



---

# SR-100 SCSR

## Daily Visual and 90 Day Inspection Criteria



ASMD  
Instruction Manual



## **SR-100**

NIOSH/MSHA Approved  
TC-13F-239

## TABLE OF CONTENTS

<b>SR-100 Safety Guidelines</b> .....	ii
<b>General Description</b> .....	1
ASMD .....	1
<b>SR-100 Inspections Criteria</b> .....	2
<b>SR-100 Daily Inspection Criteria Pass/Fail</b> .....	3
Criteria For Units to Remain In Service .....	5
Criteria for Damaged Unit To Be Pull From Service .....	7
ASMD Spot Checker .....	12
ASMD Test Procedures .....	14
<b>Appendix I: Glossary</b> .....	15
<b>Inspection Log Book</b> .....	18
<b>Notes</b> .....	23
<b>Warranty Registration</b> .....	24
<b>Warranty Policy</b> .....	25

## SR-100 SAFETY GUIDELINES

**THIS MANUAL MUST BE READ COMPLETELY BY ALL INDIVIDUALS USING, INSPECTING OR PROVIDING TRAINING FOR THE CSE SR-100. The CSE SR-100 will perform as designed only if it is maintained and used in accordance with the manufacturer's instructions and regulatory standards. FAILURE TO FOLLOW THESE INSTRUCTIONS AND REGULATIONS COULD RESULT IN SERIOUS INJURY OR DEATH.**

### SAFETY GUIDELINES – DEFINITIONS

**SAFETY TERMINOLOGY.** The following symbols are utilized throughout this manual to help you recognize safety related to the SR-100.

**WARNING** – Indicates a potential hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION** – Indicates a potential hazardous situation which, if not avoided, may result in minor or moderate injury.

**Warning:** The CSE SR-100 has been designed by CSE and approved as an Escape Self Contained Breathing Apparatus (ESCBA) and should only be used to escape from atmospheres Immediately Dangerous to Life and Health (IDLH).

**Warning:** The CSE SR-100 is not approved for use as a Self Contained Breathing Apparatus (SCBA) and should not be used for rescue, fire-fighting or underwater breathing.

**Warning:** Before donning SR-100 remove any foreign matter from your mouth such as chewing tobacco or gum.

**Warning:** Breathing through the SR-100 differs from breathing ambient air; temperature and resistance will be slightly higher. This is normal during use and never warrants removal of the mouthpiece.

**Warning:** The user should be familiar with operational primary escape ways, secondary escape ways and SR-100 cache locations.

## **SR-100 SAFETY GUIDELINES: Continued**

**Warning:** Never remove the mouthpiece unless you have reached fresh air or you are replacing the unit you are wearing with a changeover unit.

**Warning:** Do not attempt to talk while wearing SR-100, maintain a tight seal on mouthpiece and nose clip. Try to communicate via hand signals or writing.

**Warning:** Remove the SR-100 from service if any of the following conditions exist: top or bottom moisture indicator is not blue, the security seal is broken, the unit was exposed to temperatures above 130°F and the temperature indicator is red, or show indications of physical abuse (crushed, burnt, visible puncture holes, substantial cracks dents, or any other visible signs of trauma.)

**Warning:** The unit must temporarily be removed from service if the internal temperature of the unit drops below 32°F. Once the internal temperature rises above 32°F the unit may be returned to service.

**Warning:** Never attempt to use a damaged SR-100, unit already removed from service or that does not meet inspection criteria.

**Warning:** The SR-100 is intended as a one time use only product, once the unit is opened it is considered spent and should be disposed of properly.

**Warning:** Avoid direct contact between the breathing bag and open flames or chemicals during use.

**Warning:** The SR-100 and carrying pouch should be kept clean. Do not submerge the SR-100 in water or use petroleum solvents to clean.

## **SR-100 SAFETY GUIDELINES: Continued**

**Warning:** The user should perform the daily inspection of the CSE SR-100 prior to carrying the unit.

**Warning:** Only a trained and qualified individual may perform the 90 day ASMD inspection of the CSE SR-100.

**Warning:** Do not introduce petroleum based liquids or flammable liquids into the unit. The chemical (potassium super oxide) in this unit is not combustible but it can ignite flammable liquids when they come in contact.

