the ITLX cars are currently assigned to the FMC Corporation, and some of them can be found at Lawrence, KS.

ROSTER (as of January 1992)

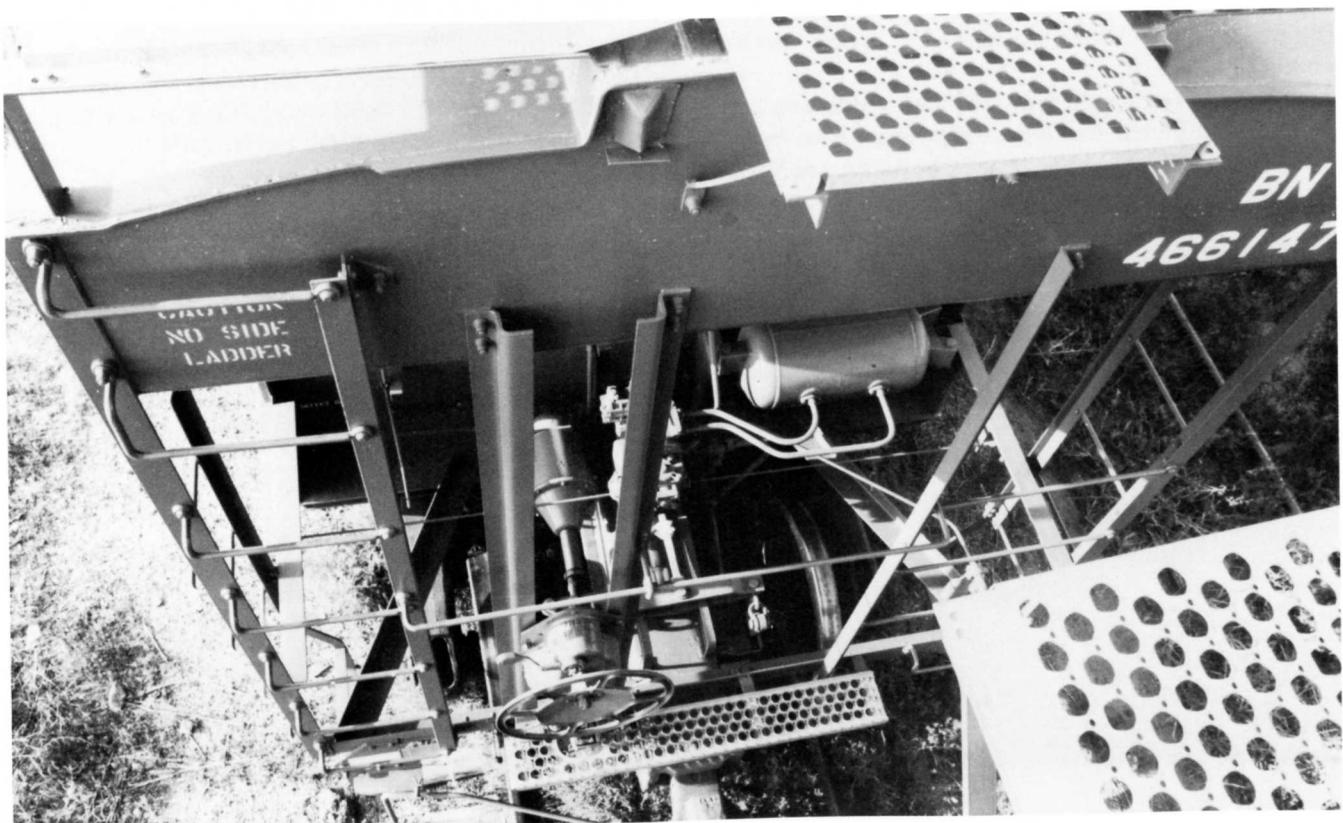
BN 466000-466999 (1000 cars): 6 = 10-90
CSXT 259000-260999 (2000 cars): 1988-89
ITLX 40000-40499 (500 cars): 11-90 = 1-91
KCS 310100-310199 (100 cars): 2-91

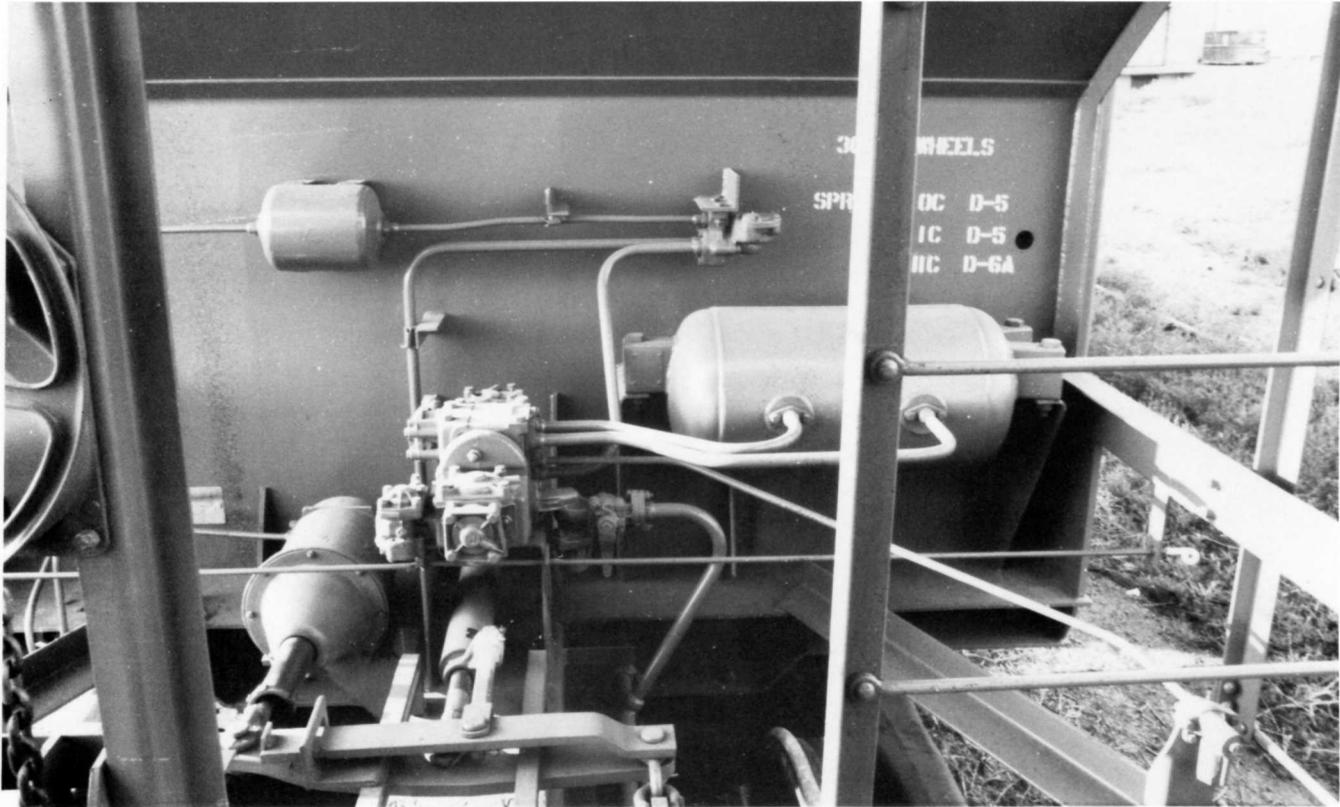


Truck on BN 466147.

