

Heath #597-1442-01

TUBE DATA FOR HEATH

IT-17 IT-21 IT-3117 TUBE TESTERS

Copyright © 1979
Heath Company
All Rights Reserved
Printed in the United States of America

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	Use plate cap on single lead.						Good tube reads above 20.					
1AB6	1	1.4	25	BCDEF	G	Good tube reads above 20.						1DN5	1	1.4	52	D	G
No open element test on B, E & F.						1BK2	4	1.4	52	N	BEH		1	1.4	27	BCF	G
						No short test. Good tube reads above 30.											

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.						1U6	1	1.4	66	D	A
	2	2	30	EFH	G	1LB4	2	1.4	40	BCF	H		1	1.4	40	BEF	BEFG
1F1	1	1.4	24	BCF	G	1LB6	1	1.4	32	BCDEFG	H	Good tube reads above 30 on test 2.					
No open element test on B.						1LC5	1	1.4	32	BCDF	EH	1V	3	6.3	24	B	CD
1F2	2	1.4	37	BCF	AE	1LC6	1	1.4	32	CD	H	1V2*	1	.63	76	(AHJ)	E
1F3	2	1.4	35	BCF	G		1	1.4	80	BEF	H	Good tube reads above 20. H may not show short.					
1F4	3	2	47	BCD	E	1LD5	1	1.4	32	BCF	H	1X2	4	1.4	67	N	ADFJ
1F5	2	2	36	CDE	G		1	1.4	95	D	H		4	1.4	67	N	BEH
1F6	1	2	37	BCN	F	Good tube reads above 20 on test 2.						1Z2	4	1.4	85	N	BEG
	1	2	95	D	F	1LE3	2	1.4	37	BF	H	2A3	3	2.5	28	BC	D
	1	2	95	E	F							2A4	3	2.5	25	E	G
1F7 (GV)	1	2	35	CFN	G	1LG5	2	1.4	35	BCF	DEH		3	2.5	25	C	EG
	1	2	95	E	G	1LH4	1	1.4	26	BF	H	No short test.					
	1	2	95	D	G		1	1.4	44	D	H	2A5	3	2.5	36	BCD	EF
1FD1	1	1.4	32	DEF	CG	1LN5	2	1.4	40	BCDF	EH	2A6	3	2.5	26	BN	EF
	1	1.4	53	C	G	1N2	4	1.4	75	N	GH		1	2.5	40	C	EF
1FD9	1	1.4	25	DEF	G	1N5	1	1.4	27	CDN	G		1	2.5	40	D	EF
	1	1.4	55	C	G	1N6	2	1.4	38	CDE	G	2A7	2	2.5	32	E	FG
1G3	1	1.4	100	N	ACDEFGH		1	1.4	95	F	G		2	2.5	64	BCDN	FG
Use G & N only for element test.						Good tube reads above 20 on test 2.						2AF4*	2	2.35	21	(AG) (BF)	DE
Good tube reads above 10.						1P1	1	1.4	23	BCF	E	2AH2	4	2.5	76	N	ABEFGHL
1G4	1	1.4	30	CE	G	1P5	1	1.4	31	CDN	G	Due to varying arrangements of internal connections, this tube cannot be tested.					
1G5	2	2	39	CDE	G	1P10	2	1.4	35	BCDF	AG	2AS2					
1G6	1	1.4	35	CD	G	1P11	1	1.4	23	BCF	E	2AV2*	1	1.4	100	(AJ)	E
	1	1.4	35	EF	G	1Q5	2	1.4	33	CDE	G	Good tube reads above 35.					
1H2	4	1.4	84	N	ADFJ	1R4	1	1.4	57	D	GH	2AZ2	4	2	63	N	ADFJ
1H4	2	2	41	CE	G	Good tube reads above 10.						2B3	2	2	40	N	B
1H5	1	1.4	93	CN	G	1R5	1	1.4	21	D	AE	Good tube reads above 10.					
	1	1.4	40	E	G		1	1.4	95	BCF	AE	2B4	3	2.5	24	BC	DE
1H6	1	2	30	CF	G	1RK23	1	1.4	90	N	ADFJ	2B6	2	2.5	95	B	FG
	1	2	40	E	G	Tube damaged if ADF or J is moved.							3	2.5	50	CD	EG
	1	2	40	D	G	Good tube reads above 35.						2B7	3	2.5	47	BCN	FG
1H35	1	1.4	25	BCDEF	G	1RK41	4	1.4	52	N	BEH		1	2.5	40	E	FG
No open element test on BE & F.						No short test. Good tube reads above 30.							1	2.5	40	D	FG
1J3/1K3	1	1.4	100	N	ACDEFGH	1S2A	1	1.4	90	N	ADFJ	2BA2*	4	2	53	(AJ)	E
Good tube reads above 10.						1S4	2	1.4	30	BCDF	AE	2BJ2	4	2.35	65	N	ADFJ
Tube damaged if ACDEFGH is moved.						1S5	1	1.4	25	DEF	G	Tube damaged if ADFJ or BEH is moved.					
1J5	2	2	38	CDE	G		1	1.4	55	C	G	2BN4*	1	2	19	(BG)E	(AF)D
1J6	2	2	39	CD	G	1SA6	2	1.4	30	CDFH	G	2BU2	1	2.5	38	N	HM
	2	2	39	EF	G	1SB6	1	1.4	36	GDH	G	Good tube reads above 10.					
1L4	2	1.4	37	BCF	AE		1	1.4	90	E	G	Tube damaged if H or M is moved.					
1L6	1	1.4	34	CD	G	1T4	2	1.4	35	BCF	G	2C21	2	6.3	29	CN	BG
	1	1.4	37	BEF	G	Good tube reads above 40 on test 2.							2	6.3	29	DE	FG

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						3.15	33	EFG	BD
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)	1	2.5	45	B	DE	3BL2	1	3.15	38	N	HM				
2C52	2	12.6	26	DE	FG		2	2.35	22	(AG) (BF)	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	3BN4*	1	3.15	19	(BG)E	(AF)D					
2DL4*	3	2.5	18	(ACFGJ)H	BE	2X2A	4	2.5	44	N	D	3BN6	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		1	3.15	43	F	BD	3CA3	4	3.15	75	N	G				
No open element test on E.						3AW2	4	2.5	52	N	ABEFJ	3CB6	2	3.15	21	AEFG	BC				
2G5	2	2.5	44	BC	EF	Tube damaged if ABEF or J is moved.						3CE5*	2	3.15	21	AEF	(BG)D				
Eye CL	4	2.5	0	BD	CEF	3AW3	2	3.15	68	N	CGH	No open element test on E.									
Eye OP	4	2.5	0	D	BCEF	Good tube reads above 10.						3CF6	1	3.15	19	AEFG	BD				
2GK5	3	2.35	20	BE	ADG	3B2	1	3.15	50	N	ACDEG	No open element test on E & G.									
Tube damaged if A or G is moved.						Good tube reads above 10.						3CN3	4	3.15	50	N	ACEG				
2GU5*	1	2.5	19	A	(BG)D	3B4	3	1.4	47	ACG	E	Tube damaged if ACE or G is moved.									
	1	2.5	29	EF	(BG)D	3B5	2	1.4	35	CDE	BG	3CS6	1	3.15	21	AF	BC				
2GW5*	2	2.5	20	A(BF)	DE	3B7	1	1.4	33	BC	AH		1	3.15	40	EG	BC				
2HA5	3	2	18	AE	BDG		1	1.4	33	FG	AH	3CU3	1	3.15	20	N	B				
Tube damaged if B or G is moved.						3BA6	2	3.15	23	ABEF	DG	Good tube reads above 20.									
2HK5	3	2	18	AE	BDG	3BC5*	2	3.15	20	AEF	(BG)C										
Tube damaged if B or G is moved.						No open element test on E.															

