



Heath #597-1442-01

TUBE DATA

FOR

HEATH

IT-17 IT-21 IT-3117 TUBE TESTERS

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IMPORTANT NOTES

* Special short test for tubes with internal connections. A good tube will not show short when the levers shown in parenthesis () are moved simultaneously. If moved individually it will show short.

Be sure to set filament selector switch to .63 volts when checking for continuity or short tests.

Tubes followed by suffixes such as G, GT, Y, W, A, B, etc., in general can be tested by the same setup listed for the tubes without a suffix.

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
00A	2	5	30	BC	D	1AD2	4	1.4	60	N	HM	1BQ2	4	1.4	86	N	BEH
01A	2	5	45	BC	D	No short test. Good tube reads above 20						Tube damaged if BE or H is moved.					
0A2	4	Off	40	AE	BDG	Tube damaged if H or M is moved.						1BX2	4	1.4	67	N	ADFJ
Good tube reads above 10.						1AE4	1	1.4	23	BCF	AE	No short test.					
0A3	4	Off	30	E	BCG	1AF4	1	1.4	26	BCF	AE	1BY2	4	1.4	60	N	HM
Good tube reads above 10.						1AF5	1	1.4	75	DEF	A	No short test. Good tube reads above 20.					
0A4	4	Off	40	G	BE	1AH5	1	1.4	32	DEF	CG	Tube damaged if H or M is moved.					
	4	Off	44	E	BG		1	1.4	53	C	G	1C3	1	1.4	25	BCDEF	G
0B2	4	Off	95	AE	BDG	1AJ4	1	1.4	24	BCF	G	No open element test on BE & F.					
Good tube reads above 10.						No open element test on B.						1C5	2	1.4	37	CDE	G
0B3	4	Off	30	E	BCG	1AU2*	4	1.4	100	(AJ)	E	1C6	2	2	42	CD	F
Good tube reads above 10.						1AX2	4	1.4	95	N	BEH		1	2	68	BEN	F
0C2	4	Off	40	AE	BDG	Good tube reads above 25.						1C7	2	2	41	EF	G
Tube normally shows leakage.						1AY2	4	1.4	58	N	G		1	2	56	CDN	G
Good tube reads above 10.						Insert into pins 2 & 7 of 9 pin min.						1C21	4	Off	45	E	BG
0C3	4	Off	30	E	BCG	1B3	1	1.4	98	N	ACDEFGH	1D5	2	2	39	CDN	G
Good tube reads above 10.						Use G & N only for element test.						1D5GP	2	2	33	CDN	G
0D3	4	Off	30	E	BCG	Good tube reads above 26.						1D7	1	2	31	EF	G
Good tube reads above 10.						1B4	1	2	27	BCN	D		1	2	95	CDN	G
0G3	4	Off	32	ACEF	BDG	1B4P	2	2	35	BCN	D	1D8	2	1.4	48	FN	G
Good tube reads above 10.						1B5(25S)	1	2	31	BE	F		2	1.4	37	CDE	G
0Y4	4	Off	22	E	CGH		1	2	40	D	F		1	1.4	95	G	H
0Z4	4	Off	22	E	CH		1	2	40	C	F	1D13*	1	1.4	75	(BF)	CG
	4	Off	22	C	EH	1B7	1	1.4	26	EF	G	1DG3	4	1.4	80	N	CE
1A3	1	1.4	75	BF	CG		1	1.4	95	CDN	G	Good tube reads above 30. No short test.					
1A4	1	2	28	BCN	D	1B8	2	1.4	32	CDE	G	1DK1	1	1.4	70	N	B
1A5	2	1.4	50	CDE	G		2	1.4	60	FN	G	Insert 2 base leads into pins 1 & 2 of 9 pin min. skt.					
1A6	2	2	50	CD	F		1	1.4	95	H	G	Use plate cap on single lead.					
	1	2	95	BEN	F	1BC2	4	1.4	70	N	BEH	Good tube reads above 20.					
1A7	1	1.4	31	EF	G	Tube damaged if BE or H is moved.						1DK29	1	1.4	32	N	B
	1	1.4	95	CDN	G	1BG2	1	1.4	32	N	B	Insert 2 base leads into pins 1 & 2 of 9 pin min. skt.					
1AB4	1	1.4	23	BCF	AE	Insert 2 base leads into pins 1 & 2 of 9 pin min. skt.						Use plate cap on single lead.					
1AB5	1	1.4	25	BCF	GH	Good tube reads above 20.						Good tube reads above 20.					
1AB6	1	1.4	25	BCDEF	G	1BK2	4	1.4	52	N	BEH	1DN5	1	1.4	52	D	G
No open element test on B, E & F.						No short test. Good tube reads above 30.							1	1.4	27	BCF	G

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
1E3	3	1.4	30	AH	CE	1LA4	2	1.4	40	BCF	H	1T5	2	1.4	40	CDE	G
1E4	2	1.4	45	CE	G	1LA6	1	1.4	30	CD	H	1U4	2	1.4	30	BCF	AE
1E5	1	2	35	CDN	G		1	1.4	95	BEF	H	1U5	2	1.4	40	BCF	A
1E7	2	2	30	CDH	G	Good tube reads above 40 on test 2.							1	1.4	66	D	A
	2	2	30	EFH	G	1LB4	2	1.4	40	BCF	H	1U6	1	1.4	34	CD	BEFG
1F1	1	1.4	24	BCF	G								1	1.4	40	BEF	CDG
No open element test on B.						Good tube reads above 30 on test 2.						Good tube reads above 20. H may not show short.					
1F2	2	1.4	37	BCF	AE	1LB6	1	1.4	32	BCDEFG	H	1V	3	6.3	24	B	CD
1F3	2	1.4	35	BCF	G	1LC5	1	1.4	32	BCDF	EH	1V2*	1	.63	76	(AHJ)	E
1F4	3	2	47	BCD	E	1LC6	1	1.4	32	CD	H	Good tube reads above 20. H may not show short.					
1F5	2	2	36	CDE	G		1	1.4	80	BEF	H	1X2	4	1.4	67	N	ADFJ
1F6	1	2	37	BCN	F	1LD5	1	1.4	32	BCF	H		4	1.4	67	N	BEH
	1	2	95	D	F		1	1.4	95	D	H	1Z2	4	1.4	85	N	BEG
	1	2	95	E	F	Good tube reads above 20 on test 2.						2A3	3	2.5	28	BC	D
1F7 (GV)	1	2	35	CFN	G	1LE3	2	1.4	37	BF	H	2A4	3	2.5	25	E	G
	1	2	95	E	G								3	2.5	25	C	EG
	1	2	95	D	G	1LG5	2	1.4	35	BCF	DEH	No short test.					
1FD1	1	1.4	32	DEF	CG	1LH4	1	1.4	26	BF	H	2A5	3	2.5	36	BCD	EF
	1	1.4	53	C	G		1	1.4	44	D	H	2A6	3	2.5	26	BN	EF
1FD9	1	1.4	25	DEF	G	1LN5	2	1.4	40	BCDF	EH		1	2.5	40	C	EF
	1	1.4	55	C	G	1N2	4	1.4	75	N	GH		1	2.5	40	D	EF
1G3	1	1.4	100	N	ACDEFGH	1N5	1	1.4	27	CDN	G	2A7	2	2.5	32	E	FG
Use G & N only for element test.						1N6	2	1.4	38	CDE	G		2	2.5	64	BCDN	FG
Good tube reads above 10.							1	1.4	95	F	G	2AF4*	2	2.35	21	(AG) (BF)	DE
1G4	1	1.4	30	CE	G	Good tube reads above 20 on test 2.						2AH2	4	2.5	76	N	ABEFGHL
1G5	2	2	39	CDE	G	1P1	1	1.4	23	BCF	E	Due to varying arrangements of internal connections, this tube cannot be tested.					
1G6	1	1.4	35	CD	G	1P5	1	1.4	31	CDN	G	2AV2*	1	1.4	100	(AJ)	E
	1	1.4	35	EF	G	1P10	2	1.4	35	BCDF	AG	Good tube reads above 35.					
1H2	4	1.4	84	N	ADFJ	1P11	1	1.4	23	BCF	E	2AZ2	4	2	63	N	ADFJ
1H4	2	2	41	CE	G	1Q5	2	1.4	33	CDE	G	2B3	2	2	40	N	B
1H5	1	1.4	33	ON	G	1R4	1	1.4	57	D	GH	Good tube reads above 10.					
	1	1.4	40	E	G	Good tube reads above 10.						2B4	3	2.5	24	BC	DE
1H6	1	2	30	CF	G	1R5	1	1.4	21	D	AE	2B6	2	2.5	95	B	FG
	1	2	40	E	G		1	1.4	95	BCF	AE		3	2.5	50	CD	EG
	1	2	40	D	G	1RK23	1	1.4	90	N	ADFJ	2B7	3	2.5	47	BCN	FG
1H35	1	1.4	25	BCDEF	G	Tube damaged if ADF or J is moved.							1	2.5	40	E	FG
No open element test on BE & F.						Good tube reads above 35.							1	2.5	40	D	FG
1J3/1K3	1	1.4	100	N	ACDEFGH	1RK41	4	1.4	52	N	BEH	2BA2*	4	2	53	(AJ)	E
Good tube reads above 10.						No short test. Good tube reads above 30.						2BJ2	4	2.35	65	N	ADFJ
Tube damaged if ACDEFGH is moved.						1S2A	1	1.4	90	N	ADFJ	Tube damaged if ADFJ or BEH is moved.					
1J5	2	2	38	CDE	G	Good tube reads above 35.						2BN4*	1	2	19	(BG)E	(AF)D
1J6	2	2	39	CD	G	1S4	2	1.4	30	BCDF	AE	2BU2	1	2.5	38	N	HM
	2	2	39	EF	G	1S5	1	1.4	25	DEF	G	Good tube reads above 10.					
1L4	2	1.4	37	BCF	AE		1	1.4	55	C	G	Tube damaged if H or M is moved.					
1L8	1	1.4	34	CD	G	1SA6	2	1.4	30	CDFH	G	2C21	2	6.3	29	CN	BG
	1	1.4	37	BEF	G	1SB6	1	1.4	36	CDH	G		2	6.3	29	DE	FG
Good tube reads above 40 on test 2.							1	1.4	90	E	G						
						1T4	2	1.4	35	BCF	G						

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
2C22	3	6.3	22	N	GH	2HM5	3	2	18	AE	BDG	3BE6	2	3.15	21	A	BD
Short top caps together.						Tube damaged if B or G is moved.						2					
2C26	3	6.3	35	N	GH	2HQ5	3	2	18	AE	BDG	3BH2	4	3.15	60	N	AEJ
2C51	2	6.3	23	CD	BFGHJ	Tube damaged if B or G is moved.						Tube damaged if AE or J is moved.					
	2	6.3	23	FG	BCDHJ	2S/4S(G-2)						3BL2	1	3.15	38	N	HM
2C52	2	12.6	26	DE	FG		1	2.5	45	B	DE	Good tube reads above 35.					
	2	12.6	26	AB	CG	2T4*	2	2.35	22	(AG) (BF)	DE	Tube damaged if H or M is moved.					
2CN3	4	1.4	50	N	CEG	2V2	4	1.4	97	N	BDFGH	3BM2	4	3.15	40	N	HM
Tube damaged if CE or G is moved.						2V3	1	2.5	96	N	G	Tube damaged if H or M is moved.					
2CW4	1	2	18	BD	HM	Good tube reads above 20.						3BN2	4	3.15	100	N	ABEFJ
2CY5*	2	2	22	AEF	(BG)C	2W3	2	2.5	36	D	H	Tube damaged if ABEF or J is moved.					
2D21	3	6.3	18	AEFG	BD	2X2 (879)	4	2.5	52	N	D	3BM4*	1	3.15	19	(BG)E	(AF)D
2DL4*	3	2.5	18	(ACFGJ)H	BE	2X2A	4	2.5	44	N	D	3BM6	1	3.15	35	BEFG	AC
2DS4	1	2	18	BD	HM	Good tube reads above 40.						Good tube reads above 20.					
2DV4*	3	2	19	(AB) (DF)	GM	2X3	3	2.5	43	D	H	3BS2	1	3.15	40	N	HM
2DZ4*	3	2.35	21	(AG) (BF)	DE	2Y2	1	2.5	95	N	D	Tube damaged if H or M is moved.					
2E5	2	2.5	44	BC	EF	Good tube reads above 40.						Good tube reads above 25.					
Eye CL	4	2.5	0	BD	CEF	2Z2 (G84)	3	2.5	56	B	D	3BT2	1	3.15	38	N	HM
Eye OP	4	2.5	0	D	BCEF	3A2	4	3.15	54	N	ADFJ	Tube damaged if H or M is moved.					
2E22	3	6.3	25	BCDN	E	3A3	4	3.15	56	N	B	Good tube reads above 20.					
2E24	3	2.5	22	CEN	BG	Good tube reads above 25.						3BU8	1	3.15	22	BCFG	AE
	3	2.5	22	CEN	BG	3A4	2	1.4	26	BCDF	AG		1	3.15	22	BGHJ	AE
A, D & F should show short when moved to top position.						3A5	2	1.4	30	BC	D	3BW2	1	3.15	38	N	HM
2E25	3	6.3	28	DEHN	B		2	1.4	30	EF	D	Tube damaged if H or M is moved.					
2E26*	3	6.3	21	CEN	(ADF)B	3A8	1	1.4	36	CDN	BG	Good tube reads above 20.					
2E30	3	2.5	26	ABEF	CD		1	1.4	36	EF	BG	3BY6	2	3.15	25	AF	BD
2EA5*	2	2.35	22	AEF	(BG)C		1	1.4	45	H	BG		1	3.15	30	EG	BD
2EG4	2	2.0	19	BD	HM	3AF4*	2	3.15	21	(AG) (BF)	DE	3BZ6	2	3.15	20	AEFG	BC
2ER5*	2	2	20	BEF	(AG)D	3AL5	1	3.15	20	B	DE	No open element test of F & G.					
2EV5*	2	2.5	22	AEF	(BG)D		1	3.15	20	G	AD	3C2	1	1.4	60	N	DEFGH
2FH5*	2	2.35	21	BE	(AG)D	3AT2	4	3.15	61	N	ABEFJ	3C4	1	1.4	23	BCF	E
2FQ5	3	2.5	20	BE	AGD	3AU6	2	3.15	22	ABEF	DG	3C5	2	1.4	34	CDE	BG
Tube damaged if A or G is moved.						3AV6	1	3.15	21	AG	BD	3C6	2	1.4	40	CD	AH
2FS5*	3	2.5	20	AF	(BG)DE		1	3.15	43	E	BD		2	1.4	40	EF	AH
2FV6	2	2.5	20	AEF	DG	3AW2	4	2.5	52	N	ABEFJ	3CA3	4	3.15	75	N	G
No open element test on E.						Tube damaged if ABEF or J is moved.						3CB6	2	3.15	21	AEFG	BC
2G5	2	2.5	44	BC	EF	3AW3	2	3.15	68	N	CGH	3CE5*	2	3.15	21	AEF	(BG)D
Eye CL	4	2.5	0	BD	CEF	Good tube reads above 10.						No open element test on E.					
Eye OP	4	2.5	0	D	BCEF	3B2	1	3.15	50	N	ACDEG	3CF6	1	3.15	19	AEFG	BD
2GK5	3	2.35	20	BE	ADG	Good tube reads above 10.						No open element test on E & G.					
Tube damaged if A or G is moved.						3B4	3	1.4	47	ACG	E	3CN3	4	3.15	50	N	ACEG
2GU5*	1	2.5	19	A	(BG)D	3B5	2	1.4	35	CDE	BG	Tube damaged if ACE or G is moved.					
	1	2.5	29	EF	(BG)D	3B7	1	1.4	33	BC	AH	3CS6	1	3.15	21	AF	BC
2GW5*	2	2.5	20	A(BF)	DE		1	1.4	33	FG	AH		1	3.15	40	EG	BC
2HA5	3	2	18	AE	BDG	3BA6	2	3.15	23	ABEF	DG	3CU3	1	3.15	20	N	B
Tube damaged if B or G is moved.						3BC5*	2	3.15	20	AEF	(BG)C	Good tube reads above 20.					
2HK5	3	2	18	AE	BDG	No open element test on E.											
Tube damaged if B or G is moved.																	

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
3CV3	4	3.15	56	N	B	3GK5	3	3.15	18	BE	ADG	4BC8	2	4.2	22	AB	CD
Good tube reads above 30.						Tube damaged if A or G is moved.						2	4.2	22	FG	DH	
3CX3	4	3.15	40	N	CE	3GS8	2	3.15	20	BCFG	AE	4BE6	2	4.2	20	A	BD
Good tube reads above 35.						2	3.15	20	BGHJ	AE		2	4.2	20	EFG	BD	
Tube damaged if C or E is moved.						3GU5	1	3.15	19	A	BDG	4BF5*	3	4.2	18	(AG)EF	BC
3CY3	4	3.15	54	N	B	1	3.15	29	EF	BDG		4BL8	2	4.7	22	AJ	EH
Good tube reads above 35.						Tube damaged if B or G is moved.						2	4.7	20	BC	EFG	
3CY5*	3	3.15	22	AEF	(BG)C	3GW5*	2	3.15	20	A(BF)	DE	4BN6	1	4.2	36	BEFG	AC
3CZ3	4	3.15	44	N	B	3HA5	3	2.5	18	AE	BDG	Good tube reads above 23.					
Good tube reads above 35.						Tube damaged if B or G is moved.						4BQ7	2	4.2	21	AB	CD
3D6	2	1.4	30	BCF	AH	3HK5	3	3.15	18	AE	BDG	2	4.2	21	FG	DH	
3DA3	4	3.15	40	N	CE	Tube damaged if B or G is moved.						4BS8	2	4.2	22	AB	CD
Good tube reads above 35.						3HM5	3	3.15	18	AE	BDG	2	4.2	22	FG	DH	
Tube damaged if C or E is moved.						Tube damaged if B or G is moved.						4BU8	1	4.2	22	BCFG	AE
3DB3	4	3.15	54	N	B	3HM6	1	3.15	34	GJ	ACE	1	4.2	22	BGHJ	AE	
Good tube reads above 35.						3	3.15	19	BH	ACE		4BX8	1	5	19	AB	CE
3DC3	1	3.15	44	N	B	Tube damaged if A or C is moved.						1	5	19	FG	EH	
Good tube reads above 25.						3HQ5	3	2.5	18	AE	BDG	4BZ6	1	4.2	18	AEFG	BC
3DF3	4	3.15	40	N	C	Tube damaged if B or G is moved.						No open element test of E & G.					
Good tube reads above 30. No short test.						3HS8	2	3.15	24	BHJ	AE	4BZ7	2	4.2	21	FG	DH
3DG4	4	3.15	18	E	C	2	3.15	21	CFG	AE		2	4.2	20	AB	CD	
4	3.15	18	G	C		3HT6	1	3.15	34	GJ	ACE	4BZ8	3	4.2	16	FG	EH
3DH3	4	3.15	40	N	CE	3	3.15	19	BH	ACE		3	4.2	16	AB	CE	
Good tube reads above 35.						Tube damaged if A or C is moved.						4CB6	2	4.2	22	AEFG	BC
Tube damaged if C or E is moved.						3JC6	2	3.15	19	BGHJ	ACE	No open element test on E.					
3DJ3	4	3.15	42	N	B	Tube damaged if A or C is moved.						4CE5*	2	4.2	20	AEF	(BG)D
Good tube reads above 20.						3KF8	2	3.15	20	BGHJ	AE	No open element test on E.					
3DK6	3	3.15	22	AEF	BCG	2	3.15	20	BCFG	AE		4CM4*	3	4.2	19	(AJ)(BFH)	CEG
3DR3	4	3.15	40	N	CE	3KT6	3	3.15	19	BGHJ	ACE	Tube damaged if C or G is moved.					
Good tube reads above 35. No short test.						Tube damaged if A or C is moved.						4CS6	1	4.2	20	AF	BC
3DS3	4	3.15	40	N	CE	3LE4	2	1.4	34	BCF	AH	1	4.2	28	EG	BC	
Good tube reads above 35. No short test.						3LF4	2	1.4	30	BCF	AH	4CY5*	3	4.2	24	AEF	(BG)C
3DT6	1	3.15	20	AEFG	BD	3MP26	2	3.15	21	AEF	BC	4DE6	2	4.2	21	AEFG	BC
3DZ4*	3	3.15	21	(AG) (BF)	DE	3MR24	3	3.15	20	AEF	BD	No open element test on E & G.					
3E5	2	1.4	31	BCF	AG	3MV7	2	3.15	20	AEF	BD	4DK6	3	4.2	22	AEF	BCG
3E6	2	1.4	30	BCDF	AH	3Q4	2	1.4	33	BCDF	AG	4DL4*	3	4.2	18	(ACFGJ)H	BE
3EA5*	2	3.15	22	AEF	(BG)C	3Q5	3	1.4	35	CDE	BG	4DT6	1	4.2	20	AEFG	BD
3EH7*	2	3.15	21	BGHJ	(AC)E	3S4	2	1.4	35	BCDF	AG	4EH7*	2	4.2	21	BGHJ	(AC)E
3EJ7*	2	3.15	21	BGHJ	(AC)E	3V4	2	1.4	28	BCF	AG	4EJ7*	2	4.2	21	BGHJ	(AC)E
3ER5*	2	2.5	20	BEF	(AG)D	4A6	2	2	35	CD	H	4ES8	2	4.2	20	AB	CE
3EV5*	2	2.5	23	AEF	(BG)D	3	2	46	EF	H		2	4.2	20	FG	EH	
3FH5	2	3.15	21	BE	ADG	4AU6	2	4.2	22	ABEF	DG	4EW6	2	4.2	20	AEF	BCG
Tube damaged if A or G is moved.						4AV6	1	4.2	21	AG	BD	No open element test on E & G.					
3FQ5	3	3.15	20	BE	AGD	1	4.2	43	E	BD		4GJ7	2	4.2	19	HJ	ACE
Tube damaged if A or G is moved.						1	4.2	43	F	BD		2	4.2	18	BFG	ACE	
3FS5*	3	3.15	19	AF	(BG)D	4BA6	2	4.2	23	ABEF	DG	Tube damaged if A or C is moved.					
						4BC5*	1	4.2	18	AEF	(BG)C	4GK5	3	4.2	19	BE	ADG
												Tube damaged if A or G is moved.					

