

The Military's Six-Axle MRS-1



Bon French photo at Heber, Utah on 4 January 2019

The first couple of newly designed and constructed MRS-1s (Military Road Switchers) were delivered to the U.S. Army in 1952; they came with a price tag of approximately \$500,000 per unit. Perhaps, the most expensive locomotive model of the time; they were more than twice the cost of a standard Alco RSC-3 road-switcher or one of EMD's soon to be introduced SD7s. Although the manufacturing start-up cost for a new locomotive model could typically be extra-ordinary, the MRS-1's high-degree of customization substantially increased the government's cold-war investment.

Separate design/build MRS-1 contracts had been awarded by the Army to EMD and GE (which subcontracted to Alco). The new six-axle model featured a 1600-hp engine, 65-mph gearing and a low-profile car-body. Multi-gauge trucks combined with a reduction in locomotive weight enabled operation of the 120-ton locomotive on various railroad gauges. The initial purchase was for 26 units, split evenly between EMD and GE. Build to one common specification, the two models were evaluated and the final contract for seventy additional units went to the GE/Alco team.

The six-axle military locos were designed to operate wherever around the world there might be a fight against communist aggression, regardless of the climatic environments from -40 to +125 degrees F. As it turned, only two ever "saw action." Two GM-built MRS-1s (U.S. Army #1810 & 1811) arrived in Korea by late 1952; they hauled troops and materiel, transported ammunition, fuel and food, and helped evacuate wounded to hospitals in rear areas. It should also be noted that several of the MRS-1s saw service here and beyond the shores of the U.S. after the Korean War and prior to being sold as surplus by the U.S. Government in the 1970s.

Spotting features:

- The number-boards on an Alco-built MRS-1 are located on the roof of the short and long hoods; they are embedded in the nose of EMD-built models
- The EMD-built MRS-1 incorporates a peaked roof on the long hood and cab.

Photo Gallery



Alaska RR #1609 at Anchorage, AK on 26 June 1977 (Matt Herson photo)

The #1609 was one of 13 MRS-1s transferred/ sold to the Alaskan railroad by the U.S. Government in 1974 and 1975. The GE/Alco loco had been originally built as US Army #B2067.



Blue Grass RR Museum #2043 at Versailles, KY. (Photo courtesy of Hawkins Rails)

GE/Alco-built #2043 has been a static display at BGRM for several years. At last report, sister #B2087 is operational and still occasionally hauls visitors around the museum.



U.S. Army #B2078 at Fort Bragg, NC on 19 May 1982 (Doug Lilly photo)

Prior to its demise in 2007, Cape Fear Railways provided service to Fort Bragg and adjacent Pope Air Force Base. The railroad leased locomotives from the military.



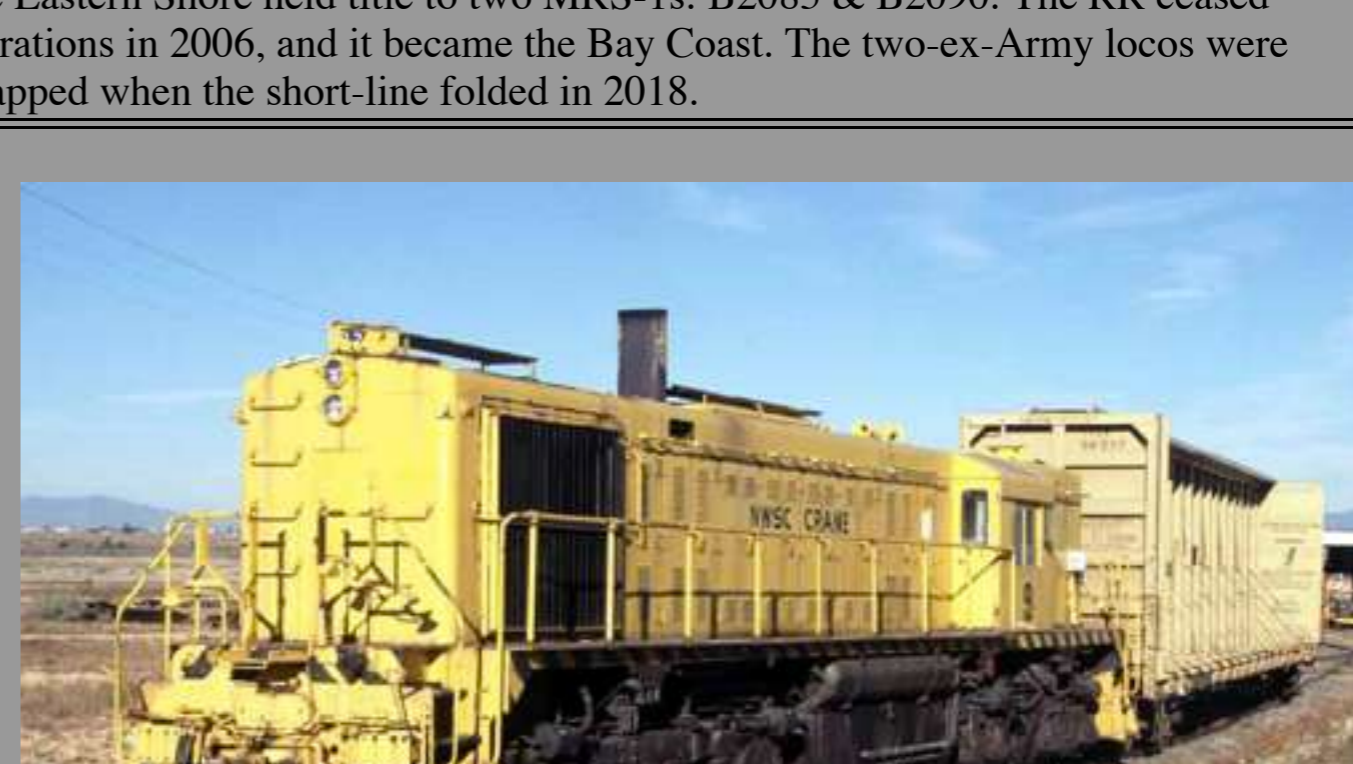
Eastern Shore B2085 at Cape Charles, Virginia on 11 April 2006