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						4BF5*						3 4.2 18 (AG)EF BC						
3CY3	4	3.15	54	N	B	1 3.15 19 A BDG	4BL8						2 4.7 22 AJ EH											
Good tube reads above 35.						1 3.15 29 EF BDG						2 4.7 20 BC EFG												
3CY5*	3	3.15	22	AEF	(BG)C	Tube damaged if B or G is moved.						4BN6						1 4.2 36 BEFG AC						
3CZ3	4	3.15	44	N	B	3GW5*	2	3.15	20	A(BF)	DE	Good tube reads above 23.												
Good tube reads above 35.						3HA5						4BQ7						2 4.2 21 AB CD						
3D6	2	1.4	30	BCF	AH	3 2.5 18 AE BDG	4BS8						2 4.2 22 AB CD											
3DA3	4	3.15	40	N	CE	3HK5						2 4.2 22 FG DH												
Good tube reads above 35.						3HM5						4BU8						1 4.2 22 BCFG AE						
Tube damaged if C or E is moved.						3HM6						4BX8						1 5 19 AB CE						
3DB3	4	3.15	54	N	B	1 3.15 34 GJ ACE	4BZ6						1 4.2 18 AEFG BC											
Good tube reads above 35.						3 3.15 19 BH ACE						No open element test of E & G.												
3DC3	1	3.15	44	N	B	3HQ5						4BZ7						2 4.2 21 FG DH						
Good tube reads above 25.						3 2.5 18 AE BDG						2 4.2 20 AB CD												
3DF3	4	3.15	40	N	C	3HS8						4BZ8						3 4.2 16 FG EH						
Good tube reads above 30. No short test.						2 3.15 24 BHJ AE						3 4.2 16 AB CE												
3DG4	4	3.15	18	E	C	2 3.15 21 CFG AE	3HT6						4CB6						2 4.2 22 AEFG BC					
4 3.15 18 G C	3 3.15 19 BH ACE						No open element test on E.																	
3DH3	4	3.15	40	N	CE	3JC6						4CE5*						2 4.2 20 AEF (BG)D						
Good tube reads above 35.						2 3.15 19 BGHJ ACE						No open element test on E.												
Tube damaged if C or E is moved.						3KF8						4CM4*						3 4.2 19 (AJ)(BFH) CEG						
3DJ3	4	3.15	42	N	B	2 3.15 20 BGHJ AE	3KT6						Tube damaged if C or G is moved.											
Good tube reads above 20.						2 3.15 20 BCFG AE						4CS6						1 4.2 20 AF BC						
3DK6	3	3.15	22	AEF	BCG	3LE4						1 4.2 28 EG BC												
3DR3	4	3.15	40	N	CE	2 1.4 34 BCF AH	3MP26						3 4.2 24 AEF (BG)C											
Good tube reads above 35. No short test.						2 3.15 21 AEF BC						4CY5*						3 4.2 24 AEF (BG)C						
3DS3	4	3.15	40	N	CE	3MR24						4DE6						2 4.2 21 AEFG BC						
Good tube reads above 35. No short test.						2 3.15 19 BGHJ ACE						No open element test on E & G.												
3DT6	1	3.15	20	AEFG	BD	3MV7						4DK6						3 4.2 22 AEF BCG						
3DZ4*	3	3.15	21	(AG) (BF)	DE	3Q4						4DL4*						3 4.2 18 (ACFG)H BE						
3E5	2	1.4	31	BCF	AG	2 1.4 33 BCDF AG						4DT6						1 4.2 20 AEFG BD						
3E6	2	1.4	30	BCDF	AH	3Q5						4EH7*						2 4.2 21 BGHJ (AC)E						
3EA5*	2	3.15	22	AEF	(BG)C	2 1.4 35 CDE BG						4EJ7*						2 4.2 21 BGHJ (AC)E						
3EH7*	2	3.15	21	BGHJ	(AC)E	3S4						4ES8						2 4.2 20 AB CE						
3EJ7*	2	3.15	21	BGHJ	(AC)E	2 1.4 28 BCF AG						2 4.2 20 FG EH												
3ER5*	2	2.5	20	BEF	(AG)D	3V4						4EW6						2 4.2 20 AEF BCG						
3EV5*	2	2.5	23	AEF	(BG)D	4A6						No open element test on E & G.												
3FH5	2	3.15	21	BE	ADG	3 2 46 EF H						4GJ7						2 4.2 19 HJ ACE						
Tube damaged if A or G is moved.						4AU6						2 4.2 22 ABEF DG						2 4.2 18 BFG ACE						
3FQ5	3	3.15	20	BE	AGD	4AV6						1 4.2 21 AG BD						Tube damaged if A or C is moved.						
Tube damaged if A or G is moved.						1 4.2 43 E BD						4BA6						2 4.2 23 ABEF DG						
3FS5*	3	3.15	19	AF	(BG)DE	1 4.2 43 F BD						4BC5*						1 4.2 18 AEF (BG)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)
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	SE
	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	AFEG	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		3	4.7	36	HJ	CEG	6AC9	1	6.3	19	B	CM
	3	5	20	BFG	ACE	5U4	3	5	35	F	H		1	6.3	19	BC	DM
Tube damaged if A or C is moved.							3	5	35	D	H		3	6.3	19	GJK	HLM
5HC7*	1	5	20	BL	CM	5U8	2	4.7	22	AJ	EH	6AC10	3	6.3	20	JK	DM
	2	5	23	(GK)J	DM		2	4.7	22	BCF	EG		3	6.3	20	EG	FM
5HG8*	3	5	19	BJ	(AC)EH	No open element test on F.							3	6.3	20	BL	CM
	3	5	23	FG	(AC)E	5V3	3	5	30	D	B	6AD6	4	6.3	95	CDE	GH
5HZ6	2	5	20	AIEFG	BD		3	5	30	F	B	Good tube reads above 26.					
5J6	1	4.7	20	AF	DG	5V4	3	5	25	F	H	Eye CL	4	6.3	0	CDE	GH
	1	4.7	20	BE	DG		3	5	25	D	H	Eye OP	4	6.3	0	E	CDGH
5JK6	3	5	18	AF	BD	5V6	3	4.7	29	CDE	AGH	6AD7	3	6.3	33	CDE	GH
	1	5	33	EG	BD		3	5	48	F	H		2	6.3	51	AF	GH
5JL6	3	5	18	AF	BD	5W4	3	5	48	D	H	6AD10	3	6.3	22	HKL	JM
	1	5	32	EG	BD		3	5	43	B	D		2	6.3	18	CFG	BEM
5JW8	2	5	20	BCF	EG	5X3	3	5	43	C	D	6AE5	3	6.3	29	CE	GH
	2	5	21	AJ	EH		3	5	33	E	H	6AE6	2	6.3	33	CE	GH
5KD8	2	5	20	AJ	EH	5X4	3	5	33	C	H		2	6.3	33	DE	GH
	2	5	20	BC	EFG		2	4.7	22	BC	EF	6AE7	2	6.3	26	CD	EG
5KE8	2	5	18	BCF	EG	5X8	2	4.7	21	GHJ	AEF		2	6.3	27	CF	GH
	2	5	18	AJ	EH		3	5	50	D	H	6AF3*	4	6.3	18	(BJ)	EN
5KZ8	3	5	19	AJ	EH	5Y3	3	5	50	F	H	6AF4*	2	6.3	21	(AG)(BF)	DE
	3	5	20	BG	CEF		3	5	57	E	G	6AF5	2	6.3	24	CE	GH
5LJ8*	3	5	22	AB	(CH)E	5Y4	3	5	57	C	G	6AF6	4	6.3	95	CDE	GH
	3	5	19	GJ	(CH)EF	5Z3	3	5	35	C	D	Good tube reads above 26.					
5MB8	3	5	21	AB	CE		3	5	35	B	D	Eye CL	4	6.3	0	CDE	GH
	3	5	19	GJ	EFH	5Z4	3	5	27	F	B	Eye OP	4	6.3	0	E	CDGH
5MF8*	3	5.0	19	D(FG)H	JM		3	5	27	D	B						
	1	5.0	19	BK	LM	6A3	3	6.3	28	BC	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)
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	No open element test on J.					
No open element test on E.						6AN5*	3	6.3	17	AEF	(BG)D	6AV5	2	6.3	25	AEH	BC
6AG7	3	6.3	17	DFH	EG	6AN6	1	6.3	23	B	FG	6AV6	1	6.3	21	AG	BD
6AG9	2	6.3	19	BDKL	JM		1	6.3	23	C	FG		1	6.3	43	E	BD
	2	6.3	20	EG	FM		1	6.3	23	D	FG		1	6.3	43	F	BD
6AG11	1	6.3	20	C	BM	6AN8	2	6.3	22	FGH	EJ	6AV11	2	6.3	23	BL	CM
	1	6.3	20	K	LM	No open element test on F.							2	6.3	23	EG	FM
	2	6.3	20	EF	DM		2	6.3	23	AB	CE		2	6.3	23	JK	DM
	2	6.3	20	GH	JM	6AQ5*	3	6.3	27	(AG) EF	BD	6AW8	3	6.3	20	GHJ	DF
6AH4	2	6.3	20	AE	GH	6AQ6	1	6.3	20	AG	BC		3	6.3	23	BC	AD
6AH6	2	6.3	22	AEF	BCG		1	6.3	40	E	BC	6AX3	3	6.3	23	DK	GM
6AH7	3	6.3	30	AC	BG		1	6.3	40	F	BC	6AX4	3	6.3	22	E	CH
	3	6.3	30	EF	DG	6AQ7	1	6.3	22	DE	FH	6AX5	3	6.3	32	C	BH
6AH9*	3	6.3	19	(EF)HJL	GM		1	6.3	34	C	BH		3	6.3	32	E	BH
	3	6.3	28	BC	DM	6AQ8	2	6.3	21	AB	CE	6AX6G	1	6.3	19	E	GH
6AJ4*	2	6.3	19	(ACDFJ)E	BH		2	6.3	21	FG	EH		1	6.3	19	C	DG
6AJ5*	2	6.3	23	AEF	(BG)C	6AR5	3	6.3	30	AEF	BD	6AX7	1	3.15	20	AB	CDE
6AJ8	2	6.3	22	ABFG	CE	6AR6	3	6.3	20	CEG	AH		1	3.15	20	FG	DEH
	2	6.3	23	HJ	CE	6AR8	3	6.3	22	BCFJ	EG	6AX8	2	6.3	20	AJ	EH
6AK5*	2	6.3	22	AEF	(BG)C	No open element test on B, C & J.							2	6.3	20	BCF	EG
6AK6	3	6.3	30	ABEF	CG		3	6.3	22	ACFH	EG	No open element test on F.					
6AK7	3	6.3	17	DFH	EG	No open element test on A, C & H.						6AY3	3	6.3	22	BG	EJ
6AK8	1	6.3	20	A	DG	6AR11	3	6.3	18	CE	BDFM	J may show leakage.					
	1	6.3	20	B	CD		3	6.3	18	JK	GHLM	6AY11	1	6.3	19	GH	JM
	1	6.3	21	HJ	DG	6AS5*	1	6.3	19	(BE) FG	AC		1	6.3	19	EF	DM
	1	6.3	40	F	DG	6AS6	2	6.3	25	AEFG	BC		1	6.3	19	K	LM
6AK9	3	6.3	30	BC	GM	6AS7	3	6.3	16	AB	CH	6AZ8	2	6.3	21	HJ	EG
	3	6.3	22	KL	GM		3	6.3	16	DE	FH		2	6.3	21	ABF	CE
	3	6.3	21	EHJ	GM	6AS8	1	6.3	19	ABJ	CEG	6B4	3	6.3	28	CE	G
6AK10	3	6.3	20	JK	DM		1	6.3	18	F	EH	6B5	3	6.3	45	BD	CEF
	3	6.3	20	EG	FM	6AS11	2	6.3	21	CD	GM		3	6.3	63	CD	BEF
	3	6.3	20	BL	CM		2	6.3	21	FH	EM	6B6	3	6.3	32	CN	GH
6AL3	3	6.3	19	ABCFGHJ	EN		3	6.3	18	KL	BJM		1	6.3	40	D	GH
No element test on top levers.						6AT6	1	6.3	20	AG	BC		1	6.3	40	E	GH
6AL5	1	6.3	22	B	DE		1	6.3	35	E	BC	6B7	3	6.3	50	BCN	FG
	1	6.3	22	G	AD		1	6.3	35	F	BC		1	6.3	40	D	FG
6AL6	3	6.3	24	DEN	GH	6AT7N	3	6.3	20	AB	CE		1	6.3	40	E	FG
6AL7	1	6.3	40	ACDEF	BH		3	6.3	20	FG	EH	6B8	3	6.3	45	CFN	GH
Eye OP	4	6.3	0	C	BDFH	6AT8	2	6.3	21	AB	CE		1	6.3	40	D	GH
Eye CL	4	6.3	0	C	BH		2	6.3	20	FGHJ	CE		1	6.3	40	E	GH
6AL9	2	6.3	20	BDKL	JM	No open element test on F & H.						6B10	1	6.3	20	H	JM
	3	6.3	20	EG	FM	6AU4	4	6.3	22	E	CH		1	6.3	20	K	JM
6AL11	1	6.3	21	CDFG	BM	6AU5	3	6.3	22	AEH	CG		2	6.3	21	CD	BM
	3	6.3	20	HKL	JM	6AU6	2	6.3	22	ABEF	DG		2	6.3	22	EF	GM
6AM4*	1	6.3	18	(ACDFJ)E	BH												
6AM5	1	6.3	22	AEG	BD												

