CIMCO

Endurance by Engineering

OXE DIESEL

Fault code list and sensor manual

125HP – 150HP – 175HP – 200HP

Version 1.0

CIMCO
Endurance by Engineering

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

OXE DIESEL

125HP 150HP 175HP 200HP

OXE Engine Fault Code list

2018-10-22

J1939 SPN	J1939 FMI	Description
97	31	Water in fuel is detected.
100	1	Engine oil pressure - Data valid but below normal operational range
100	3	Engine oil pressure sensor - Voltage above normal, or shorted to high source
100	4	Engine oil pressure sensor - Voltage below normal, or shorted to low source
102	0	Manifold air pressure - Data valid but above normal operational range
102	3	Manifold air pressure sensor - Voltage above normal, or shorted to high source
102	4	Manifold air pressure sensor - Voltage below normal, or shorted to low source
102	14	Manifold air pressure - Control error
105	3	Manifold air temperature sensor - Voltage above normal, or shorted to high source
105	4	Manifold air temperature sensor - Voltage below normal, or shorted to low source
107	0	Air filter differential pressure sensor - Data valid but below normal operational range
107	3	Air filter differential pressure sensor - Voltage above normal, or shorted to high source
107	4	Air filter differential pressure sensor - Voltage below normal, or shorted to low source
108	3	Ambient pressure sensor - Voltage above normal, or shorted to high source
108	4	Ambient pressure sensor - Voltage below normal, or shorted to low source
110	0	Engine coolant temperature sensor - Data valid but above normal operational range
110	3	Engine coolant temperature sensor - Voltage above normal, or shorted to high source
110	4	Engine coolant temperature sensor - Voltage below normal, or shorted to low source
127	0	Gearbox oil pressure - Data valid but above normal operational range
127	1	Gearbox oil pressure - Data valid but below normal operational range
127	3	Gearbox oil pressure - Voltage above normal, or shorted to high source
127	4	Gearbox oil pressure - Voltage below normal, or shorted to low source
157	0	Fuel rail pressure - Data valid but above normal operational range
157	3	Fuel rail pressure sensor - Voltage above normal, or shorted to high source
157	4	Fuel rail pressure sensor - Voltage below normal, or shorted to low source
157	14	Fuel rail pressure - Control error
158	3	Battery potential - Voltage above normal
158	4	Battery potential - Voltage below normal
171	0	Ambient air temperature - Data valid but above normal operational range
171	3	Ambient air temperature sensor - Voltage above normal, or shorted to high source
171	4	Ambient air temperature sensor - Voltage below normal, or shorted to low source
173	0	Exhaust gas temperature is to high
173	3	Exhaust gas temperature sensor- Voltage above normal, or shorted to high source
173	4	Exhaust gas temperature sensor- Voltage below normal, or shorted to low source
175	0	Engine oil temperature sensor - Data valid but above normal operational range
175	3	Engine oil temperature sensor - Voltage above normal, or shorted to high source
175	4	Engine oil temperature sensor - Voltage below normal, or shorted to low source
177	0	Gearbox oil temperature - Data valid but above normal operational range
177	3	Gearbox oil temperature - Voltage above normal, or shorted to high source
177	4	Gearbox oil temperature - Voltage below normal, or shorted to low source
651	5	Fuel injector 1, Cylinder 1 - Low current or open circuit
652	5	Fuel injector 2, Cylinder 3 - Low current or open circuit
653	5	Fuel injector 3, Cylinder 4 - Low current or open circuit
654	5	Fuel injector 4, Cylinder 2 - Low current or open circuit
1136	0	ECU temperature sensor - Data valid but above normal operational range
1136	0	ECU temperature sensor - Voltage above normal, or shorted to high source
1136	0	ECU temperature sensor - Voltage below normal, or shorted to low source
2433	0	Exhaust gas temperature - Data valid but above normal operational range
2795	14	VGT control error
2899	12	Glow Module - Fault
3509	3	ECU 5V sensor supply 1 - Voltage above normal, or shorted to high source
3509	4	ECU 5V sensor supply 1 - Voltage below normal, or shorted to low source
3510	3	ECU 5V sensor supply 2 - Voltage above normal, or shorted to high source
3510	4	ECU 5V sensor supply 2 - Voltage below normal, or shorted to low source
5324	31	Glow Plug - Fault

