

# Diagrams of steam & diesel locomotives used on the Rhodesia Railways and National Railways of Zimbabwe

## Notes to readers

The source documents for this file were held in the National Railways of Zimbabwe Drawing Office in Bulawayo. They were discovered, in March 1998, while I was helping with searching for a complete set of drawings of the 15<sup>th</sup> Class locomotives after No. 398 had been purchased by a private group in New Zealand for eventual export to that country.

The original documents were ink on linen tracings. These were photocopied (with permission), and slightly reduced in size to fit A4 size paper, while in the Drawing Office and the photocopies scanned when we were back in New Zealand.

The scanned files have been lightly “Photoshopped” to remove most of the artefacts resulting from the photocopying and scanning processes and to increase the contrast to make them more readable.

Most of the steam locomotive diagrams had a diagonal line drawn across them to indicate the class was no longer in use. These lines have all been removed to make the diagrams more readable. All other alterations, amendments or corrections done by hand on the original tracings have been left in place. The appearance of the diagrams in this file are, in many instances, better than the original tracings.

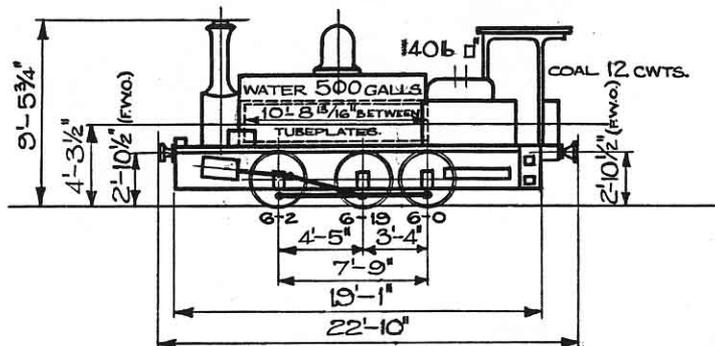
I do not believe that this is a complete set of diagrams covering the entire history of steam, diesel and electric traction on the Rhodesia Railways or National Railways of Zimbabwe (the 25kV locomotives used on the line south of Harare are notable by their absence). It is simply the collection of locomotive diagrams we came across while searching for other drawings.

Alan Bailey  
January 2011

# SMALL CLASS LOCOMOTIVE

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS **SMALL**  
BATCH **I**



BATCH	ORDER	NUMBERS
I		7

*Robinson 4/10/49*  
CME

### GENERAL PARTICULARS

SATURATED  
 TRACTIVE FORCE AT 75% B.W.P. : 7,100 LB.  
 FACTOR OF ADHESION AT 75% B.W.P. & F.W.O. : 5.94  
 MAXIMUM COUPLED AXLE LOAD, F.W.O. : 6 TONS. 10 CWT.  
 WEIGHT ON ALL COUPLED WHEELS, F.W.O. : 19 TONS. 1 CWT.  
 TOTAL WEIGHT OF ENGINE: (EMPTY):  
 " " " " : (F.W.O.) : 19 TONS. 1 CWT.  
 WEIGHT PER FOOT RUN OVER BUFFERS : 0.8345 TONS.  
 WATER CAPACITY : 500 GALLONS  
 COAL CAPACITY : 12 CWT.  
 RIGID WHEEL BASE : 7'-9"  
 NUMBER OF ENGINES: BATCH I—1. No. 7

### ENGINE

CYLINDERS: (2 OUTSIDE): 1 1/2" DIA. x 17" STROKE.  
 COUPLED WHEELS: 2'-9" DIA.  
 AXLE JOURNALS: COUPLED WHEELS: LEADING: 6 1/2" x 4 1/4" DIA.  
 " " " " : DRIVERS: 6 1/2" x 4 3/4" DIA.  
 " " " " : TRAILING: 6 1/2" x 4 1/2" DIA.  
 CONNECTING ROD CENTRES:  
 BRAKES:  
 BRAKE POWER:  
 INJECTORS:  
 VALVES: SLIDE  
 TYPE OF VALVE GEAR: STEPHENSON'S LINK MOTION.

### BOILER

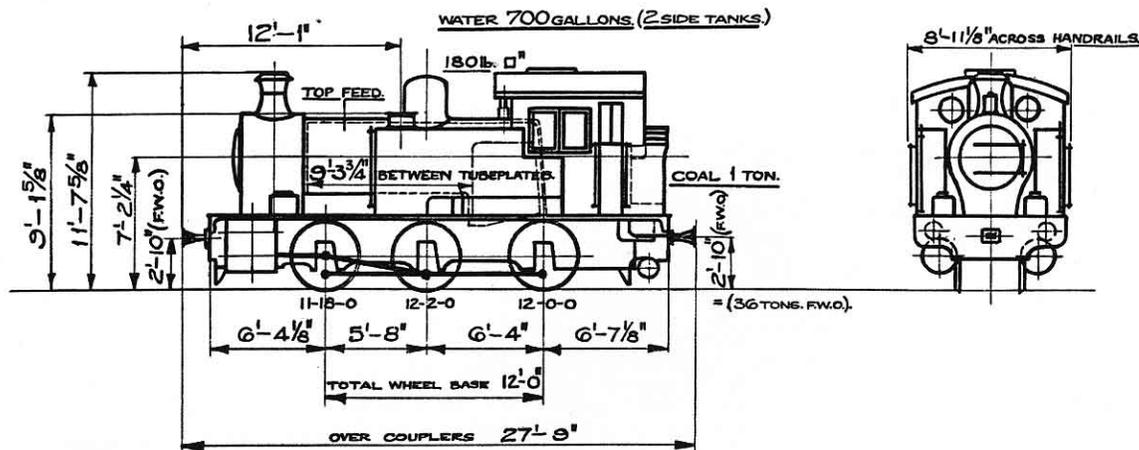
PRESSURE: 140 LB. PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 2'-6"  
 LENGTH BETWEEN TUBEPLATES: 10'-8 3/4"  
 GRATE INSIDE FOUNDATION RING: 2'-10 1/2" x 2'-0 1/4"  
 GRATE AREA: 5 SQ. FT.  
 HEATING SURFACES: TUBES : 315 SQ. FT.  
 " " : FIREBOX: 35 SQ. FT.  
 TOTAL EVAPORATION 350 SQ. FT.

I	1899	
BATCH	SERVICE ENTRY	COST PER ENGINE

D.T. POOLE (MAR. 1948)

# SMALL CLASS LOCOMOTIVE.

RHODESIA RAILWAYS. CLASS **SMALL**.  
3'-0" GAUGE. BATCH **I**.



BATCH NO.	ORDER	NUMBERS.
I		1 & 2.

*Not made 4/6/49*  
C.M.E.

## GENERAL PARTICULARS.

SATURATED.  
TRACTION FORCE AT 75% B.W.P. : 17785 LB.  
FACTOR OF ADHESION AT 75% B.W.P. & F.W.O. : 4.534.  
MAXIMUM COUPLED AXLE LOAD : 12 TONS. 2 CWTS.  
WEIGHT ON ALL COUPLED WHEELS : 36 TONS.  
TOTAL WEIGHT OF ENGINE: (EMPTY): 31 TONS. 5 CWTS.  
" " " " (F.W.O.): 36 TONS.  
WEIGHT PER FOOT RUN OVER BUFFERS : 1.297 TONS.  
WATER CAPACITY : (BOTH SIDE TANKS) : 700 GALLS.  
COAL CAPACITY : 1 TON.  
RIGID WHEEL BASE : 12 FT 0 INS.

NUMBER OF ENGINES: BATCH I—2. NOS: 1 & 2

## ENGINE

CYLINDERS: (2 OUTSIDE): 16" DIA. x 22" STROKE.  
COUPLED WHEELS: 3'-6 3/4" DIA.  
AXLE JOURNALS: 8" x 7" DIA.  
CONNECTING ROD CENTRES: 5'-8".  
BRAKES: VACUUM.  
BRAKE POWER: 23.817 TONS AT 60.11%  
INJECTORS: N° 9 GRESHAM'S.  
VALVES: PISTON. 8" DIA. 4 5/8" TRAVEL.  
TYPE OF VALVE GEAR: WALSCHAERTS.

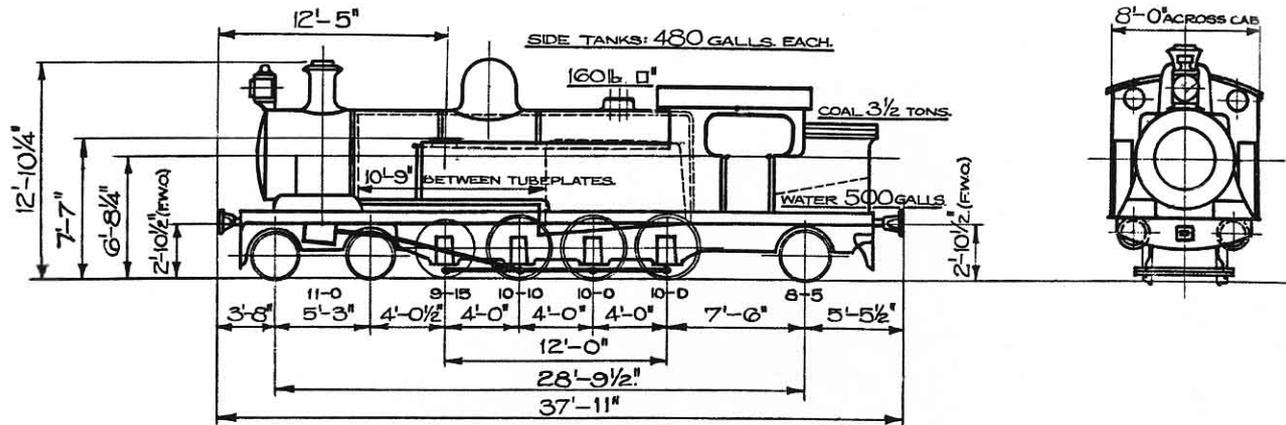
## BOILER.

PRESSURE: 180 LB PER SQ. INCH.  
SMALLEST OUTSIDE DIAMETER OF BARREL: 3'-8".  
LENGTH BETWEEN TUBEPLATES: 9'-3 3/4".  
GRATE INSIDE FOUNDATION RING: 3'-8" x 3'-8".  
GRATE AREA: 13.5 SQ. FT.  
HEATING SURFACES: BOILER TUBES: 557 SQ. FT.  
" " " " FIRE BOX: 50 SQ. FT.  
TOTAL EVAPORATION: 613 SQ. FT.

I	1929.	£ 3830
BATCH	SERVICE ENTRY.	COST PER ENGINE

# 6TH. CLASS LOCOMOTIVE.

CLASS **6**  
BATCH I & II



BATCH NO.	ORDER	NUMBERS
I		<del>18, 19</del>
II		18, 19 & 19.

*W. H. M. 4/6/49*  
CME

## GENERAL PARTICULARS

SATURATED.  
 TRACTIVE FORCE AT 75% BWP: 18660 LB  
 FACTOR OF ADHESION AT 75% BWP & F.W.Q.: 4.83.  
 MAXIMUM COUPLED AXLE LOAD, F.W.Q.: 10 TONS. 10 CWTs.  
 WEIGHT ON ALL COUPLED WHEELS: 40 TONS. 5 CWTs.  
 TOTAL WEIGHT OF ENGINE (EMPTY): 44 TONS. 14 CWTs.  
 " " " " (F.W.Q.): 59 TONS. 10 CWTs.  
 WEIGHT PER FOOT RUN OVER BUFFERS, F.W.Q.: 1.57 TONS.  
 WATER CAPACITY: SIDE TANKS: 960 GALLS. (TOTAL)  
 " " " " HIND TANK: 500 GALLS.  
 " " " " TOTAL: 1460 GALLS.  
 COAL CAPACITY: 3 1/2 TONS.  
 RIGID WHEEL BASE: 12'-0"  
 NUMBER OF ENGINES: BATCH I - ~~2~~ NOS. ~~18~~  
 : BATCH II - ~~2~~ NOS. 18, 19 & 19.

## ENGINE

CYLINDERS: (2 OUTSIDE): 17" DIA. x 23" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 3'-6 3/4" DIA.  
 TRAILING TRUCK: 2'-4 1/2" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 8 1/2" x 5" DIA.  
 " " " COUPLED WHEELS: 7 1/8" x 7" DIA.  
 " " " TRAILING TRUCK: 10" x 5" DIA.  
 CONNECTING ROD CENTRES: 6'-8"  
 BRAKES: STEAM ONLY.  
 BRAKE POWER: 23.51 TONS. AT 58.42%.  
 INJECTORS: N & S GRESHAM & CRAVEN.  
 VALVES: SLIDE. 3 3/4" TRAVEL.  
 TYPE OF VALVE GEAR: STEPHENSON'S LINK MOTION.

## BOILER

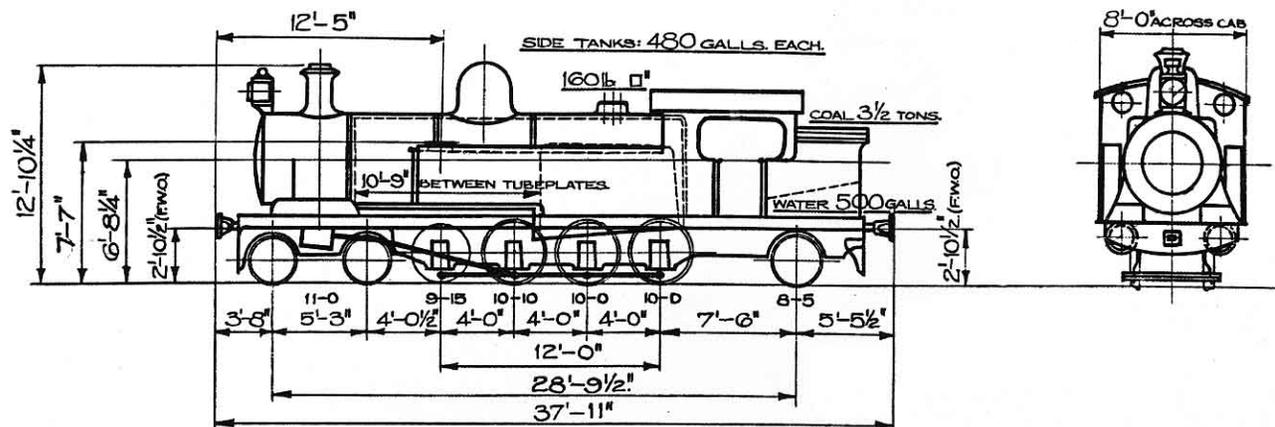
PRESSURE: 160 LB. PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 4'-5 1/8" DIA.  
 LENGTH BETWEEN TUBEPLATES: 10'-9"  
 GRATE INSIDE FOUNDATION RING: 7'-9 3/4" x 2'-2 1/2"  
 GRATE AREA: 17.5 SQ. FT.  
 HEATING SURFACES: TUBES: 976 SQ. FT.  
 " " " FIREBOX: 112 SQ. FT.  
 TOTAL EVAPORATION: 1088 SQ. FT.

I	205/02	£3830
II	1300-	
BATCH.	SERVICE ENTRY.	COST PER ENGINE.

D. POOLE. (MAR. 1949)

# 6TH. CLASS LOCOMOTIVE.

CLASS **6**  
BATCH I & II



BATCH NO.	ORDER	NUMBERS.
I		<del>8</del>
II		13, 14, & 19.

## GENERAL PARTICULARS

SATURATED.  
 TRACTIVE FORCE AT 75% BWP: 18660 LB.  
 FACTOR OF ADHESION AT 75% BWP & F.W.O.: 4.83.  
 MAXIMUM COUPLED AXLE LOAD. F.W.O.: 10 TONS. 10 CWTs.  
 WEIGHT ON ALL COUPLED WHEELS: 40 TONS. 5 CWTs.  
 TOTAL WEIGHT OF ENGINE (EMPTY): 44 TONS. 14 CWTs.  
 " " " " (F.W.O.): 59 TONS. 10 CWTs.  
 WEIGHT PER FOOT RUN OVER BUFFERS. F.W.O.: 1.57 TONS.  
 WATER CAPACITY: SIDE TANKS: 960 GALLS. (TOTAL)  
 " " : HIND TANK: 500 GALLS.  
 " " : TOTAL: 1460 GALLS.  
 COAL CAPACITY: 3 1/2 TONS.  
 RIGID WHEEL BASE: 12'-0"  
 NUMBER OF ENGINES: BATCH I - ~~1~~ NOS. ~~8~~  
 : BATCH II - ~~1~~ NOS. 13, 14, & 19.

## ENGINE

CYLINDERS: (2 OUTSIDE): 17" DIA. x 23" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 3'-6 3/4" DIA.  
 TRAILING TRUCK: 2'-4 1/2" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 8 1/2" x 5" DIA.  
 " " : COUPLED WHEELS: 7 7/8" x 7" DIA.  
 " " : TRAILING TRUCK: 10" x 5" DIA.  
 CONNECTING ROD CENTRES: 6'-9"  
 BRAKES: STEAM ONLY.  
 BRAKE POWER: 23.51 TONS. AT 58.42%.  
 INJECTORS: N° 9 GRESHAM & CRAVEN.  
 VALVES: SLIDE. 3 3/4" TRAVEL.  
 TYPE OF VALVE GEAR: STEPHENSON'S LINK MOTION.

## BOILER

PRESSURE: 160 LB. PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 4'-5 1/8" DIA.  
 LENGTH BETWEEN TUBEPLATES: 10'-9"  
 GRATE INSIDE FOUNDATION RING: 7'-9 3/4" x 2'-2 1/2"  
 GRATE AREA: 17.5 SQ. FT.  
 HEATING SURFACES: TUBES: 976 SQ. FT.  
 " " : FIREBOX: 112 SQ. FT.  
 TOTAL EVAPORATION: 1088 SQ. FT.

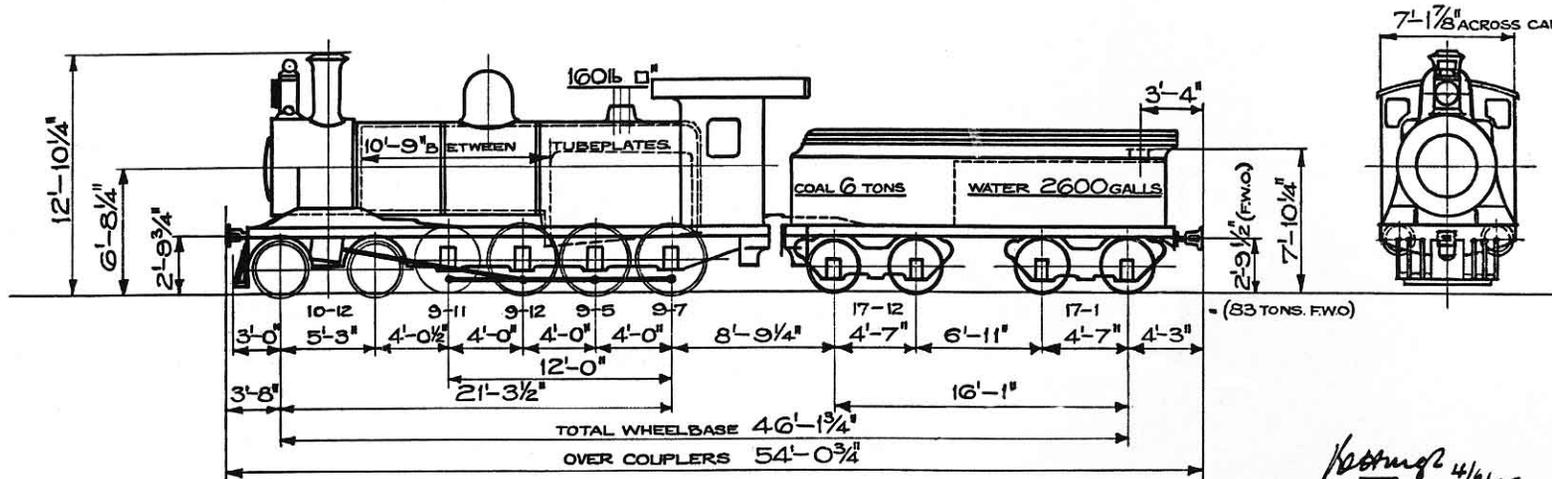
I	205/08.	£3830
II	1900.	
BATCH.	SERVICE ENTRY.	COST PER ENGINE.

D.T. POOLE. (MAR. 1949)

# 7TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS **7**  
BATCH I, II, & III



BATCH NO.	ORDER	NUMBERS.
I		72
II		25
III		SEE BELOW.

*Wattam 4/10/49*  
CME

## GENERAL PARTICULARS

SATURATED.  
 TRACTIVE FORCE AT 75% B.W.P. : 18,660 LB.  
 FACTOR OF ADHESION AT 75% B.W.P. & F.W.O. : 4.531.  
 MAXIMUM COUPLED AXLE LOAD. F.W.O. : 9 TONS. 12 C.W.T.S.  
 WEIGHT ON ALL COUPLED WHEELS : 37 TONS. 15 C.W.T.S.  
 TOTAL WEIGHT OF ENGINE: (EMPTY) : 43 TONS. 11 C.W.T.S.  
 " " " " (F.W.O.) : 48 TONS. 7 C.W.T.S.  
 " " " " TENDER: (EMPTY) : 18 TONS. 1 C.W.T.  
 " " " " (F.W.O.) : 34 TONS. 13 C.W.T.S.  
 " " " " ENG. & TEN: (EMPTY) : 61 TONS. 12 C.W.T.S.  
 " " " " " (F.W.O.) : 83 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS : 1.536 TONS.  
 WATER CAPACITY : 2,600 GALLS.  
 COAL CAPACITY : 6 TONS.  
 RIGID WHEEL BASE : 12 FT. 0 INS.  
 NUMBER OF ENGINES: BATCH I - 22 NOS. ~~22~~  
 " " " " " BATCH II - 25 NOS. ~~25~~  
 " " " " " BATCH III - 31 NOS. ~~31~~, 43, & 49

## ENGINE

CYLINDERS: (2 OUTSIDE): 17" DIA. X 23" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 3'-6 3/4" DIA.  
 TENDER BOGIE WHEELS: 2'-10" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 8 1/2 x 5" DIA.  
 " " " " COUPLED WHEELS: 7 7/8 x 7" DIA.  
 " " " " TENDER BOGIE WHEELS: 7 7/8 x 4" DIA.  
 CONNECTING ROD CENTRES: 6'-9"  
 BRAKES: STEAM & VACUUM.  
 BRAKE POWER: (COMBINED): 31.39 TONS AT 43.35%.  
 INJECTORS: N<sup>o</sup> 9 GRESHAM & CRAVEN.  
 VALVES: SLIDE. TRAVEL 3 3/4".  
 TYPE OF VALVE GEAR: STEPHENSON'S LINK MOTION.

## BOILER.

PRESSURE: 160 LB./SQ."  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 4'-5 1/8" DIA.  
 LENGTH BETWEEN TUBEPLATES: 10'-9"  
 GRATE INSIDE FOUNDATION RING: 7'-9 3/4" x 2'-2 1/2"  
 GRATE AREA: 17.5 SQ. FT.  
 HEATING SURFACES: TUBES: 976 SQ. FT.  
 " " " " FIREBOX: 112 SQ. FT.  
 TOTAL EVAPORATION: 1088 SQ. FT.

II	1904/5	£ 2700
I	<del>1901</del>	£ 2407 6
I	<del>1901</del>	£ 2075
BATCH	SERVICE ENTRY.	COST PER ENGINE.

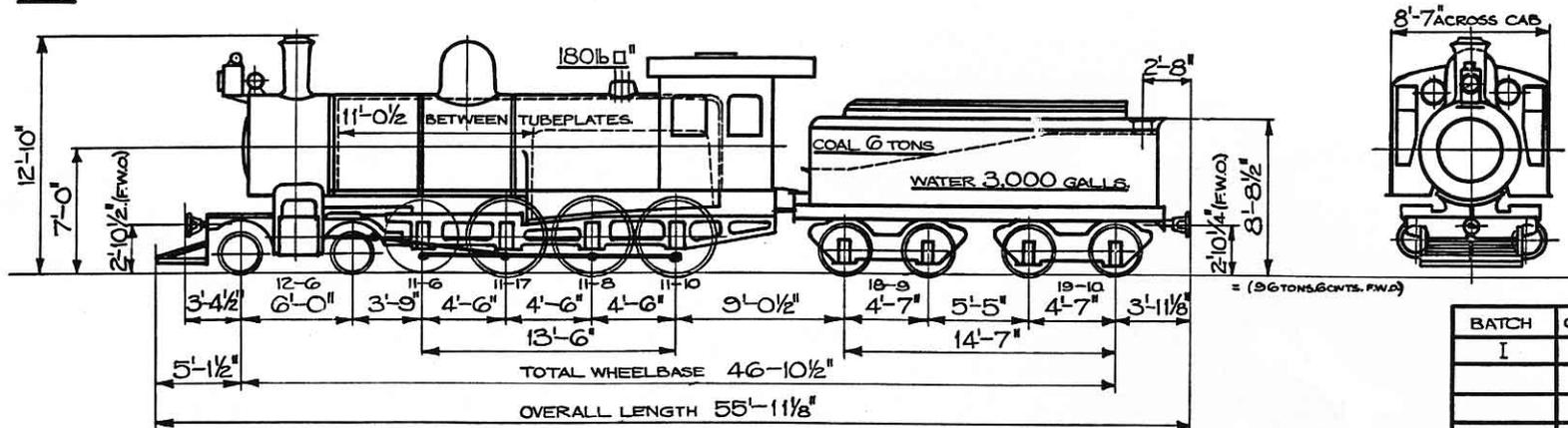
D.T. POOLE (MAR. 1949)

# 8TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS 8  
BATCH I

*through 4/6/49*  
CME



BATCH	ORDER	NUMBERS.
I		60.

GENERAL PARTICULARS	ENGINE	BOILER						
<p>SATURATED.</p> <p>TRACTIVE FORCE AT 75% BWP: 24,370 LB</p> <p>FACTOR OF ADHESION AT 75% BWP &amp; FWO: 4.28.</p> <p>MAXIMUM COUPLED AXLE LOAD. FWO: 11 TONS 8 CWT.</p> <p>WEIGHT ON ALL COUPLED WHEELS. FWO: 46 TONS 11 CWT.</p> <p>TOTAL WEIGHT OF ENGINE: (EMPTY): 52 TONS 9 CWT.</p> <p style="padding-left: 20px;">: (FWO): 58 TONS 7 CWT.</p> <p style="padding-left: 20px;">TENDER: (EMPTY): 18 TONS 2 CWT.</p> <p style="padding-left: 20px;">: (FWO): 37 TONS 19 CWT.</p> <p style="padding-left: 20px;">ENG. &amp; TEN: (EMPTY): 70 TONS 11 CWT.</p> <p style="padding-left: 20px;">: (FWO): 96 TONS 6 CWT.</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS: 1.722 TONS</p> <p>WATER CAPACITY: 3,000 GALLS.</p> <p>COAL CAPACITY: 6 TONS.</p> <p>RIGID WHEEL BASE: 13'-6"</p> <p>NUMBER OF ENGINES: BATCH I—1. NOS. 60.</p>	<p>CYLINDERS: 19" DIA. x 24" STROKE</p> <p>BOGIE WHEELS: 2'-4 1/2" DIA.</p> <p>COUPLED WHEELS: 4'-0" DIA.</p> <p>TENDER BOGIE WHEELS: 2'-10" DIA.</p> <p>AXLE JOURNALS: BOGIE WHEELS: 8 3/8" x 5 3/4" DIA.</p> <p style="padding-left: 20px;">: COUPLED WHEELS: DRIVERS: 8 3/8" x 7 1/2" DIA.</p> <p style="padding-left: 20px;">: OTHERS: 8 3/8" x 7" DIA.</p> <p style="padding-left: 20px;">: TENDER BOGIE WHEELS: 10 1/16" x 5 1/4" DIA.</p> <p>CONNECTING ROD CENTRES: 7'-2"</p> <p>BRAKES: VACUUM &amp; STEAM.</p> <p>BRAKE POWER: (COMBINED): 36.02 TONS AT 42.62%.</p> <p>INJECTORS: No 9 GRESHAM'S.</p> <p>VALVES: SLIDE 4 5/8" TRAVEL</p> <p>TYPE OF VALVE GEAR: STEPHEN'S LINK MOTION.</p>	<p>PRESSURE: 180 LB PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIAMETER OF BARREL: 5'-1 1/4"</p> <p>LENGTH BETWEEN TUBE PLATES: 11'-0 1/2"</p> <p>GRATE INSIDE FOUNDATION RING: 8'-10 9/16" x 2'-4 3/4"</p> <p>GRATE AREA: 21.35 SQ. FT.</p> <p>HEATING SURFACES: FLUE TUBES: } 1184 SQ. FT.</p> <p style="padding-left: 20px;">: BOILER TUBES: }</p> <p style="padding-left: 20px;">: WATER TUBES: } NONE</p> <p style="padding-left: 20px;">: FIREBOX: } 130 SQ. FT.</p> <p>TOTAL EVAPORATION: 1314 SQ. FT.</p>						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">I</td> <td style="width: 33%;">1904.</td> <td style="width: 33%;"> </td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE.</td> </tr> </table>	I	1904.		BATCH	SERVICE ENTRY	COST PER ENGINE.
I	1904.							
BATCH	SERVICE ENTRY	COST PER ENGINE.						

