

BRITISH RAILWAYS. STANDARD LOCOMOTIVE DIAGRAMS

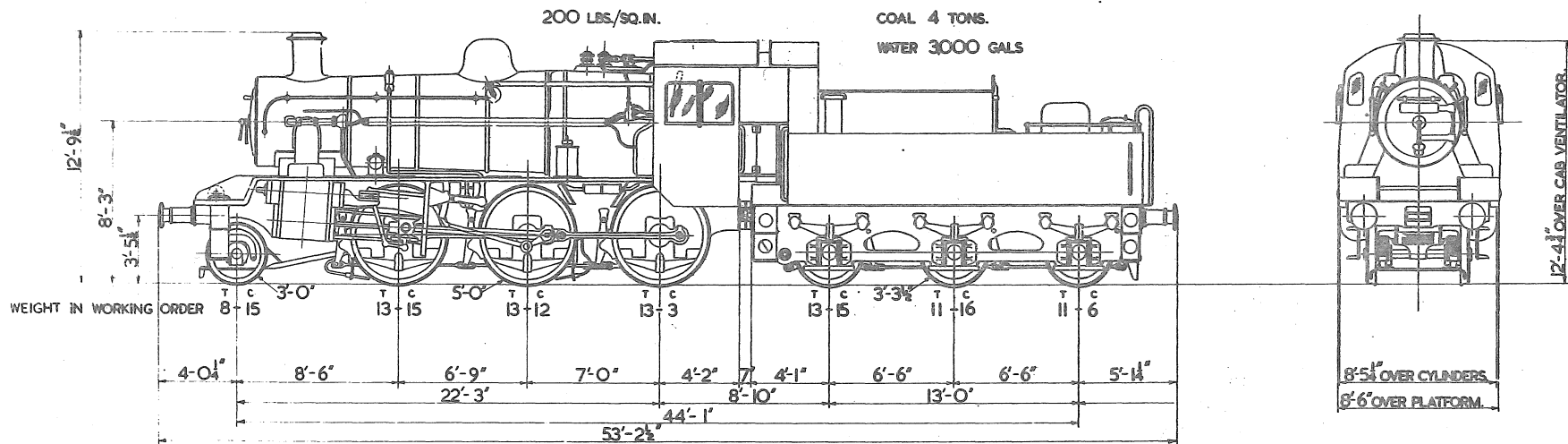
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This PDF version by David Faulkner, 2018.

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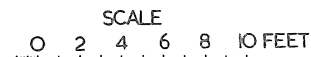


BOILER BARREL DIAMETER (OUTSIDE)	4'-3" INCREASING TO 4'-8"
FIREBOX (OUTSIDE)	5'-11" LONG x 4'-0 7/16" WIDE
TUBES	12 LARGE 5 1/8" O.D. x 7 SWG 162 SMALL 1 3/8" O.D. x 12 SWG
SUPERHEATER ELEMENTS	1 3/8" O.D.
LENGTH BETWEEN TUBEPLATES	10'-10 1/2"
HEATING SURFACES: TUBES	924 SQ. FT.
FIREBOX	101 SQ. FT.
TOTAL EVAPORATIVE	1025 SQ. FT.
SUPERHEATER	134 SQ. FT.
FREE FLUE AREA	2.77 SQ. FT.
GRATE AREA	17.5 SQ. FT.

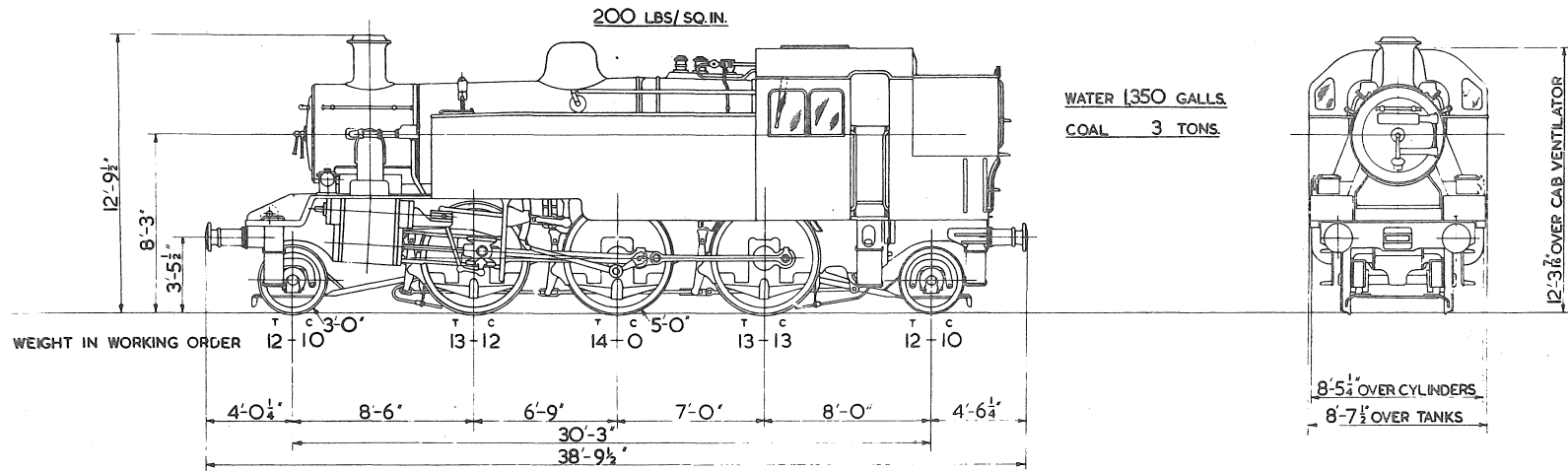
CYLINDERS (TWO)	16 1/2" DIA. x 24" STROKE
TRACTION EFFORT	18513 LBS.
ADHESION FACTOR	4.9
BRAKE % ENGINE & TENDER	60-23
MINIMUM RADIUS CURVE	4 CHAINS
(WITH SPECIFIED GAUGE WIDENING)	

BOILER TYPE	BR 8
TENDER TYPE	BR 3

WEIGHTS	FULL	EMPTY
	T C	T C
ENGINE	49-5	45-8
TENDER	36-17	19-9
TOTAL	86-2	64-17



STANDARD CLASS 2. 2-6-0 ENGINE.



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

4'-3" INCREASING TO 4'-8"
5'-11" LONG x 4'-0¾" WIDE
12 LARGE 5½" O.D. x 7 SWG.
162 SMALL 1½" O.D. x 12 SWG.
1⅜" O.D.

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

10'-10½"

HEATING SURFACES - TUBES

924 SQ. FT.

FIREBOX

101 SQ. FT.

TOTAL EVAPORATIVE

1025 SQ. FT.

SUPERHEATER

134 SQ. FT.

FREE FLUE AREA

2.77 SQ. FT.

GRATE AREA

17.5 SQ. FT.

CYLINDERS (TWO)

16½" DIA. x 24" STROKE

TRACTION EFFORT

18,513 LBS.

ADHESION FACTOR

5.0

BRAKE %

47

MINIMUM RADIUS CURVE

4 CHAINS

(WITH SPECIFIED GAUGE WIDENING)

BOILER TYPE

B.R.8

WEIGHTS

FULL EMPTY

T C

T C

ENGINE

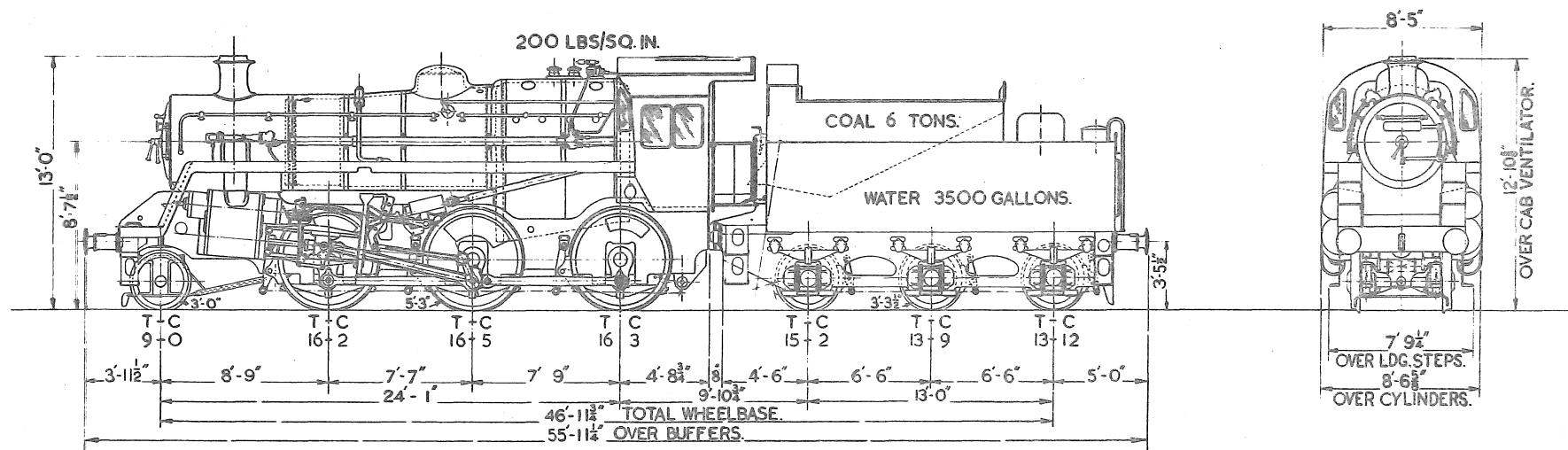
66-5

53-12

SCALE

0 2 4 6 8 10 FEET

STANDARD CLASS 2. 2-6-2 TANK ENGINE.



BOILER BARREL DIAMETER (OUTSIDE) 4'-5" INCREASING TO 5'-0 1/2".

FIREBOX (OUTSIDE) 7'-0" LONG X 4'-0" WIDE.

TUBES 18 LARGE 5 1/2" O.D. X 7 SWG.

145 SMALL 1 1/2" O.D. X 12 SWG.

SUPERHEATER ELEMENTS 1 1/2" O.D. 10 SWG.

LENGTH BETWEEN TUBEPLATES 10'-10 1/2".

HEATING SURFACES TUBES 932.90 SQ. FT.

FIREBOX 118.40 " "

TOTAL EVAPORATIVE 1051.30 " "

SUPERHEATER 190.00 " "

FREE FLUE AREA 3.08 " "

GRATE AREA 20.35 " "

CYLINDERS (TWO) 17 1/2" X 26".

