SR270 / SV340
Tier 4B (final)
Alpha Series Skid Steer Loader
PIN NGM418237 and above

TR340 / TV380
Tier 4B (final)
Alpha Series Compact Track Loader
PIN NGM418237 and above

SERVICE MANUAL

Part number 47916277
1st edition English
October 2016

CASE CONSTRUCTION

MidWestTech | Case SR270, SV340, TR340, TV380 Tier 4B Skid Steer Loader Service Manual | Publication 47916277
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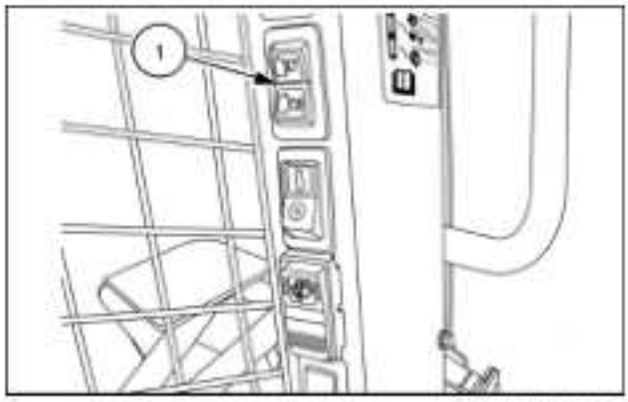
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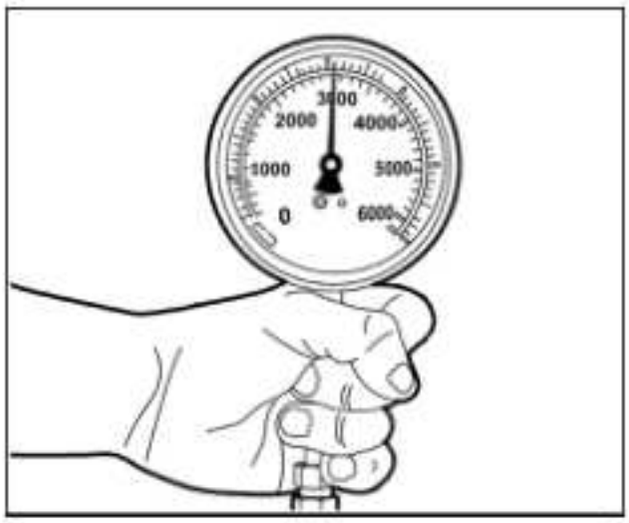
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5. Select High Flow (HF) on the rocker switch **(1)**.



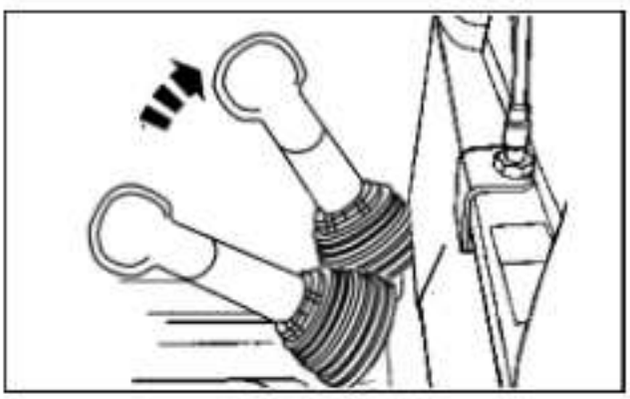
4

6. Record the pressure on the pressure gauge.
   Please see **Pilot valve - General specification (35.600)** for specifications on the high flow pilot valve.



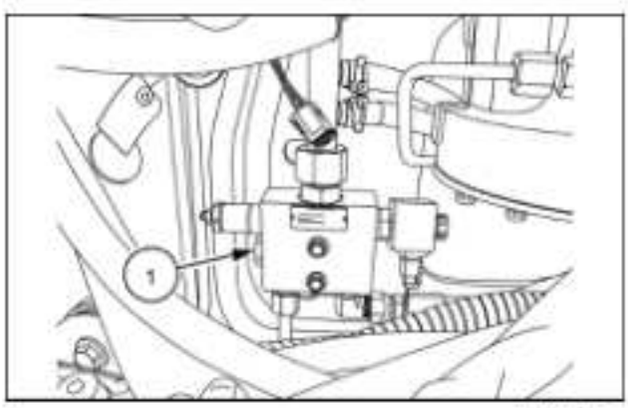
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7. Release the stroked bucket function.
8. Disengage the auxiliary hydraulics.



