


PSD MG2002 – PowlVac “K>1” Breakers
Field Checklist & Vacuum Interrupter Maintenance Table

Vacuum Interrupter Mfgr.:	Mitsubishi	Mitsubishi	Mitsubishi	G.E.	G.E.	C-H	C-H
V-I Part No.:	10B12S	10B20H	10B30C	60153-G1 (50C) 0186L0739P060	60152-G1 (52C) 0186L0739P061	WL-35296 *WL-34999C	WL-35297 *WL-35315
V-I Assembly No.:	<u>50953-G2P</u>	<u>50954-G2P</u>	<u>50955-G2P</u>	<u>60149-G2P</u>	<u>60149-G1P</u>	<u>60500G05</u> * <u>60500G10</u>	<u>60500G07</u> * <u>60500G13</u>
PowlVac Dash No. __ PV ___ - 	0, 1, 2, 5	0, 1, 2, 5	0, 1, 2, 5	3, 4, A, B	3, 4, A, B	6, 7, C, D *8, 9, F, G	6, 7, C, D *8, 9, F, G
kV • MVA • kA Rating:	15 • 500 • 18kA	5 • 250 • 29kA 15 • 750 • 28kA	5 • 350 • 41kA 15 • 1000 • 37kA All 3000 amp	15 • 500 • 18kA	5 • 250 • 29kA	15 • 750 • 28kA	5 • 350 • 41kA 7.5 • 500 • 33kA 15 • 1000 • 37kA 15 • 50kA All 3000 amp
PowlVac Mechanism:	PVS-1 PVS-3	PVS-1 PVS-3	PVS-1 PVS-3	PVS-3	PVS-3	PVS-3	PVS-3
Push Rod Part No. / Push Rod Spring Color: Spring Force: (Length: C/L; pin to pin)	<u>50934G28</u> / Silver 79 lbs/inch (9.575")	<u>50934G29</u> / Blue 134 lbs/inch (9.575")	<u>50934G30</u> / Red 300 lbs/inch (9.575")	<u>50934G28</u> / Silver 79 lbs/inch (9.575")	<u>50934G28</u> / Silver 79 lbs/inch (9.575")	<u>50934G26</u> / Blue 134 lbs/inch (9.887")	<u>50934G30</u> <u>50934G27</u> (50kA) / Red 300 lbs/inch (9.575") (9.887" 50kA)
Continuous Current:	1200A, 2000A	1200A, 2000A	1200A, 2000A, 3000A	1200A, 2000A	1200A, 2000A	1200A, 2000A	1200A, 2000A, 3000A
Contact Stroke: (min - max)	.450" ↔ .512"	.450" ↔ .512"	.450" ↔ .512"	.562" ↔ .625"	.562" ↔ .625"	.375" ↔ .500"	.450" ↔ .512" .375" ↔ .500"
Push Rod Over-Travel: “Nut gap” (min. – max.)	.125" ↔ .625"	.125" ↔ .625"	.125" ↔ .625"	.125" ↔ .625"	.125" ↔ .625"	.125" ↔ .750"	.125" ↔ .625" .125" ↔ .750" (50kA)
Contact Resistance: (Micro-Ohms) maximum allowable	1200A = 65μΩ 2000A = 55μΩ	1200A = 65μΩ 2000A = 55μΩ	1200A = 65μΩ 2000A = 55μΩ 3000A = 40μΩ	1200A = 90μΩ 2000A = 50μΩ	1200A = 90μΩ 2000A = 50μΩ	1200A = 60μΩ 2000A = 45μΩ	1200A = 60μΩ 2000A = 45μΩ 3000A = 40μΩ
Opening Speed (min.):	36"/sec.	36"/sec.	36"/sec.	50"/sec.	50"/sec.	42"/sec.	42"/sec.
Opening Time:	< 35ms	< 35ms	< 35ms	40-50ms	40-50ms	< 35ms - 3 cycle < 50ms - 5 cycle	< 35ms - 3 cycle < 50ms - 5 cycle
Closing Speed (min.):	24"/sec.	24"/sec.	24"/sec.	25"/sec.	25"/sec.	24"/sec.	24"/sec.
Closing Time:	< 80ms	< 80ms	< 80ms	< 80ms	< 80ms	< 80ms	< 80ms

Measurement Parameter Descriptions (Refer to applicable PowIVac breaker instruction bulletin for additional details)

Contact Stroke:	Breaker " <i>contact travel</i> " in inches, determined by measuring the difference between the <i>closed</i> and <i>open</i> position of the <u>lower contact block</u> . Stroke will vary depending upon operational conditions.
Nut gap; (Contact Spring Loading Force):	Dimensional measurement of the gap between the push rod operating yoke and the nut on the end of the push rod stud. This measurement can only be taken when the breaker is in the <i>closed</i> position.
Contact Resistance:	Maximum conductor path resistance, measured in micro ohms, from the upper to lower primary stab assemblies.
Closing time:	Time measurement in milliseconds, initiated at application of closing voltage and stopped at contact touch. Time in cycles based on 60 cycles system.
Closing speed:	Determined by 0.25 S (S = breaker stroke measured in inches) divided by Tc (Tc = Elapsed time in milliseconds for the breaker contacts to travel the last 25% of the breaker closing stroke)
Opening time:	Time measurement in milliseconds, initiated at application of opening voltage, and stopped at contact part. Time in cycles based on 60 cycles system.
Opening speed:	Determined by 0.75 S (S = breaker stroke measured in inches) divided by Tt (Tt = Elapsed time in milliseconds for the breaker contacts to travel the first 75% of the breaker opening stroke)
Auxiliary contacts:	Time measurement in milliseconds, initiated at application of opening or closing voltage, and stopped when contact changes state. Time in cycles based on a 60-cycles system.