SPN - Suspect Parameter Number / FMI – Failure Mode Identifier

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

OXE Engine Fault Code list

J1939 SPN	J1939 FMI	Description
521104	31	Controlhead communication timeout
521105	6	PSU Glow Plug Module - Current above normal or grounded circuit
521106	6	PSU Trim/Tilt - Current above normal or grounded circuit
521107	0	Actuator feedback message not received (ECU-ECU)
521108	14	Engine speed control error
521109	0	Gear position error Fwd or Rev
521110	0	Gear position error N
521111	0	Forward or reverse gear solenoid electrical fault
521112	31	VGT LMSP or UMSP check failed Power Up
521113	0	VGT control position error is detected
521114	31	VGT LMSP or UMSP check fail Idle
521115	0	N/A
521116	0	N/A
521117	0	N/A
521118	0	N/A
521119	0	N/A
521120	0	N/A
521121	0	N/A
521122	0	N/A
521123	0	N/A
521124	0	N/A
521125	0	Swirl Valve Electrical fault
521126	0	Trolling Valve Electrical Fault
521127	0	N/A
521128	0	N/A
521129	0	Any SWSUP High
521130	0	Any CCO High
521131	0	N/A
521132	3	Trim angle sensor - Voltage above normal, or shorted to high source
521132	4	Trim angle sensor - Voltage below normal, or shorted to low source
521133	0	N/A
521134	0	N/A
521135	0	Glow Module Communication Error

SPN - Suspect Parameter Number / FMI – Failure Mode Identifier

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

OXE Controls Fault Code list

J1939 SPN	J1939 FMI	Description	
521344	2	Control head 0 port lever pot failure	**
521345	2	Control head 1 port lever pot failure	**
521360	2	Control head 0 port lever pot mismatch	**
521361	2	Control head 1 port lever pot mismatch	**
521440	2	Control head 0 stbd lever pot failure	**
521441	2	Control head 1 stbd lever pot failure	**
521456	2	Control head 0 stbd lever pot mismatch	**
521457	2	Control head 1 stbd lever pot mismatch	**
521504	13	Control head 0 invalid configuration	*
521505	13	Control head 1 invalid configuration	*
521520	13	Control head 0 invalid calibration	*
521521	13	Control head 1 invalid calibration	*
521536	31	Control head 0 duplicate instance	*
521537	31	Control head 1 duplicate instance	*
521552	31	Control head 0 take command button fault.	**
521553	31	Control head 1 take command button fault.	**
521568	31	Control head 0 sync button fault.	**
521569	31	Control head 1 sync button fault.	**
521584	31	Control head 0 port neutral button fault.	**
521585	31	Control head 1 port neutral button fault.	**
521600	31	Control head 0 stbd neutral button fault.	**
521601	31	Control head 1 stbd neutral button fault.	**
521616	31	Control head 0 multiple controllers selected.	*
521617	31	Control head 1 multiple controllers selected.	*

