RX1575 Electric

MQ Service Edits RevA

Tier 4i Engine Spec # 3TVN76-PAAM
Tier 4F Engine Model # 3TNV80F-SPAMM

Complete Engine Wiring Harness
P/N 1240161

Battery

S1 — Ignition Switch P/N 1-30005179

Term 15 - Ignition
Term 19 - Pre Heat
Term 50 - Starter

Ignition Switch Terminals

Preheat
Ignition
Starter

Plug #	Wire #	Plug #	Wire #
1	180	6	178
2	Not Used	7	139 & 107
3	Not Used	8	130
4	Not Used	9	152 & 106
5	134	10	Not Used

Ignition Switch Terminals, Wires & Position Logic

P 0 I II III — 1 2 3 4 5 6 7 8 9 10

K1 - Main IGN Relay
P/N 1227066
82 Ohm Coil

N2 - Display Unit
N2 P/N 1226581

P3 88888.8 — R2 68Ω — H1

When Ign ON, pin 7 must have 0V to batt neg and when engine running it must have 12VDC

Cock Pit fuses

F11 - 10 amp - Machine controller supply
F12 - 25amp - Machine controller outputs
F13 - 10 amp - Display unit, shutdown bar
F14 - 25 amp - Hydraulic cooler

Engine Compartment fuses

F21 - 40 amp - Stop Soleniod
F22 - 10 amp - Fuel Pump, Alt Battery +
F23 - 40 amp - High Speed Solenoid
F24 - 40 amp - Pre Heat
F25 - 40 amp - Single Coil (tier 4 option)

Notes

*All BROWN wires are always a GROUND circuit.
* Y2 -The High Speed solenoid must be adjusted properly. Set 1.5mm gap between the adj screw and the stop.
* Y9 - Remove this connector for brake test and drive circuit deadhead relief pressure.

Cannon Plug Connector to N1 - Machine Controller

IR Transmitter Parts
Start/Stop Switch - P/N 52077
Vibration Switch - P/N 52010
Rubber Cap for Switches - P/N 68305
Joystick - P/N 68507
Battery - P/N 1266872
Transmitter Board - P/N ???

Filter Numbers

Engine Oil Filter 11930535151
Fuel/Water Sep 17108155910
T4i Air Filter 1224448
T4F Air Filter Outer 1300308
T4F Air Filter Inner 1300309
Fuel Filter 11981055650
Fuel Pump 11922552102
500 Hr Service Kit 1228783

N3 - Infrared Transmitter
P/N 1226283

Charge/Pairing Connection Cable P/N 1242589

Input voltage from machine controller Term 3 & 4 = Battery Voltage

IR Sensor
Front IR Sensor
P/N 1226285

Input voltage from machine controller Term 3 & 4 = Battery Voltage

IR Sensor
Rear IR Sensor
P/N 1226285

X5 is a connector for the front sensor/Ext cable that is located on the left side of the engine base harness area. P/N 1292241

S24 - Reverse Safety Sensor/Loop

Open Reverse bar circuit is indicated on the Display Panel by turning on H5 Lamp.

H3 - Oil Pressure indicator
H4 - Water Temp indicator
N2 - Display Unit

Power Supply - Logic Box
Power Supply - Outputs
Engine Signal
Reverse Bar Safety Circuit
Engine Oil Pressure
Water Temperature

All INPUTS run on the top of Machine Controller in diagram expect for voltage to the IR receiving eyes

N1 - Machine Controller
P/N 1226284

All OUTPUTS run on the bottom of Machine Controller in diagram expect for GND input on Cannon plug terminal 3 & 4.