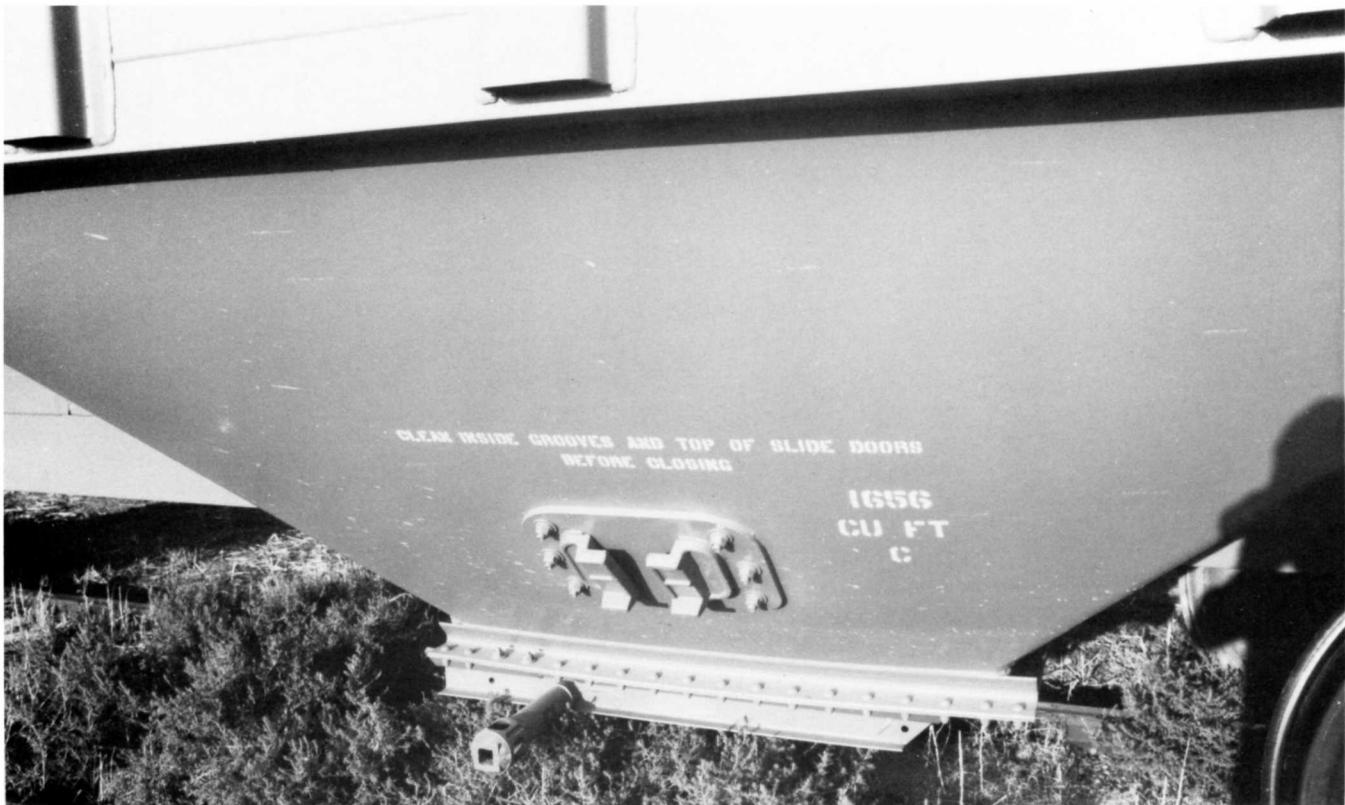


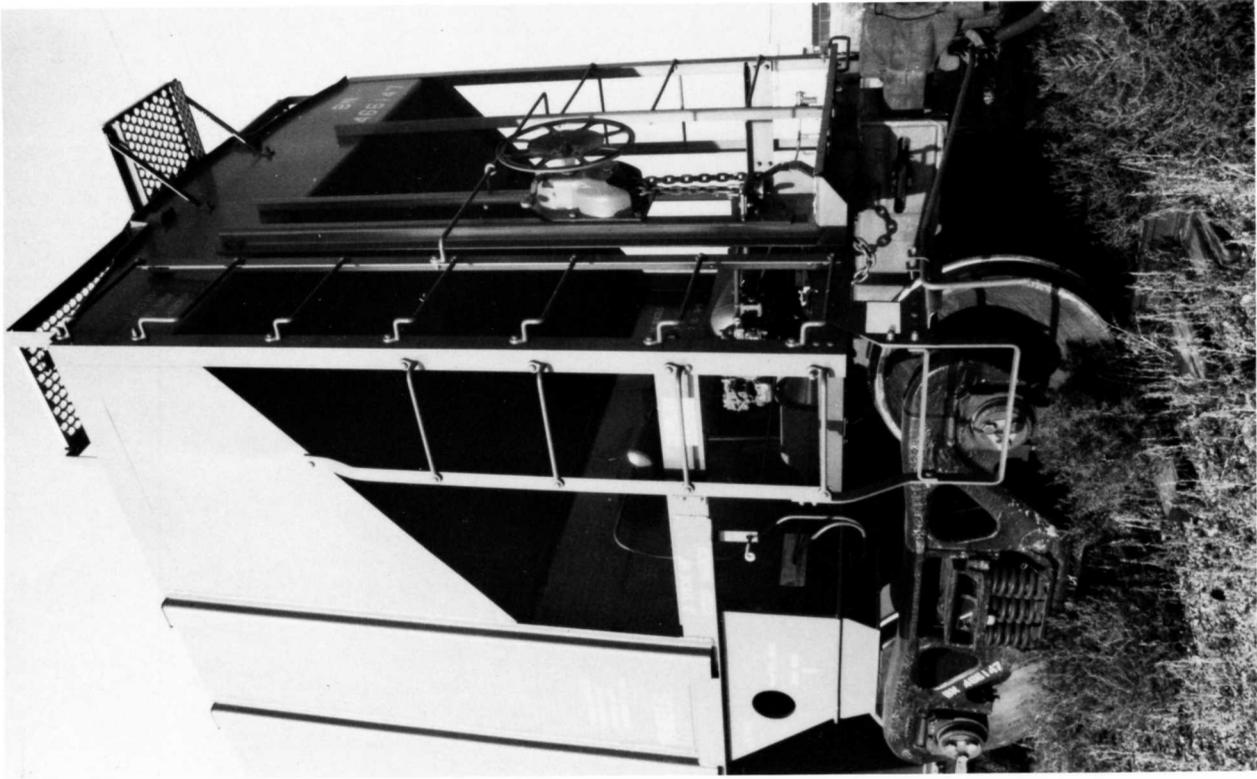
(Above) BN 466147. Lot 2111. Built July 3, 1990. September 1990. Wichita, KS. (Below) "B" end view from above showing brake gear arrangement etc.



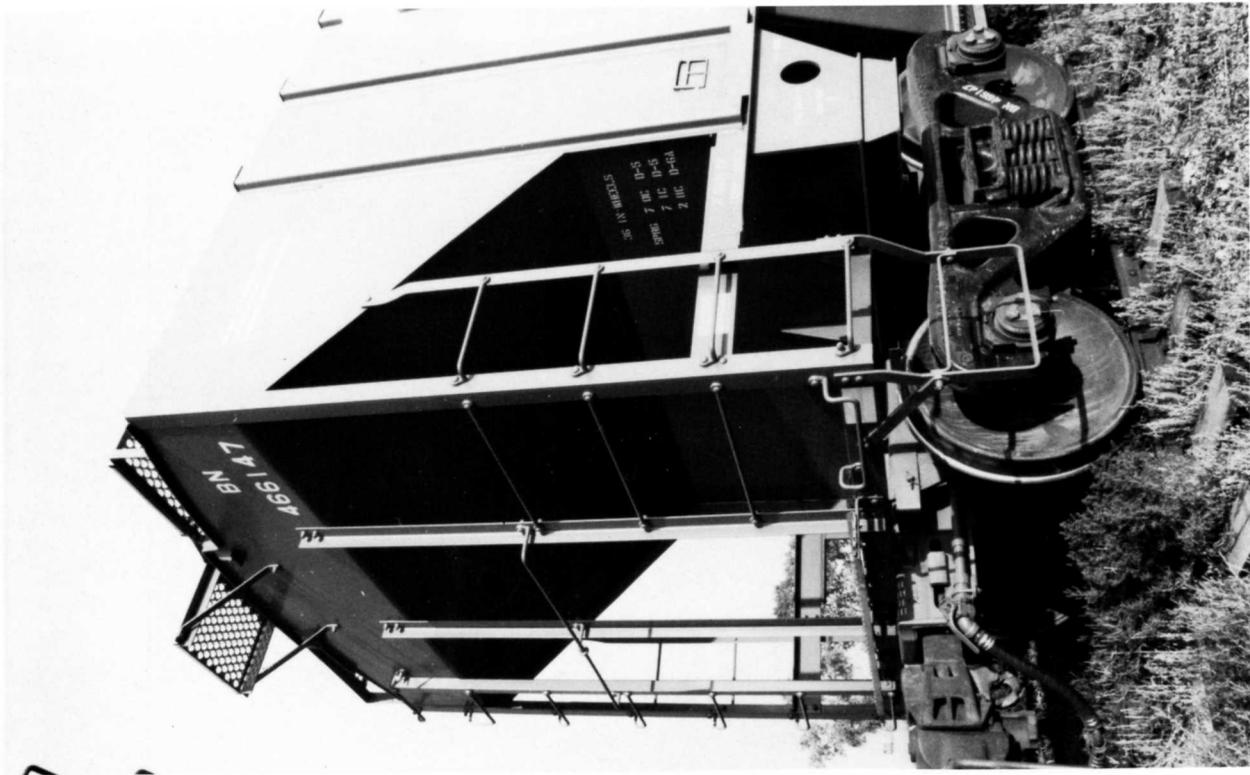


(Above) "B" end of BN 466147. Note the fabricated reservoir and empty/load auxiliary reservoir (above brake piston). (Below) Close-up of the "C" bay of BN 466147. Note the shaker attachment point.