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
4GM6	2	4.2	20	AEF	BDG	4KN8	3	4.7	19	AB	CE	5B8	2	4.7	21	BC	AE
4GS7	3	4.2	19	FGJ	CEH	3	4.7	19	FG	HE		2	4.7	21	FHJ	ABCEG	
	3	4.2	21	AB	CEH	4KT6	3	4.7	19	BGHJ	ACE	No open element test on J.					
Tube damaged if C or H is moved.						Tube damaged if A or C is moved.						5BC3*	3	5	26	(EF)	BC
4GS8	2	4.2	20	BCFG	AE	4LJ8	2	5	18	FGJ	CEH		3	5	26	(HJ)	BC
	2	4.2	20	BGHJ	AE		2	5	18	AB	CEH	Tube damaged if B or C is moved.					
4GW5*	2	4.2	20	A(BF)	DE	Tube damaged if C or H is moved.						5BE8	2	4.7	20	AB	CE
4GX7	2	4.7	20	BFG	ACE	4LU6	3	4.2	20	AEFG	BD		2	4.7	20	FGJ	CEH
	3	4.7	21	HJ	ACE	4MK8	2	4.2	20	BCFG	AE	5BK7	2	4.7	21	FG	EH
Tube damaged if A or C is moved.							2	4.2	20	BGHJ	AE		2	4.7	21	AB	CE
4GZ5*	3	4.2	19	(BE)F	ADG	4MP12	3	4.7	22	AEF	BD	5BQ7	2	4.7	22	AB	CD
4HA5	3	4.2	18	AE	BDG	4MP26	2	4.2	21	AEF	BC		2	4.7	22	FG	DH
Tube damaged if B or G is moved.						4RHH2	2	4.2	21	AB	CD	5BR8	2	4.7	20	AB	CE
4HA7	1	4.2	20	BL	CM		2	4.2	21	FG	DH		2	4.7	20	FGJ	EH
	2	4.2	23	JK	DM	4RHH8	3	4.7	19	AB	CE	No open element test on F.					
4HC7*	1	4.2	20	BL	CM		3	4.7	19	FG	EH	5BS8	2	4.7	22	AB	CD
	2	4.2	23	(GK)J	DM	4RHH15	3	4.2	22	FG	EH		2	4.7	22	FG	DH
4HK5	3	4.2	18	AE	BDG		3	4.2	22	AB	CE	5BT8	3	4.7	22	FGH	DJ
Tube damaged if B or G is moved.						5A6	3	2.5	24	ACFGH	J		1	4.7	26	A	CD
4HM5	3	4.2	18	AE	BDG	5AM8	1	4.7	18	BCFJ	AD		1	4.7	26	B	CD
Tube damaged if B or G is moved.						No open element test on F & J.						5BW8	1	4.7	20	A	BE
4HM6	3	4.2	18	BH	ACE		1	4.7	18	H	DG		1	4.7	20	C	BE
	1	4.2	32	GJ	ACE	5AN8	2	4.7	22	FGH	EJ		2	4.7	21	FHJ	EG
Tube damaged if A or C is moved.						No open element test on F.						No open element test on J.					
4HR8*	2	4.2	21	A(BG)FHJ	CE		2	4.7	23	AB	CE	5BZ7	2	4.7	20	AB	CD
4HQ5	3	4.2	18	AE	BDG	5AQ4	3	5.0	25	F	H		2	4.7	20	FG	DH
Tube damaged if B or G is moved.							3	5.0	25	D	H	5CG8	1	4.7	20	AB	CEH
4HS8	2	4.2	24	BHJ	AE	5AQ5*	3	4.7	27	(AG)EF	BD		1	4.7	19	FGJ	CEH
	2	4.2	21	CFG	AE	5AR4	3	5	26	D	H	No element or short test on C & H.					
4HT6	3	4.2	19	BH	ACE		3	5	26	F	H	5CL8	2	4.7	22	AB	CD
	1	4.2	34	GJ	ACE	5AS4	1	5	23	D	H		2	4.7	22	FGJ	DH
Tube damaged if A or C is moved.							1	5	23	F	H	5CM6*	3	4.7	21	A(CF)J	DG
4JC6	2	4.7	19	BGHJ	ACE	5AS8	3	4.7	22	ABJ	CD	5CM8	2	4.7	24	AJ	DH
Tube damaged if A or C is moved.							2	4.7	24	F	DH		3	4.7	22	BFG	CD
4JD6	3	4.7	19	BH	ACEG	5AT8	2	4.7	21	AB	CE	5CQ8	1	4.7	19	AJ	EH
Tube damaged if A or C is moved.							2	4.7	20	FGHJ	CE		1	4.7	19	BCF	EG
4JH6	3	4.2	20	AEFG	BD	No open element test on F & H.						5CR8	2	5	20	AJ	EH
4JK6	3	4.7	18	AF	BD	5AU4	3	5	30	F	H		2	5	19	BFG	CE
	1	4.7	33	EG	BD		3	5	30	D	H	5CZ5	1	4.7	21	ACFJ	EG
4JL6	3	4.7	18	AF	BD	5AV8	2	4.7	22	FHJ	EG	5DH8	1	5	19	AB	CD
	1	4.7	32	EG	BD	No open element test on F.							2	5	20	FGJ	DH
4JW8	2	4.7	20	BCF	EG		2	4.7	23	BC	AE	5DJ4*	3	5	30	(CD)	GH
	2	4.7	21	AJ	EH	5AW4	4	5	18	D	H		3	5	30	(EF)	AB
4KE8	2	4.2	18	BCF	EG		4	5	19	F	H	Tube damaged if GH or AB is moved.					
	2	4.2	18	AJ	EH	5AX4	3	5	40	D	H	5EA8	2	4.7	21	AJ	EH
4KF8	2	4.2	20	BGHJ	AE		3	5	40	F	H		2	4.7	21	BCF	EG
	2	4.2	20	BCFG	AE	5AZ4	3	5	43	F	H	5EH8*	2	4.7	21	GHJ	(AF)E
							3	5	43	D	H		2	4.7	21	BC	(AF)E
												5EU8	2	4.7	21	AGJ	EH
													2	4.7	21	BC	EF

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
5EW6	2	5	19	AF	BD	5MHH3	2	5	22	AF	CG	6A4/LA	3	6.3	36	BCD	E
	1	5	41	EG	BD		2	5	22	BE	CG	6A5	2	2.5	28	CE	BG
5FG7*	2	4.7	19	AB	(CH)E	5MK9	3	5	28	E	C	6A6	3	6.3	36	BC	DG
	3	4.7	19	GJ	(CH)EF	5MQ8	2	5	20	BCF	EG		3	6.3	36	EF	DG
5FV8	2	4.7	21	FGJ	EH		2	5	21	AJ	EG	6A7	2	6.3	30	DE	FG
	2	4.7	21	AB	CE	5R4	3	5	46	D	H		2	6.3	38	BCN	FG
5GH8	2	4.7	17	BCF	EG		3	5	46	F	H	6A8	2	6.3	31	EF	GH
	2	4.7	17	AJ	EH	5R-DDH1	1	5	22	A	BE		2	6.3	40	CDN	GH
5FJ7	2	5	19	HJ	ACE		1	5	24	F	CE	6AB4	2	6.3	22	AF	CG
	2	5	18	BFG	ACE		1	5	20	GH	EJ	6AB5	2	6.3	36	BC	EF
Tube damaged if A or C is moved.						5RHP1	2	4.7	22	AJ	EH	Eye CL	4	6.3	0	BD	CEF
5GM6	2	5	19	AF	BD		2	4.7	20	BC	EFG	Eye OP	4	6.3	0	D	BCEF
	1	5	37	EG	BD	5RHR1	2	5	20	AJ	EH	6AB6	3	6.3	62	DE	CGH
5GS7	3	5	19	FGJ	CEH		2	5	20	BCF	EG		3	6.3	44	CE	DGH
	3	5	21	AB	CEH	No open element test on F.						6AB7	3	6.3	23	DFH	CEG
Tube damaged if C or H is moved.						5RK16	3	5	24	A	D	6AB7	1	6.3	20	FGHJ	CE
5GX6	1	5	19	A	BD		3	5	24	H	D	No open element test on F & G.					
	1	5	21	EFG	BD	5T4	3	5	26	F	H		1	6.3	23	AB	CE
5GX7*	2	5	20	BG	(AC)EF		3	5	26	D	H	6AC5	3	6.3	34	CE	GH
	3	5	21	HJ	(AC)E	5T8	1	4.7	20	A	CEG	6AC6	2	6.3	26	CDE	GH
5HA7	1	5	20	BL	CM		1	4.7	20	B	CEG	6AC7	3	6.3	21	DFH	CEG
	2	5	23	JK	DM		1	4.7	20	F	CEG	No open element test on C & H.					
5HB7	2	5	20	HJ	ACE	5U4	3	5	35	F	H	6AC9	1	6.3	19	B	CM
	3	5	20	BFG	ACE		3	5	35	D	H		1	6.3	19	BC	DM
Tube damaged if A or C is moved.						5U8	2	4.7	22	AJ	EH		3	6.3	19	GJK	HLM
5HC7*	1	5	20	BL	CM		2	4.7	22	BCF	EG	6AC10	3	6.3	20	JK	DM
	2	5	23	(GK)J	DM	No open element test on F.							3	6.3	20	EG	FM
5HG8*	3	5	19	BJ	(AC)EH	5V3	3	5	30	D	B		3	6.3	20	BL	CM
	3	5	23	FG	(AC)E		3	5	30	F	B	6AD6	4	6.3	95	CDE	GH
5HZ6	2	5	20	AEFG	BD	5V4	3	5	25	F	H	Good tube reads above 26.					
5J6	1	4.7	20	AF	DG		3	5	25	D	H	Eye CL	4	6.3	0	CDE	GH
	1	4.7	20	BE	DG	5V6	3	4.7	29	CDE	AGH	Eye OP	4	6.3	0	E	CDGH
5JK6	3	5	18	AF	BD	5W4	3	5	48	F	H	6AD7	3	6.3	33	CDE	GH
	1	5	33	EG	BD		3	5	48	D	H		2	6.3	51	AF	GH
5JL6	3	5	18	AF	BD	5X3	3	5	43	B	D	6AD10	3	6.3	22	HKL	JM
	1	5	32	EG	BD		3	5	43	C	D		2	6.3	18	CFG	BEM
5JW8	2	5	20	BCF	EG	5X4	3	5	33	E	H	6AE5	3	6.3	29	CE	GH
	2	5	21	AJ	EH		3	5	33	C	H	6AE6	2	6.3	33	CE	GH
5KD8	2	5	20	AJ	EH	5X8	2	4.7	22	BC	EF		2	6.3	33	DE	GH
	2	5	20	BC	EFG		2	4.7	21	GHJ	AEF	6AE7	2	6.3	26	CD	EG
5KE8	2	5	18	BCF	EG	5Y3	3	5	50	D	H		2	6.3	27	CF	GH
	2	5	18	AJ	EH		3	5	50	F	H	6AF3*	4	6.3	18	(BJ)	EN
5KZ8	3	5	19	AJ	EH	5Y4	3	5	57	E	G	6AF4*	2	6.3	21	(AG)(BF)	DE
	3	5	20	BG	CEF		3	5	57	C	G	6AF5	2	6.3	24	CE	GH
5LJ8*	3	5	22	AB	(CH)E	5Z3	3	5	35	C	D	6AF6	4	6.3	95	CDE	GH
	3	5	19	GJ	(CH)EF		3	5	35	B	D	Good tube reads above 26.					
5MB8	3	5	21	AB	CE	5Z4	3	5	27	F	B	Eye CL	4	6.3	0	CDE	GH
	3	5	19	GJ	EFH		3	5	27	D	B	Eye OP	4	6.3	0	E	CDGH
5MF8*	3	5.0	19	D(FG)H	JM	6A3	3	6.3	28	BC	D						
	1	5.0	19	BK	LM												

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6AF11	2	6.3	21	CD	GM	6AM8	1	6.3	18	BCFJ	AD	6AU7	2	3.15	25	AB	CDE
	2	6.3	21	FH	EM	No open element test on F & J.							2	3.15	25	FG	DEH
	3	6.3	20	KL	BJM		1	6.3	18	H	DG	6AU8	2	6.3	21	BC	AD
6AG5*	3	6.3	20	AEF	(BG)C	6AN4*	2	6.3	20	(AG)(BF)	CE		2	6.3	21	GHJ	DF
No open element test on E.						6AN5*	3	6.3	17	AEF	(BG)D	No open element test on J.					
6AG7	3	6.3	17	DFH	EG	6AN6	1	6.3	23	B	FG	6AV5	2	6.3	25	AEH	BC
6AG9	2	6.3	19	BDKL	JM		1	6.3	23	C	FG	6AV6	1	6.3	21	AG	BD
	2	6.3	20	EG	FM		1	6.3	23	D	FG		1	6.3	43	E	BD
6AG11	1	6.3	20	C	BM		1	6.3	23	E	FG		1	6.3	43	F	BD
	1	6.3	20	K	LM	6AN8	2	6.3	22	FGH	EJ	6AV11	2	6.3	23	BL	CM
	2	6.3	20	EF	DM	No open element test on F.							2	6.3	23	EG	FM
	2	6.3	20	GH	JM		2	6.3	23	AB	CE		2	6.3	23	JK	DM
6AH4	2	6.3	20	AE	GH	6AQ5*	3	6.3	27	(AG) EF	BD	6AW8	3	6.3	20	GHJ	DF
6AH6	2	6.3	22	AEF	BCG	6AQ6	1	6.3	20	AG	BC		3	6.3	23	BC	AD
6AH7	3	6.3	30	AC	BG		1	6.3	40	E	BC	6AX3	3	6.3	23	DK	GM
	3	6.3	30	EF	DG		1	6.3	40	F	BC	6AX4	3	6.3	22	E	CH
6AH9*	3	6.3	19	(EF)HJL	GM	6AQ7	1	6.3	22	DE	FH	6AX5	3	6.3	32	C	BH
	3	6.3	28	BC	DM		1	6.3	34	C	BH		3	6.3	32	E	BH
6AJ4*	2	6.3	19	(ACDFJ)E	BH		1	6.3	34	A	BH	6AX6G	1	6.3	19	E	GH
6AJ5*	2	6.3	23	AEF	(BG)C	6AQ8	2	6.3	21	AB	CE		1	6.3	19	C	DG
6AJ8	2	6.3	22	ABFG	CE		2	6.3	21	FG	EH	6AX7	1	3.15	20	AB	CDE
	2	6.3	23	HJ	CE	6AR5	3	6.3	30	AEF	BD		1	3.15	20	FG	DEH
6AK5*	2	6.3	22	AEF	(BG)C	6AR6	3	6.3	20	CEG	AH	6AX8	2	6.3	20	AJ	EH
6AK6	3	6.3	30	ABEF	CG	6AR8	3	6.3	22	BCFJ	EG		2	6.3	20	BCF	EG
6AK7	3	6.3	17	DFH	EG	No open element test on B, C & J.						No open element test on F.					
6AK8	1	6.3	20	A	DG		3	6.3	22	ACFH	EG	6AY3	3	6.3	22	BG	EJ
	1	6.3	20	B	CD	No open element test on A, C & H.						J may show leakage.					
	1	6.3	21	HJ	DG	6AR11	3	6.3	18	CE	BDFM	6AY11	1	6.3	19	GH	JM
	1	6.3	40	F	DG		3	6.3	18	JK	GHLM		1	6.3	19	EF	DM
6AK9	3	6.3	30	BC	GM	6AS5*	1	6.3	19	(BE) FG	AC		1	6.3	19	K	LM
	3	6.3	22	KL	GM	6AS6	2	6.3	25	AEFG	BC		1	6.3	19	C	BM
	3	6.3	21	EHJ	GM	6AS7	3	6.3	16	AB	CH	6AZ8	2	6.3	21	HJ	EG
6AK10	3	6.3	20	JK	DM		3	6.3	16	DE	FH		2	6.3	21	ABF	CE
	3	6.3	20	EG	FM	6AS8	1	6.3	19	ABJ	CEG	6B4	3	6.3	28	CE	G
	3	6.3	20	BL	CM		1	6.3	18	F	EH	6B5	3	6.3	45	BD	CEF
6AL3	3	6.3	19	ABCFGHJ	EN	6AS11	2	6.3	21	CD	GM		3	6.3	63	CD	BEF
No element test on top levers.							2	6.3	21	FH	EM	6B6	3	6.3	32	CN	GH
6AL5	1	6.3	22	B	DE		3	6.3	18	KL	BJM		1	6.3	40	D	GH
	1	6.3	22	G	AD	6AT6	1	6.3	20	AG	BC		1	6.3	40	E	GH
6AL6	3	6.3	24	DEN	GH		1	6.3	35	E	BC	6B7	3	6.3	50	BCN	FG
6AL7	1	6.3	40	ACDEF	BH		1	6.3	35	F	BC		1	6.3	40	D	FG
Eye OP	4	6.3	0	C	BDFH	6AT7N	3	6.3	20	AB	CE		1	6.3	40	E	FG
Eye CL	4	6.3	0	C	BH		3	6.3	20	FG	EH	6B8	3	6.3	45	CFN	GH
6AL9	2	6.3	20	BDKL	JM	6AT8	2	6.3	21	AB	CE		1	6.3	40	D	GH
	3	6.3	20	EG	FM		2	6.3	20	FGHJ	CE		1	6.3	40	E	GH
6AL11	1	6.3	21	CDFG	BM	No open element test on F & H.						6B10	1	6.3	20	H	JM
	3	6.3	20	HKL	JM	6AU4	4	6.3	22	E	CH		1	6.3	20	K	JM
6AM4*	1	6.3	18	(ACDFJ)E	BH	6AU5	3	6.3	22	AEH	CG		2	6.3	21	CD	BM
6AM5	1	6.3	22	AEG	BD	6AU6	2	6.3	22	ABEF	DG		2	6.3	22	EF	GM

