

SOUND *advice*

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Dear Readers,

The Motorcycle Sound Working Group is proud to present this approach to better manage excessive motorcycle sound. We hope that the recommendations in this document, which is the result of nearly two years of hard work and collaboration, will motivate all interested parties to seek ways to keep motorcycles available, affordable and fun, while ensuring access to both public lands and public roadways for years to come.

Background

The need for a broad-based Motorcycle Sound Working Group – and therefore these recommendations – was created when the issue of excessive motorcycle sound began to grow. Of the myriad issues facing motorcyclists today, excessive motorcycle sound has become the single greatest threat to American motorcycling's future. It's among the most controversial and potentially divisive issues in motorcycling and, we believe, the issue over which motorcyclists have the most control.

Due to excessive sound, off-highway motorcycles are being banned from public lands and severely restricted on private property. On-highway motorcycles are increasingly being banned from private roads and gated communities. Local, state and national motorcycle organizations spend countless hours and dollars fighting attempts by city councils, county commissioners, state legislators and our federal government to impose restrictions – all because of excessively loud motorcycles.

That's why, in May 2003, the American Motorcyclist Association invited partners from around the country to join in an open and honest discussion on the issue of excessive motorcycle sound. More than 50 people representing more than 30 organizations reached the consensus that we must act before government and law enforcement decide to act for us, and agreed that a working group should be formed to present a series of recommendations, now published in this document.

Organization of the Document

Through the course of discussion during the National Summit on Motorcycle Sound, as well as during meetings of the Motorcycle Sound Working Group, a central theme of recognition (and in some cases denial) of stakeholder culpability became apparent. Thus, the final document is structured around various stakeholders to emphasize the fact that they all have some contributory role in addressing the issue of excessive motorcycle sound.

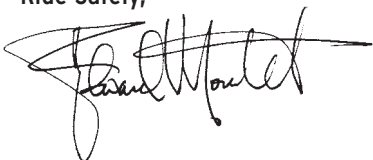
Readers may note a variation of 'editorial voice' throughout the document; this reflects the contributions of several authors. Members of the Motorcycle Sound Working Group were assigned various stakeholder groups and charged with authoring assessments of the respective stakeholder's perspective and role with regard to motorcycle sound. These stakeholder assessments were further refined through collaboration of the entire Motorcycle Sound Working Group.

Each stakeholder assessment is concluded with a series of recommendations on how that stakeholder group can contribute to reducing excessive motorcycle sound. The recommendations were formulated and prioritized by the Motorcycle Sound Working Group as a whole. Within the stakeholder assessment, the recommendations appear in order of their relative urgency, from highest to lowest, as rated by the Motorcycle Sound Working Group. The Summary of Recommendations, beginning on page 44, lists the recommendations in overall order of priority.

Acknowledgements

We gratefully acknowledge the contributions of the motorcyclists, industry figures, and public officials who attended the National Summit on Motorcycle Sound in May 2003. Among those in attendance were local, state, national and international rider organizations, aftermarket and original equipment manufacturers, dealers, affinity rider groups, media, state and federal government administration officials, law enforcement, and most important, riders of every type of motorcycle. Their interest and dedication both inspired and instructed those of us on the Motorcycle Sound Working Group, and their comments served as a constant reminder of what we had been empanelled to accomplish.

Ride Safely,



Edward Moreland
Chairman, Motorcycle Sound Working Group
Vice President, AMA Government Relations

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ISSUE STATEMENT

In the past decade or so, excessive off-highway vehicle (OHV) sound has once again emerged as a major problem for OHV recreation, resulting in negative attitudes toward OHV recreation, conflicts with other recreationists and lost OHV recreation opportunities.

To adequately address this issue, there is a need to devise measures to effectively enforce EPA sound limits for new motorcycles/ATVs along with state/local in-use limits for all off-highway vehicles. In addition, there is a need to educate riders, dealers, the aftermarket and industry media regarding the existence of these limits and the benefits/importance of complying with these limits.

WHERE WE ARE

EPA New Vehicle Sound limits

With the support of motorcycle manufacturers, the U.S. Environmental Protection Agency (EPA) adopted federal sound limits for new off-highway motorcycles, except competition machines, and three-wheeled ATVs beginning with the 1983 model year. Sound limits are currently 80 dB(A) for vehicles displacing less than 171cc and 82 dB(A) for those over 170cc, based on a precise, engineering acceleration test measured from a distance of 50 feet. These limits are generally perceived as commonplace sounds and are still regarded as adequate limits by the EPA and the motorcycle manufacturers. In fact, most newly manufactured vehicles are far below the EPA sound limits to allow for production variances and in-use degradation. Federal law also requires that a permanent label be affixed to these vehicles that states they meet the EPA noise standard and that modifications that exceed the EPA sound limit are prohibited by federal law. Competition vehicles must be labeled for closed-course competition use only.

Four-wheeled ATVs, however, are not regulated by EPA noise standards because these products were not manufactured when the EPA regulations were promulgated. To provide assurance that these products also comply with the EPA sound limits, the major manufacturers and the American National Standards Institute (ANSI) developed a voluntary standard (ANSI/SVIA-1-2001) that recommends to the EPA off-highway motorcycle sound limits for four-wheeled ATVs. Furthermore, members of the Specialty Vehicle Institute of America (SVIA) adopted a resolution in 1985 to affirm that their four-wheeled ATVs shall meet the EPA noise standards for off-highway motorcycles.

EPA Exhaust System Sound Limits

Starting in 1983, the EPA also adopted the same sound limits for original equipment and aftermarket exhaust systems, and exhaust system components, that are designed and marketed for use on EPA-regulated off-highway motorcycles. Federal law requires that complying systems contain a permanent label that lists the vehicle models for which the systems comply. EPA noise regulations essentially prohibit the sale and installation of a non-complying exhaust system on an off-highway motorcycle that is certified to meet the off-highway limits. Federal law also requires that non-complying systems and components be labeled for use only on closed-course competition motorcycles.

EPA Enforcement/Non-compliance

Because the EPA test procedure is not practical for in-field enforcement, the EPA adopted the labeling requirements to serve as an effective enforcement tool to assure in-use compliance. However, the EPA Office of Noise Abatement and Control was eliminated shortly after the EPA adopted the motorcycle noise regulations. The vehicle and aftermarket manufacturers are still, however, required by federal law to certify their products or pay heavy fines if determined to be out of compliance. The EPA has the authority to conduct selective enforcement audits to ensure vehicle product compliance. At this time, sound is obviously not a high priority for EPA, particularly when compared to other serious health hazards, and the agency is not actively enforcing compliance.

In-Use Off-Highway Motorcycle/ATV Stationary Sound Test Procedure and Sound Limits

To address the need for an in-use enforcement tool, the Motorcycle Industry Council (MIC) worked with the Society of Automotive Engineers (SAE) in the late 1970s to develop a quick, easy and economical stationary sound test procedure. First adopted in 1980, the SAE J1287 is now widely used as the stationary sound test procedure for determining excessively loud off-highway motorcycles and ATVs. The MIC has distributed tens of thousands of copies of the *Stationary Sound Test Manual* at no charge to federal and state land management agencies, OHV clubs, race sanctioning bodies, retailers, consumers, etc., to assist with their sound-reduction efforts.

Nine states currently have stationary sound limits, with five states specifying 96 dB(A). Also, seven states specify use of the SAE J1287 stationary sound test procedure.

Off-Highway Motorcycle OEMs

<i>California</i>	<i>96 dB(A) for off-highway motorcycles/ATVs manufactured after 1985 and competition motorcycles manufactured after 1997</i>
<i>Idaho</i>	<i>96 dB(A) (+3 dB(A) correction factor)</i>
<i>Maine</i>	<i>96 dB(A) at 20 inches (test procedure not specified)</i>
<i>Massachusetts</i>	<i>103 dB(A) (+2 dB(A) correction factor)</i>
<i>Michigan</i>	<i>94 dB(A) (or the EPA limit of 82 dB(A) if manufactured after 1986)</i>
<i>New Hampshire</i>	<i>96 dB(A)</i>
<i>Oregon</i>	<i>99 dB(A) (or the EPA limit of 82 dB(A)) (Oregon Dunes 93 dB(A))</i>
<i>Washington</i>	<i>105 dB(A) (or 86 dB(A) based on the EPA test procedure)</i>
<i>Wisconsin</i>	<i>96 dB(A) (test procedure not specified)</i>

standards, and legal challenges could result if an in-use standard is found to discriminate against EPA complying vehicles. Because there is no direct correlation between the EPA and SAE J1287 test procedures, vehicles that comply with the EPA test have varying sound levels when tested using the SAE J1287 test procedure. Based on manufacturing experience and development testing, manufacturers believe 96 dB(A) is the lowest in-use limit that would ensure fleetwide compliance.

MIC/SVIA/AMA 96 dB(A) Recommended In-Use Limit

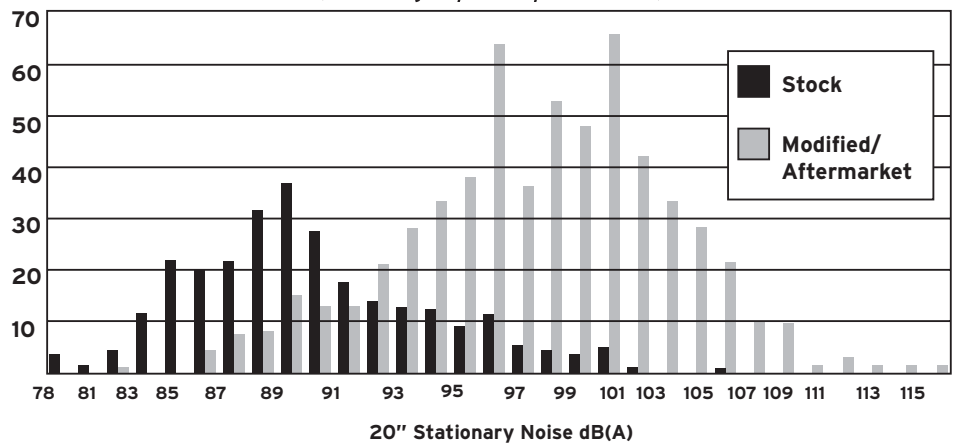
The MIC and the Specialty Vehicle Institute of America (SVIA) recommend 96 dB(A) as the maximum off-highway motorcycle/ATV sound limit for general off-highway use, based on the SAE J1287 stationary sound test procedure. Many states and localities, however, have laws and ordinances mandating other sound limits.

In 2004, the AMA implemented a 96 dB(A) stationary standard for machines entered in AMA amateur open and cross-country events. Closed-course AMA amateur events such as motocross and hillclimb continue with a 99 dB(A) stationary standard. If the state in which the event is taking place has a lower maximum sound level than the respective AMA sound levels, the state's sound level applies for the event.

96 dB(A) is Believed to be the Optimum Maximum Limit for the Following Reasons:

- 96 dB(A) represents a major reduction from the excessive sound levels that generally result from improper exhaust system replacement and modification. For example, 96 dB(A) represents roughly a 70 percent reduction from 101 dB(A).
 - 96 dB(A) allows for production line variances on new vehicles and in-use deterioration.
 - 96 dB(A) provides a necessary tolerance for test measurement variability.
 - 96 dB(A) is the lowest limit that does not prohibit the use of OHVs meeting the EPA sound limits.
- EPA standards pre-empt the adoption of more stringent state

EXHAUST SYSTEM MODIFICATIONS
-2000 USFS OHV Field Noise Testing, Oregon Dunes National Recreation Area
(957 Off-highway motorcycles and ATVs)



Exhaust System Replacement/Modification

No one can deny the widespread production, sale and use of non-complying systems on EPA noise-certified off-highway motorcycles. The improper modification or maintenance of complying exhaust systems also greatly contributes to the OHV sound problem. Many riders are not even aware that these actions are prohibited by law. Those who are concerned usually find it difficult to determine whether they are in compliance, as testing is not readily available.

