SR270 / SV340
Tier 4B (final)
Alpha Series Skid Steer Loader
PIN NHM435463 and above

TR340 / TV380
Tier 4B (final)
Alpha Series Compact Track Loader
PIN NHM435463 and above

SERVICE MANUAL

Part number 48060319
1st edition English
November 2017

CASE CONSTRUCTION

MidWestTech | Case SR270, SV340, TR340, TV380 Tier 4B Skid Steer Loader Service Manual | Publication 48060319
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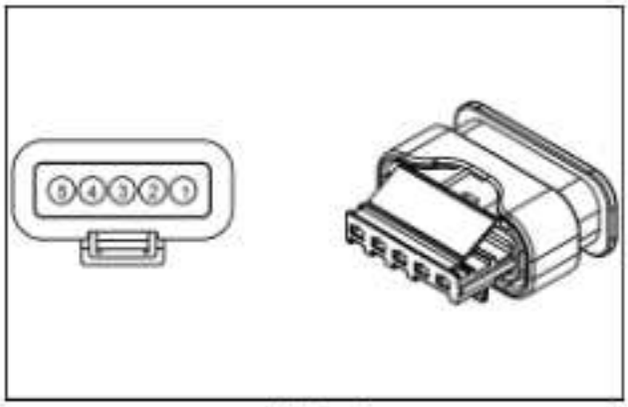
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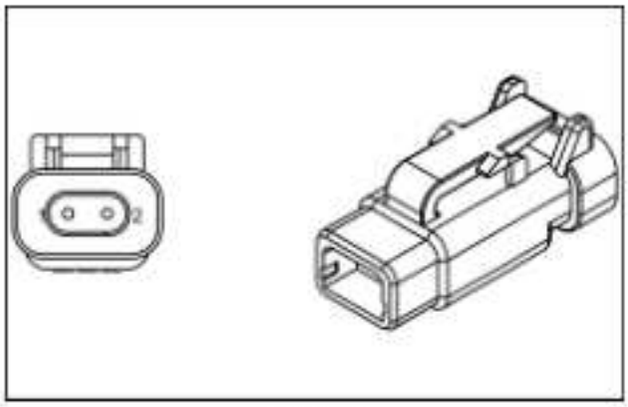
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Connector X-9135 - Controller Area Network (CAN) terminator

CONNECTOR X-9135 - Controller Area Network (CAN) terminator			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	VE-9197	CAN 2 low	**SHEET 03**
2	VE-9198	CAN 2 high	



84536933 5

Connector X-9136 - DEF/AdBlue® supply module suction line heater

CONNECTOR X-9136 -DEF/AdBlue® supply module suction line heater			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	VE-9084	Heater supply	**SHEET 02**
2	VE-9088	Series supply for heater R-9103.	

Connector X-9137 - NH3 sensor controller

CONNECTOR X-9137 - NH3 sensor controller			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	NH3-1 (PU)	Heater supply	**SHEET 03**
2	NH3-2 (YE)	Trim resistor supply	
3	NH3-3 (YE)	Trim resistor ground	
4	NH3-4 (BK)	EMF 2	
5	NH3-5 (WH)	Heater ground	
6	NH3-6 (GN)	Temperature signal	
7	NH3-7 (BR)	Signal ground	
8	NH3-8 (GY)	EMF 1	

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Hydraulic fluid temperature control sensor - General specification

Conversion chart

Sensor resistance	Oil temperature		Sensor resistance	Oil temperature
>128318 Ω	<-40 °C (<-40 °F)		1801.2 Ω	35 °C (95 °F)
128318 Ω	-40 °C (-40 °F)		1457.5 Ω	40 °C (104 °F)
88806.4 Ω	-35 °C (-31 °F)		1187.3 Ω	45 °C (113 °F)
63399.2 Ω	-30 °C (-22 °F)		973.3 Ω	50 °C (122 °F)
44472.7 Ω	-25 °C (-13 °F)		802.8 Ω	55 °C (131 °F)
32123.4 Ω	-20 °C (-4 °F)		665.9 Ω	60 °C (140 °F)
23479.7 Ω	-15 °C (5 °F)		465.8 Ω	70 °C (158 °F)
17393.7 Ω	-10 °C (14 °F)		392.6 Ω	75 °C (167 °F)
13020.7 Ω	-5 °C (23 °F)		332.5 Ω	80 °C (176 °F)
9851.1 Ω	-0 °C (32 °F)		79.2 Ω	130 °C (266 °F)
7528.2 Ω	5 °C (41 °F)		70 Ω	135 °C (275 °F)
5807.9 Ω	10 °C (50 °F)		62 Ω	140 °C (284 °F)
4521.3 Ω	15 °C (59 °F)		55.1 Ω	145 °C (293 °F)
3550 Ω	20 °C (68 °F)		49.1 Ω	150 °C (302 °F)
2810 Ω	25 °C (77 °F)		> 49.1 Ω	>150 °C (>302 °F)
2241.5 Ω	30 °C (86 °F)			

