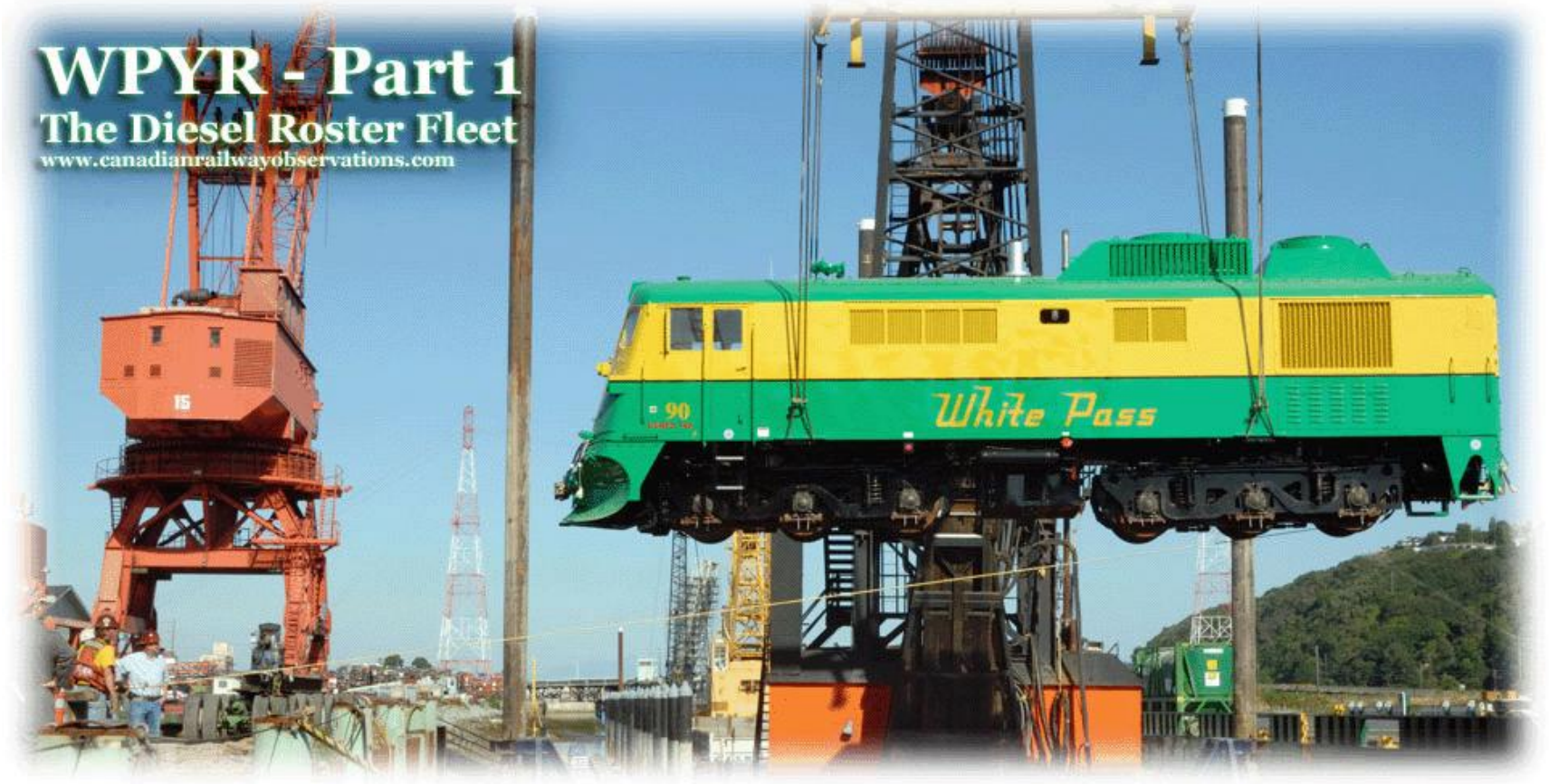
CANADIAN RAILWAY OBSERVATIONS

Proudly presents - WHITE PASS & YUKON RAILWAY



By Deane Motis

October 2nd, 2009

The White Pass Diesel Fleet

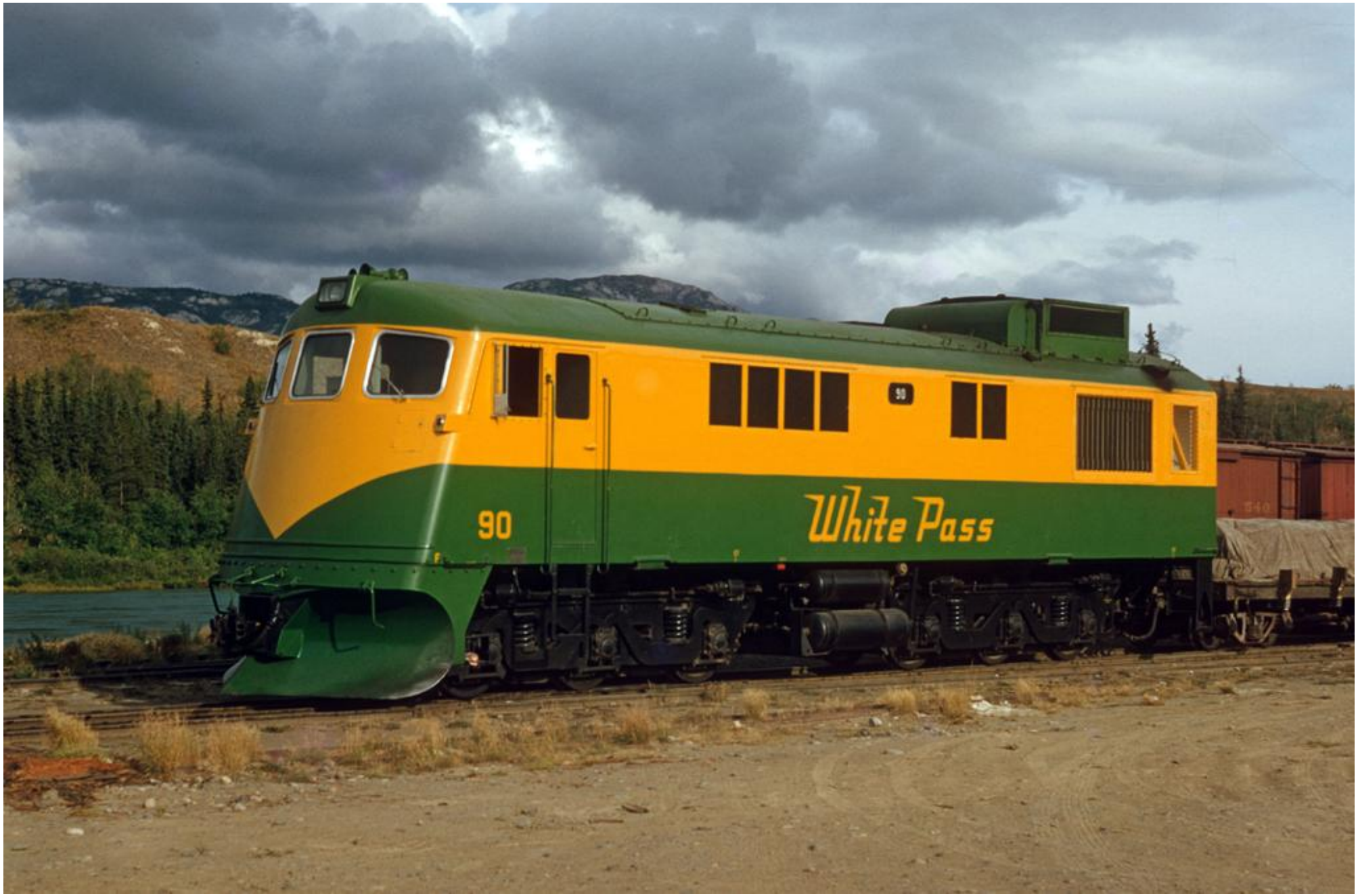
The arrival in Seattle of the steamship *Portland* on July 17, 1897 sparked the *world's last great gold rush*. That tone of gold, valued at a million dollars, created a fever that spread across an economically depressed North America. Men and a few hearty women left family & friends to strike it rich in the Klondike Gold Fields. To reach Dawson City, the "Cheechakos" or "tenderfoots" traveled a variety of routes ranging from the Ashcroft Trail through central British Columbia as well as an all water route via the Alaska coast and up the Yukon River. The more widely used routes were the Chilkoot Trail starting at Dyea, AK and the Trail of 98 that followed the Skagway River from tidewater up and over White Pass towards Lake Bennett. In order to survive the rigors of the Yukon, the stampeders were required, by law to carry a tonne of supplies. To enforce this regulation, the famed Northwest Mounted Police were prepared to use force as exemplified by the open display of a rapid fire machine gun.

Pack horses, men, and even dogs carried these supplies under terrible conditions. Visionaries saw the need for a railway that would ease the burden for all concerned while yielding a substantial profit. Beginning in 1897, a consortium of British finance, Canadian/American labour, and American engineering built the narrow gauge White Pass & Yukon Route linking Skagway, Alaska with Whitehorse, Yukon Territory. This 110 mile narrow gauge line featured 3.8% grades and curves as sharp as 16 degrees.

