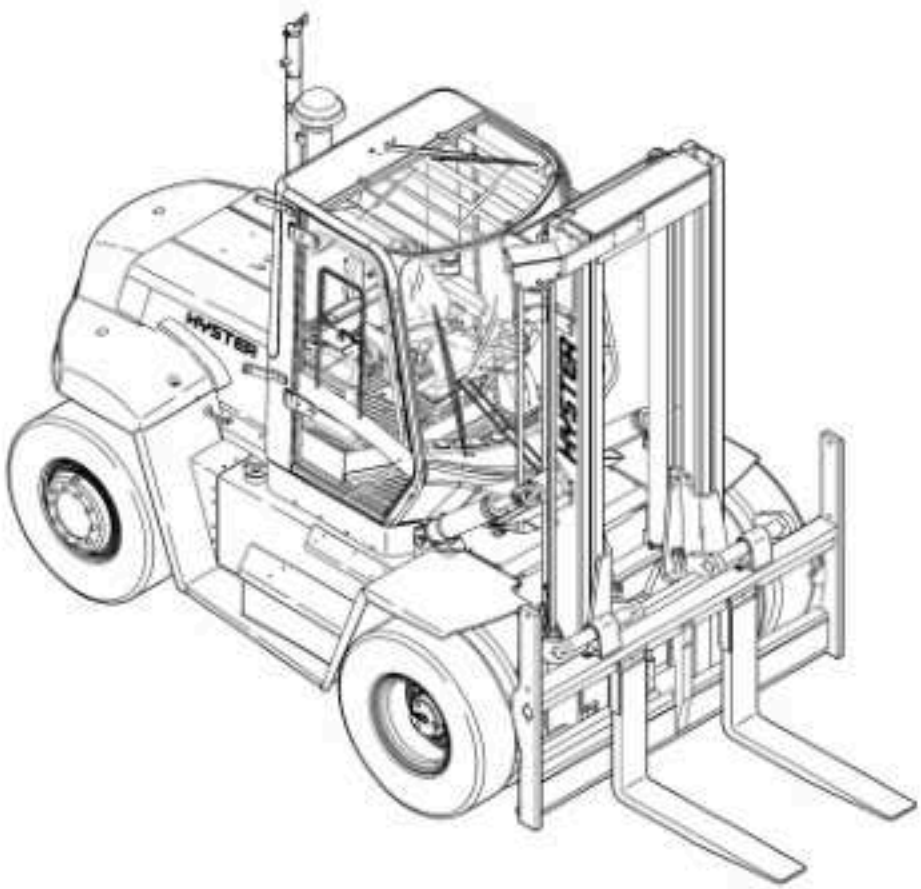
SERVICE MANUAL

H170-280HD (F007)



FORM 1506708 Rev. 02/04

MidWestTech | Hyster Challenger H170-280HD (F007) Forklift Service Manual | Publication... Order the manual at mid-west-tech.com >