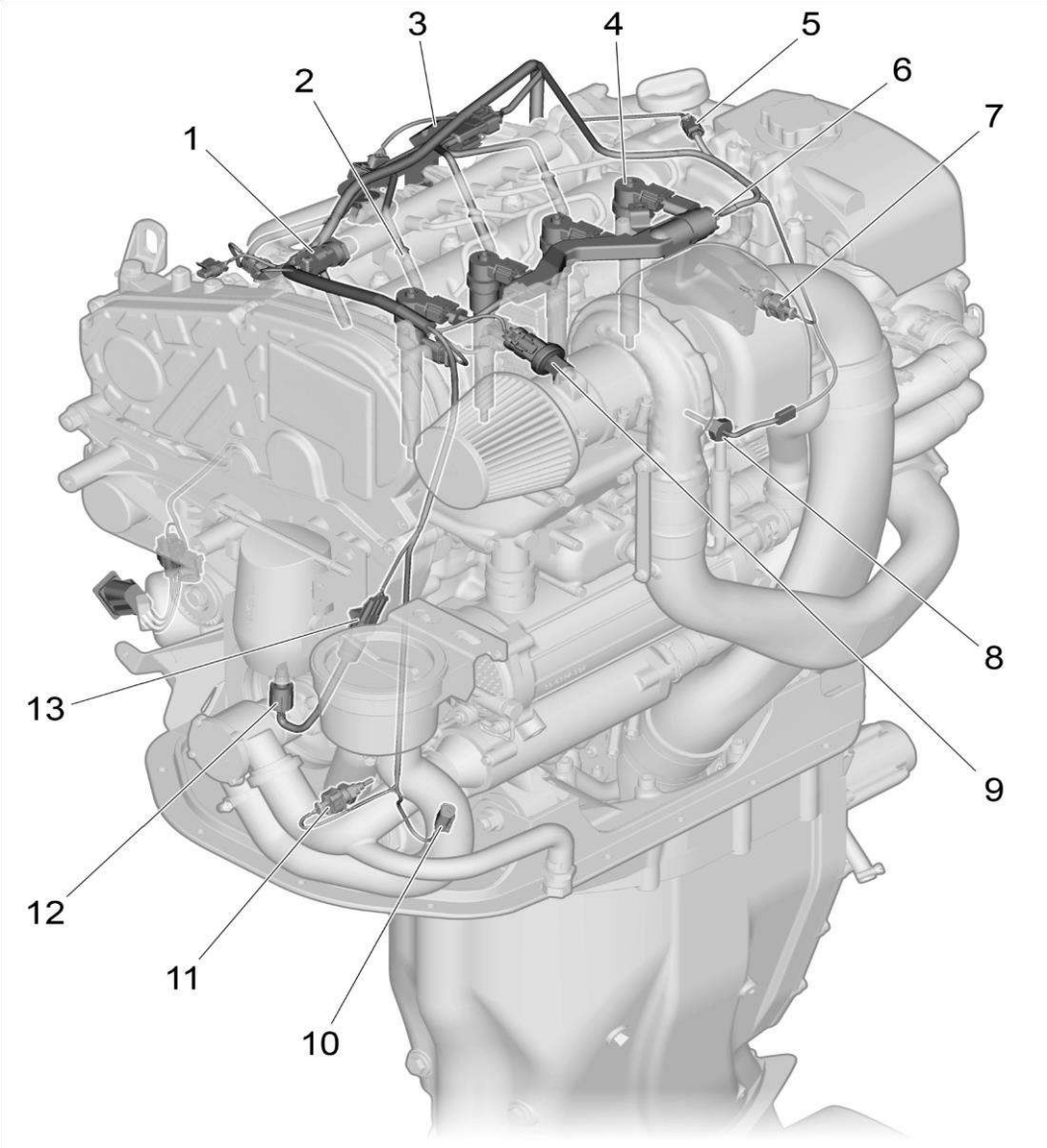
* Calibration possible

** Require control replacement or hardware repair

SPN - Suspect Parameter Number / FMI – Failure Mode Identifier

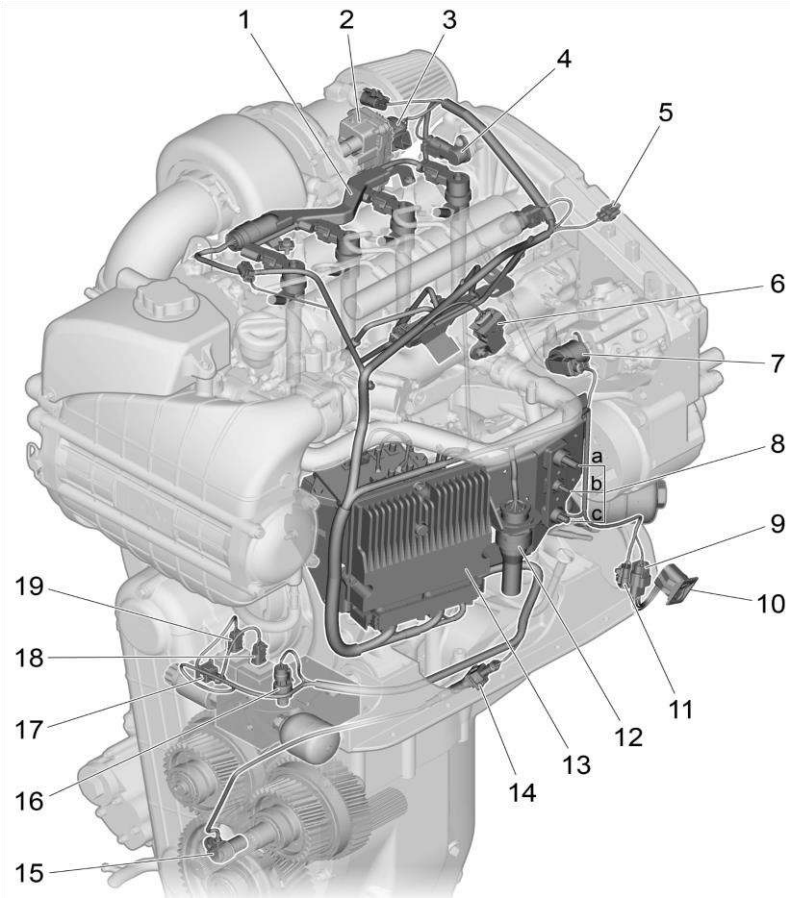
Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

