



COMPETITION BULLETIN

TO: All Supercross Licensed Riders and Season Credential Holders

FROM: AMA Racing

DATE: Oct, 24, 2008

SUBJECT: Sound Testing Requirements and Procedures for the 2009 Monster Energy® AMA Supercross, an FIM World Championship.

1. **Sound Requirements**

a. The maximum sound limit is set at:

For pre-race inspection:

Max. 96 dB/A for motorcycles with a 2-stroke engine

Max. 94 dB/A for motorcycles with a 4-stroke engine

For post-race inspection:

Max. 98 dB/A for motorcycles with a 2-stroke engine

Max. 96 dB/A for motorcycles with a 4-stroke engine

b. The test will be conducted at a fixed RPM:

0 – 125cc: 7,000 RPM

126 – 250cc: 5,000 RPM

251 – 450cc: 4,500 RPM

2. **Appendix D - Sound Test Procedures.**

a. **Sound Test Equipment**

The following instrumentation shall be used: a sound level meter meeting the Type 1, Type S1A, Type 2, or Type S2A requirements of ANSI S1.4-198 or the international standard IEC 651, Type 1 or Type 2.

The sound level meter must include a compatible calibrator, which must be used immediately before the testing session begins and always just prior to a re-test if a disciplinary sanction may be imposed.

For convenience, a 20 inch string may be attached to the front of the sound level meter for the stationary sound test.

It is recommended that the sound meter be attached to a tripod and then placed into position for the test.

Allow the sound meter to come to the same temperature as the surroundings.

Set the sound meter to slow dynamic response and A-weighting.

Always round down the meter reading, that is: 100.9 dB/A = 100 dB/A.

An electric tachometer or vibrating reed tachometer shall be used to determine RPM.

b. **Test Site**

No one should be within 10 feet (3 meters) of the machine other than the rider, the sound meter operator, an assistant to balance the motorcycle and one other person directly behind the sound meter operator.

The test area should be a flat, open surface free of large sound-reflecting surfaces, such as a parked vehicle, buildings, signs, and hillsides, within 16 feet of the motorcycle being tested.

The surface should be free of loose soil, snow or grass higher than 6 inches.

The surrounding sound should not exceed 90 dB/A within a 16-foot radius from the motorcycle during the test.

Always use a windscreen under windy conditions. The stationary test procedure should not be conducted if the wind speed is 20 mph or higher.

If wind is present, the motorcycle should be positioned so the wind blows back to front. This allows mechanical sound to blow forward, away from the microphone.

Test should not take place in rain, snow or excessively damp conditions.

c. Guidelines for Measuring the Sound

For initial sound control and technical inspection, a rider (or his mechanic) shall present only one spare silencer per motorcycle.

Other spare silencers may be presented after all participants have presented their motorcycles, or on the following days of the event.

During the sound test, only the rider (or his mechanic) may sit on the motorcycle in the normal riding position and will follow the directions of the sound test official. No other team personnel may influence the sound test.

The sound reading should be taken with the microphone placed at 20 inches from the exhaust pipe at an angle of 45 degrees measured from the center-line of the exhaust end and at the height of the exhaust pipe, but at least 8 inches above the ground. If this is not possible, the measurement can be taken at 45 degrees upward.

Attach an electric tachometer or set the vibrating reed tachometer to the test RPM.

Make sure the engine is warmed up and the transmission is in neutral.

Have the vehicle operator slowly increase the engine speed to the test RPM.

Have the rider or assistant read the meter of the electric tachometer, or have the rider or assistant hold the vibrating reed tachometer against any solid part of the vehicle

Have the vehicle operator or assistant signal when the correct RPM is held (e.g., by tapping his foot).

Read the sound level meter when the correct RPM is held.

All silencers will be checked and marked once they have successfully passed the sound check. The end opening of the silencer shall remain unmodified once it has been checked and marked.

Silencers fitted with adapters aimed to reduce the sound levels shall be marked and securely mounted to the silencer..

The silencer may only be exchanged with a spare silencer that has also been checked and marked for that motorcycle.

d. Sound Testing Corrections

Always round down the meter reading; that is: 100.9 dB/A = 100 dB/A.

Type 1 Meter: deduct 1 dB/A

Type 2 Meter: deduct 2 dB/A

Below 50 degrees Fahrenheit: deduct 1 dB/A

Below 32 degrees Fahrenheit: deduct 2 dB/A

If you have any questions concerning this information, please contact Kevin Crowther at (614) 856-1900, ext. 1230, or e-mail kcrowther@ama-cycle.org.