SERVICE MANUAL

W190C Tier 4
Wheel Loader

Print No. 84488427B

NEW HOLLAND CONSTRUCTION

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W190C Wheel Loader
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Table of Contents

Description	Section No.
General	
General Torque Specifications	1001
Fluids and Lubricants	1002
Metric Conversion Chart	1003
Engines	
Engine and Radiator Removal and Installation	2000
Stall Tests	2002
After Cooler	2003
Engine Intake Air Filtration	2010
SCR System Sensors	2020
SCR Catalyst	2030
Engine Intake Temperature/Humidity Sensor	2040
DEF/AdBlue Heater Control Valve	2050
DEF/AdBlue DNOx Supply Module	2060
DEF/AdBlue Dosing Injector	2070
DEF/AdBlue Supply Tank	2080
DEF/AdBlue Supply Tank Level and Temperature Sensor/Pick-Up and Heater	2090
DEF/AdBlue Supply Filters	2100
For Engine Repair, See the Engine Service Manual - Sold Separately	87519803
Fuel System	
For Fuel System Repair, See the Engine Service Manual - Sold Separately	87519803
Electrical	
Removal and Installation of Starter and Alternator	4001
Electrical Specifications and Troubleshooting	4002
Batteries	4003
Jump Post Option	4003a
Instrument Cluster	4005

MidWestTech | New Holland W190C Tier 4 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

W190C Wheel Loader
Service Manual
84488427A

Table of Contents

Description	Section No.
Steering	
Removal and Installation of Steering Components	5001
Steering Specifications, Pressure Checks, and Troubleshooting	5002
Steering Cylinders	5005
Center Pivot	5006
Auxiliary Steering Motor and Pump	5008
Joystick Steering System (JSS)	5009
Power Train	
Removal and Installation of Power Train Components	6001
Transmission Specifications, Pressure Checks, and Troubleshooting	6002
4 & 5 Speed Transmission	6003
Multitrac MT-L 3085 II/3095 II Axles	6004
Drive Shafts, Center Bearing, and Universal Joints	6005
Wheels and Tires	6006
Brakes	
Removal and Installation of Brake Components	7001
Hydraulic Brake Troubleshooting	7002
Brake Pump	7003
Brake Accumulators	7004
Parking Brake	7008
Hydraulics	
Removal and Installation of Hydraulic Components	8001
Hydraulic Specifications, Troubleshooting, and Pressure Checks	8002
Cleaning the Hydraulic System	8003
Hydraulic Pump	8004

MidWestTech | New Holland W190C Tier 4 Wheel Loader Service Manual | Publicatio... Order the manual at mid-west-tech.com >

W190C Wheel Loader
Service Manual
84488427A

Table of Contents

Description	Section No.
Hydraulics (Continued)	
Loader Control Valve	8005
Cylinders	8006
Coupler Solenoid Locking Valve	8007
Load Travel Stabilizer Accumulator	8013
Load Travel Stabilizer Valve	8014
Mounted Equipment	
Air Conditioning Troubleshooting and System Checks For Systems with HFC-134a Refrigerant	9002
Air Conditioner System Service	9003
Removal and Installation of Air Conditioning and Heater Components	9004
Loader	9006
Rollover Protective Structure (ROPS) Cab Structural Frame (CSF)	9007
Cab Glass Installation	9010
Rear View Camera Installation and Removal	9020
Electrical Schematic Foldouts and Hydraulic Schematic Foldout	**In Rear Pocket**

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143 – Actuator

Check Points	Correct Reading	Possible Cause of Bad Reading
NOTE: *Remove connectors from DNS Actuator and DNS Driver prior to testing.*		
Pin 6 in wiring harness connector to pin 4 in Driver module (DNS49)	Continuity	Bad wire or connector.
Pin 5in wiring harness connector to pin 5in Driver module (DNS48)	Continuity	Bad wire or connector.

144 – Driver

Check Points	Correct Reading	Possible Cause of Bad Reading
NOTE: *Remove connectors from DNS Driver and HVAC2.*		
Between DNSS2 and DNS75	Continuity	Bad wire or connector.

145 – Electronic Water Valve

Check Points	Correct Reading	Possible Cause of Bad Reading
NOTE: *No information at time of print.*		

146 – Blower Motor Speed Resistors with Thermal Fuse

Check Points	Correct Reading	Possible Cause of Bad Reading
NOTE: *Disconnect the wiring harness connector DNS RESISTOR from the resistor.*		
Between terminals 1 and 4 of blower motor connector	Approximately x.x ohms	Bad blower motor resistor.
Between terminals 2 and 4 of blower motor connector	Approximately x.x ohms	Bad blower motor resistor.
Between terminals 3 and 4 of blower motor connector	Approximately x.x ohms	Bad blower motor resistor.

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ERROR CODES

In case of possible errors in the system, an amber or red warning appears on the instrument panel, combined with a recorded error number. See section 4005 for error code retrieval procedures and definitions.