# **ACOUSTIC SOLIDS MOVEMENT DETECTOR (ASMD)**

## **GENERAL DESCRIPTION**

Designed to be used by SR-100 operators, the Acoustic Solids Movement Detector (ASMD) was created as a non-destructive method to detect changes in the chemical bed of the SR-100, either through misuse or normal wear and tear. Although, in most cases the trauma can be seen, there are times when the SR-100 does not show significant damage, therefore this manual is to be used as a reference guide for the proper usage and care of the SR-100.

By attaching the ASMD to the front center of the SR-100, a simple shake test can be performed by shaking the unit in an up and down motion, several times. A LED indicator on the ASMD will inform the user as to whether the unit passes the criteria to remain in service. Any unit which does not meet the criteria must be removed from service.

This Test is to be repeated on each SR-100 at least every 90-Days.

## **CSE SR-100 DAILY INSPECTIONS CRITERIA:**

The carrying pouch should be loose fitting so that the unit may be easily removed when needed in an emergency.

New SR-100 without carrying pouch and  
with approved carrying pouch.





## CSE SR-100 DAILY INSPECTION CRITERIA

### DAILY VISUAL INSPECTION:

Readiness of the SR-100 is confirmed visually, at any time, by quickly checking the indicators and general condition of the unit prior to entering the workplace.

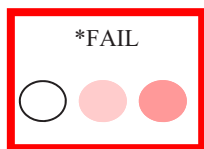
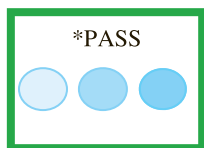
Check for the following items:

<b>PASS</b> Remain in Service	<b>FAIL</b> Remove from Service
Date of Manufacture, less than 10 years	Date of Manufacture, if date exceeds 10 years.
Security band is secure.	Security band has been become slack, unattached, or unfastened.
Top and bottom moisture indicators are blue. Temperature indicator, located on the side of the unit should be pink or white.	If the top and bottom moisture indicators of either indicator is white, pink or damaged do not attempt to use. If the temperature indicator, located on the side of the unit is red, do not attempt to use.
Top and bottom covers are properly aligned.	Top and bottom covers are jarred or misaligned.
Top and bottom cover seals are properly aligned.	Top and bottom cover seals are cut, split or displaced.
No signs of significant trauma. (Beyond normal wear and tear.)	Signs of significant trauma (beyond normal wear and tear) such as substantial dents in the top and bottom covers or substantial dents, breaks or punctures in the orange plastic outer cover. If the unit has been crushed, burnt, or suffered any damage that cause the security strap to become slack , unattached, or unfastened

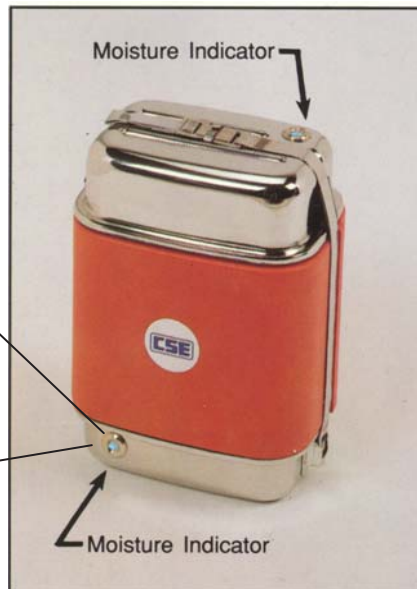
# CSE SR-100 DAILY INSPECTIONS

## CRITERIA: Continued

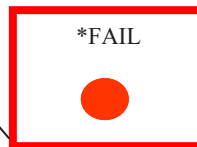
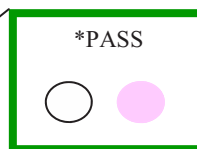
### Moisture Indicator



\* Actual color shade may differ slightly



### Temperature Indicator



\* Actual color shade may differ slightly. Fail indicates unit has been subjected to temperatures exceeding 130°F.

