

# Spark Plug Application Guide (09/28/13)

Brand	Type	455	403	Gap
ACDelco	Platinum	41818	41818	.038
ACDelco	Standard	R46SZ	R46SZ	.060
ACDelco	Platinum	AC41833 (Napa)	AC41833 (Napa)	.038
Autolite	Standard	847	847	.060
Autolite	Platinum	AP847	AP847	.038
Bosch	Standard	7921(WR10FCZ)	7920(WR10FCY)	.060
Bosch	Platinum	4023(WR9FPZ)	4022(WR9FPY)	.038
Champion	Standard	66(RJ18YC6)	66(RJ18YC6)	.060
E3	Premium	E3.52	E3.52	As from Box
NGK	Standard	4536	4536	.038
NGK	Iridium	XR45IX (7293)	XR45IX (7293)	.038
NGK	Iridium	XR5IX (7355)	XR5IX (7355)	.038

**Plug Gap Settings:** Gap setting is gap out of the box; plug gaps out of the box vary by manufacture and application and should always be checked before installation. Dick Paterson several years ago conducted Dyno testing on several different plug gaps and found that there was little difference between the large and small gap settings for power output. My personal setup was a Paterson HEI, running original ACDelco #7 Rapidfire gapped @ .038 as per DP, yours may vary. The smaller gap reduces the load on the HEI coil. Factory specified gaps have varied over the years for the coach. The 73/74 point distributor called for a .040 gap. The 455 with the HEI distributor (75 thru 77) called for a .080 gap. The 403 with HEI distributor (77 thru 78) had 2 gaps listed. The gap for the Federal motor was .060 and the California motor was .080. It has been seen that the .080 gap was hard on the coil and module and had seen a higher failure rate. An article in GMC MHI newsletter V 4, I 3, P 3 stated that GM dealers both in California and east were recommending a .045 for the 403 HEI giving the best performance.

Now a personal comment and again yours may vary. I had run our 77 403 with the .060 gap (R46SZ) (98 thru 03) and saw that the plug gap was pounded out to better than .075 in less than 4K miles. I was changing plugs every year. I also had several modules failures during that time. I switched to the DP HEI and #7 plug in 2004 I did not had any failures. Same #7 plugs, 32K miles, Cleaned and regapped in 2008, still looked good, ACDelco listed these as a 100K-mile plug. Another personal comment, is I would run one of the platinum or Iridium plugs and close the gap down to the .036 to .040 range or the E3 plug as it comes out of he box.

NOTE: The original ACDelco #7 is no longer available in original plug tip. New ACDelco #7 is not the same construction and should be avoided. In 2010 Dick Paterson recommended the NGK XR5IX plug as a replacement. I now run the E3 Brand E3.52 plug and have about 10,000 miles.

**Onan Spark Plugs:** Both the 4K & 6K use the same heat range spark plug. Plug gap for both is .020” Cummins Onan spark plugs are part# 167-0262-99 <\$7

The X-7525B service manual Section 24C, page 28 calls for the use of an AC Delco R46S spark plug. Possible spark plugs that cross for *AC DELCO R46S*:

Accel 498	E3 Spark Plug E3.52
Accel 198	Denso W9PRU
Accel 138	Denso W9PR-U
Autolite 86	Denso stk 6007
Autolite 87	General Motors 5613879
Autolite 567	Mighty M4R52
Bosch WR11F	Motorcraft AS52C
Bosch WR10FC	Motorcraft AR82
Bosch stk 7519	Motorcraft stk 57
Champion RJ18Y	NGK BP4
Champion RJ18Y8	NGK XR4
Champion RJ18YC6	NGK stk 5858
Champion RJ18Y6	Valley Forge 45R
Champion RJ18YC	
Champion stk 58	

Another spark plug that has been used is the Champion RH12:  
Possible spark plugs that cross for *Champion RH12*:

AC Delco 43LS	Champion stk 537
Accel 166	Denso W16LS
Autolite 4316	Eyquem 500A
Autolite MP4316DP2	Motorcraft AL5
Autolite 216	Splitfire SM021F

For Generac Primpac 45G/55G/66G RV Generators  
Plug Gap for all 3 units is 0.030”

Generac Manual lists 3 different spark plugs and I added an E3 Cross

AC R45S	Champion RC12YC
Autolite 65	E3 Spark Plug E3.52

Honda Generator EV-4010 & EV-6010

Plug Gap for both units is 0.024” to 0.028”

Honda Manual lists the NGK BPR4HS, which crosses to ACDelco R43FS, Bosch WR8BC, Champion RL92YC, Honda 98076-54717 and NAPA X936

*This guide was compiled by John Wright of the GMC Great Lakers*