

INFORMATION TO BE FILLED IN AND FURNISHED BY RAILROAD  
FOR  
PREPARATION OF DIESEL APPLICATION REPORT

PRODUCT APPLICATION STUDY FOR \_\_\_\_\_ RAILROAD

## Operating Department

1. Scope of study (a) Complete \_\_\_\_\_  
(b) Selected Operation \_\_\_\_\_
2. Dates covering a consecutive ten day peak period \_\_\_\_\_
3. Furnish copies of dispatchers' train sheets for selected ten days. Are tonnages shown actual or adjusted? \_\_\_\_\_
4. Furnish two sets of Employees' Time Tables including speed restrictions and freight tonnage ratings.
5. Furnish copy of engine and train crews current wage rates.
6. Furnish description of peak local freight and mixed train assignments.
7. Furnish description of peak yard switching assignments (use Table 1).

## Mechanical Department

1. Furnish locomotive specification booklet including light weight of Steam locomotives and tenders, tractive effort and year built.
2. Furnish copy of locomotive speed draw-bar pull curves, if available.
3. Furnish Steam and Diesel locomotive annual repair expense by classes for each of the past five years with corresponding locomotive mileage for each year.
4. Furnish maximum number and description of locomotives used in freight, passenger and switching services during test year segregated between Steam and Diesel types (use Table 5).

MECHANICAL DEPARTMENT ITEM NUMBER 4Steam Locomotives:

<u>No.</u>	<u>Depreciation Base</u>	<u>Depreciation Rate</u>
310	11,508.06	3.33%
311	12,198.93	3.33%
312	8,001.85	3.33%
313	9,215.55	3.33%
315	12,991.63	3.33%
316	12,289.14	3.33%
317	11,710.31	3.33%
318	11,615.35	Leased to Army 3.33%
319	14,433.38	3.33%
320	12,067.62	3.33%
401	78,969.05	3.33%
402	79,051.03	3.33%
403	12,624.33	3.33%
404	13,351.31	3.33%
405	13,409.25	3.33%
406	5,714.88	3.33%
551	67,181.60	3.33%
552	67,245.16	3.33%
554	67,239.48	3.33%
555	68,030.40	3.33%
556	68,062.89	3.33%
557	63,796.57	3.33%
558	11,566.94	3.33%
559	10,835.18	3.33%
560	17,070.31	3.33%
561	20,119.32	3.33%
562	14,785.89	3.33%
701	76,644.39	3.33%
702	76,712.13	3.33%
703	77,405.70	3.33%
801	74,634.98	3.33%
802	129,059.37	3.33%
901	95,533.04	3.33%
902	126,292.70	3.33%

Diesel Locomotives:

1000	109,583.98	3.33%
1001	109,959.76	3.33%
1010	28,866.48	3.33%
1013	28,180.15	3.33%
1014	34,320.97	3.33%
1015	19,805.64	Burned at Healy 3.33%
1016	51,821.26	" " " 3.33%
1017	23,080.74	3.33%
1018	52,849.34	3.33%

LOCOMOTIVE CLASSIFICATIONS AND NUMBERSFEBRUARY 1, 1952CLASS M-1-A

<u>Existing</u> <u>ARR No.</u>	<u>Old</u> <u>ARR No.</u>	<u>U.S.A. No.</u>	<u>Builder's No.</u>	<u>Survived By</u>
*1050	1050A	8040	70661--Alco-GE	I.R.C.E.M. Co.
*1052	*1052	8055	70676--Alco-GE	P.S.F.&D. Co.
*1054	*1054	8056	70677--Alco-GE	P.S.F.&D. Co.
*1070	*1070	8047	70668--Alco-GE	P.S.F.&D. Co.
*1072	*1072	8036	70673--Alco-GE	P.S.F.&D. Co.
*1074	*1074	8052	70657--Alco-GE	P.S.F.&D. Co.
*1076	*1076	8046	70667--Alco-GE	P.S.F.&D. Co.
*1078	*1078	8053	70674--Alco-GE	P.S.F.&D. Co.

