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305 -001 thru -004

Ritter® by MIDMARK

Power Examination Table

Serial Number Prefix:
GW, GX, JJ, JK & V

Service and Parts Manual

NO LONGER IN PRODUCTION

Some service parts may not be available for this product!

To purchase a printed copy of this manual, click on the "Place Order" button below.

Place Order

MA375601

FOR USE BY MIDMARK TRAINED TECHNICIANS ONLY

305 -001 thru -004

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(*) Indicates that there has been a serial number break for the illustration and that there are additional point page(s) following the original page.

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IMPORTANT INSTRUCTIONS

General Safety Instructions

Safety First: The primary concern of Midmark Corporation is that this table is maintained with the safety of the patient and staff in mind. To assure that services and repairs are completed safely and correctly, proceed as follows:

(1) Read this entire manual before performing any services or repairs on this table.

(2) Be sure you understand the instructions contained in this manual before attempting to service or repair this table.

Safety Alert Symbols

Throughout this manual are safety alert symbols that call attention to particular procedures. These items are used as follows:

DANGER

A DANGER is used for an imminently hazardous operating procedure, practice, or condition which, if not correctly followed, will result in loss of life or serious personal injury.

WARNING

A WARNING is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in loss of life or serious personal injury.

CAUTION

A CAUTION is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

An EQUIPMENT ALERT is used for an imminently or potentially hazardous operating procedure, practice, or condition which, if not correctly followed, will or could result in serious, moderate, or minor damage to unit.

NOTE

A NOTE is used to amplify an operating procedure, practice or condition.

Warranty Instructions

Refer to the Midmark “Limited Warranty” printed in the Installation and Operation Manual for warranty information. Failure to follow the guidelines listed below will void the warranty and/or render the 300 Medical Examination Table unsafe for operation.

- In the event of a malfunction, do not attempt to operate the table until necessary repairs have been made.
- Do not attempt to disassemble table, replace malfunctioning or damaged components, or perform adjustments unless you are one of Midmark’s authorized service technicians.
- Do not substitute parts of another manufacturer when replacing inoperative or damaged components. Use only Midmark replacement parts.

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SECTION I
GENERAL INFORMATION

1.1 Scope of Manual

This manual contains detailed troubleshooting, scheduled maintenance, and service instructions for Model 305 Medical Examination Table. This manual is intended to be used by Midmark's authorized service technicians.

1.2 How to Use Manual

A. Manual Use When Performing Scheduled Maintenance.

(1) Perform inspections and services listed in Scheduled Maintenance Chart (Refer to para 3.1).

(2) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

B. Manual Use When Table Is Malfunctioning And Cause Is Unknown.

(1) Perform an operational test on table (Refer to para 2.1).

(2) Perform troubleshooting procedures listed in Troubleshooting Guide (Refer to para 2.2).

(3) If a component is discovered to be faulty or out of adjustment, replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

C. Manual Use When Damaged Component Is Known.

(1) Replace or adjust component in accordance with maintenance/service instructions (Refer to para 4.1).

1.3 Description Of Model 305 Medical Examination Table.

A. General Description (See Figure 1-1).

The Model 305 Series Medical Examination Table is primarily used in examination rooms for general examinations and minor procedures. The table top is adjustable from a full horizontal position to a chair position. Also, when supported with an optional pelvic lift bar, the lithotomy position can be achieved. There are two storage drawers at the foot-end and doors on the left and right sides at the head-end for bulk storage which accommodate supplies used during examinations.

The major serviceable components of the table are the drawer heater plate (optional) (1, Figure 1-1), heater ON/OFF switch (optional) (2), electrical receptacle (3), hydraulic motor / pump assembly (4), motor / pump capacitors (5), two hydraulic base cylinders (6), one hydraulic back cylinder (7), footswitch assembly (8), and two stirrup assemblies (9).

The Model 305 Series Medical Examination Table is available in two different configurations and are distinguished by the following model numbers:

Model **305-001**	Non-pelvic tilt, bulk storage doors on the right and left sides at the head-end.
Model **305-002**	Pelvic tilt w/ heater, bulk storage doors on the right and left sides at the head-end.

B. Theory of Operation (See Figures 5-1 for wiring diagrams / electrical schematics.

Electrical Power:
115 VAC line voltage is supplied thru the power cord to electrical receptacles located on the side of the table. As long as the power cord is plugged into a supply outlet 115 VAC power will be present at the receptacles.

Optional Heater Plate:
Some units are equipped with the optional heater plate for drawer warming. When the operator turns the normally open (N.O.) Heater On/Off Switch to ON, closing the circuit, power is supplied to the 60 watt heater plate, heating the unit. This provides heat in the top, foot end drawer to warm instruments.

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GENERAL INFORMATION

Legend

1. Drawer Heater Plate (Optional)
2. Heater ON / OFF Switch (Optional)
3. Electrical Receptacle
4. Hydraulic Motor / Pump Assembly
5. Motor / Pump Capacitors
6. Hydraulic Table Base Cylinders
7. Hydraulic Table Back Cylinder
8. Footswitch Assembly
9. Stirrup Assembly

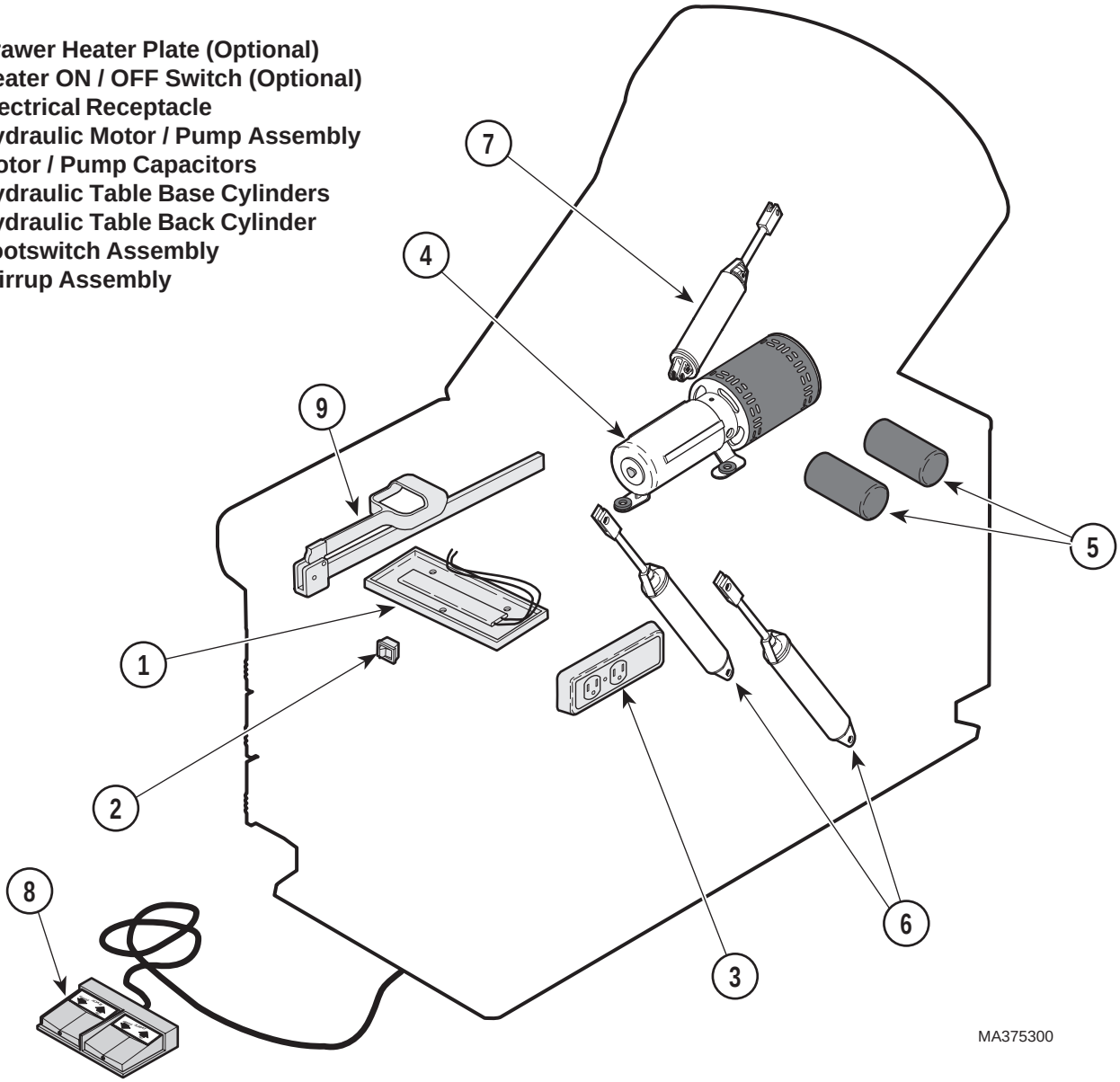

Figure 1-1. Major Components

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Raising Table (Depressing the Table "UP" foot switch).
When the foot switch for the TABLE "UP" position is depressed the normally closed (N.C.) contacts on switches SW1 and SW2 open and the normally open (N.0.) contacts close.
Current flows thru the normally closed (C-N.C.) contacts of SW7, SW5 and SW3 to the C-N.O. ***closed*** contacts on SW1 to the Base Hydraulic Cylinder Solenoid Valves opening the valves.
At the same time current flows thru the C-N.O. ***closed*** contacts on SW2 to the "Forward Direction" windings of the Hydraulic Motor Pump energizing the motor pump.
With the Hydraulic Motor Pump running, hydraulic fluid from the reservoir is pumped thru the system to the Base Hydraulic Cylinder Solenoid Valves, extending the cylinder rods and raising the table top.
When you remove your foot from the Table "UP" foot switch the motor pump stops running and the base cylinder solenoid valves close.
With the base cylinder solenoid valves closed the table top remains at the elevated height.

Lowering Table (Depressing the Table "DOWN" foot switch).
When the foot switch for the TABLE "DOWN" position is depressed the normally closed (N.C.) contacts on switches SW3 and SW4 open and the normally open (N.O.) contacts close.
Current flows thru the normally closed (C-N.C.) contacts of SW7 and SW5 to the C-N.O. ***closed*** contacts on SW3 to the Base Cylinder Solenoid Valves opening the valves.
At the same time current flows thru the C-N.O. ***closed*** contacts on SW4 to the "Reverse Direction" windings of the Hydraulic Motor Pump energizing the motor pump.
With the Hydraulic Motor Pump running in reverse and the Base Hydraulic Cylinder Solenoid Valves open, hydraulic fluid is returned to the reservoir causing the cylinder rods to retract, lowering the table top.

Raising the Back Section (Depressing the Back "UP" foot switch).
When the foot switch for the BACK "UP" is depressed the normally closed (N.C.) contacts on switches SW5 and SW6 open and the normally open (N.O.) contacts close.
Current flows thru the normally closed (C-N.C.) contacts of SW1 and SW3 to the C-N.O. ***closed*** contacts on SW5 to the Back Hydraulic Cylinder Solenoid Valve opening the valve.
At the same time current flows thru the C-N.O. ***closed*** contacts on SW6 to the "Forward Direction" windings of the Hydraulic Motor Pump energizing the motor pump.
With the Hydraulic Motor Pump running, hydraulic fluid from the reservoir is pumped thru the system to the Back Hydraulic Cylinder Solenoid Valve, extending the cylinder rods and raising the back section.
When you remove your foot from the Back "UP" foot switch the motor pump stops running and the back cylinder solenoid valve closes.
With the back cylinder solenoid valve closed the back section remains at the elevated position.

Lowering the Back Section (Depressing the Back "DOWN" foot switch).
When the foot switch for the BACK "DOWN" position is depressed the normally closed (N.C.) contacts on switches SW7 and SW8 open and the normally open (N.O.) contacts close.
Current flows thru the normally closed (C-N.C.) contacts of SW1, SW3, and SW5 to the C-N.O. ***closed*** contacts of SW7 to the Back Hydraulic Cylinder Solenoid Valve opening the valve.
At the same time current flows thru the C-N.O. ***closed*** contacts on SW8 to the "Reverse Direction" windings of the Hydraulic Motor Pump energizing the motor pump.
With the Hydraulic Motor Pump running in reverse and the Back Hydraulic Cylinder Solenoid Valve open, hydraulic fluid is returned to the reservoir causing the cylinder rod to retract, lowering the back section.

1.4 Standard Torque Specifications

The following standard torque specifications in Table 1-1 apply to the various hardware used on the units unless otherwise listed elsewhere in service procedures or parts illustrations:

Table 1-1. Torque Specifications

Hardware Size	Torque Values
#6	11 to 21 inch / lbs. (1.2 to 2.3 N•M)
#8	20 to 30 inch / lbs. (2.2 to 3.3 N•M)
#10	32 to 42 inch / lbs. (3.6 to 4.8 N•M)
1/4"	75 to 85 inch / lbs. (8.5 to 9.6 N•M)
5/16"	18 to 22 foot / lbs. (24.4 to 29.8 N•M)
3/8"	31 to 35 foot / lbs. (42.0 to 47.5 N•M)
1/2"	50 to 60 foot / lbs. (67.8 to 81.4 N•M)

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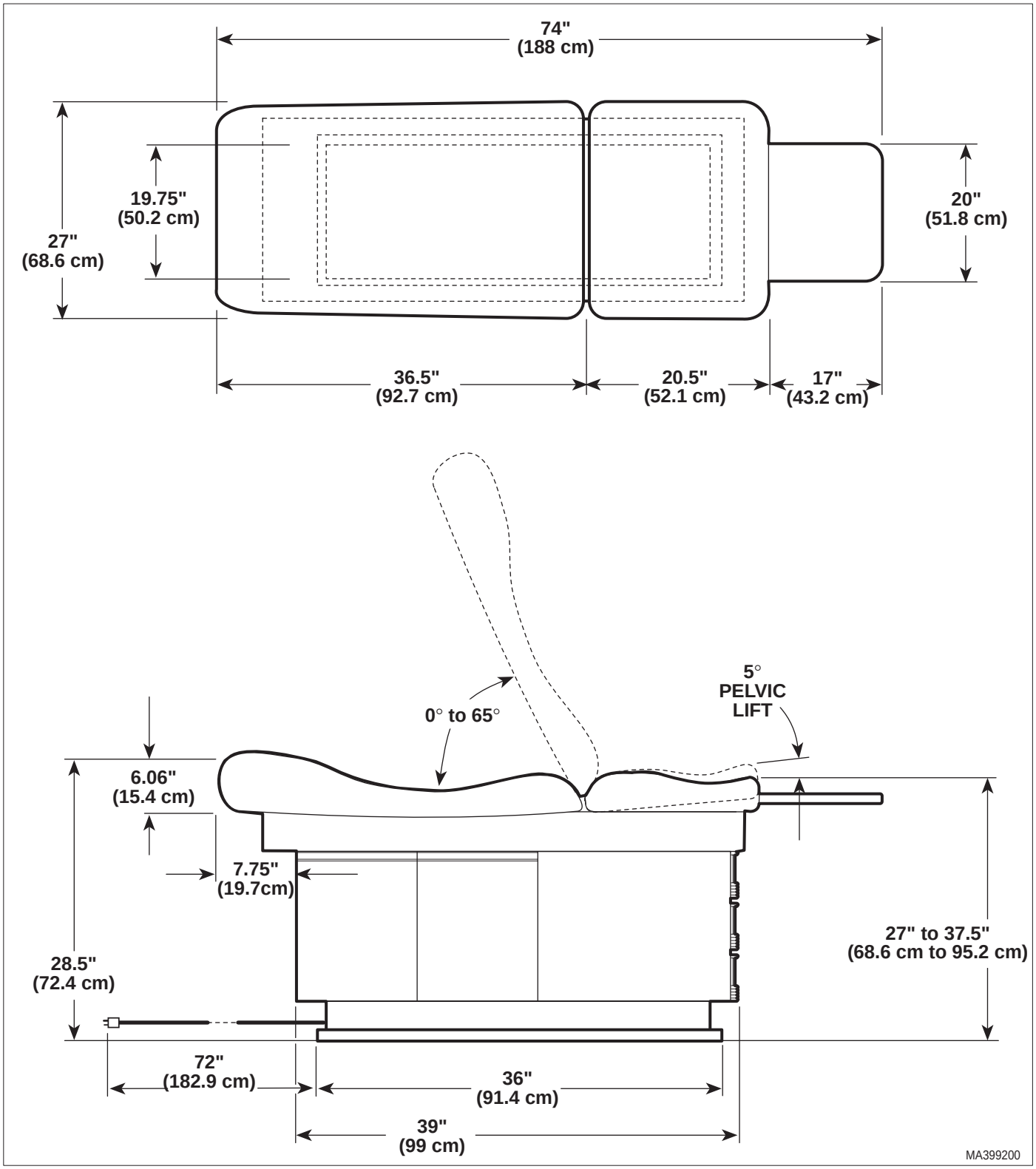

Figure 1-2. Table Dimensions

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Figure 1-3. Model Number / Serial Number Location

1.5 Specifications

Factual data for the 305 Medical Examination Table is provided in Table 1-2. Also, see Figure 1-2.

Table 1-2. Specifications

Description	Data
Weight:	
Without Shipping Carton	390 lbs (176.9 kg)
With Shipping Carton	450 lbs (204 kg)
Shipping Carton	60.5 in."L" x 30 in."W" x 42 in."H" (153.7 cm x 76.2 cm x 106.7 cm)
Dimensions (See Figure 1-2):	
Table Top Length	57 in. (144.8 cm)
Table Top Length (footrest extended)	74 in. (188 cm)
Table Top Width	27 in. (68.6 cm)
Overall Width	27 in. (68.6 cm)
Seat Height (to top of upholstered seat at foot end)	27 in. (68.6 cm)
Table Adjustment:	
Back Section (hydraulically adjusted)	0 to 70°
Weight Capacity (Maximum)	325 lb. (147.4 kg)
Electrical Requirements:	
115 VAC Unit	110 - 120 VAC, 60 HZ, 12 amp max., single phase
Power Consumption:	115 VAC Unit (126 VAC maximum-110 VAC minimum), 60 HZ, 11.5 amps (max. without heater) or 12.0 amps (max. with heater) 60 watt heater rating.

Recommended Circuit:

A separate (dedicated) circuit is recommended for this table. The table *should not* be connected to an electrical circuit with other appliances or equipment unless the circuit is rated for the additional load.

1.6 Parts Replacement Ordering

If a part replacement is required, order the part directly from the factory as follows:

NOTE
It is ***important*** that the ***entire*** Model ***and*** Serial Number be presented when ordering parts, scheduling a service call or seeking technical advice.

(1) Refer to Figure 1-3 to determine the location of the model number and serial number of the table and record this data.

(2) Refer to the Parts List to determine the item numbers of the parts, part numbers of the parts, descriptions of the parts, and quantities of parts needed and record this data (Refer to para 6.1).

NOTE
Ask the Purchasing Department of the company that owns the table for this information. Otherwise, this information may be obtained from the dealer that sold the table.

(3) Determine the installation date of the table and record this data.

(4) Call Midmark with the recorded information and ask for the Medical Products Technical Services Department. See back cover of this manual for the phone number or use the Fax Order Form (See page 7-2 for Fax Order Form).

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GENERAL INFORMATION

1.7 Special Tools

Table 1-3 lists all of the special tools needed to repair the table, how to obtain the special tools, and the purpose of each special tool.

Table 1-3. Special Tool List

Description of Special Tool	Manufacturer's Name / Address / Phone	Manufacturer's Part Number	Purpose of Special Tool
Multimeter	Commercially Available	Any Type	Used to perform continuity and voltage checks.
Pop Rivet Gun	Commercially Available	For installation of 1/8 in. pop rivets.	For installation of drawer slides and mullions.
Torque Wrench	Commercially Available	Any Type	Used to tighten nuts or screws to specified values.

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SECTION II
TESTING AND TROUBLESHOOTING

2.1 Operational Test (See Figure 2-1)

In order to effectively diagnose the malfunction of the table, it may be necessary to perform an operational test as follows:

WARNING
Refer to the Operator Manual for complete instructions on operating the table. Failure to do so could result in personal injury.

NOTE
The Operational Test, for the most part, only describes what should happen when the table is operated. If the table does something other than described, a problem has been discovered. Refer to the Troubleshooting Guide to determine the cause of the problem and its correction.

(1) Plug the table into a grounded, non-isolated, correctly polarized outlet, that has the proper voltage output for the table.

(2) Using a multimeter, check for proper voltage at the table's duplex receptacle.

Observe. There should be 110 to 120 VAC present at a 115 VAC unit receptacle.

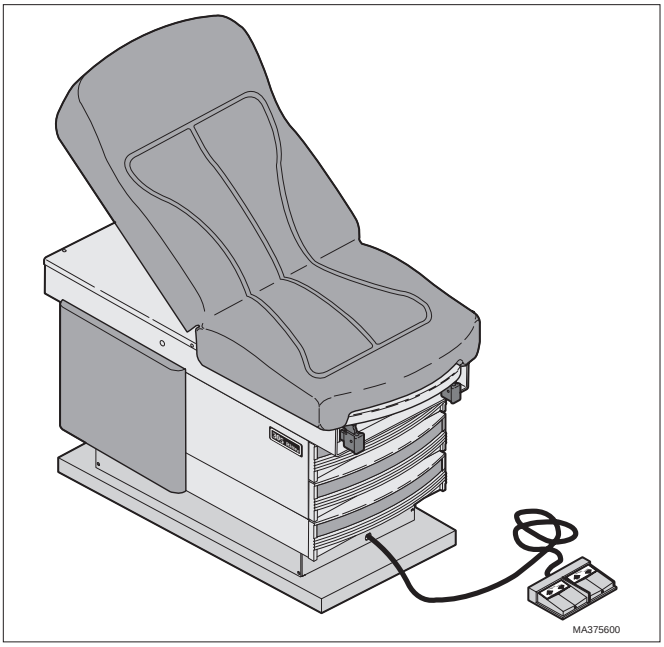
(3) If the unit has the optional heater, turn the HEATER ON / OFF switch to ON.

Observe. The HEATER ON / OFF switch should illuminate and after a short wait, the heater plate should warm the warming drawer.

Turn the HEATER ON / OFF switch to OFF.

(4) Operate the BACK "UP" footswitch.

Observe. The back section should elevate smoothly without jerky motions. The back section should be able to be raised to 70° (± 5°).



(5) Operate the BACK "DOWN" footswitch.

Observe. The back section should lower smoothly and without jerky motions to a horizontal position.

(6) Operate the BACK "UP" footswitch. Stop the back section at approximately a 45° angle and apply downward pressure to the back section.

Observe. The back section should hold firmly in place without any downward drifting motion.

(7) Operate the TABLE "UP" footswitch.

Observe. The table section should elevate smoothly without jerky motions from a low of 27 inches (68.6 cm) minimum to a maximum of 37 1/2 inches (95.2 cm) ± 1/2 inch (1.3 cm).

(8) Operate the TABLE "DOWN" footswitch.

Observe. The table should descend smoothly and without jerky motions.

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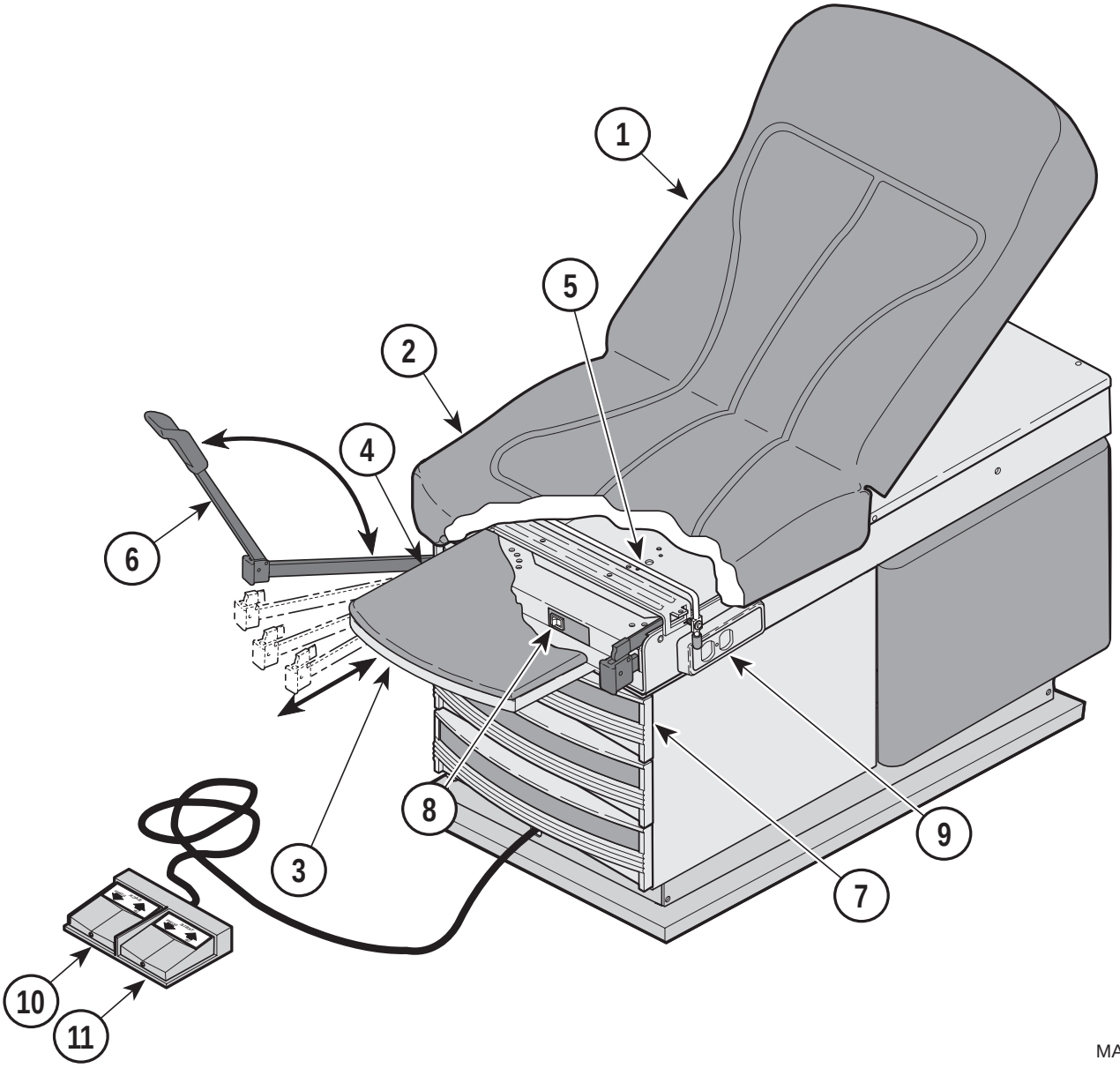
TESTING AND TROUBLESHOOTING



Legend

1. Back Section.
2. Seat Section.
3. Footrest Shelf.
4. Footrest Pad.
5. Pelvic Lift Assembly.
6. Stirrups.
7. Warming Drawer.
8. Heater ON / OFF Switch.
9. Duplex Receptacle.
10. Table UP / DOWN Footswitch
11. Back UP / DOWN Footswitch

Figure 2-1. Operational Test

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(9) Place approximately 200 lbs. (90.7 kg.) on the table and elevate the table to maximum height.

Observe. The table should hold firmly in place without drifting down.

(10) On units with the optional pelvic tilt, lift up on the seat section slightly.

Observe. The pelvic lift bar should automatically raise up into its locked position, supporting the seat section in the pelvic lift position (+5° above horizontal).

To lower the seat section to standard position, raise up slightly on seat section; then grasp pelvic lift handle and rotate the pelvic lift bar downward while lowering seat section.

(11) Extend the stirrups; then lift up on end of stirrups and move them laterally from the left to the right. Let the stirrups lock into each of the four positions. While applying downward pressure, attempt to move a stirrup laterally to the left or right.

Observe. The stirrups should be able to be extended and moved laterally easily when raised. The stirrups should lock into each of the four positions and should not be able to be moved laterally as long as downward pressure is applied on the stirrup.

(12) Check operation of each drawer.

Observe. The drawers should slide easily. All drawer rollers should move freely in the drawer tracks.

2.2 Troubleshooting Procedures

Table 2-1 is a Troubleshooting Guide which is used to determine the cause of the malfunction. Table 2-1 is located on the following pages.

Problem	Symptom	Probable Cause	Check	Correction
Drawer warmer is not working. Power is present at the supply outlet.	Heater plate assembly does not warm up when heater ON / OFF switch is turned ON.	Heater ON / OFF switch is malfunctioning.	When heater ON / OFF switch is turned to ON, heater switch should illuminate (this indicates that there is power present at output terminals of switch).	If heater ON / OFF switch does not illuminate when turned ON, replace heater switch. Refer to para 4.7.
		Heater plate assembly is malfunctioning	Replace suspect heater plate assembly with known working heater plate assembly or check for continuity thru heater plate assembly wires.	Replace heater plate assembly. Refer to para 4.8.
		Wire connections are loose.	Check all wiring connections from power heater ON / OFF switch to heater plate assembly. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections. Refer to para 5.1.

SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Duplex receptacle is not working.	Table power cord is plugged into wall outlet and power is present, but there is still no power at duplex receptacle.	Duplex receptacle is malfunctioning.	Replace suspect duplex receptaclewith known working receptacle.	Replace duplex receptacle. Refer to para 4.9.
		Wire connections are loose.	Check all wiring connections from power cord to duplex receptacle. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections. Refer to para 5.1.
Duplex receptacle or optional drawer warmer not working.	No power is available at duplex receptacle and heater ON / OFF switch does not illuminate when pressed.	Power cord is not plugged into facility wall outlet.	Check to seeif power cord is plugged in.	Plug power cord into facility wall outlet.
		Facility circuit breaker providing power to table is tripped / blown.	Check to see if facility circuit breaker is tripped / blown. One way of checking this is to plug a lamp into wall outlet that table was plugged into.	If circuit breaker is tripped, determine what caused circuit breaker to trip, correct the problem, and reset / replace circuit breaker.
		Wire connections are loose.	Check all wiring connections from power cord to duplex receptacle and heater ON / OFF switch. Perform continuity check on wires. Use multimeter to check for proper voltage levels.	Clean any dirty connections. Tighten any loose connections. Replace any damaged connections. Refer to para 5.1.
Table does not actuate into any up or down positions when foot switches are depressed.	Motor / Pump does not run. Cylinder solenoids do not actuate (no audible click).	Table is not plugged into a wall outlet.	Check to insure table is plugged into a wall outlet.	Plug table into a wall outlet.
		Wall outlet is not powered	Check circuit breaker and / or fuse for suspected wall outlet.	Replace fuse or reset circuit breaker if necessary.
		Table power cord has broken wires or loose connections at terminal board (TB1) terminals 6 or 8.	Check for loose connections at the table terminal board, terminals 6 and 8, and check the continuity of the wires in the power cord.	Replace the power cord or repair the loose connection at the terminal board. Refer to para 4.18.

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table does not actuate into any up or down positions when foot switches are depressed. - Continued	Motor / Pump does not run. Cylinder solenoids do not actuate (no audible click). - Continued	White wire in cord between footswitch (SW1, terminal N.C.) and terminal board (TB1, terminal 6) broken or disconnected.	Check for loose connections on terminal 6 of terminal board (TB1) and (N.C.) terminal of microswitch SW1 on footswitch. Check continuity on wires of footswitch cord.	Replace footswitch cord or connect white wire to terminal 6 of terminal board (TB1) or to terminal (N.C.) of microswitch SW1. Refer to para 4.16.
		White, yellow or violet jumper wires within footswitch broken or disconnected.	Check continuity and connections of the jumper wires in the footswitch assembly.	Replace defective jumper wires and / or tighten connections. Refer to para 5.1.
		Microswitches (SW1 and SW7) in footswitch malfunctioning.	Check continuity of SW1 and SW7 microswitches normally closed (N.C.) and normally open (N.O.) contacts in the operated and unoperated positions.	Replace malfunctioning microswitches. Refer to para 4.17.
	Motor / pump does not run. Hydraulic cylinder solenoid valves actuate (audible click).	Internal thermal overload (O / L) in motor / pump is open.	Check for continuity between red or blue wire on motor and the yellow wire on the motor.	Allow motor to cool down and recheck continuity. If continuity is present thermal overload has closed. Motor should run. Refer to para 5.1.
		Capacitor(s) (C1 and / or C2) have an open circuit or the wire connections are loose or missing.	Check for missing or loose wire connections on the capacitors. Visually inspect the capacitor(s) for damage.	Reconnect and / or tighten the wire connections on the capacitors. Replace the capacitors with known good capacitors. Refer to para 4.12.
		Motor / pump has open winding(s).	Check the continuity of the motor windings between the yellow and red motor leads and the yellow and blue motor leads. A certain resistance reading should be visible on the meter.	Replace the motor / pump. Refer to para 4.10.
		Red and blue wires in cord between footswitch and terminal board are broken.	Check continuity of red and blue wires.	Replace the cord between the footswitch and terminal board. Refer to para 4.16.

SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table does not actuate into any up or down positions when foot-switches are depressed (continued)	Motor / pump does not run. Hydraulic cylinder solenoid valves actuate (audible click).	SW2 and SW4 normally open (N.O.) contacts do not close when Table UP or Table Down pedals are depressed.	Check for voltage, when operating the Table UP and Down pedal, on terminal board (TB1) between terminal #1 and #7 or #8. Also between terminals #2 and #7 or #8.	If line voltage was not present at the terminals during operation adjust or replace the footswitches SW2 and SW4. Refer to para 4.17.
	Motor / pump has an audible hum but will not run. Cylinder solenoid valves actuate (audible click).	Motor / pump is locked up mechanically or has a defective motor winding.	Allow motor to cool and try activating the motor / pump again.	Replace the motor / pump. Refer to para 4.10.
	Motor / pump runs but is excessively noisy. Cylinder solenoid valves actuate (audible click).	System is low on hydraulic fluid.	Check hydraulic fluid level.	Add hydraulic fluid to the system. Refer to para 4.9.
		Suction valves in motor / pump clogged with debris not allowing fluid to flow thru the system.	Check for fluid flow in lines at hydraulic solenoid valves.	Remove reservoir and clean any debris from ports of suction valves. Refer to para 4.11.
		Pump Impeller broken loose from motor shaft.	Remove reservoir and inspect pump impeller.	Repair or replace motor / pump. Refer to para 4.10.
Table UP and Back UP do not function when the footswitches are depressed. Table DOWN and Back DOWN function properly.	Motor / pump does not run on UP actuation only. Cylinder solenoids actuate (audible click).	Blue wire of footswitch cord between terminal board (TB1) terminal 1 and footswitch microswitch SW2 normally open (N.O.) contact broken or disconnected.	Check continuity of blue wire and check connection at the footswitch microswitch SW2 normally open (N.O.) contact and terminal board (TB1) terminal 1.	Replace footswitch cord or tighten connections. Refer to para 4.16.
Table DOWN and Back DOWN do not function when the footswitches are depressed. Table UP and Back UP function properly.	Motor / pump does not run on DOWN actuation only. Cylinder solenoids actuate (audible click).	Red wire of footswitch cord between terminal board (TB1) terminal 2 and the footswitch microswitch SW4 normally open (N.O.) contact is broken or disconnected.	Check continuity of red wire and check connectors at terminal board (TB1) terminal 2 and at the footswitch microswitch SW4 normally open (N.O.) contact.	Replace footswitch cord or tighten connections. Refer to para 4.16.
Table UP and Table DOWN do not function. Back UP and Back DOWN function properly.	Table cylinder solenoids do not actuate (no audible click). Motor / pump runs.	Black wire of footswitch cord broken or disconnected.	Check continuity of black wire and check connections at terminal board (TB1) terminal 4 and at microswitch SW1 normally open (N.O.) contacts.	Replace footswitch cord or tighten connectors. Refer to para 4.16.