ELECTRICAL COMPONENTS



1. *Fuel rail pressure sensor connector*
2. *Glow plug (4 pcs)*
3. *Glow plug harness connector*
4. *Injector (4 pcs)*
5. *Exhaust gas temperature sensor connector*
6. *Injector harness connector*
7. *Engine coolant temperature sensor/connector*

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com



8. *Exhaust gas temperature sensor*

9. *Air filter restriction sensor*

10. *Gearbox oil pressure switch connector*

11. *Engine oil temperature sensor*

12. *Water-in-fuel sensor*

13. *Water-in-fuel sensor connector*

1. *Injector harness*

2. *Actuator*

3. *Turbo actuator connector*

4. *Camshaft position sensor*

5. *Fuel supply modul (FSM) connector*

6. *Temperature and air mass meter*

7. *Fuel pressure control valve*

8. *Power cable connector*
- *a) GND*
- *b) ECU & Helm power*
- *c) Engine starter power*

9. *PTT cowl connector*

10. *PTT-switch*

11. *PTT sensor connector*

12. *Engine connector*

13. *ECU*

14. *Gearbox output speed sensor connector*

15. *Gearbox output speed sensor*

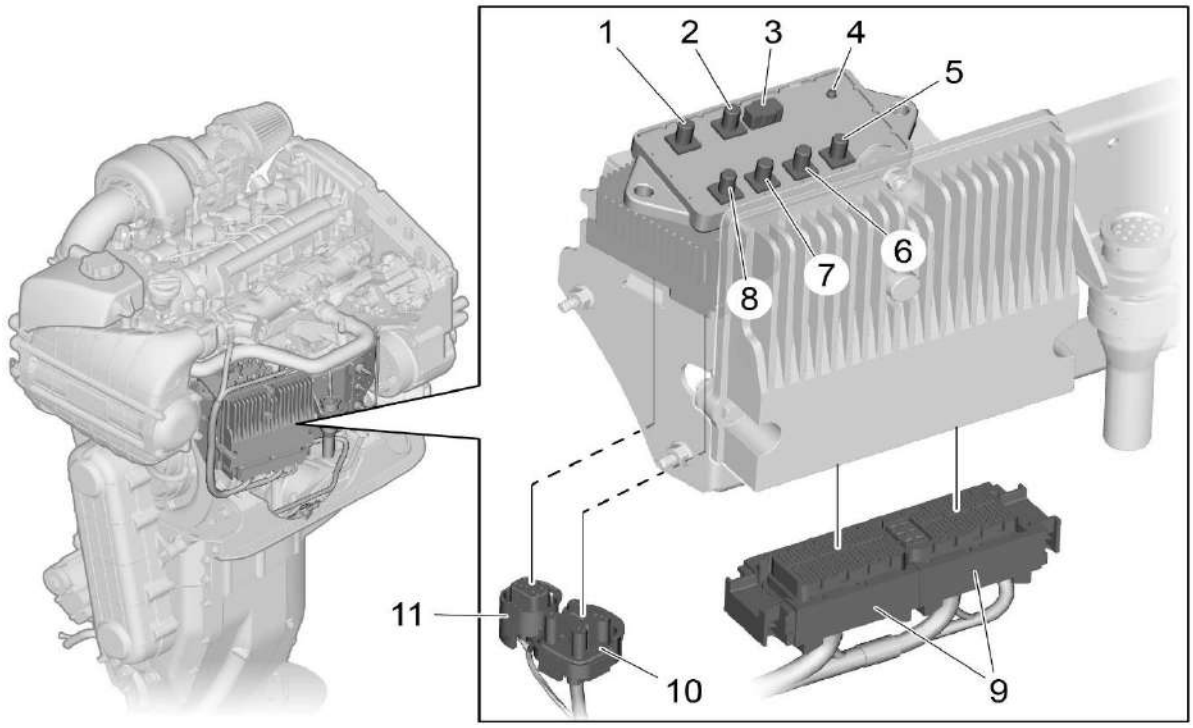
16. *Gearbox oil pressure sensor*

17. *Trolling valve*

18. *Starboard gear coil*

19. *Port gear coil*

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com



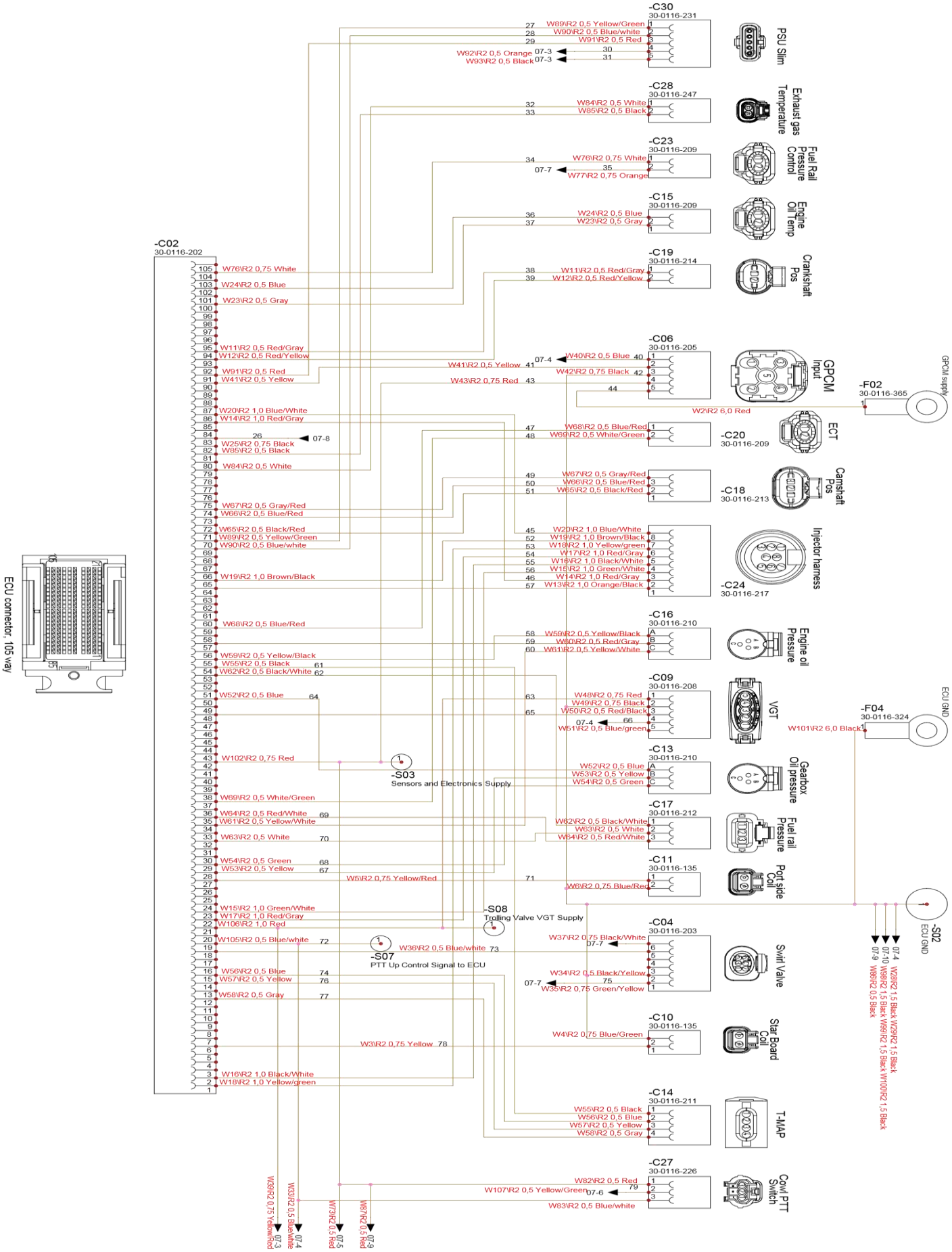
ENGINE CONTROL UNIT

1. *GND*
2. *Supply*
3. *PSU control and feedback*
4. *PSU OK LED-indicator*
5. *ECU and helm*
6. *Glow plug control module*
7. *PTT up*
8. *PTT down*
9. *ECU connectors*
10. *Glow module, control, feedback, supply*
11. *Glow module, output*

