RED — DC VOLTAGE
BLUE — INPUT SIGNAL
BLACK — GROUNDS, SHIELDS AND RETURNS
PURPLE — OUTPUT SIGNAL
GREEN — DATA LINKS

REPRESENTS FEMALE PINS
REPRESENTS MALE PINS
REPRESENTS TWISTED PAIR
REPRESENTS SHIELD

NOTE: SOME OF THE CIRCUITS SHOWN HERE WILL NOT BE ACTIVE IN ALL APPLICATIONS. CONSULT THE EQUIPMENT MANUFACTURER'S LITERATURE TO DETERMINE WHICH CIRCUITS ARE USED.

OEM RESPONSIBILITY

ECM OEM CONNECTOR

TACHOMETER — SIGNAL — C33

TELEFLEX MORSE ACCELERATOR PEDAL ASSEMBLY (APS1, APS2)
WILLIAMS ACCELERATOR PEDAL ASSEMBLY (APS1, APS2)
5 VOLT SUPPLY — SENSOR SUPPLY 4 — C42
SIGNAL — POSITION 1 — C51
RETURN — POSITION 1 — SENSOR RETURN 4 — C41
5 VOLT SUPPLY — SENSOR SUPPLY 5 — C52
SIGNAL — POSITION 2 — C53
RETURN — POSITION 2 — C23

REMOTE ACCELERATOR PEDAL OR LEVER ASSEMBLY
5 VOLT SUPPLY
SIGNAL — C58
RETURN — SENSOR RETURN 5 — C43

COOLANT LEVEL SENSOR
5 VOLT SUPPLY
SIGNAL — C44
RETURN

FAN SPEED SENSOR
CUMMINS RESPONSIBILITY
5 VOLT SUPPLY
SIGNAL — C46
RETURN

AFTERTREATMENT DIESEL PARTICULATE FILTER DIFFERENTIAL PRESSURE SENSOR
AFTERTREATMENT DIESEL PARTICULATE FILTER OUTLET GAS PRESSURE SENSOR
5 VOLT SUPPLY
SIGNAL — AFTERTREATMENT DIESEL PARTICULATE FILTER DIFFERENTIAL PRESSURE SENSOR — C55
RETURN
SIGNAL — AFTERTREATMENT DIESEL PARTICULATE FILTER OUTLET GAS PRESSURE SENSOR — C58

VEHICLE SPEED SENSOR
SIGNAL — C35
RETURN — C34

STARTER LOCKOUT/SWITCHED OUTPUT 2 SWITCH
SIGNAL — C14
RETURN — C13

ETHER INJECTION SOLENOID
SIGNAL — C04
RETURN

FAN CLUTCH
SIGNAL — C15
RETURN

BRAKE LAMP RELAY
SIGNAL — C05
SIGNAL 1 — C36

THREE POSITION ENGINE BRAKE LEVEL SWITCH
SIGNAL 2 — C30

ENGINE BRAKE SWITCH — SIGNAL — C24
ENGINE PROTECTION OVERRIDE SWITCH — SIGNAL — C49
BRAKE PEDAL POSITION SWITCH — SIGNAL — C28
CRUISE CONTROL/PTO RESUME SWITCH — SIGNAL — C29
CRUISE CONTROL/PTO SWITCH — SIGNAL — C38
ACCELERATOR INTERLOCK / ENGINE TORQUE LIMIT SWITCH — SIGNAL — C26
AFTERTREATMENT DIESEL PARTICULATE FILTER REGENERATION/DIAGNOSTIC TEST MODE SWITCH — SIGNAL — C59
MAXIMUM OPERATING SPEED/GOVERNOR TYPE SWITCH — SIGNAL — C37
REMOTE ACCELERATOR PEDAL OR LEVER POSITION SWITCH — SIGNAL — C40
REMOTE PTO SWITCH — SIGNAL — C39
PARKING BRAKE SWITCH — SIGNAL — C60
AIR CONDITIONER PRESSURE SWITCH — SIGNAL — C50
CLUTCH PEDAL POSITION SWITCH — SIGNAL — C27
FAN CONTROL SWITCH — SIGNAL — C25
RETURN — C19
AMBIENT AIR TEMPERATURE SENSOR — RETURN — SIGNAL — C57