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table UP and Table DOWN do not function. Back UP and Back DOWN function properly. - Continued	Table raises slower and unevenly. Motor runs and table cylinder solenoids apparently actuate (audible click).	One of the two table cylinders is not functioning.	Check continuity of the white and black leads (located on terminals 7, 3 and 4 of terminal board (TB1) from the table cylinder solenoid valves for an open winding. Check and observe operation of the cylinders.	Replace the malfunctioning cylinder. Refer to para 4.14.
Table DOWN does not function. Table UP, Back UP and DOWN works correctly.	Table cylinder solenoids do not actuate (no audible click). Motor / pump runs.	Black jumper wire from normally open (N.O.) of footswitch SW1 to normally open (N.O.) of SW3 footswitch broken or disconnected.	Check continuity of black jumper wire and check connections.	Replace black jumper wire if required and tighten connections. Refer to para 5.1.
		Yellow jumper wire from common (C) of footswitch SW4 to common (C) of SW3 footswitch broken or disconnected.	Check continuity of yellow jumper wire and check connections.	Replace yellow jumper wire if required and tighten connections. Refer to para 5.1.
		SW3 footswitch out of adjustment.	With the table unplugged, depress the Table DOWN footswitch pedal and listen for two (2) audible clicks of the microswitches SW3 (cylinder solenoids) and SW4 (motor / pump).	Adjust Table DOWN SW3 microswitch, that controls the Table cylinder solenoids, if 2nd audible click is not heard. Refer to para 4.17.
		SW3 microswitch malfunctioning. Normally open (N.O.) contacts do not close when SW3 switch is operated.	Check continuity of SW3 microswitch normally closed (N.C.) and normally (N.O.) contacts in the unoperated and operated positions.	Replace SW3 microswitch if continuity does not conform to electrical schematic. Refer to para 4.17.
	Motor / pump does not run. Table cylinder solenoids actuate (audible click).	Red wire of footswitch cord disconnected from normally open (N.O.) contacts on switch SW4.	Check connections of red wire at microswitch SW4 (N.O.) contacts.	Reconnect wire if disconnected. Refer to para 5.1.
		Yellow jumper wire from common (C) terminal of footswitch SW4 to common (C) of SW6 footswitch broken or disconnected.	Check continuity of yellow jumper wire and check connections at SW4 and SW6 (N.O.) contacts.	Replace yellow jumper wire if required and tighten connections. Refer to para 5.1.
		SW4 microswitch out of adjustment.	With the table unplugged, depress the Table DOWN footswitch pedal and listen for two (2) audible clicks of the microswitches SW3 (cylinder solenoids) and SW4 (motor / pump).	Adjust Table DOWN SW3 microswitch, that controls the Table cylinder solenoids, if 2nd audible click is not heard. Refer to para 4.17.

SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table UP functions properly but Table DOWN does not. Back UP and Back DOWN function properly (continued).	Motor / pump does not run but table cylinder solenoids actuate (audible click) (continued).	SW4 microswitch in footswitch malfunctioning.	Check continuity of SW4 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW4 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
Table DOWN functions properly but Table UP does not. Back UP and Back DOWN function properly.	Motor runs but table cylinder solenoids do not actuate (no audible click).	White jumper wire in footswitch from Common (C) of SW1 to Common (C) of SW2 broken or disconnected.	Check continuity of white jumper wire from SW1 to SW2 Common (C) terminals.	Replace white jumper wire between the Common (C) terminals of SW1 and SW2 footswitch microswitches. Refer to para 5.1.
		Black wire in footswitch cord from Terminal Board (TB1) terminal #4 to normally open (N.O.) contacts of SW1 disconnected or broken.	Check continuity of black wire and check connection at (N.O.) of SW1 microswitch.	Reconnect connection or replace footswitch cord. Refer to para 4.16.
		SW1 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Table UP footswitch pedal and listen for two (2) audible clicks of SW1 and SW2 microswitches.	Adjust the Table UP cylinder solenoid microswitch (SW1) if second (2nd) audible click is not heard. Refer to para 4.17.
		SW1 footswitch microswitch is malfunctioning.	Check continuity of SW1 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW1 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
	Motor does not run but table cylinder solenoids actuate (audible click).	Blue wire in footswitch cord from Terminal Board (TB1) terminal #1 to normally open (N.O.) contacts of SW2 broken or disconnected.	Check continuity of blue wire and check connections a (N.O.) contacts of SW2.	Reconnect connection or replace footswitch cord. Refer to para 4.16.
		White jumper wire in footswitch from SW3 microswitch at terminal (N.C.) disconnected at SW2 microswitch at terminal (C).	Check connections at SW2 microswitch at terminal (C).	Reconnect if disconnected. Refer to para 5.1.
		SW2 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Table UP footswitch pedal and listen for two (2) audible clicks of SW1 and SW2 microswitches.	Adjust the Table UP motor / pump microswitch (SW2) if first (1st) audible click is not heard. Refer to para 4.17.

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Table DOWN functions properly but Table UP does not. Back UP and Back DOWN function properly. - Continued	Motor does not run but table cylinder solenoids actuate (audible click). - Continued	SW2 microswitch in footswitch malfunctioning.	Check continuity of SW2 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW2 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
		SW2 microswitch in footswitch malfunctioning.	Check continuity of SW2 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW2 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
Back DOWN does not function. Back UP, Table UP and Table DOWN function properly.	Back cylinder solenoid valve does not actuate (no audible click). Motor / Pump runs.	Orange jumper wire in footswitch from normally open (N.O.) of SW5 to common (N.O.) of SW7 broken or disconnected.	Check continuity of orange wire and check connections at (N.O.) contacts of SW5 and SW7.	Reconnect connection or replace orange jumper wire. Refer to para 5.1.
		White jumper wire in footswitch from common (C) of SW7 to normally closed (N.C.) of SW5 broken or disconnected.	Check continuity of white jumper wire and check connections at (N.C.) terminal of SW5 and (C) terminal of SW7.	Reconnect connection or replace white jumper wire. Refer to para 5.1.
		SW7 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Back DOWN footswitch pedal and listen for two (2) audible clicks of SW7 and SW8 microswitches.	Adjust the Back UP cylinder solenoid microswitch (SW7) if second (2nd) audible click is not heard. Refer to para 4.17.
		SW7 microswitch in footswitch malfunctioning.	Check continuity of SW7 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW7 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
	Motor / pump does not run. Back cylinder solenoid actuates (audible click).	Red jumper wire in footswitch from normally open (N.O.) of SW8 to common (N.O.) of SW4 broken or disconnected.	Check continuity of red wire and check connections at (N.O.) contacts of SW8.	Reconnect connection or replace red jumper wire. Refer to para 5.1.
		White jumper wire in footswitch from common (C) of SW7 to common (C) of SW8 broken or disconnected.	Check continuity of white jumper wire and check connections at (C) terminal of SW7 and (C) terminal of SW8.	Reconnect connection or replace white jumper wire. Refer to para 5.1.

SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Back DOWN does not function. Back UP, Table UP and Table DOWN function properly. - Continued	Motor / pump does not run. Back cylinder solenoid actuates (audible click). - Continued	SW8 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Back DOWN footswitch pedal and listen for two (2) audible clicks of SW7 and SW8 microswitches.	Adjust the Back DOWN motor / pump microswitch (SW8) if second (2nd) audible click is not heard. Refer to para 4.17.
		SW8 microswitch in footswitch malfunctioning.	Check continuity of SW8 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW8 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
Back UP does not function. Back DOWN, Table UP and Table DOWN function properly.	Back cylinder solenoid valve does not actuate (no audible click). Motor / pump runs.	Orange jumper wire in footswitch from SW5 normally open (N.O.) to SW7 normally open (N.O.) broken or disconnected.	Check continuity of orange jumper wire and check connections at (N.O.) terminal of SW5.	Reconnect connections or replace orange jumper wire. Refer to para 5.1.
		Yellow jumper wire in footswitch connected to SW5 common (C) and SW6 (C) terminals broken or disconnected.	Check continuity of yellow jumper wire between the common (C) terminals of SW5 and SW6.	Reconnection the connections or replace the yellow jumper wire. Refer to para 5.1.
		SW5 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Back UP footswitch pedal and listen for the two (2) audible clicks of SW5 and SW6 microswitches.	Adjust the Back UP cylinder solenoid valve microswitch (SW5) if second (2nd) audible click is not heard. Refer to para 4.17.
		SW5 microswitch in footswitch is malfunctioning.	Check continuity of SW5 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW5 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
	Motor does not run. Back cylinder solenoid valve actuates (audible click).	Brown jumper wire in footswitch between normally open (N.O.) of SW6 and (N.O.) of SW2 broken or disconnected.	Check continuity of brown jumper wire and check connections at SW6 (N.O.) terminal.	Reconnect connections or replace brown jumper wire. Refer to para 5.1.
		Yellow jumper wire in footswitch disconnected from the common (C) terminal of SW6 microswitch.	Check connections at the (C) terminal of SW6 microswitch in the footswitch.	Reconnect the connections. Refer to para 5.1.

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Back UP does not function. Back DOWN, Table UP and Table DOWN function properly. - Continued	Motor does not run. Back cylinder solenoid valve actuates (audible click).- Continued	SW6 microswitch in footswitch out of adjustment.	With table power cord unplugged, depress the Back UP footswitch pedal and listen for the two (2) audible clicks of SW5 and SW6 microswitches.	Adjust the Back UP motor / pump microswitch (SW6) if first (1st) audible click is not heard. Refer to para 4.17.
		SW6 microswitch in footswitch is malfunctioning.	Check continuity of SW6 microswitch contacts C-N.C. and C-N.O. in the operated and unoperated positions.	Replace SW6 microswitch if continuity does not conform to wiring diagram. Refer to para 4.17.
Motor / pump continues to run after foot is removed from the footswitch pedal.	Table and Back UP and DOWN functions work.	One of the motor / pump microswitches is out of adjustment or malfunctioning. SW2, SW4, SW6 or SW8 microswitches control the motor / pump.	With no switches depressed and the table plugged in, check for voltage at the terminal board (TB1) between terminals 7 and / or 8 (yellow wire connection for motor / pump) and terminals 1 (blue wire connection for motor / pump) and then terminal 2 (red wire connection for motor / pump).	If voltage is present at the motor / pump connections on the Terminal Board (TB1) with no switches depressed, replace the malfunctioning microswitch or microswitches. Refer to para 4.17.
Table and / or Back cylinder(s) will not hold position. May drift down slowly.	Table and Back UP and DOWN functions work.	One of the cylinder solenoid valve microswitches is out of adjustment or malfunctioning. SW1, SW3, SW5 or SW7 microswitches control the cylinder solenoid valves.	With no switches depressed and the table plugged in, check for voltage at the terminal board (TB1) between terminals 7 and / or 8 (white wire connections for the three solenoids of the cylinder valves and terminals 3 and / or 4 (black wire connections for table cylinders) and then terminal 5 (black wire connection for back cylinder).	If voltage is present at the cylinder solenoid connections on the Terminal Board (TB1) with no switches depressed, replace the malfunctioning microswitch or microswitches. Refer to para 4.17.
		Dirt particle in cylinder valve or faulty valve.	Operate cylinder(s) by extending and retracting the cylinders about ten (10) times to attempt to flush any dirt particles thru system.	If flushing of the cylinders did not work and cylinder(s) keep drifting, replace the cylinder assembly with a new cylinder. Refer to para 4.14, 4.15.

SECTION II
TESTING AND TROUBLESHOOTING

Table 2-1. Troubleshooting Guide

Problem	Symptom	Probable Cause	Check	Correction
Motor shuts off intermittently.	After a short period of operation, the motor / pump shuts off. The cylinder solenoid valves, receptacle and drawer heater continue to operate normally.	One of the two motor / pump capacitors (C1 and / or C2) is shorted internally.	With the table unplugged and the leads off the capacitor, check the resistance (ohms) across the terminals of the capacitor. Normally the capacitor will initially show some resistance value. If no, zero (0), ohms is indicated, change the capacitor.	Replace the defective capacitor with a known good capacitor. Refer to para 4.12.

SECTION III
SCHEDULED MAINTENANCE

3.1 Scheduled Maintenance

Table 3-1 is a Scheduled Maintenance Chart which lists the inspections and services that should be performed periodically on the table. These inspections and services should be performed as often as indicated in the chart.

Table 3-1. Scheduled Maintenance Chart

Interval	Inspection or Service	What to Do
Semi-annually	Obvious damage	Visually check condition of table for obvious damage such as: cracks in components, missing components, dents in components, or any other visible damage which would cause table to be unsafe to operate or would compromise its performance. Repair table as necessary.
	Fasteners / hardware	Check table for missing or loose fasteners / hardware. Replace any missing hardware and tighten any loose hardware as necessary.
	Hydraulic components, hoses and fittings	Check hydraulic base and back cylinders, hydraulic hoses and fittings for wear and leakage. Replace and leaking parts. Check hydraulic fluid level in the reservoir and add fluid if necessary. Refer to para 4.
	Warning and instructional decals	Check for missing or illegible decals. Replace decals as necessary.
	Pivot points / moving parts / accessories	Lubricate all exposed pivot points, moving parts, and accessories with silicone based lubricant.
	Footrest extension	Check that footrest extension can be easily extended and is not damaged. Refer to para 4.3.
	Stirrup assemblies	Check that stirrup assemblies lock into the four different positions. Check for wear. Replace worn components as necessary. Refer to para 4.14.
	Electrical components, wires and connections	Check all electrical components for loose connections and worn or broken wires.
	Electrical receptacle	Check that the electrical receptacle is functioning properly. Replace receptacle as necessary. Refer to para 4.9.
	Drawer Heater (Optional)	Where applicable, check to insure the drawer heater is heating sufficiently to warm the top drawer and that the heater ON / OFF switch indicator light illuminates when the switch is in the ON position. If necessary, replace the heater switch or heater plate. Refer to para 4.7 or 4.8.
	Pelvic Tilt (Optional)	Check that the spring loaded pelvic tilt is operating properly. Replace springs if necessary.
	Upholstery	Check all upholstery for rips, tears, or excessive wear. Replace cushions as necessary.
	Accessories	Check that all accessories have all of their components and that they function properly. If necessary, repair or replace the accessory.
	Operational Test	Perform an Operational Test to determine if the table is operating within its specifications (Refer to para 2.1). Replace or adjust any malfunctioning components.

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SECTION IV
MAINTENANCE / SERVICE INSTRUCTIONS

4.1 Introduction

WARNING
Refer to the Operator Manual for complete instructions on operating the table. Failure to do so could result in personal injury.

NOTE
Perform an operational test on the table after the repair is completed to confirm the repair was properly made and that *all* malfunctions were repaired.

WARNING
Do not use this table in an explosive or oxygen-rich atmosphere. To do so could result in an explosion or fire.

The following paragraphs contain removal, installation, repair, and adjustment procedures for the table.

4.2 Upholstery Removal / Installation

A. Removal

(1) Place the table top in a horizontal position.

(2) For tables without Pelvic Tilt, remove the two screws (1, Figure 4-1) that secure the seat section (A) to the upper wrap cross member (B).

(3) Remove the two screws (2) that secure the upholstered seat section (A) to the top hinge (3).

NOTE
On units with Soft Touch upholstery, remove 8 screws that secure upholstered back rest to the back pivot plate. Refer to Section VI for illustration.

(4) Elevate the back section (C) and remove the four screws (4) that secure the upholstered back section (C) to the back plate assembly (5).

CAUTION
Use care when removing the upholstered top assembly as it weighs approximately 35 lbs. (14.5 kg). Failure to use proper lifting techniques or assistance could result in personal injury.

(5) Remove the upholstery assembly (6).

(6) Extend the footrest and remove the upholstered footrest pad (7).

B. Installation

CAUTION
Use care when installing the upholstered top assembly as it weighs approximately 35 lbs. (14.5 kg). Failure to use proper lifting techniques or assistance could result in personal injury.

(1) Lay the new upholstery assembly (6, Figure 4-1) in position on the back plate assembly (5) and upper wrap assembly (8).

NOTE
On units with Soft Touch upholstery, install 8 screws to secure upholstered back rest to the back pivot plate. Refer to Section VI for illustration.

(2) Secure the back upholstered section (C) to the back plate assembly (5) with the four screws (4).

(3) Secure the seat upholstered section (A) to the top hinge (3) with two screws (2).

(4) For tables without Pelvic Tilt, install the two screws (1) that secure the seat section (A) to the upper wrap cross member (B).

(5) Install the upholstered footrest pad (7).

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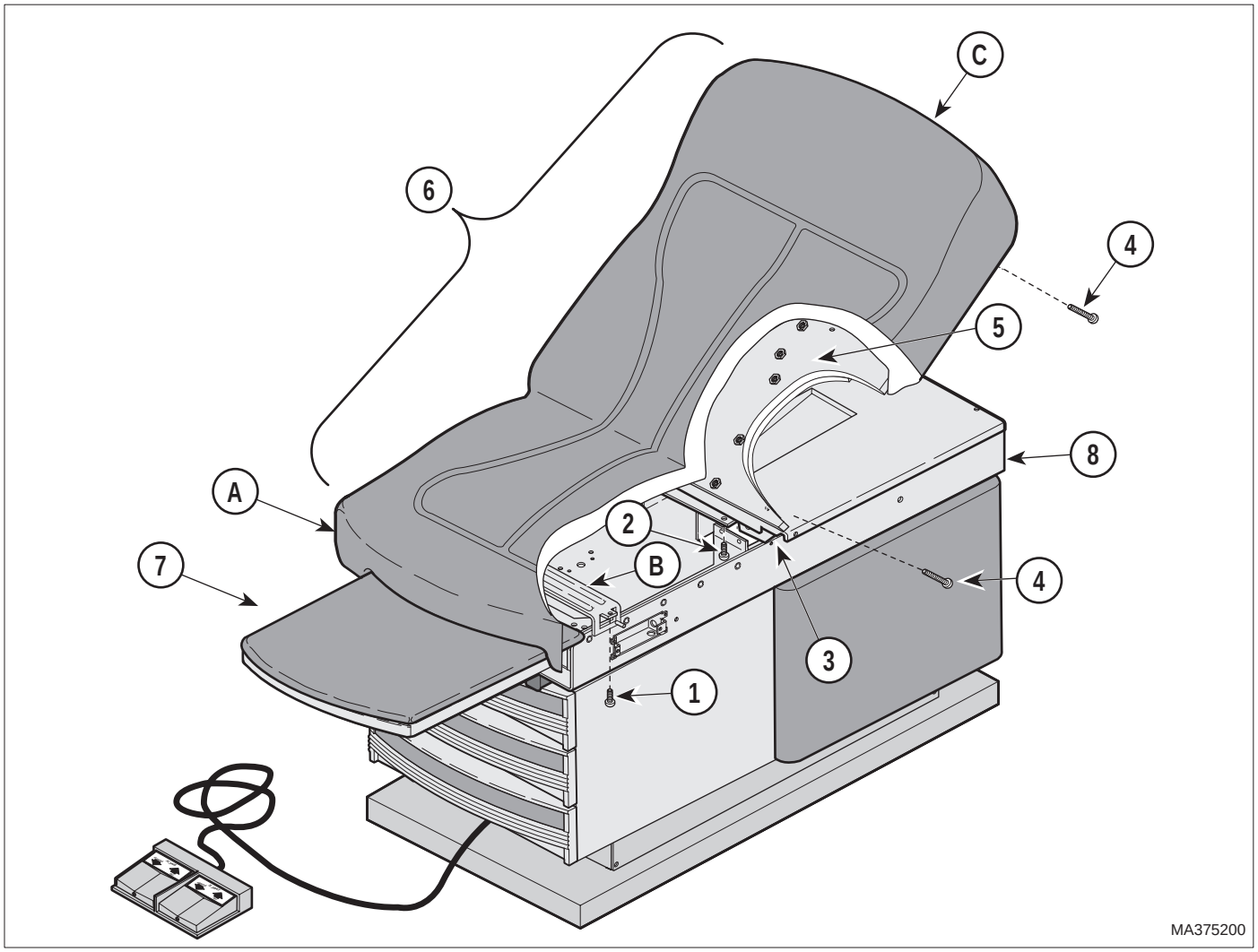

Figure 4-1. Upholstery Removal / Installation

4.3 Footrest Extension Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(1) Unplug the table power cord from the wall outlet.

(2) Pull out on the footrest assembly (1, Figure 4-2) until it is fully extended.

(3) Remove the upholstered footrest pad (2) and treatment pan (3).

NOTE
For tables without Pelvic Tilt, remove the two screws (4) that secure the seat section (5) to the upper wrap cross member (A).

(4) Raise the seat section (5) and, using a pliers or equivalent, bend up the two metal tabs (6) on the back of the footrest weldment (1) until they are horizontal.

(5) Pull the footrest weldment (1) out of the upper wrap weldment (7).

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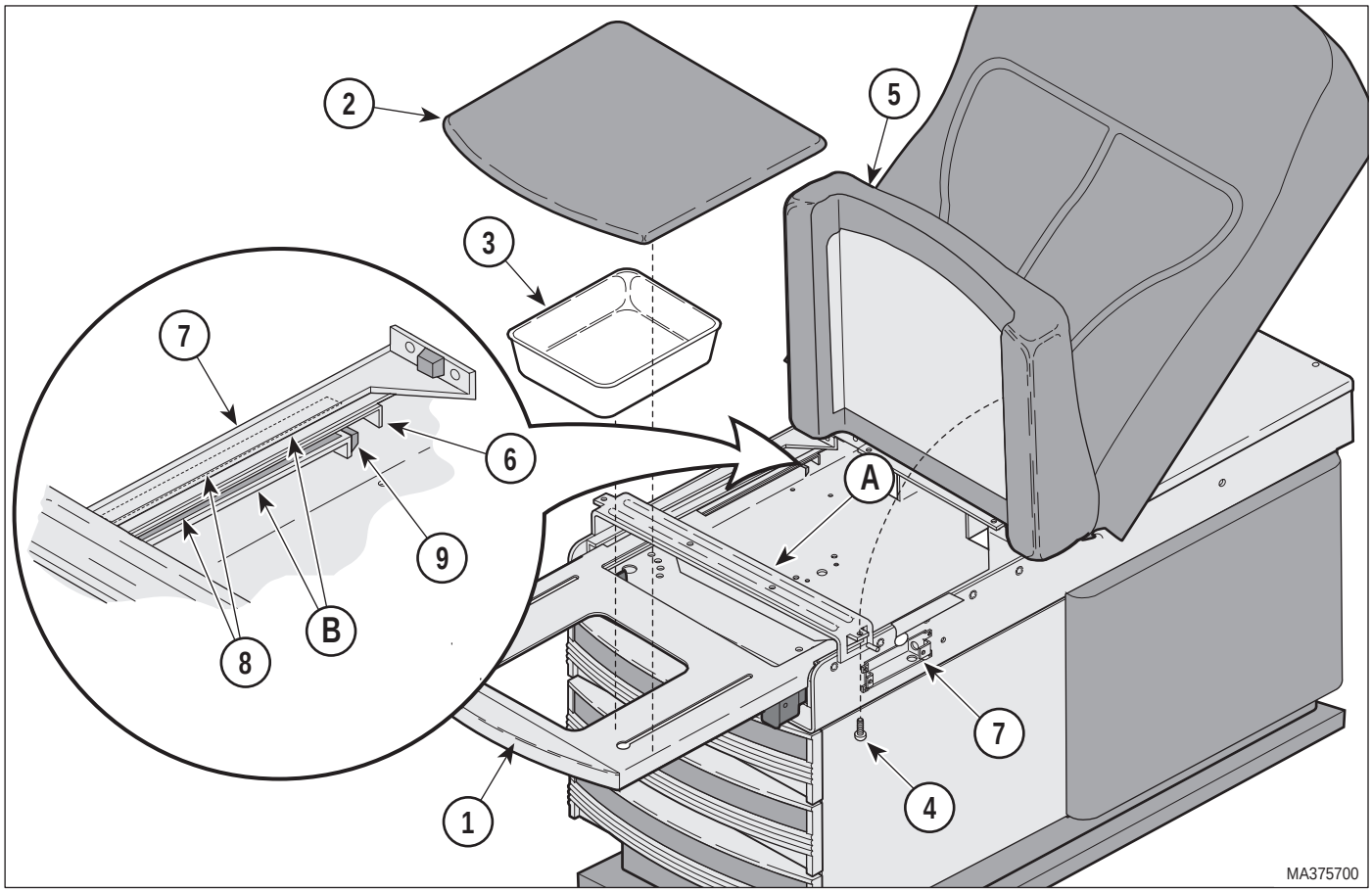

Figure 4-2. Footrest Extension Removal / Installation

B. Installation

NOTE
Before installing the footrest weldment inspect the footrest runners (B, Figure 4-2) to insure the nylo tape glides (8) are in place at the side and top of each runner. Also, inspect the rubber bumpers (9), located at the back of the footrest runners to insure they are intact.

(1) Inspect the nylo tape glides (8, Figure 4-2) and rubber bumpers (9) and replace if worn. Place a light coating of petroleum jelly on the glide.

(2) Insert the footrest weldment (1) into the runners (B) of the upper wrap weldment (7) and bend the two tabs (6) downward until vertical.

(3) Install the treatment pan (3) and upholstered footrest pad (2).

(4) Plug the table power cord into wall outlet.

4.4 Heater ON / OFF Switch Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Using a standard screwdriver, carefully pry heater switch (1, Figure 4-3) out of upper wrap weldment (2), making sure not to scratch table.

(3) Tag the wires for later assembly and disconnect four wires (3) from heater switch (1).

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SECTION IV
MAINTENANCE / SERVICE

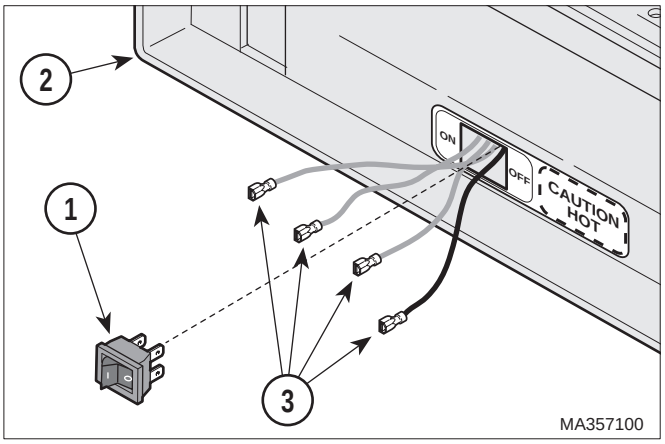

Figure 4-3. Heater ON / OFF Switch Removal / Installation

B. Installation

(1) Connect four wires (3, Figure 4-3) to heater switch (1) (Refer to the para 5.1).

NOTE
Insure that the switch ON (**I**) and OFF (**O**) symbols are matched with the proper ON or OFF designation on the decal when installing the switch.

(2) Push heater switch (1) into upper wrap weldment (2) until heater switch "pops" into place.

(3) Plug table power cord into wall outlet.

4.5 Heater Plate Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Remove two drawers from foot end of table.

(3) Remove the heater ON / OFF switch (Refer to para 4.4).

(4) Pull the footrest section (1, Figure 4-4) out as far as it will go.

NOTE
For tables without Pelvic Tilt, remove the two screws (2) that secure the seat section (3) to the upper wrap cross member (A).

(5) Raise up the seat section (3).

(6) Remove the four screws (4) and stirrup guide (5) from the upper wrap weldment (6).

(7) Remove any wrap-n-tap wire clamps (7) securing the heater plate wiring (8) to the upper wrap weldment (6).

(8) Remove the two screws (9), heater plate (10), and heat shield (11) from bottom side of the upper wrap weldment (6).

B. Installation

(1) Route the heater plate wires (8, Figure 4-4) thru the wire hole (B) in the upper wrap weldment (6).

CAUTION
Insure the heater plate wires are not pinched by the heater plate during installation. Failure to do so could cause personal injury.

(2) Install the heat shield (11), and the heater plate (10) on the upper wrap weldment (6) and secure with the two screws (9).

(3) Install the heater ON / OFF switch (Refer to para 4.4).

(4) Secure the heater plate wires (8) to the upper wrap weldment (6) with wrap-n-tap clamps (7).

NOTE
Plug the table in temporarily, turn ON the heater switch and check to insure the heater plate begins to warm. Unplug the table and continue on with installation procedures.

(5) Install the stirrup guide (5) on the upper wrap weldment (6) and secure with the four screws (4).

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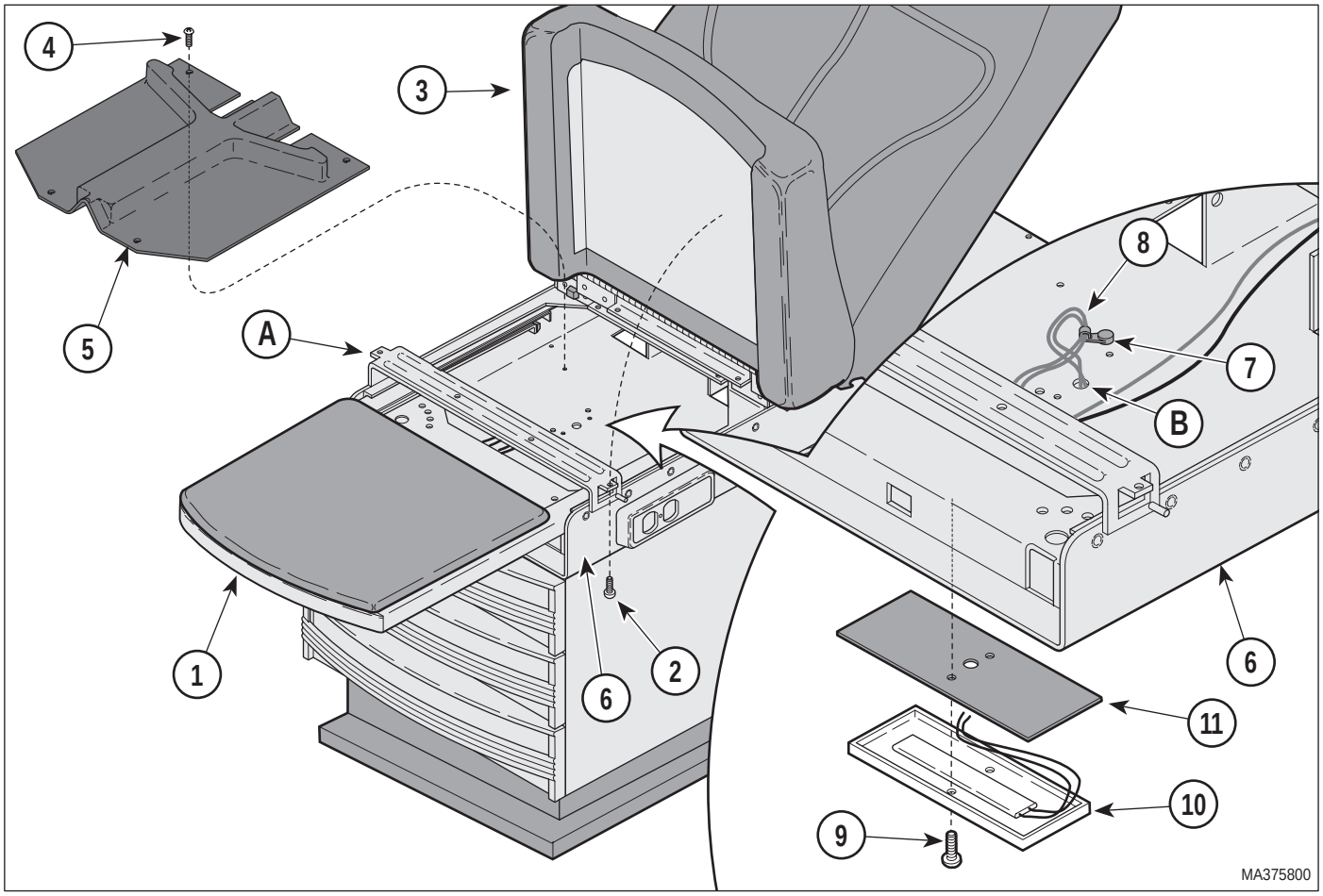

Figure 4-4. Heater Plate Removal / Installation

(6) Lower the seat section (3). If necessary, for tables without pelvic tilt, install the two screws (2) to secure the seat section (3) to the upper wrap cross member (A).

(7) Push the foot rest (1) into its stowed position.

(8) Install the two drawers in the table.

(9) Plug the table power cord into wall outlet.

4.6 Electrical Receptacle Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(1) Unplug table power cord from wall outlet.

(2) Extend the stirrups (1, Figure 4-5) out to full extension.

(3) Extend the footrest (2) out to full extension.

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(4) Remove the screw (3) from the front of the receptacle cover (4).

NOTE
For tables without Pelvic Tilt, remove the two screws (5) that secure the seat section (6) to the upper wrap cross member (A).

(5) Raise up the seat section (6).

(6) Remove the screw (7), from inside the upper wrap assembly (8), that secures the receptacle cover (4) to the upper wrap assembly (8).

(7) Remove the two screws (9) that secure the duplex receptacle (10) to the upper wrap assembly (8).

(8) Pull the duplex receptacle (10) out of the cavity in the upper wrap assembly (8).

NOTE
Before removing any of the electrical leads from the duplex receptacle place identification tags on them for installation onto the replacement receptacle. If the table has a drawer heater there will be five leads and without the drawer heater there are three leads.

(9) Tag and disconnect the electrical leads (11) from the duplex receptacle (10) and remove the receptacle.