CLASS M-1-B

*1051	*1050-B	8054	70675--Alco-GE	I.R.C.E.M. Co.
*1053	*1089	8021	70612--Alco-GE	Alaska Railroad
**1055	**1002	8038	70659--Alco-GE	Alaska Railroad
**1057	**1085	8001	69993--Alco-GE	Alaska Railroad
*1069	1021	8002	69567--Alco-GE	Alaska Railroad
*1075	1011	8051	70672--Alco-GE	Alaska Railroad
*1077	1012	8043	70664--Alco-GE	Alaska Railroad

CLASS M-1-RE

1000	1000	None	71319--Alco-GE
1001	1001	None	71370--Alco-GE
*1014	1014	8045	70666--Alco-GE

CLASS M-1-RS

1010	1010	8047	70662--Alco-GE
1013	1013	8024	70665--Alco-GE
1015	1015	8035	70656--Alco-GE
1016	1016	8026	70617--Alco-GE
1017	1017	8664	72157--Alco-GE
1018	1018	8048	70669--Alco-GE
1026	1026	8042	70663--Alco-GE
1027	1027	8049	70670--Alco-GE
1028	1028	8019	70640--Alco-GE
1029	1029	8023	70641--Alco-GE
1030	1030	8020	70644--Alco-GE
1031	1031	8005	69424--Alco-GE
1032	1032	8024	70645--Alco-GE
1033	1033	8039	70660--Alco-GE
1034	1034	8011	69427--Alco-GE
1035	1035	8013	70642--Alco-GE
1036	1036	8650	72143--Alco-GE
1041	1041	8004	69570--Alco-GE
1042	1042	8006	69425--Alco-GE
1043	1043	8003	69568--Alco-GE

ARR No.

ARR No.

Shrouded By

CLASS M-4-CN

1300	1300	8664	71745--Ele. Wests
------	------	------	-------------------

CLASS DC-4-Sd

1201	1201	7003	2007--E. M.
1202	1202	7004	2001--E. M.
1203	1203	7001	1990--E. M.
1204	1204	7002	2012--E. M.

CLASS CD-4-SV

1100	1100	7157	7438--Porter
1101	1101	7155	7439--Porter
1102	1102	7033	7392--Porter
1103	1103	7031	7403--Porter
1104	1104	7024	7425--Porter
1105	1105	7187	7317--Porter
1107	1107	7186	7318--Porter

NOTE: Shrouded Units:  
Even Numbers--1 Unit  
Odd Numbers--1 Unit

- \*CONVERSION COMPLETED AND IN SERVICE  
\*OUT OF SERVICE FOR CONVERSION  
(UNTIL FURTHER NOTICE) LOCOMOTIVES 1030, 1041, 1042, AND 2043 ARE  
SINGLE-UNIT CONTROL.)  
1005--DAMAGED BY FIRE, ANCHORAGE SHOPS 1-15-51  
2-WHEEL TRUCKS WITH TAPER BEARINGS AUTHORIZED  
3-WHEEL TRUCKS WITH TAPER BEARINGS AND STREAMLINING AUTHORIZED  
LEASED FROM U. S. ARMY  
LEASED TO U. S. ARMY  
§STREAMLINING AUTHORIZED

Information compiled by Office of Dept. of Motive Power and Equipment of  
The Alaska Railroad.



