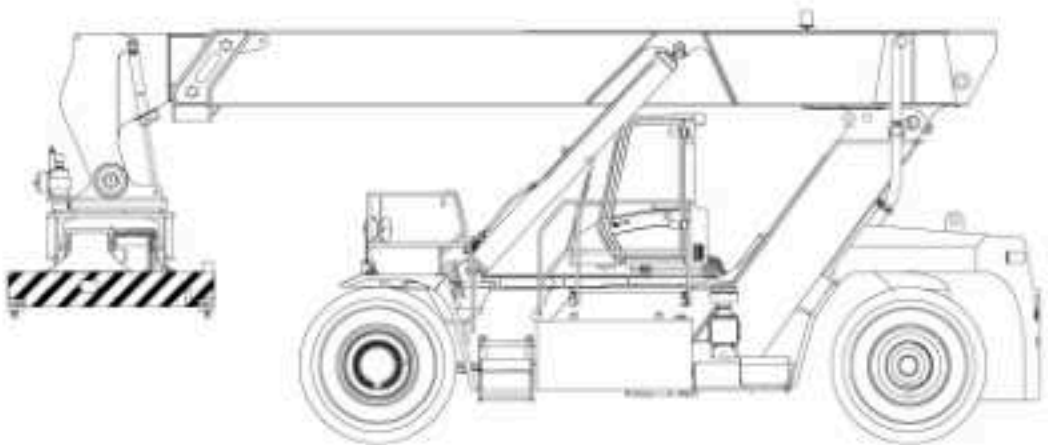
SERVICE MANUAL

C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41LS)



Rev. 08/14

MidWestTech | Hyster C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41...
Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

General 1
Description 1
Differential Repair 1
  Remove 1
    Differential Carrier From Axle Housing, Remove 1
    Differential and Ring Gear From Differential Carrier, Remove 5
    Drive Pinion and Pinion Carrier From Differential Carrier, Remove 7
  Disassemble 8
    Differential and Ring Gear Assembly, Disassemble 8
    Drive Pinion and Pinion Carrier, Disassemble 9
  Clean and Inspect 12
  Assemble 13
    Pinion, Bearings, and Pinion Carrier, Assemble 13
    Pinion Bearings, Adjust Preload 13
      Press Method 13
      Yoke or Flange Method 14
    Triple-Lip Seal, Install 15
    Pinion Carrier Shim Set, Adjust Thickness (Depth of Pinion) 16
    Differential and Ring Gear, Assemble 18
    Differential Gears Rotating Torque, Check 21
    Differential and Ring Gear Assembly, Install 21
    Differential Bearings, Preload Adjust 23
    Ring Gear, Runout Check 24
    Ring Gear Backlash, Adjust 24
    Gear Set, Tooth Contact Pattern Check 27
    Thrust Screw, Install and Adjust 30
  Install 30
    Differential Assembly Into Axle Housing, Install 30
Specifications 32
Troubleshooting 36

©2012 HYSTER COMPANY

MidWestTech | Hyster C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41... Order the manual at mid-west-tech.com >

Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
No spreader functions or no spreader functions in one direction.	Check truck hydraulic supply valve for correct operation.	Repair the supply valve.
	Low main hydraulic pressure at the spreader main relief valve.	Adjust the pressure at the main relief valve to 140 bar.
	Dirt in the relief valve cartridge.	Clean or replace the relief valve.
	No electrical power at the solenoids of both the truck and spreader.	Check for proper voltage at the solenoids. If voltage is present, replace the solenoid. If voltage is not present check the appropriate switch.
Low spreader response time.	Low hydraulic pressure at the spreader attachment main relief valve.	Adjust the pressure at the main relief valve to 140 bar.
Both extension beams will not extend.	Low hydraulic pressure at the spreader attachment main relief valve.	Adjust the pressure at the main relief valve to 140 bar.
	No electrical power at the solenoids of both the truck and spreader.	Check for proper voltage at the solenoid. If voltage is present, replace the solenoid. If voltage is not present check the appropriate switch.
One extension beam will not extend.	No electrical power at the solenoid mounted on the rear of the extension cylinder.	Check for proper voltage at the solenoids. If voltage is present, replace the solenoid. If voltage is not present, check the appropriate switch.
	Shock relief pressure is too low.	Set relief valve pressure to 80 bar.
Both extension beams will not retract.	Low hydraulic pressure at the spreader attachment main relief valve.	Adjust the pressure at the main relief valve to 140 bar.
	No electrical power at the solenoid valves on both truck and spreader.	Check for proper voltage at the solenoids. If voltage is present, replace the solenoid. If voltage is not present, check the appropriate switch.

