

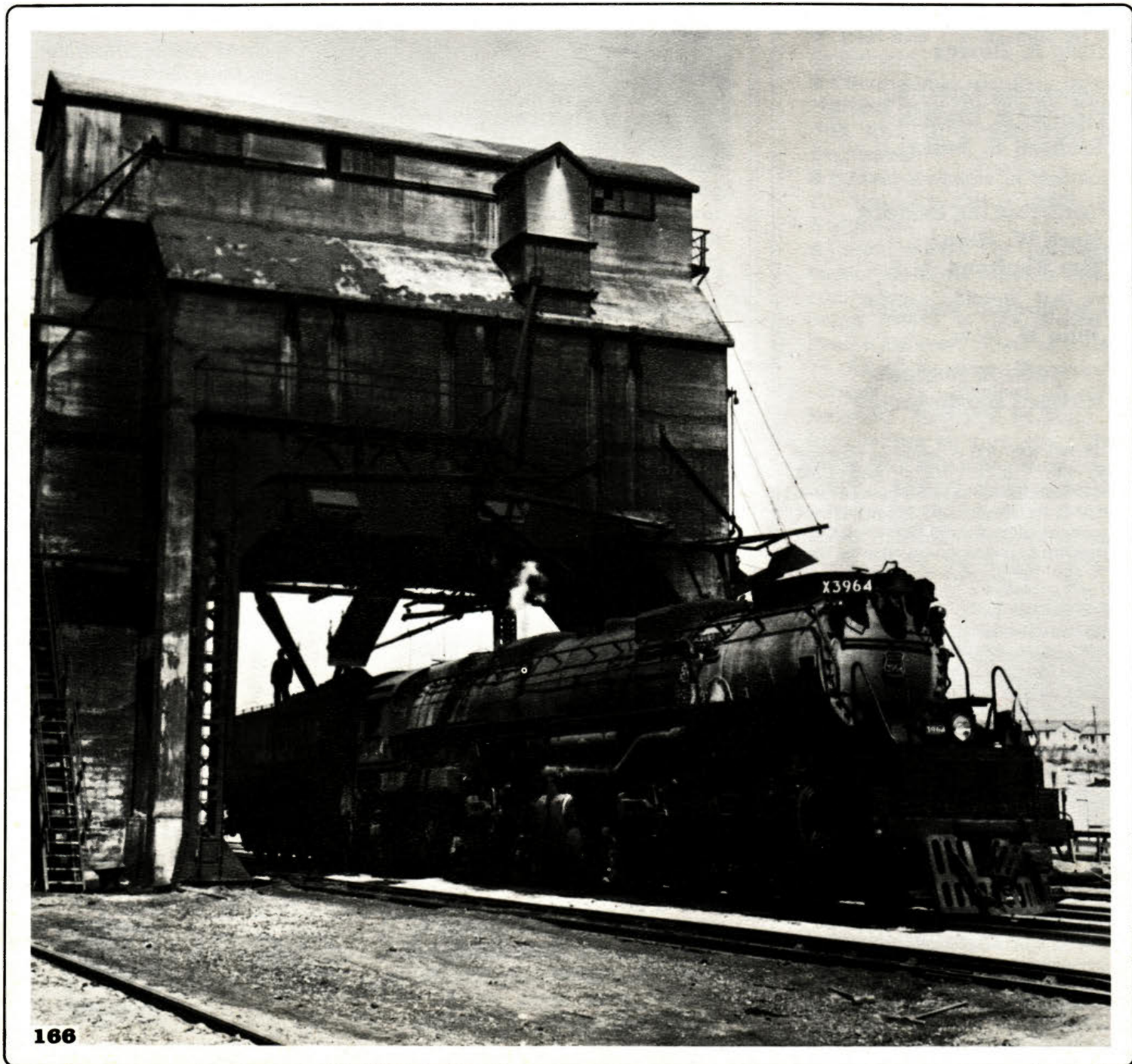


ON THE SYSTEM

The Official Publication of the UNION PACIFIC RAILROAD HISTORICAL SOCIETY

Volume 1, Number 10, October, 1980

THE 3900/3800/3700 CLASS CSA CHALLENGER STEAM LOCOMOTIVES



UNION PACIFIC RAILROAD HISTORICAL SOCIETY

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COVER PHOTO —

3964 a CSA-3 class 4-6-6-4 Challenger takes on a fresh load of coal at Hanna, WY, the home of coal for the Union Pacific. The date of this photo is unknown.

Photo courtesy of Union Pacific Railroad

EDITORIAL

On September 15, 1980, the Union Pacific, Missouri Pacific and Western Pacific Railroads filed their respective merger applications with the Interstate Commerce Commission in Washington, DC. The applications were made up of 26 volumes of information totaling some 4300 pages and were the product of several months of planning and preparation following the announcement made in January of this year that the three railroads were proposing an end-to-end merger.

The Interstate Commerce Commission has 30 months from the date of application to come to a decision on the proposed merger. The applications could be obtained as early as July, 1982. The consolidation of the three rail networks into one operating unit will follow as soon as possible, once the applications have been approved.