TRACTION EFFORT 21490 LBS.

ADHESION FACTOR 5.05

BRAKE % ENGINE & TENDER 60.7

MINIMUM RADIUS CURVE 4 1/2 CHAINS

(WITH SPECIFIED GAUGE WIDENING)

BOILER TYPE BR. 6.

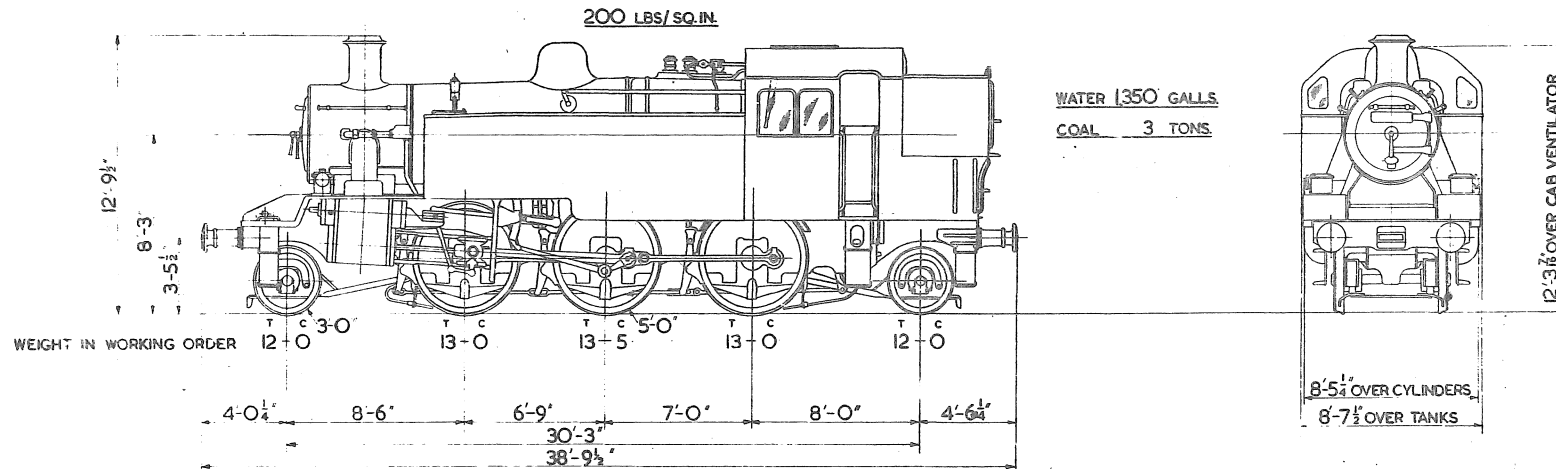
TENDER TYPE BR. 2 A.

WEIGHTS	FULL	EMPTY
T - C	57-10	53-0
ENGINE	42-3	20-10
TENDER	99-13	73-10
TOTAL		

SCALE

0 1 2 3 4 5 6 7 8 9 10

STANDARD CLASS 3.2-6-0 ENGINE.



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

HEATING SURFACES: TUBES

FIREBOX
TOTAL EVAPORATIVE
SUPERHEATER

FREE FLUE AREA
GRATE AREA

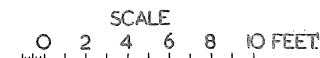
4'-3" INCREASING TO 4'-8"
5'-11" LONG x 4'-0 7/8" WIDE
12 LARGE 5 1/2" O.D. x 7 SWG.
162 SMALL 1 3/8" O.D. x 12 SWG.
1 3/8" O.D.
10'-10 1/2"
924 SQ. FT.
101 SQ. FT.
1025 SQ. FT.
134 SQ. FT.

2.77 SQ. FT.
17.5 SQ. FT.

CYLINDERS (TWO)
TRACTIVE EFFORT
ADHESION FACTOR
BRAKE %
MINIMUM RADIUS CURVE
(WITH SPECIFIED GAUGE WIDENING)
BOILER TYPE

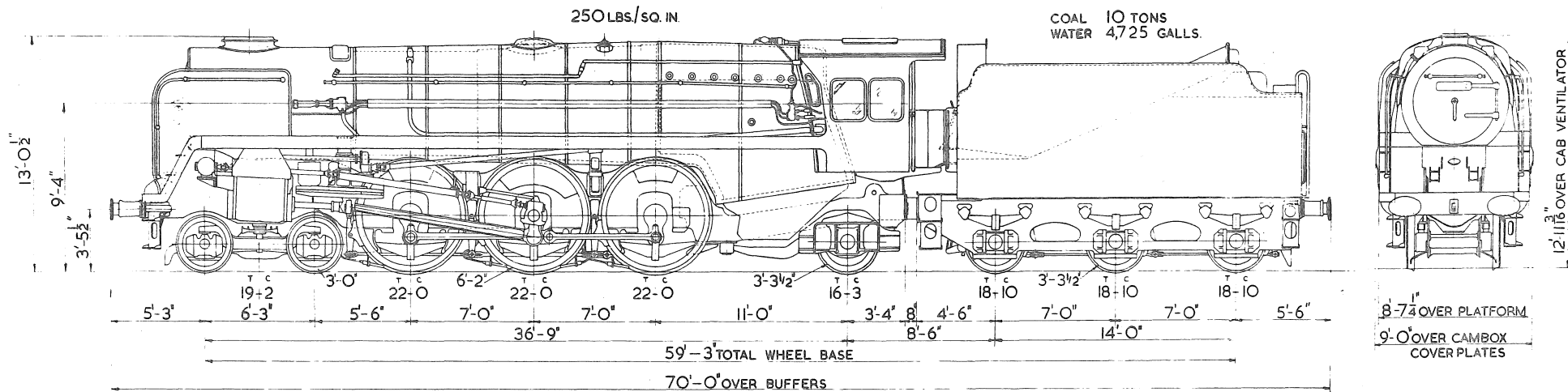
16 1/2" DIA. x 24" STROKE
18,513 LBS.
4.7
48
4 CHAINS
B.R.8

	WEIGHTS	
	FULL	EMPTY
ENGINE	T C 63-5	T C 50-8



STANDARD CLASS 2. 2-6-2 TANK ENGINE.

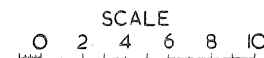
WITHOUT VACUUM CONTROL TO REGULATOR.



BOILER BARREL DIAMETER (OUTSIDE)	5'-9" INCREASING TO 6'-5 1/2"
FIREBOX (OUTSIDE)	8'-0 1/8" LONG x 7'-9" TO 7'-4" WIDE
TUBES	40 LARGE 5 1/2" O.D. x 7 S.W.G. 136 SMALL 2 1/8" O.D. x 11 S.W.G.
SUPERHEATER ELEMENTS	18" O.D. x 9 S.W.G.
LENGTH BETWEEN TUBEPLATES	17'-0"
HEATING SURFACES: TUBES	2264 SQ. FT.
FIREBOX	226 SQ. FT.
TOTAL EVAPORATIVE	2490 SQ. FT.
SUPERHEATER	691 SQ. FT.
FREE FLUE AREA	6.8 SQ. FT.
GRATE AREA	48.6 SQ. FT.

CYLINDERS (THREE)	18" x 28"
TRACTION EFFORT	39,080 LBS.
ADHESION FACTOR	3.78
BRAKE % ENGINE & TENDER	51.17
MINIMUM RADIUS CURVE (WITH SPECIFIED GAUGE WIDENING)	4 1/2 CHAINS
BOILER TYPE	B.R. 13
TENDER TYPE	B.R. 1E.

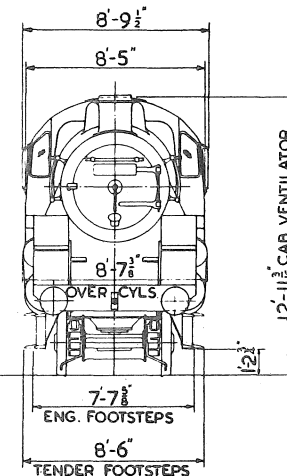
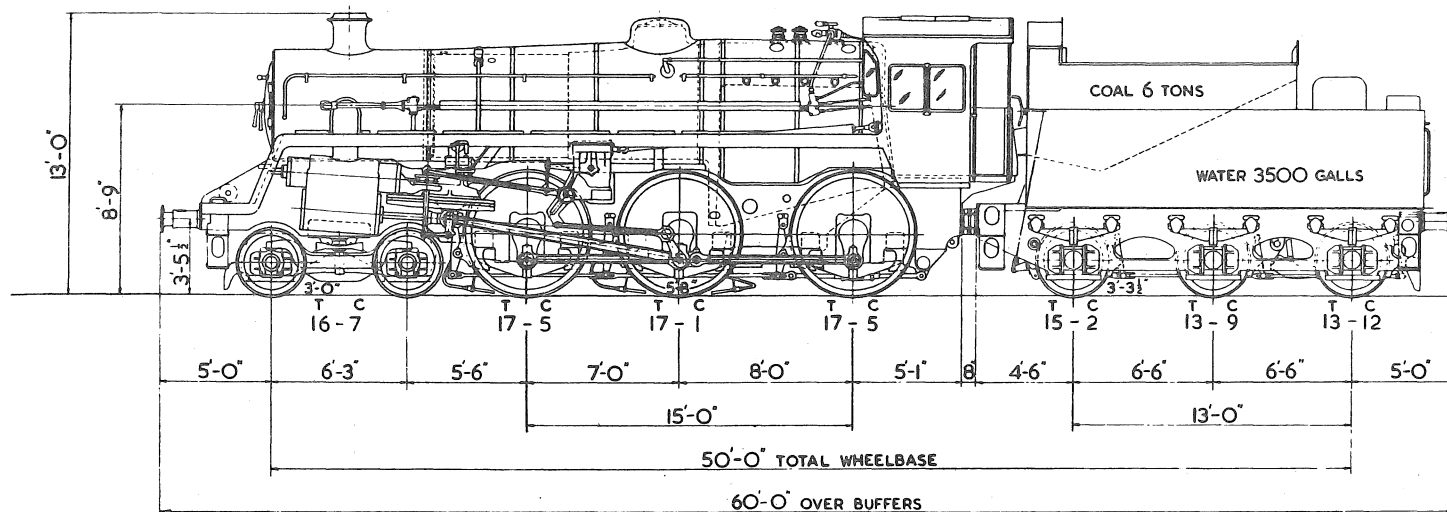
	FULL	EMPTY
WEIGHTS	T. C.	T. C.
ENGINE	101-5	92-0
TENDER	55-10	24-8
TOTAL	156-15	116-8



STANDARD CLASS 8. 4-6-2 ENGINE.

