Alaska Railroad.

11. The locomotive horsepower is not excessive for meeting requirements on The Alaska Railroad.

I sincerely hope that the information contained in this letter will answer the questions concerning Locomotive 1809 to your complete satisfaction.

Very truly yours,

Signed - F. E. Kalbaugh

F. E. Kalbaugh
General Manager

Attachments 9

JWardell:cr
Mechanical

TRANSPORTATION RESEARCH & DEVELOPMENT STATION
TRANSPORTATION CORPS
U. S. ARMY
FORT EUSTIS, VA.

TCRAD-RT 9-56-01-009, Task 33

NOV. 18 1953
Mr. Loftheim/bmc

The Alaska Railroad
Anchorage, Alaska
ATTN: Mr. J. P. Johnson, General Manager

Re: Memo of Agreement dated 21 JUL 52

Dear Mr. Johnson:

The EMD Model MRS-1 diesel-electric locomotive, USA #1809 has been operating on your railroad since November 1952. Your letter of 25 November 1952, indicated that it was necessary to make certain modifications and to remove some of the accessories in order that locomotive would be suitable for operation on your railroad. Your letter advised that flangers, a snow plow, protective windshields on each of the cab side windows, and identification lights would be applied to the locomotive.

This Command would appreciate receiving information covering changes made to locomotive including type or design of snow plow and pilot installed. In the event that photographs and drawings of locomotive showing modifications are readily available, they would also be desirable.

Specific information and comment as to the following is also desired:

1. Description of preferred windshields and method of attachment to cab side windows.

2. Comments as to the steam generator with regard to the following:

a. Starting and operating characteristics.
b. Accessibility of parts and equipment for operation, inspection and maintenance.
c. Adequacy of the operating, maintenance and spare parts instruction furnished for this equipment.
d. Fuel oil consumption.
e. Water consumption.
f. Performance of the water treatment equipment.
g. The number of cars heated successfully with the steam generator, indicating type of cars used, weather conditions and train speed.
h. Availability of boiler.

TCRAD-RT 9-56-01-009, Task 33
The Alaska Railroad

3. With respect to the coolant heaters and the winterization system, advise whether equipment is being utilized and the performance.

4. Comments and conclusions as to the performance, maintenance and operation of locomotive.

5. What difficulties, if any, not previously reported in your monthly reports to this Station, have been encountered with the locomotives?

6. Are there any particular operating difficulties from the standpoint of maintenance?

7. What changes, if any, in design or arrangement of the locomotive would you recommend? How do you rate this locomotive for accessibility for maintenance, as compared to other locomotives being operated by your railroad?

8. Has the performance of the sanders been entirely satisfactory?

9. Is the performance of the locomotive brake system considered entirely adequate? Is the air compressor capacity adequate for all conditions of operation on your railroad?

10. Is locomotive entirely satisfactory for all axle load and clearance limits of your railroad?

11. Is the locomotive hp (1600 hp to generator for traction) excessive for meeting requirements of the Alaska Railroad? If so, what hp per unit is considered most practical to meet your requirements?

Your cooperation in furnishing the above information and comments will be appreciated.

Sincerely yours,

/s/ Erwin L. Norman

for ADMIRAL B. TRAMMELL
Lt. Colonel, TC
Research Contracting Officer

HDQT. FILE
No. 411

September 1,1953

Admiral B. Trammell
Lt. Colonel, TC
Research Contracting Officer
Transportation Research & Development Station
Transportation Corps
U. S. Army
Fort Eustis, Virginia

Attention: Capt. R. F. Shreffler

My dear Colonel Trammell:

Memorandum of Agreement entered into on July 21, 1952, between the Transportation Research Development Station, Transportation Corps, United States Army, Fort Eustis, Virginia, and The Alaska Railroad, which agreed that monthly reports would be forwarded on the 1600 HP Diesel Electric Locomotive MRS-1, No.1809.

Attached you will find the reports and data.

This is to advise that during the month of August 1953 the above locomotive operated on The Alaska Railroad primarily in passenger service eight (8) calendar days. On the days not used, it was standing by for passenger protection.

No maintenance has been required other than running repairs. Locomotive has given satisfactory service in every operation.

Sincerely yours,

signed) G. A. Benedict

G. A. Benedict
Supt. of Motive Power
and Equipment

Att.

Copy: J. E. Manley
R. H. Bruce

Locomotive - 1809

Anchorage, Alaska
December 1, 1952

Memorandum:

To: Mr. J. E. Manley, Assistant General Manager

From: M. T. Hughes, Actg. Supt. of M. P. & E.

Subject: Army Test Locomotive 1809

Attached you will find a copy of a Balance Speed Vs, Trailing Tons, Curve and Continuous Tonnage Rating Curve for Army Locomotive No. 1809.