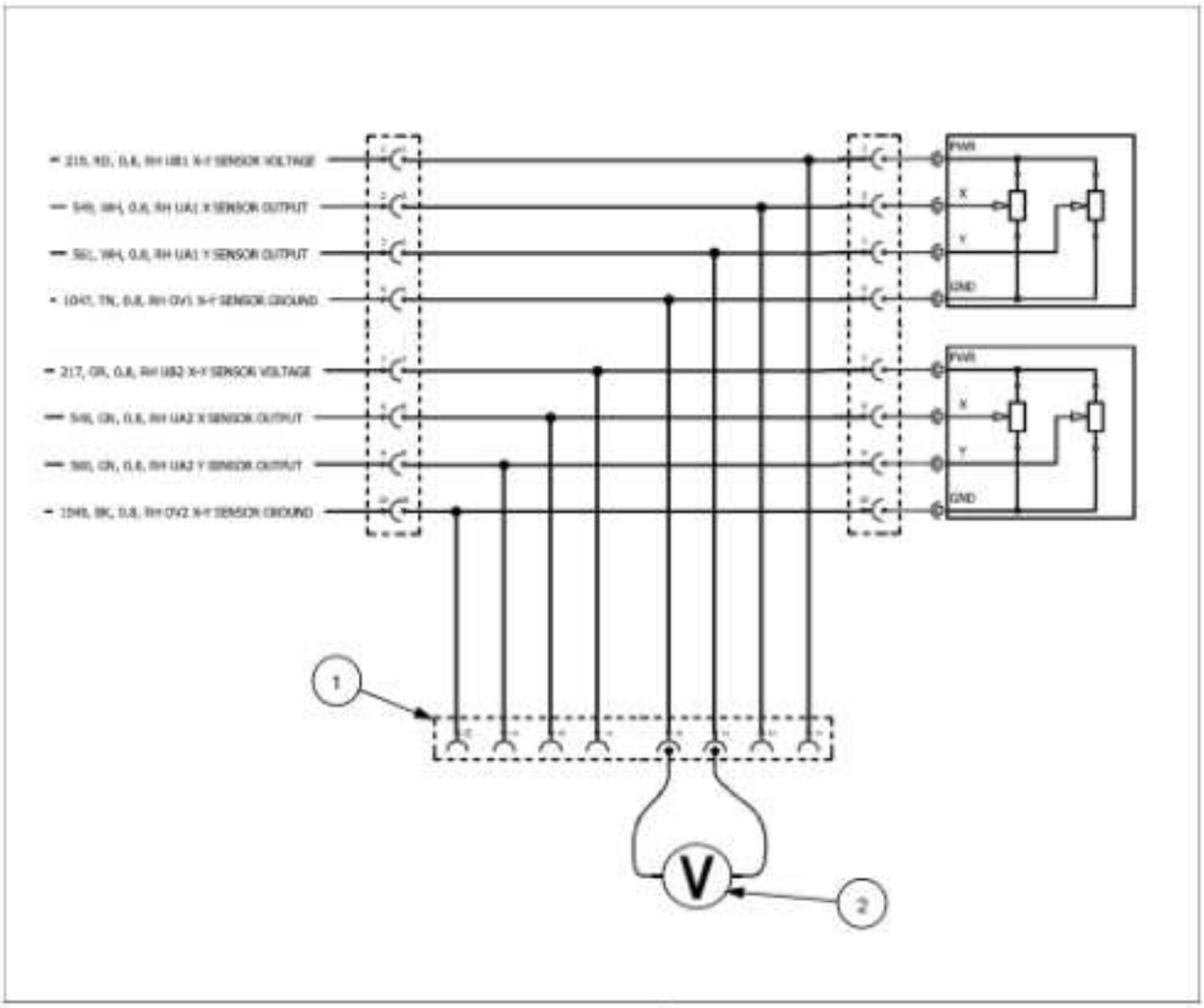
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9. If the recorded pressure is not within specification, remove the cap **(1)** on the relief valve and adjust.



7

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RAPH12GSL03GA 2

Schematic legend			
(1)	Dealer supplied breakout harness	(2)	DVM set to measure voltage.

Connect the breakout harness between the two mating connectors on X-UJMR.