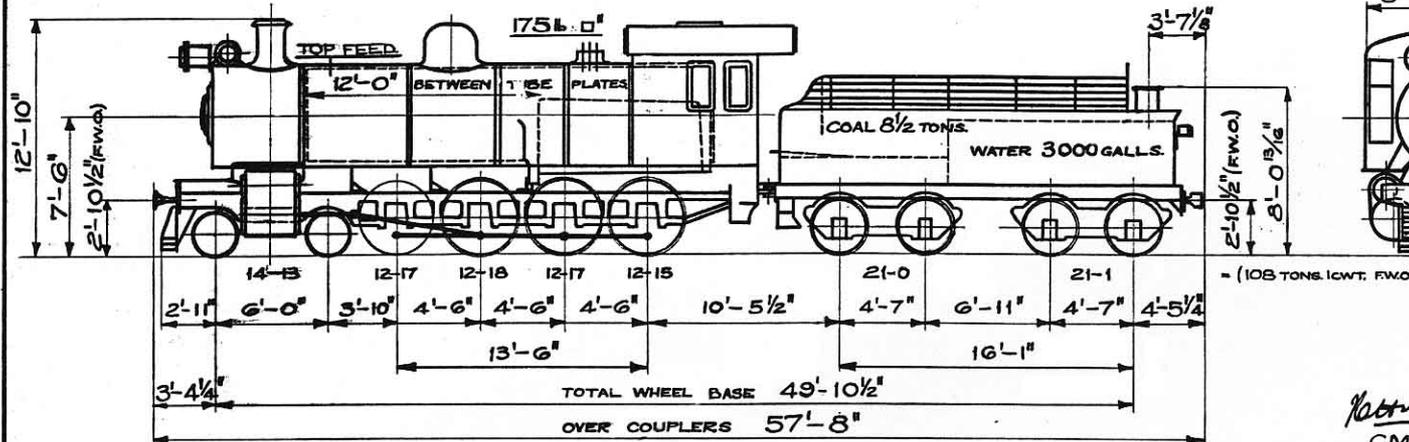
D. POOLE. (APRIL '49.)

# 9TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.  
3'-6" GAUGE.

CLASS **9**  
BATCH I, II, & III

SOLD.



*W. H. ... 4/10/49*  
C.M.E.

BATCH NO.	ORDER	NUMBERS.
I		SEE BELOW.
II		107 & 109.
III		112.

## GENERAL PARTICULARS.

SUPERHEATED.  
 TRACTIVE FORCE AT 85% B.W.P. : 29750 LB.  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 3.866.  
 MAXIMUM COUPLED AXLE LOAD : 12 TONS, 18 CWTs. (F.W.O.)  
 WEIGHT ON ALL COUPLED WHEELS. F.W.O. : 51 TONS 7 CWTs.  
 TOTAL WEIGHT OF ENGINES (EMPTY) : 60 TONS, 3 CWTs.  
 " " " " (F.W.O.) : 66 TONS.  
 " " " " TENDER (EMPTY) : 20 TONS, 4 CWTs.  
 " " " " (F.W.O.) : 42 TONS, 1 CWTs.  
 " " " " ENG. & TEN. (EMPTY) : 80 TONS, 7 CWTs.  
 " " " " " (F.W.O.) : 108 TONS, 1 CWTs.  
 WEIGHT PER FOOT RUN OVER BUFFERS : 1.873 TONS.  
 WATER CAPACITY : 3,000 GALLONS.  
 COAL CAPACITY : 8 1/2 TONS.  
 RIGID WHEEL BASE : 13 FT. 6 INS.  
 NUMBER OF ENGINES : BATCH I — 2 NOS. 919394 & 936  
 BATCH II — 21 NOS. 107 & 109.  
 BATCH III — 1 NOS. 112.

## ENGINE.

CYLINDERS (2 OUTSIDE) : 20" DIA. x 24" STROKE.  
 BOGIE WHEELS : 2'-4 1/2" DIA.  
 COUPLED WHEELS : 4'-0" DIA.  
 TENDER BOGIE WHEELS : 2'-10" DIA.  
 AXLE JOURNALS : BOGIE WHEELS : 10" x 5 3/4" DIA.  
 " " : COUPLED WHEELS : DRIVER : 9 3/8" x 8" DIA.  
 " " : " " : OTHERS : 9 3/8" x 7 1/2" DIA.  
 " " : TENDER BOGIE WHEELS : 9 7/8" x 5 1/4" DIA.  
 CONNECTING ROD CENTRES : 7'-1"  
 BRAKES : VACUUM & STEAM.  
 BRAKE POWER : (COMBINED) : 35.32 TONS AT 37.72%  
 INJECTORS : N<sup>o</sup> 9 DAVIES & METCALFE.  
 & N<sup>o</sup> 9 GRESHAM & CRAVEN.  
 VALVES : PISTON 4 5/8" TRAVEL. 8 3/4" DIA. 8 3/4"  
 TYPE OF VALVE GEAR : WALSCHAERTS.

## BOILER.

PRESSURE : 175 LB PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL : 5'-1 3/8" DIA.  
 LENGTH BETWEEN TUBE PLATES : 12'-0"  
 GRATE INSIDE FOUNDATION RING : 4'-5 1/2" x 9'-1 1/4".  
 GRATE AREA : 31.2 SQ. FT.  
 HEATING SURFACES : FLUE TUBES : } 1119 SQ. FT.  
 " " : BOILER TUBES : }  
 " " : FIREBOX : } 1237 SQ. FT.  
 TOTAL EVAPORATION : 1242.7 SQ. FT.  
 SUPERHEATER : 338 SQ. FT.  
 TOTAL : 15807 SQ. FT.

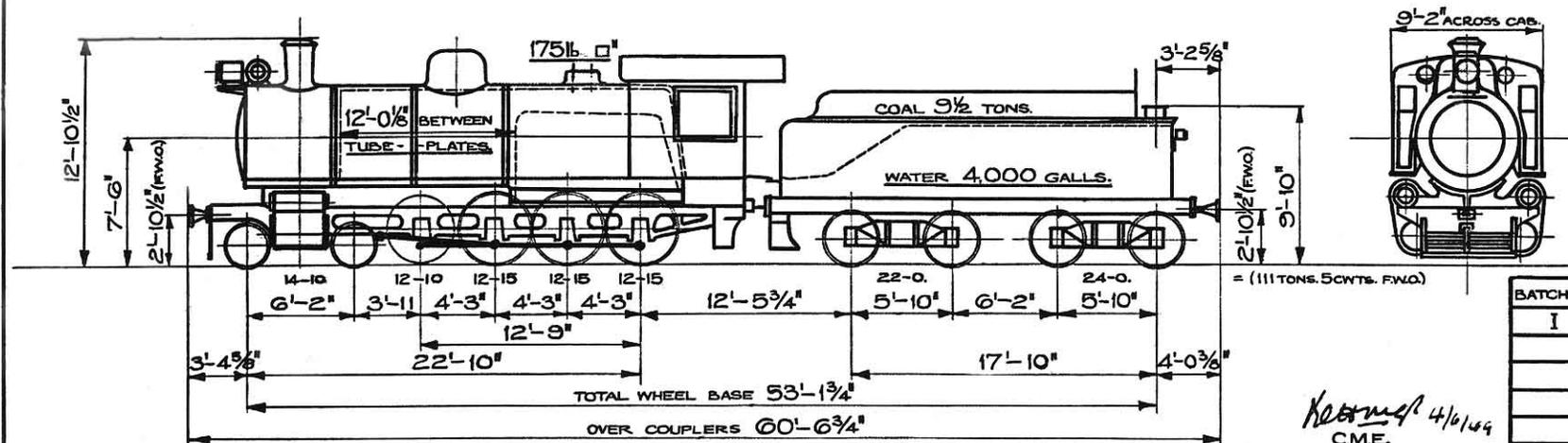
II	1917	£5844
I	1915	£6044
I	1912	£91 £3141 E96 £4947
BATCH	SERVICE ENTRY	

D.T. POOLE (MARCH 1949)

# 9A. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.  
3'-0" GAUGE.

CLASS **9A.**  
BATCH **I.**



BATCH NO.	ORDER	NUMBERS.
I		SEE BELOW.

## GENERAL PARTICULARS.

SUPERHEATED:  
 TRACTIVE FORCE AT 85% B.W.P. : 29,750 Lb  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 3.82.  
 MAXIMUM COUPLED AXLE LOAD, F.W.O. : 12 TONS. 15 CWTs.  
 WEIGHT ON ALL COUPLED WHEELS : 50 TONS. 15 CWTs.  
 TOTAL WEIGHT OF ENGINE: (EMPTY) : 59 TONS 5 CWTs.  
 " " " " : (F.W.O.) : 65 TONS 5 CWTs.  
 " " " " TENDER: (EMPTY) : 18 TONS 13 CWTs.  
 " " " " : (F.W.O.) : 46 TONS.  
 " " " " ENG. & TEN: (EMPTY) : 77 TONS 18 CWTs.  
 " " " " " : (F.W.O.) : 111 TONS 5 CWTs.  
 WEIGHT PER FOOT RUN OVERS BUFFERS : 1.837 TONS.  
 WATER CAPACITY : 4,000 GALLS.  
 COAL CAPACITY : 9 1/2 TONS.  
 RIGID WHEEL BASE : 12'-9".  
 NUMBER OF ENGINES : BATCH I—4. Nos: 117, 119, 120 & 122.

## ENGINE

CYLINDERS : (2 OUTSIDE) : 20" DIA. X 24" STROKE.  
 BOGIE WHEELS : 2'-4 1/2" DIA.  
 COUPLED WHEELS : 4'-0" DIA.  
 TENDER BOGIE WHEELS : 2'-10" DIA.  
 AXLE JOURNALS : BOGIE WHEELS : 10" X 5 3/4" DIA.  
 " " : COUPLED WHEELS : DRIVER : 9" X 8 1/2" DIA.  
 " " : " " : OTHERS : 9" X 8" DIA.  
 " " : TENDER BOGIE WHEELS : 9 3/4" X 5 1/4" DIA.  
 CONNECTING ROD CENTRES : 6'-10"  
 BRAKES VACUUM & STEAM.  
 BRAKE POWER (COMBINED) : 44.574 TONS AT 46.08%.  
 INJECTORS : No 9 GRESHAM & CRAVEN.  
 VALVES : PISTON 11" DIA. 5 1/2" TRAVEL.  
 TYPE OF VALVE GEAR : WALSCHAERTS.

## BOILER.

PRESSURE : 175 LB PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL : 5'-2 1/16".  
 LENGTH BETWEEN TUBEPLATES : 12'-0 1/8".  
 GRATE INSIDE FOUNDATION RING : 4'-6" X 9'-5 15/16".  
 GRATE AREA : 32.25 SQ. FT.  
 HEATING SURFACES: FLUE TUBES : } 1162 SQ. FT.  
 " " : BOILER TUBES : }  
 " " : WATER TUBES : NONE  
 " " : FIREBOX : 123 SQ. FT.  
 TOTAL EVAPORATION : 1285 SQ. FT.  
 SUPERHEATER : 264 SQ. FT.  
 TOTAL : 1549 SQ. FT.

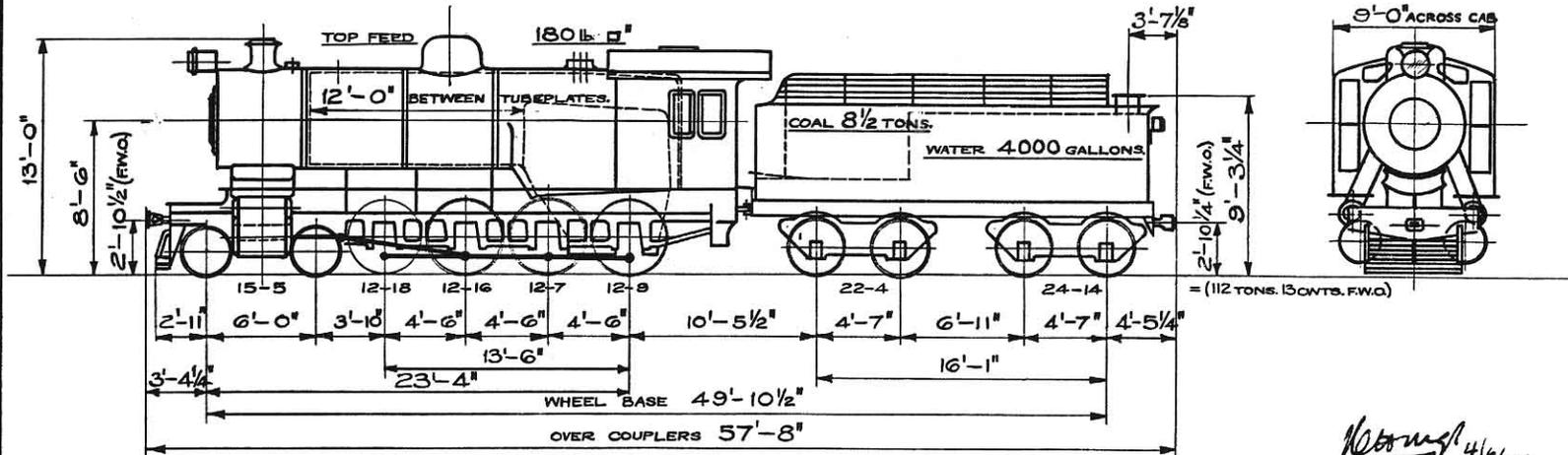
I	1917	£8067
BATCH	SERVICE ENTRY.	COST PER ENGINE.

D.T. POOLE (MARCH 1942)

# 9B. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.  
3'-0" GAUGE.

CLASS **9B.**  
BATCH I



BATCH N <sup>o</sup>	ORDER	NUMBERS.
I		SEE BELOW.

*Not used 4/6/49*  
C.M.E.

D.T. POOLE (JAN. 1949)

GENERAL PARTICULARS	ENGINE.	BOILER.														
<p>SUPERHEATED.</p> <p>TRACTIVE FORCE AT 85% BWP : 30,600 LB.</p> <p>FACTOR OF ADHESION AT 85% BWP &amp; F.W.O. : 3.699.</p> <p>MAXIMUM COUPLED AXLE LOAD. F.W.O. : 12 TONS. 18 CWTs.</p> <p>WEIGHT ON ALL COUPLED WHEELS 50 TONS. 10 CWTs.</p> <p>TOTAL WEIGHT OF ENGINE : (EMPTY) : 59 TONS. 15 CWTs.</p> <p>" " " " (F.W.O.) : 65 TONS. 15 CWTs.</p> <p>" " " " TENDER (EMPTY) : 20 TONS. 11 CWTs.</p> <p>" " " " (F.W.O.) : 46 TONS. 18 CWTs.</p> <p>" " " " ENG. &amp; TEN. (EMPTY) : 80 TONS. 6 CWTs.</p> <p>" " " " (F.W.O.) : 112 TONS. 13 CWTs.</p> <p>WEIGHT PER FOOT RUN OVER-BUFFERS : 1.953 TONS.</p> <p>WATER CAPACITY : 4,000 GALLS.</p> <p>COAL CAPACITY : 8 1/2 TONS.</p> <p>RIGID WHEEL BASE : 13 FT. 6 INS. 23 25 23 93, 94.</p> <p>NUMBER OF ENGINES : BATCH NO. I - 22 NOS. 80-84, 86-90, 92, 95, 97, 105, 106, 108, 107, 110, 111, 113, 116.</p>	<p>CYLINDERS. (2 OUTSIDE) : 20" DIA. X 24" STROKE.</p> <p>BOGIE WHEELS : 2'-4 1/2" DIA.</p> <p>COUPLED WHEELS : 4'-0" DIA.</p> <p>TENDER BOGIE WHEELS : 2'-10" DIA.</p> <p>AXLE JOURNALS : BOGIE WHEELS : 10" X 5 3/4" DIA.</p> <p>" " : COUPLED WHEELS : DRIVERS : 9 3/16" X 8" DIA.</p> <p>" " : " " : OTHERS : 9 3/16" X 7 1/2" DIA.</p> <p>" " : TENDER BOGIE WHEELS : 9 7/8" X 5 1/4" DIA.</p> <p>CONNECTING ROD CENTRES : 7'-1"</p> <p>BRAKES : VACUUM &amp; STEAM.</p> <p>BRAKE POWER : (COMBINED) : 36.01 TONS AT 36.97%.</p> <p>INJECTORS : N<sup>o</sup> 9 DAVIES &amp; METCALFE &amp; N<sup>o</sup> 9 GRESHAM &amp; CRAVEN.</p> <p>VALVES : PISTON 8 3/8" DIA. 4 5/8" TRAVEL.</p> <p>TYPE OF VALVE GEAR : WALSCHAERTS.</p>	<p>PRESSURE : 180 LB PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIAMETER OF BARREL : 5'-1 3/8" DIA.</p> <p>LENGTH BETWEEN TUBEPLATES : 12'-0"</p> <p>GRATE INSIDE FOUNDATION RING : 4'-5 1/2" X 8'-2" (APPROX.)</p> <p>GRATE AREA : 36.42 SQ. FT.</p> <p>HEATING SURFACES : FLUE TUBES : 395.7 SQ. FT.</p> <p>" " : BOILER TUBES : 783.4 SQ. FT.</p> <p>" " : WATER TUBES : 19.1 SQ. FT.</p> <p>" " : FIREBOX : 147.8 SQ. FT.</p> <p>TOTAL EVAPORATION : 1346 SQ. FT.</p> <p>SUPERHEATER : 408.62 SQ. FT.</p> <p>TOTAL : 1754.62 SQ. FT.</p> <table border="1"> <tr> <td>E 81-84, 86-89, 97, 108, 113-115</td> <td>£ 5815</td> </tr> <tr> <td>E 92, 95, 105, 110, 111, 116</td> <td>£ 8722</td> </tr> <tr> <td>E 93, 94, 106, 107</td> <td>£ 11,277</td> </tr> </table> <table border="1"> <tr> <td>I</td> <td>1912, 1915, &amp; 1917</td> <td>E 60890</td> <td>£ 3141</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td colspan="2">COST PER ENGINE</td> </tr> </table>	E 81-84, 86-89, 97, 108, 113-115	£ 5815	E 92, 95, 105, 110, 111, 116	£ 8722	E 93, 94, 106, 107	£ 11,277	I	1912, 1915, & 1917	E 60890	£ 3141	BATCH	SERVICE ENTRY.	COST PER ENGINE	
E 81-84, 86-89, 97, 108, 113-115	£ 5815															
E 92, 95, 105, 110, 111, 116	£ 8722															
E 93, 94, 106, 107	£ 11,277															
I	1912, 1915, & 1917	E 60890	£ 3141													
BATCH	SERVICE ENTRY.	COST PER ENGINE														

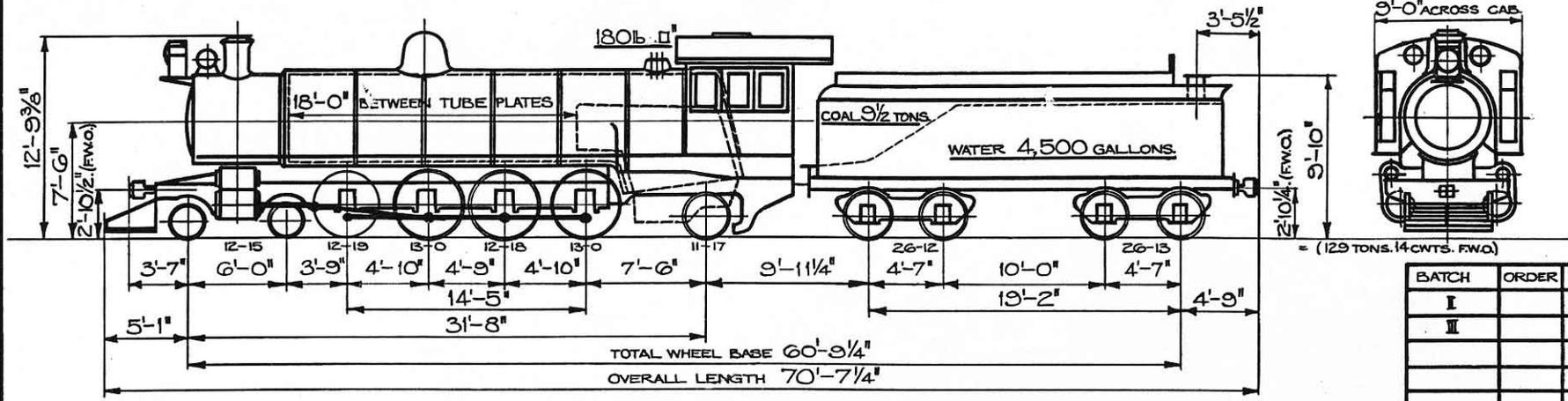
# 10 TH. CLASS LOCOMOTIVE

RHODESIA RAILWAYS.  
3'-6" GAUGE.

CLASS 10  
BATCH I & II

*W. H. H. 4/1/49*  
C.M.E.

SCRAPPED



BATCH	ORDER	NUMBERS.
I		154-158.
II		159

GENERAL PARTICULARS.	ENGINE.	BOILER.									
SUPERHEATED. TRACTIVE FORCE AT 85% BWP : 29,466 LB. FACTOR OF ADHESION AT 85% BWP & F.W.O. : 3.944 MAXIMUM COUPLED AXLE LOAD F.W.O. : 13 TONS WEIGHT ON ALL COUPLED WHEELS. F.W.O. : 51 TONS. 17 CWTs. TOTAL WEIGHT OF ENGINE: (EMPTY): 68 TONS. 9 CWTs. " " " " : (F.W.O.): 76 TONS. 9 CWTs. " " " " TENDER: (EMPTY): 23 TONS. 16 CWTs. " " " " : (F.W.O.): 53 TONS. 5 CWTs. " " " " ENG. & TEN: (EMPTY): 92 TONS. 5 CWTs. " " " " : (F.W.O.): 129 TONS. 14 CWTs. WEIGHT PER FOOT RUN OVER BUFFERS: 1.877 TONS. WATER CAPACITY : 4,500 GALLS COAL CAPACITY : 9 1/2 TONS. RIGID WHEEL BASE: 14'-5". NUMBER OF ENGINES: BATCH II-5. NOS: 154-158 " " " " : BATCH III-1. NOS: 159.	CYLINDERS : 20" DIA x 26" STROKE BOGIE WHEELS : 2'-4 1/2" DIA. COUPLED WHEELS : 4'-6" DIA. TRAILING TRUCK WHEELS : 2'-9" DIA. TENDER BOGIE WHEELS : 2'-10" DIA. AXLE JOURNALS : BOGIE WHEELS : 9 3/8" x 5 3/4" DIA. " " " " : COUPLED WHEELS : DRIVERS : 9 1/16" x 8" DIA. " " " " : " " " " : OTHERS : 9 1/16" x 7 1/2" DIA. " " " " : TRAILING TRUCK : 12" x 6 1/2" DIA. " " " " : TENDER BOGIE WHEELS : 10 1/16" x 5 1/4" DIA. CONNECTING ROD CENTRES : 7'-1". BRAKES : VACUUM & STEAM. BRAKE POWER : (COMBINED) : 34.26 TONS AT 32.55% INJECTORS : No 9, GRESHAM & CRAVEN. VALVES : PISTON 8 3/8" DIA. 4 7/8" TRAVEL. TYPE OF VALVE GEAR : WALSCHAERTS.	PRESSURE : 180 LB. PER SQ. INCH. SMALLEST DIAMETER OF BARREL : 5'-0" LENGTH BETWEEN TUBE PLATES : 18'-0" GRATE INSIDE FOUNDATION RING : 6'-9 3/8" x 4'-9" GRATE AREA : 32 SQ. FT. HEATING SURFACES : FLUE TUBES : 451 SQ. FT. " " " " : BOILER TUBES : 923 SQ. FT. " " " " : WATER TUBES : NONE. " " " " : FIREBOX : 153 SQ. FT. TOTAL EVAPORATION : 1527 SQ. FT. SUPERHEATER : 488 SQ. FT. TOTAL : 2015 SQ. FT.									
		<table border="1"> <tr> <td>II</td> <td>1924.</td> <td></td> </tr> <tr> <td>I</td> <td>1922.</td> <td></td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE.</td> </tr> </table>	II	1924.		I	1922.		BATCH	SERVICE ENTRY	COST PER ENGINE.
II	1924.										
I	1922.										
BATCH	SERVICE ENTRY	COST PER ENGINE.									

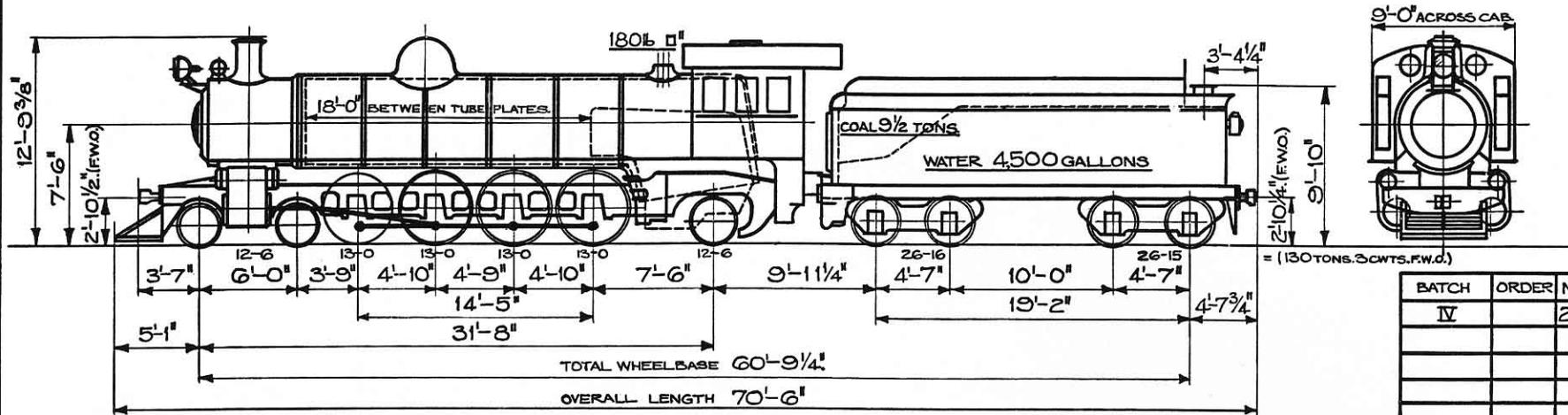
D. POOLE (APRIL '49)

# 10TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.  
3'-6" GAUGE.

CLASS **10**  
BATCH **IV**.

