

Heath # 597-1442-01

TUBE DATA

FOR

HEATH

6L6 72mA = 100%
EL34 100mA = 100%

*MANUAL NOW
MISSING
DATE 6/14/68*

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
DC2	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.						1B3	1	1.4	98	N	ACDEFGH	1C21	4	Off	45	E	BG
0C3	4	Off	30	E	BCG	Use G & N only for element test.						1D5	2	2	39	CDN	G
Good tube reads above 10.						Good tube reads above 25.						1D5GP	2	2	33	CDN	G
0D3	4	Off	30	E	BCG	1B4	1	2	27	BCN	D	1D7	1	2	31	EF	G
Good tube reads above 10.						1B4P	2	2	35	BCN	D		1	2	95	CDN	G
0G3	4	Off	32	ACEF	BDG	1B5(25S)	1	2	31	BE	F	1D8	2	1.4	48	FN	G
Good tube reads above 10.							1	2	40	D	F		2	1.4	37	CDE	G
0Y4	4	Off	22	E	CGH		1	2	40	C	F		1	1.4	95	G	H
0Z4	4	Off	22	E	CH	1B7	1	1.4	26	EF	G	1D13*	1	1.4	75	(BF)	CG
	4	Off	22	C	EH		1	1.4	95	CDN	G	1DG3	4	1.4	60	N	CE
1A3	1	1.4	75	BF	CG	1B8	2	1.4	32	CDE	G	Good tube reads above 30. No short test.					
1A4	1	2	28	BCN	D		2	1.4	60	FN	G	1DK1	1	1.4	70	N	B
1A5	2	1.4	50	CDE	G		1	1.4	95	H	G	Insert 2 base leads into pins 1 & 2 of 9 pin min. skt.					
1A6	2	2	50	CD	F	1BC2	4	1.4	70	N	EEH	Use plate cap on single lead.					
	1	2	95	BEN	F	Tube damaged if IE or H is moved.						Good tube reads above 20.					
1A7	1	1.4	31	EF	G	1BG2	1	1.4	32	N	E	1DK2B	1	1.4	32	N	B
	1	1.4	95	CDN	G	Insert 2 base lead into pins 1 & 2 of 9 pin min. skt.						Insert 2 base leads into pins 1 & 2 of 9 pin min. skt.					
1AB4	1	1.4	23	BCF	AE	Use plate cap on single lead.						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.						1U6	1	1.4	66	D	A
	2	2	30	EFH	G	1LB4	2	1.4	40	BCF	H		1	1.4	34	CD	BEFG
1F1	1	1.4	24	BCF	G	1LB6	1	1.4	32	BCDEFG	H		1	1.4	40	BEF	CDG
No open element test on B.						1LC5	1	1.4	32	BCDF	EH	Good tube reads above 30 on test 2.					
1F2	2	1.4	37	BCF	AE	1LC6	1	1.4	32	CD	H	1V	3	6.3	24	B	CD
1F3	2	1.4	35	BCF	G		1	1.4	80	BEF	H	1V2*	1	6.3	76	(AHJ)	E
1F4	3	2	47	BCD	E	1LD5	1	1.4	32	BCF	H	Good tube reads above 20. H may not show short.					
1F5	2	2	36	CDE	G		1	1.4	95	D	H	1X2	4	1.4	67	N	ADFJ
1F6	1	2	37	BCN	F	Good tube reads above 20 on test 2.							4	1.4	67	N	BEH
	1	2	95	D	F	1LE3	2	1.4	37	BF	H	1Z2	4	1.4	85	N	BEG
	1	2	95	E	F							2A3	3	2.5	28	BC	D
1F7 (GV)	1	2	35	CFN	G	1LG5	2	1.4	35	BCF	DEH	2A4	3	2.5	25	E	G
	1	2	95	E	G	1LH4	1	1.4	26	BF	H		3	2.5	25	C	EG
	1	2	95	D	G		1	1.4	44	D	H	No short test.					
1FD1	1	1.4	32	DEF	CG	1LN5	2	1.4	40	BCDF	EH	2A5	3	2.5	36	BCD	EF
	1	1.4	53	C	G	1N2	4	1.4	75	N	GH	2A6	3	2.5	26	BN	EF
1FD9	1	1.4	25	DEF	G	1N5	1	1.4	27	CDN	G		1	2.5	40	C	EF
	1	1.4	55	C	G	1N6	2	1.4	38	CDE	G		1	2.5	40	D	EF
1G3	1	1.4	100	N	ACDEFGH		1	1.4	95	F	G	2A7	2	2.5	32	E	FG
Use G & N only for element test.						Good tube reads above 20 on test 2.							2	2.5	64	BCDN	FG
Good tube reads above 10.						1P1	1	1.4	23	BCF	E	2AF4*	2	2.35	21	(AG) (BF)	DE
1G4	1	1.4	30	CE	G	1P5	1	1.4	31	CDN	G	2AH2	4	2.5	76	N	ABEFGHL
1G5	2	2	39	CDE	G	1P10	2	1.4	35	BCDF	AG	2AS2	Due to varying arrangements of internal connections, this tube cannot be tested.				
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	69	N	ADFJ
1H4	2	2	41	CE	G	Good tube reads above 10.						2B3	2	2	40	N	B
1H5	1	1.4	33	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	2B5	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	ACFJ	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	36	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	CDH	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)						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	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	BO	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	26	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	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
2FG5	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	3D	3C6	2	1.4	40	CD	AH
2FS5*	3	2.5	20	AF	(BG)DE	1	3.15	43	E	3D	2	1.4	40	EF	AH		
2FV6	2	2.5	20	AEF	DG	1	3.15	43	F	3D	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	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						4BN6						1 4.2 36 BEFG AC																	
3CY5*	3	3.15	22	AEF	(BG)C	3GW5*	2	3.15	20	A(BF)	DE	Good tube reads above 23.						4BQ7						2 4.2 21 AB CD																	
3CZ3	4	3.15	44	N	B	3HA5	3	2.5	18	AE	BDG	2 4.2 21 FG DH						4BS8						2 4.2 22 AB CD																	
Good tube reads above 35.						Tube damaged if B or G is moved.						3HK5						2 4.2 22 FG DH						4BU8						1 4.2 22 BCFG AE											
3D6	2	1.4	30	BCF	AH	3HM5	3	3.15	18	AE	BDG	1 4.2 22 BGHJ AE						4BX8						1 5 19 AB CE																	
Good tube reads above 35.						Tube damaged if C or E is moved.						3HM6						1 5 19 FG EH						4BZ6						1 4.2 18 AEFG BC											
3DA3	4	3.15	40	N	CE	1 3.15 34 GJ ACE	3 3.15 19 BH ACE						No open element test of E & G.						4BZ7						2 4.2 21 FG DH																
Good tube reads above 35.						Tube damaged if A or C is moved.						3HQ5						2 4.2 20 AB CD						4BZ8						3 4.2 16 FG EH											
3DB3	4	3.15	54	N	B	2 3.15 24 BHJ AE	3 3.15 19 BH ACE						3 4.2 16 AB CE						4CB6						2 4.2 22 AEFG BC																
Good tube reads above 35.						Tube damaged if A or C is moved.						3HS8						No open element test on E.						4CE5*						2 4.2 20 AEF (BG)D											
3DC3	1	3.15	44	N	B	2 3.15 21 CFG AE	3 3.15 19 BGHJ ACE						4CM4*						3 4.2 19 (AJ)(BFH) CEG																						
Good tube reads above 25.						Tube damaged if B or G is moved.						3HT6						Tube damaged if C or G is moved.						4CS6						1 4.2 20 AF BC											
3DF3	4	3.15	40	N	C	1 3.15 34 GJ ACE	2 3.15 20 BCFG AE						1 4.2 28 EG BC						4CY5*						3 4.2 24 AEF (BG)C																
Good tube reads above 30. No short test.						Tube damaged if A or C is moved.						3JCB						2 4.2 21 AEFG BC						4DE6						2 4.2 21 AEFG BC											
3DG4	4	3.15	18	E	C	2 3.15 20 BCFG AE	3 3.15 19 BGHJ ACE						No open element test on E & G.						4DK6						3 4.2 22 AEF BCG																
Good tube reads above 35.						Tube damaged if A or C is moved.						3KF8						4DL4*						3 4.2 18 (ACFGJ)H BE																	
3DH3	4	3.15	40	N	CE	2 3.15 20 BCFG AE	3KT6						4DT6						1 4.2 20 AEFG BD																						
Good tube reads above 35.						Tube damaged if C or E is moved.						3LE4						2 4.2 21 BGHJ (AC)E						4EH7*						2 4.2 21 BGHJ (AC)E											
3DJ3	4	3.15	42	N	B	2 1.4 30 BCF AH	3LF4						2 4.2 21 BGHJ (AC)E						4EJ7*						2 4.2 21 BGHJ (AC)E																
Good tube reads above 20.						Tube damaged if A or C is moved.						3MP26						2 4.2 20 AB CE						4ES8						2 4.2 20 AB CE											
3DK6	3	3.15	22	AEF	BCG	2 3.15 20 AEF BD	3MR24						2 4.2 20 FG EH						4EW6						2 4.2 20 AEF BCG																
3DR3	4	3.15	40	N	CE	3 3.15 20 AEF BD	3MV7						No open element test on E & G.						4GJ7						2 4.2 19 HJ ACE																
Good tube reads above 35. No short test.						Tube damaged if A or C is moved.						3Q4						2 4.2 18 BFG ACE						2 4.2 18 BFG ACE						4GK5						3 4.2 19 BE ADG					
3DS3	4	3.15	40	N	CE	2 1.4 33 BCDF AG	3Q5						3 1.4 35 CDE BG						Tube damaged if A or G is moved.																						