The results of a 2000 U.S. Forest Service in-field OHV sound test in the Oregon Dunes National Recreation Area illustrate the magnitude of the current problem. The tests were based on the SAE J1287 stationary sound test at 20 inches. The Dunes is a fairly well-enforced riding area, with a very low, 20-inch stationary sound limit of 93 dB(A). Also, the majority of vehicles tested were ATVs that tend to be modified less frequently than off-highway motorcycles. Of the 957 vehicles tested, 63 percent had modified or aftermarket exhaust systems. Forty-two percent of all vehicles were over 96 dB(A), and 29 percent were over 100 dB(A). Nearly all (95 percent) of those that exceeded 96 dB(A) had a modified or aftermarket exhaust system.

Exhaust System Modifications

Another contributing factor to the OHV sound problem is the myth perpetuated within the industry that more sound equals more power. The results of the MIC 2003 Motorcycle/ATV Owner Survey, based on telephone interviews of a statistically significant national sample, indicate that 32 percent of the off-highway motorcycles and 15 percent of ATVs in use had a modified or replaced exhaust system. Increased power/performance was cited by 44 percent as the primary reason for changing the original muffler or system, and 77 percent of these owners said the sound was greatly (40 percent) or slightly (37 percent) increased.

Further reductions in new sound limits will not address the real issue, which is the widespread use of non-complying systems, the modification of complying systems, and the inappropriate use of closed-course competition vehicles on public lands.

Education/Public Outreach

Great strides were made in the 1970s and 1980s to reduce excessive OHV sound as a result of the EPA noise regulations and land management education/enforcement and public outreach programs. Industry efforts included land management sound test training, print and radio public service announcements, education/awareness brochures, industry media noise-control articles, advertising guidelines, OHV organization support grants for sound control equipment, plus dealer and industry seminars. As the sound issue subsided and other issues became higher priorities, however, continuing efforts in sound reduction greatly diminished. In the 1990s, a notable market shift began in off-highway compe-

tion and recreation motorcycles from 2-stroke to 4-stroke machines. The changeover to the sound associated with 4-stroke motorcycles is among the factors leading to renewed interest in sound reduction.

WHERE WE WANT TO BE

Dramatically reduce excessive OHV noise through education and practical enforcement programs.

HOW TO GET THERE

Clearly, the OHV sound problem does not lie with the vehicles as originally manufactured. To make progress in OHV sound reduction, measures need to be taken to:

- Foster the manufacture and use of complying exhaust systems through education and public outreach programs aimed at riders, dealers, aftermarket manufacturers and industry media.
- Implement practical in-use enforcement programs in partnership with land managers, industry, and rider volunteer programs.
- Provide for rider testing facilities/opportunities, possibly through dealers and OHV organizations/clubs.
- Promote the adoption of 96 dB(A) as a uniform in-use off-highway vehicle sound standard for states and federal land management agencies.
- Gain the cooperation/understanding of industry media to promote sound control.
- Encourage the design of trail systems that reduce sound conflicts among recreationists.

RECOMMENDATIONS

- *Off-highway motorcycle OEMs should partner with rider and dealer organizations in support of awareness and education programs to curb excessive motorcycle sound.*
- *Off-highway motorcycle OEMs should promote the adoption of a 96 dB(A) in-use standard, based on the SAE J1287 stationary test for off-highway motorcycles, in a number of pilot states where effective enforcement can be implemented.*

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ISSUE STATEMENT

Society has demonstrated a rising concern about sound and its effect on an individual's quality of life. This extends to a variety of sound sources, from lawn and garden equipment, to public transportation, to motorcycles. Increasingly, the subject of excessive motorcycle sound is being raised as a quality-of-life issue in communities across the United States and throughout the world.

WHERE WE ARE

The issue of excessive motorcycle sound has left the motorcycle industry in a severe conundrum. Motorcycle manufacturers produce original equipment (OE) motorcycles for sale at dealerships, which are certified to 80 dB(A) using the U.S. Environmental Protection Agency (EPA) noise test procedure. However, there is a growing aftermarket industry producing louder exhaust pipes, which, though in many cases are not legal for street use, until recently have been subject to virtually no legal or regulatory enforcement. The most offensive of these are unbaffled exhaust pipes.

When regulatory agencies look for a solution to public concerns about sound, they tend to focus on the easy, yet possibly the least effective solution; lowering the legal sound levels for manufacturers' original equipment products.

At the local level, the outcome of this societal concern is that motorcycle dealerships, motorcycle event organizers and individual riders are being challenged on an increasingly frequent basis. Restrictions have been placed on motorcycle dealership expansion, relocation and operation in some communities. In many cases, bans or restrictions on motorcycle use are advocated as the solution. In addition, inconsistent and sometimes arbitrary enforcement of existing motorcycle laws further confuses and challenges the motorcycle industry and the motorcycle consumer.

The enforcement issue is further complicated by the fact that there is no reliable way to correlate sound levels between the EPA's pass-by testing method and various stationary testing methods used by local enforcement agencies. This creates a dilemma for local governments and enforcement agencies because federal law prohibits state and local governments from enacting standards that are more stringent than federal law.

This places the motorcycle manufacturers in the position of having to address this complex and controversial issue with a wide array of legislative bodies (e.g. city councils, county boards, state legislatures and Congress), as well as regulatory and law-enforcement agencies.

WHERE WE WANT TO BE

It is important to the motorcycle community that we be good citizens and that we preserve our right to ride and to use public roadways. We understand that we must work with local communities to address increasing concerns about quality-of-life issues related to excessive motorcycle sound. We must educate government officials, and to some extent their constituents, that imposing lower sound-level restrictions on original-equipment motorcycles is not a solution to the problem. In fact, it may actually increase the frequency of owners changing the exhaust pipes on their motorcycles. The EPA recognized this in the early 1980s when it set the 80 dB(A) limit for original-equipment motorcycles. The EPA's published statements at the time recognized that further reduction to that standard may increase the frequency of tampering with OE exhaust pipes.

The industry recognizes that every motorcycle is an extension of its owner's personality and style. And for that reason, those in the motorcycling community must preserve the ability to express themselves through customization, while acknowledging societal concerns about excessive motorcycle sound.

We must make sure that motorcyclists are aware of, and educated about, this issue and that we, as an industry, continue our dialogue with our industry partners and consumers.

HOW TO GET THERE

We must continue to expand the dialogue within the motorcycle community, aiming toward shared understanding of the issue. If we work to influence rider knowledge of this issue, we can also influence rider behavior when it comes to motorcycle sound. We must also expand our communication with law enforcement, legislative bodies and regulatory agencies regarding laws, equipment, and rider behavior to bring about reasonable solutions to the problem. This is an important part of the industry's ongoing dialogue with all affected stakeholders.

We must monitor and work to avoid offensive use of exhaust systems in populated areas. We must re-examine the sale of unbaffled pipes for use on the streets, and we must support the use of exhaust systems by motorcycle users that meet EPA noise standards.

RECOMMENDATIONS

- *On-highway motorcycle OEMs should partner with rider and dealer organizations in support of awareness and education programs to curb excessive motorcycle sound.*
- *On-highway motorcycle OEMs should continue to produce and sell EPA-compliant exhaust systems.*
- *On-highway motorcycle OEMs should explore the feasibility of developing an appropriate in-use sound test procedure for on-highway motorcycles.*
- *On-highway motorcycle OEMs should pursue consensus of industry support for a stationary test for on-highway motorcycles.*

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ISSUE STATEMENT

The aftermarket industry is the primary source for non-OEM motorcycle exhaust systems. As such, the aftermarket is in a unique position to influence the excessive motorcycle sound issue.

WHERE WE ARE

Excessive motorcycle sound is the No. 1 problem facing the motorcycling community. While the motorcycle and aftermarket industries are experiencing record growth in sales, riders are facing an increasing number of land closures affecting both competition and trail-riding. Additionally, street riders are increasingly targeted by local and state legislation seeking to curb excessive motorcycle sound through equipment requirements, testing procedures and sound limits.

Excessive sound emissions from motorcycles are easily detected by the general public, making the passing of anti-OHV sound ordinances relatively easy.

For those environmentalists who seek the elimination of off-highway vehicles, excessive sound provides a “silver bullet” because they are able to cite user conflicts and environmental harm as a means for closure.

An increasing number of off-highway motorcycle aftermarket exhaust systems are being manufactured and marketed to meet tightened off-highway sound standards. However, there is no similar trend with regard to aftermarket street motorcycle exhaust systems.

By and large, aftermarket street motorcycle systems are designed, labeled and represented by their respective manufacturers for off-highway or competition use only. However, a significant number of riders choose to operate these systems on public streets and highways.

WHERE WE WANT TO BE

We want the aftermarket motorcycle exhaust industry to be more involved in the effort to reduce excessive motorcycle sound.

HOW TO GET THERE

The aftermarket industry should support a nationwide campaign to increase the motorcycling community’s awareness of excessive sound and how it affects our ability to enjoy our sport and, in the long run, can lead to the elimination of most of our available riding areas.

The aftermarket should continue to develop and market off-highway motorcycle exhaust systems capable of meeting the 96 dB(A) standard and encourage the broad adoption of these systems by users.

The aftermarket should develop and aggressively market community-conscious street exhaust systems or systems with flexible tuning (inserts), allowing users to reduce exhaust sound levels.

The aftermarket should work with motorsports race-sanctioning bodies to enhance enforcement of existing competition sound regulations. The consistent practice of competition sound testing and the resultant reduction in competition sound may positively influence enthusiasts to purchase quieter exhausts and/or operate their motorcycles in a more community-conscious manner.

RECOMMENDATIONS

- *The aftermarket exhaust industry should seek opportunities to promote responsible use of products through its advertising.*
- *The aftermarket exhaust industry should make every effort to produce and promote the use of compliant motorcycle exhaust systems for street, competition and off-highway applications.*
- *The aftermarket exhaust industry should actively discourage production, sales and promotion of unbaffled exhaust systems.*
- *The aftermarket exhaust industry should partner with rider groups to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.*
- *The off-highway aftermarket exhaust industry should adhere to the recommended 96 dB(A) maximum sound level for off-highway vehicle use.*
- *The aftermarket exhaust industry should be encouraged to label or otherwise identify products as being compliant with EPA, competition or relevant land-use sound regulations so the consumer does not unknowingly purchase unlawful or noncompliant exhaust systems.*

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ISSUE STATEMENT

Retail, parts, service and accessory outlets and facilities, collectively referred to as retailers, are the primary consumer source for aftermarket motorcycle exhaust system sales, service and installation. Of all stakeholders, retailers are best positioned to engage riders at the point of purchase and provide them with information regarding the issue of excessive motorcycle sound. This contact provides an important opportunity to shape community-conscious attitudes and riding behaviors.

WHERE WE ARE

There is a strong demand for aftermarket motorcycle exhaust systems. These systems are installed for a number of reasons, including performance improvement, weight reduction, improved aesthetics, maintenance and sound quality. As with many products, actual results may vary.

Many retailers sell a variety of aftermarket motorcycle exhaust systems and provide some level of installation services. In some cases, business revenue is significantly dependent upon the sale of these items and associated services.

While the sale, installation and use of aftermarket motorcycle exhaust systems are subject to federal regulation (and in many cases, state regulation), many retailers and riders are not aware of these regulations. Indeed, it's possible that some retailers unknowingly engage in the practice of selling and installing non-compliant aftermarket exhaust systems on motorcycles intended for street or non-competition use, which is a violation of federal law. Those retailers do so at the risk of significant financial penalties that could more than offset the revenue benefit of continuing this activity.

Riders, unaware of their non-compliant equipment, are at risk of running afoul of state and local laws due to equipment violations and/or behavior-related violations associated with creating excessive noise.

WHERE WE WANT TO BE

We want retailers to be involved and supportive of efforts to reduce excessive motorcycle sound. Additionally, we want retailers to develop and put into practice appropriate strategies that help educate riders about excessive motorcycle sound, promote the purchase and use of compliant motorcycle exhaust systems, and reinforce community-conscious attitudes and riding behaviors.

HOW WE GET THERE

Retailers should educate themselves and their customers about federal and state laws governing compliant motorcycle exhaust systems. With this knowledge, retailers can establish or revise business practices as needed to remain in compliance with these regulations. Providing customers with this information will aid them in making better-informed decisions regarding the legality of exhaust systems they are considering for purchase, installation and use.