The proposed railroad will be owned and managed by a new holding company called Pacific Rail System, Inc. This is only a holding company and not a new operating railroad. The Union Pacific Railroad will still be the Union Pacific Railroad as will the Missouri Pacific Railroad. Both of these roads will still retain their identities as they do today. Ownership and management will be the responsibility of the holding company.

The Western Pacific Railroad will undergo several changes though. The Western Pacific will become Union Pacific's fourth operating district along with the current Eastern, Northwest and Southcentral Districts. The Western Pacific will be an operating subsidiary of the Union Pacific similar to the Spokane International Railroad. The Missouri Pacific, on the other hand, will be a sister railroad to the Union

Pacific. It will continue operations as it does today with only small exceptions, and those mainly in operations where common points between the U.P. and M.P. exist such as Omaha and Kansas City.

The proposed railroads will be headquartered as they are today. The U.P./W.P. in Omaha, Nebraska and the M.P. in St. Louis, Missouri. The holding company will be located in one of the two cities, as yet undecided.

An increased traffic flow is anticipated once the merger has been approved and it is planned to purchase more locomotives and cabooses in the third year of operation. Until then existing levels of equipment should be adequate for handling even an increase in business and train operations due to the increased efficiencies of the merged railroads.

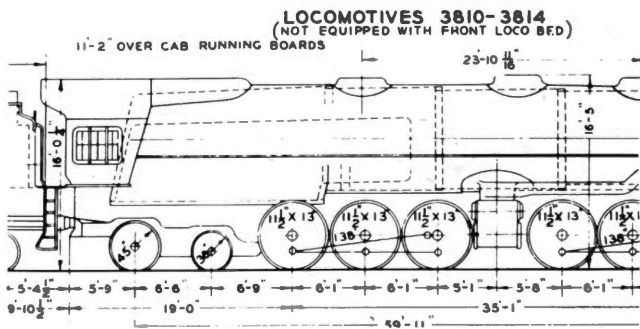
Since traffic is anticipated to increase a major thrust will be made to up-grade some of the track. The lines running either direction out of Kansas City will be worked on to increase their capacity for handling trains. It seems this track may be in for a healthy increase in traffic.

Overall the merger is expected to improve train schedules or decrease running times of run-through trains, increase efficiency of equipment and increase their respective utilization and reduce the overall operating expenses. And as I have said before, if this proposed rail network is handled anything like the current railroads are handled now, the merged railroad will be very well operated and will be very interesting to watch.



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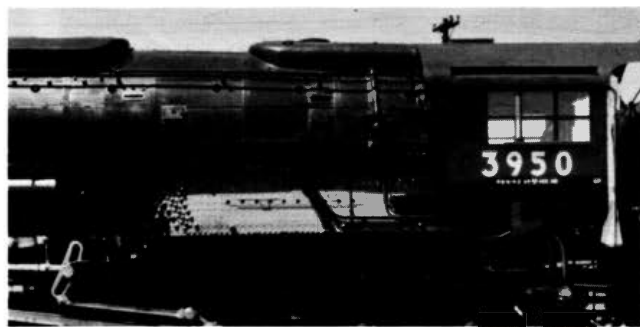
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Fast
Forty
Renumbering,
Part 3