Conversion chart

Oil temperature	Instrument panel display
<21 °C (<70 °F)	1 bar
21 °C (70 °F)	1 bar
37 °C (99 °F)	2 bars
60 °C (140 °F)	3 bars
82 °C (180 °F)	4 bars
90 °C (194 °F)	5 bars
98 °C (208 °F)	6 bars
104 °C (219 °F)	7 bars
110 °C (230 °F)	8 bars
>110 °C (>230 °F)	8 bars

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B. The resistance is greater than **10 Ω**. There is an open circuit in the solenoid signal wire or the solenoid ground line. Check splice SP-098. Repair or replace the harness as required. Return to step **1** to confirm elimination of the fault.

4. Test the UCM.

Leave the jumper wire installed between **X-13 (Female) pin 1** and **X-13 (Female) pin 2**.

Reconnect UCM connectors **X-CN3B (Female)** and **X-CN2B (Male)** .

Turn the ignition switch ON.

Activate the hydraulics while monitoring the fault code screen. Fault code **4071 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Open Circuit** should no longer be active. Fault code **4072 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Short to Ground** should become active.

A. Fault code **4072 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Short to Ground** is active and fault code **4071 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Open Circuit** is no longer active. Temporarily replace the solenoid and retest. Return to step **1** to confirm elimination of the fault.

B. Fault code **4071 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Open Circuit** is still active. Fault code **4072 – Forward Pump Control Valves (Directional) - Solenoid Left (B) Supply Short to Ground** did not become active. Temporarily replace the UCM and retest. Return to step **1** to confirm elimination of the fault.

Wiring harnesses - Electrical schematic sheet 21 Unit Control Module (55.100.DP-C.20.E.21)
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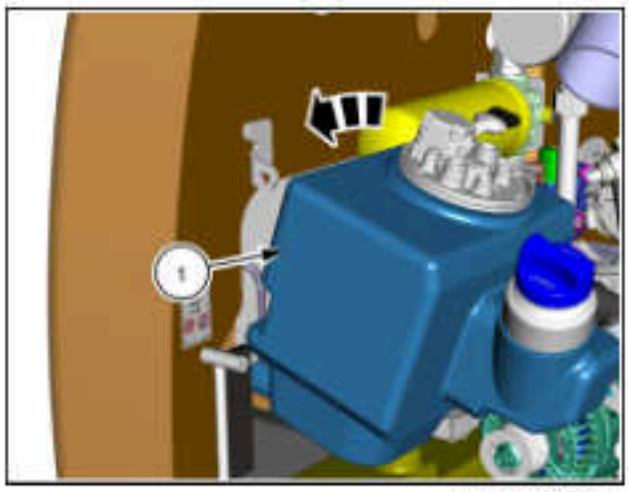
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Diesel Exhaust Fluid (DEF)/AdBlue®/ARLA tank - Install

Prior operation:
Diesel Exhaust Fluid (DEF)/AdBlue®/ARLA tank - Remove (10.500)

NOTE: *Torque all worm gear hose clamps to* ***3.0 – 4.0 N·m (2.0 – 3.0 lb ft)****.*

1. Install the Diesel Exhaust Fluid (DEF) tank **(1)** into the chassis by sliding the bottom-side of the tank into the chassis and rotating the topside in from the engine compartment.