H170-280HD (F007)
SERVICE MANUAL CONTENTS

Section	SRM Number	Rev Date
FRAME	0100 SRM 0927	12/03
OPERATOR'S CAB	0100 SRM 0935	03/03
PERKINS DIESEL ENGINE-1000 SERIES (AR, YG, YH)	0600 SRM 0705	09/03
PERKINS TIER 2 DIESEL ENGINE - 1100 SERIES (VK)	0600 SRM 1068	02/04
PERKINS TIER 2 ENGINE ELECTRONIC TROUBLESHOOTING GUIDE	0600 SRM 1072	01/04
COOLING SYSTEM	0700 SRM 0626	11/01
3-SPD POWERSHIFT TRANSMISSION-DESCR / OPER	1300 SRM 0930	02/01
3-SPD POWERSHIFT TRANSMISSION-REPAIR	1300 SRM 0931	02/01
AUTOSHIFT TRANSMISSION CONTROLLER	1300 SRM 0932	03/02
DIFFERENTIAL	1400 SRM 0046	11/03
PLANETARY GEAR AXLE - WET	1400 SRM 0944	09/03
PLANETARY GEAR AXLE - DRY	1400 SRM 0945	09/03
STEERING AXLE	1600 SRM 0326	10/03
STEERING SYSTEM	1600 SRM 0936	09/03
BRAKE SYSTEM - DRY	1800 SRM 0937	12/03
BRAKE SYSTEM - WET	1800 SRM 0951	09/03
HYDRAULIC SYSTEM	1900 SRM 0938	09/03
MAIN CONTROL VALVE	2000 SRM 0943	09/03
TILT CYLINDERS	2100 SRM 0103	10/03
ALTERNATOR	2200 SRM 0002	10/03
STARTER	2200 SRM 0106	02/01
INSTRUMENT PANEL INDICATORS / SENDERS	2200 SRM 0939	07/03
LIFT CYLINDERS	4000 SRM 0135	10/03
MASTS	4000 SRM 0445	08/01
MASTS AND CARRIAGES (STARTING 2003)	4000 SRM 1062	02/04
EMPTY CONTAINER HANDLING ATTACHMENT	5000 SRM 0969	09/03
INCH (SAE) and METRIC FASTENERS	8000 SRM 0231	03/03
PERIODIC MAINTENANCE	8000 SRM 0934	08/01
CAPACITIES and SPECIFICATIONS	8000 SRM 0940	10/03
DIAGRAMS	8000 SRM 0941	01/04
PERIODIC MAINTENANCE - TIER 2 EMISSIONS ENGINE	8000 SRM 1066	04/03

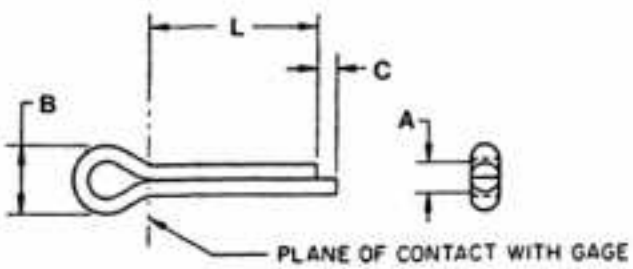
PART NO. 1506708

Rev. 02/04

MidWestTech | Hyster Challenger H170-280HD (F007) Forklift Service Manual | Publication... Order the manual at mid-west-tech.com >