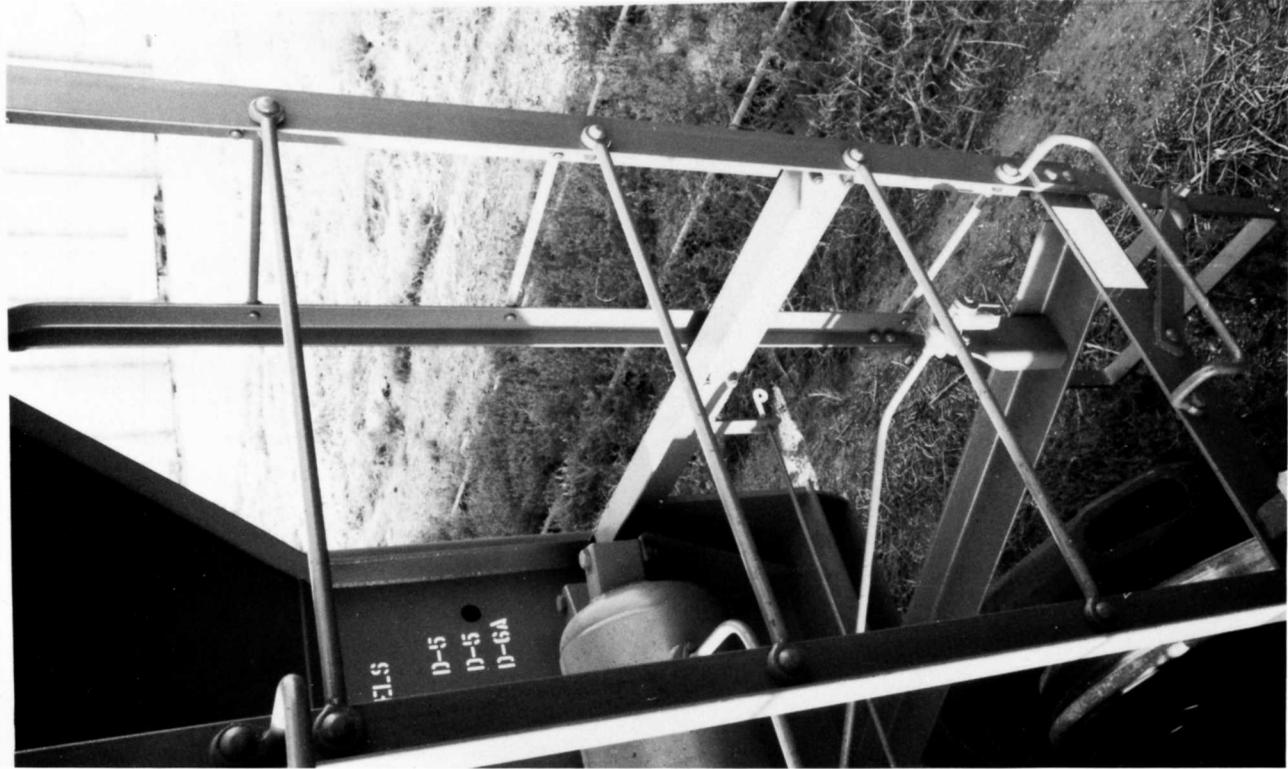




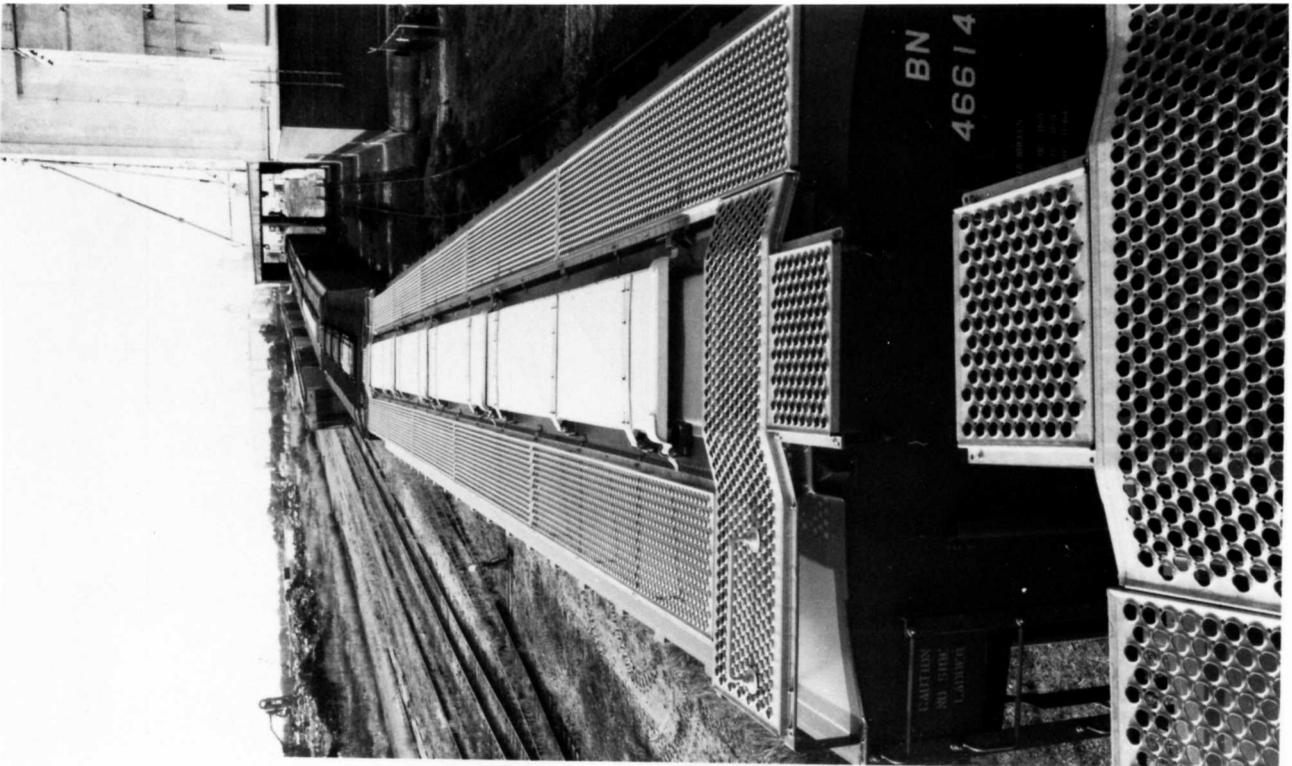
The two pipes going into the bolster are a part of the empty/load sense device, which is hidden inside the bolster.