CUMMINS RESPONSIBILITY
AFTERTREATMENT DIESEL OXIDATION CATALYST INTAKE TEMPERATURE SENSOR
AFTERTREATMENT DIESEL PARTICULATE FILTER TEMPERATURE SENSOR MODULE
AFTERTREATMENT DIESEL PARTICULATE FILTER INTAKE TEMPERATURE SENSOR
AFTERTREATMENT DIESEL PARTICULATE FILTER OUTLET TEMPERATURE SENSOR
RETURN — C45
SIGNAL — C48
SIGNAL — C54

DIAGNOSTIC CONNECTOR
SERVICE TOOL CONNECTOR
NOT CONNECTED
NOT CONNECTED
POSITIVE — SAE J1939 DATA LINK — C17
NEGATIVE — SAE J1939 DATA LINK — C18
RETURN
SUPPLY
NOT CONNECTED
NOT CONNECTED
NOT CONNECTED

MALFUNCTION INDICATOR LAMP — RETURN — C09
HIGH EXHAUST SYSTEM TEMPERATURE LAMP — RETURN — C10
AFTERTREATMENT DIESEL EXHAUST FLUID LAMP — RETURN — C20
RED STOP LAMP — RETURN — C08
AMBER WARNING LAMP — RETURN — C16
AFTERTREATMENT DIESEL PARTICULATE FILTER LAMP — RETURN — C07

ACCESSORY
IGNITION — 5 AMP FUSE — SUPPLY — C03
KEYSWITCH — START
BATTERY
SUPPLY
RETURN — C31
RETURN — C32
RETURN — C21
RETURN — C22
SUPPLY — C01
SUPPLY — C02
SUPPLY — C11
SUPPLY — C12
TERMINAL — 30 AMP FUSE

CUMMINS RESPONSIBILITY
AFTERTREATMENT OUTLET NOX SENSOR
SAE J1939 DATA LINK — POSITIVE
SAE J1939 DATA LINK — NEGATIVE
RETURN
SUPPLY
120 OHM TERMINATION RESISTOR
POSITIVE — C14
NEGATIVE — C15
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR
AFTERTREATMENT OUTLET NOX SENSOR RELAY
87A, 30, 87, 85, 86
10 AMP FUSE
15 AMP FUSE
5 AMP FUSE — SUPPLY — C52
20 AMP FUSE — SUPPLY — C06
SUPPLY — C07
SUPPLY — C08
SUPPLY — C09
RETURN — C01
RETURN — C02
RETURN — C03
RETURN — C04
RETURN — C05
LINE HEATER RELAY
87A, 30, 87, 85, 86
20 AMP FUSE — SUPPLY — C30
RETURN — C41
5 AMP FUSE — IGNITION KEYSWITCH

AFTERTREATMENT DIESEL EXHAUST FLUID TANK LEVEL SENSOR OPTIONS
FOR 2-WIRE SENSORS
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR
B — RETURN — C58
A — SIGNAL — C59
FOR 5 VOLT 3-WIRE SENSORS
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR
B — RETURN — C58
A — SIGNAL — C59
C — 5 VOLT SUPPLY — C40
FOR 12 VOLT 3-WIRE SENSORS
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR
B — RETURN — C58
A — SIGNAL — C59
C — 12 VOLT SUPPLY
SUPPLY — IGNITION KEYSWITCH

CUMMINS RESPONSIBILITY
ENGINE CONTROL MODULE
ECM ENGINE HARNESS CONNECTOR 1
ECM OEM CONNECTOR
ECM ENGINE HARNESS CONNECTOR 2
TEST LEAD 3822917

ENGINE HARNESS CONNECTOR MATING FACE
TEST LEAD 3822758
ENGINE HARNESS CONNECTOR MATING FACE
OEM HARNESS CONNECTOR MATING FACE

AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR MATING FACE
TEST LEAD 4919564
TEST LEAD 4919349
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR MATING FACE

AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER 86 PIN CONNECTOR MATING FACE
TEST LEAD 3164112
TEST LEAD 3164596
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER 53 PIN CONNECTOR MATING FACE
TEST LEAD 3164112
TEST LEAD 3164596