BRITISH-CAPROTTI VALVE GEAR

225 LBS. PER SQ. IN.



MINIMUM RADIUS CURVE WITHOUT GAUGE WIDENING 6 CHAINS (4 1/2 CHAINS DEAD SLOW).

BOILER BARREL DIAMETER (OUTSIDE) 4'-9" INCREASING TO 5'-3"
FIREBOX (OUTSIDE) 8'-6" LONG x 4'-0 1/2" WIDE
TUBES 21 LARGE 5 1/2" O.D. x 7 SWG
157 SMALL 1 1/2" O.D. 12 SWG

SUPERHEATER ELEMENTS 1 1/2" O.D. x 9 SWG
LENGTH BETWEEN TUBEPLATES 13'-0"

HEATING SURFACES: TUBES 1301 SQ. FT.
FIREBOX 143 SQ. FT.
TOTAL EVAPORATIVE 1444 SQ. FT.
SUPERHEATER 258 SQ. FT.

FREE FLUE AREA 3.78 SQ. FT.
GRATE AREA 26.7 SQ. FT.

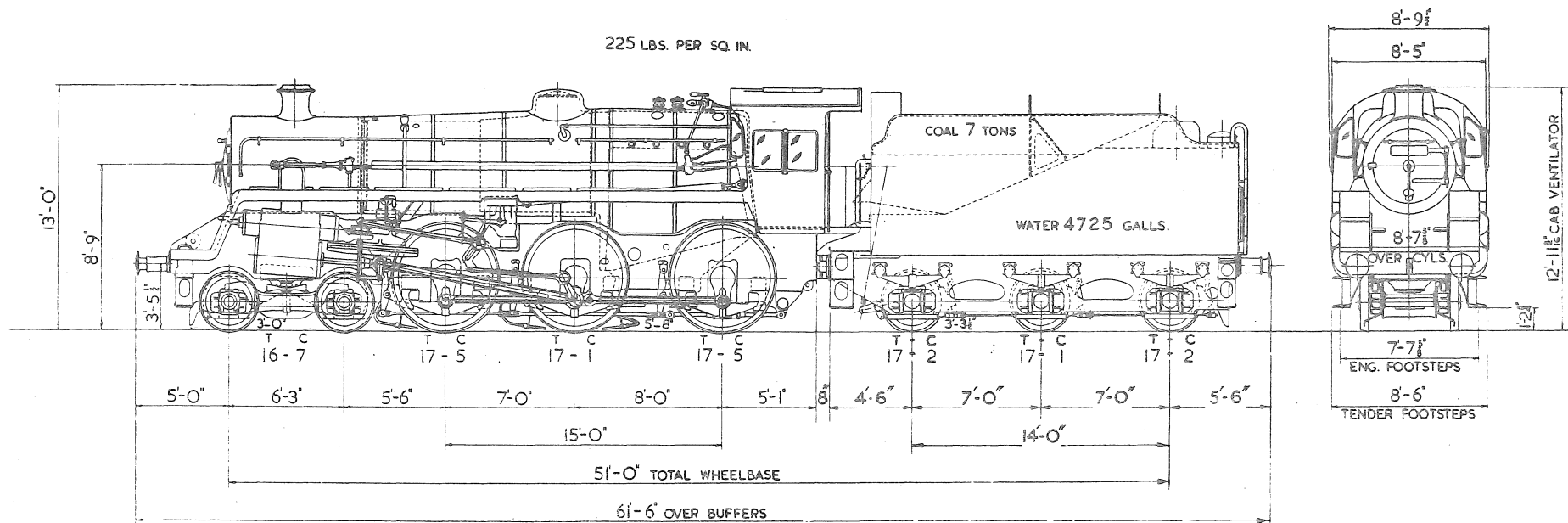
CYLINDERS (TWO) 18" x 28"
TRACTION EFFORT 25515 LBS.
ADHESION FACTOR 4.52
BRAKE % ENGINE & TENDER 55.1

BOILER TYPE BR 4
TENDER TYPE BR 2

WEIGHTS	FULL	EMPTY
	T C	T C
ENGINE	67-18	63-6
TENDER	42-3	20-10
TOTAL	110-1	83-16

SCALE
0 2 4 6 8 10 FEET

B. R. STANDARD CLASS 4. 4-6-0 ENGINE.



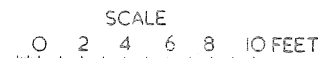
BOILER BARREL DIAMETER (OUTSIDE)	4'-9" INCREASING TO 5'-3"
FIREBOX (OUTSIDE)	8'-6" LONG x 4'-0 1/2" WIDE
TUBES	21 LARGE 5 1/2" O.D. x 7 SWG. 157 SMALL 1 1/2" O.D. x 12 SWG.
SUPERHEATER ELEMENTS	1 1/8" O.D. x 9 SWG.
LENGTH BETWEEN TUBEPLATES	13'-0"
HEATING SURFACES: TUBES	1301 SQ. FT.
FIREBOX	143 SQ. FT.
TOTAL EVAPORATIVE	1444 SQ. FT.
SUPERHEATER	258 SQ. FT.

FREE FLUE AREA
GRATE AREA

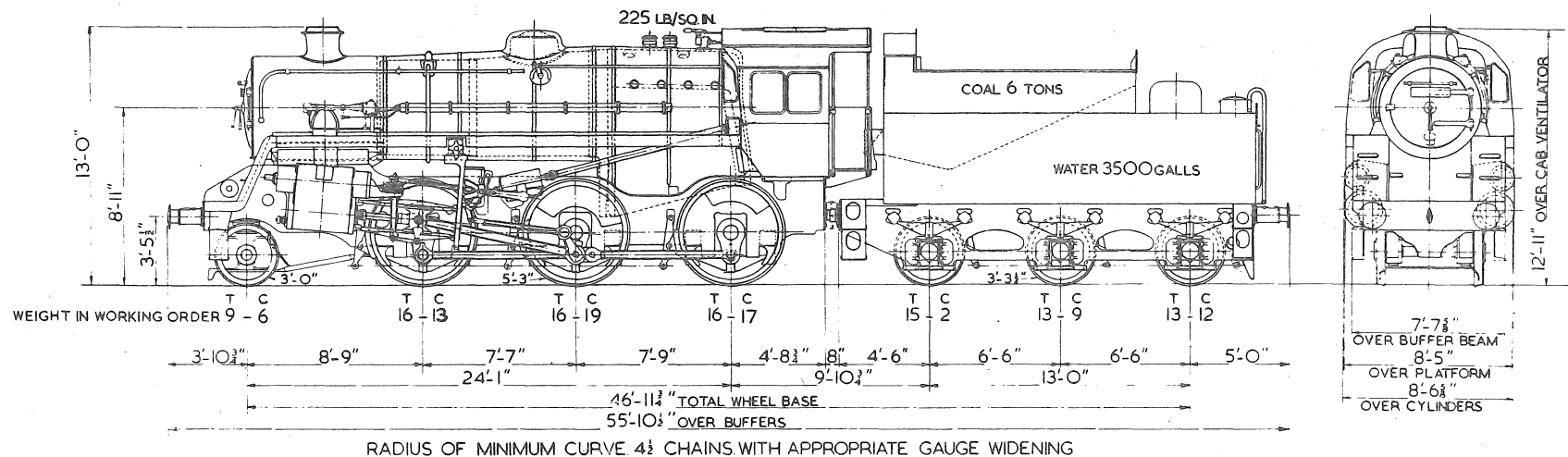
3-78 SQ. FT.
26-7 SQ. FT.

CYLINDERS (TWO)	18" x 28"
TRACTION EFFORT	25,515 LBS.
ADHESION FACTOR	4.52
BRAKE % ENGINE & TENDER	55
MINIMUM RADIUS CURVE (WITH SPECIFIED GAUGE WIDENING)	4 1/2 CHAINS
BOILER TYPE	BR. 4.
TENDER TYPE	BR. 1B.

WEIGHTS	FULL	EMPTY
	T C	T C
ENGINE	67-18	63-6
TENDER	51-5	23-3
TOTAL	119-3	86-9



B.R. STANDARD CLASS 4. 4-6-0 ENGINE.



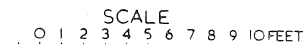
BOILER BARREL DIAMETER (OUTSIDE)	4'-9 1/2" INCREASING TO 5'-3"
FIREBOX (OUTSIDE)	7'-6" LONG x 4'-0 1/2" WIDE
TUBES	24 LARGE 5 1/2" O.D. x 7 SWG
	156 SMALL 1 1/2" O.D. x 12 SWG
SUPERHEATER ELEMENTS	1 1/2" O.D. x 9 SWG
LENGTH BETWEEN TUBE PLATES	10'-10 1/2"
HEATING SURFACES	
TUBES	1,075 SQ. FT.
FIREBOX	131 SQ. FT.
TOTAL EVAPORATIVE	1,206 SQ. FT.
SUPERHEATER	247 SQ. FT.

FREE FLUE AREA	3.8 SQ. FT.
GRATE AREA	23 SQ. FT.

