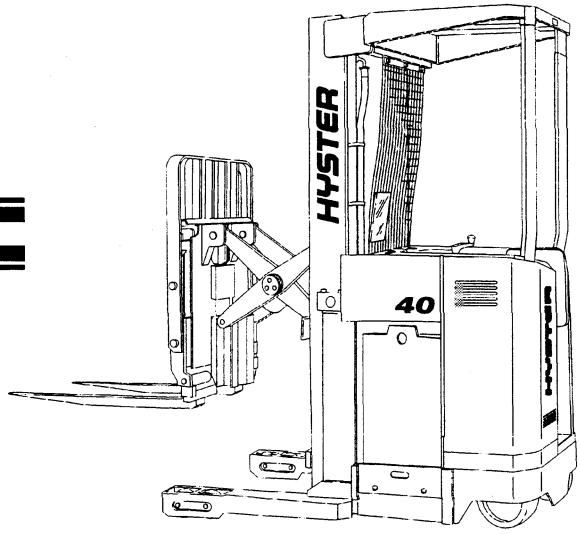
CAPACITIES AND SPECIFICATIONS

N30XMDR2, N45XMR2 (F138)



HYSTER

PART NO. 897853

8000 SRM 610

TABLE 1 - MASTER DRIVE UNIT SPECIFICATIONS

DRIVE TIRES'	N30/40XMR, N25XMDR, N50XMA N30/40XMR2, N25XMDR2, N50XMA2	12×5.5×8
	N45XMR, N30XMDR N45XMR2, N30XMDR2 N45XMXR, N30XMXDR	13.5×5.5×8
WHEEL NUT TORQUE	Cross Pattern to 136 N•m (100 lb ft)	
PINION NUT TORQUE	54 N•m (40 lb ft)	
BEARING MOUNT CAPSCREWS	Cross Pattern to 34 N•m (25 lbf ft), then to 68 N•m (50 lbf ft)	
MOTOR MOUNT CAPSCREWS	Cross Pattern to 20 N•m (15 lbf ft)	

TABLE 2 - N30/40/45XMR, N25/30XMDR, N50XMA TRACTION MOTOR CONTROLLERS FACTORY VALUES AND MINIMUM / MAXIMUM RANGES

MENU ITEM	FUNCTION DESCRIPTION (PROGRAM MENU)		FACTORY VALUE	MIN. / MAX. VALUES ALLOWED	UNITS OF MEASURE
1	Creep Speed		10	0 to 25	% of Throttle
2	Quick Start		45	See Chart	% of available Acceleration Gain
3	Mode 1 Main Current Limit (Turtle Mode)		550	100 to 550	Amps
4	Mode 1 Plug Current Limit (Turtle Mode)	**24 volt trucks only**	200	25 to 350	Amps
		36 volt trucks only	100	25 to 250	
5	Mode 1 Acceleration Rate (Turtle Mode)		2.4	See Chart	Seconds
6	Mode 1 Max. Speed (Turtle Mode)		75	25 to 100	% of Full Speed
7	Mode 2 Main Current Limit (Mid Mode)		550	100 to 550	Amps
8	Mode 2 Plug Current Limit (Mid Mode)	**24 volt trucks only**	200	25 to 350	Amps
		36 volt trucks only	100	25 to 250	
9	Mode 2 Acceleration Rate (Mid Mode)		1.5	See Chart	Seconds
10	Mode 2 Max. Speed (Mid Mode)		100	25 to 100	% of Full Speed
11	Mode 3 Main Current Limit (Rabbit Mode)		550	100 to 550	Amps
12	Mode 3 Plug Current Limit (Rabbit Mode)	**24 volt trucks only**	200	25 to 350	Amps
		36 volt trucks only	100	25 to 250	
13	Mode 3 Acceleration Rate (Rabbit Mode)		.7	See Chart	Seconds
14	Mode 3 Max. Speed (Rabbit Mode)		100	25 to 100	% of Full Speed

⚠ WARNING

Adjust quick start and accel rate to these adjustment ranges or controller can malfunction.