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

OXE DIESEL

125HP 150HP 175HP 200HP

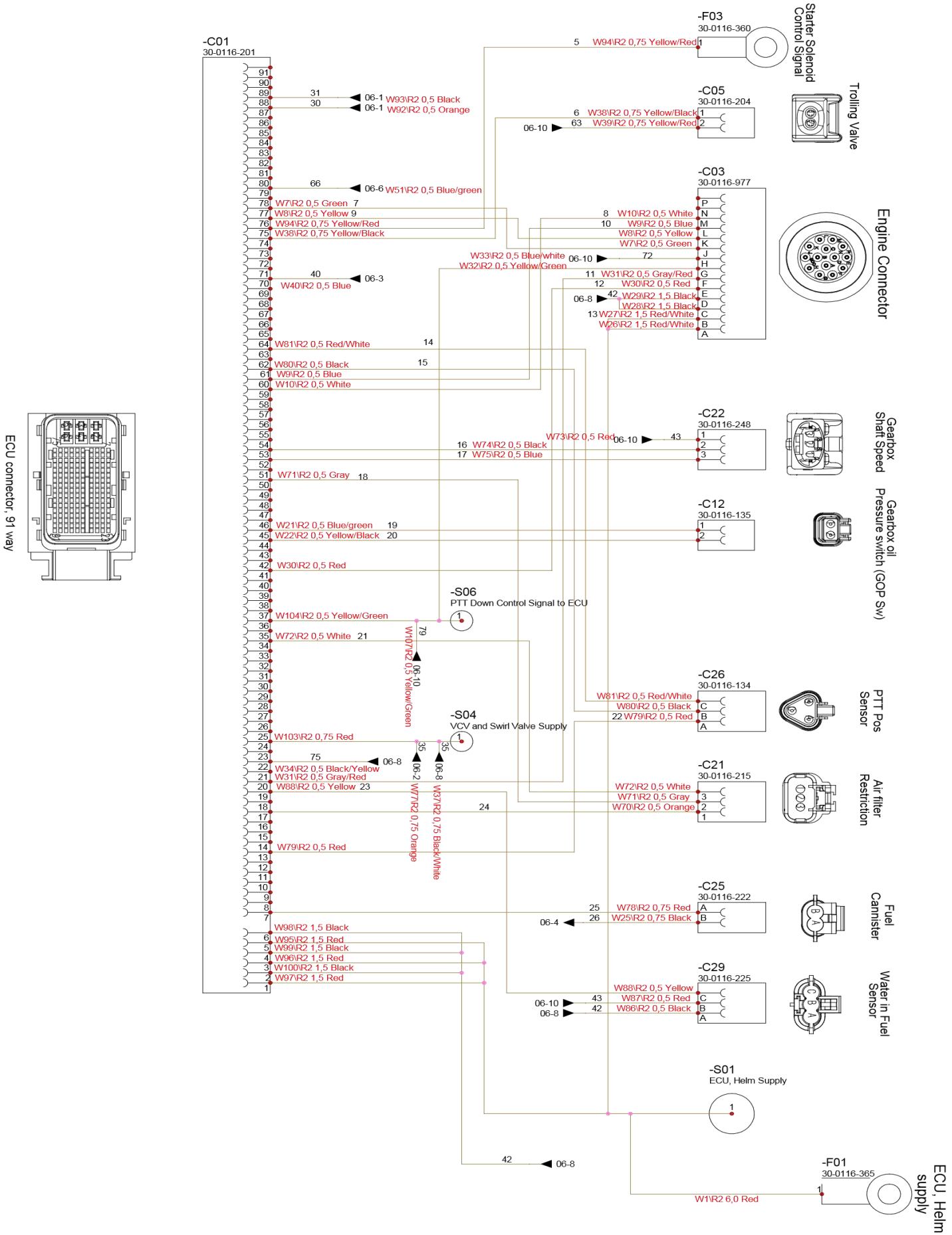


CIMCO
Endurance by Engineering

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

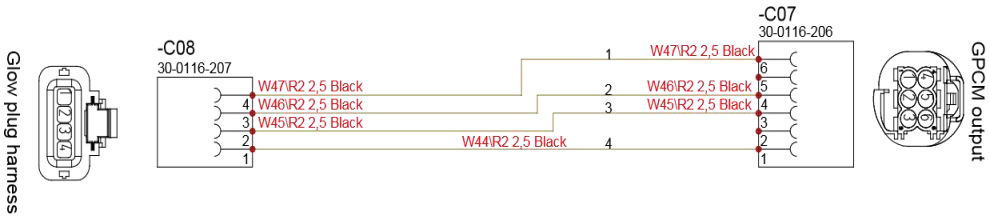
OXE DIESEL

125HP 150HP 175HP 200HP



CIMCO
Endurance by Engineering

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com



Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

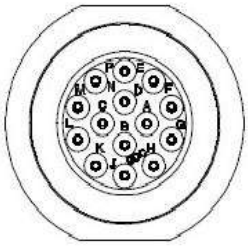
Connector ID	Description
C01	ECU 91-way
C02	ECU 105-way
C03	Engine Connector
C04	Swirl Valve
C05	Trolling Valve (Proportional)
C06	Glow Plug Control Module (GPCM) Data and Supply
C07	Glow Plug Control Module (GPCM) output
C08	Glowplug Harness
C09	VGT Actuator
C10	Reverse Gear (Star Board)
C11	Forward Gear (Port)
C12	Gearbox Oil Pressure Switch (GOP Sw)
C13	Gearbox Oil Pressure (GOP)
C14	Inlet Manifold Air Temp and Pressure (T-MAP)
C15	Engine Oil Temp (EOT)
C16	Engine Oil Pressure (EOP)
C17	Fuel Rail Pressure (FRP)
C18	Camshaft Position (CmP)
C19	Crankshaft Position (CkP)
C20	Engine Coolant Temp (ECT)
C21	Air Filter Restriction (AFR)
C22	Gearbox Output Shaft Speed (Prop. speed)
C23	Volume Contorl Valve (VCV)
C24	Injector Harness
C25	Fuel Supply Module (FSM)
C26	PTT Position Sensor
C27	PTT button Cowl