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

COAL & OIL LOCOMOTIVE MILES PER YEAR

<u>Loco No.</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
310	9804	12602	15654	3723	794
311	13257	17041	8567	5405	357
312	5665	9238	10250	3156	1867
313	5261	8579	11394	1491	-
314	664	1083	114	-	-
315	7681	9874	10027	-	-
316	15389	19783	4887	952	-
317	11762	15120	7502	55	-
318	13196	16963	6913	-	7963
319	11669	15001	9655	8753	4447
320	8834	11356	9407	-	2947
401	23464	8940	24535	6833	32082
402	24377	4191	38176	21590	23248
403	19161	31248	37556	8656	-
404	25142	7135	24785	27883	27832
405	22789	7675	40389	22470	24942
406	-	-	12771	25292	13930
551	18134	23311	26697	16477	18512
552	21502	27641	25062	18896	24773
554	23652	30405	23669	16877	33742
555	13563	17435	20171	19017	25976
556	19328	24846	18037	27252	14262
557	19206	24689	18762	22584	30684
558	17266	22195	18942	23096	31058
559	21132	27165	26153	22614	26718
560	19997	25706	17926	21220	33432
561	16218	20848	25017	28357	34202
562	15972	20531	20973	19897	31271
701	12039	15475	24134	15706	19101
702	22936	29484	28699	19698	12887
703	25328	32559	25415	9073	11238
801	24684	31731	28417	14044	-
802	14911	19181	25364	10839	-
901	19704	25329	22714	6488	1760
902	21078	27095	23253	6883	13430
* 501	-	21223	-	-	-
* 502	-	27146	-	-	-
* 504	-	21621	-	-	-
* 505	-	25185	-	-	-

\* 500 Class later returned to 400 Class, mileage shown included 400 Class for the Year 1948

DIESEL

<u>Loco No.</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
1000	7415	38361	53598	34628	36645
1001	12100	62598	46449	24492	23188
1002	-	-	15030	26157	32752
1010	5847	30250	29007	29658	36198
1011	326	1684	-	-	-
1012	7938	41068	32943	-	-
1013	8931	46204	37002	35777	41683
1014	8517	44059	39849	33134	37564
1015	6583	34055	37014	23221	29276
1016	1455	7529	36939	27951	32856
1017	-	-	5705	28071	29496
1018	-	-	18136	33519	27243
1021	-	-	-	21120	21899
1026	-	-	35081	27535	30486
1027	2602	13461	39780	32277	29404
1028	-	-	-	13212	34725
1029	-	-	-	11311	38913
1030	-	-	-	9992	31255
1031	-	-	-	11965	33822
1032	-	-	-	-	32249
1033	-	-	-	-	26364
1034	-	-	-	-	24917
1035	-	-	-	-	18284
1036	-	-	-	-	12085
1038	-	-	-	-	126
1041	-	-	-	-	25216
1042	-	-	-	-	13681
1043	-	-	-	-	15836
1050	15898	82244	87798	47767	65364
1051	-	-	12458	45371	6049
1052	-	-	-	29954	56323
1054	-	-	-	27592	52355
1069	-	-	-	-	200
1070	-	-	-	54473	62504
1072	-	-	-	48902	70742
1074	-	-	-	36977	63004
1075	-	-	-	45898	5862
1076	-	-	-	41812	75273
1077	-	-	-	33555	5540
1078	-	-	126	52950	66020
1085	-	-	-	-	526
1089	-	-	-	-	22492
1100	1452	7514	13134	3803	-
1101	2292	11857	11913	9524	48
1102	1406	7276	597	20329	44
1103	3880	20070	1571	9386	-
1104	856	4426	7782	11521	144
1106	23	120	12380	8417	-
1107	1840	9518	21151	3024	1181
1201	6647	34387	41842	18454	21994
1202	4567	23626	28748	35921	24069
1203	5967	30869	22270	20370	28679
1204	3117	16124	16535	15052	17894
1300	-	-	4782	27108	38448