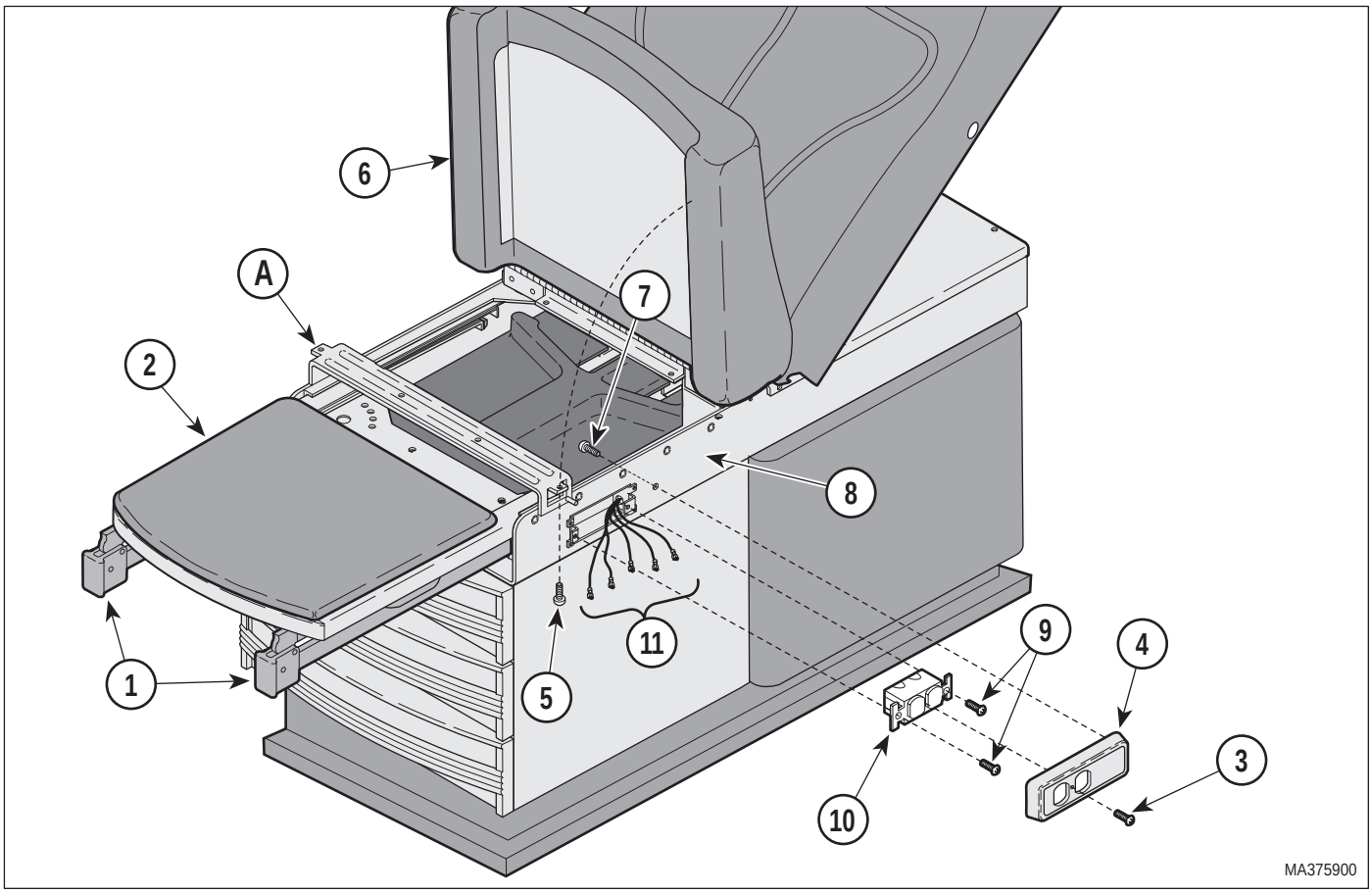

Figure 4-5. Electrical Receptacle Removal / Installation

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B. Installation

CAUTION
When installing the electrical leads (11, Figure 4-5) on the duplex receptacle (10) insure the insulation on the leads covers sufficiently to prevent electrical shorts to the cabinet. The black leads connect to the side of the receptacle with the black screws and the white leads connect to the side with the silver screws. Insure the ground (green) lead is connected to the ground terminal on the receptacle and to the table. Failure to do so could result in personal injury

(1) Connect the electrical leads (11, Figure 4-5) to the appropriate terminals on the duplex receptacle (10) (Refer to para 5.1).

CAUTION
Insure the receptacle is positioned in the cavity of the upper wrap assembly so that none of the electrical terminals or exposed wires are contacting the upper wrap assembly. Failure to do so may result in personal injury or injury to the user.

(2) Insert the receptacle (10) into its cavity in the upper wrap assembly (8) and secure with the two screws (9).

(3) Place the cover (4) on the receptacle (10) and install the screw (3) on the front cover and the screw (7) inside the upper wrap assembly (8).

(4) Push the footrest (2) and stirrups (1) into their stowed positions.

(5) Lower the seat section (6). If necessary, for tables without pelvic tilt, install the two screws (5) to secure the seat section (6) to the upper wrap cross member (A).

(6) Plug the table power cord into wall outlet and check that there is power to the receptacle.

4.7 Stirrup Components Removal / Installation

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

NOTE
For tables without Pelvic Tilt, remove the two screws (1, Figure 4-6) that secure the seat section (2) to the upper wrap cross member (A).

(1) Raise the seat section (2, Figure 4-14) up and support it.

(2) Pull the foot rest section (3) out to its full extension.

(3) Pull the stirrup (4) out far enough to access the stop screw (5) and remove the stop screw (5) from the stirrup (4).

(4) Pull the stirrup (4) out of the pivot boss (6).

(5) Remove the pivot boss (6) and the stirrup guide bracket (7) from the upper wrap weldment (8).

(6) If worn, remove the stirrup index spring (9) from the stirrup guide bracket (7).

B. Installation

(1) If removed, install the stirrup index spring (9, Figure 4-6) on the guide bracket (7).

(2) Install the guide bracket (7) in the upper wrap weldment (8) and secure with the pivot boss (6).

(3) Slide the stirrup (4) thru the slots (B) in the pivot boss (6) and the guide bracket (7).

(4) Install the stop screw (5) on the stirrup (4).

(5) Push the footrest section (3) all the way into its stowed position.

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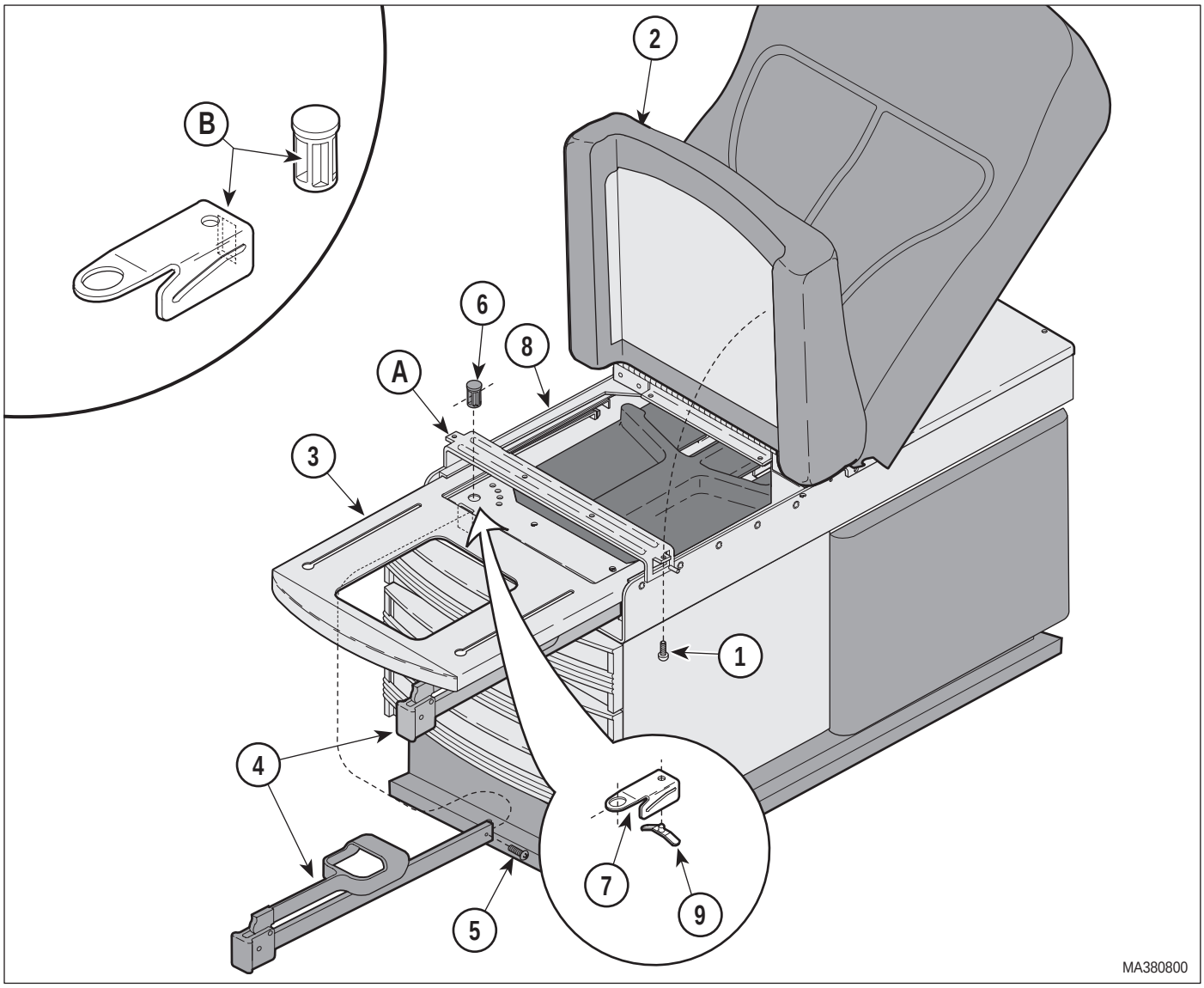

Figure 4-6. Stirrup Components Removal / Installation

(6) Lower the seat section (2). If necessary, for tables without pelvic tilt, install the two screws (1) to secure the seat section (2) to the upper wrap assembly (8).

(7) Plug the table power cord into wall outlet.

(8) Check the stirrups to insure they work smoothly and lock into the various positions.

4.8 Accessing Upper Wrap Components

A. Removal

(1) Depress the Back UP footswitch pedal and raise the back section (A, Fig. 4-7) to access the back hydraulic cylinder (1).

NOTE

If the back section will not raise when the footswitch pedal is depressed lift the back section manually to access the cylinder. Place a support between the back section and upper wrap assembly to hold the back section in an elevated position while working on the back hydraulic cylinder.

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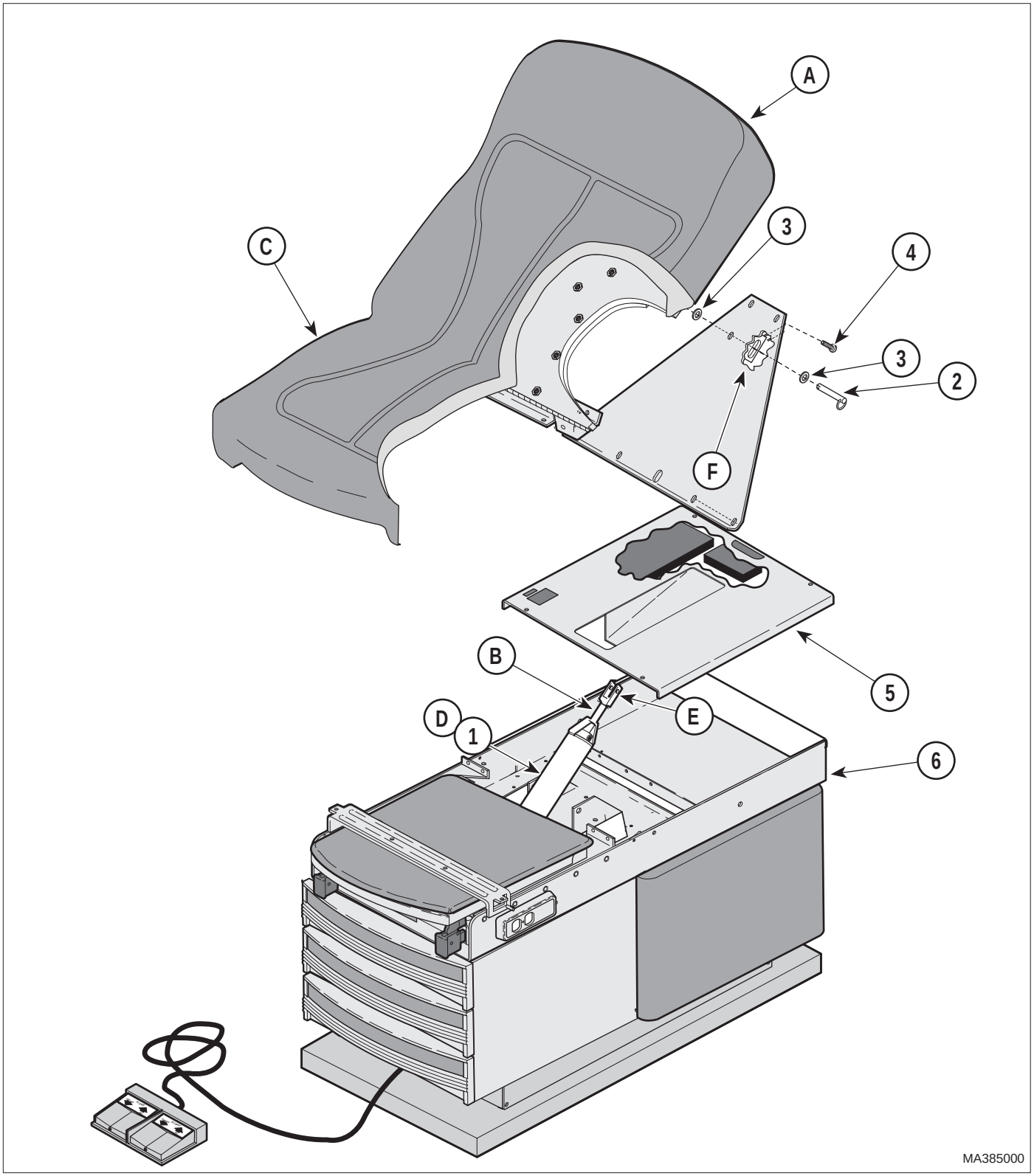

Figure 4-7. Accessing Upper Wrap Components

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CAUTION
Place a support between the bottom of the back section and the upper wrap assembly to prevent the back section from falling while working on the hydraulic back cylinder.

(2) Supporting the back section (A), remove the hitch pin (2) and flat washers (3) that secures the back hydraulic cylinder rod (B) to the back section (A).

(3) Allow the back section (A) to rest on the seat section (C).

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(4) Disconnect the power cord from the wall outlet.

(5) Remove the four screws (4) that secure the top cover assembly (5) to the upper wrap weldment (6).

(6) Carefully slide the back hydraulic cylinder (1) out through the top cover assembly (5) and remove the top cover assembly.

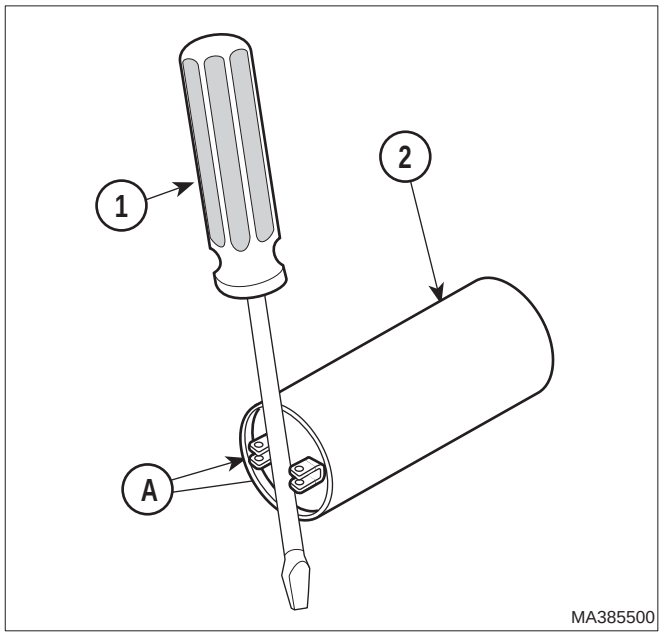

Figure 4-8. Accessing Upper Wrap Components

WARNING
Using a screwdriver with an <u>insulated</u> handle, short across the terminals of each capacitor to remove any built up electrical charge that may remain in the capacitors. Failure to comply with these instructions could result in personal injury or death.

(7) Using a screwdriver (1, Fig. 4-8) with an insulated handle, short across the terminals (A) of each capacitor (2) to discharge any electrical charge that may be remaining in the capacitors.

B. Installation

(1) Carefully feed the back hydraulic cylinder (1, Fig. 4-7) through the top cover (5) and secure the top cover with the four screws (4).

(2) Plug the table into a wall outlet and extend the back hydraulic cylinder rod (B) all the way out.

(3) Swing the back section (A) away from seat section (C) and lift hydraulic back cylinder (1) up until the clevis (E) on the cylinder rod (B) is aligned with the mounting bracket (F) on the back section (A); then install the two flat washers (3) and hitch pin (2).

(4) Depress the Back DOWN footswitch pedal until the back section (A) is in the horizontal position.

4.9 Hydraulic Oil Level

A. Checking the Hydraulic Oil Level

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

(1) Access the motor / pump assembly (Refer to Para 4-8).

(2) Remove the two screws (1, Fig. 4-9) located on the bottom, outside of the upper wrap assembly (2) at the head-end of the table, that secure the motor cover (3) to the upper wrap assembly (2).

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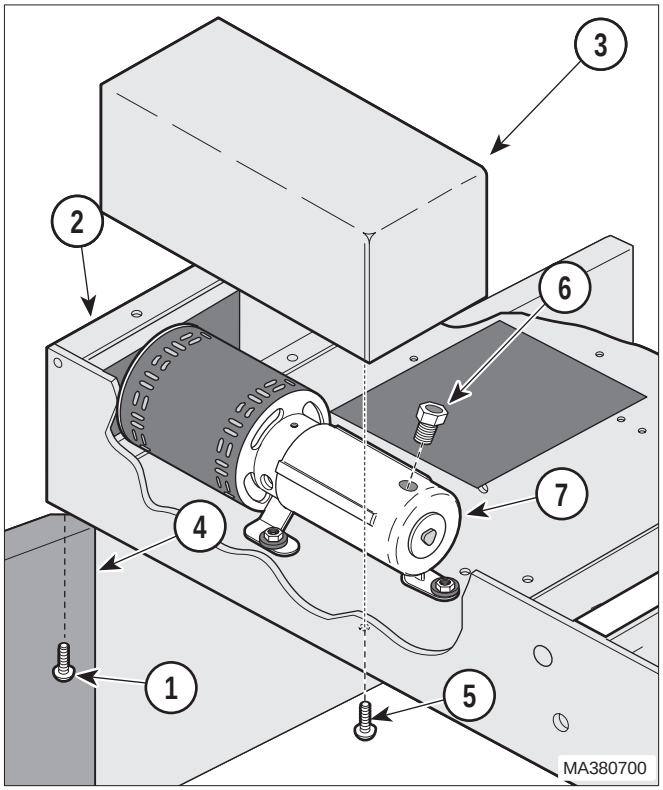

Figure 4-9. Hydraulic Oil Level

(3) Open the door (4) on the patient's right-hand side and remove the remaining two screws (5) located beneath the upper wrap assembly (2) that secure the motor cover (3) to the upper wrap assembly (2). Remove the motor cover (3).

NOTE
The level of the hydraulic oil should be just touching the bottom of the filler plug (6) on the hydraulic motor / pump reservoir (7) when the table is at its lowest position (table cylinders retracted) and the back hydraulic cylinder rod is all the way retracted.

(4) Remove the filler plug (6) and check the level of the oil in the reservoir (7).

EQUIPMENT ALERT
Use only **light** weight mineral oil in the hydraulic system of the table.

(5) If necessary, add light weight mineral oil to the reservoir (7) until the level is approximately even with the bottom of the filler plug (6) when the plug is installed.

(6) Install the filler plug (6).

NOTE
Excessive noise when operating the hydraulic system may be due to air in the system. Whenever work has been performed on the hydraulics raise and lower the table and back section several times to purge any air from the system.

(7) Raise and lower the table and back cylinder several times to purge any air from the system.

(8) Check for any hydraulic leakage and clean the table.

(9) Install the motor cover (3) and secure with the two screws (5) located on the inside of the cabinet and the two screws (1) located on the outside.

(10) Carefully feed the back hydraulic cylinder through the top cover (Refer to para 4.8).

4.10 Hydraulic Motor / Pump Removal / Installation

A. Removal

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

(1) Access the motor / pump assembly (Refer to Para 4-8).

(2) Remove the two screws (1, Fig. 4-9) located on the bottom, outside of the upper wrap assembly (2) at the head-end of the table, that secure the motor cover (3) to the upper wrap assembly (2).

(3) Open the door (4) on the patient's right-hand side and remove the remaining two screws (5) located beneath the upper wrap assembly (2) that secure the motor cover (3) to the upper wrap assembly (2). Remove the motor cover (3).

(4) Place location tags on the electrical leads or terminals where the motor / pump (1, Fig. 4-10) is connected for later reassembly.

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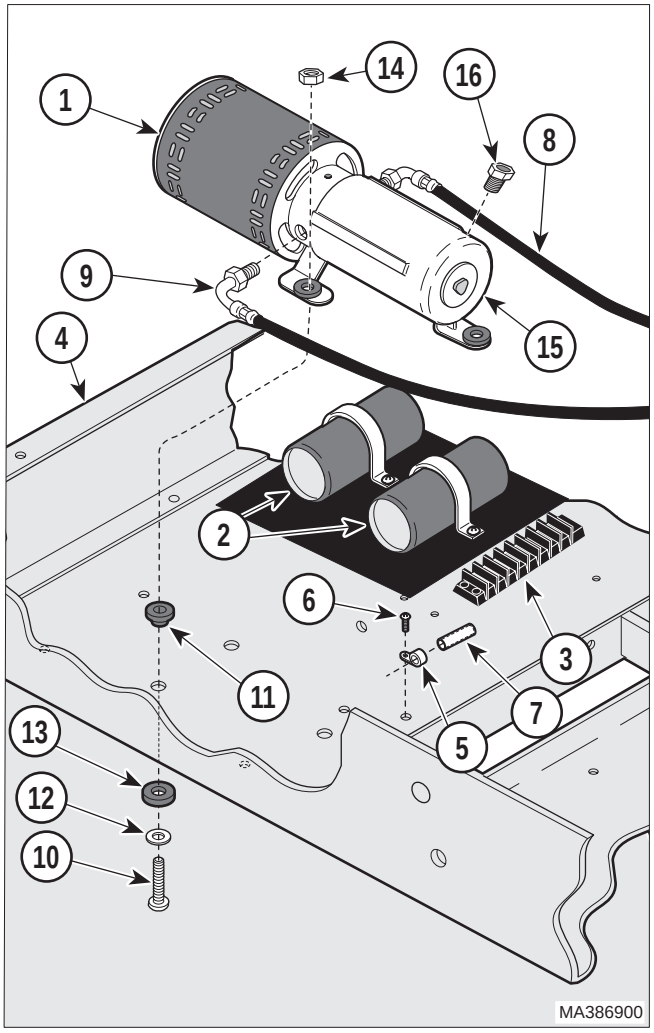

Figure 4-10. Hydraulic Motor / Pump Removal / Installation

(5) Disconnect the motor / pump electrical leads from the capacitors (2) and terminal board (3) and remove the ground wire connected to the upper wrap assembly (4).

NOTE
Before removing the wire clip and vinyl sleeve that secure the electrical leads of the motor / pump to the upper wrap assembly place location marks around the wire clip. This will assure the clip is located in the same position during reassembly in order for the motor / pump cover to fit properly.

(6) Place location marks around the wire clip (5) for later reassembly. Remove the mounting screw (6) that secures the wire clip (5) and vinyl sleeve (7) to the upper wrap assembly (4) and remove the wire clip and vinyl sleeve from the electrical leads of the motor / pump.

(7) Place location tags on the power hydraulic hose (8) and the return hydraulic hose (9) for later reassembly.

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

NOTE
Even though there is no hydraulic pressure on the system some residual fluid may drip out of the lines during removal. Place paper towels around the motor / pump to absorb any oil leakage that may occur.

(8) Disconnect the power (8) and return (9) hose assemblies from the motor / pump (1).

(9) Open the patient's right-hand door and remove the three mounting screws (10) that secure the motor / pump (1) to the upper wrap assembly (4).

(10) Remove the motor / pump (1) from the upper wrap assembly (4).

B. Installation

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

(1) Place the motor / pump (1, Fig. 4-10) in position on the vibration mount bushings (11) on the upper wrap assembly (4).

(2) Secure the motor / pump (1) to the upper wrap assembly (4) with the three screws (10), flat washers (12), vibration mount rings (13) and lock nuts (14). Tighten the nuts (14) until the vibration mounts (11) are just *slightly* compressed.

(3) Remove the shipping plugs from the ports on the motor / pump (1) and connect the return hose (9) and power hose (8).

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EQUIPMENT ALERT
Remove the shipping plug from the motor / pump reservoir and install the breather cap before operating the motor / pump.

(4) Remove the shipping plug from the reservoir (15) of the motor / pump (1) and install the breather cap (16) on the reservoir (15).

NOTE
If necessary, use the shipping plug, removed from the new motor / pump reservoir, on the old motor / pump reservoir for shipping back to the factory.

(5) Connect the electrical leads from the motor / pump (1) to the appropriate terminals on the capacitors (2) and terminal 8 of the terminal board (3) (Refer to para 5.1).

(6) Place the vinyl sleeve (7) around the electrical leads of the motor / pump (1) and secure the leads to the upper wrap assembly (4) with the wire clip (5) and mounting screw (6). Assure the wire clip (5) is in the same location as when removed so it will not interfere with the motor cover.

(7) Check the hydraulic oil level (Refer to para 4.9).

4.11 Hydraulic Motor / Pump and Reservoir Seal Replacement

A. Disassembly

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

(1) Remove the motor / pump from the table (Refer to para 4.10).

NOTE
Always dispose of any fluids in a safe and environmentally approved manner.

(2) Remove the fill plug (1, Fig. 4-11) from the hydraulic reservoir (2) of the motor / pump and drain the hydraulic fluid.

EQUIPMENT ALERT
During disassembly and assembly of the motor / pump, use extreme care to not damage, knick or scratch any of the parts.

(3) Remove the bolt (3), washer (4) and o-ring (5) that secures the hydraulic reservoir (2) to the motor / pump.

(4) Remove the reservoir (2) from the motor / pump.

NOTE
Use care to not lose the two suction valve check balls (6) located inside the pump cover head assembly (7) during disassembly.

(5) Carefully remove the five bolts (8) that secure the pump cover head assembly (7) to the pump housing assembly (9) and separate the two assemblies.

(6) Remove the o-ring seal (10) from the pump housing assembly (9).

(7) Place location marks on the motor adapter plate (11) and motor (12) for later assembly.

NOTE
When separating the motor adapter plate (11) from the motor (12) the rotor (13) will remain attached to the motor adapter plate (11) and pump housing assembly (9). Use care not to damage the components.

(8) Remove the two screws (14) that secure the motor (12) to the motor adapter plate (11) and separate the two assemblies.

EQUIPMENT ALERT
Use a soft rubber mallet to separate the outer (1, Fig. 4-12) and inner (2) geroters from the pump housing assembly (3). Use care to prevent damage to the pump housing assembly and related parts.

(9) Carefully remove the outer geroter (1, Fig. 4-12) from the pump housing assembly (3).

(10) While holding the rotor (4), tap gently on the motor adapter plate (5), while rotating it, to release the inner geroter (2).

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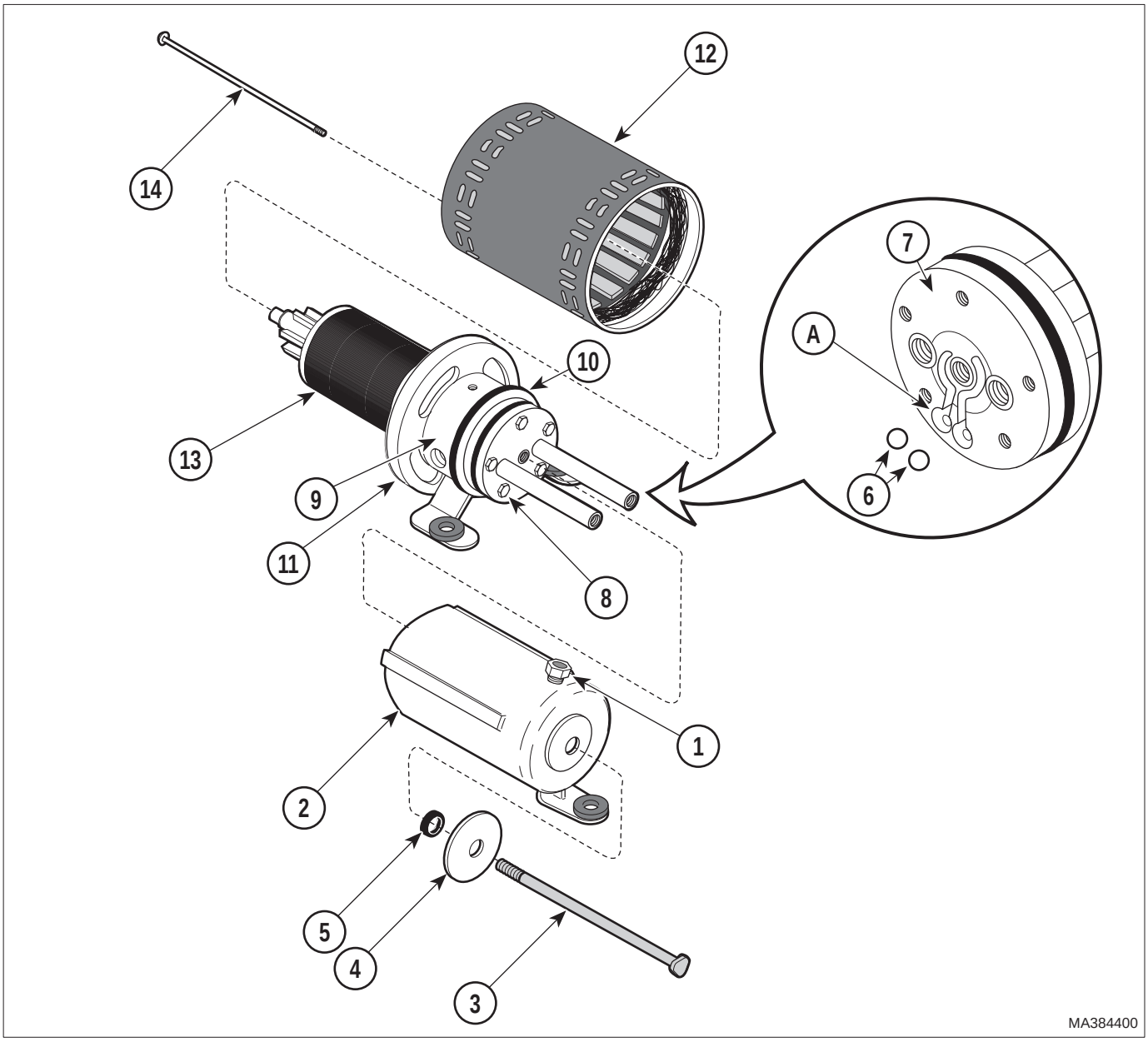

Figure 4-11. Hydraulic Motor / Pump & Reservoir Seal Replacement

(11) Remove the shaft pin (6) from the motor shaft (A).

(12) Carefully pull the rotor (4) from the pump housing assembly (3) and motor adapter plate (5).

(13) Remove the motor shaft o-ring seal (7) from the pump housing assembly (3).

B. Assembly

EQUIPMENT ALERT

When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

(1) Insure the shims (8, Fig. 4-12) are in place on both ends the rotor shaft (A) and insert the rotor shaft (A) into the motor adapter plate (5) and pump housing assembly (3).

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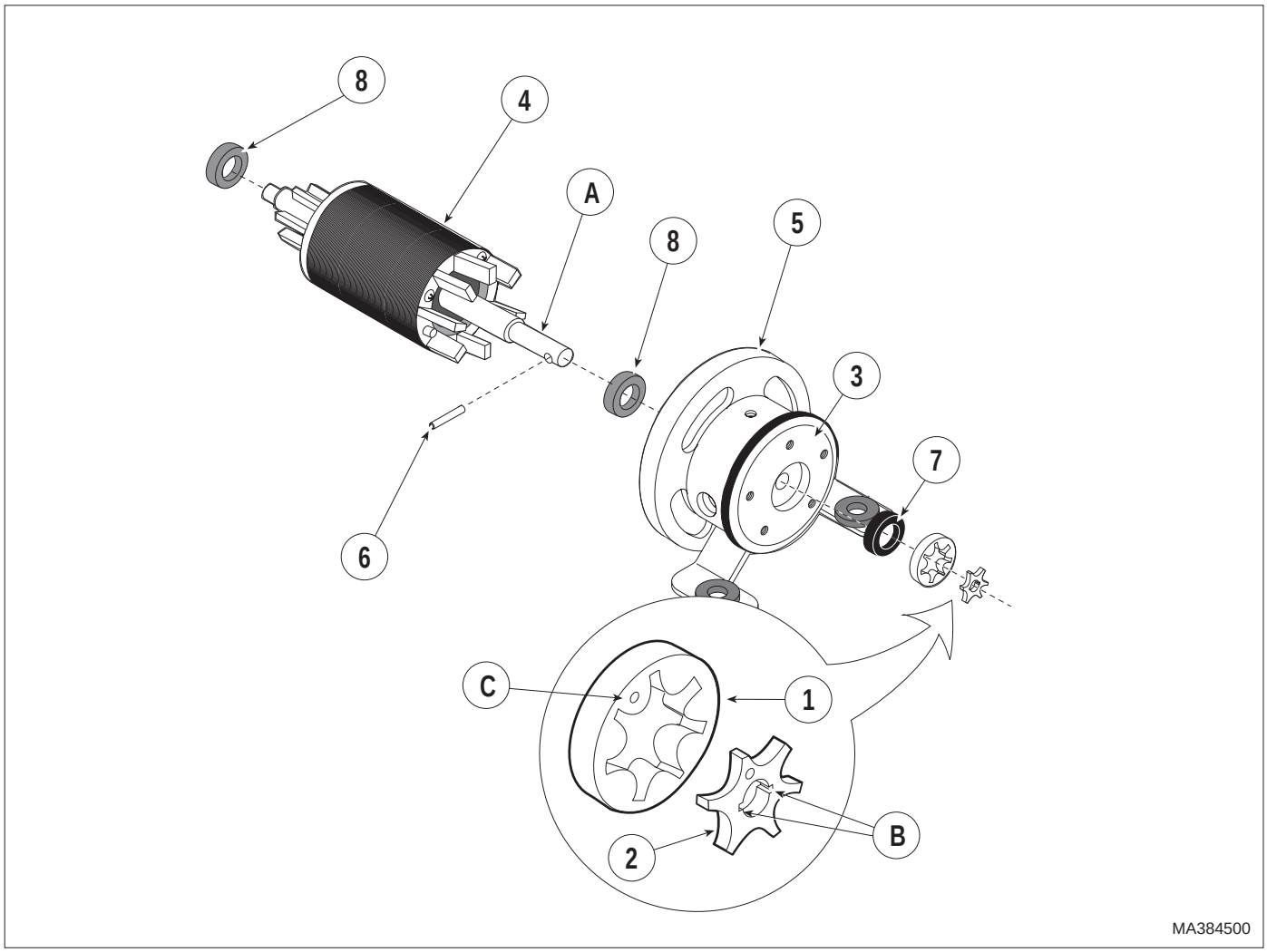

Figure 4-12. Hydraulic Motor / Pump & Reservoir Seal Replacement

(2) Assemble the motor (12, Fig. 4-11) to the motor adapter plate (11) aligning the location marks previously placed on the assemblies and install the two motor screws (14).

(3) Lubricate the motor shaft o-ring seal (7, Fig 4-12) with mineral oil and install it onto the motor shaft (A) and pump housing assembly (3).

NOTE
The shaft pin (6) has a chamfered end for ease of installation.

(4) Install the shaft pin (6) onto the motor shaft (A).

EQUIPMENT ALERT
When installing the inner geroter (2) insure that the rounded and square grooves (B) in the inner geroter are aligned with the rounded and square ends of the shaft pin (6).