Good tube reads above 35. No short test.						Tube damaged if A or G is moved.						3S4																													
3DT6	1	3.15	20	AEFG	BD	2 1.4 35 BCDF AG	3V4						2 1.4 28 BCF AG																												
3DZ4*	3	3.15	21	(AG)(BF)	DE	2 2 35 CD H	4A6						2 2 46 EF H																												
3E5	2	1.4	31	BCF	AG	2 4.2 22 ABEF DG	4AU6						2 4.2 22 ABEF DG																												
3E6	2	1.4	30	BCDF	AH	1 4.2 21 AG ED	4AV6						1 4.2 43 E ED																												
3EA5*	2	3.15	22	AEF	(BG)C	1 4.2 43 F ED	4BA6						2 4.2 23 ABEF EG																												
3EH7*	2	3.15	21	BGHJ	(AC)E	4BC5*						1 4.2 18 AEF (BG)C																													
3EJ7*	2	3.15	21	BGHJ	(AC)E																																				
3ER5*	2	2.5	20	BEF	(AG)D																																				
3EV5*	2	2.5	23	AEF	(BG)D																																				
3FH5	2	3.15	21	BE	ADG																																				
Tube damaged if A or G is moved.																																									
3FG5	3	3.15	20	BE	AGD																																				
Tube damaged if A or G is moved.																																									
3FS5*	3	3.15	19	AF	(BG)DE																																				

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	5BB	2	4.7	21	BC	AE
4GS7	3	4.2	19	FGJ	CEH								2	4.7	21	FHJ	ABCEG
	3	4.2	21	AB	CEH	4KT6	3	4.7	19	BGHJ	AGE	No open element test on J.					
Tube damaged if C or H is moved.						4LJ8	2	5	18	FGJ	CEH	5BC3*	3	5	26	(EF)	BC
4GS8	2	4.2	20	BCFG	AE								3	5	26	(HJ)	BC
	2	4.2	20	BGHJ	AE	Tube damaged if A or C is moved.						Tube damaged if B or C is moved.					
4GW5*	2	4.2	20	A(BF)	DE	4LU6	3	4.2	20	AEFG	BD	5BE8	2	4.7	20	AB	CE
4GX7	2	4.7	20	BFG	ACE	4MX8	2	4.2	20	BCFG	AE		2	4.7	20	FGJ	CEH
	3	4.7	21	HJ	ACE								2	4.7	21	FG	EH
Tube damaged if A or C is moved.						4MP12	3	4.7	22	AEF	BD	5BQ7	2	4.7	22	AB	CE
4GZ5*	3	4.2	19	(BE)F	ADG	4MP26	2	4.2	21	AEF	BC		2	4.7	22	FG	CD
4HA5	3	4.2	18	AE	BDG	4RHH2	2	4.2	21	AB	CD	5BR8	2	4.7	20	AB	DH
Tube damaged if B or G is moved.													2	4.7	20	FGJ	CE
4HA7	1	4.2	20	BL	CM	4RHH8	3	4.7	19	AB	CE						EH
	2	4.2	23	JK	DM							No open element test on F.					
4HC7*	1	4.2	20	BL	CM	4RHH15	3	4.2	22	FG	EH	5BS8	2	4.7	22	AB	CD
	2	4.2	23	(GK)J	DM								2	4.7	22	FG	DH
4HK5	3	4.2	18	AE	BDG	5A6	3	2.5	24	ACFGH	J	5BT8	3	4.7	22	FGH	DJ
Tube damaged if B or G is moved.						5AM8	1	4.7	18	BCFJ	AD		1	4.7	26	A	CD
4HM5	3	4.2	18	AE	BDG	No open element test on F & J.							1	4.7	26	B	CD
Tube damaged if B or G is moved.												5BW8	1	4.7	20	A	BE
4HM6	3	4.2	18	BH	ACE								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							5BZ7	2	4.7	20	AB	CD
4HO5	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.												5CQ8	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							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.						5AS8	3	4.7	22	ABJ	CD	5CM6*	3	4.7	21	A(CF)J	DG
4JC6	2	4.7	19	BGHJ	ACE							5CM8	2	4.7	24	AJ	DH
Tube damaged if A or C is moved.						5AT8	2	4.7	21	AB	CE		3	4.7	22	BFG	CD
4JD6	3	4.7	19	BH	ACEG							5CQ8	1	4.7	19	AJ	EH
Tube damaged if A or C is moved.													1	4.7	19	BCF	EG
4JH6	3	4.2	20	AFEG	BD	5AU4	3	5	30	F	H	5CR8	2	5	20	AJ	EH
4JK6	3	4.7	18	AF	BD								2	5	19	BFG	CE
	1	4.7	33	EG	BD	5AV8	2	4.7	22	FHJ	EG	5CZ5	1	4.7	21	ACFJ	EG
4JL6	3	4.7	18	AF	BD	No open element test on F.						5DHB	1	5	19	AB	CD
	1	4.7	32	EG	BD								2	5	20	FGJ	DH
4JW8	2	4.7	20	BCF	EG							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							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								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
													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)
6AF11	2	6.3	21	CD	GM	6AMB	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		2	6.3	20	(AG)(BF)	CE		2	6.3	21	GHJ	DF
No open element test on E.							3	6.3	17	AEF	(BG)D	No open element test on J.					
6AG7	3	6.3	17	DFH	EG	6AN4*	2	6.3	20	B	FG	6AV5	2	6.3	25	AEH	BC
6AG9	2	6.3	19	BDKL	JM	6AN5*	3	6.3	17	C	FG	6AV6	1	6.3	21	AG	SD
	2	6.3	20	EG	FM	6AN6	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	6AO5*	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	6AQ7	1	6.3	22	F	BC	6AX4	3	6.3	22	E	CH
6AH9*	3	6.3	19	(EF)HJL	GM		1	6.3	40	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	(ACDF)E	BH	6AQ8	2	6.3	21	A	BH	6AX6G	1	6.3	19	E	GH
6AJ5*	2	6.3	23	AEF	(BG)C		2	6.3	21	AB	CE		1	6.3	19	C	DG
6AJ8	2	6.3	22	ABFG	CE	6AR5	3	6.3	30	FG	EH	6AX7	1	3.15	20	AB	CDE
	2	6.3	23	HJ	CE	6AR6	3	6.3	20	AEF	BD		1	3.15	20	FG	DEH
6AK5*	2	6.3	22	AEF	(BG)C	6AR8	3	6.3	22	CEG	AH	6AX8	2	6.3	20	AJ	EH
6AK6	3	6.3	30	ABEF	CG	No open element test on B, C & J.							2	6.3	20	BCF	EG
6AK7	3	6.3	17	DFH	EG		3	6.3	22	BCFJ	EG	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	BD FM	6AY11	1	6.3	19	GH	JM
	1	6.3	40	F	DG		3	6.3	18	JK	GH LM		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	AFFG	BC		1	6.3	19	C	BM
	3	6.3	21	EHJ	GM	6AS7	3	6.3	16	AB	CH	6AZ6	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	FGPJ	CE		1	6.3	40	E	GH
6ALT1	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	(ACDF)E	BH	6AU5	3	6.3	22	AEH	CG		2	6.3	21	CD	BM
6AM5	1	6.3	22	AEC	BD	6AU6	2	6.3	22	A3EF	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	H	EJ	6BU8	1	6.3	22	BCFG	AE
6BC4*	1	6.3	20	(AJ)BCGH	EF		1	6.3	20	A	SE		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	A3	CE	6BW6*	3	6.3	26	(AB)GHJ	CE
6BD7	1	6.3	21	AB	CE	6BK8	2	6.3	22	A-J	CE	6BW8	1	6.3	20	A	BD
	1	6.3	46	H	CE	6BK11	1	6.3	20	B	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	JF	DM	6BW11	3	6.3	18	GKJL	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	CK	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	A	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	A	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	(EG)E	(AF)D		3	6.3	23	E	GH
6BE8	2	6.3	20	AB	CE	6BN6	1	6.3	36	BFG	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	A3	BDEF		1	6.3	20	F	CE	No element or short test on A & C.					