The Eastern Shore held title to two MRS-1s: B2085 & B2090. The RR ceased operations in 2006, and it became the Bay Coast. The two ex-Army locos were scrapped when the short-line folded in 2018.



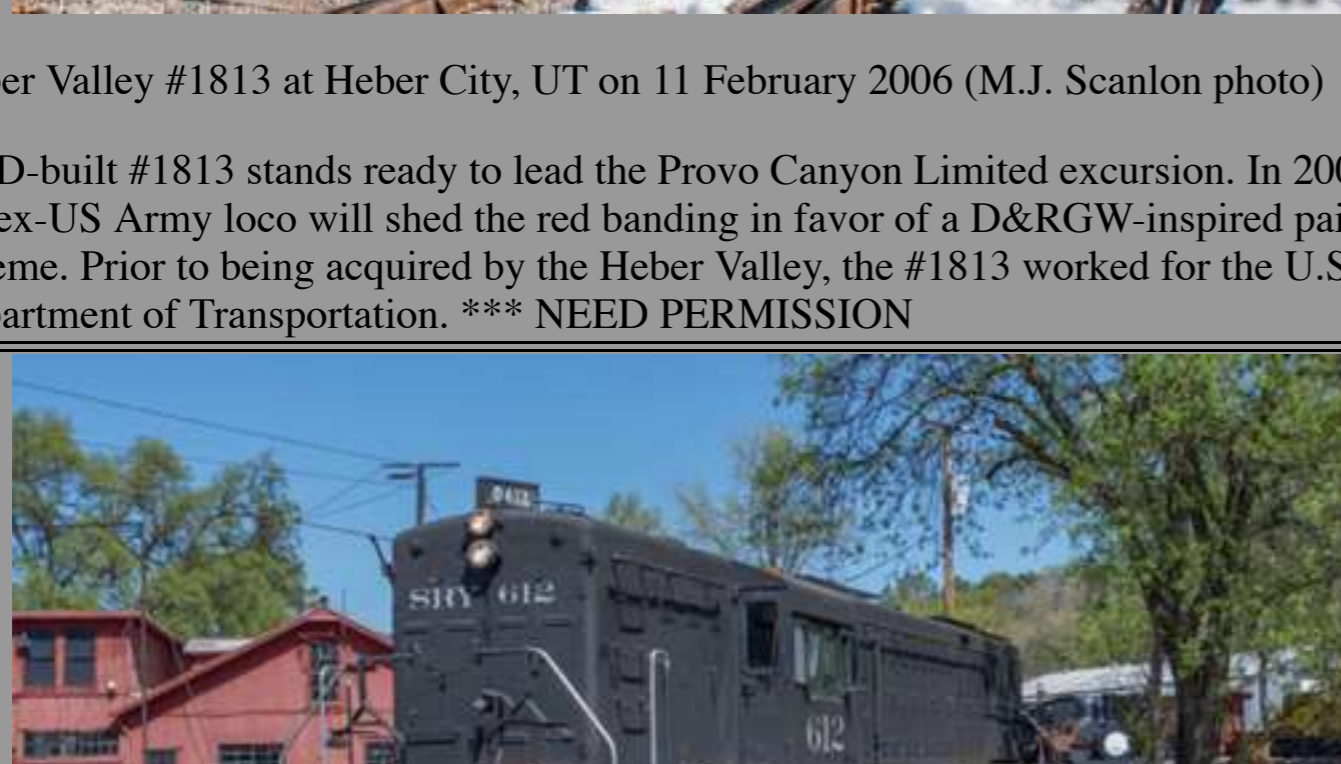
Heber Valley #1813 at Heber City, UT on 11 February 2006 (M.J. Scanlon photo)