Retailers should seize the opportunity created by selling directly to riders to apprise them of the issue of excessive motorcycle sound and the problems it creates for the motorcycling community.

Retailers should discourage the use of unbaffled exhaust systems and promote the use of compliant exhaust systems. They can foster the development of attitudes and riding behaviors that demonstrate an increased sensitivity about the environment in which we ride and respect for others in the community and on the trail.

RECOMMENDATIONS

- *Retailers should educate staff regarding federal and state laws governing compliant motorcycle exhaust systems and the associated penalties for non-compliance.*
- *Retailers should use customer interface to educate consumers about potential negative performance effects of unbaffled exhaust systems.*
- *Retailers should discourage the sale of unbaffled exhaust systems.*
- *Retailers should discourage the sale and installation of non-compliant exhaust systems on on-highway and off-highway motorcycles, which is a violation of federal anti-tampering laws.*
- *Retailers should partner with rider groups to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.*
- *Retailers should inform customers of EPA compliance of specific exhaust systems at point-of-sale.*
- *Retailers should post in employee work spaces all applicable federal and state laws governing compliant motorcycle exhaust systems.*

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ISSUE STATEMENT

Off-highway motorcyclists' attitudes about sound tend to vary depending on the exposure the individual riders have to peers and groups that have experienced lost opportunities or the threat of lost opportunities, as a partial or complete result of excessive motorcycle sound. In general, OHV recreationists who are involved in organizations that interact with land-management agencies have a keener awareness of the social impact of excessive sound. These individuals and organizations generally seem willing to go to greater lengths to keep their machines quiet.

WHERE WE ARE

OHV recreationists who haven't been involved in land-use issues tend to be more readily influenced by the mainstream OHV media and are less aware of the impacts of excessive sound. Unfortunately, until recently, the OHV media tended to promote aftermarket exhaust systems primarily on the basis of performance with little discussion of the sound output of individual systems and even less discussion about the negative social impacts of increased sound. This trend appears to be changing, at least in the off-road media.

Riders who compete in off-road racing events tend to be more concerned with performance than the sound levels of aftermarket exhaust systems. While it may, at times, be appropriate to have loud bikes in a race setting, finding a location for a race that is out of earshot of others is becoming exceedingly difficult. When off-road race events are opposed during the permitting process, excessive sound is almost always one of the key complaints of the opposition.

American riders in particular seem to equate exhaust systems that emit more sound with more power. While this statement may be somewhat accurate with existing American exhaust technology, it is certainly not universally true. European manufacturers have produced a number of designs capable of performance levels equal to or greater than 96 dB(A)-compliant American designs, but with sound outputs two or three dB(A) lower.

The tradeoff has been in the size and weight of the muffler. The European mufflers tend to be slightly larger and heavier. The challenge for the future is to change the American belief that the extra pound or so makes the difference between winning and losing, and convincing riders that lower exhaust sound levels will help them retain their riding opportunities.

WHERE WE WANT TO BE

Ultimately, the future would include these elements:

- High-performance motorcycles and ATVs from manufacturers that meet 96 dB(A), and aftermarket exhaust systems that meet sound requirements and improve performance.
 - An OHV public that prefers and utilizes quiet exhaust systems for both recreational and competitive OHV recreation.
 - Sound laws and enforcement for those who won't comply voluntarily.
 - Enforcement personnel with the equipment and training to properly enforce the SAE J1287 test procedure.
-

HOW WE GET THERE

In the real world, many high-performance off-highway motorcycles that are produced to meet the EPA 82 dB(A) drive-by test are modified after purchase. The manufacturers do not officially recommend modifying the motorcycles, but users can easily accomplish the task by removing intake and exhaust baffles and/or throttle-limit devices. The result is a machine that generally exceeds 96 dB(A) by at least several decibels.

One European manufacturer chooses to import off-road bikes and sell them as "competition-only" machines. Ironically, these bikes comply with the 96 dB(A) level quite easily and are seldom modified.

Many American aftermarket companies are already producing mufflers that comply with 96 dB(A) limits. Demand for these mufflers is largely the result of the 96 dB(A) rule in California and competition rules imposed by the American Motorcyclist Association (AMA). While this is a very positive step, manufacturers should continue development of quieter high-performance exhausts for the future.

Creating a culture in the OHV world that embraces quiet mufflers will take a combined effort from many stakeholders.

RECOMMENDATIONS

- *Off-highway vehicle (OHV) riders/rider groups should be educated about compliant exhaust systems and be encouraged to use products that meet appropriate sound standards.*
- *OHV riders/rider groups should encourage peer-to-peer education efforts on the impact of excessive motorcycle sound.*
- *OHV riders/rider groups should develop, continue and/or expand ongoing sound education programs.*
- *OHV riders/rider groups should be encouraged to work with local and state officials to enforce reasonable sound rules uniformly in order to prevent predatory sound laws designed to punitively punish only those who ride motorcycles.*
- *OHV riders/rider groups should develop local contacts within government to educate them about reasonable motorcycle exhaust sound levels to prevent punitive laws, rules or regulations that target only motorcyclists.*
- *OHV riders/rider groups should partner with interested parties to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.*
- *National OHV organizations and other organized OHV riding groups should develop motorcycle community response kits to be issued when needed to address any local excessive sound issues.*
- *Sound testing procedures should be taught at off-highway motorcycle events and off-highway motorcycle management workshops.*
- *National OHV organizations and other organized OHV riding groups should support and encourage the adoption of a 96 dB(A) sound limit, based on the SAE J1287 stationary test for off-highway motorcycles, where appropriate.*
- *National OHV organizations and other organized OHV riding groups should support the development of a national-caliber sound education campaign.*
- *OHV riders/rider groups should consider offering model legislation to emphasize behavioral rather than equipment enforcement.*

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ISSUE STATEMENT

The issue of motorcycle sound has been recently described as an issue that we, the motorcycling community, must address or it will address us.

WHERE WE ARE

Motorcycle sound, when deemed excessive, has become a serious issue in some communities and certainly may become an issue in many more. Most troubling is that the potential exists for this to affect motorcyclists' rights nationwide.

At this point, the sound issue is being dealt with inconsistently both by communities and riders. In communities, we are seeing a vast range of responses, from little or no concern to ordinances that stipulate varying standards; from reasonable sound limits to harassment and outright bans. Testing is being carried out and enforced that is not consistent with developed methodology. And we have seen unenforceable regulations on the rise in an effort to curb excessive sound. The Environmental Protection Agency (EPA) has even been called upon to address the sound issue through regulations under its jurisdiction.

It is clear that motorcycle sound has the potential to become an issue in which punitive, discriminatory, and even anti-customization measures are suggested and often acted upon against motorcyclists.

In the rider community, there is a similar range of philosophies from those who believe that "Loud Pipes Risk Rights" to those who argue that "Loud Pipes Save Lives." Both are equally passionate about the sound their motorcycles make.

An image has been romanticized when it comes to sound that cannot be ignored. Along with that comes the desire for added performance, with a strong perceived connection between the amount of sound and the amount of power. Of greatest concern, though, is the finger-pointing, assigning of blame or singling out of specific groups, which can lead to prohibiting certain types of motorcycles from motorcycle events and may serve to galvanize one group against another. This has the potential to set back the motorcyclists' rights community significantly.

WHERE WE WANT TO BE

Ideally, we strive for mainstream society to accept motorcycles and view them as positive. We want to increase accessibility to motorcycles and maintain riding areas for new riders and veterans alike. We desire a well-educated riding public that can influence and educate future users. We need the various national and state motorcyclists' rights organizations to work together on this issue and to continue building coalitions with other affected motorcycle users. We want to avoid global standards, unreasonable community-driven standards, and unnecessary government control. Instead, we want to see rider responsibility, social marketing and peer pressure as methods to help solve this issue, where the motto "Educate, not Legislate" remains a driving force.

HOW TO GET THERE

Many believe that this is not really a motorcycle issue, but in fact, a behavioral issue that must be addressed through education. We need to get additional motorcycle elements invested in the process of recognizing sound as an issue. We need to educate motorcyclists and the public about what sound is. We must also ensure appropriate, consistent, affordable and repeatable testing if it is to be used as a measurement tool. It is very important that we demonstrate to motorcycle stakeholders that all concerns and approaches have been discussed in an open environment. We also need much greater cooperation between riders and the non-riding public.

RECOMMENDATIONS

- *On-highway motorcycle riders/rider groups should develop a social awareness campaign in a usable format for distribution to educate riders regarding the effect motorcycle sound can have in many riding areas.*
- *On-highway motorcycle riders/rider groups should partner with interested parties to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.*
- *On-highway motorcycle riders/rider groups should be encouraged to work with local and state officials to enforce reasonable sound rules uniformly in order to prevent predatory sound laws designed to punish only those who ride motorcycles.*
- *On-highway motorcycle riders/rider groups should develop educational materials/procedures to further inform the riding community about sound issues.*
- *On-highway motorcycle riders/rider groups should publish a comprehensive document illustrating the many subjects related to the sound issues the Motorcycle Sound Working Group considered.*
- *On-highway motorcycle riders/rider groups should consider offering model legislation to emphasize behavioral rather than equipment enforcement.*
- *On-highway motorcycle riders/rider groups should develop local contacts within government to educate them about reasonable motorcycle exhaust sound levels to prevent punitive laws, rules or regulations that target only motorcyclists.*
- *On-highway motorcycle riders/rider groups should form a strong coalition with the off-highway motorcycle community to curb excessive motorcycle sound.*
- *On-highway motorcycle riders/rider groups should explore the feasibility of pursuing a scientific study into whether or not sound has an impact on the safety of the motorcyclist and/or increases awareness of other road users as to the presence of a motorcycle, and, if so, in what circumstances.*
- *On-highway motorcycle riders/rider groups should publish a technical document explaining the mechanics of sound and sound measurement, as well as identifying the current standards in place and their sound measurement techniques.*
- *On-highway motorcycle riders/rider groups should create and disseminate information regarding motorcycle sound to regulators and law enforcement.*
- *On-highway motorcycle riders/rider groups should discuss with the SAE the feasibility of developing an appropriate in-use sound test procedure for on-highway motorcycles.*
- *On-highway motorcycle riders/rider groups should gauge rider community support for a stationary test for on-highway motorcycles.*

SOUND *advice*



ISSUE STATEMENT

“What wins on Sunday, sells on Monday,” is a well-known reference to the influence that motorsports competition has on consumer purchasing decisions. Motorcycle competition organizers, promoters and participants undoubtedly influence spectator purchase of OEM motorcycles and aftermarket motorcycle components, including exhaust systems.

WHERE WE ARE

While many motorcycle competition sanctioning bodies have competition sound limits in place, these standards are not routinely enforced. In addition, some standards may be outdated relevant to current social standards and in need of revision.

The issue of sound limitations in closed-course off-road competition events is largely a function of two primary factors: 1) Determining the level of sound providing an “appropriate” balance between entertainment and social consciousness, and 2) The technical methods employed to enforce limitations imposed by the sanctioning body and the consistent imposition of such limitations.

Enforcement of competition sound standards can prove challenging due to the inconsistent nature of testing conditions in the field and the continual evolution of racing equipment. In addition, the manpower and equipment needed to conduct competition sound testing are not insignificant.

WHERE WE WANT TO BE

Reasonable competition sound standards should be adopted by all motorcycle competition sanctioning bodies. These standards should seek to balance fan experience with social consciousness and be developed in coordination with OEM and aftermarket industries.

Sound standards should be consistently enforced at motorcycle competition events, either by the sanctioning body or event promoter.

Motorcycle competitors should comply with sanctioning body sound standards.

HOW WE GET THERE

As the largest motorcycle competition sanctioning organization in the United States, AMA Pro Racing could take the lead in aggressively reviewing standards and enforcement procedures. The AMA, working with the industry, the aftermarket, the media and the rider community, could work to export this model to other sanctioning bodies for adoption.