*Detmud 4/6/49*  
CME



BATCH	ORDER	NUMBERS
IV		242-246

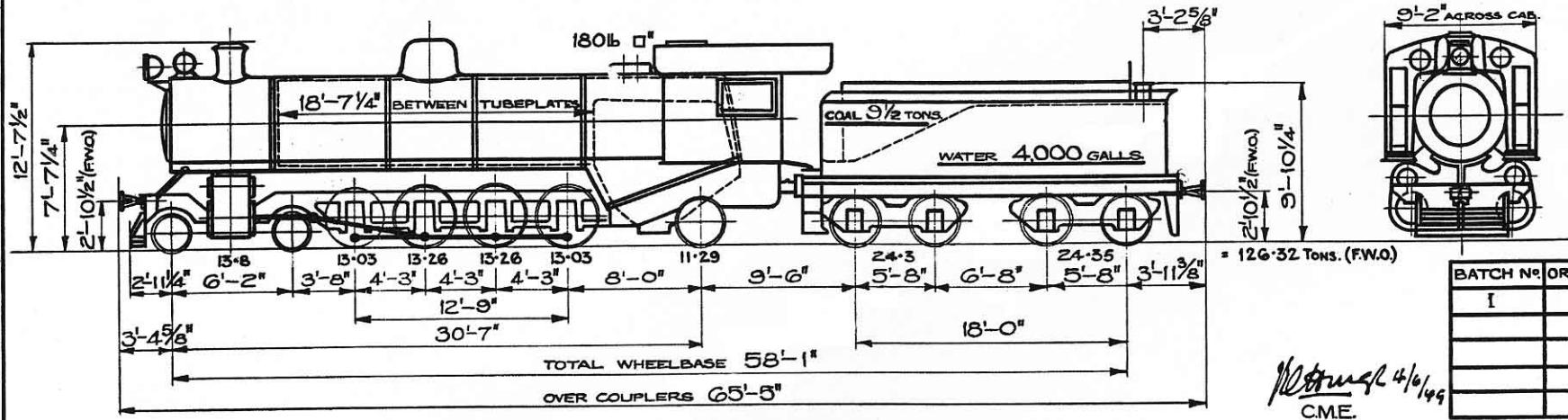
GENERAL PARTICULARS.	ENGINE.	BOILER.						
<p>SUPERHEATED:                      TRACTIVE FORCE AT 85% B.W.P. : 29,466 LB.                      FACTOR OF ADHESION AT 85% B.W.P. &amp; F.W.O. : 3.954.                      MAXIMUM COUPLED AXLE LOAD: 13 TONS.                      WEIGHT ON ALL COUPLED WHEELS: 52 TONS.                      TOTAL WEIGHT OF ENGINE:(EMPTY): 68 TONS. 9 CWTS.                      " " " " : (F.W.O.): 76 TONS. 12 CWTS.                      " " " TENDER:(EMPTY): 24 TONS.                      " " " : (F.W.O.): 53 TONS. 11 CWTS.                      " " " ENG. &amp; TEN:(EMPTY): 92 TONS. 9 CWTS.                      " " " " " " : (F.W.O.): 130 TONS. 3 CWTS.                      WEIGHT PER FOOT RUN OVER BUFFERS: 1.886 TONS.                      WATER CAPACITY: 4,500 GALLONS.                      COAL CAPACITY: 9 1/2 TONS.                      RIGID WHEEL BASE: 14'-5"                      NUMBER OF ENGINES: BATCH IV-5. NOS: 242-246.</p>	<p>CYLINDERS : 20" DIA. x 26" STROKE.                      BOGIE WHEELS: 2'-4 1/2" DIA.                      COUPLED WHEELS: 4'-6" DIA.                      TRAILING TRUCK WHEELS: 2'-9" DIA.                      TENDER BOGIE WHEELS: 2'-10" DIA.                      AXLE JOURNALS: BOGIE WHEELS: 9 3/8" x 5 3/4" DIA.                      " " : COUPLED WHEELS: DRIVERS: 9 1/16" x 8" DIA.                      " " : " " : OTHERS: 5 7/8" x 7 1/2" DIA.                      " " : TRAILING TRUCK: 12" x 6 1/2" DIA.                      " " : TENDER BOGIE WHEELS: 10 1/16" x 5 1/4" DIA.                      CONNECTING ROD CENTRES: 7'-1"                      BRAKES: VACUUM &amp; STEAM.                      BRAKE POWER : (COMBINED): 34.26 TONS AT 32.5%                      INJECTORS: N° 9 GRESHAM &amp; CRAVEN.                      VALVES: PISTON 10" DIA. 4 7/8" TRAVEL.                      TYPE OF VALVE GEAR: WALSCHAERTS.</p>	<p>PRESSURE: 180 LB PER SQ. INCH.                      SMALLEST DIAMETER OF BARREL: 5'-0"                      LENGTH BETWEEN TUBE PLATES: 18'-0"                      GRATE INSIDE FOUNDATION RING: 6'-9 3/16" x 4'-9"                      GRATE AREA: 32 SQ. FT.                      HEATING SURFACES: FLUE TUBES: 451 SQ. FT.                      " " : BOILER TUBES: 923 SQ. FT.                      " " : FIREBOX. (INCL. TUBES): 173 SQ. FT.                      TOTAL EVAPORATION: 1547 SQ. FT.                      SUPERHEATER: 488 SQ. FT.                      TOTAL: 2035 SQ. FT.</p>						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">IV</td> <td style="width: 25%; text-align: center;">1930</td> <td style="width: 50%; text-align: center;">£8655</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td>COST PER ENGINE.</td> </tr> </table>	IV	1930	£8655	BATCH	SERVICE ENTRY.	COST PER ENGINE.
IV	1930	£8655						
BATCH	SERVICE ENTRY.	COST PER ENGINE.						

D.T. POOLE. (APRIL '49)

# 11TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.  
3'-6" GAUGE.

CLASS **11.**  
BATCH **I.**



BATCH NO.	ORDER.	NUMBERS.
I		SEE BELOW

## GENERAL PARTICULARS.

SUPERHEATED.

TRACTIVE FORCE AT 85% B.W.P. ~~37,026 LB.~~ 34,952 LB.

FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. ~~3.48~~ 3.37

MAXIMUM COUPLED AXLE LOAD. F.W.O.: 13.26 TONS.

WEIGHT ON ALL COUPLED WHEELS. F.W.O.: 52.58 TONS.

TOTAL WEIGHT OF ENGINE: (EMPTY): 67.65 TONS.

" " " " (F.W.O.): 77.67 TONS.

" " " TENDER (EMPTY): 21.3 TONS.

" " " (F.W.O.): 48.65 TONS.

" " " ENG & TEN (EMPTY): 88.95 TONS.

" " " (F.W.O.): 126.32 TONS.

WEIGHT PER FOOT, RUN OVER BUFFERS: 1.931 TONS.

WATER CAPACITY: 4,000 GALLS.

COAL CAPACITY: 9 1/2 TONS.

RIGID WHEEL BASE: 12'-9"

NUMBER OF ENGINES: BATCH 1-17 NOS: 123-128  
130-140

SCRAPPED 1977 127 Museum

## ENGINE.

CYLINDERS: (2 OUTSIDE): 22" DIA. X 24" STROKE. X 2 1/8" DIA.

BOGIE WHEELS: 2'-4 1/2" DIA.

COUPLED WHEELS: 4'-0" DIA.

TRAILING TRUCK WHEELS: 2'-9" DIA.

TENDER BOGIE WHEELS: 2'-10" DIA.

AXLE JOURNALS: BOGIE WHEELS: 10" X 5 3/4" DIA.

" " : COUPLED WHEELS: DRIVER: 9" X 8 3/4" DIA.

" " : " : OTHERS: 9" X 8" DIA.

" " : TRAILING TRUCK: 12" X 6" DIA.

" " : TENDER BOGIE WHEELS: 9 3/4" X 5 1/4" DIA.

CONNECTING ROD CENTRES: 6'-11."

BRAKES: STEAM & VACUUM. 44.848 TONS AT 44.32%.

BRAKE POWER: (COMBINED):

INJECTORS: N<sup>o</sup> 9 DAVIES & METCALFE.  
& N<sup>o</sup> 9 GRESHAM & CRAVEN.

VALVES: PISTON 6" TRAVEL. 11" DIA.

TYPE OF VALVE GEAR: WALSCHAERTS.

## BOILER.

PRESSURE: 180 LB. PER SQ. INCH.

SMALLEST OUTSIDE DIAMETER OF BARREL: 5'-6 1/16" DIA.

LENGTH BETWEEN TUBEPLATES: 18'-7 1/4"

GRATE INSIDE FOUNDATION RING: 6'-10 1/2" X 5'-2 3/4"

GRATE AREA: 35.2 SQ. FT.

HEATING SURFACES: BOILER TUBES: 1415 SQ. FT.

" " : FLUE TUBES: 695 SQ. FT.

" " : WATER TUBES: 16 SQ. FT.

" " : FIREBOX: 137 SQ. FT.

TOTAL EVAPORATION: 2263 SQ. FT.

SUPERHEATER: 582 SQ. FT.

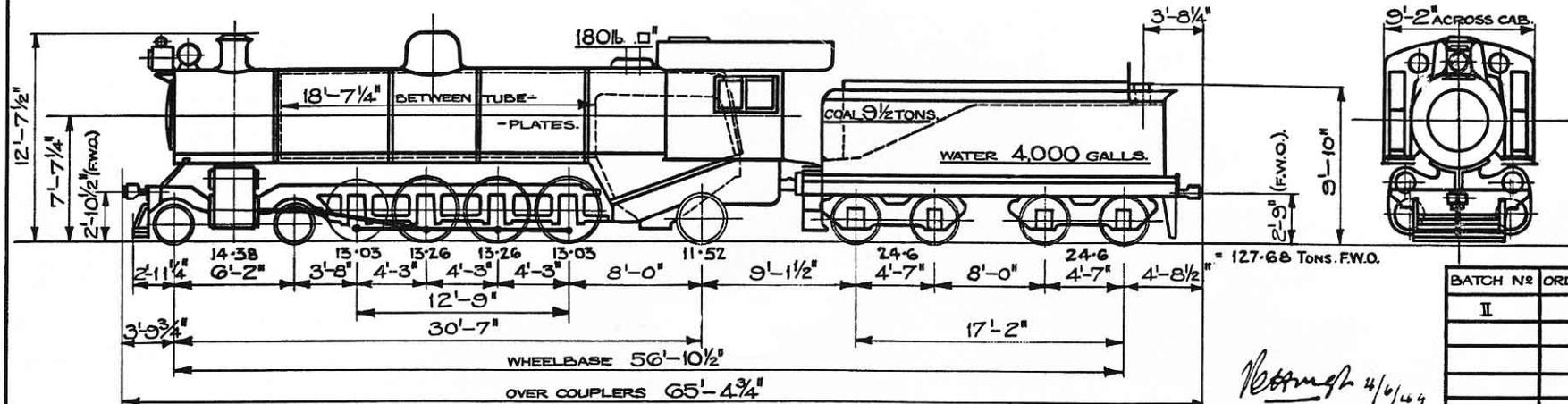
TOTAL: 2845 SQ. FT.

I	1918/19.	£15440
BATCH	SERVICE ENTRY.	COST PER ENGINE.

# 11TH CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS **II**  
BATCH **II**



BATCH NO.	ORDER	NUMBERS.
II		141-152.

**GENERAL PARTICULARS.**

SUPERHEATED:  
 TRACTIVE FORCE AT 85% B.W.P. : ~~37,020 LB~~ 34,952 LB  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : ~~5.18~~ 3.37  
 MAXIMUM COUPLED AXLE LOAD : 13.26 TONS.  
 WEIGHT ON ALL COUPLED WHEELS . 52.58 TONS  
 TOTAL WEIGHT OF ENGINE:(EMPTY): 69.7 TONS.  
 " " " " (F.W.O.): 78.48 TONS.  
 " " " " TENDER:(EMPTY): 21.7 TONS.  
 " " " " (F.W.O.): 49.2 TONS.  
 " " " " ENG & TEN:(EMPTY): 91.4 TONS  
 " " " " " (F.W.O.): 127.68 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS : 1.953 TONS.  
 WATER CAPACITY : 4,000 GALLONS.  
 COAL CAPACITY : 9 1/2 TONS.  
 RIGID WHEEL BASE : 12 FT. 9 INS.  
 NUMBER OF ENGINES: BATCH I—12 NOS. 141-152.  
 145, 146, 149, 150, 151, 152 SOLD TO C.M.

**ENGINE**

CYLINDERS (2 OUTSIDE): 22" DIA. x 24" STROKE. x 21 3/8" DIA.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 4'-0" DIA.  
 TRAILING TRUCK WHEELS: 2'-9" DIA.  
 TENDER BOGIE WHEELS: 2'-10" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 10" x 5 3/4" DIA.  
 " " " COUPLED WHEELS: DRIVER: 9" x 8 3/4" DIA.  
 " " " OTHERS: 9" x 8" DIA.  
 " " " TRAILING TRUCK: 12" x 6" DIA.  
 " " " TENDER BOGIE WHEELS: 10" x 5 1/4" DIA.  
 CONNECTING ROD CENTRES: 6'-11"  
 BRAKES: STEAM & VACUUM.  
 BRAKE POWER:(COMBINED): 43.645 TONS AT 42.9%.  
 INJECTORS: N° 9 DAVIES & METCALFE.  
 & N° 9 GRESHAM & CRAVEN.  
 VALVES: PISTON. 6" TRAVEL. 11" DIA.  
 TYPE OF VALVE GEAR: WALSCHAERTS.

**BOILER.**

PRESSURE: 180 LB PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 5'-6 1/16" DIA.  
 LENGTH BETWEEN TUBEPLATES: 18'-7 1/4"  
 GRATE INSIDE FOUNDATION RING: 6'-10 1/2" x 5'-2 3/4"  
 GRATE AREA: 35.2 SQ. FT.  
 HEATING SURFACES: BOILER TUBES: 1415 SQ. FT.  
 " " " FLUE TUBES : 695 SQ. FT.  
 " " " WATER TUBES: 16 SQ. FT.  
 " " " FIREBOX: 137 SQ. FT.  
 TOTAL EVAPORATION : 2263 SQ. FT.  
 SUPERHEATER: 582 SQ. FT.  
 TOTAL : 2845 SQ. FT.

I	1921	£ 19,539
BATCH	SERVICE ENTRY	COST PER ENGINE

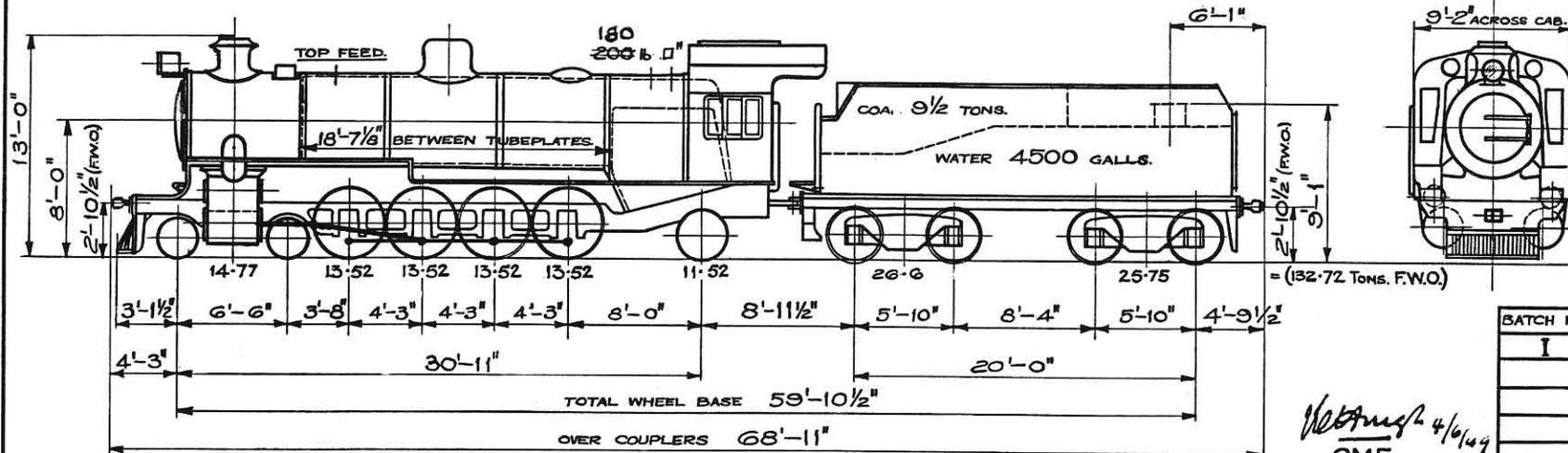
DIPPOLE (MAR. 1949)

# IIA CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS IIA.  
BATCH I.

SOLD.



BATCH N <sup>o</sup>	ORDER	NUMBERS.
I	89	304-315

*W. J. ... 4/6/49*  
C.M.E.

D. POOLE (MARCH 1948)

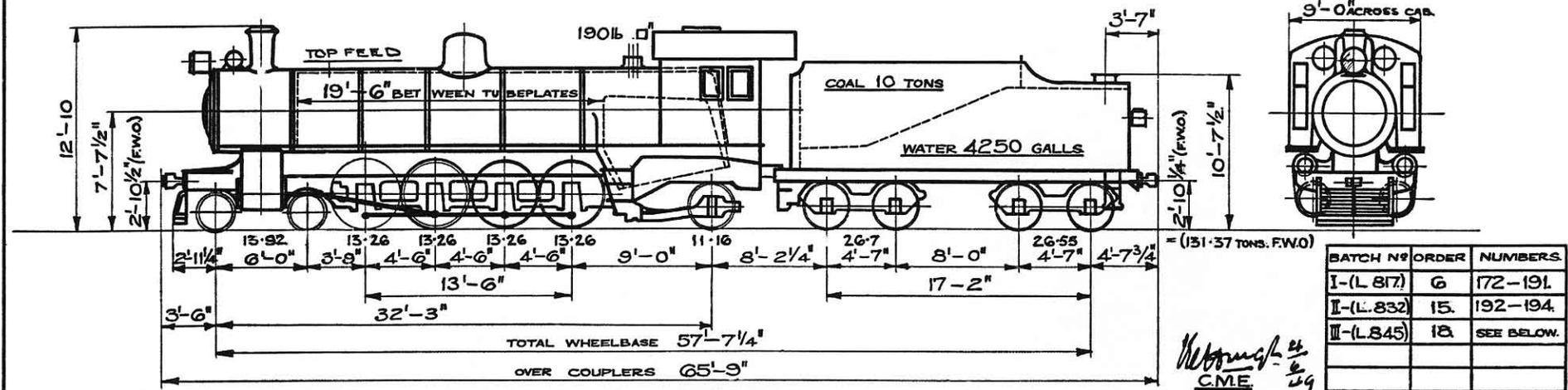
GENERAL PARTICULARS.	ENGINE.	180 BOILER.
SUPERHEATED <b>33,737</b>	CYLINDERS: (2 OUTSIDE): 21" DIA. x 24" STROKE.	PRESSURE: <del>200</del> LB. PER SQ. INCH.
TRACTIVE FORCE AT 85% B.W.P.: <b>37,485 LB 3.59</b>	BOGIE WHEELS: 2'-4 1/2" DIA.	SMALLEST OUTSIDE DIAMETER OF BARREL: 5'-6"
FACTOR OF ADHESION AT 85% B.W.P. & F.W.O.: <b>3-232</b>	COUPLED WHEELS: 4'-0" DIA.	LENGTH BETWEEN TUBEPLATES: 18'-7 1/8"
MAXIMUM COUPLED AXLE LOAD: F.W.O.: 13.52 TONS.	TRAILING TRUCK: 2'-9" DIA.	GRATE INSIDE FOUNDATION RING: 6'-10 27/32" x 5'-3 1/4"
WEIGHT ON ALL COUPLED WHEELS: F.W.O.: 54.08 TONS.	TENDER BOGIE WHEELS: 2'-10" DIA.	GRATE AREA: 36.38 SQ. FT.
TOTAL WEIGHT OF ENGINE: (EMPTY): 71.86 TONS.	AXLE JOURNALS: BOGIE WHEELS: 9 1/2" x 5 3/4" DIA.	THERMIC SYPHONS.
"  "  "  "  " (F.W.O.): 80.37 TONS.	"  "  "  "  " COUPLED WHEELS: DRIVER: 9" x 8 1/2" DIA.	HEATING SURFACES: FLUE TUBES: 696 SQ. FT.
"  "  "  "  " TENDER (EMPTY): 23.25 TONS.	"  "  "  "  " : OTHERS: 9" x 8" DIA.	"  "  "  "  " BOILER TUBES: 1,414 SQ. FT.
"  "  "  "  " (F.W.O.): 52.35 TONS.	"  "  "  "  " : TRAILING TRUCK: 11 1/4" x 6" DIA.	"  "  "  "  " FIREBOX: 138 SQ. FT.
"  "  "  "  " ENG. & TEN. (EMPTY): 95.11 TONS.	"  "  "  "  " : TENDER BOGIE WHEELS: 9 3/4" x 5 1/2" DIA.	"  "  "  "  " SYPHONS: 48 SQ. FT.
"  "  "  "  " (F.W.O.): 132.72 TONS.	CONNECTING ROD CENTRES: 6'-11"	TOTAL EVAPORATION: 2,296 SQ. FT.
WEIGHT PER FOOT RUN OVER BUFFERS: 1,926 TONS.	BRAKES: VACUUM & STEAM.	SUPERHEATER: 589 SQ. FT.
WATER CAPACITY: 4,500 GALLONS.	BRAKE POWER: (COMBINED): 47.386 TONS AT 4.52%	TOTAL: 2,885 SQ. FT.
COAL CAPACITY: 9 1/2 TONS.	INJECTORS: 10 1/2 MM SELLERS, GRESHAM & CRAVEN, N <sup>o</sup> 9	
RIGID WHEEL BASE: 12 FT. 9 INS.	VALVES: PISTON 10" DIA. 6" TRAVEL.	
NUMBER OF ENGINES: BATCH I - 12 NOS. 304-315	TYPE OF VALVE GEAR: WALSCHAERTS.	

I	1948	
BATCH	SERVICE ENTRY.	COST PER ENGINE.

# 12TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS 12  
BATCH I, II, & III.



BATCH NO	ORDER	NUMBERS.
I-(L.817)	6	172-191.
II-(L.832)	15	192-194.
III-(L.845)	18	SEE BELOW.

*W. J. ...*  
C.M.E.

D.T. POOLE (FEB. 1948)

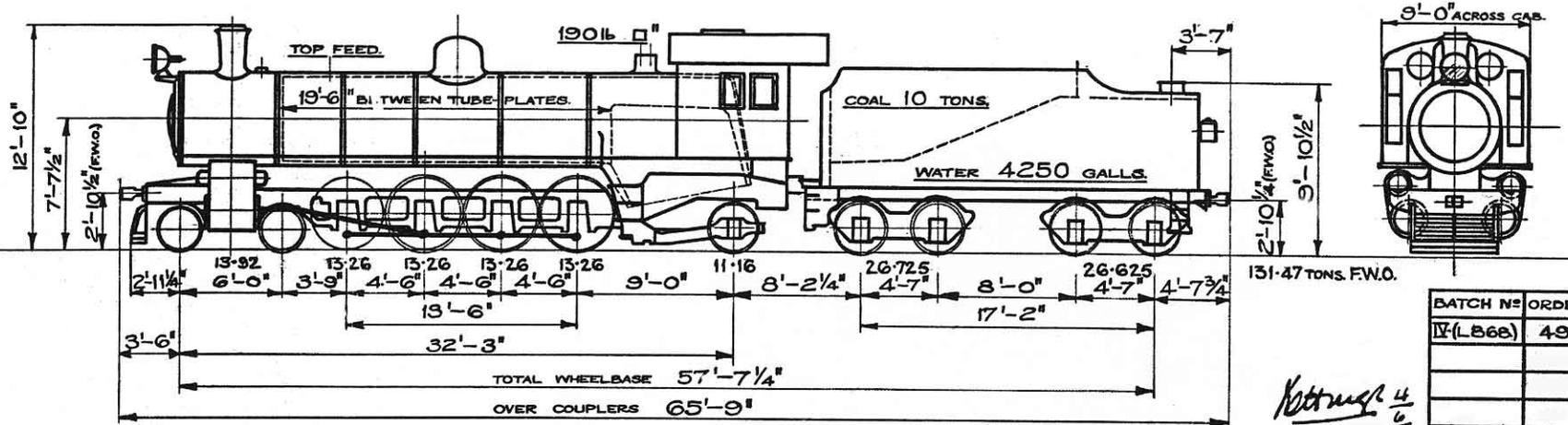
GENERAL PARTICULARS.	ENGINE	BOILER.
SUPERHEATER.	CYLINDERS: (2 OUTSIDE): 20" DIA. x 26" STROKE.	PRESSURE: 190 LB PER SQ. INCH.
TRACTIVE FORCE AT 85% B.W.P.: 32940 LB.	BOGIE WHEELS: 2'-4 1/2" DIA.	SMALLEST OUTSIDE DIAMETER OF BARREL: 5'-3" DIA.
FACTOR OF ADHESION AT 85% B.W.P. & F.W.O.: 3.607	COUPLED WHEELS: 4'-3" DIA.	LENGTH BETWEEN TUBEPLATES: 19'-6"
MAXIMUM COUPLED AXLE LOAD: F.W.O.: 13.26 TONS.	TRAILING TRUCK WHEELS: 2'-9" DIA.	GRATE INSIDE FOUNDATION RING: 6'-8 3/4" x 4'-10 15/16"
WEIGHT ON ALL COUPLED WHEELS: 53.04 TONS.	TENDER BOGIE WHEELS: 2'-10" DIA.	GRATE AREA: 32.5 SQ. FT.
TOTAL WEIGHT OF ENGINE: (EMPTY): 69.4 TONS	AXLE JOURNALS: BOGIE WHEELS: 9 1/2" x 5 3/4" DIA.	HEATING SURFACES: FLUE TUBES: 603.7 SQ. FT.
" " " " (F.W.O.): 78.12 TONS.	" " : COUPLED WHEELS: DRIVERS: 9" x 8 1/2" DIA.	" " : BOILER TUBES: 1263.3 SQ. FT.
" " " TENDER: (EMPTY): 24.32 TONS.	" " : " " : OTHERS: 9" x 8" DIA.	" " : WATER TUBES: 20 SQ. FT.
" " " (F.W.O.): 53.25 TONS.	" " : TRAILING TRUCK: 12" x 6" DIA.	" " : FIREBOX: 130 SQ. FT.
" " " ENG. & TEN. (EMPTY): 93.72 TONS.	" " : TENDER BOGIE WHEELS: 10 1/16" x 5 1/4" DIA.	TOTAL EVAPORATION: 2017 SQ. FT.
" " " (F.W.O.): 131.37 TONS.	CONNECTING ROD CENTRES: 7'-0"	SUPERHEATER: 362 SQ. FT.
WEIGHT PER FOOT RUN OVER BUFFERS: 1.983 TONS.	BRAKES: VACUUM & STEAM.	TOTAL: 2379 SQ. FT.
WATER CAPACITY: 4250 GALLONS.	BRAKE POWER: (COMBINED): 41.67 TONS AT 39.21%	
COAL CAPACITY: 10 TONS.	INJECTORS: N <sup>o</sup> 9 GRESHAM & CRAVEN.	
RIGID WHEEL BASE: 13 FT. 6 INS.	VALVES: PISTON 10" DIA. 5 15/16" TRAVEL.	
NUMBER OF ENGINES: BATCH I—20 Nos. 172-191	TYPE OF VALVE GEAR: WALSCHAERTS.	
" BATCH II—3 Nos. 192-194.		
" BATCH III— <del>18</del> 16 Nos. 195-197, 199-211.		

BATCH	SERVICE ENTRY.	COST PER ENGINE.
III	1928	£ 6196
I	1927	£ 6236
I	1926	£ 8972

# 12TH. CLASS LOCOMOTIVE

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS 12  
BATCH IV.



BATCH N <sup>o</sup>	ORDER	NUMBERS
IV(L868)	49	247-258

*Kotrus* 4/6/49  
CME

## GENERAL PARTICULARS.

SUPERHEATED.  
 TRACTIVE FORCE AT 85% B.W.P. : 32940 LB.  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 3.007.  
 MAXIMUM COUPLED AXLE LOAD : 13.26 TONS.  
 WEIGHT ON ALL COUPLED WHEELS : 53.04 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY) : 69.5 TONS.  
 " " " " (F.W.O.) : 78.12 TONS.  
 " " " " TENDER (EMPTY) : 24.45 TONS.  
 " " " " (F.W.O.) : 53.35 TONS.  
 " " " " ENG. & TENDER (EMPTY) : 93.95 TONS.  
 " " " " (F.W.O.) : 131.47 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS : 2 TONS.  
 WATER CAPACITY : 4250 GALLONS.  
 COAL CAPACITY : 10 TONS.  
 RIGID WHEEL BASE : 13 FT. 6 INE.  
 NUMBER OF ENGINES: BATCH IV—12. NOS. 247-258.

## ENGINE.

CYLINDERS : (2 OUTSIDE) : 20" DIA. X 26" STROKE.  
 BOGIE WHEELS : 2'-4 1/2" DIA.  
 COUPLED WHEELS : 4'-3" DIA.  
 TRAILING TRUCK WHEELS : 2'-9" DIA.  
 TENDER BOGIE WHEELS : 2'-10" DIA.  
 AXLE JOURNALS : BOGIE WHEELS : 3 1/2" x 5 3/4" DIA.  
 " " : COUPLED WHEELS : DRIVERS : 9" x 8 1/2" DIA.  
 " " : " " : OTHERS : 9" x 8" DIA.  
 " " : TRAILING TRUCK : 12" x 6" DIA.  
 " " : TENDER BOGIE WHEELS : 10 1/8" x 5 1/4" DIA.  
 CONNECTING ROD CENTRES : 7'-0"  
 BRAKES : VACUUM & STEAM.  
 BRAKE POWER : (COMBINED) : 41.67 TONS AT 39.21%.  
 INJECTORS : N<sup>o</sup> 9 GRESHAM & CRAVEN.  
 VALVES : PISTON 10" DIA. 5 15/16" TRAVEL.  
 TYPE OF VALVE GEAR : WALSCHAERTS.

