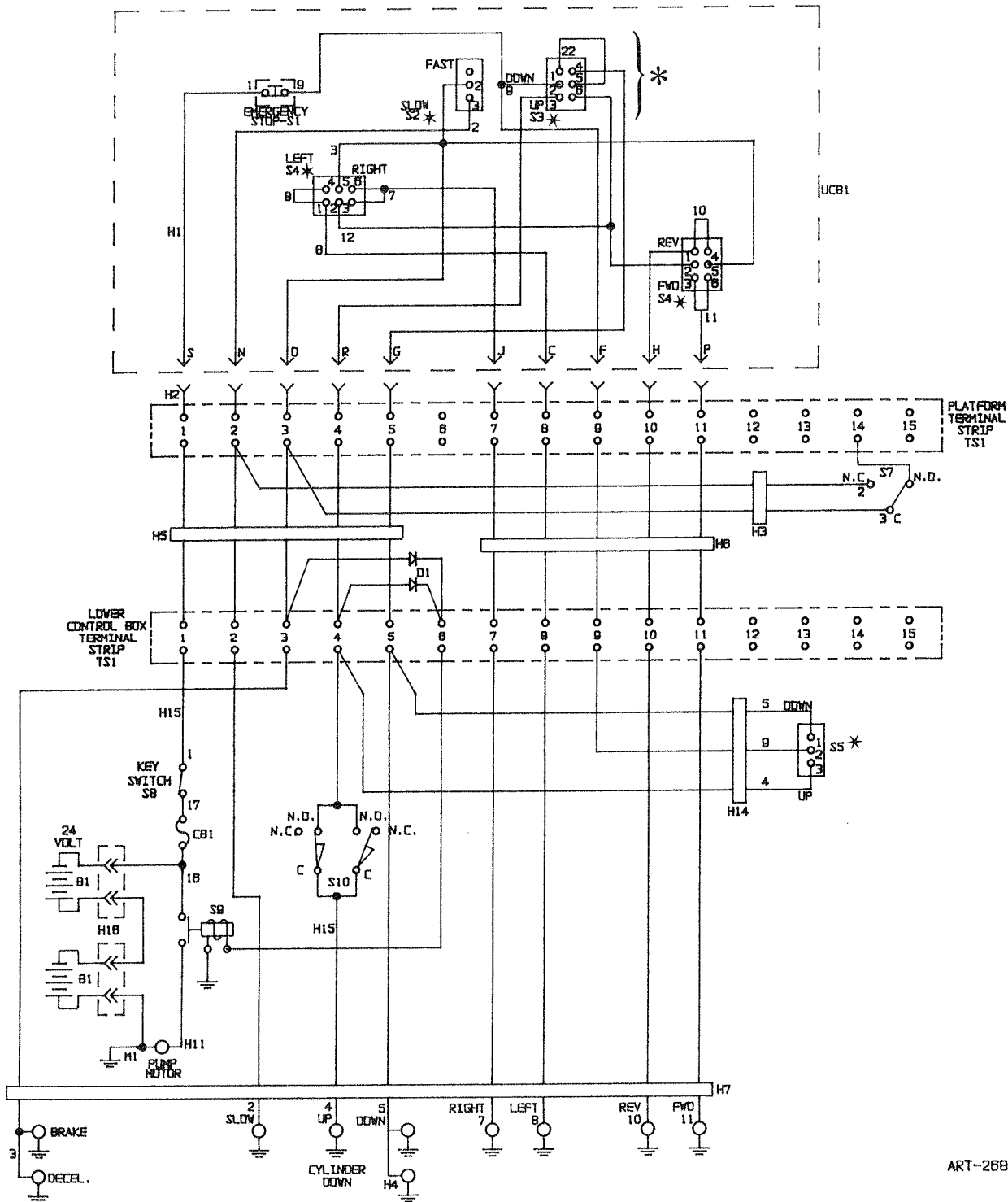


WIRING DIAGRAM
 mec NARO 20 (STANDARD SERIES without Motion Switch)
 Models 2034 & 2042
 Pre 1992 Models



ART-268

* NOTE: Switch wiring as seen from the rear of switch.

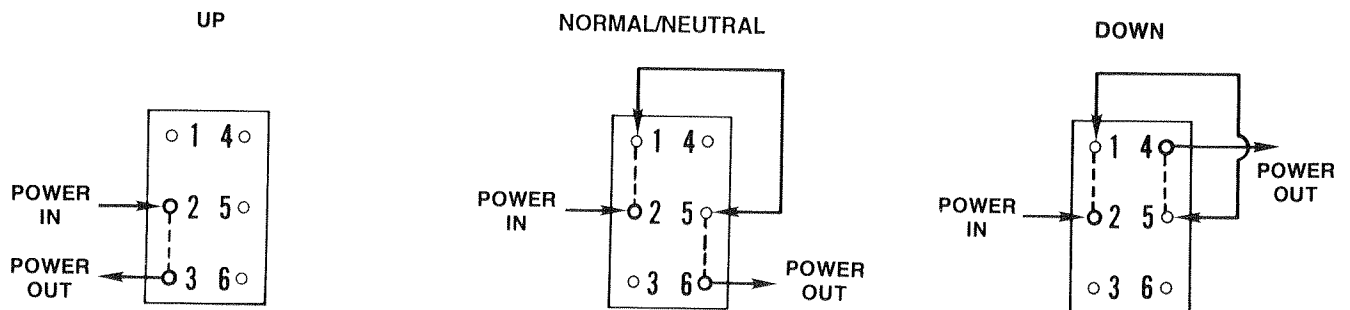
Up/Down Switch at Upper Control Box - Contacts Made With Toggle at Keyway Position 1-2, 4-5 - Center Position 1-2, 5-6 - Opposite Keyway 2-3, 5-6

**Symbol Identification for
WIRING DIAGRAM**
^{mec}NARO 20 (STANDARD SERIES without Motion Switch)
 Models 2034 & 2042
 Pre 1992 Models