TRANSMISSION SHIFTER LOGIC INFORMATION

Function	Shifter	Shifter Wire Color	Shifter Tower Connector	Shifter Shroud Connector	Harness Wire #	Harness ped/cab #	Trans. ECM #
power	B+	black/red	A	A	19A_H	43	45
forward	V	yellow	-	B	25F	44	43
reverse	R	pink	-	C	25R	45	64
neutral	N	gray	-	D	25T_B	46	67
gear2(3-4)	B2	green	B	-	25W	48	65
gear1(1-2)	B1	blue	C	-	25Z	49	63
downshift	DS	purple	D	-	25Y	50	22

NOTE: *Power is supplied through the fuse A to the transmission shifter via 19A wire. This is 24 Volt. Within the shifter are limit switches to transfer the signal voltages to the outputs. In forward V is high. In reverse R is high. In neutral N is high. In first gear, B1 is high and B2 is low. In second gear, B1 and B2 are low. In third gear, B1 is low and B2 is high. In fourth gear, B1 and B2 are high. Downshift, DS, is activated when the end of the shifter is engaged.*

RELATIONSHIP BETWEEN TRANSMISSION ECM, VALVES, AND CLUTCHES

Transmission ECM Function	Transmission ECM Pin #	Transmission Valve	Clutch #	Transmission Valve Pin #	Wire #	Trans/Cab Pin #
A1P1	56	Y1	K4	1	25K	16
A1P2	10	Y2	KR	2	25L	17
A1P3	32	Y3	K1	3	25M	18
A1P4	55	Y4	K3	4	25N	19
A1P5	9	Y5	KV	5	25P	20
A1P6	51	Y6	K2	6	25J	21
VPSI	12,13	all Y	all K	7	25S	22
TEMP	39	TEMP	none	8	36T	5
TEMP	46	TEMP	none	9	36R	12

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Assembly

NOTE: *If a new gland is being used, put part number of cylinder on new gland.*

1. Install bushing (8) in gland (4).
2. Install rod seal (6) in gland (4). Rod seal is to be installed so that lips of seal are toward bushing (8). Rod seal (6) can be difficult to install.
3. Install buffer seal (7) in gland (4). The side of buffer seal with groove must be toward bushing (8).
4. Install a new wiper (5) in gland (4). Lips of wiper must be toward outside end of gland (4).
5. Install a new O-ring (11) in groove on OD of gland (4).
6. Install a new backup ring (9) in groove on OD of gland (4). If both sides of backup ring are not flat, side that is not flat must be toward small end of gland (4).
7. Install a new O-ring (10) next to backup ring (9) in groove on outside of gland (4). O-ring must be toward small end of gland.
8. Fasten piston rod (13) eye or yoke in vise.
9. Remove any marks and sharp edges on chamfer at end of piston rod (13). Make sure that piston rod is clean.
10. Lubricate bore of gland (4) and piston rod (13) with clean oil.
11. Push gland (4) onto piston rod (13). If necessary, use a soft hammer to drive gland onto piston rod.
12. Put a support below and near end of piston rod (13). Use a shop cloth between support and the piston rod to prevent damage to piston rod.
13. Start piston (15) onto piston rod (13).
14. Clean the threads on the end of the piston rod (13) and the threads of the bolt (14) using Loctite cleaning solvent. Allow to dry. Apply Loctite 242 to piston rod threads 6.3 mm (1/4 inch) from open end of piston rod so that there is 13 mm (1/2 inch) of Loctite 242 on piston rod threads. DO NOT apply Loctite to first 6.3 mm (1/4 inch) of piston rod threads.
15. Install bolt (14) into piston rod (13). Tighten bolt to a torque of 2830 to 3220 Nm (2087 to 2374.9 pound-feet). A torque multiplier can be used to help torque the bolt.
16. Install a new wear ring (18) in wide groove on outside of piston (15).
17. Install a new ring (17) in the other groove on the outside of the piston (15).
18. Install a new seal (16) on top of ring (17).
19. Fasten tube (1) in an acceptable repair stand or other holding equipment. Be careful to prevent damage to tube.
20. Lubricate inside of the tube (1) and piston (15) with clean oil.
21. Push piston (15) straight into tube (1).
22. When the piston (15) is in smooth part of tube (1), start gland (4) into tube.
23. Lubricate O-rings (10 and 11) on gland (4) with clean oil.
24. Turn gland (4) into tube (1). Tighten gland to a torque of 135 to 542 Nm (100 to 400 pound-feet).
25. If the original parts are being assembled:
    A. Tighten gland to a torque of 135 to 542 Nm (100 to 400 pound-feet).
    B. Install and tighten self-tapping screw (12) to a torque of 2.3 Nm (20 inch-pounds).
    C. If, after tightening gland, the self-tapping screw (12) holes are not aligned, a new hole for self-tapping screw must be drilled. See Step 26.
26. If a new gland (4) or a new tube (1) are being assembled:
    A. Tighten gland (4) to 135 to 542 Nm (100 to 400 pound-feet).
    B. Use a No. 27 drill bit and drill a hole half in gland (4) and half in tube (1). Drill to a depth of 11 mm (7/16 inch). Do not drill within 13 mm (1/2 inch) of a hole for gland wrench.
    C. Install and tighten self-tapping screw (12) to a torque of 2.3 Nm (20 inch-pounds).
27. If hoses were removed with cylinder, install new O-rings, if equipped, on hose fittings. Lubricate O-rings with clean oil. Install hoses.