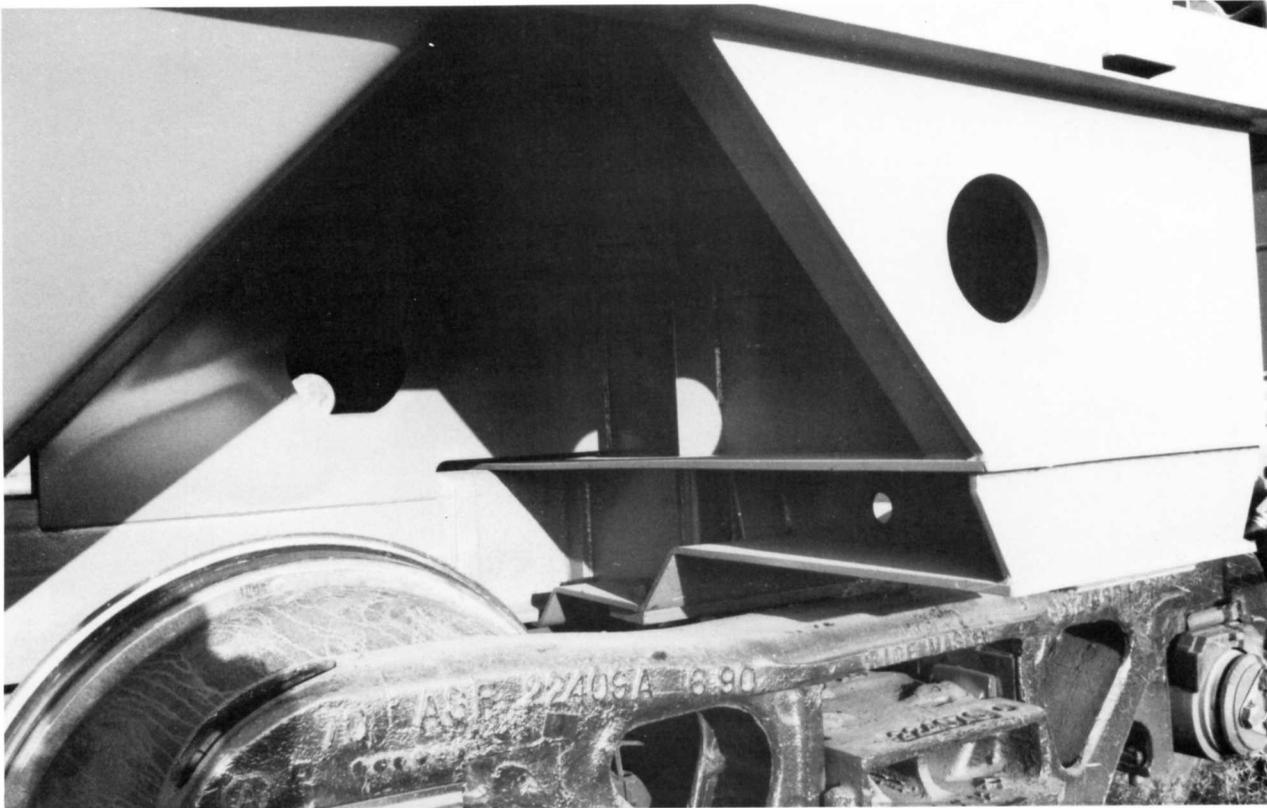
"A" end of BN 466147.



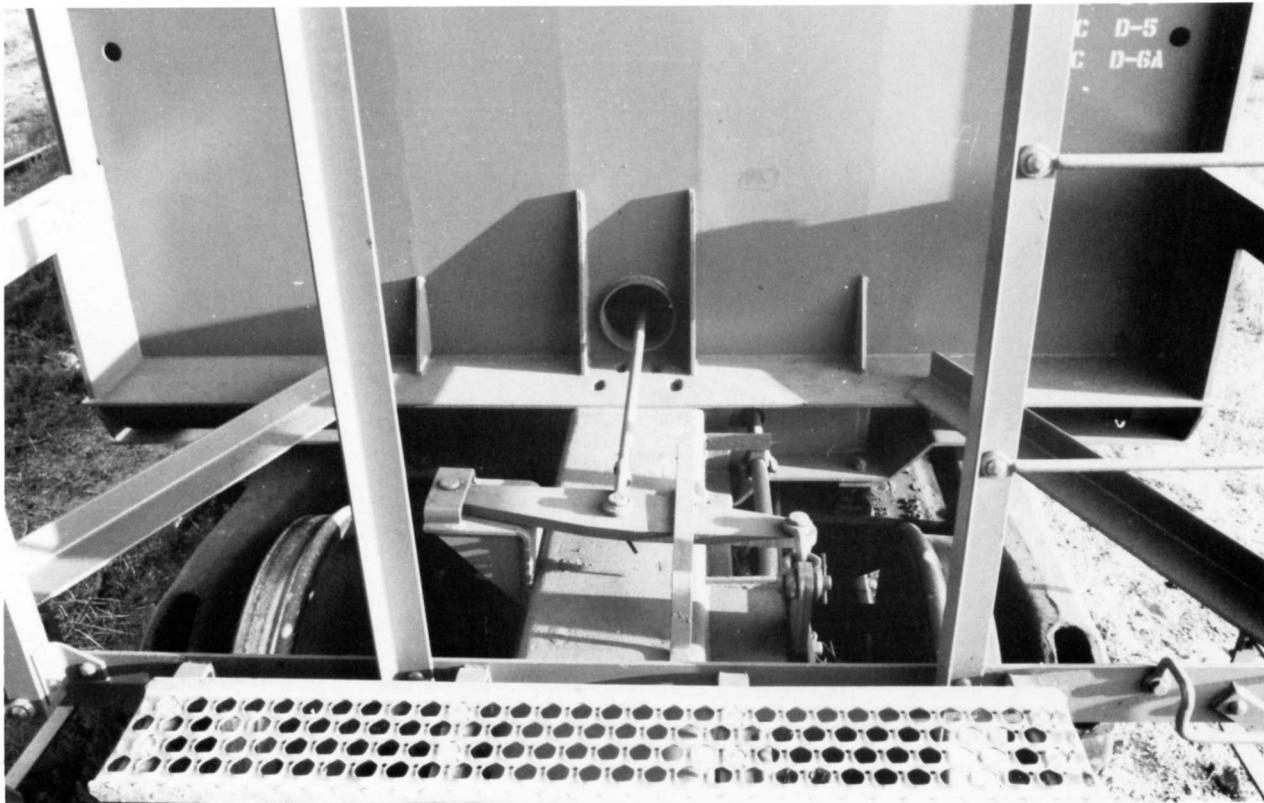
Detail of "B" end ladder and cross brace arrangement.