M. T. Hughes
Actg. Supt. of M. P. & E.

Attachment

Army Diesel Electric Locomotive No. 1809

	Continuous	1 hr.	1/4 hr.	10 minutes
Motor Amps	745	820	900	940
Gen. Amps	2235	2460	2700	2820
Tractive Effort	45,000	51,000	57,000	60,000
% Adhesion	18.3	20.7	23.1	24.4

Anchorage, Alaska
December 1, 1952

Memorandum

To: John E. Manley, Assistant General Manager

From: C. L. Griffith, Assistant Chief Engineer

Subject: Army Locomotive No. 1809, Eng. File No. 405.15

Per Mr. Cook's verbal request, we have examined the locomotive and pertinent data and specifications submitted by the Mechanical Department in the form of a memorandum from Mr. M. T. Hughes, Acting Supt. of M. P. & E. to All Roundhouse Foreman dated November 24, 1952.

Mr. Holman has computed the Coopers equivalent loading which would be produced by this engine on various lengths of bridge spans. See attached copy.

The maximum rating would be E-41 for spans 8' long and shorter. For longer spans the rating rapidly decreases to E-30.5 for 14' and 15' spans, then increases slightly to E-32.5 for 28' spans and then diminishes again to E-30.5 for a 80' span.

This engine may be operated safely on all subdivision and branch lines of the railroad so far as clearances and bridge carrying capacity are concerned, at speeds not to exceed the maximum current speed restrictions.

It is noted that this engine is capable of a maximum speed of 77 M.P.H. and that the three axle trucks have a wheel base of 13'-2". The wheel spacing has been checked by the Mechanical Department and is the same as on our present diesel engines. Accordingly, this engine should be able to negotiate all of the curves on the railroad. However, this matter should be determined by the Mechanical Department by checking with the manufacturer.

As the long wheel base of the trucks would tend to spread the rails at high speeds, it is recommended that all operating personnel concerned be instructed to stay within the maximum speed restrictions currently in effect and that tape recordings on the speed of each run be kept available for reference.

C. L. Griffith
Asst. Chief Engineer

The Alaska Railroad
DEC 1 1952
Asst. General Manager

Attachment

cc: Richard Bruce
M. T. Hughes
B. E. Cannon

ARMY LOCOMOTIVE 1809

Equivalent E-Loading

Span	E-Equivalent
8 feet	E 41
10 "	E 36.5
12 "	E 30.75
14 "	E 30.5
15 "	E 30.5
28 "	E 32.5
30 "	E 32.0
40 "	E 29.5
70 "	E 29.5
80 "	E 30.5

11/25/52
B. H.

HDQT. FILE
No. 411

November 25, 1952

Admiral B. Trammell
Lt. Colonel, TC
Research Contracting Officer
Transportation Research & Development Station
Transportation Corps
U. S. Army
Fort Eustis, Virginia

Re: TCRAD-RC
9-56-01-009, Task 25

My dear Colonel Trammell:

This will advise you that on November 23, 1952, Diesel Electric Locomotive No. 1809 (USA 1809) was received by The Alaska Railroad in the Anchorage Shops.

Locomotive 1809 has been inspected and found to meet the requirements of the ICC or any other authorized public regulatory body.

It will be necessary to make the following modifications to place this locomotive in suitable operating condition to meet climatic conditions found in Alaska, for which authorization is hereby requested:

Apply pilot and snow plow, install protective windshields on each side of the cab windows, and apply identification lights.

The above-mentioned modifications will not change the characteristics of the locomotive; however, it will be necessary to remove a few of the accessories that were installed on the locomotive when received. The accessories will be stored and at the termination of the Contract they will be replaced in accordance with Memorandum of Agreement dated July 21, 1952.

We will arrange to have our Accounting Department issue a Bill of Collection to the Transportation Research & Development Station for the modifications mentioned above.

Our authorization for such billing will be found under "Scope of Testing," Paragraph "B", from which we quote in part, "The Railroad will make such alterations, repairs, or modifications that may be necessary, the cost of which will be borne by TRADS."

Sincerely yours,

M. T. Hughes
Acting Superintendent of
Motive Pwr. & Equipment

cc: Travis V. Buchanan, Lt. Colonel TC
Colonel J. P. Johnson, General Manager

COPY

TRANSPORTATION RESEARCH & DEVELOPMENT STATION
TRANSPORTATION CORPS
U. S. ARMY
FORT EUSTIS, VA.

TCRAD-RC
9-56-01-009, Task 25

RAC/lc

SEP 10 1952

The Alaska Railroad
U. S. Department of the Interior
General Office Building
Anchorage, Alaska

Re: Memorandum of Agreement
dated 21 July 1952.

Gentlemen:

Forwarded herewith for your records is original signed number of the subject Memorandum of Agreement.