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INDEX OF FUNCTIONS

FUNCTION	SHT
AIR SEAT	12
BACKUP ALARM	6
CAN COMMUNICATION	12
COLD START	4
ENGINE CONTROL	5
HOOD LIFT	11
HVAC	12, 14
IGNITION SWITCH	4
INSTRUMENT CLUSTER	9
LIGHTING 1 (combos....)	6
LIGHTING 2 (work lights)	7
MACHINE CONTROLS	10
RADIO/POWER CONVERTER	12
POWER DISTRIBUTION	4
TRANSMISSION CONTROL	8
SCR EXHAUST TREATMENT	5
SECONDARY STEERING	11
WIPER/WASHER SYSTEM	11
JOYSTICK STEERING	13

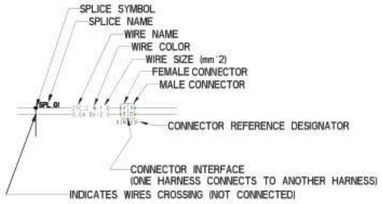
COLOR ABBREVIATIONS

ABBREVIATION	COLOR
Bk	BLACK
DU	DARK BLUE
G	GREEN
K	PINK
LG	LIGHT GREEN
LU	LIGHT BLUE
N	BROWN
Or	ORANGE
P	PURPLE OR VIOLET
R	RED
S	GREY
T	TAN
U	BLUE
W	WHITE
Y	YELLOW

LARGE CONNECTOR LIST

NAME	DESCRIPTION	SHEET
AIC_1	ADV INSTR CLUSTER 1	4, 7, 9, 10
AIC_2	ADV INSTR CLUSTER 2	4, 6, 7, 9, 10
CAB_E	CAB-ENGINE	4, 5, 8, 10, 11, 12
CAB_F	CAB-FRNT_CHAS	8, 10
CAN_MOD_2	JSS CAN MOD	13
ECA	ELECT CNTR A	4, 5, 6, 7, 8, 9, 10, 11
ECB	ELECT CNTR B	4, 8, 9, 10, 12
ECC	ELECT CNTR C	4, 8, 7, 8, 9, 10, 11
ECD	ELEC CNTR D	4, 5, 6, 10, 11, 12
ENG	ENGINE-CAB1	4, 5, 9, 10, 11, 12
FRONT	FRNT_CHAS-CAB	8, 10
SW_PD	SWITCH PAD	8, 9, 10, 12

DIAGRAM SYMBOL DESCRIPTIONS



REF DES NAMING CONVENTION
S_ ROCKER SWITCHES
L_ LIGHTS
P_ PRESSURE SENSORS/SWITCHES
Y_ SOLENOIDS
R_ RESISTANCE MEASURE
ABOVE LETTER FOLLOWED BY THE FIRST LETTER
OF THE FIRST TWO WORDS OF THE SYMBOL LABEL
SPL _ SPLICE

ECA

PIN	NAME	SHT
A1	A1	8
A2	A2	8
A3	A3	8
A4	A4	8
A5	A5	10
A6	A6	8
A7	A7	10
A8	A8	8
A9	A9	8
A10	A10	5
C1	C1	11
C2	C2	11
C3	C3	11
C4	C4	6
C5	C5	12
C7	C7	11
C8	C8	12
C9	C9	7
L1	L1_1	6
L1	L1_2	13
L1	L1_3	6
L1	L1_4	11
L1	L1_5	10
L1	L1_6	6
L1	L1_9	6
L1	L1_10	5
L2	L2_1	12
L2	L2_2	12
L2	L2_3	11
L2	L2_4	6
L2	L2_6	12
L2	L2_7	12
L2	L2_8	12
L2	L2_9	7