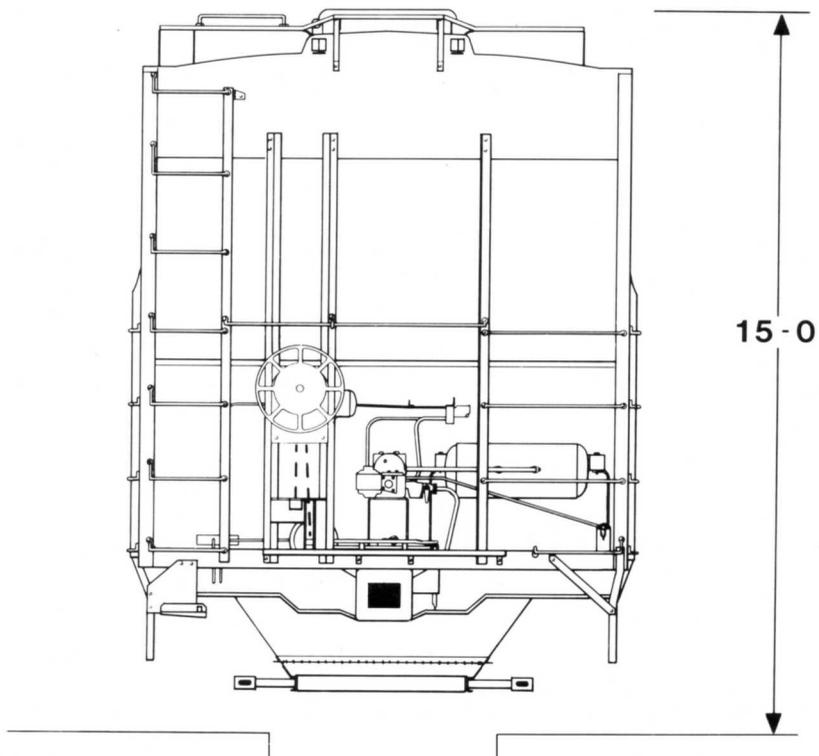


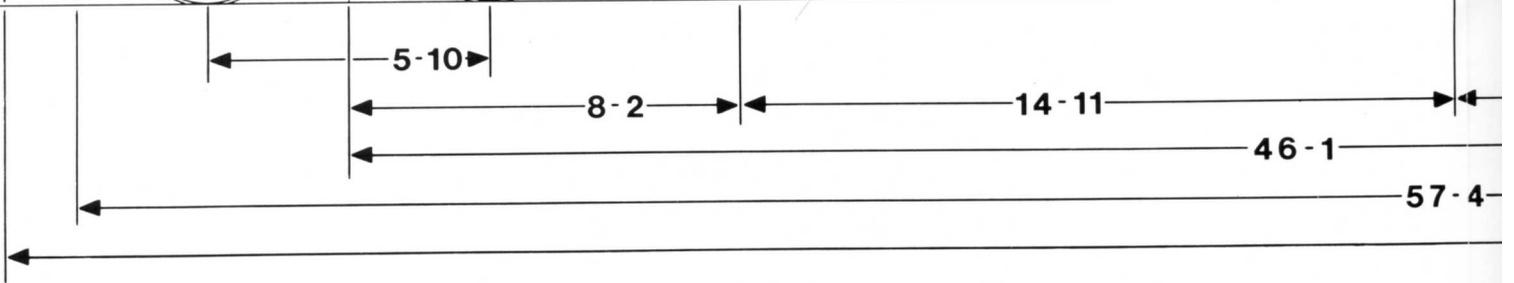
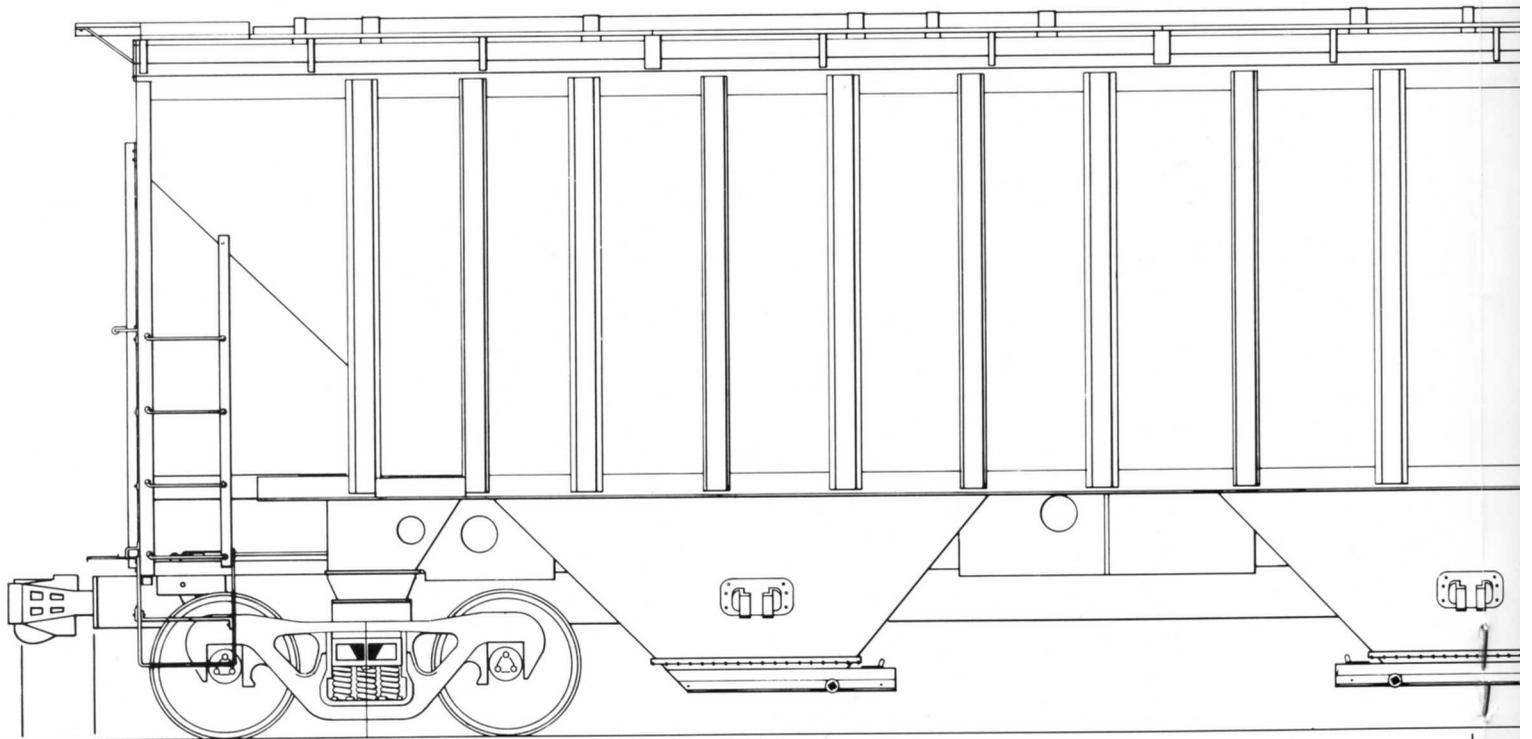
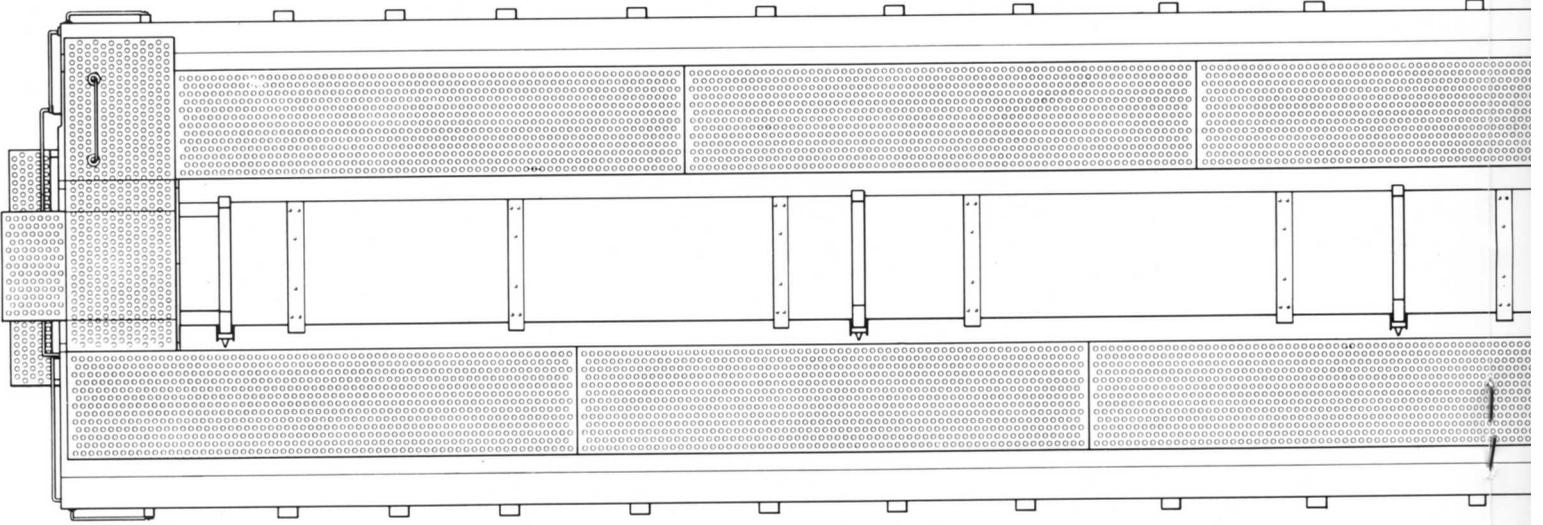
Roof view showing walkways and hatches.

