Product Service Bulletin:
Drawbar Wire Harness Rebuild Kits
300, 500, 600 Series

This product bulletin summarizes the essential steps and best practices for using the **Drawbar Wire Harness Rebuild Kit**. This kit allows for the efficient repair of damaged or corroded harness ends at the hitch connection without requiring the removal of the entire main wire harness.

Why You Need This Kit

- **Targeted Repair:** Main wire harnesses often fail only at the high-exposure ends (near the drawbar) due to proximity to the PTO, fatigue, and physical strain. This kit fixes the specific failure point.
- **Eliminate Resistance:** Corroded wires cause voltage drops and intermittent signal loss; replacing the "whip" end restores full electrical integrity to your system.

Key Advantages

- **Massive Labor Savings:** Avoid the hours (or days) required to fish a complete main harness through a chassis; this repair is done entirely at the machine's exterior.
- **Triple-Action Reliability:** The included connectors don't just crimp; they **solder** for strength and **heat-shrink** for a 100% waterproof seal that outperforms standard electrical tape repairs.

What's Included

- **Replacement Wire Whip:** A pre-pinned plug with factory-matched wire colors and gauges, designed to integrate seamlessly with your existing harness.
- **Complete Finishing Hardware:** Includes specialized crimp/solder butt connectors and large-diameter, heavy-duty heat shrink to protect the entire splice zone from the elements.

Harness Rebuild Best Practices

1. Overview & Preparation

The goal of this kit is to replace only the compromised section of the harness.

- **Prevent Unraveling:** Measure **18"** from the plug end and wrap with electrical tape before cutting to secure the protective mesh [00:02].
- **Remove Damage:** Cut away the old plug and trim back wires in **2" increments** until all visible corrosion is gone.
- **Alignment:** Align the new wire whip with the harness at the tape line to ensure proper length.

2. Tooling Requirements

For a reliable, weather-sealed connection, the following tools are required:

- **Crimping Tool:** Must be designed for **insulated connectors** (standard pliers are not sufficient) [00:10].
- **Heat Source:** A heat gun or butane torch rated for at least **1000°F (538°C)** [00:20].

3. Critical Splicing Steps

To maintain harness flexibility and strength, follow these splicing rules:

- **Staggered Cuts:** Do not place splices side-by-side. Stagger cuts at least **1 ½" apart**.
- **Wire Matching:** Always match both color and gauge (diameter) before connecting.
- **Stripping:** Strip approximately **5/16"** for small wires and **3/8"** for large wires.
- **Heat Shrink Placement:** Remember to slide the large diameter heat shrink onto the main harness **before** starting any wire connections.

4. Connector Installation (Crimp, Solder, Seal)

Follow this specific sequence to ensure a permanent, waterproof bond:

1. **Insert:** Push wires into the butt connector until they hit the internal wire stop [00:35].
2. **Crimp:** Align your tool **halfway** between the center solder sleeve and the end of the barrel [00:41].
3. **Seal Tubing:** Start heating at the **center** and move toward the ends to force out air and create a seal [01:06].

4. **Melt Solder:** Finally, focus heat on the center solder ring. Rotate the connector until the solder becomes **liquidus** and flows into the wire strands [01:27].

5. Testing & Final Protection

- **Functional Test:** Power up the system and test all functions before the final seal.
- **Strain Relief:** Slide the large diameter heat shrink over the entire splice area and the plug's strain relief.
- **Final Seal:** Heat from the center outward until the tubing is fully recovered and sealed against the wire mesh.

Training Resource

For a visual demonstration of the crimping and soldering process, please refer to the following instructional video: **Watch here:** VIDEO OR **Scan QR Code Below**

Part Numbers

SPK-BDW300 - Baler Side Drawbar Whip 300

SPK-BDW600 - Baler Side Drawbar Whip 500/600

SPK-TDW300 - Tractor Side Drawbar Whip 300

SPK-TDW600 - Tractor Side Drawbar Whip 500/600

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