NOTE
The inner (2) and outer geroter (1) each have a small detent hole (C) on one side. When installing the geroters the detent hole has no significance in the placement.

(5) Gently push the inner geoter (2), aligned with the shaft pin (6), onto the motor shaft (A).

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NOTE
Lubricate the outer geroter (1) with mineral oil before installing.

(6) Carefully align and install the outer geroter (1) onto the pump housing assembly (3).

(7) Insert the check balls (6, Fig. 4-11) in the suction valve holes (A).

(8) Align and install the pump cover head assembly (7) onto the pump housing assembly (11) and torque the bolts (8) evenly to 18 to 22 ft. / lbs (24.4 to 29.8 N•M).

(9) Lubricate the reservoir o-ring (10) with mineral o-ring with mineral oil and install it on the pump housing assembly (9).

EQUIPMENT ALERT
Do not overtighten the reservoir bolt when installing the reservoir or damage to the reservoir may occur.

(10) Place the reservoir (2) in position and install the o-ring seal (5), flat washer (4), and bolt (3).

EQUIPMENT ALERT
Use only **light** weight mineral oil in the hydraulic system of the table.

(11) Remove the filler plug (1) and add light weight mineral oil to the reservoir (2) until the level is approximately even with the bottom of the filler plug (1) when the plug is installed.

(12) Install the filler plug (1).

(13) Install the motor / pump onto the table (Refer to Hydraulic Motor / Pump Removal / Installation para 4.10).

(14) Check operation and clean the unit.

4.12 Capacitors (Motor / Pump) Removal / Installation

A. Removal

(1) Access the upper wrap components (Refer to Para 4-8).

(2) Place location tags on the electrical leads of the capacitor(s) (1, Fig. 4-13) and remove the leads from the capacitor(s).

(3) Loosen the mounting screws (2) on the capacitor clamp(s) (3) and slide the capacitor(s) (1) out of the clamp(s).

B. Installation

EQUIPMENT ALERT
Assure the capacitor(s) being installed have the same voltage (VAC) and microfarad (MFD) ratings as the ones removed.

(1) Position the capacitor(s) (1, Fig. 4-13) in place beneath the capacitor clamp(s) (3) and tighten the clamp mounting screws (2).

(2) Using the location tags, previously place on the electrical leads, connect the electrical leads to the capacitor(s) (1). If necessary, refer to Wiring Diagrams para 5.1.

(3) Install the top cover (Refer to para 4.8)

(4) Check operation and clean the table.

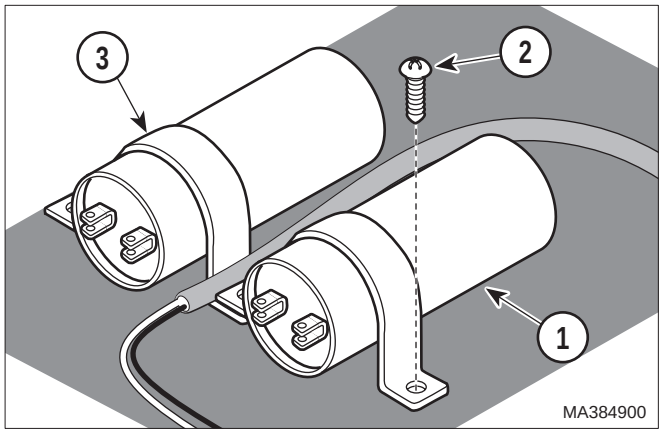

Figure 4-13. Capacitor Removal / Installation

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4.13 Hydraulic Return and Power Hose Removal / Installation

A. Removal

(1) Access the upper wrap components (Refer to Para 4-8).

(2) Remove the two screws (1, Fig. 4-14) located on the bottom, outside of the upper wrap assembly (2) at the head-end of the table, that secure the motor cover (3) to the upper wrap assembly (2).

(3) Open the door (4) on the patient's right-hand side and remove the remaining two screws (5) located beneath the upper wrap assembly (2) that secure the motor cover (3) to the upper wrap assembly (2). Remove the motor cover (3).

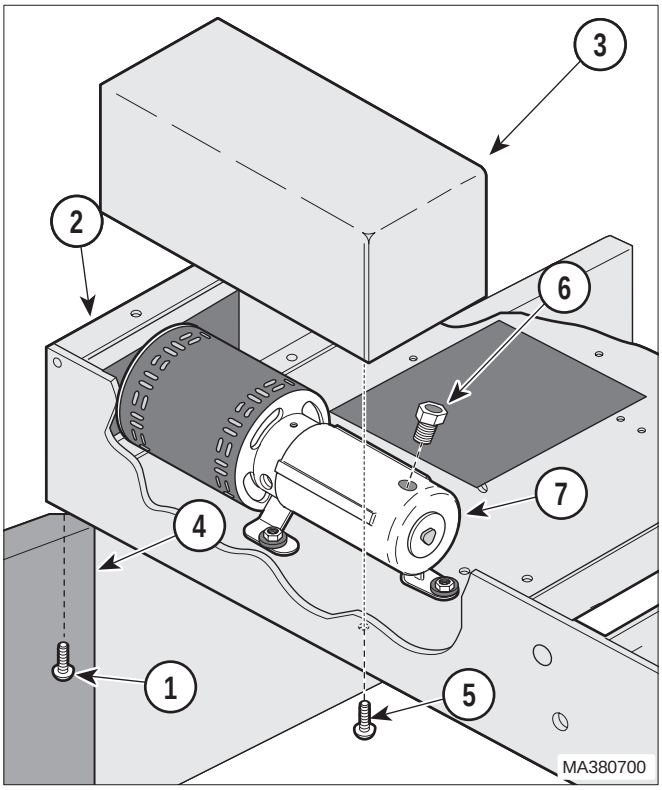

Figure 4-14. Accessing the Motor / Pump Assembly

(4) Open one of the doors, remove the two screws (1, Fig. 4-15) that hold the rod cover (2) in place and remove the rod cover (2).

CAUTION

Place supports beneath the scissor frame of the table before working on the hydraulic base components. Failure to do so could result in personal injury.

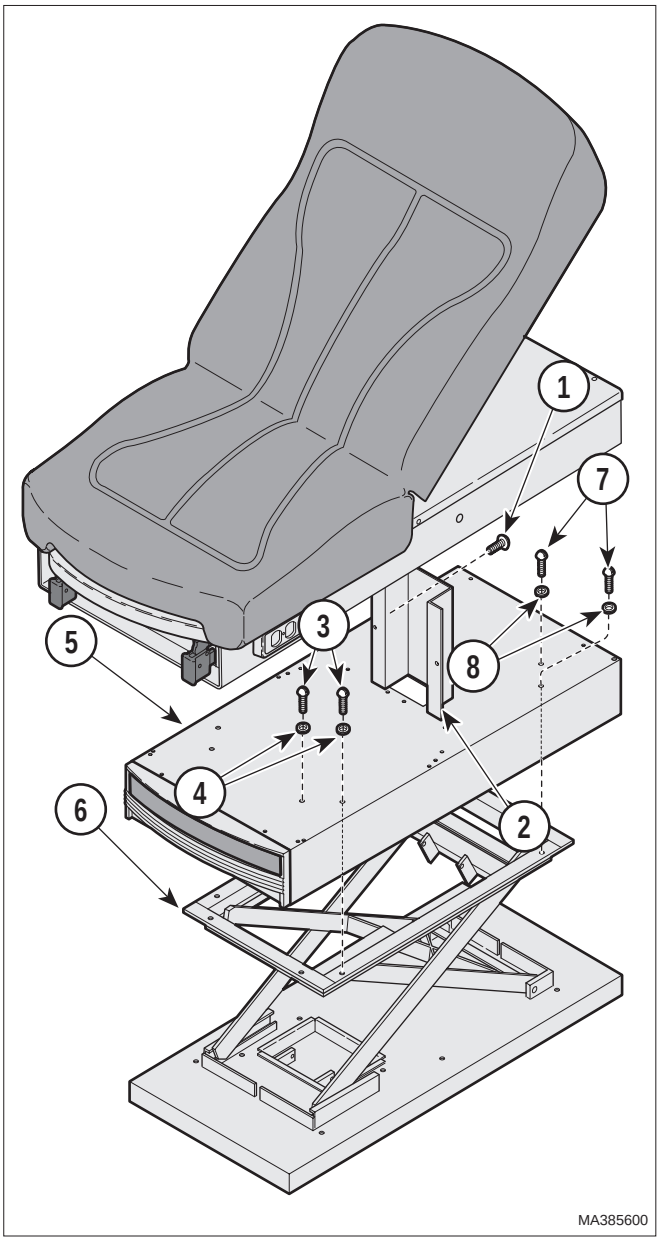

Figure 4-15. Hydraulic Return and Power Hose Removal / Installation

NOTE
If one or both of the base hydraulic cylinders are operable, to gain access to the base cylinders, raise the unit to its maximum level and place supports beneath the scissor frame to prevent it from falling. If the base cylinders are not operable continue on with the following steps.

(5) Remove the drawers at the foot-end of the table.

(6) Remove the four allen head screws (3) and lockwashers (4) that secures the sub base (5) to the scissors frame assembly (6).

(7) Open the two doors at the head-end of the table and remove the four screws (7) and lockwashers (8) that secures the sub base (5) to the scissors frame (6).

CAUTION
Take care to not damage the table or flooring when tilting the table off the scissors frame. Use proper lifting techniques when lifting the table to prevent personal injury.

(8) Carefully lift the table from the head-end, tilting it slightly, so that foot-end slides off and rest on the floor.

CAUTION
Place supports beneath the head-end of the table before working on the hydraulic base component. Failure to do so could result in personal injury.

CAUTION
Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(9) Place location tags on the hydraulic hoses (1, Fig. 4-16) for later reassembly. Also, note the location of the cable ties (2) and wire clips (3) that secure the cylinder hoses and electrical leads to insure they are installed in the same exact locations.

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

NOTE
Even though there is no hydraulic pressure on the system some residual fluid may drip out of the lines during removal. Place paper towels around the lines, cylinders and pump / motor to absorb any oil leakage that may occur.

(10) Disconnect the leaking hydraulic hose or hoses from the cylinders and motor / pump and remove the hose or hoses.

B. Installation

CAUTION
Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(1) Lay the old and new hose assemblies next to each other and transfer the location tags, cable tie and wire clip location marks from the old hose assembly to the new hose assembly.

(2) Place the new hose assembly in position on the table and connect the hose fittings to the respective components. If necessary, refer to Hydraulic Schematic para 5.1.

(3) Install the cable ties (2, Figure 4-16) and wire clips (3) at the exact position of the locations marks placed on the hose assembly (1).

CAUTION
Take care to not damage the table or flooring when tilting the table onto the scissors frame. Use proper lifting techniques when lifting the table to prevent personal injury.

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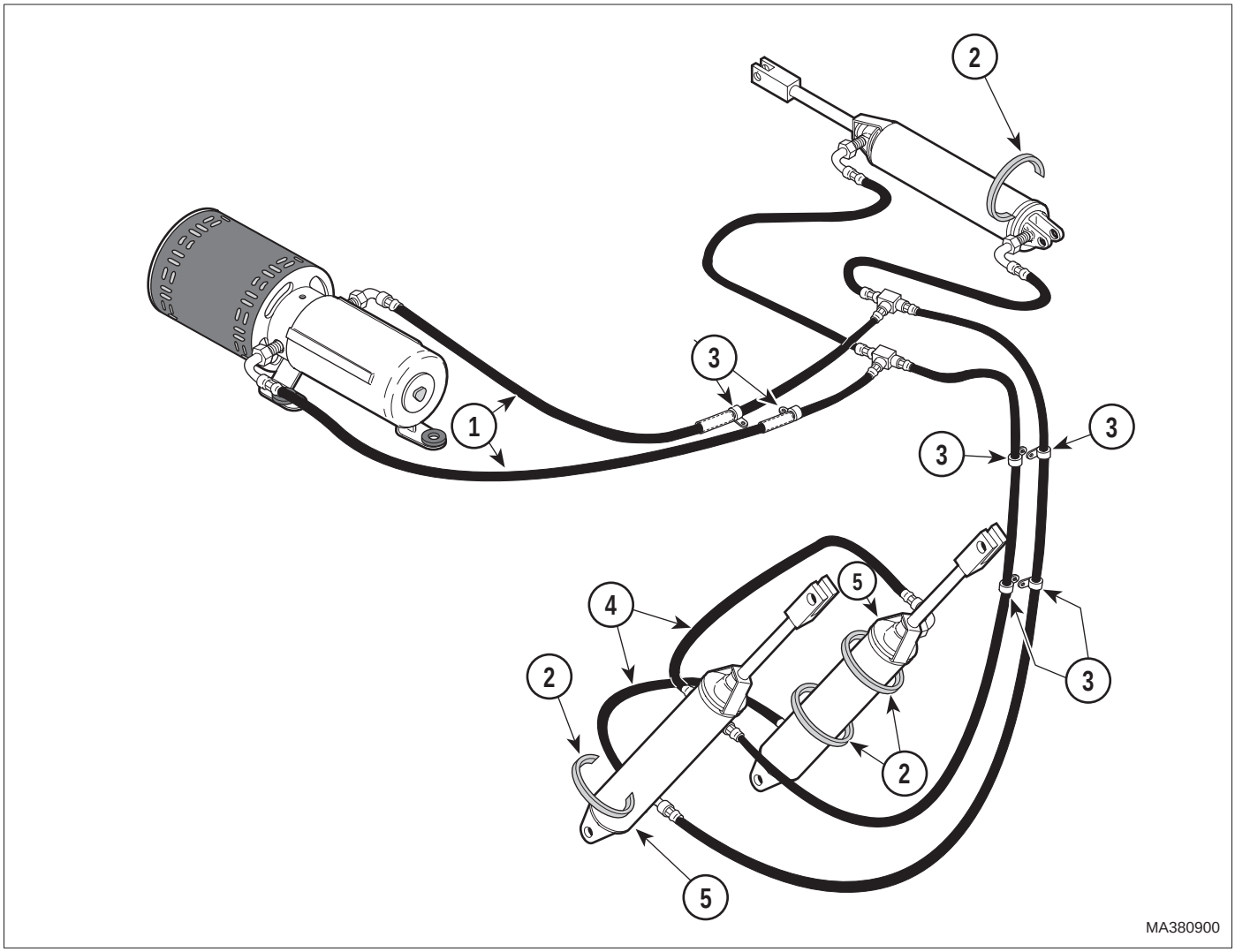

Figure 4-16. Hydraulic Return and Power Hose Removal / Installation

(4) Carefully lift the table back onto the scissor frame aligning the eight mounting holes in the sub base (5, Fig. 4-15) with the eight mounting holes in the scissor frame (6).

(5) Secure the sub base (5) to the scissor frame (6) with the eight lockwashers (4,8) and screws (3,4).

(6) Check the hydraulic oil level (Refer to para 4.9).

4.14 Hydraulic Base Cylinder Removal / Installation

A. Removal

EQUIPMENT ALERT

Do **not** cut off the electrical leads from the cylinder solenoid valve when removing the cylinders. If the electrical leads are removed on warranty parts it will **void the warranty** on those parts.

(1) Access the upper wrap components (Refer to Para 4-8).

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(2) Open one of the doors and remove the two screws (1, Fig. 4-17) that hold the rod cover (2) in place and remove the rod cover (2).

CAUTION

Place supports beneath the scissor frame of the table before working on the hydraulic base components. Failure to do so could result in personal injury.

NOTE

If one or both of the base hydraulic cylinders are operable, to gain access to the base cylinders, raise the unit to its maximum level and place supports beneath the scissor frame to prevent it from falling. If the base cylinders are not operable continue on with the following steps.

(3) Remove the drawers at the foot-end of the table.

(4) Using an allen wrench, remove the four allen head screws (3) and lockwashers (4) that secures the sub base (5) to the scissors frame assembly (6).

(5) Open the two doors at the head-end of the table and remove the four screws (7) and lockwashers (8) that secure the sub base (5) to the scissors frame (6).

CAUTION

Take care to not damage the table or flooring when tilting the table off the scissors frame. Use proper lifting techniques when lifting the table to prevent personal injury.

(6) Carefully lift the table from the head-end, tilting it slightly, so that foot-end slides off and rest on the floor.

CAUTION

Place supports beneath the head-end of the table before working on the hydraulic base component. Failure to do so could result in personal injury.

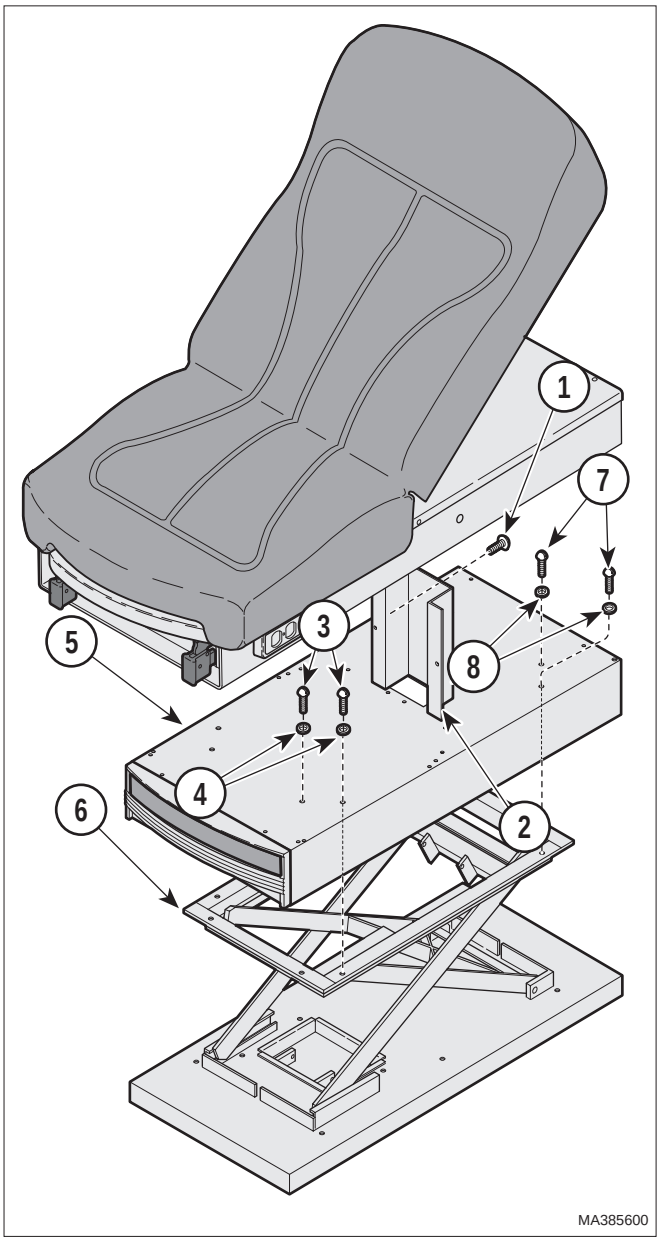

Figure 4-17. Hydraulic Base Cylinder Removal / Installation

CAUTION

Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

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(7) Place location tags on the hydraulic hoses (4, Fig. 4-16) for later reassembly. Also, note the location of the cable ties (2) and wire clips (3) that secure the cylinder hoses and electrical leads to insure they are installed in the same exact locations.

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

NOTE
Even though there is no hydraulic pressure on the system some residual fluid may drip out of the lines during removal. Place paper towels around the lines and cylinders to absorb any fluid during removal.

(8) Disconnect the hydraulic lines (4) from the malfunctioning base cylinder (5).

(9) Place location tags on the terminals of the terminal board, disconnect the electrical leads of the malfunctioning base cylinder (5) and pull the leads down through the table. If necessary, refer to Wiring Diagram, para 5.1.

(10) Remove the hitch pin clip (1, Fig. 4-18) and clevis pin (2) that secures the clevis (3) of the malfunctioning cylinder (4) to the scissor frame assembly (5).

(11) Remove the hitch pin clip (6) and clevis pin (7) that secures the hydraulic cylinder (4) to the base of the scissor frame assembly (5) and remove the hydraulic cylinder.

B. Installation

NOTE
Place the new hydraulic base cylinder in position on the scissor frame assembly so that the electrical leads coming out of the cylinder from the solenoid valve are facing upward.

(1) Place the new hydraulic base cylinder (4, Fig. 4-18) in position on the scissor frame assembly (5) with the solenoid valve electrical leads (8) facing upward.

NOTE
Before installing the clevis pin that secures the base cylinder to the base of the scissor frame assembly place a light coating of lubricant on it.

(2) Install the clevis pin (7) and hitch pin clip (6) that secures the base cylinder (4) to the base of the scissor frame assembly (5).

(3) Feed the electrical leads from the solenoid valve of the base cylinder to the terminal board and connect the electrical leads to terminals 3 or 4 and 7 (Refer to Wiring Diagram, para 5.1).

(4) Remove the shipping plugs from the base cylinder (4) and connect the return (9) and power (10) hoses to the cylinder.

CAUTION
Insure that all cable ties and wire clips are placed in **exactly** the same locations as when removed or damage to the electrical leads and / or hydraulic hoses may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(5) Place cable ties (11) on the hydraulic hoses (10) and cylinder electrical leads (8) in the exact same position from where they were removed.

NOTE
It may be necessary to extend the cylinder rod on the new cylinder in order to connect the cylinder clevis to the bracket on the scissor frame assembly. The table must be plugged into an electrical outlet to extend the cylinder. To prevent the other table base cylinder from extending, causing the table to raise, disconnect and tape one of its electrical leads from the terminal board.

(6) Disconnect one of the electrical leads from the terminal board of the hydraulic base cylinder (4) that was not replaced to prevent it from extending. Place electrical tape around the connector of the electrical lead (refer to Wiring Diagram, para 5.1).

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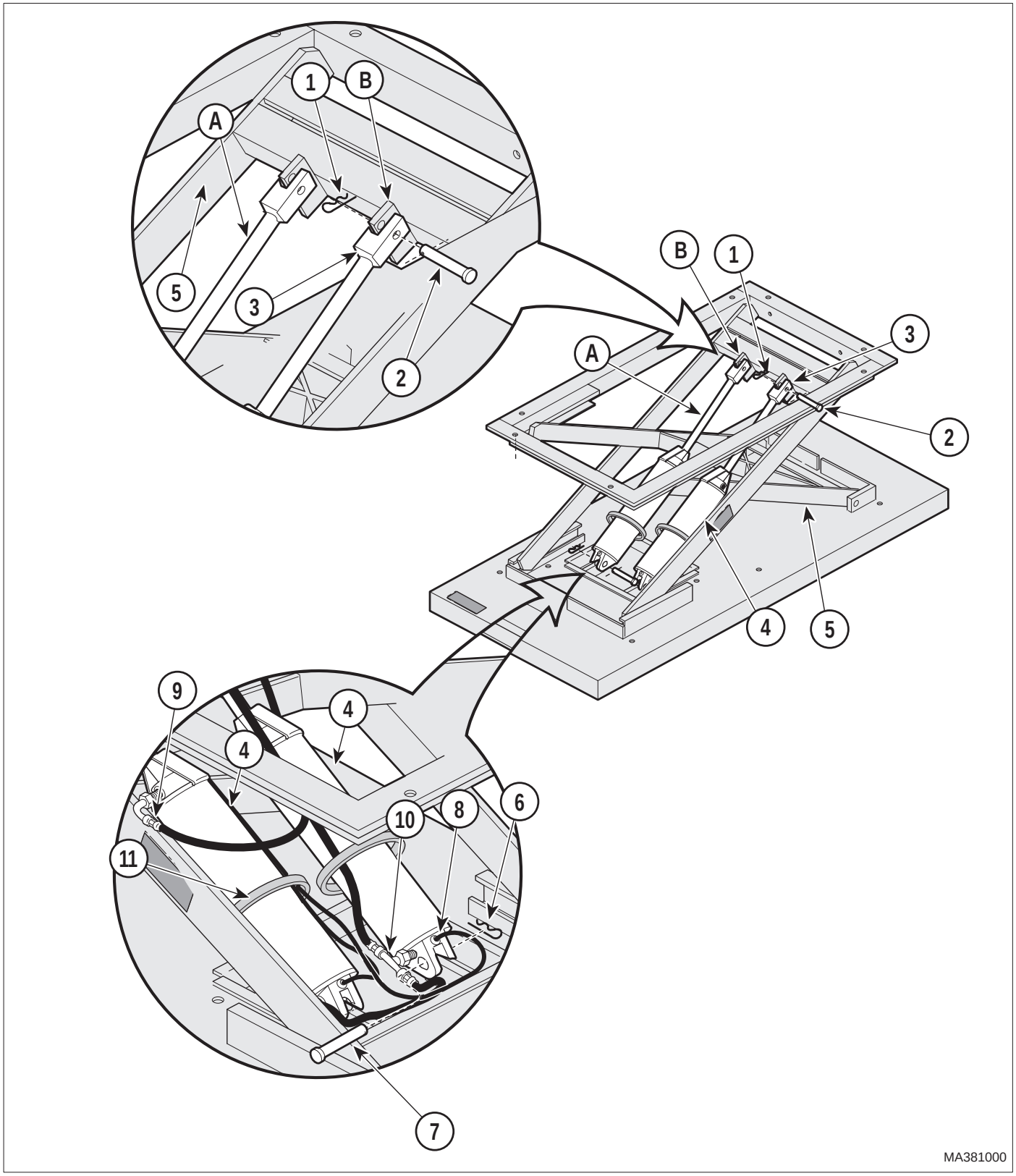

Figure 4-18. Hydraulic Base Cylinder Removal / Installation

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WARNING
Use extreme care to prevent the possibility of electrical shock when power is applied to the table without the top cover in place. Live electrical circuits are present on the terminal board and components. Failure to comply with these instructions could result in personal injury or death.

(7) Plug the power cord into a wall outlet.

(8) While observing the cylinder rod (A) on the base cylinder (4) that was replaced, depress the Table UP footswitch to extend the cylinder rod until it is aligned with the bracket (B) on the scissor frame (5).

(9) Disconnect the power cord from the wall outlet.

(10) Install the clevis pin (2) and hitch pin clip (1) that secures the base cylinder rod (A) to the bracket (B) of the scissor frame (5).

(11) Reconnect the electrical lead that was removed from the terminal board of the base cylinder that was not replaced.

CAUTION
Take care to not damage the table or flooring when tilting the table onto the scissors frame. Use proper lifting techniques when lifting the table to prevent personal injury.

(12) Carefully lift the table onto the scissor frame (6, Fig. 4-17) aligning the eight mounting holes in the sub base (5) with the eight mounting holes in the scissor frame (6).

(13) Secure the sub base (5) to the scissor frame (6) with the eight lockwashers (4,8) and screws (3,7).

(14) Check the hydraulic oil level (Refer to para 4.9).

C. Adjustments

EQUIPMENT ALERT
The base cylinders must be synchronized for proper operation. If the two base cylinders do not extend evenly undue stress is placed on the lifting mechanism. If not corrected premature failure may occur on the assemblies of the lifting mechanism.

(1) While observing the table to assure it elevates evenly, depress the Table UP footswitch and raise the table to its highest elevation.

NOTE
Both base cylinders must stop simultaneously when the table reaches its highest elevation.

EQUIPMENT ALERT
Never attempt to adjust the hydraulic cylinder rod length with the cylinder in its completely **extended** (rod all the way out) or **retracted** (rod all the way in) positions. Failure to do so may result in equipment damage.

(2) Raise the table section high enough to gain access to the flats on the cylinder rod (A, Fig. 4-18) but do not extended it completely.

WARNING
Place supports beneath the table to support it while performing any adjustments on the base cylinders. Failure to do so could result in personal injury.

NOTE
Turn the cylinder rod only 1/4 turn at a time when making adjustment until the back section is adjusted properly.

(3) To **lower** the table section, using a 3/8" wrench on the flats of the cylinder rod (A), turn the cylinder rod inward (counterclockwise).

(4) To **raise** the table section, turn the cylinder rod (A) outward (clockwise).

(5) Raise and lower the table to assure the table operates correctly. If necessary readjust the cylinder rod(s).

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SECTION IV
MAINTENANCE / SERVICE

4.15 Hydraulic Back Cylinder Removal / Installation

A. Removal

EQUIPMENT ALERT
Do **not** cut off the electrical leads from the cylinder solenoid valve when removing the cylinders. If the electrical leads are removed on warranty parts it would **void the warranty** on those parts.

(1) Depress the Back UP footswitch pedal and raise the back section (A, Fig. 4-19) to access the back hydraulic cylinder (1).

NOTE
If the back section will not raise when the footswitch pedal is depressed lift the back section manually to access the cylinder. Place a support between the back section and upper wrap assembly to hold the back section in an elevated position while working on the back hydraulic cylinder.

CAUTION
Place a support between the bottom of the back section and the upper wrap assembly to prevent the back section from falling while working on the hydraulic back cylinder.

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(2) Supporting the back section (A), remove the hitch pin (2) and flat washers (3) that secures the back hydraulic cylinder rod (B) to the back section (A).

(3) Allow the back section (A) to rest on the seat section (C).

(4) Disconnect the power cord from the wall outlet.

(5) Remove the four screws (4) that secure the top cover assembly (5) to the upper wrap weldment (6).

(6) Carefully slide the back hydraulic cylinder (1) out through the top cover assembly (5) and remove the top cover assembly.

WARNING
Using a screwdriver with an <u>insulated</u> handle, short across the terminals of each capacitor to remove any built up electrical charge that may remain in the capacitors. Failure to comply with these instructions could result in personal injury or death.

(7) Using a screwdriver (1, Fig. 4-20) with an insulated handle, short across the terminals (A) of each capacitor (2) to discharge any electrical charge that may be remaining in the capacitors.

CAUTION
Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(8) Place location tags on the hydraulic hoses (1, Fig. 4-21) for later reassembly. Also, note the location of the cable ties (2) that secure the cylinder hoses and electrical leads to insure they are installed in the same exact locations.

EQUIPMENT ALERT
When working on the hydraulic system it is important that the area, tools and components be kept clean and free of any contaminants that would damage the system.

NOTE
Even though there is no hydraulic pressure on the system some residual fluid may drip out of the lines during removal. Place paper towels around the back cylinder to absorb any oil leakage that may occur.

(9) Disconnect the power (3) and return (4) hose assemblies from the back cylinder (5).

(10) Place location tags on the terminals of the terminal board and disconnect the electrical leads from the back cylinder (5).

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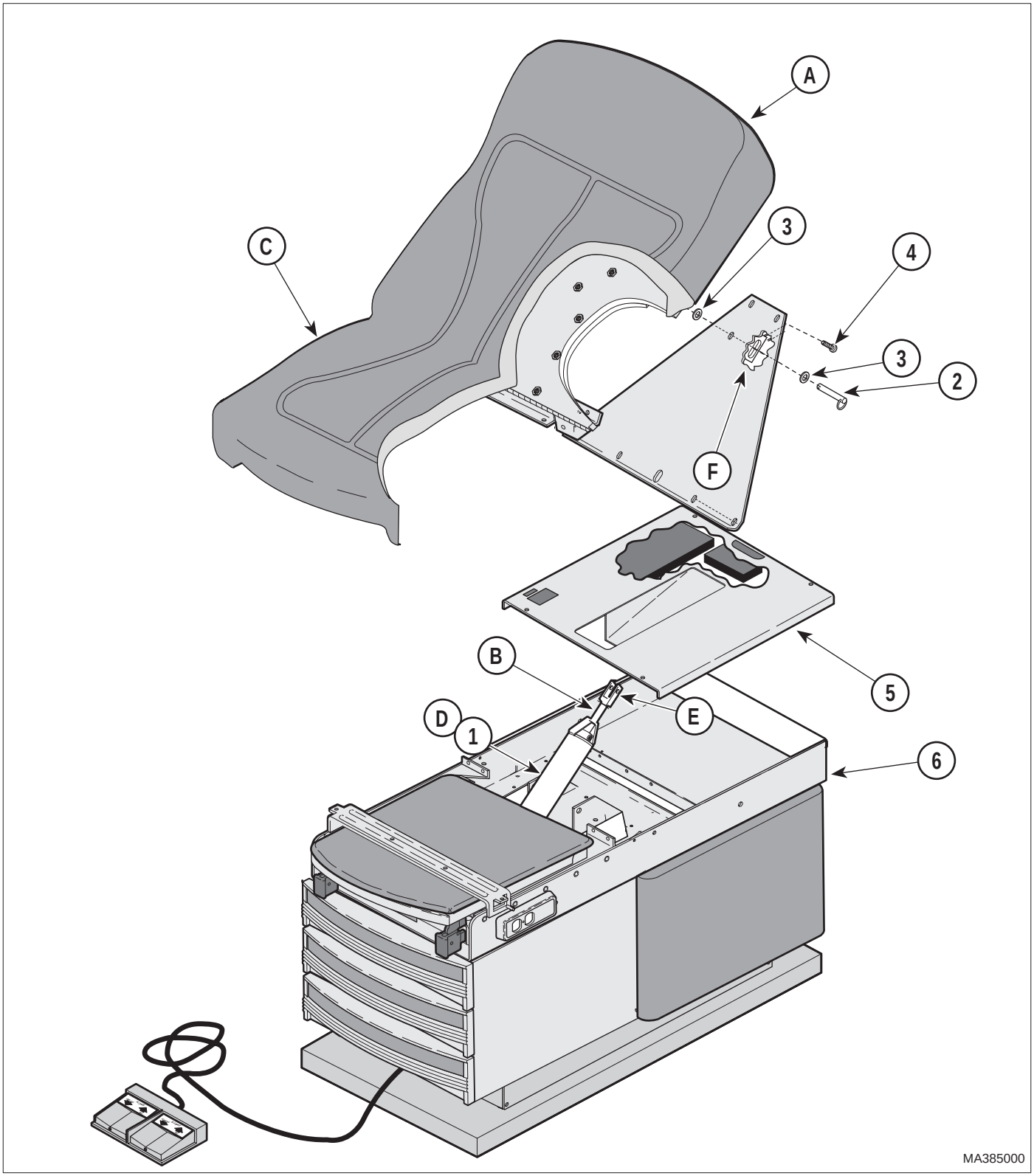

Figure 4-19. Hydraulic Back Cylinder Removal / Installation

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(11) Remove the hitch pin clip (6) and clevis pin (7) that secures the back cylinder (5) to the upper wrap assembly (8).

(12) Remove the back cylinder (5).

B. Installation

NOTE
Place the hydraulic back cylinder in position on the upper wrap assembly so that the electrical leads coming out of the cylinder from the solenoid valve are facing upward.

(1) Place the new hydraulic back cylinder (5, Fig. 4-21) in position on the upper wrap assembly (8) with the solenoid valve electrical leads (9) facing upward.

NOTE
Before installing the clevis pin (7) that secures the back cylinder (5) to the upper wrap assembly (8) place a light coating of lubricant on it.

(2) Install the clevis pin (7) and hitch pin clip (6) that secures the back cylinder (5) to the upper wrap assembly (8).