Turn the ignition switch ON.

Measure the voltage between pin 3 and pin 4 on the break out harness. The voltage should be approximately **2.5 V** while the joystick in the neutral position.

Continue measuring the voltage while slowly moving the throttle in the F-B position. The voltage should change between **0.5 V** and **4.5 V**. The voltage change should be smooth and steady as the joystick is moved between the stop points.

A. The voltage is approximately **2.5 V** in the neutral position and the voltage changes between **0.5 V** and **4.5 V**. Temporarily replace the UCM and retest. Return to step **1** to confirm elimination of the fault.

B. The voltage is not **2.5 V** in the neutral position or the voltage change is erratic. Temporarily replace the joystick and retest. Return to step **1** to confirm elimination of fault.

Wiring harnesses - Electrical schematic sheet 21 Unit Control Module (55.100.DP-C.20.E.21)
Wiring harnesses - Electrical schematic sheet 15 Bulkhead Connection (55.100.DP-C.20.E.15)
Wiring harnesses - Electrical schematic sheet 30 UJM Connectors (55.100.DP-C.20.E.30)

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9405-Loss Of DM1 Message From VCM

Context:
CAN bus communications between modules on the data link have been lost. This fault code may be displayed with other CAN bus fault code messages.

Cause:
CAN bus communications between modules on the data link have been lost.

Possible failure modes:

1. CAN data link wiring or circuits open.
2. CAN data link wiring or circuits shorted.
3. Faulty CAN Data Link device.
4. Faulty instrument cluster.
5. Faulty ECU.

Solution:

1. Verify that the fault code is active.

   Use the Electronic Service Tool to verify that the CAN data link faults are ACTIVE.

   To check for fault codes: Start and operate the machine. Wiggle the harness to reveal an intermittent condition.

   If three or more fault codes are active, such as **1051 - Timeout of CAN message EEC1** through **1059 - Timeout of CAN Message DM1** or **3096 - CAN A Bus off failure**, **3334 - CAN communication failure between vehicle controller and ECU controller - TSC1_PE message**, **3338 - CAN communication failure between VCM and EDC controller - TSC1_VE message**or **3358 - CAN transmit error - EEC1 message (Electronic Engine Control 1 message - Torque, accelerator pedal, engine speed, and other signals)**, this is an indication of a problem in the CAN bus circuit, continue with this procedure. If one or two CAN bus fault codes are active, this is an indication of an intermittent connection in the CAN circuit. Check the wiring and connectors to verify they are secure and free of damage, corrosion, abrasion or incorrect attachment.