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6B32	1	6.3	22	B	DE	6BH3	3	6.3	22	BG	EJ	Eye OP	4	6.3	0	AB	D
	1	6.3	22	G	AD	6BH6	2	6.3	22	AEFG	BC	No open element test on A, B & G.					
6BA3*	3	6.3	23	(BG)	EJ	6BH8	2	6.3	22	BC	AD	6BR7	1	6.3	20	BGHJ	CE
6BA6	2	6.3	23	ABEF	DG		2	6.3	21	GHJ	DF	6BR8	2	6.3	20	AB	CE
6BA7	3	6.3	18	AB	CEGJ	No open element test on J.							2	6.3	20	FGJ	EH
	1	6.3	36	AFGJ	BCE	6BH11	3	6.3	18	HJK	LM	No open element test on F.					
6AB8	3	6.3	25	BC	AD		3	6.3	18	FG	EM	6BS3*	2	6.3	20	(BG)	EJ
	3	6.3	22	GHJ	DF		3	6.3	18	CD	BM	6BS8	2	6.3	22	AB	CD
6BA11	2	6.3	23	BCE	HM	6BJ3	3	6.3	21	DK	GM		2	6.3	22	FG	DH
	2	6.3	22	DFG	HM	6BJ6	2	6.3	22	AEFG	BD	6BT6	1	6.3	21	AG	BC
	2	6.3	22	JL	KM	6BJ7	1	6.3	20	B	AE		1	6.3	30	E	BC
6BB14*	3	6.3	18	(AB)(FG)N	CEH		1	6.3	20	F	EG		1	6.3	30	F	BC
Tube damaged if C or H is moved.						6BJ8	1	6.3	20	A	BE	6BU8	1	6.3	22	BCFG	AE
6BC4*	1	6.3	20	(AJ)BCGH	EF		1	6.3	20	F	CE		1	6.3	22	BGHJ	AE
6BC5*	2	6.3	22	AEF	(BG)C		3	6.3	25	GH	EJ	6BV8	1	6.3	20	F	EH
6BC7	1	6.3	20	B	AD	6BK4	1	6.3	30	EN	ABCDHF		1	6.3	20	J	EG
	1	6.3	20	H	DJ	No open element test on N.							2	6.3	22	BC	AE
	1	6.3	21	F	DG	6BK5	2	6.3	21	ACGH	DF	6BV11	2	6.3	20	GJKL	HM
6BC8	1	6.3	19	FG	DH	6BK6	1	6.3	24	AG	BC		2	6.3	20	BCDF	EM
	1	6.3	19	AB	CD		1	6.3	32	E	BC	6BW3*	4	6.3	21	(DK)	GM
6BD4	1	6.3	29	EN	AG		1	6.3	36	F	BC	6BW4	4	6.3	20	G	EJ
6BD5	3	6.3	18	AEH	CG	6BK7	2	6.3	21	FG	EH		4	6.3	20	A	EJ
6BD6	2	6.3	26	ABEF	DG		2	6.3	21	AB	CE	6BW6*	3	6.3	26	(AB)GHJ	CE
6BD7	1	6.3	21	AB	CE	6BK8	2	6.3	22	AHJ	CE	6BW8	1	6.3	20	A	BD
	1	6.3	46	H	CE	6BK11	1	6.3	20	BL	CM		1	6.3	20	C	BD
	1	6.3	51	F	CE		1	6.3	20	EG	FM		3	6.3	22	FHJ	DG
6BD11	3	6.3	20	KL	BJM		1	6.3	20	JK	DM	6BW11	3	6.3	18	GHJL	KM
	2	6.3	20	FH	EM	6BL4	4	6.3	22	AE	CG		3	6.3	17	CDEF	BM
	2	6.3	21	CD	GM	6BL7	3	6.3	22	AB	CG	6BX4	3	6.3	30	F	DG
6BE3	3	6.3	20	DK	GM		3	6.3	22	DE	FG		3	6.3	30	A	DG
6BE6	2	6.3	22	A	BD	6BL8	2	6.3	22	AJ	EH	6BX6*	2	6.3	22	BGHJ	(AC)E
	2	6.3	26	EFG	BD		2	6.3	20	BC	EFG	6BX7	3	6.3	22	DE	FG
6BE7*	1	6.3	20	ABFGJ	(CH)E	6BM8	1	6.3	20	AJ	EH		3	6.3	22	AB	CG
No open element test on F.							1	6.3	20	CFG	BE	6BY5	3	6.3	23	D	AG
	1	6.3	30	FJ	(CH)E	6BN4*	1	6.3	19	(BG)E	(AF)D		3	6.3	23	E	GH
6BE8	2	6.3	20	AB	CE	6BN6	1	6.3	36	BEFG	AC	6BY6	1	6.3	19	AF	BD
	2	6.3	20	FGJ	CEH	Good tube reads above 23.							1	6.3	25	EG	BD
6BF5	3	6.3	18	AEFG	BC	6BN8	1	6.3	20	A	BE	6BY7	1	6.3	22	BGHJ	ACE
6BF6	3	6.3	28	AG	BDEF		1	6.3	20	F	CE	No element or short test on A & C.					
	1	6.3	38	E	ABDFG		1	6.3	20	GH	EJ	6BY8	2	6.3	26	ABGH	EJ
	1	6.3	38	F	ABDEG		1	6.3	20	GH	EJ		2	6.3	22	F	CE
6BF8	1	6.3	19	A	EF	6BN11	3	6.3	18	GJKL	HM	6BY11	1	6.3	19	CEFG	BM
	1	6.3	19	B	EF		3	6.3	18	CDEF	BM		3	6.3	19	HKL	JM
	1	6.3	19	C	EF	6BQ5	3	6.3	22	ABGJ	CD	6BZ3*	3	6.3	20	(DK)	GM
	1	6.3	19	G	EF	6BQ6	3	6.3	21	DEN	GH	6BZ6	1	6.3	18	AEFG	BC
	1	6.3	19	H	EF	6BQ7	2	6.3	22	AB	CD	No open element test on E & G.					
	1	6.3	19	J	EF		2	6.3	21	FG	DH	6BZ7	2	6.3	21	FG	DH
6BF11	1	6.3	20	CEFG	BM	6BR3*	4	6.3	18	(BJ)	EN		2	6.3	20	AB	CD
	3	6.3	20	HKL	JM	6BR5											
6BG6	3	6.3	24	EHN	CG	Eye CL	4	6.3	0	ABG	D						

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6BZ8	3	6.3	16	FG	EH	6CH3*	3	6.3	19	(BG)	EJ	6CX8	1	6.3	20	BC	AD
	3	6.3	16	AB	CE	6CH6	4	6.3	19	BGHJ	CE		2	6.3	23	GHJ	DF
6C4	2	6.3	25	AEF	DG	6CH7*	1	6.3	19	AB	CE	6CY5*	3	6.3	22	AEF	(BG)C
6C5	2	6.3	30	CE	GH		1	6.3	19	FG	E(HJ)	6CY7	1	6.3	20	FG	DH
6C6	1	6.3	21	BCN	DEF	6CH8	2	6.3	22	HJ	AE		3	6.3	20	ABC	DJ
6C7	1	6.3	21	B	FG		2	6.3	21	BOG	EF	6CZ5	1	6.3	20	ACFJ	EG
	1	6.3	40	D	FG	No open element test on B.						6D1*	1	6.3	20	(AE)F	DG
	1	6.3	40	E	FG	6CH40	2	6.3	22	ABFG	CE	6D4	3	6.3	20	AG	DE
6C8	2	6.3	27	CN	DG		2	6.3	23	HJ	CE	6D5	3	6.3	32	CE	GH
	2	6.3	27	EF	GH	6CJ3*	3	6.3	20	(BG)	EJ	6D6	3	6.3	27	BCDN	EF
6C9	2	6.3	20	ABC	EK	6CJ6	3	6.3	16	ABFGHJN	CE	6D7	2	6.3	28	BCN	DFG
	2	6.3	20	GHJ	EF	6CK3*	3	6.3	18	(BG)	EJ	6D8	2	6.3	34	EF	GH
6C10	1	6.3	20	BL	CM	6CK4	1	6.3	21	ACE	GH		2	6.3	42	CDN	GH
	1	6.3	20	EG	FM	6CL3*	3	6.3	19	(BG)	EJ	6D10	1	6.3	18	BL	CM
	1	6.3	20	JK	DM	6CL5*	3	6.3	20	(AH)(DE)N	B(CF)		1	6.3	18	EG	FM
6C16	2	6.3	22	AJ	EH	6CL6*	3	6.3	22	(BJ)(CH)FG	AD		1	6.3	18	JK	DM
	2	6.3	20	BC	EFG	6CL8	2	6.3	22	AB	CD	6DA4	3	6.3	21	E	CG
6C18	3	6.3	17	BOG	EFH		2	6.3	22	FGJ	DH	6DA5	1	6.3	22	AG	BE
	3	6.3	22	J	EFH	6CM3*	3	6.3	17	(BG)	EJ	Eye CL	4	6.3	0	CGHJ	ABE
Tube damaged if F or H is moved.						6CM4*	3	6.3	19	(AJ)(BFH)	CEG	Eye OP	4	6.3	0	CHJ	ABEG
6CA4	2	6.3	22	A	CD	Tube damaged if C or G is moved.						6DA6	3	6.3	18	BGHJ	CE
	2	6.3	22	G	CD	6CM5*	3	6.3	19	(AD)EN	CGH	6DB5*	3	6.3	20	A(CF)J	(BG)D
6CA5	3	6.3	22	BEFG	AC	Tube damaged if C or H is moved.						6DB6	1	6.3	18	AEFG	BD
6CA7	3	6.3	22	ACDE	GH	6CM6*	3	6.3	26	A(CF)J	DG	6DC6	1	6.3	18	AEFG	BD
6CA11	3	6.3	22	BC	AG	6CM7	2	6.3	24	AH	EJ	No open element test on E & G.					
	3	6.3	20	DF	AE		2	6.3	26	FG	CE	6DC8	2	6.3	22	ABFJ	CE
	3	6.3	20	HKL	AJ	6CM8	2	6.3	24	AJ	DH		1	6.3	36	G	CE
6CB5*	2	6.3	20	(AH)(DE)	B(CF)		2	6.3	22	BFG	CD		1	6.3	36	H	CE
6CB6	2	6.3	22	AEFG	BC	6CN7	1	3.15	21	GH	DEF	6DE4	4	6.3	22	E	CH
No open element test on E & G.							3	3.15	20	A	CDE	6DE6	2	6.3	20	AEFG	BD
6CC31	1	6.3	18	AF	DG		3	3.15	20	B	CDE	No open element test on E & G.					
	1	6.3	18	BE	DG	6CQ4	3	6.3	21	E	CH	6DE7	2	6.3	26	FG	DH
6CC42	2	6.3	23	CD	BFGHJ	6CQ8	1	6.3	19	AJ	EH		3	6.3	22	ABC	DJ
	2	6.3	23	FG	BCDHJ		1	6.3	19	BCF	EG	6DG6	3	6.3	20	CDE	GH
6CC43	2	6.3	21	AB	CE	6CR6	2	6.3	23	EFG	AD	6DJ8	2	6.3	21	FG	EH
	2	6.3	21	FG	EH		1	6.3	36	B	AD		2	6.3	21	AB	CE
6CD3*	3	6.3	18	(DK)	GM	6CS6	1	6.3	20	AF	BC	6DK3*	3	6.3	18	(BG)	DN
6CD6	3	6.3	17	EHN	BC		1	6.3	25	EG	BC	6DK6	3	6.3	22	AEF	BCG
6CE3*	1	6.3	18	(DK)	GM	6CS7	3	6.3	24	AC	DJ	6DL3*	3	6.3	18	(BG)	DN
6CE5*	2	6.3	20	AEF	(BG)D		2	6.3	28	FG	DH	6DL4*	3	6.3	18	(ACFGJ)H	BE
No open element test on E.						6CT3*	3	6.3	18	(BF)	EJ	6DL5*	3	6.3	23	(AG)EF	BD
6CF6	2	6.3	22	AEFG	BC	6CU5	3	6.3	18	BEFG	AD	6DL7					
No open element test on E & G.						6CU6	3	6.3	18	DEN	GH	Eye OP	4	6.3	0	E	DGH
6CF8	1	6.3	20	AFHJ	CD	6CU8	1	6.3	20	HJ	AE	Eye CL	4	6.3	0	CEF	DGH
6CG3*	3	6.3	18	(DK)	GM		1	6.3	19	BOG	EF	No open element test.					
6CG7	2	6.3	23	AB	CD	6CW4	1	6.3	18	BD	HM	6DL8	1	6.3	40	A	EH
	2	6.3	23	FG	DH	6CW5*	3	6.3	16	•	CE		1	6.3	20	CFG	BE
6CG8	1	6.3	20	AB	CEH	•(AB)(FJ)(GH)							1	6.3	40	J	EH
	1	6.3	19	FGJ	CEH	A, F or H is not used in some tubes.						6DM4	3	6.3	22	E	CH

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6DN3*	3	6.3	18	(BG)	EJ	6EA8	2	6.3	20	AJ	EH	6EX6	3	6.3	15	EHN	CG
6DN6	3	6.3	17	EHN	CG		2	6.3	20	BCF	EG	6EY6	3	6.3	22	CDE	BH
6DN7	3	6.3	24	AB	CG	6EB5	3	6.3	38	G	AD	6EZ5	3	6.3	21	CDE	GH
	3	6.3	32	DE	FG		3	6.3	38	B	DE	6EZ8	1	6.3	20	BC	AD
6DQ3	3	6.3	18	(DK)	GM	6EB8	1	6.3	20	BC	AE		1	6.3	20	FG	D
6DQ4	3	6.3	22	E	CH		2	6.3	22	GHJ	EF		1	6.3	20	HJ	D
6DQ5*	1	6.3	19	(AE)(DH)N	(CF)G	6EC4*	3	6.3	19	(BGH)	EN	6F5	1	6.3	20	DN	GH
6DQ6	3	6.3	22	DEN	GH	6ED4	1	6.3	26	HN	ABCEFGJ	6F6	3	6.3	32	CDE	GH
6DR4*	1	6.3	20	(AE)F	DG	Tube damaged if ABCEFG or J is moved.						6F7	3	6.3	43	BCN	FG
6DR7	1	6.3	19	FG	EH	6EF6	4	6.3	18	CDE	GH		3	6.3	82	DE	FG
	3	6.3	16	ABC	EJ	6EH4	1	6.3	28	FN	BEJLM	6F8	2	6.3	24	CN	DG
6DS4	1	6.3	18	BD	HM	Tube damaged if BEJ or L is moved.							2	6.3	24	EF	GH
6DS5	1	6.3	19	AEFG	BD	6EH5	3	6.3	20	BEFG	AD	6F10	3	6.3	21	DFH	CEG
6DS8	3	6.3	22	ABFG	CD	6EH7*	2	6.3	21	BGHJ	(AC)E	No open element test on C & H.					
	2	6.3	23	HJ	CD	6EH8*	3	6.3	20	BC	(AF)E	6F19	1	6.3	22	BGHJ	ACE
6DT3*	3	6.3	20	(DK)	GM		3	6.3	20	GHJ	(AF)E	Tube damaged if A or C is moved.					
6DT4*	3	6.3	24	(AE)	CH	No open element test on J.						6F22	1	6.3	20	AFHJ	CE
6DT5	3	6.3	22	ACFJ	EG	6EJ4	1	6.3	26	FN	EM	6F26	1	6.3	22	BGHJ	ACE
6DT6	1	6.3	20	AEFG	BD	6EJ7*	3	6.3	18	BGHJ	(AC)E	Tube damaged if A or C is moved.					
6DT8	3	6.3	20	AB	CE	6EL4	1	6.3	30	EN	ABCDHF	6F29*	2	6.3	21	BGHJ	(AC)E
	3	6.3	20	FG	EH	No element tests.						6F30	2	6.3	21	BGHJ	ACE
6DU3*	3	6.3	18	(DK)	GM	6EM5	3	6.3	18	ACFJ	EG	Tube damaged if A or C is moved.					
6DV4	2	6.3	19	ABDF	GM	6EM7	3	6.3	19	AB	CH	6F33	2	6.3	25	AEFG	BC
6DW4	3	6.3	20	BG	EJ		1	6.3	20	DE	FM	6F35	2	6.3	23	AEF	BGC
6DW5	1	6.3	22	ACFJ	EG	6EN4*	1	6.3	27	(EF)N	ABCDH	Tube damaged if B or G is moved.					
6DX8	2	6.3	20	AB	CE	No short test.						6FA7	2	6.3	24	AGH	DF
	3	6.3	20	HJ	EFG	6EQ7	1	6.3	34	H	CE		2	6.3	24	GHJ	DF
6DY5	3	6.3	20	BGJ	CE	Good tube reads above 25.							1	6.3	46	C	

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6FM8	1	6.3	20	B	CE	6GJ7*	3	6.3	19	BG	(AC)EF	6H5	2	6.3	36	BC	EF
	1	6.3	20	F	AE		3	6.3	20	HJ	(AC)E	Eye CL	4	6.3	0	BD	CEF
	1	6.3	22	HJ	EG	6GK5	3	6.3	20	BE	ADG	Eye OP	4	6.3	0	D	BCEF
6FQ5*	3	6.3	20	BE	(AG)D	Tube damaged if A or G is moved.						6H6	1	6.3	25	C	DG
6FQ7	2	6.3	23	AB	CE	6CK6*	2	6.3	20	BGH	A(CJ)E		1	6.3	25	E	GH
	2	6.3	23	FG	EH	6GK17	3	6.3	22	E	CG	6H7S	3	6.3	33	BCD	FG
6FR7*	3	6.3	19	A(BC)	EJ	6GL7	3	6.3	19	AB	CH		2	6.3	52	EN	FG
	3	6.3	30	FG	EH		1	6.3	20	DE	FH	6HA5	3	6.3	18	AE	BDG
6FS5*	2	6.3	20	AF	(BG)DE	6GM5	3	6.3	21	AFJ	EG	Tube damaged if B or G is moved.					
6FV6	2	6.3	20	AEF	DG	6GM6	2	6.3	20	AEF	BDG	6HA6*	3	6.3	19	BG(FH)	ACEJ
No open element test on F.						6GM8	2	6.3	22	AB	CE	Tube damaged if C or J is moved.					
6FV8	2	6.3	21	FGJ	EH		2	6.3	22	FG	EH	6HB5*	3	6.3	18	B(CL)G	(DK)M
	2	6.3	21	AB	CE	6GN8	1	6.3	19	BC	AE	6HB6*	3	6.3	18	B(FH)	AE
6FW5	3	6.3	20	AEH	CG		3	6.3	19	GH	EFJ		1	6.3	24	(CJ)G	AE
6FY5	2	6.3	20	BE	ADG	6GQ7	1	6.3	20	F	EG	6HB7	2	6.3	20	HJ	ACE
No element or short test on A & G.							1	6.3	20	H	EJ		3	6.3	20	BFG	ACE
6FY7	3	6.3	19	CE	GM		1	6.3	20	B	AE	Tube damaged if A or C is moved.					
	1	6.3	21	KL	JM	6GS7	3	6.3	19	FGJ	CEH	6HC8	3	6.3	23	CFG	BE
6G5	2	6.3	36	BC	EF		3	6.3	21	AB	CEH		3	6.3	26	AJ	EH
Eye CL	4	6.3	0	BD	CEF	Tube damaged if C or H is moved.						6HD5*	3	6.3	19	(CL)(EJ)G	(DK)M
Eye OP	4	6.3	0	D	BCEF	6GS8	2	6.3	20	BCFG	AE	6HD7	3	6.3	20	BFG	AGE
6G6	3	6.3	36	CDE	GH		2	6.3	20	BGHJ	AE		3	6.3	19	HJ	ACE
6G6G	2	6.3	28	CDE	BH	6GT5*	3	6.3	19	(AG)(BF)J	CE	Tube damaged if A or C is moved.					
6G7	3	6.3	36	BN	CEG	6GU5*	1	6.3	19	A	(BG)D	6HE5*	3	6.3	21	(BJ)(CK)F	(DL)M
	1	6.3	24	D	CG		1	6.3	29	EF	(BG)D	6HE7	1	6.3	19	B	DM
	1	6.3	24	F	CG	6GU7	3	6.3	22	AB	CE		3	6.3	18	EJL	HM
6G11	1	6.3	20	CDFG	BM		3	6.3	22	FG	EH	6HF5*	3	6.3	19	C(EJ)FHLN	(DK)M
	3	6.3	20	HKL	JM	6GV5*	3	6.3	19	CGL(EJ)N	(DK)M	6HF8	1	6.3	19	BC	AE
6GA7*	3	6.3	20	(BC)DG	EM	6GV7	3	6.3	17	BOG	EFH		3	6.3	19	GH	EFJ
	3	6.3	24	L	HM		3	6.3	22	AJ	EFH	6HG5*	3	6.3	26	(AG)EF	BD
6GA8	2	6.3	22	FG	EH	Tube damaged if F or H is moved.						6HG8*	3	6.3	18	BJ	(AC)EH
	2	6.3	22	AB	CE	6GV8	1	6.3	19	AB	CE		3	6.3	20	FG	(AC)E
6GB3	3	6.3	19	DE	GH		3	6.3	20	FGJ	EH	6HJ5*	3	6.3	18	(CL)(EJ)G	BDKM
6GB5*	3	6.3	19	(AB)(FG)N	CEH	6GW5*	2	6.3	20	A(BF)	DE	Tube damaged if D or K is moved.					
Tube damaged if C or H is moved.						6GW6	3	6.3	20	DEN	GH	6HJ7	3	6.3	19	BFG	ACE
6GB6	3	6.3	21	DEN	GH	6GW8	1	6.3	20	AJ	BE		3	6.3	18	HJ	ACE
6GB7	3	6.3	18	DEN	BH		3	6.3	20	CFH	EG	Tube damaged if A or C is moved.					
6GB9	3	6.3	22	DEN	GH	6GX6	1	6.3	19	A	BD	6HJ8	1	6.3	19	H	EG
6GC5*	3	6.3	21	(AH)(CF)J	EG		1	6.3	21	EFG	BD		3	6.3	19	BC	AE
6GC6	2	6.3	21	DEHN	CG	6GX7*	2	6.3	20	BG	(AC)EF		3	6.3	28	CFJ	AE
	3	6.3	19	AB	(CH)E		3	6.3	21	HJ	(AC)E	6HK5	3	6.3	18	AE	BDG
6GD7*	3	6.3	19	GJ	(CH)EF	6GY5*	3	6.3	18	(CGL)(EJ)N	(DK)M	Tube damaged if B or G is moved.					
6GE5*	3	6.3	19	B(CL)G	(DK)M	6GY6	3	6.3	19	AEFG	BD	6HL5*	3	6.3	18	(AB)GJ	CE
6GF5*	3	6.3	19	B(CL)G	(DK)M	6GY8	1	6.3	26	AB	E	6HL8	2	6.3	20	AJ	EH
6GF7	3	6.3	18	BF	CE		1	6.3	19	CJ	EH		3	6.3	19	BC	EFG
	1	6.3	20	HJ	AE		1	6.3	22	F	EG	6HM5	3	6.3	18	AE	BDG
6GH8	2	6.3	17	BCF	EG	No open element test on B & C.						Tube damaged if B or G is moved.					
	2	6.3	17	AJ	EH	6GZ5*	3	6.3	19	(BE)F	ADG	6HM6	3	6.3	19	BH	ACE
6GJ5*	3	6.3	20	(AG)(BF)N	CE	6H4	1	6.3	26	D	GH		1	6.3	34	GJ	ACE