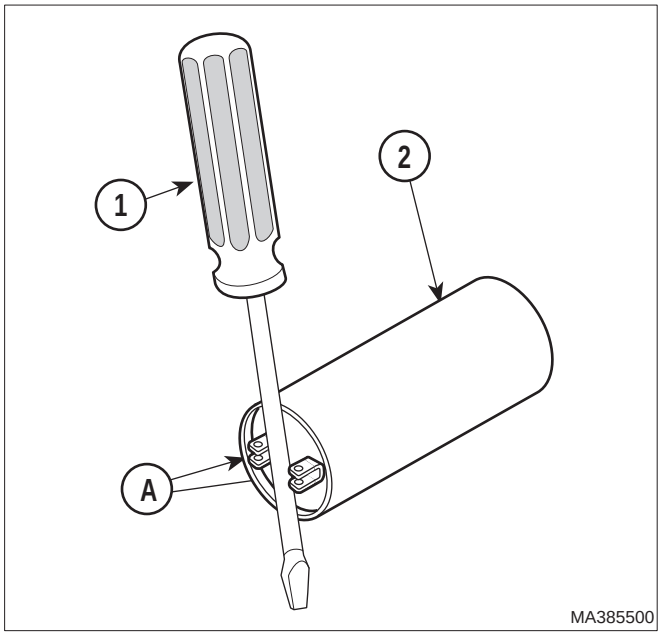

Figure 4-20. Hydraulic Back Cylinder Removal / Installation

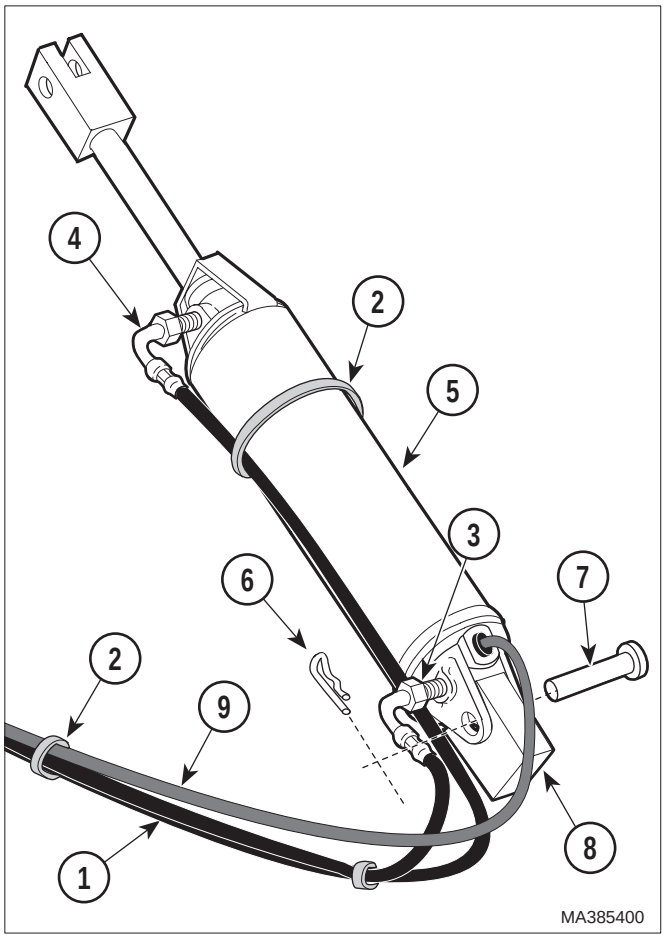

Figure 4-21. Hydraulic Back Cylinder Removal / Installation

(3) Connect the electrical leads (9) from the back cylinder (5) to the terminal board at terminals 5 and 8 (Refer to Wiring Diagram para 5.1).

(4) Remove the shipping plugs from the back cylinder (5) and connect the return (4) and power (3) hoses to the cylinder.

CAUTION
Insure that all cable ties and wire clips are placed in **exactly** the same locations as when removed or damage to the electrical leads and / or hydraulic hoses may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(5) Place cable ties (2) on the hydraulic hoses (1) and cylinder electrical leads (9) in the exact same position from where they were removed.

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WARNING
Use extreme care to prevent the possibility of electrical shock when power is applied to the table without the top cover in place. Live electrical circuits are present on the terminal board and components. Failure to comply with these instructions could result in personal injury or death.

(6) Plug the table into a wall outlet.

(7) Swing the back hydraulic cylinder (1,Fig. 4-19) up to prevent it from contacting any exposed electrical leads or connections and extend the back cylinder rod (B) all the way out.

(8) Swing the back section (A) away from seat section (C) and align hydraulic back cylinder clevis (E) on the cylinder rod (B) with the mounting bracket (F) on the back section (A); then install the two flat washers (3) and hitch pin (2).

NOTE
Excessive noise when operating the hydraulic system may be due to air in the system. Whenever work has been performed on the hydraulics raise and lower the table and back section several times to purge any air from the system.

(9) Raise and lower the table and back sections several times and check for hydraulic fluid leakage at the fittings on the back cylinder (1).

(10) Check the hydraulic oil level (Refer to para 4.9).

WARNING
Before continuing with the installation procedures first disconnect the power cord from the wall outlet and then; using a screwdriver with an <u>insulated</u> handle, short across the terminals of each capacitor to remove any built up electrical charge that may remain in the capacitors. Failure to comply with these instructions could result in personal injury or death.

(11) Disconnect the power cord from the wall outlet.

(12) Using a screwdriver (1, Fig. 4-20) with an insulated handle, short across the terminals (A) of each capacitor (2) to discharge any electrical charge that may be remaining in the capacitors.

(13) Supporting the back section (A, Fig. 4-19), remove the hitch pin (2) and flat washers (3) that secures the back hydraulic cylinder rod (B) to the back section (A).

(14) Allow the back section (A) to rest on the seat section (C).

(15) Carefully feed the back hydraulic cylinder (1) through the top cover (5) and secure the top cover with the four screws (4).

(16) Plug the table into a wall outlet and extend the back hydraulic cylinder rod (B) all the way out.

(17) Swing the back section (A) away from seat section (C) and lift hydraulic back cylinder (1) up until the clevis (E) on the cylinder rod (B) is aligned with the mounting bracket (F) on the back section (A); then install the two flat washers (3) and hitch pin (2).

(18) Depress the Back DOWN footswitch pedal until the back section (A) is in the horizontal position.

NOTE
If the Back Section cannot be returned to a completely horizontal (flat) position or continues to retract putting undue pressure on the cylinder the back cylinder will have to be adjusted. Refer to the Adjustments in this section.

(19) Check operation and clean the table.

C. Adjustment

EQUIPMENT ALERT
Never attempt to adjust the hydraulic cylinder rod length with the cylinder in its completely **extended** (rod all the way out) or **retracted** (rod all the way in) positions. Failure to do so may result in equipment damage.

(1) Raise the back section (A, Fig. 4-19) high enough to gain access to the flats on the cylinder rod (B) but do not extended it completely.

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NOTE
Turn the cylinder rod only 1/4 turn at a time when making adjustment until the back section is adjusted properly.

(2) To **lower** the table back section, using a 3/8" wrench on the flats of the cylinder rod (B), turn the cylinder rod inward (counterclockwise).

(3) To **raise** the table back section, turn the cylinder rod (B) outward (clockwise).

4.16 Footswitch Assembly Removal / Installation

A. Removal

(1) Access the upper wrap components (Refer to Para 4-8).

(2) Place location tags by the terminals where the footswitch electrical leads (1, Fig. 4-22) are connected on the terminal board (2) for later installation and remove the leads.

(3) Temporarily connect the new footswitch cord electrical leads to the terminal board (2) and upper wrap assembly (3) (Refer to Wiring Diagram para 5.1).

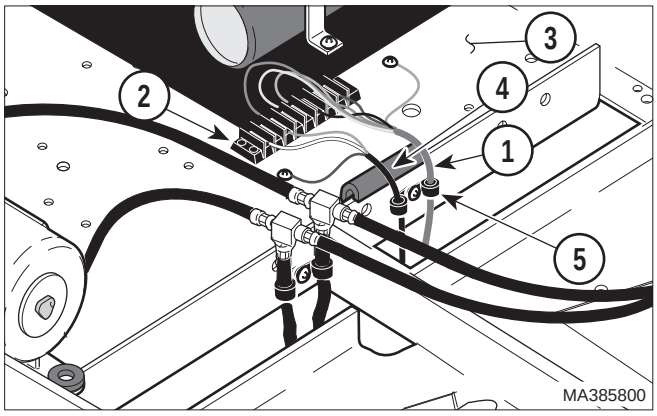

Figure 4-22. Footswitch Assembly Removal / Installation

WARNING
Use extreme care to prevent the possibility of electrical shock when power is applied to the table without the top cover in place. Live electrical circuits are present on the terminal board and components. Failure to comply with these instructions could result in personal injury or death.

(4) Plug the power cord into a wall outlet.

(5) Raise the table to the highest position.

WARNING
Before continuing with the removal procedures first disconnect the power cord from the wall outlet and then; using a screwdriver with an <u>insulated</u> handle, short across the terminals of each capacitor to remove any built up electrical charge that may remain in the capacitors. Failure to comply with these instructions could result in personal injury or death.

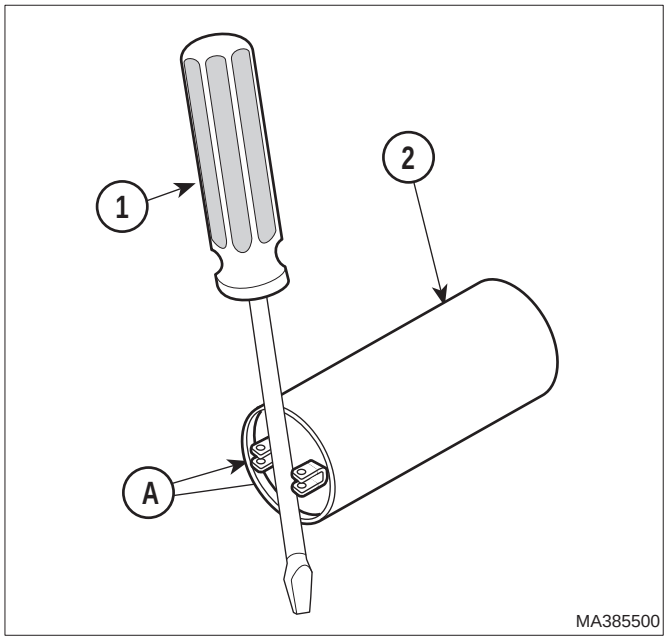

Figure 4-23. Footswitch Assembly Removal / Installation

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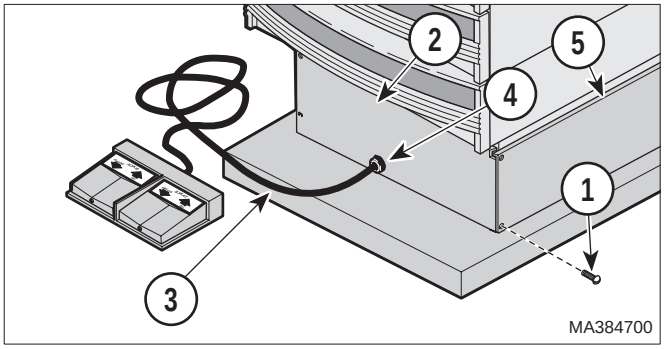

Figure 4-24. Footswitch Assembly Removal / Installation

(6) Disconnect the power cord from the wall outlet and discharge the capacitors (2, Fig. 4-23).

WARNING
Place supports on the table to prevent it from falling when working on the power and footswitch cords, hydraulic hoses and cylinders. Failure to do so could result in personal injury.

(7) Disconnect the new, temporary footswitch cord from the terminal board (2, Fig. 4-22) and upper wrap assembly (3).

(8) Remove the four screws (1, Fig. 4-24) from the lower end shroud (2) on which the footswitch cord (3) is located.

(9) Remove the strain relief bushing (4) from the lower end shroud (2).

(10) Open one of the doors, remove the two screws (1, Fig. 4-25) that hold the rod cover (2) in place and remove the rod cover (2).

CAUTION
Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage, electrical shorts and possibly personal injury.

(11) Place location marks on the hydraulic hoses and electrical cords to identify the position of the cable ties (5, Fig. 4-22) for later installation.

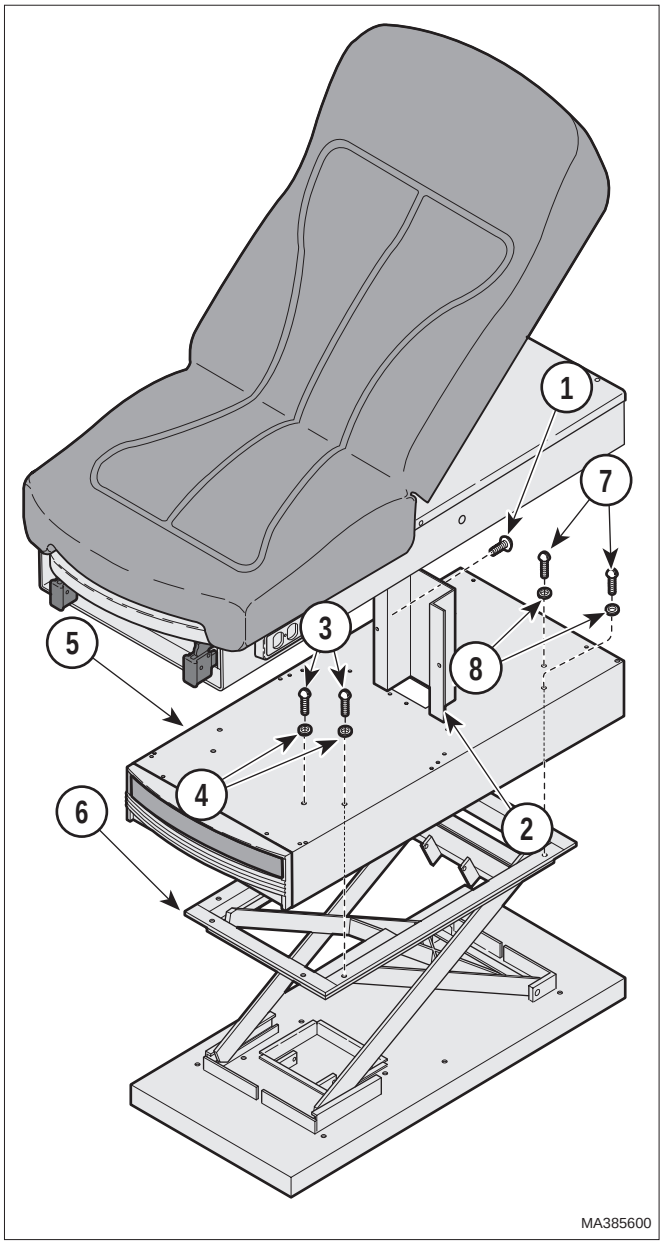

Figure 4-25. Footswitch Assembly Removal / Installation

(12) Remove the cable ties (5) that secure the footswitch cord (1).

(13) Remove the footswitch cord (1).

B. Installation

(1) Carefully route the new footswitch cord (1, Fig. 4-22) through the table to the terminal board (2).

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(2) Connect the electrical leads to the appropriate terminals on the terminal board (2) and the green (ground) wire to the upper wrap assembly (3) (Refer to Wiring Diagram, para 5.1).

CAUTION
When installing the new footswitch cord, assure that the wire clips and cable ties are located in the same positions as the old footswitch cord in relation to the hydraulic hoses, electrical cords and hydraulic cylinders. Failure to do so may result in equipment damage and / or electrical shorts.

(3) Secure the footswitch cord (1, Fig. 4-22) to the unit, hydraulic hoses and cylinders, and other electrical cords with the cable ties (5).

(4) Install the strain relief bushing (4, Fig. 4-24) onto the footswitch cord (3) and secure it to the lower end shroud (2).

(5) Install the lower end shroud (2) to the lower side shrouds (5) with the four screws (1).

(6) Install the rod cover (2, Fig. 4-25) and secure with two screws (1).

(7) Install the top cover (Refer to para 4.8)

(8) Check operation and clean the table.

4.17 Footswitch Microswitch Removal / Installation / Adjustment

A. Removal

WARNING
Always disconnect the power cord from the wall outlet before removing any of the table's covers / shrouds or making any repairs to prevent the possibility of electrical shock. Failure to comply with these instructions could result in personal injury or death.

(1) Disconnect the power cord from the wall outlet.

(2) Remove the pivot screw (1, Fig. 4-26) and lockwasher (2) from the footswitch pedal (3).

(3) Remove the pedal (3) by lifting the end of it upward and pushing back toward the cord end of the footswitch assembly to unhook the pedal (3) from the pivot bracket (A).

NOTE
Place location tags on the electrical leads connected to the malfunctioning microswitch for identification purposes during installation.

(4) Remove the mounting screw (4) and locknut (5) that secure the pair of microswitches to the mounting bracket (B).

NOTE
The microswitch (6) located on the outside is also secured to the mounting bracket (B) by a locating tab (C).

(5) Remove the electrical leads from the malfunctioning microswitch (6) and remove the switch.

B. Installation

NOTE
The microswitch has markings on the side to identify the normally open, normally closed and common terminals to assist in making electrical connections.

(1) Using the location tags, previously place on the electrical leads, connect the electrical leads to the microswitch (6, Fig. 4-26). If necessary, refer to Wiring Diagram, para 5.1.

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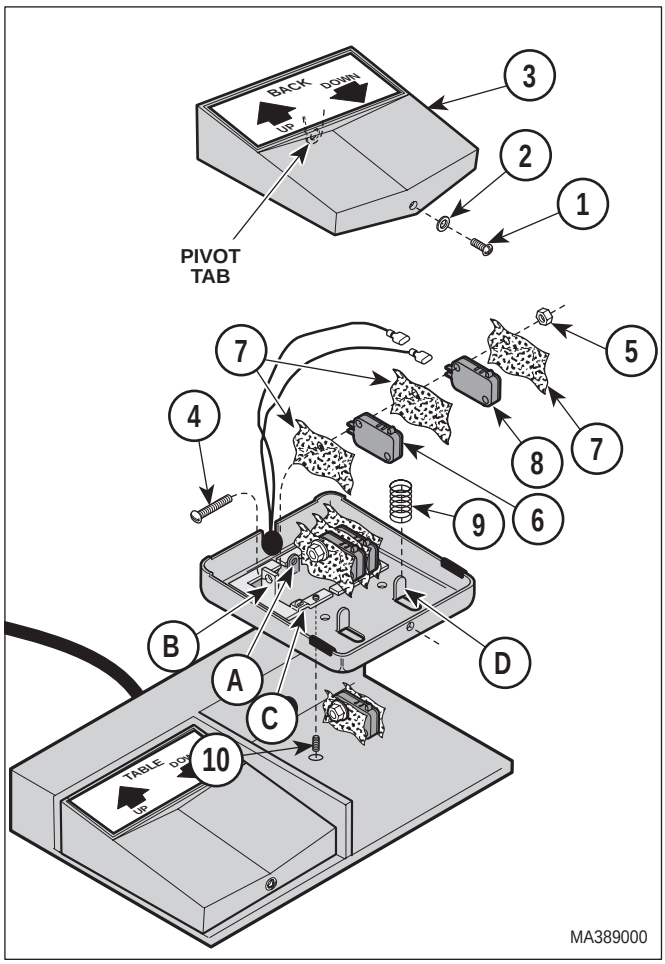

Figure 4-26. Footswitch Microswitch Removal / Installation / Adjustment

EQUIPMENT ALERT
Inspect the insulators (7) to assure they are in good condition and replace if necessary. The insulators should be located so that they extend out past the connectors on the electrical leads to prevent possible electrical shorts.

(2) Position the outside microswitch (6) and insulator (7) on the mounting bracket (B) securing it to the locating tab (C).

(3) Placing insulators (7) between the inside and outside of the second microswitch (8), position them next to the first microswitch (6) and secure the microswitches and insulators to the mounting bracket (B) with the mounting screw (4) and lock nut (5).

NOTE
Assure the pedal springs (9) are in good condition and located on the positioning tabs (D) before installing the pedal.

(4) Install the pedal (3) assuring that it is located properly on the pivot bracket (A) and secure with the pivot screw (1) and lockwasher (2).

(5) Plug the table power cord into the wall outlet.

NOTE
The pedal operates correctly when a light touch actuates the motor / pump and is followed closely by the actuation of the hydraulic cylinder solenoid valve.

(6) Check the operation of each pedal function by depressing the pedal and listening and observing the specific function. If necessary, adjust the microswitches.

C. Adjustment

NOTE
Each pedal function, Table UP, Table DOWN, Back UP or Back DOWN has an allen head adjustment screw (1, Fig. 4-27) on the bottom of the footswitch assembly (2) beneath each pedal function. The adjustment screw raises or lowers the position of **one** of the microswitches of that specific function to position the switch closer or farther away from the pedal that actuates the switch.
On the Table or Back **UP** functions the adjustment screw positions the **motor / pump** microswitch (3).
On the Table or Back **DOWN** functions the adjustment screw positions the **cylinder solenoid valve** microswitch (4).

(1) Plug the table power cord into a wall outlet.

(2) Lightly depress the specific function pedal and listen to and observe the table.

NOTE
The pedal operates correctly when a light touch actuates the motor / pump and is followed closely by the actuation of the hydraulic cylinder solenoid valve.

(3) Turn the adjustment screw (1, Fig. 4-27) inward (clockwise) will raise the microswitch allowing it to actuate sooner.

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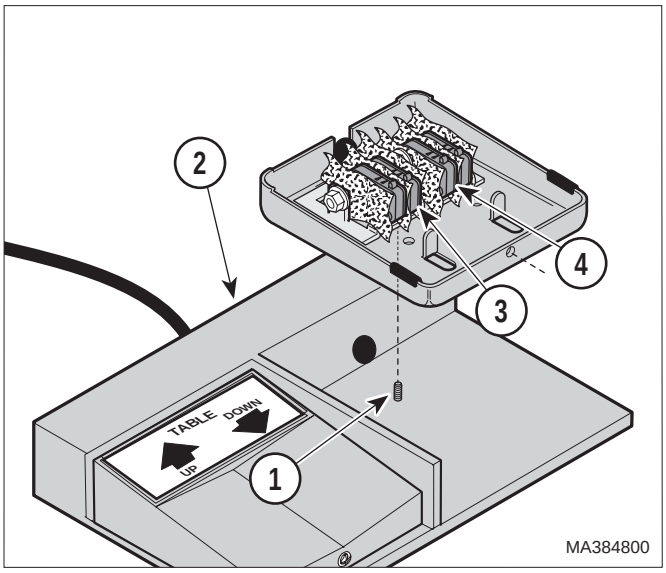

Figure 4-27. Footswitch Microswitch Adjustment

(4) Turn the adjustment screw (1) outward (counter-clockwise) will lower the microswitch causing it to actuate later.

(5) Check operation to assure the pedals function correctly.

4.18 Power Cord Removal / Installation

A. Removal

(1) Access the upper wrap components (Refer to Para 4-8).

NOTE
If the table cannot be operated due to a malfunction in the power cord temporarily connecting the new power cord to the table's terminal board will enable the table to be operated. This will allow the table to be positioned in order to remove the malfunctioning power cord.

(2) Disconnect the electrical and ground leads of the power cord (4, Fig. 4-28) from the terminal board (2) and upper wrap assembly (3).

(3) Temporarily connect the new power cord to the terminal board (2) and upper wrap assembly (3) (Refer to Wiring Diagram, para 5.1).

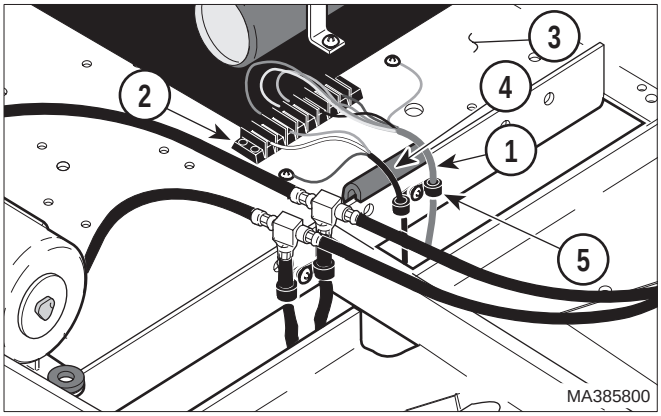

Figure 4-28. Power Cord Removal / Installation

WARNING
Use extreme care to prevent the possibility of electrical shock when power is applied to the table without the top cover in place. Live electrical circuits are present on the terminal board and components. Failure to comply with these instructions could result in personal injury or death.

(4) Plug the temporary power cord from the table into a wall outlet.

(5) Raise the table to the highest position.

WARNING
Before continuing with the removal procedures first disconnect the power cord from the wall outlet and then; using a screwdriver with an insulated handle, short across the terminals of each capacitor to remove any built up electrical charge that may remain in the capacitors. Failure to comply with these instructions could result in personal injury or death.

(6) Disconnect the power cord from the wall outlet and discharge the capacitors (1, Fig. 4-29).

WARNING
Place supports on the table to prevent it from falling when working on the power and footswitch cords, hydraulic hoses and cylinders. Failure to do so could result in personal injury.

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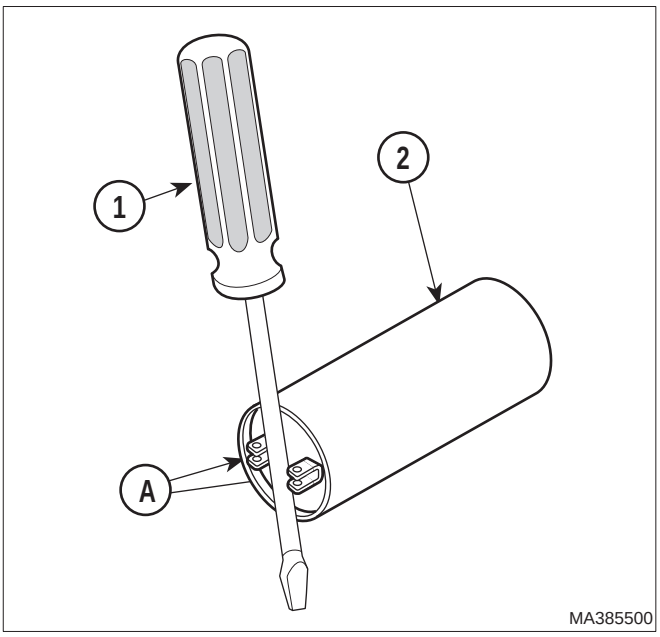

Figure 4-29. Power Cord Removal / Installation

(7) Disconnect the new temporary power cord from the terminal board (2, Fig. 4-28) and upper wrap assembly (3).

(8) Remove the four screws (1, Fig. 4-30) that secure the lower end shroud (2) to the lower side shrouds (3).

(9) Remove the strain relief bushing (4) from the lower end shroud (2).

(10) Open one of the doors, remove the two screws (1, Fig. 4-31) that hold the rod cover (2) in place and remove the rod cover (2).

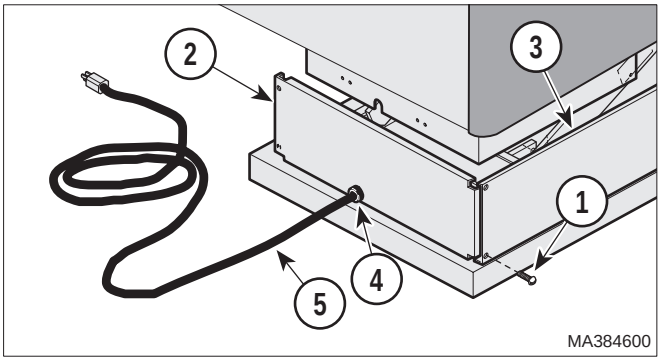

Figure 4-30. Power Cord Removal / Installation

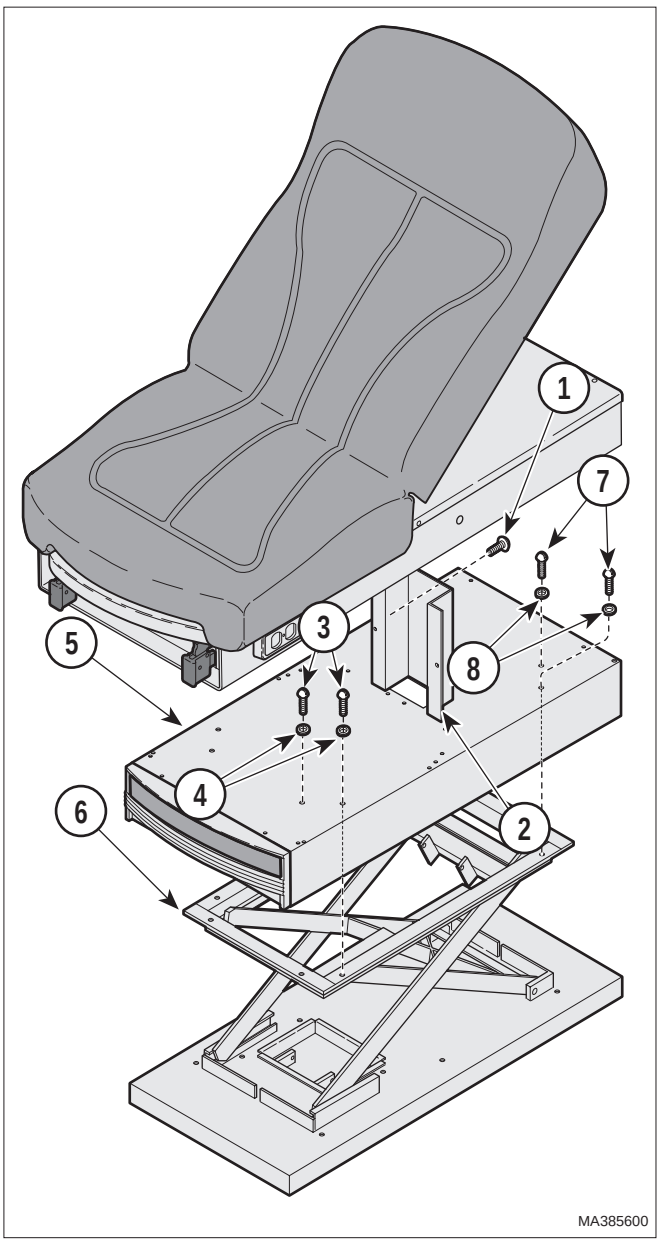

Figure 4-31. Power Cord Removal / Installation

CAUTION

Mark the location of the cable ties and wire clips in relation to the electrical cords, hydraulic hoses and cylinders. The cable ties and wire clips must be installed in the **exact** same locations or damage to the hydraulic hoses and / or electrical leads may occur. Failure to do so may result in equipment damage and / or electrical shorts.

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(11) Place location marks on the hydraulic hoses and electrical cords to identify the position of the cable ties (5, Fig. 4-28) for later installation.

(12) Remove the cable ties (5) that secure the power cord (4).

(13) Remove the power cord (4).

B. Installation

(1) Carefully route the new power cord (4, Fig. 4-28) through the table to the terminal board (2).

(2) Connect the black and white wires to the appropriate terminals on the terminal board (2) and the green (ground) wire to the upper wrap assembly (3) (Refer to wiring diagram para 5.1).

CAUTION
When installing the new power cord, assure that the wire clips and cable ties are located in the **exact** same positions as the old power cord in relation to the hydraulic hoses, electrical cords and hydraulic cylinders. Failure to do so may result in equipment damage and / or electrical shorts.

(3) Secure the power cord (4) to the unit, hydraulic hoses and cylinders, and other electrical cords with the cable ties (5).

(4) Install the strain relief bushing (4, Fig. 4-30) onto the power cord (5) and secure it to the lower end shroud (2).

(5) Install the lower end shroud (2) to the lower side shrouds (3) with the four screws (1).

(6) Install the rod cover (2, Fig. 4-31) and secure with two screws (1).

(7) Install the top cover (Refer to para 4.8)

(8) Check operation and clean the table.

SECTION V
SCHEMATICS AND DIAGRAMS

5.1 Electrical Schematics / Wiring Diagrams

Figures 5-1, 5-2, and 5-3 illustrates the current flow and wiring connections between the electrical components in the 115 VAC table.