ECB

PIN	NAME	SHT
B1	B1_K1	4
B2	B2_K2	4
B3	B3_K3	4
B4	B4_K4	4
B5	B5_K5	4
B6	B6_K1	4
B7	B7_K2	4
B8	B8_K3	4
B9	B9_K4	4
B10	B10_K5	4
C1	C1_K1	4
C2	C2_K2	4
C3	C3_K3	4
C4	C4_K4	4
C5	C5_K5	4
C6	C6_K1	4
C7	C7_K2	4
C8	C8_K3	4
C9	C9_K4	4
C10	C10_K5	4
D1	D1_K1	4
D2	D2_K2	4
D3	D3_K3	4
D4	D4_K4	4
D5	D5_K5	4
D6	D6_K1	4
D7	D7_K2	4
D8	D8_K3	4
D9	D9_K4	4
D10	D10_K5	4
A1	A1	7
A2	A2	7
A3	A3	7
A4	A4	7
A5	A5	7
A6	A6	7
A7	A7	11
A8	A8	11
A9	A9	12
A10	A10	8
A11	A11	8
A12	A12	8
A13	A13	8
A14	A14	8
A15	A15	8
A16	A16	8
A17	A17	11
A18	A18	11
A19	A19	11
A20	A20	11
A21	A21	11
A22	A22	11
A23	A23	11
A24	A24	11
A25	A25	11
A26	A26	11
A27	A27	11
A28	A28	11
A29	A29	11
A30	A30	11
A31	A31	11
A32	A32	11
A33	A33	11
A34	A34	11
A35	A35	11
A36	A36	11
A37	A37	11
A38	A38	11
A39	A39	11
A40	A40	11

ECC

PIN	NAME	SHT
B1	B1_K1	11
B2	B2_K2	11
B3	B3_K3	10
B4	B4_K4	10
B5	B5_K5	10
B6	B6_K1	11
B7	B7_K2	11
B8	B8_K3	10
B9	B9_K4	10
B10	B10_K5	10
C1	C1_K1	11
C2	C2_K2	11
C3	C3_K3	10
C4	C4_K4	10
C5	C5_K5	10
C6	C6_K1	10
C7	C7_K2	10
C8	C8_K3	10
C9	C9_K4	10
C10	C10_K5	10
D1	D1_K1	11
D2	D2_K2	11
D3	D3_K3	10
D4	D4_K4	10
D5	D5_K5	10
D6	D6_K1	11
D7	D7_K2	11
D8	D8_K3	10
D9	D9_K4	10
D10	D10_K5	10

ECD

PIN	NAME	SHT
B1	B1_K1	11
B2	B2_K2	11
B3	B3_K3	10
B4	B4_K4	10
B5	B5_K5	10
B6	B6_K1	11
B7	B7_K2	11
B8	B8_K3	10
B9	B9_K4	10
B10	B10_K5	10

AC_1

PIN	SHT
1	9
2	9
3	12
4	12
6	9
7	9
8	9
9	9
10	9
11	9
12	9
13	9
14	9
15	9
16	9
17	9
18	9
19	9
20	12
21	13
22	13
23	10
24	10
25	10

AC_2

PIN	SHT
2	9
4	9
5	9
6	9
7	10
8	10
9	6
10	6
11	9
12	9
13	9
14	9
15	9
16	12
17	4
18	4
20	9
21	9
22	9
23	9
24	9

ENG_ENGINECAB1

PIN	SHT
1	9
2	9
3	4
4	12
5	5
6	5
7	4
8	9
9	8
10	9
11	4
12	5
13	5
14	5
15	5
16	5
17	5
18	5
19	5
20	5
21	5
22	10
23	10
24	11
25	11
26	4
27	8
28	8
29	12
30	12
31	4

ENG2_ENG_BULKHD2

PIN	SHT
A	5
B	5
C	5
D	5
E	5
F	5
G	5
H	5
J	6
K	6
L	6
M	6
N	6
P	6
R	6
S	6
T	11
U	11
V	11
W	11
X	11

FRONT

PIN	SHT
1	6
2	6
3	6
4	8
5	8
6	8
7	12
8	12
9	9
10	9
11	13
12	13
13	7
14	7
15	7
16	7

SW_PD SWITCH PAD

PIN	SHT
1	10
2	9
3	9
4	9
5	9
6	9
7	9
8	9
9	9
10	9
11	3

TRANS_TRANSMISSION_CAB

PIN	SHT
1	8
2	8
3	11
4	11
5	8
6	8
7	11
8	8
9	8
10	8
11	8
12	8
13	8
14	8
15	8
16	8
17	8
18	8
19	8
20	8
21	8
22	8
23	8
24	8
25	8
26	11
27	8
28	8
29	8
30	8
31	8