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NEXT MONTH

- THE OLDEST LOCOMOTIVE ON THE SYSTEM
- 3975-3999, CLASS CSA-4 CHALLENGERS
- A NEW LOOK IN DIESEL PAINTING

NEWS BRIEFS

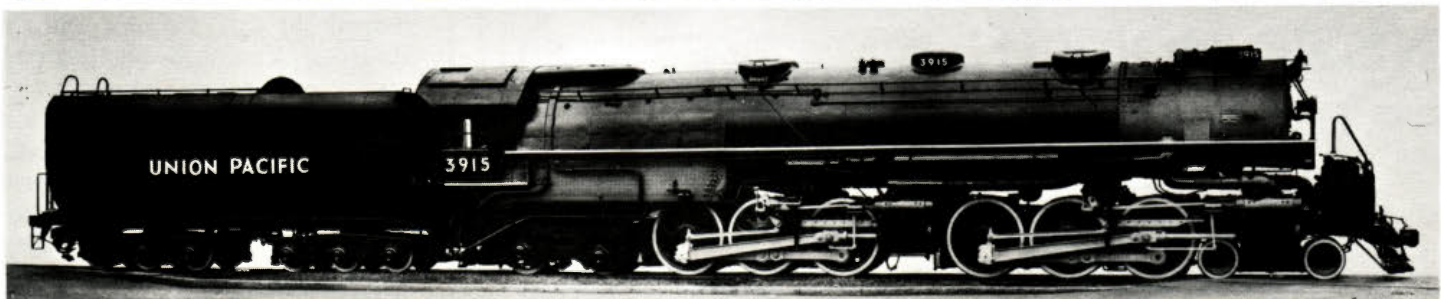
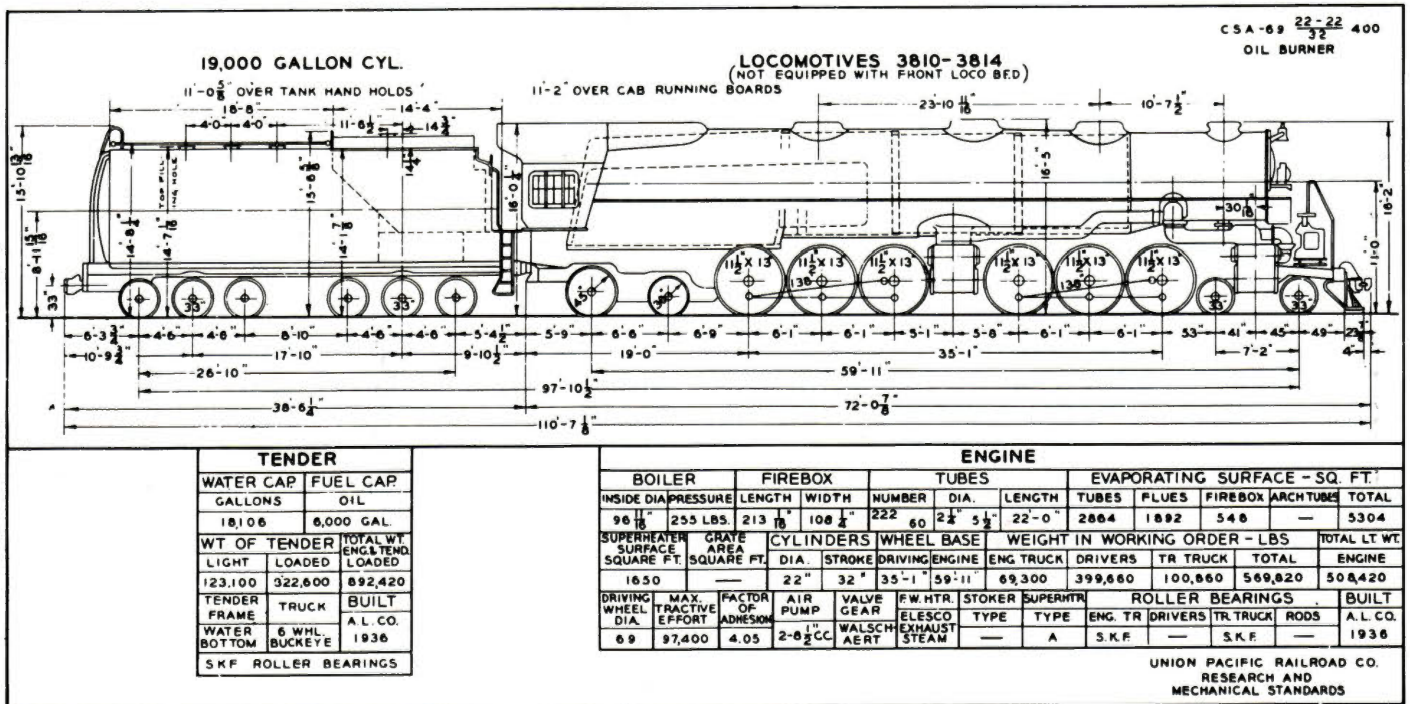
- New C-30-7's, 2517-2529 were delivered in September. The remaining units 2530-2539 are expected next month.
- SW-10, 1209 (ex 1861) was released from the Omaha Shops on October 7.
- Sold to Bargains Galore in September was GP-9, 213 for delivery to J. Simon and Sons.
- Naparano Iron and Metal purchased DD-35B's, 80B, 82B & 94B and GP-20 492 all in September.
- Purchased by Precision National were DD-35's 83, 87B, 88B and GP-9 228 also in September.
- Hyman-Michaels in Madison, IL bought GP-9 253 in September.
- Union Pacific is currently leasing 31 of its units to other companies. Almost half are being leased to the Western Pacific Railroad. Each of these 15 SD-40-2's have the words "Leased to Western Pacific Railroad" stenciled in black 3 inch letters on the cabs. The units numbers being leased are 3352, 3360, 3419, 3421, 3424, 3475, 3476, 3478, 3504, 3519, 3528, 3536, 3542, 3546 and 3565. Of the remaining 17 units it is interesting to note that NW-2, 1040 is being leased to the Alaska Lumber Co., in Sitka, AK, GP-7, 112 being leased to Beker Industries in Soda Springs, ID and NW-2, 1044 being leased to Allied Chemical near Green River, WY. The others are being leased to the Camas Prairie Railroad, Mount Hood Railroad and several other industries.
- In August Barry B. Combs replaced the retiring E. C. Schafer as General Director - Public Relations and Advertising. Barry had been previously the Director - Public Relations.
- SW-10 1210 (ex 1831) is currently being worked on.