By the time the line was completed in 1900, the gold fever had been cured. Copper, zinc, and lead mines would provide the cargo for the railway's fleet of 2-6-0, 2-8-0, and 2-8-2 steam locomotives. Enter World War II and the WP&YR found a new role in supporting the war effort. Men and supplies necessary to build the Alcan Highway were transported over the line's route. War material destined for the fighting in the Aleutian Chain as well as eastern Russia flowed along the line. At the end of hostilities, the railway was tired and worn. Returning to its traditional role of carrying raw ore from the mines of the Yukon, the line was upgraded so that it might continue shipping raw material to the processors in BC and the states.

In 1954, two diesels of the "90 Class, built by General Electric in Erie, Pennsylvania entered service on the White Pass. Numbered 90, 91 the units featured the iconic shovel nose design that could withstand the rigors of mountain railroading as well as the extreme weather conditions the plagued the north. Power plants were inline ALCO 251 engines producing 930 horsepower that translated to 51,000 pounds of tractive effort. While only two in number, these diesels sealed the fate of steam on the White Pass. Three more 90 Class units would arrive in 1956 followed by two additional orders of three units each in 1963 and 1966.

The year is 1966, the steam era on the White Pass had come to a temporary end. It would be revived again in 1982. Skagway 7/15/66 Photographer unknown.



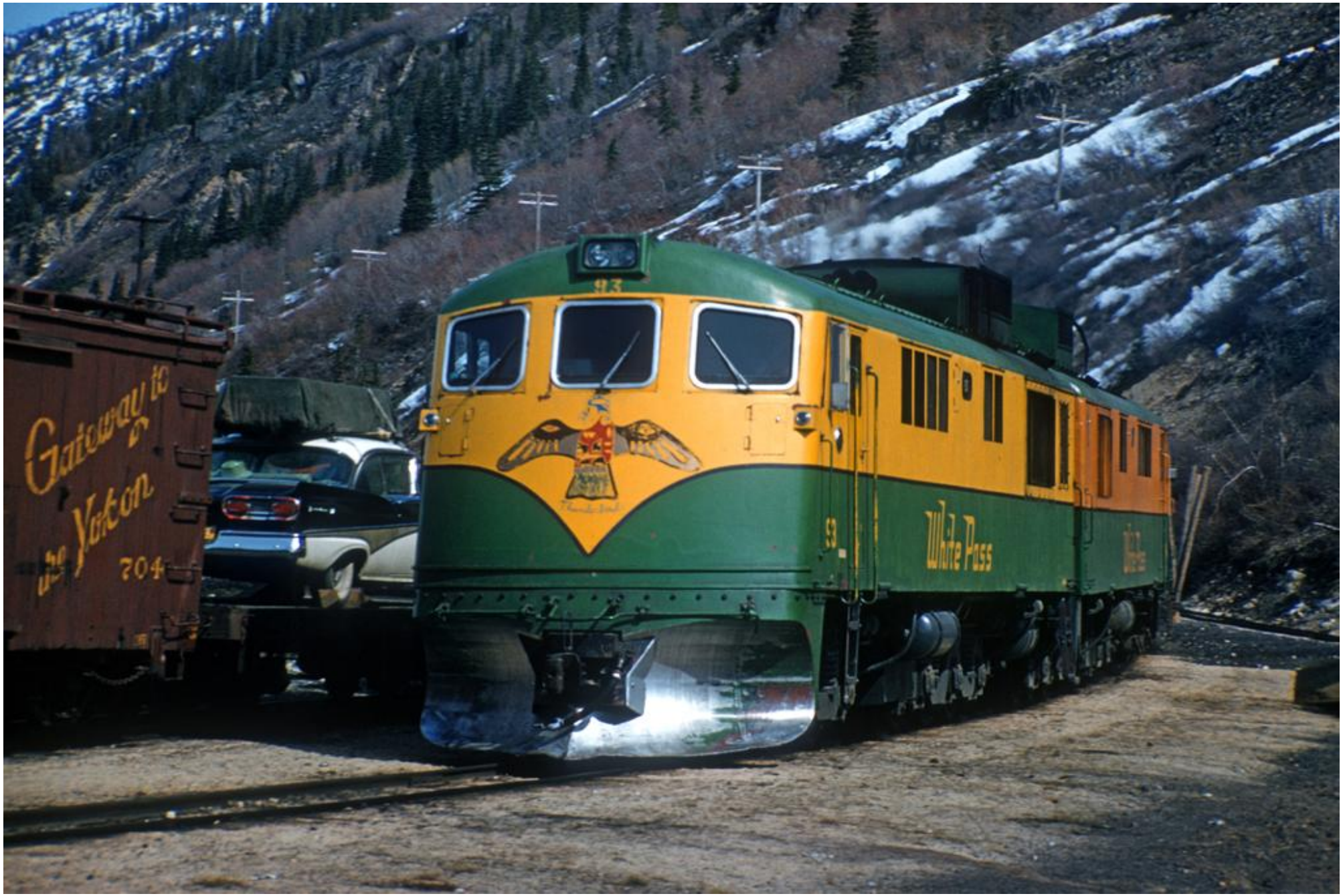
Fresh out of the box, Class Unit #90 rests at Whitehorse, YT in this 1954 scene. Photographer Unknown

The 90 Class were not the first examples of internal combustion engines on the WP&YR. Two rather exotic units as early as 1936. First was a Skagit Steel & Iron works that put out a whopping 27 horsepower. The Ford powered unit worked the company shops.

The second was a Westminster Iron Works switcher that found work at the Carcross tie plant from 1952 to 1982. Lastly, the company employed a 175 horsepower Plymouth that was severely damaged in the 1969 roundhouse fire.

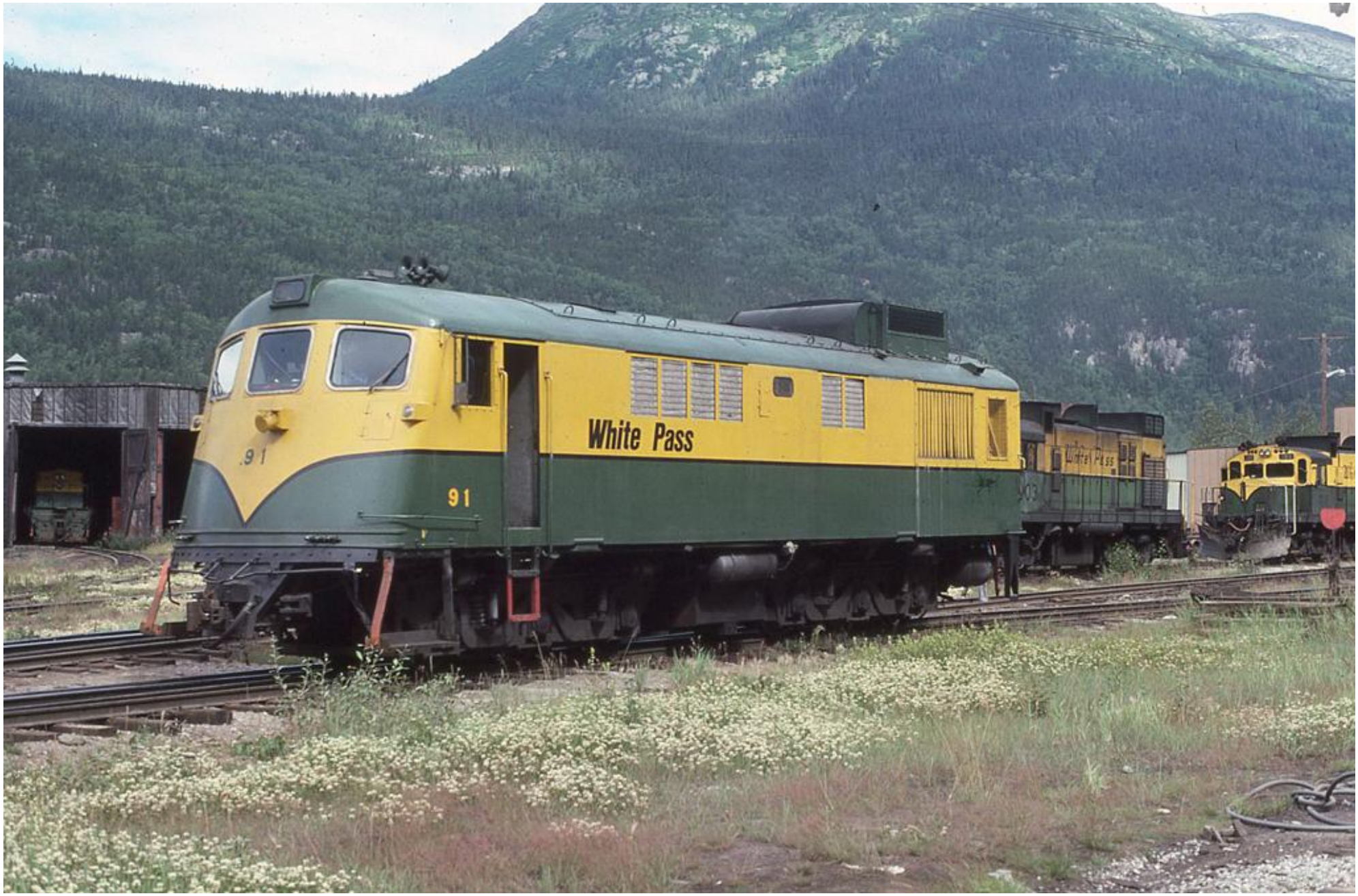
White Pass Plymouth #3 found working the White Pass Shop area. Note the unique lettering. Skagway Photographer unknown

GE #95 is hoisted from the deck of a freighter to the Skagway docks in this 1956 scene captured by veteran engineer Skagway Photo by J.D. True.



