



Subject: Unlabeled HVLP Spray Guns, Low-Volume, Low-Pressure (LVLP) Spray Guns and Rule 1151

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ISSUE

When Rule 1151, Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations, was amended on December 2, 2005, to implement the California Air Resources Board (CARB) Suggested Control Measure (SCM) for Automotive Coatings as approved by the CARB Board on October 20, 2005, Rule 1151 included a definition of high-volume, low pressure (HVLP) [Rule 1151(c)(18)] which contained a requirement for HVLP spray equipment to be permanently labeled HVLP. This same requirement for a permanent label was in the SCM. However, the SCM (see Section 4.7.4) allowed the use of spray equipment that was not permanently labeled HVLP provided the spray equipment met the HVLP design requirements of being, "designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns". This language in the SCM allows spray guns that meet the design requirements of HVLP spray equipment to be used even though the spray guns may not be permanently labeled as HVLP. This language is important since many HVLP spray guns in use today are not permanently labeled as HVLP and many LVLP (low-volume, low-pressure) spray guns in use today meet the HVLP design requirements but are classified as LVLP spray guns by their manufacturers. Prior to the December 2, 2005 Rule 1151 amendment, both the unlabeled HVLP spray guns and the LVLP spray guns that met the HVLP design requirements were acceptable spray guns under Rule 1151. Since the December 2, 2005 Rule 1151 amendments took effect on July 1, 2008, the use of these unlabeled HVLP spray guns and LVLP spray guns that meet the HVLP design requirements would technically have to be tested to demonstrate that their transfer efficiency is equivalent to or better than HVLP equipment in accordance with Rule 1151(d)(7)(A)(iii). This policy and procedure will address the use of these spray guns for Rule 1151 operations.

RULE REFERENCES

CARB SCM

3. Definitions

- 3.17 "High-Volume, Low-Pressure (HVLP)" means spray equipment permanently labeled as such and which is designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

4. Standards

- 4.7 **Coating Application Methods.** No person shall apply any coating to any motor vehicle, mobile equipment, or associated parts and components unless one of the following application methods is used:

4.7.1 Brush, dip, or roller.

4.7.2 Electrostatic spray.

4.7.3 High-Volume, Low-Pressure (HVLP) spray equipment

4.7.4 Use of a spray gun: If a spray gun is used, the end user must demonstrate that the gun meets the HVLP definition in section 3.17 in design and use. A satisfactory demonstration must be based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.

Rule 1151

(c) Definitions

- (18) **HIGH-VOLUME, LOW-PRESSURE (HVLP)** means spray equipment permanently labeled HVLP and which is designed and operated between 0.1 and 10 pounds per square inch, gauge, (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

(d) Requirements

(7) Transfer Efficiency

- (A) A person shall not apply coatings except by the use of one of the following methods:
- (i) electrostatic application, or
 - (ii) high-volume, low pressure (HVLP) spray, or
 - (iii) such other coating application methods as are demonstrated, in accordance with the provisions of subparagraph (h)(1)(F), to be capable of achieving equivalent or better transfer efficiency than the coating application method listed in clause (d)(7)(A)(ii), and for which written approval of the Executive Officer has been obtained.

DISCUSSION and CONCLUSIONS

The CARB developed the SCM for automotive coatings with input from the local air pollution control and air quality management districts in order to standardize the requirements for the automotive refinishing industry throughout the state. Based on the SCM, the District amended Rule 1151 on December 2, 2005 with the amendment to take effect on July 1, 2008. At the time of the amendment, some automotive refinishing operations were using either HVLP spray guns that were not permanently labeled as HVLP or low-volume, low pressure (LVLP) spray guns that met the design criteria of HVLP spray equipment. CARB intended that the use of both of these types of spray guns be allowed under the SCM as indicated in section 4.7.4. The staff report for the Rule 1151 amendment does not address these spray guns and the current rule language would indicate that the operators or manufacturers of these spray guns are required to perform transfer efficiency testing to demonstrate that these guns are capable of achieving equivalent or better transfer efficiency than HVLP spray equipment simply because they are not permanently labeled as HVLP. These unlabeled HVLP spray guns and LVLP spray guns meet the design criteria specified in the SCM and Rule 1151. In order to avoid the time and expense of transfer efficiency testing for these spray guns that meet the design criteria for HVLP spray equipment, we will consider non-labeled HVLP spray guns and LVLP spray guns as equivalent to HVLP provided the spray gun manufacturers and the operators can demonstrate that the spray gun is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns based on the manufacturer's published technical material on the design of the gun and by a demonstration of the operation of the gun using an air pressure tip gauge from the manufacturer of the gun.

Approved



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