ECM ENGINE HARNESS CONNECTOR 1

CRANKSHAFT POSITION SENSOR
SIGNAL — C26
RETURN — SENSOR RETURN 3 — C37
5 VOLT SUPPLY — SENSOR SUPPLY 3 — C36

CAMSHAFT POSITION SENSOR
SIGNAL — C09
RETURN — SENSOR RETURN 2 — C59
5 VOLT SUPPLY — SENSOR SUPPLY 2 — C60

INTAKE MANIFOLD PRESSURE/TEMPERATURE SENSOR
RETURN
TEMPERATURE SIGNAL — C05
5 VOLT SUPPLY
PRESSURE SIGNAL — C15

BAROMETRIC PRESSURE SENSOR
5 VOLT SUPPLY
RETURN
SIGNAL — C16

CRANKCASE PRESSURE SENSOR
5 VOLT SUPPLY
RETURN
SIGNAL — C03

COOLANT TEMPERATURE SENSOR
SIGNAL — C14
RETURN — C13

OIL PRESSURE SENSOR
5 VOLT SUPPLY
RETURN
SIGNAL — C02

FUEL PUMP ACTUATOR
RETURN — C40
SIGNAL — C30

COMPRESSOR INTAKE TEMPERATURE SENSOR
RETURN
SIGNAL — C06

OIL TEMPERATURE SENSOR
RETURN
SIGNAL — C12

SIGNAL — ENGINE BRAKE SOLENOID 1 — C39
SIGNAL — ENGINE BRAKE SOLENOID 2 — C29
RETURN — ENGINE BRAKE SOLENOID 1 — C49
RETURN — ENGINE BRAKE SOLENOID 2 — C28

INJECTOR 1 — SIGNAL — INJECTOR SOLENOID 1 — C48 — RETURN — INJECTOR SOLENOID 1 — C58
INJECTOR 2 — SIGNAL — INJECTOR SOLENOID 2 — C47 — RETURN — INJECTOR SOLENOID 2 — C57
INJECTOR 3 — SIGNAL — INJECTOR SOLENOID 3 — C46 — RETURN — INJECTOR SOLENOID 3 — C56
INJECTOR 4 — SIGNAL — INJECTOR SOLENOID 4 — C53 — RETURN — INJECTOR SOLENOID 4 — C53
INJECTOR 5 — SIGNAL — INJECTOR SOLENOID 5 — C44 — RETURN — INJECTOR SOLENOID 5 — C54
INJECTOR 6 — SIGNAL — INJECTOR SOLENOID 6 — C45 — RETURN — INJECTOR SOLENOID 6 — C55

VARIABLE GEOMETRY TURBOCHARGER ACTUATOR
SUPPLY — C10
RETURN — C19
SAE J1939 DATA LINK — POSITIVE — C09
SAE J1939 DATA LINK — NEGATIVE — C18

SAE J1939 DATA LINK CONNECTOR
POSITIVE — SAE J1939 DATA LINK
NEGATIVE — SAE J1939 DATA LINK

IF EQUIPPED
CRANKCASE BREATHER HEATER
RETURN — C42
SUPPLY — C52

FUEL LIFT PUMP RELAY
30, 85, 86, 87, 87A
SUPPLY
SIGNAL — C01
RETURN — C11
FUEL LIFT PUMP
WATER IN FUEL — C25
WATER IN FUEL — C24