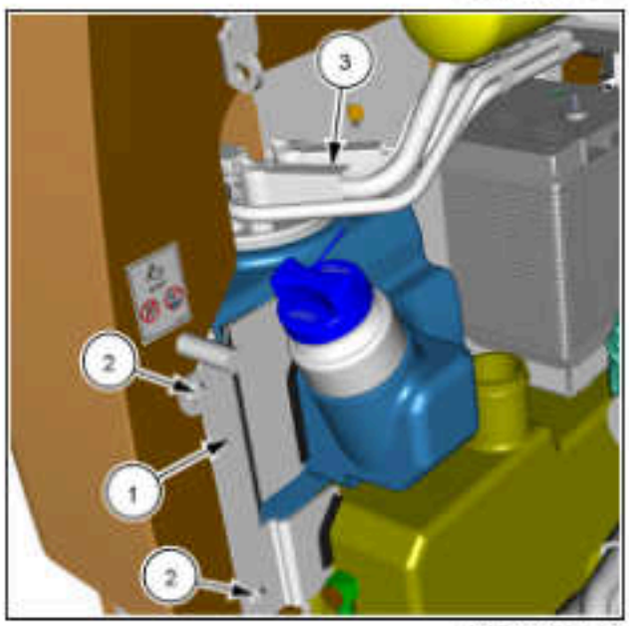
RAPH175SLE28AQA 1

2. Install the DEF lines **(3)** to the DEF tank.

NOTE: *See Figure* ***3*** *for DEF tank line connections.*

3. Install the retaining bracket **(1)** to the chassis and secure with the bolts **(2)**.

NOTE: *Depending upon machine configuration, the same bolts* ***(2)*** *may be used to secure the fuel filter bracket.*



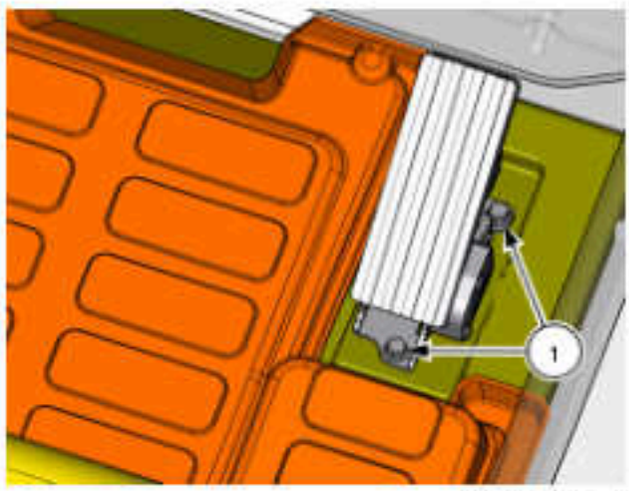
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Throttle pedal - Install

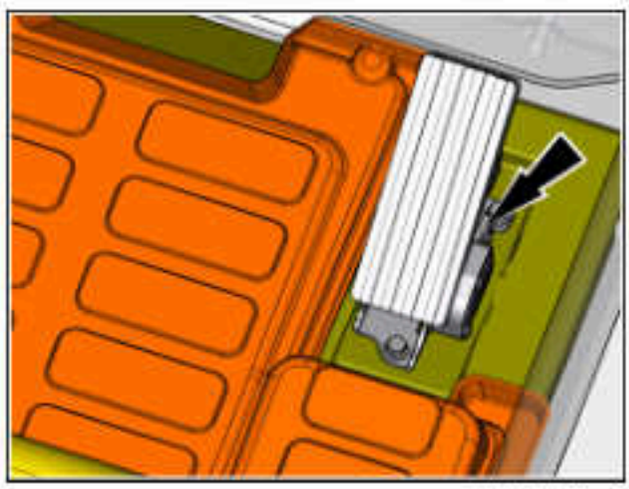
Prior operation:
Throttle pedal - Remove (55.525)

1. Place the foot pedal assembly into the right-hand side of the floor plate.
2. Secure the foot pedal assembly to the floor plate with two bolts **(1)**.



RAPH175SLD179QA 1

3. Connect the electrical harness to the foot pedal assembly.



RAPH175SLD179QA 2

Next operation:
Battery - Connect (55.302)

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ELECTRO-HYDRAULIC (EH) VALVE ASSEMBLY

RAC 51423450
SR220 / SR240 / SR250 / SV250
SR270 / SV280 / SV300 / SV340
TR320 / TR340 / TV370 / TV380

NOTES:

1. FLUSHING VALVE
   -10 BAR SPRINGS
   -2 mm FLUSHING ORIFICE
   -290 PSI (20BAR) CUTOFF RELIEF
2. LOAD CHECK REMOVED IF HIGH FLOW INSTALLED.
3. STANDARD PUMP STACK NOT USED ON EHF OPTION SEE NOTE ON DRAWING.
4. IN-LINE ORIFICE AT MANIFOLD BLOCK FOR VERTICAL MACHINES ONLY.
5. LIFT CYLINDERS ARE CUSHIONED FOR VERTICAL FRAME MACHINES ONLY.
6. BOOM ROD LOCK VALVE FOR LARGE FRAME VERTICAL MACHINES ONLY.