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
115	GRID_HTR_PWR	4
193	STARTER_RELAY	4
194	STARTER_SIGNAL	4
195	STR_REL_PWR	4
198F	DIAGNOSTIC_CONNECTOR	8
260M	DIODE_MODULE	11
197F	MAIN_CAB_FNR	8
197W	FNR-MAIN_CAB	8
202W	ROLLBACK_JUMPER	10
209F	BACK-UP_ALRM_DISA_JMP	6
209M	BACK-UP_ALRM_DISA_JMP	6
20M	TRANS_KICK-DOWN	8
215F	ALTERNATOR_RESISTOR	4
216F	ALTERNATOR_RESISTOR	4
21M	TRANS_KICK-DOWN	13
242F	CHAS_GRD-SEC_STRG_MTR	11
244F	STARTER-SEC_STRG_MTR	11
245F	SEC_STR_FLYBACK	11
64F	FLASHER_CONNECTOR	6
64M	FLASHER_CONNECTOR	6
AB+	ALTERNATOR_B+	4
AB_S	ALTERNATOR B+	4
AC1	AC_COMP_CLUTCH	12
AD	ALTERNATOR D+	4
ALT_S	ALTERNATOR D+	4
ARM_FNR	FNR-MAIN_CAB	13
ASM_POS	ARM POSITION	13
B1	STARTER PWR STUD	4
B2	STARTER_POWER	4
B3	STARTER-BATTERY	4
B4	STARTER_POWER	4
B5	STARTER PWR STUD	4
B6	STARTER POWER	4
B7	STARTER-BATTERY	4
B8	STARTER_POWER	4
BPP	PEDAL POSITION	8
BT1	BATTERY_STARTER	4
BT2	DISCONECT-BATTERY	4
BT3	STARTER-BATTERY	4
BT4	DISCON-BLCH_GRND	4
BTM_C	CAB BOTTOM BULKHD	6
BTM_E	CAB BTTOM	5
Bu1	BACKUP_ALARM_GRND	6
BU2	BACKUP_ALARM	6
BUZ	AIC_BUZZER	9
CABE2	CAB TO ENG2 BULKHD	5
CAB_ARM	CAB TO ARMREST	13
CAB_ARM_FRM	CAB TO ARM TO FRM	13
CAB_B	CAB BTM BULKHEAD	6
CAB_FNR	MAIN_CAB_FNR	13
CAB_FRM	CAB TO JSS FRAME	13
CAB_FW	CAB POWER	4
CAB_RF	CAB TO ROOF CONNECTION	7
CAB_T	CAB-TRANSMISSION	8
CAB_W	CAB POWER	4
CL	CIGAR_LIGHTER	12
CNV	24V TO 12V PWR CONVERTER	12
DC1	DISCONECT-BATTERY	4
DC2	DISCON-BLCH_GRND	4
DC3	FUEL_SOL_DISCONNECT	4
DC4	FUEL_SOL_DISCONNECT	4
DC2_A	DISCONECT-BATTERY	4
DEFDM	DOSER METERING VLV	5
DIA	DIAGNOSTIC	12
DIA_2	DIAGNOSTIC	5

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
DISC	DISCONNECT-ENGINE	4
DN	DIODE_DR	11
DN042	NOX CONTROLLER	5
DS	DOOR SWITCH	7
DTLTS	DEF_TANK_LEVEL_TEMP_SENSOR	5
DTS	DOWNSTREAM TEMP SENS	5
D_DR	DIODE_DR	7
ECA_L1	B+ POWER	4
EDC1	ENGINE CONTROLLER	5
EM	RTD_HEIGHT_CONT_RTT	10
ENG2	ENG BULKHD 2	5, 6, 11
ENG_B	CAB BTTOM	5, 9, 12
ENG_D	DISC HARNESS	4
ENG_H	ENGINE TO HOOD	6
ENG_H_T_1	ENGINE TO HOOD	6
ENG_H_T_2	ENGINE TO HOOD	6
ES3	ENG_SPEED_SENS	8
EVGT_3	EVGT_FUSE	5
EVGT_4	EVGT	5
E_HD	TRANS-HOOD	6
FFH	FUEL_FLTR_HTR	4
FLSHR	FLASHER_MODULE	6
FM	FILT_MAINT_SW	8
FNR_RLY	RELAY #2	13
FSS	FAN_SPEED_SENS	9
FWD_DIODE	DIODE ASSY	13
FWM	FRONT-WIPER_MOTOR	11
FWMG	WIPER GROUND	11
FWN	FRONT_WASHER	11
GH	GRID_HEATER	4
GHC	GRID_HEATER_REL	4
GHF1	GRID HTR FUSE	4
GHF3	GRID_HTR_FUSE	4
GHF4	GRID_HTR	4
GH_T	GRID_HTR	4
GND_CAB1	GROUND_A	7
GND_CAB2	GROUND_A	11
GND_CAB3	GROUND_C	12
GND_CAB4	GROUND_C	12
GND_CAB5	GROUND_C	12
GND_CAB6	STRT_TFH, WAT_SEP_HTR	4
GND_CAB3D	GROUND_A	9
GND_CAB_SPL	CAB GRND SPLICE	12
GND_CAB_SPL2	SPL BACK LGHT GD	4, 8
GND_ENG1	STRT_TFH, WAT_SEP_HTR	4
GND_ENG2	WIF_EDC	5
GND_ENG3	SPLC_PK, WSHR MTR	11
GND_ENG4	REAR LIGHTING	6
GND_ENG5	DEDICATED	9
GND_ENGT	TRANNY, COOL TEMP	9
GND_FC	GROUND_A	10
GND_GH1	STRT_TFH, WAT_SEP_HTR	4
GND_JSS	GROUND_A	13
GND_PDST	GROUND_A	9
GND_PDST1	GROUND_A	9