Sincerely yours,

Isaac V. Buchanan, Lt Col TC
for ADMIRAL B. TRAMMELL
Lt. Colonel, TC
Research Contracting Officer

1 Incl:
Memo. of Agreement

CONTRACTOR

DEPARTMENT OF THE ARMY
TRANSPORTATION RESEARCH AND DEVELOPMENT STATION
FORT EUSTIS, VIRGINIA

MEMORANDUM OF AGREEMENT

This Memorandum of Agreement is entered into as of the 21st day of July 1952 by and between the Transportation Research and Development Station, Transportation Corps, United States Army, Fort Eustis, Virginia, hereinafter called "TRADS," represented by the Research Contracting Officer executing this Memorandum of Agreement, hereinafter called the "Contracting Officer," and the Alaska Railroad, United States Department of the Interior, with headquarters at Anchorage, Alaska, hereinafter called "The Railroad":

WITNESSETH THAT:

WHEREAS, TRADS is the owner of a 1600 HP Diesel Electric Locomotive, U. S. Army #1809, hereinafter called "The Locomotive"; and

WHEREAS, TRADS is desirous of service testing The Locomotive on the terms and conditions hereinafter set forth; and

WHEREAS, each party to this Memorandum of Agreement is a branch of an agency of the United States Government; but, nevertheless, the parties desire to formalize their mutual understanding with respect to the service testing of The Locomotive;

NOW, THEREFORE, the parties have agreed as follows:

1. Scope of testing:

a. The Railroad shall furnish all facilities, services, and perform all work necessary for the service testing of The Locomotive, all as more particularly described hereinafter.

b. TRADS will deliver The Locomotive f.o.b. The Railroad's Yard, U. S. Army Dock, Whittier, Alaska. Upon delivery, The Railroad will inspect The Locomotive to determine whether it is in proper operating condition and meets the requirements of the Interstate Commerce Commission and any other authorized public regulatory body. A report of such inspection shall be made to the Contracting Officer, with recommendations as to alterations or modifications considered necessary before The Locomotive can meet the aforesaid requirements or be placed in proper operating condition. The Railroad will make such alterations, repairs, or modifications which may be necessary, but only upon written direction of the Contracting Officer. The costs of such alterations, repairs, or modifications made by The Railroad will be borne by TRADS.

c. The Locomotive shall be placed in regular service on The Railroad's lines for the period specified herein and shall be fully operated in switching and/or road service within The Locomotive's horsepower and speed limits.

2. Reports

At monthly intervals during the period of performance hereunder, The Railroad will deliver to the Contracting Officer full and complete reports relating to the operation, maintenance, and performance of The Locomotive. Said reports shall include the following:

The Railroad's Report Forms covering inspections of locomotive.

Engineman's inspection report outlining mechanical repairs needed.

Report on fuel and lube oil added.

The Railroad's other standard forms as may be considered pertinent.

Statement summarizing the service and performance of The Locomotive.

The Railroad's regular train crew operating The Locomotive shall not be required to take special readings or logs during periods when The Locomotive is in operation.

3. TRADS Inspectors

TRADS inspectors and other personnel authorized by the Contracting Officer shall have access to and the right to inspect The Locomotive at all reasonable times, and shall be permitted to ride The Locomotive in observer capacity during periods of operation by The Railroad.

4. Fitness for Use - Repairs

TRADS makes no representations or warranties as to the capabilities of The Locomotive or its fitness for any particular purpose or use. The Railroad, at its own cost and expense, shall maintain running repairs during the period of performance hereunder, and shall also furnish all necessary supplies required for the operation and maintenance of The Locomotive including fuel and lubricants. All necessary renewal parts or special tools required for the repair or operation of The Locomotive shall be furnished by TRADS.

5. Period of Performance, Termination and Redelivery

Unless sooner terminated by either party, The Locomotive shall remain in the service of The Railroad for a period of one year from the date of delivery thereof to The Railroad's yards, U. S. Army Dock, Whittier, Alaska, as aforesaid. This Memorandum of Agreement may be terminated by either party hereto by giving the other party notice in writing at least thirty (30) days prior to the effective date of such termination. At the end of the period of service testing on The Railroad, The Locomotive shall be delivered to TRADS, f. o. b. U. S. Army Dock, Whittier, Alaska. Included with The Locomotive in shipment shall be all property furnished by TRADS and received with The Locomotive, such property to consist of items determined by inventory taken jointly by representatives of TRADS and The Railroad at time The Locomotive is delivered to The Railroad.

6. Accountability for Property

a. The Railroad agrees that it will account for The Locomotive in accordance with the provision of Appendix "B" of the Armed Services Procurement Regulations entitled "Manual for Control of Government Property in Possession of Contractors," dated March, 1951.

b. All reports made in accordance with said Manual shall be forwarded to Captain Robert F. Shreffler, Transportation Research and Development Station, Fort Eustis, Virginia, who is hereby designated as the Property Administrator under this Memorandum of Agreement.

7. Assumption of Risk

a. The Railroad shall not be liable for damage to or loss or destruction of The Locomotive regardless of the cause thereof.

b. TRADS will reimburse The Railroad for all losses and expenses not compensated for or covered by insurance and actually sustained or incurred by The Railroad as a result of bodily injury to, or death of TRADS inspectors or representatives operating or observing the operation of The Locomotive while on The Railroad's premises in connection with matters relating to this Memorandum of Agreement.

c. Except as herein provided in this Article, The Railroad assumes all risks and liabilities of whatsoever nature or kind arising out of the use, operation, or control of The Locomotive by The Railroad and agrees to indemnify and save harmless TRADS against and from all claims, demands, losses, liability, damage, injury (including death claims), liens and expenses (including cost of court and reasonable attorneys fees) on account of, or arising out of, such risks or liability.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Agreement as of the day and year first above written.

