Audi AAN ightarrow 3B ightarrow B3 7A Repin & Conversion Guide

Wiring Integration and Verification Manual — Rev 2 • October 31, 2025

Compiled & Illustrated by Andrew Schlueter • License: MIT

This document details adapting the Audi AAN engine wiring harness to the 3B Motronic 2.3.1 ECU in a B3 7A chassis. It provides ECU repinning, connector integration, and system conversion instructions (ignition, throttle, MAF, diagnostics). Designed as an educational reference with modern color diagrams and Audi-style connector boxes.

$AAN o 3B o B3 \ 7A ullet ECU \ T55 \ Pin \ Layout \ (Front \ Reference)$

T55 ECU Connector — Harness View

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	

Red = Power & Grounds

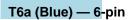
Green = Outputs

Blue = Sensors/Inputs/Diag

Representative Pin Mapping

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AAN Pin | Color | → 3B Function | Action | Connector | 7A Tie-in
18 | +12V Batt (30) | +12V Batt (30)
                                     | No Move
                                                 | T6a (Blue) — VERIFY | Fuse panel 30
27 | +12V IGN (15) | +12V IGN (15)
                                      | No Move
                                                 | T6a (Blue) — VERIFY | Ignition switch/X-relay
                                                    | No Move | T6a (Blue) — VERIFY | Relay J271
37 | Switched +12V to injectors/MAF | J271 feed
                                                      | T6b (Gray) — VERIFY | Chassis lug
10 | ECU/Actuator Ground | Ground
                                          l No Move
                                                      | T6b (Gray) — VERIFY | Chassis lug
19 | ECU/Actuator Ground | Ground
                                          No Move
24 | ECU/Actuator Ground | Ground
                                          | No Move
                                                      | T6b (Gray) — VERIFY | Chassis lug
                                                      | T6b (Gray) — VERIFY | Chassis lug
30 | ECU/Actuator Ground | Ground
                                          | No Move
51 | ECU/Actuator Ground | Ground
                                          | No Move | T6b (Gray) — VERIFY | Chassis lug
                                             | No Move | T6a (Blue) — VERIFY | Fuel pump relay panel
3 | Fuel Pump Relay Control | J17 coil (85)
47 | Reference (G4) | G4
                                  | No Move | Engine subloom | Shield to ECU
49 | Engine Speed (G28) | G28
                                       | No Move | Engine subloom | Shield to ECU
                                      | No Move | Engine subloom | Shield to ECU
8 | Cam Position (G40) | G40
                             | No Move | Engine subloom | —
44 | IAT (G42) | G42
45 | CLT (G62) | G62
                              | No Move | Engine subloom
11 | Knock 1 (G61) | G61
                                  | No Move | Engine subloom | --
29 | Knock 2 (G66) | G66
                                  | No Move | Engine subloom | —
7 | MAF (G70) Signal | G70
                                    | No Move | T8a (Red) — VERIFY | Cluster/Diag bus
25 | MAF Burn-off Control | (not used on 3B) | Remove | -
52 | TPS (Idle) F60 | TPS Idle (F60)
                                     | Rewire | T8b (Green) — VERIFY | HVAC/Throttle loom
54 | TPS (WOT) F96 | TPS WOT (F96)
                                         | Rewire | T8b (Green) — VERIFY | HVAC/Throttle loom
55 | TPS Ground | TPS Ground
                                            | T8b (Green) — VERIFY | HVAC/Throttle loom
                                   | Verify
53 | AAN TPS Potentiometer | (not used)
                                            | Remove/Park | —
1 | AAN COP (pin 1) | N124 trigger input (single) | Repurpose | T6a (Blue) — VERIFY | N124 power stage
2 | AAN COP (pin 2) | N124 trigger input (single) | Repurpose | T6a (Blue) — VERIFY | N124 power stage
20 | AAN COP (pin 20) | N124 trigger input (single) | Repurpose | T6a (Blue) — VERIFY | N124 power stage
21 | AAN COP (pin 21) | N124 trigger input (single) | Repurpose | T6a (Blue) — VERIFY | N124 power stage
23 | AAN COP (pin 23) | N124 trigger input (single) | Repurpose | T6a (Blue) — VERIFY | N124 power stage
40 | Tach Output | Cluster Tach
                                  | No Move | T8a (Red) — VERIFY | Cluster
50 | Vehicle Speed Signal | VSS to ECU
                                            | No Move | T8a (Red) — VERIFY | Cluster
22 | MIL Lamp Output | MIL low-side
                                       | No Move | T8a (Red) — VERIFY | Cluster bulb
                                    | No Move | T8b (Green) — VERIFY | HVAC head
6 | A/C Request | HVAC request
41 | A/C Idle-up | ISV idle-up
                                | No Move | T8b (Green) — VERIFY | HVAC head
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Harness Carrier Connectors



1	2	3	4		
5	6	7	8		

T6b ((Gray)	 6-	nin
ן טט ו	Oray	, — 0-	PIII

1	2	3	4		
5	6	7	8		

T8a (Red) — 8-pin

1	2	3	4		
5	6	7	8		

T8b (Green) — 8-pin

1	2	3	4
5	6	7	8

Note: IDs/colors based on best-known practice — verify on harness.

2×2: White (K/L) and Black (+12V/BR GND). MIL: IGN +12V \rightarrow Bulb \rightarrow ECU 22 (low-side).

$\text{AAN} \rightarrow \text{3B} \rightarrow \text{B3 7A}$ • Sources & References

- Audi AG AAN/3B wiring diagrams (Motronic 2.3.x)
- Bentley Audi 80/90/CQ manuals
- S2Central / S2Forum wiring archives
- Audi ELSAWin connector/color conventions