Nearly all 90 Class GE's retained a trademark "thunderbird" emblem. Each was unique in terms of eye placement and wing details. This particular unit was lettered "Thunderbird." The year of the photograph is approximately 1958 as indicated by the auto being transported on the flatcar. Bennett, BC, Photo by J.D. True

In 1956, the White Pass pioneered containerization. This was decades prior to the practice becoming the norm throughout the world. Note the small pipe to the left of the unit's pilot. The White Pass owned a petroleum pipeline that carried a variety of products from the bulk facilities at Skagway to Whitehorse. Skagway 8/73 Photographer unknown.



A number of 90 Class units lost their pilot plows during their career. In this case, #91 had stirrups applied to allow switchman to ride on the outside of the unit. (91 was the only unit to receive the block lettering scheme.) Others had the plows removed to prevent snow from building up behind plows when the units were in a trailing position. Note the wooden rotary shed in the background. Skagway 7/5/77 Photo by Doug Philips

Mountain railroading could be hard on the locomotives. After hitting a boulder, a pair of units tumbled off the pass. Sent to CP's Calgary shops, the units were rebuilt and returned to service. White Pass Photo by J.D. True

By 1969, the fleet of GE's could no longer handle the amount of traffic being generated by the demand for Yukon ore. Desiring to maintain fleet commonality in terms of prime movers, the White Pass ordered 7 hood units (101-107) carrying the designation DL535E from Alco. Arriving in May of that year, the 101 Class added their horsepower to the White Pass stable. October, 1969 brought tragedy to both the White Pass roster and infrastructure. The longstanding wooden roundhouse caught fire and burned taking with newly delivered Alco's 102 and 105. Never overly popular on the pass, the 1200 horsepower Alcos were hard on the track due to the rigidity of their truck design.

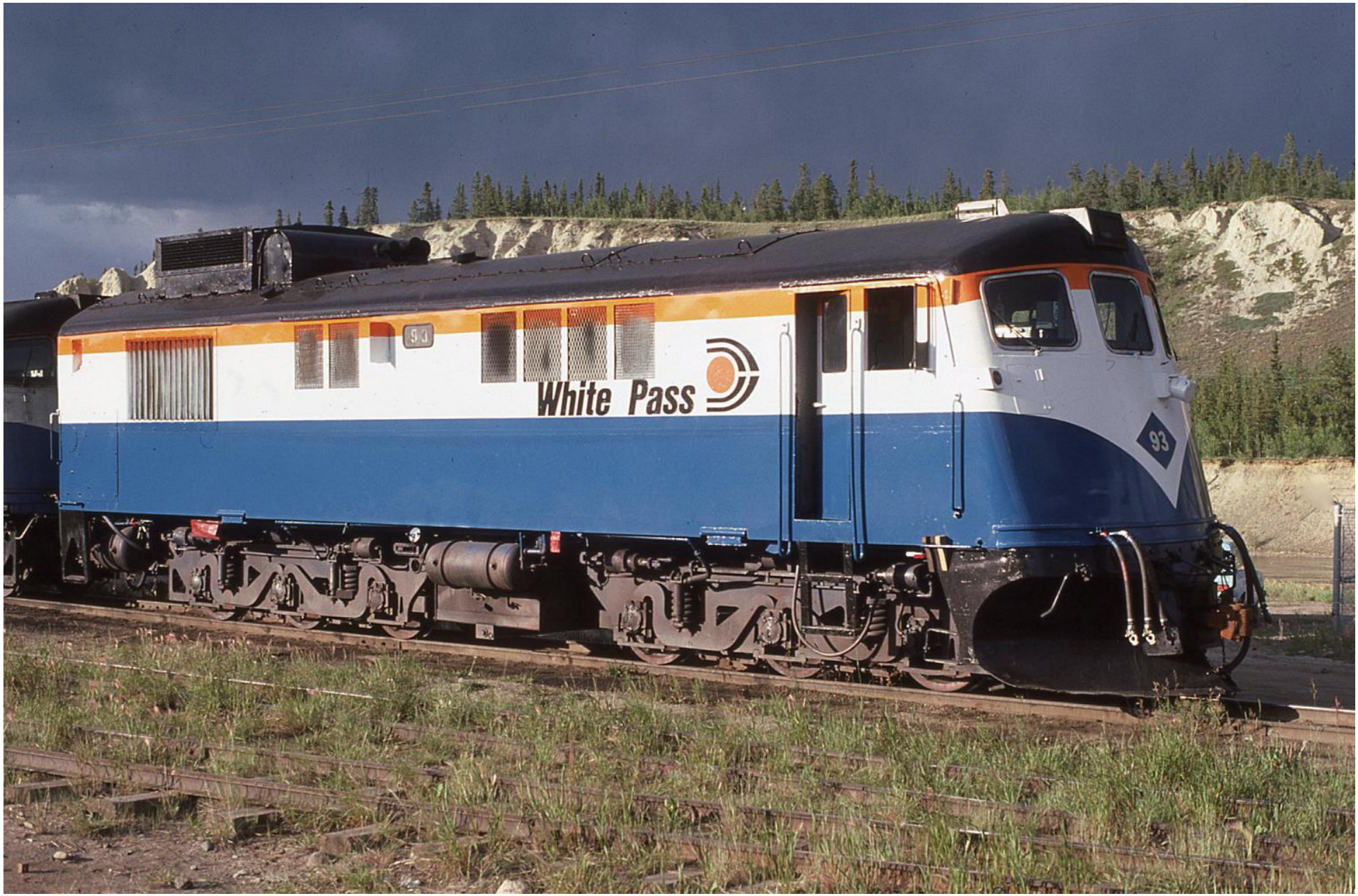
Five 101 Class Alcos haul an empty ore train northward to Utah Junction for another load of raw ore. Skagway 7/2/77 Photo by Bob Wilt

Two 25 Ton GE units were acquired in 1969 from Colorado Fuel & Iron. Used as shop switchers, current employees state the units had a difficult time pulling even on coach on the slight grade on the track from the shop area to the mainline. Unit #1 lasted in service until 1979 when it was donated to the BC Forest Industry Museum. Unit #2 was scrapped on site in 1972.

GE #1 at the height of its career. It could haul its own weight plus one coach. Skagway 7/5/77 Photo by Doug Phillips

By 1971, the White Pass was in need of additional horsepower. Returning to Montreal Locomotive Works, the railway ordered three more DL535E's (108-110) nearly identical to the first set. These three units arrived on the property in late December of that year.

A pair of Alcos prepare to head southbound with a load of empty tank cars and containers. Whitehorse, YT 7/7/77 Photo by Doug Philips