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6HQ5	3	6.3	18	AE	BDG		2	6.3	20	HJ	(AG)E	6JX8	2	6.3	20	HJ	CE
Tube damaged if B or G is moved.						6JD5*	3	6.3	18	(BL)(CK)G	DM	2	6.3	20	ABFG	CE	
6HR5*	3	6.3	26	(AG)EF	BD	6JD6	3	6.3	19	BH	ACEG	6JY8	2	6.3	20	BC	AE
6HR6	3	6.3	18	ABEF	DG	No element or short test on A & C.						2	6.3	20	GHJ	EF	
6HS5*	3	6.3	18	(BL)(CK)G	DM	6JE6*	3	6.3	17	•	CE	6JZ6*	3	6.3	18	(DK)CEN	BM
6HS6	1	6.3	19	A	DG	•(AG)(BF)HN						6JZ8*	3	6.3	20	D(FG)H	JM
1	6.3	21	BEF	DG		6JE8	2	6.3	20	BC	AE	1	6.3	21	BK	LM	
6HS8	2	6.3	24	BHJ	AE	3	6.3	19	GHJ	EF		6K5	1	6.3	20	CN	GH
2	6.3	21	CFG	AE		6JF6*	3	6.3	18	•	CE	6K6	3	6.3	34	CDE	GH
6HT5	1	6.3	40	FN	M	•(AG)(BF)HN						6K7	2	6.3	32	CDN	EGH
6HU6*	1	6.3	22	AJ	CE	6JG5	3	6.3	19	GHJ	DF	6K8	1	6.3	20	DE	GH
4	6.3	100	(BFH)G	CE		6JG6*	3	6.3	18	(AG)BJ	ECF	1	6.3	20	EF	GH	
Good tube reads above 8.						6JH5*	3	6.3	20	•	DM	1	6.3	39	CN	GH	
6HU8	3	6.3	21	ABC	EG	•(BL)(CK)(GH)						6K11	2	6.3	23	JK	DM
3	6.3	21	FHJ	EG		6JH6	3	6.3	18	AF	BD	1	6.3	20	BL	CM	
6HV5*	3	6.3	20	(BL)(CK)G	DM	1	6.3	48	EG	BD		1	6.3	20	EG	FM	
6HW8	3	6.3	22	CF	ABEGHJ	6JH8	2	6.3	35	ABCJ	DG	6KA8	3	6.3	19	FGHJ	CE
6HZ5*	3	6.3	18	(BL)(CK)G	DM	3	6.3	23	CF	DG		2	6.3	21	AB	CE	
6HZ6	2	6.3	20	AEFG	BD	6JK5*	3	6.3	20	•	DM	6KD6*	2	6.3	17	•	BM
6HZ8	2	6.3	21	BC	AE	•(BL)(CK)(GH)						•(CL)(DK)(EJ)N					
3	6.3	19	GH	EFJ		6JK6	3	6.3	18	AF	BD	2	6.3	20	BCF	EG	
6J4	2	6.3	20	AEFG	BD	1	6.3	33	EG	BD		No open element test on F.					
6J5	2	6.3	24	CE	GH	6JK8	2	6.3	19	AB	CE	2	6.3	20	AJ	EH	
6J6	1	6.3	18	AF	DG	2	6.3	20	FG	EH		6KE8	2	6.3	18	AJ	EH
1	6.3	18	BE	DG		6JL8	3	6.3	18	AF	BD	2	6.3	18	BCF	EG	
6J7	2	6.3	29	CDN	AEHG	1	6.3	32	EG	BD		6KF8	2	6.3	20	BGHJ	AE
6J8	2	6.3	25	CDN	GH	6JM6	3	6.3	20	CEN	BDKM	2	6.3	20	BCFG	AE	
2	6.3	25	EF	GH		Tube damaged if D or K is moved.						6KG6*	4	6.3	21	•	EJ
6J9	2	6.3	20	AB	CE	6JN6	3	6.3	20	CGL	BDKM	•(AH)(BG)(CF)N					
2	6.3	20	FJ	EK		Tube damaged if D or K is moved.						6KH8	3	6.3	24	AB	DG
2	6.3	20	GH	EK		6JN8	3	6.3	19	AB	CE	3	6.3	20	BCJ	DG	
6J10	4	6.3	68	DEFG	HM	3	6.3	20	GJ	EFH		3	6.3	20	FHJ	DG	
3	6.3	20	BJL	CM		6JQ6*	3	6.3	20	A(BC)(GH)	DJ	6KL8	1	6.3	48	H	CE
6J11	3	6.3	18	BE	CDFM	1	6.3	23	F	DJ		2	6.3	20	ABFG	CE	
3	6.3	18	GL	HJKM		6JR6*	3	6.3	18	(AG)BJ	CEF	6KM6*	3	6.3	18	•	CE
6JA5*	3	6.3	21	(BJ)(CK)F	DLM	6JS6*	3	6.3	18	(CL)(EJ)N	BDKM	•(AG)(BF)HN					
Tube damaged if D or L is moved.						Tube damaged if D or K is moved.						6KM8*	1	6.3	48	C	EF
6JA8	2	6.3	20	BC	AE	6JT6*	3	6.3	20	(AG)BFJ	CE	2	6.3	20	GH	EF	
3	6.3	19	GH	EFJ		6JT8	3	6.3	18	GH	EFJ	1	6.3	30	ABJ	EF	
6JB5*	3	6.3	21	(BJ)(CK)F	DLM	1	6.3	19	BC	AE		6KN6*	3	6.3	17	•	BM
Tube damaged if D or L is moved.						6JU6*	3	6.3	17	•	CE	•(CL)(DK)(EJ)N					
6JB6*	3	6.3	19	•	CE	•(AG)(BF)HN						6KN8	3	6.3	19	AB	CE
•(AG)(BF)HN						6JU8	3	6.3	22	GH	EJ	3	6.3	19	FG	EH	
6JC5*	3	6.3	21	(BJ)(CK)F	DLM	3	6.3	22	G	EH		6KR8	3	6.3	20	BC	AE
Tube damaged if D or L is moved.						3	6.3	22	AB	CE		3	6.3	20	GHJ	EF	
6JC6	2	6.3	19	BGHJ	ACE	3	6.3	22	A	BE		6KS8	1	6.3	20	BC	AE
No element or short test on A & C.						6JV8	3	6.3	18	GH	EFJ	3	6.3	19	GH	EFJ	
6JC8*	2	6.3	20	BCF	(AG)E	1	6.3	19	BC	AE		F may show leakage.					
No open element test on F.						6JW8	2	6.3	21	AJ	EH	6KT6	3	6.3	19	BFHJ	ACE
						2	6.3	20	BCF	EG		Tube damaged if A or C is moved.					

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6KT8	3	6.3	20	GH	EFJ	6LT8	1	6.3	18	H	EG	6MJ8	3	6.3	22	BL	CM
	1	6.3	19	BC	AE		1	6.3	18	F	EG		3	6.3	22	DK	CM
6KU8	1	6.3	38	C	AE		3	6.3	19	BCJ	AE		3	6.3	22	FH	CM
	1	6.3	38	B	AE	6LU6	3	6.3	20	AEFG	BD	6MK8	2	6.3	20	BGHJ	AE
	3	6.3	17	GHJ	EF	6LU8*	3	6.3	18	D(FG)H	JM		2	6.3	20	BCFG	AE
6KV6*	3	6.3	18	(AG)BFJ	CE		1	6.3	18	BK	LM	6ML4*	2	6.3	21	(AG)(BF)	DE
6KV8	3	6.3	18	GHJ	EF	6LV6*	3	6.3	18	•	BM	6ML8	2	6.3	20	CF	EG
	2	6.3	19	BC	EA		•(CL)(DK)(EJ)N						2	6.3	20	BH	EG
6KY6*	3	6.3	17	B(CJ)GH	AE	6LW6*	3	6.3	17	(AE)CN	BFG		2	6.3	20	AJ	EG
6KY8	1	6.3	19	HJ	AE	Tube damaged if B or F is moved.						6MN8	3	6.3	22	BL	CM
	3	6.3	20	BFG	CE	6LX6*	3	6.3	18	(CL)(EJ)N	BDKM		3	6.3	22	DK	CM
6KZ8	3	6.3	20	BG	CEF	Tube damaged if D or K is moved.							3	6.3	22	FH	CM
	3	6.3	19	AJ	EH	6LX8	2	6.3	21	AJ	EH	6MP17	3	6.3	22	AEF	BD
6L5	2	6.3	26	CE	GH		2	6.3	20	BCF	EG	6MP18*	3	6.3	20	(AG)EF	BC
6L6	3	6.3	27	CDE	GH	6LY8	1	6.3	18	BC	AE	6MP20	3	6.3	20	AEF	BD
6L7	2	6.3	56	D	GH		3	6.3	18	GHJ	EF	6MQ8	2	6.3	21	AJ	EH
	2	6.3	26	CEN	GH	6LZ6*	3	6.3	19	(AG)(BF)N	CE		2	6.3	20	BCF	EG
6LB6*	3	6.3	18	•	BM	6M8	2	6.3	26	CDN	AG	6MU8	2	6.3	22	AJ	EH
	•(CL)(DK)(EJ)						2	6.3	26	EF	AG		2	6.3	21	BCF	EG
6LB8	3	6.3	18	GH	EFJ		1	6.3	34	H	AG	6MV8	3	6.3	19	GH	EFJ
	2	6.3	25	BC	AE	6M11	2	6.3	19	GH	JM		1	6.3	20	BC	AE
6LC8	2	6.3	20	AB	CE		2	6.3	19	EF	DM	6MX8	3	6.3	20	BFG	CE
C should show short when tube is heated, Sec. 1.							3	6.3	18	BC	KLM		1	6.3	28	HJ	AE
	2	6.3	20	FHJ	CEG	6MA6	2	6.3	38	FN	GH	6MY8*	3	6.3	19	D(FG)H	JM
6LD6*	2	6.3	21	B(CJ)(FH)G	AD	6MB6*	3	6.3	18	(CL)(EJ)N	BDKM		1	6.3	19	BK	LM
6LE8	2	6.3	19	AHJ	BCE	Tube damaged if D or K is moved.						6N3	3	6.3	21	J	CD
	2	6.3	19	FHJ	CEG	6MB8	3	6.3	19	GJ	EFH	6N4*	2	6.3	24	(AG)E	(BF)D
6LF6*	3	6.3	18	•	BM		3	6.3	21	AB	CE	6N5	1	6.3	37	BC	EF
	•(CL)(DK)(EJ)N					6MC8*	3	6.3	18	•	CD	Eye CL	4	6.3	0	BD	CEF
6LF8	1	6.3	20	BC	AE		•(AG)(BF)HN					Eye OP	4	6.3	0	D	BCEF
	3	6.3	20	GHJ	EF	6MD8	2	6.3	20	AJ	EG	6N6	3	6.3	61	DE	CGH
6LG6*	3	6.3	20	(CL)(EJ)N	DKM		2	6.3	20	BH	EG		3	6.3	41	CE	DGH
Tube damaged if D or K is moved.							2	6.3	20	CF	EG	6N7	3	6.3	29	EF	GH
6LH6	1	6.3	26	EN	FG	6ME5	2	6.3	29	AB	DG		3	6.3	29	CD	GH
6LJ6	1	6.3	28	EN	FG	Eye CL	4	6.3	0	BE	ADG	6N8	1	6.3	22	ABF	CD
6LJ8*	3	6.3	19	GJ	(CH)EF	Eye OP	4	6.3	0	E	ABDG		1	6.3	45	G	CD
	3	6.3	21	AB	(CH)E	6ME6*	3	6.3	20	•	CE		1	6.3	45	H	CD
6LM8	3	6.3	18	BCF	EG		•(AG)(BF)HN					6P5	2	6.3	30	CE	GH
	3	6.3	18	AJ	EH	6ME8	3	6.3	21	CFHJ	ABEG	6P7	2	6.3	32	DEN	BH
6LN8	3	6.3	21	AJ	EH	6MF8*	3	6.3	19	D(FG)H	JM		3	6.3	70	FG	BH
	3	6.3	20	BCF	EG		1	6.3	19	BK	LM	6PL12	1	6.3	20	AJ	EH
6LQ6*	3	6.3	17	•	CE	6MG8	3	6.3	20	BCF	EG		1	6.3	20	CFG	BE
	•(AG)(BF)HN						3	6.3	20	AJ	EH	6Q4	2	6.3	21	ABGHJ	CD
6LQ8	3	6.3	18	BC	AE	6MH1*	2	6.3	20	(AEF)G	BD	6Q5	4	6.3	20	CE	GH
	3	6.3	18	GHJ	EF	6HM6*	3	6.3	18	•	BM	6Q6	1	6.3	20	CN	GH
6LR6*	3	6.3	17	(CL)(EJ)N	BDKM		•(CL)(DK)(EJ)						1	6.3	90	E	GH
Tube damaged if D or K is moved.						6MHH3	2	6.3	22	BE	CG	6Q7	1	6.3	21	CN	GH
6LR8	3	6.3	19	BFG	CE		2	6.3	22	AF	CG		1	6.3	47	D	GH
	1	6.3	19	HJ	AE	6MJ6*	3	6.3	19	•	CE		1	6.3	47	E	GH
							•(AG)(BF)HN					6Q8	2	6.3	31	EF	GH
													2	6.3	40	CDN	GH

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6Q11	2	6.3	23	JK	DM	6SQ7	1	6.3	40	E	CG	6V6	3	6.3	29	CDE	AGH
	1	6.3	20	EG	FM		1	6.3	40	D	CG	6V7	3	6.3	46	N	GH
	1	6.3	20	BL	CM		1	6.3	20	BF	CG		1	6.3	50	D	GH
6R3	2	6.3	22	BJ	DN		1	6.3	50	E	CG		1	6.3	50	E	GH
6R6	3	6.3	41	CEN	GH	6SR7	2	6.3	30	BF	CG	6V8	1	6.3	20	G	EH
6R7	1	6.3	33	D	GH		1	6.3	50	D	CG		1	6.3	21	AF	CE
	1	6.3	33	E	GH		1	6.3	50	E	CG		2	6.3	22	B	CE
	3	6.3	37	CN	GH	6SS7	3	6.3	30	DFH	CEG		2	6.3	65	J	CE
6R8	1	6.3	20	A	EG	6ST7	2	6.3	28	BF	CG	6W4	3	6.3	18	E	CH
	1	6.3	20	F	EG		1	6.3	95	D	CG	6W5	3	6.3	25	C	GH
	2	6.3	25	B	CE		1	6.3	95	E	CG		3	6.3	25	E	GH
	2	6.3	30	HJ	EG	6SU7	2	6.3	25	AB	CDEFH	6W6	3	6.3	21	CDE	GH
							2	6.3	25	DE	ABCFH						
6RA8*	3	6.3	22	(BG)J	AE	6SV7	2	6.3	23	BDF	CH	6W7	1	6.3	20	CDN	EGH
6RA9*	3	6.3	20	(BG)J	AD		2	6.3	28	E	CH	6X4	3	6.3	30	F	DG
6RB11*	3	6.3	21	A(CF)J	DH	6SZ7	1	6.3	50	E	CH		3	6.3	30	A	DG
6RHH2	2	6.3	21	FG	DH		1	6.3	50	D	CH	6X5	3	6.3	32	E	GH
	2	6.3	21	AB	CD		1	6.3	21	BF	CH		3	6.3	32	C	GH
6RHH8	3	6.3	19	FG	EH	6T1	2	6.3	21	(AG)(BF)	DE	6X6	2	6.3	41	E	GH
	3	6.3	19	AB	CE	6T4*	2	6.3	20	(AG)(BF)	CE	Eye CL	4	6.3	0	CD	EGH
6RK19*	3	6.3	20	(BJ)	EN	6T5	1	6.3	24	BC	EF	Eye OP	4	6.3	0	D	CEGH
6RP15*	3	6.3	22	(AB)GJ	CD	Eye CL	4	6.3	0	BD	CEF	6X8	2	6.3	21	BC	EF
6RP22*	2	6.3	20	(BJ)(CH)FG	AE	Eye OP	4	6.3	0	D	BCEF	No open element test on J.					
6S4	3	6.3	24	CFJ	BE	6T6M	2	6.3	22	CDN	GH		2	6.3	20	GHJ	AEF
6S6	3	6.3	24	ADN	GH	6T7	1	6.3	20	CN	GH	6Y3G	4	6.3	47	N	G
6S7	2	6.3	28	CDN	EGH		1	6.3	40	D	GH	6Y5	3	6.3	28	C	DF
6S8	1	6.3	28	FN	BG		1	6.3	40	E	GH		3	6.3	28	E	DF
	1	6.3	40	A	BG	6T8	3	6.3	32	HJ	CEG	6Y6	3	6.3	19	CDE	GH
	1	6.3	40	D	BG		1	6.3	20	F	CEG	6Y7	3	6.3	33	CD	GH
	1	6.3	40	C	EG		1	6.3	20	B	CEG		3	6.3	33	EF	GH
6S78	2	6.3	21	AB	CG		1	6.3	20	A	CEG	6Y10	3	6.3	20	HKL	JM
	2	6.3	21	DE	FG	6T9	3	6.3	20	HKL	JM		2	6.3	20	CEFG	BM
6SA7	2	6.3	28	CDH	AFG		1	6.3	19	BD	EM	6Z3	3	6.3	24	B	CD
	2	6.3	24	DE	FGH	6T10	3	6.3	19	HK	JLM	6Z4	3	6.3	26	B	DE
6SB7Y	2	6.3	22	DE	AFG		1	6.3	21	CEFG	BM		3	6.3	26	C	DE
	1	6.3	34	CDH	AFG	6U3	3	6.3	17	J	CD	6Z5	3	6.3	25	C	BDF
6SC7	3	6.3	33	BC	FG	6U4	3	6.3	18	E	CG	(12Z5)	3	6.3	25	E	BDF
	3	6.3	38	DE	FG	6U5	2	6.3	34	BC	EF	6Z7	3	6.3	32	CD	GH
6SD7	3	6.3	23	DFH	CEG	Eye CL	4	6.3	0	BD	CEF		3	6.3	32	EF	GH
6SE7	2	6.3	23	DFH	CEG	Eye OP	4	6.3	0	D	BCEF	6Z10	3	6.3	20	BJL	CM
6SF5	1	6.3	20	CE	BG	6U6	3	6.3	24	CDE	GH		4	6.3	56	DEFG	HM
6SF7	1	6.3	40	E	CG	6U7	2	6.3	30	CDN	EGH	6ZY5	3	6.3	36	C	GH
	3	6.3	30	BDF	CG	6U8	2	6.3	22	BCF	EG		3	6.3	36	E	GH
6SG7*	3	6.3	19	DFH	(CE)G	No open element test on F.						7A4	2	6.3	24	BF	GH
6SH7*	2	6.3	20	DFH	(CE)G		2	6.3	22	AJ	EH	7A5	3	6.3	23	BCF	GH
6SJ7	2	6.3	27	DFH	CEG	6U10	1	6.3	20	EG	FM	7A6	1	6.3	28	C	BH
6SK7	3	6.3	30	DFH	CEG		2	6.3	23	JK	DM		1	6.3	28	F	GH
6SL7	3	6.3	28	DE	FG		2	6.3	23	BL	CM	7A7	3	6.3	28	BCF	DGH
	3	6.3	28	AB	CG	6V3	3	6.3	16	BGJ	EN	7A8	2	6.3	35	CD	GH
6SN7	2	6.3	26	DE	FG	6V4	3	6.3	26	A	CE		2	6.3	44	BEF	GH
	2	6.3	26	AB	CG		3	6.3	26	G	CE	7AB7*	3	6.3	26	ACE	(DFH)G