Table 8. Cotter Pin Dimensional Data

Nominal Size	Shank Diameter A		Head Dia. B	Length of Extended Prong C		Recommended Hole Size	
	max	min	min	max	min	min	max
1.00 mm (0.031 in.)	0.90 mm (0.035 in.)	0.70 mm (0.028 in.)	1.50 mm (0.060 in.)	1.52 mm (0.060 in.)	0.25 mm (0.01 in.)	0.91 mm (0.036 in.)	1.37 mm (0.054 in.)
1.60 mm (0.047 in.)	1.20 mm (0.048 in.)	0.90 mm (0.035 in.)	1.50 mm (0.060 in.)	2.54 mm (0.10 in.)	0.51 mm (0.02 in.)	1.50 mm (0.059 in.)	1.78 mm (0.070 in.)
2.00 mm (0.062 in.)	1.50 mm (0.060 in.)	1.30 mm (0.051 in.)	2.40 mm (0.094 in.)	2.54 mm (0.10 in.)	0.76 mm (0.03 in.)	1.90 mm (0.075 in.)	2.18 mm (0.086 in.)
2.50 mm (0.094 in.)	2.30 mm (0.091 in.)	2.10 mm (0.083 in.)	4.00 mm (0.158 in.)	2.54 mm (0.10 in.)	1.00 mm (0.04 in.)	2.41 mm (0.095 in.)	2.95 mm (0.116 in.)
3.20 mm (0.125 in.)	3.00 mm (0.120 in.)	2.70 mm (0.106 in.)	5.10 mm (0.201 in.)	3.30 mm (0.13 in.)	1.52 mm (0.06 in.)	3.12 mm (0.123 in.)	3.76 mm (0.148 in.)
4.00 mm (0.156 in.)	3.80 mm (0.150 in.)	3.50 mm (0.138 in.)	6.50 mm (0.256 in.)	4.06 mm (0.16 in.)	1.78 mm (0.07 in.)	3.94 mm (0.155 in.)	4.55 mm (0.179 in.)
5.00 mm (0.188 in.)	4.60 mm (0.181 in.)	4.40 mm (0.172 in.)	8.00 mm (0.315 in.)	4.06 mm (0.16 in.)	2.03 mm (0.08 in.)	4.93 mm (0.194 in.)	5.33 mm (0.210 in.)
6.30 mm (0.250 in.)	5.90 mm (0.232 in.)	5.60 mm (0.220 in.)	10.3 mm (0.406 in.)	4.06 mm (0.16 in.)	2.03 mm (0.08 in.)	6.22 mm (0.245 in.)	6.96 mm (0.274 in.)
8.00 mm (0.312 in.)	7.50 mm (0.295 in.)	7.00 mm (0.275 in.)	13.1 mm (0.516 in.)	4.06 mm (0.16 in.)	2.03 mm (0.08 in.)	7.85 mm (0.309 in.)	8.28 mm (0.326 in.)
9.50 mm (0.375 in.)	9.50 mm (0.374 in.)	8.40 mm (0.329 in.)	16.6 mm (0.654 in.)	6.35 mm (0.25 in.)	4.06 mm (0.16 in.)	9.45 mm (0.372 in.)	9.73 mm (0.383 in.)
13.0 mm (0.500 in.)	12.4 mm (0.488 in.)	11.9 mm (0.467 in.)	21.7 mm (0.854 in.)	6.35 mm (0.25 in.)	3.05 mm (0.12 in.)	12.62 mm (0.497 in.)	13.21 mm (0.520 in.)
16.0 mm (0.625 in.)	15.4 mm (0.606 in.)	15.0 mm (0.590 in.)	27.0 mm (1.063 in.)	8.89 mm (0.35 in.)	3.05 mm (0.12 in.)	15.80 mm (0.622 in.)	16.28 mm (0.641 in.)