EMD-built #1813 stands ready to lead the Provo Canyon Limited excursion. In 2009, the ex-US Army loco will shed the red banding in favor of a D&RGW-inspired paint scheme. Prior to being acquired by the Heber Valley, the #1813 worked for the U.S. Department of Transportation. *** NEED PERMISSION



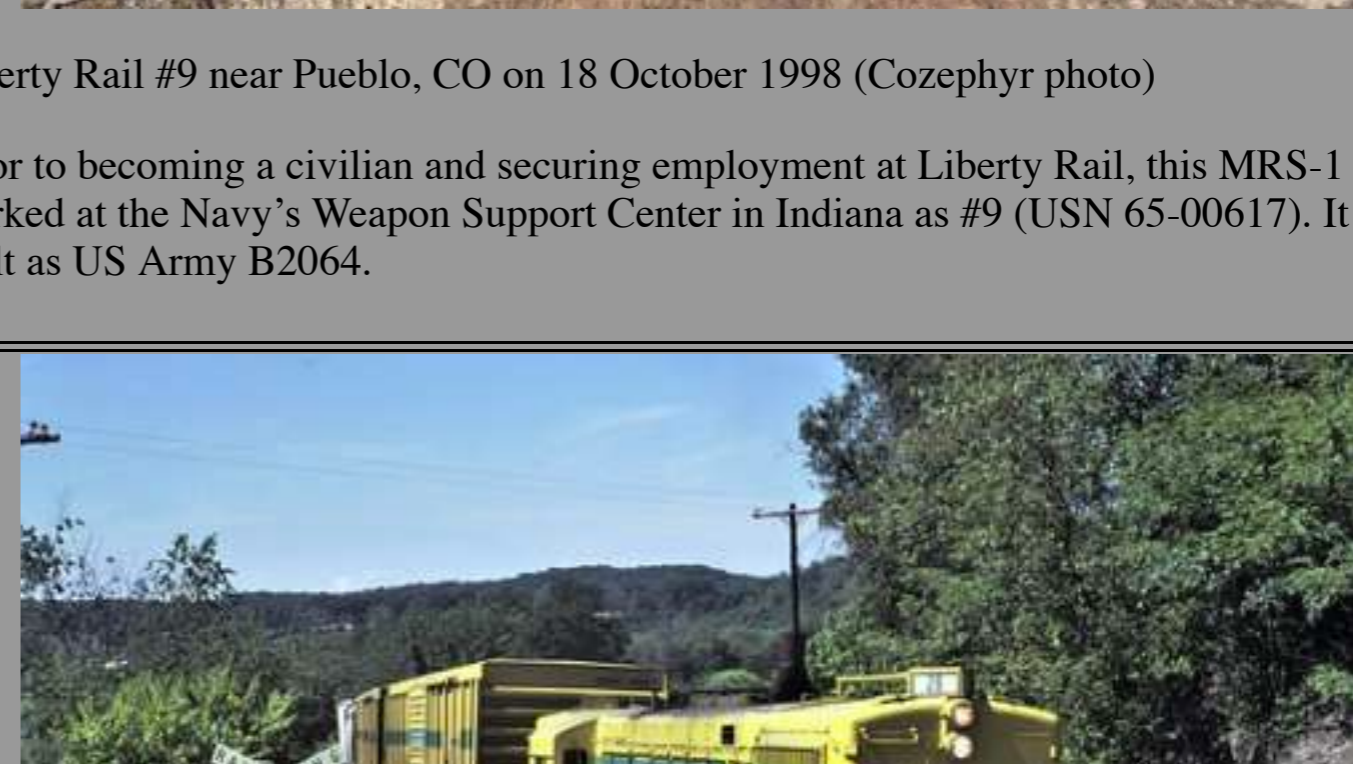
Liberty Rail #9 near Pueblo, CO on 18 October 1998 (Cozeephyr photo)

Prior to becoming a civilian and securing employment at Liberty Rail, this MRS-1 worked at the Navy's Weapon Support Center in Indiana as #9 (USN 65-00617). It was built as US Army B2064.