C28	Exhaust Gas Temperature (EGT)
C29	Water In Fuel Sensor (WIF)
C30	PSU Slim
S01	ECU, Helm Supply splice
S02	GND splice
S03	Sensors supply splice
S04	VCV and swirl supply splice
S05	PTT down splice
S06	PTT up splice
S07	Trolling and VGT supply splice
T01	ECU, Helm
T02	GPCM
T03	Starter Solenoid
T04	Harness GND

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com

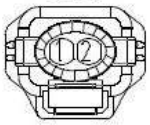
OXE DIESEL

125HP 150HP 175HP 200HP

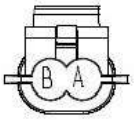
C03
Engine Connector



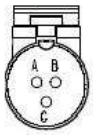
C23
Fuel Rail Pressure Control



C25
Fuel Supply Module

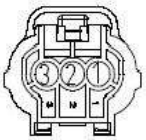


C16
Engine oil Pressure

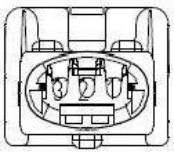


C29
Water in Fuel Sensor

C27
Cowl PTT Switch

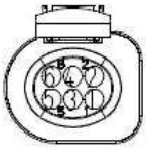


C22
Gearbox Shaft Speed

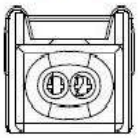


C19
Crankshaft Pos

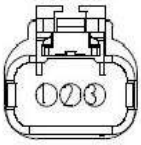
C04
Swirl Valve



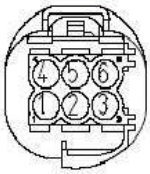
C05
Trolling Valve



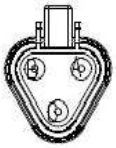
C21
Air filter Restriction



C07
GPCM output



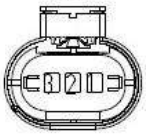
C26
PTT Pos Sensor



C10
Reverse Gear (Star Board coil)

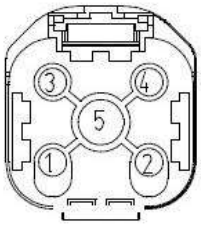
C11
Forward Gear (Port coil)