3900-3914 CLASS CSA 69 - $\frac{22-22}{32}$ - 400

Original Number	Class	Built	Builder Number	Tractive Effort	Weight	Converted to Oil	Renumb.	Date	Retired
3900	CSA-1	8/36	68745	97,400	402,920	7/43	3800	4/44	8/57
3901	CSA-1	8/36	68746	97,400	402,920	4/43	3801*	4/44	9/57
3902	CSA-1	8/36	68747	97,400	402,920	5/43	3802*	4/44	12/58
3903	CSA-1	9/36	68748	97,400	402,920	5/43	3803	4/44	5/59
3904	CSA-1	9/36	68749	97,400	402,920	4/43	3804*	4/44	7/59
3905	CSA-1	9/36	68750	97,400	402,920	5/43	3805	4/44	2/56
3906	CSA-1	9/36	68751	97,400	402,920	5/43	3806	4/44	7/62
3907	CSA-1	9/36	68752	97,400	402,920	6/43	3807*	4/44	8/57
3908	CSA-1	9/36	68753	97,400	402,920	5/43	3808	4/44	4/57
3909	CSA-1	9/36	68754	97,400	402,920	1/43	3809*	4/44	8/57
3910	CSA-1	9/36	68755	97,400	399,660	3/43	3810*	4/44	9/56
3911	CSA-1	9/36	68756	97,400	399,660	3/43	3811*	4/44	9/56
3912	CSA-1	9/36	68757	97,400	399,660	4/43	3812	4/44	12/58
3913	CSA-1	9/36	68758	97,400	399,660	3/43	3813	4/44	9/56
3914	CSA-1	9/36	68759	97,400	399,660	3/43	3814*	4/44	6/57

Builder: AMERICAN LOCOMOTIVE CO., Schenectady, NY
 These were the first 4-6-6-4 steam locomotives purchased by the Union Pacific Railroad
 As built, they were coal burning and later were converted to oil burning locomotives

*See special roster for these locomotives on page 10.



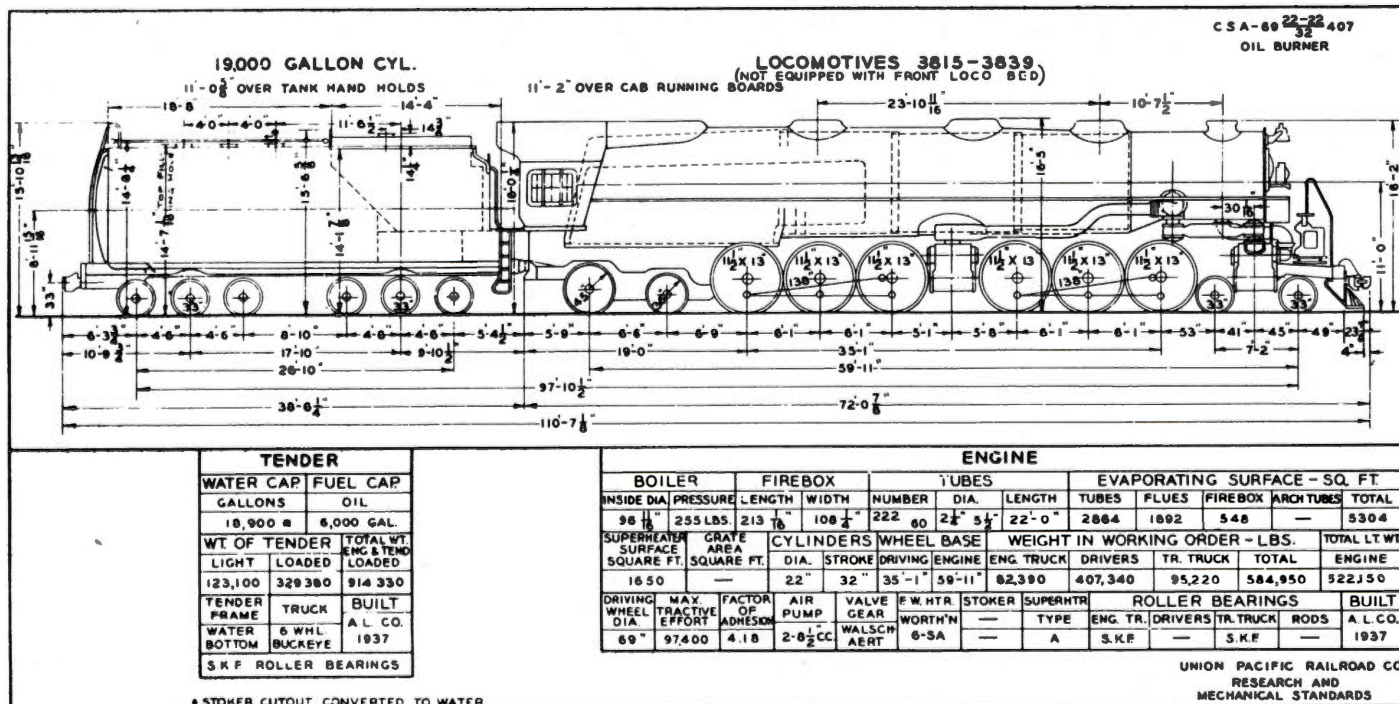
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 3915 shown here in a builders pose outside the Schenectady shops of American Locomotive in July, 1937. Compare this pose to that of 3938 on page 10. Both locomotives are CSA-2 class 4-6-6-4 Challengers. Photo courtesy Union Pacific Railroad