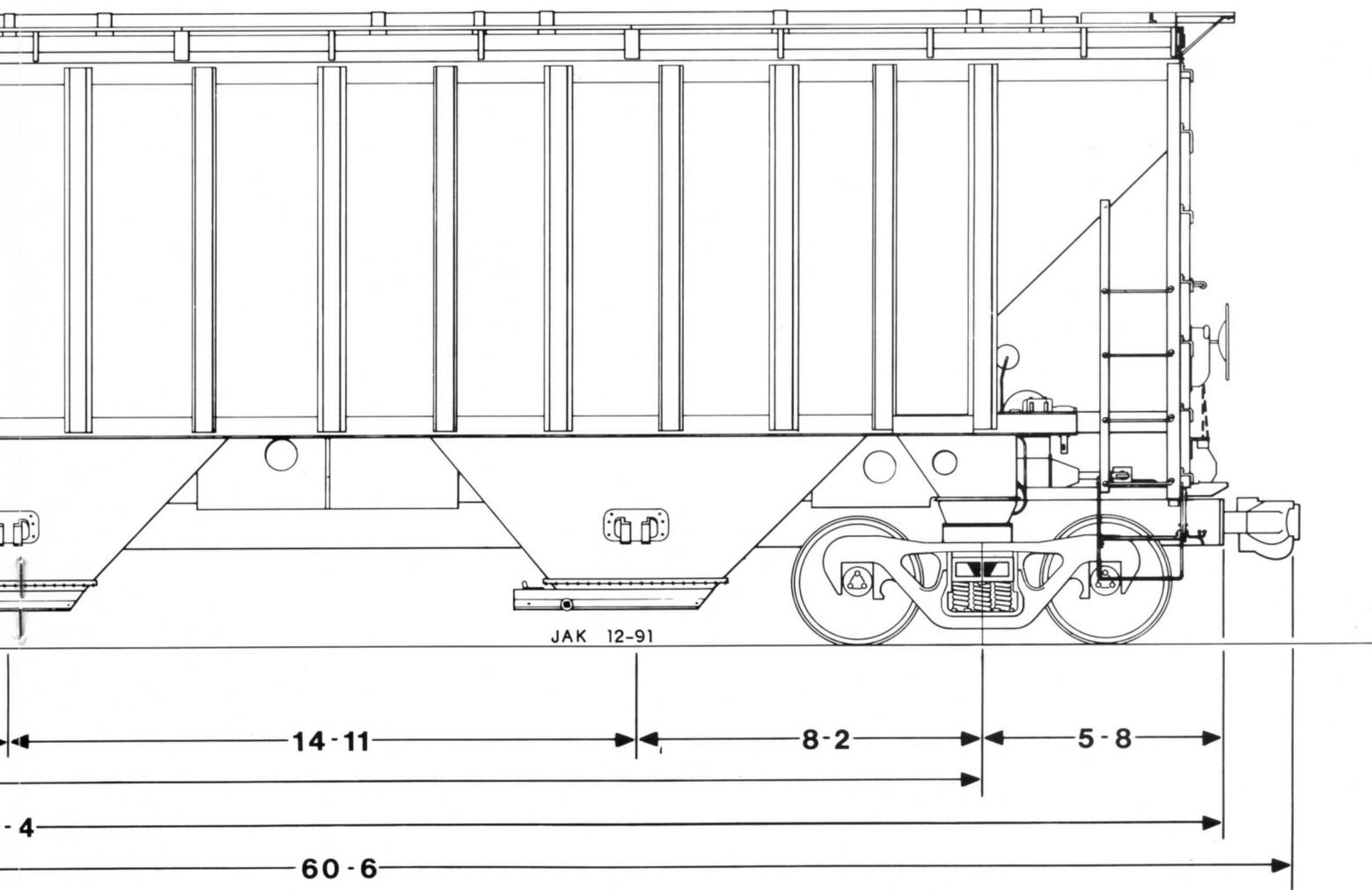
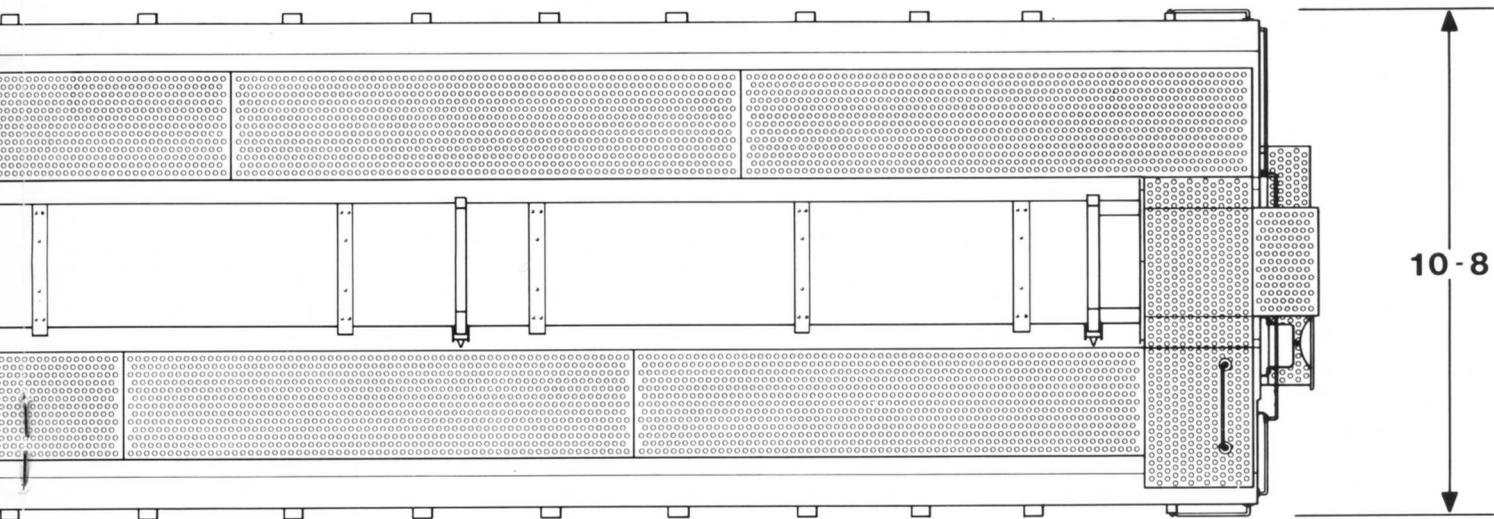


(Above) Close-up of integral lift ring and bolster on BN 466147. (Below) Detail of the "A" end of BN 466147.









BURLINGTON NORTHERN'S (GRAIN) COVERED HOPPER FLEET 1970-1980

compiled by *David G. Casdorff*

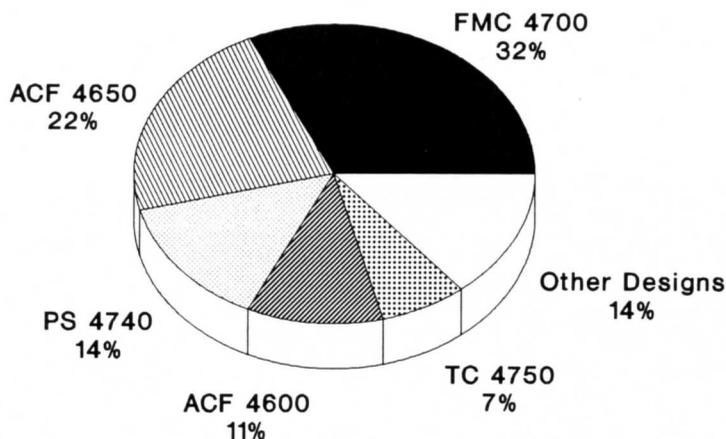
The first decade of Burlington Northern's newly assembled freight car fleet were certainly met with many challenges. One of these challenges was to organize and expand its fleet of covered hoppers for grain service. Cars from the four former railroads had to be combined for more efficient accounting and maintenance purposes. New cars had to be ordered to keep up with both increased demand and newer more economical designs.

The following roster is the result of the first ten years of BN's grain car fleet. It consists of grain hopper cars 4000 cubic foot capacity and larger with trough hatches. It does not include the former NP "Conditionaire" or refrigerated cov-

ered hoppers of BN series 453010-453060 or 454850-454910. Also, the 3- and 4-digit C&S and FW&D cars were apparently not renumbered into a BN initialed series until after 1980 (these railroads were still being listed separately in the *ORER*).

The roster is generally self-explanatory. Standard abbreviations are used for builders. The "Capy" column refers to the cubic foot capacity of the car. In the notes section one will find the former number series (if applicable) or "New" if delivered to the Burlington Northern when built. This section also includes the builder's lot number if known and month/year build dates.