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		3	6.3	18	GJKL	HM		2	6.3	22	F	CE
6BF8	1	6.3	19	A	EF	6BN11	3	6.3	18	CDEF	BM	6BY11	1	6.3	19	CEFG	BM
	1	6.3	19	B	EF		3	6.3	18	ABGJ	CD		3	6.3	19	HKL	JM
	1	6.3	19	C	EF	6BQ5	3	6.3	22	DEN	GH	6BZ3*	3	6.3	20	(DK)	GM
	1	6.3	19	G	EF	6BQ6	3	6.3	21	AB	CD	6BZ6	1	6.3	18	AEFG	BC
	1	6.3	19	H	EF	6BQ7	2	6.3	22	FG	DH	No open element test on E & G.					
	1	6.3	19	J	EF		2	6.3	21	AB	EN	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	BCG	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)FGAD			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	BCG	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	28	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	BCG	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
No element test or short test on C & H.																	

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	ABCFH	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	FH	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	DF
6DY7	3	6.3	22	ACD	GH		2	6.3	22	ABFG	CE	6FD6	1	6.3	19	ABEF	DG
	3	6.3	22	DEF	GH	6ER5*	2	6.3	20	BEF	(AG)D	6FD7*	1	6.3	21	FG	EH
H normally shows leakage.						6ES5*	3	6.3	21	BE	(AG)D		3	6.3	18	A(BC)	EJ
6ZD4*	3	6.3	21	(AG)(BF)	DE	6ES6	3	6.3	21	AEF	BCG	6FE5	3	6.3	22	CDE	BH
6DZ7	3	6.3	22	ACD	GH	6ES8	2	6.3	20	AB	CE	6FG5*	3	6.3	20	AEF	(BG)C
	3	6.3	22	DEF	GH		2	6.3	20	FG	EH	No open element test on E.					
No open element test on C & F.						6ET6	3	6.3	20	AEF	BCG	6FG6	1	6.3	28	AJ	CE
6DZ8	1	6.3	20	AJ	EH	6ET7	3	6.3	20	GHJ	EF		4	6.3	100	BFGH	CE
	3	6.3	20	CFG	BE	No open element test on J.						Good tube reads above 8.					
6E5	2	6.3	36	BC	EF		1	6.3	56	B	AE	6FG7*	2	6.3	19	AB	(CH)E
Eye OP	4	6.3	0	D	BCEF		1	6.3	56	C	AE		3	6.3	19	GJ	(CH)EF
Eye CL	4	6.3	0	BD	CEF	6EU7	2	6.3	24	EF	BD	6FH5*	2	6.3	21	BE	(AG)D
6E6	3	6.3	31	BC	DG		2	6.3	24	GH	BJ	6FH6	3	6.3	15	DEN	GH
	3	6.3	31	EF	DG	6EU8	2	6.3	19	AGJ	EH	6FH8	2	6.3	33	AGHJ	D
6E7	2	6.3	28	BCN	DFG		2	6.3	19	BC	EF		2	6.3	20	BC	D
6E8	2	6.3	31	EF	GH		2	6.3	19	BC	EF		1	6.3	18	F	D
	2	6.3	40	CDN	GH	6EV5	2	6.3	22	AEF	(BG)D	6FJ7	2	6.3	25	KL	JM
6EA4	1	6.3	28	FN	BEJLM	6EV7	2	6.3	23	AB	CE		3	6.3	21	CE	GM
Tube damaged if BEJ or L is moved.							2	6.3	23	FG	EH	6FM7*	3	6.3	19	(CH)E	GM
6EA5*	2	6.3	22	AEF	(BG)C	6EW6	2	6.3	20	AEFG	BD		1	6.3	20	KL	JM
6EA7	1	6.3	22	DE	FH	6EW7	3	6.3	19	ABC	EJ						
	3	6.3	20	AB	CH		3	6.3	30	FG	EH						