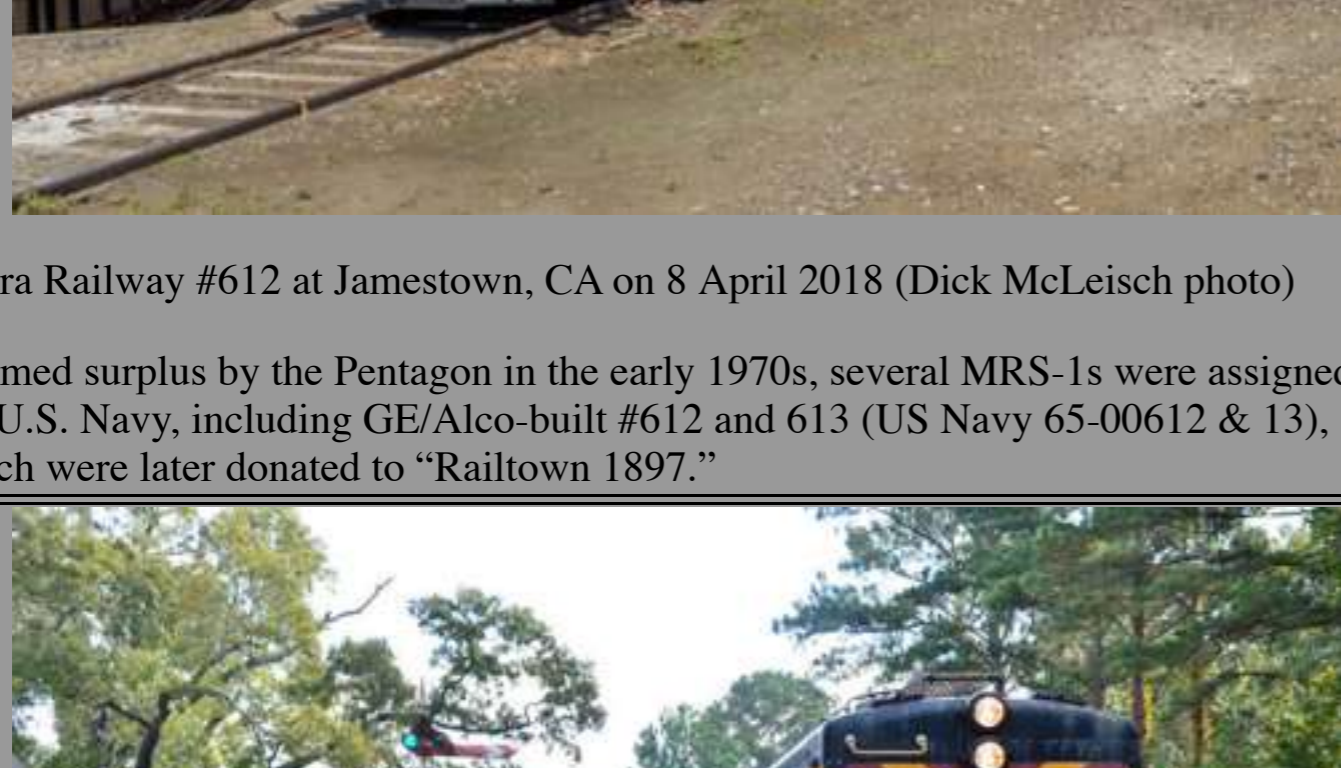
Sierra Railway #612 at Jamestown, CA on 8 April 2018 (Dick McLeisch photo)

Deemed surplus by the Pentagon in the early 1970s, several MRS-1s were assigned to the U.S. Navy, including GE/Alco-built #612 and 613 (US Navy 65-00612 & 13), which were later donated to "Railtown 1897."



South Branch Valley #28 in West Virginia on 21 September 1981 (Bob Todten photo)

During the 1980s, the South Branch Valley acquired a pair of MRS-1s (#26 & 28) from the U.S. Navy #65-00587 & 65-00589; they were ex-USAX #B2105 and B2109.