BN Grain Cars 1970-1980 Fleet Composition by Car Design



BN GRAIN HOPPER ROSTER 1970-1980

| <i>Init</i> | <i>Number Series</i> | <i>Quan</i> | <i>Type</i> | <i>Built</i> | <i>Builder</i> | <i>Capy</i> | <i>Notes</i> |
|-------------|----------------------|-------------|-------------|--------------|----------------|-------------|--|
| CS | 860-869 | 10 | 190LO | 1964 | GATC | 4500 | New. Lot 8363-G. Built 12-64. |
| FWD | 3001-3050 | 50 | 190LO | 1964 | GATC | 4500 | New. Lot 8363-G. Built 12-64. |
| FWD | 3051-3150 | 100 | 199LO | 1966 | ACF | 4600 | New. Lot 11-02387. Built 4-66. |
| FWD | 3151-3250 | 100 | 199LO | 1967 | ACF | 4650 | New. Built 3-67. Lot 11-02646. |
| BN | 446000-446499 | 500 | 199LO | 1975 | ACF | 4650 | New. Built 5=6-75. |
| BN | 446550-447049 | 500 | 197LO | 1976 | FMC | 4700 | New. Job 17777. Built 7=9-76. |
| BN | 447050-447499 | 450 | 199LO | 1977 | ACF | 4650 | New. Built 2=3-77. |
| BN | 447550-447924 | 375 | 197LO | 1978 | FMC | 4700 | New. Job 17896. Built 3=5-78. |
| BN | 447925-448424 | 500 | 200LO | 1978 | TC | 4750 | New. Built 5=8-78. |
| BN | 448425-448924 | 500 | 200LO | 1979 | TC | 4750 | New. Built 9=11-79. |
| BN | 448925-449424 | 500 | 200LO | 1979 | PS | 4750 | New. Lot 1036. Built 12-79=1-80. |
| BN | 450240-450289 | 50 | 190LO | 1963 | PS | 4000 | CBQ 85640-85689. Lot 8806. |
| BN | 450500-450524 | 25 | 200LO | 1964 | PS | 4427 | NP 75665-75689. Lot 8892-A. |
| BN | 450525-450624 | 100 | 200LO | 1966 | PS | 4427 | NP 76200-76299. Lot 9150. Built 9-66. |
| BN | 450650-450699 | 50 | 198LO | 1965 | PS | 4427 | NP 76120-76169. |
| BN | 450700-450999 | 300 | 198LO | 1967 | PS | 4427 | NP 76700-76999. |
| BN | 451050-451099 | 50 | 198LO | 1964 | GATC | 4500 | GN 171050-171099. Lot 8363-A. |
| BN | 451100-451199 | 100 | 198LO | 1964 | GATC | 4500 | CBQ 85700-85799. Lot 8363-B. Built 10-64. |
| BN | 451200-451599 | 400 | 198LO | 1964-65 | GATC | 4500 | CBQ 85800-86199. Lot 8363-G. 12-65=1-65. |
| BN | 451600-452599 | 1000 | 197LO | 1973 | FMC | 4700 | New. Job 17548. Built 7=10-73. |
| BN | 453100-453589 | 490 | 198LO | 1966 | ACF | 4600 | CBQ 86200-86689. Built 3=4-66. |
| BN | 453600-453799 | 200 | 198LO | 1967 | ACF | 4600 | CBQ 184400-184599. Built 3=4-67. |
| BN | 453800-453999 | 200 | 190LO | 1968 | ACF | 4600 | CBQ 185150-185349. Lot 11-02676. Built 2-68. |
| BN | 454000-454299 | 300 | 198LO | 1968 | ACF | 4650 | GN 170000-170299. Lot 11-02692. Built 8-68. |
| BN | 454300-454599 | 300 | 199LO | 1966 | ACF | 4650 | GN 171700-171999. Lot 11-02619. Built 11-66. |
| BN | 454600-454699 | 100 | 200LO | 1968 | ACF | 4650 | NP 76300-76399. Lot 11-02678. |
| BN | 454700-454749 | 50 | 196LO | 1964 | ACF | 4650 | GN 171100-171149. Lot 11-02219. Built 5-64. |
| BN | 454750-454789 | 40 | 196LO | 1965 | ACF | 4650 | GN 171150-171189. Lot 11-02335. |
| BN | 454790-454849 | 60 | 196LO | 1965 | ACF | 4650 | GN 171190-171249. Lot 11-02336. |
| BN | 455000-455199 | 200 | 200LO | 1970 | ACF | 4650 | New. Built 4-70. Ordered by NP. |
| BN | 455200-455449 | 250 | 198LO | 1970 | ACF | 4650 | New. Built 7-70. |
| BN | 455500-455799 | 300 | 200LO | 1970 | PS | 4740 | New. Lot 9459. Built 6=7-70. |
| BN | 455800-455999 | 200 | 198LO | 1970 | ACF | 4600 | New. Built 6-70. |
| BN | 456000-456149 | 150 | 199LO | 1970 | PS | 4740 | New. Lot 9459-A. Built 8=9-70. |
| BN | 456150-456249 | 100 | 200LO | 1970 | PS | 4740 | New. Lot 9459-C. Built 9-70. |
| BN | 456250-456649 | 400 | 198LO | 1971 | GI | 4700 | New. Job 17313. Built 7=8-71. |
| BN | 456700-456899 | 200 | 198LO | 1966 | PS | 4740 | GN 171500-171699. Lot 9107. |
| BN | 456900-456999 | 100 | 199LO | 1969 | PS | 4740 | NP 76400-76499. |
| BN | 457000-457324 | 325 | 200LO | 1967 | PS | 4740 | CBQ 184600-184924. Lot 9231. |
| BN | 457350-457549 | 200 | 200LO | 1968 | PS | 4740 | CBQ 184950-185149. Lot 9291. |
| BN | 457600-457749 | 150 | 198LO | 1967 | PS | 4740 | GN 172100-172249. Lot 9217-A. |
| BN | 457750-457774 | 25 | 198LO | 1968 | PS | 4740 | CBQ 185350-185374. Lot 9312-A. |
| BN | 457800-457949 | 150 | 198LO | 1967 | PS | 4740 | GN 172250-172399. Lot 9217. |
| BN | 458000-458299 | 300 | 198LO | 1967 | PS | 4740 | GN 172400-172699. Lot 9259. |
| BN | 458300-458799 | 500 | 198LO | 1971 | ACF | 4650 | New. Built 8=9-71. |
| CS | 458800-458999 | 200 | 198LO | 1971 | GI | 4700 | New. Job 17313. Built 9-71. |
| BN | 459000-459099 | 100 | 200LO | 1965 | Magor | 4750 | GN 172000-172099. |
| FWD | 459350-459549 | 200 | 199LO | 1974 | ACF | 4650 | New. Built 10=11-74. |

BN GRAIN HOPPER ROSTER 1970-1980 (cont'd)

| <i>Init</i> | <i>Number Series</i> | <i>Quan</i> | <i>Type</i> | <i>Built</i> | <i>Builder</i> | <i>Capy</i> | <i>Notes</i> |
|-------------|----------------------|-------------|-------------|--------------|----------------|-------------|--|
| FWD | 459550-459649 | 100 | 200LO | 1979 | PS | 4750 | New. Lot 1036-A. Built 1-80. |
| FWD | 459650-459749 | 100 | 195LO | 1980 | FMC | 4700 | New. Job 18128. Built 5=6-80. |
| BN | 460000-460199 | 200 | 193LO | 1965 | ACF | 5250 | GN 171250-171349 (lot 11-02518) and GN 171350-171449 (lot 11-02516). |
| BN | 460200-461199 | 1000 | 195LO | 1980 | FMC | 4700 | New. Job 17975. Built 2=5-80. |
| BN | 480600-480609 | 10 | 198LO | 1966 | ACF | 4600 | CBQ 86690-86699. Lot 11-02387. |
| BN | 480800-480824 | 25 | 200LO | 1967 | PS | 4740 | CBQ 184925-184949. Lot 9231. |
| BN | 481000-481099 | 100 | 199LO | 1977 | ACF | 4650 | New. Built 3=4-77. |
| BN | 481100-481199 | 100 | 199LO | 1978 | ACF | 4600 | New. Built 8-78. |
| BN | 481200-481299 | 100 | 200LO | 1979 | ACF | 4600 | New. Built 8-79. |



BN 447140 was delivered new in 1977 from ACF. Its part of the series BN 447050-447499. This car was photographed in Longview, WA in July 1987. It had been recently been repainted in 11-86.

BN GRAIN HOPPER CAR PHOTOS

by *David G. Casdorph*

Most of the photos shown here were taken from the period 1985-1992 (March 1992 being the latest). Since 1987, Burlington Northern has been acquiring and leasing numerous series of grain cars from a cornucopia of leasing companies, some of which are shown here.

Freight Cars Journal hopes that after all the changes have

settled down, we'll be able to present a more thorough examination of BN's recent fleet. In addition to the leased cars, it was reported in the February 1992, *Railway Age*, that an order for another 500 hoppers similar to the 466000-series of 1990 will be placed in 1992.

