

Trouble code identification

System code	Code meaning	Action
010	Separator/command code	Briefly depress accelerator pedal fully
020	Command code	Briefly depress brake pedal fully
030	Command code	Briefly depress brake pedal fully

Scanner type	Fault location	Probable cause
10	Cylinder 1, low	Cylinder compression, ignition components, injector
20	Cylinder 2, low	Cylinder compression, ignition components, injector
30	Cylinder 3, low	Cylinder compression, ignition components, injector
40	Cylinder 4, low	Cylinder compression, ignition components, injector
50	Cylinder 5, low	Cylinder compression, ignition components, injector
60	Cylinder 6, low	Cylinder compression, ignition components, injector
90	Cylinder balance test OK	-
111	Systems OK	-
112	<u>Intake air temperature (IAT) sensor - voltage low</u>	Wiring, IAT sensor, ECM
113	<u>Intake air temperature (IAT) sensor - voltage high</u>	Wiring, IAT sensor, ECM
114	<u>Intake air temperature (IAT) sensor - range</u>	IAT sensor
116	<u>Engine coolant temperature (ECT) sensor - range</u>	ECT sensor
117	<u>Engine coolant temperature (ECT) sensor - voltage low</u>	Wiring, ECT sensor, ECM
118	<u>Engine coolant temperature (ECT) sensor - voltage high</u>	Wiring, ECT sensor, ECM
121	<u>Throttle position (TP) switch/sensor - range</u>	TP switch/sensor
122	<u>Throttle position (TP) switch/sensor - voltage low</u>	Wiring, TP switch/sensor, ECM
123	<u>Throttle position (TP) switch/sensor - voltage high</u>	Wiring, TP switch/sensor, ECM
124	<u>Throttle position (TP) switch/sensor - voltage high</u>	Wiring, TP switch/sensor, ECM
125	<u>Throttle position (TP) switch/sensor - voltage low</u>	Wiring, TP switch/sensor, ECM
129	<u>Mass air flow (MAF) sensor/manifold absolute pressure (MAP) sensor - no signal change during throttle 'blip'</u>	<u>Mass air flow (MAF) sensor/manifold absolute pressure (MAP) sensor</u>
136	<u>Heated oxygen sensor (HO2S) 2, bank 2 - weak mixture</u>	Wiring, HO2S, ECM
137	<u>Heated oxygen sensor (HO2S) 2, bank 2 - rich mixture</u>	Wiring, HO2S, ECM
139	<u>Heated oxygen sensor (HO2S) 2, bank 2 - weak/rich mixture</u>	Wiring, HO2S, ECM
144	<u>Heated oxygen sensor (HO2S) 1, bank 1 - weak/rich mixture</u>	Wiring, HO2S, ECM
157	<u>Mass air flow (MAF) sensor - voltage low</u>	Wiring, MAF sensor, ECM
158	<u>Mass air flow (MAF) sensor - voltage high</u>	Wiring, MAF sensor, ECM
159	<u>Mass air flow (MAF) sensor - range</u>	Wiring, MAF sensor, ECM
167	<u>Throttle position (TP) switch/sensor - no signal change during throttle 'blip'</u>	TP switch/sensor
171	<u>Heated oxygen sensor (HO2S) 1, bank 1 - adaptive limit reached</u>	<u>Fuel pressure, wiring, air leaks, injectors, ECM</u>
172	<u>Heated oxygen sensor (HO2S) 1, bank 1 - weak mixture</u>	Wiring, HO2S, ECM
173	<u>Heated oxygen sensor (HO2S) 1, bank 1 - rich mixture</u>	Wiring, HO2S, ECM
174	<u>Heated oxygen sensor (HO2S)</u>	Wiring, HO2S, ECM
175	<u>Heated oxygen sensor (HO2S) 2, bank 2 - adaptive limit reached</u>	<u>Fuel pressure, wiring, air leaks, injectors, ECM</u>

