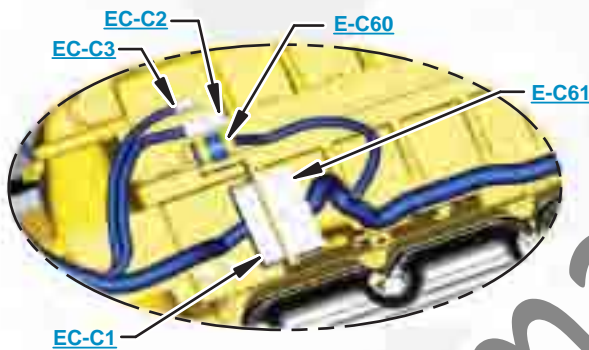


This document is best viewed at a screen resolution of 1024 X 768.

To set your screen resolution do the following:
RIGHT CLICK on the **DESKTOP**.
 Select **PROPERTIES**.
CLICK the **SETTINGS TAB**.
MOVE THE SLIDER under **SCREEN RESOLUTION** until it shows **1024 X 768**.
CLICK OK to apply the resolution.

The Bookmarks panel will allow you to quickly navigate to points of interest.



Click on any text that is BLUE and underlined. These are hyperlinks that can be used to navigate the schematic and machine views.

VIEW ALL CALLOUTS

When only one callout is showing on a machine view this button will make all of the callouts visible. This button is located in the top right corner of every machine view page.

HOTKEYS (Keyboard Shortcuts)		
	FUNCTION	KEYS
	Zoom In	"CTRL" / "+"
	Zoom Out	"CTRL" / "-"
	Fit to Page	"CTRL" / "0" (zero)
	Hand Tool	"SPACEBAR" (hold down)
	Find	"CTRL" / "F"



Schematic

D8R Series II Track-Type Tractor Electrical System

AKA489-UP
6YZ774-UP

SchematicCat.com

COMPONENT LOCATION

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Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
ACC Power CONN - Switched	E-7	38	Ground - Engine Block	H-3	1
ACC Power CONN - Unswitched	F-7	38	Relay - Main	H-9	38
Alarm - Action	B-10	A	Relay - Start	H-9	38
Alarm - Backup	C-14	15	Relay - Start Aid	I-2	8
Alternator	H-2	11	Resistor (Starter)	I-4	1
Assembly - Receptacle	F-7	32	Resistor (Dash)	D-9	A
Auxillary Start	I-3	14	Resistor - Blower	E-10	A
Battery - 12 V 1	I-9	22	Sender - Direction	G-15	C
Battery - 12 V 2	H-10	22	Sensor - Atmospheric Pressure	E-1	37
Battery - 12 V 3	I-10	22	Sensor - Brake Position	E-9	35
Battery - 12 V 4	H-10	22	Sensor - Coolant Temperature	E-1	13
Breaker - Alternator	H-9	38	Sensor - Engine Oil Pressure	E-1	37
Breaker - Converter 1	F-7	32	Sensor - Engine Speed	F-4	4
Breaker - Converter 2	F-7	32	Sensor - Fuel Level	D-14	26
Breaker - Drive Train	I-8	38	Sensor - Fuel Temperature	E-1	37
Breaker - Engine ECM Switched	I-8	38	Sensor - Hydraulic Oil Temperature	A-13	50
Breaker - Engine ECM Unswitched	I-8	38	Sensor - Inching Pedal	B-8	35
Control - ADEM Engine	D-2	1	Sensor - Inlet Air Temperature	F-1	37
Control - Blade Float	A-8	B	Sensor - Primary Speed Timing	F-2	8
Control - ECB	G-13	C	Sensor - Transmission Input Speed ECPC	G-4	4
Converter - 10 A	F-7	32	Sensor - Turbo Inlet Pressure	E-4	47
Converter - 20 A	F-8	22	Sensor - Turbo Outlet Pressure	E-1	37
Deceleration Pedal Position	A-9	35	Sensor - XMSN INTMED SP 1	I-14	17
Diode A/C	G-3	3	Sensor - XMSN INTMED SP 2	I-14	17
Dual Tilt - ARC Suppr 1	A-4	8	Sensor - XMSN OUT SP 1	H-14	17
Dual Tilt - ARC Suppr 2	A-4	8	Sensor - XMSN OUT SP 2	H-14	17
Dual Tilt - Handle	A-4	C	Sensor - XMSN Sump Temp	G-4	18
Dual Tilt - Handle Base	E-5	C	Solenoid - AC Clutch	G-3	3
Electronic Monitoring System	G-9	A	Solenoid - First Gear Clutch	I-14	17
Fuse - 24 V- 12V Converter	H-8	38	Solenoid - Flex Air	B-5	13
Fuse - AC Condensor	H-8	38	Solenoid - Forward Clutch	I-14	17
Fuse - Aux 1	H-8	38	Solenoid - Injector 1	G-1	37
Fuse - Aux 2	H-8	38	Solenoid - Injector 2	G-1	37
Fuse - Aux 3	H-8	38	Solenoid - Injector 3	G-1	37
Fuse - Aux 4	H-8	38	Solenoid - Injector 4	G-1	37
Fuse - Blowers	H-8	38	Solenoid - Injector 5	F-1	37
Fuse - Converter	H-8	38	Solenoid - Injector 6	F-1	37
Fuse - EMS 11	H-8	38	Solenoid - Left Brake	H-11	49
Fuse - Fender Floods	H-8	38	Solenoid - Parking Brake Dump	I-11	49
Fuse - Forward Horn	H-8	38	Solenoid - Priority Valve	G-4	48
Fuse - Front Floods	H-8	38	Solenoid - Reverse Clutch	I-14	17
Fuse - Key	H-8	38	Solenoid - Ripper Pin	C-15	16
Fuse - MSS Product Link	H-8	38	Solenoid - Second Gear Clutch	I-14	17
Fuse - Priming Pump	H-8	38	Solenoid - Service Brake Dump	I-11	49
Fuse - Rear Floods	H-8	38	Solenoid - Start Aid	I-1	8
Fuse - Ripper Pin/Seat/Winch	H-8	38	Solenoid - Third Gear Clutch	I-14	17
Fuse - Service Brake	H-8	38	Solenoid - Winch	C-15	16
Fuse - Winch	H-8	38	Suppressor - Arc 1	C-15	16
Fuse - Wipers	H-8	38	Suppressor - Arc 2	C-15	16
Gage Cluster	C-9	A	Switch - 4 Speed Blower	E-11	A
Ground - Alternator	H-2	11	Switch - AC	D-11	A
Ground - Engine	E-3	1	Switch - Auto Downshift	C-10	A