## BOILER

PRESSURE : 190 LB PER SQ. INCH  
 SMALLEST OUTSIDE DIAMETER OF BARREL : 5'-3"  
 LENGTH BETWEEN TUBE PLATES : 19'-6"  
 GRATE INSIDE FOUNDATION RING : 6'-8 3/4" x 4'-10 15/16"  
 GRATE AREA : 32.5 SQ. FT.  
 HEATING SURFACES : FLUE TUBES : 603.7 SQ. FT.  
 " " : BOILER TUBES : 1263.3 SQ. FT.  
 " " : WATER TUBES : 20 SQ. FT.  
 " " : FIREBOX : 130 SQ. FT.  
 TOTAL EVAPORATION : 2017 SQ. FT.  
 SUPERHEATER : 362 SQ. FT.  
 TOTAL : 2379 SQ. FT.

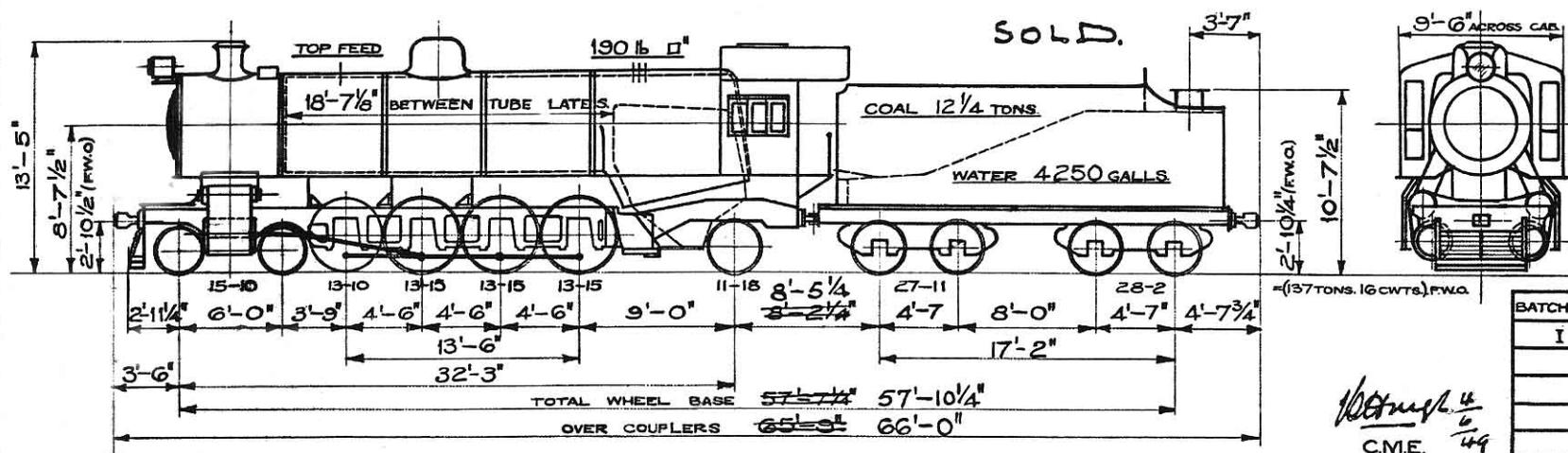
IV	1930.	£8415
BATCH	SERVICE ENTRY.	COST PER ENGINE.

D.T. POOLE. (FEB. 1949)

# 12A. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

**CLASS 12A**  
**BATCH I**



BATCH NO.	ORDER.	NUMBERS.
I		198, 212 & 213.

*W. H. M. 4/6/49*  
C.M.E.

GENERAL PARTICULARS.	ENGINE	BOILER																								
<p>SUPERHEATED.</p> <p>TRACTIVE FORCE AT 85% BWP : 32,940 LB.</p> <p>FACTOR OF ADHESION AT 85% BWP &amp; FWO 3.723.</p> <p>MAXIMUM COUPLED AXLE LOAD. F.W.O. 13 TONS. 15 CWTs.</p> <p>WEIGHT ON ALL COUPLED WHEELS. F.W.O. : 54 TONS. 15 CWTs.</p> <p>TOTAL WEIGHT OF ENGINE: (EMPTY): 74 TONS. 3 CWTs.</p> <p>" " " " : (F.W.O.): 82 TONS. 3 CWTs.</p> <p>" " " TENDER: (EMPTY): 24 TONS. 9 CWTs.</p> <p>" " " " : (F.W.O.): 55 TONS. 13 CWTs.</p> <p>" " " ENG. &amp; TEN. (EMPTY): 98 TONS. 12 CWTs.</p> <p>" " " " : (F.W.O.): 137 TONS. 16 CWTs.</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS: 2.095 TONS.</p> <p>WATER CAPACITY: 4250 GALLS.</p> <p>COAL CAPACITY: 12 1/4 TONS.</p> <p>RIGID WHEEL BASE: 13 FT. 6 IN.</p> <p>NUMBER OF ENGINES: BATCH I - 2 Nos. 198, 212 &amp; 213.</p>	<p>CYLINDERS: (2 OUTSIDE): 20" DIA. x 26" STROKE.</p> <p>BOGIE WHEELS: 2'-4 1/2" DIA.</p> <p>COUPLED WHEELS: 4'-3" DIA.</p> <p>TRAILING TRUCK WHEELS: 2'-9" DIA.</p> <p>TENDER BOGIE WHEELS: 2'-10" DIA.</p> <p>AXLE JOURNALS: BOGIE WHEELS: 9 1/2" x 5 3/4" DIA.</p> <p>" " : COUPLED WHEELS: DRIVERS: 9" x 8 1/2" DIA.</p> <p>" " : " " : OTHERS: 9" x 8" DIA.</p> <p>" " : TRAILING TRUCK: 12" x 6" DIA.</p> <p>" " : TENDER BOGIE WHEELS: 10 1/6" x 5 1/4" DIA.</p> <p>CONNECTING ROD CENTRES: 7'-0"</p> <p>BRAKES: VACUUM &amp; STEAM.</p> <p>BRAKE POWER. (COMBINED): 4.67 TONS AT 37.92%</p> <p>INJECTORS: N° 9 GRESHAM &amp; CRAVEN.</p> <p>VALVES: PISTON 10" DIA. 5 1/8" TRAVEL.</p> <p>TYPE OF VALVE GEAR: WALSCHAERTS.</p>	<p>PRESSURE: 190 LB. PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIA. OF BARREL: 5'-6" DIA.</p> <p>LENGTH BETWEEN TUBEPLATES: 18'-7 1/8" (385-390)</p> <p>GRATE INSIDE FOUNDATION RING: 6'-10 1/2" x 5'-2 3/4" (339-343 &amp; 335-266 FT. (339-343, 385-390))</p> <p>GRATE AREA: 6'-10 1/2" x 5'-3 1/4" (421-432) 36-38 SQ. FT. (421-432)</p> <p>HEATING SURFACES: NOS 339-343, 385-390 421-432</p> <table border="1"> <tr> <td>BOILER TUBES:</td> <td>1415 SQ. FT.</td> <td>1414 SQ. FT.</td> </tr> <tr> <td>WATER TUBES:</td> <td>16 SQ. FT.</td> <td>NONE.</td> </tr> <tr> <td>THERMIC SYPHONS:</td> <td>NONE</td> <td>48 SQ. FT.</td> </tr> <tr> <td>FIREBOX:</td> <td>137 SQ. FT.</td> <td>138 SQ. FT.</td> </tr> <tr> <td>FLUE TUBES:</td> <td>695 SQ. FT.</td> <td>696 SQ. FT.</td> </tr> <tr> <td>TOTAL EVAPORATION</td> <td>2263 SQ. FT.</td> <td>2296 SQ. FT.</td> </tr> <tr> <td>SUPERHEATER:</td> <td>582 SQ. FT.</td> <td>589 SQ. FT.</td> </tr> <tr> <td></td> <td>2845 SQ. FT.</td> <td>2885 SQ. FT.</td> </tr> </table>	BOILER TUBES:	1415 SQ. FT.	1414 SQ. FT.	WATER TUBES:	16 SQ. FT.	NONE.	THERMIC SYPHONS:	NONE	48 SQ. FT.	FIREBOX:	137 SQ. FT.	138 SQ. FT.	FLUE TUBES:	695 SQ. FT.	696 SQ. FT.	TOTAL EVAPORATION	2263 SQ. FT.	2296 SQ. FT.	SUPERHEATER:	582 SQ. FT.	589 SQ. FT.		2845 SQ. FT.	2885 SQ. FT.
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		<table border="1"> <tr> <td>I</td> <td>1928.</td> <td>£6196</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td>COST PER ENGINE.</td> </tr> </table>	I	1928.	£6196	BATCH	SERVICE ENTRY.	COST PER ENGINE.																		
I	1928.	£6196																								
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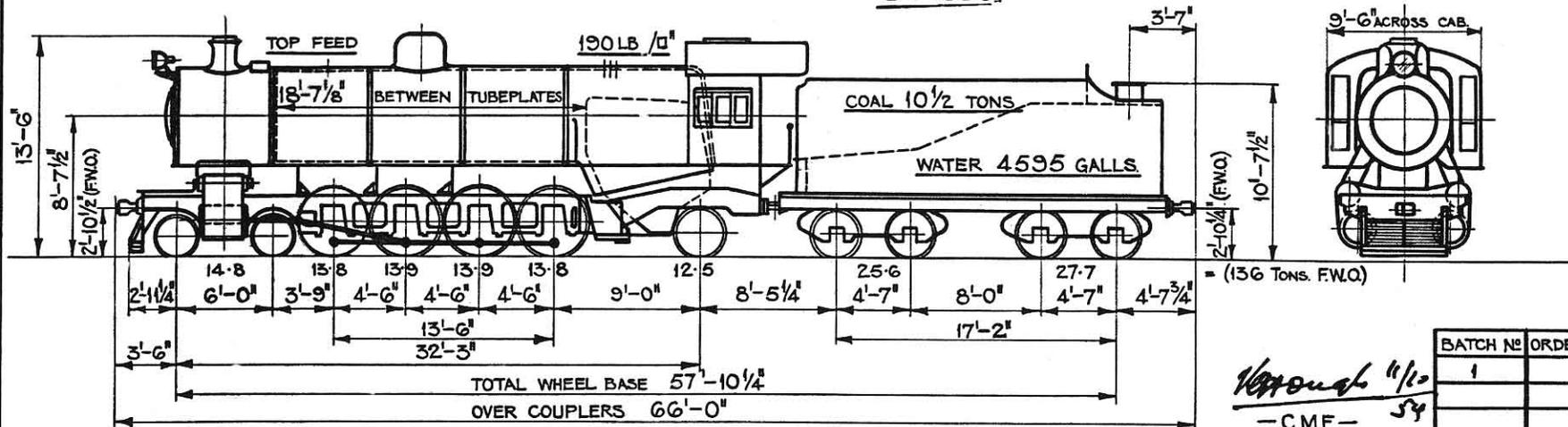
D. POOLE (JAN. 1949)

# 12B CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-0" GAUGE

CLASS 12B.  
BATCH I

SOLD.



BATCH NO	ORDER	NUMBERS.
1		260-269

## GENERAL PARTICULARS.

SUPERHEATED 32,940  
 TRACTIVE EFFORT AT 85% B.W.P.: 30,309 LB  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O.: 3.4377  
 MAXIMUM COUPLED AXLE LOAD: 13.9 TONS. (F.W.O.)  
 WEIGHT ON ALL COUPLED WHEELS: F.W.O.: 55.4 TONS.  
 TOTAL WEIGHT OF ENGINE: (EMPTY): 72.74 TONS.  
 " " " " : (F.W.O.): 82.7 TONS.  
 " " " TENDER: (EMPTY): 22.9 TONS.  
 " " " : (F.W.O.): 53.3 TONS.  
 " " " ENGINE & TENDER: EMPTY: 95.64 TONS  
 " " " " " : F.W.O.: 136 TONS.  
 WT. PER FOOT RUN OVER BUFFERS: 2.061 TONS  
 WATER CAPACITY: 4595 GALLS.  
 COAL CAPACITY: 10 1/2 TONS.  
 RIGID WHEEL BASE: 13'-6"  
 NUMBER OF ENGINES: BATCH I-10. Nos 260-269

## ENGINE

CYLINDERS: (2 OUTSIDE): 26" DIA. x 26" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 4'-3" DIA.  
 TRAILING TRUCK WHEELS: 2'-9" DIA.  
 TENDER BOGIE WHEELS: 2'-10" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 9 1/2" x 5 3/4" DIA.  
 " " : COUPLED WHEELS: DRIVERS: 9" x 8 1/2" DIA.  
 " " : OTHERS: 9" x 8" DIA.  
 " " : TRAILING TRUCK: 12" x 6" DIA.  
 " " : TENDER BOGIE WHEELS: 10 1/16" x 5 1/4" DIA.  
 CONNECTING ROD CENTRES: 7'-0"  
 BRAKES: VACUUM & STEAM.  
 BRAKE POWER: (COMBINED): 41.67 TONS AT 38.33%.  
 INJECTORS No 9 GRESHAM & CRAVEN.  
 VALVES: PISTON 10" DIA. 5 15/16" TRAVEL.  
 VALVE GEAR: WALSCHAERTS.

## BOILER.

PRESSURE: 190 LB / sq. in.  
 SMALLEST OUTSIDE DIA. OF BARREL: 5'-6"  
 LENGTH BETWEEN TUBEPLATES: 18'-7 1/8"  
 GRATE INSIDE FOUNDATION RING: 6'-10 7/32" x 5'-3 1/4"  
 GRATE AREA: 36.38 SQ. FT.  
 HEATING SURFACES: BOILER TUBES: 1414 SQ. FT.  
 " " : WATER " : NONE  
 " " : THERMIC SYPHONS: 48 SQ. FT.  
 " " : FIREBOX: 138 SQ. FT.  
 " " : FLUE TUBES: 696 SQ. FT.  
 TOTAL EVAPORATION: 2296 SQ. FT.  
 SUPERHEATER: 589 SQ. FT.  
 TOTAL: 2885 SQ. FT.

I	1954/55	
BATCH	SERVICE ENTRY	COST PER ENGINE

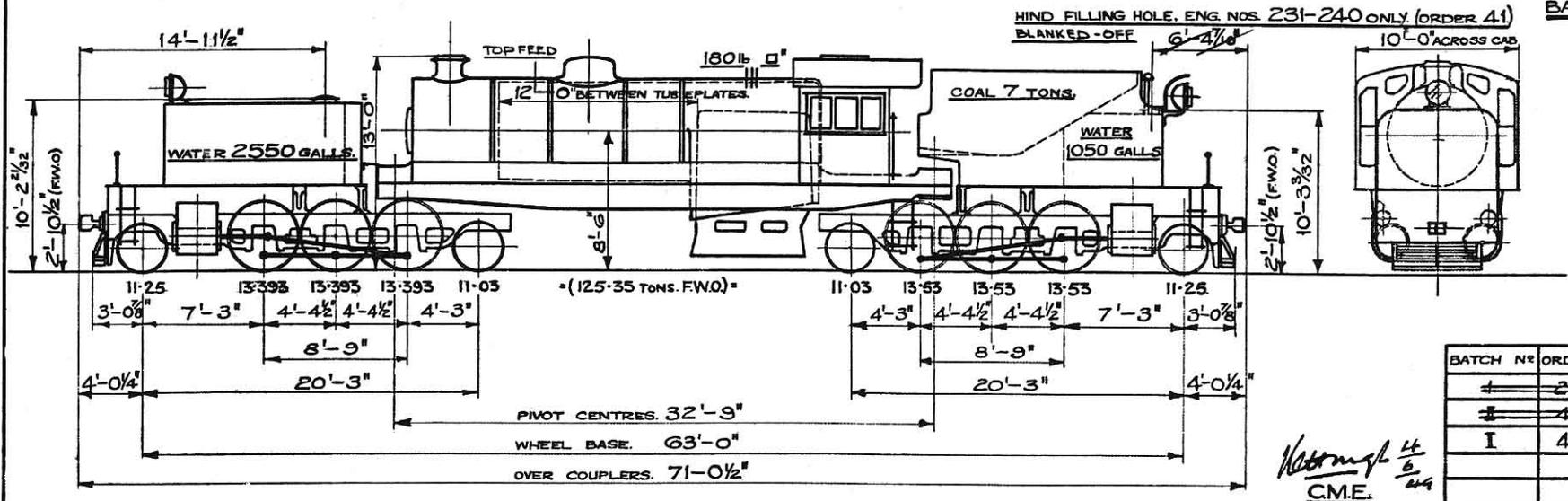
D.T. ROLE. (SEPT. '54)



# 14 TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS,  
3'-6" GAUGE.

CLASS **14**,  
BATCH **I & II**.



BATCH N <sup>o</sup>	ORDER	NUMBERS.
<del>4</del>	<del>25</del>	<del>215-220</del>
<del>3</del>	<del>41</del>	<del>231-240</del>
<b>I</b>	<b>41</b>	<b>233-240</b>
		500-507.

*Wabington* 14  
6  
44  
C.M.E.

GENERAL PARTICULARS	ENGINE.	BOILER.									
<p>SUPERHEATED.</p> <p>TRACTIVE FORCE AT 85% B.W.P.: 39,168 LB (17,77 TONNE)</p> <p>FACTOR OF ADHESION AT 85% B.W.P. &amp; F.W.O.: 4.62</p> <p>MAXIMUM COUPLED AXLE LOAD: 13.53 TONS (13,74 TONNE)</p> <p>WEIGHT ON ALL COUPLED WHEELS: 80.79 TONS.</p> <p>TOTAL WEIGHT OF ENGINE (EMPTY): 96.5 TONS.</p> <p>" " " (F.W.O.) *125.35 TONS.</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS: 1.765 TONS</p> <p>WATER CAPACITY: FRONT TANK: 2550 GALLS.</p> <p>" " : HIND TANK: 1050 GALLS.</p> <p>" " : TOTAL 3,600 GALLS.</p> <p>COAL CAPACITY : 7 TONS.</p> <p>RIGID WHEEL BASE: 8 FT. 9 INS.</p> <p>NUMBER OF ENGINES: BATCH <del>6</del> Nos. <del>215-220</del></p> <p>BATCH <del>10</del> Nos. <del>231-240</del></p> <p><del>8</del> Nos. <del>233-240</del></p> <p>Nos 215-220, 231 &amp; 232 SOLD TO C.F.B. (C.M.E.'S 321/6 OF 25/10/49), 500-507.</p>	<p>CYLINDERS (2 ON EACH UNIT): 16" DIA. x 24" STROKE.</p> <p>BOGIE WHEELS : 2'-9" DIA.</p> <p>COUPLED WHEELS : 4'-0" DIA.</p> <p>AXLE JOURNALS : BOGIE WHEELS : 11" x 6 3/4" DIA.</p> <p>" " : COUPLED WHEELS : DRIVER: 9" x 8" DIA.</p> <p>" " : " : OTHERS: 9" x 7 1/2" DIA.</p> <p>CONNECTING ROD CENTRES : 8'-7"</p> <p>BRAKES : STEAM.</p> <p>BRAKE POWER : 47.2 TONS AT 58.41%.</p> <p>INJECTORS : NO. 10 GRESHAM &amp; CRAVEN.</p> <p>VALVES : PISTON 8" DIA. 3 3/4" + 1/4" TRAVEL</p> <p>TYPE OF VALVE GEAR : WALSCHAERTS.</p>	<p>PRESSURE : 180 LB PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIAMETER OF BARREL : 6'-0"</p> <p>LENGTH BETWEEN TUBEPLATES : 12'-0"</p> <p>GRATE INSIDE FOUNDATION RING : 6'-5 7/8" x 5'-11 1/2"</p> <p>GRATE AREA : 38.8 SQ. FT.</p> <p>NO THERMIC SYPHONS.</p> <p>HEATING SURFACES: FLUE TUBES : 520 SQ. FT.</p> <p>" " BOILER TUBES : 1156 SQ. FT.</p> <p>" " BRICK ARCH TUBES 20 SQ. FT.</p> <p>" " FIRE BOX : 154 SQ. FT.</p> <p>TOTAL EVAPORATION : 1850 SQ. FT.</p> <p>SUPERHEATER : 380 SQ. FT.</p> <p>TOTAL: 2230 SQ. FT.</p> <table border="1"> <tr> <td><b>I</b></td> <td>1930</td> <td>£10,634</td> </tr> <tr> <td><b>1</b></td> <td>1929</td> <td></td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td>COST PER ENGINE.</td> </tr> </table>	<b>I</b>	1930	£10,634	<b>1</b>	1929		BATCH	SERVICE ENTRY.	COST PER ENGINE.
<b>I</b>	1930	£10,634									
<b>1</b>	1929										
BATCH	SERVICE ENTRY.	COST PER ENGINE.									

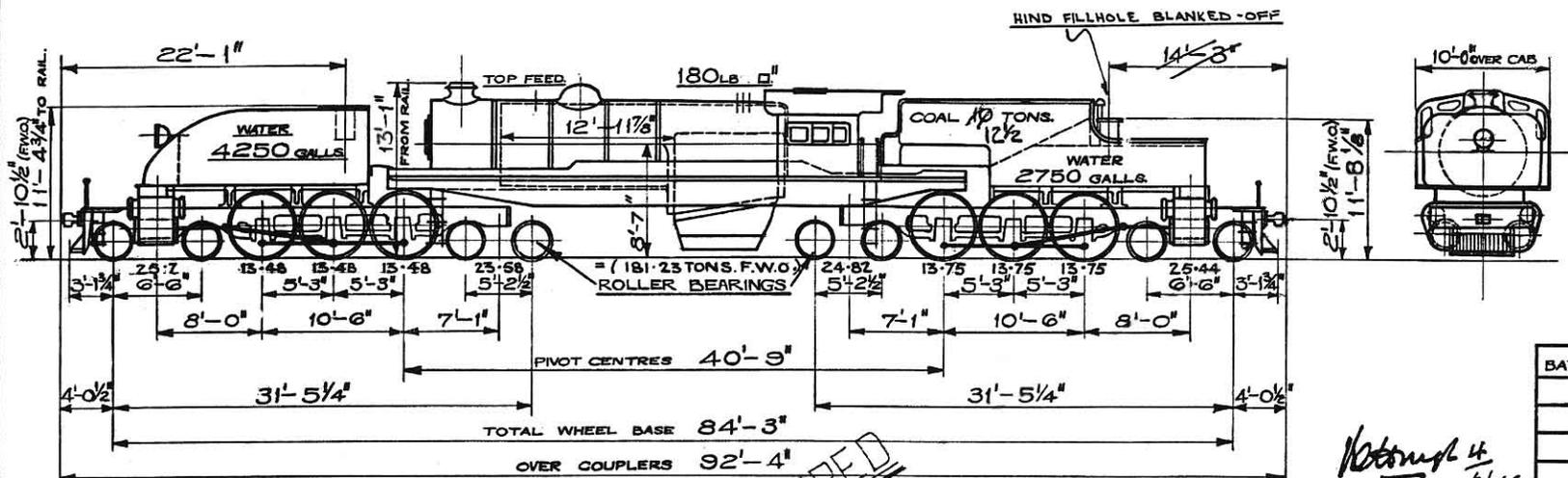
D.T. POOLE. (JAN. 1945)



# 15TH. CLASS LOCOMOTIVES

RHODESIA RAILWAYS  
3'-6" GAUGE.

**CLASS 15.**  
**BATCH I.**



BATCH. NO	ORDER	NUMBERS
I	74	271-274
		<del>250-252</del>
		SCRAPPED

*W. J. ...*  
6/49  
C.M.E.

## GENERAL PARTICULARS.

SUPERHEATED  
 TRACTIVE FORCE AT 85% B.W.P. : 42,750 LB  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 4:281  
 MAXIMUM COUPLED AXLE LOAD. F.W.O. : 13.75 TONS  
 WEIGHT ON ALL COUPLED WHEELS. F.W.O. : 81.69 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY) : 129,775 TONS.  
 " " " " (F.W.O.) : 181.23 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS. F.W.O. : 1,963 TONS.  
 WATER CAPACITY, FRONT TANK : 4250 GALLONS.  
 " " HIND TANK : 2750 GALLONS.  
 " " TOTAL : 7000 GALLONS.  
 COAL CAPACITY 12 1/2 TONS.  
 RIGID WHEEL BASE : 10 FT. 6 INS.

NUMBER OF ENGINES : BATCH I-4. NOS. ~~350-352~~  
 No 352 SCRAPPED 11/83.  
 MUSEUM-FRANCISTOWN.

## ENGINE.

CYLINDERS (2 ON EACH UNIT) : 17 1/2" DIA. X 26" STROKE.  
 BOGIE WHEELS : 2'-9" DIA.  
 COUPLED WHEELS : 4'-9" DIA.  
 ROLLER BEARINGS : BOGIE WHEELS & ECCENTRIC RODS.  
 AXLE JOURNALS : BOGIE WHEELS : 160 M.M (ROLLER)  
 " " : COUPLED WHEELS : 9" x 8" DIA.  
 CONNECTING ROD CENTRES : 8'-0"  
 BRAKES : STEAM  
 BRAKE POWER : 48.1 TONS AT 58.87%  
 INJECTORS : NO. 11 GRESHAM & CRAVEN.  
 VALVES : PISTON 9" DIA. 6" TRAVEL  
 TYPE OF VALVE GEAR : WALSCHAERTS.

## BOILER.

PRESSURE : 180 LB. PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL : 6'-4 9/16".  
 LENGTH BETWEEN TUBEPLATES : 12'-11 7/8".  
 GRATE INSIDE FOUNDATION RING : 6'-2 7/8" x 7'-11 1/8".  
 GATE AREA : 49.5 SQ. FT.  
 NO THERMIC SYPHONS.  
 HEATING SURFACES : FLUE TUBES : } 2124 SQ. FT.  
 " " BOILER TUBES : }  
 " " FIREBOX (INCL. ARCH TUBES) : 212 SQ. FT.  
 TOTAL EVAPORATION : 2336 SQ. FT.  
 SUPERHEATER : 494 SQ. FT.  
 TOTAL : 2830 SQ. FT.

I	1940	£ 20,093
BATCH	SERVICE ENTRY	COST PER ENGINE

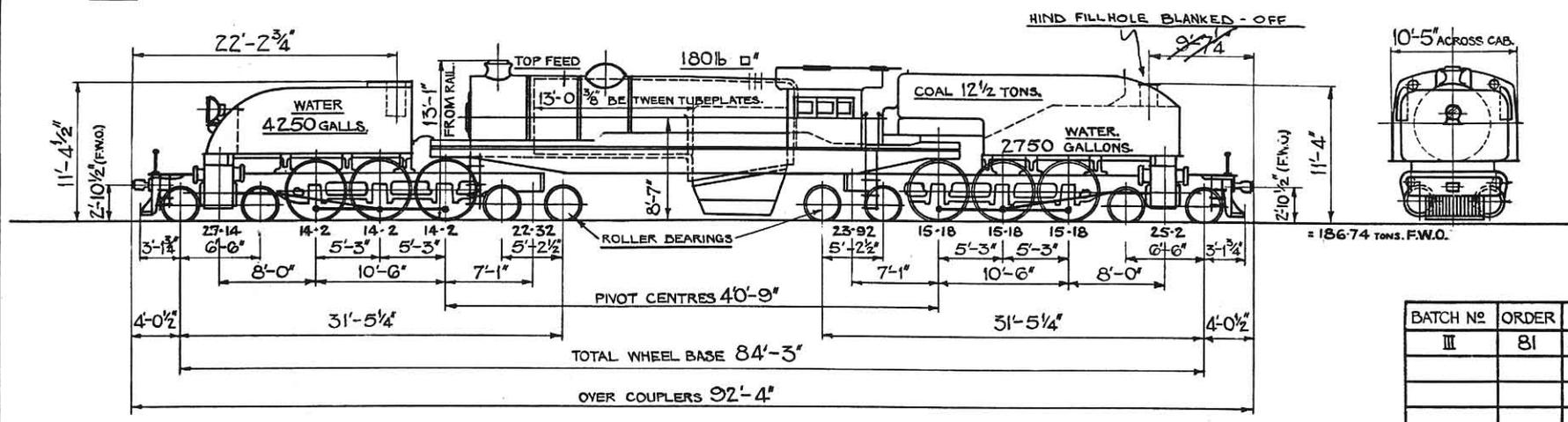


*W. G. ...*  
C.M.E.

# 15 TH CLASS LOCOMOTIVE

RHODESIA RAILWAYS.  
3'-6" GAUGE.

CLASS **15**  
BATCH **III**.