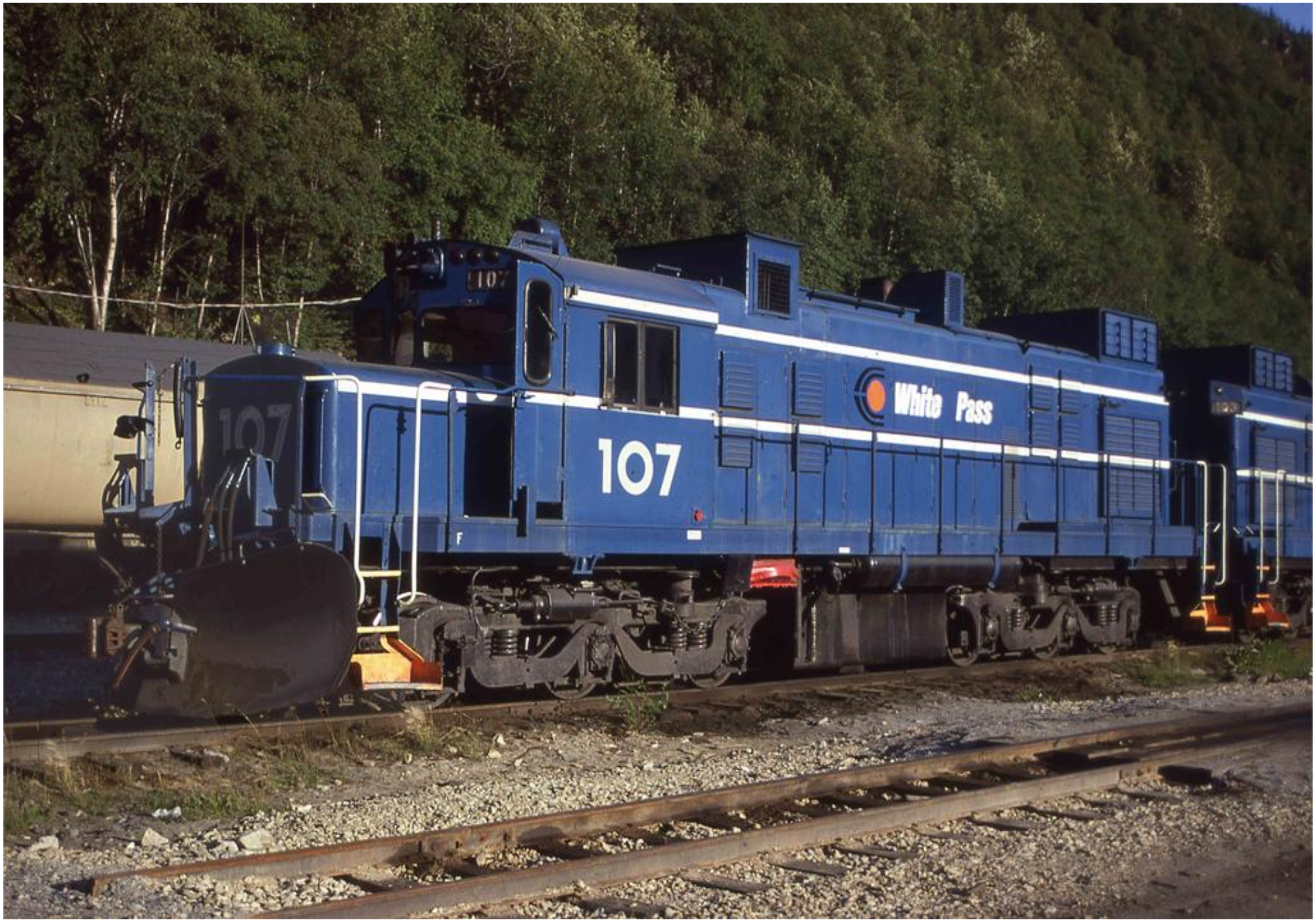


Now owned by Federal Industries, the fleet traded green & yellow for what were termed “circus colours.” #93 rests under the late afternoon light at Whitehorse. 7/7/77 Photo by Doug Philips

#98 heads up the daily mixed train from Skagway to Whitehorse in this 1977 scene. At this time, the only way to drive from Skagway to Whitehorse was to take the train. Note the camper on flatcar. 7/3/77 Photo by Bob Wilt

The 101 Class Alcos also received the bright blue, white and orange livery. #110 prepares to pull at Whitehorse. Date and photographer - unknown

In the early 80's, the bright colours gave way to a simplified solid blue scheme. #93, at Bennett, has traded its Canadian crew for one based in Skagway. An interesting side bar, the American crews were paid by the mile while their Canadian counterparts were paid by the hour. The differential resulted in a number of labour problems over the years. 9/7/82 Photographer unknown



The 101's looked good in the fresh blue paint. The steps of the units were painted solid orange as a safety measure. #107 has just pulled into outer tracks at Shops. Skagway 7/81 Photographer Barbara Kalen

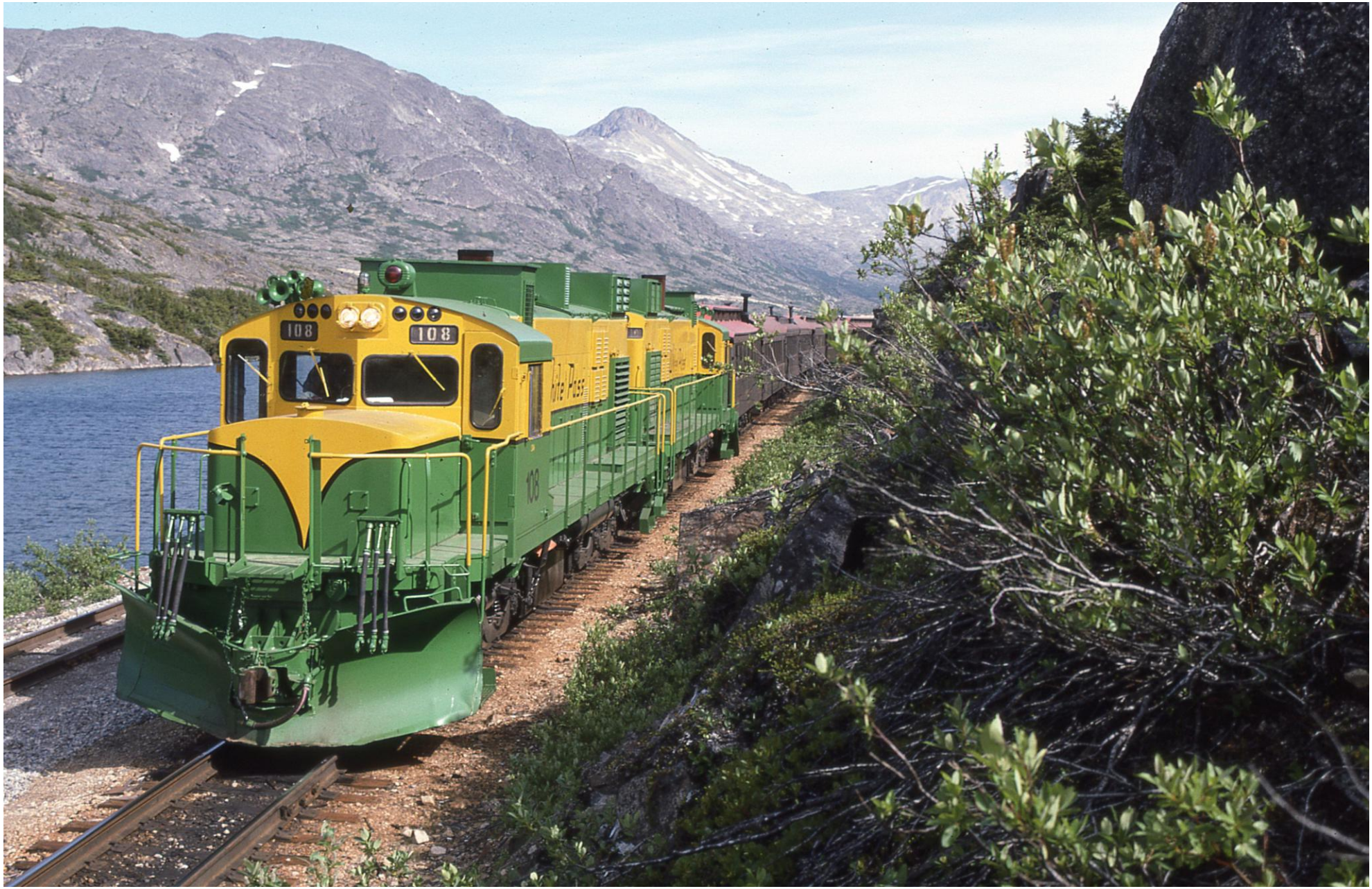
White Pass looked to be on a roll and four additional upgrade DL535's were ordered in May of 1982 These units would come complete the with the North American safety cab and a newly designed truck that would eventually prove to be easier on the 16 degree curves found on the ascent of White Pass. Between the time of the order and delivery, world metal prices plunged, mines closed, and the staple revenue of the railway dried up overnight. The units were never delivered and were stored in the Montreal area.

The railway struggled to survive by providing passenger service and limited freight operations but this meager business could not suppress the tide of red ink. On October 7, 1982, the windows were shuttered, the doors locked and bolted and the railway was shut down. The company continued operations by providing trucking service throughout the Yukon and bulk petroleum services in both territory and Southeast Alaska. The need for cash became so great that five of the DL535's were sold for service in Columbia. Here, their plow pilots pushed weeds aside. At this point the future looked dim for all things "White Pass."

Still the Columbian colours, #103 was purchased as a parts source for the other 101's. The need for power became so great it was rebuilt and reentered service. 7/29/00 Photo by Deane Motis

By the mid-1980's a new gold rush was ascending on Alaska. Cruise ships were plying the waters between Vancouver, BC and Alaska. Passengers aboard these vessels wanted to reach out and touch history. A number of true visionaries saw the railway as the ideal venue to show this new generation of stampeders the history of the Gold Rush and the spectacular scenery of the White Pass. Now owned by Tri-White Corp. of Toronto, the Nathan 5 Chimes could be heard echoing off the mountains signaling a return to prosperity. In 1988, the first year after reopening, the railway carried 37,000 passengers. Just 9 years later, that number would rise to over 461,000 people.