3915-3939 CLASS CSA 69 - $\frac{22-22}{32}$ - 407

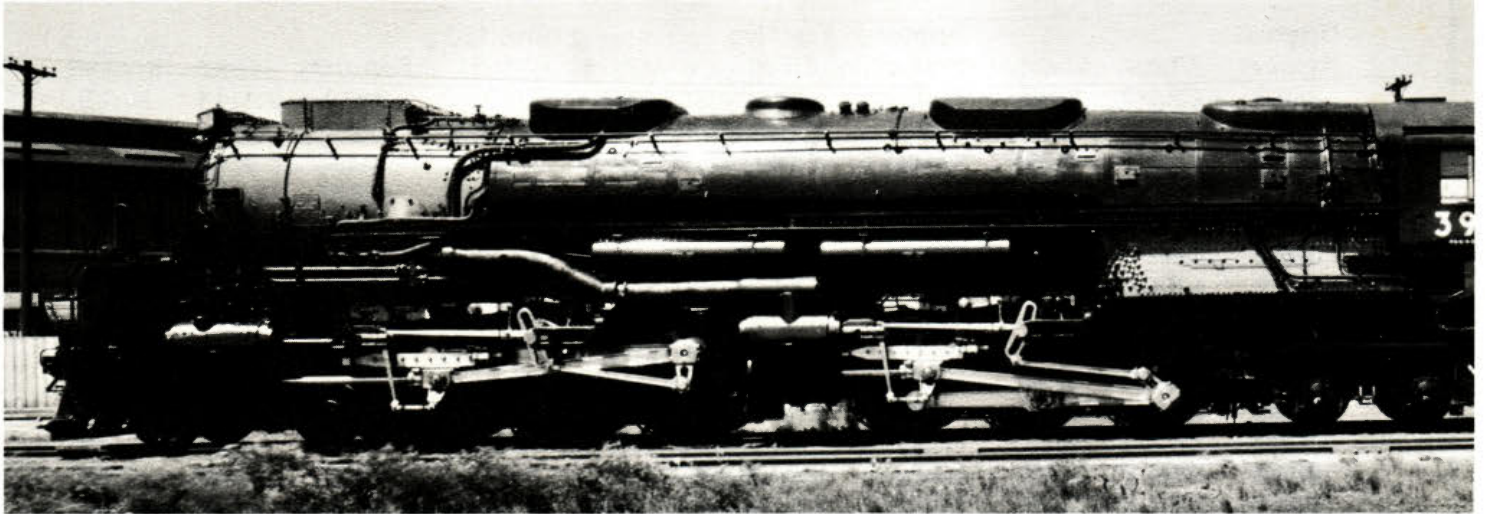
Original Number	Class	Built	Builder Number	Tractive Effort	Weight	Converted to Oil	Renumb.	Date	Retired
3915	CSA-2	7/37	68924	97,400	407,340	3/43	3815	4/44	12/58
3916	CSA-2	6/37	68925	97,400	407,340	2/43	3816	4/44	4/57
3917	CSA-2	6/37	68926	97,400	407,340	1/43	3817*	4/44	6/57
3918	CSA-2	7/37	68927	97,400	407,340	11/42	3818*	4/44	3/61
3919	CSA-2	7/37	68928	97,400	407,340	11/42	3819	4/44	7/57
3920	CSA-2	7/37	68929	97,400	407,340	2/43	3820	4/44	8/57
3921	CSA-2	7/37	68930	97,400	407,340	2/43	3821	4/44	4/57
3922	CSA-2	7/37	68931	97,400	407,340	8/42	3822	4/44	9/57
3923	CSA-2	7/37	68932	97,400	407,340	8/42	3823	4/44	7/59
3924	CSA-2	7/37	68933	97,400	407,340	8/42	3824	4/44	7/57
3925	CSA-2	7/37	68934	97,400	407,340	8/42	3825	4/44	4/57
3926	CSA-2	7/37	68935	97,400	407,340	8/42	3826	4/44	11/56
3927	CSA-2	7/37	68936	97,400	407,340	8/42	3827	4/44	12/58
3928	CSA-2	7/37	68937	97,400	407,340	4/42	3828	4/44	7/59
3929	CSA-2	7/37	68938	97,400	407,340	9/41	3829	4/44	7/57
3930	CSA-2	8/37	68939	97,400	407,340	4/42	3830	4/44	5/59
3931	CSA-2	8/37	68940	97,400	407,340	4/42	3831	4/44	6/57
3932	CSA-2	8/37	68941	97,400	407,340	4/42	3832	4/44	5/59
3933	CSA-2	8/37	68942	97,400	407,340	4/42	3833	4/44	11/56
3934	CSA-2	8/37	68943	97,400	407,340	7/38	3834	4/44	11/54
3935	CSA-2	8/37	68944	97,400	407,340	9/37	3835	4/44	11/56
3936	CSA-2	8/37	68945	97,400	407,340	9/37	3836	4/44	11/56
3937	CSA-2	8/37	68946	97,400	407,340	9/37	3837	4/44	7/57
3938	CSA-2	9/37	68947	97,400	407,340	9/37	3838	4/44	5/59
3939	CSA-2	9/37	68948	97,400	407,340	9/37	3839	4/44	8/57

Builder: AMERICAN LOCOMOTIVE CO., Schenectady, NY
 As built, they were coal burning and later were converted to oil burning locomotives