Quick Start	Accel Rate
35-37	0.0-0.5
38-39	0.0-0.9
40-42	0.0-1.8
43-55	0.0-2.4

This section is for the following models:
N30/40/45XMR, N25/30XMDR, N50XMA
N30/40/45XMR2, N25/30XMDR2, N50XMA2
N30XMXDR, N45XMXR

(More Content includes: Brake system, Capacities, and specifications, Frame, Hydraulic, System, Industrial battery, Main control, Valve, Mast repair, Fasteners, Schematics diagrams, Steering axle, Steering system, Wire harness repair And more)

TABLE 3 - N30/40/45XMR2, N25/30XMDR2, N50XMA2 SEM TRACTION MOTOR CONTROLLERS
FACTORY VALUES AND MINIMUM / MAXIMUM RANGES

MENU DISPLAY	FUNCTION DESCRIPTION		BATT. VOLTS	FACTORY VALUE	MIN. / MAX. VALUES ALLOWED	UNITS OF MEASURE
M3 BRAKE C/L M2 BRAKE C/L M1 BRAKE C/L	Brake Current Limit	N30/40XMR2, N25XMDR2, N50XMA2	24	320	100 to 450	Amps
		N40XMR2, N25XMDR2, N50XMA2	36	280		
		N45XMR2, N30XMDR2	36	280		
NOTE: Changes made to the BRAKE C/L settings may necessitate changes to the TAPER RATE setting below to ensure smooth operation when plugging to a stop or transitioning from one direction to the other.						
M3 NEUT BRK % M2 NEUT BRK % M1 NEUT BRK %	Neutral Braking Level		24 36	16	0 to 50	% of Regen C/L
M3 ACCEL RATE	M3 Acceleration Ramp Rate	N30/40XMR2, N25XMDR2, N50XMA2	24	0.5	0.1 to 5.0	Seconds
		N40XMR2, N25XMDR2, N50XMA2	36	0.7		
		N45XMR2, N30XMDR2	36	0.8		
M2 ACCEL RATE	M2 Acceleration Ramp Rate	N30/40XMR2, N25XMDR2, N50XMA2	24	1.6	0.1 to 5.0	Seconds
		N40XMR2, N25XMDR2, N50XMA2	36			
		N45XMR2, N30XMDR2	36			
M1 ACCEL RATE	M1 Acceleration Ramp Rate	N30/40XMR2, N25XMDR2, N50XMA2	24	3.2	0.1 to 5.0	Seconds
		N40XMR2, N25XMDR2, N50XMA2	36	2.5		
		N45XMR2, N30XMDR2	36	2.5		
TAPER RATE	End Regen Taper Rate	N30/40XMR2, N25XMDR2, N50XMA2	24	25	1 to 64	1/32 Second
		N40XMR2, N25XMDR2, N50XMA2	36	27		
		N45XMR2, N30XMDR2	36	27		
NOTE: Changes made to the TAPER RATE setting may necessitate changes to the BRAKE C/L settings above to ensure smooth operation when plugging to a stop or transitioning from one direction to the other.						
M3 MAX SPEED	M3 Speed Limit	N30/40XMR2, N25XMDR2, N50XMA2	24	100	25 to 100	% of Throttle
		N40XMR2, N25XMDR2, N50XMA2	36			
		N45XMR2, N30XMDR2	36			
M2 MAX SPEED	M2 Speed Limit	N30/40XMR2, N25XMDR2, N50XMA2	24	100	25 to 100	% of Throttle
		N40XMR2, N25XMDR2, N50XMA2	36			
		N45XMR2, N30XMDR2	36			
M1 MAX SPEED	M1 Speed Limit	N30/40XMR2, N25XMDR2, N50XMA2	24	65	25 to 65	% of Throttle
		N40XMR2, N25XMDR2, N50XMA2	36			
		N45XMR2, N30XMDR2	36			
M1 = TURTLE M2 = MID M3 = RABBIT						

TABLE 4 - SEM TRACTION MOTOR CONTROLLER
FACTORY VALUES AND MINIMUM / MAXIMUM RANGES

MENU DISPLAY	FUNCTION DESCRIPTION		BATT. VOLTS	FACTORY VALUE	MIN. / MAX. VALUES ALLOWED	UNITS OF MEASURE
BRAKE C/L	Brake Current Limit	N30XMXDR, N45XMXR	36	320	100 to 500	Amps
NOTE: Changes made to the BRAKE C/L settings may necessitate changes to the TAPER RATE setting below to ensure smooth operation when plugging to a stop or transitioning from one direction to the other.						
M3 THRT BRK % M2 THRT BRK % M1 THRT BRK %	Throttle Braking Level		36	16	0 to 100	% of Regen C/L
M3 ACCEL RATE	M3 Acceleration Ramp Rate	N30XMXDR, N45XMXR	36	1.3	0.1 to 5.0	Seconds
M2 ACCEL RATE	M2 Acceleration Ramp Rate	N30XMXDR, N45XMXR	36	1.6	0.1 to 5.0	Seconds
M1 ACCEL RATE	M1 Acceleration Ramp Rate	N30XMXDR, N45XMXR	36	3.3	0.1 to 5.0	Seconds
TAPER RATE	End Regen Taper Rate	N30XMXDR, N45XMXR	36	10	1 to 64	1/32 second
NOTE: Changes made to the TAPER RATE setting may necessitate changes to the BRAKE C/L settings above to ensure smooth operation when plugging to a stop or transitioning from one direction to the other.						
M3 MAX SPEED	M3 Speed Limit	N30XMXDR, N45XMXR	36	100	0 to 100	% of Throttle
M2 MAX SPEED	M2 Speed Limit	N30XMXDR, N45XMXR	36	100	0 to 100	% of Throttle
M1 MAX SPEED	M1 Speed Limit	N30XMXDR, N45XMXR	36	65	0 to 65	% of Throttle
M1 = TURTLE		M2 = MID		M3 = RABBIT		