RECOMMENDATIONS

- *Every effort should be made by sanctioning bodies to enforce current sound rules in professional competition.*
- *Professional sanctioning bodies, when planning for future sound standard changes, should work with manufacturers to make these plans available to race teams and related motorcycling industries with appropriate lead time (18-24 months).*
- *The motorcycle competition community should develop recommendations that outline property line sound standards, noise abatement techniques, and minimum space requirements. These recommendations should address at least three classes of racing facilities: professional, amateur and private practice.*
- *All professional sanctioning bodies should work with promoters to accommodate stationary sound testing facility needs.*
- *AMA Pro Racing should assess, via survey, etc., fan perception of sound at sanctioned events.*

SOUND *advice*



ISSUE STATEMENT

Amateur motorcycle competition strongly influences the development, purchase and use of aftermarket motorcycle exhaust systems.

WHERE WE ARE

In contrast to professional motorcycle racing, which has relatively few competitors, there are literally thousands of riders who compete in amateur motorcycle events every week. For example, the American Motorcyclist Association's amateur competition department, AMA Sports, works with over 700 promoters who organize just over 3,500 events each year. These riders routinely purchase aftermarket exhaust systems for their competition machines. In addition, the spectator base for amateur competition is significant. And these spectators base their aftermarket exhaust system purchases in part on what they see used in competition.

Many amateur competition sanctioning bodies have competition sound limits in place. The AMA Sports rule book provides that sound limits cannot exceed the maximum dB(A) required by the state where the meet is being held, or 99 dB(A), whichever is less, using the SAE J1287 test procedure. AMA Sports further provides that motorcycles used in open and cross-country events that traverse public lands may not exceed 96 dB(A). These rules do not apply to all competition. For instance, in AMA Sports racing, vintage machines, drag racing and the Bonneville Speed Trials are exempt.

Although sound limits are in place for many amateur events, enforcement of these standards is a challenge. While this issue is recognized among sanctioning bodies and promoters, there is not a commonly held solution. Environment, time, personnel, training and equipment are among the many factors that must be considered to effectively enforce competition sound limits. Adding to these challenges is the notable increase of four-stroke competition motorcycles in the field. This change in machinery preference may necessitate a review of existing sound levels.

An increasing number of competition tracks are being closed or threatened with closure because of sound issues. There are no uniform guidelines available that provide recommendations for competition sound standards, sound abatement techniques and space requirements. Many track owners, and communities, could benefit from such a resource.

WHERE WE WANT TO BE

We want reasonable competition sound standards adopted by all motorcycle competition bodies. These standards should seek to balance fan experience with social consciousness. These standards should be consistently enforced at amateur motorcycle competition events, either by the sanctioning body or event promoter.

We want amateur motorcycle competitors to comply with reasonable sound standards set by sanctioning bodies.

HOW WE GET THERE

AMA Sports sanctions over 3,500 amateur motorcycle competition events each year. Working with promoters, fans and participants, AMA Sports should develop solutions to the challenges of competition sound-level management that could serve as models for other competition bodies.

RECOMMENDATIONS

- *Every effort should be made by sanctioning bodies to enforce current sound rules in amateur competition.*
- *Amateur sanctioning bodies should work with promoters to accommodate stationary sound testing facility needs.*
- *Every effort should be made to conduct effective sound testing at all amateur events.*
- *The amateur competition community should work to advise the public about the proper procedures for building amateur racetracks and working with local governments to mitigate negative sound issues.*
- *The amateur competition community should develop recommendations that outline property-line sound standards, noise-abatement techniques and minimum space requirements. These recommendations should address at least three classes of racing facilities: professional, amateur and private practice.*
- *The amateur competition community should work to distribute educational literature/materials to fans regarding sound issues.*

SOUND *advice*



ISSUE STATEMENT

The motorcycle media, including print, radio and television, have a profound influence on rider attitudes and behaviors, from the equipment they purchase to the way they ride. The motorcycle media can make a significant contribution toward mitigating the problem of excessive motorcycle sound.

WHERE WE ARE

There is little acknowledgment of a sound problem within the motorsports media industry. This differs markedly from some other significant issues, which tend to fall into two groups. There are some issues, like safety-equipment use and rider training, which get nearly universal support in mainstream motorcycle publications. And there are others, like wheelies and high-speed riding, which may be depicted in magazines, but at least carry disclaimers noting that the photos show professional riders under closed-course conditions.

In contrast, nearly all motorcycle publications, regardless of whether they are focused on road or dirt riding, regularly publish stories about modifying motorcycles. And those stories invariably include (and often begin with) replacement of the exhaust system. While some publications do quantify the increase in sound level due to the exhaust modification, the usual description is “throatier” or “mellow.” And even when decibel numbers are used, there’s seldom any indication of how loud is too loud.

This approach tends to reinforce an opinion already held by many motorcyclists that more sound equals more power. In addition, there’s an undercurrent in some parts of the motorcycle media supporting the argument that “Loud Pipes Save Lives.” It will be difficult to reach ordinary motorcyclists with a message about avoiding excessive sound without some acknowledgment of the problem on the part of these influential publications and media outlets.

WHERE WE WANT TO BE

We would like motorcycle media to become engaged partners in the effort to curb excessive motorcycle noise.

HOW TO GET THERE

Media can get involved in a variety of ways, not least of which is incorporating a set of testing guidelines created by the motorcycling community as part of their standard testing/reporting procedures. The goal would be to have these publications test the aftermarket systems they use against any standard developed by the motorcycle community. This likely would involve education of media representatives in the nature of the sound problem and in performing sound tests.

In addition, media can be involved in working with advertisers and the overall motorcycle industry to better inform the riding community about the risks of excessive motorcycle sound. And media can play a role in advising consumers about the legality of aftermarket exhaust systems.

RECOMMENDATIONS

- *The motorcycling media should work with advertisers, industry, motorcycle rider groups, etc., to better inform the riding community of the negative effects of excessive motorcycle sound.*
- *The motorcycling media should promote a community-conscious attitude to riders.*
- *The motorcycling media should review and revise editorial guidelines as needed to ensure the public is kept informed of what meets the definition of legal use with respect to motorcycle exhaust systems.*
- *The motorcycling media should review and revise advertising and additional guidelines as needed to ensure consumers are better informed about the legality of aftermarket exhaust systems.*

SOUND*advice*



ISSUE STATEMENT

Elected officials and law enforcement are in a position to create and enforce rules and regulations regarding motorcycle sound levels, and are often the recipients of public complaints against motorcyclists.

WHERE WE ARE

Communities throughout the country are experiencing an increase in complaints about motorcycle sound. The solution first considered, and often provided, by elected officials is to create new laws or amend existing laws to ban motorcycle use on public roads and lands or further restrict sound output levels of these machines.

Law enforcement officials often face challenges in response to these new or amended laws. For example, in some cases the laws require the use of expensive test equipment not ordinarily available to law enforcement. And where the equipment is available, there are often shortcomings in training in proper operation and maintenance procedures. Additionally, it's not uncommon for newly revised local sound standards to be in conflict with the standards required of OEMs by the federal government; a local standard may be so stringent that not even a newly manufactured motorcycle is capable of meeting it.

In some cases laws are directed solely at motorcycles, ignoring other potential sources of excessive sound, thereby targeting a specific group as offenders and omitting other offenders completely. The riding community views regulation of this nature as discriminatory and an infringement of personal rights.

All these factors contribute to inconsistency in enforcement procedures and standards, creating further challenges for government officials, law enforcement and riders.

WHERE WE WANT TO BE

Government and law enforcement officials should be knowledgeable about the science of motorcycle sound and the current federal/state guidelines in place for measuring and regulating motorcycle sound. Existing sound laws should be enforced rather than first resorting to the creation of new laws. These laws should be fairly enforced and universally applied. Government and law enforcement officials should seek out and work with motorcycle rider groups and the motorcycle industry when conflicts relating to motorcycle sound arise.

HOW TO GET THERE

Government and law enforcement officials should educate themselves about existing sound standards and testing procedures for highway and off-highway motorcycles. Working with motorcycle rider groups, government and law enforcement officials should develop or otherwise support community education and outreach programs that promote responsible riding behaviors. Sound laws should be fairly applied and enforced.

RECOMMENDATIONS

- *Government officials and law enforcement should make every effort to work with rider groups to mitigate excessive motorcycle sound.*
- *Government officials and law enforcement should make every effort to educate themselves about the myriad dynamics of motorcycle sound.*
- *Regulating agencies should inform the motorcycle rider community about relevant sound regulations.*

SUMMARY OF RECOMMENDATIONS

The following recommendations are presented in three general categories of Priority One, Priority Two and Priority Three, reflecting their relative urgency as determined by the Motorcycle Sound Working Group. The recommendations are further divided within each priority category by their associated stakeholders group.

PRIORITY ONE

On-Highway Motorcycle OEMs (page 8)

On-highway motorcycle OEMs should partner with rider and dealer organizations in support of awareness and education programs to curb excessive motorcycle sound.

On-highway motorcycle OEMs should continue to produce and sell EPA-compliant exhaust systems.

Aftermarket Exhaust Industry (page 12)

The aftermarket exhaust industry should seek opportunities to promote responsible use of products through its advertising.

Off-Highway Motorcycle Riding Community (page 20)

Off-highway vehicle (OHV) riders/rider groups should be educated about compliant exhaust systems and be encouraged to use products that meet appropriate sound standards.

OHV riders/rider groups should encourage peer-to-peer education efforts on the impact of excessive motorcycle sound.

On-Highway Motorcycle Riding Community (page 24)

On-highway motorcycle riders/rider groups should develop a social awareness campaign in a useable format for distribution to educate riders regarding the effect motorcycle sound can have in many riding areas.

On-highway motorcycle riders/rider groups should partner with interested parties to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.

Professional Competition (page 28)

Every effort should be made by sanctioning bodies to enforce current sound rules in professional competition.

Professional sanctioning bodies, when planning for future sound standard changes, should work with manufacturers to make these plans available to race teams and related motorcycling industries with appropriate lead time (18-24 months).

The motorcycle competition community should develop recommendations that outline property line sound standards, noise abatement techniques, and minimum space requirements. These recommendations should address at least three classes of racing facilities: professional, amateur and private practice.

Amateur Competition (page 32)

Every effort should be made by sanctioning bodies to enforce current sound rules in amateur competition.

Amateur sanctioning bodies should work with promoters to accommodate stationary sound testing facility needs.

Media (page 36)

The motorcycling media should work with advertisers, industry, motorcycle rider groups, etc., to better inform the riding community of the negative effects of excessive motorcycle sound.

The motorcycling media should promote a community-conscious attitude to riders.

PRIORITY TWO

Off-Highway Motorcycle OEMs (page 3)

Off-highway motorcycle OEMs should partner with rider and dealer organizations in support of awareness and education programs to curb excessive motorcycle sound.

On-Highway Motorcycle OEMs (page 8)

On-highway motorcycle OEMs should explore the feasibility of developing an appropriate in-use sound test procedure for on-highway motorcycles.

Aftermarket Exhaust Industry (page 12)

The aftermarket exhaust industry should make every effort to produce and promote the use of compliant motorcycle exhaust systems for street, competition and off-highway applications.

SUMMARY OF RECOMMENDATIONS

The aftermarket exhaust industry should actively discourage production, sales and promotion of unbaffled exhaust systems.

The aftermarket exhaust industry should partner with rider groups to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.

The aftermarket exhaust industry should adhere to the recommended 96 dB(A) maximum sound level for off-highway vehicle use.

Retail, Parts, Service and Accessory Outlets and Facilities (page 16)

Retailers should educate staff regarding federal and state laws governing compliant motorcycle exhaust systems and the associated penalties for non-compliance.

Retailers should use customer interface to educate consumers about potential negative performance effects of unbaffled exhaust systems.

Retailers should discourage the sale of unbaffled exhaust systems.

Retailers should discourage the sale and installation of non-compliant exhaust systems on on-highway and off-highway motorcycles, which is a violation of federal anti-tampering laws.

Off-Highway Motorcycle Riding Community (page 20)

OHV riders/rider groups should develop, continue and/or expand ongoing sound education programs.

OHV riders/rider groups should be encouraged to work with local and state officials to enforce reasonable sound rules uniformly in order to prevent predatory sound laws designed to punish only those who ride motorcycles.

OHV riders/rider groups should develop local contacts within government to educate them about reasonable motorcycle exhaust sound levels to prevent punitive laws, rules or regulations that target only motorcyclists.