TRANSPORTATION RESEARCH AND DEVELOPMENT STATION
TRANSPORTATION CORPS
UNITED STATES ARMY

BY Admiral B. Trammell

ADMIRAL B. TRAMMELL
Lt. Colonel, TC
Research Contracting Officer

ALASKA RAILROAD
UNITED STATES DEPARTMENT OF THE INTERIOR

BY J. P. Johnson

General Manager
(Official Title)

General Office Bldg., Anchorage, Alaska
(Business Address)

TRANSPORTATION RESEARCH & DEVELOPMENT STATION

TRANSPORTATION CORPS

U. S. ARMY

FORT EUSTIS, VA.

RFS/wj

TCRAD-ET 9-56-01-009 T-25

APR 18 1952

Alaska Railroad
U. S. Dept of Interior
Anchorage, Alaska

ATTN: Mr. J. P. Johnson, Gen. Mgr.

Dear Mr. Johnson:

This Station is developing a 120-ton 1600-HP Diesel-Electric 0-6-6-0 locomotive, 56-1/2" gauge, winterized for service under low temperature conditions.

Inclosed you will find a description and list of pertinent dimensions pertaining to this locomotive. It will be noted that locomotive is being built by Electro-Motive Division of General Motors Corporation at La Grange, Illinois, and will be equipped with EMD 16-cylinder, V-Type, GP-7 power plant of 1600-HP; six-wheel trucks with all axles motor driven; provisions for independent operation of either truck; winterization equipment for cold weather operations; air compressor with a capability of 77-1/2 CFM at idle and 225 CFM at full speed; and air brake schedule of 6-BL. The wheel arrangement is 0-6-6-0 with a total weight of 120-tons evenly distributed over all wheels. Tractive effort at continuous rating will be 45,000 lbs at 10 mph, maximum speed will be 65 mph, and maximum curvature 30°. Overall height is 13' 6" and locomotive conforms with restricted military railway clearance diagram 2-B-4 except that clearance above rail with new wheels is 5-5/8" below motor gear case. The power plant, generator, and motors are the standard units used in commercial EMD GP-7 road-switcher locomotives. The locomotive is designed for multiple unit control when units of the same type are used. The winterization equipment is designed for cold starting temperature down to -40° F, and includes two Vapor Company 150,000 BTU/hr heaters, one for the engine water jacket and the other to preheat the crankcase oil, the fuel oil, and the various pumps and filters.

Thirteen locomotives of this type are being constructed for the Transportation Corps by EMD at La Grange, Illinois, and upon completion each of the locomotives is being sent to the Belt Railway Company of Chicago for a sixty-day break-in service test. At the completion of this break-in service, one of the locomotives will be sent to the Denver & Rio Grande Western Railroad for extensive service tests in mountainous terrain for

the period of a year. This station desires to service test a second locomotive under severe weather conditions and low temperatures for the period of a year, and it is felt that such operating conditions would be encountered on your railroad. Accordingly, we should like to ask your assistance in service testing this 1600-HP locomotive on the Alaska Railroad.

In such a program, this organization would be glad to ship the locomotive in question to your railroad in Alaska and turn it over to your operating forces for placing in service on your lines for a period of one year. We would prefer that the assignment you select for the locomotive be one that would allow the unit to accumulate a maximum of mileage and operate in terrain that offers steep slopes, varying altitudes, and low ambient temperatures. The locomotive would be placed in your service on a no-charge basis. It is expected that your road would be willing to operate and maintain the unit and handle ordinary light and running repairs. A certain amount of instrumentation and data recording may be required, and this station will furnish the necessary instruments and personnel to accumulate the test data.

As a matter of information, there is inclosed a copy of the contract negotiated with the Belt Railway of Chicago for the break-in service testing of all thirteen locomotives, and this contract can be considered as a sample of the agreement that this station would be willing to enter into to cover an extensive service test of the one locomotive on the Alaska Railroad. We would suggest that it be reviewed as a guide to the terms that would be included in our contract with you.

The test locomotive in question will be turned over to the Belt Railway of Chicago sometime this month for the sixty-day break-in service. It therefore will be ready for extensive service testing sometime in June, and it can be shipped to your lines in Alaska at that time.

This station would appreciate your reviewing the above and advising promptly if the Alaska Railroad would be willing to participate in our test program for this 1600-HP locomotive. At the same time, we would welcome your comments on the contract suggested. If any other information is desired in connection with the locomotive or the test program, please advise and we will furnish promptly so that all arrangements can be completed at the earliest possible date.

Sincerely yours,

James R. Truden

JAMES R. TRUDEN
Lt Col TC
Ch, Engr & Test Div.