COMPONENT LOCATION

Page 2 of 2



Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Ground - Frame	H-3	39	Switch - Bi-Directional Mode	C-10	A
Ground Frame	H-10	40	Switch - Coolant Flow	F-1	11
Ground - Headliner	B-13	30	Switch - Disconnect	H-10	22
Ground - Module	I-6	36	Switch - Downshift	G-15	C
Heater - Water Jacket 120V	F-3	36	Switch - Front Wiper	C-13	30
Heater - Water Jacket 120V	F-3	40	Switch - D8 Flex Air Fan	B-5	A
Horn - Forward (SW)	B-11	B	Switch - Hydraulic Filter Bypass	I-9	22
Horn - Forward High	I-1	7	Switch - Implement Lockout 2	A-8	B
Horn - Forward Low	I-1	7	Switch - Key Start	D-10	A
Module - Lamp Gear	C-9	A	Switch - Lamp	C-11	A
Motor - Blower 1	E-10	A	Switch - Left Wiper	C-13	30
Motor - Blower 2	E-10	A	Switch - Operator Monitor	C-10	A
Motor - Condensor 1	A-15	41	Switch - Parking Brake	F-15	C
Motor - Condensor 2	A-15	41	Switch - Power Train Filter Pressure 1	A-13	29
Motor - Condensor Rops 1	E-15	42	Switch -Power Train Filter Pressure 2	A-13	29
Motor - Condensor Rops 2	E-15	42	Switch - Prelube Oil Pressure	H-4	51
Motor - Front Washer	D-12	34	Switch - Rear Floods	C-11	30
Motor - Front Wiper	C-12	43	Switch - Rear Floods/Ripper	C-11	30
Motor - Left Wiper	C-12	44	Switch - Rear Wiper	D-13	30
Motor - Rear Wiper	D-13	46	Switch - Refrigerant	G-3	3
Motor - Right Wiper	C-12	45	Switch - Reverse	G-15	C
Motor - Left Washer	E-12	34	Switch - Right Wiper	C-13	30
Motor - Rear Washer	D-12	34	Switch - Ripper Flood	C-14	A
Motor - Right Washer	D-12	34	Switch - Ripper Pin Pull	A-11	B
Motor - Seat	E-12	9	Switch - TC Out Temp	F-4	B
Motor - Starter	I-4	1	Switch - Throttle	B-10	B
Outlet - 12 V 1	F-13	23	Switch - Upshift	G-15	C
Outlet - 12 V 2	F-13	23	Switch - Winch	A-12	B
Prelube Starter	I-4	1	Switch - Implement Lockout 1	A-8	B
Product Link	I-15	33	Thermostat	D-10	A
Relay - Condensor (Fender)	A-15	41	Timer - Prelube	H-4	8
Relay - Condensor (ROPS)	F-15	42			

Machine locations are repeated for components located close together.

A = Located on dash.

B = Located inside of right console.

C = Located inside of left console.

D = Located around headliner.

