

# QUICK RELEASE PINS AND PIN TETHERS, STANDARD FOR

## NOT EXPORT CONTROLLED

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**Engineering Directorate**

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National Aeronautics and  
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**John F. Kennedy Space Center**



**RECORD OF REVISIONS/CHANGES**

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## ABBREVIATIONS, ACRONYMS, AND SYMBOLS

AISI	American Iron and Steel Institute
ASTM	American Society for Testing and Materials
COTS	commercial off-the-shelf
DE	Engineering Development Directorate
EMF	electromotive force
FOD	Foreign Object Debris
ft	foot (feet)
GS	ground systems
GSE	ground support equipment
GSS	ground support systems
in	inch
JSC	Lyndon B. Johnson Space Center
KSC	John F. Kennedy Space Center
ksi	kips (1000 lbs) per square inch
lbs	pounds
M&P	Materials and Processing Engineering
MIL	military
mm	millimeter
MPa	megapascal
MSC	Manned Spacecraft Center
MSFC	George C. Marshall Space Flight Center
NAS	National Aerospace Standard
NASA	National Aeronautics and Space Administration
SCC	stress corrosion cracking
SPEC	specification
STD	standard
TM	technical manual
UTS	ultimate tensile strength
Ø	diameter
°C	degree Celsius
°F	degree Fahrenheit

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## 1. SCOPE

This standard covers the usage and installation of quick release pins and pin tethers on ground support equipment (GSE) and facilities at the John F. Kennedy Space Center (KSC) or areas under KSC responsibility. This standard identifies types of pins, materials approved for use, and installation methods to provide designers, engineers, and technicians with standard practices to ensure the proper use of pins.

This standard applies to facilities and GSE where hazards to flight hardware or personnel exist. Hazardous areas include the vicinity of flight hardware, launch environments, and at heights where a falling object might cause injury to personnel or damage to flight hardware. Work authorization documents prepared for technicians to install or replace quick release pins shall cite this standard and provide applicable sections.

## 2. APPLICABLE DOCUMENTS

The following documents form a part of this document to the extent specified herein.

80K56817	Tab, Quick Release Pin, Specification for
ASTM A380	Standard Practice for Cleaning, Descaling, and Passivation of Stainless Steel Parts, Equipment, and Systems
ASTM D5363	Standard Specification for Anaerobic Single-Component Adhesives (AN)
MIL-DTL-83420/2	Wire Rope, Flexible, Type I, Composition B
MIL-DTL-83420/4	Wire Rope, Flexible, Type II (Jacketed), Composition B
MS51844	Sleeve, Swaging-Wire Rope
MSFC-STD-486	Standard, Threaded Fasteners, Torque Limits for
MSFC-STD-3029	Guidelines for the Selection of Metallic Materials for Stress Corrosion Cracking Resistance in Sodium Chloride Environments
SAE HS-1086	Metals & Alloys in the Unified Numbering System

## 3. DEFINITIONS

For the purpose of this document, the following definitions shall apply.