



MOTORSPORT SOUTH AFRICA

Groupe / Group

R2B

Homologation N°

A-S25729

Extension N°

03/03 VR2B

FICHE D'EXTENSION D'HOMOLOGATION HOMOLOGATION EXTENSION FORM

Homologation valable à partir du
Homologation valid as from

10 OCTOBER 2014



VR2B Variante Rallye R2B / Rally Variant R2B

VR2C Variante Rallye R2C / Rally Variant R2C

VR3C Variante Rallye R3C / Rally Variant R3C

101. CONSTRUCTEUR DU VEHICULE / MANUFACTURER OF THE VEHICLE

FORD MOTOR COMPANY

102. MODÈLE ET TYPE DE VEHICULE / MODEL AND TYPE OF THE VEHICLE

a) Modèle et type
Model and type **FIESTA R2**

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1	324-A2	Motec M130 ECU.	2
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5	324-A2	Motec M130 connector ID.	5
5	500	ECU harness connector ID.	6
7	500	Engine harness assy.	7
7	500	Engine harness connector ID.	8
8	500	Lambda harness assy.	9
8	500	Accelerator pedal harness assy.	10
8	500	Lambda harness connector ID.	11
8	500	Accelerator pedal harness connector ID.	12
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1) Engine harness assembly.



2) Motec M130 ECU.



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3) Motec M130 Pin-out.

MOTEC M130 Wiring Summary (ECU connectors A and B)

PIN	Abbreviation	Name		Usage
B_3	AT1	Analogue Temperature Input 1	Analogue Input	Inlet Manifold Temperature Sensor Voltage
B_4	AT2	Analogue Temperature Input 2	Analogue Input	Coolant Temperature Sensor Voltage
B_5	AT3	Analogue Temperature Input 3	Analogue Input	Fuel Tank Level Sensor Voltage
B_6	AT4	Analogue Temperature Input 4		
A_14	AV1	Analogue Voltage Input 1	Analogue Input	Throttle Servo Bank 1 Position Main Voltage
A_15	AV2	Analogue Voltage Input 2	Analogue Input	Throttle Servo Bank 1 Position Tracking Voltage
A_16	AV3	Analogue Voltage Input 3	Analogue Input	Throttle Pedal Sensor Main Voltage
A_17	AV4	Analogue Voltage Input 4		
A_25	AV5	Analogue Voltage Input 5	Analogue Input	Ambient Pressure Sensor Voltage
B_20	AV6	Analogue Voltage Input 6	Analogue Input	Engine Oil Pressure Sensor Voltage
B_21	AV7	Analogue Voltage Input 7	Analogue Input	Fuel Pressure Sensor Voltage
B_22	AV8	Analogue Voltage Input 8	Analogue Input	Gear Sensor Voltage
B_12	BAT_BAK	Battery Backup		
A_10	BAT_NEG	Battery Negative		
A_11	BAT_NEG	Battery Negative		
A_26	BAT_POS	Battery Positive	Analogue Input	ECU Battery Voltage
B_17	CAN_HI	CAN Bus High		
B_18	CAN_LO	CAN Bus Low		
B_26	ETH_RX-	Ethernet Receive-		
B_25	ETH_RX+	Ethernet Receive+		
B_24	ETH_TX-	Ethernet Transmit-		
B_23	ETH_TX+	Ethernet Transmit+		
A_3	IGN_LS1	Low Side Ignition 1	Digital Output	Ignition Cylinder 1 Output
A_4	IGN_LS2	Low Side Ignition 2	Digital Output	Ignition Cylinder 2 Output
A_5	IGN_LS3	Low Side Ignition 3		
A_6	IGN_LS4	Low Side Ignition 4		
A_7	IGN_LS5	Low Side Ignition 5		