CONNECTOR LOCATION



Connector Number	Schematic Location	Machine Location
CONN 1	F-14	24
CONN 2	F-14	24
CONN 3	E-14	26
CONN 4	E-14	27
CONN 5	C-14	16
CONN 6	C-14	16
CONN 7	C-14	16
CONN 8	A-14	28
CONN 9	A-14	28
CONN 10	A-13	29
CONN 11	C-13	30
CONN 12	C-13	16
CONN 13	D-13	23
CONN 14	E-13	16
CONN 15 Datalink Service Connector	E-13	23
CONN 16 Monitor Service Connector	E-13	23
CONN 17	H-13	31
CONN 18	I-13	31
CONN 19	J-13	31
CONN 20	K-12	31
CONN 21	H-12	20
CONN 22	H-12	32
CONN 23	D-12	24
CONN 24	E-12	A
CONN 25	A-12	29
CONN 26	A-11	B
CONN 27	I-10	22
CONN 28	D-10	A
CONN 29	A-9	B
CONN 30	B-9	B
CONN 31	E-9	A
CONN 32	E-9	A
CONN 33	A-7	B
CONN 34	D-7	A
CONN 35	F-7	32
CONN 36	G-7	32
CONN 37	G-7	4
CONN 38	H-7	32
CONN 39	I-7	37
CONN 40	E-6	8
CONN 41	D-4	4
CONN 42	C-4	4
CONN 43	C-4	4
CONN 44	C-4	2
CONN 45	C-3,B-3	3
CONN 46	D-3	3
CONN 47	I-1	3
CONN 48	G-2	4
CONN 49	F-1	5
CONN 50	A-5	3
CONN 51	A-5	3
CONN 52	A-5	32

The connectors shown in this chart are for harness to harness connectors. Connectors that join a harness to a component are generally located at or near the component. See the Component Location Chart.

Component Identifiers (CID ¹) Module Identifier (MID ²) Caterpillar Monitoring System (MID No. 030)	
CID	Component
0096	Fuel Level Sender
0177	Torque Converter Oil Temperature Sensor
0248	Data Link
0263	Sensor Power Supply
0271	Action Alarm
0324	Action Lamp
0600	Hydraulic Oil Temperature Sensor
0819	Display Data Link
0821	Display Power Supply
Engine Control System (MID No. 036)	
CID	Component
0001	Injector Cylinder 1
0002	Injector Cylinder 2
0003	Injector Cylinder 3
0004	Injector Cylinder 4
0005	Injector Cylinder 5
0006	Injector Cylinder 6
0091	Throttle Position
0100	Oil Pressure
0110	Coolant Temperature
0168	Battery Voltage
0172	Intake air Temperature
0174	Fuel Temperature
0190	Engine Speed
0248	CAT Data Link Communications
0253	Personality Module
0254	ECM Fault
0261	Engine Timing Calibration
0262	Analog Sensor
0263	Digital Sensor Supply Short
0264	Deceleration Throttle Output
0266	Crank Without Inject Inputs
0268	Program Parameters/ECM Fault
0273	Turbo Out Pressure
0274	Atmospheric Pressure
0275	Turbo Inlet Air Pressure
0545	Start Aid
0799	Service Tool
Transmission Control System (MID No. 113)	
CID	Component
0070	Parking Brake Switch
0075	Steering Oil Temperature Sensor
0168	Electrical System Voltage
0177	Transmission Temperature Sensor
0190	Engine Speed Sensor
0248	CAT Data Link
0254	Power Train ECM
0269	Steering Temperature Sensor
0298	Service Brake
0299	Transmission Direction Selector
0368	Transmission Auto/Manual Switch
0468	Brake Pedal Position Sensor
0490	Implement Lockout
0573	Inching Pedal Position Sensor
0618	Park Brake Switch
0621	Downshift Switch
0622	Upshift Switch
0623	Directional Switch
0650	Harness Code
0668	Transmission Lever Position Sensor
0671	Transmission Output Speed Sensor
0672	Torque Converter Speed Sensor
0673	Transmission Speed Sensor
0674	Transmission Intermediate Speed Sensor
0675	Transmission Intermediate Speed Sensor
0676	Left Steering Position Sensor
0677	Right Steering Position Sensor

0689	Left Steering Brake Solenoid
0690	Right Steering Brake Solenoid
0691	Reverse Clutch Solenoid
0692	Forward Clutch Solenoid
0693	Third Gear Clutch Solenoid
0694	Second Gear Clutch Solenoid
0695	First Gear Clutch Solenoid
0697	Priority Valve Solenoid
0698	Left Steering Clutch Solenoid
0699	Right Steering Clutch Solenoid
0718	Third Gear Sensor
0722	Secondary Brake Solenoid
1327	Left Brake Pedal Attachment
1328	Right Service Brake Position Sensor
1329	Left Brake Pedal Switch
1330	Right Brake Pedal Switch
1488	Implement Detent
1870	Position Thumb Lever Blade Control
1933	Left Blade Angle Solenoid
1934	Right Blade Angle Solenoid

¹ The CID is a diagnostic code that indicates which circuit is faulty.

² The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.

Failure Mode Identifiers (FMI) ¹	
FMI No.	Failure Description
0	Data valid but above normal operational range.
1	Data valid but below normal operational range.
2	Data erratic, intermittent, or incorrect.
3	Voltage above normal or shorted high.
4	Voltage below normal or shorted low.
5	Current below normal or open circuit.
6	Current above normal or grounded circuit.
7	Mechanical system not responding properly.
8	Abnormal frequency, pulse width, or period.
9	Abnormal update.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Bad device or component.
13	Out of calibration.
14	Parameter failures.
15	Parameter failures.
16	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Condition not met.
20	Parameter failures.