MidWestTech | Hyster C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41... Order the manual at mid-west-tech.com >

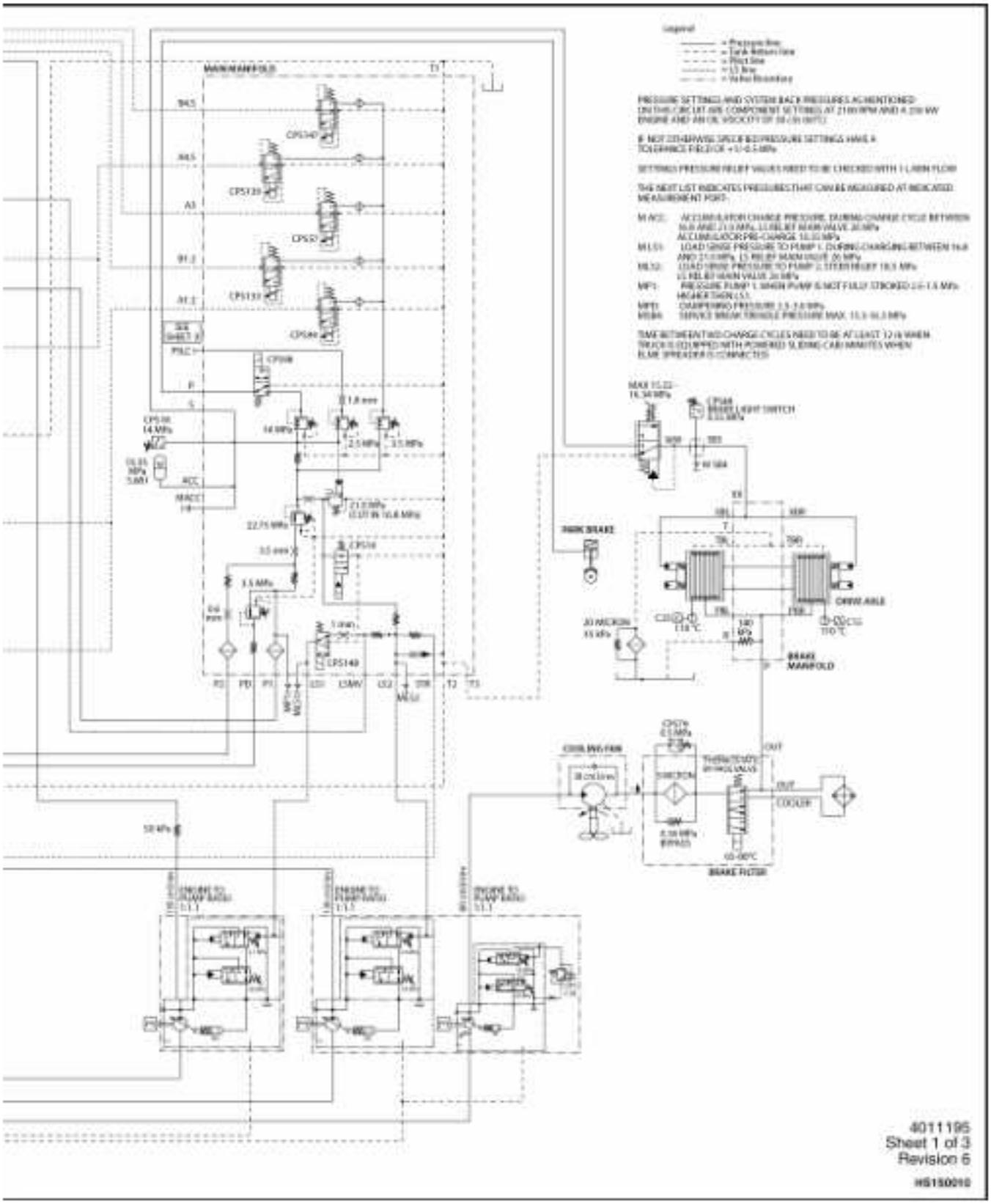


Figure 3. Hydraulic Schematic (Sheet 1 of 3)