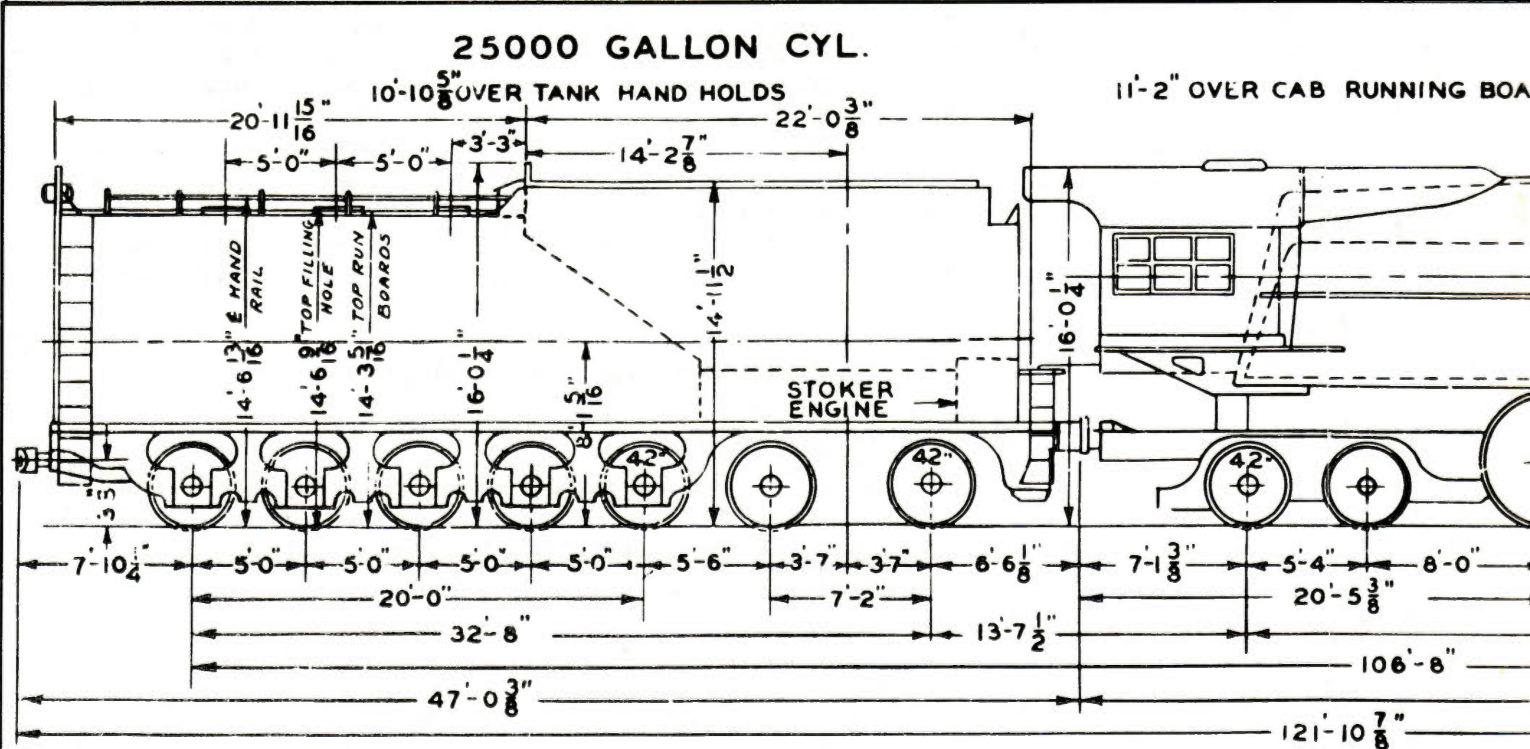
*See special roster for these locomotives on page 10.



3950-3969 CLASS CSA 69 - $\frac{21-21}{32}$ - 404



3950 is shown here at the Union Pacific Shops in Omaha soon after it was received in May, 1942. This locomotive was the first of its class to be shipped from American, class CSA-3 4-6-6-4 Challenger. All of these steam locomotives remained coal burning right up to the bitter end.



TENDER		
WATER CAP.		FUEL CAP.
GALLONS		COAL
25,000		LEVEL FULL 56,000 LBS.
WT. OF TENDER		TOTAL WT. ENG. & TEND.
LIGHT	LOADED	LOADED
172,300	436,500	1,063,500
TENDER FRAME	TRUCK	BUILT
WATER BOTTOM	GENERAL STEEL	A. L. CO. 1942
TIMKEN ROLLER BEARINGS		