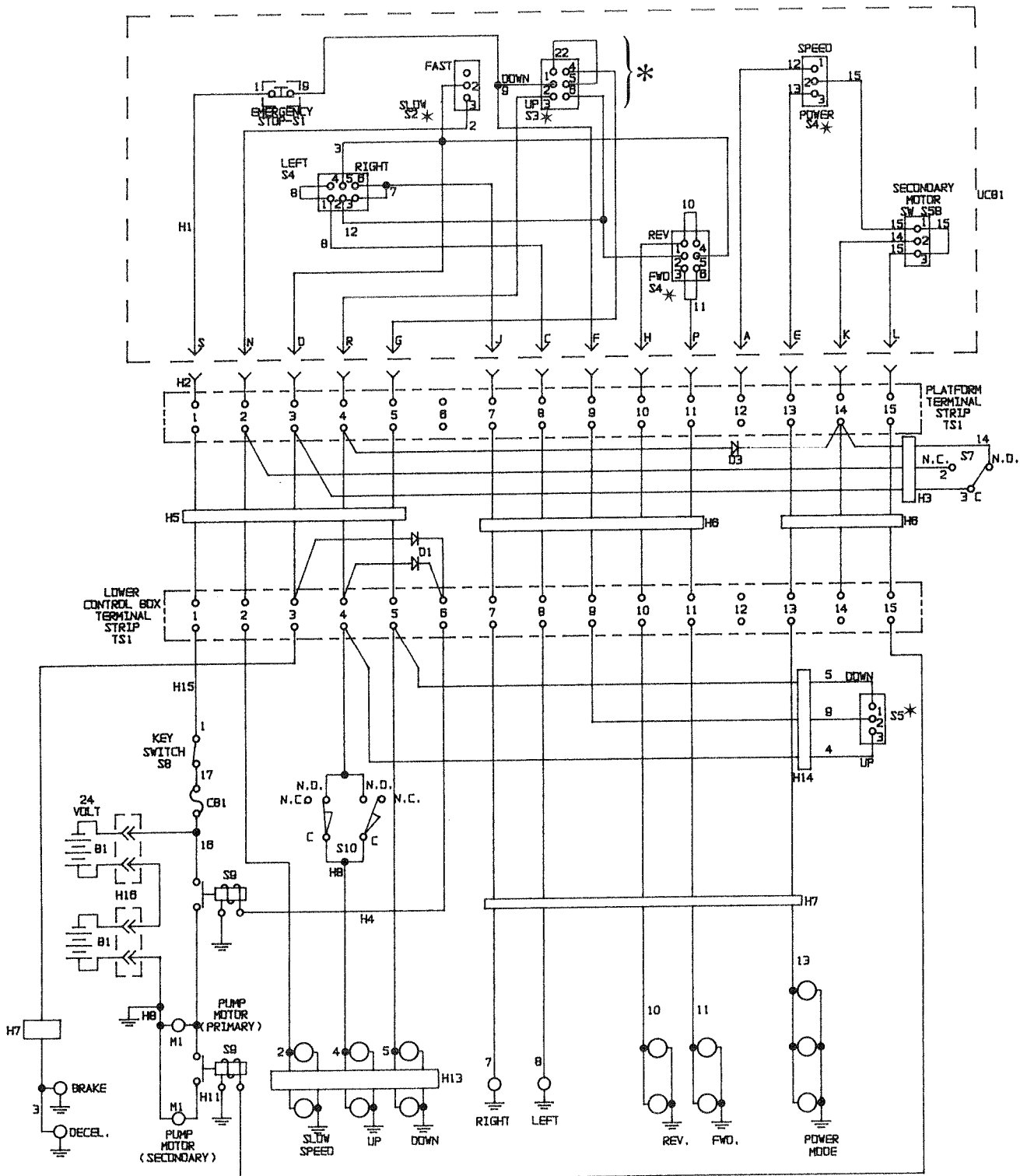
Qty.	Symbol	Description	Part No.
4	B1	Battery, 6V, Deep Cycle (GC2)	5970
1	CB1	Circuit Breaker, 15 Amp	7235
2	D1	Diode Assembly, 3 Amp, 600V (PIV)	6070
1	H1	Harness (w/Cannon End), Control Box	5982
1	H2	Harness (w/Cannon End), Upper Control	5983
Service		Repair Kit, Cannon Plug	6318
1	H3	Harness, Speed Limit Switch	7070
1	H4	Harness, Cylinder Down Valve	6787
1	H5	Harness, Scissors, Nos. 1-5	6739
1	H6	Harness, Scissors, Nos. 7-11	6740
1	H7	Harness, Valve Manifold	6805
1	H10	Harness, 110V AC Outlet Assy.	6746
1	H11	Cable, Motor	6123
1	H14	Harness, Lower Controls	6764
1	H15	Harness, Power, Ground & Stabilizer Limit Switches	7076
1	H16	Jumper, Battery, 16 in.	7017
2	H17	Jumper, Battery, 5 in.	6208
2		Cable Assembly, Connector	6687

Qty.	Symbol	Description	Part No.
1	M1	Motor, 24V	6194
	S1	Switch Assy., Emergency Stop	7800
1	S2	Toggle Switch (Fast/Slow)	5630
1	S3	Toggle Switch (Up/Down) (See diagram below)	5979
2	S4	Toggle Switch (Drive/Steer)	5694
1	S5	Toggle Switch (Up/Down - Lower Control)	5230
1	S7	Plunger Switch (Speed Limit)	6715
1	S8	Key Switch (w/Keys)	5936
Service		Key Only	6117
1	S9	Contactor, Motor	5967
2	S10	Plunger Switch (Stabilizer Limit)	6016
2	TB1	Toggle Boot	5692
2	TS1	Terminal Strip	5991
1	UCB1	Control Box, Upper	2107

*** Up/Down Switch Diagram (at Upper Control Box)**



mec NARO 20 (HIGH TORQUE SERIES without Motion Switch)
Models 2034HT & 2042HT
Pre 1992 Models



* NOTE: Switch wiring as seen from the rear of switch.

ART-269

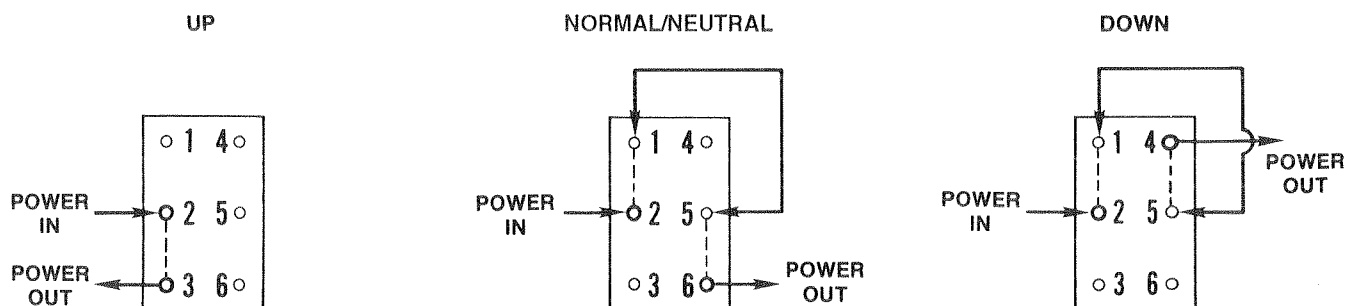
Up/Down Switch at Upper Control Box - Contacts Made With Toggle at Keyway Position 1-2, 4-5 - Center Position 1-2, 5-6 - Opposite Keyway 2-3, 5-6

**Symbol Identification for
WIRING DIAGRAM**
^{mec}NARO 20 (HIGH TORQUE SERIES without Motion Switch)
 Models 2034HT & 2042HT
 Pre 1992 Models

Qty.	Symbol	Description	Part No.
4	B1	Battery, 6V, Deep Cycle (GC2)	5970
1		CB1 Circuit Breaker, 15 Amp	7235
2	D1	Diode Assembly, 3 Amp, 600V (PIV)	6070
1	D3	Diode Assembly, 3 Amp, 600V (PIV)	6241
1	H1	Harness (w/Cannon End), Control Box HT Wire Set	5982 6296
1	H2	Harness (w/Cannon End), Upper Control	5983
1		Repair Kit, Cannon Plug (Terminals)	
1	H3	Harness, Limit Switch	7070
1	H4	Harness, Cylinder Down Valve	6787
1	H5	Harness, Scissors, No. 1-5	6739
1	H6	Harness, Scissors, Nos. 7-11	6740
1	H7	Harness, Secondary Manifold	6766
1	H8	Harness, Power, Ground & Stabilizer Limit Switches	7076
1	H9	Harness, Scissors, Nos. 13-15	6741
1	H10	Harness, 110V AC Outlet Assy.	6746
1	H13	Harness, Primary Manifold	6765
1	H14	Harness, Lower Controls	6764