MidWestTech | Hyster C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41... Order the manual at mid-west-tech.com >

Installation Procedures

COUNTERWEIGHT

Install

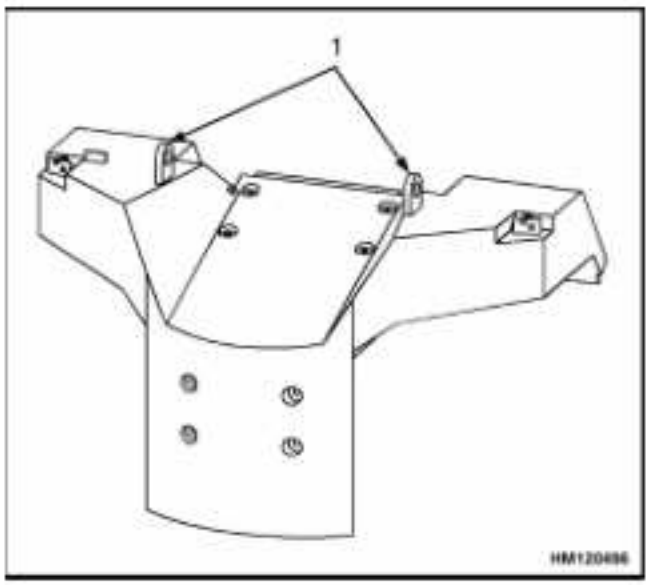
1. Put the forks of a lift truck under the main counterweight.

WARNING

The main counterweight is very heavy. Make sure that the lifting device has the capacity to lift the main counterweight. See Table 2 for counterweight weights.

Make sure no one is under or gets under the main counterweight being moved.

2. Attach a lifting device to the two lift points of the main counterweight. See Figure 9.
3. Install the main counterweight on the frame by aligning the flange over the frame member.
4. Install the eight tie rods, washers, and nuts. Tighten the top and rear tie rods to 1500 N•m (1106 lbf ft). See Figure 10.
5. Connect the electrical connector between the rear lights and the main wire harness, located at the right side of the frame.



1. LIFT POINTS

Figure 9. Lift Points Main Counterweight

BOOM

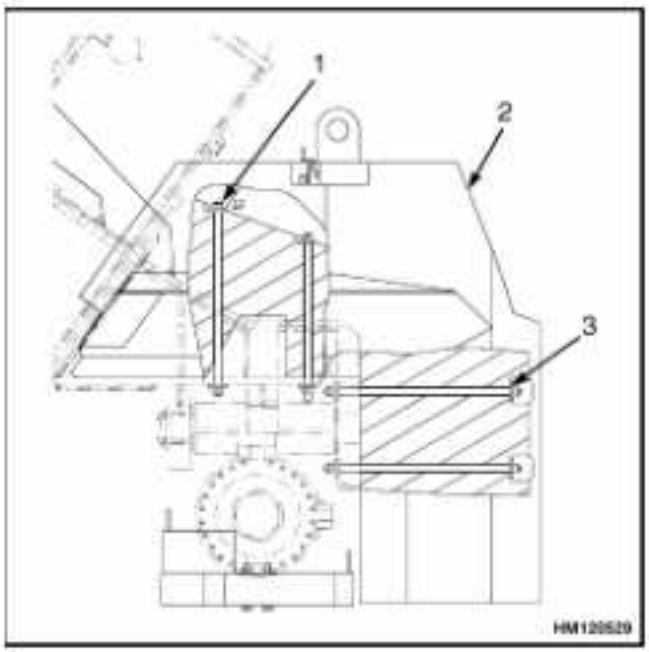
Install

CAUTION

Verify the sling for the boom rear side is approximately 0.75 m (29.5 in.) longer then the sling used at the boom tip side.

NOTE: Orientation of the boom must be slightly upwards to allow for correct alignment.

1. Connect a lifting device to lift the boom assembly at the boom tip and rear side.
2. Prefill the inner diameter of the boom mounting pin with grease.
3. Lift and place the boom assembly into position for installing the pins and carefully align the center of the spherical bushing with the center of the spacer tubes.



1. TOP TIE RODS
2. COUNTERWEIGHT
3. REAR TIE RODS

Figure 10. Tie Rods

MidWestTech | Hyster C222 (RS45-27, RS45-31, RS46-36, RS46-41L, RS46-41S, RS46-41... Order the manual at mid-west-tech.com >