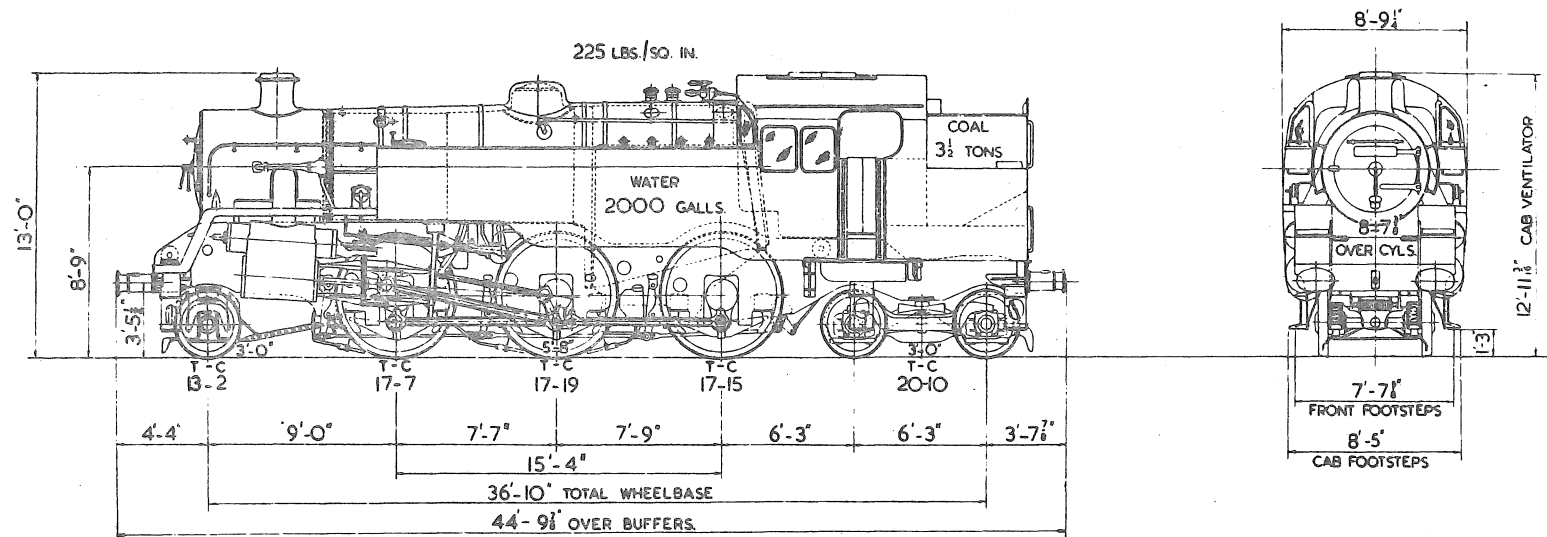
CYLINDERS (TWO)	17 1/2" x 26"
TRACTION EFFORT	24,170 LB.
ADHESION FACTOR	4.68
BRAKE % ENGINE & TENDER	63.75

BOILER TYPE	BR 7
TENDER TYPE	BR 2

WEIGHTS	FULL	EMPTY
ENGINE	59 - 15 - 0	55 - 18 - 2
TENDER	42 - 3 - 0	20 - 10 - 2
TOTAL	101 - 18 - 0	76 - 9 - 0



STANDARD CLASS 4.2-6-0 ENGINE



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

4'-9" INCREASING TO 5'-3"
8'-6" LONG x 4'-0 1/2" WIDE
21 LARGE 5 1/2" O.D. x 7 SWG
157 SMALL 1 1/2" O.D. x 12 SWG
1 1/2" O.D. x 10 SWG
12'-3"

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

HEATING SURFACES : TUBES

FIREBOX

TOTAL EVAPORATIVE

SUPERHEATER

1223 SQ. FT.
143 SQ. FT.
1366 SQ. FT.
246 SQ. FT.

FREE FLUE AREA
GRATE AREA.

3.78 SQ. FT.
26.7 SQ. FT.

CYLINDERS (TWO)

TRACTION EFFORT

ADHESION FACTOR

BRAKE %

MINIMUM RADIUS CURVE
(WITH SPECIFIED GAUGE WIDENING)

BOILER TYPE

18" x 28"

25,515 LBS.

4.65

44.2

4 1/2 CHAINS.

BR 5

WEIGHTS

FULL

EMPTY

T - C

T - C

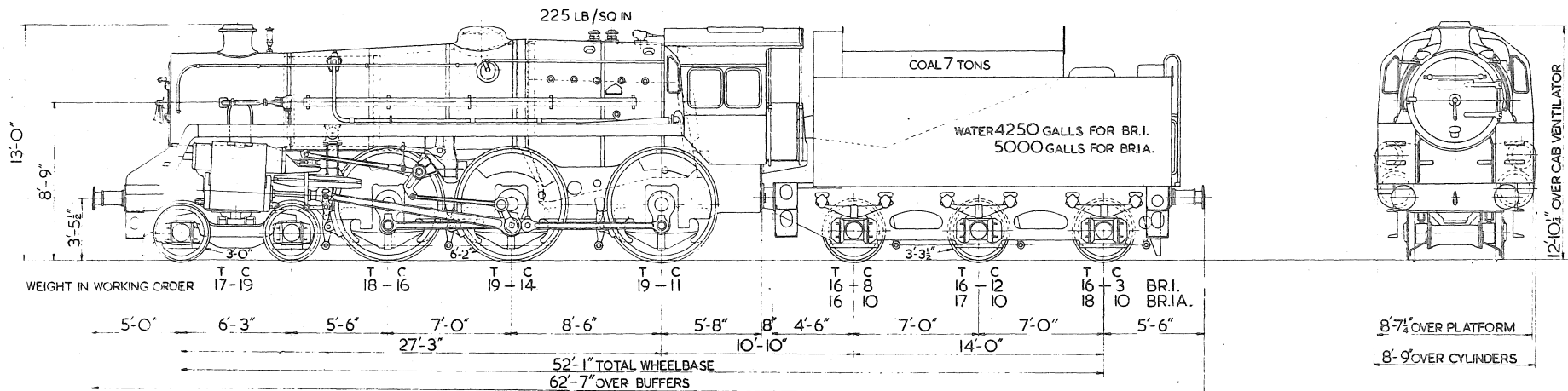
86 - 13

69 - 8

SCALE

0 2 4 6 8 10 FEET

B.R. STANDARD CLASS 4. 2-6-4 TANK ENGINE



RADIUS OF MINIMUM CURVE. 5 CHAINS. WITH APPROPRIATE GAUGE WIDENING.

BOILER BARREL DIAMETER (OUTSIDE)	4'-11 1/8" INCREASING TO 5'-8 1/2"
FIREBOX (OUTSIDE)	9'-2 1/8" LONG x 3'-11 1/8" WIDE
TUBES	28 LARGE 5 1/8" O.D. x 7 SWG
	151 SMALL 1 7/8" O.D. x 11 SWG
SUPERHEATER ELEMENTS	1 1/8" O.D. x 10 SWG
LENGTH BETWEEN TUBE PLATES	13'-2 7/8"
HEATING SURFACES TUBES	1479 SQ FT
FIREBOX	171 SQ FT
TOTAL EVAPORATIVE	1650 SQ FT
SUPERHEATER	369 SQ FT

FREE FLUE AREA	4.5 SQ FT
GRATE AREA	28.7 SQ FT

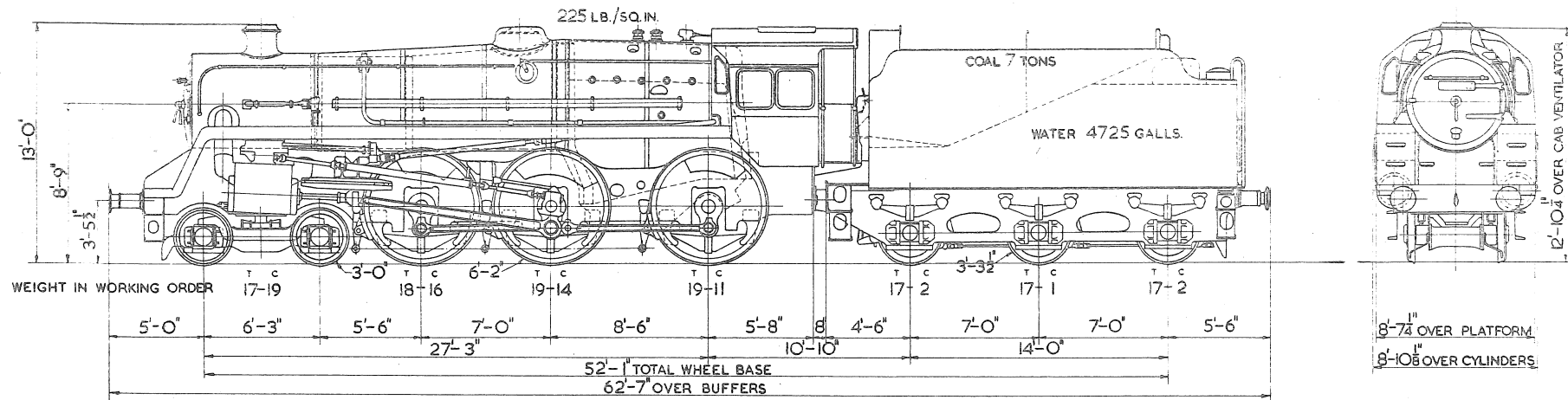
CYLINDERS (TWO)	19'x 28'
TRACTIVE EFFORT	26120 LB
ADHESION FACTOR	4.97
BRAKE % ENGINE & TENDER	60.7 BR.I. TENDER
	59.5 BR.IA. TENDER

BOILER TYPE	BR. 3.
TENDER TYPE	BR. I. OR BR. IA.

	WITH BR.I. TENDER		WITH BR.IA. TENDER	
WEIGHTS	FULL	EMPTY	FULL	EMPTY
ENGINE	76-0	69-5	76-0	69-5
TENDER	49-3	23-3	52-10	23-3
TOTAL	125-3	92-8	128-10	92-8

SCALE	
0	2 4 6 8 10 FEET

STANDARD CLASS 5.4-6-0 ENGINE



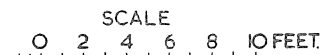
MINIMUM RADIUS CURVE WITHOUT GAUGE WIDENING 6 CHAINS (4 1/2 CHAINS DEAD SLOW).

BOILER BARREL DIAMETER (OUTSIDE)	4'-11 1/8" INCREASING TO 5'-8 1/2"
FIREBOX (OUTSIDE)	9'-2 1/8" LONG x 3'-11 1/8" WIDE
TUBES	28 LARGE 5 1/8" O.D. x 7 S.W.G. 151 SMALL 1 1/8" O.D. x 11 S.W.G.
SUPERHEATER ELEMENTS	1 3/8" O.D. x 9 S.W.G.
LENGTH BETWEEN TUBEPLATES	13'-2 1/8"
HEATING SURFACES: TUBES	1479 SQ. FT.
FIREBOX	171 SQ. FT.
TOTAL EVAPORATIVE	1650 SQ. FT.
SUPERHEATER	358 SQ. FT.