LOCOMOTIVES DESIGNED FOR 20 DEGREES MAXIMUM CURVATURE



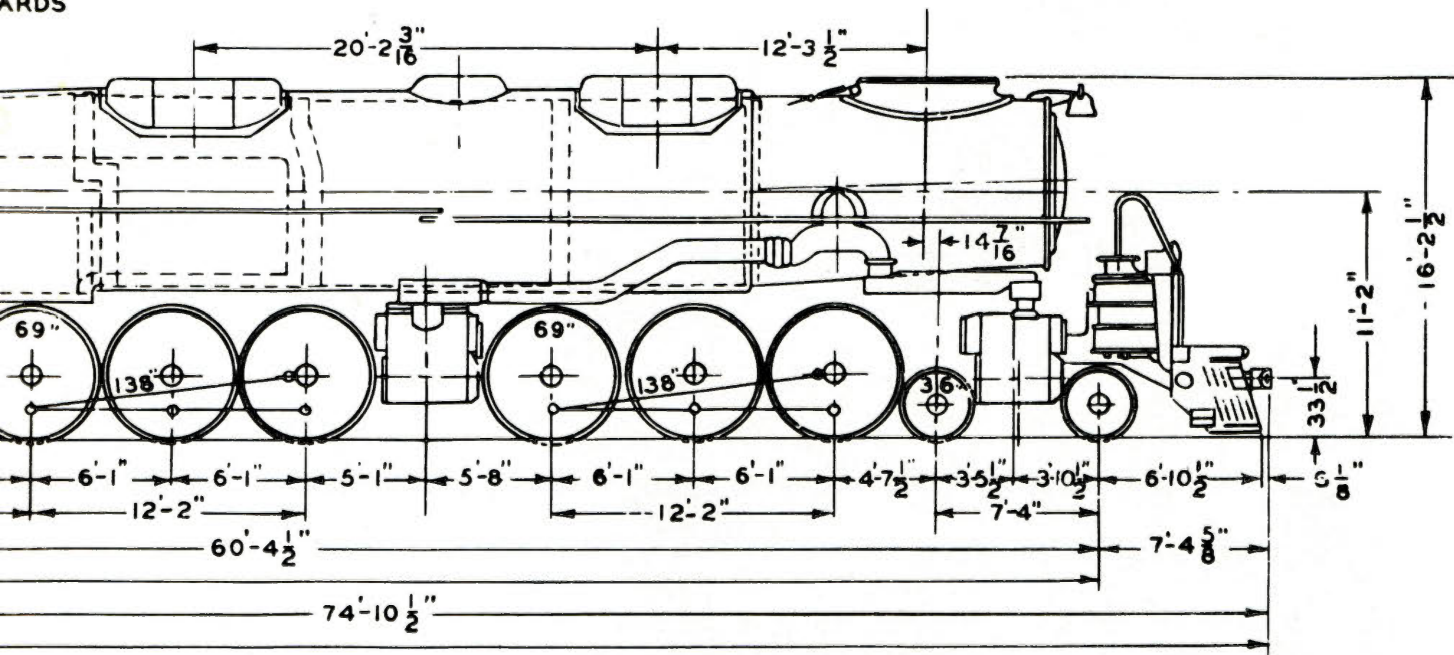
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For 3950 the end came in March, 1961 when it was retired under the classification "Worn-out" as were all except one of the big Challengers. Actually 3950 was only out lived by a couple other Challengers, even though it was still burning coal. Photo courtesy Union Pacific Railroad

LOCOMOTIVES 3950-3969

4-6-6-4 - 3 69 $\frac{21-21}{32}$ 404-MB

ARDS



ENGINE

BOILER		FIREBOX		TUBES			EVAPORATING SURFACE-SQ. FT.				
INSIDE DIA.	PRESSURE	LENGTH	WIDTH	NUMBER	DIA.	LENGTH	TUBES	FLUES	FIREBOX	CIRCULATORS	TOTAL
94 $\frac{11}{16}$ "	280 LBS.	187 $\frac{1}{32}$ "	108 $\frac{3}{16}$ "	45 177	2 $\frac{1}{4}$ " 4"	20'-0"	527	3688	519	83	4817
SUPERHEATER SURFACE SQUARE FT.		GRATE AREA SQUARE FT.		CYLINDERS		WHEEL BASE		WEIGHT IN WORKING ORDER-LBS.			TOTAL LT. WT.
2355	132	DIA.	STROKE	DRIVING	ENGINE	ENG. TRUCK	DRIVERS	TR. TRUCK	TOTAL	ENGINE	
		21"	32"	35'-1"	60'-4 $\frac{1}{2}$ "	101,000	403,700	122,300	627,000	574,600	
DRIVING WHEEL DIA.	MAXIMUM TRACTIVE EFFORT	FACTOR OF ADHESION	AIR PUMP	VALVE GEAR	F. W. HTR.	STOKER	ROLLER BEARINGS			BUILT	
69"	97,350	4.16	2'-8 $\frac{1}{2}$ " CC	WALSCH-AERTS	ELESCO EXHAUST STEAM	STANDARD	ENG. TR.	DR.VERS	TR. TRUCK	RODS	A.L.CO.
						M.B.	S.K.F.	TIMKEN	S.K.F.	-	1942