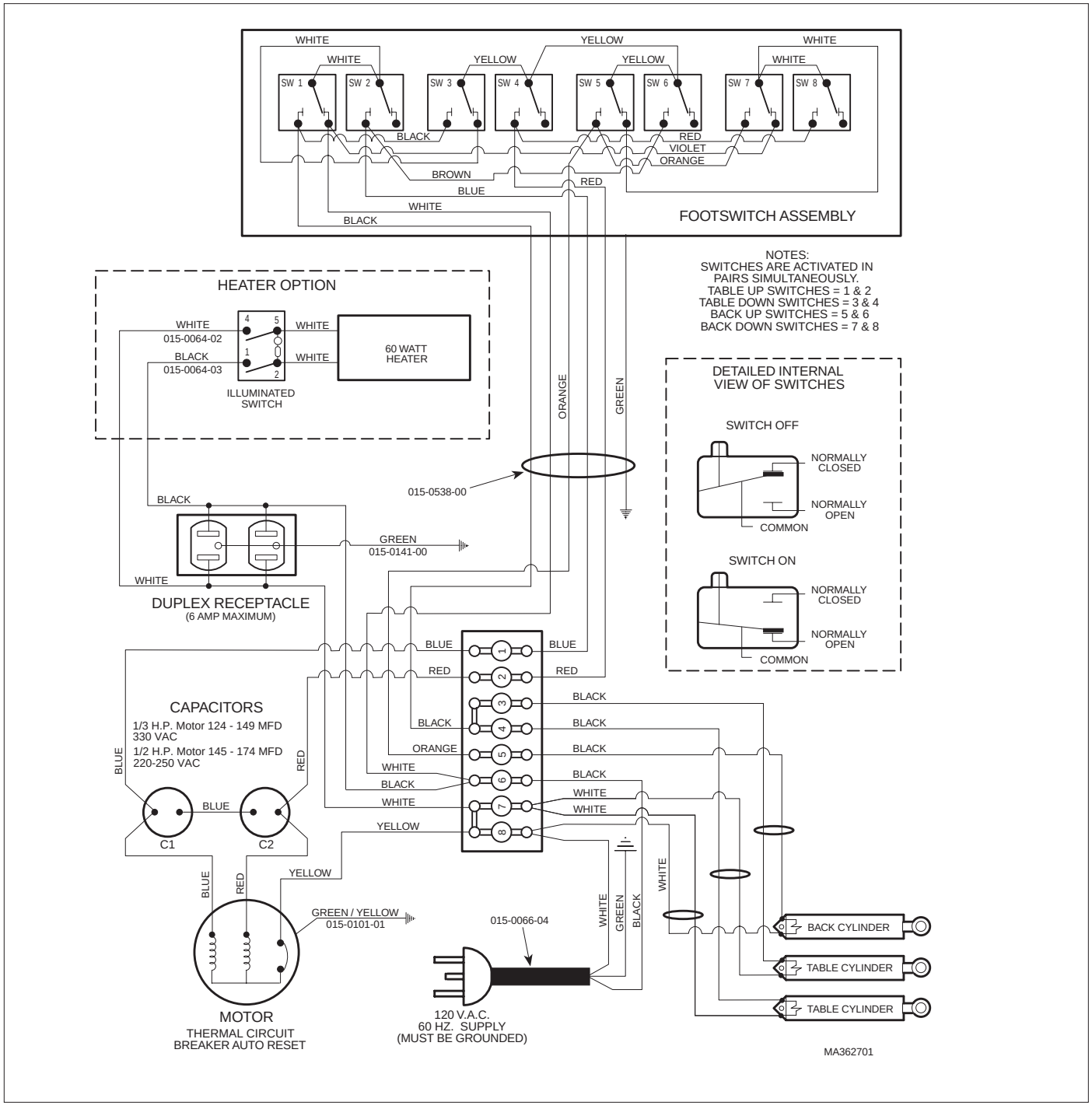
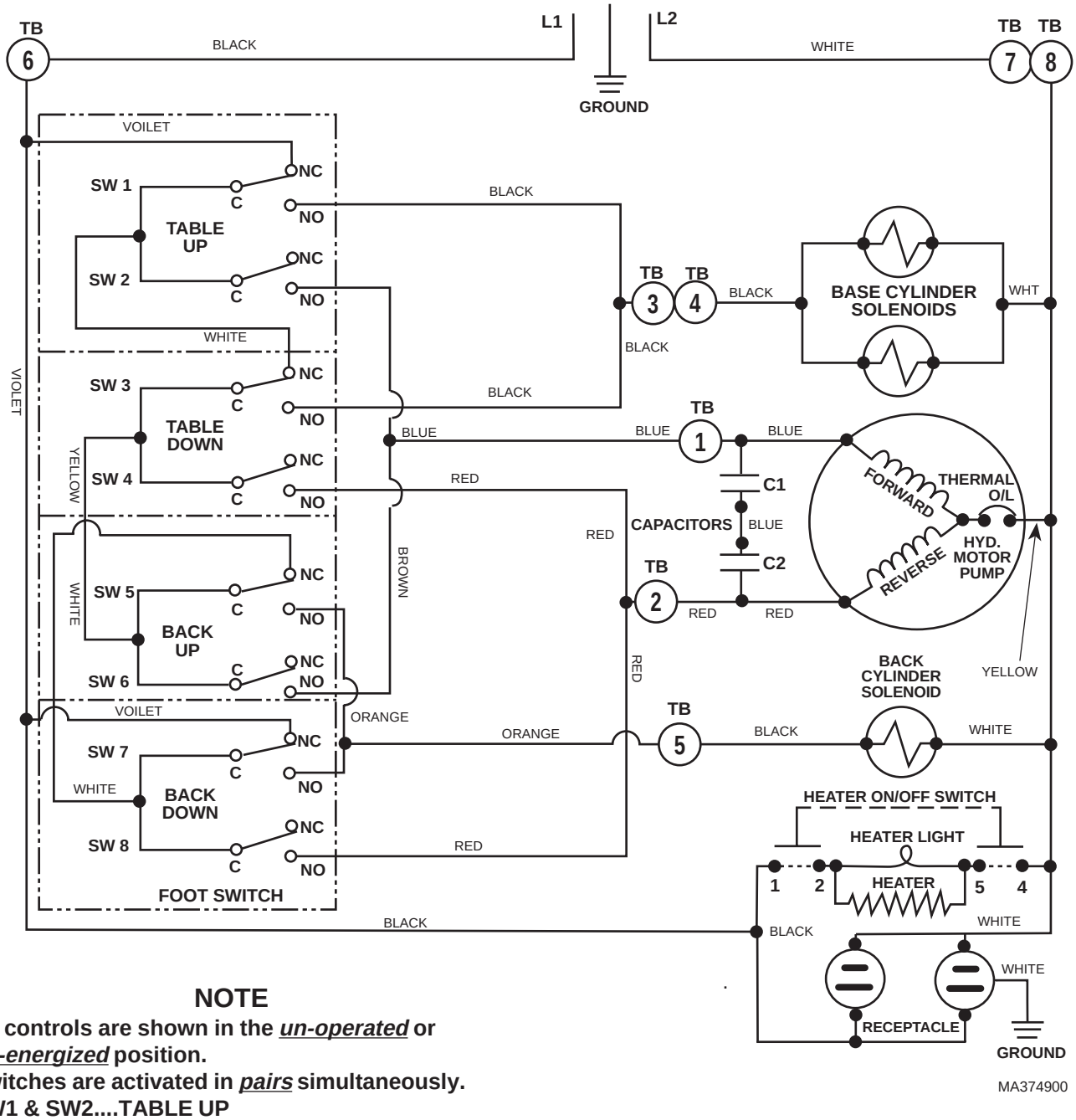


Figure 5-1. 115 VAC Units Electrical Schematic / Wiring Diagram

SECTION V
SCHEMATICS AND DIAGRAMS



NOTE

All controls are shown in the *un-operated* or *un-energized* position.
Switches are activated in *pairs* simultaneously.
SW1 & SW2....TABLE UP
SW3 & SW4....TABLE DOWN
SW5 & SW6....BACK UP
SW7 & SW8....BACK DOWN

Microswitches SW1, SW3, SW5, and SW7 control the hydraulic cylinder solenoid valves.

Microswitches SW2, SW4, SW6, and SW8 control the hydraulic motor / pump.

NO = Normally Open
NC = Normally Closed
C = Common
TB = Terminal Board
O/L = Overload

Figure 5-2. 115 VAC Units Electrical Schematic

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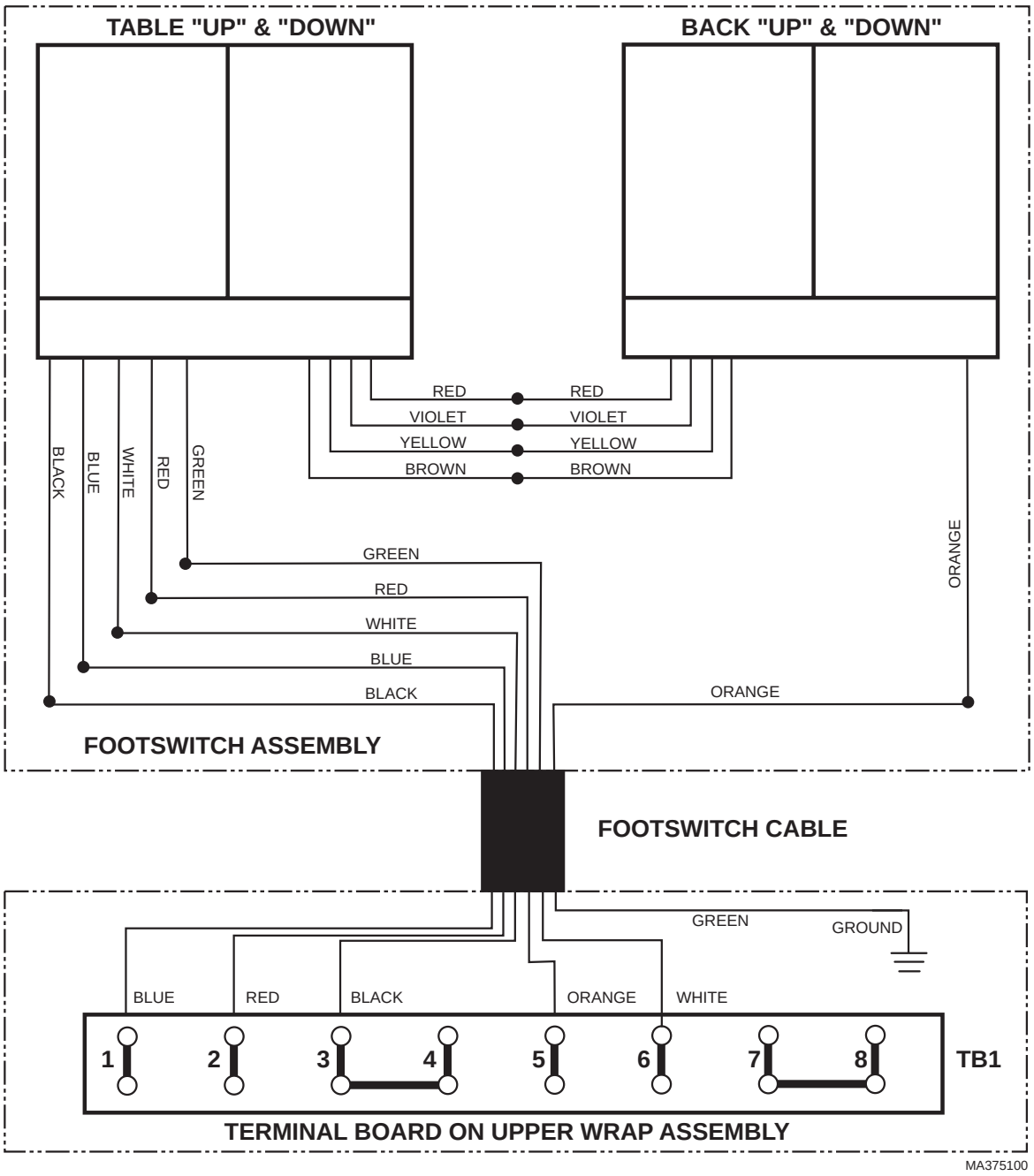

NOTE

The red wire from the Footswitch Cable is connected to either one of the red wires attached to the Table DOWN microswitch SW4 in the Footswitch. The other red wire from SW4 microswitch attaches to the red wire coming off the Back DOWN microswitch SW8.

Figure 5-3. Wiring Diagram for Footswitch Cable

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SECTION V
SCHEMATICS AND DIAGRAMS

Table "Up" Hydraulic Schematic

A..Table Hydraulic Cylinders
B..Back Hydraulic Cylinder
C..Hydraulic Motor / Pump
D..Pressure Relief Valves
E..Suction Check Valves
F..Table Cylinder Solenoid Valves (Open)
G..Back Cylinder Solenoid Valve (Closed)
H..Hydraulic Reservoir

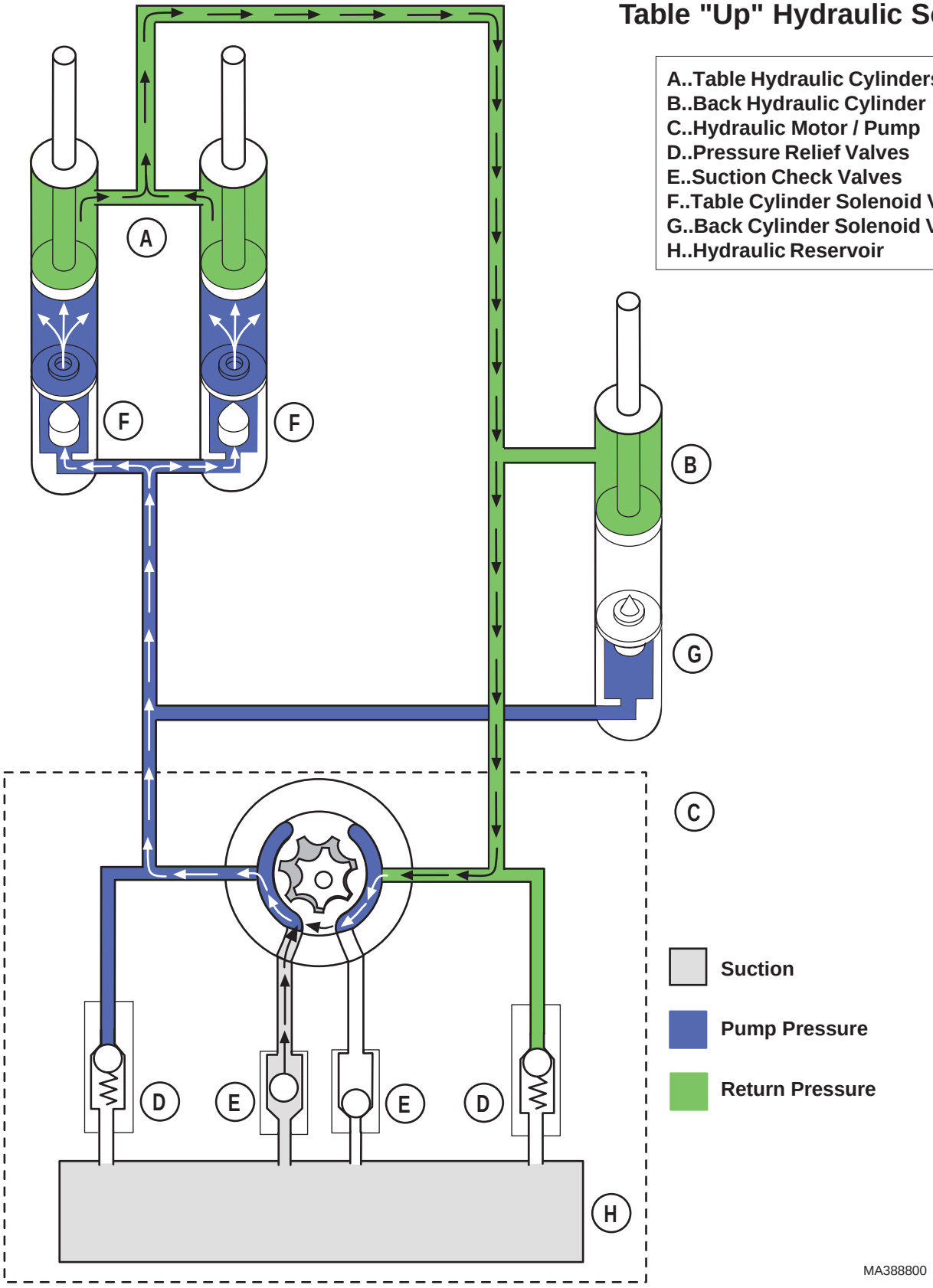


Figure 5-4. Hydraulic Schematic

Printed in U.S.A.

Table "Down" Hydraulic Schematic

A..Table Hydraulic Cylinders
B..Back Hydraulic Cylinder
C..Hydraulic Motor / Pump
D..Pressure Relief Valves
E..Suction Check Valves
F..Table Cylinder Solenoid Valves (Open)
G..Back Cylinder Solenoid Valve (Closed)
H..Hydraulic Reservoir

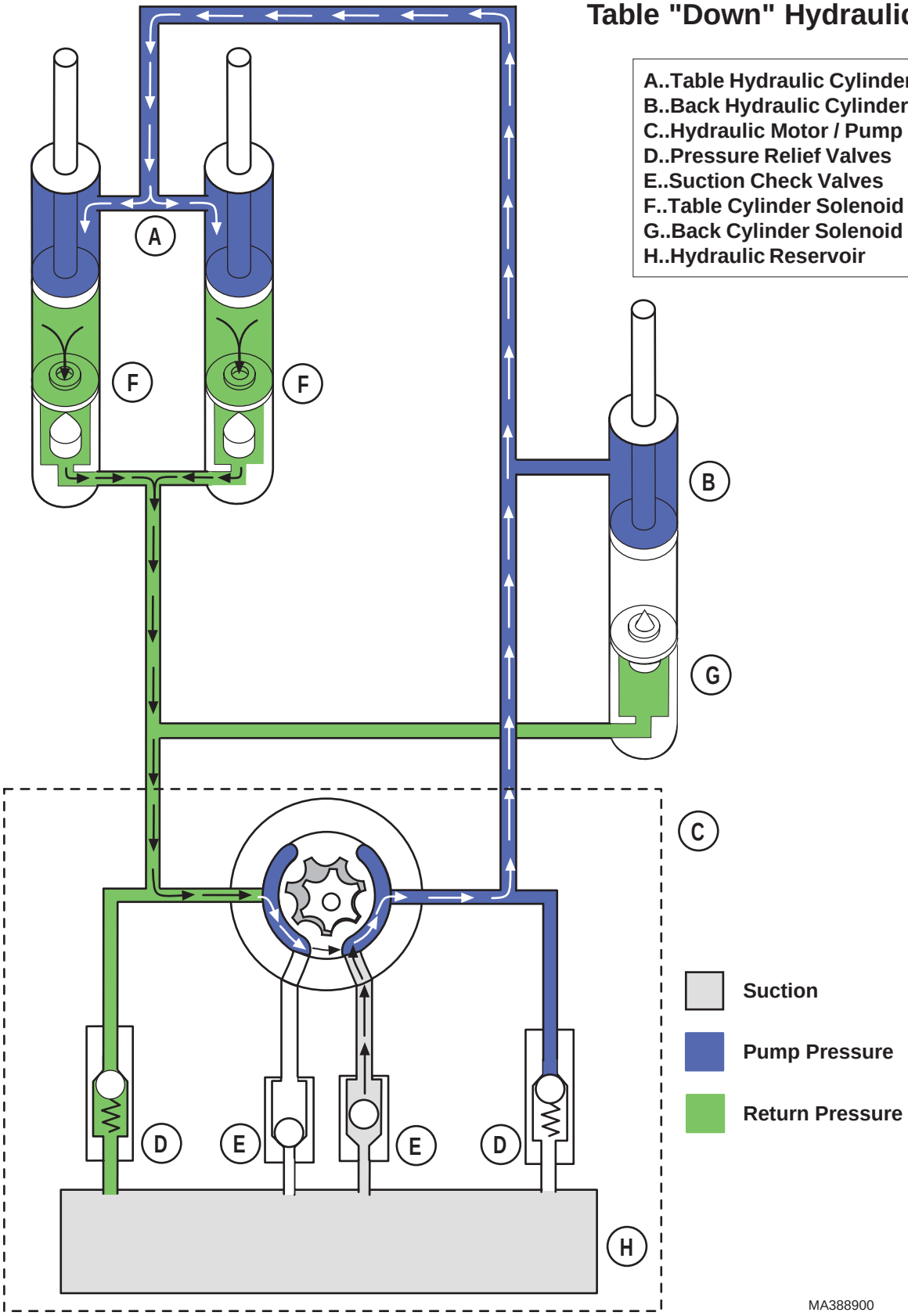


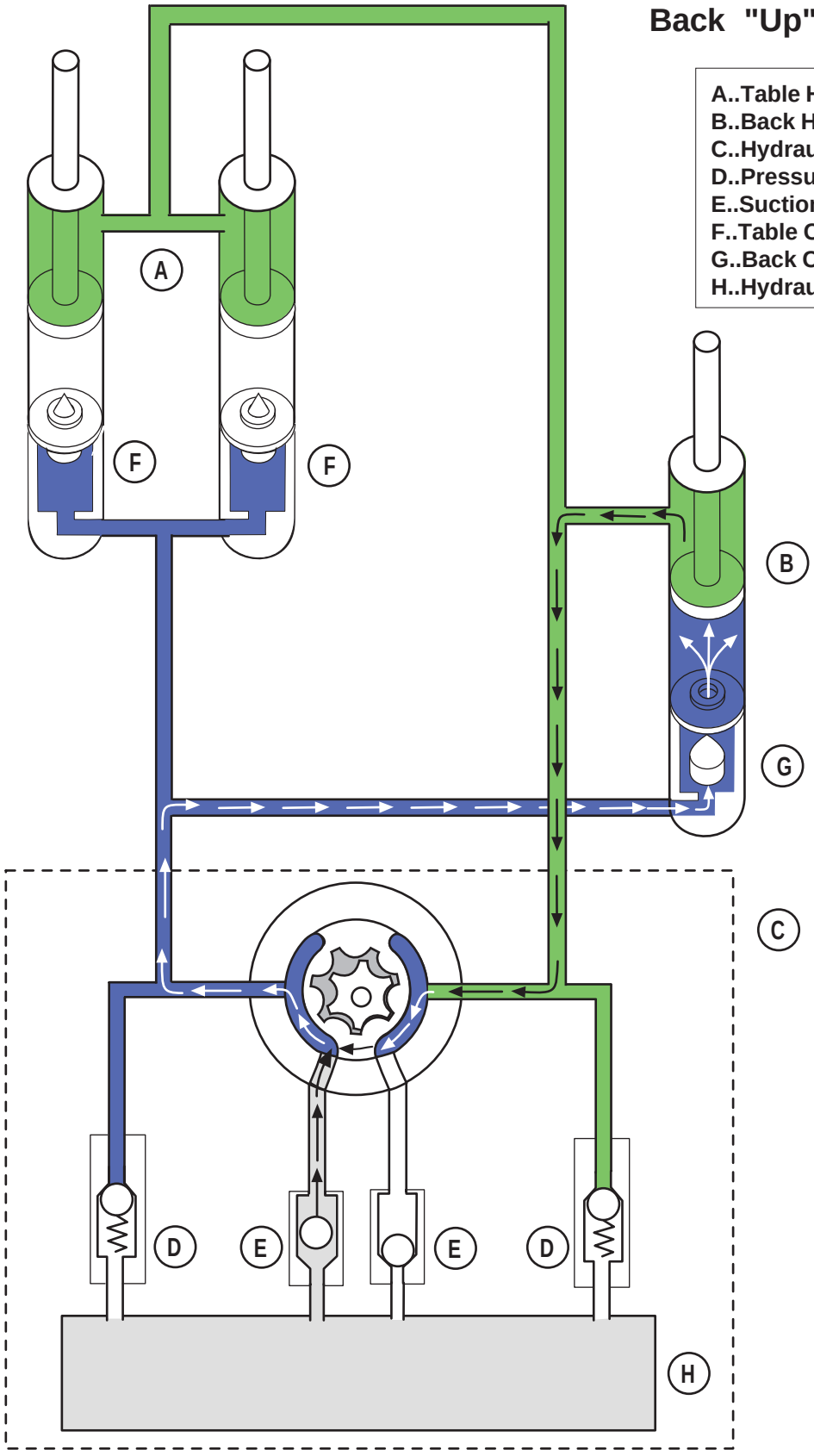
Figure 5-5. Hydraulic Schematic

Printed in U.S.A.

SECTION V
SCHEMATICS AND DIAGRAMS

Back "Up" Hydraulic Schematic

A..Table Hydraulic Cylinders
B..Back Hydraulic Cylinder
C..Hydraulic Motor / Pump
D..Pressure Relief Valves
E..Suction Check Valves
F..Table Cylinder Solenoid Valves (Closed)
G..Back Cylinder Solenoid Valve (Open)
H..Hydraulic Reservoir



Suction
Pump Pressure
Return Pressure

MA390000

Figure 5-6. Hydraulic Schematic

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Back "Down" Hydraulic Schematic

A..Table Hydraulic Cylinders
B..Back Hydraulic Cylinder
C..Hydraulic Motor / Pump
D..Pressure Relief Valves
E..Suction Check Valves
F..Table Cylinder Solenoid Valves (Closed)
G..Back Cylinder Solenoid Valve (Open)
H..Hydraulic Reservoir

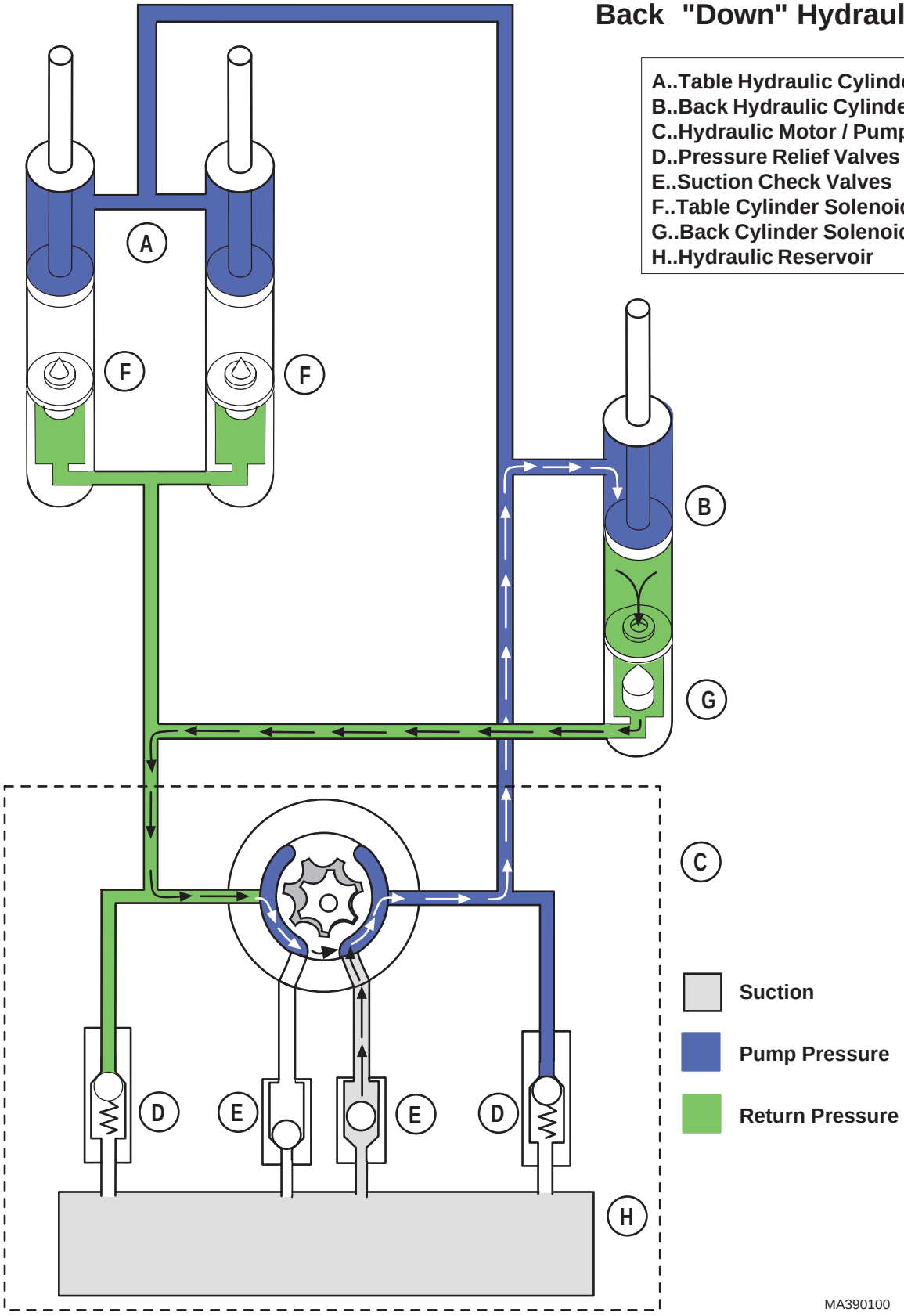

Figure 5-7. Hydraulic Schematic

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SECTION V
SCHEMATICS AND DIAGRAMS

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SECTION VI
PARTS LIST

6.1 Introduction

The illustrated parts list provides information for identifying and ordering the parts necessary to maintain the unit in peak operating condition. Refer to paragraph 1.5 for parts ordering information.

The parts list also illustrates disassembly and assembly relationships of parts.

6.2 Description of Columns

The *Item* column of the parts list gives a component its own unique number. The same number is given to the component in the parts illustration. This allows a part number of a component to be found if the technician can visually spot the part on the illustration. The technician simply finds the component in question on the illustration and notes the item number of that component. Then, he finds that item number in the parts list. The row corresponding to the item number gives the technician the part number, a description of the component, and quantity of parts per subassembly. Also, if a part number is known, the location of that component can be determined by looking for the item number of the component on the illustration.

The *Part No.* column lists the MIDMARK part number for that component.

The *Description* column provides a physical description of the component.

The *Qty.* column lists the number of units of a particular component that is required for the subassembly. The letters “AR” denote “as required” when quantities of a particular component cannot be determined, such as: adhesive.

Bullets { • } in the *Part No.* column and the *Description* column show the indenture level of a component. If a component does not have a bullet, it is a main component of that illustration. If a component has a bullet, it is a subcomponent of the next component listed higher in the parts list than itself that does not have a bullet. Likewise, if a component has two bullets, it is a subcomponent of the next component listed higher in the parts list than itself that has only one bullet.

6.3 Torque Specifications and Important Assembly Notes

When specific assembly torque specifications, measurements, or procedures have been identified, by our engineering department, as required to assure proper function of the unit, those torque specifications measurements, and procedures will be noted on the parts illustrations. Adherence to these requirements is essential.

Pictorial Index

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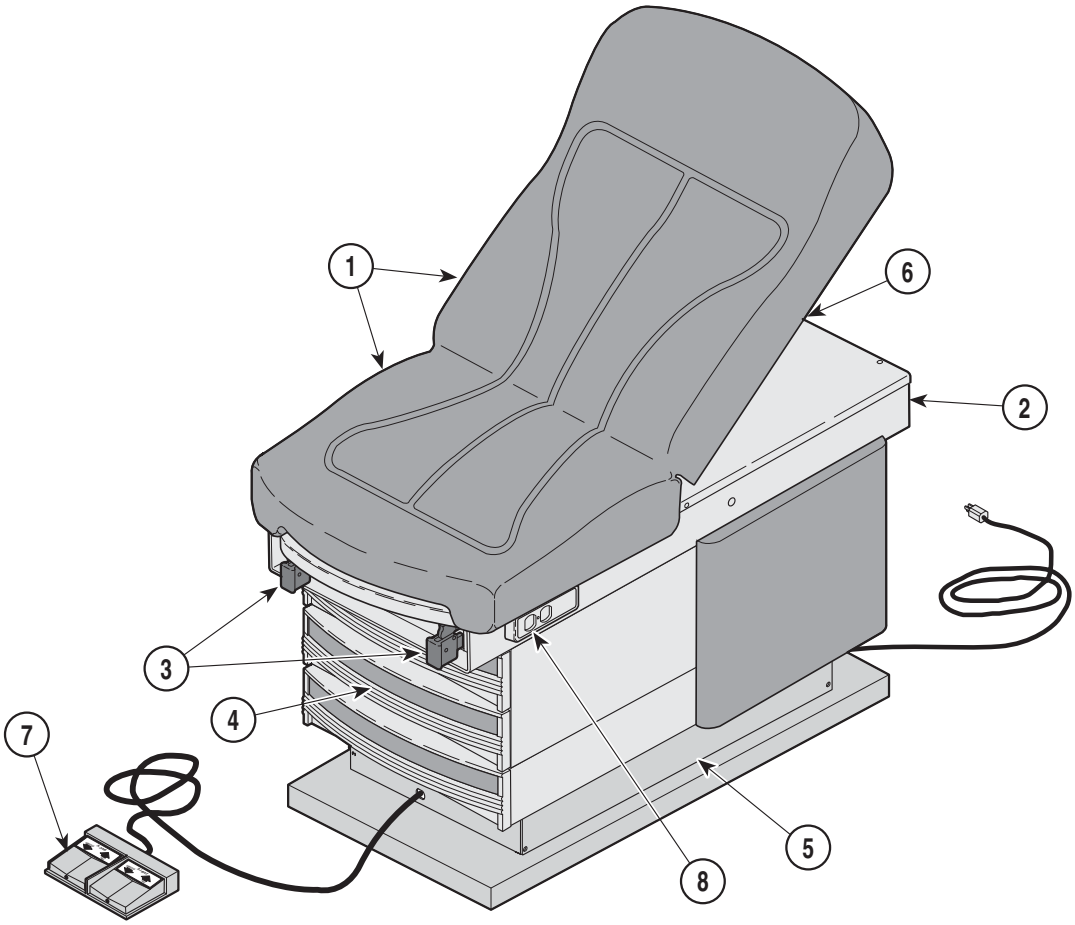

MA358200

Used On Units With Serial Number GW1000, GX1000, JJ1000 and JK1000 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Page
	305-001-xxx	305 Power Examination Table with Vacu-Form Upholstery {Ser. # Series [GW]}	Ref
	305-002-xxx	305 Power Examination Table with Vacu-Form Upholstery (w/ Heater & Pelvic Lift) {Ser. # Series [GX]}	Ref
	305-003-xxx	305 Power Examination Table with Soft Touch Upholstery {Ser. # Series [JJ]}	Ref
	305-004-xxx	305 Power Examination Table with Soft Touch Upholstery (w/ Heater & Pelvic Lift) {Ser. # Series [JK]}	Ref
1	•	• Seat and Back Components with Vacu-Form Upholstery	6-3
	•	• Seat and Back Components with Soft Touch Upholstery	6-4
2	•	• Upper Wrap Components	6-5
3	••	•• Stirrup Assembly	6-6
4	•	• Cabinet Components	6-7
5	•	• Base Components	6-8
6	••	•• Hydraulic System	6-9
7	••	•• Footswitch Assembly	6-10
8	•	• Electrical Components (Domestic)	6-11
		OPTIONAL ACCESSORIES	
		Refer to MEDICAL ACCESSORY BOOK {004-0096-00}	
7	9A01010	Knee Crutch Set	9A01
8	9A0200*	Armboard Assembly	9A02
9	9A04001	Procto Rest	9A04
10	9A70000	Stainless Steel Treatment Pan	6-7
11	9A104001	Urology Drain Pan	9A104
12	9A105004	Pelvic Lift Accessory (305-001 Units Only)	9A105
13	9A180004	Welch Allyn Bracket	9A180
14	9A206005	Knee Crutch Set	9A206
15	9A210007	Side Rails	9A210

* Click on the Color Selector link above to see available colors.

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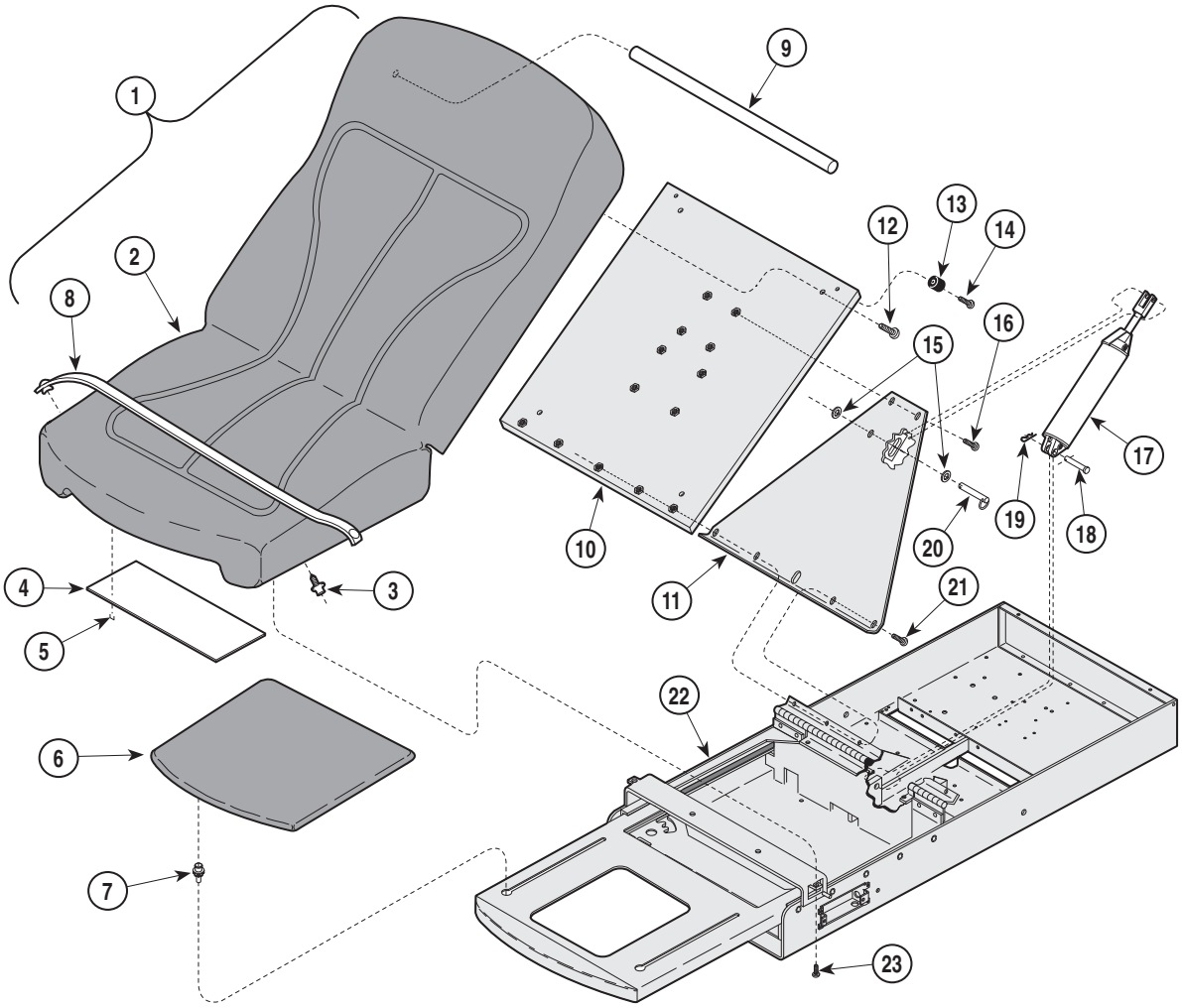
Seat and Back Components (Vacu-Form Upholstery)

Color Selector.....www.midmark.com



MA358300

Used On Units With Serial Number GW1000 thru GW1901 and GX1000 thru GX1380

Item	Part No.	Description	Qty.
1	002-0570-00	Vacu-form Upholstered Kit (Includes Items 2 thru 5 [*Specify Color])	1
2	• 028-0443-XX	• Upholstery Top (*Specify Color)	1
3	• 016-0022-00	• Stud	4
4	• 053-0869-01	• Scuff Plate (Units w/ Pelvic Lift Only)	1
5	• 042-0040-00	• Staple (Units w/ Pelvic Lift Only)	10
6	028-0439-XX	Upholstered Foot Pad Assembly (*Specify Color) [Includes Item 7]	1
7	053-0424-00	Footrest Glide	4
8	029-0017-00	Paper Tear Strip Assembly	2
9	055-0005-04	Dowel	1
10	029-2014-00	Back Plate Assembly	1
11	030-0270-40	Back Pivot Weldment	1
12	040-0010-134	Screw	4
13	053-0024-00	Recess Bumper	2
14	040-0008-95	Screw	2
15	045-0001-105	Washer	2
16	040-0010-01	Screw	4
17		Cylinder Assembly (Refer to "Hydraulic System" Elsewhere)	Ref
18	042-0005-01	Clevis Pin	1
19	042-0004-00	Hitch Pin Clip	1
20	042-0601-03	Cotterless Hitch Pin	1
21	040-0010-01	Screw	5
22		Upper Wrap (Refer to "Upper Wrap Components" Elsewhere)	Ref
23	040-0010-01	Screw (Units w/o Pelvic Lift Only)	2

* Click on the Color Selector link above to see available colors.