¹ The FMI is a diagnostic code that indicates what type of failure has occurred.

Engine Event Codes	
Number	Error Description
E017	High Engine Coolant Temperature
E027	High Intake Air Temperature
E035	Loss Of Coolant Flow Warning
E100	Low Engine Oil Pressure
E190	Engine Overspeed
E265	User Defined Shutdown
E272	Inlet Air Restriction

Monitoring System Service Modes	
Service Mode	Number
Hour Meter	0
Harness Code Display	1
Parameter Display	2
Service Mode	3
Digital Tattletale	4
US/SI	5
Calibration	6
Calibration	7
Calibration	8
Charging	9

Off Machine Switch Specification				
Part No.	Function	Actuate	Deactuate	Contact Position
134-6054	Coolant Flow Switch	362 ± 29 mN (1.3 ± 0.1 oz)	303 mN (1.1 oz MIN)	Normally Open
114-5333	A/C (High / Low) Pressure	275 to 1750 kPa ¹ (39.9 to 253.8 psi)	-	Normally Open ²
105-9152	Pre Lube Oil Pressure	30±7 kPa ¹ (39.9 to 253.8 psi)	30±7 kPa ¹ (39.9 to 253.8 psi)	Normally Closed

¹ With increasing pressure the closed condition can be maintained up to 2800 kPa (406 psi), with decreasing pressure the closed condition can be maintained down to 170 kPa (25 psi).

² Contact position at the contacts of the connector.

Resistor, Sender and Solenoid Specifications		
Part No.	Component Description	Resistance (Ohms) ¹
3E-1906	Solenoid:A/C Clutch	17.6 ± 0.6
3E-7842	Resistor: Starter Motor	150 ± 7.5
3E-8575	Solenoid:Ripper Pin	24.9 ± 0.4
4W-9972	Sender: XMSN Oil Temperature	560 to 716 @ 54°C (130°F) 72 to 82 @ 110°C (230° F)
116-6203	Resistor: Resistor	20 ± 1.0
125-3716	Solenoid:Hyd. Fan	3
136-1679	Solenoid:ECPC Pump	31 ± 3
160-8408	Forward Clutch Reverse Clutch Solenoid: First Gear Clutch Second Gear Clutch Third Gear Clutch	8.7 ± 0.4
172-2392	Solenoid:Park Brake Dump	41.9 ± 2.1
172-2392	Solenoid:Service Brake Dump	41.9 ± 2.1
174-4909	Solenoid:Left Brake	8.7 ± 0.4

¹ At room temperature unless otherwise noted.

Related Service Manuals	
Title	Form Number
Alternator: 3E-7577 (75A)	REN1252
Alternator: 165-5140 (100A)	SEN17508
Electric Starting Motor: 6V-0890	SEN13860
Caterpillar Monitoring System:	REN12014
Engine ECM:	SEN15003
Transmission:	SEN18367

Machine Codes	
Machine	Code
D8R	15

WIRE DESCRIPTION

Page 1 of 3



Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
Power Circuits			Control Circuits		
101	RD	Bat (+) (Not Application Specific)	709	OR	Sensor Power Supply
102	RD	Hd Lmp	751	GN	XMSN Shift Sol No. 1 Or 3
103	RD	Aux Ckt	752	YL	XMSN Shift Sol No. 2
104	YL	Aux Ckt	754	BU	XMSN Shift Sol No. 3 Or 1
105	RD	Key Sw	755	OR	XMSN Shift Sol No. 4 Or 5
106	RD	Aux Ckt	779	WH	Coupler Engage Sol
108	BU	Aux Ckt	780	PU	Coupler Disengage Sol
109	RD	Alt Output (+) Term.	A700	OR	Digital Sensor Power(+5V)
110	RD	Aux Ckt	A701	GY	Injector #1
111	YL	Aux Ckt	A702	PU	Injector #2
112	PU	Main Power Rly Output	A703	BR	Injector #3
113	OR	Opr Mon Panel VMIS B+ Switched	A704	GN	Injector #4
114	RD	Warning Horn (Forward)	A705	BU	Injector #5
115	RD	Aux Ckt	A706	GY	Injector #6
116	BR	Aux Ckt	A745	WH	Fuel Pressure
124	GN	A/C	A746	PK	Turbo Outlet Pressure
130	GN	Aux Ckt	A747	GY	Atmospheric Pressure
140	BU	Aux Ckt	A751	YL	After Cooler Temp
150	OR	Bat (+)	E707	GN	VMIS Display +V
158	BR	Aux Ckt	E708	PK	VMIS Display Clock
160	PU	Aux Ckt	E735	PU	Smart Ems Tack/Serv Mtr/Odometer Select
176	YL	Aux Ckt	E793	BU	ATA Data Link -
184	BU	Aux Ckt	E794	YL	ATA Data Link +
186	WH	Aux Ckt	E799	BR	PWM #1 And #2 Return
197	RD	Aux Ckt	F700	BU	PWM #1 Out (3.5A)
198	RD	Aux Ckt	F701	BR	PWM #2 Out (3.5A)
Ground Circuits			F702	GN	Throttle
200	BK	Main Chassis	F703	GY	Lh Turbine Inlet Exh Temp
201	BK	Operator Monitor Return	F704	OR	Rh Turbine Inlet Exh Temp
202	BK	XMSN Ctrl	F705	PK	Dout 6
203	BK	Chassis Diagnostic	F706	PU	Dout 5
207	BK	Starter Diagnostic	F707	WH	Ether Current Level Relay
229	BK	Bat (-)	F708	YL	Dout 3
270	BK	CMS Ident Code 0	F709	BU	Dout 2
271	BK	CMS Ident Code 1	F710	BR	Ether On Relay
272	BK	CMS Ident Code 2	F711	GN	CAN Link +
273	BK	CMS Ident Code 3	F712	GY	CAN Link -
274	BK	CMS Ident Code 4	F714	PK	Right Turbo Inlet Press
275	BK	CMS Ident Code 5	F715	PU	Shutdown
276	BK	XMSN Ctrl Ident Code 0	F716	WH	Shutdown

