NAVISTAR

0000003481-R3

N9 and N10 with SCR

Engine Wiring Diagram

Page 1 of 3

Color code for schematic lines

Red	B+ (Battery Voltage)
Red	High side driver control
Blue	VREF (5 Volts)
Green	Signal
Green	A/C Speed Signal
Brown	Data Communication
Brown	PWM Signal
Black	GND (Ground)
Black	Low side driver control
Purple	Injectors
	Twisted pair

WARNING

To prevent personal injury or death, read all safety instructions in the "Safety Information" section of *Navistar® N9 & 10 Engine Operation and Maintenance Manual* 0000003721 before doing any diagnostic procedures. Information on this form was current at the time of publication. Updates may have been made to introduce product improvements and technical advancements. See correct truck service manual for chassis wiring.
Chassis wiring and connectors are for reference only.
Your vehicles specific chassis wiring and connectors may differ.

For detailed circuit information, refer to the following Truck documents:
- *Chassis Electrical Circuit Diagram Manual*

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N9 and N10 with SCR

Aftertreatment Wiring Harness

Page 2 of 3

Color code for schematic lines

Red	B+ (Battery Voltage)
Red	High side driver control
Blue	VREF (5 Volts)
Green	Signal
Brown	Data Communication
Brown	PWM Signal
Black	GND (Ground)
Black	Low side driver control
	Twisted pair

DOC and DPF Harness

DPFDP/ DPFOP

DOCIT DPFIT DPFOT

DOC/DPF Temp. Sensor Module

DOC / DPF Temp. Module

8-Pin Connector (672)

CAN-L (GN)
CAN-H (YL)
GND
SWBAT

Aftertreatment Harness

Aftertreatment Control Module (ACM)

SIG GND J1-42
DPFDP J1-70
DPFOP J2-32
VREF4 J2-42
CAN-H (YL) J2-14
CAN-L (GN) J2-15

Private CAN

12-Pin Connector (690)

DEF Tank Harness

4-Pin Connector (689)

B+

DEFTL / DEFTT (678)

SWBAT
GND
CAN-L (GN)
CAN-H (YL)

Relay Connector

Ignition Relay

DEF Supply Module Relay

DEF Line Heater Relay

F3 F2 F1

DEFSLH (677) DEFRLH (675) DEFPLH (676)

SCR Harness

Ammonia (NH_3) Sensor

8-Pin Connector

4-Pin Connector

Ammonia (NH_3) Sensor Module

SCR Temp. Sensor Module

SCRIT SCROT

SCR Temp. Module

NO_X Out Sensor Module

12-Pin Connector (671)

NH_3 HTR PWR
Trim Resistor
Trim Resistor GND
NH_3-2
NH_3 HTR GND
NH_3 Temp
SIG GND
NH_3-1

SWBAT
GND
CAN-H (YL)
CAN-L (GN)

DEFTH (691) DEFD (673)

DEFD CTL-L
DEFD CTL-H
DEFTH CTL
DEFTH GND

A B C Terminating Resistor (681)

120 Ω

Public CAN

DEFSMH Relay CTL J2-33
DEFLH Relay GND J1-07
DEFSMH Relay GND J1-63
DEFLP J2-45
DEFPLH J1-28
DEFRLH J1-52
DEFSLH J1-04

J1 Connector (685)

J2 Connector (686)

8-Pin Connector (687)

12-Pin Connector (680)

Supply (Inlet) Return (Backflow) Pressure (Outlet)

DEF Supply Module Heater (DEFSMH)
DEF Supply Pump (DEFSP) and Temperature Sensor
DEF Reverting Valve (DEFRV)
DEF Line Pressure (DEFLP)

DEFLH Relay CTL J1-08
DEFSP GND J2-02
DEFSP PWR J2-46
DEFSP Temp/CTL J2-48
DEFRV CTL J1-56
DEFRV GND J2-34
VREF4 J2-57
SIG GND J1-17

Chassis Harness

Component is Engine Mounted
NO_X In Sensor Module (608)

GND (6314A)

14-Pin Connector (674)

Under Hood PDM 15-Pin Connector

B+
B+
B+

To EFP GND page 1 — EFP GND
To ACT GND page 1 — GND
To SWBAT page 1 — SWBAT
To Public CAN page 1 — CAN-H (YL) CAN-L (GN) Public CAN

DCU Jumper Harness

4-Pin Connector (6343)

14-Pin Connector (6342)