REPAIRS CHARGED TO LOCOMOTIVES PER YEAR

<u>Loco No.</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
23	3,156.54	-	-	-	-
272	283.44	-	-	-	-
301	1,133.34	175.78	-	-	-
310	4,355.55	6,291.31	12,090.71	7,067.11	6,611.50
311	11,224.96	13,879.70	14,550.33	5,670.37	1,277.96
312	729.48	4,234.76	5,338.57	11,498.19	1,408.32
313	2,229.97	3,207.94	6,813.47	6,308.72	497.74
314	1,403.15	8,064.86	1,142.90	8,861.58	-
315	5,659.68	4,995.65	3,894.81	2,423.99	809.51
316	1,895.06	3,020.23	5,807.29	1,990.48	25.00
317	6,392.61	9,608.30	8,836.01	2,087.44	193.53
318	5,921.53	4,800.05	6,975.58	8,387.21	1,755.65
319	2,774.05	6,533.36	6,474.77	3,486.97	4,349.05
320	4,683.76	4,967.49	12,210.89	1,404.25	6,066.06
401	16,830.45	16,827.18	21,477.16	74,092.51	22,818.08
402	12,784.92	19,191.86	22,330.12	20,885.62	22,851.58
403	16,806.70	19,013.33	24,584.55	32,063.58	2,375.26
404	8,344.11	19,495.21	34,154.68	20,326.46	20,937.10
405	35.49	9,242.43	19,870.47	14,370.30	15,733.52
406	-	-	10,264.87	12,463.96	12,500.70
551	12,368.39	10,719.09	19,288.26	13,706.40	32,775.35
552	11,674.04	20,657.86	13,079.96	14,874.04	19,038.50
554	13,372.26	12,096.31	21,680.44	22,096.12	20,224.84
555	12,883.72	19,433.11	12,810.84	9,149.35	20,791.98
556	13,935.16	13,591.53	20,239.46	14,999.66	22,553.93
557	12,289.61	12,775.33	15,511.91	13,261.45	20,049.04
558	9,521.95	18,485.87	10,552.25	23,269.10	22,203.07
559	11,463.96	14,081.69	12,144.10	12,898.11	23,011.42
560	5,928.12	15,329.19	10,387.47	10,207.38	20,422.21
561	-	8,962.62	14,021.15	13,389.10	21,480.29
562	-	8,116.48	20,599.14	12,504.86	25,194.08
601	1,588.85	-	-	-	-
605	1,549.25	-	-	-	-
610	2,994.26	-	-	-	-
620	4,573.06	-	-	-	-
701	24,425.26	57,775.74	35,580.39	11,540.50	11,925.42
702	31,120.68	22,981.17	17,943.39	14,210.89	18,494.32
703	32,740.16	22,690.09	26,134.04	33,432.00	11,785.74
801	22,765.25	28,525.57	26,939.66	6,025.54	1,321.73
802	24,095.54	36,026.98	29,744.12	21,033.75	6,971.02
901	25,263.23	24,430.41	22,268.83	13,746.42	18,493.40
902	17,094.60	19,118.52	40,400.48	10,196.81	17,006.25

<u>Loco No.</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
1000	7,152.00	42,300.40	29,173.67	27,040.07	29,752.24
1001	6,937.03	17,734.19	41,733.50	22,237.41	29,276.08
1002	-	-	8,361.50	15,191.77	13,560.61
1010	3,622.98	17,269.59	25,330.94	16,727.86	30,835.45
1011	5,880.06	4,468.01	4,572.03	7,720.65	-
1012	2,862.32	19,086.27	23,698.38	38,246.07	-
1013	2,307.26	15,213.52	20,758.64	11,670.30	28,112.24
1014	2,457.52	16,135.43	18,516.16	18,489.33	19,340.87
1015	-	6,507.10	16,223.51	20,153.51	23,048.39
1016	-	4,511.86	13,145.50	36,361.40	27,614.78
1017	-	-	-	11,311.88	17,885.05
1018	-	-	16,706.78	16,507.98	13,376.86
1021	-	-	-	5,722.83	21,548.35
1026	-	-	10,433.93	13,184.98	13,145.92
1027	-	4,183.39	18,023.26	13,148.93	30,785.49
1028	-	-	-	7,175.46	21,341.02
1029	-	-	-	5,757.56	20,355.45
1030	-	-	-	5,402.57	10,403.64
1031	-	-	-	2,811.42	9,932.94
1032	-	-	-	-	11,242.53
1033	-	-	-	-	7,734.31
1034	-	-	-	-	17,505.89
1035	-	-	-	-	4,664.66
1036	-	-	-	-	8,339.79
1041	-	-	-	-	9,967.81
1042	-	-	-	-	8,136.52
1043	-	-	-	-	7,330.25
1050	4,228.15	15,716.40	31,940.19	14,577.27	70,977.05
1051	2,044.74	15,538.71	31,993.48	17,114.12	79,691.69
1052	-	-	-	6,984.63	52,141.75
1054	-	-	-	6,859.18	35,255.04
1070	-	-	32.06	19,616.60	27,535.08
1072	-	-	-	16,790.92	31,132.01
1074	-	-	-	13,307.54	31,909.88
1075	-	-	-	20,284.20	37,227.65
1076	-	-	-	9,321.77	20,387.34
1077	-	-	-	9,059.16	28,504.77
1078	-	-	1,513.82	20,081.77	35,254.91
1089	-	-	-	7,674.54	14,925.89
1100	834.44	4,131.62	8,788.00	9,493.70	5,198.51
1101	804.46	5,251.40	4,393.23	6,616.48	1,220.50
1102	711.64	465.40	7,586.25	6,530.64	2,568.64
1103	374.56	9,200.88	6,403.76	14,776.50	11,676.39
1104	677.82	2,188.78	3,634.38	7,952.20	9,192.01
1106	523.13	3,077.62	7,516.32	8,332.32	481.00
1107	-	2,680.95	2,674.25	2,594.46	5,259.08
1201	1,198.00	5,586.05	7,810.74	8,362.49	15,296.72
1202	1,028.01	6,725.77	12,696.49	15,110.84	6,959.44
1203	421.82	6,072.13	7,334.38	7,350.50	15,905.63
1204	983.01	8,994.16	7,690.62	15,979.56	8,609.87
1300	-	-	1,484.48	9,593.39	13,035.74