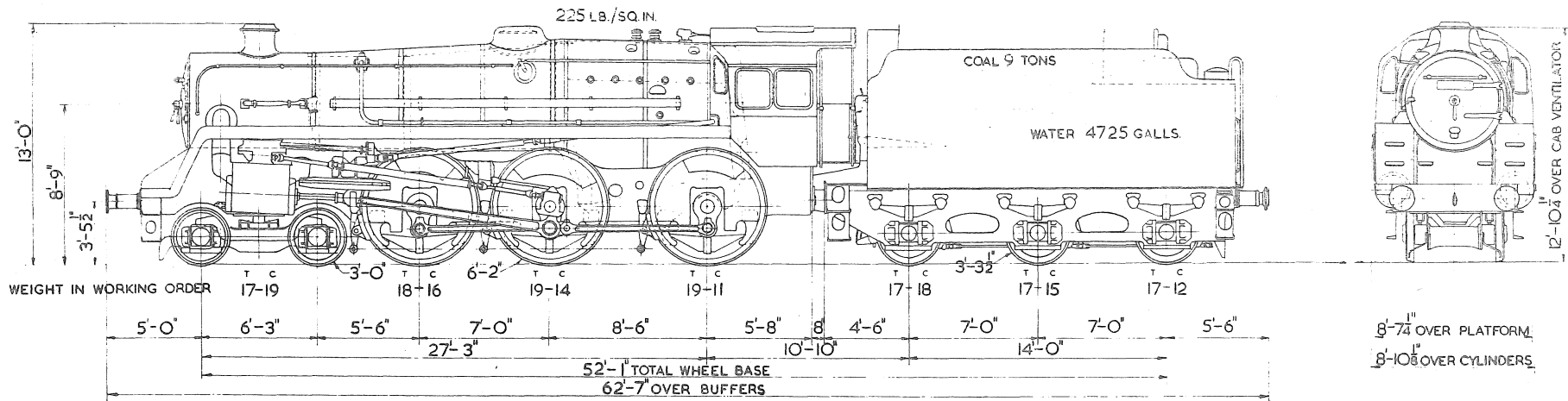
FREE FLUE AREA	4.5 SQ. FT.
GRATE AREA	28.7 SQ. FT.

CYLINDERS (TWO)	19" x 28"	WEIGHTS	FULL	EMPTY
TRACTION EFFORT	26 120 LBS.		T. C.	T. C.
ADHESION FACTOR	4.97	ENGINE	76-0	69-5
BRAKE % ENGINE & TENDER	62.3	TENDER	51-5	23-3
		TOTAL	127-5	92-8

BOILER TYPE	B.R. 3.
TENDER TYPE	B.R. 1B.



B.R. STANDARD CLASS 5 4-6-0 ENGINE. **BRITISH-CAPROTTI VALVE GEAR**



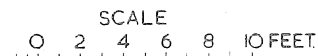
MINIMUM RADIUS CURVE WITHOUT GAUGE WIDENING 6 CHAINS (4½ CHAINS DEAD SLOW)

BOILER BARREL DIAMETER (OUTSIDE)	4'-11 1/8" INCREASING TO 5'-8 1/2"
FIREBOX (OUTSIDE)	9'-2 1/8" LONG x 3'-11 7/8" WIDE
TUBES	28 LARGE 5 1/8" O.D. x 7 S.W.G. 151 SMALL 1 7/8" O.D. x 11 S.W.G.
SUPERHEATER ELEMENTS	1 3/8" O.D. x 9 S.W.G.
LENGTH BETWEEN TUBEPLATES	13'-2 1/8"
HEATING SURFACES: TUBES	1479 SQ. FT.
FIREBOX	171 SQ. FT.
TOTAL EVAPORATIVE	1650 SQ. FT.
SUPERHEATER	358 SQ. FT.

FREE FLUE AREA	4.5 SQ. FT.
GRATE AREA	28.7 SQ. FT.

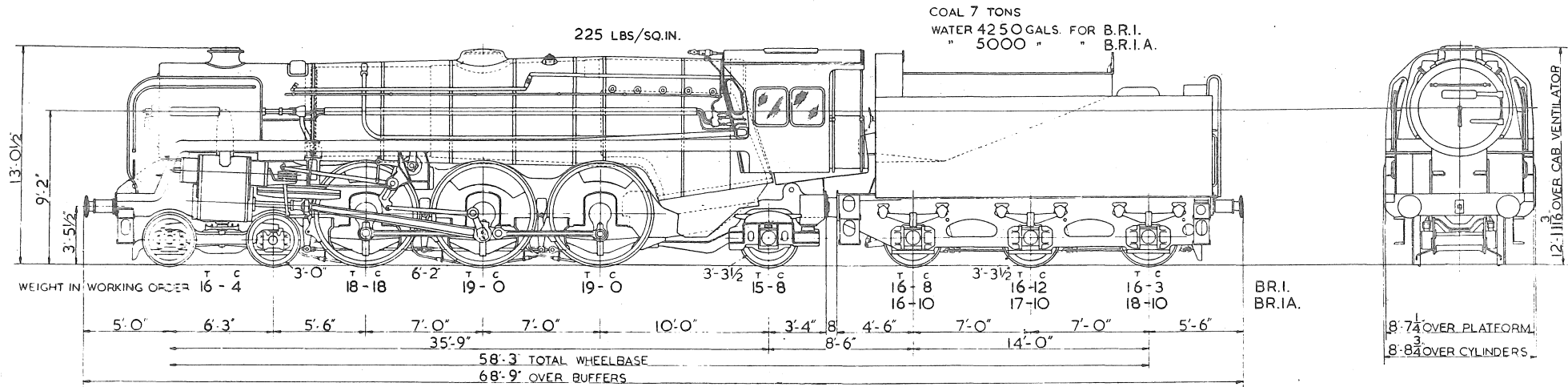
CYLINDERS (TWO)	19' x 28"	WEIGHTS	FULL	EMPTY
TRACTION EFFORT	26 120 LBS.	T. C.	T. C.	
ADHESION FACTOR	4.97	ENGINE	76-0	69-5
BRAKE % ENGINE & TENDER	61.5	TENDER	53-5	23-3
		TOTAL	129-5	92-8

BOILER TYPE	B.R.3.
TENDER TYPE	B.R.1.C.



B.R. STANDARD CLASS 5. 4-6-0 ENGINE.

BRITISH-CAPROTTI VALVE GEAR.



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

HEATING SURFACES : TUBES

FIREBOX
TOTAL EVAPORATIVE
SUPERHEATER

FREE FLUE AREA
GRATE AREA

5'-4" INCREASING TO 6'-1"
6'-9" LONG x 7'-0" TO 6'-8" WIDE.
35 LARGE 5 1/2" OD. x 7 SWG.
108 SMALL 2 1/8" OD. x 11 SWG.
1 3/8" OD. x 10 SWG.
17'-0"
1878 SQ.FT.
195 SQ.FT.
2073 SQ.FT.
628 SQ.FT.

5-73 SQ.FT.
36 SQ.FT.

CYLINDERS (TWO) 19 1/2" x 28"
TRACTIVE EFFORT 27,520 LBS
ADHESION FACTOR 4.63
BRAKE % ENGINE & TENDER 49.9 B.R.I. TENDER.
MINIMUM RADIUS CURVE 49.0 B.R.I.A. TENDER. TENDER
(WITH SPECIFIED GAUGE WIDENING) 4 1/2 CHAINS
BOILER TYPE BR.2.
TENDER TYPE BR.I. OR B.R.I.A.

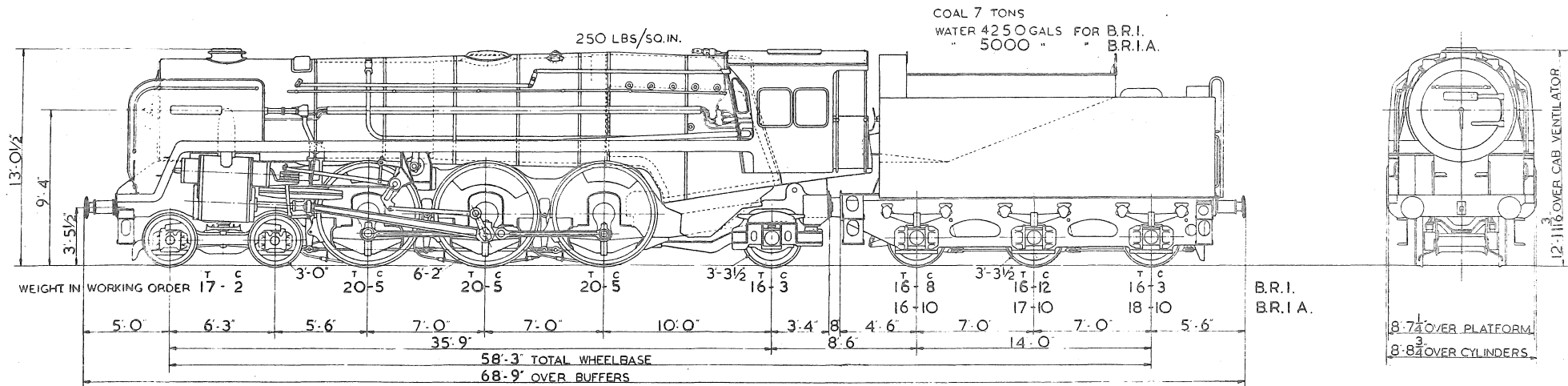
WITH B.R.I. TENDER. WITH B.R.IA. TENDER.

WEIGHTS	FULL T-C	EMPTY T-C	FULL T-C	EMPTY T-C
ENGINE	88-10	80-18	88-10	80-18
TENDER	49-3	23-3	52-10	23-3
TOTAL	137-13	104-1	141-0	104-1

SCALE

0 2 4 6 8 10 FEET

STANDARD CLASS 6. 4-6-2 ENGINE.



BOILER BARREL DIAMETER (OUTSIDE)	5'-9" INCREASING TO 6'-5 1/2"
FIREBOX (OUTSIDE)	7'-0" LONG x 7'-9" TO 7'-4" WIDE
TUBES	40 LARGE 5 1/2" O.D. x 7 SWG 136 SMALL 2 1/8" O.D. x 11 SWG
SUPERHEATER ELEMENTS	18" O.D. x 10 SWG
LENGTH BETWEEN TUBEPLATES	17'-0"
HEATING SURFACES : TUBES	2264 SQ. FT.
FIREBOX	210 SQ. FT.
TOTAL EVAPORATIVE	2474 SQ. FT.
SUPERHEATER	718 SQ. FT.
FREE FLUE AREA	6.8 SQ. FT.
GRATE AREA	42 SQ. FT.