	1	6.3	39	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	GKL	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	DEJ	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	4	6.3	0	AB	D						
6BG6	3	6.3	24	EHN	CG	Eye CL	4	6.3	0	AB	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)
6BZ6	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	6CH5	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	24	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	BGH	6DB5*	3	6.3	20	A(CF)J	(BG)D
6CA5	3	6.3	22	B.EFG	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	GH
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	3.3	21	E	CH	6DE7	2	6.3	26	FG	DH
6CC42	2	6.3	23	CD	BFGHJ	6CQ8	1	3.3	19	AJ	BH		3	6.3	22	ABC	DJ
	2	6.3	23	FG	BCDHJ		1	3.3	19	BCF	EG	6DG6	3	6.3	20	CDE	GH
6CC43	2	6.3	21	A3	CE	6CR6	2	3.3	23	EFG	AD	6DJ8	2	6.3	21	FG	EH
	2	6.3	21	FG	EH		1	3.3	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	ENN	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	DI	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	(ACFG)H	BE
No open element test on E.						6CT3*	3	6.3	18	(BF)	E	6DL5*	3	6.3	23	(AG)EF	BD
6CF6	2	6.3	22	AEFG	BC	6CU5	3	6.3	18	B.EFG	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	AHJ	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.					
6GG7	2	6.3	23	AE	CD	6CW4	1	6.3	18	BD	HN	6DL8	1	6.3	40	A	EH
	2	6.3	23	FG	DH	6CWS*	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	6EAB	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
6DQ3	3	6.3	32	DE	FG	3	6.3	38	B	DE	6EZ8	1	6.3	20	BC	AD	
6DQ4	3	6.3	18	(DK)	GM	6EB8	1	6.3	20	BC	AE	1	6.3	20	FG	D	
6DQ5*	1	6.3	22	E	CH	2	6.3	22	GHJ	EF	1	6.3	20	HJ	D		
6DQ6	3	6.3	19	(AE)(DH)N	(CF)G	6EC4*	3	6.3	19	(BGH)	EN	6F5	1	6.3	20	DN	GH
6DR4*	1	6.3	20	(AE)F	DG	6ED4	1	6.3	26	HN	ABCEFGJ	6F6	3	6.3	32	CDE	GH
6DR7	1	6.3	19	FG	EH	Tube damaged if ABCEFG or J is moved.						6F7	3	6.3	43	BCN	FG
3	6.3	16	ABC	EJ	6EF6	4	6.3	18	CDE	GH	6F8	3	6.3	82	DE	FG	
6DS4	1	6.3	18	BD	HM	6EH4	1	6.3	28	FN	BEJLM	2	6.3	24	CN	DG	
6DS5	1	6.3	19	AEEG	BD	Tube damaged if BEJ or L is moved.						2	6.3	24	EF	GH	
6DS8	3	6.3	22	ABFG	CD	6EH5	3	6.3	20	BEFG	AD	6F10	3	6.3	21	DFH	CEG
2	6.3	23	HJ	CD	6EH7*	2	6.3	21	BGHJ	(AC)E	No open element test on C & H.						
6DT3*	3	6.3	20	(DK)	GM	6EH8*	3	6.3	20	BC	(AF)E	6F19	1	6.3	22	BGHJ	ACE
6DT4*	3	6.3	24	(AE)	CH	3	6.3	20	GHJ	(AF)E	Tube damaged if A or C is moved.						
6DT5	3	6.3	22	ACFJ	EG	No open element test on J.						6F22	1	6.3	20	AFHJ	CE
6DT6	1	6.3	20	AEEG	BD	6EJ4	1	6.3	26	FN	EM	6F26	1	6.3	22	BGHJ	ACE
6DT8	3	6.3	20	AB	CE	6EJ7*	3	6.3	18	BGHJ	(AC)E	Tube damaged if A or C is moved.					
3	6.3	20	FG	EH	6EL4	1	6.3	30	EN	ABCDHF	6F29*	2	6.3	21	BGHJ	(AC)E	
6DU3*	3	6.3	18	(DK)	GM	No element tests.						6F30	2	6.3	21	BGHJ	ACE
6DV4	2	6.3	19	ABDF	GM	6EM5	3	6.3	18	ACFJ	EG	Tube damaged if A or C is moved.					
6DW4	3	6.3	20	BG	EJ	6EM7	3	6.3	19	AB	CH	6F33	2	6.3	25	AEEG	BC
6DW5	1	6.3	22	ACFJ	EG	1	6.3	20	DE	FH	6F35	2	6.3	23	AEF	BGC	
6DX8	2	6.3	20	AB	CE	6EN4*	1	6.3	27	(EF)N	ABCDH	Tube damaged if B or G is moved.					
3	6.3	20	HJ	EFG	No short test.						6FA7	2	6.3	24	AGH	DF	
6DY5	3	6.3	20	BGJ	CE	6EQ7	1	6.3	34	H	CE	2	6.3	24	GHJ	DF	
6DY7	3	6.3	22	ACD	GH	Good tube reads above 25.						1	6.3	46	C	DF	
3	6.3	22	DEF	GH	2	6.3	22	ABFG	CE	6FD6	1	6.3	19	ABEF	DG		
H normally shows leakage.						6ER5*	2	6.3	20	BEF	(AG)D	6FD7*	1	6.3	21	FG	EH
6ZD4*	3	6.3	21	(AG)(BF)	DE	6ES5*	3	6.3	21	BE	(AG)D	3	6.3	18	A(BG)	EJ	
6DZ7	3	6.3	22	ACD	GH	6ES6	3	6.3	21	AEF	BCG	6FE5	3	6.3	22	CDE	BH
3	6.3	22	DEF	GH	6ES8	2	6.3	20	AB	CE	6FG5*	3	6.3	20	AEF	(BG)C	
No open element test on C & F.						2	6.3	20	FG	EH	No open element test on E.						
6DZ8	1	6.3	20	AJ	EH	6ET6	3	6.3	20	AEF	BCG	6FG6	1	6.3	28	AJ	CE
3	6.3	20	CFG	BE	6ET7	3	6.3	20	GHJ	EF	4	6.3	100	BFGH	CE		
6E5	2	6.3	36	BC	EF	No open element test on J.						Good tube reads above 6.					
Eye OP	4	6.3	0	D	BCEF	1	6.3	56	B	AE	6FG7*	2	6.3	19	AB	(CH)E	
Eye CL	4	6.3	0	BD	CEF	1	6.3	56	C	AE	3	6.3	19	GJ	(CH)EF		
6E6	3	6.3	31	BC	DG	6EU7	2	6.3	24	EF	BD	6FH5*	2	6.3	21	BE	(AG)D
3	6.3	31	EF	DG	6EUB	2	6.3	24	GH	BJ	6FH6	3	6.3	15	DEN	GH	
6E7	2	6.3	28	BCA	DFG	2	6.3	19	AGJ	EH	6FH8	2	6.3	33	AGHJ	D	
6E8	2	6.3	31	EF	GH	2	6.3	19	BC	EF	2	6.3	20	BC	D		
2	6.3	40	CDN	GH	6EV5	2	6.3	22	AEF	(BG)D	1	6.3	18	F	D		
6EA4	1	6.3	28	FN	BEJLM	6EV7	2	6.3	23	AB	CE	6FJ7	2	6.3	25	KL	JM
Tube damaged if BEJ or L is moved.						2	6.3	23	FG	EH	3	6.3	21	CE	GM		
6EA5*	2	6.3	22	AEF	(BG)C	6EW6	2	6.3	20	AEEG	BD	6FM7*	3	6.3	19	(CH)E	GM
6EA7	1	6.3	22	DE	FH	3	6.3	19	ABC	EJ	1	6.3	20	KL	JM		
3	6.3	20	AB	CH	6EW7	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	CEEF
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(C)JE		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	19	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
6FW6	3	6.3	20	AEH	CG		3	6.3	19	GH	EFJ		1	6.3	24	(C)G	AE
6FY5	2	6.3	20	BE	ADG	6GO7	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	ACE
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	BCG	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	FG	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(B)F	DE	Tube damaged if D or K is moved.					