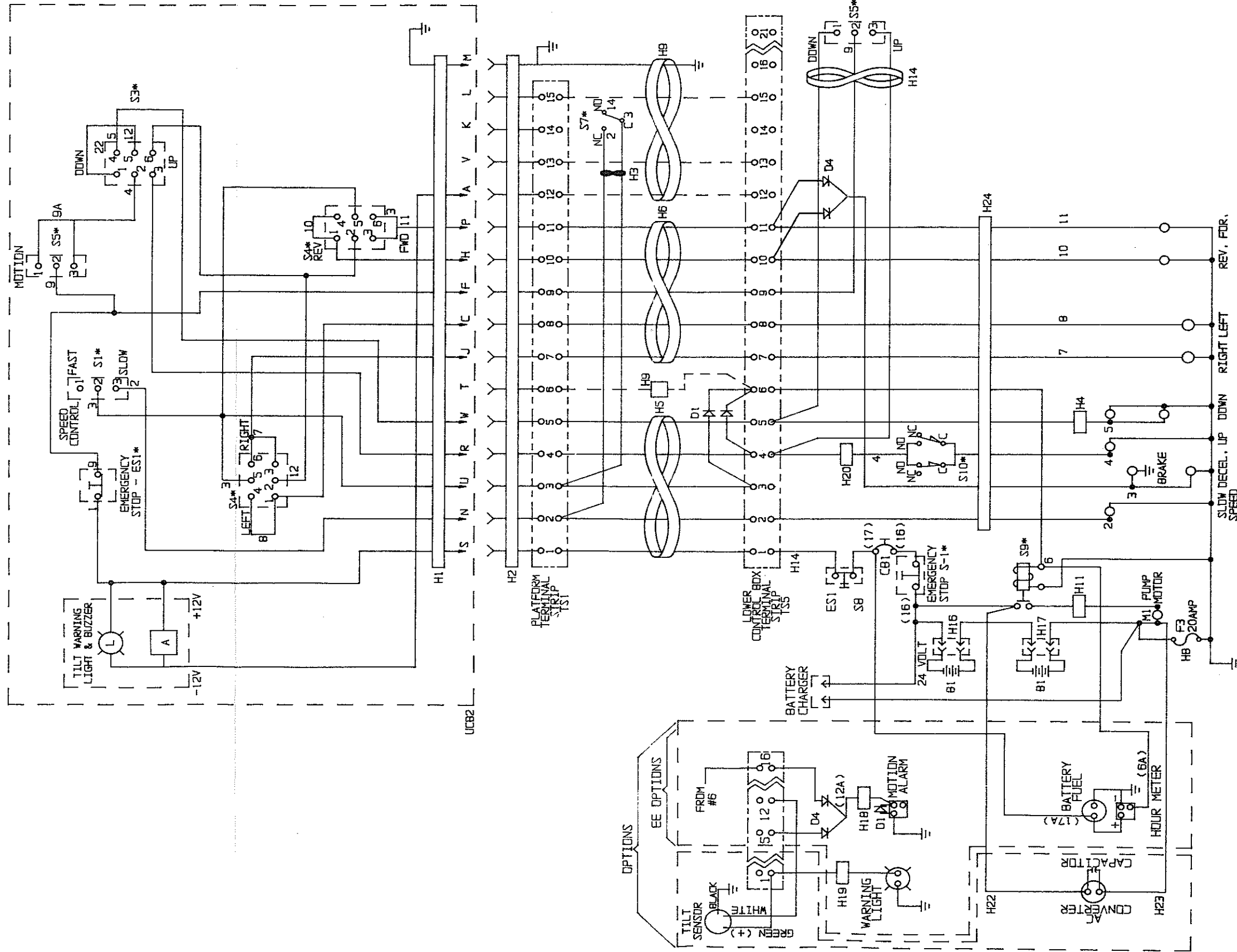
Qty.	Symbol	Description	Part No.
1	H16	Jumper, Battery, 16 in.	7017
2	H17	Jumper, Battery, 5 in.	6208
2		Cable Assembly, Connector	6687
2	M1	Motor, 24V	6194
	S1	Switch Assy., Emergency Stop	7800
1	S2	Toggle Switch (Fast/Slow)	5630
3		Toggle Boot	5692
1	S3	Toggle Switch (Up/Down) (See diagram below)	5979
2	S4	Toggle Switch (Drive/Steer)	5694
2	S5	Toggle Switch (Up/Down - Lower Control, Secondary Motor)	5230
1	S6	Toggle Switch (Speed/Power)	6234
1	S7	Plunger Switch (Speed Limit)	6715
1	S8	Key Switch (w/Keys)	5936
2		Key Only	5991
2	S9	Contactor, Motor	5967
2	S10	Plunger Switch (Stabilizer Limit)	6016
2	TS1	Terminal Strip	5991
1	UCB1	Control Box, Upper	2107

*** Up/Down Switch Diagram (at Upper Control Box)**



WIRING DIAGRAM

mecNARO 20 (STANDARD & STANDARD EE SERIES)
Models 2034 & 2042
1992 and Later Models



Symbol Identification for
WIRING DIAGRAM
NARO 20 (STANDARD & STANDARD EE SERIES)
Models 2034 & 2042
1992 and Later Models

Qty.	Symbol	Description	Part No.	
			Standard	Standard EE
4	B1	Battery, 6V, Deep Cycle (GC2)	5970	5970
1	CB1	Circuit Breaker, 15 Amp	7235	7577
2	D1	Diode Assembly, 3 Amp, 600V (PIV)	6070	6070
	ES1	Emergency Stop Assembly		
1	F3	Fuse, 20 Amp	7275	7275
1	H1	Harness , Control Box w/Connector	7657*	7657
1	H2	Harness Upper Control Cord w/Connector	7656*	7656
1	H3	Harness, Speed Limit Switch	7070	7070
1	H4	Harness, Lift Cylinder Down Valve	6787	6787
1	H5	Harness, Base to Platform, Nos. 1-5	6739	6739
1	H6	Harness, Base to Platform, Nos. 7-11	6740	6740
1	H8	Harness, Ground	---	7588
1	H9	Harness, Base to Platform, Nos. 6, 12, 15	6741	6741
1	H14	Harness, Lower Controls	6764	6764
1	H16	Cable, Battery Jumper Awg 2-23 in.	7017	7613
1	H20	Harness, Power, Ground & Stabilizer Switches	7912	7603
1	H24	Harness, Manifold, Standard	6805	6805
1	M1	Motor, 24VDC Permanent Magnet	6194	7169
3	S1	Switch - SP, ST Toggle	5630	5630
2		Switch Guard Emergency Stop	7622	7622
1	S3	Switch - DP, DT, 2-Way Interlock, SR Toggle	5979	5979
2	S4	Switch - DP, DT, SR Toggle	5694	5694
2	S5	Switch - SP, DT, SR Toggle	5230	5230
1	S7	Switch - Speed Limit - Plunger	6715	6715
1	S8 Serv.	Switch - Key w/2 Keys	5936	5936
		Key - Only	6117	6117
1	S9	Contactor - Motor Run	5967	5967
2	S10	Switch - Stabilizer Limit, w/Roller	6016	7583
1	TS1	Terminal Strip	5991	5991
1	TS5	Terminal Strip	6947	6947
	UCB2	Upper Control Box (Also see pages 82, 83, or 84)	4940	4940

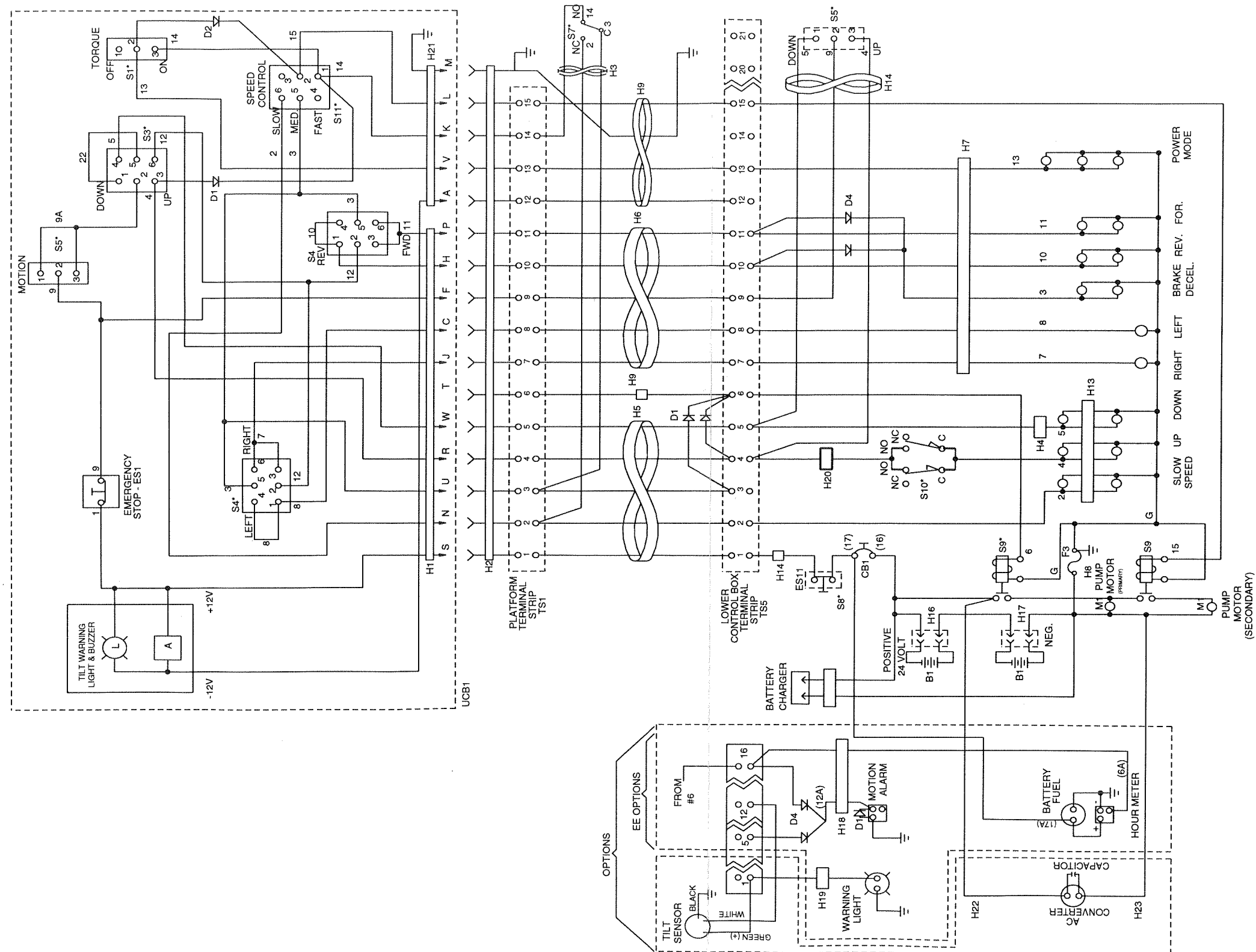
* Part Numbers shown are for standard machines built after 1-1-92. For machines built before that date, order part no. 5983 for Harness H2 and part no. 5982 for Harness H1.