2 Incls:
1. List of Description & Dim.
2. Contract

Locomotive, Diesel Electric, 56½" Gauge, 120-Ton, 1600-HP, 0-6-6-0 Wheel, Single Power Plant, Road-Switcher

Dimensions

Overall length over couplers	56' - 0"
Max. width over handrails	9' - 8"
Max. height above rails	13' - 6"
Distance between truck centers	31' - 0"
Truck wheel base (6 wheel truck)	13' - 2"
Clearance above rails	5-5/8"
Wheel diameter	40"

Description

Total weight in working order	240,000 #
Weight per axle	40,000 #
Max. curvature	30°
Max. speed	65 mph
Input to generator for traction	1600 HP
Tractive Effort: Starting (30% adhesion)	72,000 #
Continuous (10 mph)	45,000 #

Engine: EMD 16-567B V-Type, 16 cylinder, 2 cycle, 800 RPM.
Single Engine
Engine is standard GP-7 power plant.
Bore & Stroke: 8½" x 10"
Generators: D.C. Shunt wound. Standard GP-7 generator.
Traction Motors: Total No. 6
Type: DC series-wound. Standard GP-7 traction motors.
Motor Control: Special military installation. Automatic transition from series to shunt only.
Trucks: Two six-wheel trucks with all axles motor-driven. Each truck can operate separately.
Bearings: Friction type, 6½ x 12.
Wheels: 40" multiple wear.
Air Brakes: Schedule 6-BL
Compressor: Gardner-Denver, Air-cooled, two-stage Model WXO. 225 CFM at full speed (800 RPM)
Winterization Equipment: Two Vapor Company 150,000 BTU/hr heaters, one for engine cooling jacket, one for lube oil, fuel oil, pumps and filters.
Air Chime: Nathan
Lubrication: Full pressure, direct driven, gear type pump.
Injection: Full governor controlled.
Fuel Oil Filters: Duplex.
Lube Oil Filters: Michiana
Air intake: Oil Bath Type.
Fuel Capacity: 1600 gals.
Lube Oil: 200 gals.
Cooling Water: 230 gals.
Sand Capacity: 18 cu. ft.

HDQT. FILE
No. 411
X 3a4 AFE

Anchorage, Alaska
June 17, 1955

Memorandum

To: Mr. J. E. Manley, Assistant General Manager

From: G. V. Randall, Supt. of Motive Power & Equipment

Subject: A. F. E. Department No. 756 covering conversions and steam generator relocations on Locomotives Nos. 1051 and 1508

With reference to your memorandum of December 9, 1954 stating that "this work should be withheld until a later date preferably sometime after April 1, next", please advise whether or not the Locomotive USA No. 1809 is definitely to be shipped next November, as proposed. This information is desired in connection with a decision in regard to resubmitting the AFE.

If the Locomotive No. 1809 is to be shipped out, it is very probable that another Lead unit equipped with a steam generator will be needed. Locomotive No. 1051 will be in the shop within the next 60 days and it is anticipated that at that time the steam generator will be removed in order to relieve the excessive loading on the rear truck. If the steam generator is to be relocated to Locomotive No. 1508, this would be the logical time for it.

In any event, in conformance with your memorandum, no water tanks will be installed in the roof hatches of Locomotive No. 1508. If an AFE is submitted, it will be with the proposal that the water tanks be installed in some other location, preferably within the car body, having a capacity of approximately 500 gallons.

G. V. Randall
Supt. of Motive Power
and Equipment

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF TERRITORIES
Washington 25, D.C.

HDQT. FILE
No. 411

APR 27 1955

Mr. R. C. Barton
Shipbuilding, Railroad,
Ordinance, and Aircraft Division
Room 4022
Department of Commerce
Washington 25, D. C.

Dear Mr. Barton:

In accordance with your telephone request of last week, I radioed The Alaska Railroad as to the condition of the steam locomotives which are now surplus to the railroad's operation and which are up for sale on a competitive bid basis. I am attaching a carbon copy of the railroad's reply.

You will notice that the railroad has 14 steam locomotives (Lima) and 10 steam locomotives (Baldwin) for a total of 24, all in operating condition. Please note also that where repairs are required, the cost of such repairs will not exceed $2,000 per locomotive.

We greatly appreciate your interest and assistance in the matter of disposing of these surplus locomotives.

Sincerely yours,

(Sgd.) Edwin M. Fitch

Edwin M. Fitch
Special Representative
The Alaska Railroad

Enclosure

EMFitch:crr
4/26/55

Copy to: Mr. John E. Manley
Acting General Manager
The Alaska Railroad
Anchorage, Alaska

HDQT. FILE
No. 411

PRIORITY 25 APRIL 1953

FM MANLEY ACTING GENERAL MANAGER THE ALASKA RAILROAD ANCHORAGE ALASKA

TO EDWIN FITCH SPECIAL REPRESENTATIVE THE ALASKA RAILROAD WASHINGTON D C

URWIRE APRIL 22 FOLLOWING STEAM LOCOMOTIVES INVITATION FOR BID GS DASH FIVE FIVE DASH AL DASH TWO X COLON

ALASKA RAILROAD LOCOMOTIVE	LIMA SERIAL
316	8379
317	8393
315	8391
318	8392
404	7877
405	7875
406	7876
402	7880
401	7879
320	8383
310	8390
319	8382
311	8402
312	8407
	BALDWIN SERIAL
702	59606
588	70478
552	69637
902	70336
901	62515
703	60689
555	69854
701	59605
559	70479
560	70367

