

Audi AAN → 3B → 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.

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

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
37	Switched +12V to injectors/MAF J271 feed	No Move	T6a (Blue) — VERIFY	Relay J271
10	ECU/Actuator Ground Ground	No Move	T6b (Gray) — VERIFY	Chassis lug
19	ECU/Actuator Ground Ground	No Move	T6b (Gray) — VERIFY	Chassis lug
24	ECU/Actuator Ground Ground	No Move	T6b (Gray) — VERIFY	Chassis lug
30	ECU/Actuator Ground Ground	No Move	T6b (Gray) — VERIFY	Chassis lug
51	ECU/Actuator Ground Ground	No Move	T6b (Gray) — VERIFY	Chassis lug
3	Fuel Pump Relay Control J17 coil (85)	No Move	T6a (Blue) — VERIFY	Fuel pump relay panel
47	Reference (G4) G4	No Move	Engine subloom	Shield to ECU
49	Engine Speed (G28) G28	No Move	Engine subloom	Shield to ECU
8	Cam Position (G40) G40	No Move	Engine subloom	Shield to ECU
44	IAT (G42) G42	No Move	Engine subloom	—
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	Verify	T8b (Green) — VERIFY	HVAC/Throttle loom
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
6	A/C Request HVAC request	No Move	T8b (Green) — VERIFY	HVAC head
41	A/C Idle-up ISV idle-up	No Move	T8b (Green) — VERIFY	HVAC head

Harness Carrier Connectors

T6a (Blue) — 6-pin

1	2	3	4
5	6	7	8

T6b (Gray) — 6-pin

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.

AAN → 3B → B3 7A • Diagnostics (2×2) & MIL

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

- 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