

# The 1962-63 Spyder Ignition Ballast and Coil

by Bob Nichols effective November 17, 2021

The 1962-63 Spyder turbocharged models use a different ignition ballast and coil versus the resistance wire ballast and coil used other models. The Spyder model used a ceramic ballast resistor and special coil. The following is a discussion of why this was done and how to substitute currently available parts.

Turbo charged boost creates higher engine cylinder pressure during the compression stroke. This requires greater electrical energy from the ignition coil to create a good spark across the spark plug electrode gap.

**Greater spark energy vs. points durability.** - Chevrolet engineers used a ceramic ballast resistor (1931385) and coil (1115091) from the high performance V8 engines of the period for the turbo charged Corvair Spyder combined with standard contact ignition points. The Spyder ignition produced an effective ignition spark, but it reduced ignition points durability due to greater electrical energy through the contact points.

**The service bulletin fix.** - On February 27, 1963 Chevrolet Technical Service Bulletin DR #577 was issued to address the ignition points durability. In summary, the high performance and turbocharged engine's ballast resistor was changed from 0.3 ohm (1931385) ballast to 1.8 ohm (1957154) ballast to improve the ignition points service life. The coil (1115091) was NOT changed. The change was not recommended for higher performance V8's and the "Corvair Spyder" to ensure "best possible high speed ignition performance" except "for temporary Winter operation" when installation of the 1.8 ohm resistance ballast was recommended.

**Winter vs. summer ballast.** - The service bulletin seems to imply that something about Winter operation and colder temperatures was the problem requiring a higher resistance value ballast to prevent unacceptable points deterioration. A more logical explanation is vehicle owners were engaged in "competitive driving" during fair weather summer months requiring maximum engine performance and they tolerated shorter reliable service of the ignition points. During inclement winter operation, the vehicle would probably be used for more "sedate" operation where greater points durability was more important versus maximum engine power at higher RPM. Simply put, GM did not want to say "for racing use the hotter spark producing 0.3 ohm ignition ballast, but for normal driving use the 1.8 ohm ballast to make the points last longer".

**The final fix.** - If you want to assemble a correct stock vehicle, it's understandable to want to use the originally specified parts. This requires finding the NOS ballast resistor and coil for the 1962-63 Spyder models. There is a solution using components that look like the original components, provide an adequate ignition energy, and acceptable ignition points service life. In 1965 both the Corvette engines and Corvair turbocharged engines used a 1.8 ohm resistance ballast with a high performance coil. While the 1965 Corvair used a ballast wire in the harness, the Corvette used the ceramic style 1.8 ohm resistance ballast 1957154 that can be used on the Spyder with coil part number is 1115202. Fortunately, you can find NOS or reproduction parts from Corvette vendors. These parts should fit the 1962-63 Spyder with little or no modification.

**Location and wiring.** - The ceramic resistor is located on the passenger side rear rail. Refer to the 1962 assembly manual "TURBO-CHARGER - ENGINE COMPARTMENT WIRING" Pg. 1962-243 for specifics. It has been observed that sometimes two wires are installed on the coil and sometimes on the ceramic resistor terminal. Done correctly either works electrically. See the picture that illustrates how the factor assembly diagram shows the wiring.