WIRE DESCRIPTION

Page 2 of 3



Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
277	BK	XMSN Ctrl Ident Code 1	F717	YL	SW 4
278	BK	XMSN Ctrl Ident Code 2	F718	BU	SW 5
279	BK	XMSN Ctrl Ident Code 3	F719	BR	SW 6/1
280	BK	XMSN Ctrl Ident Code 4	F720	GN	SW 8/3
290	BK	CMS Service	F721	GY	SW 9/4
291	BK	CMS Clear	F722	OR	SW 10/5
A234	BK	J1939 Shield Gnd	F723	PK	TDC Probe +
Basic Machine Circuits			F724	PU	TDC Probe -
301	BU	Starter No. 1 Sol	F725	WH	Fuel Press
302	OR	Starter No. 1 Resistor To Diagnostic	F780	PK	Parking Brake SW
304	WH	Starter Relay No. 1 Output	F781	BR	Downshift SW (N.O.)
306	GN	Starter Relay Coil To Neut Start SW Or Key SW	F782	OR	Reverse SW (N.O.)
307	OR	Key SW To Neutral Start SW Or VMIS Sensor Module	F783	GN	Upshift SW (N.C.)
308	YL	Main Power Relay Coil	F784	YL	Downshift SW (N.C.)
310	PU	Start Aid SW To Start Aid Sol	F785	WH	Upshift SW (N.O.)
321	BR	Backup Alarm Lamp Travel Alarm	F786	GY	Reverse SW (N.C.)
322	GY	Warning Horn (Forward)	F788	PU	Left Steer Clutch
326	PU	Key SW "C" Term.	F789	YL	Right Steer Clutch
334	BU	Start Aid Sol #2	F790	BR	Service Brake Pedal
337	WH	Prelube Pushbutton SW To Prelube Timer	F791	BU	Right Brake Solenoid
Monitoring Circuits			F792	WH	Left Brake Solenoid
403	GN	Alternator (R) Term.	G730	PK	EPTC II - Park Brake Sol
410	WH	Opr Mon Action Alarm	G731	GY	EPTC II - Secondary Service Brake Sol
411	PK	Opr Mon Master	K737	BR	Engine Retarder Sol Cyl 1, 2, 5, 6
412	BU	Opr Mon Cool Flow	K738	GN	Engine Retarder Sol 3,4
419	YL	Opr Mon Parking Brake	K739	BU	Engine Retarder Sol Common
426	BR	Opr Mon Power Train Oil Filter	851	WH	Hydrst Speed And Direction Sensor
442	GY	Hyd System Temp Gage	892	BR	CAT Data Link (-)
443	YL	Power Train Temp Gage	893	GN	CAT Data Link (+)
447	PK	Fuel Level Gage	F842	BU	AIH Post Heat
450	YL	Tach Sender (+)	F843	YL	Inching Pedal
451	BR	Tach Sender (-)	F846	PU	LED Driver 1
A447	PK	Prelube Press. SW To Prelube Timer	F847	YL	ECB SW IP1
C413	YL	VMIS Display Data	F848	OR	ECB SW IP2
C414	BU	VMIS Display Load	F849	WH	ECB SW IP3
Accessory Circuits			F850	PK	ECB SW IP4
500	BR	Wiper - Front (Park)	G848	GN	LED Driver 2
501	GN	Wiper - Front (Low)	900	PU	XMSN Shift Sol No. 5 or 4
502	OR	Wiper - Front (HI)	973	BR	CST Autoshift- Auto/Manual SW 2
503	BR	Wiper - Rear (Park)	975	WH	CST Autoshift- Sol Return
504	YL	Wiper - Rear (Low)	977	YL	CST Autoshift- Auto/Manual SW 1
505	BU	Wiper - Rear (HI)	987	WH	Diverter Sol
506	PU	Washer - Front	993	BR	Analog Sensor Common
507	WH	Washer - Rear	994	GY	Oil Pressure (Filtered)
508	PU	Radio Speaker - Left	995	BU	Coolant Temperature
509	WH	Radio Speaker - Left (Commom)	997	OR	Analog Sensor Power (+ 5V)

