



LOTO

The Control of Hazardous Energy

OSHA - 29 CFR 1910.147



LOCKOUT/TAGOUT



# LOTO

## PURPOSE

OSHA 1910.147

NASA SSP-8715-0001



Provide NASA SSC employees with Lockout/Tagout Standards, Procedures and Requirements necessary to ensure their safety.



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## NASA procedure states

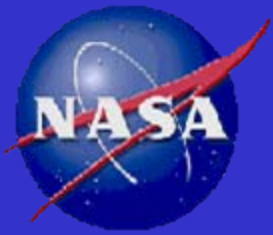
- Additionally, this guideline is intended to uniformly lock and tag equipment/systems across all Stennis Space Center (SSC) operations. For the purpose of attempting to maintain the overall effectiveness of the LO/TO program, a separate (but equally effective) program shall be documented and properly approved for long-term isolation of equipment/systems which may contain hazardous energy, but not undergoing service or maintenance activity.



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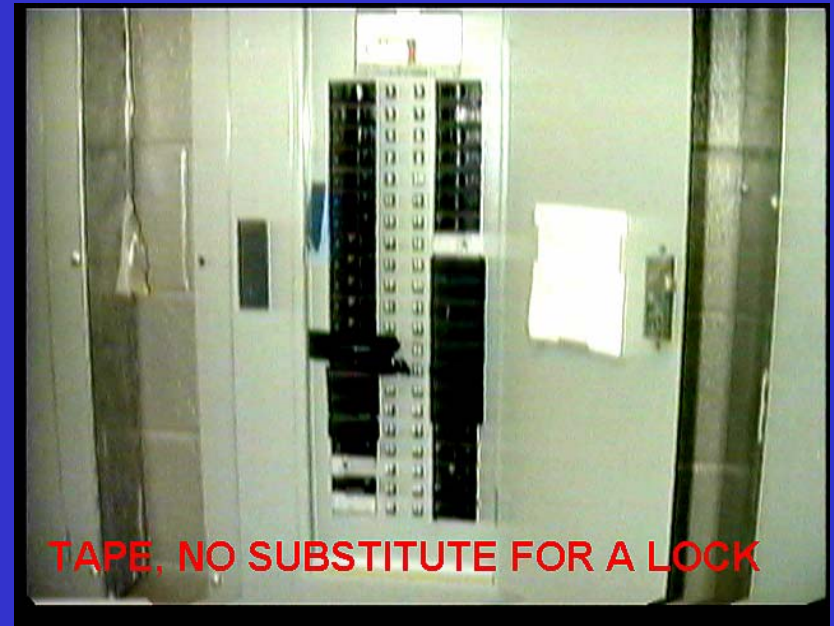
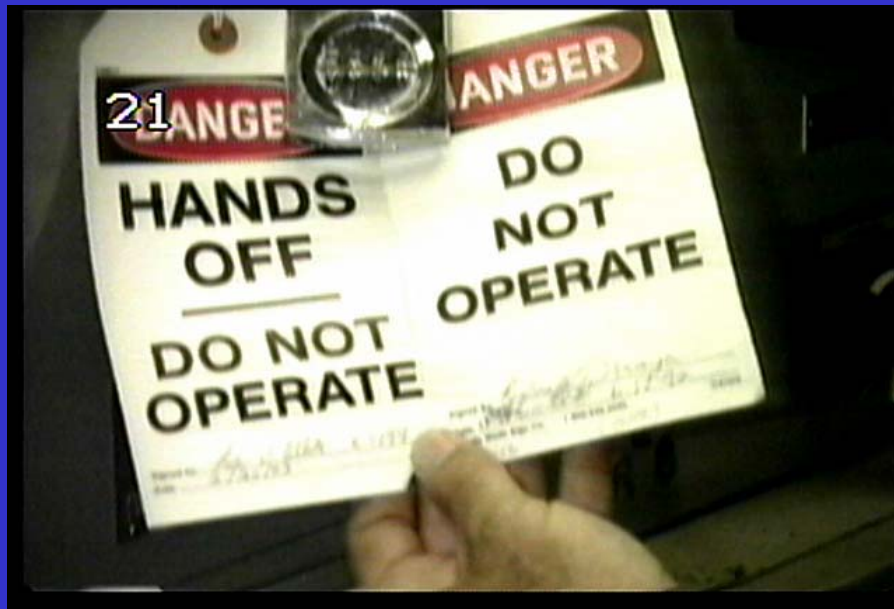
## General Requirements