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	6GS7	3	6.3	19	FGJ	CEH	Tube damaged if A or C is moved.					
	1	6.3	21	KL	JM		3	6.3	21	AB	CEH	6HC8	3	6.3	23	CFG	BE
6G5	2	6.3	36	BC	EF	Tube damaged if C or H is moved.							3	6.3	26	AJ	EH
Eye CL	4	6.3	0	BD	CEF	6GS8	2	6.3	20	BCFG	AE	6HD5*	3	6.3	19	(CL)(EJ)G	(DK)M
Eye OP	4	6.3	0	D	BCEF		2	6.3	20	BGHJ	AE	6HD7	3	6.3	20	BFG	AGE
6G6	3	6.3	36	CDE	GH	6GT5*	3	6.3	19	(AG)(BF)J	CE		3	6.3	19	HJ	ACE
6G6G	2	6.3	28	CDE	BH	6GU5*	1	6.3	19	A	(BG)D	Tube damaged if A or C is moved.					
6G7	3	6.3	36	BN	CEG		1	6.3	29	EF	(BG)D	6HE5*	3	6.3	21	(BJ)(CK)F	(DL)M
	1	6.3	24	D	CG	6GU7	3	6.3	22	AB	CE	6HE7	1	6.3	19	B	DM
	1	6.3	24	F	CG		3	6.3	22	FG	EH		3	6.3	18	EJL	HM
6G11	1	6.3	20	CDFG	BM	6GV5*	3	6.3	19	CGL(EJ)N	(DK)M	6HF5*	3	6.3	19	C(EJ)FHLN	(DK)M
	3	6.3	20	HKL	JM	6GV7	3	6.3	17	BCG	EFH	6HF8	1	6.3	19	BC	AE
6GA7*	3	6.3	20	(BC)DG	EM		3	6.3	22	AJ	EFH		3	6.3	19	GH	EFJ
	3	6.3	24	L	HM	Tube damaged if F or H is moved.						6HG5*	3	6.3	26	(AG)EF	BD
6GA8	2	6.3	22	FG	EH	6GV8	1	6.3	19	AB	CE	6HG8*	3	6.3	18	BJ	(AC)EH
	2	6.3	22	AB	CE		3	6.3	20	FGJ	EH		3	6.3	20	FG	(AC)E
6GB3	3	6.3	19	DE	GH	6GW5*	2	6.3	20	A(BF)	DE	6HJ5*	3	6.3	18	(CL)(EJ)G	BDKM
6GB5*	3	6.3	19	(AB)(FG)N	CEH	6GW6	3	6.3	20	DEN	GH	Tube damaged if D or K is moved.					
Tube damaged if C or H is moved.						6GW8	1	6.3	20	AJ	BE	6HJ7	3	6.3	19	BFG	ACE
6GB6	3	6.3	21	DEN	GH	6GX6	1	6.3	19	A	BD		3	6.3	18	HJ	ACE
6GB7	3	6.3	18	DEN	BH		1	6.3	21	EFG	BD	Tube damaged if A or C is moved.					
6GB9	3	6.3	22	DEN	GH	6GX7*	2	6.3	20	BG	(AC)EF	6HJ8	1	6.3	19	H	EG
6GC5*	3	6.3	21	(AH)(CF)J	EG		3	6.3	21	HJ	(AC)E		3	6.3	19	BC	AE
6GC6	2	6.3	21	DEHN	CG	6GY5*	3	6.3	18	(CGL)(EJ)N	(DK)M		3	6.3	28	CFJ	AE
6GD7*	3	6.3	19	AB	(CH)E	6GY6	3	6.3	19	AEFG	BD	6HK5	3	6.3	18	AE	BDG
	3	6.3	19	GJ	(CH)EF	6GY8	1	6.3	26	AB	E	Tube damaged if B or G is moved.					
6GE5*	3	6.3	19	B(CL)G	(DK)M		1	6.3	19	CJ	EH	6HL5*	3	6.3	18	(AB)GJ	CE
6GF5*	3	6.3	19	B(CL)G	(DK)M		1	6.3	22	F	EG	6HL8	2	6.3	20	AJ	EH
6GF7	3	6.3	18	BF	CE	No open element test on B & C.							3	6.3	19	BC	EFG
	1	6.3	20	HJ	AE	6GZ5*	3	6.3	19	(BE)F	ADG	6HM5	3	6.3	18	AE	BDG
6GH8	2	6.3	17	BCF	EG	6H4	1	6.3	26	D	GH	Tube damaged if B or G is moved.					
	2	6.3	17	AJ	EH							6HM6	3	6.3	19	BH	ACE
6GJ5*	3	6.3	20	(AG)(BF)N	CE								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.																		
6HR5*	3	6.3	26	(AG)EF	BD	6JD5*	3	6.3	18	(BL)(CK)G	DM	6JY8	2	6.3	20	ABFG	CE	
6HR6	3	6.3	18	ABEF	DG	6JD6	3	6.3	19	BH	ACEG							
6HS5*	3	6.3	18	(BL)(CK)G	DM	No element or short test on A & C.						6JZ6*	3	6.3	18	(DK)CEN	BM	
6HS6	1	6.3	19	A	DG	6JE6*	3	6.3	17	•	CE	6JZ8*	3	6.3	20	D(FG)H	JM	
	1	6.3	21	BEF	DG	•(AG)(BF)HN							1	6.3	21	BK	LM	
6HS8	2	6.3	24	BHJ	AE	6JE8	2	6.3	20	BC	AE	6K5	1	6.3	20	CN	GH	
	2	6.3	21	CFG	AE		3	6.3	19	GHJ	EF	6K6	3	6.3	34	CDE	GH	
6HT5	1	6.3	40	FN	M	6JF6*	3	6.3	18	•	CE	6K7	2	6.3	32	CDN	EGH	
6HU6*	1	6.3	22	AJ	CE	•(AG)(BF)HN						6K8	1	6.3	20	DE	GH	
	4	6.3	100	(BFH)G	CE	6JG5	3	6.3	19	GHJ	DF		1	6.3	20	EF	GH	
Good tube reads above 8.						6JG6*	3	6.3	18	(AG)BJ	ECF		1	6.3	39	CN	GH	
6HU8	3	6.3	21	ABC	EG	6JH5*	3	6.3	20	•	DM	6K11	2	6.3	23	JK	DM	
	3	6.3	21	FHJ	EG	•(BL)(CK)(GH)							1	6.3	20	BL	CM	
6HV5*	3	6.3	20	(BL)(CK)G	DM	6JH6	3	6.3	18	AF	BD		1	6.3	20	EG	FM	
6HW8	3	6.3	22	CF	ABEGHJ		1	6.3	48	EG	BD	6KA8	3	6.3	19	FGHJ	CE	
6HZ5*	3	6.3	18	(BL)(CK)G	DM	6JH8	2	6.3	35	ABCJ	DG		2	6.3	21	AB	CE	
6HZ6	2	6.3	20	AEFG	BD		3	6.3	23	CF	DG	6KD6*	2	6.3	17	•	BM	
6HZ8	2	6.3	21	BC	AE	6JK5*	3	6.3	20	•	DM	•(CL)(DK)(EJ)N						
	3	6.3	19	GH	EFJ	•(BL)(CK)(GH)						6KD8	2	6.3	20	BCF	EG	
6J4	2	6.3	20	AEFG	BD	6JK6	3	6.3	18	AF	BD	No open element test on F.						
6J5	2	6.3	24	CE	GH		1	6.3	33	EG	BD		2	6.3	20	AJ	EH	
6J6	1	6.3	18	AF	DG	6JK8	2	6.3	19	AB	CE	6KE8	2	6.3	18	AJ	EH	
	1	6.3	18	BE	DG		2	6.3	20	FG	EH		2	6.3	18	BCF	EG	
6J7	2	6.3	29	CDN	AEGH	6JL6	3	6.3	18	AF	BD	6KF8	2	6.3	20	BGHJ	AE	
6J8	2	6.3	25	CDN	GH		1	6.3	32	EG	BD		2	6.3	20	BCFG	AE	
	2	6.3	25	EF	GH	6JM6	3	6.3	20	CEN	BDKM	6KG6*	4	6.3	21	•	EJ	
6J9	2	6.3	20	AB	CE	Tube damaged if D or K is moved.						•(AH)(BG)(CF)N						
	2	6.3	20	FJ	EK	6JN6	3	6.3	20	CGL	BDKM	6KH8	3	6.3	24	AB	DG	
	2	6.3	20	GH	EK	Tube damaged if D or K is moved.							3	6.3	20	BCJ	DG	
6J10	4	6.3	68	DEFG	HM	6JN8	3	6.3	19	AB	CE		3	6.3	20	FHJ	DG	
	3	6.3	20	BJL	CM		3	6.3	20	GJ	EFH	6KL8	1	6.3	48	H	CE	
6J11	3	6.3	18	BE	CDFM	6JQ6*	3	6.3	20	A(BC)(GH)	DJ		2	6.3	20	ABFG	CE	
	3	6.3	18	GL	HJKM		1	6.3	23	F	DJ	6KM6*	3	6.3	18	•	CE	
6JA5*	3	6.3	21	(BJ)(CK)F	DLM	6JR6*	3	6.3	18	(AG)BJ	CEF	•(AG)(BF)HN						
Tube damaged if D or L is moved.						6JS6*	3	6.3	18	(CL)(EJ)N	BDKM	6KM8*	1	6.3	48	C	EF	
6JA8	2	6.3	20	BC	AE	Tube damaged if D or K is moved.							2	6.3	20	GH	EF	
	3	6.3	19	GH	EFJ	6JT6*	3	6.3	20	(AG)BFJ	CE		1	6.3	30	ABJ	EF	
6JB5*	3	6.3	21	(BJ)(CK)F	DLM	6JT8	3	6.3	18	GH	EFJ	6KN6*	3	6.3	17	•	BM	
Tube damaged if D or L is moved.							1	6.3	19	BC	AE	•(CL)(DK)(EJ)N						
6JB6*	3	6.3	19	•	CE	6JU6*	3	6.3	17	•	CE	6KN8	3	6.3	19	AB	CE	
•(AG)(BF)HN						•(AG)(BF)HN							3	6.3	19	FG	EH	
6JC5*	3	6.3	21	(BJ)(CK)F	DLM	6JU8	3	6.3	22	GH	EJ	6KR8	3	6.3	20	BC	AE	
Tube damaged if D or L is moved.							3	6.3	22	G	EH		3	6.3	20	GHJ	EF	
6JC6	2	6.3	19	BGHJ	ACE		3	6.3	22	AB	CE	6KS8	1	6.3	20	BC	AE	
No element or short test on A & C.							3	6.3	22	A	BE		3	6.3	19	GH	EFJ	
6JC8*	2	6.3	20	BCF	(AG)E	6JV8	3	6.3	18	GH	EFJ	F may show leakage.						
No open element test on F.							1	6.3	19	BC	AE	6KT6	3	6.3	19	BFHJ	ACE	
						6JW8	2	6.3	21	AJ	EH	Tube damaged if A or C is moved.						
							2	6.3	20	BCF	EG							