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
GND_PDST2	GROUND_A	9
GND_S1	GROUND_A	10
GND_S2	GROUND_A	10
GND_SSCHAS	SSM_GROUND_CABLE	11
GND_SSMOD	SEC STR CHASIS GND	11
GND_TRANS	GROUND_TRANS	9
GND_WIF	GRND_WIF RING TERM	4
HD	HOOD_SWITCH	11
HDM	HOOD_LIFT_MOTOR	11
HD_E	HOOD-TRANS	6
HD_N	HOOD TO ENG	6
HD_N_T_1	HOOD TO ENGINE	6
HD_N_T_2	HOOD TO ENGINE	6
HN1	HORN_PWR	10
HN2	HORN_GRND	10
HOT	HYD_OIL_TEMP_SEND	9
HTS	HMDT1 AND AMB TEMP	5
HVAC1	HVAC1	12
HVAC2	HVAC2	12
ISS	INT_SPEED_SENS	8
JSS_19TF	MAIN_CAB_FNR	13
JSS_19TM	FNR-MAIN_CAB	13
JSS_ARM	JSS ARMREST TO CAB	13
JSS_CAB	JSS CAB	12, 13
JSS_CNT	JSS CONTROLLER	13
JSS_FRM	JSS FRAME TO CAB	13
JSS_LS	JSS LOAD SENSE	13
JSS_PIL_DUMP	JSS PILOT DUMP	13
JSS_PIL_PR	JSS PILOT PRESSURE	13
JSS_RLY	RELAY #2	13
JSS_VALVE	JSS HYD VALVE	13
K5		
KD_DIODE	DIODE ASSY	13
KWCO	WIPER CUTOUT	11
L1_ECC	ECC BATT-PWR	7
LBEGRD	LIGHT BEACON GRND	7
LBEPWR	LIGHT BEACON PWR	7
LDM1	DOME_LIGHT_B+	7
LDM2	DOME_LIGHT_AUTO	7
LDM3	DOME_LIGHT_GND	7
LLT	LIGHTS_LH	6
LLTW	LH_FRONT_WK_LT	7
LLR	LH_REAR_COMB_LT	6
LLRW	LH_REAR_WK_LT	7
LLR_E	LH_REAR_COMB_LT	6
LLT_E	LIC_PLATE_LIGHT	6
LRT	LIGHTS_RH	6
LRTO	FRONT_WK_LT_OPT	7
LRTW	FRONT_WK_LT_OPT	7
LRTS	FRONT_WK_LT_OPT	7
LRW	RH_FRONT_WK_LT	7
LRR	RH_REAR_COMB_LT	6
LRRW	RH_REAR_WK_LT	7
LRR_E	RH_REAR_COMB_LT	6
LSPK	LEFT_SPEAKER	12
MON	CAMERA/MONITOR	7
NOXS	NOX SENSOR	5
NTRL_DIODE	DIODE ASSY	13
OSS	OUT_SPEED_SENS	8
PAF	AIR_FIL_RES_SW	9
PBD	DEC_PRESS_SW	8
PBL	BRAKE_LT_PRES_SW	6
PBW	BRK_WARN_PR_SW	9
PHF	HYD_OIL_FILT_RES_SW	9
PHFS	HYD_FLTR_RES_SW	9
PO1	POWER_OUTLET	12
PO2	POWER_OUTLET	12
PRB1	RED_BRAKE_SW	9
PRB2	RED_BRAKE_SW	9
PRBF	ROLLBACK_PRES_SW	10
PRH	AC HIGH PRESS SW	12