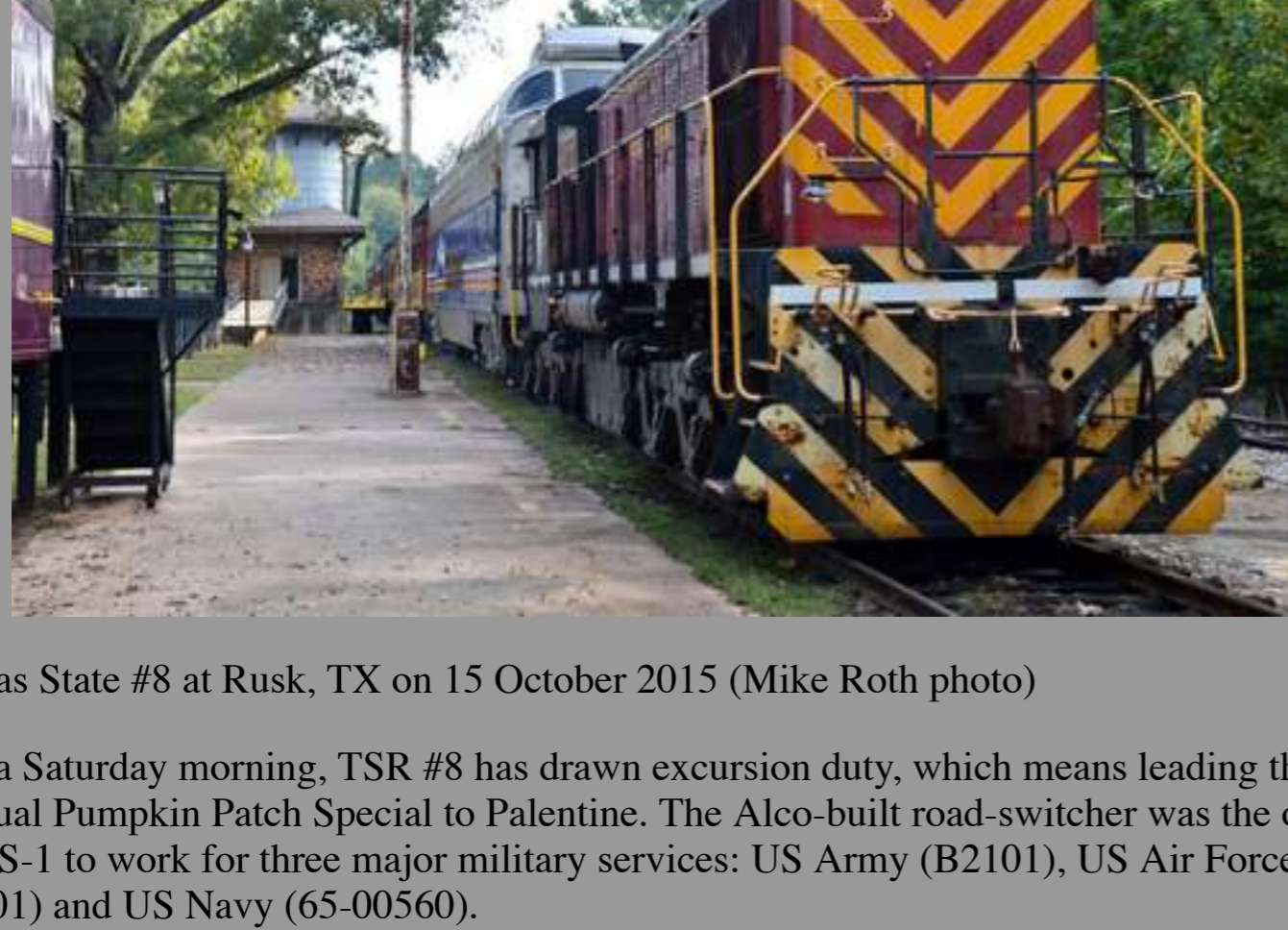
Texas State #8 at Rusk, TX on 15 October 2015 (Mike Roth photo)

On a Saturday morning, TSR #8 has drawn excursion duty, which means leading the annual Pumpkin Patch Special to Palentine. The Alco-built road-switcher was the only MRS-1 to work for three major military services: US Army (B2101), US Air Force (2101) and US Navy (65-00560).



TSWR #B2070 at Royal City, WA on 28 December 2010 (Mark Herren photo)

Toppenish Simcoe and Western Railroad acquired GE/Alco-built #B2070 in 1993, and according to some reports, the locomotive is still operational, on a part-time basis.