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)GAD		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					6MC6*	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	6SR7	2	6.3	30	BF	CG		1	6.3	50	E	GH
6R6	3	6.3	41	CEN	GH		1	6.3	50	D	CG	6V8	1	6.3	20	G	EH
6R7	1	6.3	33	D	GH		1	6.3	50	E	CG		1	6.3	21	AF	CE
	1	6.3	33	E	GH	6SS7	3	6.3	30	DFH	CEG		2	6.3	22	B	CE
	3	6.3	37	CN	GH	6ST7	2	6.3	28	BF	CG	6W4	2	6.3	65	J	CE
6R8	1	6.3	20	A	EG		1	6.3	95	D	CG	6W5	3	6.3	18	E	CH
	1	6.3	20	F	EG		1	6.3	95	E	CG		3	6.3	25	C	GH
	2	6.3	25	B	CE	6SU7	2	6.3	25	AB	CDEFH	6W6	3	6.3	25	E	GH
	2	6.3	30	HJ	EG		2	6.3	25	DE	ABCFH		3	6.3	21	CDE	GH
6RA6*	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	EFG	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	8AR11	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	8AU8	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.						8AV11	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	8AV11	2	7.5	23	EG	FM
	2	7.5	20	BC	AD	Tube damaged if F or H is moved.						8AW8	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	8B8	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	8B10	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		1	9.45	20	CD	BM
	1	6.3	58	E	(DG)H		1	6.3	20	CD	BH		1	9.45	20	K	JM
	1	6.3	58	F	(DG)H		1	6.3	39	E	GH		1	9.45	20	H	JM
7B7	2	6.3	28	BCF	DGH		1	6.3	39	F	GH	8BA8	2	7.5	20	GHJ	EF
7B8	2	6.3	28	CD	GH	7KY6*	3	7.5	17	B(CJ)GH	AE		1	7.5	18	BC	AE
	2	6.3	34	BEF	GH	7KZ6*	3	7.5	18	B(CJ)GH	AE	8BA11	2	7.5	22	JL	KM
7C4	2	6.3	33	D	GH	7L7	2	6.3	26	BCF	DGH		2	7.5	22	DFG	HM
7C5	3	6.3	29	BCF	GH	7MP18*	3	7.5	20	(AG)EF	BC		2	7.5	23	BCE	HM
7C6*	3	6.3	33	BC	(DG)H	7N7	2	6.3	26	CD	BH	8BH8	2	7.5	20	GHJ	EF
	1	6.3	40	E	(DG)H		2	6.3	26	EF	GH		1	7.5	20	BC	AE
	1	6.3	40	F	(DG)H	7Q7	2	6.3	25	CD	GH	8BM11	3	7.5	21	BCDF	EM
7C7	1	6.3	22	BCF	DGH		2	6.3	41	BEF	GH		3	7.5	22	GHJL	KM
7CL8	2	7.5	22	AB	CD	7R7	2	6.3	22	BEF	GH	8BN8	2	7.5	21	A	BD
	2	7.5	22	FGJ	DH		1	6.3	50	C	GH		1	7.5	18	GH	DJ
7D10	4	6.3	19	BGHJ	CE		1	6.3	50	D	GH	8BN11	3	7.5	18	CDEF	BM
7D11	3	6.3	21	CDE	GH	7S7	2	6.3	33	CD	GH		3	7.5	18	GJKL	HM
7DJ8	2	7.5	21	AB	CE		2	6.3	23	BEF	GH	8BQ5	3	7.5	20	ABGJ	CD
	2	7.5	21	FG	EH	7SC7	3	7.5	33	BC	FG	8BQ11	3	7.5	18	BCDE	FM
7DZ7	3	7.5	22	ACD	GH		3	7.5	38	DE	FG		3	7.5	19	GHJK	LM
	3	7.5	22	DEF	GH	7V7	3	6.3	18	BCF	DGH	8BU11	3	7.5	18	CD	BM
No open element test on C & F.						7W7*	2	6.3	24	BCF	(DG)EH		3	7.5	18	FG	EM
7E5*	2	6.3	34	(AE)(CG)	(DF)H	7X6	3	6.3	20	C	BH		3	7.5	18	HJK	LM
7E6*	2	6.3	27	BC	(DG)H		3	6.3	20	F	GH	8CB11	3	7.5	19	JK	GHLM
	1	6.3	45	E	(DG)H	7X7	1	6.3	21	BC	DGH		3	7.5	19	CE	BDFM
	1	6.3	45	F	(DG)H		1	6.3	20	E	DGH	8CG7	2	7.5	24	FG	DH
7E7	3	6.3	36	BEF	GH		1	6.3	21	F	DGH		2	7.5	24	AB	CD
	1	6.3	40	C	GH	7Y4	3	6.3	33	C	GH	8CM7	2	7.5	24	FG	CE
	1	6.3	46	D	GH		3	6.3	33	F	GH		2	7.5	22	AH	EJ
7ED7	2	7.5	20	BGHJ	ACE	7Z4	3	6.3	34	C	GH	8CN7	3	7.5	20	B	CDE
7ES8	2	7.5	20	AB	CD		3	6.3	34	F	GH		3	7.5	20	A	CDE
	2	7.5	20	FG	DH	8A8	3	7.5	22	AJ	EH		1	7.5	20	GH	DEF
7EY6	3	7.5	25	CDE	BH		3	7.5	20	BCF	EG	8CS7	3	7.5	24	AC	DJ
7F7	1	6.3	20	CD	BH	8AC9	3	9.45	19	GJK	HLM		2	7.5	26	FG	DH
	1	6.3	20	EF	GH		1	9.45	19	BC	DM	8CW5*	3	7.5	20	(AB)(FGH)J	CE
7F8	2	6.3	22	AC	DG		1	9.45	19	B	CM	A, F or H is not used in some tubes.					
	2	6.3	22	FH	EG	8AC10	3	7.5	20	BL	CM	8CX8	1	7.5	19	GHJ	DF
							3	7.5	20	EG	FM		1	7.5	19	BC	AD
							3	7.5	20	JK	DM						