## **CSE SR-100 DAILY INSPECTIONS:**

### **Criteria for Units to Remain to Service**

These three units have been in service for approximately six years and show the typical signs of normal wear and tear. The plastic dust covers are abraded on the corners and along the edges. There are also some dents in the top and bottom stainless steel covers.

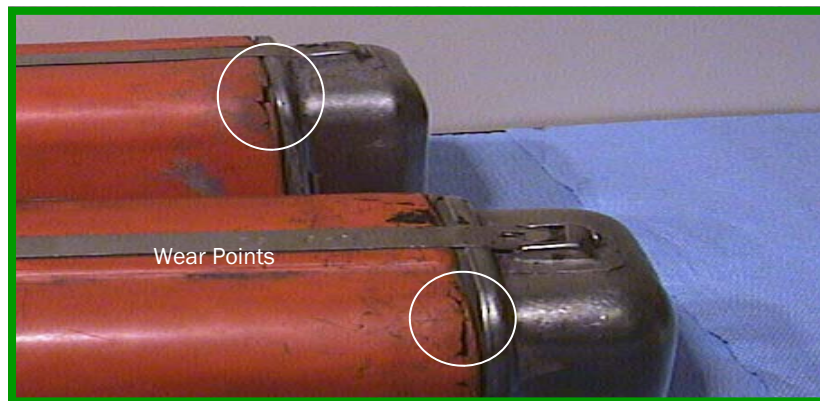
However, the security bands are in place and the color indicators are blue, indicating no ingress of moisture. The two seals between the top and bottom covers and the chemical canister appear to be securely in place. These units pass the daily and 90-day visual inspection criteria.



## **CSE SR-100 DAILY INSPECTIONS:** **Criteria for Units to Remain in Service**



This unit's condition shows normal wear and tear. The abraded corner on the plastic cover and minor dent in the stainless steel top cover do not cause the unit to fail visual inspection. The unit may remain in service if it passes the remainder of the inspection.



These wear points are the result of abrasion and minor impacts that do not adversely affect the SR-100 performance. These units may remain in service if they pass the remainder of inspection criteria.

**CSE SR-100 DAILY INSPECTION:**  
**Damaged Units, Remove from Service**

Examples of damaged units.

All units displayed must be removed from service



**Warning: Never attempt to use a damaged SR-100 or unit already removed from service.**





**CSE SR-100 DAILY INSPECTION:**  
**Damaged Units, Remove from Service**



Seals are protruding and security band out of alignment. Such conditions result from forceful impacts.

These units must be removed from service.



This unit has received a severe impact to its top cover. As a result, the top cover has a significant dent and the seal ring has been displaced.

This unit must be removed from service.

**CSE SR-100 DAILY INSPECTION:**  
**Damaged Units, Remove from Service**

This unit fails the visual inspection because its seal has been displaced and is protruding from under the stainless steel cover.

This unit must be removed from service.



## **CSE SR-100 90 DAY INSPECTION CRITERIA:**

### **ASMD SPOT CHECKER: Operating Instructions**

**The ASMD Spot Checker is used to check the calibration level of the Acoustic Solids Movement Detector (ASMD) making sure the ASMD's red LED comes on at the designated noise level.**



1. To activate the ASMD Spot Checker, plug its power adapter into a 120V outlet, insert the cord from the power adapter into the bottom of the ASMD spot checker and turn on the switch located next to the plug at the bottom of the unit. A green LED will light up to show the power is on.



## **CSE SR-100 90 DAY INSPECTION CRITERIA CONTINUED:**

### **ASMD SPOT CHECKER: Operating Instructions**

2. With the power on you will hear an audible sound emitting from the ASMD Spot Checker. If the audible noise is not heard, return the ASMD Spot Checker to CSE Corporation for repair.
3. The ASMD Spot Checker should be returned to CSE every **six months** for calibration.

### **Checking ASMD with ASMD Spot Checker**

1. Turn on the power switches of both the ASMD and the ASMD Spot Checker. Join the units at their rubber cones, squeeze the cones together so as to compress the foam pad attached to the ASMD rubber cone. At this time the red LED should be visible in the ASMD top panel. If the red LED is visible you are ready to begin using the ASMD. This check of the ASMD should be performed once each day you are going to evaluate SR-100's for noise.
2. If the red LED is not visible when tested with the ASMD Spot Checker, the ASMD must be removed from service and returned to CSE for repair.