## Accounting Department

1. Furnish Steam and Diesel unit operating costs (use Tables 2, 3 & 4).
2. Furnish depreciation base and rates of the following equipment to be retired by this Dieselization.

- (a) Locomotives (use Table 5)
- (b) Account 18 - Water Stations
- (c) Account 19 - Fuel Stations - Steam
- (d) Account 19 - Fuel Stations - Diesel
- (e) Account 20 - Shops & Enginehouses
- (f) Account 44 - Shop Machinery

BASE	RATE %
\$1,451,367.72	3.33%
\$ 310,317.69	3.77%
\$ 410,354.47	2.71%
\$ None	
\$ None	
\$ None	

3. Furnish selected annual operating expense for year 1951 (use Table 6).
4. Furnish Steam and Diesel locomotive miles and yard switching hours (use Tables 1 and 7).

## Engineering Department

1. Furnish track profile with grades and curves indicated. Horizontal scale not less than one inch equals two miles.
2. Furnish 8 $\frac{1}{2}$ " x 11" map of railroad.
3. Furnish copies of layout drawings of engine terminals and switching yards showing track layout with fuel and water servicing areas and enginehouses.
4. Fill in annual maintenance charges for year 1951.

## Account

231 Water Stations \$ 39,247.39

Not Broken Down. 233 Fuel Stations - ~~XXXXX~~ \$ 8,273.62 ~~XXXXXXXX~~ \$ \_\_\_\_\_

" " " 235 Shops & Enginehouses - ~~XXXXX~~ \$ 123,712.74 ~~XXXXXXXX~~ \$ \_\_\_\_\_

302 Shop Machinery \$ 68,023.03

## Stores Department

1. Fill in fuel costs on tender or locomotive:
  - (a) Coal per ton \$ 9.64
  - (b) Bunker "C" oil per gallon \$ .08
  - (c) Diesel fuel oil per gallon \$ .1346
2. Fill in cost of lubricating oil per gallon including handling \$ .94
3. Fill current selling price of Steam locomotive scrap per gross ton.
  - (a) On wheels \$ 14.85
  - (b) Cut up \$ 14.85

TABLE 1

ANNUAL HOURS AND DAILY ASSIGNMENTS  
 IN  
 YARD SWITCHING SERVICE

YEAR 1951

Location	Annual Hours Worked		Daily Assignments		Days Per Week	No. of Existing Locomotives		Locomotive Road Number
	Steam	Diesel	Start	End		Steam	Diesel	
NOT AVAILABLE	384					6		310-320
	8					1		701
		5012			NOT AVAILABLE		3	1000-1002
		18028					22	1010-1043
		8					1	1072
		32					2	1101-1104
		15991					4	1201-1204
		5748					1	1300