Key:
SP = Single Pole
DT = Double Throw
SR = Spring Return
ST = Single Throw
DP = Double Pole

OPTIONS

Qty.	Symbol	Description	Part No.	
			Standard	Standard EE
1	AC	AC Converter	7103	N/A
1	A1	Alarm - Tilt Warning	7553	7553
1	BC	Battery Charger (Also see page 62)	6995	6995
1	BF	Battery Fuel Gauge	7099	7099
1	CA	Ceramic Capacitor .1 MF	7130	N/A
1	D1	Diode, Motion Alarm	6070	Not Used
1	D4	Diode, Dual	6946	6946
1	HM	Hour Meter	6857	7590
2	H11	Cable Assembly, Connector	6687	7615
1		Harness, 110VAC Outlet Assembly	6746	6746
2	H17	Jumper - Battery 8.5M Awg #2	6208	7614
1	H18	Harness - Battery Fuel Gauge, Motion Alarm, Hour Meter	7604	7604
1	H19	Harness - Warning Light	4914	4914
1	H22	Harness - AC Converter Red	7114	N/A
1	H23	Harness - AC Converter Black	7113	N/A
1	L1	Indicator Light - Tilt Warning	6906	6906
1	MA	Motion Alarm	7102	7630
1	TS2	Tilt Sensor 4-1/2° 1 Second Delay	7552	7552
1	WL	Warning Light	7105	7595

WIRING DIAGRAM
 mecNARO 20 (HIGH TORQUE & HIGH TORQUE EE SERIES)
 Models 2034HT & 2042HT
 1992 and Later Models



Symbol Identification for
WIRING DIAGRAM
NARO 20 (HIGH TORQUE & HIGH TORQUE EE SERIES)
Models 2034HT & 2042HT
1992 and Later

OPTIONS

Qty.	Symbol	Description	Part No.	
			Hi-Torque	Hi-Torque EE
4	B1	Battery, 6V, Deep Cycle (GC2)	5970	5970
1	CB1	Circuit Breaker	7235	7577
3	D1	Diode Assembly, 3 Amp, 600V (PIV)	6070	6070
1	D2	Diode , 3 Amp 600V (PIV)	6241	6241
	ES1	Emergency Stop Assembly		
1	F3	Fuse. 20 Amp	7275	7275
1	H1	Harness , Control Box w/Connector	7657*	7657
1	H2	Harness Upper Control Cord w/Connector	7656*	7656
1	H3	Harness, Speed Limit Switch	7070	7070
1	H4	Harness, Lift Cylinder Down Valve	6787	6787
1	H5	Harness, Base to Platform Nos. 1-5	6739	6739
1	H6	Harness, Base to Platform Nos. 7-11	6740	6740
1	H7	Harness, Secondary Manifold	6766 ⁵	6766
1	H8	Harness, Ground	---	7588
1	H9	Harness, Base to Platform Nos. 6, 12-15	6741	6741
1	H13	Harness, Primary Manifold	6765 ⁶	6765
1	H14	Harness, Lower Controls	6764	6764
1	H16	Cable - Battery Jumper Awg 2-23 in.	7017	7613
1	H20	Harness, Power, Ground & Stabilizer Switches	7076	7603
1	H21	Harness, HT Wire Set	7658*	7658
1	M1	Motor, 24VDC Permanent Magnet	6194	7169
3	S1	Switch - SP, ST Toggle	5630	5630
2		Switch Guard Emergency Stop	7622	7622
1	S3	Switch - DP, DT, 2-Way Interlock, SR Toggle	5979	5979
2	S4	Switch - DP, DT, SR Toggle	5694	5694
2	S5	Switch - SP, DT, SR Toggle	5230	5230
1	S7	Switch - Speed Limit - Plunger	6715	6715
1	S8 Serv.	Switch - Key w/2 Keys	5936	5936
		Key - Only	6117	6117
2	S9	Contactor - Motor Run	5967	5967
2	S10	Switch - Stabilizer Limit, w/Roller	6016	7583
1	S11	Switch - DP - 3-Position Toggle	7633	7633
1	TS1	Terminal Strip	5991	5991
	UCB1	Upper Control Box (Also see pages 82, 83, or 84)	4920	4920
		Earlier Models Used	2992	N/A

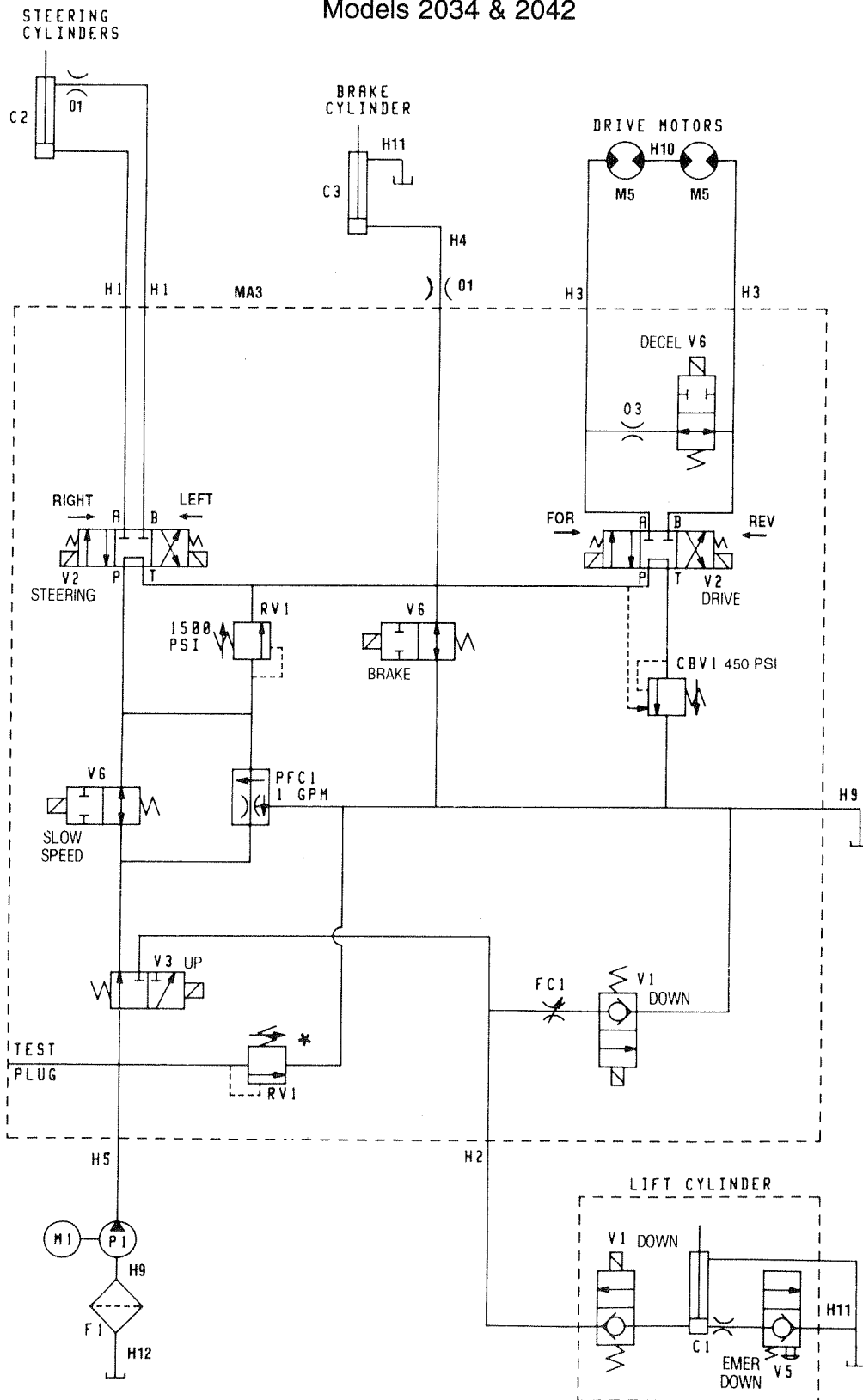
Qty.	Symbol	Description	Part No.	
			Standard	Standard EE
1	AC	AC Converter	7103	N/A
1	A1	Alarm - Tilt Warning	6906	6906
1	BC	Battery Charger (Also see page 62)	6995	6995
1	BF	Battery Fuel Gauge	7099	7099
1	CA	Ceramic Capacitor .1 MF	7130	N/A
1	D1	Diode, Motion Alarm	6070	Not Used
1	D4	Diode, Dual	6946	6946
1	HM	Hour Meter	6857	7590
2	H11	Cable Assembly, Connector	6687	7615
1		Harness, 110VAC Outlet Assembly	6746	6746
2	H17	Jumper - Battery 8.5M Awg #2	6208	7614
2		Cable Assembly w/Connector	6687	7615
1	H18	Harness - Battery Fuel Gauge, Motion Alarm, Hour Meter	7604	7604
1	H19	Harness - Warning Light	4914	4914
1	H22	Harness - AC Converter Red	7114	N/A
1	H23	Harness - AC Converter Black	7113	N/A
1	L1	Indicator Light - Tilt Warning	7553	7553
1	MA	Motion Alarm	7102	7630
1	TS2	Tilt Sensor 4-1/2° 1 Second Delay	7552	7552
1	WL	Warning Light	7105	4913