## **CSE SR-100 90 DAY INSPECTION CRITERIA CONTINUED:**

### **90 DAY VISUAL AND ASMD INSPECTIONS:**

#### **This is the ASMD Test as detailed:**

1. Remove your SR-100 from its carrying pouch.

If difficulty is experienced in getting the SR-100 into or out of its carrying pouch, it can be cleaned with clean, cool water and air-dried. Do not use harsh chemicals or detergents on the pouch or the SR-100 unit. If a pouch wears out and is no longer serviceable, it must be replaced.

2. Slide the harness of the ASMD over the top metal lid and down the orange casing until the straps fit around the lid and case of the SR-100 (Covering the round CSE sticker). Now pull the two Velcro straps firmly through the buckle to tighten the ASMD against the SR-100. Continue to tighten the two straps until the foam of the rubberized sound sensor is slightly compressed, then secure the straps by attaching the Velcro Sections.



Acoustic Solids Movement Detector  
Mounted on a SR-100

## **CSE SR-100 90 DAY INSPECTION CRITERIA CONTINUED:**

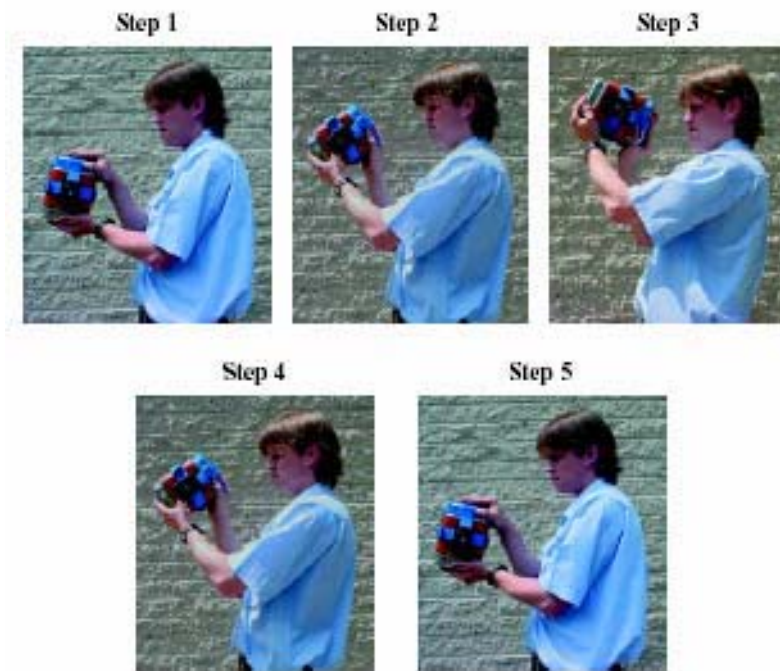
### **90 DAY VISUAL AND ASMD INSPECTIONS CONTINUED:**

3. Now your SR-100 is ready to be checked using the Acoustic Solids Movement Detector (ASMD). Check the readiness of the ASMD unit by first turning the ASMD unit on and tapping the case with your finger. This makes a noise causing the red failure indicator to flash on and off. This will confirm the ASMD power switch is on..



## CSE SR-100 INSPECTION CRITERIA CONTINUED:

4. Hold the SR-100 firmly, placing one hand on the top and one hand on the bottom of the unit. Move the unit in a swinging up and down motion from shoulder to waist. This should be repeated four times in a smooth motion.  
( look for the RED LED to flash on and off).



## **CSE SR-100 INSPECTION CRITERIA CONTINUED:**

5. If the RED LED is visible only once or twice on the first or second shake or not at all the SR-100 may be returned to service. If the RED LED lights up consistently while shaking, the SR-100 must be taken out of service. Please remember to test the SR-100 in a smooth up and down motion rather than violently shaking the unit which could cause unrelated noises and give a false reading.