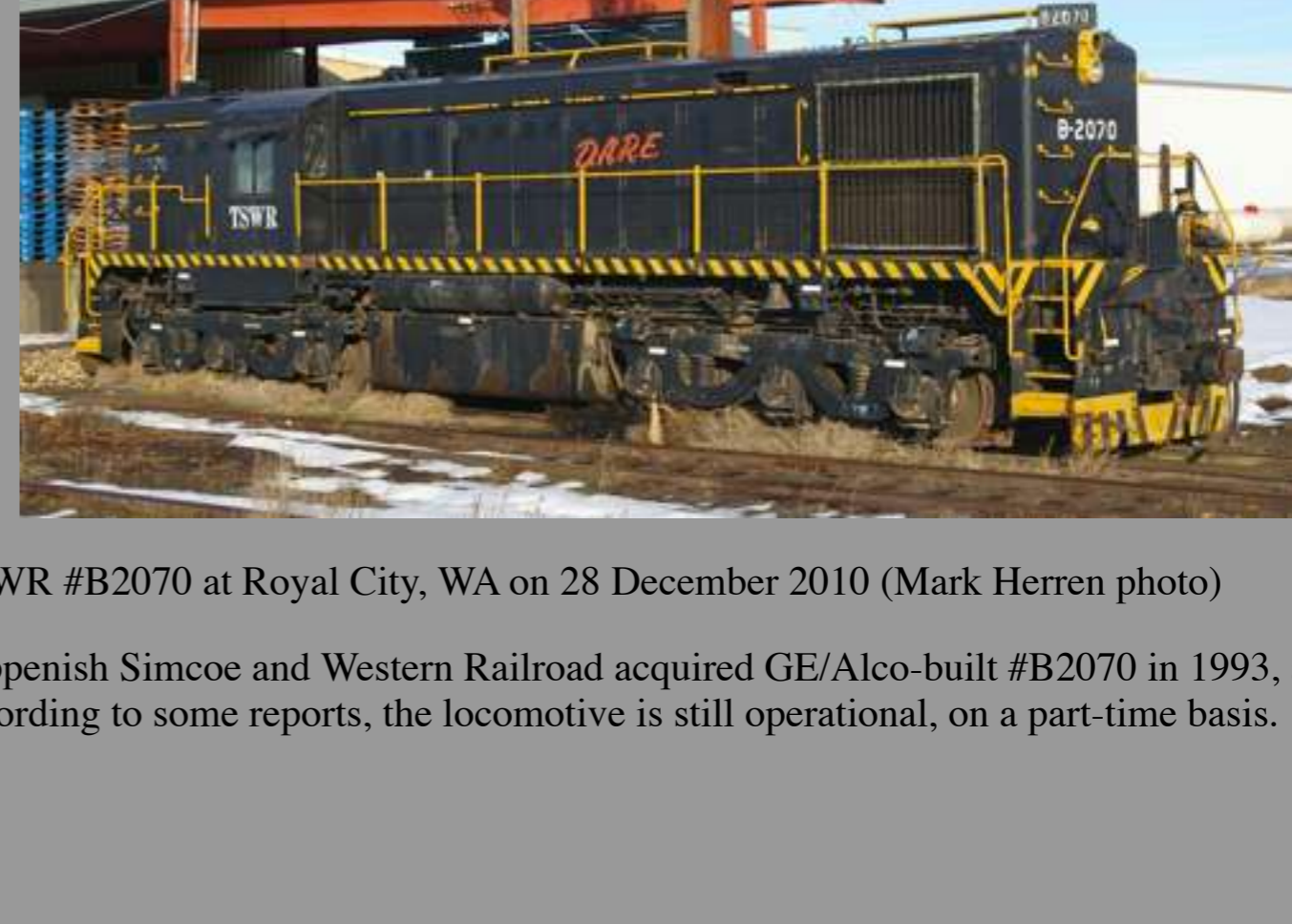


United States Army #1810 at Yongsan, Korea, 11 Mar 1953

by Don Ross

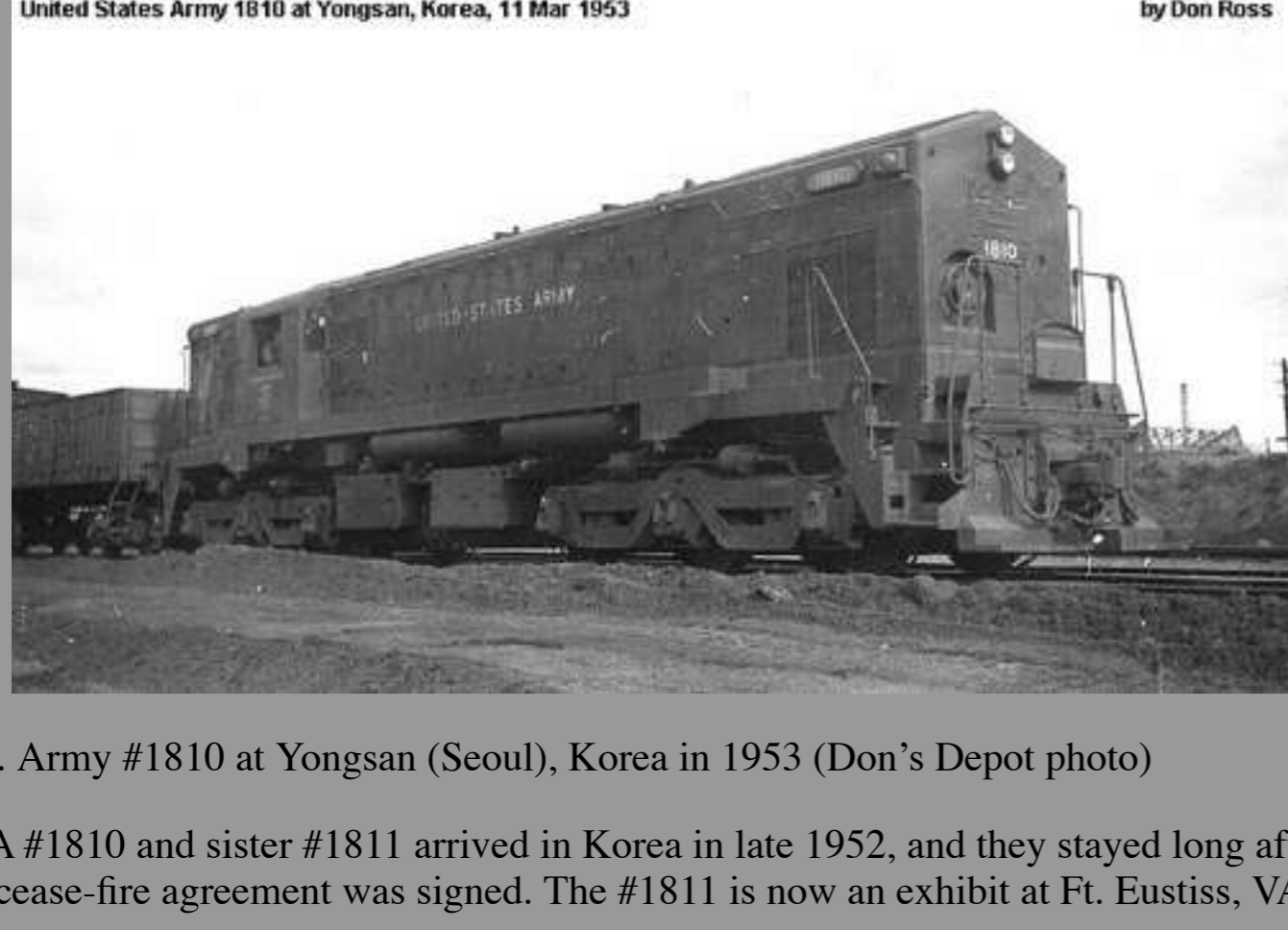
U.S. Army #1810 at Yongsan (Seoul), Korea in 1953 (Don's Depot photo)