OHV riders/rider groups should partner with interested parties to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.

National OHV organizations and other organized OHV riding groups should develop motorcycle community response kits to be issued when needed to address any local excessive sound issues.

Sound testing procedures should be taught at off-highway motorcycle events and off-highway motorcycle management workshops.

National OHV organizations and other organized OHV riding groups should support and encourage the adoption of a 96 dB(A) sound limit, based on the SAE J1287 stationary test for off-highway motorcycles, where appropriate.

On-Highway Motorcycle Riding Community (page 24)

On-highway motorcycle rider/rider groups should be encouraged to work with local and state officials to enforce reasonable sound rules uniformly in order to prevent predatory sound laws designed to punish only those who ride motorcycles.

On-highway motorcycle rider/rider groups should develop educational materials/procedures to further inform the riding community about sound issues.

On-highway motorcycle rider/rider groups should publish a comprehensive document illustrating the many subjects related to the sound issues the Motorcycle Sound Working Group considered.

On-highway motorcycle rider/rider groups should consider offering model legislation to emphasize behavioral rather than equipment enforcement.

On-highway motorcycle rider/rider groups should develop local contacts within government to educate them about reasonable motorcycle exhaust sound levels to prevent punitive laws, rules or regulations that target only motorcyclists.

SUMMARY OF RECOMMENDATIONS

On-highway motorcycle rider/rider groups should form a strong coalition with the off-highway motorcycle community to curb excessive motorcycle sound.

On-highway motorcycle rider/rider groups should explore the feasibility of pursuing a scientific study into whether or not sound has an impact on the safety of the motorcyclist and/or increases awareness of other road users as to the presence of a motorcycle, and if so in what circumstances.

Professional Competition (page 28)

All professional sanctioning bodies should work with promoters to accommodate stationary sound testing facility needs.

Amateur Competition (page 32)

Every effort should be made to conduct effective sound testing at all amateur events.

The amateur competition community should work to advise the public about proper procedures for building amateur race tracks and working with local councils to mitigate negative sound issues.

The amateur competition community should develop recommendations that outline property-line sound standards, noise-abatement techniques, and minimum space requirements. These recommendations should address at least three classes of racing facilities: professional, amateur and private practice.

Media (page 36)

The motorcycling media should review and revise editorial guidelines as needed to ensure the public is kept informed of what meets the definition of legal use with respect to motorcycle exhaust systems.

Government/Public/Law Enforcement (page 40)

Government officials and law enforcement should make every effort to work with rider groups to mitigate excessive motorcycle sound.

Government officials and law enforcement should make every effort to educate themselves about the myriad dynamics of motorcycle sound.

PRIORITY THREE

Off-Highway Motorcycle OEMs (page 3)

Off-highway motorcycle OEMs should promote the adoption of a 96 dB(A) in-use standard, based on the SAE J1287 stationary test for off-highway motorcycles, in a number of pilot states where effective enforcement can be implemented.

On-Highway Motorcycle OEMs (page 8)

On-highway motorcycle OEMs should pursue consensus of industry support for a stationary test for on-highway motorcycles.

Aftermarket Exhaust Industry (page 12)

The aftermarket exhaust industry should be encouraged to label or otherwise identify products as being compliant with EPA, competition or relevant land use sound regulations so the consumer does not unknowingly purchase unlawful or noncompliant exhaust systems.

Retail, Parts, Service and Accessory Outlets and Facilities (page 16)

Retailers should partner with rider groups to create, promote and fund campaigns to increase rider awareness of the negative effects of excessive motorcycle sound and the resulting impact on the surrounding community and motorcycling.

Retailers should inform customers of EPA compliance of specific exhaust systems at point-of-sale.

Retailers should post in employee work spaces all applicable federal and state laws governing compliant motorcycle exhaust systems.

Off-Highway Motorcycle Riding Community (page 20)

National OHV organizations and other organized OHV riding groups should support the development of a national-caliber sound education campaign.

OHV riders/rider groups should consider offering model legislation to emphasize behavioral rather than equipment enforcement.

On-Highway Motorcycle Riding Community (page 24)

On-highway motorcycle riders/rider groups should publish a technical document explaining the mechanics of sound and sound measurement, as well as identifying the current standards in place and their sound measurement techniques.

On-highway motorcycle riders/rider groups should create and disseminate information regarding motorcycle sound to regulators and law enforcement.

On-highway motorcycle riders/rider groups should discuss with the SAE the feasibility of developing an appropriate in-use sound test procedure for on-highway motorcycles.

On-highway motorcycle riders/rider groups should gauge rider community support for a stationary test for on-highway motorcycles.

Professional Competition (page 28)

AMA Pro Racing should assess, via survey, etc., fan perception of sound at sanctioned events.

Amateur Competition (page 32)

Amateur competition community should work to distribute educational literature/materials to fans regarding sound issues.

Media (page 36)

The motorcycling media should review and revise advertising and additional guidelines as needed to insure consumers are better informed about the legality of aftermarket exhaust systems.

Government/Public/Law Enforcement (page 40)

Regulating agencies should inform the motorcycle rider community regarding relevant sound regulations.

Members of the Working Group on Motorcycle Sound

Don Amador Western Representative BlueRibbon Coalition (BRC)

Don Amador was born and raised in the city of Eureka in northern California. Don is a graduate of St. Mary's College in Moraga, California.

Don works as the Western Representative for the BlueRibbon Coalition (BRC) and has spent the last 15 years successfully advocating environmentally sound off-road recreation on public lands. Don has assumed numerous leadership roles in championing the responsible use of off-road motorcycles on public and private lands at both the state and national level.

In 1994, Don was appointed by Gov. Pete Wilson to the Off Highway Motor Vehicle Recreation Commission of the California Department of Parks and Recreation, where he served as chairman for a number of years. He stepped down from the Commission in 2000 after his term had expired.

Don has orchestrated a successful outreach program to build coalitions with other multiple-use interests, including other recreation groups, the forest products industry, rural communities and private property rights organizations.

Don has been a featured speaker on the topic of off-road recreation at many media events, including the Annual Outdoor Writers Association of America Conference, Western Outdoor Writers Annual Conference, the Common Wealth Club of San Francisco and the Society of Environmental Journalists Annual Conference.

Don has won numerous awards from various recreation and resource organizations, including the California Nevada Snowmobile Association, District 36 of the American Motorcyclist Association, California State Parks, the Bureau of Land Management, and the California Forestry Association.

Don is 50 years old. Don and his wife Ellen live in Oakley, California. They enjoy camping and riding dual-sport motorcycles together on federal forest lands.

Russ Ehnes Executive Director National Off-Highway Vehicle Conservation Council (NOHVCC)

Russ Ehnes is the Executive Director of the National Off-Highway Vehicle Conservation Council. Russ has lived in Great Falls, Montana, his entire life. His parents operated a small motorcycle shop from 1967 until the mid-'80s. They took their family trail riding nearly every weekend. Russ began riding motorcycles when he was 5. He enjoyed racing motocross, flat track, cross-country, and trials riding until the mid-'80s. Russ now enjoys trail-riding with

his wife, two children, parents, and friends.

Russ became an OHV activist in 1978 and is a founding member of the Montana Trail Vehicle Riders Association and the Great Falls Trailbike Riders Association. He served several terms as president for both organizations and has helped develop a wide variety of OHV educational programs including Montana's On The Right Trail Campaign. He has worked extensively with a wide variety of recreation and resource groups as well as state and federal agencies. He has experience with federal agencies at every level from field office to Washington, D.C.

Russ was appointed to the position of NOHVCC Montana Representative in 1992. In 1997 Russ joined the NOHVCC staff as a full-time employee. In December of 1998, the Board of Directors appointed Russ to the position of executive director. Russ is also a member of the Board of Directors of Tread Lightly!

George Luttig Director, Research and Development FMF Racing

George Luttig has been involved in motorsports his entire life, both as a participant and a technical professional, having been trained by Dr. Robin Harrison, P.E., and Chris Real, C.L.S. George holds a level-two technical inspector certification for motor vehicle sound testing.

Having started his career as a motorcycle mechanic while racing motocross, flat track and TT, George has worked as a professional mechanic in a variety of racing disciplines. He has contributed to development projects for companies such as Yamaha Motor Corp., as well as individuals, including four-time World Champion Eddie Lawson. Presently, George Luttig is the director of R&D for Don Emler's FMF Racing, developing and promoting lightweight high-performance quiet pipes for off-road applications.

Edward Michel Director, Regulatory Affairs Harley-Davidson Motor Company

Ed Michel has worked with the Harley-Davidson Motor Company for 29 years, and has been active in motorcycling since 1966. He loves riding his Buell XB Lightning and has a number of great bikes in his garage, including a BSA single, a classic Vincent, a TT500 Yamaha, an XL1000 Sportster and an SWM trials bike. One of his first positions at Harley-Davidson was supervisor of the Road Test Department, which allowed him to experience the thrill of motorcycling at its most extreme levels. His passion and knowledge of

the industry have guided him into areas that have allowed him to become a mentor of our sport.

In 1989, Ed took on a new role at Harley—manager of all motorcycle regulatory issues. Over the years, his industry involvement included serving as chairman of the SAE Motorcycle Committee from 1995 to 2005, vice president of the United States Motorcycle Manufacturers Association (USMMA) from 1991 to the present, Steering Committee and Technical Committee member of the International Motorcycle Manufacturers Association (IMMA) from 1992 to the present, and chairman of the Harmonization Committee of the IMMA. With his Bachelor's of Arts degrees in political science and history, he is well-suited to carry the industry's message.

Edward Moreland
Vice President, Government Relations
American Motorcyclist Association

Edward Moreland is vice president of government relations for the American Motorcyclist Association. Ed held the position of Washington representative in the Association prior to his current job title. Before joining the AMA's team, Ed was a lobbyist and association executive in the Washington, D.C., office of an association multimanagement firm based in Atlanta. Before working in the private sector, Ed served on the staffs of members of the U.S. Senate and House of Representatives. Ed earned a Bachelor's of Arts in political science from the University of Minnesota. He has been an active motorcycle rider for over 20 years.

Jeff Shetler
OE Technical Committee Chairman
Motorcycle Industry Council
Manager, Government Relations
Kawasaki Motors Corp., USA

In 1971, after completing a tour of duty in the United States Air Force as an aircraft mechanic, Jeff Shetler started his career with Kawasaki. In the early years, he worked as a motorcycle mechanic in the Technical Services, Research and Development, and Road Racing Departments. His involvement included having the opportunity to assist in the development of Kawasaki's first high performance 4-stroke motorcycles as well as travel throughout the U.S. and Europe while preparing exotic road racing motorcycles for Kawasaki's professional racers.

In January 1979, Shetler joined Kawasaki's newly established Government Relations Department where he began honing his skills in the areas of exhaust and evaporative emissions certification, development of motorcycle technical and safety standards,

and the development of motorcycle noise standards and test procedures. He has been a member of the Motorcycle Industry Council (MIC) OE Technical Committee since 1979 and its chairman for the past 8 years. As a technical committee member, he was involved in the implementation of the EPA motorcycle noise regulations and participated in the development of the MIC Stationary Sound Test Manual for off-highway motorcycles and all-terrain vehicles. In the early 1980s, he was a member of the MIC Land Use Committee and participated in a number of Land Use Workshops with government land management agencies. Motorcycle and all-terrain vehicle noise test procedures and limits were key areas of discussion at each workshop. He is also a member of the Society of Automotive Engineers Motorcycle Committee and has participated in the development of numerous motorcycle standards including SAE J1287 - Measurement of Exhaust Sound Levels of Stationary Motorcycles.

Shetler currently oversees Kawasaki's Government Relations activities in all product categories including motorcycles, all-terrain vehicles, personal watercraft, utility vehicles, small engines and power products.

Imre Szauter
Legislative Affairs Specialist
American Motorcyclist Association

Imre F. Szauter has been with the staff of the American Motorcyclist Association's Government Relations Department since 2001. His primary focus is on-highway motorcycling issues and policies. Szauter has been an MSF-certified RiderCoach since 1994.

Szauter holds a Bachelor's of Science degree in electrical engineering and a Master of Science degree in electrical engineering from Ohio State University.