   A. CAN bus fault codes are not recorded again and are no longer ACTIVE. OK to return the machine to service.

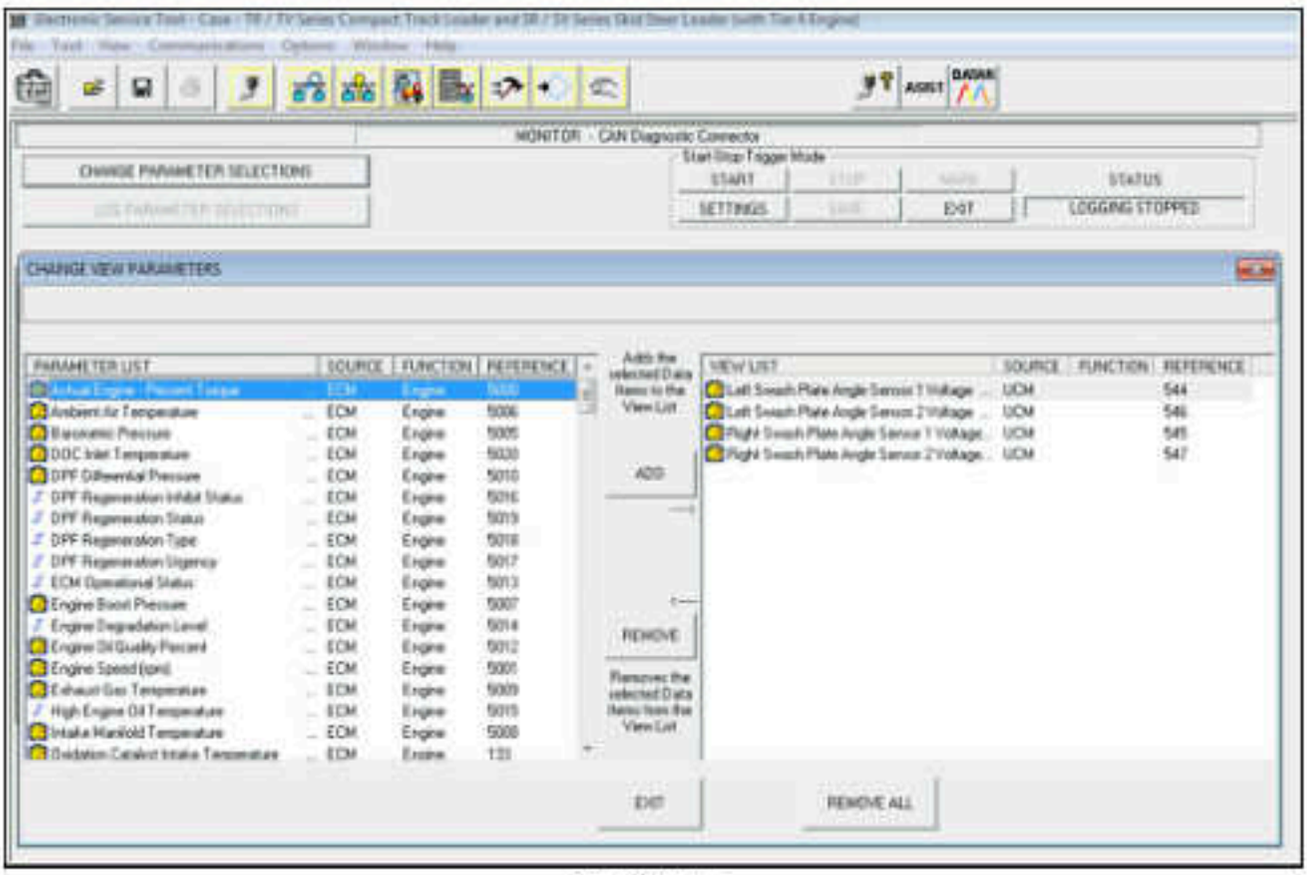
   B. CAN bus fault codes are present and ACTIVE. Refer to **1051-No CAN Communication With Engine Controller (55.408)**.

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Hydrostatic drive control sensors - Test - Swash plate angle sensor test and centering procedure

Prior operation:
Confirm that the joysticks are returning to the neutral position and there are no electrical issues with the joystick harness before checking the swash plate angle sensors.
Prior operation:
Place the machine on blocks or ensure that the machine is in an open area with adequate clearance to other objects.

NOTE: *This procedure is done using the Electronic Service Tool (EST) 'monitor' function.*



RAPH16SSL0327GA 1

EST View Parameters List

1. Connect the EST diagnostic connector to the test port of the machine to monitor the four Electro-Hydraulic (EH) parameters shown in the right-hand column of Figure 1.

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Track frame and driving wheels - Overview

TR340	NA
TV380	NA



RAPH16CTL3011PA 1

Low Profile Undercarriage

The Compact Track Loaders (CTL) now feature a redesigned undercarriage beginning February 2016. The new low-profile design promotes the same quality and long lasting Berco undercarriage components. The primary change from the older style undercarriage is in the frame design of the undercarriage.

The newer design changes immediately increase the ease of cleanout by eliminating the large angled carrier design used in the older style undercarriage. The updated carrier design features an improved yoke-to-frame engagement which increases track alignment, maximizes the track life, and produces less operating noise. The new design does not affect or increase performance specifications that were met with the older style undercarriage design. The new design allows for an ease of serviceability to the undercarriage which lowers the cost of operation and in time provides undercarriage longevity.

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MECHANICAL VALVE ASSEMBLY

RAC 48052982
SR220 / SR240 / SR250 / SV250
SR270 / SV280 / SV300 / SV340
TR320 / TR340 / TV380

NOTES:

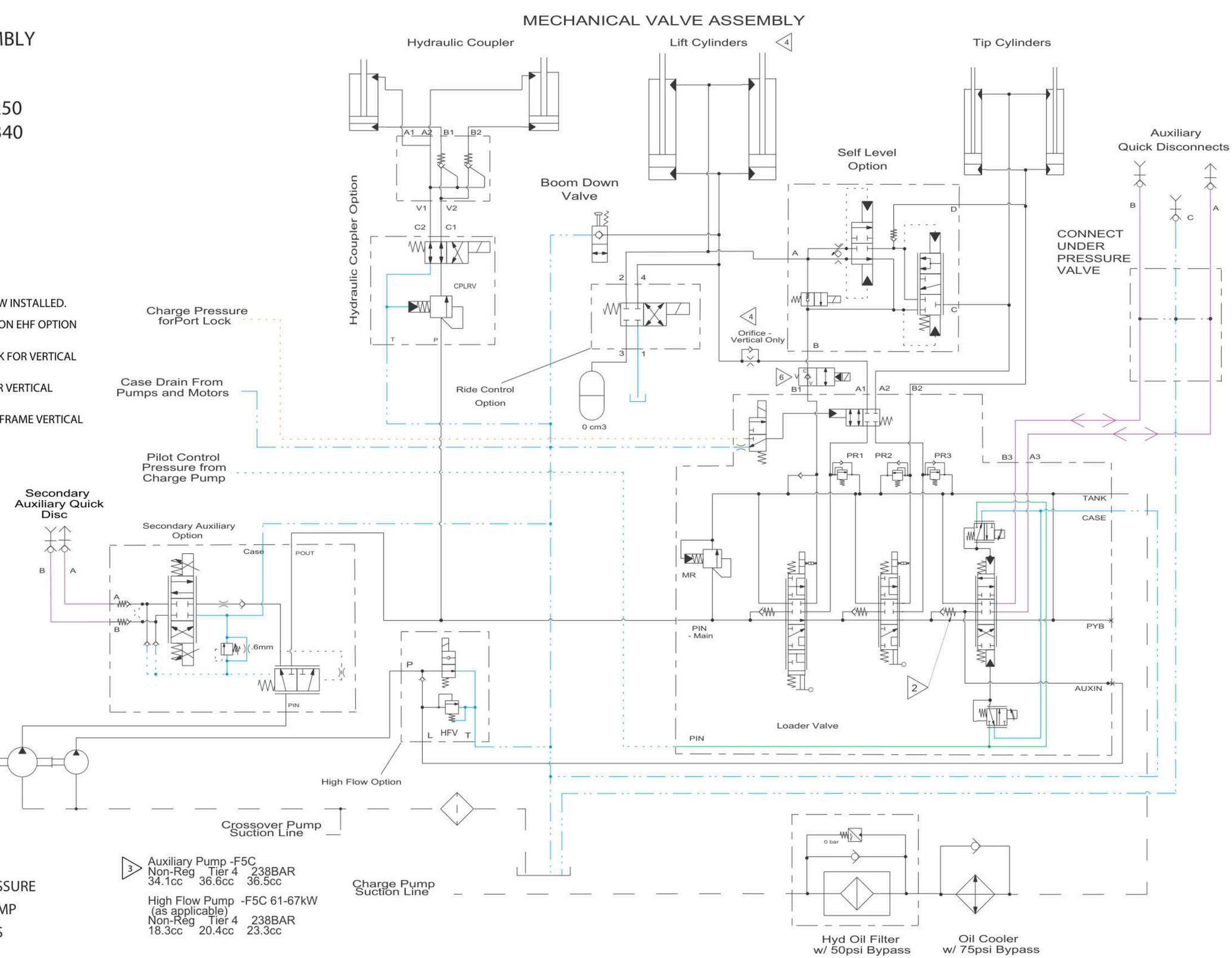
1. FLUSHING VALVE
   -10 BAR SPRINGS
   -2 mm FLUSHING ORIFICE
   -290 PSI (20BAR) CUTOFF RELIEF
2. LOAD CHECK REMOVED IF HIGH FLOW INSTALLED.
3. STANDARD PUMP STACK NOT USED ON EHF OPTION SEE NOTE ON DRAWING.
4. IN-LINE ORIFICE AT MANIFOLD BLOCK FOR VERTICAL MACHINES ONLY.
5. LIFT CYLINDERS ARE CUSHIONED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



HYDROSTATIC PUMP
CHARGE PUMP
PILOT CONTROL PRESSURE
RETURN TO TANK/SUMP
QUICK DISCONNECTS

3 Auxiliary Pump -F5C
Non-Reg Tier 4 238BAR
34.1cc 36.6cc 36.5cc

High Flow Pump -F5C 61-67kW
(as applicable)
Non-Reg Tier 4 238BAR
18.3cc 20.4cc 23.3cc

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