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
7AD7	3	6.3	17	BCDF	EGH	7G7	2	6.3	22	BCDF	GH	8AL9	3	7.5	20	EG	FM
7AF7	2	6.3	25	CD	BGH	7G8	2	6.3	24	BCD	EFGH		2	7.5	20	BDKL	JM
	2	6.3	25	EF	BGH		2	6.3	24	CEG	BDFH	8AR11	3	7.5	18	JK	GHLM
7AG7	2	6.3	22	BCF	DEGH	7GS7	3	7.5	19	FGJ	CEH		3	7.5	18	CE	BDFM
7AH7	2	6.3	21	BCDF	GH		3	7.5	21	AB	CEH	8AU8	2	7.5	22	GHJ	DF
7AJ7	2	6.3	23	BCF	DGH	Tube damaged if C or H is moved.							2	7.5	22	BC	AD
7AK7	2	6.3	22	BCDF	GH	7GV7	3	7.5	17	BCG	EFH	8AV11	2	7.5	23	BL	CM
7AN7	3	7.5	21	FJ	DGH		3	7.5	22	AJ	EFH		2	7.5	23	EG	FM
	2	7.5	20	BC	AD	Tube damaged if F or H is moved.							2	7.5	23	JK	DM
Tube damaged if G or H is moved.						7H7	2	6.3	24	BCF	DGH	8AW8	3	7.5	22	GHJ	DF
7AU7	2	3.15	25	FG	DEH	7HG8*	3	7.5	18	BJ	(AC)EH		3	7.5	24	BC	AD
	2	3.15	25	AB	CDE		3	7.5	20	FG	(AC)E	8B8	2	7.5	22	AJ	EH
7B4	1	6.3	22	BF	GH	7J7	2	6.3	30	CDE	GH		3	7.5	20	CFG	BE
7B5	3	6.3	29	BCF	GH		2	6.3	30	BEF	GH	8B10	2	9.45	21	EF	GM
7B6*	2	6.3	25	BC	(DG)H	7K7	1	6.3	20	CD	BH		2	9.45	21	CD	BM
	1	6.3	58	E	(DG)H		1	6.3	39	E	GH		1	9.45	20	K	JM
	1	6.3	58	F	(DG)H		1	6.3	39	F	GH		1	9.45	20	H	JM
7B7	2	6.3	28	BCF	DGH	7KY6*	3	7.5	17	B(CJ)GH	AE	8BA8	2	7.5	20	GHJ	EF
7B8	2	6.3	28	CD	GH	7KZ6*	3	7.5	18	B(CJ)GH	AE		1	7.5	18	BC	AE
	2	6.3	34	BEF	GH	7L7	2	6.3	26	BCF	DGH	8BA11	2	7.5	22	JL	KM
7C4	2	6.3	33	D	GH	7MP18*	3	7.5	20	(AG)EF	BC		2	7.5	22	DFG	HM
7C5	3	6.3	29	BCF	GH	7N7	2	6.3	26	CD	BH		2	7.5	23	BCE	HM
7C6*	3	6.3	33	BC	(DG)H		2	6.3	26	EF	GH	8BH8	2	7.5	20	GHJ	EF
	1	6.3	40	E	(DG)H	7Q7	2	6.3	25	CD	GH		1	7.5	20	BC	AE
	1	6.3	40	F	(DG)H		2	6.3	41	BEF	GH	8BM11	3	7.5	21	BCDF	EM
7C7	1	6.3	22	BCF	DGH	7R7	2	6.3	22	BEF	GH		3	7.5	22	GHJL	KM
7CL8	2	7.5	22	AB	CD		1	6.3	50	C	GH	8BN8	2	7.5	21	A	BD
	2	7.5	22	FGJ	DH		1	6.3	50	D	GH		1	7.5	18	GH	DJ
7D10	4	6.3	19	BGHJ	CE	7S7	2	6.3	33	CD	GH	8BN11	3	7.5	18	CDEF	BM
7D11	3	6.3	21	CDE	GH		2	6.3	23	BEF	GH		3	7.5	18	GJKL	HM
7DJ8	2	7.5	21	AB	CE	7SC7	3	7.5	33	BC	FG	8BQ5	3	7.5	20	ABGJ	CD
	2	7.5	21	FG	EH		3	7.5	38	DE	FG	8BQ11	3	7.5	18	BCDE	FM
7DZ7	3	7.5	22	ACD	GH	7V7	3	6.3	18	BCF	DGH		3	7.5	19	GHJK	LM
	3	7.5	22	DEF	GH	7W7*	2	6.3	24	BCF	(DG)EH	8BU11	3	7.5	18	CD	BM
No open element test on C & F.						7X6	3	6.3	20	C	BH		3	7.5	18	FG	EM
7E5*	2	6.3	34	(AE)(CG)	(DF)H		3	6.3	20	F	GH		3	7.5	18	HJK	LM
7E6*	2	6.3	27	BC	(DG)H	7X7	1	6.3	21	BC	DGH	8CB11	3	7.5	19	JK	GHLM
	1	6.3	45	E	(DG)H		1	6.3	20	E	DGH		3	7.5	19	CE	BDFM
	1	6.3	45	F	(DG)H		1	6.3	21	F	DGH	8CG7	2	7.5	24	FG	DH
7E7	3	6.3	36	BEF	GH	7Y4	3	6.3	33	C	GH		2	7.5	24	AB	CD
	1	6.3	40	C	GH		3	6.3	33	F	GH	8CM7	2	7.5	24	FG	CE
	1	6.3	46	D	GH	7Z4	3	6.3	34	C	GH		2	7.5	22	AH	EJ
7ED7	2	7.5	20	BGHJ	ACE		3	6.3	34	F	GH	8CN7	3	7.5	20	B	CDE
7ES8	2	7.5	20	AB	CD	8A8	3	7.5	22	AJ	EH		3	7.5	20	A	CDE
	2	7.5	20	FG	DH		3	7.5	20	BCF	EG		1	7.5	20	GH	DEF
7EY6	3	7.5	25	CDE	BH	8AC9	3	9.45	19	GJK	HLM	8CS7	3	7.5	24	AC	DJ
7F7	1	6.3	20	CD	BH		1	9.45	19	BC	DM		2	7.5	26	FG	DH
	1	6.3	20	EF	GH	8AC10	3	7.5	20	BL	CM	8CW5*	3	7.5	20	(AB)(FGH)J	CE
7F8	2	6.3	22	AC	DG		3	7.5	20	EG	FM	A, F or H is not used in some tubes.					
	2	6.3	22	FH	EG		3	7.5	20	JK	DM	8CX8	1	7.5	19	GHJ	DF
													1	7.5	19	BC	AD

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
8CY7	1	7.5	20	FG	DH	8LE8	2	7.5	19	FHJ	CGE	9GV7	3	9.45	17	BCG	EFH
	3	7.5	20	ABC	DJ		2	7.5	19	FHJ	BCE		3	9.45	22	AJ	EFH
8D8	1	6.3	21	AFHJ	CE	8LS6*	3	7.5	19	B(CJ)GH	AE	9GV8	3	9.45	20	FGJ	EH
No open element test on F.						8LT8	1	7.5	18	H	EG		2	9.45	21	AB	CE
8DX8	2	7.5	20	AB	CE		1	7.5	18	F	EG	9JW8	2	9.45	20	BCF	EG
	3	7.5	20	HJ	EF		3	7.5	19	BCJ	AE		2	9.45	21	AJ	EH
8EB8	2	7.5	22	GHJ	EF	8MD8	2	7.5	20	AJ	EG	9KC6	3	9.45	23	FGJ	AE
	1	7.5	20	BC	AE		2	7.5	20	BH	EG	9KG6*	4	9.45	21	•	EJ
8EM5	3	9.45	18	ACFG	EG		2	7.5	20	CF	EG	•(AH)(BG)(CF)K					
8ET7	1	7.5	56	C	AE	8MU8	2	7.5	22	AJ	EH	9KX6*	3	9.45	18	B(CJ)GH	AE
	1	7.5	56	B	AE		2	7.5	21	BCF	EG	9KZ8	3	9.45	20	BGF	CE
	3	7.5	20	GHJ	EF	8MV8	3	7.5	19	GH	EFJ		3	9.45	19	AJ	EH
No open element test on J.							1	7.5	20	BC	AE	9LA6*	3	9.45	19	B(CJ)GH	AE
8FE5	3	7.5	22	CDE	BH	8RHP1	2	7.5	22	AJ	EH	9MD8	2	9.45	20	AJ	EG
8FQ7	2	7.5	23	FG	EH		3	7.5	20	CFG	BE		2	9.45	20	BH	EG
	2	7.5	23	AB	CE	8SN7	2	7.5	26	AB	CG		2	9.45	20	CF	EG
8FY7	3	7.5	19	CE	GM		2	7.5	26	DE	FG	9MHH3	2	9.45	22	BE	CG
	1	7.5	21	KL	JM	9A8	3	9.45	18	AJ	EH		2	9.45	22	AF	CG
8GJ7*	3	9.45	21	HJ	(AC)E		2	9.45	20	BCF	EG	9ML8	2	9.45	20	CF	EG
	3	9.45	19	BG	(AC)EF	9AH9*	3	9.45	28	BC	DM		2	9.45	20	BH	EG
8GN8	3	7.5	19	GH	EFJ		3	9.45	19	(EF)HJL	GM		2	9.45	20	AJ	EG
	1	7.5	19	BC	AE	9AK10	3	9.45	20	BL	CM	9MN8	3	9.45	22	BL	CM
8GU7	3	7.5	22	FG	EH		3	9.45	20	EG	FM		3	9.45	22	DK	CM
	3	7.5	22	AB	CE		3	9.45	20	JK	DM		3	9.45	22	FH	CM
8HA6*	3	7.5	19	BG(FH)	ACEJ	9AM10	3	9.45	20	JK	DM	9MP12	3	9.45	22	AEF	BD
Tube damaged if C or J is moved.							3	9.45	20	EG	FM	9RA6*	3	9.45	22	(BG)J	AE
8JE8	2	7.5	20	BC	AE		3	9.45	20	BL	CM	9RAL1*	2	9.45	20	(BC)	EJ
	3	7.5	19	GHJ	EF	9AQ8	1	9.45	18	AB	CD		2	9.45	24	FG	EH
8JT8	3	7.5	18	GH	EFJ		1	9.45	18	FG	DH	9U8	2	9.45	22	BCF	EG
	1	7.5	19	BC	AE	9AU7	2	4.7	25	FG	DEH		2	9.45	22	AJ	EH
8JU8	3	7.5	22	GH	EJ		2	4.7	25	AB	CDE	9X8	2	9.45	20	GHJ	AEF
	3	7.5	22	G	EH	9BJ11	3	9.45	18	BCDF	EM		2	9.45	21	BC	EF
	3	7.5	22	AB	CE		3	9.45	18	GHJL	KM	No open element test on J.					
	3	7.5	22	A	BE	9BR7	2	5	21	G	DEH	10	3	7.5	56	BC	D
8JV8	3	9.45	18	GH	EFJ		2	5	21	F	DEH	10AF11	3	9.45	20	KL	BJM
	1	9.45	19	BC	AE		2	5	18	AB	CDE		2	9.45	21	FH	EM
8K11	2	7.5	23	JK	DM	9CL8	2	9.45	22	AB	CD		2	9.45	21	CD	GM
	1	7.5	20	BL	CM		2	9.45	22	FGJ	DH	10AL11	3	9.45	20	HKL	JM
	1	7.5	20	EG	FM	9DK3*	3	9.45	18	(BG)	DN		1	9.45	19	CDFG	BM
8KA8	3	9.45	19	FGHJ	CE	9DZ8	1	9.45	20	AJ	EH	10BQ5	3	9.45	22	ABGJ	CD
	2	9.45	21	AB	CE		3	9.45	20	CFG	BE	10C8	2	9.45	24	FGH	EJ
8KR8	3	7.5	18	GHJ	EF	9EA8	2	9.45	20	BCF	EG		1	9.45	22	AB	CE
	3	7.5	18	BC	AE		2	9.45	20	AJ	EH	10CW5*	3	9.45	20	(AB)(FGH)J	CE
8KS8	3	7.5	19	GH	EFJ	9ED4	1	7.5	26	HN	ABCEFGJ	A, F or H is not used in some tubes.					
	1	7.5	20	BC	AE	Tube damaged if ABCEFG or J is moved.						10DE7	3	9.45	22	ABC	DJ
8LC8	2	7.5	20	AB	CE	9EF6	1	9.45	17	CDE	BH		2	9.45	26	FG	DH
	2	7.5	20	FHJ	CEG	9GB8	2	9.45	22	FGH	EJ	10DR7	3	9.45	16	ABC	EJ
	2	7.5	20	FHJ	CEG		2	9.45	23	AB	CE		1	9.45	19	FG	EH
						9GH8	2	9.45	17	AJ	EH	10DX8	3	9.45	20	HJ	CFG
							2	9.45	17	BCF	EG		2	9.45	20	AB	CE

C should show short when tube is heated, Sec. 2.

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
10EB8	2	9.45	22	GHJ	EF	10LZ8	3	9.45	19	GH	EFJ	12A7	2	12.6	29	BCN	FG
	1	9.45	20	BC	AE		2	9.45	20	Bc	AE		1	12.6	20	E	DG
10EG7	2	9.45	21	AB	CG	10P18*	3	50	19	(AB)(GH)J	CE	12A8	2	12.6	28	CDN	GH
	1	9.45	21	DE	FG	10T10	3	9.45	19	HK	JLM		2	12.6	36	EF	GH
10EM7	1	9.45	20	DE	FH		1	9.45	21	CEFG	BM	12AB5*	3	12.6	30	(AH)(CF)J	EG
	3	9.45	19	AB	CH	10Y	3	7.5	42	BC	D	12AC6	1	12.6	21	ABEF	DG
10EW7	3	9.45	30	FG	EH	10Z10	3	9.45	20	BJL	CM	12AC10	3	12.6	20	BL	CM
	3	9.45	19	ABC	EJ		4	9.45	56	DEFG	HM		3	12.6	20	EG	FM
10FD7*	1	9.45	21	FG	EH	11AR11	3	12.6	18	JK	GHLM		3	12.6	20	JK	DM
	3	9.45	18	A(BC)	EJ		3	12.6	18	CE	BDFM	12AD6	1	12.6	20	AEFG	BC
10FR7*	3	7.5	19	A(BC)	EJ	11BM8	1	9.45	20	CFG	BE	12AD7	1	6.3	22	AB	CDE
	3	7.5	30	FG	EH		1	9.45	20	AJ	EH		1	6.3	22	FG	DEH
10GF7	1	9.45	20	HJ	AE	11BN11	3	12.6	18	CDEF	BM	12AE6	1	12.6	40	F	BC
	3	9.45	18	BF	CE		3	12.6	18	GHKL	HM		1	12.6	40	E	BC
10GK6*	3	7.5	20	BGH	A(CJ)E	11BQ11	3	12.6	18	BCDE	FM		1	12.6	22	AG	BC
10GN8	3	9.45	19	GH	EFJ		3	12.6	19	GHJK	LM	12AE7	1	6.3	19	AB	CDE
	1	9.45	19	BC	AE	11BT11	2	12.6	20	CJ	DM		1	6.3	19	FG	DEH
10GV8	2	9.45	21	AB	CE		2	12.6	20	EG	FM	12AE10	1	12.6	20	HKL	JM
	3	9.45	20	FGJ	EH		3	12.6	20	BKL	FHM		3	12.6	21	CEFG	BM
10HA6*	3	9.45	19	BG(FH)	ACEJ	11CA11	3	12.6	20	HKL	AJ	12AF3	4	12.6	18	BJ	EN
Tube damaged if C or J is moved.							3	12.6	20	DF	AE	12AF6	1	12.6	20	ABEF	DG
10HF8	3	9.45	19	GH	EFJ		3	12.6	22	BC	AG	12AF11	3	12.6	20	KL	BJM
	1	9.45	19	BC	AE	11CF11	3	12.6	19	CDE	FM		2	12.6	21	FH	EM
10JA5*	3	9.45	21	(BJ)(CK)F	DLM		3	12.6	19	BL	GM		2	12.6	21	CD	GM
Tube damaged if D or L is moved.							3	12.6	23	JK	HM	12AH7	3	12.6	30	AC	BG
10JA8	3	9.45	19	GH	EFJ	11CH11	3	12.6	17	BKL	FHM		3	12.6	30	EF	DG
	2	9.45	20	BC	AE		2	12.6	20	EG	FM	12AH8	2	6.3	20	ABFG	CDE
10JT8	3	9.45	18	GH	EFJ		2	12.6	20	CJ	EM		2	6.3	23	GH	CDE
	1	9.45	19	BC	AE	11CY7	3	9.45	20	ABC	DJ	12AJ6	1	12.6	38	F	BC
10JY8	3	12.6	18	GH	EFJ		1	9.45	21	FG	DH		1	12.6	38	E	BC
	3	12.6	18	BC	AE	11DS5*	1	12.6	19	(AG)EF	BD		1	12.6	20	AG	BC
10KR8	3	9.45	20	BC	AE	11FY7	1	12.6	21	KL	JM	12AJ7	3	12.6	22	ABFG	CE
	3	9.45	20	GHJ	EF		3	12.6	19	CE	GM		2	12.6	24	HJ	CE
10KU8	1	7.5	38	C	AE	11HM7*	3	5	17	B(CJ)GH	ADE	12AL5	1	12.6	22	G	AD
	1	7.5	38	B	AE	11JE8	3	12.6	19	GHJ	EF		1	12.6	22	B	DE
	3	7.5	17	GHJ	EF		2	12.6	20	BC	AE	12AL8	1	12.6	38	BF	CEG
10L14	2	25	21	FG	EH	11KV8	3	12.6	18	GHJ	EF		1	12.6	22	A	EJ
	2	25	21	AB	CE		2	12.6	20	BC	AE	12AL11	3	12.6	20	HKL	JM
10LB8	3	9.45	18	GH	EFJ	11LQ8	3	9.45	18	BC	AE		1	12.6	21	CDFG	BM
	2	9.45	25	BC	AE		3	9.45	18	GHJ	EF	12AQ5*	3	12.6	32	(AG)EF	BD
10LD6*	2	9.45	21	•	AD	11LT8	1	12.6	18	H	GE	12AS5	3	12.6	19	BEFG	AD
	•B(CJ)(FH)G						1	12.6	18	F	GE	12AT6	3	12.6	28	AG	BC
10LE8	2	7.5	19	AHJ	BCE		3	12.6	19	BCJ	AE		1	12.6	35	F	BC
	2	7.5	19	FHJ	CEG	11LY6*	3	9.45	19	B(CJ)GH	AE		1	12.6	35	E	BC
10LM8	3	9.45	20	BCF	EG	11MS8	3	9.45	20	FGJ	EH	12AT7	2	6.3	24	FG	HJ
	3	9.45	21	AJ	EH		2	9.45	21	AB	CE		2	6.3	24	AB	CJ
10LW8	1	9.45	19	BC	AE	11R3*	2	9.45	22	(BJ)	DN	12AU6	2	12.6	22	ABEF	DG
	3	9.45	20	GHJ	EF	12A	2	5	26	BC	D	12AU7	2	6.3	25	FG	DEH
10LY8	3	9.45	18	GHJ	EF	12A4	2	6.3	20	BGJ	ADE		2	6.3	25	AB	CDE
	1	9.45	18	BC	AE	12A5	3	6.3	32	BCD	EF	12AV5	3	12.6	18	AEH	BC
						12A6	3	12.6	32	CDE	GH						