BATCH NO.	ORDER	NUMBERS
III	81	364-383

GENERAL PARTICULARS.	ENGINE	BOILER						
<p><b>SUPERHEATED:</b></p> <p>TRACTIVE FORCE AT 85% B.W.P. : 42,750 LB. (19,39 TONNE)</p> <p>FACTOR OF ADHESION AT 85% B.W.P. &amp; F.W.O. : 4.618</p> <p>MAXIMUM COUPLED AXLE LOAD: F.W.O. : 15.18 TONS. (15,43 TONNE)</p> <p>WEIGHT ON ALL COUPLED WHEELS: F.W.O. : 88.14 TONS.</p> <p>TOTAL WEIGHT OF ENGINE (EMPTY) : 133.4 TONS.</p> <p>" " " (F.W.O.) : 186.74 TONS. (189,79 TONNE)</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS : 2.022 TONS.</p> <p>WATER CAPACITY: FRONT TANK : 4250 GALLS</p> <p>" " " HIND TANK : 2750 "</p> <p>" " " TOTAL : 7000 "</p> <p>COAL CAPACITY : 12 1/2 TONS.</p> <p>RIGID WHEEL BASE : 10'-6"</p> <p>NUMBER OF ENGINES: BATCH III - 20. Nos: 364-383.</p>	<p>CYLINDERS: (2 ON EACH UNIT): 17 1/2" DIA. X 26" STROKE.</p> <p>BOGIE WHEELS : 2'-9" DIA.</p> <p>COUPLED WHEELS : 4'-9" DIA.</p> <p>ROLLER BEARINGS: BOGIE WHEELS &amp; ECCENTRIC RODS.</p> <p>AXLE JOURNALS: BOGIE WHEELS: 160 M.M. (ROLLER).</p> <p>" " : COUPLED WHEELS: 9" X 8" DIA.</p> <p>CONNECTING ROD CENTRES: 8'-6"</p> <p>BRAKES: STEAM &amp; VACUUM.</p> <p>BRAKE POWER: 41 TONS AT 46.5%.</p> <p>INJECTORS: No 11 GRESHAM &amp; CRAVEN.</p> <p>VALVES: 9" DIA. 6" TRAVEL.</p> <p>TYPE OF VALVE GEAR: WALSCHAERTS.</p>	<p>PRESSURE : 180 LB. PER. SQ. INCH.</p> <p>SMALLEST DIA. OF BARREL : 6'-4 1/16"</p> <p>LENGTH BETWEEN TUBE PLATES : 13'-0 3/8"</p> <p>GRATE INSIDE FOUNDATION RING : 7'-11 3/16" X 6'-3 3/8"</p> <p>GRATE AREA : 49.6 SQ. FT.</p> <p>HEATING SURFACES: FLUE TUBES : } 2131 SQ. FT.</p> <p>" " : BOILER TUBES: }</p> <p>" " : ARCH TUBES: }</p> <p>" " : THERMIC SYPHONS: } 254 SQ. FT.</p> <p>" " : FIREBOX: }</p> <p>TOTAL EVAPORATION : 2385 SQ. FT.</p> <p>SUPERHEATER: 494 SQ. FT.</p> <p>TOTAL: 2879 SQ. FT.</p>						
		<table border="1"> <tr> <td>III</td> <td>1949.</td> <td>£39,793</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE.</td> </tr> </table>	III	1949.	£39,793	BATCH	SERVICE ENTRY	COST PER ENGINE.
III	1949.	£39,793						
BATCH	SERVICE ENTRY	COST PER ENGINE.						

D.T. PEARCE (Nov. 1951).



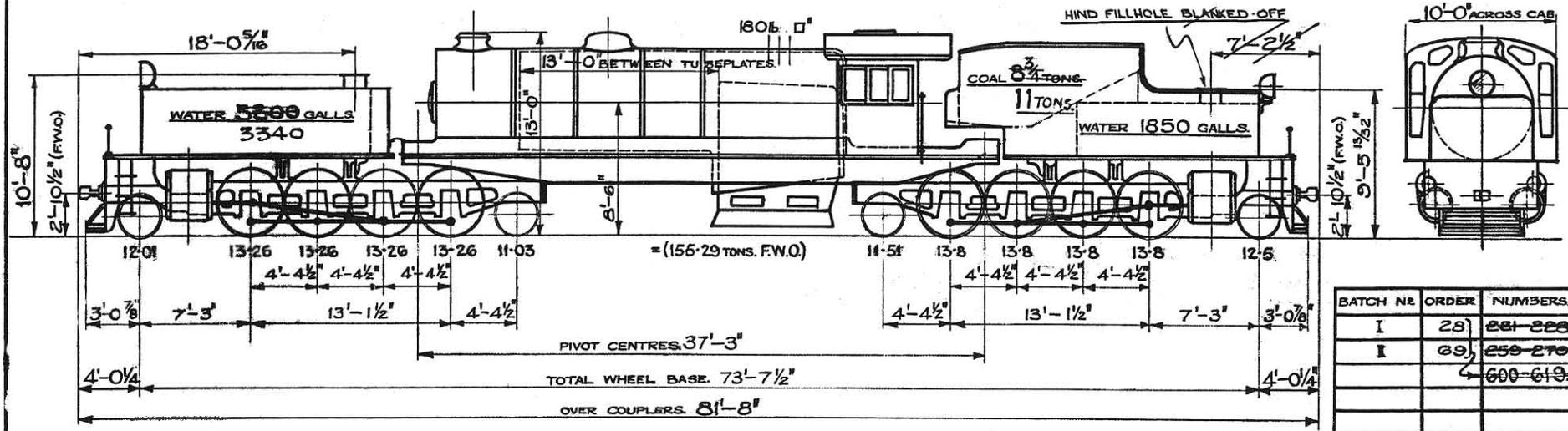


*W. H. M. 4/6/49*  
C.M.E.

# 16TH CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS 16  
BATCH I & II.



BATCH NO.	ORDER	NUMBERS.
I	28	221-228
II	69	259-270
		600-619

GENERAL PARTICULARS.	ENGINE.	BOILER.									
<p>SUPERHEATED.</p> <p>TRACTIVE FORCE AT 85% B.W.P. : 52,364 LB.</p> <p>FACTOR OF ADHESION AT 85% B.W.P. &amp; F.W.O.: 4.628.</p> <p>MAXIMUM COUPLED AXLE LOAD : 13.8 TONS.</p> <p>WEIGHT ON ALL COUPLED WHEELS. F.W.O. : 108.24 TONS.</p> <p>TOTAL WEIGHT OF ENGINE. (EMPTY) : 117.5 TONS</p> <p>" " " " (F.W.O.) : 155.29 TONS.</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS : 1.9 TONS.</p> <p>WATER CAPACITY : FRONT TANK 3200 GALLONS.</p> <p>HIND TANK : 1850 GALLONS.</p> <p>TOTAL 5050 GALLONS.</p> <p>COAL CAPACITY : 8 1/2 TONS 5190</p> <p>RIGID WHEEL BASE : 13 FT. 1 1/2 INS.</p>	<p>CYLINDERS (2 ON EACH UNIT) : 18 1/2" DIA. X 24" STROKE.</p> <p>BOGIE WHEELS : 2'-9" DIA.</p> <p>COUPLED WHEELS : 4'-0" DIA.</p> <p>AXLE JOURNALS : BOGIE WHEELS : 11" X 6 3/4" DIA.</p> <p>" " : COUPLED WHEELS (OUT, INT. &amp; DRIVER) : 9" X 8" DIA.</p> <p>" " : " " (INNER) : 9" X 8" DIA.</p> <p>CONNECTING ROD CENTRES : 8'-7"</p> <p>BRAKES : STEAM.</p> <p>BRAKE POWER : 63.44 TONS AT 58.64%.</p> <p>INJECTORS : NO 10 GRESHAM &amp; CRAVEN.</p> <p>VALVES : PISTON 9" DIA. 3 5/8" TRAVEL.</p> <p>TYPE OF VALVE GEAR : WALSCHAERTS.</p>	<p>PRESSURE : 180 LB. PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIAMETER OF BOILER : 6'-4 9/16"</p> <p>LENGTH BETWEEN TUBEPLATES : 13'-0"</p> <p>GRATE INSIDE FOUNDATION RING : 6'-2 7/8" X 7'-11 1/2"</p> <p>GRATE AREA : 49.5 SQ. FT.</p> <p>HEATING SURFACES : FLUE TUBES : 670 SQ. FT.</p> <p>" " BOILER TUBES : 1456 SQ. FT.</p> <p>" " FIREBOX : 189 SQ. FT.</p> <p>" " BRICK ARCH TUBES : 23 SQ. FT.</p> <p>TOTAL EVAPORATION : 2338 SQ. FT.</p> <p>SUPERHEATER : 480 SQ. FT.</p> <p>TOTAL : 2818 SQ. FT.</p>									
		<p>E 600-607 £12,467</p> <p>E 608-619 £15,233</p>									
		<table border="1"> <tr> <td>I</td> <td>1938</td> <td></td> </tr> <tr> <td>I</td> <td>1929/30</td> <td></td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE</td> </tr> </table>	I	1938		I	1929/30		BATCH	SERVICE ENTRY	COST PER ENGINE
I	1938										
I	1929/30										
BATCH	SERVICE ENTRY	COST PER ENGINE									
		<table border="1"> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE</td> </tr> </table>	BATCH	SERVICE ENTRY	COST PER ENGINE						
BATCH	SERVICE ENTRY	COST PER ENGINE									

D. POOLE (FEB. 1949)

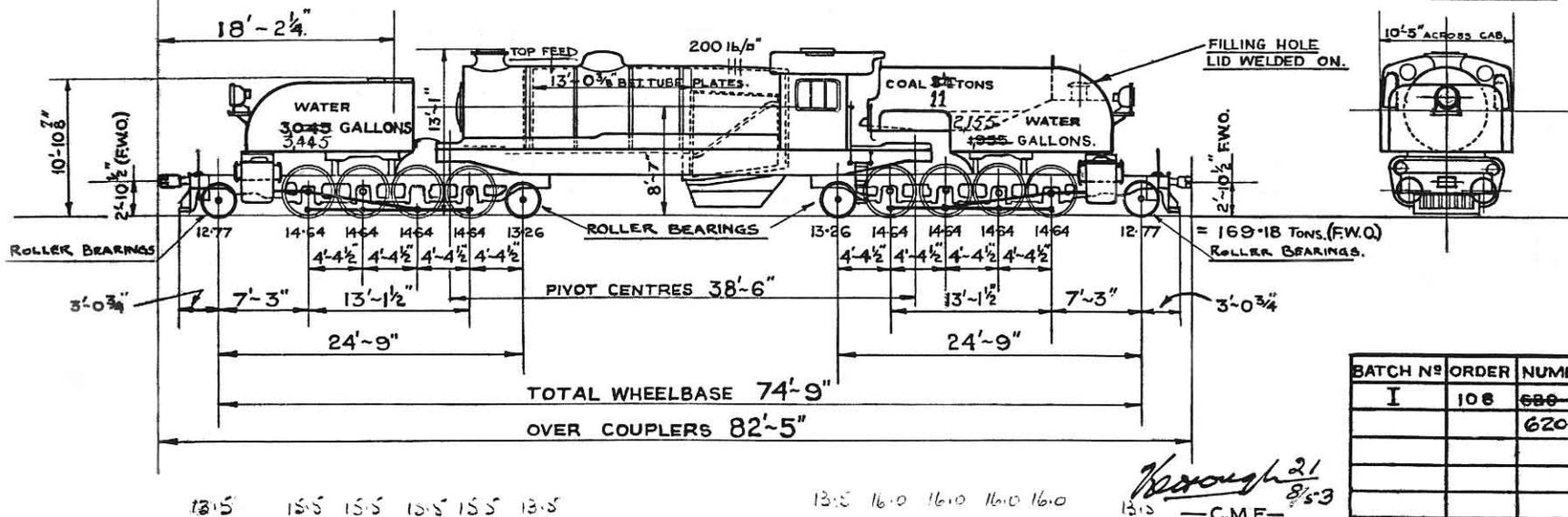
NUMBER OF ENGINES : BATCH I - 8 NOS. 221-228  
 MUSEUM BATCH II - 12 NOS. 259-270  
 NOS 600, 604, 609, 612, 613, 614, 618

\* SOLD TO DUNN'S ENG 3/71.

# 16A CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS 16A  
BATCH I



BATCH NO	ORDER	NUMBERS.
I	106	620-649
		620-648

## GENERAL PARTICULARS

SUPERHEATED  
 TRACTIVE FORCE AT 85% B.W.P.: 58,183 LB. (26.39 TONNE)  
 FACTOR OF ADHESION AT 85% B.W.P.: 4.51  
 MAXIMUM COUPLED AXLE LOAD F.W.O.: 14.64 TONS (14.88 TONNE)  
 WEIGHT ON ALL COUPLED WHEELS: 117.12 TONS F.W.O.  
 TOTAL WEIGHT OF ENGINE (EMPTY): 127.8 TONS.  
 " " " " (F.W.O.): 169.18 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFER: 2.05 TONS.  
 WATER CAPACITY: FRONT TANK: 3,945 GALLONS.  
 " " " " HIND TANK: 2,155 GALLONS.  
 " " " " TOTAL: 3,000 GALLONS.  
 COAL CAPACITY: 11 1/2 TONS, 3,600 GALLONS.  
 RIGID WHEEL BASE: 13'-1 1/2"  
 NUMBER OF ENGINES: BATCH I-30, Nos 620-649.

## ENGINE

CYLINDERS: (2 ON EACH UNIT) 18 1/2" DIA. x 24" STROKE.  
 BOGIE WHEELS: 2'-9" DIA.  
 COUPLED WHEELS: 4'-0" DIA.  
 ROLLER BEARINGS: { ECCENTRIC RODS.  
 BOGIE BOXES.  
 AXLE JOURNALS (PLAIN) BOGIE WHEELS: 11" x 6 3/4" DIA.  
 " " " COUPLED " " : 9" x 8" DIA.  
 CONNECTING ROD CENTRES: 8'-3"  
 BRAKES: STEAM AND VACUUM  
 BRAKE POWER: 51.41 TONS AT 43.9%  
 INJECTORS: No. 11 GRESHAM & CRAVEN  
 VALVES: PISTON. 9" DIA. x 6" TRAVEL.  
 TYPE OF VALVE GEAR: WALSCHAERTS.  
 PIVOT CENTRES: SELF ADJUSTING TYPE.

## BOILER

PRESSURE: 200 LB. PER SQ. INCH.  
 SMALLEST OUTSIDE DIA. OF BARREL: 6'-4 9/16"  
 LENGTH BETWEEN TUBEPLATES: 13'-0 3/8"  
 GRATE INSIDE FOUNDATION RING: 6'-3 3/8" x 7'-11 3/16"  
 GRATE AREA: 49.6 SQ. FT.  
 HEATING SURFACES: FLUE TUBES: } 2131 SQ. FT.  
 " " " BOILER TUBES: }  
 " " " ARCH TUBES: } 212 SQ. FT.  
 : FIREBOX :  
 TOTAL EVAPORATION: 2,343 SQ. FT.  
 SUPER HEATER: 494 SQ. FT.  
 TOTAL: 2,837 SQ. FT.

I	1953	£48409
BATCH	SERVICE ENTRY	COST PER ENGINE.

ISSUED TO	DATE
M.E.U.	9-2-53

# 17 TH. CLASS LOCOMOTIVE

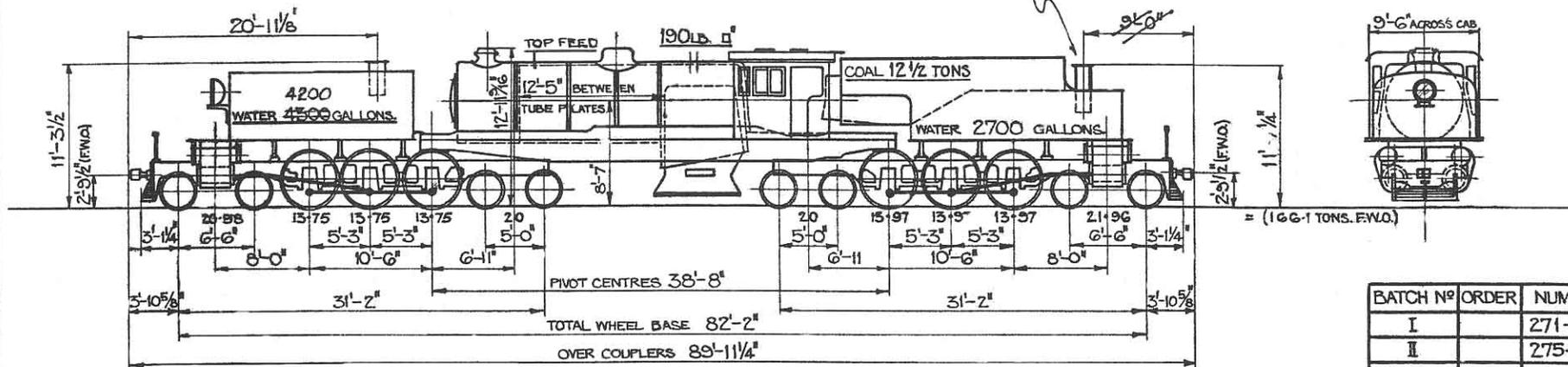
RHODESIA RAILWAYS.  
3'-6" GAUGE

CLASS 17.  
BATCH I & II.

C.M.E.

SOLD

HIND FILL-HOLE BLANKED-OFF



BATCH NO	ORDER	NUMBERS.
I		271-274
II		275-280

*Retrow 19/5/51*

GENERAL PARTICULARS.	ENGINE.	BOILER.									
<p>SUPERHEATED.  TRACTIVE FORCE AT 85% BWP = 41336 LB  FACTOR OF ADHESION AT 85% &amp; F.W.O. &amp; B.W.R. = 4.505  MAXIMUM COUPLED AXLE LOAD, F.W.O. = 13.97 TONS.  WEIGHT ON ALL COUPLED WHEELS, F.W.O. = 83.16 TONS  TOTAL WEIGHT OF ENGINE (EMPTY) = 120.4 TONS.  " " " (F.W.O.) = 166.1 TONS.  WEIGHT PER FOOT RUN OVER BUFFERS = 1846 TONS  WATER CAPACITY: FRONT TANK: 4300 GALLS. 4,200  " " : HIND TANK: 2,700 GALLS.  " " : TOTAL: 7,000 GALLS. 6,900 GALS  COAL CAPACITY: 12 1/2 TONS.  RIGID WHEEL BASE: 10'-6"  NUMBER OF ENGINES: BATCH I-4. NOS: 271-274.  : BATCH II-6. NOS: 275-280.</p>	<p>CYLINDERS: (2 ON EACH UNIT): 16 3/4" DIA. x 26" STROKE  BOGIE WHEELS: 2'-9" DIA.  COUPLED WHEELS: 4'-9" DIA.  AXLE JOURNALS: BOGIE WHEELS: 6 1/2" DIA.  " " : COUPLED WHEELS: 7 1/2" DIA.  CONNECTING ROD CENTRES: 8'-6"  BRAKES: STEAM.  BRAKE POWER: 38.42 TONS. AT 46.19%  INJECTORS: GRESHAM &amp; CRAVEN NO 10  VALVES: PISTON 9" DIA. 6 7/32" TRAVEL  TYPE OF VALVE GEAR: WALSCHAERTS.</p>	<p>PRESSURE: 190 lb. PER SQ. INCH.  SMALLEST OUTSIDE DIA. OF BARREL: 6'-0"  LENGTH BETWEEN TUBE PLATES: 12'-5"  GRATE INSIDE FOUNDATION RING: 6'-8 5/8" x 6'-5 3/4"  GRATE AREA: 43.2 SQ. FT.  HEATING SURFACES: FLUE TUBES: 607 SQ. FT.  " " : BOILER TUBES: 1169 " "  " " : ARCH TUBES: } 184 " "  " " : FIREBOX: }  TOTAL EVAPORATION: 1960 " "  SUPERHEATER: 440 " "  TOTAL: 2400 " "</p>									
		<table border="1"> <tr> <td>II</td> <td>1949.</td> <td>£15,667</td> </tr> <tr> <td>I</td> <td>1949.</td> <td>£15,667</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE.</td> </tr> </table>	II	1949.	£15,667	I	1949.	£15,667	BATCH	SERVICE ENTRY	COST PER ENGINE.
II	1949.	£15,667									
I	1949.	£15,667									
BATCH	SERVICE ENTRY	COST PER ENGINE.									

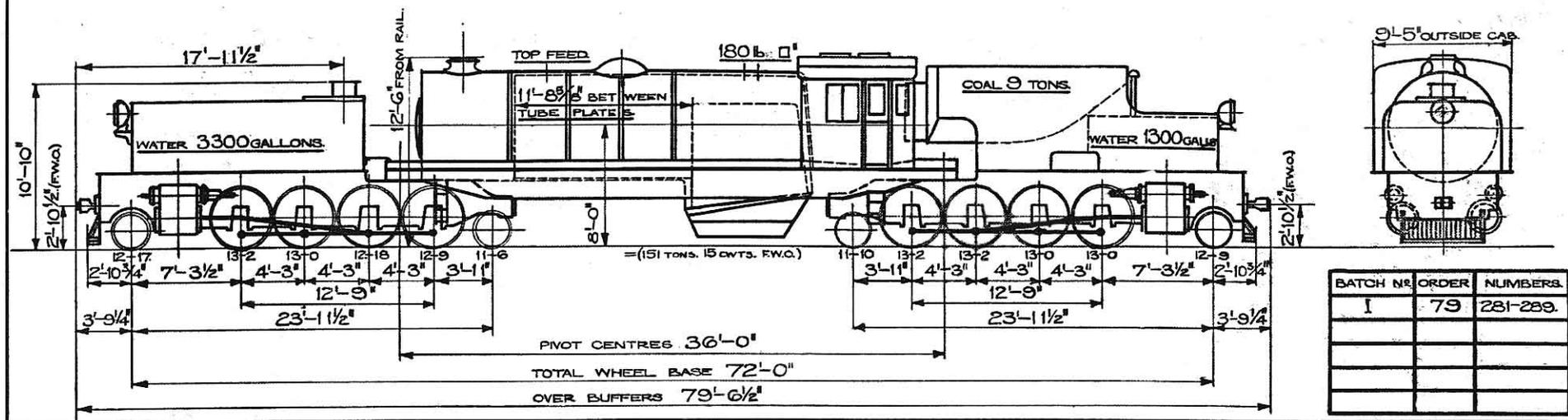
D.T. POOLE (JAN. 1950).

*Retrunk 4/6/49*  
CME

# 18TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS 18  
BATCH I



GENERAL PARTICULARS.	ENGINE.	BOILER.						
<p>SUPERHEATED                      TRACTIVE FORCE AT 85% B.W.P. : 58,268 LB.                      FACTOR OF ADHESION AT 85% B.W.P. &amp; F.W.O. : 3.983                      MAXIMUM COUPLED AXLE LOAD, F.W.O. : 13 TONS 2 CWTS.                      WEIGHT ON ALL COUPLED WHEELS : 103 TONS 13 CWTS. (F.W.O.)                      TOTAL WEIGHT OF ENGINE (EMPTY) : 114 TONS 0 CWTS.                      " " " (F.W.O.) : 151 TONS 15 CWTS.                      WEIGHT PER FOOT RUN OVER BUFFERS : 1.907 TONS.                      WATER CAPACITY : FRONT TANK : 3300 GALLONS.                      " " : HIND TANK : 1300 GALLONS.                      " " : TOTAL : 4600 GALLONS.                      COAL CAPACITY : 9 TONS.</p>	<p>CYLINDERS : (2 ON EACH UNIT) : 19" DIA. x 24" STROKE.                      BOGIE WHEELS : 2'-4 1/2" DIA.                      COUPLED WHEELS : 3'-9 1/2" DIA.                      AXLE JOURNALS : BOGIE WHEELS : 11" x 6 3/4" DIA.                      " " : COUPLED WHEELS : 8 7/8" x 7 1/2" DIA.                      CONNECTING ROD CENTRES : 8'-1 1/2".                      BRAKES : STEAM.                      BRAKE POWER : 60.8 TONS. AT 58.67%.                      INJECTORS : 1 1/2 MM. GRESHAM &amp; CRAVEN.                      VALVES : PISTON 9" DIA. 5" TRAVEL.                      TYPE OF VALVE GEAR : WALSCHAERTS.</p>	<p>PRESSURE : 180 LB PER SQ. INCH.                      SMALLEST OUTSIDE DIAMETER OF BARREL : 6'-10 1/2".                      LENGTH BETWEEN TUBE PLATES : 11'-8 5/8".                      GRATE INSIDE FOUNDATION RING : 7'-10 9/16" x 6'-6 5/8".                      GRATE AREA : 51.3 SQ. FT.                      HEATING SURFACES : FLUE TUBES : } 2328 SQ. FT.                      " " : BOILER TUBES : }                      " " : FIREBOX (INCL ARCH TUBES) : 212 SQ. FT.                      TOTAL EVAPORATION : 2540 SQ. FT.                      SUPERHEATER : 470 SQ. FT.                      TOTAL : 3010 SQ. FT.</p>						
<p><b>SOLD TO C.F.B.</b></p>								
<p>NUMBER OF ENGINES : BATCH I-9. Nos. 281-289.</p>		<table border="1"> <tr> <td>I</td> <td>1943/44.</td> <td></td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td>COST PER ENGINE.</td> </tr> </table>	I	1943/44.		BATCH	SERVICE ENTRY.	COST PER ENGINE.
I	1943/44.							
BATCH	SERVICE ENTRY.	COST PER ENGINE.						

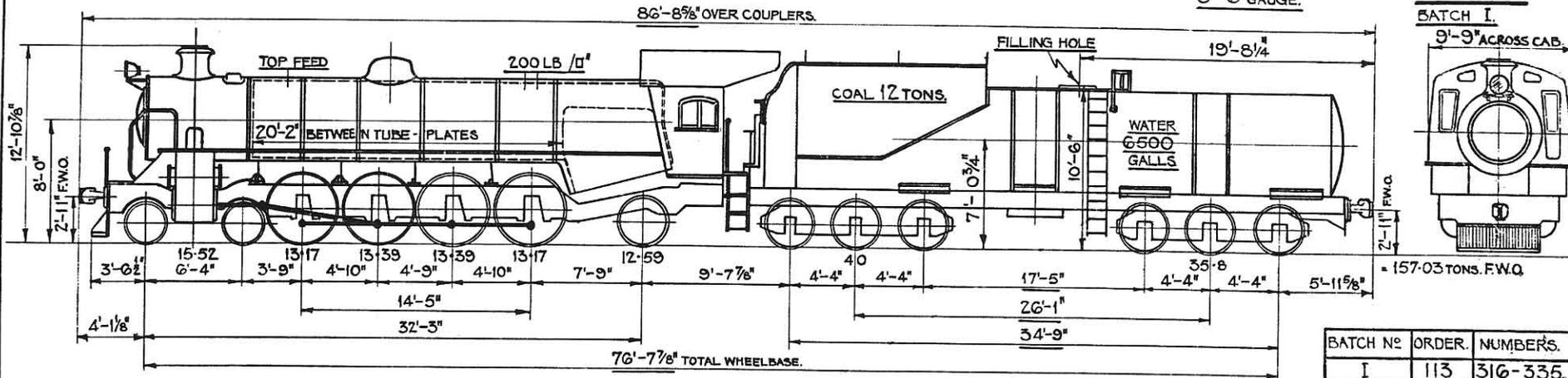
D.T. POOLE (MARCH 1949)

# 19TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS

3'-0" GAUGE.

CLASS 19.  
BATCH I.



BATCH NO	ORDER.	NUMBERS.
I	113	316-335.

*W. G. ...*  
-C.M.E.-

**GENERAL PARTICULARS.**

SUPERHEATED.  
 TRACTIVE FORCE AT 85% B.W.P. : 36,090 LB  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 3.297  
 MAXIMUM COUPLED AXLE LOAD: 13.39 TONS.  
 WEIGHT ON ALL COUPLED WHEELS: 53.12 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY): 73.2 TONS.  
 " " " (F.W.O.): 81.23 TONS.  
 " " " TENDER (EMPTY): 34.7 TONS.  
 " " " (F.W.O.): 75.8 TONS.  
 " " " ENG. & TENDER (EMPTY): 107.9 TONS.  
 (F.W.O.): 157.03 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS: 2.048 TONS.  
 WATER CAPACITY 6,500 GALLONS.  
 COAL CAPACITY: 12 TONS.  
 RIGID WHEEL BASE: 14'-5"  
 NUMBER OF ENGINES: BATCH I - 20. NOS: 316-335.