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
PRL	AC LOW PRESS SW	12
PWMB_L1	B+ POWER	4
PWMB_L2	B+ POWER	4
PWM_A	PWR RLY MOD A	
PWM_A1	PWM OUTPUT	4
PWM_A2	PWM SIGNAL	4
PWM_B1	PWM SIGNAL	4
PWM_C1	PWM SIGNAL	4
PWM_D	PWR RLY MOD D	
PWM_D1	PWM OUTPUT	4
PWM_D2	PWM SIGNAL	4
PSS	SEC STR PRES SWITCH	11
PYRES	JSS_JOYSTICK	13
PXF	RTD	10
PXH	MGT_CNTRL-RTT	10
PXM	RTD	10
PXT	RTD	10
P_A1	B+ POWER	4
P_A3	B+ POWER	4
P_C1	B+ PWR FRM PRMD	4
P_C2	B+ PWR FRM PRMD	4
P_C3	B+ PWR FRM PRMD	4
P_C4	B+ PWR FRM PRMD	4
P_C6	B+ PWR FRM PRMD	4
R1	RESISTOR	13
RAD	RADIO_POWER	12
RAD_J1	RADIO_POWER	12
RAD_J2	SPEAKER	12
RAD_J3	RADIO_JUMPER	12
RECT	ENG_COOL_TEMP	9
RFL	FUEL_SENDER	9
RFLG	FUEL_SEND_GRND	9
RFL_23	FUEL_LEVEL_SEND	9
ROOF	ROOF TO CAB CONNECTION	T, 11, 12
RSPK	RIGHT_SPEAKER	12
RTHP	THROTTLE_PEDAL	5
RVS_DIODE	DIODE ASSY	13
RWM	REAR_WIPER_MTR	11
RWMG	REAR_WIPER_MTR_GD	11
RWN	REAR_WASHER	11
SAJ	FNR_SWITCH	13
SBL	BEACON_SW	7
SBU	BACK-UP_ALRM_DIS_SW	6
SC	SEAT_COMP_MOTOR	12
SDA	DIFF LOCK SWITCH	8
SDC	DCCLUTCH_SWITCH	8
SDM	DIFF LOCK SWITCH	8
SDR	DRIVING LIGHTS SW	6
SFC	FAN_CONTROL_SW	10
SFL	RETURN_TO_TRAVEL_SW	10
SFNR	FNR_SWITCH	8
SFNW	FRONT WIPER/WASHER	11
SHC	HEIGHT CONTROL SW	10
SHZ	HAZARD_SWITCH	6
SJS	JOYSTICK_CONTROL_SW	13
SPB	PARKING_BRAKE_SWITCH	9
SPC	PILOT_CONTROL_SWITCH	10
SPE	PTN_ENGAGE_SW	10
SPN	SPEAKER	12
SPL_2	ULTRASONIC	11
SPL_3	ULTRASONIC	11
SPL_12V	ULTRASONIC	11
SPL_19S	ULTRASONIC	11
SPL_35A	ULTRASONIC	6
SPL_42C	ULTRASONIC	7
SPL_A1	ULTRASONIC	10
SPL_A2	ULTRASONIC	10
SPL_A3	ULTRASONIC	10
SPL_A4	ULTRASONIC	9
SPL_ATA	ULTRASONIC	6
SPL_AC	ULTRASONIC	12

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
SPL_ACC	ULTRASONIC	4
SPL_ACP	ULTRASONIC	12
SPL_ACS	ULTRASONIC	12
SPL_AJ	ULTRASONIC	13
SPL_ALT	ULTRASONIC	4
SPL_AP	ULTRASONIC	9
SPL_BB	ULTRASONIC	6
SPL_BCK_LGT	SPLICE BACK LGHT PWR	7
SPL_BCK_LGT2	SPL_BACK LGT PWR	10
SPL_BCK_LT_GD	SPL BACK LGHT GD	7
SPL_BCK_LT_GD2	SPL_BACK LGT GRND	10
SPL_BLWR	ULTRASONIC	12
SPL_BU2	ULTRASONIC	9
SPL_C3	ULTRASONIC	11
SPL_CAN	ULTRASONIC	12
SPL_CAN_DH	ULTRASONIC	5
SPL_CAN_DJAG	ULTRASONIC	12
SPL_CAN_DJAG_L	ULTRASONIC	12
SPL_CAN_DL	ULTRASONIC	5
SPL_CAN_GH	ULTRASONIC	5
SPL_CAN_GL	ULTRASONIC	5
SPL_CAN_HT	ULTRASONIC	5
SPL_CAN_HV	ULTRASONIC	5
SPL_CAN_JS_H1	ULTRASONIC	12
SPL_CAN_JS_H2	ULTRASONIC	12
SPL_CAN_JS_L1	ULTRASONIC	12
SPL_CAN_JS_L2	ULTRASONIC	12
SPL_CAN_L	ULTRASONIC	12
SPL_CAN_LT	ULTRASONIC	5
SPL_CAN_LV	ULTRASONIC	5
SPL_CAN_TEL	ULTRASONIC	12
SPL_CAN_TEL2	ULTRASONIC	12
SPL_CAN_TRANS	ULTRASONIC	12
SPL_CAN_TRANS_L	ULTRASONIC	12
SPL_CNV	ULTRASONIC	12
SPL_CR	ULTRASONIC	4
SPL_CRK	ULTRASONIC	4
SPL_D1	ULTRASONIC	10
SPL_D11	ULTRASONIC	8
SPL_D12	ULTRASONIC	8
SPL_D15	ULTRASONIC	8
SPL_D16	ULTRASONIC	8
SPL_D17	ULTRASONIC	8
SPL_D19	ULTRASONIC	8
SPL_D24	ULTRASONIC	10
SPL_D25	ULTRASONIC	10
SPL_D26	ULTRASONIC	10
SPL_DB_C1	ULTRASONIC	6
SPL_DC	ULTRASONIC	8
SPL_DCUG	ULTRASONIC	5
SPL_DLY3	ULTRASONIC	9
SPL_DR	ULTRASOIC	6
SPL_EDC1	ULTRASONIC	5
SPL_EDC2	ULTRASONIC	5
SPL_EDC3	ULTRASONIC	5
SPL_EDC4	ULTRASONIC	5
SPL_ENG	ULTRASONIC	11
SPL_FAN	ULTRASONIC	10
SPL_FLSHR_PWR	ULTRASONIC	6
SPL_FNR	ULTRASONIC	8
SPL_FW	ULTRASONIC	11
SPL_H1	ULTRASONIC	8
SPL_H2	ULTRASONIC	8
SPL_HB	ULTRASONIC	6
SPL_HC	ULTRASONIC	11
SPL_HOOD	ULTRASONIC	11
SPL_HOOD_GRND	HOOD_GRND_6PCK	11
SPL_HRN	ULTRASONIC	10
SPL_HTR	ULTRASONIC	4
SPL_J1	ULTRASONIC	6
SPL_J2_N	ULTRASONIC	6
SPL_JSS_1	ULTRASONIC	13

