SERVICE MANUAL

A20-30XL (A203)



FORM 897207 Rev. 11/03

MidWestTech | Hyster A20-30XL (A203) Forklift Service Manual | Publication 897207 Order the manual at mid-west-tech.com >

A20-30XL (A203)
SERVICE MANUAL CONTENTS

Section	SRM Number	Rev Date
FRAME	0100 SRM 0362	12/92
DC MOTOR MAINTENANCE	0620 SRM 0294	08/03
MASTER DRIVE UNIT-HURTH	0630 SRM 0283	03/02
MASTER DRIVE UNIT-SPETH (EARLY UNITS)	0630 SRM 0363	07/92
STEERING CONTROL UNIT	1600 SRM 0054	10/03
STEERING SYSTEM	1600 SRM 0364	03/93
STEERING SYSTEM with ON-DEMAND STEERING	1600 SRM 0485	08/03
BRAKE SYSTEM	1800 SRM 0365	03/97
HYDRAULIC SYSTEM	1900 SRM 0366	02/93
SEVCON MC400G MOTOR CONTROL-DESCR/OPER	2200 SRM 0367	04/93
SEVCON MC400G MOTOR CONTROL-REPAIR	2200 SRM 0368	03/93
SEVCON MC400G MOTOR CNTRL-TROUBLESHOOTING	2200 SRM 0369	03/93
INDUSTRIAL BATTERY	2240 SRM 0001	11/03
BATTERY INDICATORS	2260 SRM 0138	06/02
VISTA MAST-DESCRIPTION	4000 SRM 0222	12/92
VISTA MAST-REPAIR	4000 SRM 0374	03/93
INCH (SAE) AND METRIC FASTENERS	8000 SRM 0231	03/03
PERIODIC MAINTENANCE	8000 SRM 0370	04/93
CAPACITIES AND SPECIFICATIONS	8000 SRM 0371	07/97
DIAGRAMS	8000 SRM 0372	12/92

PART NO. 897207
Rev. Unknown

MidWestTech | Hyster A20-30XL (A203) Forklift Service Manual | Publication 897207 Order the manual at mid-west-tech.com >

TEST FOR SHORT CIRCUIT BETWEEN FIELD AND MOTOR CASE

Make sure that carbon dust has been cleaned from the motor before making this test. An ohmmeter (R × 10,000 scale) can be used to test for a short circuit between the field and the motor case. Put one probe on the motor case and the other probe on a field terminal. Check the resistance between the field terminal and the motor case. A resistance of less than 1 megohm indicates a problem between the field terminal and the motor case.

BRUSH HOLDER TEST

Make sure the carbon dust has been removed from the brush holders. Use an ohmmeter (R × 10,000 scale) to measure the resistance between the brush holder and the motor case. The correct resistance is an indication of infinity (∞).

Troubleshooting

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
Heavy streaks and fine grooves (see Table 2).	Operation in a dirty or abrasive environment.	Clean commutator more frequently.
	Continuous operation of motor with a light load.	Increase load on motor from time to time.
	Brush pressure is too low.	Increase brush pressure.
	Worn brushes.	Replace brushes.
Grooves and lines following heavy streaks. The armature must be replaced or the brushes will wear rapidly (see Table 2).	Operation in a dirty or abrasive environment.	Clean commutator more frequently.
	Continuous operation of motor with a light load.	Increase load on motor from time to time.
	Brush pressure is too low.	Increase brush pressure.
	Worn brushes.	Replace brushes.
Grooves the width of the brushes (see Table 2).	Operation in a dirty or abrasive environment.	Clean commutator more frequently.
	Wrong type of brushes for this motor and operation.	Replace brushes with correct type.
	Brush pressure is too high.	Adjust brush pressure.

MidWestTech | Hyster A20-30XL (A203) Forklift Service Manual | Publication 897207 Order the manual at mid-west-tech.com >

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
The steering operation is not smooth.	The oil level in the tank is low.	Fill tank to the correct level. Check for leaks.
	Air was not removed after repair to the hydraulic system.	Remove air from the system.
	The steering control unit is assembled wrong or has damage.	Repair or install new control unit.
	The hydraulic pump a leak at the inlet.	Fix leaks. Remove air from the system.
The pump motor will not stop operating after steering wheel stops turning.	Check for damaged pressure switch.	Replace the switch.
	Check steering contactor for welded contacts.	Replace the contactor.
The power steering pump makes noise that is not normal.	There is not enough oil in hydraulic tank.	Fill the tank to the correct level. Check for leaks.
	Air is entering the system at the inlet side of the pump.	Repair the leaks.
The power steering motor does not operate when the steering wheel is turned.	Power steering contactor does not energize with steering wheel movement.	Make sure the key switch is **ON** and operator is in the seat. If power steering contactor does not energize with steering wheel movement, check for B– at contactor coil terminal. If there is B– at terminal, check contactor and wiring. If wiring is good and there is no B– at terminal, replace the activator. If the contactor still does not energize, replace the optical encoder.
	Power steering motor is damaged.	Repair or replace the power steering motor.

MidWestTech | Hyster A20-30XL (A203) Forklift Service Manual | Publication 897207 Order the manual at mid-west-tech.com >

SAFETY PRECAUTIONS
MAINTENANCE AND REPAIR

- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks.
- Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the **Operating Manual** or the **Periodic Maintenance** section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use **HYSTER APPROVED** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the **WARNING** and **CAUTION** notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

NOTE: The following symbols and words indicate safety information in this manual:



WARNING

Indicates a condition that can cause immediate death or injury!



CAUTION

Indicates a condition that can cause property damage!

Order the manual at mid-west-tech.com >