An early season train, with Class engine #90 on the point, waits at the Summit for authority to head down the pass 20.4 miles distant and 2,888 feet in elevation. 5/3/99 Photo by Deane Motis



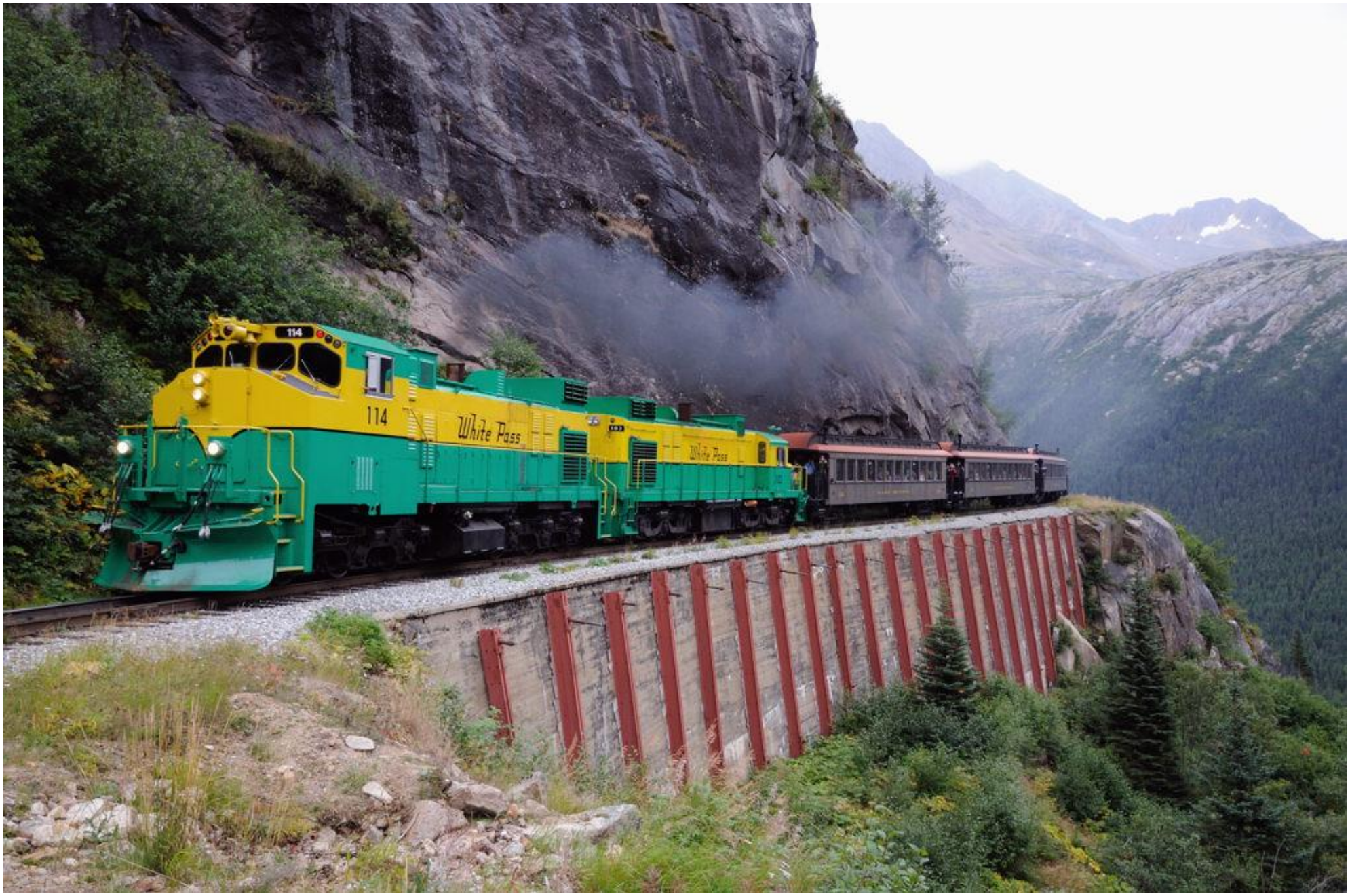
A pair of newly repainted Alcos next to Summit Lake lead a test train of 15 cars to determine the pulling capabilities of the units. 7/15/94 Summit Photo by Deane Motis

Unit #94 obtained a rather ungainly exhaust scrubbing device. Fortunately, the experiment was deemed a failure and the "tank" was removed. Skagway 4/6/01
Photo by Deane Motis

The need for motive power was so great, the five units were repurchased from Columbia and still the railway found itself short. By this time three of the undelivered DL535EW had been sold to US Gypsum for its Plaster City, California operation. One unit, had already been destroyed when a load of ore was dumped on the cab and carbody. Still, the railway picked up #114 having it delivered only 14 years late.

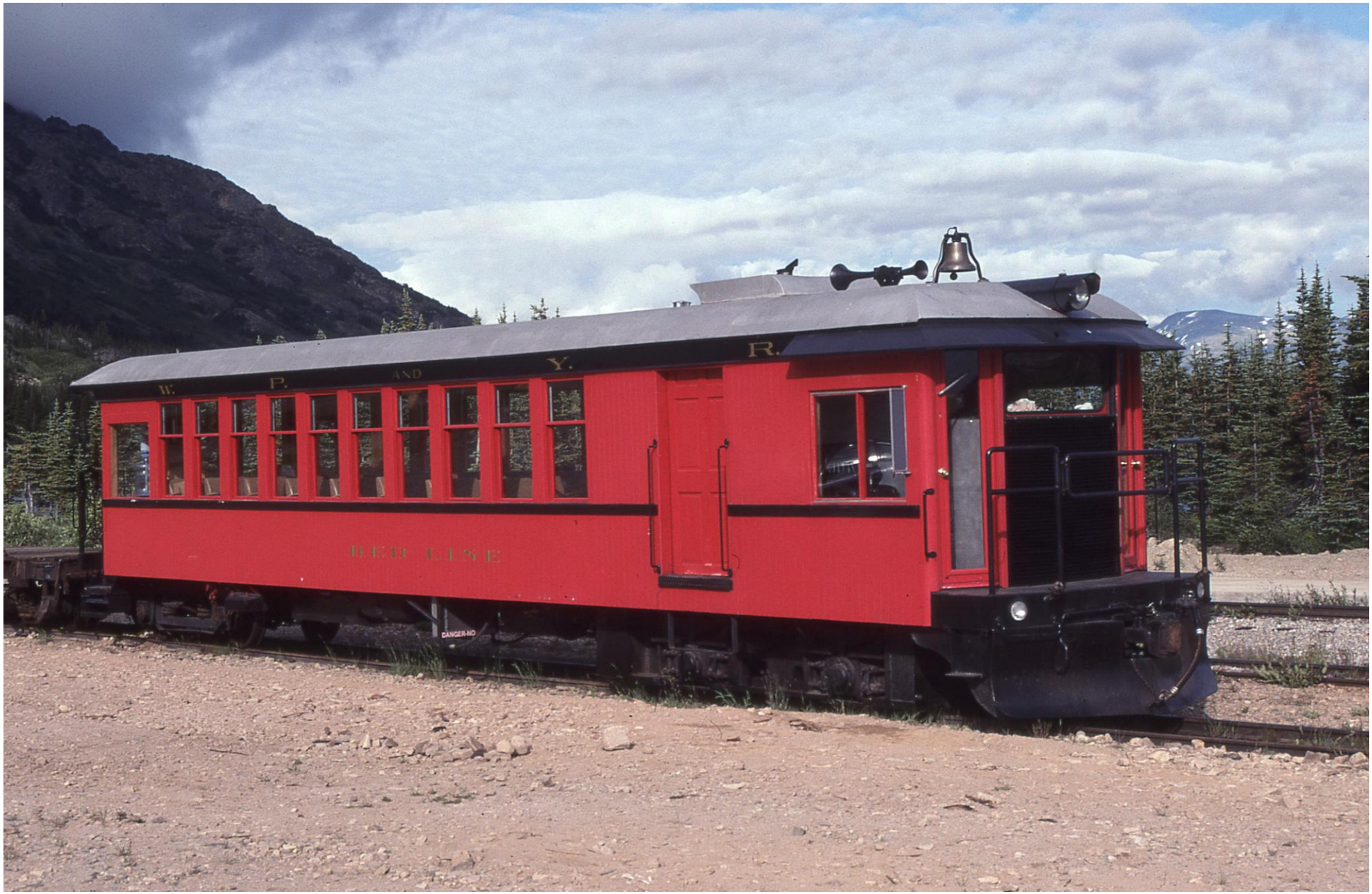
U.S. Gypsum #113, was one of three units that languished in Montreal before heading to the California desert. This unit would later be destroyed in a loading accident. Plaster City, CA 3/27/91 Photo by Alan Miller

Only fourteen years late. #114 was delivered in her original blue colours. The 114, being somewhat of an orphan was normally assigned to work train service. The unit would be nearly totaled in an fatal accident in 2006. It would be rebuilt by CEECO in Tacoma, WA. In 2009, rebuilt #114 would be called on quite frequently to handle road trains to the summit of White Pass. Skagway 7/30/99 Photo by Deane Motis



Resplendent in bright green and yellow, #114 leads a northbound Summit train near Bridge 15C late in the 2009 season. Photo by Deane Motis