WIRE DESCRIPTION



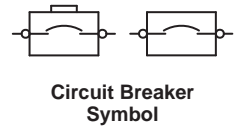
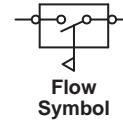
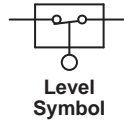
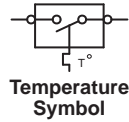
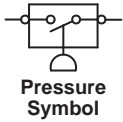
Wire Number	Wire Color	Description	Wire Number	Wire Color	Description
511	BR	Radio Speaker - Right	998	BR	Digital Sensor Return
512	GN	Radio Speaker - Right (Common)	C967	BU	Inlet Air Temperature
513	OR	A/C Compressor/Refrigerant Pressure SW	E900	WH	ECPC Trans Output SPD +
515	GY	Blower Motor (HI)	E901	GN	ECPC Trans Output SPD -
516	GN	Blower Motor (Medium)	E902	PU	ECPC Trans Intermediate SPD +
517	BU	Blower Motor (Low)	E903	YL	ECPC Trans Intermediate SPD -
521	YL	A/C SW To Refrigerant SW	E904	BR	ECPC Trans Intermediate SPD Q+
522	WH	A/C Clutch To Thermostat SW	E905	BU	ECPC Trans Intermediate SPD Q-
523	BR	Wiper - Left (Park)	E906	OR	ECPC Trans Output SPD Q+
524	BU	Wiper - Left (Low)	E907	GY	ECPC Trans Output SPD Q-
525	GY	Wiper - Left (HI)	E908	BR	ECPC Trans Input SPD +
526	YL	Wiper - Right (Park)	E909	WH	ECPC Trans Input SPD -
527	GN	Wiper - Right (Low)	E965	BU	Engine Speed/Timing B-
528	PK	Wiper - Right (HI)	E966	YL	Engine Speed/Timing B+
529	WH	Washer Left	G939	PK	Reverse Safety Switch Return
530	OR	Washer Right	J992	YL	Unused
553	YL	Pitch Sol To Trigger SW- Dual Tilt	J993	PK	Unused
554	PK	Momentary SW To Single Tilt Sol- Dual Tilt	J994	GY	Unused
567	WH	A/C SW Jumper	J995	PU	Unused
592	BU	DC/DC Converter Power Output	K977	PK	ECPC Trans Oil Temp Sensor
593	GN	Condensor Fan Relay To Motors	K978	BU	ECPC Pump Sol
A513	PK	DC/DC Converter Memory Output	L983	WH	Injector Common 1 & 2
C568	WH	Blower Motor (Max)	L984	OR	Injector Common 3 & 4
Lighting Circuits			L985	YL	Injector Common 5 & 6
600	BR	Dash Lamp Basic	N931	GY	Hydraulic Pump Pressure
608	GN	Flood Lamp - Rear	N940	BU	Engine Analog Sensor Power (+5V)
609	YL	Flood Lamp - Side	N941	YL	Engine Analog Sensor Return
610	OR	Head Lamp Basic	N942	OR	Flexxaire Fan
630	GY	Flood Lamp Rear (Attach)	N943	BR	Unused
651	PK	Flood Lamp Rear	N944	PU	Engine Digital Sensor Return
663	GY	Gage Lamps - Smart EMS			

HARNESS and WIRE

Electrical Schematic Symbols



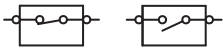
Symbols



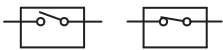
Symbols and Definitions



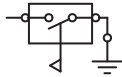
Fuse: A component in an electrical circuit that will open the circuit if too much current flows through it.



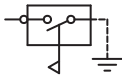
Switch (Normally Open): A switch that will close at a specified point (temp, press, etc.). The circle indicates that the component has screw terminals and a wire can be disconnected from it.



Switch (Normally Closed): A switch that will open at a specified point (temp, press, etc.). No circle indicates that the wire cannot be disconnected from the component.



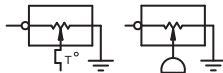
Ground (Wired): This indicates that the component is connected to a grounded wire. The grounded wire is fastened to the machine.



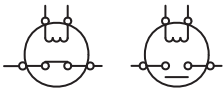
Ground (Case): This indicates that the component does not have a wire connected to ground. It is grounded by being fastened to the machine.



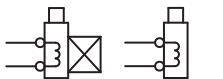
Reed Switch: A switch whose contacts are controlled by a magnet. A magnet closes the contacts of a normally open reed switch; it opens the contacts of a normally closed reed switch.



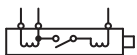
Sender: A component that is used with a temperature or pressure gauge. The sender measures the temperature or pressure. Its resistance changes to give an indication to the gauge of the temperature or pressure.



Relay (Magnetic Switch): A relay is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close the switch part of the relay.



