1. all wire connections crimped or screw connectors, not soldered
2. all connectors to oem spec as in drawing C-2188701 and SD-51115-001
3. all crimping for 2188701 and male mate connectors according to spec 411-61029 except as necessary to mate 2 wires
4. all crimping for 51115-1611 according to spec in drawing SD-51115-001
5. wrap all wires in automotive cloth tape wrap to 30mm from connectors
5. a) wrap all W3 wires (W3_a, W3_b, W3_c) in one sleeve
   b) wrap all W2 wires (W2_a-W2_h) and W1 wires (W1_a, W1_b)
   c) place within 100mm from OBD port
6. alternative connectors are acceptable for shunt as long as they maintain 9mm separation between M-CAN_(HIGH) and M-CAN_(LOW)
7. use of combined 73-pin male mate (wire-to-wire equivalent of 2188692) is acceptable if it is the most economical option; use of 35-pin-only connector is preferred if cost is the same or better
8. wire lengths are +/- 30%
9. any splice type suitable for long-term automotive applications is acceptable
10. substitution of parts for cost is acceptable as long as replacements meet original specification
11. wire colors are for clarity and not required
12. all twisted pairs (W2_b, W2_c, W3_c) twisted at 40 twists per meter

Name: Hyundai/Kia M-CAN to OBD dongle	Date: 2026-04-21
Drawing Number: HKMOBD_SHR_ES-007-1	Drawn by: Tyler Harvey