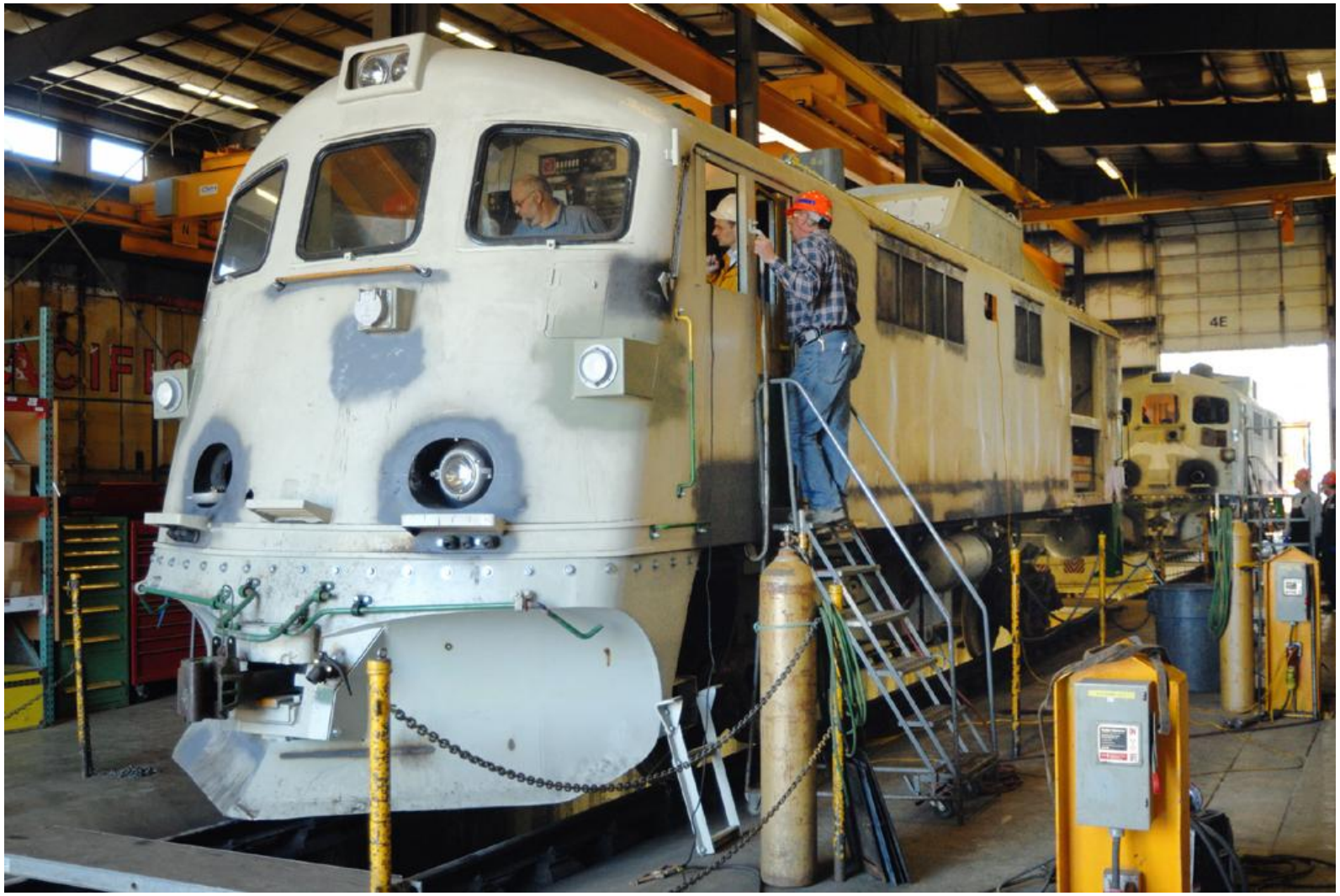
In 1998, the White Pass purchased a self propelled vehicle capable of carrying 40 passengers. A product of Beartown Mechanical Design, the car utilized the hydraulic drive from a retired mine locomotive and a Caterpillar diesel. Not overly successful, the Red Line car was sold to the Yukon government in 2004.



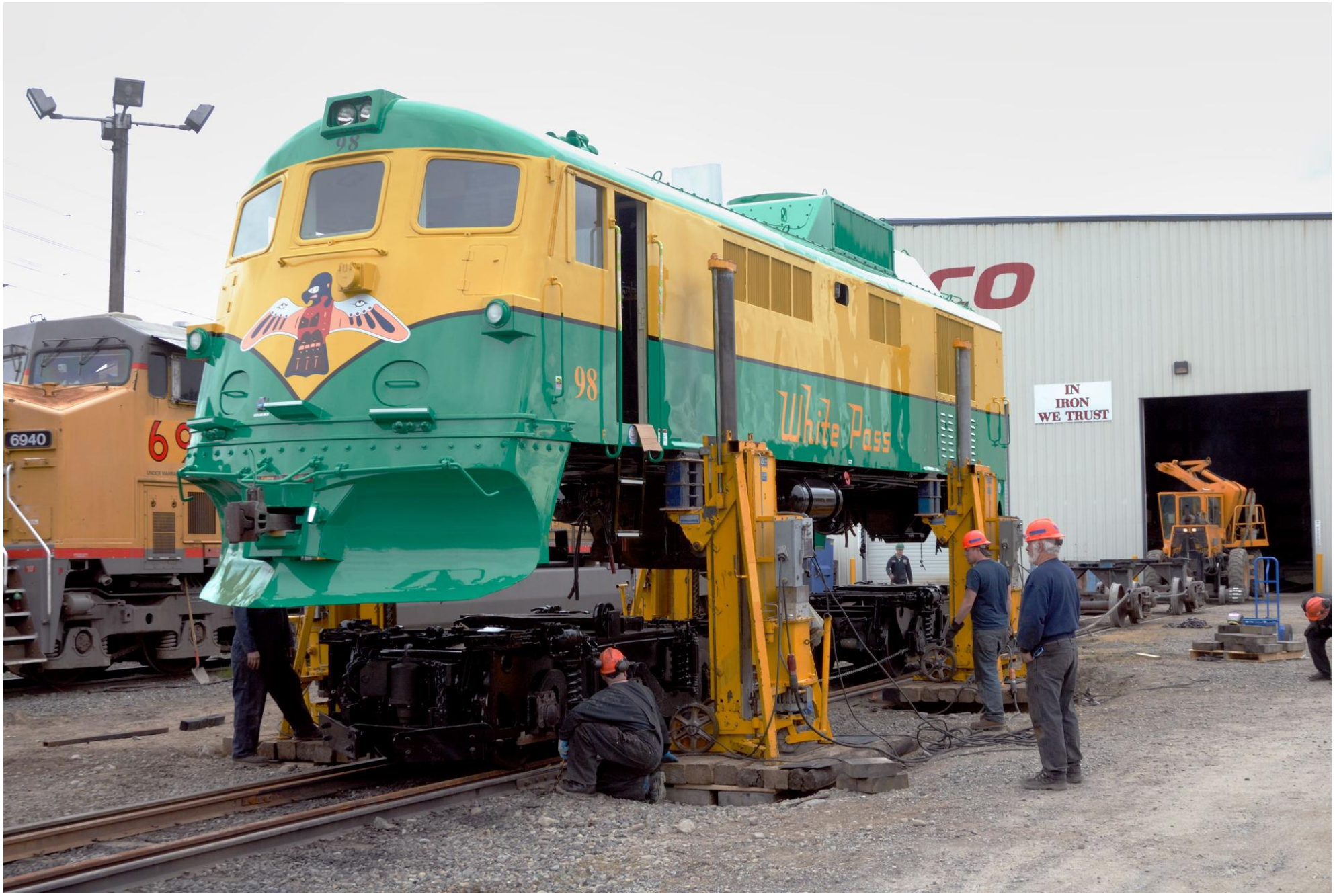
The Red Line car, out of service at Fraser BC. Hard to believe the unit was once a mine locomotive. Fraser, BC 7/29/00 Photo by Deane Motis

By mid-2004, it became apparent, the fleet needed help. A number of the GE's were fifty years old. Alco parts for the inline prime mover were getting impossible to find. The cost of fuel was beginning to creep ever upward and federal regulations regarding emissions were being felt. The railway, being proactive, sought a number of proposals from a variety of vendors to rebuild the 90 Class.