- A written LO/TO program, including procedures, shall be developed for each federal agency and their contractor located at SSC.
- As a minimum, each program shall conform to the requirements found within the latest edition of the Stennis Safety Procedure (SSP 8715-0001)



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## WHAT NOT TO USE



TAPE, NO SUBSTITUTE FOR A LOCK



# LOTO

## WHAT NOT TO USE

No locking device installed



Tagouts alone will not be allowed to lockout energy sources



**LOTO**

**WHAT NOT TO USE**









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# FOSC CONFIGURATION TAG

Available from  
Safety Crib

**FOSC Configuration Tag**  
Date: \_\_\_\_\_

**WARNING**

**DO NOT OPERATE**

This lock/tag attached by and may only be removed by  
\_\_\_\_\_ Name \_\_\_\_\_ Dept. # \_\_\_\_\_

Supervisor: \_\_\_\_\_  
Contact #: \_\_\_\_\_  
WAD #: \_\_\_\_\_  
Expected Completion: \_\_\_\_\_

FOSC Form 192 (11/2007) See reverse for comments

Additional Comments: \_\_\_\_\_  
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FOSC Form 192 (11/2007) (reverse) (Ref. SPI 18-20-007)



# LOTO DEVICES

Custom designed valve  
covers to fit unique  
type handles

Group Lockout  
Multiple Crafts

Configuration Lock

Individual Lock





# LOTO

## DEVICES

Individual Simple  
Lockout





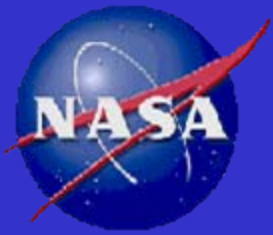
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## LO/TO procedure

All equipment must have capability to be locked out

- Tag outs alone are allowed unless approved by supervisor and safety.
- Implementation will require some equipment modification.





# LOTO DEVICES

## Valve lockout covers

Configuration  
Lockout



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# LOTO

## DEVICES

Group Lock Keys



Lock box  
lock installed  
by supervisor  
or lead

System/Group locked out with no  
employees working on system

Must have Configuration Lock & Tag



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## DEVICES

Personal locks must be removed at shift change if the system/group lockout extends to another shift.



**Employee  
Individual  
Lock**

**Must be identifiable  
and have LOTO  
tags attached**



# LOTO

## DEVICES



Special lockout devices for circuit breakers must be used on electrical systems





# LOTO

Remember  
to remove  
all LOTO  
locks and  
tags when  
finished  
job.

Tag found  
12/15/2007  
in 480V  
switchgear

Installed Date  
5/2/68





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- **APPENDIX C – REQUIREMENT FOR OFFSITE CONTRACTOR**
- **LOCKOUT/TAGOUT (LO/TO)**
- **When requested SSC work is performed by offsite contractors and the work requires use of LO/TO procedures for worker protection, special responsibilities shall be assumed by both the requesting organization and the offsite contractor(s) in accordance with the following requirements:**
  - 1. The requesting SSC organization shall provide the offsite contractor with a current copy of SSP 8715-0001, “Lockout/Tagout Program.”
  - 2. The requesting SSC organization shall ensure the offsite contractor provides a copy of their Safety and Health Plan to the Industrial Safety Department (ISD) to the monitoring safety office prior to starting any work to ensure all potential LO/TO conflicts are resolved before the commencement of work.
  - 3. The requesting SSC organization shall ensure the offsite contractor provides a request for SSC LO/TO training to the FOSC prior to starting any work.
  - 4. The offsite contractor and the requesting SSC organization shall fully understand that **NO** work can begin until the offsite contractor’s Safety and Health Plan is approved.
  - 5. The offsite contractor shall fully understand that special or additional LO/TO procedures can be required when working at SSC, above and beyond those described in their own Energy Control Program.