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A_8	IGN_LS6	Low Side Ignition 6		
A_12	IGN_LS7	Low Side Ignition 7		
A_13	IGN_LS8	Low Side Ignition 8		
A_23	INJ_LS1	Low Side Injector 1	Analogue Input Digital Output Configuration	Fuel Pump Voltage Fuel Pump Output Fuel Pump Pin
A_24	INJ_LS2	Low Side Injector 2	Digital Output Analogue Input Configuration	Coolant Fan 1 Output Coolant Fan 1 Voltage Coolant Fan 1 Pin
A_19	INJ_PH1	Peak Hold Injector 1	Digital Output Analogue Input Configuration	Fuel Cylinder 1 Output Fuel Cylinder 1 Voltage Fuel Cylinder 1 Pin
A_20	INJ_PH2	Peak Hold Injector 2	Analogue Input Digital Output Configuration	Fuel Cylinder 2 Voltage Fuel Cylinder 2 Output Fuel Cylinder 2 Pin
A_21	INJ_PH3	Peak Hold Injector 3	Configuration Digital Output Analogue Input	Fuel Cylinder 3 Pin Fuel Cylinder 3 Output Fuel Cylinder 3 Voltage
A_22	INJ_PH4	Peak Hold Injector 4	Analogue Input Digital Output Configuration	Fuel Cylinder 4 Voltage Fuel Cylinder 4 Output Fuel Cylinder 4 Pin
A_27	INJ_PH5	Peak Hold Injector 5		
A_28	INJ_PH6	Peak Hold Injector 6		
A_29	INJ_PH7	Peak Hold Injector 7		
A_30	INJ_PH8	Peak Hold Injector 8		
B_7	KNOCK1	Differential Knock Input 1. Knock Input 1		
B_7	KNOCK1	Knock Input 1	Analogue Input	Knock Cylinder 1
B_13	KNOCK2	Differential Knock Input 1. Knock Input 2		
B_13	KNOCK2	Knock Input 2		
A_18	OUT_HB1	Half Bridge Output 1		
A_18	OUT_HB1	Bridge Output 1.Half Bridge Output 1	Digital Output	Throttle Servo Bank 1 Motor Output
A_1	OUT_HB2	Half Bridge Output 2		
A_1	OUT_HB2	Bridge Output 1.Half Bridge Output 2	Digital Output	Throttle Servo Bank 1 Motor Output

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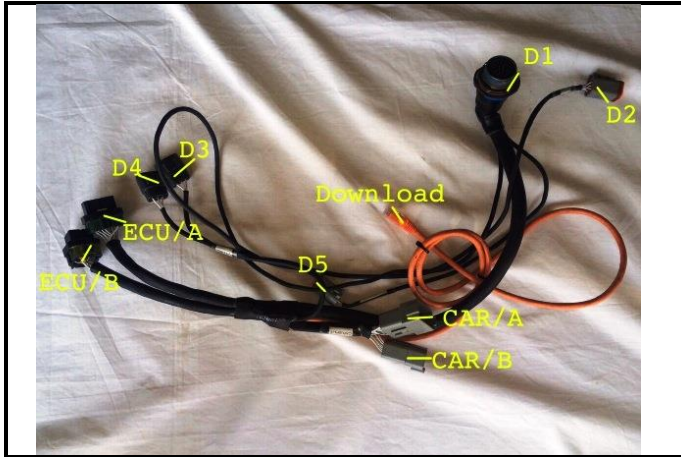
Extension N°

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A_31	OUT_HB3	Half Bridge Output 3	Digital Output Analogue Input	Inlet Camshaft Bank 1 Actuator Output Inlet Camshaft Bank 1 Actuator Voltage
A_31	OUT_HB3	Bridge Output 2. Half Bridge Output 3		
A_32	OUT_HB4	Half Bridge Output 4	Analogue Input Digital Output	Exhaust Camshaft Bank 1 Actuator Voltage Exhaust Camshaft Bank 1 Actuator Output
A_32	OUT_HB4	Bridge Output 2. Half Bridge Output 4		
A_33	OUT_HB5	Half Bridge Output 5		
A_33	OUT_HB5	Bridge Output 3. Half Bridge Output 5		
A_34	OUT_HB6	Bridge Output 3. Half Bridge Output 6		
A_34	OUT_HB6	Half Bridge Output 6		
B_15	SEN_0V_A	Sensor 0V A		
B_16	SEN_0V_B	Sensor 0V B		
A_2	SEN_5V0_A	Sensor 5.0V A	Analogue Input	ECU Sensor 5V0 A Voltage
A_9	SEN_5V0_B	Sensor 5.0V B	Analogue Input	ECU Sensor 5V0 B Voltage
B_19	SEN_6V3	Sensor 6.3V	Analogue Input	ECU Sensor 6V3 Voltage
B_1	UDIG1	Universal Digital Input 1	Analogue Input Configuration Digital Input	Engine Speed Voltage Engine Speed Pin Engine Speed Reference
B_2	UDIG2	Universal Digital Input 2	Analogue Input Digital Input Configuration	Inlet Camshaft Bank 1 Voltage Inlet Camshaft Bank 1 Position Inlet Camshaft Bank 1 Pin
B_8	UDIG3	Universal Digital Input 3	Configuration Analogue Input Digital Input	Exhaust Camshaft Bank 1 Pin Exhaust Camshaft Bank 1 Voltage Exhaust Camshaft Bank 1 Position
B_9	UDIG4	Universal Digital Input 4		
B_10	UDIG5	Universal Digital Input 5	Analogue Input	Gear Lever Up Switch
B_11	UDIG6	Universal Digital Input 6	Digital Input Analogue Input Configuration	Wheel Speed Front Drive Sensor Period Wheel Speed Front Drive Sensor Voltage Wheel Speed Front Drive Sensor Pin
B_14	UDIG7	Universal Digital Input 7	Digital Input Configuration Analogue Input	Wheel Speed Rear Drive Sensor Period Wheel Speed Rear Drive Sensor Pin Wheel Speed Rear Drive Sensor Voltage

4) ECU harness assembly.