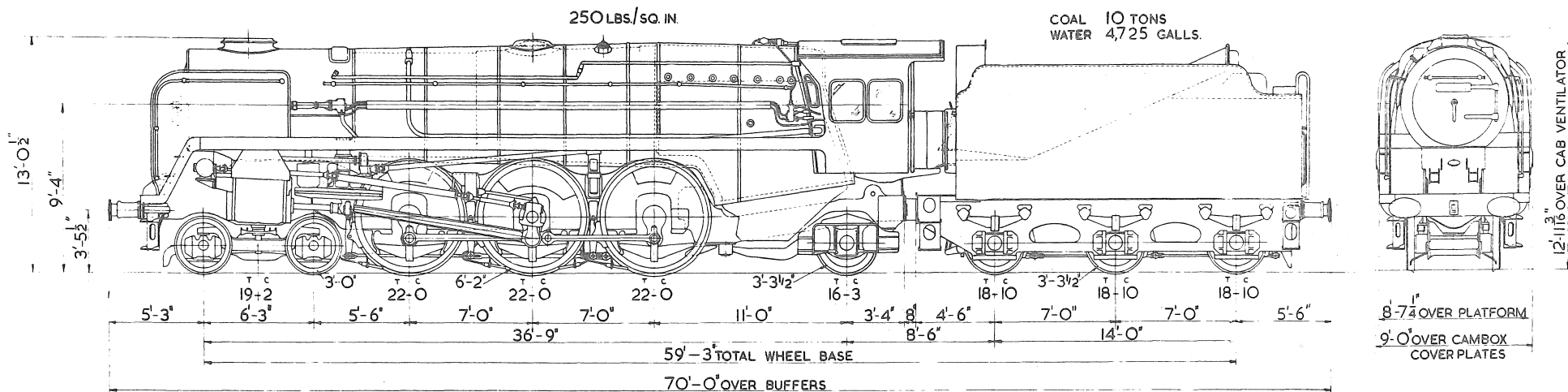
CYLINDERS (TWO)	20" x 28"
TRACTIVE EFFORT	32,150 LBS
ADHESION FACTOR	4.23
BRAKE % ENGINE & TENDER	53.4 B.R.I. TENDER. 52.5 B.R.I.A. TENDER.
MINIMUM RADIUS CURVE (WITH SPECIFIED GAUGE WIDENING)	4 1/2 CHAINS.
BOILER TYPE	B.R.I.
TENDER TYPE	B.R.I. OR B.R.I.A.

WITH B.R.I. TENDER. WITH B.R.I.A. TENDER.

WEIGHTS	FULL	EMPTY	FULL	EMPTY
	T-C	T-C	T-C	T-C
ENGINE	94-0	85-3	94-0	85-3
TENDER	49-3	23-3	52-10	23-3
TOTAL	143-3	108-6	146-10	108-6

SCALE
0 2 4 6 8 10 FEET

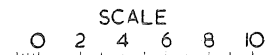
STANDARD CLASS 7. 4-6-2 ENGINE.



BOILER BARREL DIAMETER (OUTSIDE)	5'-9" INCREASING TO 6'-5 1/2"
FIREBOX (OUTSIDE)	8'-0 1/8" LONG x 7'-9" TO 7'-4" WIDE
TUBES	40 LARGE 5 1/2" O.D. x 7 S.W.G. 136 SMALL 2 1/2" O.D. x 11 S.W.G.
SUPERHEATER ELEMENTS	18" O.D. x 9 S.W.G.
LENGTH BETWEEN TUBEPLATES	17'-0"
HEATING SURFACES: TUBES	2264 SQ. FT.
FIREBOX	226 SQ. FT.
TOTAL EVAPORATIVE	2490 SQ. FT.
SUPERHEATER	691 SQ. FT.
FREE FLUE AREA	6.8 SQ. FT.
GRATE AREA	48.6 SQ. FT.

CYLINDERS (THREE)	18" x 28"
TRACTION EFFORT	39,080 LBS.
ADHESION FACTOR	3.78
BRAKE % ENGINE & TENDER	51.17
MINIMUM RADIUS CURVE (WITH SPECIFIED GAUGE WIDENING)	4 1/2 CHAINS
BOILER TYPE	B.R. 13
TENDER TYPE	B.R. 1E.

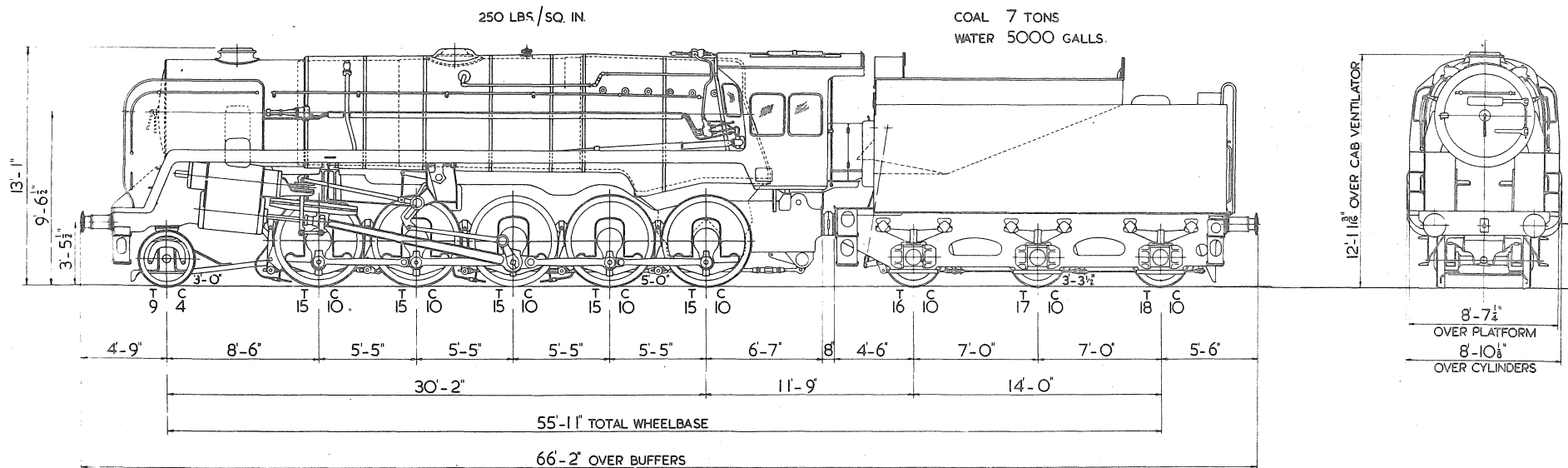
WEIGHTS	FULL	EMPTY
	T. C.	T. C.
ENGINE	101-5	92-0
TENDER	55-10	24-8
TOTAL	156-15	116-8



STANDARD CLASS 8. 4-6-2 ENGINE.

BRITISH-CAPROTTI VALVE GEAR

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BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

HEATING SURFACES: TUBES

FIREBOX
TOTAL EVAPORATIVE
SUPERHEATER

5'-9" INCREASING TO 6'-1"
7'-5 1/2" LONG x 7'-0 1/8" TO 6'-6 1/2" WIDE
35 LARGE 5 1/2" O.D. x 7 SW.G.
138 SMALL 2" O.D. x 11 SW.G.
1 1/8" O.D. x 9 S.W.G.
15'-3"
1836 SQ. FT.
179 SQ. FT.
2015 SQ. FT.
535 SQ. FT.

CYLINDERS (TWO)
TRACTION EFFORT
ADHESION FACTOR
BRAKE % ENGINE & TENDER
MINIMUM RADIUS CURVE
WITHOUT GAUGE WIDENING

BOILER TYPE
TENDER TYPE

20" x 28"
39,667 LBS.
4.38
69.8
6 CHAINS
BR.9
BR.1g

	FULL		EMPTY	
	T	C	T	C
ENGINE	86	14	78	0
TENDER	52	10	23	3
TOTAL	139	4	101	3

SCALE
0 2 4 6 8 10 FEET

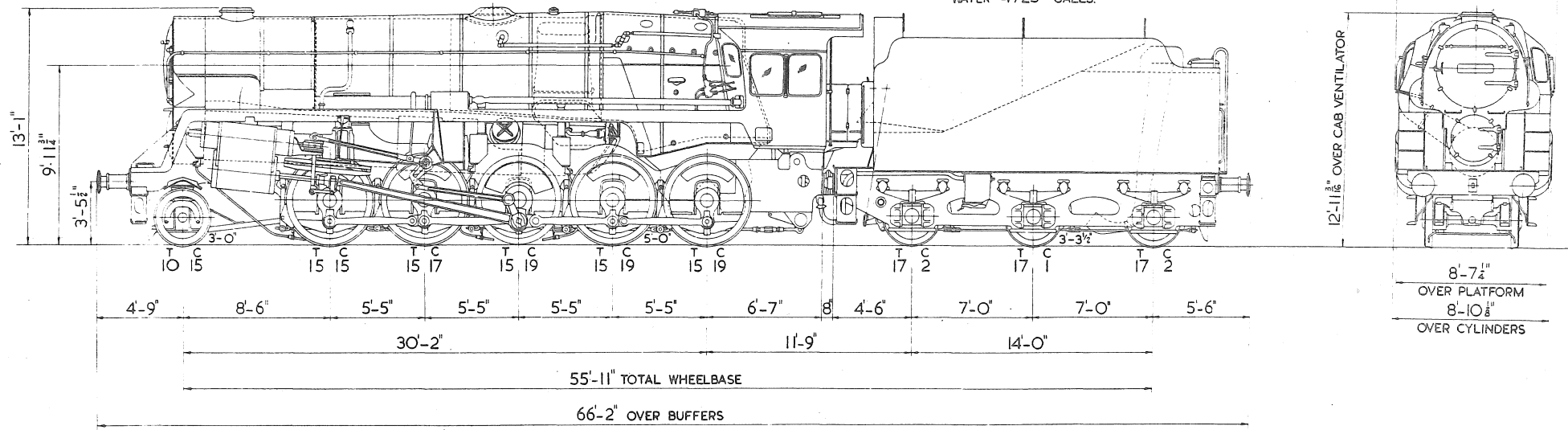
FREE FLUE AREA
GRATE AREA

5.49 SQ. FT.
40.2 SQ. FT.

B.R. STANDARD CLASS 9. 2-10-0 ENGINE

250 LBS./SQ. IN.

COAL 7 TONS
WATER 4725 GALLS.