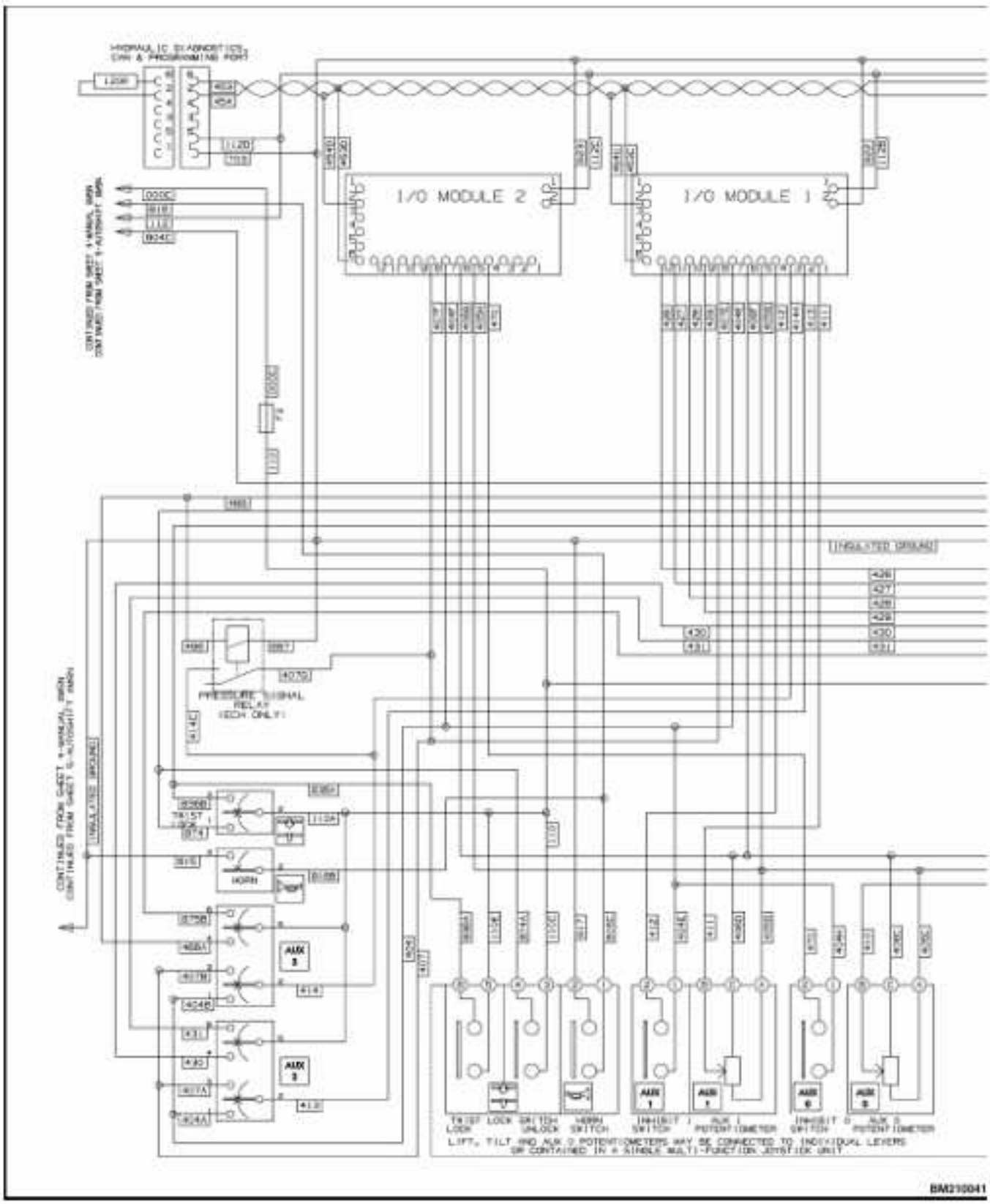
EXTENDED PRONG

HM211587

MidWestTech | Hyster Challenger H170-280HD (F007) Forklift Service Manual | Publication... Order the manual at mid-west-tech.com >

PROBLEM	POSSIBLE CAUSE	PROCEDURE OR ACTION
Lift cylinder rods move down when lift lever or joystick is moved to **LIFT** position.	Load check valve is damaged.	Repair load check valve.
Erratic operating functions movement.	Line from tank to pump leaks.	Replace damaged hydraulic lines.
	Oil level is low. There is no oil in tank.	Fill tank to correct level.
	Air in pilot system.	Remove air in pilot system. **1.** Start engine. **2.** Shut down engine. **3.** Operate levers 20 times. **4.** Repeat steps 1 through 3 until functions are working correctly.
STEERING CIRCUIT (ALSO SEE STEERING SYSTEM 1600 SRM 936)		
Lift truck steers slowly. Steering wheel is hard to turn.	Oil level is low. There is no oil in tank.	Fill tank to correct level.
	Line(s) to steering control unit or steering cylinder is damaged.	Replace damaged hydraulic lines.
	Steering relief pressure is below specifications.	Adjust relief pressure.
	Engine idle speed is below specifications.	Adjust idle speed to specification.
	Hydraulic pump is worn or damaged.	Repair or replace hydraulic pump.
	Priority valve does not operate correctly.	Replace priority valve.

MidWestTech | Hyster Challenger H170-280HD (F007) Forklift Service Manual | Publication... Order the manual at mid-west-tech.com >



MidWestTech | Hyster Challenger H170-280HD (F007) Forklift Service Manual | Publication... Order the manual at mid-west-tech.com >