ALL LOCOMOTIVES IN OPERATING CONDITION FD ANY REPAIRS REQUIRED WILL NOT EXCEED $2,000.00 PER LOCOMOTIVE

(Signed) JOHN E. MANLEY

John E. Manley
Acting General Manager

JWMiles:ow
Stores and Purchases

DEPARTMENT OF THE ARMY
TRANSPORTATION RESEARCH AND DEVELOPMENT COMMAND
FORT EUSTIS, VIRGINIA

S

Supplemental Agreement No. 1 to
Memorandum of Agreement between
TRADCOM and The Alaska Railroad

THIS SUPPLEMENTAL AGREEMENT NO. 1 entered into this 23rd day of November 1953 to Memorandum of Agreement by and between the Transportation Research and Development Command, Transportation Corps, United States Army, Fort Eustis, Virginia (hereinafter referred to as "TRADCOM"), represented by the Research Contracting Officer executing this Supplemental Agreement (hereinafter referred to as the "Contracting Officer") and The Alaska Railroad of the United States Department of the Interior, with headquarters at Anchorage, Alaska (hereinafter referred to as "The Railroad").

WITNESSETH THAT:

WHEREAS, the parties hereto entered into a Memorandum of Agreement as of the 21st day of July 1952 for the service testing of a 1600 H. P. Diesel Electric Locomotive, U. S. Army #1809 (hereinafter referred to as "The Locomotive") for a period of one (1) year from the date of delivery thereof to The Railroad's Yard, U. S. Army Dock, Whittier, Alaska; and

WHEREAS, The Locomotive was delivered to The Railroad on 23 November 1952 and the parties hereto desire to continue the service testing thereof until 30 November 1955, unless sooner terminated by either party, in accordance with the provisions of the Memorandum of Agreement, and it is further desired that upon completion of service testing The Locomotive be delivered to Lathrop, California as hereinafter set forth; and

WHEREAS, under the provisions of the Memorandum of Agreement, The Railroad agreed to account for The Locomotive in accordance with the provisions of Appendix "B" of the Armed Services Procurement Regulation entitled "Manual for Control of Government Property in Possession of Contractors" dated March 1951; and

WHEREAS, the parties hereto desire to amend Clause 6 of the Memorandum of Agreement entitled "Accountability for Property" by transferring the accountability for property in The Railroad's possession into the Military account as hereinafter set forth; and

WHEREAS, Clause 7 of the Memorandum of Agreement entitled "Assumption of Risk" provides, inter alia, that The Railroad will be reimbursed for all losses and expenses not compensated for or covered by insurance and actually sustained or incurred by The Railroad in certain specific instances; and

Incl # 1 of 1 Incl

WHEREAS, TRADCOM desires to amend the Memorandum of Agreement in order to identify the funds from which payments would be made in the event liability arises under said "Assumption of Risk" Clause; and

WHEREAS, the Government desires to amend the Memorandum of Agreement to reflect the changes as aforesaid; and

WHEREAS, this Supplemental Agreement No. 1 is deemed to be in the best interest of the Government and is authorized by the Armed Services Procurement Act of 1947 (Public Law 413, 80th Congress), as amended:

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. Clause 5 of the Memorandum of Agreement entitled "Period of Performance, Termination and Redelivery" be and the same hereby is amended as follows:

a. The Locomotive shall remain in the service of The Railroad until 30 November 1955 unless sooner terminated by either party in accordance with the provisions of said Clause 5.

b. Upon receipt of shipping instructions from the Transportation Corps Supply Officer, Sharpe General Depot, Lathrop, California, The Locomotive and all renewal parts and supply tools furnished by TRADCOM shall be delivered to the "Transportation Corps Supply Officer, Sharpe General Depot, Lathrop, California, f. o. b., outloading port, at Whittier or Seward, Alaska.

2. Clause 6 of the Memorandum of Agreement entitled "Accountability for Property" be and the same hereby is deleted and the following substituted therefor:

"a. Accountability for Government property furnished or acquired under the terms of this Memorandum of Agreement shall be maintained by the Transportation Corps Supply Officer, Sharpe General Depot, Lathrop, California.

"b. The Railroad will maintain responsibility for the care and safe-keeping of The Locomotive and property in accordance with the terms of the Memorandum of Agreement".

3. Clause 7 of the Memorandum of Agreement, entitled "Assumption of Risk" is amended effective the 21st day of July 1952 by the addition of the following:

"d. Estimated cost of Agreement - One Dollar ($1.00.)

"e. The Finance Officer U. S. Army, Fort Eustis, Virginia is designated as the officer to make payment in accordance with the Memorandum of Agreement. The supplies and services to be obtained by this instrument are chargeable to the following Allotment Number: 2152020 509-1059 P3124-07 S44-019, the available balance of which is sufficient to cover the cost thereof".