USA #1810 and sister #1811 arrived in Korea in late 1952, and they stayed long after the cease-fire agreement was signed. The #1811 is now an exhibit at Ft. Eustiss, VA.



U.S. Air Force #2104 is one of the exhibits at Pacific Southwest RR Museum at Campo, California. (Thomas E. Hirsch photo)

US Navy 65-00548 -> Sunny Point Army Depot #1810 - (scrapped)



U.S. Navy operated 20 MRS-1s; 20 per cent of them are depicted here at Port Chicago, CA in September, 1982. (Thomas E. Hirsch photo)



Yreka Western #244 at Montague, CA on 28 June 2003 (Greg Brown photo)

Alco-built #244 was easily one of the most colorful of all MRS-1s. The road number was probably a reference to the loco's 12-cylinder-244 engine that drove the excursion puller. It was scrapped in 2011.

***** U.S. Army MRS-1 Specifications ****

Component / Specification	EMD MRS-1	GE / Alco RSX-4 (E1670)
Quantity built (dates)	13 (1952-1953)	83 (1953-1954)
Engine	EMD 567B (16 cylinder)	Alco 244 (12 cylinders)
Bore & Stroke	2-cycle 8.5" X 10"	4-cycle 8.5" X 10"
Horsepower	1500	1600
Locomotive Weight (Lbs)	240,000	240,000
Trucks / Wheel Base	C / C / 13'-06" Drop-equalizer Tri-Mount (Adjustable to fit multiple gauges)	C / C / 13'-02" Drop-equalizer Tri-Mount (Adjustable to fit multiple gauges)
Traction Motors	EMD D27 (one per axle)	GE 731 (one per axle)
Tractive Force (starting)	98,000 lbs @ 25%	xx,000 lbs @ 25%
Tractive Force (continuous)	xx,000 lbs with max. speed 83 mph	xx,000 lbs with max. speed 83 mph
Main Generator	GM D12	GE GT581
Gear ratio (Wheel size)	60:17 (40')	--
Locomotive Length	57'-05"	Locomotive Length: 55'-11"
Height / width	13'-6" / 9'-8"	xxxxx
Fuel Capacity	1300 gal.	xxxxx
Steam Temperature	2500-lb/hour (for only US Army #1808 & 1809)	2500-lb/hour (for US Army #B2041-B2090)
Temperature gradient	Both manufacturer's model were designed for -40F to +125F temperatures	

Reference Sources:

- TheDieselBuilders: Alco, Vol.2, by John F. Kirkland
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Locomotive data in-put from by Jean-Denis Bachand.

***** EMD-Built MRS-1s ****

USATC Road No.	Serial No.	Built Date	Notes & Status
1808	15873	3/52	Sunny Point Army Depot #1808 - (scrapped)
1809	15874	3/52	US Air Force 1809 > Alaska RR 1809 > San Diego & Arizona Rwy 1809 - (Static display)
1810	15875	3/52	Served in Korea during the Korean War (1952-1954) > Sunny Point Army Depot #1810 - (scrapped)
1811	15876	x/52	Served in Korea during the Korean War (1952-1954) > Sunny Point Army Depot #1811 > Ft Eustiss 1811 - (Static display)
1812	15877	3/52	--
1813	15878 (4/52)	4/52	U.S. Department of Transportation Test track #1813 > Heber Valley RR 1813 - (Active ?)
1814-1816	15879-15881	x/52	US Navy Hawthorne Ammo Depot 65-00570 & 00572 > Alaska RR 1714-1716 - (scrapped)
1817	15882	5/52	US Navy Hawthorne Ammo Depot 65-00573 > Alaska RR 1717- (Retired - scrapped)
1818	15883	(5/52)	Spent several months during 1952 & 1953 in France (Societe Nationale des Chemins de fer Francais 1818), Belgium, & Germany as a demonstrator / test bed > US Navy Hawthorne Ammo Depot 65-00574 > Alaska RR 1718 > US Air Force 1718 > Museum of Transp. & Industry - (Static display)
1819	15884	(x/52)	--
1820	15885	(x/52)	Spent nearly five months in Manitoba, Canada undergoing cold weather evaluation tests > San Diego Rwy Museum 1829 - (Static display)