* Part Numbers shown are for standard machines built after 1-1-92. For machines built before that date, order part no. 5983 for Harness H2, part no. 5982 for Harness H1, and part no. 6296 for H21.

Key:
SP = Single Pole
DT = Double Throw
SR = Spring Return
ST = Single Throw
DP = Double Pole

HYDRAULIC SCHEMATIC

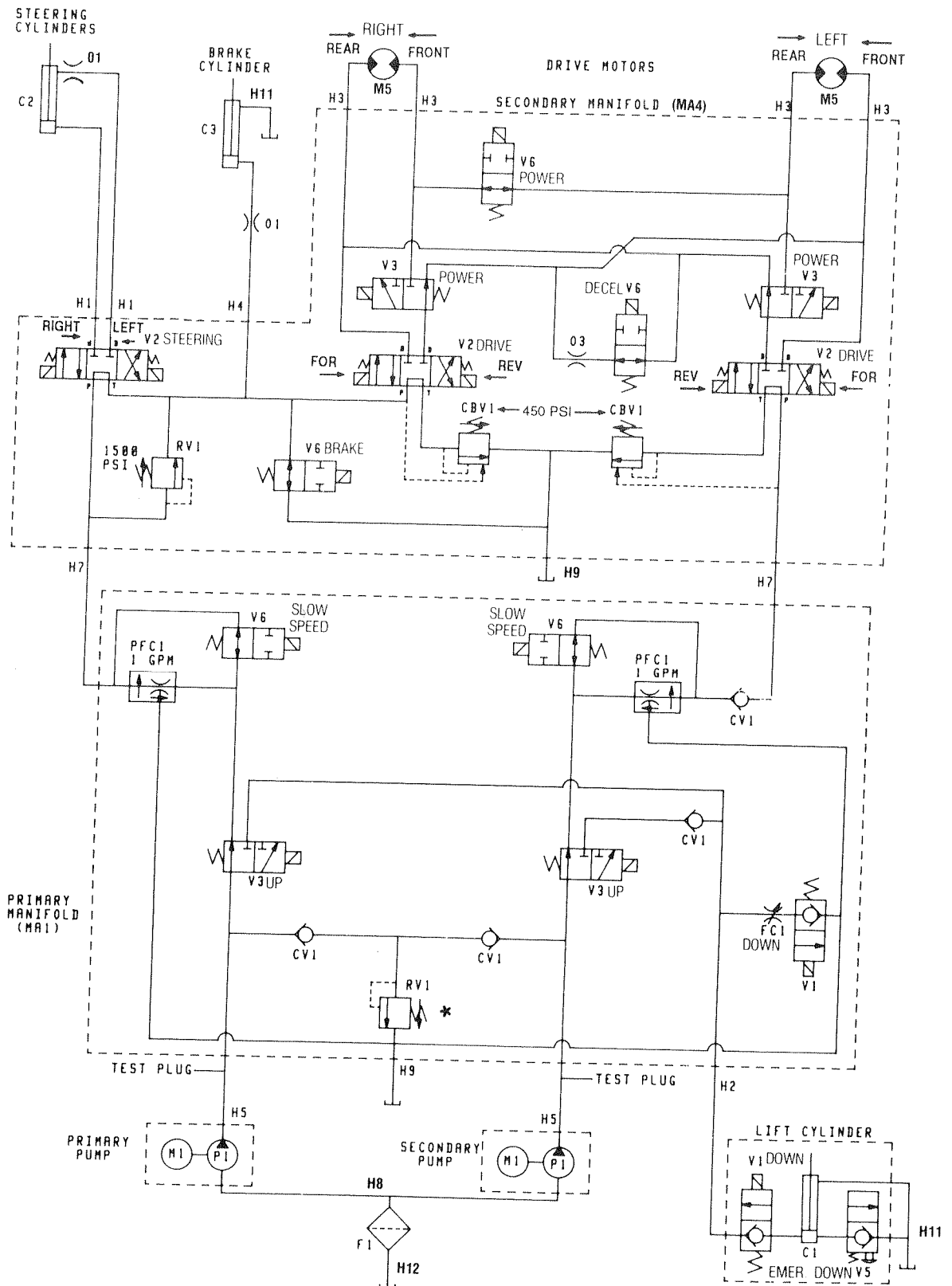
meccANARO 20 (STANDARD SERIES)
Models 2034 & 2042



NOTE: Refer to symbol chart for setting Relief Valve.