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	EFG		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
C should show short when tube is heated, Sec. 2.						9GH8	2	9.45	17	AJ	EH	10DX8	3	9.45	20	HJ	EFG
							2	9.45	17	BCF	EG		2	9.45	20	AB	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)
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		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
							3	12.6	20	DF	AE	12AF6	1	12.6	20	ABEF	DG
							3	12.6	22	BC	AG	12AF11	3	12.6	20	KL	BJM
10HF8	3	9.45	19	GH	EFJ		3	12.6	19	CDE	FM		2	12.6	21	FH	EM
	1	9.45	19	BC	AE	11CF11	3	12.6	19	BL	GM		2	12.6	21	CD	GM
10JA5*	3	9.45	21	(BJ)(CK)F	DLM		3	12.6	23	JK	HM	12AH7	3	12.6	30	AC	BG
						11CH11	3	12.6	17	BKL	FHM		3	12.6	30	EF	DG
10JA8	3	9.45	19	GH	EFJ		2	12.6	20	EG	FM	12AH8	2	6.3	20	ABFG	CDE
	2	9.45	20	BC	AE		2	12.6	20	CJ	EM		2	6.3	23	GH	CDE
10JT8	3	9.45	18	GH	EFJ	11CY7	3	9.45	20	ABC	DJ	12AJ6	1	12.6	38	F	BC
	1	9.45	19	BC	AE		1	9.45	21	FG	DH		1	12.6	38	E	BC
10JY8	3	12.6	18	GH	EFJ	11DS5*	1	12.6	19	(AG)EF	BD		1	12.6	20	AG	BC
	3	12.6	18	BC	AE	11FY7	1	12.6	21	KL	JM	12AJ7	3	12.6	22	ABFG	CE
10KR8	3	9.45	20	BC	AE		3	12.6	19	CE	GM		2	12.6	24	HJ	CE
	3	9.45	20	GHJ	EF	11HM7*	3	5	17	B(CJ)GH	ADE	12AL5	1	12.6	22	G	AD
10KU8	1	7.5	38	C	AE		3	12.6	19	GHJ	EF		1	12.6	22	B	DE
	1	7.5	38	B	AE	11JE8	3	12.6	20	BC	AE	12AL8	1	12.6	38	BF	CEG
	3	7.5	17	GHJ	EF		2	12.6	20	GHJ	EF		1	12.6	22	A	EJ
10L14	2	25	21	FG	EH	11KV8	3	12.6	18	BC	AE	12AL11	3	12.6	20	HKL	JM
	2	25	21	AB	CE		2	12.6	20	BC	AE		1	12.6	21	CDFG	BM
10LB8	3	9.45	18	GH	EFJ	11LQ8	3	9.45	18	BC	AE	12AQ5*	3	12.6	32	(AG)EF	BD
	2	9.45	25	BC	AE		3	9.45	18	GHJ	EF	12AS5	3	12.6	19	BEFG	AD
10LD6*	2	9.45	21	•	AD	11LT8	1	12.6	18	H	GE	12AT6	3	12.6	26	AG	BC
							1	12.6	18	F	GE		1	12.6	35	F	BC
							3	12.6	19	BCJ	AE		1	12.6	35	E	BC
10LE8	2	7.5	19	AHJ	BCE	11LY6*	3	9.45	19	B(CJ)GH	AE	12AT7	2	6.3	24	FG	HJ
	2	7.5	19	FHJ	CEG		3	9.45	20	FGJ	EH		2	6.3	24	AB	CJ
10LM8	3	9.45	20	BCF	EG	11MS8	3	9.45	21	AB	CE	12AU6	2	12.6	22	ABEF	DG
	3	9.45	21	AJ	EH		2	9.45	22	(BJ)	DN	12AU7	2	6.3	25	FG	DEH
10LW8	1	9.45	19	BC	AE	11R3*	2	9.45	22	BC	D		2	6.3	25	AB	CDE
	3	9.45	20	GHJ	EF	12A	2	5	26	BCJ	ADE	12AV5	3	12.6	18	AEH	BC
10LY8	3	9.45	18	GHJ	EF	12A4	2	6.3	20	BGJ	AE						
	1	9.45	18	BC	AE	12A5	3	6.3	32	BCD	EF						
						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	12DL8	1	12.6	40	J	BE
	1	12.6	43	E	BD		2	6.3	23	F	DEH		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	AE½BCG		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.						12HU8	3	12.6	21	FHJ	EG	12S8	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	ABCEFJ	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	12R5	3	12.6	28	BEFG	AC	13CW4	1	12.6	18	BD	HM
12HB25*	3	12.6	19	•	EJ	12RK19*	3	12.6	20	(BJ)	EN	13DE7	1	12.6	20	FG	EH
•(AB)(CH)(FG)N						12RLL3	2	6.3	22	AB	CDE		1	12.6	18	ABC	EJ
12HE7	3	6.3	18	EJL	HK		2	6.3	21	FG	DEH	13DR7	3	12.6	16	ABC	EJ
	1	6.3	19	B	DK								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			3	12.6	19	CE	GM
	3	12.6	19	AB	CH		1	12.6	20	F	AE	15HA6*	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	AEEFG	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.												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	24A	2	2.5	32	BCN	DE	Tube damaged if C or H is moved.					
	3	19.6	19	A(BC)	EJ	24AX4	3	25	20	E	CH	25EC6	3	25	20	EHN	BC
20EZ7	1	9.45	20	GH	CJ	24BF11	3	25	20	HKL	JM	25EH5	3	25	20	BEFG	AD
	1	9.45	20	EF	CD		1	25	20	CEFG	BM	25F5	2	25	22	BEFG	AD
20J8	1	19.6	19	CDEN	GH	24GA7*	3	25	20	(BC)DG	EM	25GB6	3	25	21	DEK	GH
	1	19.6	20	EF	GH		3	25	24	L	HM	25GF6	3	25	16	DEN	GH
20LF6*	3	19.6	18	•	BM	24JE6*	3	25	19	(AG)(BF)HNCE		25HX5*	3	25	18	(AG)FJ	BCE
				•(CL)(DK)(EJ)N		24JZ6*	3	25	19	D(FG)H	JM	Tube damaged if B or C is moved.					
21A6	3	19.6	16	ABFGHJN	CE		1	25	20	BK	LM	25JQ6*	3	25	20	A(BC)(GH)	DJ
No open element test on N.						24LQ6*	3	25	17	(AG)(BF)HNCE			1	25	23	F	DJ
21EX6	3	19.6	16	EHN	CG	24LZ6*	3	25	19	(AG)(BF)N	CE	25JZ8*	3	25	19	D(FG)H	JM
21GY5*	3	19.6	18	(CGL)(EJ)N	(DK)M	25A6	3	25	27	CDE	GH		1	25	20	BK	LM
21HA6*	3	25	19	BG(FH)	ACEJ	25A7	3	25	27	CDE	GH	25KA6*	3	25	19	C(DL)EN	KM
Tube damaged if C or J is moved.						25AC5	3	25	31	CE	GH	25L6	3	25	22	CDE	GH
21HB5*	3	19.6	18	B(CL)G	(DK)M	25AV5	3	25	18	AEH	BC	25MP20	3	25	20	AEF	BD
21HD5*	3	19.6	19	(CL)(EJ)G	DKM	25AX4	3	25	20	E	CH	25N6	2	25	30	CDE	GH
Tube damaged if D or K is moved.						25B5	3	25	37	BD	EF	25RK19*	4	25	18	(BJ)	EN
21HJ5*	3	19.6	18	(CL)(EJ)G	BDKM	25B6	3	25	23	CDE	GH	25W4	3	25	18	E	CG
Tube damaged if D or K is moved.						25B8	2	25	25	CDN	AG	25W6	3	25	17	CDE	BH
21JS6*	3	25	19	(CL)(EJ)N	BDKM		2	25	25	EH	FG	25X6	3	25	27	C	DG
Tube damaged if D or K is moved.						25BB14*	3	25	18	(AB)(FG)N	CEH		3	25	27	E	GH
21JV6*	3	19.6	18	(DK)CGL	BM	Tube damaged if C or H is moved.						25Y4	3	25	25	E	GH
21JZ6*	3	19.6	18	(DK)CEN	BM	25BK5	2	25	21	ACGH	DF	25Y5	3	25	30	B	CF
21KA6*	3	19.6	19	C(DL)EN	KM	25BQ6	2	25	21	DEN	GH		3	25	30	E	DF
21KQ6*	3	19.6	19	•	EJ	25C5	2	25	20	BEFG	AD	25Z5	3	25	25	B	CF
				•(AH)(BG)(CF)N		25C6	3	25	25	CDE	GH		3	25	25	E	DF
21LG6*	3	19.6	20	(CL)(EJ)N	DKM	25CA5	3	25	17	BEFG	AD	25Z6	3	25	24	C	DG
Tube damaged if D or K is moved.						25CD6	3	25	20	EHN	BC		2	25	24	E	GH
21LR8	3	19.6	19	BFG	CE	25CG3*	3	25	18	(DK)	GM	26	2	1.4	38	BC	D
	1	19.6	19	HJ	AE	25CK3*	3	25	18	(BG)	EJ	26A6	2	2.5	22	ABEF	DG
21LU8*	3	19.6	19	D(FG)H	JM							26A7	2	25	20	CDE	BG
	1	19.6	19	BK	LM								2	25	20	AEH	BG
21MY8*	3	19.6	19	D(FG)H	JM							26AQ8	2	25	21	FG	EH
	1	19.6	19	BK	LM								2	25	21	AB	CE
22	1	2.5	56	BCN	D							26C6	3	25	30	AG	BDEF
22BH3	3	25	22	BG	EJ								1	25	36	E	ABDFG
													1	25	36	F	ABDEG

Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)	Tube	Type	Fil.	Plate	Top (T)	Bottom (B)
26D6	2	25	22	AF	BCED	30CW5*	3	32	20	•	CE	34	2	2	40	BCN	D
	1	25	40	EFG	ABC						•(AB)(FJ)(GH)	34CD3*	3	32	18	(DK)	GM
26DQ6*	1	25	19	(AE)(DH)N	CFG	A, F or H is not used in some tubes.						34CE3*	1	32	18	(DK)	GM
Tube damaged if C or F is moved.						30HD5*	3	25	19	(CL)(EJ)G	DKM	34CM3*	3	32	17	(BG)	EJ
26DQ6	3	25	22	DEN	GH	Tube damaged if D or K is moved.						34DK3*	3	32	18	(BG)	DN
26HU5*	3	25	19	(AE)CN	BFH	30HJ5*	3	32	18	(CL)(EJ)G	BDKM	34GD5	3	32	21	BEFG	AD
Tube damaged if B or F is moved.						Tube damaged if D or K is moved.						34R3*	3	32	20	(BJ)	DN
26LW6*	3	25	17	(AE)CN	BFG	30JZ6*	3	32	18	(DK)CEN	BM	35(51)	2	2.5	30	BCN	DE
Tube damaged if B or F is moved.						30KD6*	3	25	17	•	BM	35A5	3	32	22	BCF	GH
26LX6*	3	25	18	(CL)(EJ)N	BDKM	•(CL)(DK)(EJ)N						35B5	3	32	23	AEFG	BD
Tube damaged if D or K is moved.						30KG6*	4	25	21	•	EJ	35C5	3	32	24	BEFG	AC
26Z5	4	25	18	F	HJ	•(AH)(BG)(CF)						35CD6	3	32	17	EHN	BC
	4	25	18	A	CJ	30LE6	3	32	17	(AE)CN	BFG	35DZ8	3	32	20	CFG	BE
27	2	2.5	32	BC	DE	Tube damaged if B or F is moved.							1	32	20	AJ	EH
27GB5*	3	25	19	(AB)(FG)N	CEH	30MB6*	3	32	18	(CL)(EJ)N	BDKM	35EH5	3	32	20	BEFG	AD
Tube damaged if C or H is moved.						Tube damaged if D or K is moved.						35GL6	2	32	22	BEG	AD
27KG6*	4	25	21	•	EJ	30MP23*	3	32	20	(BE)FG	AC	A normally shows leakage.					
						•(AH)(BG)(CF)N						35HB8	1	32	20	AC	BE
27LF6*	3	25	18	•	BM	30MP27*	3	32	20	(BE)FG	AC		3	32	22	FGJ	EH
						30PL12	3	12.6	26	AJ	EH	35L6	3	32	20	CDE	GH
							2	12.6	20	CFG	BE	35LR6*	3	32	17	(CL)(EJ)N	BDKM
28D7	2	25	22	BCD	FH	31	2	2	40	BC	D	Tube damaged if D or K is moved.					
	2	25	22	CEG	FH	31AL10	2	12.6	24	BC	FG	35W4	3	32	20	E	DFG
28EC4*	3	25	19	(BGH)	EN		2	12.6	21	DEH	FG	35Y4	3	32	23	B	GH
28GB5*	3	25	19	(AB)(FG)N	CEH		3	12.6	23	JL	FK	35Z3	3	32	22	B	GH
Tube damaged if C or H is moved.						31JS6*	3	32	18	(CL)(EJ)N	BDKM	35Z4	3	32	20	E	GH
28HA6*	3	25	19	BG(FH)	ACEJ	Tube damaged if D or K is moved.						35Z5	3	32	21	E	GH
Tube damaged if C or J is moved.						31LQ6*	3	32	17	(AG)(BF)HNCE		35Z6	3	32	20	C	DG
28HD5*	3	25	19	(CL)(EJ)G	DKM	31LR8	3	32	19	BFG	CE		3	32	20	E	GH
Tube damaged if D or K is moved.							1	32	19	HJ	AE	36	2	6.3	32	BCN	DE
28Z5	3	12.6	38	C	GH	31LZ6*	3	32	19	(AG)(BF)N	CE	36AM3	4	32	22	E	CG
	3	12.6	38	F	GH	32	2	2	42	BCN	D	36KD6*	3	32	18	•	BM
29	2	2.5	36	BC	DEF	32A8	1	32	20	CFG	BE						
29GK6*	2	25	20	BGH	A(CJ)E		1	32	20	AJ	EH	•(CL)(DK)(EJ)N					
Tube damaged if C or J is moved.						32ET5*	3	32	25	(BE)FG	AD	36LW6*	3	32	17	(AE)CN	BFG
29KQ6*	3	30	19	•EJ		32GA7*	3	32	20	(BC)DG	EM	36MC6*	3	32	18	(AG)(BF)HNCD	
							3	32	24	L	HM	37	3	6.3	37	BC	DE
29LE6*	3	25	19	•	DJ	32HQ7	3	19.6	20	EJL	AHM	38	3	6.3	36	BCN	DE
							1	19.6	20	B	ADM	38A3*	3	32	21	(AFJ)	CD
												38HE7	3	19.6	18	EJL	HK
30	2	2	35	BC	D	32L7	3	32	21	CDE	GH		1	19.6	19	B	DK
30A5	3	32	16	BEFG	AC		3	32	18	F	AG	38HK7	3	19.6	18	EJL	HK
30AE3	3	32	20	ABCFGHJ	EN	33	3	2	39	BCD	E		1	19.6	18	B	DK
No element test on top levers.						33GT7*	3	12.6	20	E(JL)K	AHM	39(44)	2	6.3	30	BCN	DE
30AG11	1	25	20	C	BM		3	12.6	21	B	ADM	40	1	5	28	BC	D
	1	25	20	K	LM	33GY7*	3	12.6	19	E(JK)L	AHM	40FR5	3	32	22	BEFG	AD
	2	25	20	EF	DM		3	12.6	21	B	ADM	40KD6*	3	32	17	•	BM
	2	25	20	GH	JM	33HE7	3	32	18	EJL	HM						
30C18	3	7.5	17	BCG	EFH		1	32	19	B	DM	•(CL)(DK)(EJ)N					
	3	7.5	22	AJ	EFH	33JR6*	3	32	18	(AG)BJ	CEF	•(AH)(BG)(CF)N					
Tube damaged if F or H is moved.						33JV6*	3	32	18	(DK)CGL	BM	40SUA	2	2	39	CDN	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)
40Z5	3	32	20	E	BCH	53HK7	3	25	18	EJL	HK	88M	3	6.3	31	CDN	EGH
(45Z5)						1	1	25	18	B	DK	88S	3	6.3	32	BCN	DEF
41	3	6.3	32	BCD	EF	55	2	2.5	32	BN	EF	89	3	6.3	32	BCN	EF
42	3	6.3	29	BCD	EF	1	1	2.5	49	C	EF	89RS	3	6.3	36	BN	CEG
42EC4*	3	32	19	(BGH)	EN	1	1	2.5	40	D	EF	1	1	6.3	24	D	CG
42KN6*	3	19.6	17	•	BG	56	2	2.5	30	BC	DE	1	1	6.3	24	F	CG
				•(CL)(DK)(EJ)N		57	2	2.5	30	BCN	DEF	95	3	2.5	36	BCD	EF
43	3	25	31	BCD	EF	57A(AS)	3	6.3	34	BCN	DEF	98	3	6.3	26	B	DE
45	3	2.5	32	BC	D	58	3	2.5	35	BCN	DEF	3	3	6.3	26	C	DE
45B5*	3	50	19	(AB)(GH)J	CE	58AS	3	6.3	35	BCN	DEF	99	2	2.5	65	BC	D
45Z3	3	50	24	BF	DG	58HE7	1	50	19	B	DM	(99XX99)					
