



SURFACE VEHICLE RECOMMENDED PRACTICE	J1855™	DEC2024
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Superseding J1855 FEB2010		
Deployment of Electrically Activated Automotive Airbags for Automobile Reclamation		

RATIONALE

This document has been revised to remove reference documents that are too old and are not readily available. These revisions have resulted in renumbering sections using the prior format.

Other revisions include removing older exemplar materials, including those previously referenced in Figure 1 as they are too old to be valuable. These examples are changed to general descriptions of components so the figure is not manufacturer- or time-dependent.

FOREWORD

Interest has been expressed by groups in government and industry regarding the issue of safe deployment of automotive airbag systems for disposal purposes. As a result, there have been numerous studies and meetings to address various methods for handling, identification, and disposal of electrically activated airbag inflators. Several viable solutions have been proposed, yet a standardized approach was still needed. For this reason, the Automotive Air Bag Disposal Study Group of the SAE Inflatable Restraints Systems Standards Committee has prepared this SAE Recommended Practice.

1. SCOPE

This SAE Recommended Practice describes the method for safe deployment of airbag modules in vehicles equipped with electrically actuated airbag systems for the purpose of disposal. It is intended to provide a procedure that does not require significant technical expertise, is easy to operate, and is readily available to be used by automobile dismantlers or vehicle shredders to deploy airbag modules prior to automobile reclamation.

1.1 Purpose

The purpose of this document is to establish a uniform procedure regarding the deployment of automotive airbags in vehicles during the vehicle scrappage process. This document is intended as a guide toward standard practice and is subject to change to keep pace with experience and technical advances.

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2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J1538 Glossary of Automotive Inflatable Restraint Systems

2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J1856 Identification of Automotive Air Bags

Gratch, S. and McConnell, C., "The MVMA Gas Generants Investigation," SAE Technical Paper 790643, 1979, <https://doi.org/10.4271/790643>.

Kirchoff, G., "Disposal of Inflators for Airbag Systems," SAE Technical Paper 841217, 1984, <https://doi.org/10.4271/841217>.

3. DEFINITIONS

See SAE J1538.

4. REMOTE ACTUATION OF UNDEPLOYED AIRBAG SYSTEMS

4.1 Safety Considerations

The deployment of an airbag could be potentially hazardous to personnel in close proximity to the deployment event. Therefore, the following safety precautions are recommended:

- 4.1.1 Place the unit to be deployed in a well-lighted and ventilated area.
- 4.1.2 Notify anyone in the immediate vicinity of a pending airbag deployment.
- 4.1.3 Check the mounting of the airbag to be sure it is rigidly attached to the vehicle or a suitable mounting structure.
- 4.1.4 Remove or otherwise disengage the power source when making connections to the airbag wiring.
- 4.1.5 Activate, if necessary, the ventilation system just before the deployment and continue its operation for several minutes afterward.
- 4.1.6 Ensure other personnel are a safe distance from the event, and announce the deployment.
- 4.1.7 Ensure safety glasses and ear protection devices are being worn by all personnel in the vicinity of the airbag deployment area.

4.2 Remote Deployment Connector

Existing remote deployment systems utilize plug-in type connectors. Until such time as a uniform connector is developed and utilized by all automobile manufacturers in all airbag systems and vehicle designs, access to existing connectors, or a suitable splicing location, is advised. Information regarding the description and location of these connectors or splicing locations and the types of vehicles they are being used in should be prepared and made available by automobile manufacturers as new systems are developed. As a minimum, the following information is recommended for inclusion for each type of air-bag-equipped vehicle:

4.2.1 Alternative A

4.2.1.1 Make/model/year of vehicle.

4.2.1.2 Description and part number of remote deployment connector, if provided (see Figure 1).

4.2.1.3 Description of remote deployment connector or splicing location(s).

4.2.2 Alternative B

4.2.2.1 Make/model/year of vehicle.

4.2.2.2 A remote deployment system connecting device that uses crimp-on type connectors where the electrical connection to the inflator firing circuit is made by crimping to a loop or insulated stub in the wiring system.

4.2.2.3 Description of location of loop or insulated stub.

4.3 Remote Deployment Device

A remote deployment device may be utilized to trigger an airbag inflator without removing the system from the vehicle. The requirements for a remote deployment device are as follows:

4.3.1 Electrical power supply may be self-contained or may utilize an external 12-V battery source.

4.3.2 The proper electrical interface connectors/adapters for the airbag systems that are to be remotely deployed.

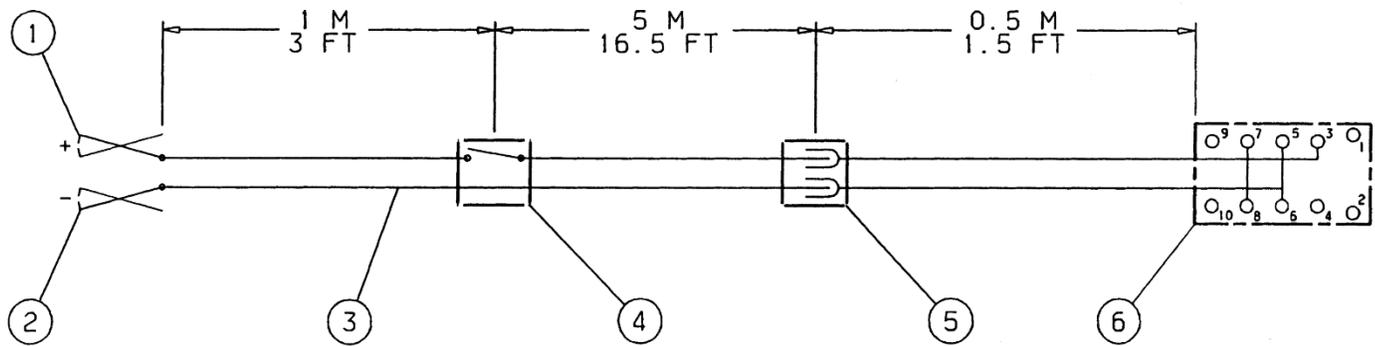
4.3.3 A firing switch in series between the power supply and the electrical interface connectors/adapters.

An example of a remote deployment system and the system electrical schematic is given in Figure 1.

4.4 Remote Deployment Procedures

A typical procedure for the remote deployment of an airbag system may include:

4.4.1 Disconnect vehicle battery and wait 20 minutes for the energy reserve to discharge.



1. Battery Terminal Clip
2. Battery Terminal Clip
3. 2 conductor Cable
4. Toggle Switch, off-momentary on type
5. Two circuit connector
6. Airbag connector

Figure 1 - Example of an airbag remote deployment device circuit

- 4.4.2 The airbag module(s) to be deployed must be firmly mounted to the vehicle. Verify that there is no loose debris around the unit(s). Deployment of loose or unmounted airbag module(s) may cause personal injury.
- 4.4.3 The operator of the remote deployment device should ensure that no other persons are in or near the vehicle when the bag(s) is deployed.
- 4.4.4 Connect the manufacturer-specified electrical connector for the airbag system(s) to be deployed to one end of the firing line of the remote deployment device.
- 4.4.5 Connect the other end of the firing line to the remote airbag inflator(s) firing system connector.
- 4.4.6 Close the doors of the car, if possible, extending the connecting cable to its full length of at least 6 m (20 feet).
- 4.4.7 Connect the remote firing line to an automobile battery or other remote power source.
- 4.4.8 From a safe position, activate the firing button(s) to initiate remote deployment of the airbag module(s).
- 4.4.9 Wait for at least 30 minutes before approaching and handling the airbag.