BOILER

BARREL DIA. (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

4'-11 1/8" INCREASING TO 5'-7 1/2"
7'-5 1/2" LONG x 7'-0 1/8" TO 6'-6 1/8" WIDE
28 LARGE 5 1/2" O.D. x 7 S.W.G.
60 SMALL 2 3/8" O.D. x 11 S.W.G.
1 1/4" O.D. x 9 S.W.G.

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

16'-5"

PREHEATER

BARREL DIA. (OUTSIDE)
TUBES

2'-8 3/8"
90-2 1/4" O.D. x 11 S.W.G.

LENGTH BETWEEN TUBEPLATES

19'-3"

HEATING SURFACES

BOILER

TUBES

1274 SQ. FT.

FIREBOX

158 SQ. FT.

TOTAL EVAPORATIVE

1432 SQ. FT.

SUPERHEATER

411 SQ. FT.

PREHEATER

TUBES

1021 SQ. FT.

EXHAUST STEAM JACKET

57 SQ. FT.

FREE FLUE AREA (BOILER)

4.59 SQ. FT.

FREE FLUE AREA (PREHEATER)

2.0 SQ. FT.

GRATE AREA

40.2 SQ. FT.

CYLINDERS (TWO)

20" x 28"

TRACTIVE EFFORT

39,667 LBS.

ADHESION FACTOR

4.48

BRAKE % ENGINE & TENDER

68.4

MINIMUM RADIUS CURVE
(WITHOUT GAUGE WIDENING)

6 CHAINS

BOILER TYPE

B.R.12

TENDER TYPE

B.R.1b.

WEIGHTS

FULL

EMPTY

ENGINE

T C

T C

TENDER

90 4

82 2

TOTAL

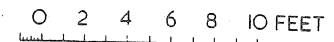
51 5

23 3

141 9

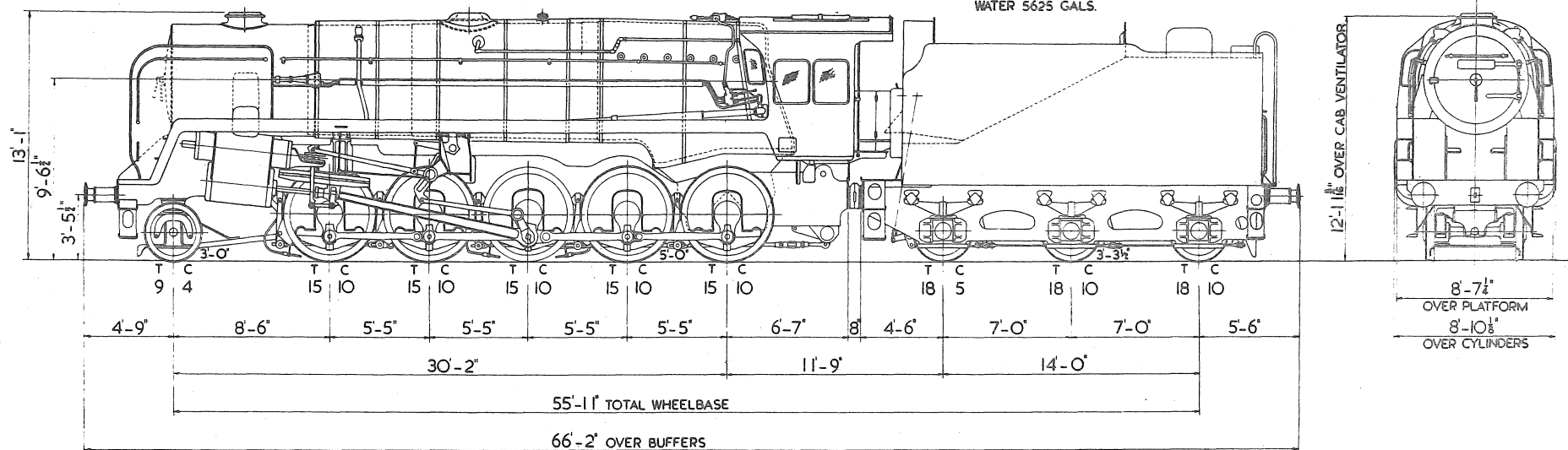
105 5

SCALE



B.R. CLASS 9 2-10-0 CROSTI ENGINE

250 LBS./SQ. IN.

COAL 7 TONS
WATER 5625 GALS.

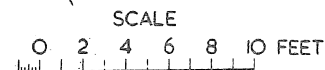
BOILER BARREL DIAMETER (OUTSIDE)	5'-9" INCREASING TO 6'-1"
FIREBOX (OUTSIDE)	7'-5 1/2" LONG x 7'-0 1/2" TO 6'-6 1/2" WIDE
TUBES	35 LARGE 5 1/4" O.D. x 7 S.W.G. 138 SMALL 2" O.D. x 11 S.W.G.
SUPERHEATER ELEMENTS	1 1/2" O.D. x 9 S.W.G.
LENGTH BETWEEN TUBEPLATES	15'-3"
HEATING SURFACES: TUBES	1836 SQ. FT.
FIREBOX	179 SQ. FT.
TOTAL EVAPORATIVE	2015 SQ. FT.
SUPERHEATER	535 SQ. FT.

FREE FLUE AREA	5.49 SQ. FT.
GRATE AREA	40.2 SQ. FT.

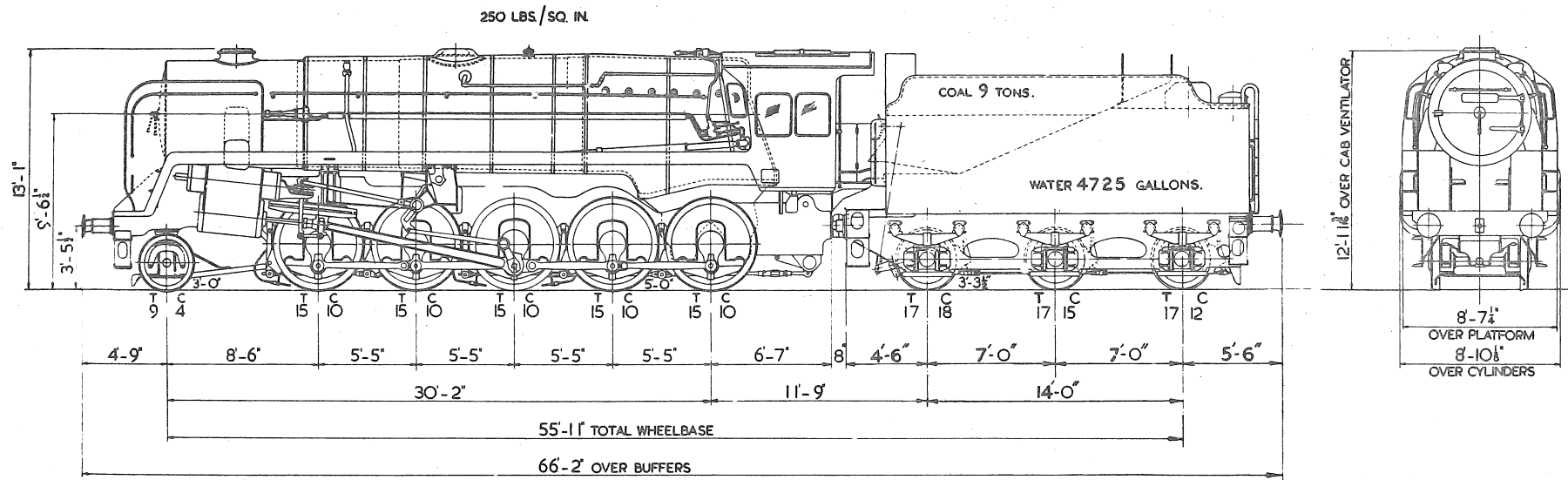
CYLINDERS (TWO)	20" x 28"
TRACTION EFFORT	39,667 LBS.
ADHESION FACTOR	4.38
BRAKE % ENGINE & TENDER	68.8

MINIMUM RADIUS CURVE WITHOUT GAUGE WIDENING	6 CHAINS
BOILER TYPE	B.R.9
TENDER TYPE	B.R.1f

WEIGHTS	FULL	EMPTY
	T C	T C
ENGINE	86 14	78 0
TENDER	55 5	23 3
TOTAL	141 19	101 3



B.R. STANDARD CLASS 9. 2-10-0 ENGINE



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

5'-9" INCREASING TO 6'-1"
7'-5 1/2" LONG x 7'-0 1/2" TO 6'-6 7/8" WIDE
35 LARGE 5 1/2" O.D. x 7 SW.G.
138 SMALL 2" O.D. x 11 SW.G.
1 1/2" O.D. x 9 SW.G.

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

15'-3"

HEATING SURFACES: TUBES

1836 SQ. FT.

FIREBOX

179 SQ. FT.

TOTAL EVAPORATIVE

2015 SQ. FT.

SUPERHEATER

535 SQ. FT.

FREE FLUE AREA
GRATE AREA

5.49 SQ. FT.
40.2 SQ. FT.

CYLINDERS (TWO)
TRACTIVE EFFORT
ADHESION FACTOR
BRAKE % ENGINE & TENDER
MINIMUM RADIUS CURVE
WITHOUT GAUGE WIDENING

20' x 28"
39,667 LBS.
4.38
69.5
6 CHAINS

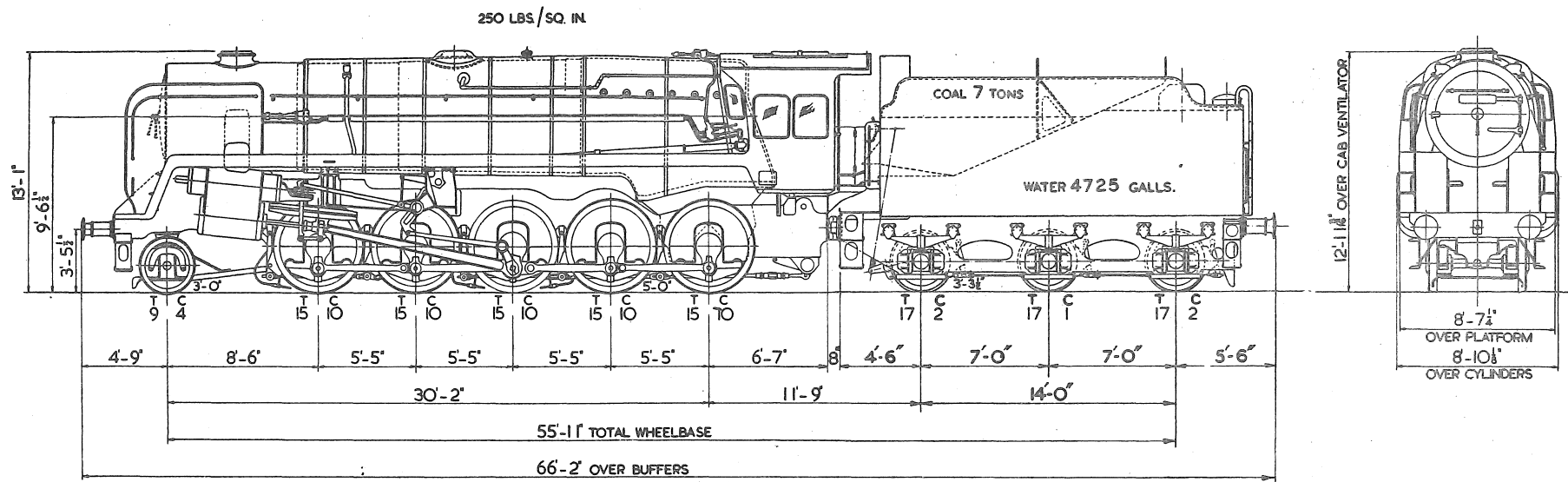
BOILER TYPE
TENDER TYPE

BR.9
BR.IC.