Tube damaged if C or H is moved.						6GW6	3	6.3	20	DEH	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
6GD7*	3	6.3	19	AB	(CH)E		3	6.3	21	HJ	(AC)E	6HK5	3	6.3	18	AE	BDG
	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	E(CL)G	(DK)M	6GY8	1	6.3	25	AB	E	6HL8	2	6.3	20	AJ	EH
6GF7	3	6.3	18	EF	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	6HMS	3	6.3	18	AE	BDG
6GH8	2	6.3	17	ECF	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	6HMS	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	6JY8	2	6.3	20	ABFG	CE	
6HR5*	3	6.3	26	(AG)EF	BD	6JD6	3	6.3	19	BH	ACEG	6JZ6*	3	6.3	18	(DK)CEN	BM	
6HR6	3	6.3	18	ABEF	DG	No element or short test on A & C.						6JZ8*	3	6.3	20	D(FG)H	JM	
6HS5*	3	6.3	18	(BL)(CK)G	DM	6JE6*	3	6.3	17	•	CE	6K5	1	6.3	20	CN	GH	
6HS6	1	6.3	19	A	DG	•(AG)(BF)HN						6K6	3	6.3	34	CDE	GH	
	1	6.3	21	BEF	DG	6JE8	2	6.3	20	BC	AE	6K7	2	6.3	32	CON	EGH	
6HS8	2	6.3	24	BHJ	AE	3	6.3	19	GHJ	EF		6K8	1	6.3	20	DE	GH	
	2	6.3	21	CFG	AE	6JF6*	3	6.3	18	•	CE	1	6.3	20	EF	GH		
6KT5	1	6.3	40	FN	M	•(AG)(BF)HN						1	6.3	39	CN	GH		
6HU6*	1	6.3	22	AJ	CE	6JG5	3	6.3	19	GHJ	DF	6K11	2	6.3	23	JK	DM	
	4	6.3	100	(BFH)G	CE	6JG6*	3	6.3	18	(AG)BJ	ECF	1	6.3	20	BL	CM		
Good tube reads above 8.						6JH5*	3	6.3	20	•	DM	1	6.3	20	EG	FM		
6HU8	3	6.3	21	ABC	EG	•(BL)(CK)(GH)						6KA8	3	6.3	19	FGHJ	CE	
	3	6.3	21	FRJ	EG	6JH6	3	6.3	18	AF	BD	2	6.3	21	AB	CE		
6HV5*	3	6.3	20	(BL)(CK)G	DM	1	6.3	48	EG	BD		6KD6*	2	6.3	17	•	BM	
6HW8	3	6.3	22	CF	ABEGHJ	6JH8	2	6.3	35	ABCJ	DG	•(CL)(DK)(E)N						
6HZ5*	3	6.3	18	(BL)(CK)G	DM	3	6.3	23	CF	DG		6KD8	2	6.3	20	BCF	EG	
6HZ6	2	6.3	20	AEEG	BD	6JK5*	3	6.3	20	•	DM	No open element test on F.						
6HZ8	2	6.3	21	BC	AE	•(BL)(CK)(GH)						2	6.3	20	AJ	EH		
	3	6.3	19	GH	EFJ	6JK6	3	6.3	18	AF	BD	6KE8	2	6.3	18	AJ	EH	
6J4	2	6.3	20	AEEG	BD	1	6.3	33	EG	BD		2	6.3	18	BCF	EG		
6J5	2	6.3	24	CE	GH	6JK8	2	6.3	19	AB	CE	6KF8	2	6.3	20	BGHJ	AE	
6J6	1	6.3	18	AF	DG	2	6.3	20	FG	EH		2	6.3	20	BCFG	AE		
	1	6.3	18	BE	DG	6JL6	3	6.3	18	AF	BD	6KG6*	4	6.3	21	•	EJ	
6J7	2	6.3	29	CDN	AEGH	1	6.3	32	EG	BD		•(AH)(BG)(CF)N						
6J8	2	6.3	25	CDN	GH	6JM6	3	6.3	20	CEN	BDKM	6KH8	3	6.3	24	AB	DG	
	2	6.3	25	EF	GH	Tube damaged if D or K is moved.						3	6.3	20	BCJ	DG		
6J9	2	6.3	20	AB	CE	6JN6	3	6.3	20	CGL	BDKM	3	6.3	20	FHJ	DG		
	2	6.3	20	FJ	EK	Tube damaged if D or K is moved.						6KL8	1	6.3	48	H	CE	
	2	6.3	20	GH	EK	6JN8	3	6.3	19	AB	CE	2	6.3	20	ABFG	CE		
6J10	4	6.3	68	DEFG	HM	3	6.3	20	GJ	EFH		6KM6*	3	6.3	18	•	CE	
	3	6.3	20	BJL	CM	6JQ6*	3	6.3	20	A(BC)(GH)	DJ	•(AG)(BF)HN						
6J11	3	6.3	18	BE	CDFM	1	6.3	23	F	DJ		6KMB*	1	6.3	48	C	EF	
	3	6.3	18	GL	HJKM	6JR6*	3	6.3	18	(AG)BJ	CEF	2	6.3	20	GH	EF		
6JA5*	3	6.3	21	(BJ)(CK)F	DLM	6JS6*	3	6.3	18	(CL)(E)N	BDKM	1	6.3	30	ABJ	EF		
Tube damaged if D or L is moved.						Tube damaged if D or K is moved.						6KN6*	3	6.3	17	•	BM	
6JA8	2	6.3	20	BC	AE	6JT6*	3	6.3	20	(AG)BFJ	CE	•(CL)(DK)(E)N						
	3	6.3	19	GH	EFJ	6JT8	3	6.3	18	GH	EFJ	6KN8	3	6.3	19	AB	CE	
6JB5*	3	6.3	21	(BJ)(CK)F	DLM	1	6.3	19	BC	AE		3	6.3	19	FG	EH		
Tube damaged if D or L is moved.						6JU6*	3	6.3	17	•	CE	6KR8	3	6.3	20	BC	AE	
6JB6*	3	6.3	19	•	CE	•(AG)(BF)HN						3	6.3	20	GHJ	EF		
						6JU8	3	6.3	22	GH	EJ	6KS8	1	6.3	20	BC	AE	
6JC5*	3	6.3	21	(BJ)(CK)F	DLM	3	6.3	22	G	EH		3	6.3	19	GH	EFJ		
Tube damaged if D or L is moved.						3	6.3	22	AB	CE		F may show leakage.						
6JC6	2	6.3	19	BGHJ	ACE	3	6.3	22	A	BE		6KT8	3	6.3	19	BFHJ	ACE	
No element or short test on A & C.						6JV8	3	6.3	18	GH	EFJ	Tube damaged if A or C is moved.						
6JC8*	2	6.3	20	BCF	(AG)E	1	6.3	19	BC	AE								
No open element test on F.						6JW8	2	6.3	21	AJ	EH							
						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	6LU6*	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				
6KY5*	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	6MU8	2	6.3	22	AJ	EH				
6LB6*	3	6.3	18	*	BM	6M8	2	6.3	26	CDN	AG		2	6.3	21	BCF	EG				
	*(CL)(DK)(EJ)						2	6.3	26	EF	AG	6MV8	3	6.3	19	GH	EFJ				
6LB8	3	6.3	18	GH	EFJ		1	6.3	34	H	AG		1	6.3	20	BC	AE				
	2	6.3	25	BC	AE	6M11	2	6.3	19	GH	JM	6MX8	3	6.3	20	BFG	CE				
6LC8	2	6.3	20	AB	CE		2	6.3	19	EF	DM		1	6.3	26	HJ	AE				
C should show short when tube is heated. Sec. 1.							3	6.3	18	BC	KLM	6MY8*	3	6.3	19	D(FG)H	JM				
	2	6.3	20	FHJ	CEG	6MA6	2	6.3	38	FN	GH		1	6.3	19	BK	LM				
6LD6*	2	6.3	21	B(CJ)(FH)G	AD	6MB6*	3	6.3	18	(CL)(EJ)N	BDKM	6N3	3	6.3	21	J	CD				
6LE8	2	6.3	19	AHJ	BCE	Tube damaged if D or K is moved.					6N4*	2	6.3	24	(AG)E	(BF)D					
	2	6.3	19	FHJ	CEG	6MB8	3	6.3	19	GJ	EFH	6N5	1	6.3	37	BC	EF				
6LF6*	3	6.3	18	*	BM		3	6.3	21	AB	CE	Eye CL	4	6.3	0	BD	CEF				
	(CL)(DK)(EJ)N					6MC6	3	6.3	18	*	CD	Eye OP	4	6.3	0	D	BCEF				
6LF8	1	6.3	20	BC	AE		*(AG)(BF)HN			6MD8	2	6.3	20	AJ	EG	6N6	3	6.3	61	DE	CGH
	3	6.3	20	GHJ	EF		2	6.3	20	BH	EG		3	6.3	41	CE	DGH				
6LG6*	3	6.3	20	(CL)(EJ)N	DKM		2	6.3	20	CF	EG	6N7	3	6.3	29	EF	GH				
Tube damaged if D or K is moved.						6ME5	2	6.3	29	AB	DG		3	6.3	29	CO	GH				