**ENGINE**

CYLINDERS: (2 OUTSIDE): 21" DIA. x 26" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 4'-6" DIA.  
 TRAILING TRUCK WHEELS: 2'-10" DIA.  
 TENDER BOGIE WHEELS: 2'-10" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 9 7/8" x 6" DIA.  
 " " : COUPLED WHEELS: DRIVERS: 9" x 8 1/2" DIA.  
 " " : " " : OTHERS: 9" x 7 1/2" DIA.  
 " " : TRAILING TRUCK WHEELS: 12" x 6 1/2" DIA.  
 " " : TENDER BOGIE WHEELS: 10" x 5" DIA.  
 CONNECTING ROD CENTRES: 7'-6"  
 BRAKES: VACUUM.  
 BRAKE POWER: (COMBINED): 52.6 TONS AT 40.81%.  
 INJECTORS: GRESHAM & CRAVEN  
 VALVES: PISTON 11" DIA. 3 1/2" TRAVEL. 7 9/32"  
 TYPE OF VALVE GEAR: WALSCHAERTS.

**BOILERS.**

PRESSURE: 200 LB PER SQ. INCH.  
 SMALLEST OUTSIDE DIA. OF BARREL: 5'-1 3/8"  
 LENGTH BETWEEN TUBE PLATES: 20'-2"  
 GRATE INSIDE FOUNDATION RING: 6'-8 3/4" x 5'-4 1/4"  
 GRATE AREA: 36 SQ. FT.  
 HEATING SURFACES: FLUE TUBES: 6 97 SQ. FT.  
 " " : BOILER TUBES: 1 003 " "  
 " " : WATER TUBES: 17 " "  
 " " : FIREBOX: 130 " "  
 TOTAL EVAPORATION: 1 847 " "  
 SUPERHEATER: 390 " "  
 TOTAL: 2 237 " "

I	1952.	£38,746
BATCH	SERVICE ENTRY.	COST PER ENGINE.

D.T. P. 53 (July 53)

# 19 TH CLASS LOCOMOTIVE

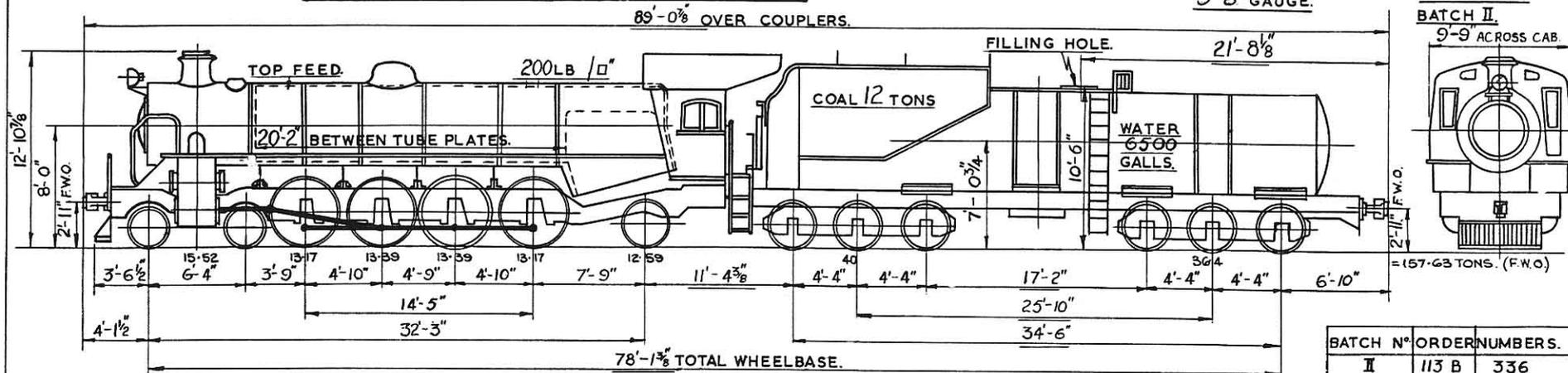
RHODESIA RAILWAYS.

3'-6" GAUGE.

CLASS 19.

BATCH II.

9'-9" ACROSS CAB.



BATCH	N°	ORDER	NUMBERS.
II	113 B	336	

CONVERTED FROM CONDENSER 1958.

*A. S. Morrison*  
C.M.E.

## GENERAL PARTICULARS.

SUPERHEATED.  
 TRACTIVE FORCE AT 85% B.W.P. 36,090 LB  
 FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. 3.297.  
 MAXIMUM COUPLED AXLE LOAD 13.39 TONS.  
 WEIGHT ON ALL COUPLED WHEELS 53.12 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY) 73.2 TONS.  
 " " " " (F.W.O.) 81.23 TONS.  
 " " " TENDER (EMPTY) 35.3 TONS.  
 " " " " (F.W.O.) 76.4 TONS.  
 " " " ENG & TENDER (EMPTY) 108.5 TONS.  
 " " " " (F.W.O.) 157.63 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS 1.77 TONS.  
 WATER CAPACITY 6,500 GALLS.  
 COAL CAPACITY 12 TONS.  
 RIDGID WHEEL BASE 14'-5"  
 NUMBER OF ENGINES BATCH II-1 N° 336.

## ENGINE.

CYLINDERS: (2 OUTSIDE) 21" DIA. X 26" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 4'-6" DIA.  
 TRAILING TRUCK WHEELS: 2'-10" DIA.  
 TENDER BOGIE WHEELS: 2'-10" DIA.  
 AXLE JOURNALS: BOGIE WHEELS: 9 7/8 X 6" DIA.  
 " " : COUPLED WHEEL DRIVER: 9" X 8 1/2" DIA.  
 " " : " " OTHERS: 9" X 7 1/2" DIA.  
 " " : TRAILING TRUCK WHEELS: 12" X 6 1/2" DIA.  
 " " : TENDER BOGIE WHEELS: 10" X 5" DIA.  
 CONNECTING ROD CENTRES: 7'-6"  
 BRAKES: VACUUM.  
 BRAKE POWER (COMBINED) 54.15 TONS AT 41.81 %  
 INJECTORS: GRESHAM & CRAVEN  
 VALVES PISTON: 11" DIA. 3 1/4" TRAVEL. 7 9/32."  
 TYPE OF VALVE GEAR: WALSCHAERTS.

## BOILER.

PRESSURE: 200LB PER SQ. IN.  
 SMALLEST OUTSIDE DIA OF BARREL: 5'-1 3/8"  
 LENGTH BETWEEN TUBE PLATES: 20'-2"  
 GRATE INSIDE FOUNDATION RING: 6'-8 3/4" X 5'-4 1/4"  
 GRATE AREA 36 SQ. FT.  
 HEATING SURFACES: FLUE TUBES: 697 SQ. FT.  
 " " : BOILER TUBES: 1,003 " "  
 " " : WATER TUBES: 17 " "  
 " " : FIREBOX: 130 " "  
 TOTAL EVAPORATION: 1,847 " "  
 SUPERHEATER: 390 " "  
 TOTAL: 2,237 " "

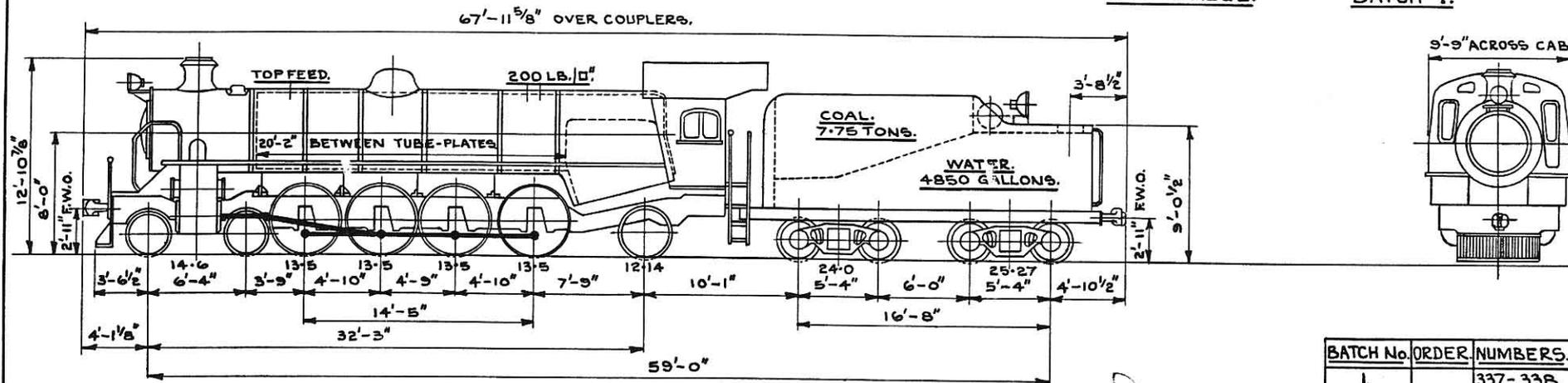
II	1954	£67,795
BATCH	SERVICE ENTRY	COST PER ENGINE

A.S. Morrison 1958

# 19B CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE.

CLASS 19B.  
BATCH 1.



BATCH No.	ORDER	NUMBERS.
1.		337-338.

*Handwritten signature* = 3 3/4  
— C.M.E. —

## GENERAL PARTICULARS.

SUPERHEATED.  
 TRACTIVE FORCE AT 85% B.W.P: 36,090 LB.  
 FACTOR OF ADHESION AT 85% B.W.P & F.W.O.: 3.35.  
 MAXIMUM COUPLED AXLE LOAD: 13.5 TONS.  
 WEIGHT ON ALL COUPLED WHEELS: 54 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY): 73.71 TONS.  
 " " " " (F.W.O.): 81.74 TONS.  
 " " " TENDER (EMPTY): 19.87 TONS.  
 " " " (F.W.O.): 49.27 TONS.  
 " " " ENG. & TENDER (EMPTY): 93.58 TONS.  
 " " " " " (F.W.O.): 131.01 TONS.  
 WEIGHT PER FOOT RUN OVER BUFFERS: 1.927 TONS.  
 WATER CAPACITY: 4850 GALLONS.  
 COAL CAPACITY: 7.75 TONS.  
 RIGID WHEEL BASE: 14'-5"  
 No. OF ENGINES: BATCH I - 2 Nos 337 & 338.

## ENGINE.

CYLINDERS: (2 OUTSIDE): 21" DIA. x 26" STROKE.  
 BOGIE WHEELS: 2'-4 1/2" DIA.  
 COUPLED WHEELS: 4'-6" DIA.  
 TRAILING TRUCK WHEELS: 2'-10" DIA.  
 TENDER BOGIE WHEELS: 2'-6" DIA. ROLLERS SKF.  
 AXLE JOURNALS: BOGIE WHEELS: 9 7/8 x 6" DIA.  
 " " : COUPLED WHEELS: DRIVERS: 9" x 8 1/2" DIA.  
 " " : " " : OTHERS: 9" x 7 1/2" DIA.  
 " " : TRAILING TRUCK WHEELS: 12" x 6 1/2" DIA.  
 " " : TENDER WHEELS: 140mm ROLLERS SKF.  
 CONNECTING ROD CENTRES: 7'-6"  
 BRAKES: VACUUM.  
 BRAKE POWER (COMBINED): 37.72 TONS AT 36.5%  
 INJECTORS: GRESHAM & CRAVEN.  
 VALVES: PISTON 11" DIA. 7 9/32 TRAVEL.  
 TYPE OF VALVE GEAR: WALSCHAERTS.

## BOILERS.

PRESSURE: 200 LB. PER SQUARE INCH.  
 SMALLEST OUTSIDE DIA. OF BARREL: 5'-1 3/8".  
 LENGTH BETWEEN TUBE PLATES: 20'-2"  
 GRATE INSIDE FOUNDATION RING: 6'-8 3/4 x 5'-4 1/4".  
 GRATE AREA: 36 SQ. FT.  
 HEATING SURFACES: FLUE TUBES: 697 SQ. FT.  
 " " : BOILER TUBES: 1003 " "  
 " " : WATER TUBES: 17 " "  
 " " : FIRE BOX: 130 " "  
 TOTAL EVAPORATION: 1847 " "  
 SUPERHEATER: 390 " "  
**TOTAL: 2237 " "**

1.	1968.	\$10 450.
BATCH.	SERVICE ENTRY.	COST PER ENGINE.

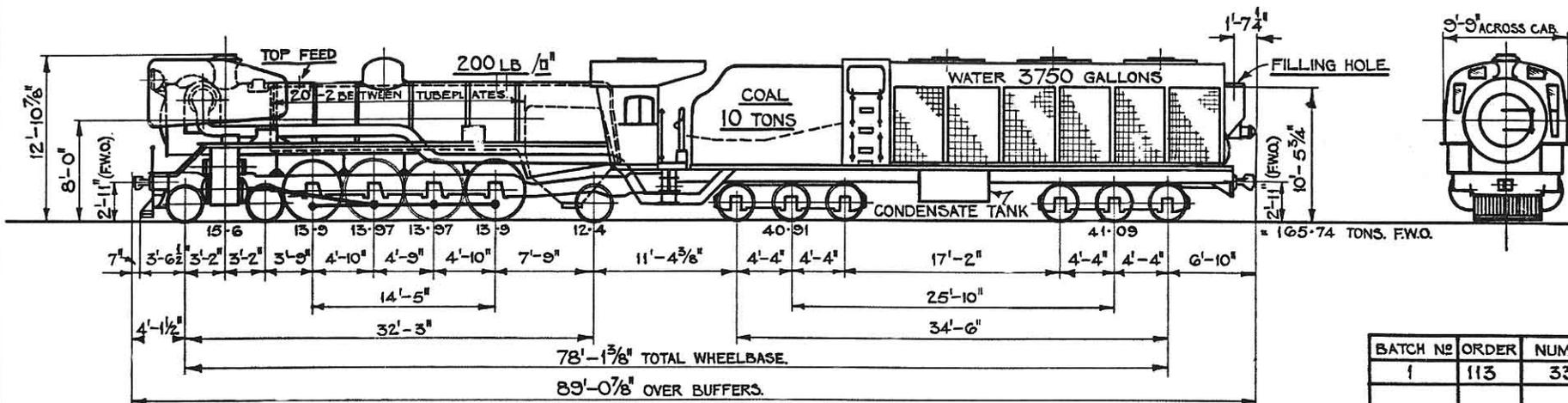
*Work order 11/10/54*  
— C.M.E. —

# 19C. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.

3'-6" GAUGE.

CLASS 19C.  
BATCH I



CONVERTED TO 19TH CLASS, 1958.

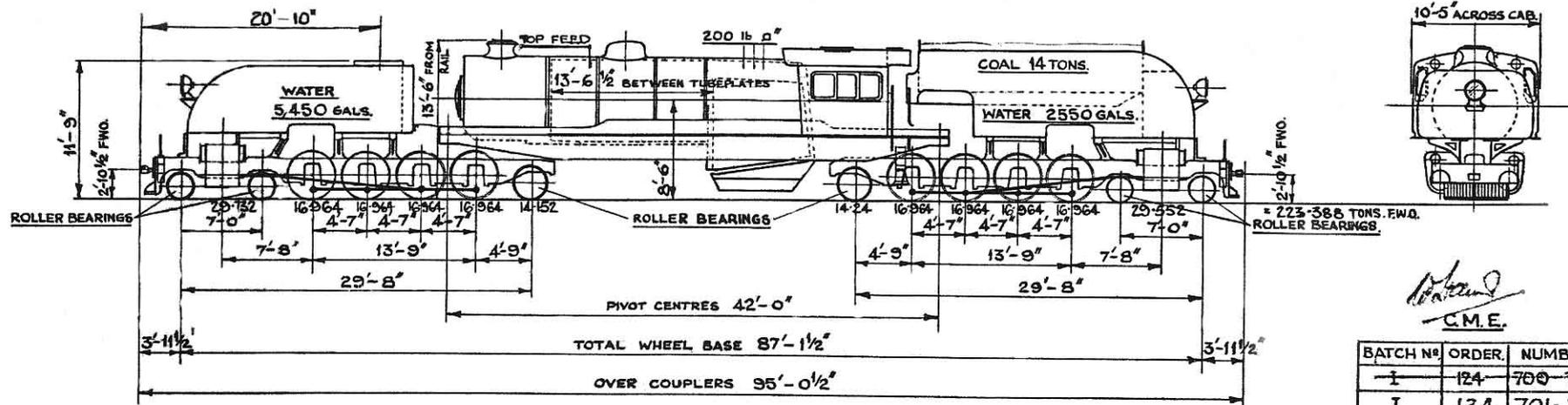
GENERAL PARTICULARS.	ENGINE.	BOILER.						
SUPERHEATED. TRACTIVE FORCE AT 85% B.W.P. : 36,090 LB FACTOR OF ADHESION AT 85% B.W.P. & F.W.O. : 3.46 MAXIMUM COUPLED AXLE LOAD (F.W.O.) : 13.97 TONS WEIGHT ON ALL COUPLED WHEELS : 55.74 TONS TOTAL WEIGHT OF ENGINE (EMPTY) : " " " " (F.W.O.) : 83.74 TONS. " " " " TENDER (EMPTY) : " " " " (F.W.O.) : 82 TONS. " " " " ENG. & TENDER (EMPTY) : " " " " (F.W.O.) : 165.74 TONS.	CYLINDERS : (2 OUTSIDE) : 21" DIA. X 26" STROKE. BOGIE WHEELS : 2'-4 1/2" DIA. COUPLED WHEELS : 4'-6" DIA. TRAILING TRUCK WHEELS : 2'-10" DIA. TENDER BOGIE WHEELS : 2'-10" DIA. AXLE JOURNALS : BOGIE WHEELS : 9 7/8" X 6" DIA. " " " : COUPLED WHEELS : DRIVERS : 9" X 8 1/2" DIA. " " " : " " " : OTHERS : 9" X 7 1/2" DIA. " " " : TRAILING TRUCK WHEELS : 12" X 6 1/2" DIA. " " " : TENDER BOGIE WHEELS : 10" X 5" DIA. CONNECTING ROD CENTRES : 7'-6"	PRESSURE : 200 LB PER SQ. INCH. SMALLEST OUTSIDE DIA. OF BARREL : 5'-1 3/8" LENGTH BETWEEN TUBEPLATES : 20'-2" GRATE INSIDE FOUNDATION RING : 6'-8 3/4" X 5'-4 1/4" GRATE AREA : 36 SQ. FT. HEATING SURFACES : FLUE TUBES : 697 SQ. FT. " " " : BOILER TUBES : 1003 " " " " " : WATER TUBES : 17 " " " " " : FIREBOX : 130 " " TOTAL EVAPORATION : 1847 " " SUPERHEATER : 390 " " <hr/> 2237 " "						
WT. PER FOOT RUN OVER BUFFERS : WATER CAPACITY : FRESH : 3750 GALLONS " " " : CONDENSATE : 370 GALLONS. COAL CAPACITY : 10 TONS. RIGID WHEEL BASE : 14'-5" NUMBER OF ENGINES : BATCH I :- 1 No 336.	BRAKES : VACUUM. BRAKE POWER : 54.15 TONS AT 39.31% (COMBINED). FEED PUMPS : STEAM TURBO TYPE. VALVES : 11" DIA. 3 3/16" TRAVEL 7 9/32" TYPE OF VALVE GEAR : WALSCHAERTS.							
		<table border="1" data-bbox="1512 1324 2027 1380"> <tr> <td>I</td> <td>1954</td> <td>£52,000</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY</td> <td>COST PER ENGINE.</td> </tr> </table>	I	1954	£52,000	BATCH	SERVICE ENTRY	COST PER ENGINE.
I	1954	£52,000						
BATCH	SERVICE ENTRY	COST PER ENGINE.						

D.T. POOLE. (SEPT. 54).

# 20 TH. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS 20  
BATCH I & II



*M. J. ...*  
C.M.E.

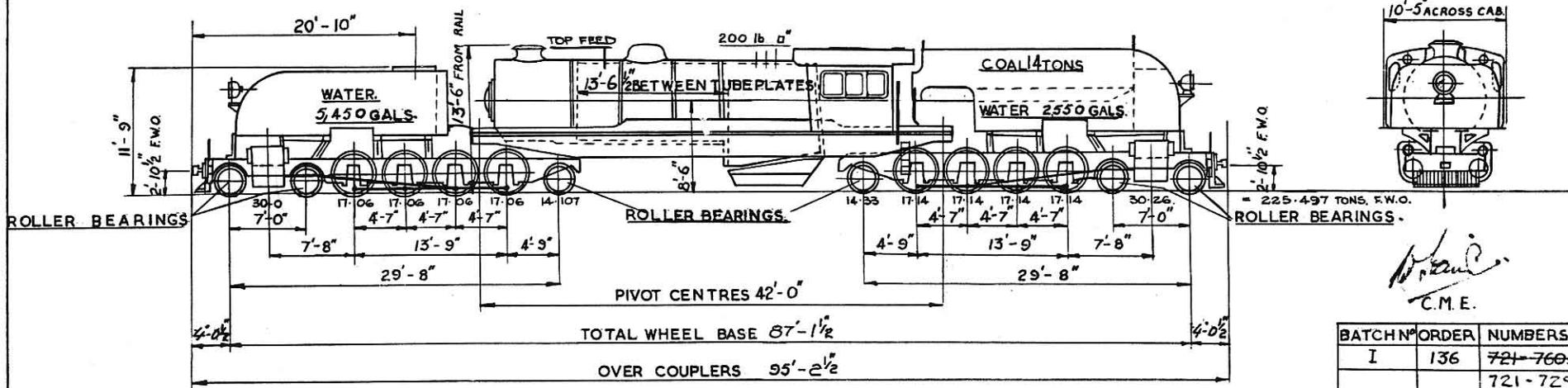
BATCH NO.	ORDER	NUMBERS
I	124	700-714
I	124	701-714
II	136	715-720

GENERAL PARTICULARS	ENGINE	BOILER						
<p>SUPERHEATED <span style="float: right;">x (31,45 TONNE)</span></p> <p>TRACTIVE FORCE AT 85% BWP : x69333 LB</p> <p>FACTOR OF ADHESION AT 85% BWP &amp; F.W.O. : 4.384</p> <p>MAXIMUM COUPLED AXLE LOAD F.W.O. : 16,964 <sup>x (17,254 TONNES)</sup> TONS.</p> <p>WEIGHT ON ALL COUPLED WHEELS : 135,712 TONS.</p> <p>TOTAL WEIGHT OF ENGINE:(EMPTY) : 163,25 TONS.</p> <p>" " " (F.W.O.) x223,388 TONS.</p> <p>WEIGHT PER FOOT RUN OVER BUFFERS : 2,35 <sup>x (2,2704 TONNES)</sup> TONS</p> <p>WATER CAPACITY: FRONT TANK: 5450 GALLS.</p> <p>" " : HIND TANK: 2550 GALLS.</p> <p>" " : TOTAL: 8000 GALLS.</p> <p>COAL CAPACITY : 14 TONS.</p> <p>RIGID WHEEL BASE : 13'-9" <span style="float: right;">14 701-714</span></p> <p>NUMBER OF ENGINES : BATCH I - <del>15</del> Nos 700-714</p> <p style="text-align: right;">II-6 Nos 715-720</p>	<p>CYLINDERS : (2 ON EACH UNIT): 20" DIA. x 26" STROKE.</p> <p>INNER BOGIE WHEELS : 2'-9" DIA.</p> <p>OUTER BOGIE WHEELS : 2'-4 1/2" DIA.</p> <p>COUPLED WHEELS : 4'-3" DIA.</p> <p>ROLLER BEARINGS : BOGIE WHEELS &amp; ECCENTRIC RODS.</p> <p>AXLE JOURNALS : BOGIE WHEELS INNER : 10 3/8 x 7" DIA.</p> <p>" " : BOGIE WHEELS OUTER : 3 1/16 x 7" DIA.</p> <p>" " : COUPLED WHEELS : 11" x 9" DIA.</p> <p>BRAKES : STEAM &amp; VACUUM.</p> <p>BRAKE POWER : 69,58 TONS AT 51.28% (COMBINED).</p> <p>INJECTORS : GRESHAM &amp; CRAVEN No 15 CLASS R.H.W.</p> <p>VALVES : PISTON 11" DIA. TRAVEL 6 3/4"</p> <p>TYPE OF VALVE GEAR : WALSCHAERTS.</p> <p>PIVOT CENTRE : SELF-ADJUSTING TYPE.</p> <p>CONNECTING ROD CENTRES : 12'-0"</p>	<p>PRESSURE 200 LB. PER SQ. INCH.</p> <p>SMALLEST OUTSIDE DIAMETER OF BARREL : 7'-1 1/16" DIA.</p> <p>LENGTH BETWEEN TUBEPLATES : 13'-6 1/2"</p> <p>GRATE INSIDE FOUNDATION RING : 8'-4 1/16" x 7'-6 7/8"</p> <p>GRATE AREA : 63.1 SQ. FT.</p> <p>HEATING SURFACE: FLUE TUBES : } 2791 SQ. FT.</p> <p>" " : BOILER TUBES: } 233 SQ. FT.</p> <p>" " : ARCH TUBES: }</p> <p>" " : FIREBOX: }</p> <p>TOTAL EVAPORATION : 3024 SQ. FT.</p> <p>SUPERHEATER : 748 SQ. FT.</p> <p style="text-align: right;">TOTAL: 3772 SQ. FT.</p>						
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">II</td> <td style="width: 20%;">1957</td> <td style="width: 70%;">£ 76010</td> </tr> <tr> <td>I</td> <td>1954/55</td> <td>£ 67331</td> </tr> </table>	II	1957	£ 76010	I	1954/55	£ 67331
II	1957	£ 76010						
I	1954/55	£ 67331						

B.C.W. TURNER. (JAN. 55.)

# 20A CLASS LOCOMOTIVE

RHODESIA RAILWAYS. CLASS 20A  
3'-6" GAUGE. BATCH: I.



BATCH NO	ORDER	NUMBERS.
I	136	721-760-
		721-729
		731-759

*W. J. ...*  
C.M.E.

**GENERAL PARTICULARS.**

SUPERHEATED. \* (31.45 TONNE)  
 TRACTIVE FORCE AT 85% B.W.P. \* 69,333 LB  
 FACTOR OF ADHESION AT 85% B.W.P & F.W.O. 4.419  
 MAXIMUM COUPLED AXLE LOAD F.W.O.  $\times 17.14$  TONS. (17.14 TONNE)  
 WEIGHT ON ALL COUPLED WHEELS. 136.8 TONS.  
 TOTAL WEIGHT OF ENGINE (EMPTY) 165.36 TONS.  
 " " " " (F.W.O.) \* 225.497 TONS. (225.497 TONNE)  
 WEIGHT PER FOOT RUN OVER BUFFERS. 2.38 TONS.  
 WATER CAPACITY FRONT TANK. 5,450 GALS.  
 " " HIND TANK. 2,550 GALS.  
 " " TOTAL. 8,000 GALS.  
 COAL CAPACITY: 14 TONS.  
 RIGID WHEEL BASE: 13'-9"  
 NUMBERS OF ENGINES: BATCH I. Nos 721-729  
 721-760  
 731-759

**ENGINE.**

CYLINDERS: (2 ON EACH UNIT): 20" DIA X 26" STROKE  
 INNER BOGIE WHEELS: 2'-9" DIA.  
 OUTER BOGIE WHEELS: 2'-9" DIA.  
 COUPLED WHEELS: 4'-3" DIA.  
 ROLLER BEARINGS: BOGIE WHEELS & ECCENTRIC RODS  
 AXLE JOURNALS BOGIE WHEELS INNER. 3 1/4" x 7" DIA.  
 " " " " OUTER. 3 1/4" x 7" DIA.  
 " " COUPLED WHEELS: 11" x 9" DIA.  
 BRAKES: STEAM & VACUUM.  
 BRAKE POWER 69.58 TONS AT 50.86% (COMBINED)  
 INJECTORS GRESHAM & CRAVEN No 13 CLASS R.H.W.  
 VALVES: PISTON 11" DIA TRAVEL 6 3/4"  
 TYPE OF VALVE GEAR: WALSCHAERTS.  
 PIVOT CENTRE: SELF-ADJUSTING TYPE.  
 CONNECTING ROD CENTRES: 12'-0"

**BOILER.**

PRESSURE 200 LB PER SQ. INCH.  
 SMALLEST OUTSIDE DIAMETER OF BARREL: 7'-1 1/16" DIA.  
 LENGTH BETWEEN TUBE PLATES: 13'-6 1/2"  
 GRATE INSIDE FOUNDATION RING: 8'-4 1/16" x 7'-6 3/8"  
 GRATE AREA: 63.1 SQ. FT.  
 HEATING SURFACE FLUE TUBES } 2,791 SQ. FT.  
 " " BOILER TUBES }  
 " " ARCH TUBES } 233 SQ. FT.  
 " " FIREBOX }  
 TOTAL EVAPORATION: 3,024 SQ. FT.  
 SUPERHEATER: 748 SQ. FT.  
 TOTAL: 3,772 SQ. FT.