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

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176	Heated oxygen sensor (HO2S) 2, bank 2 - weak mixture	Wiring, HO2S, ECM
177	Heated oxygen sensor (HO2S) 2, bank 2 - rich mixture	Wiring, HO2S, ECM
178	Heated oxygen sensor (HO2S)	Wiring, HO2S, ECM
179	Fuel trim (part throttle) - weak mixture	Fuel pressure, air leaks, injectors, ignition system
181	Fuel trim (part throttle) - rich mixture	Fuel pressure, air leaks, injectors, ignition system
182	Fuel trim (idle) - weak mixture	Fuel pressure, air leaks, injectors, ignition system
183	Fuel trim (idle) - rich mixture	Fuel pressure, air leaks, injectors, ignition system
184	Mass air flow (MAF) sensor - air flow high	Wiring, MAF sensor, ECM
185	Mass air flow (MAF) sensor - air flow low	Wiring, MAF sensor, ECM
186	Injector pulse width - too long	Wiring, injectors, ECM
187	Injector pulse width - too short	Wiring, injectors, ECM
188	Heated oxygen sensor (HO2S), bank 2 - weak mixture	Wiring, fuel pressure, injectors, air leak, HO2S, ECM
189	Heated oxygen sensor (HO2S), bank 2 - rich mixture	Wiring, fuel pressure, injectors, air leak, HO2S, ECM
191	Heated oxygen sensor (HO2S), bank 2 - idle mixture weak	Wiring, fuel pressure, injectors, air leak, HO2S, ECM
192	Heated oxygen sensor (HO2S), bank 1 - idle mixture rich	Wiring, fuel pressure, injectors, air leak, HO2S, ECM
194	Heated oxygen sensor (HO2S)	Wiring, HO2S, ECM
195	Heated oxygen sensor (HO2S)	Wiring, HO2S, ECM
211	Profile ignition pick-up (PIP) signal	Wiring, CKP sensor, ignition control (EDIS) module, ECM
212	Tachometer circuit	Wiring, ignition control (EDIS) module, tachometer
213	Spark output (SPOUT) signal	Wiring, ignition control (EDIS) module, ECM
214	Camshaft position (CMP) sensor - circuit malfunction	Wiring, CMP sensor, ECM
215	Ignition coil 1, EDIS	Ignition coil
216	Ignition coil 2, EDIS	Ignition coil
217	Ignition coil 3, EDIS	Ignition coil
218	Tachometer circuit	Wiring, ignition control (EDIS) module, tachometer
222	Tachometer circuit	Wiring, ignition control (EDIS) module, tachometer
226	Ignition control (EDIS) module - pulse missing	Wiring, ignition control (EDIS) module, CKP/RPM sensor, ECM
227	Crankshaft position (CKP) sensor/engine speed (RPM) sensor	Wiring, CKP/RPM sensor
228	Ignition control (EDIS) module/ignition coil 1	Wiring, ignition control (EDIS) module, ignition coil
229	Ignition control (EDIS) module/ignition coil 2	Wiring, ignition control (EDIS) module, ignition coil
231	Ignition control (EDIS) module/ignition coil 3	Wiring, ignition control (EDIS) module, ignition coil
232	Ignition coil primary circuit	Wiring, ignition coil
233	Ignition control (EDIS) module	Ignition control (EDIS) module
234	Ignition coil	Ignition coil
235	Ignition coil	Ignition coil
236	Ignition coil	Ignition coil
237	Ignition coil	Ignition coil