***** Alco-Built MRS-1s ****

USATC Road No.	Serial No.	Built Date	Notes & Status
B-2041, B-2042	80357, 80358	4/53	--
B-2043	80359	x/53	Blue Grass RR Museum - ??
B-2044	80360 x/53	x/53	Hagerstown RR Museum - scrapped ?
B-2045 to B-2047	80361-80363	x/53	--
B-2048	80364	x/53	US Navy 65-00611 - (status ?)
B-2049 & B-2050	80365 & 80366	x/53	Alaska RR #1601 & 1602 - retired
B-2051	80367	x/53	--
B-2052	80368	4/53	Hagerstown RR Museum - scrapped?
B-2053, B-2054 & B-2055	80369-80371	4/53	Alaska RR #1603, 1604 & 1605 - retired
B-2056	80372	4/53	Alaska RR #B-2056 - retired
B-2057	80373	x/53	US Navy 65-00616 - (status /)
B-2058	80374 (x/53)	--	US Navy 65-00613 - (status ?)
B-2059	80375	4/53	Alaska RR #1606 - retired
B-2060	80376	4/53	--
B-2061	80377	4/53	Alaska RR #1608 - retired
B-2062	80378	x/53	--
B-2063	80379	4/53	US Navy 65-00613 > Railtown 1897 - (Static display?)
B-2064	80380	x/53	US Navy 65-00617
B-2065	80381	x/53	--
B-2066	80382 (x/53)	x/53	US Navy 65-00610 > Western Railway Museum - ?
B-2067	80383	x/53	Alaska RR #1609 - retired
B-2068	80384	x/53	--
B-2069	80385	x/53	Museum of Transportation - Static display
B-2070	80386	x/53	Sold to TSWR B2070 (active ?)
B-2071 to B-2072	80387-80388	x/53	--
B-2073	80389	x/53	Alaska RR #1610 - retired
B-2074	80390	x/53	--
B-2075	80391	x/53	Alaska RR #1611 - retired
B-2076	80392	x/53	U.S. Navy 65-00548 - (status ?)
B-2077	80393	x/53	Alaska RR #1612 - retired
B-2078	80394	x/53	Ft. Bragg B-2078 - (Operated by Cape Fear Rwy)
B-2079	80395	x/53	--
B-2080	80396	x/53	Assigned to Korea (1954-1956) > Donated to Nevada Northern Museum
B-2081	80397	x/53	Assigned to Korea after the Korean War (1954-1956) > Donated to Nevada Northern Museum
B-2082 to B-2084	80398-30400	4/53	--
B-2085	80401	10/53	Bay Coast RR / Eastern Shore 2085 - (RR ceased operations in 2018)
B-2086	80402	1-/53	Bluegrass Railroad #B-2086 (active)
B-2087 to B-2090	80403-80406	10/53	--
2091	80324	x/53	US Navy 65-00546 > Sierra Rwy at Railtown 1897 - (Static display ?)
2092 to 2094	80325-80327	4/53	--
2095	80328	4/53	US Navy 65-00597 (Naval Ammunition Depot-Crane #18) - (status ?)
2096	80329	4/53	U.S. Navy 65-00547 - (status ?)
2097	80330	4/53	--
2098	80331	3/53	--
2099	80332	6/53	Uruguay Railway 1612 - (status ?)
2100	80333	4/53	US Navy 65-00587 > Alaska RR - (used as parts source)
2101	80334	4/53	US Navy 65-00560 > US Air Force 2101 > Texas State RR #8 - Active
2102	80335	4/53	--
2103	80336	4/53	US Navy 65-00554 - (Active)
2104	80336	4/53	US Navy 65-00555 > U.S. Air Force B2104 > Pacific Coast Rwy Museum - (Status ?)
2105	80337	4/53	US Navy 65-00587; ex-Colts Neck Depot > South Branch Valley #26 - (active ?)
2106 to 2108	80335-80337	x/53	--
2109	80338	x/53	US Navy 65-00589; ex-Colts Neck Depot > South Branch Valley #28 - (active ?)
2107 to 2116	80339-80349	x/53	--
2117	80350	x/53	U.S. Navy 65-00550 - (status ?)
2118	80351	x/53	U.S. Navy 65-00540 - (status ?)
2119	80352 (6/53)	4/53	US Navy 65-00541 > Feather River & Western 541 > Yreka Western 235 - (active ?)
2120	80353 (6/53)	4/53	US Navy 65-00542 - (active ?)
2121	80354	6/53	US Navy 65-00543 Concord Naval Base > California State RR Museum - (status ?)
2122	80355	6/53	US Navy 65-00544 > Feather River & Western 244 > Nevada Northern 244 > Yreka Western 244 - (active ?)
2123	80356	6/53	US Navy 65-00545 Concord Naval Base > California State RR Museum - Active ?

Compiled by: R. Craig

New: 1 April 2020