W105 - Ignition Relay Output Pwr to K1 Relay
Starter
Motor holding coil
Ground
Drive Forward
Drive Reverse
Circuit Negative
Steering Left
Steering Right
High Amplitude
Low Amplitude
Brake Valve
Reverse Bar Safety Circuit
Error
High Speed Solenoid Relay
Glow Plug Relay

K2 - Start Relay
P/N 1-493887
20 Ohm Coil

K3 Timer
Meter set to 600K ohm
Red lead = RT
Blk lead = SW
310K Ohms
Reverse leads = 0
Check for VDC at RT-GB.
Don t use Auto-range

K4 - Relay Coil 85-86= 37 ohms Draws .3a

Shaded Area Tier 4F Option

Solenoid Driver (TIER 4)

Wire Colors
RT = Red
SW = Black
RTWS = Red/White
GB = Yellow
WS = White

Y1 - Fuel Shutoff Solenoid
P/N 11923377932

S25 - Hydro Oil Temp Switch closes at 122 degrees F

K7 - Hyd Fan Relay
P/N 1227066
82 Ohm Coil

Y3 - Y4 Drive Solenoids
Coil Resistance 6 Ohms

Y5 - Y9 Hydraulic Valve Solenoids
Coil Resistance 6 ohms
Current Draw - 2.5 amp

K5 - High Speed Solenoid Relay
P/N 1227066
82 Ohm Coil

K6 - Glow Plug Relay
P/N 1227066
82 Ohm Coil

Y2 - use proper polarity. Must be adjusted properly

R1 - Glow Plugs
Glow Plugs are not on a timer
Amp Draw 10Amps

N2 - Display Unit

S22 - Water Temp Switch must be OPEN in Normal temps. 4s Delay

S21 - Oil Pressure switch must be closed when the engine is stopped. Closed when starting & open when running. 4s Delay

Water Temperature P/N 12125044901
Engine Oil Pressure P/N 11425039450

Battery
G2 +12V
M1 — Starter Motor
G1 — Alternator
M2 — Fuel Pump
M3 — Hydraulic Cooler Motor

N2 -Display Unit
P3 - Hour Meter
H1 - Battery Charge indicator
H2 - Pre-heating lamp
H3 - Oil Pressure indicator
H4 - Water Temp indicator
H5 - Shutdown bar warning lamp
H6 - Error warning lamp

G1 - Alternator

P/N 129423-77200
Term 30 : 14.5V output
Term D+ : Ground out for Display, K2 relay, controller timer.
D+ must have 0V when the Ign is on.
D+ must have 12V when the engine is running
Term 15 : Ignition circuit power from K1 relay.

M1 - Starter Motor

P/N 1-954079
Amps / 250 Peak / 150 Continuous

High Speed Solenoid

P/N 1226545
Amps / 8.9 Peak / .5 Continuous

Hyd Test Pressures @ High Speed

Drive Pressure Relief - 4000psi
Charge Pressure - 300psi
Vibration Pressure - 3000/1500psi
Steering Pressure - 1000psi

* Stauff-Test 20 Adapter (SMS-20/N1/4)

Relay ID and Description

K1 - Main Ignition Relay (P/N 1227066)
K2 - Starter Relay (P/N 1-493837)
K3 - Timer Relay (1s.) (P/N 1-952515)
YM:129211-77920
K4 - Pull-in Stop Solenoid (P/N 1-952514) NGK:G71SU
K5 - High Speed Solenoid Relay (P/N 1227066)
K6 - Glow Plug Relay (P/N 1227066)
K7 - Hydro Cooler Fan Relay (P/N 1227066)
K11 - Solenoid Driver Relay (Tier 4F only)
K1/K7 Spec - 12VDC-40A/15A

Solenoid Valve Descriptions

Approx coil resistance is 6 ohms for Y3,4,5,6,7,8,9
Y1 - Fuel Shutoff Solenoid
Y2 - High Speed Solenoid
Y3 - Drive Forward
Y4 - Drive Reverse
Y5 - Steering Left
Y6 - Steering Right
Y7 - High Amplitude
Y8 - Low Amplitude
Y9 - Brake Valve
Y11 - 2nd Holding Solenoid (Tier 4F only)

Drive Speed Voltage to Coils

High Speed - 4.8 DCV to Coil
Low Speed - 3.6 DCV to Coil

Note: Voltage check must be done with connector plugged in. Unit will read stray voltage if test is not done correctly. Make this test while engine running, back probe connectors

RX1575 Trench Roller

Infrared Safety Zone : Spec's from manual, actual may vary.
Max range w/ cable 11ft. ~ Max w/ IR 60ft
Min proximity range 8ft

Y2 - High Speed Solenoid Adjustment

Leave 1.5mm gap.

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