AFTERTREATMENT INTAKE NOX SENSOR
SAE J1939 DATA LINK — POSITIVE
SAE J1939 DATA LINK — NEGATIVE
RETURN
SUPPLY

ECM ENGINE HARNESS CONNECTOR 2

AFTERTREATMENT FUEL INJECTOR — SIGNAL — RETURN — C50 — C60
AFTERTREATMENT PURGE AIR ACTUATOR — SIGNAL — RETURN — C08 — C46
AFTERTREATMENT FUEL SHUTOFF VALVE 1 — RETURN — SIGNAL — C09
EXHAUST GAS RECIRCULATION TEMPERATURE SENSOR — SIGNAL — RETURN — C48 — C18
TURBOCHARGER SPEED SENSOR — SUPPLY — RETURN — C32 — C33
FUEL RAIL PRESSURE SENSOR — 5 VOLT SUPPLY — SIGNAL — RETURN — SENSOR SUPPLY 6 — C31 — C44 — SENSOR RETURN 6 — C21
AFTERTREATMENT FUEL PRESSURE SENSOR — SIGNAL — RETURN — 5 VOLT SUPPLY — C56
EXHAUST GAS RECIRCULATION DIFFERENTIAL PRESSURE SENSOR — SIGNAL — RETURN — 5 VOLT SUPPLY — C39
EXHAUST GAS PRESSURE SENSOR — SIGNAL — RETURN — 5 VOLT SUPPLY — C34
EXHAUST GAS RECIRCULATION VALVE — 5 VOLT SUPPLY — SENSOR SUPPLY 1 — C30
POSITION A — C31
POSITION B — C41
POSITION C — C42
RETURN — SENSOR RETURN 1 — C47
MOTOR B — C04
MOTOR C — C03
MOTOR A — C05
EXHAUST GAS RECIRCULATION OUTLET PRESSURE SENSOR — 5 VOLT SUPPLY — RETURN — SIGNAL — C38

14 PIN CONNECTOR
SAE J1939 DATA LINK — POSITIVE — C09
SAE J1939 DATA LINK — NEGATIVE — C18
WATER IN FUEL SENSOR — RETURN — C17
WATER IN FUEL SENSOR — SIGNAL — C40
TEMPERATURE — RETURN — C17
OUTLET TEMPERATURE SENSOR — SIGNAL — C40
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION INTAKE TEMPERATURE SENSOR — SIGNAL — C45
REAL TIME CLOCK — RETURN — C27 — SUPPLY — C26

CUMMINS RESPONSIBILITY
WATER IN FUEL SENSOR — RETURN — SIGNAL
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION OUTLET GAS TEMPERATURE SENSOR
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION TEMPERATURE SENSOR MODULE
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION INTAKE GAS TEMPERATURE SENSOR

AIR SHUTOFF VALVE OVERRIDE SWITCH
5 AMP FUSE
AIR SHUTOFF VALVE SOLENOID — SIGNAL — RETURN — AIR SHUTOFF VALVE — IDLE SHUTDOWN RELAY — SIGNAL — C07
AIR SHUTOFF VALVE LAMP — 5 AMP FUSE — SIGNAL
AIR SHUTOFF VALVE POSITION SWITCH — SIGNAL — AIR SHUTOFF VALVE POSITION SWITCH — SIGNAL — C22
AIR SHUTOFF VALVE TEST SWITCH — SIGNAL — RETURN — AIR SHUTOFF VALVE TEST SWITCH — SIGNAL — C12
AFTERTREATMENT DIESEL PARTICULATE FILTER REGENERATION SWITCH — SIGNAL — AFTERTREATMENT DIESEL PARTICULATE FILTER REGENERATION SWITCH — SIGNAL — C13
REAR AXLE RATIO SWITCH — SIGNAL — C14
ENGINE PROTECTION SWITCH — SIGNAL — ENGINE PROTECTION SWITCH — SIGNAL — C15

CUMMINS RESPONSIBILITY
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT CONNECTOR
AFTERTREATMENT DIESEL EXHAUST FLUID CONTROLLER CONNECTOR
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT — SUPPLY — C46
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT — RETURN — C26
DOSING UNIT SIGNAL / DOSING UNIT TEMPERATURE — SIGNAL — C24
AFTERTREATMENT DIESEL EXHAUST FLUID RETURN VALVE — SUPPLY — C86
AFTERTREATMENT DIESEL EXHAUST FLUID RETURN VALVE — SIGNAL — C65
RETURN — RETURN — C18
5 VOLT SUPPLY — C19
AFTERTREATMENT DIESEL EXHAUST FLUID PRESSURE — SIGNAL — C17
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER — SUPPLY — C05
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT HEATER — SIGNAL — C03
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 1 — SIGNAL — SUPPLY — C01
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 2 — SIGNAL — SUPPLY — C02
AFTERTREATMENT DIESEL EXHAUST FLUID LINE HEATER 3 — SIGNAL — SUPPLY — C48
AFTERTREATMENT DIESEL EXHAUST FLUID TANK TEMPERATURE — RETURN — SIGNAL — C78 — C79
AFTERTREATMENT DIESEL EXHAUST FLUID TANK HEATER CONTROL VALVE — RETURN — SIGNAL — C85 — C08
CUMMINS RESPONSIBILITY
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE — RETURN — SIGNAL — C12 — C32