TABLE 5 - LIFT CAPACITIES

	N25XMDR N25XMDR2	N30XMR N30XMDR N30XMR2 N30XMDR2 N30XMXDR	N40XMR N40XMR2	N45XMR N45XMR2 N45XMXR	N50XMA N50XMA2
Basic* Capacity at 24 inch load center	2500 lbs	3000 lbs	4000 lbs	4500 lbs	5000 lbs
Basic* Capacity at 500 mm load center	1250 kg	1500 kg	2000 kg	2250 kg	2500 kg

*Reach N30XMR, N40XMR, N45XMR, N25XMDR and N30XMDR
N30XMR2, N40XMR2, N45XMR2, N25XMDR2 and N30XMDR2
@N30XMXDR, N45XMXR

- Three Stage Vista free lift mast with 212 inches (5385 mm) maximum fork height
- @Three Stage Vista free lift mast with 422 inches (10719 mm) maximum fork height
- 52 inch (1320 mm) base width
- minimum battery compartment width
- minimum battery weight

*Straddle N50XMA
N50XMA2

- Three Stage Vista free lift mast with 219 inches (5562 mm) maximum fork height
- 52 inch (1320 mm) base width
- minimum battery compartment width
- minimum battery weight

TABLE 6 - OIL CAPACITIES

MASTER DRIVE UNIT					
N30XMR, N40XMR, N25XMDR, N50XMA, N30XMR2, N40XMR2, N25XMDR2, N50XMA2 (HURTH HFK 300)				2.5 litres (2.64 quarts)	
N45XMR, N30XMDR, N45XMR2, N30XMDR2, N30XMXDR, N45XMXR (HURTH HFK 400)				3.7 litres (3.91 quarts)	
BRAKE SYSTEM					
All Models				0.45 litres (0.12 gallon)	
HYDRAULIC OIL TANK CAPACITIES					
	Battery Compartment Size				
	12.5 inches	14.6 inches	16.6 inches	18.8 inches	21.1 inches
N25/30XMDR N30/40/45XMR N50XMA	19.4 litres (5.13 gallons)	21.7 litres (5.72 gallons)	24.0 litres (6.33 gallons)	28.5 litres (7.54 gallons)	28.5 litres (7.54 gallons)
N25/30XMDR2 N30/40/45XMR2 N50XMA2	21.4 litres (5.66 gallons)	24.2 litres (6.38 gallons)	24.2 litres (6.38 gallons)	28.2 litres (7.45 gallons)	28.2 litres (7.45 gallons)
N30XMXDR N45XMXR	N/A	N/A	N/A	29.2 litres (7.74 gallons)	29.2 litres (7.74 gallons)

TABLE 7 - HYDRAULIC SYSTEMS SPECIFICATIONS

	N30/40XMR, N30/40XMR2 N25XMDR, N25XMDR N50XMA, N50XMA2	N45XMR, N45XMR2 N30XMDR, N30XMDR2	N45XMR, N45XMR2 N30XMDR, N30XMDR2	N30XMXDR, N45XMXR
LIFT PUMP				
Maximum Output	14.0 cm^3/rev. (0.85 in^3/rev.)	22.0 cm^3/rev. (1.34 in^3/rev.)	19.0 cm^3/rev. (1.159 in^3/rev.)	29.0cm^3/rev. (1.77in^3/rev.)
Maximum Pressure	28 MPa (4000psi)	22.4 MPa (3200psi)	28 MPa (4000psi)	21.0 MPa (3050psi)
Speed	500-3300 rpm	500-2800 rpm	500-3000 rpm	500-2300 rpm
STEERING PUMP				
Maximum Output	6.0 cm^3/rev. (.366 in^3/rev.)	6.0 cm^3/rev. (.366 in^3/rev.)	6.0 cm^3/rev. (.366 in^3/rev.)	6.0 cm^3/rev. (.366 in^3/rev.)
Maximum Pressure	28 MPa (4000 psi)	28 MPa (4000 psi)	28 MPa (4000 psi)	28 MPa (4000 psi)
Speed	500-3300 rpm	500-3300 rpm	500-3300 rpm	500-4000 rpm
RELIEF VALVE PRESSURES				
Lift System	19.6 MPa (2800 psi)	19.6 MPa (2800 psi)	19.6 MPa (2800 psi)	19.6 MPa (2800 psi)
Range	18.9 to 20.3 MPa (2700 to 2900 psi)	18.9 to 20.3 MPa (2700 to 2900 psi)	18.9 to 20.3 MPa (2700 to 2900 psi)	18.9 to 20.3 MPa (2700 to 2900 psi)
Auxiliary Functions System	14.7 MPa (2100 psi)	14.7 MPa (2100 psi)	14.7 MPa (2100 psi)	14.7 MPa (2100 psi)
Range	14.4 to 15.1 MPa (2050 to 2150 psi)	14.4 to 15.1 MPa (2050 to 2150 psi)	14.4 to 15.1 MPa (2050 to 2150 psi)	14.4 to 15.1 MPa (2050 to 2150 psi)
All measurements made when the hydraulic oil temperature is 54-66° C (130-150° F)				