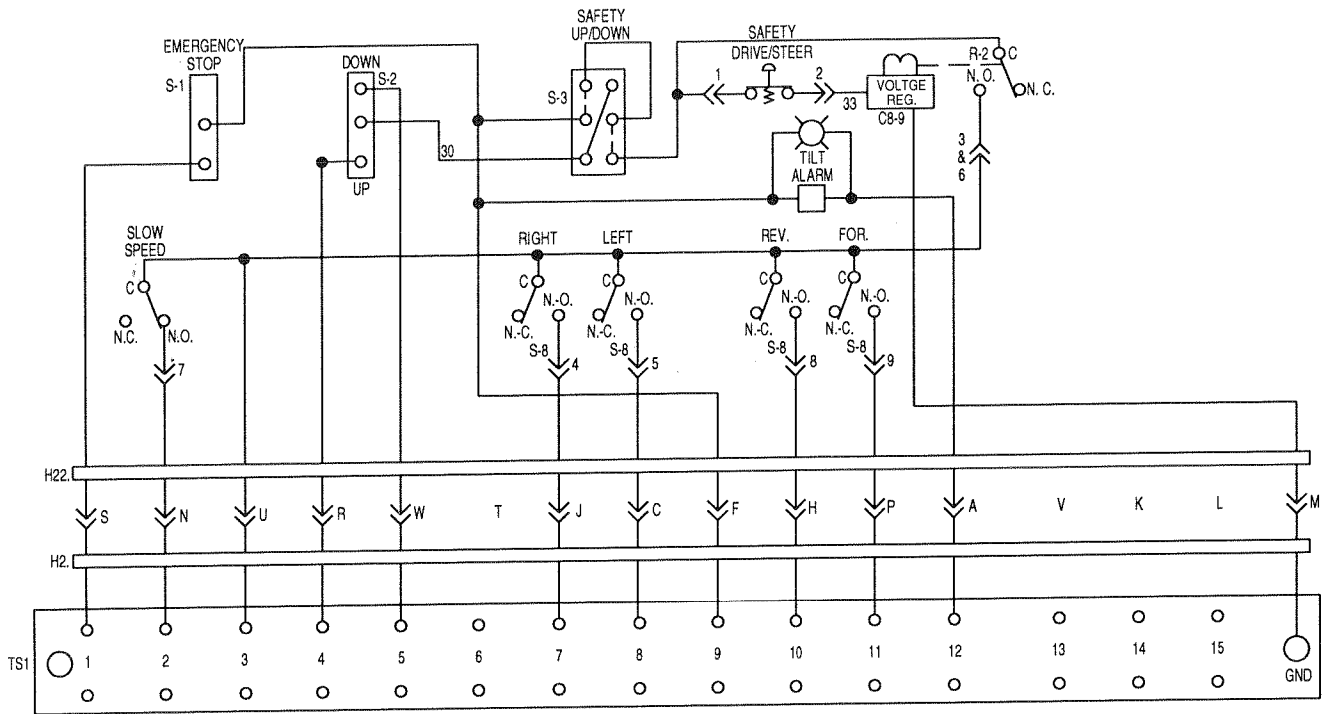
HYDRAULIC SCHEMATIC

meccANO 20 (HIGH TORQUE SERIES)
Models 2034HT & 2042HT



* NOTE: Refer to symbol chart for setting Relief Valve.

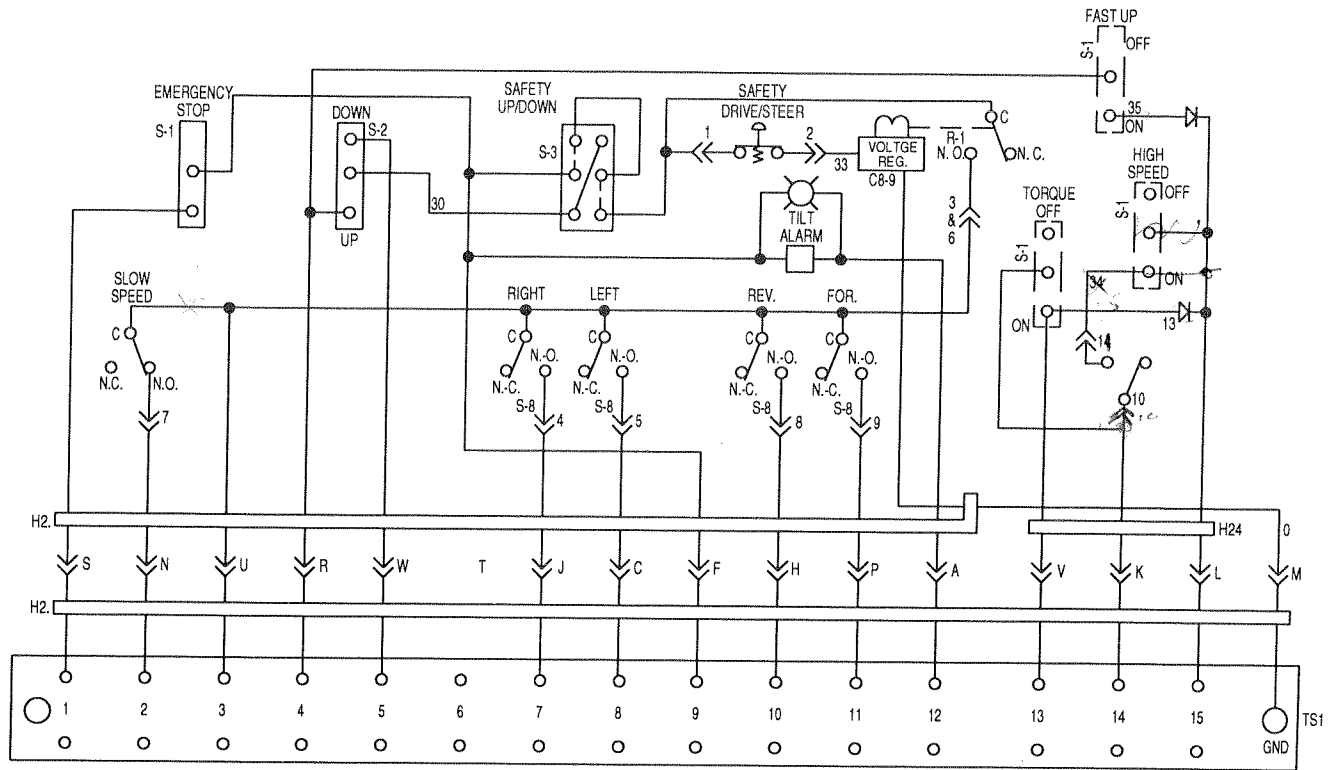
WIRING DIAGRAM **meconARO 20 (STANDARD SERIES)** **JOYSTICK CONTROL BOX**