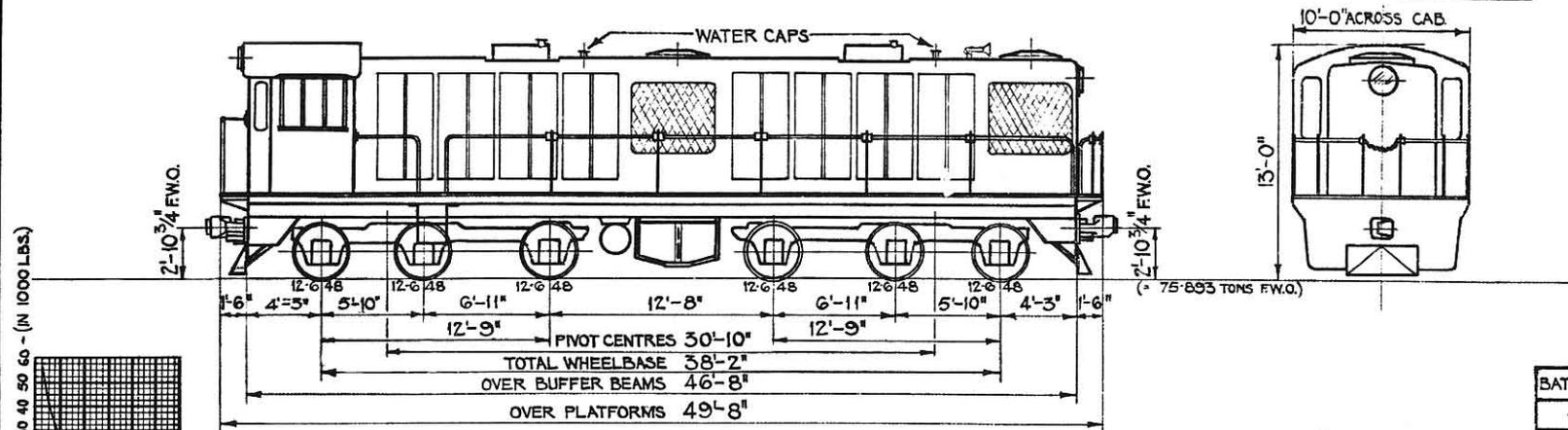
I	1957/58.	£76,010
BATCH	SERVICE ENTRY.	COST PER ENGINE

A.S. Morrison 1958

# D.E.I. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS  
3'-6" GAUGE

CLASS **D.E.I.**  
BATCH **I**



BATCH NO.	ORDER.	NUMBERS.
I		1000-1005-
1		0101-0106

*Revised 15/9/53*  
—C.M.E.—

## GENERAL PARTICULARS.

TRACTIVE EFFORT: AT 15 M.P.H. = 17500 LB (MAX. 57 MPH)  
 " " : AT 35 M.P.H. = 7500 LB.  
 % TRUE ADHESION: 10.29% AT 15 M.P.H. & 4.41% AT 35 M.P.H.  
 MAXIMUM AXLE LOAD: (F.W.O.) 12.648 TONS (LONG)  
 TOTAL WEIGHT OF LOCO: 75,893 TONS (LONG)  
 FUEL OIL CAPACITY: 541 GALLS. PER LOCO (IMP)  
 LUBRICATING OIL CAPACITY: 35 GALLS PER LOCO (IMP)  
 SANDBOXES: (4 PER LOCO): 12 CUBIC FEET.  
 BOGIES: (6 WHEELED):  
 WHEELS: 3'-0" DIA.  
 AXLEBOXES: TIMKEN ROLLER BEARINGS  
 ACTUAL TRACTIVE EFFORT CONT. = 77.8 kN AT 24.14 km/h.  
 " " " " = 33.4 kN AT 56.33 km/h.  
 NUMBER OF LOCOS: BATCH I—6: NOS 1000-1005  
 TRACTIVE EFFORT: 42,500 LB. AT 25% ADHESION.  
 TRACTIVE EFFORT: 189 kW AT 25% ADHESION

## ENGINE, RADIATOR & BRAKE GEAR.

ENGINE: (2 PER LOCO). MODEL D-39T.  
 TYPE: CATERPILLAR, 12 CYL, V-BANK, SUPERCHARGED.  
 RUNNING SPEED: 1200 R.P.M.  
 CYLINDER: 5 3/4" DIA. x 8" STROKE.  
 HORSEPOWER PER ENGINE: 460 BHP  
 RADIATOR: (2 PER LOCO).  
 TYPE: SECTIONAL CORE  
 COOLING WATER CAPACITY: 85.35 GALLS. (IMP)  
 BRAKE GEAR: COMBINED VACUUM & AIR.  
 TYPE: WESTINGHOUSE, PRESSURE: 20 LB / SQ. IN.  
 CYLINDER: 7" DIA. x 8" STROKE.  
 BRAKE POWER: 21.4 TONS AT 28.5%.

## ELECTRICAL EQUIPMENT

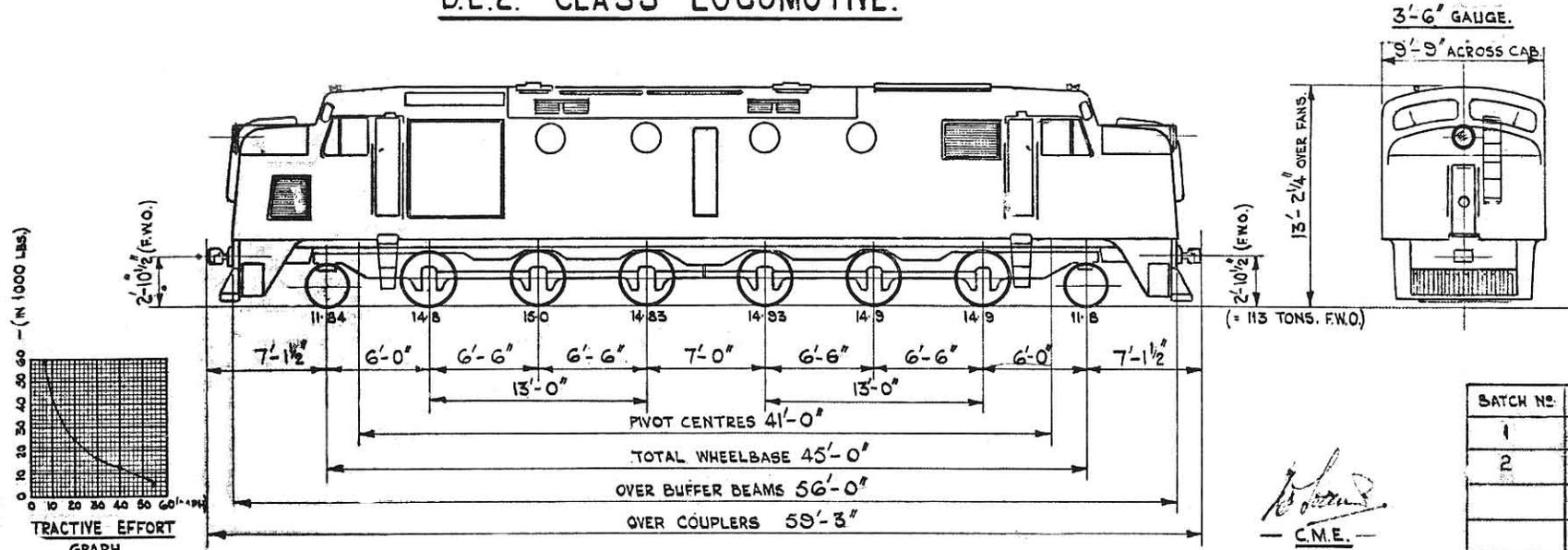
MAIN GENERATOR: (2 PER LOCO).  
 TYPE: WESTINGHOUSE 1604C.  
 CONTINUOUS 1300 AMP, 308 VOLTS, 1200 R.P.M.  
 EXCITER-AUXILIARY GENERATOR: (2 PER LOCO).  
 TYPE: WESTINGHOUSE YG-49D.  
 160 AMP, 75 VOLT, 900-2250 R.P.M.  
 TRACTION MOTORS: (AXLE HUNG—6 PER LOCO).  
 TYPE: WESTINGHOUSE 973A SERIES  
 CONTINUOUS 325 AMP, 300 VOLTS WITH 1500 CU/FT. OF AIR/MIN.  
 TRACTION BLOWERS: (2 PER LOCO).  
 TYPE: SIRROCCO MODEL 182 (AMERICAN BLOWER CORP).  
 STORAGE BATTERIES:  
 VOLTAGE: 64 PLATES; 17; AMPERE PER HOUR: 284

I	1952.	£33,333
BATCH	SERVICE ENTRY	COST PER LOCO.

# D.E.2. CLASS LOCOMOTIVE.

RHODESIA RAILWAYS.

CLASS **DE2**  
BATCH 1



BATCH NO.	ORDER	NUMBERS
1	125	1200-1222
2	142	1223-1234

*[Signature]*  
— C.M.E. —

GENERAL PARTICULARS.	ENGINE, RADIATOR & BRAKE GEAR.	ELECTRICAL EQUIPMENT.									
<p><b>TRACTION EFFORT 50400 LBS. AT 25% ADHESION.</b>                      ACTUAL T/EFFORT CONT. <del>150,2 KN</del> <sup>150,2 KN</sup> AT 21,8 km/h.</p> <p>% TRUE ADHESION: 16.15% AT 15 MPH. &amp; 6.95% AT 35 MPH.                      MAXIMUM AXLE LOAD: (F.W.O.): 15 TONS. (LONG) (15,24 TONNE)                      TOTAL WEIGHT OF LOCO: 113 TONS. (LONG) (113,8 TONNE)                      ADHESIVE WEIGHT: 90 TONS (NOMINAL)                      FUEL CAPACITY: 1000 GALLS. PER LOCO (NOMINAL)                      LUBRICATING OIL CAPACITY: 135 GALLS.                      SANDBOXES: (8 PER LOCO) 16 CUBIC FEET. (4 ONLY IN USE)                      RIGID WHEEL BASE: 13'-0"                      BOGIES: (6 WHEELED DRIVEN.)                      WHEELS: 3'-1 1/2" DIA.                      PONY BOGIE                      WHEELS: 2'-4 1/2" DIA.                      AXLEBOXES: TIMKEN ROLLER BEARINGS                      DESIGN T/EFFORT CONT. 150,2 KN AT 21,8 km/h.</p>	<p>ENGINE: TYPE: 16 CYL. S.V.T. MK. II SUPERCHARGED.                      MAXIMUM R.P.M.: 850.                      CYLINDERS: 10" DIA. x 12" STROKE.                      HORSEPOWER: 1710 B.H.P.                      RADIATOR: (2 PER LOCO)                      TYPE: SECTIONAL CORE.                      COOLING WATER CAPACITY: 265 GALLS.                      BRAKE GEAR: COMBINED VACUUM &amp; AIR                      TYPE: WESTINGHOUSE. PRESSURE: 50 LB./sq" (MAX.)                      CYLINDER: 8" DIA. x 8" STROKE.                      BRAKE POWER: 76.5 TONS. AT 67.75%.</p> <p>(1209, 1213. SCRAPPED)</p>	<p>MAIN GENERATOR. TYPE: E.E. 822/2C.                      CONTINUOUS: 1750 AMP. 1095 KW/850 RPM.                      AUXILIARY GENERATOR: TYPE: E.E. 911/1B.                      391/436 AMP. 110 VOLT. 450/850 R.P.M.                      TRACTION MOTORS: (AXLE HUNG - 6 PER LOCO)                      TYPE: E.E. 530/1A.                      CONTINUOUS: 520 AMP. 300 VOLTS. 469 RPM. WITH 1800 CU/FT. OF AIR/MIN.                      TRACTION BLOWERS: (2 PER LOCO.)                      TYPE: E.E. 714/11 N. CONT: 115 AMP. 110 VOLTS. 2.600 RPM. WITH 5400 CU/FT. OF AIR/MIN.                      BATTERIES: TYPE: EXIDE E.F.C. 25 48 CELLS.                      VOLTAGE: 110 PLATES: 25 AMP/HOUR: 288 AT 5 HOUR RATE.</p> <table border="1"> <tr> <td>2</td> <td>1957/58</td> <td>£ 92,472</td> </tr> <tr> <td>1</td> <td>1955/56</td> <td>£ 80,489</td> </tr> <tr> <td>BATCH</td> <td>SERVICE ENTRY.</td> <td>COST PER LOCO</td> </tr> </table>	2	1957/58	£ 92,472	1	1955/56	£ 80,489	BATCH	SERVICE ENTRY.	COST PER LOCO
2	1957/58	£ 92,472									
1	1955/56	£ 80,489									
BATCH	SERVICE ENTRY.	COST PER LOCO									

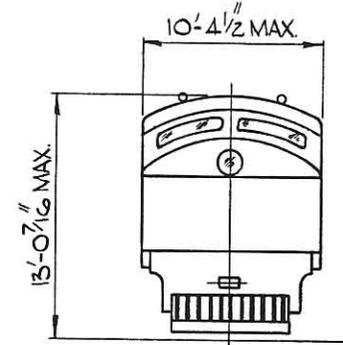
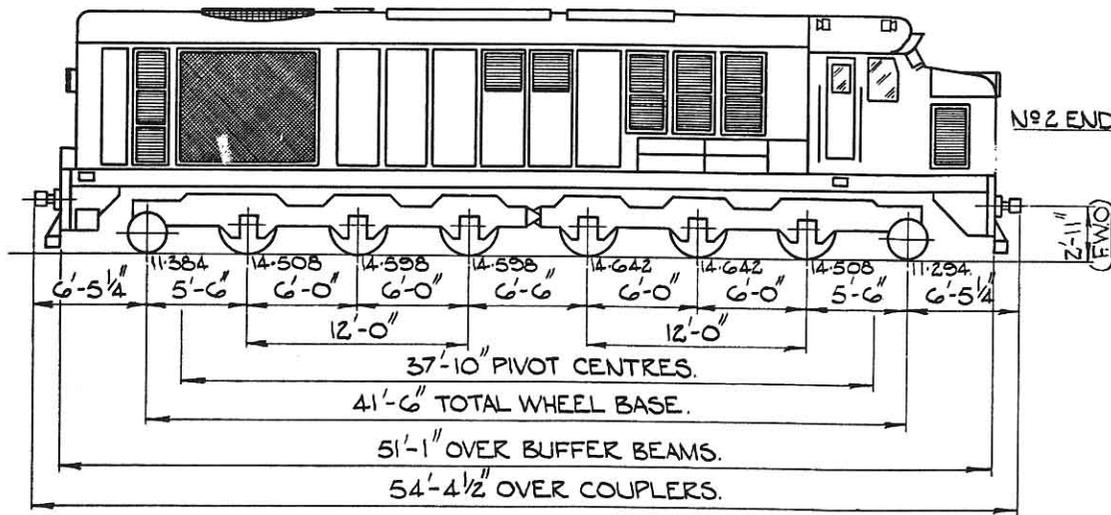
B.C. W. TURNER FEB. 57

DE.3 CLASS LOCOMOTIVE.

RHODESIA RAILWAYS 3'-6" GAUGE.

CLASS DE.3.  
BATCH 1

No 1 END.



*M. L. L. L.*  
C.M.E.

1.	1962	1300-1315.
BATCH NO	ORDER	NUMBERS

GENERAL PARTICULARS

TRACTIVE EFFORT-49,000 LB AT 25% ADHESION.  
 ACTUAL T/EFFORT CONT. - 17,14 TONNE AT 20.8 km/h  
 MAXIMUM AXLE LOAD (F.W.O.) - 14,642 TONS.  
 TOTAL WEIGHT OF LOCOMOTIVE \*110.18 TONS.  
 ADHESIVE WEIGHT - 87.5 TONS. \*(77.9 TONNE)  
 LUBRICATING OIL CAPACITY - 110 GALLS.  
 SANDBOXES, 4 PER LOCO, TOTAL CAPACITY - 76 CWT.  
 RIGID WHEEL BASE - 12'-0"  
 FUEL CAPACITY - 1,000 GALLS.  
 BOGIES (6 WHEELS DRIVEN)  
 WHEELS - 3'-1 1/2" DIA.  
 PONY BOGIE  
 WHEELS - 2'-4 1/2" DIA.  
 AXLEBOXES - TIMKEN ROLLER BEARINGS.  
 DESIGN T/EFFORT CONT. - 17,14 TONNE AT 20.8 km/h.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE TYPE - 12 CYL. C.S.V.T.  
 MAXIMUM R.P.M. - 850.  
 CYLINDERS - 10" DIA. X 12" STROKE.  
 HORSEPOWER - 1860 B.H.P.  
 RADIATOR - 2 PER LOCOMOTIVE (TYPE: SECTIONAL CORE)  
 COOLING WATER CAPACITY - ENGINE 172 GALLS.  
 COOLING WATER CAPACITY - INTERCOOLER, OIL-COOLER 55 GALLS.  
 BRAKE GEAR - COMBINED VACUUM AND AIR.  
 TYPE: WESTINGHOUSE, PRESSURE 70 LB / IN<sup>2</sup> MAX.  
 CYLINDER - 6" DIA. X 8" STROKE.  
 BRAKE POWER - 71.58 TONS AT 85.2%

1.	1962-1963.	£ 21,476.
BATCH	SERVICE ENTRY.	COST PER LOCO.

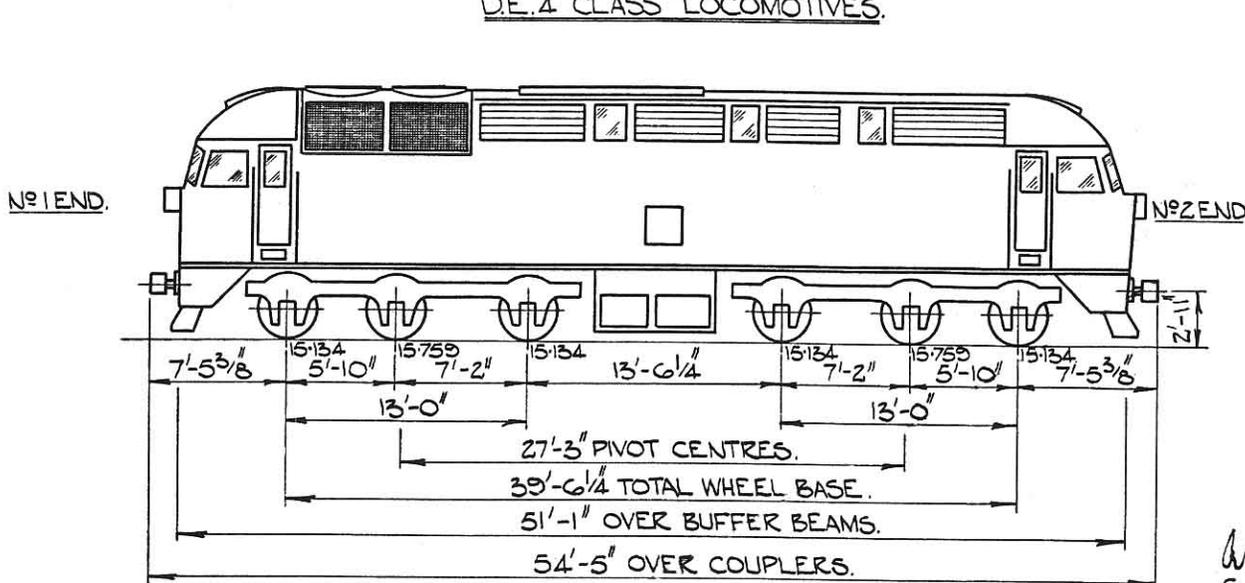
ELECTRICAL EQUIPMENT.

MAIN GENERATOR TYPE: EE 822/11G.  
 CONTINUOUS: 1175 KW/850 R.P.M. - 1575 AMP - 745 VOLTS.  
 AUXILIARY GENERATOR TYPE: EE 911/6B  
 43 KW/450 RPM. - 391 AMP - 110 VOLTS.  
 TRACTION MOTORS (AXLE HUNG, 6 PER LOCO)  
 TYPE: EE 537/3A.  
 CONTINUOUS.  
 TRACTION BLOWERS (2 PER LOCO)  
 TYPE: EE 750/34G - 14.4 H.P.  
 CONTINUOUS: 124 AMP - 110 VOLTS - 2,480 R.P.M.  
 BATTERIES  
 48 LEAD ACID CELLS - 154 AMP/HOUR - 110 VOLTS.

C.L. DUBUISSON JUNE '67.

D.E.4 CLASS LOCOMOTIVES.

RHODESIA RAILWAYS 3'-6" GAUGE.



CLASS DE 4.  
BATCH 1

*A. Kelly*  
C.M.E.

1.	163	1400-1413
BATCH N <sup>o</sup>	ORDER	NUMBERS.

GENERAL PARTICULARS.

TRACTIVE EFFORT-51,520 LB AT 25% ADHESION.  
 MAXIMUM AXLE LOAD (F.W.O)-15.759 TONS.  
 TOTAL WEIGHT OF LOCOMOTIVE-92.0 TONS.  
 ADHESIVE WEIGHT-92.0 TONS.  
 LUBRICATING OIL CAPACITY-97 GALLS.  
 SANDBOXES, 4 PER LOCO, TOTAL CAPACITY-10 1/2 CWT.  
 RIGID WHEEL BASE-13'-0"  
 FUEL CAPACITY-1,000 GALLS.  
BOGIES  
 WHEELS-3-4" DIA.  
 AXLEBOXES.-SKF ROLLER BEARINGS.  
 NUMBER OF LOCOS, BATCH 1-14, N<sup>o</sup>s 1400-1413.  
 ACTUAL T/EFFORT CONT.-160,21 N AT 21,6 km/h.  
 DESIGN T/EFFORT CONT.-166,77 k N AT 21,6 km/h.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE-JVSST12 MIRRLEES NATIONAL  
 MAXIMUM R.P.M.-1,000  
 CYLINDERS-3 3/4" DIA. X 10 1/2" STROKE  
 HORSEPOWER-1730 B.H.P.  
RADIATOR-4 PER LOCOMOTIVE (TYPE: SECTIONAL CORE).  
 COOLING WATER CAPACITY-ENGINE, 153 GALLS.  
 COOLING WATER CAPACITY-INTERCOOLER, OIL-COOLER, 60 GALLS.  
BRAKE GEAR-WESTINGHOUSE, PRESSURE 70 LB / IN<sup>2</sup> MAX. (COMBINED VACUUM AND AIR).  
 CYLINDER-10" DIA X 8" STROKE.  
 BRAKE POWER-78.7 TONS AT 85%.

1.	1964.	£ 83,606 00
BATCH.	SERVICE ENTRY.	COST PER LOCO

ELECTRICAL EQUIPMENT.

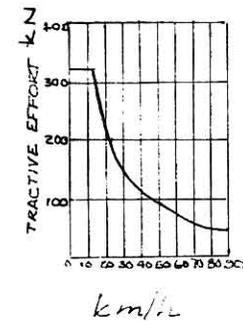
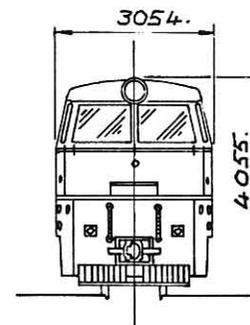
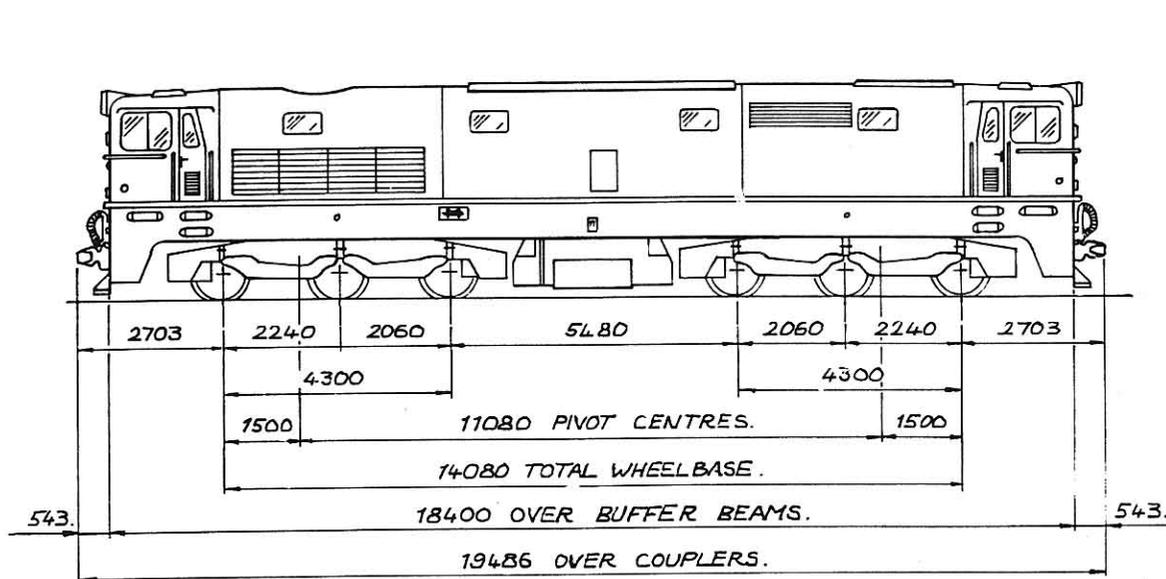
MAIN GENERATOR TYPE: TG. 160-50 MK I.  
 CONTINUOUS: 1650 AMPS-680 VOLTS & 2100 AMPS-530 VOLTS AT 1,000 R.P.M.  
AUXILIARY GENERATOR TYPE: TG. 69-24 MK II  
 338 AMPS-110 VOLTS-AT 1,000 R.P.M.  
TRACTION MOTORS (AXLE HUNG-6 PER LOCO).  
 TYPE: TM. 73-42 MK I.  
 CONTINUOUS: 700 AMPS-265 VOLTS-556 R.P.M.-222 H.P.  
TRACTION BLOWERS (2 PER LOCO)  
 TYPE: TAM. 28-16 MK IV.  
 CONTINUOUS: 103 AMPS-110 VOLTS-2,000 R.P.M.  
BATTERIES  
 48 LEAD ACID CELLS-154 AMP/HOUR-110 VOLTS.

C.L. DUBUISSON, JUNE 67



D.E. 5 CLASS LOCOMOTIVE.

NATIONAL RAILWAYS OF ZIMBABWE  
1067 GAUGE.



F.C.M.E. *[Signature]*

1.	203.	1500 ~ 1534.
BATCH N <sup>o</sup> .	ORDER.	NUMBERS.

GENERAL PARTICULARS.

ACTUAL T/EFFORT CONT. <sup>236 kN</sup> <sub>227 kN</sub> AT 18 km/h.  
DESIGN T/EFFORT CONT. ~ 245.25 kN AT 18 km/h.  
MAX STARTING TRACTIVE EFFORT ~ 313.9 kN  
MAX RUNNING SPEED ~ 96 km/h.  
AXLE LOAD ~ 17.2 TONNE  
TOTAL MASS. . APPRDX ~ 103 TONNE  
RIGID WHEEL BASE ~ 4300  
FUEL CAPACITY ~ 5400 LITRES.  
BOGIES: FABRICATED.  
WHEEL DIA. ~ 1016 mm.  
AXLE BOXES ~ DOUBLE CYLINDRICAL ROLLER BEARINGS.  
GEAR RATIO 33:18.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE. ~ M.A. 12 V 956 T.D.  
MAX. R.P.M. ~ 1500 R.P.M.  
CYLINDERS ~ V12, STROKE x BORE 230 x 230  
OUTPUT ~ 1690 kW / 1500 RPM.  
RADIATOR ~ WATER SECT. CORE  
OIL SECT. CORE  
CHARGE AIR AIR COOLED.  
BRAKE GEAR ~ PRESSURE 4 BAR MAX.  
COMBINED VACUUM/AIR.  
BRAKE POWER. ~  
STARTING ~ COMP. AIR.

ELECTRICAL EQUIPMENT.

BATTERY ~ 96 VOLTS 150 AMP HOURS.  
AUX. ALTERNATOR ~ 3 PHASE 90/100 KVA  
SYNCHRONOUS SELF EXCITED  
TWO BEARING TYPE  
1 FC 3246.6  
MAIN ALTERNATOR ~ 3 PHASE 1530 KVA  
SYNCHRONOUS ALT.  
SEPARATELY EXCITED, ONE  
BEARING TYPE 1 FC 3336.6

LOCO 1500 SCRAPPED.

1	1973 ~ 1976.	
BATCH.	SERVICE ENTRY.	COST PER LOCO.