Peter Nonis
Senior Legislative Assistant
American Motorcyclist Association

Peter Nonis is the senior legislative assistant in the Washington, D.C., office of the American Motorcyclist Association. Pete lobbies on behalf of motorcyclists on issues such as transportation, health care and access to public lands. Previously, he served in the Washington office of Sen. Jack Reed (D-Rhode Island) as well as in the former firm of Gov. Haley Barbour (R-Mississippi), where he assisted in government affairs and public relations activities. Pete earned a Bachelor's of Arts degree in political science from American University in Washington, D.C.

Members of the Working Group on Motorcycle Sound

Kirk R. Willard **Vice President** **Motorcycle Riders Foundation**

Kirk "Hardtail" Willard is the vice president of the Motorcycle Riders Foundation. He also acts as their representative to the International Motorcycle Co-Operation Group made up of the MRF, FEMA, the AMA, and FIM. He also serves as the deputy director for the state motorcyclist's rights organization ABATE of WISCONSIN Inc.

Kirk holds a Bachelor's of Science degree in biology from Olivet Nazarene University in Kankakee, Illinois, and a Master's degree in business from Keller Graduate School of Management in Chicago. He is employed in the field of production management and project engineering for an agriculturally based major international food and beverage company.

Kirk has 27 years of street riding experience and even through the harsh Wisconsin winters he still finds time to ride between 15,000 and 20,000 miles per year. He is a frequent speaker at motorcycle conferences and events throughout the country. He can also be found annually on the Run to the Wall/Rolling Thunder ride, the Women in Motion Ride to benefit Accident Scene Management, Governor/Secretary Thompson's Ride as a road captain, most motorcycle industry expo's throughout the year, and has attended the Sturgis Rally and Races all but a couple years of his riding career.

Royce Wood **Legislative Affairs Specialist** **American Motorcyclist Association**

Royce Wood has been with the staff of the American Motorcyclist Association's Government Relations Department since 2000. As a legislative affairs specialist, his primary focus is on off-highway motorcycle and ATV issues and policies. Wood was the AMA's representative to the California Off-Highway Motor Vehicle Recreation Division's Noise Reduction Task Force.

Wood holds a Bachelor's of Science degree in economics from Southwest Missouri State University and did post-graduate work in economics at the University of Missouri in Kansas City. In his more than 20 years of motorcycling involvement, he has been an amateur road-racer and hare scrambles racer, and an active street and dual-sport rider.

Steve Zimmer **Motorcyclist Rights Activist**

Steve Zimmer began riding street motorcycles in the early '70s while serving in the U.S. Navy. Riding for recreation and transportation, he has traveled coast to coast. He holds a Bachelor's of Arts in psychology and sociology from the University of Missouri. He has done extensive graduate work in organizational and political sociology.

Zimmer has been active in the motorcyclists' rights movement since early 1983, when he joined Freedom of Road Riders of Missouri (FORR). He served as state newsletter editor for FORR and held several local positions, including vice president and Central Committee representative. At the end of 1989, he assumed the vacated position of state legislative coordinator and began lobbying in the Missouri State Capitol for FORR until 1997.

Zimmer's involvement in the Motorcycle Riders Foundation began at the first "Meeting of the Minds," held in St. Louis in 1985. He attended several of the meetings that led to the formation of the organization we now know as the MRF. Zimmer served as MRF state rep number 14 when the reps program was in its infancy. At the end of 1997, Zimmer was named vice president of government relations for the MRF in Washington, D.C., serving in that capacity until June 2000.

He was a member of the working group that developed the National Agenda for Motorcycle Safety, released in November 2000. Since 1998, Zimmer has continued as a "Friend of the Committee" on the National Transportation Research Board, Committee on Motorcycles and Mopeds. He was asked in 2004 to be a full member of the TRB committee. He spoke at the Lifesavers Conference motorcycle session in 2004 and spoke at the 2005 Lifesavers. He also represents motorcyclists at many non-motorcycling conferences and events.

Zimmer is currently the executive director of ABATE of Ohio Inc. and is a registered legislative and executive agent with the state of Ohio. He is chairman of the Ohio American Bikers Aimed Toward Education PAC. Zimmer serves as one of the Supporting State Motorcyclist's Rights Organizations reps to the Board of Directors of the MRF and as a member on the MRF PAC fund.

Aftermarket industry – Segment of motorcycle equipment manufacturers that are not considered OEMs.

AMA Pro Racing – The AMA's professional competition sanctioning body, headquartered in Pickerington, Ohio.

“Educate, Not Legislate” – Position taken within the on- and off-highway riding communities that it is far more effective to educate the motorcycling community on the perils of a particular issue than it is for governmental bodies to enact and attempt to enforce even more restrictive laws.

In-use sound test – Sound-level testing procedure conducted with the vehicle under test moving at or accelerating to a predetermined speed. The vehicle's total sound level, not just the exhaust system sound level, is measured during this procedure.

This test procedure may also be referred to as a “pass-by” sound test. The test procedure specified in the Code of Federal Regulations, 40CFR205 Appendix I-1, used with on- and off-highway motorcycles, is an example of such a test.

“Loud Pipes Risk Rights” – Position taken by the AMA that the use of excessively loud exhaust systems on motorcycles leads to a loss of public and private riding areas for on- and off-highway motorcycles and ATVs.

“Loud Pipes Save Lives” – Position taken by some members of the on-highway riding community that the use of loud aftermarket exhaust systems on motorcycles leads to a reduction in multi-vehicle crashes involving motorcycles. The elevated sound level produced by some aftermarket exhaust systems is thought to attract the attention of drivers who might otherwise fail to notice a motorcycle, thereby creating a safer riding environment for the motorcyclist.

Off-highway – Any public or private riding area generally reserved for use by non-DOT certified vehicles; also used to describe motor vehicles generally not requiring licensing, registration, and/or insurance for legal operation. In most cases, these motor vehicles may not be operated on public highways.

On-highway – Any riding area generally characterized as reserved for use by street-legal motor vehicles; also used to describe motor vehicles certified by the U.S. DOT for public highway use that require licensing, registration, and (most often) insurance for legal operation.

SAE J-1287 stationary sound test – An approved sound testing procedure that involves the use of a calibrated sound level meter positioned 20 inches and 45 degrees from the exhaust system of a stationary OHM or ATV, while the engine is revved to a predetermined RPM.

Stationary sound test – Sound level testing procedure conducted with the test vehicle's transmission in neutral and the engine running at a specified RPM, based on the engine configuration. In general, the only sound level measured is that emitted by the exhaust system of the vehicle under test.

This test procedure may also be referred to as a “field” or “roadside” sound test. The SAE J-1287 stationary sound test procedure (used only with off-highway motorcycles and ATVs) is an example of such a test.

Straight pipes – Motorcycle exhaust systems that contain no baffles or sound attenuation devices.

“What wins on Sunday, sells on Monday” – Belief that winning competitive motorcyclists and their machines help drive the successful marketing of products and services to the riding public. This may contribute to the use of non-compliant exhaust systems on non-competition motorcycles, on- and off-highway.

AMA – American Motorcyclist Association

National not-for-profit, member-based motorcycling organization headquartered in Pickerington, Ohio. Founded in 1924, the Association represents its members and motorcyclists nationwide by pursuing, protecting, and promoting their interests through government relations, competition, and recreational activities. See www.AMADirectlink.com.

ANSI – American National Standards Institute

A private, non-profit organization (501(c)(3)) that administers and coordinates the U.S. voluntary standardization and conformity assessment system. See www.ansi.org.

ASI – All-Terrain Vehicle Safety Institute

A not-for-profit division of the Specialty Vehicle Institute of America (SVIA) formed in 1988 to implement an expanded national program of all-terrain vehicle (ATV) safety education and awareness. See www.atvsafety.org.

ATVA – All Terrain Vehicle Association

The ATVA is a national membership organization dedicated to increasing members' enjoyment of riding and owning ATVs by serving as a source of authoritative information about where and how to ride, products, events, and racing, and by protecting and promoting the rights of all ATV riders. The ATVA is part of the American Motorcyclist Association. See www.ATVAonline.com.

ATV – All-Terrain Vehicle

A vehicle designed for off-road use operating on three or four low-pressure tires which has a motorcycle-style seat (designed to be straddled by the operator) and handlebar.

BRC – BlueRibbon Coalition

National coalition of organizations, businesses, and individuals dedicated to providing leadership in responsible land use, promoting balanced resource conservation and advocating common sense and equitable approaches to recreation and access issues. See www.sharetrails.org.

dB(A) – decibel (A- weighted scale)

Scale used on a sound level meter that best approximates the frequency response of the human ear. Generally, normal hearing is within the range of 20 to 20,000 hertz (cycles per sound). The A-weighted scale is calibrated to put more weight on those frequencies to which the human ear is more sensitive.

DOT – Department of Transportation

At the national level, their mission is to ensure a fast, safe, efficient, accessible, and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people. At the state and local level, the agency most directly involved in infrastructure regulatory, administrative and maintenance activities. See www.dot.gov and www.fhwa.dot.gov/webstate.htm.

EPA – Environmental Protection Agency

Federal agency charged with protecting human health and the environment through regulation of all sources of emissions; regulates motorcycle exhaust sound levels through the Noise Control Act of 1972. See www.epa.gov

MIC – Motorcycle Industry Council

A not-for-profit, national trade association created to promote and preserve motorcycling and the U.S. motorcycle industry through activities in government relations, statistics, communications, technical and aftermarket programs. Represents over 300 member manufacturers and distributors of motorcycles, scooters, parts and accessories, as well as allied trades such as publishing, insurance and consultants. See www.mic.org.

MRF – Motorcycle Riders Foundation

Founded in 1987 to represent the interests of the State Motorcyclists' Rights Organizations (SMROs) at the national level. Headquartered in Washington, D.C., it serves to focus grassroots efforts on issues of importance to the on-highway riding community. See www.mrf.org.

NAOPM – National Association of Off-Highway Vehicle Program Managers

NOHVCC – National Off-Highway Vehicle Conservation Council

A publicly supported educational foundation organized for the sole purpose of promoting safe, responsible, family oriented off-highway recreational experiences. It is a forum for organizations and supporters of off-highway vehicle (OHV) recreation, including OHV manufacturers, related businesses, affiliated foundations, OHV dealers, clubs and enthusiasts, to become partners in creating a positive future for the sport. See www.nohvcc.org.

OE – Original Equipment

Industry standard term for equipment that was installed in or on a motorcycle or ATV at the time of manufacture. Also refers to components sold through the retail channel as factory-authorized replacements for those originally installed in or on the vehicle.

OEM – Original Equipment Manufacturer

Industry standard term for an entity that produces equipment used in the production of a motorcycle or ATV, or to the entity that produces the final vehicle.

OHV – Off-Highway Vehicle

General term to describe a motorized track or wheeled vehicle designed for cross-country travel over natural terrain. Off-highway motorcycles (generally, any motorcycle not designed and/or equipped for on-highway use) and ATVs are classified as off-highway vehicles.

RPM – Revolutions per Minute

A measure of rotational speed often used to describe the number of times an engine crankshaft rotates per unit of time.

SAE – Society of Automotive Engineers

A non-profit educational and scientific organization dedicated to advancing mobility technology. With over 89,000 member engineers and scientists, it develops technical information on all forms of self-propelled vehicles including automobiles, trucks and buses, off-highway equipment, aircraft, aerospace vehicles, marine, rail, and transit systems. See www.sae.org.

SMRO – State Motorcyclists' Rights Organization

A state-level grassroots organization dedicated to protecting the safety and rights of on-highway motorcyclists through legislative, educational, and awareness activities. Search online using "state motorcyclists' rights organization."

SVIA – Specialty Vehicle Institute of America

A not-for-profit trade association formed in 1983 to promote the safe and responsible use of All-Terrain Vehicles (ATVs) through rider training programs, public awareness campaigns, and state legislation. It also serves as a resource for ATV research, statistics, and vehicle standards. See www.atvsafety.org.

USFS – United States Forest Service

An agency of the U.S. Department of Agriculture established in 1905. It manages about 193 million acres of public lands in national forests and grasslands. See www.fs.fed.us.