C18
Camshaft Pos

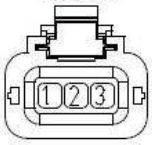


C08
Glow plug harness

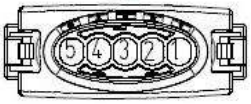
C06
GPCM Input



C17
Fuel rail Pressure



C09
VGT



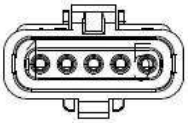
C12
Gearbox oil Pressure switch

C13
Gearbox Oil Pressure

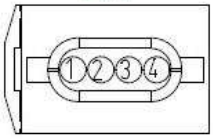
C28
Exhaust gas Temperature

C20
ECT

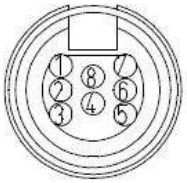
C30
PSU Slim



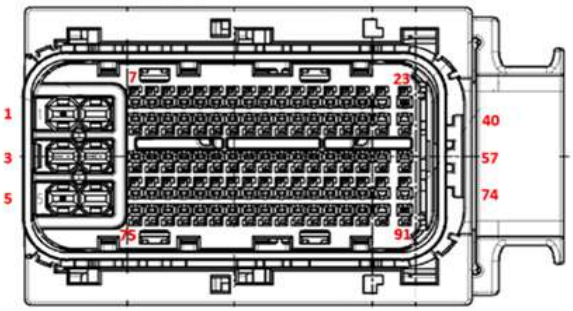
C14
T-MAP



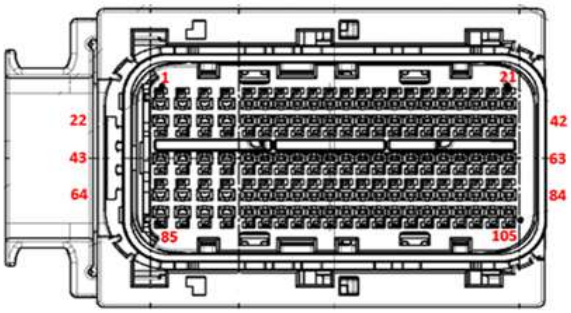
C24
Injector harness



C1 - 91pin ECU connector

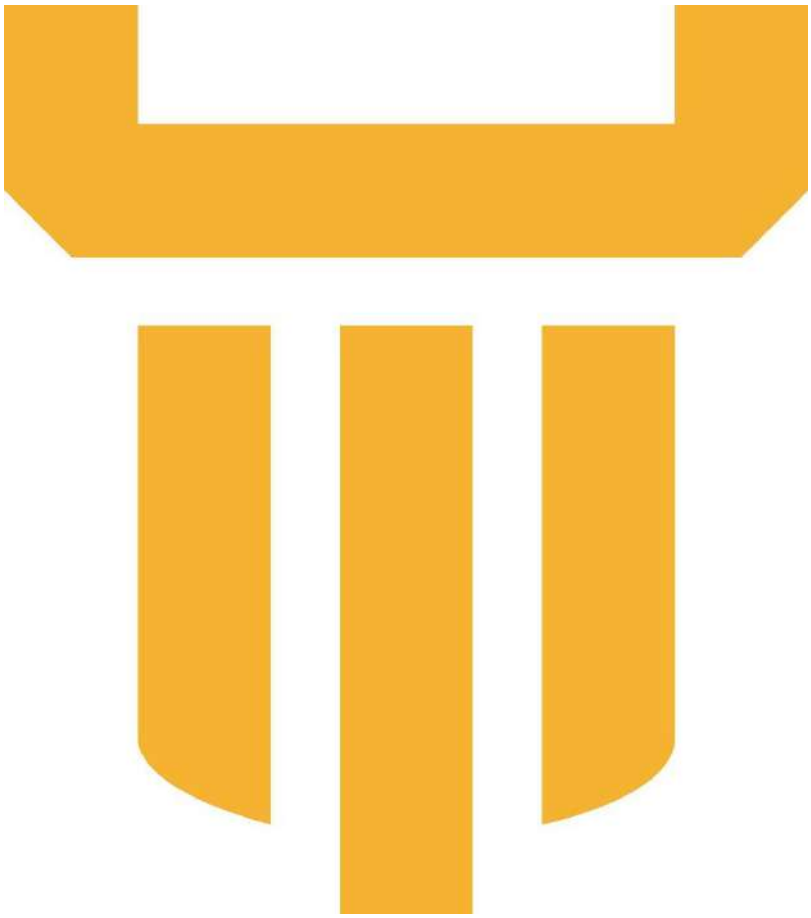


C2- 105pin ECU Connector



CIMCO
Endurance by Engineering

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com



WWW.OXE-DIESEL.COM

Cimco Marine AB
Adress Metallgatan 17A, SE-262 72 Ängelholm, SWEDEN
Phone +46 431 37 11 30 Email technicalsupport@oxe-diesel.com Web www.oxe-diesel.com