TABLE 2

## OPERATING COSTS PER LOCOMOTIVE MILE

## FREIGHT SERVICE

YEAR 195 1

<u>Item</u>	Steam Locomotive		Diesel Locomotive	
	<u>Through</u>	<u>Local</u>	<u>Through</u>	<u>Local</u>
Repairs	\$ .7955	\$ . -	\$ .5790	\$ . -
Fuel	.8077	-	.1752	-
Water				
Lubricants				
Other Supplies				
Enginehouse Expense				
	_____	_____	_____	_____
TOTAL	\$160.32	\$	\$75.42	\$

TABLE 3  
 OPERATING COSTS PER PASSENGER LOCOMOTIVE MILE  
 YEAR 1951

<u>Item</u>	Steam	Diesel	
Repairs	\$ . 8848	\$ . 5521	
Fuel	.5603	.1780	
Water			
Lubricants			
Other Supplies			
Enginehouse Expense			
	<u>144.51</u>	<u>73.01</u>	
TOTAL	\$	\$	

NOT AVAILABLE

TABLE 4  
 OPERATING COSTS  
 PER YARD SWITCHING LOCOMOTIVE HOUR  
 YEAR 195\_1

<u>Item</u>	<u>Steam</u>	<u>Diesel</u>
Repairs	\$ • 11.4866	\$ • 3.3065
Fuel	4.8915	.7873
Water		
Lubricants		
Other Supplies	<del>NOT AVAILABLE</del>	
Enginehouse Expense	<del>NOT AVAILABLE</del>	
	—————	—————
TOTAL	\$ 16.3781	\$ 4.0938

TABLE 5

## DETAILS OF LOCOMOTIVE EQUIPMENT

Locomotive Numbers	Steam or Diesel	Class of Service	Number of Locos.	Light Weight Loco. & Tender (Pounds)	Depreciation Base	Depreciation Rate
10-320	Steam	Switcher	10 (c)		116,031.82	3.33%
01-406	Steam	Freight	6 (c)		203,119.85	3.33%
51-562	Steam	Psgr. & Frt.	11 (c)		475,933.74	3.33%
01-703	Steam	Wrk Train	3 (c)		230,762.22	3.33%
a) 801-802	Steam	Wrk. Train	2 (c)		203,694.35	3.33%
01, (a) 902	Steam	Wrk. Train	2 (c)		221,825.74	3.33%
000-1001	Diesel	Psgr.	2 (c)		219,543.74	3.33%
010-1043	Diesel	Frt.	21	223,000	466,323.81	3.33%
050 (b)	Diesel	Psgr.	1	266,000	72,177.58	3.33%
052-1078 (b)	Diesel	Psgr.	7	237,900	757,551.30	3.33%
1051(b)	Diesel	Psgr.	1	271,000	71,726.68	3.33%
1053-1077(b)	Diesel	Psgr.	6 (c)		309,837.78	3.33%
000 -1107	Diesel	Switcher	7 (c)		66,555.62	3.33%
001-1204	Diesel	Switcher	4 (c)		46,010.66	3.33%
000	Diesel	Switcher	1	232,000	18,560.51	3.33%
Class of service shown is based on present operation						
(a) Out of service						
(b) Locomotives Class M-4-A, Class M-4-B, and Class M-4-Rs are equipped with 4-wheel trucks which in the case of some locomotives is contrary to photostats, showing 6-wheel trucks as prints were made prior to change-over. (See attached Locomotive Classifications & Numbers, Pages 1 & 2) & Locomotive Specifications Sheet. Difference in weights due to trucks shown on prints should be adjusted accordingly; comparative weights of trucks are:						
Complete 6-wheel truck including motors, wheels and axles equals -					53,250 lbs.	
Complete 4-wheel truck including motors, wheels and axles equals -					42,000 lbs.	
Difference in Weight per truck .....					11,250 lbs.	
(c) In some cases no light weights are available - loaded weights shown on attached prints.						
Attached you will find depreciation base and depreciation rates for each locomotive.						