6LH6	1	6.3	26	EN	FG	Eye CL	4	6.3	0	BE	ADG	6N8	1	6.3	22	ABF	CD				
6LJ6	1	6.3	28	EN	FG	Eye OP	4	6.3	0	E	ABDG		1	6.3	45	G	CD				
6LJ8*	3	6.3	19	GJ	(CH)EF	6ME6*	3	6.3	20	*	CE		1	6.3	45	H	CD				
	3	6.3	21	AB	(CH)E	*(AG)(BF)HN					6P5	2	6.3	30	CE	GH					
6LMB	3	6.3	18	BCF	EG	6ME8	3	6.3	21	CFKJ	AEEG	6P7	2	6.3	32	DEN	BH				
	3	6.3	18	AJ	EH	6MF8*	3	6.3	19	D(FG)H	JM		3	6.3	70	FG	BH				
6LN8	3	6.3	21	AJ	EH		1	6.3	19	BK	LM	6PL12	1	6.3	20	AJ	EH				
	3	6.3	20	BCF	EG	6MG8	3	6.3	20	BCF	EC		1	6.3	20	CFG	BE				
6LQ6*	3	6.3	17	*	CE		3	6.3	20	AJ	EF	6Q4	2	6.3	21	ABGHJ	CD				
	(AG)(BF)HN					6MH1	2	6.3	20	(AE)G	BC	6Q5	4	6.3	20	CE	GH				
6LQ8	3	6.3	18	BC	AE	6HM6*	3	6.3	18	*	BA	6Q6	1	6.3	20	CN	GH				
	3	6.3	18	GHJ	EF	*(CL)(DK)(EJ)						1	6.3	90	E	GH					
6LR6*	3	6.3	17	(CL)(EJ)N	BDKM	6MHH3	2	6.3	22	BE	CC	6Q7	1	6.3	21	CN	GH				
Tube damaged if D or K is moved.							2	6.3	22	AF	CC		1	6.3	47	E	GH				
6LR8	3	6.3	19	BFG	CE	6MJ6*	3	6.3	19	*	CE	6Q8	2	6.3	31	EF	GH				
	1	6.3	19	HJ	AE	*(AG)(BF)N						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	GEG		2	6.3	22	B	CE
	3	6.3	37	CN	GH	6ST7	2	6.3	28	BF	CG		2	6.3	65	J	CE
6R8	1	6.3	20	A	EG		1	6.3	95	D	CG	6W4	3	6.3	18	E	CH
	1	6.3	20	F	EG		1	6.3	95	E	CG	6W5	3	6.3	25	C	GH
	2	6.3	25	B	CE	6SU7	2	6.3	25	AB	CDEFH		3	6.3	25	E	GH
	2	6.3	30	HJ	EG		2	6.3	25	DE	ABCFH	6W6	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
6RHH6	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						
6S4	3	6.3	24	CFJ	BE	6T6M	2	6.3	22	CDN	GH						
6S6	3	6.3	24	ADN	GH	6T7	1	6.3	20	CN	GH		2	6.3	20	GHJ	AEF
6S7	2	6.3	26	CDN	EGH		1	6.3	40	D	GH	6Y3G	4	6.3	47	N	G
6S8	1	6.3	28	FN	BG		1	6.3	40	E	GH	6Y5	3	6.3	28	C	DF
	1	6.3	40	A	BG	6T8	3	6.3	32	HJ	CEG		3	6.3	26	E	DF
	1	6.3	40	D	BG		1	6.3	20	F	CEG	6Y6	3	6.3	19	CDE	GH
	1	6.3	40	C	EG		1	6.3	20	B	CEG	6Y7	3	6.3	33	CD	GH
6S78	2	6.3	21	AB	CG		1	6.3	20	A	CEG		3	6.3	33	EF	GH
	2	6.3	21	DE	FG	6T9	3	6.3	20	HKL	JM	6Y10	3	6.3	20	HKL	JM
6SA7	2	6.3	28	CDH	AFG		1	6.3	19	BD	EM		2	6.3	20	CEFG	BM
	2	6.3	24	DE	FGH	6T10	3	6.3	19	HK	JLM	6Z3	3	6.3	24	B	CD
6SB7Y	2	6.3	22	DE	AFG		1	6.3	21	CEFG	BM	6Z4	3	6.3	26	B	DE
	1	6.3	34	CDK	EFG	6U3	3	6.3	17	J	CD		3	6.3	26	C	DE
6SC7	3	6.3	33	BC	FG	6U4	3	6.3	18	E	CG	6Z5	3	6.3	25	C	BOF
	3	6.3	38	DE	FG	6U5	2	6.3	34	BC	EF	(12Z5)	3	6.3	25	E	BDF
6SD7	3	6.3	23	DFH	CEG	Eye CL	4	6.3	0	BD	CEF	6Z7	3	6.3	32	CD	GH
6SE7	2	6.3	23	DFH	CEG	Eye OP	4	6.3	0	D	BCEF		3	6.3	32	EF	GH
6SF5	1	6.3	20	CE	BG	6U6	3	6.3	24	CDE	GH	6Z10	3	6.3	20	BJL	CM
6SF7	1	6.3	40	E	CG	6U7	2	6.3	30	CDN	EGH		4	6.3	56	DEFG	HM
	3	6.3	30	BDF	CG	6U8	2	6.3	22	BCF	EG	6ZY5	3	6.3	36	C	GH
6SG7*	3	6.3	19	DFH	(CE)G								3	6.3	36	E	GH
6SH7*	2	6.3	20	DFH	(CE)G		2	6.3	22	AJ	EH	7A4	2	6.3	24	BF	GH
6SJ7	2	6.3	27	DFH	CEG	6U10	1	6.3	20	EG	FM	7A5	3	6.3	23	BCF	GH
6SK7	3	6.3	30	DFH	CEG		2	6.3	23	JK	DM	7A6	1	6.3	28	C	BH
6SL7	3	6.3	28	DE	FG		2	6.3	23	BL	CM		1	6.3	28	F	GH
	3	6.3	28	AE	CG	6V3	3	6.3	16	BGJ	EN	7A7	3	6.3	26	BCF	DGH
6SN7	2	6.3	26	DE	FG	6V4	3	6.3	26	A	CE	7A8	2	6.3	35	CD	GH
	2	6.3	26	AE	CG		3	6.3	26	G	CE		2	6.3	44	BEF	GH
												7A87*	3	6.3	26	ACE	(DFH)G

No open element test on J.

No open element test on F.

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	7GB	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	26	FG	DEH	7HG8*	3	7.5	18	BJ	(AC)EH	8BB	3	7.5	24	BC	AD
	2	3.15	25	AB	CDE		3	7.5	20	FG	(AC)E	8BB	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	8B10	2	9.45	21	CD	BM
	1	6.3	58	E	(DG)H		1	6.3	39	E	GH	8BA8	1	9.45	20	K	JM
	1	6.3	58	F	(DG)H	7KY6*	1	6.3	39	F	GH	8BA8	1	9.45	20	H	JM
7B7	2	6.3	28	BCF	DGH	7KZ6*	3	7.5	17	B(CJ)GH	AE	8BA8	2	7.5	20	GHJ	EF
7B8	2	6.3	28	CD	GH	7L7	3	7.5	18	B(CJ)GH	AE	8BA11	1	7.5	18	BC	AE
	2	6.3	34	BEF	GH	7MP18*	2	6.3	26	BCF	DGH	8BA11	2	7.5	22	JL	KM
7C4	2	6.3	33	D	GH	7N7	3	7.5	20	(AG)EF	BC	8BA11	2	7.5	22	DFG	HM
7C5	3	6.3	29	BCF	GH		2	6.3	26	CD	BH	8BA11	2	7.5	22	BCE	HM
7C6*	3	6.3	33	BC	(EG)H	7O7	2	6.3	26	EF	GH	8BH8	2	7.5	23	GHJ	EF
	1	6.3	40	E	(DG)H		2	6.3	25	CD	GH	8BH8	1	7.5	20	BC	AE
	1	6.3	40	F	(DG)H	7R7	2	6.3	41	BEF	GH	8BM11	3	7.5	21	BCDF	EM
7C7	1	6.3	22	BC*	DGH		2	6.3	22	BEF	GH	8BM11	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	8BN8	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	8BN11	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	8BQ11	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	8BU11	3	7.5	18	FG	EM
7E5*	2	6.3	34	(AE)(CG)	(DF)H		3	6.3	20	F	GH	8BU11	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	(CG)H		1	6.3	20	E	DGH	8CB11	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	8CG7	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	8CM7	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	8CN7	3	7.5	20	A	CDE
	2	7.5	20	FG	DH		3	7.5	20	BCF	EG	8CS7	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	8CS7	2	7.5	26	FG	DH
	1	6.3	20	EF	GH		1	9.45	19	B	CM	8CW5*	3	7.5	20	(AB)(FGH)J	CE
7F8	2	6.3	22	AC	DG	8AC10	3	7.5	20	BL	CM	A, F or H is not used in some tubes.					