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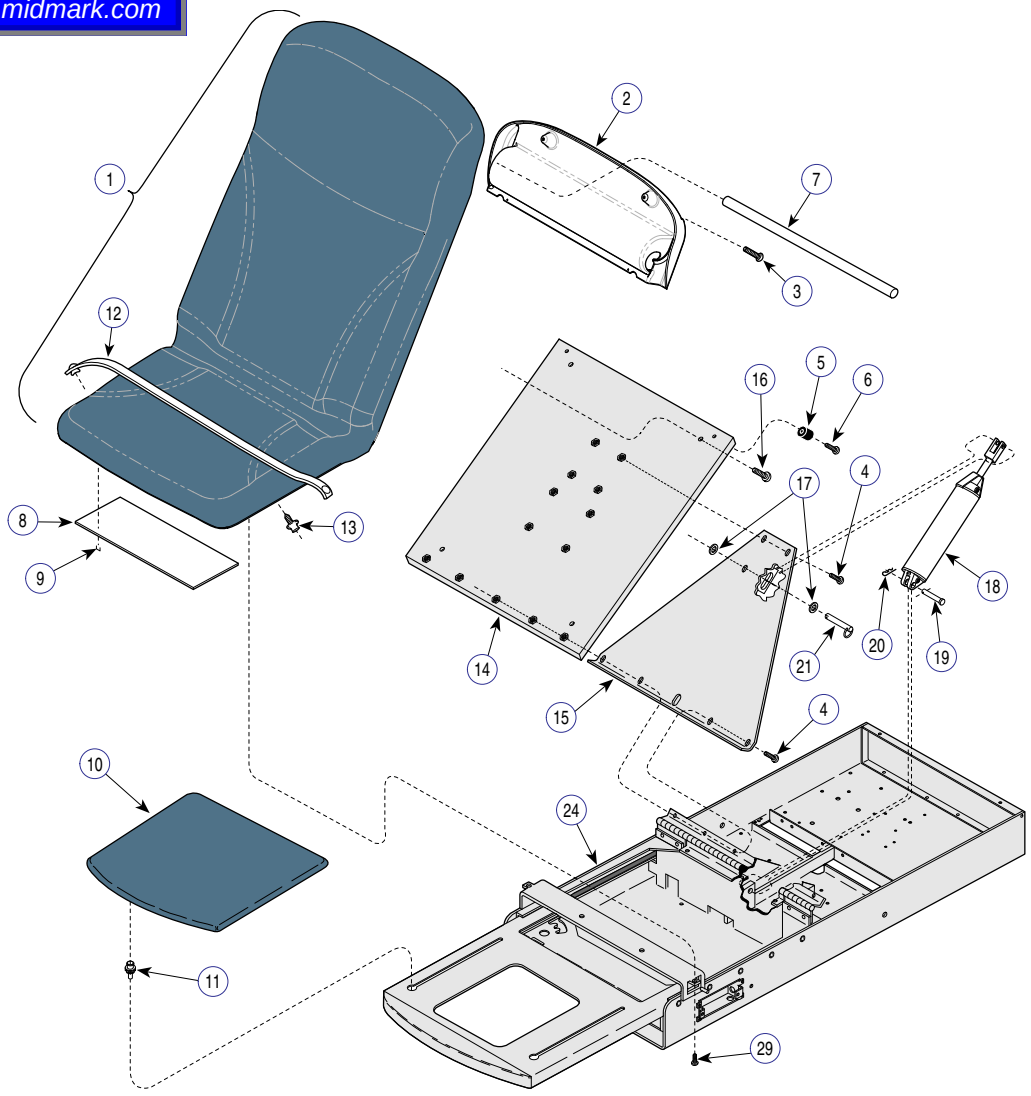
Seat and Back Components (Vacu-Form Upholstery)

Color Selector.....www.midmark.com



MA358301i

Used On Units With Serial Number GW1902, GX1381 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Qty.
1	028-0533-XX	Styled Upholstery Top (*Specify Color) .	1
2	• 053-1319-01	• Paper Roll Holder	1
3	• 040-0008-46	• Screw	4
4	• 040-0010-01	• Screw	5
5	• 053-1290-00	• Recess Bumper	2
6	• 040-0008-104	• Screw	2
7	055-0005-07	Dowel	1
8	053-0950-00	Scuff Plate	1
9	042-0040-00	Staple	AR
10	028-0439-99	Upholstered Footrest(*Specify Color)	1
11	053-0424-00	Footrest Guide	2
12	029-0017-00	Paper Tear Strap	1
13	016-0022-00	Stud	4
14	029-2014-00	Back Plate Assembly	1
15	030-0270-40	Back Pivot Weldment	1
16	040-0010-134	Screw	4
17	045-0001-105	Washer	2
18		Cylinder Assembly (Refer to "Hydraulic System" Elsewhere)	Ref
19	042-0005-01	Clevis Pin	1
20	042-0004-00	Hitch Pin Clip	1
21	042-0601-03	Cotterless Hitch Pin	1
22	040-0010-01	Screw	5
23		Upper Wrap (Refer to "Upper Wrap Components" Elsewhere)	Ref
24	040-0010-01	Screw (Units w/o Pelvic Lift Only)	2

* Click on the Color Selector link above to see available colors.

Always Specify Model & Serial Number

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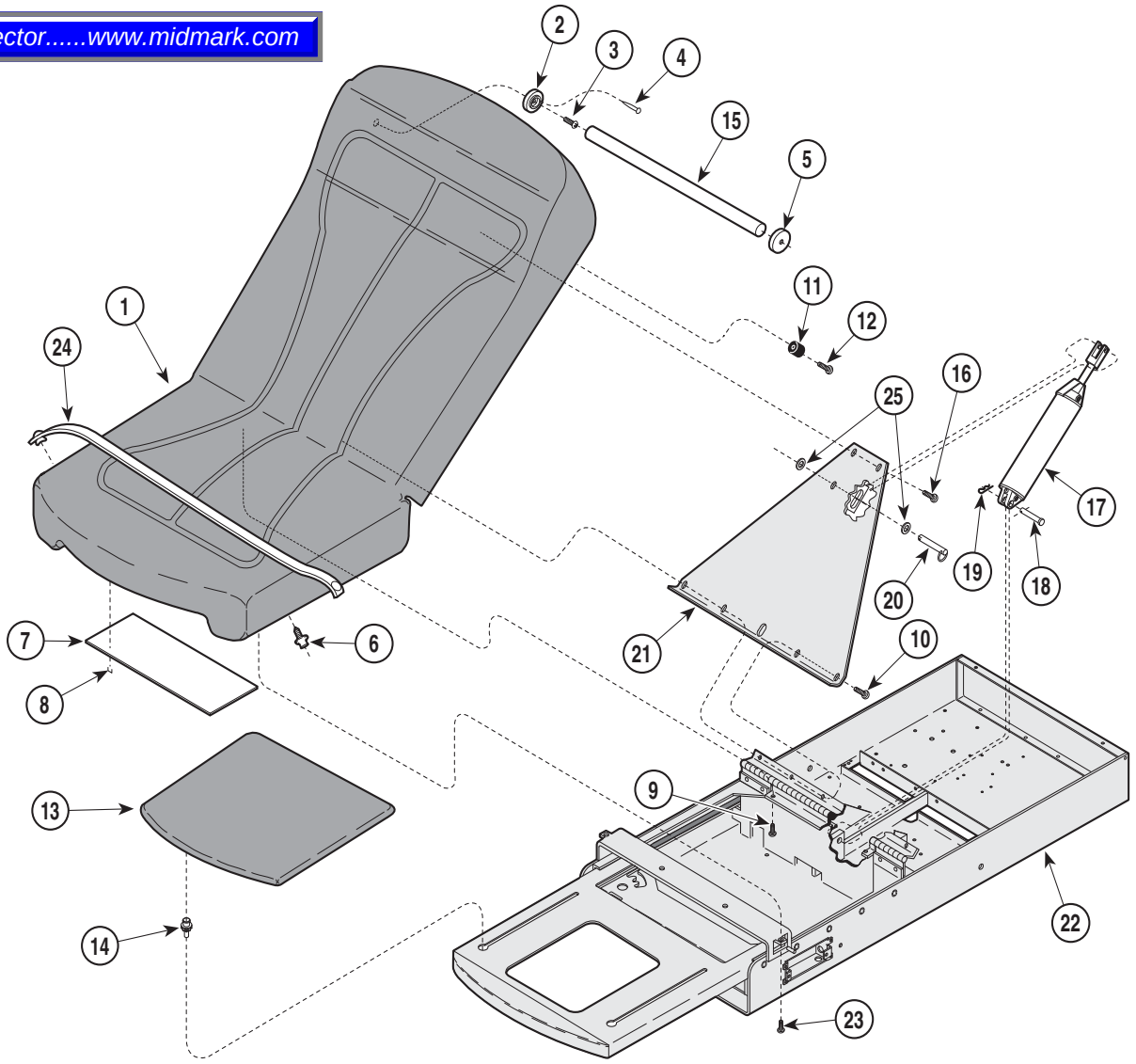
Seat and Back Components (Soft Touch Upholstery)

Color Selector.....www.midmark.com



MA420202

Item	Part No.	Description	Qty.
1	002-0599-XX	Soft Touch Upholstered (Includes Items 2 thru 12 [*Specify Color])	1
2	• 053-0043-04	• L.H. Pole Socket	1
3	• 040-0006-26	• Screw	2
4	• 042-0605-00	• Wire Nail	2
5	• 053-0043-03	• R.H. Pole Socket	1
6	• 016-0022-00	• Stud	4
7	• 053-0950-00	• Scuff Plate (Units w/Pelvic Lift Only)	1
8	• 042-0040-00	• Staples (Units w/Pelvic Lift Only)	10
9	• 040-0010-01	• Screw	3
10	• 040-0010-43	• Screw	4
11	• 053-0024-00	• Recess Bumper	2
12	• 040-0008-95	• Screw	2
13	028-0439-XX	Uph. Footrest Assy. (*Specify Color) [Includes item 14]	1
14	• 053-0424-00	• Footrest Glide	4
15	055-0005-00	Dowel	1
16	040-0010-01	Screw	4
17		Cylinder Assembly (Refer to "Hydraulic System" Elsewhere)	Ref
18	042-0005-01	Clevis Pin	1
19	042-0004-00	Hitch Pin Clip	1
20	042-0601-03	Cotterless Hitch Pin	1
21	030-0270-40	Back Pivot Weldment	1
22		Upper Wrap (Refer to "Upper Wrap Components" Elsewhere)	Ref
23	040-0010-01	Screw	2
24	029-0017-00	Paper Tear Strip Assembly	2
25	045-0001-105	Washer	2

* Click on the Color Selector link above to see available colors.

Always Specify Model & Serial Number

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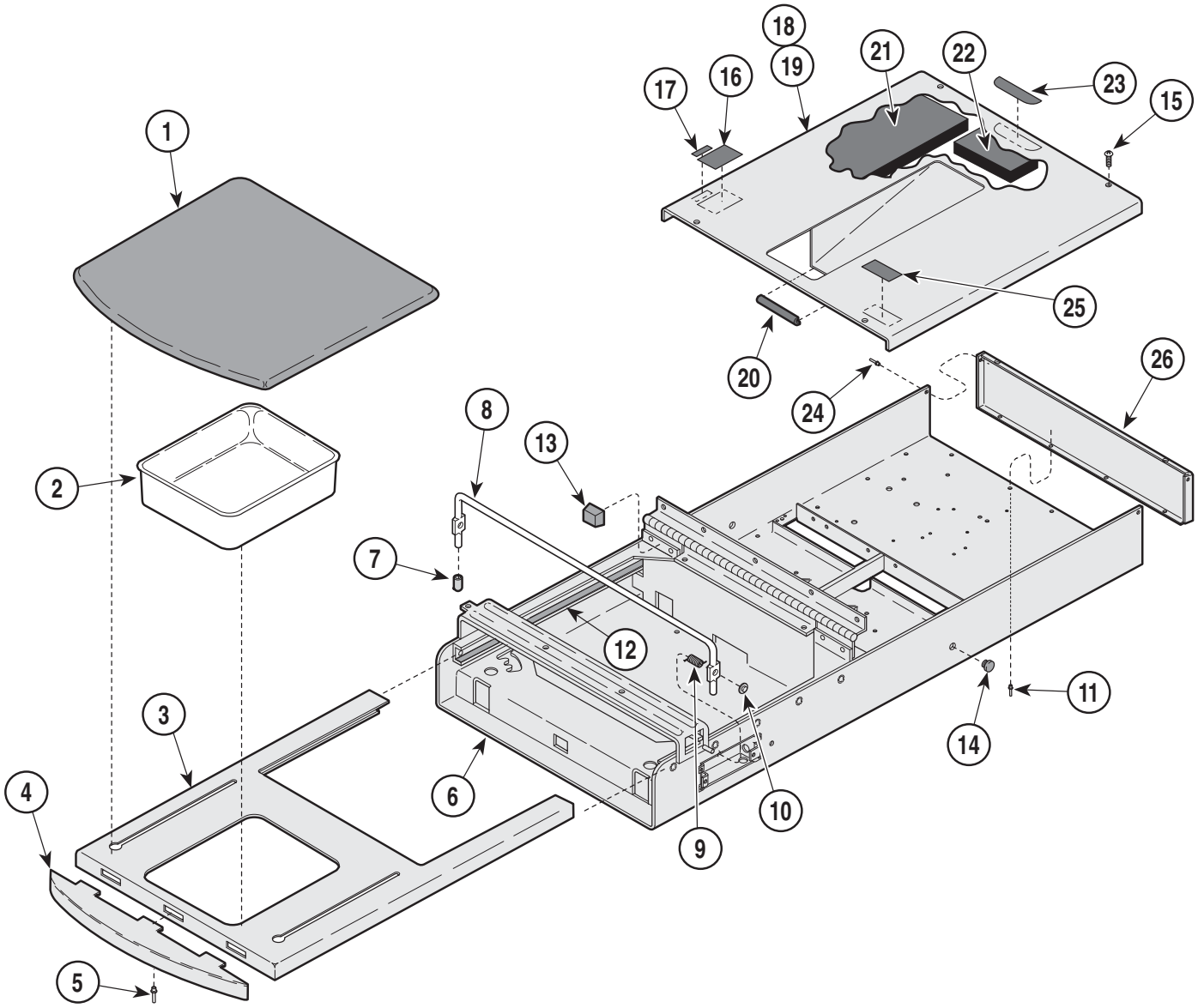
Upper Wrap Components



MA358400

Used On Units With Serial Number GW1000 thru GW2083, GX1000 thru GX1476, JJ1000 thru JJ1302 and JK1000 thru JK1158

Item	Part No.	Description	Qty.
1		Upholstered Foot Pad (Refer to "Seat and Back Components" Elsewhere)	Ref
2	053-0220-01	Treatment Basin (Plastic)	1
	016-0373-00	Irrigation Pan (Stainless Steel)	Ref
3	030-1034-40	Footrest Weldment	1
4	053-0828-00	Footrest Shelf Trim	1
5	042-0010-01	Pop Rivet	2
6	030-1083-40	Upper Wrap Weldment	1
7	053-0268-00	End Cap (Units w/ Pelvic Lift Only)	2
8	057-0242-40	Pelvic Lift Bar (Units w/ Pelvic Lift Only)	1
9	016-0284-01	R.H. Spring (Used on Left Side[Shown])	1
	016-0284-00	L.H. Spring (Used on Right Side)	1
10	041-0009-00	Push Nut	2
11	042-0010-07	Pop Rivet	4
12	053-0018-00	Nylo Tape (Sold by the inch)	52
13	053-0014-00	Self Sticking Bumper	4
14	053-0050-01	Hole Plug	2
15	040-0010-18	Screw	4
16		Serial Number Tag	1
17	061-0291-00	Patent Pending Label	1
18	~~029-0337-02~~	Top Cover Assembly (Includes Items 19 thru 22)	1
19	• 030-0269-40	Top Cover Weldment	1
20	• 016-0140-00	Trim Lock	1
21	• ~~054-0026-10~~	Sound Damp Foam (Long)	2
22	• 054-0026-08	Sound Damp Foam (Short)	1
23	061-0293-00	Caution Label	1
24	042-0010-03	Pop Rivet	2
25	061-0301-00	U/L Label (Units w/ Heaters Only)	1
	061-0620-00	U/L-CUL Label (Units w/o Heaters Only)	1
26	050-0180-40	End Cap	1

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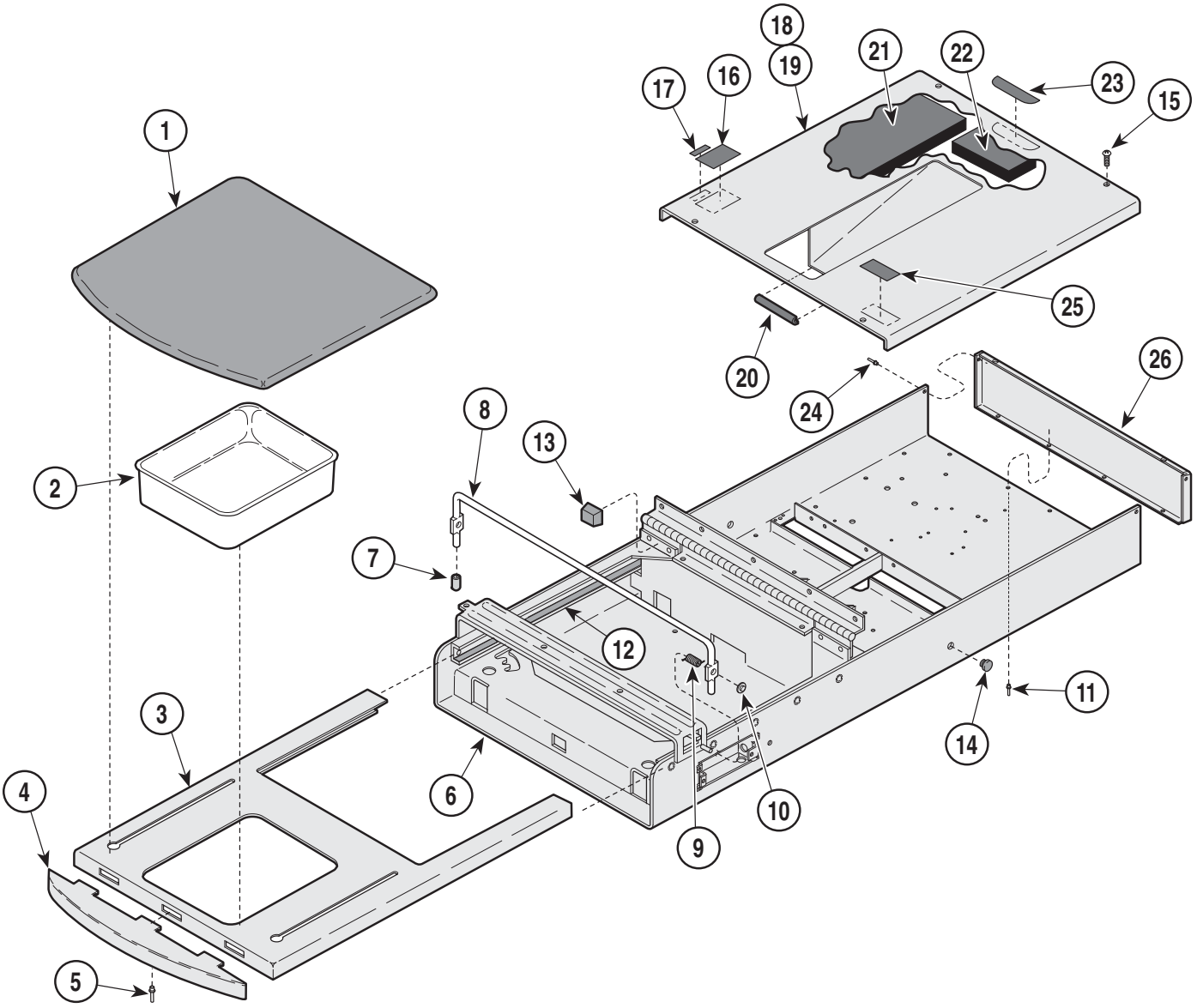
Upper Wrap Components



MA358402

Used On Units With Serial Number GW2084, GX1477, JJ1303, and JK1159 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Qty.
1		Upholstered Foot Pad (Refer to "Seat and Back Components" Elsewhere)	Ref
2	053-0220-01	Treatment Basin (Plastic)	1
	016-0373-00	Irrigation Pan (Stainless Steel)	Ref
3	030-1034-40	Footrest Weldment	1
4	053-0828-00	Footrest Shelf Trim	1
5	042-0010-01	Pop Rivet	2
6	030-1514-40	Upper Wrap Weldment	1
7	053-0268-00	End Cap (Units w/ Pelvic Lift Only)	2
8	057-0242-40	Pelvic Lift Bar (Units w/ Pelvic Lift Only)	1
9	016-0284-01	R.H. Spring (Used on Left Side[Shown])	1
	016-0284-00	L.H. Spring (Used on Right Side)	1
10	041-0009-00	Push Nut	2
11	042-0010-07	Pop Rivet	4
12	053-0018-00	Nylo Tape (Sold by the inch)	52
13	053-0014-00	Self Sticking Bumper	4
14	053-0050-01	Hole Plug	2
15	040-0010-18	Screw	4
16		Serial Number Tag	1
17	061-0291-00	Patent Pending Label	1
18	~~029-0337-02~~	Top Cover Assembly (Includes Items 19 thru 22)	1
19	• 030-0269-40	Top Cover Weldment	1
20	• 016-0140-00	Trim Lock	1
21	• ~~054-0026-10~~	Sound Damp Foam (Long)	2
22	• 054-0026-08	Sound Damp Foam (Short)	1
23	061-0293-00	Caution Label	1
24	042-0010-03	Pop Rivet	2
25	061-0301-00	U/L Label (Units w/ Heaters Only)	1
	061-0620-00	U/L-CUL Label (Units w/o Heaters Only)	1
26	050-0180-40	End Cap	1

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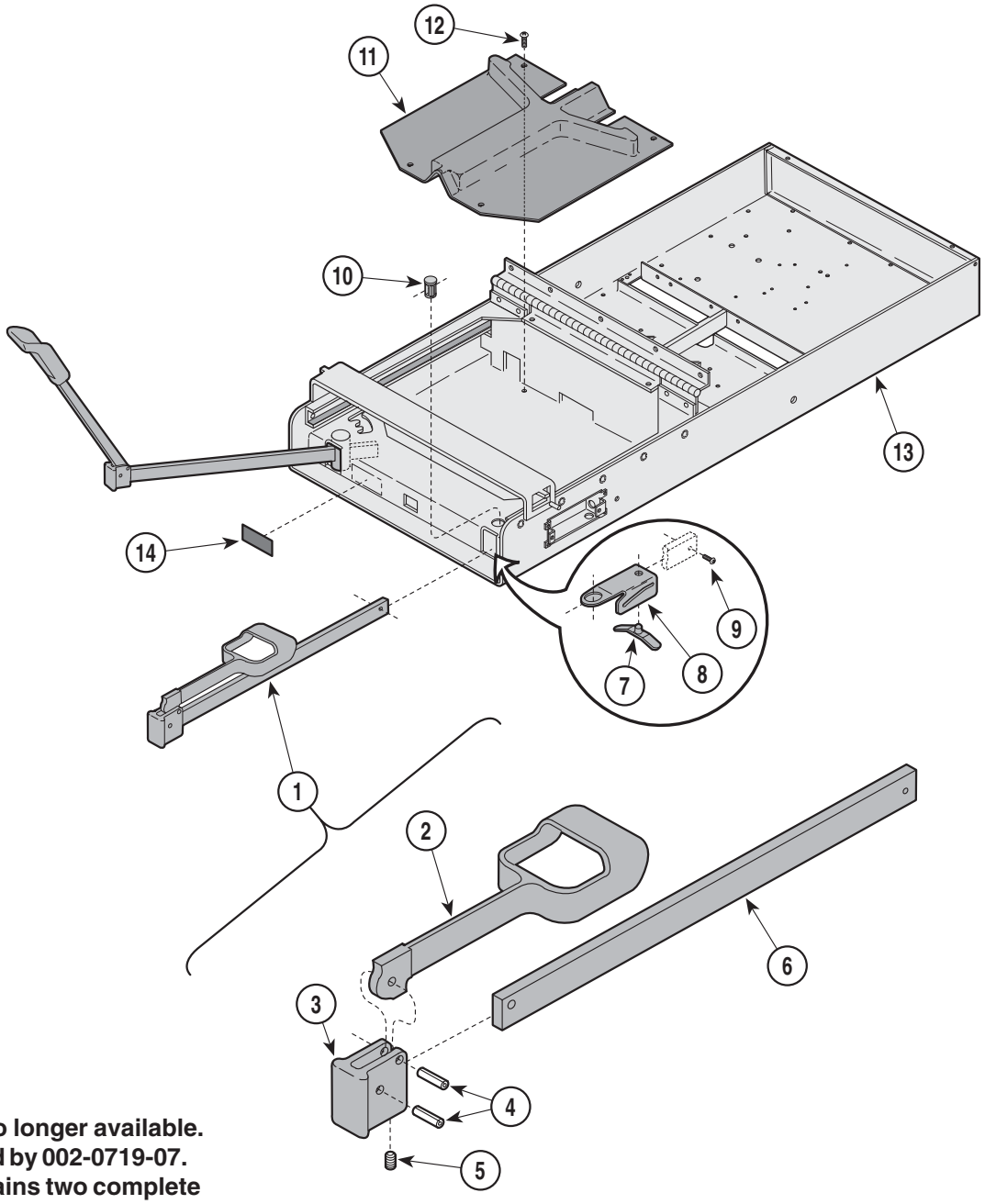
Stirrup Assembly



This assembly is no longer available. It has been replaced by 002-0719-07. Note: This kit contains two complete stirrup assemblies.

MA358900

Used On Units With Serial Number GW1000 thru GW1904, GX1000 thru GX1380, JJ1000 thru JJ1283 and JK1000 thru JK1109

Item	Part No.	Description	Qty.
1	029-1397-02	Stirrup Assembly (Includes Items 2 thru 6)	2
2	• 020-0181-30	• Painted Stirrup	1
3	• 020-0182-30	• Pivot Block	1
4	• 042-0001-00	• Roll Pin	2
5	• 040-0250-15	• Set Screw	1
6	• 051-0668-03	• Horizontal Bar	1
7	016-0400-00	Stirrup Index Spring (Apply Lubricant #S006-00719	2
8	050-1785-02	Stirrup Guide Bracket	2
9	040-0010-47	Screw	2
10	053-0387-00	Pivot Boss	2
11	053-0380-00	Stirrup Guide	1
12	040-0010-00	Screw	4
13		Upper Wrap (Refer to "Upper Wrap Assembly" Elsewhere)	Ref
14	061-0296-00	Stirrup Label	1

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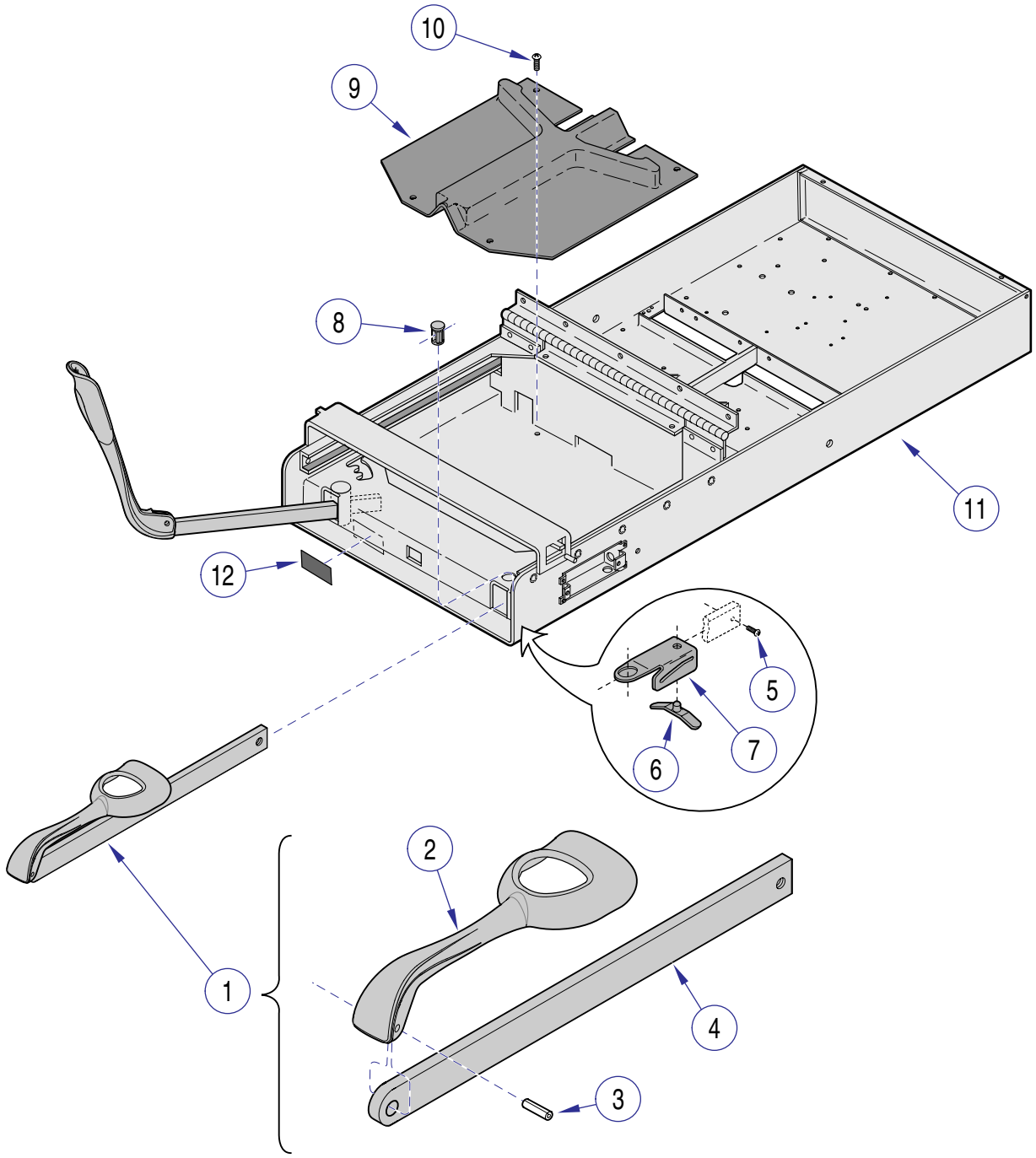
Stirrup Assembly



MA358901i

Used On Units With Serial Number GW1905 thru GW2083, GX1381 thru GX1476, JJ1284 thru JJ1302 and JK1110 thru JK1158

Item	Part No.	Description	Qty.
1	029-2951-03	Stirrup Assembly (Includes Items 2 thru 4)	2
2	• 020-0239-30	• Stirrup	1
3	• 042-0001-00	• Roll Pin	1
4	• 051-1003-01	• Stirrup Bar	1
5	040-0010-47	Screw	2
6	016-0400-00	Stirrup Index Spring (Apply Lubricant #S006-00719	2
7	050-5027-00	Stirrup Guide Bracket	2
8	053-0387-00	Pivot Boss	2
9	053-0380-00	Stirrup Guide	1
10	040-0010-00	Screw	4
11		Upper Wrap (Refer to "Upper Wrap Assembly" Elsewhere)	Ref
12	061-0296-00	Stirrup Label	1