TABLE 8 - REACH CARRIAGE SPECIFICATIONS

SCISSOR ARMS	
End Cap Capscrews	41 N•m (30 lbf ft)
Inner Thrust Washer Capscrews	39 N•m (29 lbf ft) Apply Loctite 242 to Threads
REACH CYLINDER TORQUES	
Rod End Capscrews	48 to 54 N•m (35-40 lbf ft)
TILT CYLINDER TORQUES	
Rod Nut	163-190 N•m (120-140 lbf ft) Lubed
Rod End Pin Nut	136 N•m (100 lb ft) Lubed
REACH MECHANISM STROKES	
Single	610 ± 6.4 mm (24 ± 0.25 in)
Dual	1067 ± 6.4 mm (42 ± 0.25 in)
REACH CYLINDER STROKES	
24 inch Reach	99 mm (3.90 in)
42 inch Reach	89 mm (3.50 in)
SIDESHIFT CYLINDER STROKE	102 mm (4.00 in)
TILT CYLINDER STROKE	75.5 mm (2.97 in)
FORK TILT ANGLE	
Down	3°
Up	4°

TABLE 9 - BATTERY SIZE SPECIFICATIONS

MODEL	VOLTS	MINIMUM COMPARTMENT SIZE LENGTH × WIDTH MILLIMETERS (INCHES)	BATTERY SIZE* MINIMUM/MAXIMUM		WEIGHT	
			LENGTH	WIDTH	MINIMUM	MAXIMUM
N30XMR N40XMR N25XMDR N50XMA N30XMR2 N40XMR2 N25XMDR2 N50XMA2	24	986 × 318 (38.8 × 12.5)	986 mm (38.8 in)	311.1 mm (12.25 in)	568 kg (1250 lb)	863 kg (1900 lb)
		986 × 371 (38.8 × 14.6)	986 mm (38.8 in)	365 mm (14.38 in)	681 kg (1500 lb)	953 kg (2100 lb)
		986 × 422 (38.8 × 16.6)	986 mm (38.8 in)	416 mm (16.38 in)	726 kg (1600 lb)	1033 kg (2275 lb)
N40XMR N25XMDR N50XMA N40XMR2 N25XMDR2 N50XMA2	36	986 × 371 (38.8 × 14.6)	986 mm (38.8 in)	365 mm (14.38 in)	704 kg (1550 lb)	953 kg (2100 lb)
		986 × 422 (38.8 × 16.6)	986 mm (38.8 in)	416 mm (16.38 in)	840 kg (1850 lb)	1090 kg (2400 lb)
N45XMR N30XMDR N45XMR2 N30XMDR2 N45XMXR N30XMXDR	36	986 × 422 (38.8 × 16.6)	986 mm (38.8 in)	416 mm (16.38 in)	840 kg (1850 lb)	1090 kg (2400 lb)
		986 × 478 (38.8 × 18.8)	986 mm (38.8 in)	473 mm (18.62 in)	999 kg (2200 lb)	1294 kg (2850 lb)
		986 × 536 (38.8 × 21.1)	986 mm (38.8 in)	530 mm (20.88 in)	1135 kg (2500 lb)	1362 kg (3000 lb)

Compartment width is across the width of the lift truck. Battery length installed across lift truck, battery width installed front to back.

*Maximum height for all batteries is 787 mm (31.0 in).

WARNING: The battery must fit the battery compartment so that the battery restraint system will operate correctly. Use the spacers designed by the Hyster Company to prevent the battery from moving more than13 mm (0.5 in) in any horizontal direction.

NOTE: Maximum tolerances are +0 and −13 mm (+0 and −0.5 in) for the size of the battery compartment. The battery specification chart shows the maximum size tolerances that will permit the battery to still fit into the battery compartment.

NOTES