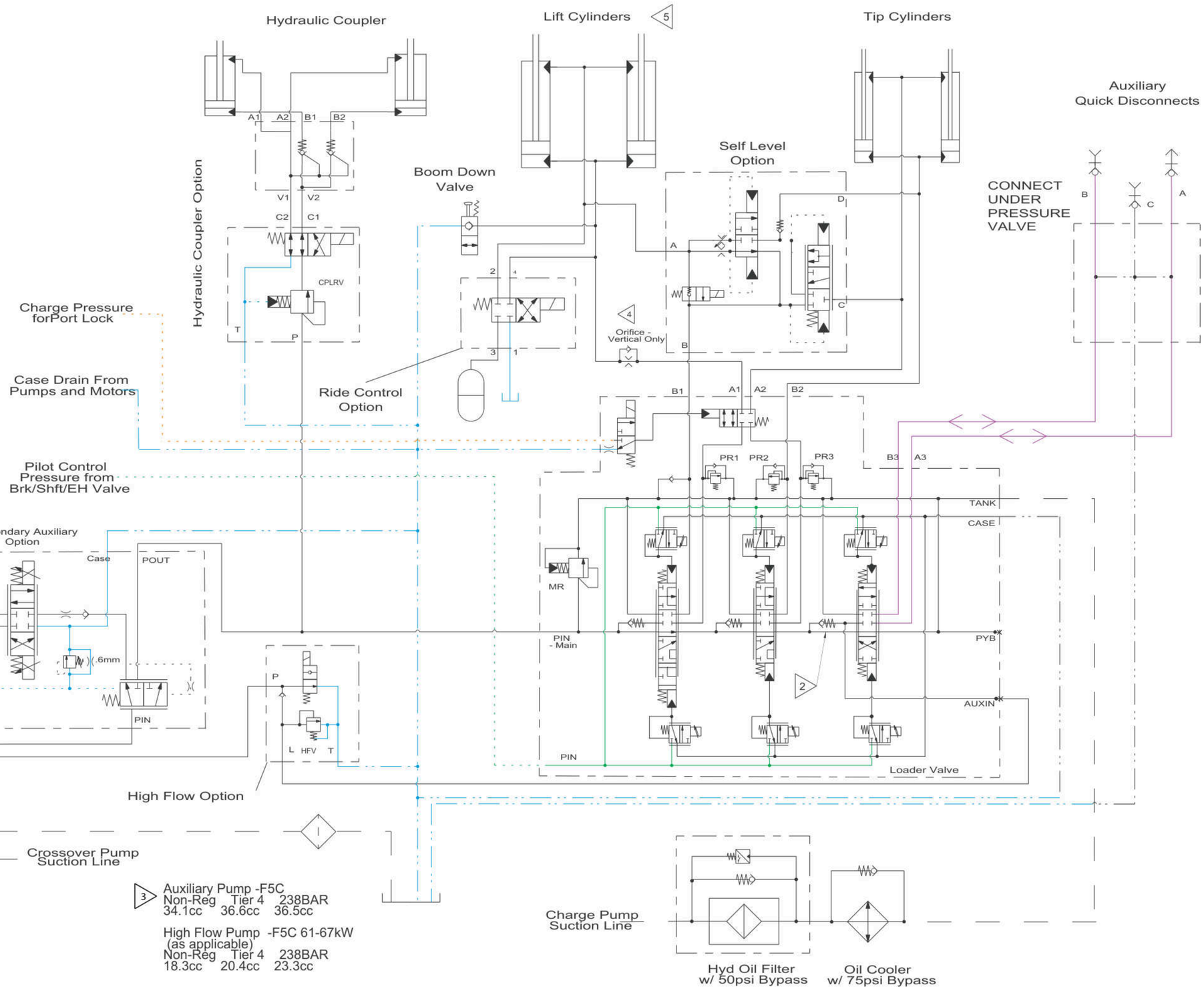
STANDARD RELIEF PRESSURE TABLE

MAIN 3046 PSI ± 72.5 (210 BAR)
PR1- 3263 PSI +145/-73 (225 BAR)
PR2- 3263 PSI +145/-73 (225 BAR)
PR3- 3771 PSI +145/-73 (260 BAR)
PR3- OPTIONAL 80 BAR OR 100 BAR (SERVICE)
HFV- 3250 PSI (224 BAR)
CPLRV- 2500 PSI (172 BAR)

HIGH PRESSURE RELIEF PRESSURE TABLE

MAIN 3450 PSI ± 72.5 (238 BAR)
PR1- 3625 PSI +290/-73 (250 BAR)
PR2- 3625 PSI +290/-73 (250 BAR)
PR3- 3916 PSI +290/-73 (270 BAR)
HFV- 3655 PSI +218/-0 (252 BAR)
CPLRV- 2500 PSI (172 BAR)

EH VALVE ASSEMBLY



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