UNION PACIFIC RAILROAD CO.
RESEARCH AND
MECHANICAL STANDARDS

Original Number	Class	Built	Builder Number	Tractive Effort	Weight	Converted to Oil	Renumb.	Date	Retired
3950	CSA-3	5/42	69760	97,350	403,700	—	—	—	3/61
3951	CSA-3	5/42	69761	97,350	403,700	—	—	—	12/59
3952	CSA-3	5/42	69762	97,350	403,700	—	—	—	7/60
3953	CSA-3	5/42	69763	97,350	403,700	—	—	—	2/60
3954	CSA-3	5/42	69764	97,350	403,700	—	—	—	2/60
3955	CSA-3	6/42	69765	97,350	403,700	—	—	—	12/58
3956	CSA-3	6/42	69766	97,350	403,700	—	—	—	2/60
3957	CSA-3	6/42	69767	97,350	403,700	—	—	—	2/60
3958	CSA-3	6/42	69768	97,350	403,700	—	—	—	3/60
3959	CSA-3	6/42	69769	97,350	403,700	—	—	—	7/60
3960	CSA-3	6/42	69770	97,350	403,700	—	—	—	12/58
3961	CSA-3	6/42	69771	97,350	403,700	—	—	—	12/58
3962	CSA-3	6/42	69772	97,350	403,700	—	—	—	3/60
3963	CSA-3	6/42	69773	97,350	403,700	—	—	—	10/59
3964	CSA-3	7/42	69774	97,350	403,700	—	—	—	10/59
3965	CSA-3	7/42	69775	97,350	403,700	—	—	—	7/60
3966	CSA-3	7/42	69776	97,350	403,700	—	—	—	3/60
3967	CSA-3	7/42	69777	97,350	403,700	—	—	—	3/60
3968	CSA-3	7/42	69778	97,350	403,700	—	—	—	4/60
3969	CSA-3	7/42	69779	97,350	403,700	—	—	—	4/60

Builder: AMERICAN LOCOMOTIVE CO., Schenectady, NY

As built, they were coal burning locomotives and were never converted to oil burning



Another view of 3950 shows a little more just how big these steam locomotives really were. Consider the driver diameter was only 69 inches - or just under 6 feet high! Photo courtesy Union Pacific Railroad



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Again we see another angle on 3950. This is the more popular three-quarter shot. As you see below another photographer used the same angle to take the same locomotive with - only 11 years later and many miles of service. Photo courtesy Union Pacific Railroad



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3950 is seen here in Laramie, WY on October 7, 1953. By comparing the two pictures you can see some of the changes these locomotives took over the years they were in service on the Union Pacific. Photo collection of G. B. Davies



172

3961 is seen here ready to depart somewhere for someplace in a direction unknown. It is not brand new but evidently has been recently repainted. The locomotive is a CSA-3 class 4-6-6-4 Challenger. Photo courtesy Union Pacific Railroad



173

3938 is seen here in August, 1937, as shown by the small sign under the tender. There is another sign under the front cylinders showing the order number. Union Pacific records show this unit as having been built in September, 1937. Photo courtesy Union Pacific Railroad

Temporary Conversion - Oil to Coal to Oil - 1949/50

Why this conversion ever happened is a question that goes unanswered. This might have been an experiment to see how well the conversion would work, but why? And then why convert them back to oil? For what ever reason these were the first locomotives to carry the 3700 number series. The next locomotives were the CSA-4 and 5's.

Number	Converted		Date	Converted		Date
	to Coal	Renumb.		to Oil	Renumb.	
3801	7/49	3701	10/49	1/50	3801	1/50
3802	8/49	3702	10/49	1/50	3802	1/50
3804	7/49	3704	10/49	1/50	3804	1/50
3807	8/49	3707	10/49	1/50	3807	1/50
3809	6/49	3709	10/49	1/50	3809	1/50
3810	7/49	3710	10/49	1/50	3810	1/50
3811	7/49	3711	10/49	1/50	3811	1/50
3814	6/49	3714	10/49	1/50	3814	1/50
3817	6/49	3717	10/49	1/50	3817	1/50
3818	6/49	3718	10/49	1/50	3818	1/50

FAST FORTY RENUMBERING,

Part 3

Current Number	Model	Builder	Built	Builder Number	Weight	To Be Renumbered
8065	SD-40-2	EMD	5/77	776013-1	390,000	3400
8066	SD-40-2	EMD	5/77	776013-2	390,000	3401
8067	SD-40-2	EMD	5/77	776013-3	390,000	3402
8068	SD-40-2	EMD	5/77	776013-4	390,000	3403
8069	SD-40-2	EMD	5/77	776013-5	390,000	3404
8070	SD-40-2	EMD	5/77	776013-6	390,000	3405
8071	SD-40-2	EMD	5/77	776013-7	390,000	3406
8072	SD-40-2	EMD	5/77	776013-8	390,000	3407
8073	SD-40-2	EMD	5/77	776013-9	390,000	3408
8074	SD-40-2	EMD	5/77	776013-10	390,000	3409

THIS PROGRAM WAS CANCELLED AUGUST 29, 1980

The following are the only SD-40-2H units to be converted back to SD-40-2's and renumbered:

8017 to 3257 in 7/80; 8035 to 3305 in 6/80; 8036 to 3306 in 6/80; 8042 to 3312 in 7/80; 8043 to 3313 in 6/80; 8047 to 3317 in 8/80; 8049 to 3319 in 7/80; 8059 to 3329 in 8/80; 8060 to 3330 in 6/80

SD-40-2H, 8068, is seen here in Council Bluffs awaiting its next assignment west in May, 1980.

Photo by G. B. Davies



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Eastbound SD-40-2H, 8071 and three other 8000's are about to pass through Kimball, NE on September 8, 1979. The small bridge in the background is at mile post 446.25.

Photo by G. B. Davies

175

LOCATION: Manhattan, KS

DATE: July 9, 1955 at mile post 119.44



176

Steamed up and ready to depart Manhattan, KS for Ft. Riley with a troop train 7013 with 12 cars in tow is just crossing the diamond of the Rock Island. Last month we showed you the other side of Manhattan, just around the bend from here. Photo by Thos. R. Lee