DCU Module

53-Pin Connector (6340)

86-Pin Connector (6341)

B+
B+
GND
GND
CAN-H (YL)
CAN-L (GN)
SWBAT

Engine Harness

To Private CAN page 1 — CAN-L (GN) CAN-H (YL) Private CAN

DSI: AFTFSO AFTFP2 AFTFPC AFTFP1 AFTFT

24-Pin Engine to Chassis (6011)

AFTFP1
VREF5
AFTFT
SIG GND
AFTFP CTL-L
AFTFP CTL-H
AFTFP2
SIG GND
VREF5
AFTFSO CTL-L
AFTFSO CTL-H

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N9 and N10 with SCR

Aftertreatment Diagram

APP1	Accelerator Pedal Position 1
APP2	Accelerator Pedal Position 2
ACT GND	Actuator Ground
ACT PWR	Actuator Power
AAT	Ambient Air Temperature
ACM	Aftertreatment Control Module
AFTFSO	AFT Fuel Shutoff
AFTFPC	AFT Fuel Pressure Control
AFTFP1	AFT Fuel Pressure 1
AFTFP2	AFT Fuel Pressure 2
AFTFT	AFT Fuel Temperature
ATA	ATA Communication Link
B+	Battery Voltage
BARO	Barometric Pressure
BCP	Brake Ctrl Pressure
BS	Brake Switch
BPS	Brake Pressure Switch
CAC	Charge Air Cooler
CACOT	CAC Outlet Temperature
CCOSS	Crankcase Oil Separator Speed
CKP	Crankshaft Position
CMP	Camshaft Position
CTL	Control
DCU	Doser Control Unit
DEF	Diesel Exhaust Fluid
DEFLP	DEF Line Pressure
DEFD	DEF Doser
DEFSLH	DEF Supply Line Heater
DEFRLH	DEF Return Line Heater
DEFPLH	DEF Pressure Line Heater
DEFRV	DEF Reverting Valve
DEFSMH	DEF Supply Module Heater
DEFSP	DEF Supply Pump
DEFTH	DEF Tank Heater
DEFTL	DEF Tank Level
DEFTT	DEF Tank Temperature
DOC	Diesel Oxidation Catalyst
DOCIT	DOC Intake Temperature
DPF	Diesel Particulate Filter
DPFDP	DPF Differential Pressure
DPFIT	DPF Intake Temperature
DPFOP	DPF Outlet Pressure
DPFOT	DPF Outlet Temperature
DSI	Down Stream Injection
EBP	Exhaust Back Pressure
EBPC	Exhaust Back Pressure Control
ECB1	Engine Compression Brake 1
ECI	Engine Crank Inhibit
ECL	Engine Coolant Level
ECM	Engine Control Module
ECT1	Engine Coolant Temperature 1
EFC	Engine Fan Control
EFP	Electronic Fuel Pump
EGC	Electronic Gauge Cluster
EGRV	Exhaust Gas Recirculation Valve
EGRP	EGR Valve Position
EGT	Exhaust Gas Temperature
EOP	Engine Oil Pressure
EOT	Engine Oil Temperature
ETC	Engine Throttle Control
ETP	Engine Throttle Valve Position
FDP	Fuel Delivery Pressure
FPM	Fuel Pump Monitor
GND	Ground
HEST	High Exhaust System Temperature
IAHC	Intake Air Heater Control
IAT	Intake Air Temperature
ICP	Injection Control Pressure
IMP	Intake Manifold Pressure
IMT	Intake Manifold Temperature
INJ	Injector
IPR	Engine Injection Control Pressure Regulator
KAPWR	Keep Alive Power
MAF	Mass Air Flow
MPR	Main Power Relay
NH3	Ammonia
NOxIn	NOx Intake Concentration
NOxOut	NOx Outlet Concentration
PDM	Power Distribution Module
RAPP	Remote Accelerator Pedal Position
RAS	Resume Accel Switch
RPRE	Remote Preset PTO
RSE	Radiator Shutter Enable
SCR	Selective Catalytic Reduction
SCRIT	SCR Intake Temperature
SCROT	SCR Outlet Temperature
SWBAT	Keyswitch Battery
TACH	Tachometer
TC	Turbocharger
TC1TOP	TC1 Turbine Outlet Pressure
TC2CIT	TC2 Compressor Intake Temperature
TC2WG	TC2 Wastegate
TDE	Transmission Driveline Engaged
WIF	Water In Fuel
XCS	Transfer Case