5) Motec M130 connector ID.



6) ECU harness connector ID.

ECU HARNESS CONNECTOR ID:

- D1 Bulkhead connector to engine harness.
- D2 Accel pedal flylead connector.
- D3 Ignition module cyl 1/4.
- D4 Ignition module cyl 2/3.
- D5 Sensor split.
- ECU/A ECU connector A. See: 3) Motec M130 Pin-out.
- ECU/B ECU connector B. See: 3) Motec M130 Pin-out.
- CAR/A CAR harness connector A.
- CAR/B CAR harness connector B.

CONNECTOR D1 PIN ID:

PIN	FUNCTION	PIN	FUNCTION
1 A	Injector 1	17 T	Oil Pressure
2 B	Injector 2	18 U	Fuel Pressure
3 C	Injector 3	19 V	Engine Temp
4 D	Injector 4	20 W	MAP
5 E	Coil 1	21 X	Air temp
6 F	Coil 2	22 Y	Gear Position
7 G	Crank Sensor	23 Z	Gear Upshift Switch
8 H	Cam Sensor Inlet	24 a	Can Hi
9 J	Cam Sensor Exhaust	25 b	Can Lo
10 K	Cam Control Inlet	26 c	0v
11 L	Cam Control Exhaust	27 d	5v
12 M	TP1	28 e	Knock
13 N	TP2	29 f	12V
14 P	DBW+	30 g	12V
15 R	DBW-	31 h	Earth
16 S	Start	32 i	Earth

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CONNECTOR D2 PIN ID:

1	0 v
2	TPD 1
3	5 v
4	0 v
5	TPD 2
6	12 v

CONNECTOR D5 PIN ID:

1	0 v
2	5 v
3	Gear lever strain guage
4	Barometric pressure

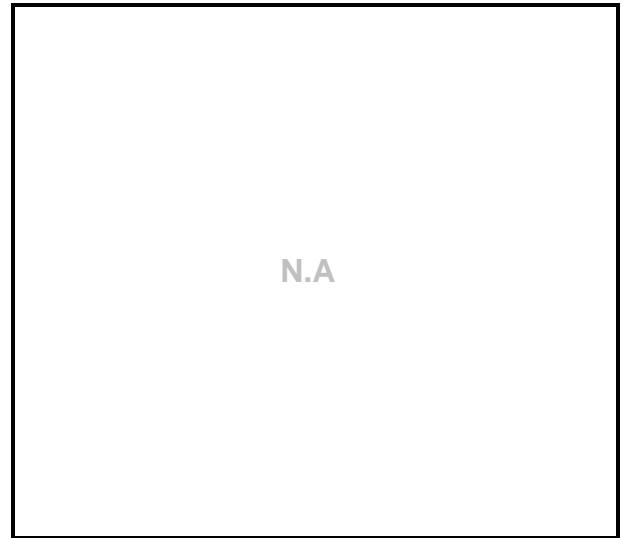
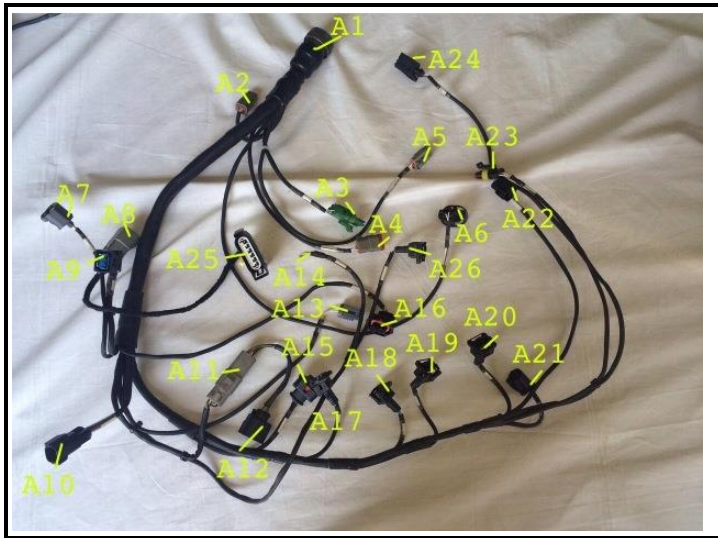
CAR HARNESS CONNECTOR A PIN ID:

1	0 v	7	Start
2	5v	8	Can Hi
3	Baro pressure	9	Can Lo
4	Fuel level	10	12v Bulkhead
5	Speed front	11	12v Bulkhead
6	Speed rear	12	12v Bulkhead

CAR HARNESS CONNECTOR B PIN ID:

1	Earth
2	Earth
3	Earth
4	Earth
5	Earth
6	Earth

7) Engine harness assembly.