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	
12AV6	1	12.6	43	F	BD	12BR7	2	6.3	23	G	DEH		1	12.6	40	J	BE	
	1	12.6	43	E	BD		2	6.3	23	F	DEH		12DL8	1	12.6	20	CFG	BE
	1	12.6	21	AG	BD		2	6.3	21	AB	CDE		1	12.6	40	A	EH	
12AV7	2	6.3	21	FG	DEH	12BS3*	2	12.6	20	(BG)	EJ		1	12.6	40	J	EH	
	2	6.3	22	AB	CDE	12BT3	3	12.6	21	DK	GM		12DM4	3	12.6	22	E	CH
12AW6	2	12.6	22	AEFG	BD	12BT6	1	12.6	22	AG	BC		12DQ6	3	12.6	23	DEN	GH
No open element test on E.							1	12.6	29	E	BC		12DQ7	3	12.6	22	BCGHJ	AE
12AX3	3	12.6	23	DK	GM		1	12.6	29	F	BC		12DS7	1	12.6	40	J	EH
12AX4	3	12.6	22	E	CG	12BV7*	3	6.3	20	BGH	A(CJ)DE		1	12.6	40	A	EH	
12AX7	1	6.3	20	FG	DEH	12BV11	2	12.6	20	BCDF	EM		1	12.6	20	CFG	EH	
	1	6.3	20	AB	CDE		2	12.6	20	GJKL	HM		12DT5	3	12.6	24	ACFJ	EG
12AY3	3	12.6	22	BG	EJ	12BW4	4	12.6	20	G	EJ		12DT6	1	12.6	20	AEFG	BD
J may show leakage.							4	12.6	20	A	EJ		12DT7	1	6.3	20	AB	CDE
12AY7	1	6.3	22	FG	DEH	12BY7*	3	6.3	22	BGH	A(CJ)DE		1	6.3	20	FG	DEH	
	1	6.3	22	AB	CDE	No open element test on G.						12DT8	2	12.6	21	FG	EH	
12AZ7	1	6.3	20	FG	DEH	12BZ6	1	12.6	18	AEFG	BC		2	12.6	21	AB	CE	
	1	6.3	20	AB	CDE	No open element test on E & G.						12DV7	1	6.3	22	FG	DEH	
12B4	2	6.3	21	BGJ	ADE	12BZ7	1	6.3	19	FG	DEH		1	6.3	67	B	ADE	
12B6	3	12.6	31	CN	GH		1	6.3	19	AB	CDE		1	6.3	67	C	ADE	
	1	12.6	58	D	GH	12C5	3	12.6	17	BEFG	AC		12DV8	1	12.6	20	CFG	BE
	1	12.6	58	E	GH	12C8	1	12.6	38	D	GH		1	12.6	35	A	EH	
12B7	2	12.6	30	BCF	AH		1	12.6	38	E	GH		1	12.6	35	J	EH	
12B8	2	12.6	26	CDN	AG		3	12.6	41	CFN	GH		12DW4*	3	12.6	20	(BG)	EJ
	3	12.6	26	EH	FG	12CA4	2	12.6	22	A	CD		12DW5	1	12.6	21	ACFJ	EG
12BA6	2	12.6	22	ABEF	DG		2	12.6	22	G	CD		12DW7	1	6.3	20	FG	DEH
12BA7	3	12.6	18	AB	CEFGJ	12CA5	3	12.6	22	BEFG	AC		2	6.3	24	AB	CDE	
	1	12.6	36	AFGJ	BCE	12CK3*	3	12.6	18	(BG)	EJ		12DY8	2	12.6	21	HJ	EG
12BB14*	3	12.6	18	(AB)(FG)N	CEH	12CL3*	3	12.6	18	(BG)	EJ		2	12.6	20	ACF	BE	
Tube damaged if C or H is moved.						12CM6*	3	12.6	26	A(CF)J	EG		12DZ6	1	12.6	20	AF	BDG
12BD6	2	12.6	27	ABEF	DG	12CN5*	2	12.6	42	FG	A(BE)C		12DZ7	3	12.6	22	ACD	GH
12BE3	3	12.6	20	DK	GM	12CR6	3	12.6	30	EFG	AC		3	12.6	22	DEF	GH	
12BE6	2	12.6	24	EFG	BD		1	12.6	32	B	AC		No open element test on C & F.					
	2	12.6	24	A	BD	12CS6	1	12.6	20	AF	BC		12E5	3	12.6	30	CE	GH
12BF6	2	12.6	34	AG	BD		1	12.6	25	EG	BC		12E13	3	6.3	21	CDE	GH
	1	12.6	38	F	BD	12CT3*	3	12.6	18	(BF)	EJ		12EA6	1	12.6	20	AF	BDG
	1	12.6	38	E	BD	12CT8	2	12.6	22	AB	CD		12EC8	1	12.6	40	B	ACE
12BF11	3	12.6	20	HKL	JM		2	12.6	22	FGH	DJ		1	12.6	57	FG	EHJ	
	1	12.6	20	CEFG	BM	12CU5	3	12.6	18	BEFG	AD		12ED5	3	12.6	20	BEFG	AD
12BH7	2	6.3	21	FG	DEH	12CU6	3	12.6	23	DEN	GH		12EF6	4	12.6	18	CDE	GH
	2	6.3	21	AB	CDE	12CX6	2	12.6	22	AE1/2BCG			12EG6	1	12.6	20	AEG	BD
12BK5	2	12.6	22	ACGH	DF	12CX8	1	12.6	23	BEF	ACG		1	12.6	21	F	BD	
12BK6	1	12.6	24	AG	BC	12D4	3	12.6	21	E	CG		12EH5	3	12.6	20	BEFG	AD
	1	12.6	32	E	BC	12DB5*	2	12.6	24	A(CF)J	(BG)D		12EK6	1	12.6	21	EF	DG
	1	12.6	36	F	BC	12DF5	1	6.3	31	A	CJ		1	12.6	20	AB	DG	
12BL6	1	12.6	20	AEF	BDG		1	6.3	31	F	HJ		12EL6	1	12.6	20	AB	DG
Good tube reads above 30.						12DJ8	2	12.6	20	AB	CE		1	12.6	45	E	DG	
12BN6	1	12.6	36	BEFG	AC		2	12.6	20	FG	EH		1	12.6	45	F	DG	
Good tube reads above 30.						12DK6	3	12.6	22	AEF	BCG		12EM6	1	12.6	19	ACF	BE
12BQ6	3	12.6	22	DEN	GH	12DK7	1	12.6	20	CG	BE		1	12.6	38	J	BE	
12BR3*	4	12.6	18	(BJ)	EN		1	12.6	30	F	BE		12EN6	1	12.6	19	CDE	GH

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
12EQ7	2	12.6	22	ABFG	CE	12HL5*	3	12.6	18	(AB)GJ	CE	12RL5	2	12.6	23	FG	EH
	1	12.6	34	H	CE	12HL7*	3	6.3	18	BGH(CJ)	ADE		2	12.6	23	AB	CE
Good tube reads above 25.						12HU6	3	12.6	21	FHJ	EG	12S6	1	12.6	27	FN	BH
12EZ6	1	12.6	18	AF	BDEG		3	12.6	21	ABC	EG		1	12.6	34	D	BH
	1	12.6	24	BE	DG	12J5	2	12.6	24	CE	GH		1	12.6	37	A	BH
12F5	1	12.6	22	DN	GH	12J7	1	12.6	20	CDN	EGH		1	12.6	39	C	EH
12F8	1	12.6	37	F	DG	12J8	1	12.6	20	J	DG	12SA7	2	12.6	35	CH	FG
	1	12.6	37	A	DG		1	12.6	20	H	DG		2	12.6	25	DE	FG
	1	12.6	21	BCH	DGJ		1	12.6	20	ACF	BD	12SC7	1	12.6	20	BC	FG
12FK6	1	12.6	40	F	BD	12JB6*	3	12.6	19	(AG)(BF)HNCE			1	12.6	20	DE	FG
	1	12.6	40	E	BD	12JF5*	3	12.6	20	B(CL)N	DKM	12SF5	1	12.6	20	CE	BG
	1	12.6	20	AG	BD	Tube damaged if D or K is moved.						12SF7	1	12.6	40	E	CG
12FM6	1	12.6	55	G	ABD	12JM6	3	12.6	20	CGL	BDKM		3	12.6	30	BDF	CG
	1	12.6	38	F	BD	Tube damaged if D or K is moved.						12SG7*	3	12.6	19	DFH	(CE)G
	1	12.6	38	E	BD	12JN6	3	12.6	20	CGL	BDKM	12SH7*	3	12.6	19	DFH	(CE)G
12FQ7	2	12.6	23	FG	EH	Tube damaged if D or K is moved.						12SJ7	1	12.6	20	DFH	CEG
	2	12.6	23	AB	CE	12JN8	3	12.6	20	GJ	EFH	12SK7	3	12.6	28	CDFH	EG
12FQ8	1	12.6	20	BC	AEFGHJ		3	12.6	19	AB	CE	12SL7	3	12.6	28	DE	FG
	1	12.6	20	AB	CEFGHJ	12JQ6*	1	12.6	23	F	DJ		3	12.6	28	AB	CG
	1	12.6	20	FG	ABCEHJ		3	12.6	20	A(BC)(GH)	DJ	12SN7	2	12.6	29	DE	FG
	1	12.6	20	GH	ABCEHJ	12SJ6*	3	12.6	18	(CL)(EJ)N	BDKM		2	12.6	29	AB	CG
12FR8	1	12.6	18	CFG	E	Tube damaged if D or K is moved.						12SQ7	1	12.6	50	E	CG
	1	12.6	20	AJ	BE	12JT6*	3	12.6	20	(AG)BFJ	CE		1	12.6	50	D	CG
	1	12.6	44	H	BE	12K5	1	12.6	20	BEFG	AD	12SR7	3	12.6	27	BF	CG
12FV7	3	6.3	19	FG	HJ	12K7	3	12.6	34	CDN	EGH		1	12.6	36	E	CG
	3	6.3	19	AB	CJ	12K8	1	12.6	22	EF	GH		1	12.6	48	D	CG
12FX5*	2	12.6	20	(BE)FG	AD		3	12.6	52	CDN	GH	12SW7	2	12.6	26	BF	CG
12FX8	1	12.6	25	CJ	EG	12KG6*	4	12.6	21	•	EJ		1	12.6	43	D	CG
	1	12.6	19	FH	E	•(AH)(BG)(CF)N							1	12.6	43	E	CG
	1	12.6	19	AB	EG	12KL8	1	12.6	48	H	CE	12SX7	2	12.6	25	DE	FH
12G11	1	12.6	20	CDFG	BM		2	12.6	20	ABFG	CE		2	12.6	25	AB	CH
	3	12.6	20	HKL	JM	12L6	3	12.6	22	CDE	GH	12SY7	2	12.6	32	ACH	FG
12GB3	3	12.6	19	DE	GH	12LG8	3	12.6	20	CDE	BG		2	12.6	26	DE	FG
12GB7	3	12.6	18	DEN	GH		3	12.6	22	AEH	BG	12T10	3	12.6	19	HK	JLM
12GC6	3	12.6	20	DEHN	CG	12MD8	2	12.6	20	AJ	EG		1	12.6	20	CEFG	BM
12GE5*	3	12.6	19	B(CL)G	(DK)M		2	12.6	20	BH	EG	12U7	1	6.3	25	AB	CDE
12GJ5*	3	12.6	20	(AG)(BF)N	CE		2	12.6	20	CF	EG		1	6.3	25	FG	DEH
12GK17	3	12.6	22	E	CG	12ML8	2	12.6	20	CF	EG	12V6	3	12.6	27	CDE	GH
12GN7*	3	6.3	17	BH(CJ)	ADEG		2	12.6	20	BH	EG	12W6	3	12.6	21	CDE	GH
12GT5*	3	12.6	19	(AG)(BF)J	CE		2	12.6	20	AJ	EG	12X4	1	12.6	21	F	DG
12GV5*	3	12.6	19	(CLG)(EJ)N	DKM	12MX8	3	12.6	20	BFG	CE		1	12.6	21	A	DG
Tube damaged if D or K is moved.							1	12.6	28	HJ	AE	12Z3	3	12.6	25	B	CD
12GW6	3	12.6	20	DEN	GH	12Q7	1	12.6	20	CN	GH	13CM5*	3	12.6	19	(AD)EN	CHG
12H6	1	12.6	25	C	DG		1	12.6	40	D	GH	Tube damaged if C or H is moved.					
	1	12.6	25	E	GH		1	12.6	40	E	GH	13CW4	1	12.6	18	BD	HM
12HB25*	3	12.6	19	•	EJ	12R5	3	12.6	28	BEFG	AC	13DE7	1	12.6	20	FG	EH
•(AB)(CH)(FG)N						12RK19*	3	12.6	20	(BJ)	EN		1	12.6	18	ABC	EJ
12HE7	3	6.3	18	EJL	HK	12RL3	2	6.3	22	AB	CDE	13DR7	3	12.6	16	ABC	EJ
	1	6.3	19	B	DK		2	6.3	21	FG	DEH		1	12.6	19	FG	EH
12HG7*	3	6.3	18	B(CJ)GH	AE												

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
13EM7	1	12.6	22	DE	FH	14GT8	1	12.6	20	HJ	EG	15HA6*	3	12.6	19	CE	GM
	3	12.6	19	AB	CH		1	12.6	20	F	AE		3	12.6	19	BG(FH)	ACEJ
13FD7*	3	12.6	18	A(BC)	EJ		1	12.6	20	B	CE	Tube damaged if C or J is moved.					
	1	12.6	21	FG	EH	14GW8	3	12.6	20	CFH	EG	15HB6*	3	12.6	18	B(FH)	AE
13FM7*	1	12.6	20	KL	JM		1	12.6	20	AJ	BE		1	12.6	24	(CJ)G	AE
	3	12.6	19	(CH)E	GM	14H7	2	12.6	22	BCF	DGH	15KY8	1	12.6	28	HJ	AE
13FR7	3	12.6	19	ABC	EJ	14J7	2	12.6	32	CDE	FGH		3	12.6	20	BFG	CE
	3	12.6	30	FG	EH		3	12.6	33	BEF	GH	15LE8	2	12.6	19	AHJ	BCE
13GB5*	3	12.6	19	(AB)(FG)N	CEH	14JG8	2	12.6	23	HJ	EG		2	12.6	19	FHJ	CEG
Tube damaged if C or H is moved.							1	12.6	19	F	AE	15MF8*	3	12.6	19	D(FG)H	JM
13GC8	2	12.6	21	AB	CE		1	12.6	19	B	CE		1	12.6	19	BK	LM
	2	12.6	21	FHJ	EG	14N7	2	12.6	26	CD	BH	15MX8	1	12.6	28	HJ	AE
13GF7	3	12.6	18	BF	CE		2	12.6	26	EF	GH		3	12.6	20	BFG	CE
	1	12.6	20	HJ	AE	14Q7	2	12.6	25	CD	GH	16A	1	6.3	22	AEG	BD
13J10	3	12.6	20	BJL	CM		2	12.6	30	BEF	GH	16A5	3	12.6	18	BGJ	CD
	4	12.6	68	DEFG	HM	14R7	1	12.6	18	BEF	GH	16A8	2	12.6	20	CFG	BE
13JZ8*	3	12.6	20	D(FG)H	JM		1	12.6	50	C	GH		3	12.6	26	AJ	EH
	1	12.6	21	BK	LM		1	12.6	50	D	GH	16AK9	3	7.5	21	EHJ	FG
13V10	2	12.6	24	CFG	BEM	14S7	2	12.6	28	CD	GH		3	7.5	22	KL	FG
	3	12.6	23	HKL	JM		2	12.6	24	BEF	GH		3	7.5	30	BC	FG
13Z10	3	12.6	20	BJL	CM	14V7	3	12.6	18	BCF	DGH	16AQ3	3	19.6	20	ABCFGHJ	EN
	4	12.6	68	DEFG	HM	14W7*	2	12.6	22	BCF	(DG)EH	No element test on top levers.					
14	2	12.6	30	BCN	DE	14X7	1	12.6	20	BC	DGH	16BQ11	3	12.6	18	BCDE	FM
14A4	2	12.6	26	BF	GH		1	12.6	20	E	DGH		3	12.6	19	GHJK	LM
14A5	3	12.6	33	BCF	GH		2	12.6	24	F	DGH	16BX11	2	12.6	21	GH	JM
14A7	2	12.6	30	BCDF	GH	Good tube reads above 30.							2	12.6	20	EF	DM
14AF7	3	12.6	25	EF	BCDGH	14Y4	3	12.6	28	C	GH		2	12.6	20	BC	KLM
	3	12.6	25	CD	BEFGH		3	12.6	28	F	GH	16CB28*	3	12.6	18	•	AB
14B6*	1	12.6	20	BC	(DG)H	14Z3	3	12.6	25	B	CD	•(CL)(DK)(EJ)N					
	1	12.6	40	E	(DG)H	15	2	2	36	BCN	DE	16GK6*	2	19.6	20	BGH	A(CJ)E
	1	12.6	40	F	(DG)H	15A6	1	12.6	20	ABFG	CE	16GY5*	3	12.6	18	C(EJ)GLN	(DK)M
14B8	2	12.6	34	CD	GH	15A8	2	12.6	24	DEN	BF	16HB5*	3	12.6	18	B(CL)G	DKM
	2	12.6	30	BEF	GH		2	12.6	27	CH	AB	Tube damaged if D or K is moved.					
14BL11	2	12.6	20	CJ	DM	15AF11	3	12.6	20	KL	BJM	16KA6*	3	12.6	19	C(DL)EN	KM
	2	12.6	20	EG	FM		2	12.6	21	FH	EM	16KH8	3	12.6	24	AB	DG
	2	12.6	20	BKL	HM		2	12.6	21	CD	GM		3	12.6	20	BCJ	DG
14BR11	2	12.6	20	BCL	DM	15BD11	3	12.6	20	KL	BJM		3	12.6	20	FHJ	DG
	2	12.6	20	FH	EM		2	12.6	20	FH	EM	16LD6*	2	12.6	21	B(CJ)(FH)G	AD
	2	12.6	20	JK	GM		2	12.6	21	CD	GM	16LU8*	1	12.6	19	BK	LM
14C5	3	12.6	25	BCF	GH	15CW5*	3	12.6	20	(AB)(FGH)J	CE		3	12.6	19	D(FG)H	JM
14C7	2	12.6	28	BCF	DGH	A, F or H is not used in some tubes.						16MY8*	3	12.6	19	D(FG)H	JM
14E6*	3	12.6	31	BC	(DG)H	15DQ8	2	12.6	20	AB	CE		1	12.6	19	BK	LM
	1	12.6	65	E	(DG)H		3	12.6	20	FHJ	EG	17	3	12.6	40	BC	DE
	1	12.6	65	F	(DG)H	15EA7	1	12.6	20	DE	FH	17A8	2	12.6	20	BCF	EG
14E7	2	12.6	28	BEF	GH		3	12.6	19	AB	CH		2	12.6	18	AJ	EH
	1	12.6	58	C	GH	15EW6	2	12.6	20	AEFG	BD	17AB10	4	19.6	55	DEFG	HM
	1	12.6	58	D	GH	15EW7	3	12.6	19	A(BC)	EJ		3	19.6	19	BJL	CM
14F7	1	12.6	20	CD	BH		3	12.6	30	FG	EH	17AV5	3	12.6	24	AEH	BC
	1	12.6	20	EF	GH	15FM7*	3	12.6	19	(CH)E	GM	17AX3	3	19.6	23	DK	GM
14F8	3	12.6	22	AC	DG		1	12.6	20	KL	JM	17AX4	3	12.6	28	E	CH
	3	12.6	22	FH	EG	15FY7	1	12.6	21	KL	JM						