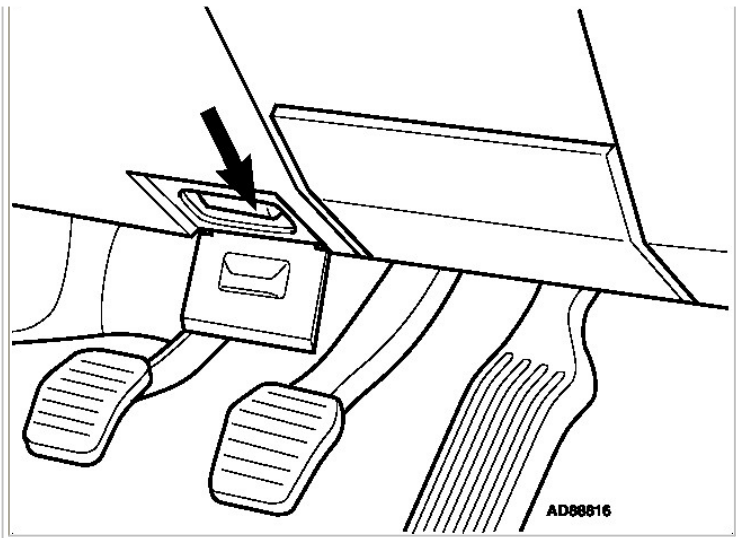
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238	Ignition control (EDIS) module/ignition coil	Wiring, ignition control (EDIS) module, ignition coil
239	Profile ignition pick-up (PIP) signal - PIP signal occurs when engine cranking	Wiring, CKP/RPM sensor, ignition control (EDIS) module, ECM
241	<u>Engine control module (ECM)/ignition control (EDIS) module - false data</u>	<u>Engine control module (ECM), ignition control (EDIS) module</u>
243	<u>Ignition coil</u>	<u>Ignition coil</u>
311	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
312	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
313	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
314	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
315	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
316	<u>Pulsed secondary air injection (PAIR) system</u>	Wiring, PAIR solenoid, MAP/MAF/VAF sensor, ECM
326	Exhaust pressure (EP) sensor	Wiring, EP sensor, ECM
327	Exhaust pressure (EP) sensor/exhaust gas recirculation (EGR) solenoid	Wiring, EP sensor, EGR solenoid, ECM
328	<u>Exhaust gas recirculation (EGR) solenoid</u>	Wiring, EGR solenoid, ECM
332	<u>Exhaust gas recirculation (EGR) solenoid</u>	Wiring, EGR solenoid, ECM
334	<u>Exhaust gas recirculation (EGR) solenoid</u>	Wiring, EGR solenoid, ECM
335	Exhaust pressure (EP) sensor	Wiring, EP sensor, ECM
336	Exhaust pressure (EP) - high	EP sensor
337	Exhaust pressure (EP) sensor/exhaust gas recirculation (EGR) solenoid	Wiring, EP sensor, EGR solenoid, ECM
338	<u>Engine coolant temperature (ECT) sensor - temperature low</u>	Wiring, ECT sensor, ECM
339	<u>Engine coolant temperature (ECT) sensor - temperature high</u>	Wiring, ECT sensor, ECM
341	Octane plug - connected to earth	Octane plug
411	Engine rpm too low during self-test	Wiring, compression, ignition, IAC valve, ECM
412	Engine rpm too high during self-test	Wiring, compression, ignition, IAC valve, ECM
413	<u>Idle air control (IAC) valve</u>	Wiring, IAC valve, ECM
414	<u>Idle air control (IAC) valve</u>	Wiring, IAC valve, ECM
415	<u>Idle air control (IAC) valve</u>	Wiring, IAC valve, ECM
416	<u>Idle air control (IAC) valve</u>	Wiring, IAC valve, ECM
452	<u>Vehicle speed sensor (VSS)</u>	Wiring, VSS, ECM
511	<u>Engine control module (ECM) - ROM error</u>	<u>ECM</u>
512	<u>Engine control module (ECM) - KAM error</u>	<u>ECM</u>
513	<u>Engine control module (ECM) - internal reference voltage</u>	<u>ECM</u>
519	Power steering pressure (PSP) switch - not activated during self-test	Wiring, PSP switch
521	Power steering pressure (PSP) switch - not activated	Wiring, PSP switch
522	Park/neutral position (PNP) switch - circuit malfunction	Wiring, PNP switch, ECM
523	Park/neutral position (PNP) switch - circuit malfunction	Wiring, PNP switch, ECM
528	Clutch pedal position (CPP) switch - circuit malfunction	Wiring, CPP switch, ECM
536	Brake pedal position (BPP) switch - not activated during self-test	Wiring, BPP switch, ECM
538	Operator error during self-test	-
539	AC switched ON during self-test	Wiring, AC switch
542	<u>Fuel pump - circuit malfunction</u>	Wiring, fuel pump relay, IFS switch