	2	6.3	22	FH	EG		3	7.5	20	EG	FM	8CX8	1	7.5	19	GHJ	DF
							3	7.5	20	JK	DM	8CX8	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
8DB	1	6.3	21	AFHJ	CE	8LSB*	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	9JW8	2	9.45	21	AB	CE
8DX8	2	7.5	20	AB	CE		1	7.5	18	F	EG		2	9.45	20	BCF	EG
	3	7.5	20	HJ	EFG		3	7.5	19	BCJ	AE	9KC6	3	9.45	23	FGJ	AE
8EB8	2	7.5	22	GHJ	EF	8MD8	2	7.5	20	AJ	EG	9KG6*	4	9.45	21	•	EJ
	1	7.5	20	BC	AE		2	7.5	20	BH	EG	*(AH)(BG)(CF)K					
8EM5	3	9.45	18	ACFG	EG		2	7.5	20	CF	EG	9KX6*	3	9.45	18	B(CJ)GH	AE
8ET7	1	7.5	56	C	AE	8MU8	2	7.5	22	AJ	EH	9KZ8	3	9.45	20	BGF	CE
	1	7.5	56	B	AE		2	7.5	21	BCF	EG		3	9.45	19	AJ	EH
	3	7.5	20	GHJ	EF	8MV8	3	7.5	19	GH	EFJ	9LA6*	3	9.45	19	B(CJ)GH	AE
No open element test on J.							1	7.5	20	BC	AE	9MD8	2	9.45	20	AJ	EG
8FE5	3	7.5	22	CDE	BH	8RHP1	2	7.5	22	AJ	EH		2	9.45	20	BH	EG
8FQ7	2	7.5	23	FG	EH		3	7.5	20	CFG	BE	9MH3	2	9.45	20	CF	EG
	2	7.5	23	AB	CE	8SN7	2	7.5	26	AB	CG		2	9.45	22	BE	CG
8FY7	3	7.5	19	CE	GM		2	7.5	26	DE	FG		2	9.45	22	AF	CG
	1	7.5	21	KL	JM	9A8	3	9.45	18	AJ	EH	9ML8	2	9.45	20	CF	EG
8GJ7*	3	9.45	21	HJ	(AC)E		2	9.45	20	BCF	EG		2	9.45	20	BH	EG
	3	9.45	19	BG	(AC)EF	9AH9*	3	9.45	28	BC	DM		2	9.45	20	AJ	EG
8GN8	3	7.5	19	GH	EFJ		3	9.45	19	(EF)HJL	GM	9MN8	3	9.45	22	BL	CM
	1	7.5	19	BC	AE	9AK10	3	9.45	20	BL	CM		3	9.45	22	DK	CM
8GU7	3	7.5	22	FG	EH		3	9.45	20	EG	FM		3	9.45	22	FH	CM
	3	7.5	22	AB	CE	9AM10	3	9.45	20	JK	DM	9MP12	3	9.45	22	AEF	BD
8HA6*	3	7.5	19	BG(FH)	ACEJ		3	9.45	20	EG	FM	9RA6*	3	9.45	22	(BG)J	AE
Tube damaged if C or J is moved.							3	9.45	20	BL	CM	9RAL1*	2	9.45	20	(BC)	EJ
8JEB	2	7.5	20	BC	AE	9AQ8	1	9.45	18	AB	CD		2	9.45	24	FG	EH
	3	7.5	19	GHJ	EF		1	9.45	18	FG	DH	9U8	2	9.45	22	BCF	EG
8JT8	3	7.5	18	GH	EFJ	9AU7	2	4.7	25	FG	DEH		2	9.45	22	AJ	EH
	1	7.5	19	BC	AE		2	4.7	25	AB	CDE	9XB	2	9.45	20	GHJ	AEF
8JU8	3	7.5	22	GH	EJ	9BJ11	3	9.45	18	BCDF	EM		2	9.45	21	BC	EF
	3	7.5	22	G	EH		3	9.45	18	GHJL	KM	No open element test on J.					
	3	7.5	22	AB	CE	9BR7	2	5	21	G	DEH	10	3	7.5	56	BC	D
	3	7.5	22	A	BE		2	5	21	F	DEH	10AF11	3	9.45	20	KL	BJM
8JV8	3	9.45	18	GH	EFJ		2	5	18	AB	CDE		2	9.45	21	FH	EM
	1	9.45	19	BC	AE	9CL8	2	9.45	22	AB	CD		2	9.45	21	CD	GM
8K11	2	7.5	23	JK	DM		2	9.45	22	FGJ	DH	10AL11	3	9.45	20	HKL	JM
	1	7.5	20	BL	CM	9DK3*	3	9.45	18	(BG)	DN		1	9.45	19	CDFG	BM
	1	7.5	20	EG	FM	9DZ8	1	9.45	20	AJ	EH	10BQ5	3	9.45	22	ABGJ	CD
8KA8	3	9.45	19	FGHJ	CE		3	9.45	20	CFG	BE	10C8	2	9.45	24	FGH	EJ
	2	9.45	21	AB	CE	9EA8	2	9.45	20	BCF	EG		1	9.45	22	AB	CE
8KR8	3	7.5	18	GHJ	EF		2	9.45	20	AJ	EH	10CW5*	3	9.45	20	(AB)(FGH)J	CE
	3	7.5	18	BC	AE	9ED4	1	7.5	26	HN	ABCEFGJ	A, F or H is not used in some tubes.					
8KS8	3	7.5	19	GH	EFJ	Tube damaged if ABCEFG or J is moved.						10DE7	3	9.45	22	ABC	DJ
	1	7.5	20	BC	AE	9EF6	1	9.45	17	CDE	BH		2	9.45	26	FG	DH
8LC8	2	7.5	20	AB	CE	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
	2	7.5	20	FHJ	CEG	9GH8	2	9.45	17	AJ	EH	10DX8	3	9.45	20	HJ	EFG
C should show short when tube is heated, Sec. 2.							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	CPG	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(C)JE	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	
10HFB	3	9.45	19	GH	EFJ	11CF11	3	12.6	19	CDE	FM		2	12.6	21	FH	EM	
	1	9.45	19	BC	AE		3	12.6	19	BL	GM		2	12.6	21	CD	GM	
10JAS*	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	
10KRB	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	6	1*	B(C)GH	ADE	12AL5	1	12.6	22	G	AD	
10KU8	1	7.5	38	C	AE	11JE8	3	12.6	19	GHJ	EF		1	12.6	22	B	DE	
	1	7.5	38	B	AE		2	12.6	20	BC	AE	12AL8	1	12.6	38	BF	CEG	
	3	7.5	17	GHJ	EF	11KV8	3	12.6	18	GHJ	EF		1	12.6	22	A	EJ	
10L14	2	25	21	FG	EH		2	12.6	20	BC	AE	12AL11	3	12.6	20	HKL	JM	
	2	25	21	AB	CE	11LQ8	3	9.45	18	BC	AE		1	12.6	21	CDFG	BM	
10LBB	3	9.45	18	GH	EFJ		3	9.45	18	GHJ	EF	12AQ5*	3	12.6	32	(AG)EF	BD	
	2	9.45	25	BC	AE	11LT8	1	12.6	18	H	GE	12AS5	3	12.6	19	BEFG	AD	
10LD6*	2	9.45	21	•	AD		1	12.6	18	F	GE	12AT6	3	12.6	26	AG	BC	
							3	12.6	18	BCJ	AE		1	12.6	35	F	BC	
						11LY6*	3	9.45	18	B(C)GH	AE		1	12.6	35	E	BC	
10LE8	2	7.5	19	AHJ	BCE	11MS6	3	9.45	20	FGJ	EH	12AT7	2	6.3	24	FG	HJ	
	2	7.5	19	FHJ	CEG		2	9.45	2*	AB	CE		2	6.3	24	AB	CJ	
10LMB	3	9.45	20	BCF	EG	11R3*	2	9.45	22	(BJ)	DN	12AU6	2	12.6	22	ABEF	DG	
	3	9.45	21	AJ	EH	12A	2	5	28	BC	D	12AU7	2	6.3	25	FG	DEH	
10LWB	1	9.45	19	BC	AE	12A4	2	6.3	20	BGJ	ADE		2	6.3	25	AB	CDE	
	3	9.45	20	GHJ	EF	12A5	3	6.3	32	BCD	EF	12AV5	3	12.6	18	AEH	BC	
10LY8	3	9.45	18	GHJ	EF	12A6	3	12.6	32	CDE	GH							
	1	9.45	18	BC	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)
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	12DL8	1	12.6	20	CFG	BE
	1	12.6	21	AG	BD		2	6.3	21	A,B	CDE	12DL8	1	12.6	40	A	EH
12AV7	2	6.3	21	FG	DEH	12BS3*	2	12.6	20	(BG)	EJ	12DM4	3	12.6	22	E	CH
	2	6.3	22	AB	CDE	12BT3	3	12.6	21	DK	GM	12DQ5	3	12.6	23	DEN	GH
12AW6	2	12.6	22	AEFG	BD	12BT6	1	12.6	22	AG	BC	12DQ7	3	12.6	22	BCGHJ	AE
No open element test on E.							1	12.6	29	E	BC	12DS7	1	12.6	40	J	EH
12AX3	3	12.6	23	DK	GM		1	12.6	29	F	BC	12DT5	3	12.6	24	ACFJ	EG
12AX4	3	12.6	22	E	CG	12BV7*	3	6.3	20	BGH	A(CJ)DE	12DT6	1	12.6	20	AEFG	BD
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	12DT7	1	6.3	20	AB	CDE
12AY3	3	12.6	22	BG	EJ	12BW4	4	12.6	20	G	EJ		1	6.3	20	FG	DEH
J may show leakage.							4	12.6	20	A	EJ	12DT8	2	12.6	21	FG	EH
12AY7	1	6.3	22	FG	DEH	12BY7*	3	6.3	22	BGH	A(CJ)DE	12DV7	1	6.3	22	FG	DEH
	1	6.3	22	AB	CDE	No open element test on G.							1	6.3	67	B	ADE
12AZ7	1	6.3	20	FG	DEH	12BZ6	1	12.6	18	AEFG	BC	12DV8	1	12.6	20	CFG	BE
	1	6.3	20	AB	CDE	No open element test on E & G.							1	12.6	35	A	EH
12B4	2	6.3	21	BGJ	ADE	12BZ7	1	6.3	19	FG	DEH		1	12.6	35	J	EH
12B6	3	12.6	31	CN	GH		1	6.3	19	AB	CDE	12DW4*	3	12.6	20	(BG)	EJ
	1	12.6	58	D	GH	12C5	3	12.6	17	BEFG	AC	12DW5	1	12.6	21	ACFJ	EG
	1	12.6	58	E	GH	12C8	1	12.6	38	D	GH	12DW7	1	6.3	20	FG	DEH
12B7	2	12.6	30	BCF	AH		1	12.6	38	E	GH		2	6.3	24	AB	CDE
12B8	2	12.6	26	CDN	AG		3	12.6	41	CFN	GH	12DY8	2	12.6	21	HJ	EG
	3	12.6	26	EH	FG	12CA4	2	12.6	22	A	CD		2	12.6	20	ACF	BE
12BA6	2	12.6	22	ABEF	DG		2	12.6	22	G	CD	12DZ6	1	12.6	20	AF	BDG
12BA7	3	12.6	18	AB	CEFGJ	12CA5	3	12.6	22	BEFG	AC	12DZ7	3	12.6	22	ACD	GH
	1	12.6	36	AFGJ	BCE	12CK3*	3	12.6	18	(BG)	EJ		3	12.6	22	DEF	GH
12BB14*	3	12.6	18	(AB)(FG)N	CEH	12CL3*	3	12.6	18	(BG)	EJ	No open element test on C & F.					