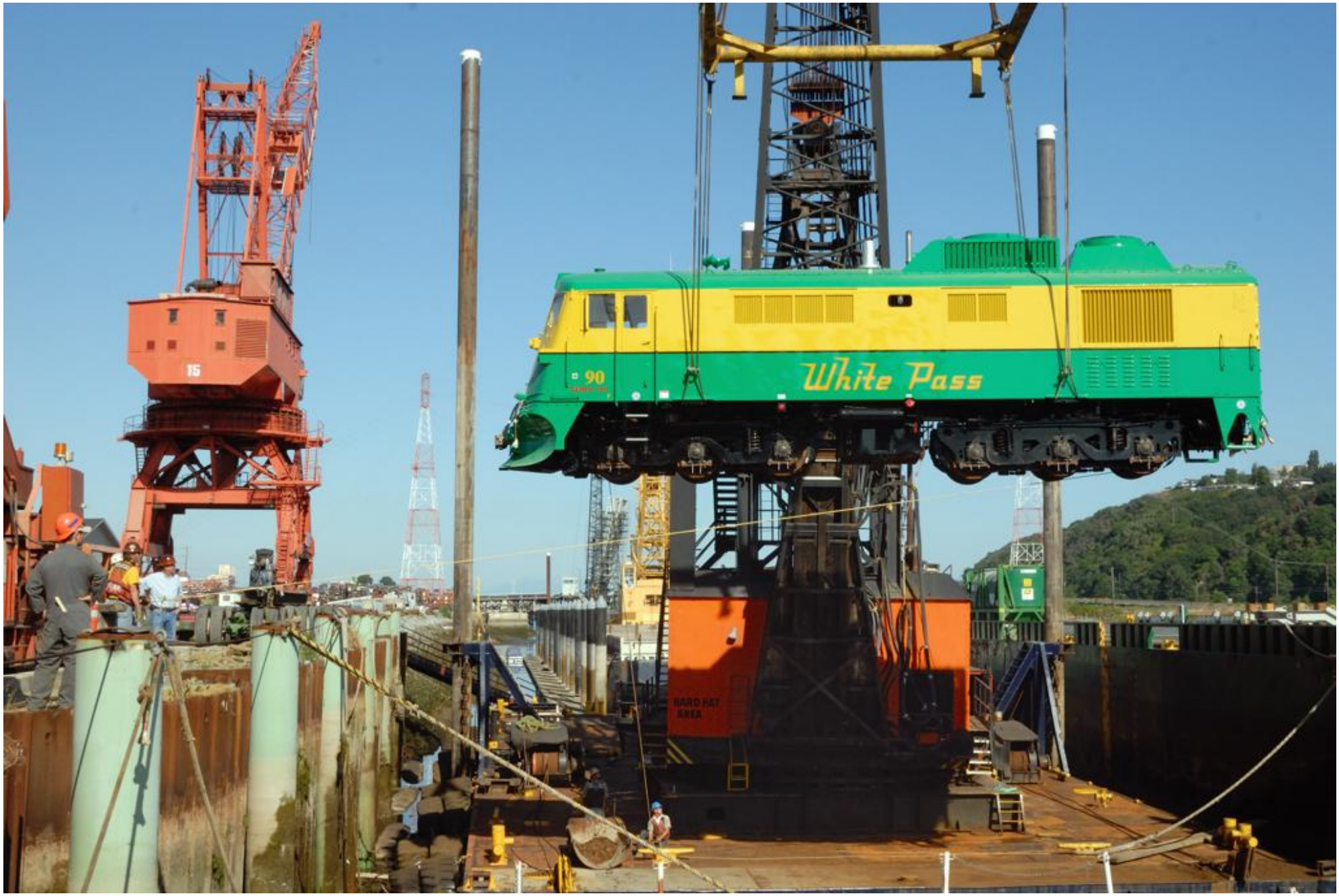
In mid-2008, the rebuild program for two units was approved. On October 14, 2008, two units #'s 90 and 98 arrived at Coast Engine and Equipment in Tacoma, WA. The units would be, for all intent and purposes, new locomotives. Only the frame, carbody shell, and running gear would be retrained. The Alco engine block would be replaced with a Cummins UK prime mover producing 1400 horsepower, a Kato alternator would take the place of the old GE generator, traction motors would be totally rebuilt to handle the extra load. 37,000 pounds of ballast along with a Quantum electronic control system would apply the power to the rail. Lastly, the rebuilds would be equipped an extended range dynamic brake, an external radiator, and a rebuilt cab. The CERES 140 would be delivered to the railway in July, 2009.



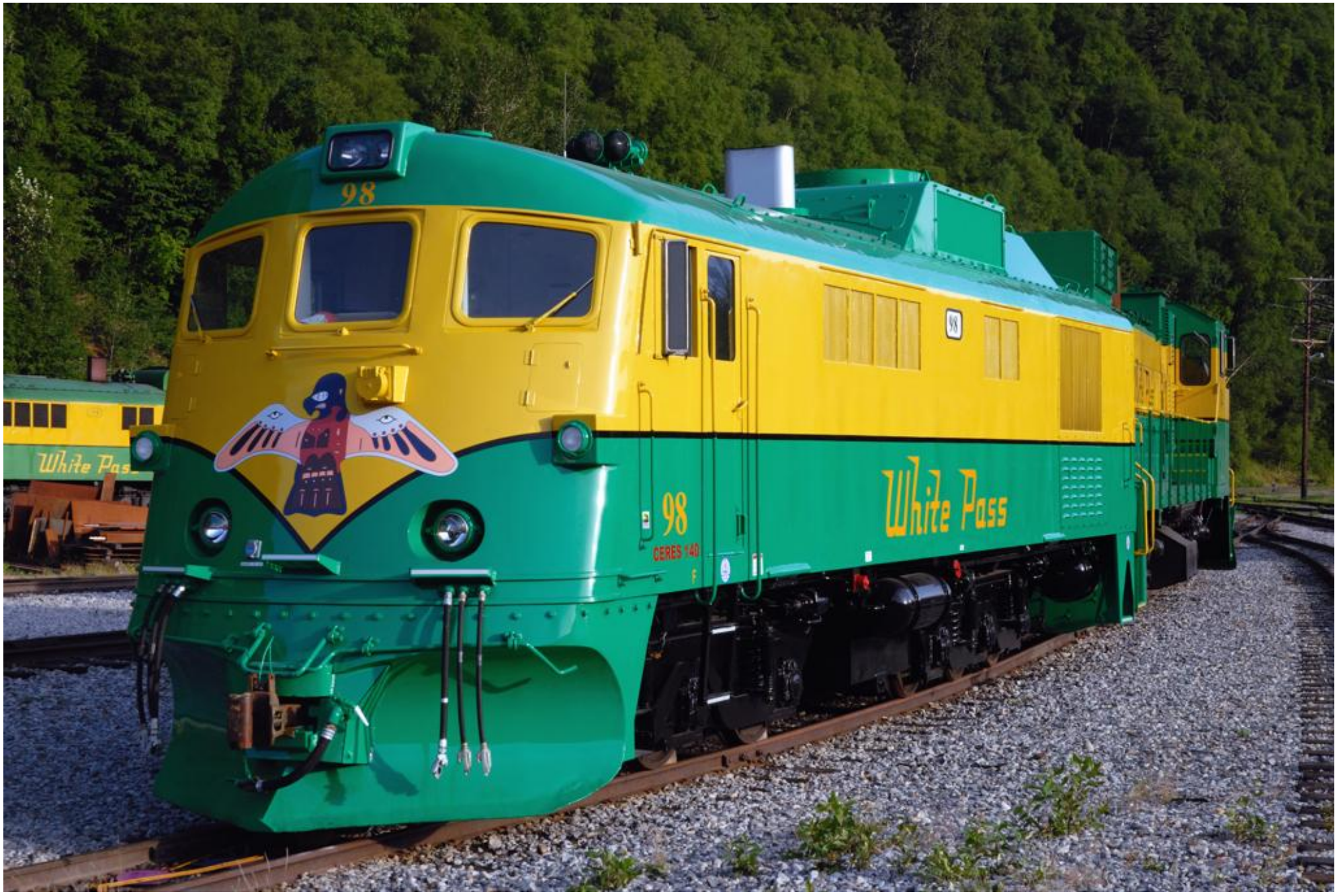
CERES 140, #98 prepares to be fired up for the first time at the CEECO facility. Tacoma, WA 4/30/09 Photo by Deane Motis



Having been rolled out in late May, 2009, 98 prepares to exchanges its standard gauge shop trucks for its double equalized CC trucks. Four 35 tonne jacks were used to lift the unit 9 feet in the air in order for the trucks to clear the plow. Tacoma, WA 5/8/09 Photo by Deane Motis