6. The ASMD is powered with a 9V, field replaceable, battery. If for some reason the power does not come on, replace the battery. To replace the battery, remove the battery compartment cover from the ASMD case, lift pad and remove the battery from the compartment and separate the snap connector from the battery. Connect a fresh 9V battery to the snap connector and wrap it within the foam cushion. Holding the foam tightly against the battery, replace the battery compartment cover. If the power still does not come on, return the ASMD to CSE for repair.

## **APPENDIX II:GLOSSARY**

ASMD - Acoustic Solids Movement Detector

CO<sub>2</sub> - Carbon Dioxide

EGRESS - to go or come out

EPA - Environmental Protection Agency

ESCBA - Escape Self Contained Breathing Apparatus

IDLH - Immediately Dangerous to Life and Health

KO<sub>2</sub> - Potassium Super Oxide

LiOH - Lithium Hydroxide

MSHA– Mine Safety and Health Administration

NIOSH - National Institute For Occupational Safety and Health

O<sub>2</sub> - Oxygen

PWSCSR - Pearson Wearable Self Contained Self Rescuer

SCSR - Self Contained Self Rescuer













**Notes:**





**ASMD**  
Warranty Registration

Date of Purchase \_\_\_\_\_ Serial Number \_\_\_\_\_

Name \_\_\_\_\_ Phone \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

---

Mail or Fax ASMD Warranty Card (412-856-9203)

Warranty is void unless registration card is completed and returned to CSE within 30 days of receipt of product.



---

**ASMD**  
Warranty Policy

CSE Corporation warrants to the original end-user purchaser this product to be free from defects in material and workmanship for 1 year from the date of purchase. During this period, CSE will repair or replace defective parts on an exchange basis. F.O.B. the factory at Monroeville, Pennsylvania. Freight charges to and from the CSE factory will be paid by the end-user purchaser. The decision to repair or replace defective parts shall be determined by CSE.

**Validation:** To validate this warranty, the registration card must be detached, completed and returned to CSE's offices within 30 days of purchase.

**Conditions and Exclusions:** To maintain this warranty, the purchaser must perform maintenance and inspection as prescribed in the owners manual and such other necessary care as may be required according to the use of the equipment in the reasonable judgment of CSE. Normal wear and tear, parts damaged by abuse, misuse, negligence, or accidents are excluded from this warranty. Purchaser acknowledges that, notwithstanding any contrary term or provision in the purchaser's purchase order or otherwise, the only warranty extended by CSE is the express warranty contained herein. PURCHASER FURTHER ACKNOWLEDGES THAT THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATIONS, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; THAT THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF; THAT NO ORAL WARRANTIES, REPRESENTATIONS, OR GUARANTEES OF ANY KIND HAVE BEEN MADE BY CSE, ITS DISTRIBUTORS OR THE AGENTS OF EITHER OF THEM, THAT IN ANY WAY ALTER THE TERMS OF THIS WARRANTY; THAT CSE AND ITS DISTRIBUTORS SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING BUT NOT LIMITED TO INJURY TO THE PERSON OR PROPERTY OF THE PURCHASER OR OTHERS, AND FROM OTHER LOSSES OR EXPENSES INCURRED BY THE PURCHASER ARISING FROM THE USE, OPERATION, STORAGE, OR MAINTENANCE OF THE PRODUCT COVERED BY THE WARRANTY; THAT CSE'S LIABILITY UNDER THIS WARRANTY IS RESTRICTED TO REPAIR OR REPLACEMENT OF DEFECTIVE PARTS AT CSE'S SOLE DISCRETION. The warranty shall be void if the date and/or serial numbers affixed to the products by CSE are removed, obliterated, or defaced.

CSE Corporation, 600 Seco Rd. , Monroeville, PA. 15146 (412) 856-9200 or  
1-800-245-2224

Part Number \_\_\_\_\_ Serial Number \_\_\_\_\_

ASMD Warranty Statement

August 5, 2001



Corporate Headquarters  
600 Seco Road  
Monroeville, PA 15146  
Phone: 412-856-9200  
Fax: 412-856-9203  
Email: [customerservice@csecorporation.com](mailto:customerservice@csecorporation.com)  
Website: [www.csecorporation.com](http://www.csecorporation.com)