WIRING IS NOT CHANGED FROM
UPPER TERMINAL STRIP TO BASE

ART-198

WIRING DIAGRAM mec **NARO 20 (HIGH TORQUE SERIES)** **JOYSTICK CONTROL BOX**

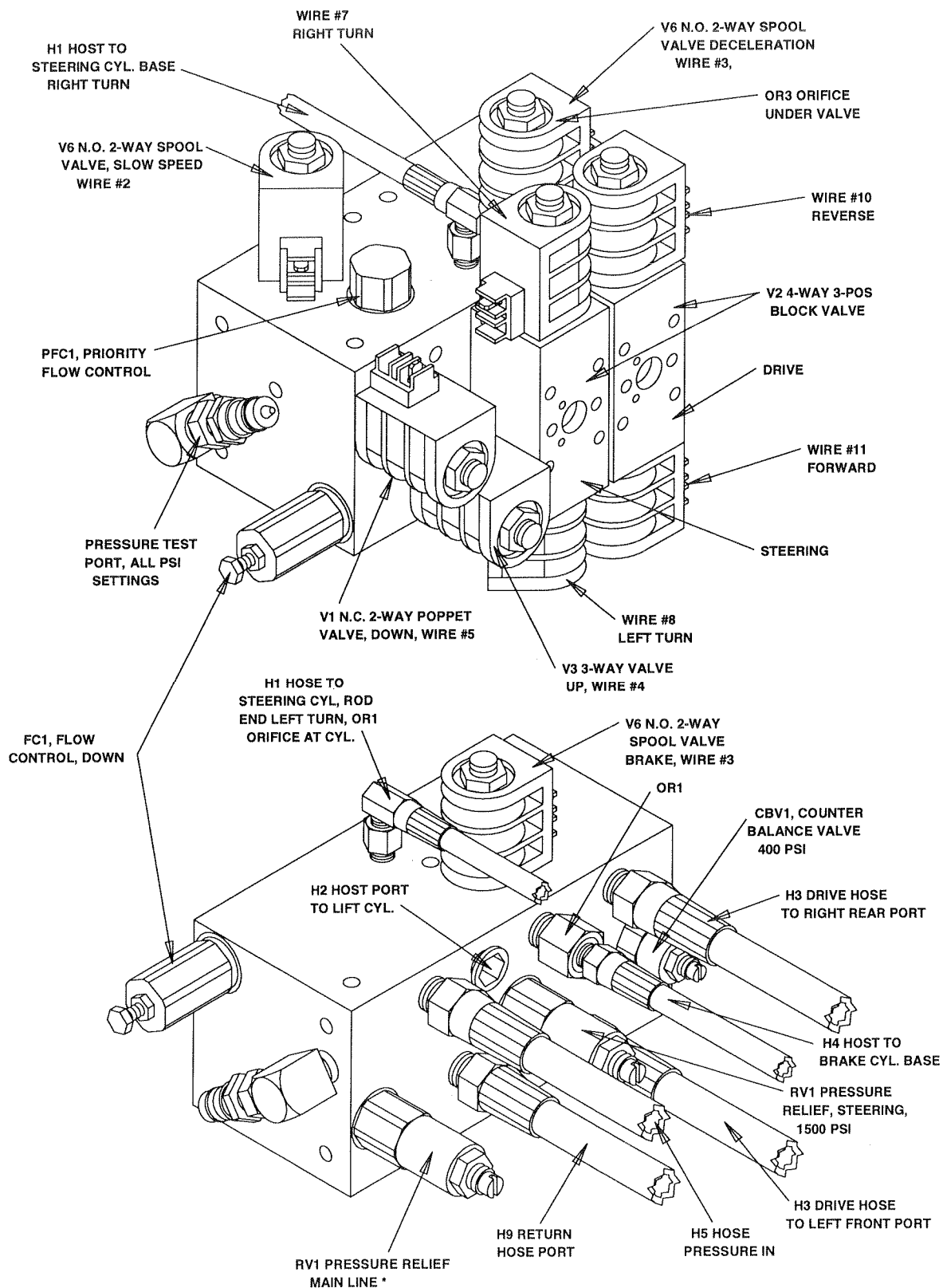


WIRING IS NOT CHANGED FROM
UPPER TERMINAL STRIP TO BASE

ART-197

2 VIEWS OF MANIFOLD

mec NARO 20 (STANDARD SERIES)



ART-180

* NOTE: Refer to symbol chart for setting Relief Valve.

**Symbol Identification for
MANIFOLD**
mecNARO 20 (STANDARD SERIES)

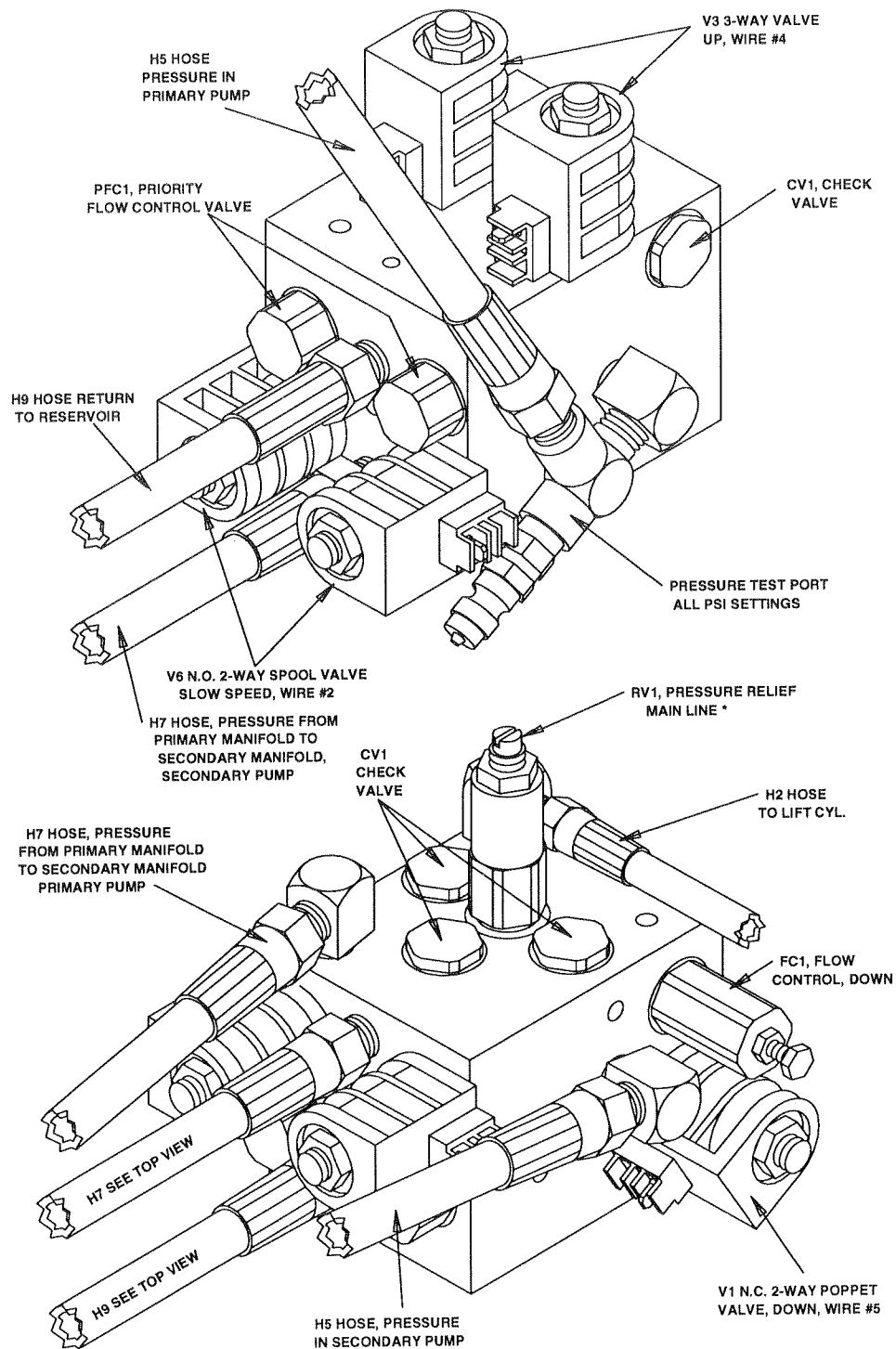
Qty.	Symbol	Description	Part No.	Qty.	Symbol	Description	Part No.
1	C1	Lift Cylinder	6871	1	MA3	Primary Manifold	3239
Service		Seal Kit	7078	1	O1	Orifice, Fitting Assembly .036	6107
1	C2	Steering Cylinder	2838	1	O3	Orifice, Fitting (Brass) Hole .062	2975
1		Barrel Weldment	2484	1	P1	Hydraulic Pump	6994
1		Cylinder Head	2493	1	PFC1	Priority Flow Control	
1		Piston	2494			1.0 GPM (Std.)	5954
1		Cylinder Rod	2837	1		Priority Flow Control	
1		Internal Retaining Ring	6337			.5 GPM (Special)	6189
1		Nut, 1/2-20 Lock	6338	Service		"O" Ring Kit	5475
Service		Seal Kit	5947	2	RV1*	Relief Valve	6316
1	C3	Brake Cylinder	2483	Service		"O" Ring Kit	5475
1		Barrel Weldment	2485	2	V1	2-Way N.C. Valve	
1		Cylinder Head	2493	Service		"O" Ring Kit	5475
1		Piston	2494			Valve Only	6973
1		Cylinder Rod	2504	†		Coil Only 24 VDC	6163
1		Internal Retaining Ring	6337			NOTE: Lift Cylinder Coil Only	7833
1		Nut, 1/2-20 Lock	6338	2	V2	4-Way 3-Position Valve	7976
Service		Seal Kit	5947	Service		Spring and "O" Ring Kit	6161
1	CBV1	Counterbalance Valve	6712	†		Coil Only 24 VDC	6163
Service		"O" Ring Kit	6806	1	V3	3-Way 2-Position Valve	
1	F1	Filter Element	6156	Service		"O" Ring Kit	5476
1	FC1	Flow Control	5963			Valve Only	6976
Service		"O" Ring Kit	5475	†		Coil Only 24 VDC	6163
2	H1	Hose, Steering	7066	1	V5	Manual Pull - Emergency Down	5435
1	H2	Hose, Lift	7005	Service		"O" Ring Kit	5475
2	H3	Hose, Drive	7006	3	V6	2-Way N.O. (Spool Valve)	
Service		Seal Kit	6675	Service		"O" Ring Kit	5475
1	H4	Hose, Brake	6722			Valve Only	6975
1	H5	Hose	7067	†		Coil Only 24 VDC	6163
2	H9	Return/Suction Hose	6225				
1	H10	Hose, Crossover, 34"	5996				
1		Hose, Crossover, 42"	7082				
25 ft.	H11	Return Line, 5/16 I.D. Fuel Line	6458				
1	H12	Hose, Tank to Filter	7058				
1	M1	24 VDC Motor	6194				
2	M5	Drive Motor, Model 2034	6987P				
Service		Seal Kit	6815				
2		Drive Motor, Model 2042	7037P				
Service		Seal Kit	6815				

*Relief Valve Pressure Relief		
Model	Setting	Lift Capacity
2034	2,000 PSI	750 lbs.
2034 HT	2,000 PSI	750 lbs.
2042	2,250 PSI	1,000 lbs.
2042 HT	2,250 PSI	1,000 lbs.