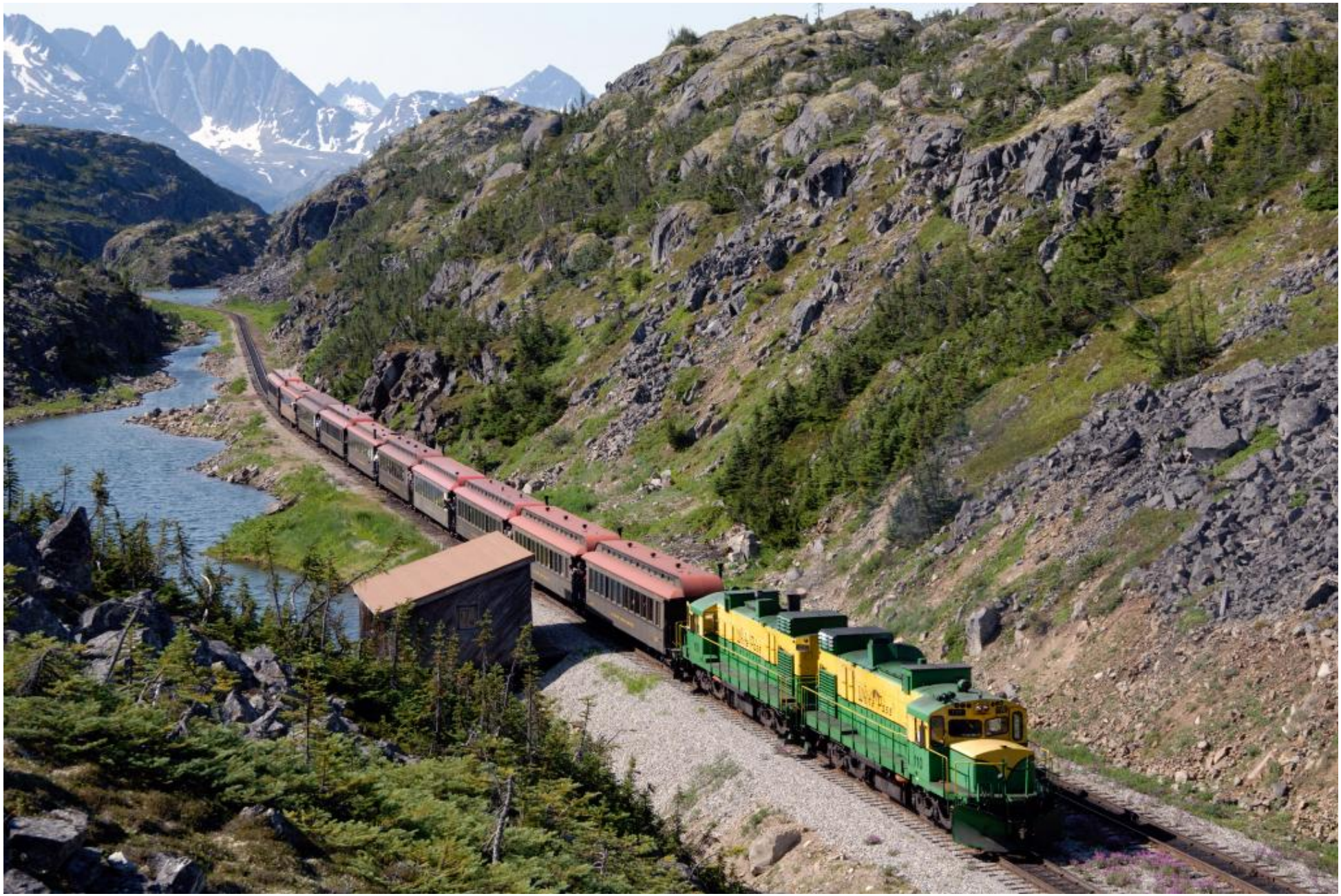


The 140 Tonne floating crane of American Construction is used to lift the second rebuilt 90 Class unit from the dock to the barge Southeast Provider. Tacoma, WA 7/21/09 Photo by Deane Motis



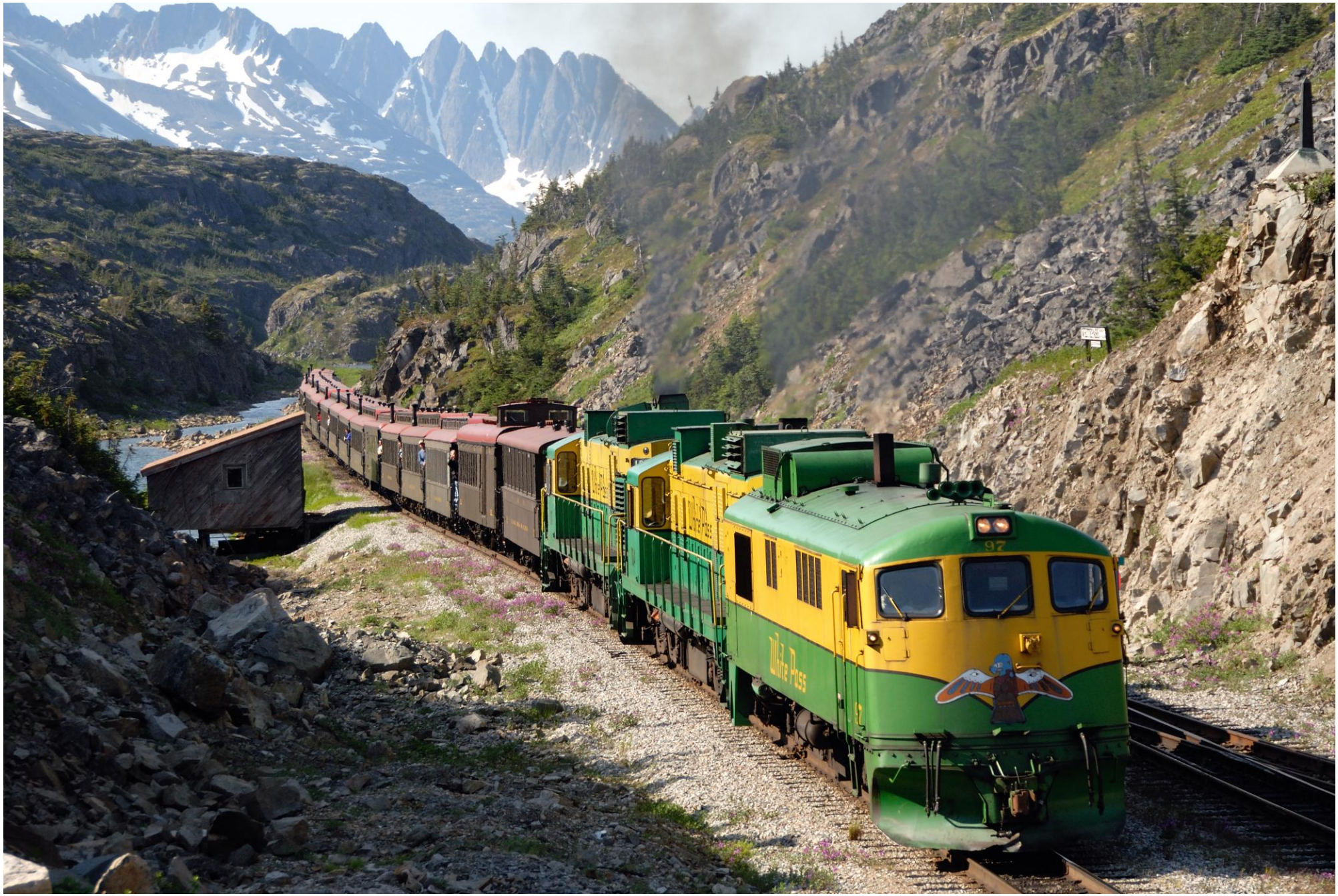
#98, having completed its initial setup at Skagway is ready to enter revenue service. Apparent in this photo is the placement of the dynamic brake to the area formerly occupied by the winterization hatch. Ditch lights with removable covers have been added along with an external roof mounted radiator. It is expected two CERES 140's will replace three conventional units. Skagway 7/13/09 Photo by Deane Motis

It is expected the remainder of the 90 class will be rebuilt. When and where is the question? CEECO, closed their doors when the 90 and 98 were completed. No doubt the expertise of those involved in the rebuild will be retained.



A pair of 101's reach the Summit of White Pass. This point is the official border between Alaska and British Columbia. Summit 7/14/09 Photo by Deane Motis

Two Summit trains meet at the top of the pass. The GE's have already run around the train and are waiting for the 101's to clear the switch before heading down the pass. As many as four trains are at the Summit on a busy day. Summit 7/14/09 Photo by Deane Motis



With the Sawtooth Mountains in the background and passengers occupying the vestibules, 97 and two 101's approach the border. Here at the time of the gold rush, the Northwest Mounted Police weighed each grubstake to insure that each stampeder had the required one tonne of supplies in order to head to the Klondike. Summit 7/14/09 Photo by Deane Motis

Thanks goes to Doug Philips, Alan Miller and Boerries Burkhardt for their assistance in the preparation of this article.

About **Deane Motis:**

Deane Motis classifies himself as a "trans-border" person having lived and worked in the Yukon Territory, BC, AB, and WA state. (Indicative of this fact, he is able to use "huh" and "eh" interchangeably.) He has actively been photographing railways across North America since 1969 as well as venturing into Mexico and South America. In the past decade, he has expended the majority of his photographic efforts on the CP and CN in BC and AB as well making at least one annual pilgrimage to the White Pass. The White Pass & Yukon has used his talents to produce two commemorative books depicting the modern history of the line. Having retired from the cruise line industry, he now works for Amtrak in the on board services department.

About **Canadian Railway Observations:**

Canadian Railway Observations (C.R.O.) is a monthly free newsletter that showcases Canadian locomotive news and photos. Founded in 1989 by William H. Baird, their mission is to inform and update readers on current, and pertinent Canadian locomotive and railway news.

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