Tube damaged if C or H is moved.						12CM6*	3	12.6	26	A(CF)J	EG	12E5	3	12.6	30	CE	GH
12BD6	2	12.6	27	ABEF	DG	12CN5*	2	12.6	42	FG	A(BE)C	12E13*	3	6.3	21	CDE	GH
12BE3	3	12.6	20	DK	GM	12CR6	3	12.6	30	EF3	AC	12EA6	1	12.6	20	AF	BDG
12BE6	2	12.6	24	EFG	BD		1	12.6	32	B	AC	12EC8	1	12.6	40	B	ACE
	2	12.6	24	A	BD	12CS6	1	12.6	20	AF	BC		1	12.6	57	FG	EHJ
12BF6	2	12.6	34	AG	BD		1	12.6	25	EG	BC	12ED5	3	12.6	20	BEFG	AD
	1	12.6	38	F	BD	12CT3*	3	12.6	18	(BR)	EJ	12EF6	4	12.6	18	CDE	GH
	1	12.6	38	E	BD	12CT8	2	12.6	22	AB	CD	12EG6	1	12.6	20	AEG	BD
12BF11	3	12.6	20	HKL	JM		2	12.6	22	FGI	DJ		1	12.6	21	F	BD
	1	12.6	20	CEFG	BM	12CU5	3	12.6	18	BEFG	AD	12EH5	3	12.6	20	BEFG	AD
12BH7	2	6.3	21	FG	DEH	12CU6	3	12.6	23	DEI	GH	12EK6	1	12.6	21	EF	DG
	2	6.3	21	AB	CDE	12CX6	2	12.6	22	AEBCG			1	12.6	20	AB	DG
12BK5	2	12.6	22	ACGH	DF	12CX8	1	12.6	23	BEI	ACG	12EL6	1	12.6	20	AB	DG
12BK6	1	12.6	24	AG	BC	12D4	3	12.6	21	E	CG		1	12.6	45	E	DG
	1	12.6	32	E	BC	12DB5*	2	12.6	24	A(C)J	(BG)D	12EM6	1	12.6	19	ACF	BE
	1	12.6	36	F	BC	12DF5	1	6.3	31	A	CJ		1	12.6	38	J	BE
12BL6	1	12.6	20	AEF	BDG		1	6.3	31	F	HJ	12EN6	1	12.6	19	CDE	GH
Good tube reads above 30.						12DJ8	2	12.6	20	AB	CE						
12BN6	1	12.6	36	EEFG	AC		2	12.6	20	FG	EH						
Good tube reads above 30.						12DK6	3	12.6	22	AEF	BCG						
12BQ6	3	12.6	22	DEN	GH	12DK7	1	12.6	20	CG	BE						
12BR3*	4	12.6	18	(BJ)	EN		1	12.6	30	F	BE						

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	12RL15	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	BCD	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	BQ
	1	12.6	20	AG	BD	Tube damaged if D or K is moved.						12SF7	1	12.6	40	E	CG
12FM8	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	DFH	EG
12FQ8	1	12.6	20	BC	A EFGHJ		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	PH
12G11	1	12.6	20	COFG	BM		2	12.6	20	ABFG	CE		2	12.6	25	AB	CH
	3	12.6	20	HK	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	DEV	GH	12MD8	2	12.6	22	AEH	BG	12T10	3	12.6	19	HK	JLM
12GC6	3	12.6	20	DEHN	CG		2	12.6	20	AJ	EG		1	12.6	20	CEFG	BM
12GE5*	3	12.6	19	B(CL)G	(DK)M	12ML8	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	12MX8	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	12Q7	1	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	12R5	3	12.6	28	BFG	AC	13CM5*	3	12.6	19	(AD)EN	CHG
12H6	1	12.6	25	C	DG		1	12.6	40	(BJ)	EN	Tube damaged if C or H is moved.					
	1	12.6	25	E	GH	12RK19*	3	12.6	20	AB	CDE	13CW4	1	12.6	18	BD	HM
12HB25*	3	12.6	19	•	EJ	12RLL3	2	63	22	FG	DEH	13DE7	1	12.6	20	FG	EH
•(AB)(CH)(FG)N							2	63	21				1	12.6	18	ABC	EJ
12HE7	3	6.3	18	EJL	HK							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	
13JZB*	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	
13Y10	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	FF	DM	
14AF7	3	12.6	25	EF	BCDGH	14Y4	3	12.6	28	G	GH		2	12.6	20	BC	KLM	
	3	12.6	25	CD	BEFGH		3	12.6	28	H	GH	16CB2B*	3	12.6	18	•	AB	
14B5*	1	12.6	20	BC	(DG)H	14Z3	3	12.6	25	I	CD	*(CL)(DK)(EJ)N						
	1	12.6	40	E	(OG)H	15	2	2	36	BCN	DE	16GK6*	2	19.6	20	BGH	A(CJ)E	
	1	12.6	40	F	(OG)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	BCEN	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	CL	BJM	16KA6*	3	12.6	19	C(DL)EN	KM	
	2	12.6	20	EG	FM		2	12.6	21	EH	EM	16KHB	3	12.6	24	AB	DG	
	2	12.6	20	BKL	HM		2	12.6	21	ED	GM		3	12.6	20	BCJ	DG	
14BR11	2	12.6	20	BCL	DM	15BD11	3	12.6	20	EL	BJM		3	12.6	20	FHJ	DG	
	2	12.6	20	FH	EM		2	12.6	20	EH	EM	16LD6*	2	12.6	21	B(CJ)(FH)GAD		
	2	12.6	20	JK	GM		2	12.6	21	ED	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	26	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	IB	CE		1	12.6	19	BK	LM	
	1	12.6	65	E	(DG)H		3	12.6	20	IJ-	EG	17	3	12.6	40	BC	DE	
	1	12.6	65	F	(DG)H	15EA7	1	12.6	20	IE	FH	17A8	2	12.6	20	BCF	EG	
14E7	2	12.6	28	BEF	GH		3	12.6	19	IB	CH		2	12.6	18	AJ	EH	
	1	12.6	58	C	GH	15EW6	2	12.6	20	IEFG	BD	17AB10	4	19.6	55	DEFG	HM	
	1	12.6	58	D	GH	15EW7	3	12.6	19	(BC)	EJ		3	19.6	19	BJL	CM	
14F7	1	12.6	20	CD	BH		3	12.6	30	I	EH	17AV5	3	12.6	24	AEH	BC	
	1	12.6	20	EF	GH	15FM7*	3	12.6	19	(H)E	GM	17AX3	3	19.6	23	DK	GM	
14FB	3	12.6	22	AC	DG		1	12.6	20	L	JM	17AX4	3	12.6	28	E	CH	
	3	12.6	22	FH	EG	15FY7	1	12.6	21	-	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	38	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	28	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	19EAB	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	18FX5*	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(C)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	ABFJ	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)F	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	19V6	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	2.5	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	22JUG*	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
20LP6*	3	19.6	18	•	BM	24JE6*	3	25	19	(AG)(BF)HNCE		25HX5*	3	25	18	(AG)FJ	BCE
				•(CL)(DK)(EJ)N		24JZ8*	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	25JG6*	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.							3	25	23	F	AG	25L6	3	25	22	CDE	GH
21HB5*	3	19.6	18	B(CL)G	(DK)M	25AC5	3	25	31	CE	GH	25MP20	3	25	20	AEF	BD
21HD5*	3	19.6	19	(CL)(EJ)G	DKM	25AV5	3	25	18	AEH	BC	25N6	2	25	30	CDE	GH
Tube damaged if D or K is moved.						25AX4	3	25	20	E	CH	25RK19*	4	25	18	(BJ)	EN
21HJ5*	3	19.6	18	(CL)(EJ)G	BDKM	25B5	3	25	37	BD	EF	25W4	3	25	18	E	CG
Tube damaged if D or K is moved.						25B6	3	25	46	CD	BEF	25W6	3	25	17	CDE	BK
21JS6*	3	25	19	(CL)(EJ)N	BDKM	25B8	2	25	25	CD	AG	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 G 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	AC	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	2.6	22	ABEF	DG
21LU6*	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)
40Z5	3	32	20	E	BCH	53HK7	3	25	18	EJL	HK	88M	3	6.3	31	CDN	EGH
(45Z5)							1	25	18	B	OK	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	2.5	49	C	EF	89RS	3	6.3	36	BN	CEG
42EC4*	3	32	19	(BGH)	EM		1	2.5	40	D	EF		1	6.3	24	D	CG
42KN6*	3	19.5	17	•	BG	56	2	2.5	30	BC	DE		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	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	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	A EFG	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							M7	3	110	25	CDE	GH
	1	50	20	AJ	EH	A shows short.						117N7	3	110	20	CDE	FGH
50C5	3	50	22	BEFG	AC		3	70	20	AFG			3	110	15		GH
50C6	3	50	22	CDE	GH	Allow tube to heat up. Move levers F & G to top position.											