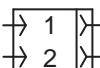
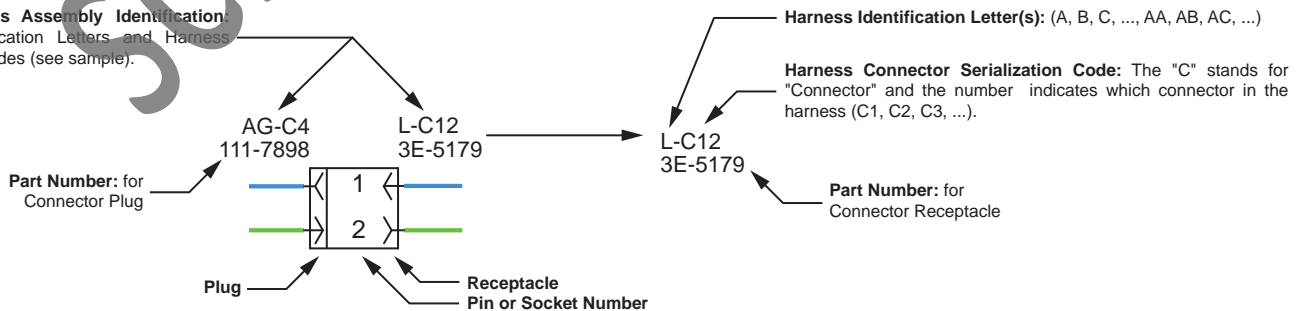
Solenoid: A solenoid is an electrical component that is activated by electricity. It has a coil that makes an electromagnet when current flows through it. The electromagnet can open or close a valve or move a piece of metal that can do work.



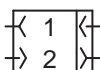
Magnetic Latch Solenoid: A magnetic latch solenoid is an electrical component that is activated by electricity and held latched by a permanent magnet. It has two coils (latch and unlatch) that make electromagnet when current flows through them. It also has an internal switch that places the latch coil circuit open at the time the coil latches.

Harness and Wire Symbols

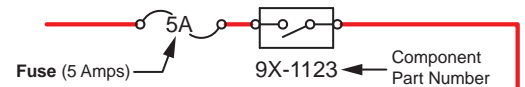
Wire, Cable, or Harness Assembly Identification: Includes Harness Identification Letters and Harness Connector Serialization Codes (see sample).



Deutsch connector: Typical representation of a Deutsch connector. The plug contains all sockets and the receptacle contains all pins.



Sure-Seal connector: Typical representation of a Sure-Seal connector. The plug and receptacle contain both pins and sockets.



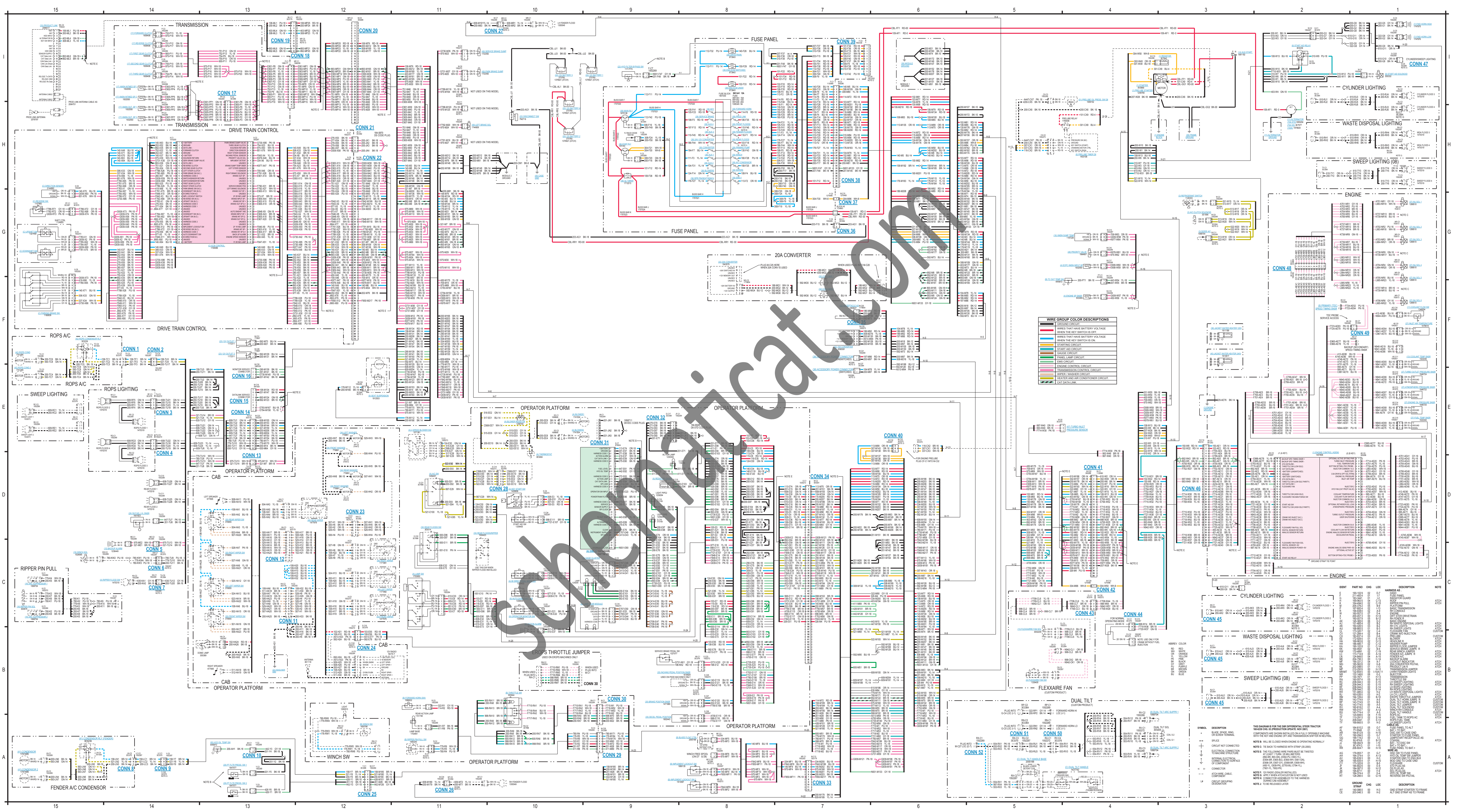
Harness identification code: This example indicates wire group 325, wire 135 in harness "AG".

