BEFORE YOU SEND A PRINT

Ten things a harness print needs to get priced the first time.

If yours is missing some, send it anyway. The redline lists every assumption so nothing is hidden in the price.

THE CHECKLIST

- [ ] **Wire gauge and type on every circuit**
  Gauge and insulation, such as 16 AWG GXL. GXL, TXL and SXL differ in wall, heat rating and price.
- [ ] **Lengths with tolerances**
  Each branch length from a clear datum, with a tolerance such as ±13 mm.
- [ ] **Connector, terminal and seal part numbers**
  The full stack per cavity: housing, terminal, seal and secondary lock.
- [ ] **Pinout for every cavity**
  Including unused cavities and the plugs that fill them.
- [ ] **Wire colors or circuit IDs**
  So the harness matches your schematic.
- [ ] **Label and marking format**
  What each label reads, what it is made of and where it sits.
- [ ] **Covering for each branch**
  Split loom, braid, tape or heat-shrink, and where each starts and stops.
- [ ] **Rev letter and date in the title block**
  Keeps samples, production and service parts in step.
- [ ] **Test requirements**
  Continuity, hi-pot, pull values. If none are stated, we quote 100% continuity.
- [ ] **Annual usage and release size**
  How many a year and how many at a time.

SIX FAILURE POINTS TO DESIGN OUT

1. Chafe at pass-throughs
Call out a grommet or abrasion sleeve wherever the harness crosses a frame rail or sheet-metal edge.

2. Crimp quality
Under-crimped terminals pull out and over-crimped ones crack later. Check crimp height at every setup and confirm with cross-sections.

3. Missing secondary locks
A connector that never fully latched works loose. Specify the secondary lock and check it at final test.

4. Fretting on mated pairs
Micro-movement wears contact plating until the circuit drops out. Match connector family and plating to the vibration.

5. Unplugged cavities
An empty cavity in a sealed connector lets water in. Add cavity plugs to the BOM.

6. Tight bends at connector exits
Strands break inside the insulation. Set bend radius and strain relief to how the harness mounts.

Free redline in two business days. Send the print at loomwrightharness.com/contact.

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