543	<u>Fuel pump - circuit malfunction</u>	Wiring, fuel pump relay, IFS switch
551	<u>Idle air control (IAC) valve - circuit malfunction</u>	Wiring, IAC valve, ECM
552	<u>Pulsed secondary air injection (PAIR) system - circuit malfunction</u>	Wiring, PAIR solenoid
556	<u>Fuel pump - circuit malfunction</u>	Wiring, fuel pump relay
558	<u>Exhaust gas recirculation (EGR) solenoid - circuit malfunction</u>	Wiring, EGR solenoid, ECM
563	Engine coolant blower motor relay - circuit malfunction	Wiring, engine coolant blower motor relay
564	Engine coolant blower motor relay - circuit malfunction	Wiring, engine coolant blower motor relay
565	<u>Evaporative emission (EVAP) canister purge valve - circuit malfunction</u>	Wiring, EVAP canister purge valve, ECM
566	3rd/4th gear shift solenoid	Wiring, 3rd/4th gear shift solenoid
573	Engine coolant blower motor relay - circuit malfunction	Wiring, engine coolant blower motor relay, ECM
574	Engine coolant blower motor relay - circuit malfunction	Wiring, engine coolant blower motor relay, ECM
575	Fuel pump/inertia fuel shut-off (IFS) switch - circuit	Wiring, fuel pump relay, IFS switch
576	Kick-down switch	Wiring, kick-down switch
577	Kick-down switch - not activated during self-test	Wiring, kick-down switch
612	Transmission range (TR) switch, 4th/3rd gear switch contacts - open circuit	Wiring, TR switch
613	Transmission range (TR) switch, 4th/3rd gear circuit - open circuit	Wiring, TR switch
614	Transmission range (TR) switch, 3rd/2nd gear circuit - short circuit	Wiring, TR switch
615	Transmission range (TR) switch, 3rd/2nd gear switch contacts - open circuit	Wiring, TR switch
621	Shift solenoid (SS) 1 - circuit malfunction	Wiring, shift solenoid, ECM
622	Shift solenoid (SS) 2 - circuit malfunction	Wiring, shift solenoid, ECM
624	AT electronic pressure control solenoid	AT electronic pressure control solenoid
625	AT electronic pressure control solenoid - circuit malfunction	Wiring, AT electronic pressure control solenoid, ECM
628	Modulated torque converter clutch (TCC) solenoid	Wiring, TCC solenoid
629	Torque converter clutch (TCC) solenoid	Wiring, TCC solenoid
634	Park/neutral position (PNP) switch	Wiring, PNP switch
635	Transmission fluid temperature (TFT) switch - circuit malfunction	Wiring, TFT switch, ECM
636	Transmission fluid temperature (TFT) switch - circuit malfunction	Wiring, TFT switch, ECM
637	Transmission fluid temperature (TFT) switch - circuit malfunction	Wiring, TFT switch, ECM
638	Transmission fluid temperature (TFT) switch - circuit malfunction	Wiring, TFT switch, ECM
639	Turbine shaft speed (TSS) sensor - signal low	Wiring, TSS sensor
645	1st gear failure - incorrect ratio	Wiring, transmission fault
646	2nd gear failure - incorrect ratio	Wiring, transmission fault
647	3rd gear failure - incorrect ratio	Wiring, transmission fault
648	4th gear failure - incorrect ratio	Wiring, transmission fault
649	Electronic throttle valve - failure	Wiring, electronic throttle valve, ECM
651	Electronic throttle valve - intermittent failure	Wiring, electronic throttle valve, ECM
652	Modulated torque converter clutch (TCC) solenoid - circuit malfunction	Wiring, TCC solenoid, ECM
653	Transmission control switch - not activated during self-test	Wiring, transmission control switch, ECM
658	Performance/economy switch - not activated during self-test	Wiring, performance/economy switch, ECM
998	ECT sensor/IAT sensor/MAF sensor/TP sensor - circuit malfunction	Wiring, ECT sensor/IAT sensor/MAF sensor/TP sensor, ECM