46	3	2.5	35	BCD	E	3	3	50	18	EJL	HM	99V	2	2.5	65	AC	D
47	3	2.5	41	BCD	E	59	3	2.5	29	BCDE	FG	(V99)					
48	3	32	25	BCD	EF	60FX5	2	50	22	BEFG	AD	113HY	1	1.4	45	BC	E
49	2	2	38	BCD	E	64	1	6.3	22	BCN	DE	(123HY)					
50	3	7.5	42	BC	D	65	2	6.3	28	BCN	DE	114HY	3	1.4	55	N	G
50A5	3	50	20	BCF	GH	67	3	6.3	37	BC	DE	115HY	1	1.4	45	BCD	E
50B5	3	50	20	AEFG	BD	68	3	6.3	37	BCN	DE	(145HY)					
50BK5	2	50	21	ACGH	DF	70A7	3	70	23	CDE	FGH	117L7/	3	110	20	F	AG
50BM8	1	50	20	CFG	BE	A shows short.						M7	3	110	25	CDE	GH
1	1	50	20	AJ	EH	3	3	70	20			117N7	3	110	20	CDE	FGH
50C5	3	50	22	BEFG	AC	Allow tube to heat up. Move levers F & G to top position.						3	3	110	15		GH
50C6	3	50	22	CDE	GH	Good tube will kick to 70.											
50CA5	3	50	22	BEFG	AC	70L7	3	70	18	CDE	FG	117P7	3	110	22	CDE	FGH
50CD4	3	50	23	E	CG	3	3	70	17	H	AG	3	3	110	15		GH
50EH5	3	50	20	BEFG	AD	71A	3	5	47	BC	D	Allow tube to heat up. Move lever G to top position. Good tube will kick to 70.					
50FA5	3	50	22	BEFG	AD	72	4	2.5	35	N	D	117Z3	3	110	24	AE	DF
A normally shows leakage.						75	1	6.3	20	BN	EF	117Z4	3	110	19	E	GH
50FE5	3	50	22	CDE	BH	1	1	6.3	38	C	EF	117Z6	3	110	20	C	DG
50FK5	3	50	24	BEG	AC	1	1	6.3	38	D	EF	3	3	110	20	E	GH
50GY7*	3	25	19	E(JK)L	AHM	76	2	6.3	33	BC	DE	128A/	4	2.5	20	BC	DE
				ADM		77	3	6.3	30	BCN	DEF	2523N1					
50HC6	3	50	19	BEG	AC	78	3	6.3	31	BCN	DEF	163PEN	3	12.6	18	BGJ	CD
50HK6	3	50	20	BEG	AC	79	3	6.3	30	BC	DF	182B	3	5	37	BC	D
50JY6*	3	50	19	(AD)CEN	GH	80	3	5	55	EN	DF	(482B)					
50L6	3	50	21	CDE	GH	81	3	5	55	B	D	183	3	5	40	BC	D
50X6	3	50	19	C	BH	82(82V)	3	2.5	24	B	D	(483)					
3	3	50	19	F	GH	3	3	2.5	24	C	D	201B	2	5	45	BC	D
50Y6	3	50	23	C	DG	83(83V)	3	5	26	B	D	201C	2	5	45	BC	D
3	3	50	23	E	GH	3	3	5	26	C	D	210T	3	7.5	56	BC	D
50Y7	3	50	20	C	BD	84	3	6.3	26	B	DE	230S	2	2	35	BC	D
3	3	50	20	E	BH	3	3	6.3	26	C	DE	232	2	2	42	BCN	D
50Z6	3	50	21	C	DG	85	3	6.3	45	BN	EF	233S	3	2	39	BCD	E
3	3	50	21	E	GH	1	1	6.3	47	C	EF	234S	2	2	40	BCN	D
50Z7	3	50	25	C	DFG	1	1	6.3	47	D	EF	257A	2	2.5	41	BN	D
3	3	50	25	E	FGH	86M	3	6.3	37	CE	GH	262B	3	7.5	42	BN	CD
52	3	6.3	30	BCD	E	87S	2	6.3	33	BCN	DEF						
53	3	2.5	32	BC	DG	88	3	5	26	B	D						
3	3	2.5	32	EF	DG	3	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	988	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		4	1.4	25	B	A	1631	3	12.6	27	CDE	GH
417A	2	6.3	20	ADEGH	FJ	CK1007	4	.63	21	C	G	1632	3	12.6	22	CDE	GH
427	3	2.5	44	BC	DE		4	.63	21	E	G	1633	2	25	28	AB	CG
428A	3	5	47	BC	D	CK1007	4	.63	21	E	G	1634	1	12.6	20	BC	FG
484(485)	3	2.5	32	BC	DE	CK1027	4	Off	27	DN	ABFG	1635	2	6.3	26	CD	EFGH
486	2	2.5	48	BC	DE	1201*	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	CK5608A	2	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)
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	(A)E	8278*	3	6.3	19	(AH)(CG)J	BEF
	3	6.3	20	FG	EHJ	7558*	3	6.3	19	B(CH)FG	(A)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	AEGH	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)(E)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		3	6.3	20	(AD)CE	BH		3	6.3	16	DE	FH
	2	12.6	22	AB	CE	7751*	3	6.3	20	AFJ	EG	AA91E	1	6.3	22	B	DE
7059	2	12.6	23	BCF	EG	7754	3	6.3	20	AFJ	EG		1	6.3	22	G	AD
	2	12.6	21	AJ	EH	7788*	3	6.3	17	B(FJ)GH	ACE	ABC91	3	12.6	32	CDE	GH
7060	2	12.6	28	FGH	EJ	Tube damaged if A or C is moved.						AF	3	2.5	24	B	D
	2	12.6	23	AB	CE	7798	2	6.3	20	AB	CJ		3	2.5	24	C	D
7061*	3	12.6	22	(AH)(CF)J	EG		2	6.3	20	FG	HJ	AG	3	5	26	B	D
7062	2	16.3	21	AB	CJ		3	6.3	20	(AG)(BF)J	CE		3	5	26	C	D
	2	6.3	21	FG	HJ	7868*	3	6.3	20	BD	HM	B36	2	12.6	29	AB	CG
7105	3	12.6	15	AB	CH	7895	2	6.3	19	BD	HM		2	12.6	29	DE	FG
	3	12.6	15	DE	FH	7898	3	6.3	20	FG	HJ	B309	2	6.3	24	AB	CJ
7119	4	6.3	19	GJ	DEF		3	6.3	20	AB	CJ		2	6.3	24	FG	HJ
	4	6.3	19	AB	CDE	7905*	2	3.15	24	B(CH)	AGJ	B339	1	6.3	20	AB	CDE
7137	2	6.3	22	AEFG	BD	Tube damaged if A or J is moved.							1	6.3	20	FG	CDE
7167*	3	12.6	22	AEF	(BG)C	7984*	3	12.6	19	•	BFHJM	Tube damaged if D or E is moved.					
7189*	4	6.3	17	(AB)(FJ)G	CE	•(CDE)(GL)K											
7193	2	6.3	24	N	GH	8016	1	1.4	98	N	ACDEFGH						
Short top caps together.						Use G & N only for element test.											

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	WL481	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.											