325-AG135

PK-14

Wire Gauge

Wire Color



WIRE GROUP COLOR DESCRIPTIONS

Red	Battery Circuit
Green	Wires That Have Battery Voltage When the Key Switch is Off
Blue	Wires That Have Battery Voltage When the Key Switch is On
Yellow	Starting Circuit
Orange	Ignition Circuit
Purple	Panel Lamp Circuit
Black	Power Circuit
Brown	Engine Control Circuit
Pink	Transmission Control Circuit
White	Water Pumping Circuit
Light Blue	Heater and Air Conditioning Circuit
Dark Blue	Seat Belt Lock

SYM	DESCRIPTION	QTY	LOC	DESCRIPTION	NOTE
AT01	WASTE DISPOSAL LIGHTING	1	4-1	WASTE DISPOSAL LIGHTING	AT01
AT02	CYLINDER LIGHTING	1	4-1	CYLINDER LIGHTING	AT02
AT03	SWEEP LIGHTING (08)	1	4-1	SWEEP LIGHTING (08)	AT03
AT04	ENGINE	1	4-1	ENGINE	AT04
AT05	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT05
AT06	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT06
AT07	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT07
AT08	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT08
AT09	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT09
AT10	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT10
AT11	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT11
AT12	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT12
AT13	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT13
AT14	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT14
AT15	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT15
AT16	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT16
AT17	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT17
AT18	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT18
AT19	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT19
AT20	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT20
AT21	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT21
AT22	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT22
AT23	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT23
AT24	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT24
AT25	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT25
AT26	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT26
AT27	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT27
AT28	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT28
AT29	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT29
AT30	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT30
AT31	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT31
AT32	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT32
AT33	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT33
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AT37	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT37
AT38	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT38
AT39	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT39
AT40	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT40
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AT42	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT42
AT43	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT43
AT44	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT44
AT45	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT45
AT46	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT46
AT47	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT47
AT48	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT48
AT49	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT49
AT50	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT50
AT51	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT51
AT52	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT52
AT53	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT53
AT54	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT54
AT55	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT55
AT56	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT56
AT57	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT57
AT58	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT58
AT59	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT59
AT60	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT60
AT61	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT61
AT62	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT62
AT63	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT63
AT64	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT64
AT65	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT65
AT66	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT66
AT67	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT67
AT68	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT68
AT69	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT69
AT70	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT70
AT71	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT71
AT72	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT72
AT73	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT73
AT74	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT74
AT75	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT75
AT76	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT76
AT77	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT77
AT78	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT78
AT79	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT79
AT80	OPERATOR PLATFORM	1	4-1	OPERATOR PLATFORM	AT80

THE DIAGRAM FOR THE DIFFERENTIAL MOTOR TRACTOR
 THESE CIRCUITS REPRESENT THE MAIN POWER CIRCUITS FOR THE DIFFERENTIAL MOTOR TRACTOR.
 NOTE: THE FOLLOWING WIRE COLORS MUST BE USED:
 RED - BATTERY VOLTAGE
 GREEN - BATTERY VOLTAGE WHEN KEY SWITCH IS OFF
 BLUE - BATTERY VOLTAGE WHEN KEY SWITCH IS ON
 YELLOW - STARTING CIRCUIT
 ORANGE - IGNITION CIRCUIT
 PURPLE - PANEL LAMP CIRCUIT
 BLACK - POWER CIRCUIT
 BROWN - ENGINE CONTROL CIRCUIT
 PINK - TRANSMISSION CONTROL CIRCUIT
 WHITE - WATER PUMPING CIRCUIT
 LIGHT BLUE - HEATER AND AIR CONDITIONING CIRCUIT
 DARK BLUE - SEAT BELT LOCK

MACHINE HARNESS CONNECTOR AND COMPONENT LOCATIONS