SUMMARY OF U.S. EPA MOTORCYCLE NOISE REGULATIONS

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40 CFR Ch. 1, PART 205 SUBPARTS D AND E

Part 205 Transportation Equipment Noise Emission Controls

- * Subpart D - Motorcycles
- * Subpart E - Motorcycle Exhaust Systems
- * Appendix I to Subparts D and E - Motorcycle Noise Emission Test Procedures

SUBPART D - MOTORCYCLES

Applicability (§ 205.150)

These regulations apply to 1983 and subsequent model year motorcycles newly manufactured after December 31, 1982. The regulations do not apply to electric or battery-powered motorcycles or to competition motorcycles.

Definitions (§ 205.151)

Motorcycle: Means any motor vehicle, other than a tractor, that has two or three wheels; a curb mass less than or equal to 680 kg (1499 lb); and is capable, with an 80 kg (176 lb) driver, of achieving a maximum speed of at least 24 km/hr (15 mph) over a level paved surface.

Street motorcycle: Means any motorcycle that, with an 80 kg (176 lb) driver, is capable of achieving a maximum speed of at least 40 km/hr (25 mph) over a level paved surface; and is equipped with features customarily associated with practical street or highway use, including but not limited to stoplight, horn, rear view mirror, turn signals. Any motorcycle that has an engine displacement less than 50 cubic centimeters which produces less than two brake horsepower and, with an 80 kg (176 lb) driver, cannot exceed 48 km/hr (30 mph) over a level paved surface, is also considered a street motorcycle.

Competition motorcycle: Means any motorcycle designed and marketed for use in closed-course competition events.

Off-road motorcycle: Means any motorcycle that is not a street or competition motorcycle.

Closed-course competition event: Means any organized competition event covering an enclosed, repeated or confined route intended for easy viewing of the entire route by all spectators.

Exhaust system: Means the combination of components that provides for the enclosed flow of exhaust gas from the engine exhaust port to the atmosphere.

Model specific code: Means the 10 character designation used for labeling purposes to identify the motorcycle manufacturer, vehicle class and advertised engine displacement.

Motorcycle noise level: Means the A-weighted noise level of a motorcycle as measured by the acceleration test procedure.

Noise control system: Means any vehicle part, component or system, the purpose of which includes control or reduction of noise, including all exhaust system components.

Tampering: Means the removal or rendering inoperative by any person, other than for purposes of maintenance, repair or replacement, any part or component of the noise control system.

Noise emission standards (§ 205.152)

Street motorcycles, except those with engine displacement less than 50cc, no more than 2 bhp, and not capable of exceeding 30 mph over level surface:

Model year	dB(A)
1983	83
1986	80

Street motorcycles under 50cc, no more than 2 bhp and not capable of exceeding 30 mph (moped type):

Model year	dB(A)
1983	70

Off-road motorcycles 170cc and less:

Model year	dB(A)
1983	83
1986	80

Off-road motorcycles over 170cc:

Model year	dB(A)
1983	86
1986	82

SUMMARY OF U.S. EPA MOTORCYCLE NOISE REGULATIONS

General requirements (§ 205.1571)

Manufacturers must ensure that each motorcycle conforms to the applicable noise emission standard when tested in accordance with the specified measurement methodology and that the motorcycle is labeled as prescribed.

Labeling requirements (§ 205.158)

The motorcycle manufacturer must permanently attach, in a readily visible position, a "Motorcycle Noise Emission Control Information" label that cannot be removed without destroying or defacing it. The label must be in English block letters and numerals of a color that contrasts with its background containing the following statement:

Motorcycle Noise Emission Control Information

This ___ (model year) ___ (model specific code) motorcycle, ___ (serial/vin number), meets EPA noise emission requirements of ___ (noise emission standard) dB(A) at ___ (closing rpm) rpm by the Federal test procedure. Modifications which cause this motorcycle to exceed Federal noise standards are prohibited by Federal law. See owner's manual.

The label for competition motorcycles shall include the following statement:

"This motorcycle is designed for closed course competition use only. It does not conform to U.S. EPA motorcycle noise standards."

Any motorcycle manufactured in the United States solely for use outside the U. S. must be clearly labeled with the statement: "For Export Only".

SUBPART E – MOTORCYCLE EXHAUST SYSTEMS

Applicability (§ 205.164)

These regulations apply to any motorcycle replacement exhaust system or replacement exhaust system component that is a "new product" and designed and marketed for any motorcycle regulated under Subpart D. Except for labeling, these regulations do not apply to exhaust systems that are designed and marketed for use on competition motorcycles. Exhaust header pipes sold as separate products are not subject to these regulations.

Definitions (§ 205.165)

All terms defined in Subpart D also apply to this Subpart.

Category: Means a group of exhaust systems that are identical in all material aspects with respect to parameters listed for muffler/silencer, expansion chamber, spark arrestor and other exhaust system components.

Exhaust header pipe: Means any tube of constant diameter which conducts exhaust gas from an engine exhaust port to other exhaust system components that provide noise attenuation. Tubes with cross connections or internal baffling are not considered to be "exhaust header pipes."

Federally regulated motorcycle: Means any motorcycle subject to the noise standards of Subpart D.

Federal standards: Means the standards specified in Subpart D.

Stock configuration: Means that no modifications have been made to the original equipment motorcycle that would affect the noise emissions of the vehicle when measured according to the acceleration test procedure.

Noise emission standards (§ 205.166)

Street Motorcycles

Exhaust systems and exhaust system components that are designed and marketed for use on any Federally regulated street motorcycle of the 1983 and subsequent model years must be designed and built so that when installed on any motorcycle which is in compliance with the requirements of Subpart D, they will not cause that motorcycle to produce noise emissions in excess of the levels indicated.

Street motorcycles, except those with engine displacement less than 50cc, no more than 2 bhp, and not capable of exceeding 30 mph over level surface:

Model year	dB(A)
1983	83
1986	80

Street motorcycles under 50cc, no more than 2 bhp, and not exceeding 30 mph (moped type):

Model year	dB(A)
1983	70

SUMMARY OF U.S. EPA MOTORCYCLE NOISE REGULATIONS

The Acoustical assurance period for properly maintained exhaust systems and exhaust system components designed and marketed for Federally regulated street motorcycles is one year or 6,000 km (3,729 mi) whichever occurs first.

Off-Road Motorcycles

Exhaust systems and exhaust system components that are designed and marketed for use on any Federally regulated off-road motorcycle of the 1983 and subsequent model years must be designed and built so that when installed on any motorcycle that is in compliance with the requirements of Subpart D, they will not cause that motorcycle to produce noise emissions in excess of the levels indicated.

Off-road motorcycles 170cc and less:

Model year	dB(A)
1983	83
1986	80

Off-road motorcycles over 170cc:

Model year	dB(A)
1983	86
1986	82

The Acoustical assurance period for properly maintained exhaust systems and exhaust system components designed and marketed for Federally regulated off-road motorcycles is one year or 3,000 km (1,865 mi) whichever occurs first.

General requirements (§ 205.168)

Manufacturers of exhaust systems for Federally regulated motorcycles shall ensure that the exhaust system conforms to the applicable noise emissions standards when tested in accordance with the specified measurement methodology and that the exhaust system is labeled as prescribed. The manufacturer shall verify all categories of exhaust systems or replacement exhaust systems within the product line for each class of regulated motorcycle for which it is designed and marketed.

Labeling requirements (§ 205.169)

The manufacturer of exhaust systems or exhaust system components shall affix a permanent label or mark to the product of the type and in the manner described containing information as follows:

The "Motorcycle Exhaust System Noise Emission Control Information" labels or marks shall be affixed so that they cannot be removed without destroying or defacing and must not be applied to any part that is easily detachable from the product.

The label or mark shall be readily visible when the exhaust system or exhaust system component is installed on all motorcycles for which it is designed and sold.

The label or mark shall use English block letters and numerals of a color that contrasts with the background.

For original equipment and replacement exhaust systems the following statement is required:

Motorcycle Exhaust System Noise Emission Control Information
This (manufacturer's name) exhaust system (serial no.) meets EPA noise emissions requirements of (noise emission standard) dB(A) for the following motorcycles: (list of model specific codes). Installation of this exhaust system on motorcycles not specified may violate Federal law.

For exhaust systems components designed and marketed as a constituent of a complete exhaust system of nonoriginal equipment components, the following statement is required:

Motorcycle Exhaust System Noise Emission Control Information
"This (manufacturer's name) (type of component) (serial number), when installed with a legal (type of component), meets EPA noise emissions requirements of (noise emission standard) dBA for the following motorcycles: (list of model specific codes). Installation of this exhaust system component on motorcycle models not specified may violate Federal law."

The label for exhaust systems designed solely for use on competition motorcycles shall contain the following statement:

"This product is designed for use on pre-1982 model year motorcycles only and does not conform to U.S. EPA noise emission standards. Use on motorcycles subject to EPA noise regulations constitutes tampering and is a violation of Federal law unless it can be shown that such use does not cause the motorcycle to exceed applicable Federal standards."

SUMMARY OF U.S. EPA MOTORCYCLE NOISE REGULATIONS

The label for exhaust systems designed solely for use on motorcycles manufactured before January 1, 1982, shall include the following statement:

"This product is designed for use on closed-course competition motorcycles only and does not conform to U.S. EPA noise emission standards. Used on motorcycles subject to EPA noise regulations constitutes tampering and is a violation of Federal law unless it can be shown that such use does not cause the motorcycle to exceed applicable Federal standards."

The label for replacement exhaust systems manufactured in the United States solely for outside the U.S. and not conforming to Federal noise emissions standards, shall contain the statement "For Export Only."

This exhaust system does not conform to Federal noise emissions standard and is For Export Only.

APPENDIX 1 TO SUBPARTS D AND E -

TEST PROCEDURE FOR STREET AND OFF-ROAD MOTORCYCLES

Instrumentation. The following instrumentation must be used, where applicable:

- (1) A sound level measurement system that meets the type S1A requirements of American National Standard Specification for Sound Level Meters, ANSI S 1.41971.
- (2) An acoustic calibrator with an accuracy of within ± 0.5 dB.
- (3) An engine speed measurement system.
- (4) An anemometer with steadystate accuracy of within $\pm 10\%$ at 20 km/h (12.4 mph).
- (5) A microphone wind screen that does not affect microphone response more than ± 0.5 dB for frequencies of 204,000 Hz or ± 1.0 dB for frequencies of 400,010,000 Hz.

Test site. The measurement area within the test site, which must be a flat open space free of large sound reflecting surfaces, shall be laid out as depicted in FIGURE 1 - TEST SITE MEASUREMENT AREA.

(1) The following points must be established:

- (a) Microphone target point - a reference point on the vehicle path;
- (b) End point - a point on the vehicle path 7.5 ± 0.3 m (24.6 ± 1.0 ft) beyond the microphone target point, and
- (c) Microphone location point - a point 15 ± 0.3 m (49.2 ± 1.0 ft) from the microphone target point on a normal to the vehicle path through the microphone target point.

Measurement Procedure.

- (1) Establish the acceleration point.
- (2) Determine the closing RPM.
- (3) Determine the distance from the acceleration point to the end point.
- (4) Adjust the procedure to accommodate motorcycles equipped with an automatic transmission.
- (5) Control throttle opening to avoid excessive wheel slip or lift off.
- (6) To conduct a sound measurement, the motorcycle must proceed along the vehicle path in second gear (or higher as applicable) at a constant engine speed of 50% of maximum rated RPM or at closing RPM less 10% (of maximum rated RPM), whichever is lower. When the front of the vehicle reaches the acceleration point, the throttle must be smoothly and fully opened. Full acceleration must continue until closing RPM is reached, which must occur within ± 1.0 m (3.3 ft) of the end point, and at which time the throttle must be smoothly and fully closed.