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	
17AY3	3	19.6	21	BG	EJ	17JZ8*	3	19.6	19	D(FG)H	JM	19CG3*	3	19.6	18	(DK)	GM	
J may show leakage.						1	19.6	20	BK	LM		19CL8	2	19.6	21	FGJ	DH	
17BB14*	3	12.6	18	(AB)(FG)N	CEH	17KV6*	3	12.6	18	(AG)BFJ	CE	2	19.6	21	AB	CD		
Tube damaged if C or H is moved.						17L6	3	12.6	24	CDE	GH	19DC8	1	19.6	36	H	CE	
17BE3	3	19.6	20	DK	GM	17LD8	1	12.6	28	HJ	AE	1	19.6	36	G	CE		
17BF11	3	19.6	20	HKL	JM	3	12.6	20	BFG	CE		2	19.6	22	ABFJ	CE		
1	19.6	20	CEFG	BM		17R5	3	12.6	24	BEFG	AC	19DE3*	3	19.6	18	(DK)	MN	
17BH3*	3	12.6	22	(BG)	EJ	17RHH2	2	19.6	20	AB	CD	19DE7	2	19.6	26	FG	DH	
17BQ6	3	12.6	21	DEN	GH	2	19.6	20	FG	DH		3	19.6	22	A(BC)	DJ		
17BR3*	4	19.6	18	(BJ)	EN	17RK19*	4	19.6	18	(BJ)	EN	19DK3*	3	19.6	18	(BG)	DN	
17BS3*	2	12.6	20	(BG)	EJ	17X10	4	19.6	55	DEFG	HM	19DQ3*	3	19.6	18	(DK)	GM	
17BW3*	4	12.6	21	(DK)	GM	3	19.6	19	BJL	CM	19EA8	2	19.6	20	BCF	EG		
17BZ3*	3	12.6	20	(DK)	GM	17Z3	4	12.6	18	BJ	DN	2	19.6	20	AJ	EH		
17C5*	3	12.6	24	(BE)FG	AC	18	3	12.6	31	BCD	EF	19EZ8	1	19.6	20	HJ	D	
17C9	2	19.6	20	GHJ	EF	18A5	2	12.6	24	AEH	CG	1	19.6	20	FG	D		
2	19.6	20	ABC	EK	18AJ10	3	19.6	22	HKL	JM	1	19.6	20	BC	AD			
17CA5	3	12.6	22	BEFG	AD	1	19.6	20	CEFG	BM	19FL8	2	19.6	22	ABFJ	CE		
17CK3*	3	12.6	18	(BG)	EJ	18DZ8	1	19.6	20	AJ	EH	1	19.6	42	G	CE		
17CL3*	3	12.6	18	(BG)	EJ	3	19.6	20	CFG	BE	1	19.6	42	H	CE			
17CT3*	3	19.6	18	(BF)	EJ	18FW6	2	19.6	21	ABEF	DG	19FX5*	2	19.6	20	(BE)FG	AD	
17CU5	3	12.6	19	BEFG	AD	18FX6	2	19.6	25	EFG	BD	19GQ7	1	19.6	20	B	AE	
17D4	3	12.6	21	E	CG	2	19.6	22	AFG	BD	1	19.6	20	H	EJ			
17DE4	3	19.6	22	E	CH	18FY6	1	19.6	50	F	BD	1	19.6	20	F	EG		
17DM4	3	19.6	21	E	CH	1	19.6	50	E	BD		19HR6	3	19.6	18	ABEF	DG	
17DQ6	3	12.6	24	DEN	GH	1	19.6	20	AG	BD		19HS6	1	19.6	21	BEF	DG	
17DW4*	3	12.6	20	(BG)	EJ	18GB5*	3	19.6	19	(AB)(FG)N	CEH	1	19.6	19	A	DG		
17EW8	2	19.6	20	FG	DH	Tube damaged if C or H is moved.						19HV8	2	19.6	21	GJ	EFH	
2	19.6	20	AB	CD		18GD6	2	19.6	20	ABEF	DG	1	19.6	21	AB	CE		
17GE5*	3	19.6	19	B(CL)G	(DK)M	18GV5*	3	19.6	19	(CGL)(EJ)N	DKM	19J6	2	19.6	24	BE	CG	
17GJ5*	3	19.6	20	(AG)(BF)N	CE	Tube damaged if D or K is moved.						2	19.6	24	AF	CG		
17GT5*	3	19.6	19	(AG)(BF)J	CE	18GV8	3	19.6	20	FGJ	EH	19JC6	2	19.6	19	BGHJ	ACE	
17GV5*	3	19.6	19	CGL(EJ)N	(DK)M	2	19.6	21	AB	CE		Tube damaged if A or C is moved.						
17GW6	3	19.6	20	DEN	GH	18HB8	1	19.6	20	AC	BE	19JN8	3	19.6	19	FGJ	EH	
17H3	3	12.6	28	CH	AE	3	19.6	22	FGJ	EH		No open element test on F.						
17HB25*	3	19.6	19	•	EJ	18J6	1	19.6	23	AF	BDEG	2	19.6	20	AB	CE		
•(AB)(CH)(FG)N						1	19.6	23	BE	ADFG		19KF6*	3	19.6	19	(AG)BFJ	CE	
17HC8	3	19.6	23	CFG	BE	18RAL1*	2	19.6	20	(BC)	EJ	19KG8	3	19.6	19	GJ	EFH	
3	19.6	26	AJ	EH		2	19.6	24	FG	EH		3	19.6	19	BA	CE		
17JB6*	3	19.6	19	(AG)(BF)HNCE		19	3	2	37	BC	F	19MR9	2	19.6	20	ABEF	DG	
17JF6*	3	12.6	18	(AG)(BF)HNCE		3	2	39	DE	F		19Q9	3	19.6	19	AB	CEK	
17JG6*	3	12.6	18	(AG)BJ	CEF	19A3	3	7.5	21	E	FG	3	19.6	19	HJ	EG		
17JM6	3	12.6	20	CEN	BDKM	19AJ8	2	19.6	22	ABFG	CE	19T8	1	19.6	21	HJ	CEG	
Tube damaged if D or K is moved.						2	19.6	23	HJ	CE		1	19.6	20	F	CEG		
17JN6	3	12.6	20	CGL	BDKM	19AQ5*	3	19.6	27	(AG)EF	BD	1	19.6	20	B	CEG		
Tube damaged if D or K is moved.						19AU4	4	19.6	22	E	CH	1	19.6	20	A	CEG		
17JQ6*	1	12.6	23	F	DJ	19BG6	3	19.6	26	EHN	CG	19U3	3	19.6	21	J	CD	
3	12.6	20	A(BC)(GH)	DJ		19C8	1	19.6	19	A	EG	19V8	1	19.6	19	B	CE	
17JR6*	3	19.6	18	(AG)BJ	CEF	1	19.6	19	F	EG		1	19.6	19	G	EH		
17JT6*	3	12.6	20	(AG)BFJ	CE	1	19.6	20	HJ	EG		1	19.6	22	AF	CE		
						1	19.6	20	B	CE		1	19.6	36	J	CE		

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)												
19W3	3	19.6	21	J	CD	22BW3*	4	19.6	21	(DK)	GM	25CM3*	3	25	17	(BG)	EJ												
19X3	3	19.6	18	J	CD	22DE4	3	25	22	E	CH	25CT3*	3	25	18	(VF)	EJ												
19X8	2	19.6	22	BC	DF	22JF6*	3	19.6	18	(AG)(BF)HNCE		25CU6	3	25	23	DEN	GH												
	2	19.6	21	AGHJ	DF	22JG6*	3	25	18	(AG)BJ	CEF	25D8	2	25	26	EF	AG												
19Y3*	3	19.6	20	(AGJ)	CE	22JR6*	3	25	18	(AG)BJ	CEF		2	25	26	CDN	AG												
20	2	6.3	48	BC	D	22JU6*	3	19.6	17	(AG)(BF)HNCE			1	25	22	H	AG												
20AQ3	3	19.6	20	ABCFGHJ	EN	22KM6*	3	25	18	(AG)(BF)HNCE		25DK3*	3	25	18	(BG)	DN												
No element test on top levers.						22KV6*	3	19.6	18	(AG)BFJ	CE	25DK4	4	25	26	E	CG												
20D4	2	6.3	22	ABFG	CE	22JS6*	3	25	18	(CL)(EJ)N	BDKM	25DL3*	3	25	18	(BG)	DN												
	2	6.3	23	HJ	CE	Tube damaged if D or K is moved.						25DN6	3	25	17	EHN	CG												
20EQ7	1	19.6	34	H	CE	23MB6	3	25	18	(CL)(EJ)N	BDKM	25DQ6	3	25	24	DEN	GH												
Good tube reads above 25.						Tube damaged if D or K is moved.						25DT5	3	25	22	ACFJ	EG												
	2	19.6	22	ABFG	CE	23Z9	IMPORTANT = Due to several different filament center tap arrangements, data for this tube has been discontinued. Attempts at testing may cause filament burnout on some tubes. Therefore, we recommend direct substitution as the only safe test.										25E5*	3	25	18	(AD)EN	CGH							
20EW7*	3	19.6	30	FG	EH													Tube damaged if C or H is moved.			25EC6	3	25	20	EHN	BC			
	3	19.6	19	A(BC)	EJ	24A	2	2.5	32	BCN	DE	25EH5	3	25	20	BEFG	AD				25F5	2	25	22	BEFG	AD			
20EZ7	1	9.45	20	GH	CJ	24AX4	3	25	20	E	CH	25GB6	3	25	21	DEK	GH				25GF6	3	25	16	DEN	GH			
	1	9.45	20	EF	CD	24BF11	3	25	20	HKL	JM	25HX5*	3	25	18	(AG)FJ	BCE				Tube damaged if B or C is moved.			25JQ6*	3	25	20	A(BC)(GH)	DJ
20J8	1	19.6	19	CDEN	GH		1	25	20	CEFG	BM											1	25	23	F	DJ			
20LF6*	3	19.6	18	•	BM	24GA7*	3	25	20	(BC)DG	EM	25JZ8*	3	25	19	D(FG)H	JM				1	25	20	BK	LM				
•(CL)(DK)(EJ)N							3	25	24	L	HM		1	25	20	BK	LM				25KA6*	3	25	19	C(DL)EN	KM			
21A6	3	19.6	16	ABFGHJN	CE	24JE6*	3	25	19	(AG)(BF)HNCE		25L6	3	25	22	CDE	GH				25MP20	3	25	20	AEF	BD			
No open element test on N.						24JZ6*	3	25	19	D(FG)H	JM	25N6	2	25	30	CDE	GH				25RK19*	4	25	18	(BJ)	EN			
21EX6	3	19.6	16	EHN	OG		1	25	20	BK	LM	25W4	3	25	18	E	CG				25W6	3	25	17	CDE	BH			
21GY5*	3	19.6	18	(CGL)(EJ)N	(DK)M	24LQ6*	3	25	17	(AG)(BF)HNCE		25X6	3	25	27	C	DG				25Y4	3	25	25	E	GH			
21HA6*	3	25	19	BG(FH)	ACEJ	24LZ6*	3	25	19	(AG)(BF)N	CE		3	25	27	E	GH				25Y5	3	25	30	B	CF			
Tube damaged if C or J is moved.						25A6	3	25	27	CDE	GH	25Z5	3	25	25	B	CF					3	25	30	E	DF			
21HB5*	3	19.6	18	B(CL)G	(DK)M	25A7	3	25	27	CDE	GH		3	25	25	E	DF				25Z6	3	25	24	C	DG			
21HD5*	3	19.6	19	(CL)(EJ)G	DKM		3	25	23	F	AG	26	2	1.4	38	BC	D					2	25	24	E	GH			
Tube damaged if D or K is moved.						25AC5	3	25	31	CE	GH	26A6	2	2.5	22	ABEF	DG				26A7	2	25	20	CDE	BG			
21HJ5*	3	19.6	18	(CL)(EJ)G	BDKM	25AV5	3	25	18	AEH	BC		2	25	20	AEH	BG					2	25	21	FG	EH			
Tube damaged if D or K is moved.						25AX4	3	25	20	E	CH	26AQ8	2	25	21	AB	CE					2	25	21	AB	CE			
21JS6*	3	25	19	(CL)(EJ)N	BDKM	25B5	3	25	37	BD	EF	26C6	3	25	30	AG	BDEF					1	25	36	E	ABDFG			
Tube damaged if D or K is moved.						25B6	3	25	23	CDE	GH		1	25	36	F	ABDEG					1	25	36	F	ABDEG			
21JV6*	3	19.6	18	(DK)CGL	BM	25B8	2	25	25	CDN	AG																		
21JZ6*	3	19.6	18	(DK)CEN	BM		2	25	25	EH	FG																		
21KA6*	3	19.6	19	C(DL)EN	KM	25BB14*	3	25	18	(AB)(FG)N	CEH																		
21KQ6*	3	19.6	19	•	EJ	Tube damaged if C or H is moved.																							
•(AH)(BG)(CF)N						25BK5	2	25	21	ACGH	DF																		
21LG6*	3	19.6	20	(CL)(EJ)N	DKM	25BQ6	2	25	21	DEN	GH																		
Tube damaged if D or K is moved.						25C5	2	25	20	BEFG	AD																		
21LR8	3	19.6	19	BFG	CE	25C6	3	25	25	CDE	GH																		
	1	19.6	19	HJ	AE	25CA5	3	25	17	BEFG	AD																		
21LU8*	3	19.6	19	D(FG)H	JM	25CD6	3	25	20	EHN	BC																		
	1	19.6	19	BK	LM	25CG3*	3	25	18	(DK)	GM																		
21MY8*	3	19.6	19	D(FG)H	JM	25CK3*	3	25	18	(BG)	EJ																		
	1	19.6	19	BK	LM																								
22	1	2.5	56	BCN	D																								
22BH3	3	25	22	BG	EJ																								

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
40Z5 (45Z5)	3	32	20	E	BCH	53HK7	3	25	18	EJL	HK	88M	3	6.3	31	CDN	EGH
41	3	6.3	32	BCD	EF	1	25	18	B	DK		88S	3	6.3	32	BCN	DEF
42	3	6.3	29	BCD	EF	55	2	2.5	32	BN	EF	89	3	6.3	32	BCN	EF
42EC4*	3	32	19	(BGH)	EN	1	2.5	49	C	EF		89RS	3	6.3	36	BN	CEG
42KN6*	3	19.6	17	•	BG	1	2.5	40	D	EF		1	6.3	24	D	CG	
•(CL)(DK)(EJ)N						56	2	2.5	30	BC	DE	1	6.3	24	F	CG	
43	3	25	31	BCD	EF	57	2	2.5	30	BCN	DEF	95	3	2.5	36	BCD	EF
45	3	2.5	32	BC	D	57A(AS)	3	6.3	34	BCN	DEF	98	3	6.3	26	B	DE
45B5*	3	50	19	(AB)(GH)J	CE	58	3	2.5	35	BCN	DEF	3	6.3	26	C	DE	
45Z3	3	50	24	BF	DG	58AS	3	6.3	35	BCN	DEF	99	2	2.5	65	BC	D
46	3	2.5	35	BCD	E	58HE7	1	50	19	B	DM	(99XX99)					
47	3	2.5	41	BCD	E	3	50	18	EJL	HM		99V	2	2.5	65	AC	D
48	3	32	25	BCD	EF	59	3	2.5	29	BCDE	FG	(V99)					
49	2	2	38	BCD	E	60FX5	2	50	22	BEFG	AD	113HY	1	1.4	45	BC	E
50	3	7.5	42	BC	D	64	1	6.3	22	BCN	DE	(123HY)					
50A5	3	50	20	BCF	GH	65	2	6.3	28	BCN	DE	114HY	3	1.4	55	N	G
50B5	3	50	20	AEFG	BD	67	3	6.3	37	BC	DE	115HY	1	1.4	45	BCD	E
50BK5	2	50	21	ACGH	DF	68	3	6.3	37	BCN	DE	(145HY)					
50BM8	1	50	20	CFG	BE	70A7	3	70	23	CDE	FGH	117L7/	3	110	20	F	AG
1	50	20	AJ	EH		A shows short.						M7	3	110	25	CDE	GH
50C5	3	50	22	BEFG	AC	3	70	20		AFG		117N7	3	110	20	CDE	FGH
50C6	3	50	22	CDE	GH	Allow tube to heat up. Move levers F & G to top position.						3	110	15		GH	
50CA5	3	50	22	BEFG	AC	Good tube will kick to 70.											
50CD4	3	50	23	E	CG	70L7	3	70	18	CDE	FG	Allow tube to heat up. Move lever G to top position. Good tube will kick to 70.					
50EH5	3	50	20	BEFG	AD	3	70	17	H	AG		117P7	3	110	22	CDE	FGH
50FA5	3	50	22	BEFG	AD	71A	3	5	47	BC	D	3	110	15		GH	
A normally shows leakage.						72	4	2.5	35	N	D	Allow tube to heat up. Move lever G to top position. Good tube will kick to 70.					
50FE5	3	50	22	CDE	BH	75	1	6.3	20	BN	EF	117Z3	3	110	24	AE	DF
50FK5	3	50	24	BEG	AC	1	6.3	38	C	EF		117Z4	3	110	19	E	GH
50GY7*	3	25	19	E(JK)L	AHM	1	6.3	38	D	EF		117Z6	3	110	20	C	DG
25	21	B	ADM			76	2	6.3	33	BC	DE	3	110	20	E	GH	
50HC6	3	50	19	BEG	AC	77	3	6.3	30	BCN	DEF	3	110	20			
50HK6	3	50	20	BEG	AC	78	3	6.3	31	BCN	DEF	128A/	4	2.5	20	BC	DE
50JY6*	3	50	19	(AD)CEN	GH	79	3	6.3	30	BC	DF	2523M1					
50L6	3	50	21	CDE	GH	3	6.3	30	EN	DF		163PEN	3	12.6	18	BGJ	CD
50X6	3	50	19	C	BH	80	3	5	55	B	D	182B	3	5	37	BC	D
3	50	19	F	GH		3	5	55	C	D	(482B)						
50Y6	3	50	23	C	DG	81	3	7.5	75	B	D	183	3	5	40	BC	D
3	50	23	E	GH		82(82V)	3	2.5	24	B	D	(483)					
50Y7	3	50	20	C	BD	3	2.5	24	C	D		201B	2	5	45	BC	D
3	50	20	E	BH		83(83V)	3	5	26	B	D	201C	2	5	45	BC	D
50Z6	3	50	21	C	DG	3	5	26	C	D		210T	3	7.5	56	BC	D
3	50	21	E	GH		84	3	6.3	26	B	DE	230S	2	2	35	BC	D
50Z7	3	50	25	C	DFG	3	6.3	26	C	DE		232	2	2	42	BCN	D
3	50	25	E	FGH		85	3	6.3	45	BN	EF	233S	3	2	39	BCD	E
52	3	6.3	30	BCD	E	1	6.3	47	C	EF		234S	2	2	40	BCN	D
53	3	2.5	32	BC	DG	1	6.3	47	D	EF		257A	2	2.5	41	BN	D
3	2.5	32	EF	DG		86M	3	6.3	37	CE	GH	262B	3	7.5	42	BN	CD
						87S	2	6.3	33	BCN	DEF						
						88	3	5	26	B	D						
						3	5	26	C	D							