P. D. BARRETT. FEB 1980.

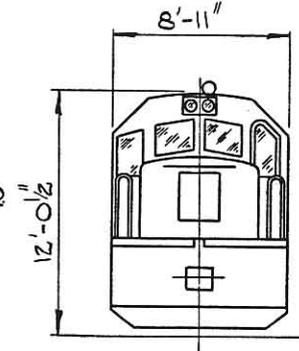
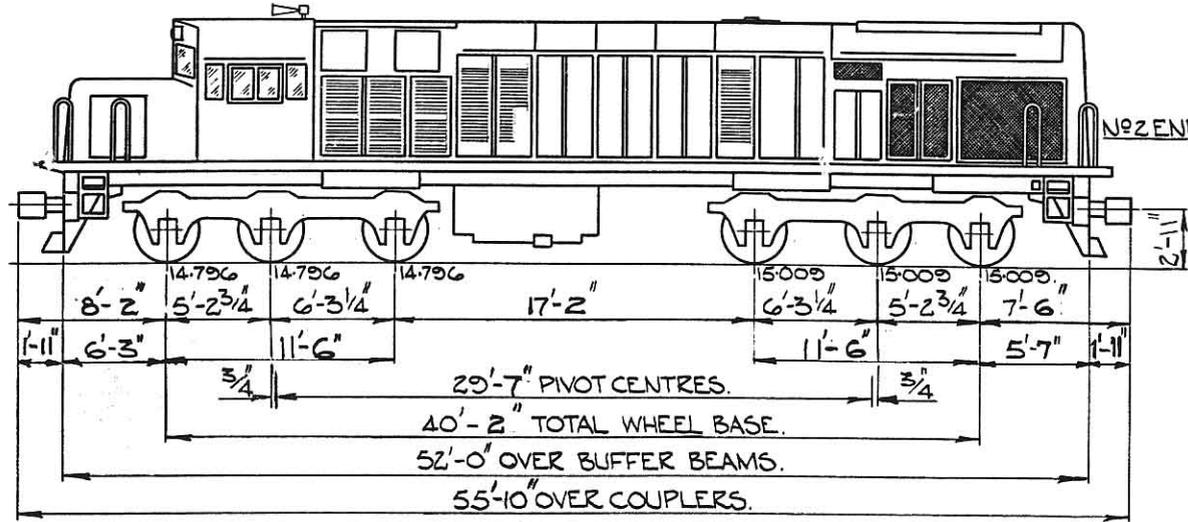
GE DRG 41R970545

D.E. 6 CLASS LOCOMOTIVE.

RHODESIA RAILWAYS 3'-6" GAUGE.

CLASS DE 6  
BATCH 1

No 1 END



*M. C. M.*  
C.M.E.

1	177	1600-1609
BATCH NO	ORDER	NUMBERS

GENERAL PARTICULARS.

TRACTIVE EFFORT - 50,075 ~~25~~ LB @ 25%  
 ACTUAL T/EFFORT CONT. <sup>AT 100% (100% LINE)</sup> 210,520 KN AT 102 km/h.  
 DESIGN T/EFFORT CONT. 210,520 KN AT 102 km/h.  
 MAXIMUM AXLE LOAD (F.W.O) \*15,009 TONS. <sup>(15,25 TONNE)</sup>  
 TOTAL WEIGHT OF LOCOMOTIVE ± 89,417 TONS.  
 LUBRICATING OIL CAPACITY - 229 GALLS. <sup>(90,84 TONNE)</sup>  
 SANDBOXES, 4 PER LOCO, TOTAL CAPACITY - 18 CUFT.  
 RIGID WHEEL BASE - 11'-6"  
 FUEL CAPACITY - 996 GALLS.  
 BOGIES (6 WHEELS DRIVEN)  
 WHEELS - 3'-0" DIA.  
 AXLEBOXES - TIMKEN ROLLER BEARINGS.  
 NUMBER OF LOCOS BATCH 1 - 10 - NOS 1600-1609.  
 GEAR RATIO 92 : 19

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE TYPE: FDL-12 GENERAL ELECTRIC.  
 MAXIMUM R.P.M. - 1,000.  
 CYLINDERS - 9" DIA X 10 1/2" STROKE.  
 HORSEPOWER - 2,090.  
 RADIATOR 1 PER LOCOMOTIVE (TYPE: SECTIONAL CORE)  
 COOLING WATER CAPACITY - 187 GALLS.  
 BRAKE GEAR WESTINGHOUSE, PRESSURE 70 P.S.I. MAX. (COMBINED VACUUM AND AIR).  
 CYLINDER - 12" DIA X 8" STROKE.  
 BRAKE POWER - 71.44 TONS AT 80%.

ELECTRICAL EQUIPMENT.

MAIN GENERATOR - MODEL 5GT581  
 CONTINUOUS RATING - 1,000 AMPS.  
 AUXILIARY GENERATOR - MODEL 5GY27FI.  
 EXCITER GENERATOR - MODEL 5GY50CI.  
 TRACTION MOTORS (6 PER LOCO) - MODEL 5GE76IA5.  
 CONTINUOUS RATING - 610 AMPS AT 3,100 R.P.M.  
 BATTERIES.  
 32 LEAD ACID CELLS - 385 AMP/HOUR AT 5 HOUR - 73 VOLTS.

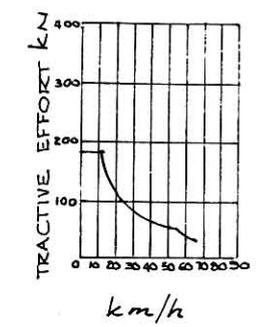
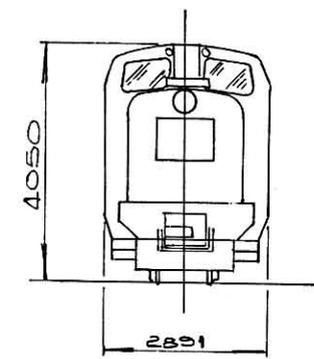
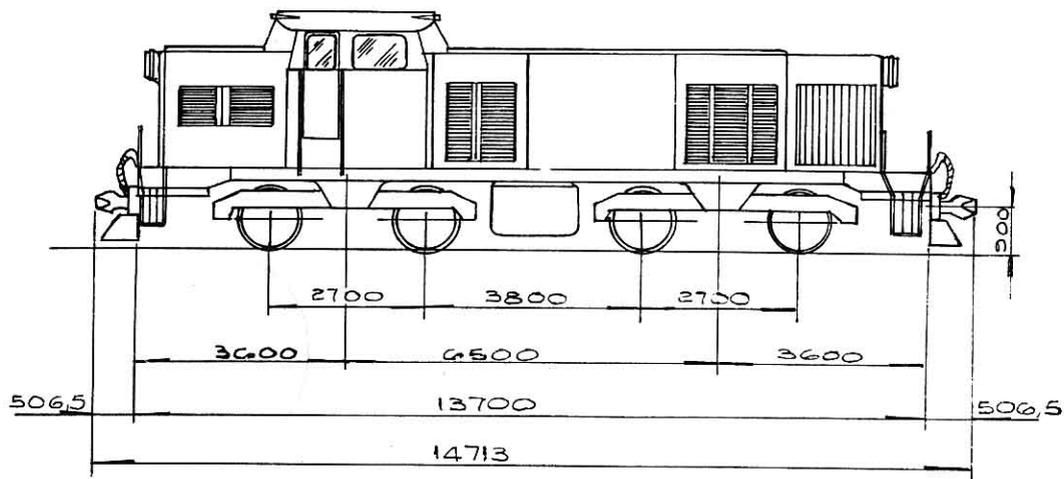
C.L. DUBUISSON JUNE '67

1.	1966.	£ 93,796.
BATCH	SERVICE ENTRY	COST PER LOCO.



D. E 7 CLASS LOCOMOTIVE

NATIONAL RAILWAYS OF ZIMBABWE  
1067 GAUGE



CME  
*[Signature]*

II	193	1712 - 1735
I	193	1700 - 1711
BATCH No	ORDER	NUMBERS.

GENERAL PARTICULARS.

ACTUAL T/EFFORT CONT. <sup>114.8 kN</sup> 100 kN AT 17.1 km/h.  
 DESIGN T/EFFORT CONT. - 114.8 kN - AT 17.1 km/h  
 MAX. STARTING TRACTIVE EFFORT. - 168.34 kN.  
 MAX. RUNNING SPEED - 67 km/h.  
 AXLE LOAD. - 'a' 13 TONNE 'b' 14 TONNE  
 TOTAL MASS APPROX. - 'a' 52 TONNE 'b' 56 TONNE  
 RIGID WHEEL BASE. - 2700  
 FUEL CAPACITY. - 2280 LITRES.  
 BOGIES. - FABRICATED.  
 WHEEL DIA. - 1000 mm.  
 AXLE BOXES - SPHERICAL ROLLER BEARING WITH TAPER SLEEVES  
 GEAR RATIO 85:14

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE. - T 12 B  
 MAX. R.P.M. - 1400  
 CYLINDERS - VIZ, 190 BORE X 220 STROKE  
 OUTPUT - 785 kW  
 RADIATOR - HYDROSTATIC FAN DRIVE  
 FRONT COOLER 30 SECTIONS.  
 BRAKE GEAR. - COMBINED AIR/VACUUM

ELECTRICAL EQUIPMENT.

BATTERY - 96 V 150 AH  
 MAIN ALTERNATOR - GD 650 G 700/240 kW.  
 AUX. ALTERNATOR. - GNJAL 34 17 kW.

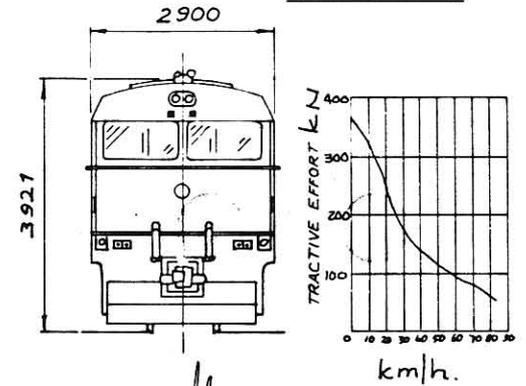
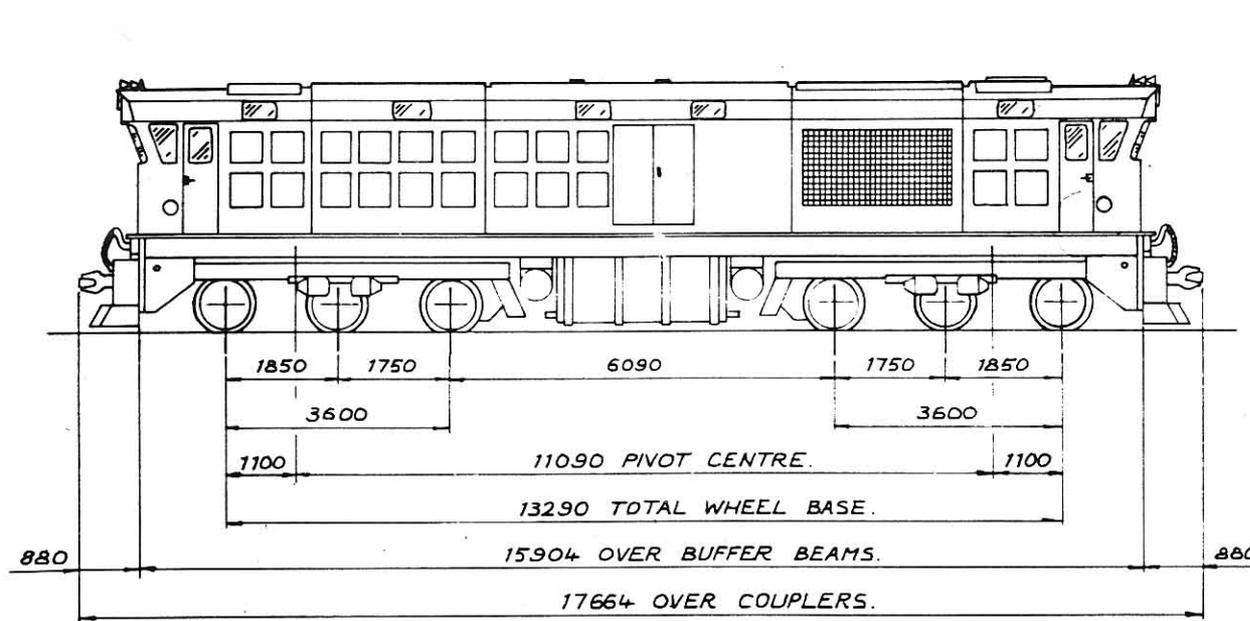
L.S. BRAMWELL. MAR. 1980

a.	II	1973	
b.	I	1971	
	BATCH	SERVICE ENTRY	COST PER LOCO.

LOCOS SCRAPPED 1712, 1713, 1734

D.E. 8 CLASS LOCOMOTIVE

NATIONAL RAILWAYS OF ZIMBABWE.  
1067 GAUGE.



*J*  
*CME*

I	204	1800 ~ 1813
BATCH N <sup>o</sup> .	ORDER.	NUMBERS.

GENERAL PARTICULARS.

MAX STARTING EFFORT ~ 357 kN.  
DESIGN T/EFFORT CONT. ~ 250 kN. AT 19.2 km/h  
MAX RUNNING SPEED ~ 80 km/h  
AXLE LOAD ~ 20 TONNE  
TOTAL MASS APPROX ~ 120 TONNE  
RIGID WHEEL BASE ~ 3600  
FUEL CAPACITY ~ 6000 LITRES  
BOGIES: FABRICATED  
WHEEL DIA. ~ 1050 (NEW)  
AXLE BOXES ~ S.K.F. DOUBLE SPHERICAL  
ROLLER BEARINGS.  
GEARRATIO 65:11  
ACTUAL T/EFFORT CONT. 258,94 kN AT 19.2 km/h  
x (26,39 TUNNE,  
W.A.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE ~ 16 PA 4 V 200  
MAX R.P.M. ~ 1400  
CYLINDERS ~ 1/16, 200 BORE X 210 STROKE  
OUTPUT ~ 1730 kW / 1400 RPM  
RADIATOR ~ 2 SECTIONS - LOW TEMP / HIGH  
TEMP. 16 DETACHABLE  
CORE'S PER SECTION.  
BRAKE GEAR ~ COMBINED AIR / VACUUM

ELECTRICAL EQUIPMENT.

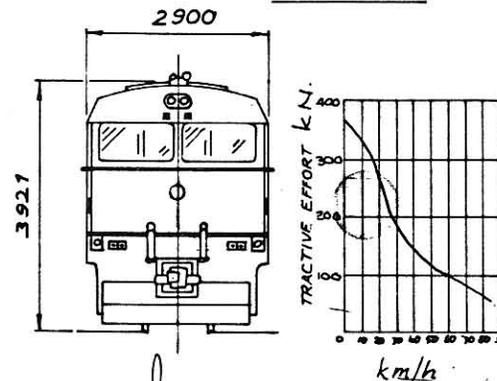
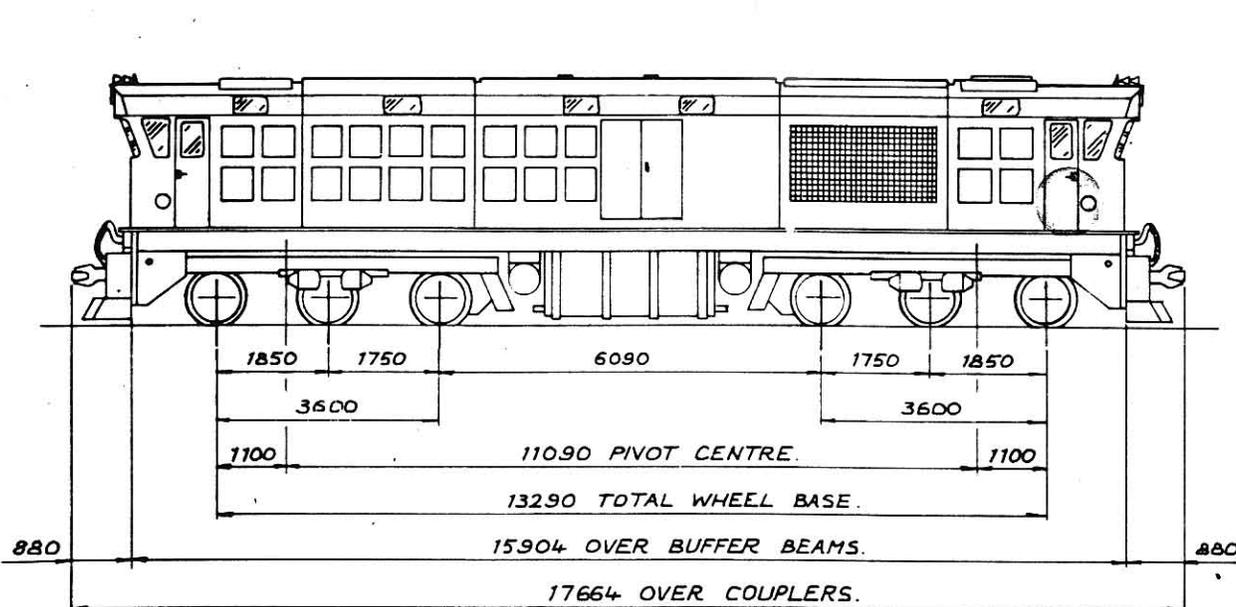
BATTERY ~ 72 VOLTS. 150 AMP HOURS.  
MAIN ALTERNATOR ~ TYPE 54.  
AUX. ALTERNATOR ~ E.V.R. DOUBLE FLUX  
STATODYNE.

I	1973	
BATCH.	SERVICE ENTRY.	COST PER LOCO

P. D. BARRETT FEB. 1980

D.E. BA CLASS LOCOMOTIVE.

NATIONAL RAILWAYS OF ZIMBABWE.  
1067 GAUGE.



CME *[Signature]*

II	204	1822 ~ 1833
I	204	1814 ~ 1821
BATCH N <sup>o</sup> .	ORDER.	NUMBERS.

GENERAL PARTICULARS.

MAX STARTING EFFORT ~ 357 kN.  
 DESIGN T/EFFORT CONT. ~ 250kN AT 19,2 km/h  
 MAX RUNNING SPEED ~ 80 km/h  
 AXLE LOAD ~ 20 TONNE  
 TOTAL MASS APPROX ~ 120 TONNE  
 RIGID WHEEL BASE ~ 3600  
 FUEL CAPACITY ~ 6000 LITRES  
 BOGIES: FABRICATED.  
 WHEEL DIA. ~ 1050 (NEW)  
 AXLE BOXES ~ SKF DOUBLE SPHERICAL ROLLER BEARINGS.  
 GEAR RATIO 85:14  
 ACTUAL T/EFFORT CONT. ~ 255,04 kN AT 19,2 km/h  
 x (86,39 TONNE)

LOCOS 1825, 1831 SCRAPPED.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE ~ 16 PA 4 V 200  
 MAX R.P.M. ~ 1400  
 CYLINDERS ~ V16, 200 BORE X 210 STROKE.  
 OUTPUT ~ 1730 kW / 1400 RPM  
 RADIATOR ~ 2 SECTIONS- LOW TEMP/HIGH-  
 TEMP 16 DETACHABLE  
 CORES PER SECTION  
 BRAKE GEAR ~ COMBINED AIR/VACUUM.  
 P.B.L.Z SYSTEM.

II	1974 - 1975	
I	1973	
BATCH.	SERVICE ENTRY.	COST PER LOCO

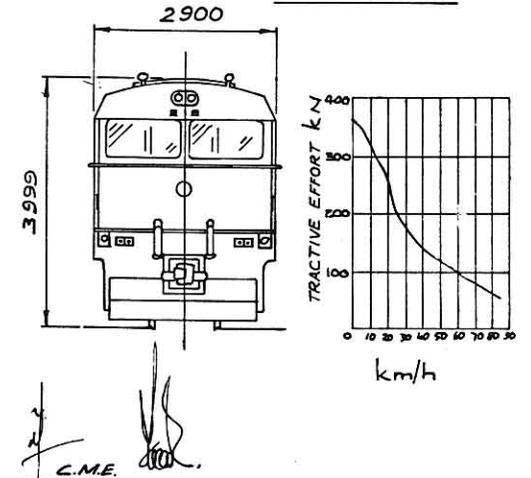
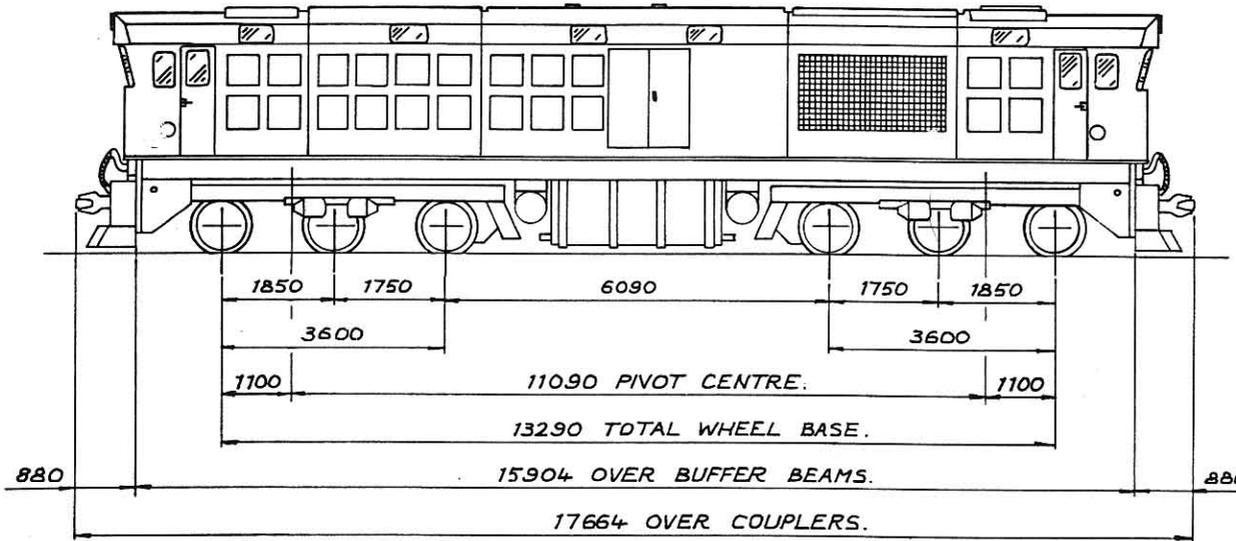
ELECTRICAL EQUIPMENT.

BATTERY ~ 72 VOLTS 150 AMP HOURS  
 MAIN ALTERNATOR ~ TYPE 54  
 AUX ALTERNATOR ~ E.V.R. DOUBLE FLUX  
 STATODYNE

P.D. BARRETT FEB. 1980

D.E. 88 CLASS LOCOMOTIVE.

NATIONAL RAILWAYS OF ZIMBABWE.  
1067 GAUGE.



C.M.E.

I	204	1834-1853
BATCH No.	ORDER.	NUMBERS.

GENERAL PARTICULARS.

MAX STARTING EFFORT ~ 357 kN  
DESIGN T/EFFORT CONT. ~ 250 kN AT 19.2 km/h  
MAX RUNNING SPEED ~ 80 km/h  
AXLE LOAD ~ 17 TONNE  
TOTAL MASS APPROX ~ 102 TONNE  
RIGID WHEEL BASE ~ 3600  
FUEL CAPACITY ~ 6000 LITRES.  
BOGIES: FABRICATED.  
WHEEL DIA. ~ 1050 (NEW)  
AXLE BOXES ~ SKF DOUBLE SPHERICAL ROLLER BEARINGS.  
GEAR RATIO 85/14  
ACTUAL T/EFFORT CONT. 227.59 kN AT 19.2 km/h  
x (23,20 TONNE,  
LOCO 1853 SCRAPPED.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE ~ 16 PA 4 V 200  
MAX R.P.M. ~ 1400  
CYLINDERS ~ V16, 200 BORE X 210 STROKE  
OUTPUT ~ 1730 kW / 1400 RPM  
RADIATOR ~ 2 SECTIONS- LOW TEMP/HIGH TEMP. 16 DETACHABLE CORES PER SECTION.  
BRAKE GEAR ~ COMBINED AIR/VACUUM. P.B.L. 2. SYSTEM.

ELECTRICAL EQUIPMENT.

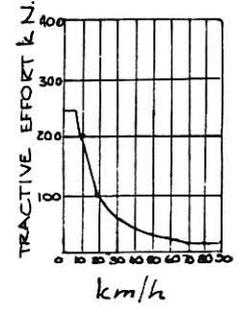
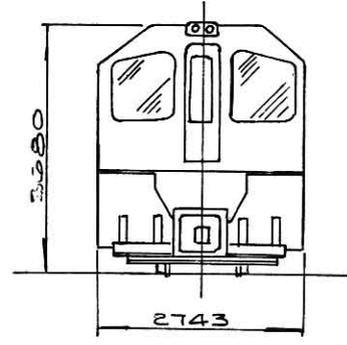
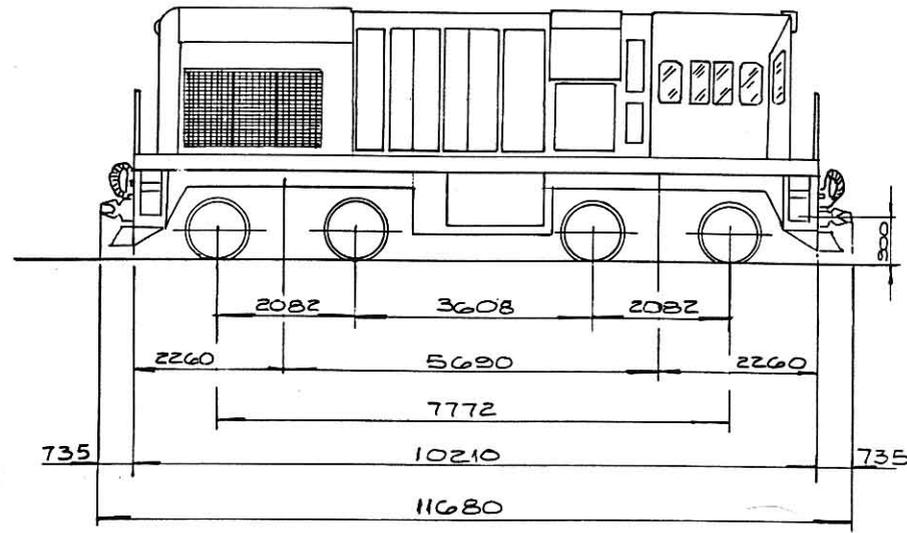
BATTERY ~ 72 VOLTS. 150 AMP HOURS.  
MAIN ALTERNATOR ~ TYPE 54  
AUX. ALTERNATOR ~ E.V.R. DOUBLE FLUX STATODYNE.

I	1976 - 1977	
BATCH.	SERVICE ENTRY.	COST PER LOCO

P.D. BARRETT FEB. 1980

D.E. 9 CLASS LOCOMOTIVE.

NATIONAL RAILWAYS OF ZIMBABWE.  
1067 GAUGE.



C.M.E. *[Signature]*

I	205	1900-1919
BATCH NO.	ORDER	NUMBERS.

GENERAL PARTICULARS.

MAX STARTING EFFORT - 245,25 kN.  
 DESIGN T/EFFORT CONT. - 132,5 kN. AT 15 km/h  
 MAX RUNNING SPEED. - 103 km/h  
 AXLE LOAD - 14 TONNE  
 TOTAL MASS APPROX - 56 TONNE.  
 RIGID WHEEL BASE - 2082  
 FUEL CAPACITY - 2270 LITRES  
 BOGIES - CAST/FABRICATED.  
 WHEEL DIA. - 965 mm.  
 AXLE BOXES - TIMKEN AP ROLLER BEARING  
 GEAR RATIO 92:19  
 ACTUAL T/EFFORT CONT. 115,76 kN AT 15 km/h.  
 11,50 TONNE.

ENGINE, RADIATOR & BRAKE GEAR.

ENGINE - D.398 B.  
 MAX R.P.M. - 1300  
 CYLINDERS - V12, 150 BORE x 203 STROKE  
 OUTPUT - 650 kW.  
 RADIATOR. - 1 PER LOCO (SECTIONAL CORE).  
 BRAKE GEAR. - AIR/VACUUM  
 28 LV-1 SYSTEM.

ELECTRICAL EQUIPMENT.

BATTERY - 64 VOLTS - 150 Ah  
 AUX ALTERNATOR - GMC. 14G  
 MAIN ALTERNATOR. - GT. 601.

L. S. BRANWELL MAR 80.

I	1972	
BATCH	SERVICE ENTRY	COST PER LOCO.