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
SPL_JSS_2	ULTRASONIC	13
SPL_JSS_3	ULTRASONIC	13
SPL_JSS_4	ULTRASONIC	13
SPL_JSS_5	ULTRASONIC	13
SPL_JSS_6	ULTRASONIC	13
SPL_JSS_7	ULTRASONIC	13
SPL_JSS_9	ULTRASONIC	13
SPL_JSS_10	ULTRASONIC	13
SPL_JSS_11	ULTRASONIC	13
SPL_JSS_13	ULTRASONIC	13
SPL_JSS_14	ULTRASONIC	13
SPL_JSS_15	ULTRASONIC	13
SPL_JSS_16	ULTRASONIC	13
SPL_JSS_17	ULTRASONIC	13
SPL_JSS_18	ULTRASONIC	13
SPL_JSS_20	ULTRASONIC	13
SPL_JSS_21	ULTRASONIC	13
SPL_LB	ULTRASONIC	6
SPL_LT	ULTRASONIC	7
SPL_NEU	ULTRASONIC	4
SPL_PBS	ULTRASONIC	9
SPL_PED_BL	SPL_BACK LGT PWR 6 PCK	10
SPL_PED_BL_GD	SPL BACK LGT GD 6PCK	10
SPL_PIN	SPL_BACK LGT PWR	10
SPL_PINE	ULTRASONIC	10
SPL_PK1	SPLICE 3-4WAY	7
SPL_PK3	SPLICE 3-4WAY	6
SPL_POS	ULTRASONIC	6
SPL_POS_L	ULTRASONIC	6
SPL_POS_NA	ULTRASONIC	6
SPL_POS_R	ULTRASONIC	6
SPL_PR	ULTRASONIC	6
SPL_PTM	ULTRASONIC	9
SPL_RAD	ULTRASONIC	12
SPL_RD	ULTRASONIC	9
SPL_ROOF	SPLICE ROOF GROUND	7
SPL_RTT	ULTRASONIC	10
SPL_RWW	ULTRASONIC	11
SPL_SD1	ULTRASONIC	4
SPL_SD2	ULTRASONIC	4
SPL_SD3	ULTRASONIC	4
SPL_SEC	ULTRASONIC	11
SPL_SS	ULTRASONIC	11
SPL_SW_PD	ULTRASONIC	9
SPL_TRNS_PWR	TRANS_PWR	8
SPL_WHS	ULTRASONIC	11
SPL_WK	ULTRASONIC	7
SPL_WL	ULTRASONIC	7
SPL_WL1	ULTRASONIC	7
SPL_WLS	ULTRASONIC	11
SPL_WR	ULTRASONIC	7
SPL_WRK1	ULTRASONIC	7
SPL_WRK2	ULTRASONIC	7
SPL_WRKF	ULTRASONIC	7
SPL_WRKR	ULTRASONIC	7
SRC	RIDE_CONTROL_SW	10
SRC_1	RELAY	4
SRHSTLK	RH STALK SWITCH	6
SRP	WORK LIGHTS SW	4
SRTD	DETENT_SWITCH	10
SRWP	REAR_WIPER_SW	11
SSD	SEC_STR_DIODE	11
SSM	SEC STR MOD	11
SSS	SS MAG SWITCH	11
SS_TR	SS_MOD-TRANS	11
STA	TRANS_AUTO_SW	8
STE	TRANS_ENABLE_SW	8
STR_GRN	GRID_HTR_FUSE	4
SWL	WORK LIGHTS SW	7
S_KEY	IGNITION_SWITCH	4
TCDT	TCD_SENDER	8
TECM	TRANS	8

CONNECTOR LIST

NAME	DESCRIPTION	SHEET
TEL	TELEMATICS	12
TERM_CAN_2	CAN BULK HEAD	5
THV	TANK HEATER CONTROL VALVE	5
TRANS	TRANSMISSION-CAB	8, 9, 11
TRC	TRANS_CONTROL	8
TR_SS	SEC_STR_MOD_OPT	11
TS1	TRANS