50CA5	3	50	22	BEFG	AC	Good tube will kick to 70.											
50CD4	3	50	23	E	CG	70L7	3	70	16	CDE	FG						
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
						72	4	2.5	35	N	D						
A normally shows leakage.						75	1	6.3	20	BN	EF						
50FE5	3	50	22	CDE	BH		1	6.3	38	C	EF	117Z3	3	110	24	AE	DF
50FK5	3	50	24	BEG	AC		1	6.3	38	D	EF	117Z4	3	110	19	E	GH
50GY7*	3	25	19	E(JK)L	AKM	76	2	6.3	33	BC	DE	117Z6	3	110	20	C	OG
		25	21	B	ADM	77	3	6.3	30	BCN	DEF		3	110	20	E	GH
50KC6	3	50	19	BEG	AC	78	3	6.3	31	BCN	DEF	126A/	4	2.5	20	BC	DE
50HK6	3	50	20	BEG	AC	79	3	6.3	30	BC	DF	2523N1					
50JY6*	3	50	19	(AD)CEN	GH		3	6.3	30	EN	DF	163PEN	3	12.6	18	BGJ	CD
50LB	3	50	21	CDE	GH	80	3	5	55	B	D	182B	3	5	37	BC	D
50X6	3	50	19	C	BH		3	5	55	C	D	(482B)					
	3	50	19	F	GH	81	3	7.5	75	B	D	183	3	5	40	BC	D
50Y6	3	50	23	C	DG	82(82V)	3	2.5	24	B	D	(483)					
	3	50	23	E	GH		3	2.5	24	C	D	201B	2	5	45	BC	D
50Y7	3	50	20	C	BD	83(83V)	3	5	26	B	D	201C	2	5	45	BC	D
	3	50	20	E	BH		3	5	26	C	D	210T	3	7.5	56	BC	D
50Z6	3	50	21	C	DG	84	3	6.3	26	B	DE	230S	2	2	35	BC	D
	3	50	21	E	GH		3	6.3	26	C	DE	232	2	2	42	BCN	D
50Z7	3	50	25	C	DFG	85	3	6.3	45	BN	EF	233S	3	2	39	BCD	E
	3	50	25	E	FGH		1	6.3	47	C	EF	234S	2	2	40	BCN	D
52	3	6.3	30	BCD	E		1	6.3	47	D	EF	257A	2	2.5	41	BN	D
53	3	2.5	32	BC	DG	86M	3	6.3	37	CE	GH	262B	3	7.5	42	BN	CD
	3	2.5	32	EF	DG	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	6.3	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	BF GHJ	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/	4	6.3	26	E	F	1626	3	12.6	32	CE	GH
Tube damaged if B or G is moved.						CK1005	4	6.3	26	C	F	1629	2	12.6	36	CE	GH
407A	1	19.6	20	CD	ABJ		4	6.3	26	C	F	Eye OP	4	12.6	0	D	CEGH
	1	19.6	20	FG	AHJ	1006/	4	1.4	22	C	A	Eye CL	4	12.6	0	CD	EGH
408A*	1	19.6	20	AEF	(BG)D	CK1006	4	1.4	25	B	A	1631	3	12.6	27	CDE	GH
417A	2	6.3	20	ADEGH	FJ		4	1.4	25	B	A	1632	3	12.6	22	CDE	GH
427	3	2.5	44	BC	DE	CK1007	4	6.3	21	C	G	1633	2	25	28	AB	CG
428A	3	5	47	BC	D		4	6.3	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	EF GH
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
595	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/	3	6.3	17	CEF	GH
Z729	1	6.3	20	AFHJ	BCEG	1266	4	Off	95	E	BCG	2051					
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.						5516	3	2.5	25	CEN	BG
Short top caps together.						1267	4	Off	31	E	BG	5591	2	6.3	22	AEF	BCG
801	3	7.5	42	BD	D	1273	3	6.3	26	BCF	DGH	Tube damaged if B or G is moved.					
802	3	6.3	29	CDN	EFG	1274	4	6.3	19	C	GH	CK5608A2	2.5	26	BC	DG	
807	3	6.3	25	BCN	DE		4	6.3	19	E	GH		2	2.5	26	EF	DG
809	3	6.3	27	CN	D	1275	3	5	30	B	CD	GL5610	2	6.3	22	AEF	BD
811A	3	6.3	34	CE	D		3	5	30	C	BD	5618	3	2.5	21	BCDF	AG
Requires jumper from plate cap to pin 5 of any other tube socket.						1280	3	12.5	26	BCF	DGH	5642	1	1.4	100	N	E
812	3	6.3	29	CN	D	1284	3	12.5	25	BCF	DGH	Insert bottom leads into pins 4 & 5 respectively. Use plate cap top lead.					
816	4	2.5	19	N	A	1291	1	1.4	33	BC	AH	5651	4	Off	95	AE	BDG
837	3	12.6	25	CDN	EFG		1	1.4	33	FG	AH	Good tube reads above 30.					
840	2	2	33	BCN	DE	1293	2	1.4	32	BF	H	5654*	2	6.3	22	AEF	(BG)C
841	3	7.5	45	BC	D	1294	1	1.4	57	D	GH	5659	3	12.6	32	CDE	GH
842	3	7.5	54	BC	D	Good tube reads above 10.						5660	3	12.6	41	CFN	GH
864	1	1.4	55	BC	DE	1298	2	1.4	30	BCF	AH		1	12.6	38	D	GH
865	3	7.5	80	BCN	D	1603	1	6.3	23	BCN	DEF		1	12.6	38	E	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)
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	8058	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.						8108	3	12.6	19	A(CH)G	(BF)E
	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	8158	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	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)(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	7695	3	6.3	21	AJ	EH	9002*	2	6.3	27	(AE)F	(BG)D
7044	2	6.3	19	AB	CDE		2	6.3	23	AJ	EH	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		1	6.3	21	(AD)CE	BH		3	6.3	16	DE	FH
	2	12.6	22	AB	CE	7751*	3	6.3	20	(AD)CE	BH	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	7868*	3	6.3	20	(AG)(BF)J	CE		3	5	26	C	D
	2	6.3	21	FG	HJ	7895	2	6.3	19	BD	HM	B36	2	12.6	29	AB	CG
7105	3	12.6	15	AB	CH	7898	3	6.3	20	FG	HJ		2	12.6	29	DE	FG
	3	12.6	15	DE	FH		3	6.3	20	AB	CJ	B309	2	6.3	24	AB	CJ
7119	4	6.3	19	GJ	DEF	7905*	2	315	24	B(CH)	AGJ		2	6.3	24	FG	HJ
	4	6.3	19	AB	CDE	Tube damaged if A or J is moved.						B339	1	6.3	20	AB	CDE
7137	2	6.3	22	AEFG	BD	7984*	3	12.6	19	*	BFHJM		1	6.3	20	FG	CDE
7167*	3	12.6	22	AEF	(BG)C	*(CDE)(GL)K						Tube damaged if D or E is moved.					
7189*	4	6.3	17	(AB)(J)G	CE	8016	1	14	98	N	ACDEFGH						
7193	2	6.3	24	N	GH	Use G & N only or element test.											

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	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
EP804S	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.											