OEM RESPONSIBILITY
CUMMINS RESPONSIBILITY

AFTERTREATMENT FUEL SHUTOFF VALVE
AFTERTREATMENT PURGE AIR ACTUATOR
AFTERTREATMENT FUEL INJECTOR
EXHAUST GAS RECIRCULATION TEMPERATURE SENSOR
AFTERTREATMENT EXHAUST GAS TEMPERATURE SENSORS CONNECTOR MATING FACE
TEST LEAD 3164596

INTAKE MANIFOLD PRESSURE/TEMPERATURE SENSOR CONNECTOR MATING FACE
TEST LEAD 5299368
FUEL RAIL PRESSURE SENSOR CONNECTOR MATING FACE
TEST LEAD 3823993
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING VALVE CONNECTOR MATING FACE
TEST LEAD 3164596

EXHAUST GAS RECIRCULATION POSITION SENSOR
EXHAUST GAS RECIRCULATION MOTOR CONNECTOR MATING FACE
TEST LEAD 3164596
TURBOCHARGER SPEED SENSOR CONNECTOR MATING FACE
TEST LEAD 5299368
AFTERTREATMENT INTAKE NOx SENSOR
AFTERTREATMENT OUTLET NOx SENSOR CONNECTOR MATING FACE
TEST LEAD 3164596

FUEL PUMP ACTUATOR
AFTERTREATMENT INTAKE NOx SENSOR
CRANKCASE BREATHER HEATER
FUEL LIFT PUMP
WATER IN FUEL SENSOR CONNECTOR MATING FACE
TEST LEAD 3823993

ENGINE BRAKE SOLENOID
INJECTOR PASS THROUGH CONNECTOR CONNECTOR MATING FACE
TEST LEAD 5299368
14 PIN CONNECTOR MATING FACE
TEST LEAD 3164596
AFTERTREATMENT DIESEL EXHAUST FLUID DOSING UNIT CONNECTOR MATING FACE
TEST LEAD 5299368

OIL TEMPERATURE SENSOR
COOLANT TEMPERATURE SENSOR CONNECTOR MATING FACE
TEST LEAD 5299368
120 OHM TERMINATION RESISTOR
DIAGNOSTIC CONNECTOR CONNECTOR MATING FACE
TEST LEAD 3823994

OIL PRESSURE SENSOR
CRANKCASE PRESSURE SENSOR
CAMSHAFT POSITION SENSOR
CRANKSHAFT POSITION SENSOR
EXHAUST GAS RECIRCULATION DIFFERENTIAL PRESSURE SENSOR
EXHAUST GAS RECIRCULATION OUTLET PRESSURE SENSOR
BAROMETRIC AIR PRESSURE SENSOR
AFTERTREATMENT FUEL PRESSURE SENSOR
EXHAUST GAS PRESSURE SENSOR CONNECTOR MATING FACE
TEST LEAD 3164596

VARIABLE GEOMETRY TURBOCHARGER ACTUATOR
AFTERTREATMENT DIESEL PARTICULATE FILTER DIFFERENTIAL PRESSURE SENSOR
AFTERTREATMENT DIESEL PARTICULATE FILTER OUTLET PRESSURE SENSOR
AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION TEMPERATURE SENSOR MODULE
AFTERTREATMENT DIESEL PARTICULATE FILTER TEMPERATURE SENSOR MODULE CONNECTOR MATING FACE
TEST LEAD 3164596

AFTERTREATMENT SELECTIVE CATALYTIC REDUCTION TEMPERATURE SENSOR MODULE
AFTERTREATMENT DIESEL PARTICULATE FILTER TEMPERATURE SENSOR MODULE

ISX15 CM2250 Wiring Diagram

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