SUMMARY OF U.S. EPA MOTORCYCLE NOISE REGULATIONS

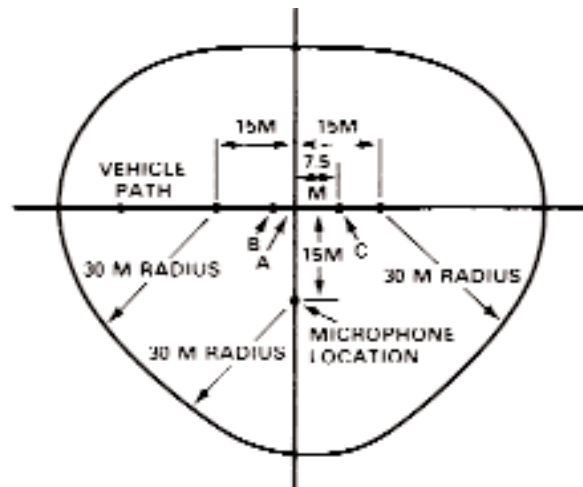
Measurements.

- (1) The sound level meter must be set for fast response and A-weighting network. A microphone windscreen must be used. The sound level meter must be calibrated with the acoustic calibrator as necessary.
- (2) The sound level meter must be observed throughout the acceleration period and the highest sound level obtained for the run must be recorded.
- (3) Measurements must be made until four readings from each side are within 2 dB of each other. The noise level reported must be for the side having the highest noise level.
- (4) Only one person other than the rider and the meter reader may be within 15 m (49.2 ft) of the vehicle or the microphone.
- (5) The ambient noise level must be at least 10 dB lower than the noise level at the microphone being produced by the motorcycle being tested.
- (6) Wind speed must be less than 20 km/h (12.4 mph).

Required Data.

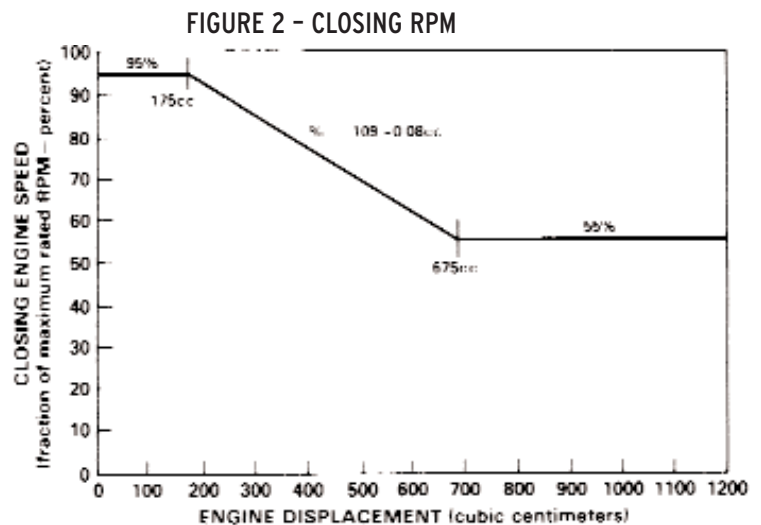
- (1) Motorcycle type, serial number, model year, date of manufacture, engine displacement, maximum-rated RPM, closing RPM, transmission type if automatic and gear used.
- (2) Names of persons conducting test and test location.
- (3) Wind speed and ambient noise level.
- (4) Description of the sound level meter and acoustic calibrator including type, serial number and calibration date.
- (5) Description of the tachometer or engine speed measurement system.
- (6) Maximum noise level for each pass and reported noise level.

Figure 1 - TEST MEASUREMENT AREA



- A - MICROPHONE TARGET POINT
- B - ACCELERATION POINT (VARIABLE)
- C - END POINT

FIGURE 2 - CLOSING RPM



AMA POSITION ON MOTORCYCLE SOUND

The Association believes that few other factors contribute more to misunderstanding and prejudice against the motorcycling community than excessively noisy motorcycles. Riders on loud motorcycles may leave the impression that all motorcycles are loud. In fact, a significant percentage of the public does not realize that motorcycles are built to federally mandated noise control standards.

Each segment of the motorcycling community - including the riders, event organizers, retailers and distributors, original equipment and aftermarket manufacturers, law enforcement and the safety community - must realize that it cannot single-handedly solve this problem. However, each has a role and a responsibility in achieving a solution.

Shifting blame and failing to adopt responsible policies on a voluntary basis can only result in greater prejudice and discrimination against motorcycling. The consequences of continuing to ignore this issue will likely result in excessively rigorous state and federal standards, more expensive and less attractive motorcycles, the reduction of choices in aftermarket products, loss of riding opportunities, abusive enforcement of current laws and other punitive measures to riders and the motorcycle industry.

Based on its opposition to excessive motorcycle noise, the American Motorcyclist Association recommends the following:

- All motorcyclists must be responsive to community standards and respect the rights of fellow citizens to enjoy a peaceful environment.
- Motorcyclists should not modify exhaust systems in a way that will increase sound to an offensive level, including the use of unbaffled pipes.
- Organizers of motorcycle events should take steps through advertising, peer pressure and enforcement to make excessively loud motorcycles unwelcome.
- Motorcycle retailers should encourage the use of quiet exhaust technology.
- The motorcycle industry, including aftermarket suppliers of replacement exhaust systems, should adopt responsible product design and marketing policies aimed at limiting excessive motorcycle noise.
- Motorcycle and aftermarket manufacturers should continue to educate their dealers and customers that louder exhaust systems do not necessarily improve the performance of a motorcycle.
- Law enforcement agencies should fairly and consistently enforce appropriate laws and ordinances against excessive vehicle noise.
- The motorcycle industry and the safety community should educate riders that excessive noise may cause fatigue and may put their health at risk.

QUESTIONS & ANSWERS

Q: What is "excessive noise?"

A: No one likes excessive or unreasonable noise. Confusion arises because everyone has a different definition of "excessive." The definition of excessive noise shouldn't always be based on the rider, but rather the conditions around the rider. Some factors to consider include surroundings, time of day, traffic mix, people present, etc. It's up to you to be aware of your surroundings and be respectful and considerate of others.

Q: Why does AMA care about the issue of excessive motorcycle noise?

A: The position results from the AMA's desire to avoid further restrictions on motorcycling. The AMA has fought motorcycle bans in St. Louis, Detroit, Brockton, Massachusetts, and Springfield, Illinois. The foundation for each was tied to excessive noise. More recently we have confronted proposed motorcycle prohibitions in Chicago and New York City. Motorcycle noise, again, was the justification for these proposals.

In the past several years, the AMA has spent well over \$100,000 defending lawsuits and confronting legislative prohibitions initiated by zealous legislators responding to their belief that motorcycles are too loud. In Europe, where road closures to stifle excessive noise are becoming almost commonplace, anti-tampering legislation and restrictive sound emission requirements are under serious consideration.

If the excessive noise problem is not addressed voluntarily, and in a timely fashion, these restrictions are inevitable. The AMA agrees that failure to raise this warning, despite the potential negative reception by some, would be shirking our responsibility to AMA members and the motorcycling community.

Q: If my exhaust is modified or capable of producing "excessive noise," will I be denied access to AMA or other motorcycle events?

A: It depends on a variety of factors including promoter discretion, local laws and community pressure. The AMA has encouraged event organizers to use advertising, peer pressure and enforcement of event rules to discourage excessively loud motorcycles.

Q: Why should appropriate laws and ordinances against excessive vehicle noise be fairly and consistently enforced?

A: The AMA believes that if existing laws and ordinances governing excessive noise from vehicles of all types were fairly and consistently enforced, the problem of noisy vehicles would be effectively eliminated.

Q: What good is it to regulate myself if others continue to make excessive noise?

A: Excessive noise is not the fault of any one brand, any particular style of bike, or any single segment of the motorcycle industry. It is a community-wide problem and we all need to be part of the solution.

Q: Is the AMA telling me to replace my aftermarket exhaust with an original-equipment exhaust?

A: No, however, unbaffled or modified exhaust systems should not increase sound to an offensive level.

Voluntary Sound Management, presented by Rick Gray, Chairman, AMA Board of Directors

With many rights come responsibilities. We enjoy the right to free speech in America, but that right does not entitle us to yell "Fire!" in a crowded theater. So too, the right to ride a motorcycle does not permit us to infringe on the peaceful enjoyment of life by others. Indeed, many others, including the courts, view motorcycling not as a right but a privilege. This is an important distinction because under our legal system, the government can regulate or eliminate a privilege much easier than it can restrict or cancel a right.

When we examine lessons from history, it's predictable that when a minority abuses a right or privilege the majority will react. The reaction usually takes the form of some repressive measure. Often the phrase, "I hate motorcycles" is immediately followed with "they're too loud." Reactions of this nature regularly result in bike bans and proposals to limit the modifications we can make to our motorcycles.

Activist motorcyclists throughout the world have defended themselves against such reactions, and here in the United States the AMA has spent more than \$100,000 fighting bike ban lawsuits in recent years. All too often, the measures being fought by the AMA originated in part or total because a minority of motorcyclists have not acted responsibly when it comes to noise. Much of this predicament is not an equipment or engineering problem, but rather a behavioral problem. Some motorcycles, when operated under certain conditions, are virtually guaranteed to offend others by interfering with their right to a peaceful environment. Irresponsibly making excessive noise with motorcycle exhaust systems is tantamount to yelling "Fire," yet some do it daily.

Rather than abuse our right to ride, shouldn't we view that right as a resource to be conserved, nurtured and developed? Can we realize that "noise" has become a political problem? Shouldn't we engage in voluntary sound management through reasonable self-regulation in order to avoid the imposition of repressive regulations?

With responsible voluntary sound management, we can "soundly manage" our precious resource of motorcycling. Without it, we invite further government regulation or worse. The choice is ours.

**Adopted by
THE NATIONAL ASSOCIATION OF OFF-HIGHWAY VEHICLE PROGRAM MANAGERS
(NAOPM)**

In support of:

A NATIONAL OFF-HIGHWAY VEHICLE SOUND STANDARD NOT TO EXCEED 96 dB(A)

WHEREAS: the signatories of this Resolution ("the signatories" hereinafter) represent local, state and federal management agencies responsible for off-highway vehicle ("OHV" hereinafter) programs throughout the United States; and

Whereas: the responsibilities of the signatories are to manage and provide, where appropriate, responsible OHV recreation opportunity; and

Whereas: the responsibilities of the signatories are to provide necessary management that minimizes conflict between diverse motorized and non-motorized recreation and other interested publics; and

Whereas: The signatories recognize the adverse impact that excessive sound and noise have on OHV recreation opportunity, other recreation activities, communities and wildlife; and

Whereas: the signatories recognize the importance of consistent regulations to improve visitor understanding and compliance, and enhance seamless service; and

Whereas: the signatories encourage efforts by the OHV industry and community to reduce noise created by OHV recreation activities to the lowest possible and reasonable level; and

NOW, THEREFORE, BE IT RESOLVED, that the signatories support a national sound standard not to exceed 96 dB(A) utilizing the SAE 1287-July 98 testing procedure for all OHVs operated on public lands with the exception of closed-course, hill-climb competition events or other permitted special events.

BE IT RESOLVED THIS 10 DAY OF MARCH, 2004

National Association of OHV Program Managers

A JOINT STATEMENT FROM THE AMA AND THE MRF

The American Motorcyclist Association (AMA) and the Motorcycle Riders Foundation (MRF) share a common goal of protecting the best interests of American motorcyclists and have a long history of working together toward that goal.

At the National Summit on Motorcycle Sound, held May 16-18, 2003 in Worthington, Ohio, the AMA and the MRF joined others from the motorcycling community—including representatives from rider groups, motorcycle manufacturers, aftermarket companies, event organizers, law enforcement, municipal government, research institutions and regulatory agencies—in candid and open discussions on issues related to motor-vehicle noise.

The AMA and the MRF, along with others present at the conference, agreed that excessive motorcycle noise is a serious issue in some communities, that it may become an issue in many more, and that the potential exists for it to affect motorcyclists' rights nationwide.

Based on discussions at that conference, the AMA and the MRF have agreed to work together, with the support of other organizations and individuals within the motorcycling community, to seek solutions to this problem in the best interests of American motorcyclists. The AMA and the MRF ask for the support of their members, and of all motorcyclists, in this effort.

Issued: June 30, 2003



rights. riding. racing.
AmericanMotorcyclistAssociation



List of Attendees National Summit on Motorcycle Sound

Don Amador

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Ohio Center for
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