8) Engine harness connector ID.

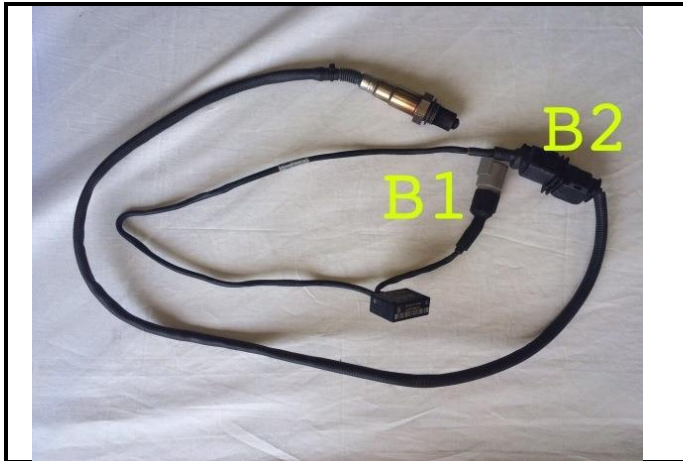
ENGINE HARNESS CONNECTOR ID.

A1	Bulkhead connector to ECU harness	A14	Earth
A2	Lambda to CAN	A15	Inlet cam position
A3	Barometric Pressure	A16	Exhaust cam position
A4	Fuel pressure	A17	Injector 1
A5	Gear position	A18	Injector 2
A6	Gearbox upshift switch	A19	Injector 3
A7	Coolant temperature	A20	Injector 4
A8	Pedal flylead connector	A21	Inlet Cam Actuator
A9	Ignition coils flylead	A22	Exhaust Cam Actuator
A10	Knock sensor	A23	Oil pressure
A11	Drive by wire throttle flylead	A24	Alternator
A12	Drive by wire servo	A25	Drive by wire pedal
A13	Air temperature	A26	Oil temp

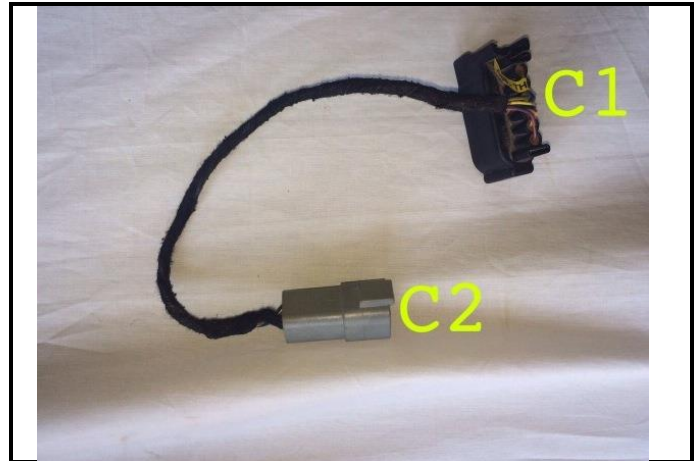
CONNECTOR A1 PIN ID:

PIN	FUNCTION	PIN	FUNCTION
1 A	Injector 1	17 T	Oil Pressure
2 B	Injector 2	18 U	Fuel Pressure
3 C	Injector 3	19 V	Engine Temp
4 D	Injector 4	20 W	MAP
5 E	Coil 1	21 X	Air temp
6 F	Coil 2	22 Y	Gear Position
7 G	Crank Sensor	23 Z	Gear Upshift Switch
8 H	Cam Sensor Inlet	24 a	Can Hi
9 J	Cam Sensor Exhaust	25 b	Can Lo
10 K	Cam Control Inlet	26 c	0v
11 L	Cam Control Exhaust	27 d	5v
12 M	TP1	28 e	Knock
13 N	TP2	29 f	12V
14 P	DBW+	30 g	12V
15 R	DBW-	31 h	Earth
16 S	Start	32 i	Earth

9) Lambda harness assy.



10) Accel pedal harness assy.



11) Lambda harness connector ID.

- B1 - LTC
- B2 - Lambda sensor

12) Accelerator pedal harness connector ID.

- C1 – Drive by wire pedal
- C2 – Pedal flylead connector
(see: 6) ECU harness connector D2 ID)

13) Baro sensor.



14) Ignition module.