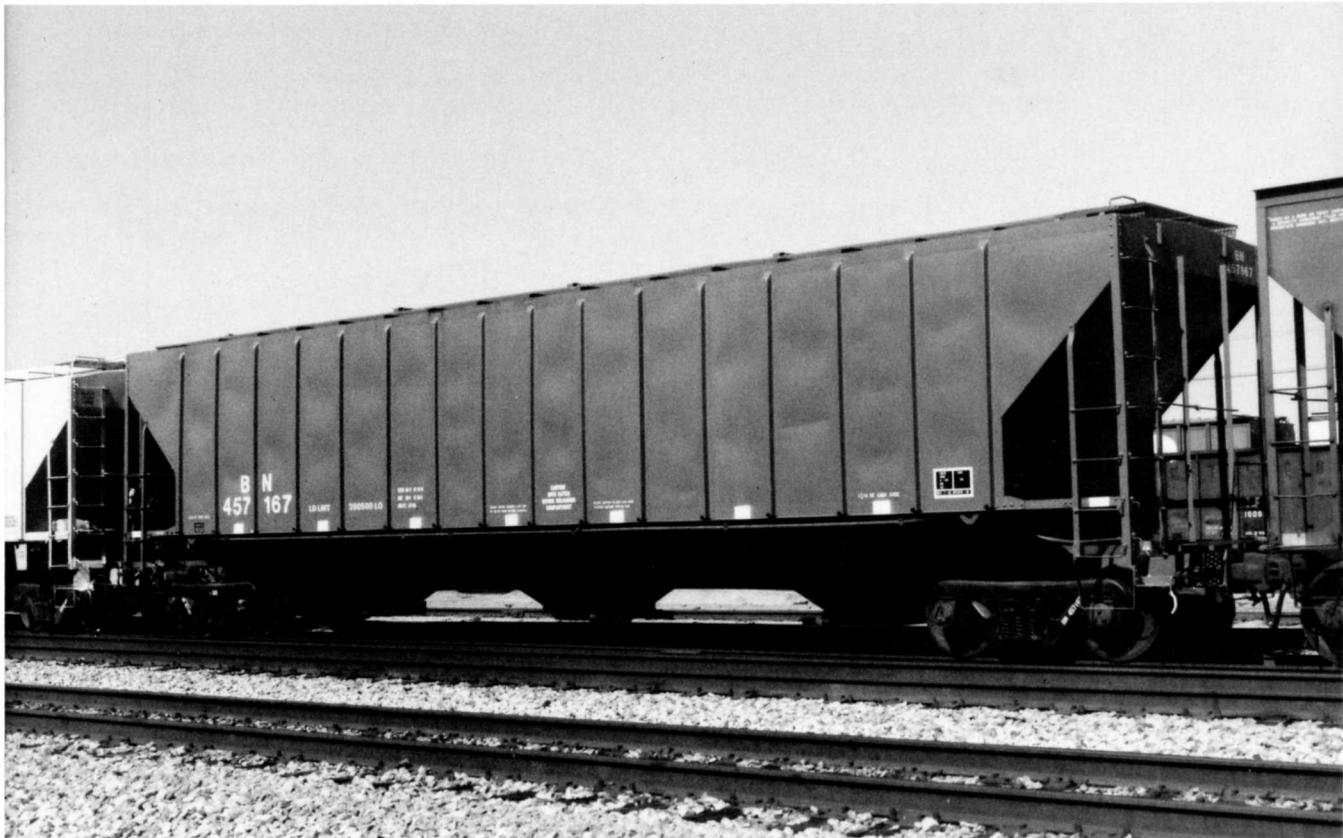


BN 458968 is shown here in March 1992. It was built as part of a 200 car series (BN 458800-459999) in 1971 by Gunderson Inc.

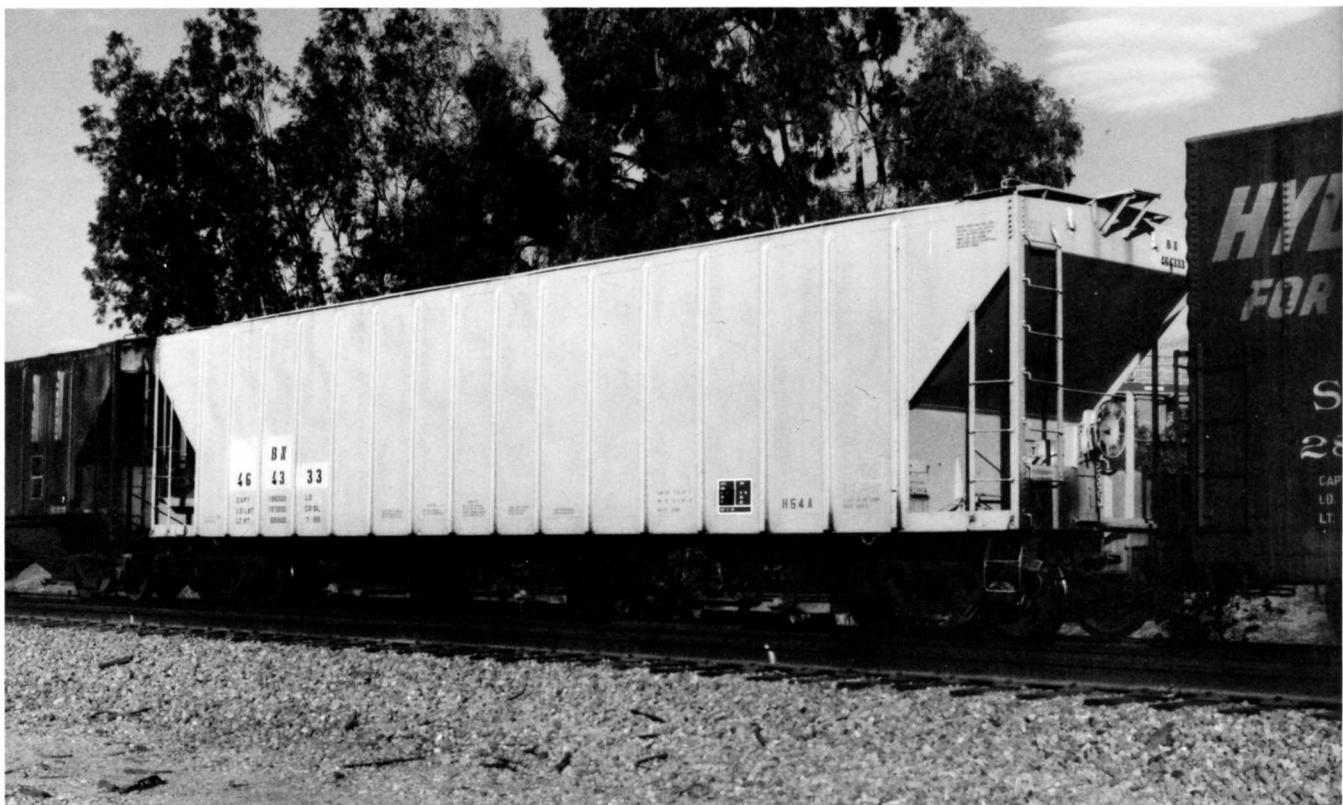


(Above) BN 451201 is from the former CB&Q 85800-86199 series. It was built by General American in 1964. (Below) GN 171747 was still in Great Northern livery when it was photographed in July 1987. The series, GN 171700-171999, was built in 1966. Many of this series were later relettered and renumbered into the BN 454300-454599 series.





(Above) BN 457167 originally came from the CB&Q 184600-184924 series, built by Pullman-Standard in 1967. Shown here in central California in March 1992. (Below) BN 464333 is being leased from GERSCO. Most of the BN 464000-464917 series came from Conrail via RFMX.





(Above) BN 464478 is part of the 464000-464917 series that the BN began leasing in 1989. (Below) BN 465460 was built in by Evans in 2-81. The series, BN 465301-465550 was added to the fleet in early 1992. The cars are owned by Louis Dreyfus.



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Burlington Northern's 466000-466999 and Related 4750
cu.ft. Covered Hoppers *James Kinkaid*

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Burlington Northern's (Grain) Covered Hopper Fleet
1970-1980 *David G. Casdorff*

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BN Grain Hopper Car Photos *David G. Casdorff*