Aircraft Tool Supply MS20995C32SS1LB

Aircraft Tool Supply .032 Safety Lock Wire Instruction Manual

Model: MS20995C32SS1LB

1. Introduction

This manual provides essential information for the proper use and handling of the Aircraft Tool Supply .032 Safety Lock Wire. This product is designed to secure bolts, nuts, and other hardware components against loosening due to vibration, ensuring operational safety in critical applications.
Please read this manual thoroughly before using the product to ensure safe and effective application.

2. Safety Information

Always prioritize safety when working with tools and materials. Failure to follow safety guidelines can result in injury or damage to components.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, to prevent injury from sharp wire ends or tools.
- Use only approved lock wire pliers or twisting tools for application. Do not attempt to twist wire by hand.
- Ensure the work area is well-lit and free from obstructions.
- Keep the lock wire dispenser closed when not in use to prevent tangling and contamination.
- Dispose of cut wire ends properly to avoid hazards.

3. Product Overview

The Aircraft Tool Supply .032 Safety Lock Wire is a high-quality stainless steel wire, Type 302, designed for critical fastening applications. It comes in a convenient 1 lb dispenser can, ensuring easy access and minimal waste.

Image 1: The Aircraft Tool Supply .032 Safety Lock Wire in its blue dispenser can, shown from two angles. The can is designed for easy dispensing and storage of the wire.

Key Features:

- **Material:** Stainless Steel Type 302/304
- **Diameter:** .032 inches
- **Packaging:** 1 lb dispenser can
- **Standards:** Meets NASM / MS20995C and ASTM A580 specifications.

Image 2: An open blue dispenser can revealing the coiled .032 inch stainless steel safety lock wire ready for use. The design allows for smooth wire extraction.

4. Setup

The lock wire is supplied in a ready-to-use dispenser can. No complex setup is required for the wire itself.

1. Ensure you have the necessary tools: lock wire pliers, diagonal cutters, and the components to be secured.
2. Open the dispenser can by removing the lid.
3. Locate the end of the wire and pull out the desired length.
4. Close the dispenser lid after pulling out the wire to keep the remaining wire clean and contained.

5. Operating Instructions

Safety wiring is a technique used to secure fasteners in place. The general principle is to apply tension in the direction that prevents the fastener from loosening.

5.1. Basic Lock Wiring Procedure

1. **Prepare the Wire:** Pull out a sufficient length of wire from the dispenser. Cut the wire using diagonal cutters, ensuring clean ends.
2. **Insert Wire:** Thread the wire through the designated hole in the fastener (e.g., a drilled bolt head or nut).
3. **Twist:** Using lock wire pliers, grip both ends of the wire and twist them together. The twists should be uniform and tight, but not so tight as to weaken the wire.
4. **Secure:** Route the twisted wire to an adjacent fastener or a fixed anchor point. The wire should be routed such that any loosening motion of the fastener would tighten the wire.
5. **Final Twist and Cut:** Twist the wire around the second fastener or anchor point, ensuring proper tension. Cut off any excess wire, leaving a short pigtail (typically 3-6 twists) that is bent back to prevent snagging.