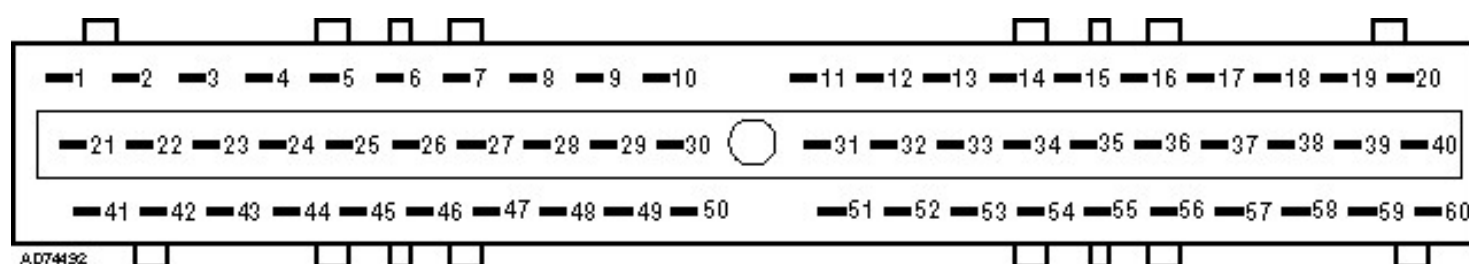


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A23	Alarm system control module
31	Battery -
30	Battery +
B132	Camshaft position (CMP) sensor
B54	Crankshaft position (CKP) sensor
X1	Data link connector (DLC)
A35	Engine control module (ECM)
K46	Engine control relay
K12	Engine coolant blower motor relay
B24	Engine coolant temperature (ECT) sensor
Y104	Evaporative emission (EVAP) canister purge valve
B127	Exhaust gas pressure sensor
Y28	Exhaust gas recirculation (EGR) solenoid
M12	Fuel pump
K20	Fuel pump relay
F	Fuse
B72	Heated oxygen sensor (HO2S)
Y99	Idle air control (IAC) valve
T1	Ignition coil
15	Ignition switch - ignition ON
S39	Inertia fuel shut-off (IFS) switch
Y3	Injector
A5	Instrument panel
B25	Intake air temperature (IAT) sensor
B30	Mass air flow (MAF) sensor
W21	Octane coding plug
S231	Power steering pressure (PSP) switch
Y111	Pulsed secondary air injection (PAIR) solenoid
K4	Starter motor relay
P7	Tachometer
B147	Throttle position (TP) sensor
B33	Vehicle speed sensor (VSS)



bl = blue	br = brown	el = cream	ge = yellow
gn = green	gr = grey	nf = neutral	og = orange
rs = pink	rt = red	sw = black	vi = violet
ws = white	hbl = light blue	hgn = light green	rbr = maroon
x = braided cable	y = high tension	z = non-cable connection	

NOTE: In certain diagrams (Citroen, Peugeot & Renault), colour codes are replaced by numbers which are used to

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Identify a particular cable and not the colour. In this instance, the cables will be numbered at each end close to the harness connector.