4. Except as herein amended all the terms, provisions and conditions of the Memorandum of Agreement shall remain and continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Supplemental Agreement as of the day and year first above written.

TRANSPORTATION RESEARCH AND DEVELOPMENT COMMAND
TRANSPORTATION CORPS
UNITED STATES ARMY

BY Admiral B. Trammell

ADMIRAL B. TRAMMELL
Colonel, TC
Research Contracting Officer

THE ALASKA RAILROAD
UNITED STATES DEPARTMENT OF THE INTERIOR

BY John E. Manley

Acting General Manager
Official Title

General Office Building, Anchorage, Alaska
Business Address

HDQT. FILE
No. 411

April 8, 1955

Capt. Charles E. Lewandowski
Stock Control Officer
Sharpe General Depot, U. S. Army
Lathrop, California

Subject: Locomotive USA No. 1809
(Stock No. 58-4991-06-636)
Your file: QMDYT-SC(18) 453

Dear Sir:

Your memorandum of April 5, 1955 has been received.

On February 23, 1955 Col. Admiral B. Trammell at Fort Eustis, Virginia, forwarded three copies of a Supplemental Agreement No. 1, extending the agreement covering the use of locomotive USA 1809 to November 30, 1955. This was done because suitable facilities for handling a locomotive the size of the one in question were not available, and it is expected that this will allow sufficient time to provide such facilities.

When Col. Trammell returns to us a copy of this supplemental agreement which has been signed and forwarded to him, we will then be in a position to provide the information you have requested.

Very truly yours,

(Signed) JOHN E. MANLEY

John E. Manley
Acting General Manager

WDMcKinney/lm

Anchorage, Alaska
April 14, 1954

Memorandum

To: F. E. Kalbaugh, General Manager

From: G. V. Randall, Supt. of Motive Power & Equipment

Subject: Memo of Agreement dated 21 July 1952 regarding Locomotive USA No. 1809

With reference to your memorandum of April 5, 1954, attached herewith is a reply, for your approval and signature, to the letter dated March 31, 1954, from the Transportation Research and Development Command, Transportation Corps, U. S. Army, Fort Eustice, Virginia.

The subject letter is returned herewith.

G. V. Randall
Supt. of Motive Power
and Equipment

Attachment

KAHahn:mz
Mech.

April 14, 1954

Air Mail

D. S. Williams
1st Lt. TC
Assistant Adjutant
Transportation Research & Development Station
Transportation Corps
U. S. Army
Fort Eustice, Virginia

Re: TCRAD-TE 9-56-01-009, Task 35
Memo of Agreement dated 21 July 1952

Dear Sir:

Replying to your letter of March 31, 1954, information requested covering Items 1-9, incl., is submitted below:

1. Maximum curves and grades on which the locomotive saw service: Maximum curvature 18°, maximum grade (Jonesville Branch) 4.7%, ruling grade (Mainline Portage-Seward Southbound) 3% - 2.2 miles.

Enclosed herewith are three prints of The Alaska Railroad Main Line and Branch Line condensed profiles. Locomotive USA No. 1809 was used on all Main Line and Branches, with exception of the Healy River Coal Spur.

KAH.

2. The locomotive operated in a maximum of approximately 2' of snow at times during the test period. No snow entered the traction motors or battery box, nor were any other difficulties experienced due to snow or ice.

3. Idling of the engine rapidly when standing in temperatures of 50 degrees below zero or less to prevent freezing of the engine coolant was experienced, but this was an unusual occurrence. The maximum temperature encountered was -50 degrees F.

4. The cab heaters were adequate for service on The Alaska Railroad and it is our opinion that installation of additional heaters in the cab at the Engineer's feet is not necessary.

5. The engine coolant temperature stayed within the normal range under all operating conditions.

6. The protective windshields installed were furnished by the Prime Manufacturing Company, 1669 South First St., Milwaukee 4, Wisconsin, and are Windshield Wing and Rearview Mirror Combination, Complete, No. SC-871-100 (Right and Left required).

The Snow Plow applied was very similar to the plow shown on attached Print No. EE-42. We do not have a print of the plow applied to Locomotive No. 1809, as drawings of same were destroyed in The Alaska Railroad Mechanical Department fire in January, 1951. However, we have a number of plows in service on diesel-electric locomotives which are as per the attached print and these plows have proven very satisfactory. There are no drawings available of the brackets for attaching these plows to the locomotives.

7. The tonnage ratings were assigned by an Electro-Motive Division factory representative. We have no particular criterion by which these ratings are assigned, but do have tonnage ratings reductions used during the winter season. These reductions from locomotive ratings made in accordance with winter conditions are as follows:

	Per Cent
30 degrees above zero, to zero	0
1 degree below zero to 20 degrees below zero	15
21 degrees below zero to 40 degrees below zero	20
41 degrees below zero to 60 degrees below zero	40

8. The dead man feature was not used by The Alaska Railroad.

9. We had no occasion to allow the locomotive to cool down while in low ambient temperature conditions and then heat it by use of the winterization system, prior to cranking.