	WEIGHTS		FULL		EMPTY	
	T	C	T	C	T	C
ENGINE	86	14	78	0		
TENDER	53	5	23	3		
TOTAL	139	19	101	3		

SCALE
0 2 4 6 8 10 FEET

B.R. STANDARD CLASS 9. 2-10-0 ENGINE



BOILER BARREL DIAMETER (OUTSIDE)
FIREBOX (OUTSIDE)
TUBES

SUPERHEATER ELEMENTS
LENGTH BETWEEN TUBEPLATES

HEATING SURFACES: TUBES

FIREBOX
TOTAL EVAPORATIVE
SUPERHEATER

5'-9" INCREASING TO 6'-1"
7'-5 1/2" LONG x 7'-0 1/2" TO 6'-6 1/2" WIDE
35 LARGE 5 1/2" O.D. x 7 SWG.
138 SMALL 2" O.D. x 11 SWG.
1 1/2" O.D. x 9 S.W.G.
15'-3"
1836 SQ. FT.
179 SQ. FT.
2015 SQ. FT.
535 SQ. FT.

CYLINDERS (TWO)
TRACTION EFFORT
ADHESION FACTOR
BRAKE % ENGINE & TENDER
MINIMUM RADIUS CURVE
WITHOUT GAUGE WIDENING
BOILER TYPE
TENDER TYPE

20" x 28"
39,667 LBS.
4.38
70.25
6 CHAINS
B.R. 9
B.R. 1B.

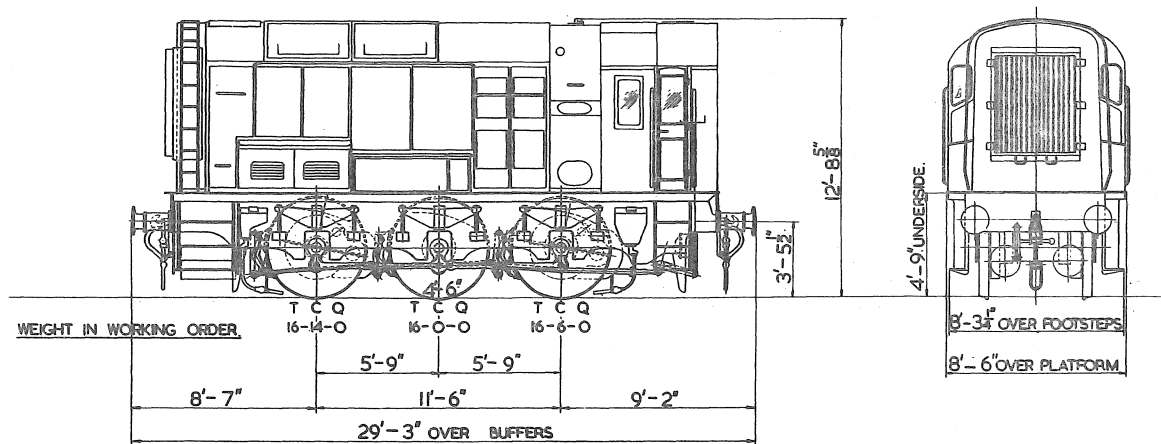
	FULL		EMPTY	
	T	C	T	C
ENGINE	86	14	78	0
TENDER	51	5	23	3
TOTAL	137	19	101	3

SCALE
0 2 4 6 8 10 FEET

FREE FLUE AREA
GRATE AREA

5.49 SQ. FT.
40.2 SQ. FT.

B.R. STANDARD CLASS 9. 2-10-0 ENGINE



6 CYLINDER ENGINE	350	B.H.P
CAPACITY FUEL OIL TANK MAIN	585	GALLONS.
• • • SERVICE	83	•
• • • TOTAL	668	•
• RADIATOR	89	•
TRACTIVE EFFORT	35000	LBS.
ADHESION FACTOR.	3.13	

	LIGHT	LOADED.
	T. C. Q.	T. C. Q.
TOTAL WEIGHT.	45-0-0	49-0-0

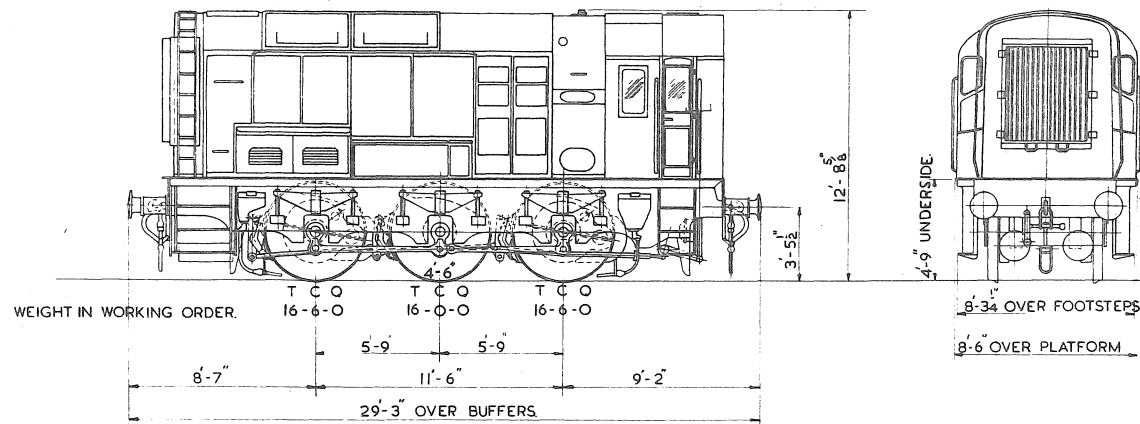
MINIMUM RADIUS CURVE 3 1/2 CHAINS.
(WITH SPECIFIED GAUGE WIDENING).
BRAKE % 66.2

SCALE
0 2 4 6 8 10 FEET

DIESEL ELECTRIC SHUNTING LOCOMOTIVE.

ENGLISH ELECTRIC — POWER EQUIPMENT.

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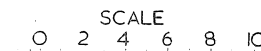


6 CYLINDER ENGINE	350	B.H.P.
CAPACITY FUEL OIL TANK MAIN	585	GALLONS.
SERVICE	83	
TOTAL	668	
RADIATOR	89	
TRACTION EFFORT	35000	LBS.
ADHESION FACTOR.	3.11	

	LIGHT	LOADED
	T. C. Q.	T. C. Q.
TOTAL WEIGHT.	45-12-0	48-12-0

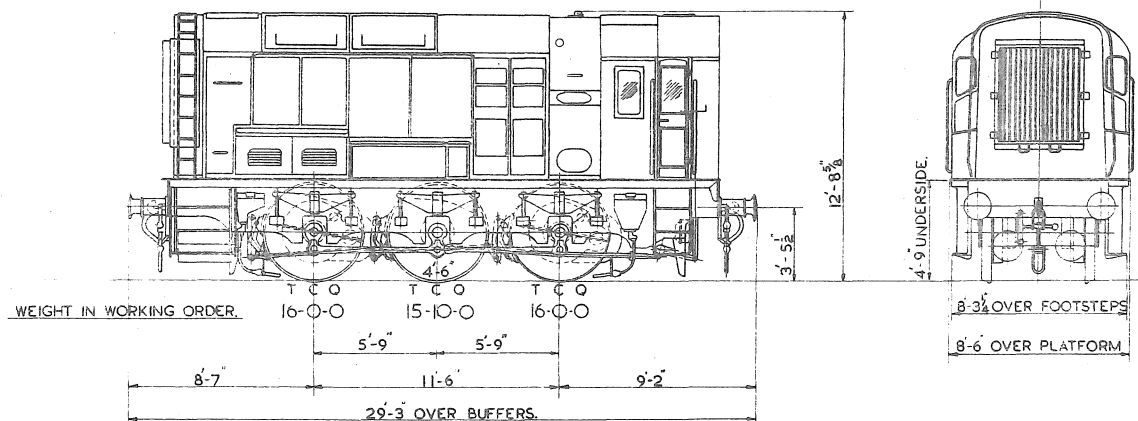
MINIMUM RADIUS CURVE
(WITH SPECIFIED GAUGE WIDENING)
BRAKE % 66.7

3 1/2 CHAINS.



DIESEL ELECTRIC SHUNTING LOCOMOTIVE.

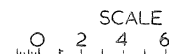
GENERAL ELECTRIC COMPANY, BLACKSTONE.-POWER EQUIPMENT



6 CYLINDER ENGINE	350	B.H.P.
CAPACITY FUEL OIL TANK MAIN	585	GALLONS.
SERVICE	83	
TOTAL	668	
RADIATOR	89	
TRACTION EFFORT	35000	LBS
ADHESION FACTOR	3.04	

	LIGHT	LOADED
	T C Q	T C Q
TOTAL WEIGHT	43-10-0	47-10-0

MINIMUM RADIUS CURVE (WITH SPECIFIED GAUGE WIDENING.) 3 1/2 CHAINS.
BRAKE % 68.3



DIESEL ELECTRIC SHUNTING LOCOMOTIVE.

CROMPTON PARKINSON. CROSSLEY - POWER EQUIPMENT