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- 6. The requesting SSC organization and offsite contractor shall fully understand and comply with all the SSC LO/TO program requirements. Contact responsible organization's safety office if additional information is needed.
- 7. The offsite contractor shall fully understand that a supervisor/foreman who is familiar with the SSC LO/TO program shall be onsite at all times while any LO/TO activities are being performed.
- 8. The requesting SSC organization shall ensure that all affected and other employees working in the area where the offsite contractor is performing LO/TO activities are informed of this work.
- 9. The requesting SSC organization and offsite contractor shall ensure any LO/TO activities performed by more than one crew or contractor are coordinated, and a group LO/TO procedure is initiated in accordance with section 3.10.1(a)(7)(F).
- 10. If the requesting SSC organization does not have an authorized employee to lockout the equipment/system during service by the offsite contractor, the organization shall coordinate this support service through the FOSC, as necessary.
- 11. The requesting SSC organization shall monitor the offsite contractor to ensure compliance with all the SSC LO/TO program requirements and that they identify and report any potential problems to the NASA Safety Office.
- 12. The requesting SSC organization shall ensure removal of all offsite contractor LO/TO devices occurs at job completion and before the contractor leaves the center.



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- **APPENDIX C**
- **Offsite Contractor Control of Hazardous Energy Documentation Record**
- **SWR/EMI/CONTRACT:** \_\_\_\_\_
- **JOB TITLE:** \_\_\_\_\_
- **WORK LOCATION:**  
\_\_\_\_\_
- **SCOPE OF WORK:**  
\_\_\_\_\_
- **OFFSITE CONTRACTOR/FOSC GROUP REQUIREMENTS  
(BEFORE COMMENCEMENT OF WORK)**
- **CONTRACT COMPLIANCE OFFICE REPRESENTATIVE HAS BEEN NOTIFIED**
- **THE OFFSITE CONTRACTOR HAS PROVIDED A COPY OF THEIR SAFETY AND HEALTH  
PLAN TO THE FOSC SAFETY DEPARTMENT TO ENSURE ALL POTENTIAL LO/TO  
CONFLICTS ARE RESOVED BEFORE COMMENCEMENT OF WORK.**
- **THE OFFSITE CONTRACTOR HAS REQUESTED FOR SSC LOCKOUT/TAGOUT  
TRAINING.**
- **THE OFFSITE CONTRACTOR SHALL FULLY UNDERSTAND AND COMPLY WITH ALL  
SSC LOCKOUT/TAGOUT REQUIREMENTS. (COMPLYING WITH FOSC PROCEDURE  
SPI-18-20-007 SHALL BE CONSIDERED TO BE IN COMPLIANCE WITH SSP-8715-0001  
SECTION 3.10)**
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- THE OFFSITE CONTRACTOR UNDERSTANDS THAT A SUPERVISOR/FOREMAN WHO IS FAMILIAR WITH THE SSC LOCKOUT/TAGOUT PROGRAM SHALL BE ONSITE AT ALL TIMES WHILE ANY LOCKOUT/TAGOUT ACTIVITIES ARE BEING PERFORMED.
- THE REQUESTING FOSC GROUP OR OFFSITE CONTRACTOR HAS INFORMED ALL AFFECTED EMPLOYEES WORKING IN THE AREA WHERE THE OFFSITE CONTRACTOR WILL BE PERFORMING LOCKOUT/TAGOUT ACTIVITIES.
- THE FOSC GROUP HAS PROVIDED A JOB BRIEFING TO THE OFFSITE CONTRACTOR TO IDENTIFY ANY HAZARDS OR POTENTIAL PROBLEMS.
- THE OFFSITE CONTRACTOR/FOSC GROUP UNDERSTANDS THAT ALL OFFSITE CONTRACTOR LOCKOUT/TAGOUT DEVICES SHALL BE REMOVED UPON COMPLETION OF WORK AND BEFORE THE CONTRACTOR LEAVES THE SITE.
- C.C.O. REP. OR CONSTRUCTION MONITOR APPROVAL/DATE:  

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- SUB-CONTRACTOR REP. APPROVAL/DATE:  

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## LOCKOUT / TAGOUT EMCS NOTIFICATION RECORD

- **Date**
- **Authorized Employee or LO/TO Coordinator**
- **Crew Number (s)**
- **Type of LO/TO (Simple, Group, or Configuration)**
- **Work Oder #(WAD)(NA if Unknown)**
- **Location**
- **Remote Start? (Y,N)**
- **Start Time**
- **Stop Time**
- **Purpose of Lockout**



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## Question/Discussion