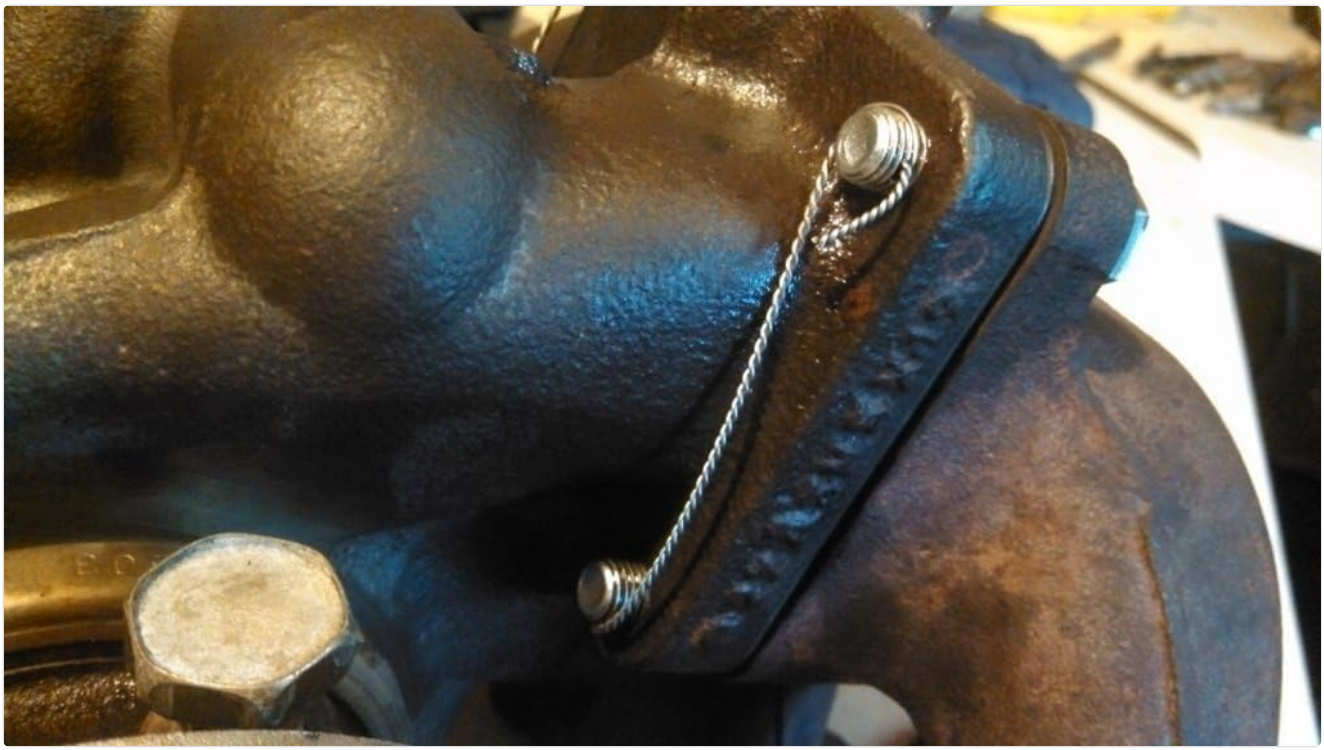

Image 3: An example of safety lock wire applied to secure bolts on an engine component. The wire is twisted between two bolts, preventing them from loosening.

5.2. Common Applications

- Securing aircraft engine components.
- Automotive racing applications.
- Industrial machinery where vibration is a concern.
- Any application requiring positive locking of fasteners.

Image 4: Safety lock wire applied to secure multiple bolts on an aircraft propeller. This demonstrates a common application where multiple fasteners are secured in a series.

6. Maintenance

The lock wire itself requires no maintenance. Proper storage is key to maintaining its quality.

- Store the dispenser can in a dry, clean environment away from corrosive chemicals or extreme temperatures.
- Keep the lid securely closed to prevent dust, dirt, or moisture from contaminating the wire.
- Inspect the wire for any kinks, corrosion, or damage before use. Do not use damaged wire.

7. Troubleshooting

Most issues related to safety wiring stem from improper technique or tool usage.

Problem	Possible Cause	Solution
Wire breaks during twisting.	Excessive twisting force; wire fatigued; incorrect pliers.	Reduce twisting force; ensure wire is not kinked before twisting; use proper lock wire pliers.
Twists are uneven or loose.	Improper plier technique; insufficient tension.	Practice with pliers to achieve consistent twists; maintain slight tension on the wire during twisting.
Fastener still loosens after wiring.	Incorrect wire routing; insufficient tension; fastener not properly torqued initially.	Ensure wire tension opposes loosening direction; verify fastener torque before wiring; re-wire with correct technique.

8. Specifications

Attribute	Detail
Brand	Aircraft Tool Supply
Model Number	MS20995C32SS1LB
Material	Stainless Steel Type 302/304
Diameter	.032 inches
Weight	1 pound (approx. 16 ounces)
Tensile Strength	300 megapascals
Finish Type	Polished
Standards Met	NASM / MS20995C, ASTM A580, MIL-W-6713
UPC	700761118401

9. Warranty and Support

Specific warranty information for the Aircraft Tool Supply .032 Safety Lock Wire is not provided in this manual. For details regarding warranty coverage, returns, or technical support, please contact Aircraft Tool Supply directly or refer to their official website.

For general inquiries or assistance with product application, please reach out to the manufacturer's customer service.