Very truly yours,

Signed - F. E. Kalbaugh

F. E. Kalbaugh
General Manager

Attachments

KAHahn:mz
Mech.

TRANSPORTATION RESEARCH & DEVELOPMENT COMMAND

TRANSPORTATION CORPS

U. S. ARMY

FORT EUSTIS, VA.

TCRAD-TE 9-56-01-009, Task 35 (Test 179.2) 31 MAR 1954

Mr. J. P. Johnson, General Manager
The Alaska Railroad
Anchorage, Alaska

Re: Memo of Agreement
Dated 21 July 1952

Dear Mr. Johnson:

Please refer to EMD Model MRS-1 Diesel-Electric Locomotive, USA No. 1809 that has been operating on your railroad since November 1952. This Command is preparing a final test report based on information supplied by your railroad for the period of test initiated December 1952 and terminating November 1953. In preparing this report it was discovered that certain information pertinent to its satisfactory completion is not available.

Information and comment as to the following is desired:

1. A description of the terrain on which the locomotive saw service, particularly the maximum curves and grades encountered (ruling grade) and the length of these grades. If convenient, a copy of profile would be of considerable interest to this Command.

2. How much snow did the locomotive operate in during the test period? Did any of this enter the traction motors or battery box? Please list any difficulties encountered due to snow or ice.

3. You made mention of the fact that it was necessary to idle the engine rapidly when operating in temperatures of 50 degrees below zero or less to prevent freezing of the engine coolant. Was this a frequent or an unusual occurrence? What was the maximum temperature encountered?

4. Were the cab heaters adequate for service on your railroad? In your opinion would it be advisable to install an additional heater in the cab at the engineer's feet?

5. What was the highest engine coolant temperature and under what conditions was it observed (e.g. grade, tonnage, track conditions, ambient temperature)?

TCRAD-TE 9-56-01-009, Task 35 (Test 179.2)

6. This Command has particular interest in the protective windshields and snowplow and pilot your railroad applied to the locomotive. Are design drawings or sketches available for these items? If they were purchased items, we would be interested in the manufacturer's name and location.

7. Was a tonnage rating (e.g. tons to be handled over a certain grade) assigned the locomotive by your railroad? Do you have any particular criterion by which you assign these ratings?

8. Was the dead man feature put into use by your railroad?

9. At any time has the locomotive been allowed to cool down while in low ambient temperature conditions, and the winterization system employed to heat it prior to cranking? If so, did you consider the winterization system adequate?

Your cooperation will be greatly appreciated in providing, wherever possible, the above mentioned information.

Sincerely yours,

D. S. WILLIAMS
1st Lt TC
Assistant Adjutant

HDQT. FILE
No. 411

December 1, 1953

Admiral B. Trammel
Lt. Colonel, TC
Research Contracting Officer
Transportation Research & Development Station
U. S. Army
Fort Eustis, Virginia

Re: TCRAD-RT 9-56-01-009, Task 33
Memo of Agreement dated July 21, 52

Dear Colonel Trammell:

This will acknowledge receipt of your letter of November 18, 1953, requesting specific information and comment on the EMD Model MRS-1 Diesel-electric locomotive, USA No. 1889, which has been operating on The Alaska Railroad since November 1952.

In accordance with the Memorandum of Agreement dated July 21, 1952, a snow plow, protective windshield on each cab side window, and identification lights were applied to the locomotive in order to make it suitable for operation on The Alaska Railroad; no flangers were installed.

In line with your suggestions we are furnishing photographs, which are attached, of the installations we made; in our opinion these will be more adequate than a verbal description of the installations.

1. The windshields and attachments are shown in the attached photographs.

2. Information regarding steam generator:
   a. Starting and operating characteristics are satisfactory.

   b. The accessibility of parts and equipment for operation, inspection and maintenance are satisfactory.

   c. The adequacy of the operating, maintenance and spare parts instruction furnished for this equipment is satisfactory.

d. The fuel oil consumption is 32 gallons an hour at full capacity.

e. The water consumption is approximately 375 gallons an hour.

f. The performance of the water treatment is satisfactory.

g. We operated six standard passenger cars satisfactorily with the temperature from 20 above to 50 below zero at speed ranging from 20 to 59 miles an hour.

h. The boiler was available 85 per cent of the time - being out of service about 15 per cent of the time for boilerwashing.

3. The coolant heaters and winterization system have proved satisfactory with temperatures ranging down to 50 below zero. When the weather becomes colder than this it is necessary to idle the engine in second or third notch so that the water will circulate properly.

4. The performance of the engine has been satisfactory with normal maintenance.

5. No difficulties not previously recorded in our monthly reports to you have been encountered with this locomotive.

6. There are no particular operating difficulties from the standpoint of maintenance.

7. No changes in design are recommended. The accessibility for inspection and maintenance is such that it requires more time to perform as compared to our standard F-7, 1500 horsepower locomotives now in service on The Alaska Railroad.

8. The performance of the sanders has been satisfactory.

9. The locomotive brake system and the air compressor are satisfactory.

10. The locomotive is entirely satisfactory for all axle load and clearance limits on The