Service = Service Uses
† = 10 Total Coils

2 VIEWS PRIMARY MANIFOLD

meccano NARO 20 (HIGH TORQUE SERIES)

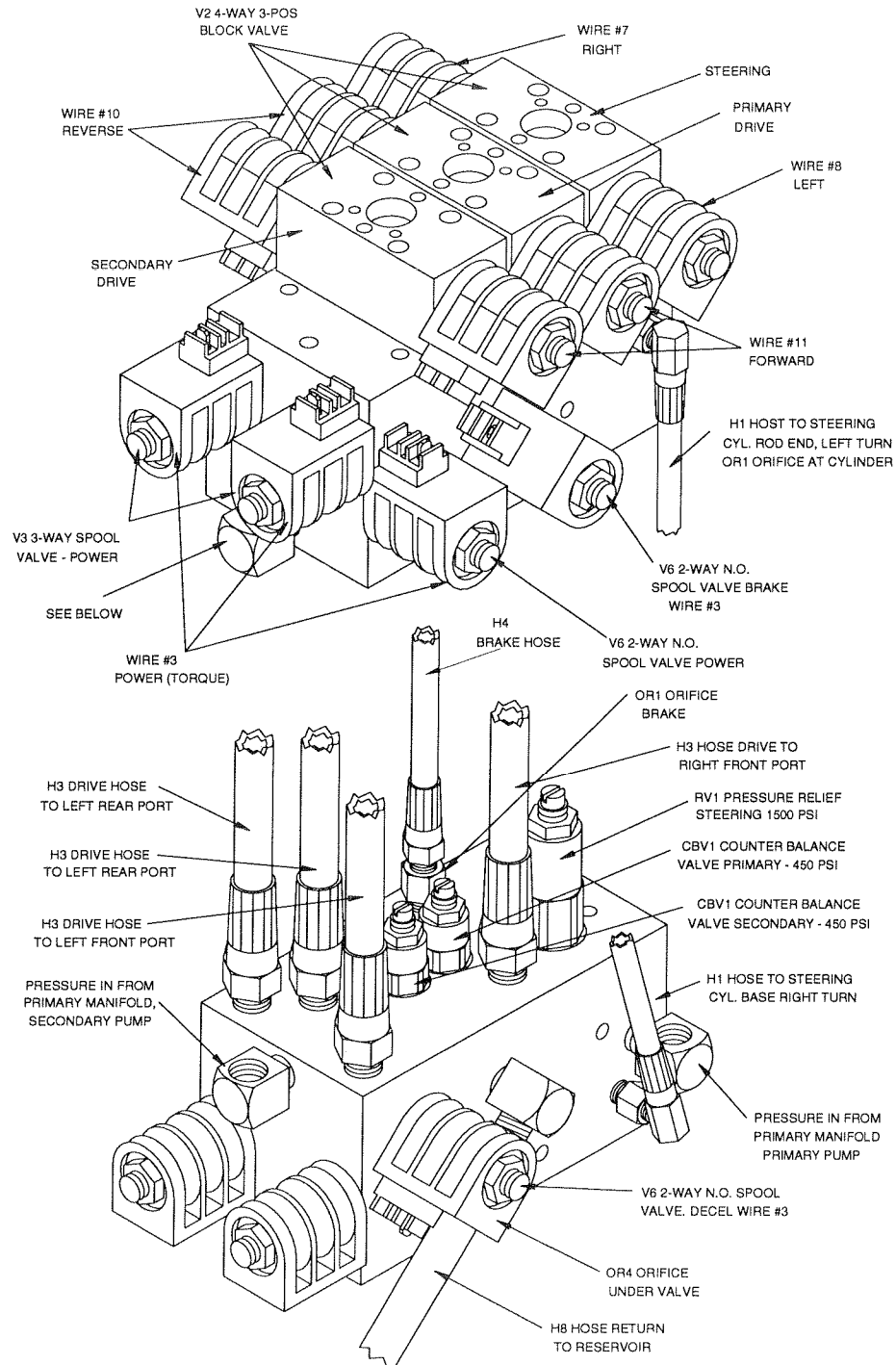


ART-181

* NOTE: Refer to symbol chart for setting Relief Valve.

2 VIEWS SECONDARY MANIFOLD

m6c NARO 20 (HIGH TORQUE SERIES)



ART-182

* NOTE: Refer to symbol chart for setting Relief Valve.

**Symbol Identification for
MANIFOLD**
mecNARO 20 (HIGH TORQUE SERIES)

Qty.	Symbol	Description	Part No.
1	C1	Lift Cylinder	6871
Service		Seal Kit	7078
1	C2	Steering Cylinder	2838
1		Barrel Weldment	2484
1		Cylinder Head	2493
1		Piston	2494
1		Cylinder Rod	2837
1		Internal Retaining Ring	6337
1		Nut, 1/2-20 Lock	6338
Service		Seal Kit	5947
1	C3	Brake Cylinder	2483
1		Barrel Weldment	2485
1		Cylinder Head	2493
1		Piston	2494
1		Cylinder Rod	2504
1		Internal Retaining Ring	6337
1		Nut, 1/2-20 Lock	6338
Service		Seal Kit	5947
2	CBV1	Counterbalance Valve	6712
Service		"O" Ring Kit	6806
4	CV1	Check Valve	5434
Service		"O" Ring Kit	5475
1	F1	Filter Element	6156
1	FC1	Flow Control	5963
Service		"O" Ring Kit	5475
2	H1	Hose, Steering	7066
1	H2	Hose, Lift	7005
4	H3	Hose, Drive	7006
Service		Seal Kit Swivel Fitting	6675
1	H4	Hose, Brake	6722
2	H5	Hose, Pump to Manifold	7067
2	H7	Hose, Manifold to Manifold	6429
2	H8	Hose, Suction	6225
2	H9	Hose, Return	5995
25 ft.	H11	Return Line, 5/16 I.D. Fuel Line	6458
1	H12	Hose, Tank to Filter	7058
2	M1	24 VDC Motor	6194
2	M5	Drive Motor (Hydraulic)	
		Model 2034 HT	6987P
Service		Seal Kit	6815
2		Drive Motor (Hydraulic)	
		Model 2042 HT	7037P
Service		Seal Kit	6815

Qty.	Symbol	Description	Part No.
1	MA1	Primary Manifold	3595
1	MA4	Secondary Manifold	3480
2	O1	Orifice, Fitting Assembly .036	6107
1	O4	Orifice, Fitting (Brass) .062	2975
2	P1	Hydraulic Pump	6994
2	PFC1	Priority Flow Control	
		1.0 GPM (Std.)	5954
		Priority Flow Control	
		.5 GPM (Special)	6189
Service		"O" Ring Kit	5475
2	RV1*	Relief Valve	6316
Service		"O" Ring Kit	5475
2	V1	2-Way N.C. Valve	
Service		"O" Ring Kit	5475
		Valve Only	6973
†		Coil Only 24 VDC	6163
		NOTE: Lift Cylinder Coil Only	7833
3	V2	4-Way 3-Position Valve	7976
Service		Spring and "O" Ring Kit	6161
†		Coil Only 24 VDC	6163
4	V3	3-Way 2-Position Valve	
Service		"O" Ring Kit	5476
		Valve Only	6976
†		Coil Only 24 VDC	6163
1	V5	Manual Pull - Emergency Down	5435
Service		"O" Ring Kit	5475
5	V6	2-Way N.O. (Spool Valve)	
Service		"O" Ring Kit	5475
		Valve Only	6975
†		Coil Only 24 VDC	6163

*Relief Valve Pressure Release		
Model	Setting	Lift Capacity
2034	2,000 PSI	750 lbs.
2034 HT	2,000 PSI	750 lbs.
2042	2,250 PSI	1,000 lbs.
2042 HT	2,250 PSI	1,000 lbs.

Service = Service Uses
† = 17 Total Coils