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
274A	3	5	36	B	D	866(A)	3	2.5	25	N	D	1608	3	2.5	24	BC	D
	3	5	36	C	D	GL874	4	.63	30	C	ABD	1609	2	1.4	32	BCD	E
300B	3	5	21	BC	D	Good tube reads above 10.						1610	3	2.5	28	BCD	E
310B	2	7.5	28	BCD	AE	TJ880*	2	6.3	21	B(CJ)GH	AE	1612	3	6.3	25	DN	GH
313C	4	Off	45	B	A	884	4	6.3	20	CE	GH	1614	3	6.3	24	CDE	GH
313CB	4	Off	53	B	AD	885	4	2.5	20	BC	DE	1616	3	2.5	57	N	D
313CD	4	Off	44	B	AD	950	3	2	46	BCD	E	1619	3	2.5	29	CDE	GH
348A	1	6.3	24	CDEN	BH	951	2	2	35	BCN	D	1620	1	6.3	22	CDN	GH
376B	4	Off	37	E	BG	986	3	5	26	B	D	1621	3	6.3	40	CDE	GH
393A	4	2.5	20	DN	AB		3	5	26	C	D	1622	3	6.3	27	CDE	GH
396A	2	6.3	23	CD	BFGHJ	1003	4	Off	22	E	CH	1624	3	2.5	26	BCN	E
	2	6.3	23	FG	BCDHJ		4	Off	32	C	EH	1625	3	12.6	25	CDN	FG
403B	2	6.3	22	AEF	BCG	1005/ CK1005	4	6.3	26	E	F	1626	3	12.6	32	CE	GH
Tube damaged if B or G is moved.							4	6.3	26	C	F	1629	2	12.6	36	CE	GH
407A	1	19.6	20	CD	ABJ	1006/ CK1006	4	1.4	22	C	A	Eye OP	4	12.6	0	D	CEGH
	1	19.6	20	FG	AHJ		4	1.4	22	C	A	Eye CL	4	12.6	0	CD	EGH
408A*	1	19.6	20	AEF	(BG)D	CK1007	4	1.4	25	B	A	1631	3	12.6	27	CDE	GH
417A	2	6.3	20	ADEGH	FJ		4	.63	21	C	G	1632	3	12.6	22	CDE	GH
427	3	2.5	44	BC	DE	CK1027	4	.63	21	E	G	1633	2	25	28	AB	CG
428A	3	5	47	BC	D		4	.63	21	E	G	1634	1	12.6	20	BC	FG
484(485)	3	2.5	32	BC	DE	1201*	2	6.3	34	DN	ABFG	1635	2	6.3	26	CD	EFGH
486	2	2.5	48	BC	DE		2	6.3	34	(AE)(CG)	(DF)H		2	6.3	26	EF	CDGH
502A	3	6.3	19	CEF	GH	1203	1	6.3	33	D	GH	1642	2	6.3	29	CN	BG
(GL502A)						1204	2	6.3	26	ACE	DFGH		2	6.3	29	DE	FG
567	3	5	24	D	H	1221	1	6.3	22	BCN	DEF	1654	1	1.4	41	N	A
	3	5	24	F	H	1222	3	6.3	20	BCD	FG	1680	1	6.3	24	AF	BDEG
585	3	7.5	42	BC	D	1223	1	6.3	22	CDN	EGH		1	6.3	56	EFG	ABD
586	3	7.5	42	BC	D	1229	1	2	25	BCN	D	1851	3	6.3	20	CDN	EGH
615HY	3	6.3	33	N	G	1231	2	6.3	23	BCF	DGH	1852	3	6.3	21	DFH	CEG
Short top caps together.						1232	2	6.3	22	BCDF	GH	No open element test on C & H.					
713A	2	6.3	25	DFH	CEG	1237	2	2.5	26	C	G	1853	3	6.3	23	DFH	CEG
717A	1	6.3	23	DFH	CEG		2	2.5	26	F	G	2050/ 2051	3	6.3	17	CEF	GH
Z729	1	6.3	20	AFHJ	BCEG	1266	4	Off	95	E	BCG	5516	3	2.5	25	CEN	BG
800	3	7.5	54	N	D	Good tube reads above 10. No open element test on levers C & G. Tube normally shows short in short position.						5591	2	6.3	22	AEF	BCG
Short top caps together.						1267	4	Off	31	E	BG	Tube damaged if B or G is moved.					
801	3	7.5	42	BD	D	1273	3	6.3	26	BCF	DGH	CK5608A2	2.5	26	BC	DG	
802	3	6.3	29	CDN	EFG	1274	4	6.3	19	C	GH		2	2.5	26	EF	DG
807	3	6.3	25	BCN	DE		4	6.3	19	E	GH	GL5610	2	6.3	22	AEF	BD
809	3	6.3	27	CN	D	1275	3	5	30	B	CD	5618	3	2.5	21	BCDF	AG
811A	3	6.3	34	CE	D		3	5	30	C	BD	5642	1	1.4	100	N	E
Requires jumper from plate cap to pin 5 of any other tube socket.						1280	3	12.6	26	BCF	DGH	Insert bottom leads into pins 4 & 5 respectively. Use plate cap top lead.					
812	3	6.3	29	CN	D	1284	3	12.6	25	BCF	DGH	5651	4	Off	95	AE	BDG
816	4	2.5	19	N	A	1291	1	1.4	33	BC	AH	Good tube reads above 30.					
837	3	12.6	25	CDN	EFG		1	1.4	33	FG	AH	5654*	2	6.3	22	AEF	(BG)C
840	2	2	33	BCN	DE	1293	2	1.4	32	BF	H	5659	3	12.6	32	CDE	GH
841	3	7.5	45	BC	D	1294	1	1.4	57	D	GH	5660	3	12.6	41	CFN	GH
842	3	7.5	54	BC	D	Good tube reads above 10.							1	12.6	38	D	GH
864	1	1.4	55	BC	DE	1299	2	1.4	30	BCF	AH		1	12.6	38	E	GH
865	3	7.5	80	BCN	D	1603	1	6.3	23	BCN	DEF						

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	
5662	3	6.3	23	AG	BDE	5910	1	1.4	26	BCF	AE	6146*	3	6.3	23	CEN	(ADF)G	
Filament switch must be in .63 position for short check.						5915	1	6.3	24	AF	BDEG	R6158A	1	1.4	98	N	ACDEFGH	
GL5663	2	6.3	32	AEG	BC		1	6.3	56	EFG	ABD	Good = 26. For element test use levers G & N only.						
GL5670	2	6.3	23	CD	BFGHJ	5920	2	6.3	21	BE	DG	6159*	3	6.3	23	CEN	(ADF)G	
	2	6.3	23	FG	BCDHIJ		2	6.3	21	AF	DG	6197	2	6.3	20	(BJ)(CH)FG	AE	
5679	3	6.3	31	C	ABH	5930	3	2.5	24	BC	A	6201	2	6.3	24	FG	HJ	
	3	6.3	31	F	AGH	5963	2	6.8	25	AB	CDE		2	6.3	24	AB	CJ	
5686*	3	6.3	30	B(FJ)G	(ACH)D		2	6.3	25	FG	DEH	6202	3	6.3	25	F	DG	
5687	2	6.3	24	AB	CDEF	5964	3	6.3	18	AF	CG		3	6.3	25	A	DG	
	2	6.3	24	GJ	BDEF		3	6.3	18	BE	CG	6203	1	6.3	21	A	EGJ	
5690	3	6.3	17	C	BD	5965	1	6.3	18	FG	HJ		1	6.3	21	J	AEG	
	3	6.3	17	E	GH		1	6.3	18	AB	CJ	6211	1	6.3	18	AB	CDE	
5691	3	6.3	28	AB	CG	GL6005	3	6.3	24	AEFG	BD		1	6.3	18	FG	DEH	
	3	6.3	28	DE	FG	6012	4	6.3	18	CEH	AG	6216*	3	6.3	19	(AF)BG	(CH)E	
5692	2	6.3	26	AB	CG	No open element test on C & E.						6227	3	6.3	18	BGHJ	CD	
	2	6.3	26	DE	FG	6028*	2	19.6	22	AEF	(BG)D	6265	2	6.3	22	AEFG	BC	
5693	2	6.3	27	CDFH	EG	6072	1	6.3	22	FG	CDEH	No open element test on E & G.						
CK5694	1	6.3	20	CD	AG		1	6.3	22	AB	CDEH	6267	1	6.3	20	AFHJ	CE	
	1	6.3	20	EF	GH	6073	4	Off	40	AE	BDG	No open element test on F.						
5696	2	6.3	31	AF	BDEG	Good tube reads above 10.						6293*	3	6.3	18	CEN	(ADF)G	
5722	2	5	47	AF	CD	6074	4	Off	95	AE	BDG	6350	1	6.3	22	FH	DEG	
5725	3	6.3	20	AEFG	BD	Good tube reads above 10.							1	6.3	22	AC	BDE	
5726	1	6.3	23	G	AD	6080	3	6.3	20	AB	CH	6360	3	6.3	22	AFG	BCDEH	
	1	6.3	23	B	DE		3	6.3	20	DE	FH		3	6.3	22	CGH	ABDEF	
GL5727	3	6.3	18	AEFG	BD	6082	3	25	15	DE	ABCFH	6386	2	6.3	26	CD	BJ	
5731	2	6.3	27	D	GH		3	25	15	AB	CDEFH		2	6.3	26	FG	HJ	
5749	2	6.3	23	ABEF	DG	6084	1	6.3	21	AFHJ	CE	6417	3	12.6	22	ACFHJ	EG	
GL5750	2	6.3	22	A	BD	6085	1	6.3	20	FG	DEH	6463	2	6.3	21	FH	DEG	
	2	6.3	22	EFG	BD		1	6.3	20	AB	CDE		2	6.3	21	AC	BDE	
5751	1	6.3	22	AB	CDE	6086	1	12.6	18	ABFJ	CE	6485	2	6.3	22	ABEF	DG	
	1	6.3	28	FG	DEH	(18042)	No open element test on J.						6516	1	6.3	19	AEG	BC
CK5755	1	6.3	65	AC	BDE	GL6087	3	5	39	F	H	6520	3	6.3	16	AB	CH	
	1	6.3	65	FH	DEG		3	5	39	D	H		3	6.3	16	DE	FH	
5763	3	6.3	19	ACFHJ	EG	6095	3	6.3	22	AEFG	BD	6525	3	6.3	19	AEFG	BC	
5814	2	6.3	24	AB	CDE	6096	2	6.3	22	AEF	BCG	6550	3	6.3	21	CDE	GH	
	2	6.3	24	FG	DEH	6097	1	6.3	23	G	AD	6659	4	Off	38	A	E	
GL5814	2	6.3	25	AB	CDE		1	6.3	23	B	DE	6660	2	6.3	23	ABEF	DG	
	2	6.3	25	FG	DEH	6098	3	6.3	20	CEG	AH	6661	2	6.3	22	AEFG	BC	
5823	4	Off	30	A	CG	6099/CT	1	6.3	23	BE	DG	6662	2	6.3	22	AEFG	BD	
5824	3	25	18	CDE	AGH		1	6.3	23	AF	DG	6663	1	6.3	23	G	AD	
5842	2	6.3	20	ADEGH	FJ	6100	2	6.3	25	AEF	DG		1	6.3	23	B	DE	
GL5844	1	6.3	18	AF	DG		2	6.3	25	AEF	DG	6669	3	6.3	32	AEFG	BD	
	1	6.3	18	BE	DG	6101	1	6.3	18	BE	DG	6677*	3	6.3	22	(BJ)(CH)FG	AD	
5845	1	2.5	85	E	ACD		1	6.3	18	AF	DG	6678	2	6.3	22	BCF	EG	
	1	2.5	85	A	CDE	GL6134	3	6.3	21	DFH	CEG		2	6.3	22	AJ	EH	
5847	1	6.3	21	AFH	DJ	6135	2	6.3	25	AEF	DG	No open element test on F.						
5852	4	6.3	19	C	GH	6136	2	6.3	22	ABEF	DG	6679	2	6.3	24	AB	CJ	
	4	6.3	19	E	GH	GL6137	3	6.3	24	DFH	CEG		2	6.3	24	FG	HJ	
5879	1	6.3	26	AGHJ	CD	6145	3	6.3	18	BCDF	GH							
5881	3	6.3	20	CDE	BH													

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
6680	2	6.3	25	AB	CDE	7199	1	6.3	19	BCG	EF	Good tube reads above 26.					
	2	6.3	25	FG	DEH		2	6.3	21	AJ	EH	8032	3	12.6	23	CEN	ADFG
6681	1	6.3	20	AB	CDE	7233	3	6.3	19	(ACFJ)(BG)	DH	Tube damaged if AD or F is moved.					
	1	6.3	20	FG	DEH	7247	1	6.3	22	FG	DEH	8068	3	6.3	22	EHN	CG
6686	3	6.3	19	BGHJ	CE		2	6.3	24	AB	CDE	8077*	2	12.6	21	B(CJ)GH	AE
6688*	2	6.3	21	BGHJ	(AC)E	7258	2	12.6	22	AB	CE	8102	3	12.6	19	FGJ	EH
6689	2	6.3	20	ABFJ	CE		2	12.6	21	FGH	EJ		3	12.6	19	AC	BE
6829	3	6.3	20	AB	CDE	No open element test on F.						8106	3	12.6	19	A(CH)G	(BF)JE
	3	6.3	20	FG	DEH	7308	1	6.3	20	AB	CE	8113	3	6.3	20	AEF	BDG
6883*	3	12.6	19	CEN	(ADF)G		1	6.3	20	FG	EH	Tube damaged if B or G is moved.					
6887	1	6.3	20	B	DE	7316	2	6.3	24	AB	CJ	8136	3	6.3	19	AEF	BCG
	1	6.3	21	G	AD		2	6.3	24	FG	HJ	8156	3	12.6	22	•	BFHJM
6888	1	6.3	20	CDFH	EG	7355	3	6.3	19	CFH	EG	•(CDE)(GL)K					
6893*	3	12.6	21	CEN	(ADF)B	7360	2	6.3	20	BCFG	AEHJ	Tube damaged if BFH or J is moved.					
6919	1	6.3	23	B	DE	7408	3	6.3	24	CDE	AGH	8233*	3	6.3	19	A(BF)CH	DGJ
	1	6.3	23	G	AD	7543	1	6.3	20	ABEF	CG	Tube damaged if G or J is moved.					
6922	3	6.3	20	AB	CEJ	7551*	3	12.6	19	B(CH)FG	(AJ)E	8278*	3	6.3	19	(AH)(CG)J	BEF
	3	6.3	20	FG	EHJ	7558*	3	6.3	19	B(CH)FG	(AJ)E	Tube damaged if B or F is moved.					
6939	3	6.3	22	AFG	BDE	7581	3	6.3	20	CDE	BH	8417	3	6.3	19	CDE	GH
	3	6.3	22	CGH	BDE	7586	2	6.3	19	BD	HM	8425	2	6.3	22	ABEF	DG
6954	1	6.3	20	AEFG	BD	7587	2	6.3	19	BDN	HM	8552	3	12.6	23	CEN	ADFG
6973*	4	6.3	19	(AH)(CF)J	EG	No open element test on N.						Tube damaged if A, D or F is moved.					
7000	2	6.3	29	CDN	AEFH	7591	3	6.3	20	CDFH	EG	8908*	3	6.3	18	(AE)(BF)C	DH
7025	1	6.3	20	AB	CDE	7643	2	6.3	21	AJ	EH	8950	3	12.6	18	•	BFM
	1	6.3	20	FG	DEH		2	6.3	20	BCF	EG	•(CL)(DK)(EJ)N					
7027*	4	6.3	18	(AD)C(EF)	GH	7687	1	6.3	19	BCF	EG	Tube damaged if B or F is moved.					
7036	1	6.3	20	AF	BD	No open element test on F.						9001*	1	6.3	20	AEF	(BG)D
	1	6.3	28	EG	BD		2	6.3	23	AJ	EH	9002*	2	6.3	27	(AE)F	(BG)D
7044	2	6.3	19	AB	CDE	7695	3	50	21	AFJ	EG	9003*	2	6.3	27	AEF	(BG)D
	2	6.3	19	GJ	FDE	7700	1	6.3	20	BCN	DEF	9004	1	6.3	20	D	EG
7054	2	12.6	21	BCGHJ	AE	7701*	3	12.6	30	BF(GJ)	(ACH)E	9005	1	2.5	34	E	DGH
7055	2	12.6	23	G	AD	7716	1	12.6	19	BC	AE	9006*	1	6.3	25	AE	(BG)D
	2	12.6	23	B	DE		3	12.6	19	GHJ	EF	FOREIGN					
7056	2	12.6	21	AEFG	BD	7719	1	6.3	21	(AF)(BG)	(CH)DE	A1834	3	6.3	16	AB	CH
7057	2	12.6	22	FG	EH	7751*	3	6.3	20	(AD)CE	BH		3	6.3	16	DE	FH
	2	12.6	22	AB	CE	7754	3	6.3	20	AFJ	EG	AA91E	1	6.3	22	B	DE
7059	2	12.6	23	BCF	EG	7788*	3	6.3	17	B(FJ)GH	ACE		1	6.3	22	G	AD
	2	12.6	21	AJ	EH	Tube damaged if A or C is moved.						ABC91	3	12.6	32	CDE	GH
7060	2	12.6	28	FGH	EJ	7798	2	6.3	20	AB	CJ	AF	3	2.5	24	B	D
	2	12.6	23	AB	CE		2	6.3	20	FG	HJ		3	2.5	24	C	D
7061*	3	12.6	22	(AH)(CF)J	EG	7868*	3	6.3	20	(AG)(BF)J	CE	AG	3	5	26	B	D
7062	2	16.3	21	AB	CJ	7895	2	6.3	19	BD	HM		3	5	26	C	D
	2	6.3	21	FG	HJ	7898	3	6.3	20	FG	HJ	B36	2	12.6	29	AB	CG
7105	3	12.6	15	AB	CH		3	6.3	20	AB	CJ		2	12.6	29	DE	FG
	3	12.6	15	DE	FH	7905*	2	3.15	24	B(CH)	AGJ	B309	2	6.3	24	AB	CJ
7119	4	6.3	19	GJ	DEF	Tube damaged if A or J is moved.							2	6.3	24	FG	HJ
	4	6.3	19	AB	CDE	7984*	3	12.6	19	•	BFHJM	B339	1	6.3	20	AB	CDE
7137	2	6.3	22	AEFG	BD	•(CDE)(GL)K							1	6.3	20	FG	CDE
7167*	3	12.6	22	AEF	(BG)C	8016	1	1.4	98	N	ACDEFGH	Tube damaged if D or E is moved.					
7189*	4	6.3	17	(AB)(FJ)G	CE	Use G & N only for element test.											
7193	2	6.3	24	N	GH												

Short top caps together.

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
D2M9	1	6.3	22	B	DE	RK33	3	6.3	27	DE	FG
	1	6.3	22	G	AD		3	6.3	27	CN	BG
E82CC	2	6.3	25	FG	DEH	RK34	3	6.3	27	EN	DG
	2	6.3	25	AB	CDE	Top cap lead on left top cap.					
E83CC	1	6.3	20	FG	DEH		3	6.3	27	CN	DG
	1	6.3	20	AB	CDE	Top cap lead on right top cap.					
E-90Z	3	6.3	30	F	DG	UF89	2	12.6	23	BGH	CEJ
	3	6.3	30	A	DG	VR75	4	Off	30	E	BCG
E92CC	1	6.3	20	BE	ADFG	Good tube reads above 10.					
	1	6.3	20	AF	BDEG	VR90	4	Off	30	E	BCG
E188CC	1	6.3	20	AB	CE	Good tube reads above 10.					
	1	6.3	20	FG	EH	VR105	4	Off	30	E	BCG
E810F*	3	6.3	17	B(FJ)GH	ACE	Good tube reads above 10.					
Tube damaged if A or C is moved.						VR150	4	Off	30	E	BCG
E-902	3	6.3	30	F	DG	Good tube reads above 10.					
	3	6.3	30	A	DG	WL401	4	2.5	59	N	D
EAF801	3	6.3	23	ABF	CDJ	WNOA	3	6.3	35	BC	DEF
	1	6.3	34	H	CD	WNDC	3	2.5	35	BC	DEF
ECC808	2	6.3	23	AC	BD	WX12	1	1.4	55	BC	D
	2	6.3	23	GJ	DH	XXB	2	1.4	40	CD	AH
ECLL800	3	6.3	24	AB	DG		2	1.4	40	EF	AH
	3	6.3	20	BCJ	DG	XXD	3	12.6	25	EF	BCDGH
	3	6.3	20	FHJ	DG		3	12.6	25	CD	BEFGH
ED500	1	6.3	26	HK	ABCEFGJ	XXFM	1	6.3	27	BC	DGH
Tube damaged if ABCFG or J is moved.							1	6.3	27	E	DH
EF37A	3	6.3	28	CDEN	GH		1	6.3	27	F	GH
EF804S	3	6.3	25	AGHJ	CD	XXL	2	6.3	24	BF	GH
EL32	3	6.3	29	CDE	AGH	Z2000	1	6.3	22	BE	CG
EL-504*	3	6.3	19	(AB)(FG)N	CEH		1	6.3	22	AF	CG
Tube damaged if C or H is moved.											
EL-505*	4	6.3	21	•	EJ						
•(AH)(BG)(CF)N											
EL-508	3	6.3	20	DEN	GH						
FM1000	1	6.3	20	BE	ACG						
	1	6.3	35	DF	ACG						
G4	1	2.5	45	B	DE						
	1	2.5	45	C	DE						
GA	3	5	32	BCD	E						
HY69	4	6.3	20	BCD	E						
HY1269	4	6.3	19	BCN	AE						
KR1	3	6.3	24	B	CD						
KR5	3	6.3	36	BCD	E						
KR25	3	2.5	36	BCD	EF						
KR98	3	6.3	26	B	DE						
	3	6.3	26	C	DE						
PZ	3	2.5	41	BCD	E						
PZH	3	2.5	36	BCD	EF						
R30	2	2	35	BC	D						
R100	3	7.5	43	N	D						
Short top caps together.											