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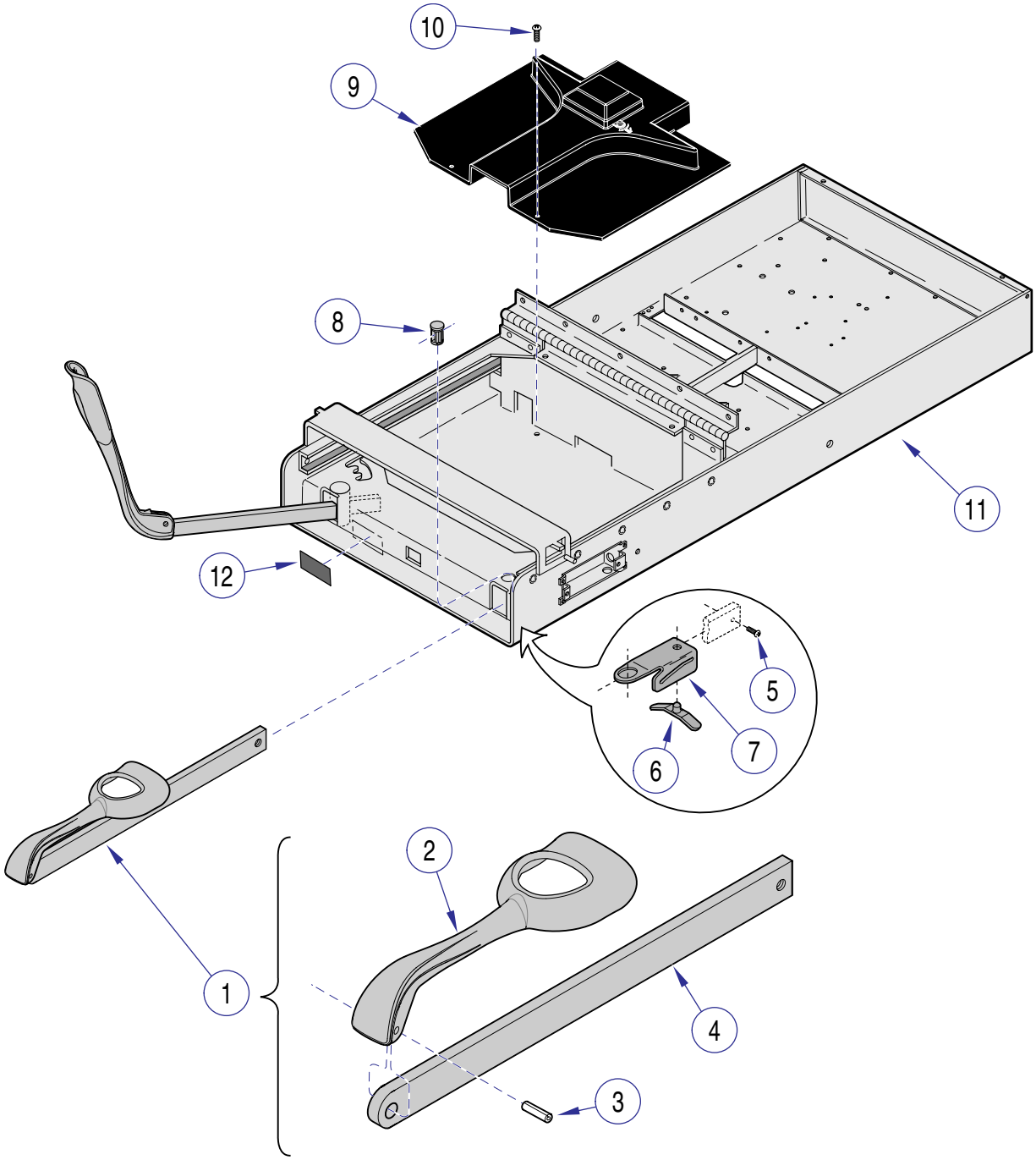
Stirrup Assembly



MA358902i

Used On Units With Serial Number GW2084, GX1477, JJ1303, and JK1159 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Qty.
1	029-2951-03	Stirrup Assembly (Includes Items 2 thru 4)	2
2	• 020-0239-30	• Stirrup	1
3	• 042-0001-00	• Roll Pin	1
4	• 051-1003-01	• Stirrup Bar	1
5	040-0010-47	Screw	2
6	016-0400-00	Stirrup Index Spring (Apply Lubricant #S006-00719	2
7	053-1391-00	Stirrup Guide Bracket	2
8	053-0387-00	Pivot Boss	2
9	053-0380-00	Stirrup Guide	1
10	040-0010-00	Screw	4
11		Upper Wrap (Refer to "Upper Wrap Assembly" Elsewhere)	Ref
12	061-0296-00	Stirrup Label	1

Always Specify Model & Serial Number

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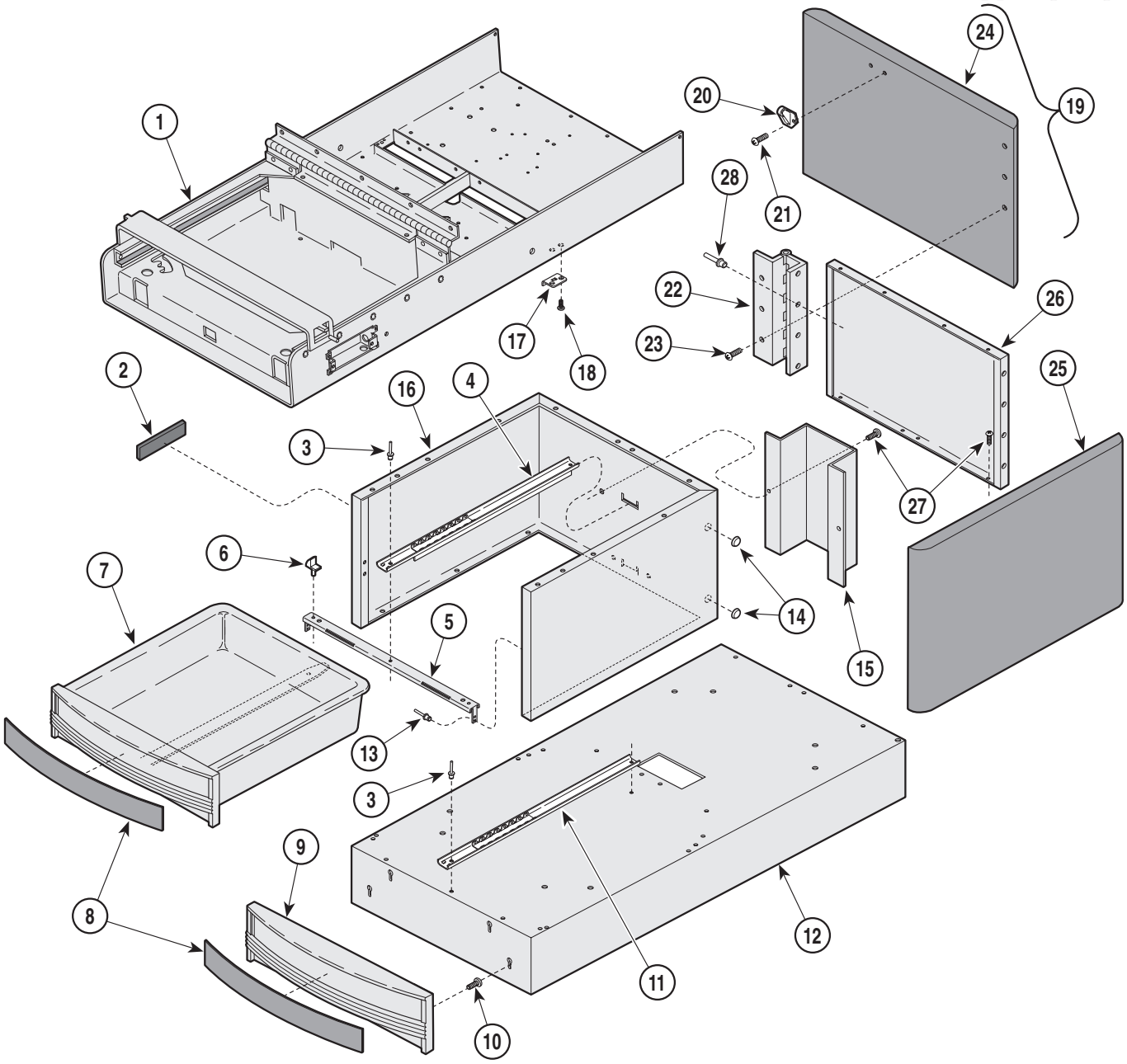
Cabinet Components



MA358500

Item	Part No.	Description	Qty.
1		Upper Wrap Weldment (Refer to "Upper Wrap Components" Elsewhere)	Ref
2	061-0621-03	305 Nameplate	1
3	042-0010-03	Pop Rivet	2
4	016-0677-01	Cabinet Member Foot Slide	1
5	050-3628-40	Short Foot Mullion	1
6	053-0004-00	Glide	4
7	029-1956-00	Drawer Assembly	2
8	050-3683-00	Foot Drawer Insert (Specify Color)	3
9	029-2042-00	Front Foot Assembly (Includes Item 10)	1
10	• 040-0006-00	• Screw	4
11	016-0688-01	Cabinet Member Foot Slide	1
12	050-3611-40	Sub Base Wrap	1
13	042-0010-01	Pop Rivet	4
14	053-0716-00	Self Sticking Bumper	4
15	050-3869-40	Rod Cover	1
16	050-3610-40	Center Support	1
17	016-0004-01	Strike Plate (Includes Item 20)	2
18	040-0006-26	Screw	4
19	029-2029-00	R.H. Door Assembly (Includes Items 20 thru 24 [Specify Color])	1
20	• 016-0004-01	• Roller Catch (Includes Item 17)	1
21	• 040-0006-26	• Screw	2
22	• 016-0684-40	• Hinge	1
23	• 040-0006-00	• Screw	4
24	• 063-3300-00	• Door Panel (Specify Color)	1
25	029-2028-00	L.H. Door Assembly (Includes Items 20 thru 24 [Specify Color])	1
26	050-0016-40	Back Wrap	1
27	040-0010-00	Screw	16
28	042-0010-02	Pop Rivet	8

Always Specify Model & Serial Number

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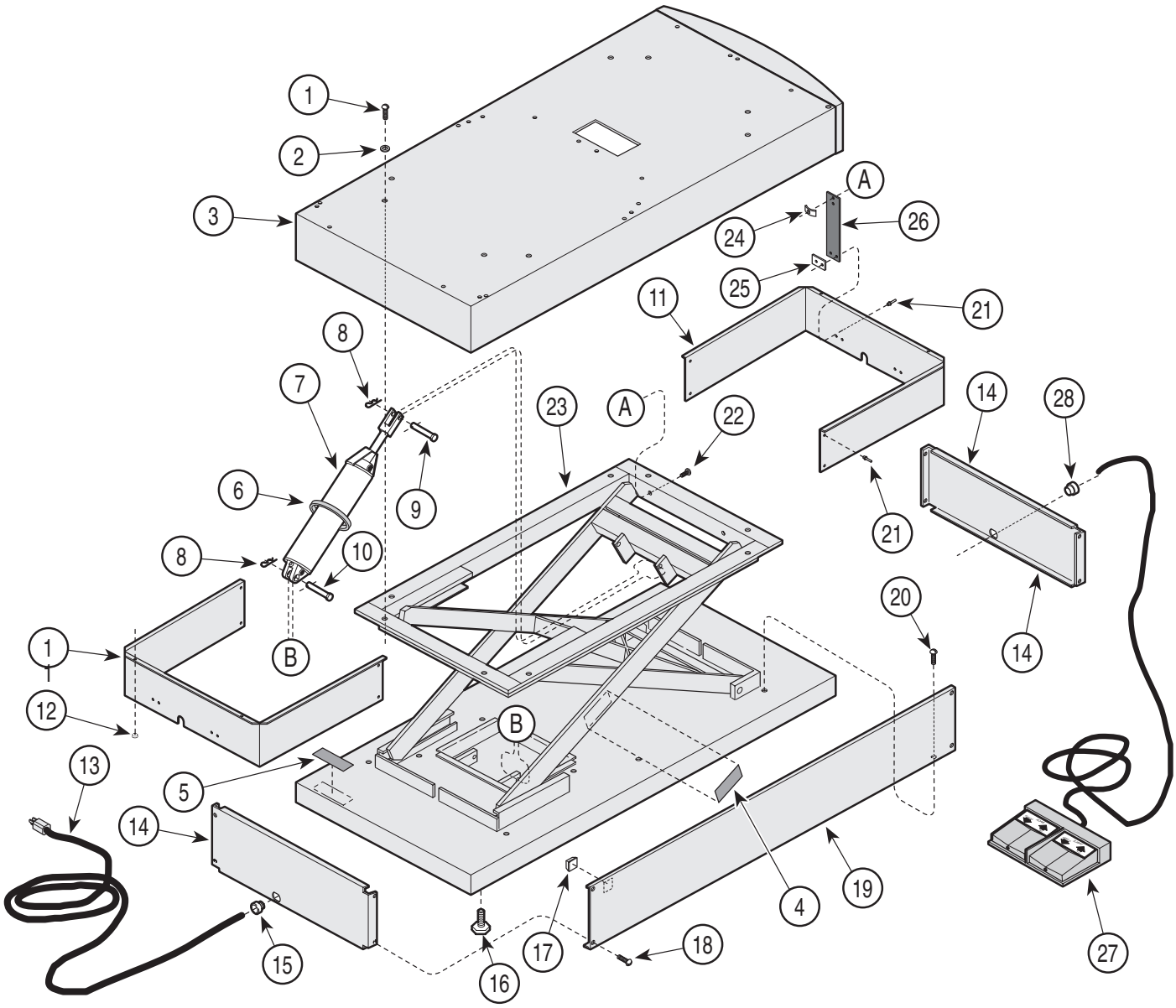
Base Components



MA358600

Item	Part No.	Description	Qty.
1	040-0250-08	Screw	8
2	045-0001-05	Lockwasher	8
3		Sub Base Wrap (Refer to "Cabinet Components" Elsewhere)	Ref
4	061-0045-00	Caution Label	2
5	061-0295-00	Cord Tag	1
6	015-0016-00	Cable Tie	3
7		Cylinder Assembly (Refer to "Hydraulic System" Elsewhere)	Ref
8	042-0004-00	Hitch Pin Clip	4
9	042-0005-00	Clevis Pin	2
10	042-0005-01	Clevis Pin	2
11	050-4984-30	Upper Shroud	2
12	016-0140-00	Trim Lock	4
13		Power Cord (Refer to "Wiring Diagram" [Section 5] Elsewhere)	Ref
14	050-0155-30	Lower End Shroud	2
15	015-0002-01	Strain Relief Bushing	1
16	016-0001-00	Leveling Screw	4
17	053-0443-00	Slide Pad	10
18	040-0006-06	Screw	8
19	050-0154-30	Lower Side Shroud	2
20	040-0010-00	Screw	6
21	042-0010-03	Pop Rivet	14
22	040-0006-05	Screw	4
23	030-0055-01	Scissors Frame Assembly	1
24	041-0007-00	Speed Nut	4
25	050-0158-00	Webbing Retainer	4
26	053-0059-00	Webbing Strip	4
27		Footswitch (Refer to "Footswitch Assembly" Elsewhere)	Ref
28	015-0008-00	Strain Relief Bushing	1

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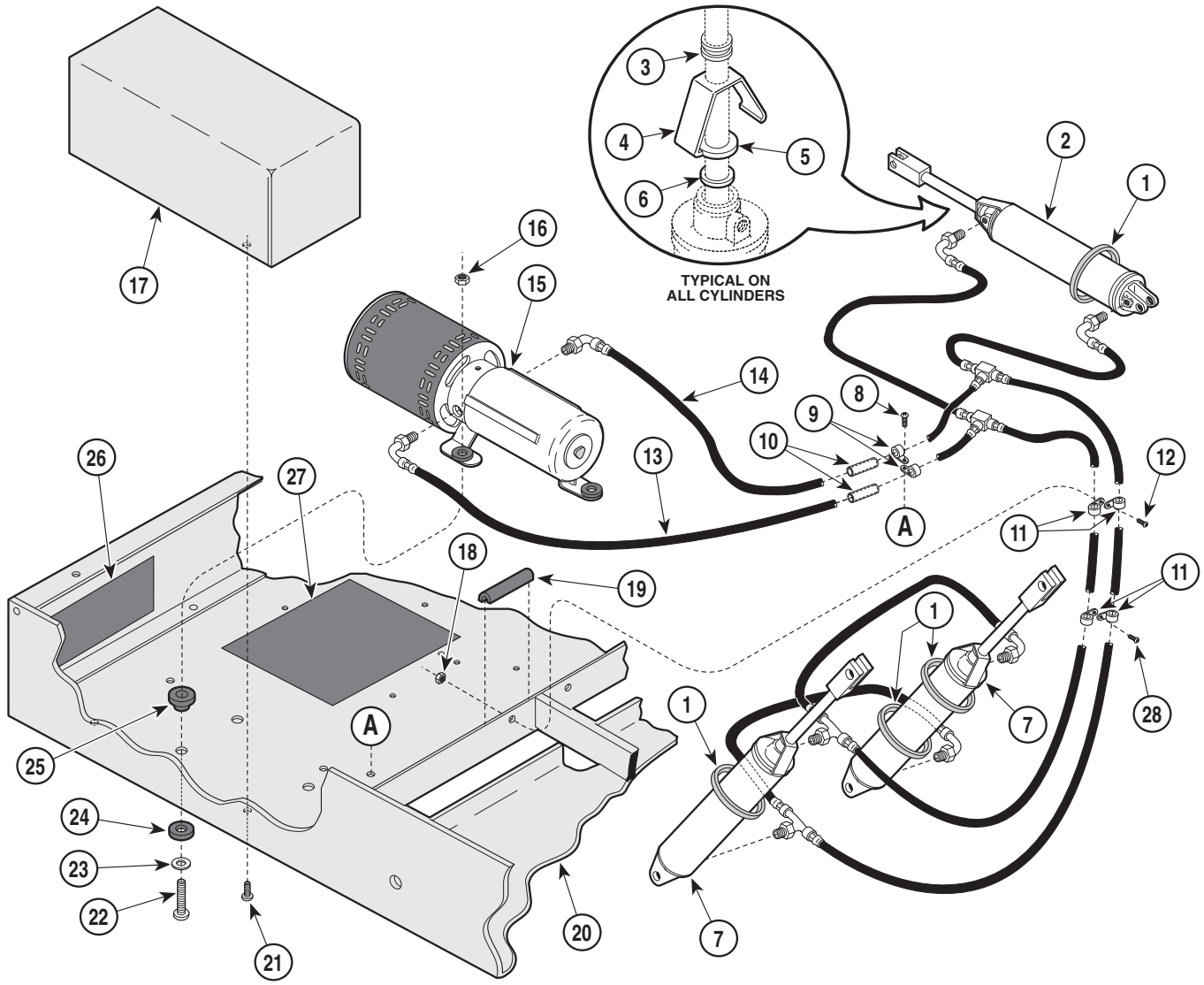
Hydraulic System



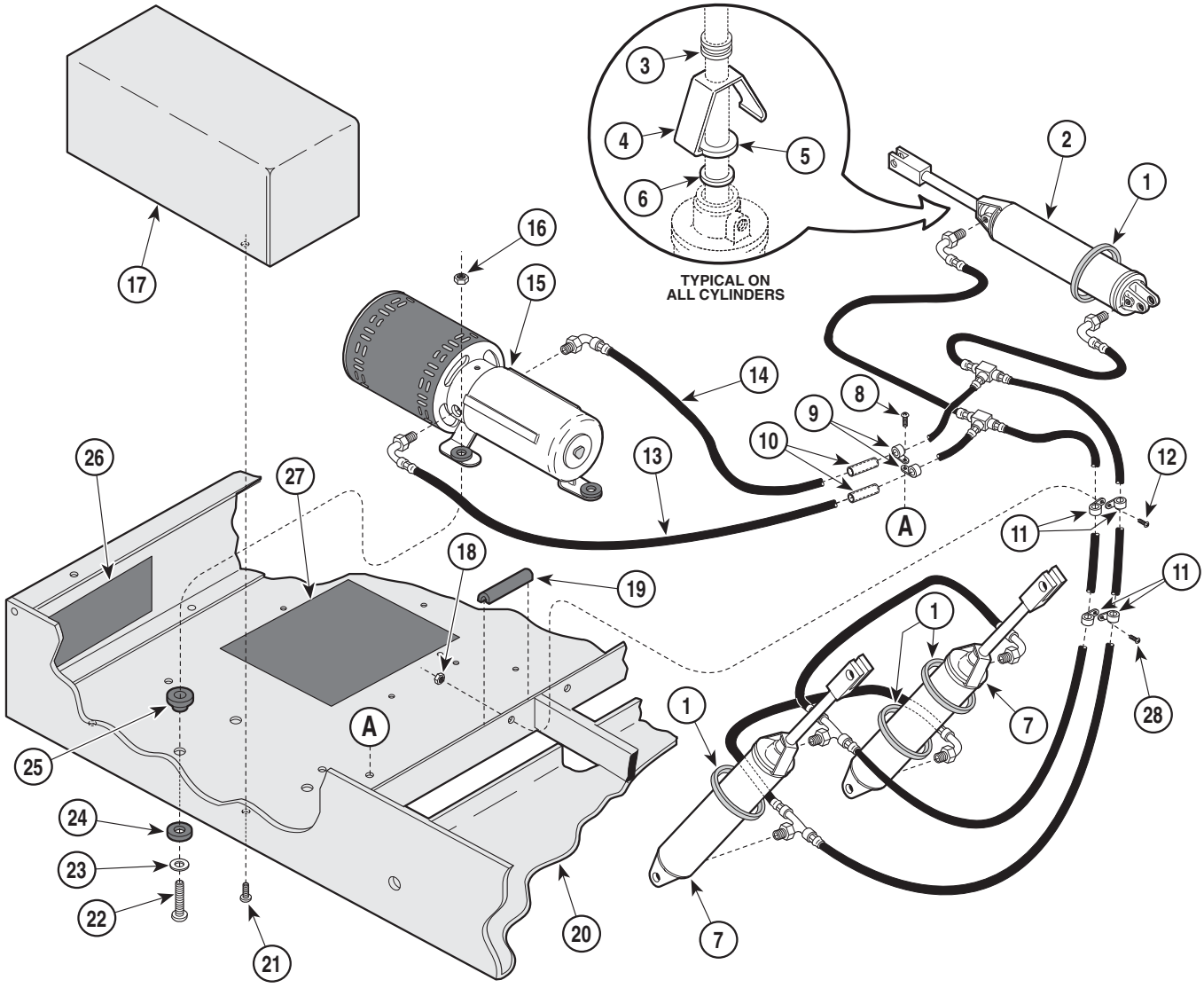
MA358700

Used On Units With Serial Number GW1000 thru GW1160, GX1000 thru GX1043, JJ1000 thru 1129 and JK 1000 thru 1004

Item	Part No.	Description	Qty.
1	015-0016-00	Cable Tie	4
2	002-0100-00	Back Cylinder Kit (Includes Items 3, 4, 5 & 6)	1
3	• 053-0226-03	• Snap-in Nyliner Bearing	1
4	• 025-0032-00	• Rod Wiper Bracket	1
5	• 054-0109-00	• Felt Wiper (1")	1
6	• 054-0108-00	• Felt Wiper (11/16")	1
7	002-0094-00	Base Cylinder Kit (Includes Items 3, 4, 5 & 6])	2
8	040-0010-47	Screw	1
9	015-0014-00	Wire Clip	2
10	053-0042-00	Vinyl Sleeve (Sold by the inch)	3
11	015-0001-00	Wire Clip	4
12	040-0010-01	Screw	1
13	002-0098-00	Return Hose Kit	1
14	002-0099-00	Power Hose Kit	1
15	002-0112-00	Motor / Pump Kit - 115V (1/3 hp)	1
	• 014-0256-00	• Reservoir O-Ring (Not Shown)	1
	• 014-0257-00	• Shaft Seal (Not Shown)	1
16	041-0250-01	Nut	3
17	~~029-0330-02~~	Motor Cover Assembly	1
18	041-0010-00	Nut	1
19	016-0140-02	Trim Lock	1
20		Upper Wrap Weldment (Refer to "Upper Wrap Components" Elsewhere)	Ref
21	040-0010-23	Screw	4
22	040-0250-28	Screw	3
23	045-0001-02	Washer	3
24	053-0127-01	Vibration Mount Ring	3
25	053-0127-02	Vibration Mount Bushing	3
26	054-0067-01	Sound Damp	1
27	054-0070-00	Sound Damp	1
28	040-0010-07	Screw	1

Always Specify Model & Serial Number

Hydraulic System



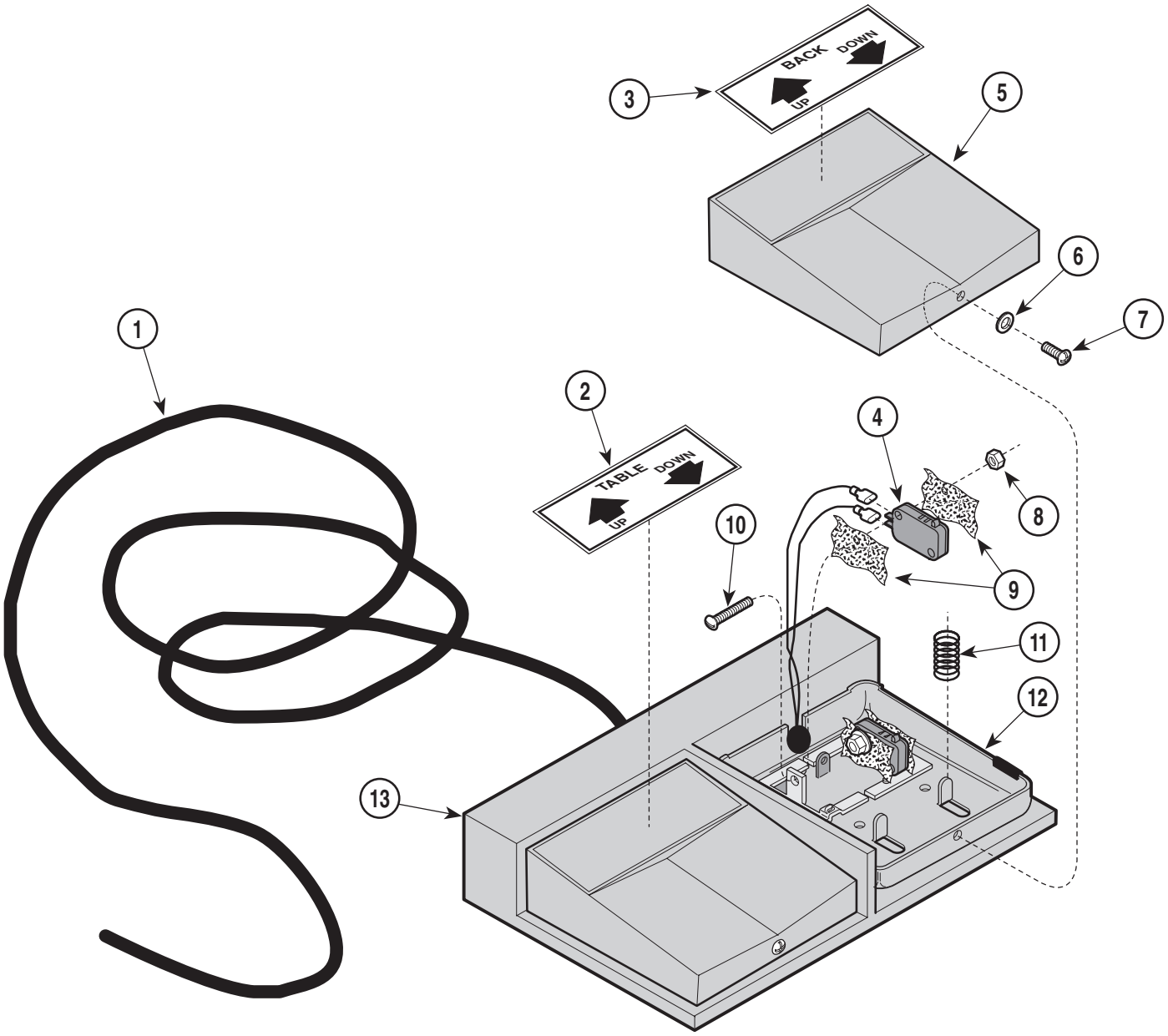
MA358700

Used On Units With Serial Number GW1161, GX1044, JJ1130, JK1005 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Qty.
1	015-0016-00	Cable Tie	4
2	002-0100-00	Back Cylinder Kit (Includes Items 3, 4, 5 & 6)	1
3	• 053-0226-03	• Snap-in Nyliner Bearing	1
4	• 025-0032-00	• Rod Wiper Bracket	1
5	• 054-0109-00	• Felt Wiper (1")	1
6	• 054-0108-00	• Felt Wiper (11/16")	1
7	002-0094-00	Base Cylinder Kit (Includes Items 3, 4, 5 & 6])	2
8	040-0010-47	Screw	1
9	015-0014-00	Wire Clip	2
10	053-0042-00	Vinyl Sleeve (Sold by the inch)	3
11	015-0001-00	Wire Clip	4
12	040-0010-01	Screw	1
13	002-0098-00	Return Hose Kit	1
14	002-0099-00	Power Hose Kit	1
15	002-0112-00	Motor / Pump Kit - 115 V (1/2 hp)	1
	• 014-0256-00	• Reservoir O-Ring (Not Shown)	1
	• 014-0257-00	• Shaft Seal (Not Shown)	1
16	041-0250-01	Nut	3
17	~~029-0330-02~~	Motor Cover Assembly	1
18	041-0010-00	Nut	1
19	016-0140-02	Trim Lock	1
20		Upper Wrap Weldment (Refer to "Upper Wrap Components" Elsewhere)	Ref
21	040-0010-23	Screw	4
22	040-0250-28	Screw	3
23	045-0001-02	Washer	3
24	053-0127-01	Vibration Mount Ring	3
25	053-0127-02	Vibration Mount Bushing	3
26	054-0067-01	Sound Damp	1
27	054-0070-00	Sound Damp	1
28	040-0010-07	Screw	1

Always Specify Model & Serial Number

Footswitch Assembly



MA323000

Item	Part No.	Description	Qty.
	002-0104-00	Footswitch Assembly (Includes Items 1 Thru 13)	1
1	•	• Cable (Refer to "Wiring Diagram" [Section 5] Elsewhere)	Ref
2	• 061-0096-00	• Label (Table)	1
3	• 061-0102-00	• Label (Back)	1
4	• 002-0101-00	• Foot Control Switch	4
5	•	• Footswitch Pedal	2
6	•	• Lockwasher	2
7	•	• Screw	2
8	•	• Nut	4
9	•	• Insulator	4
10	•	• Screw	4
11	•	• Spring	4
12	•	• Switch Mount	2
13	•	• Base	1

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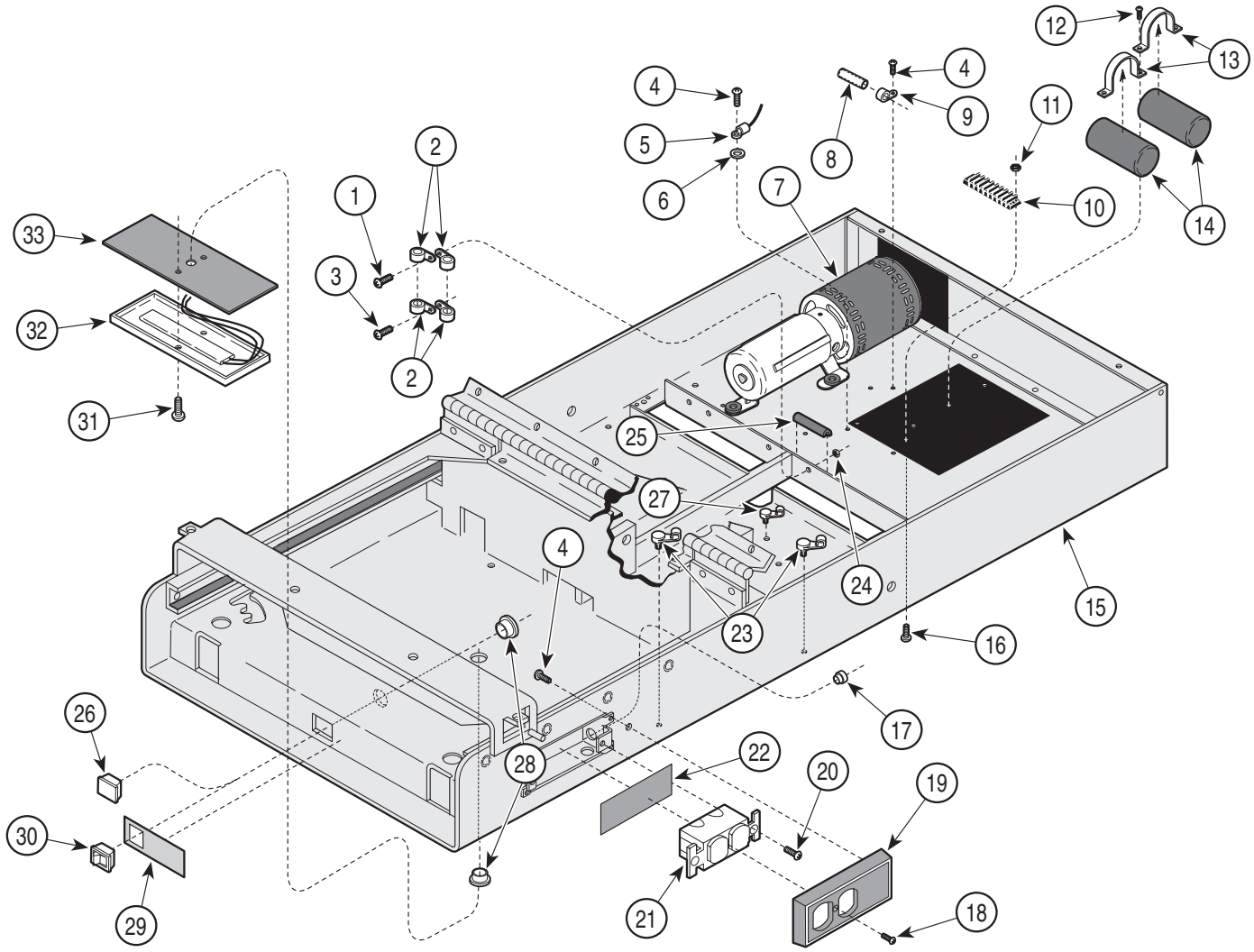
Electrical Components



MA358800

Used On Units With Serial Number GW1000 thru GW1160, GX1000 thru GX1043, JJ1000 thru 1129 and JK 1000 thru 1004

Item	Part No.	Description	Qty.
1	040-0010-01	Screw	1
2	015-0017-00	Cable Tie	4
3	040-0010-07	Screw	1
4	040-0010-47	Screw	6
5		Jumper Wire (Refer to "Wiring Diagram" [Section 5] Elsewhere)	Ref
6	045-0001-31	Lockwasher	3
7		Motor / Pump Kit (Refer to "Hydraulic System" Elsewhere)	Ref
8	053-0128-00	Vinyl Sleeve (Sold by the inch)	1.5
9	015-0001-00	Wire Clip	1
10	015-0009-00	Terminal Board	1
	015-0022-01	Jumper (Not Shown)	2
11	041-0006-01	Nut	2
12	040-0010-04	Screw	3
13		Capacitor Clamp	2
14	002-0044-00	Capacitor Kit	2
15		Upper Wrap Weldment (Refer to "Upper Wrap Components" Elsewhere)	Ref
16	040-0006-07	Screw	2
17	053-0068-07	Snap Bushing	1
18	040-0006-23	Screw	1
19	053-0836-00	Receptacle Cover	1
20	040-0006-13	Screw	2
21	015-0083-01	Duplex Receptacle	1
22	053-0092-00	Fishpaper Insulator	1
23	015-0007-04	Wrap-N-Tap Clamp	2
24	041-0010-00	Nut	1
25	016-0140-02	Trim Lock	1
26	053-0350-02	Plug (Units Without Heater Only)	1
27	015-0007-00	Wrap-N-Tap Clamp (Units With Heater)	3
28	053-0068-00	Snap Bushing	2
29	061-0219-00	Label (Units With Heater)	1
30	015-0650-00	Heater Switch (Units With Heater)	1
31	040-0010-35	Screw (Units With Heater)	2
32	002-0554-00	Heater Assembly Kit- 60 Watt (Includes Items 32 and 34) (Units w/ Heaters Only [Refer to "Wiring Diagram {Section 5} for Wire Numbers])	1
33	053-0362-00	Heat Shield (Units With Heater)	1

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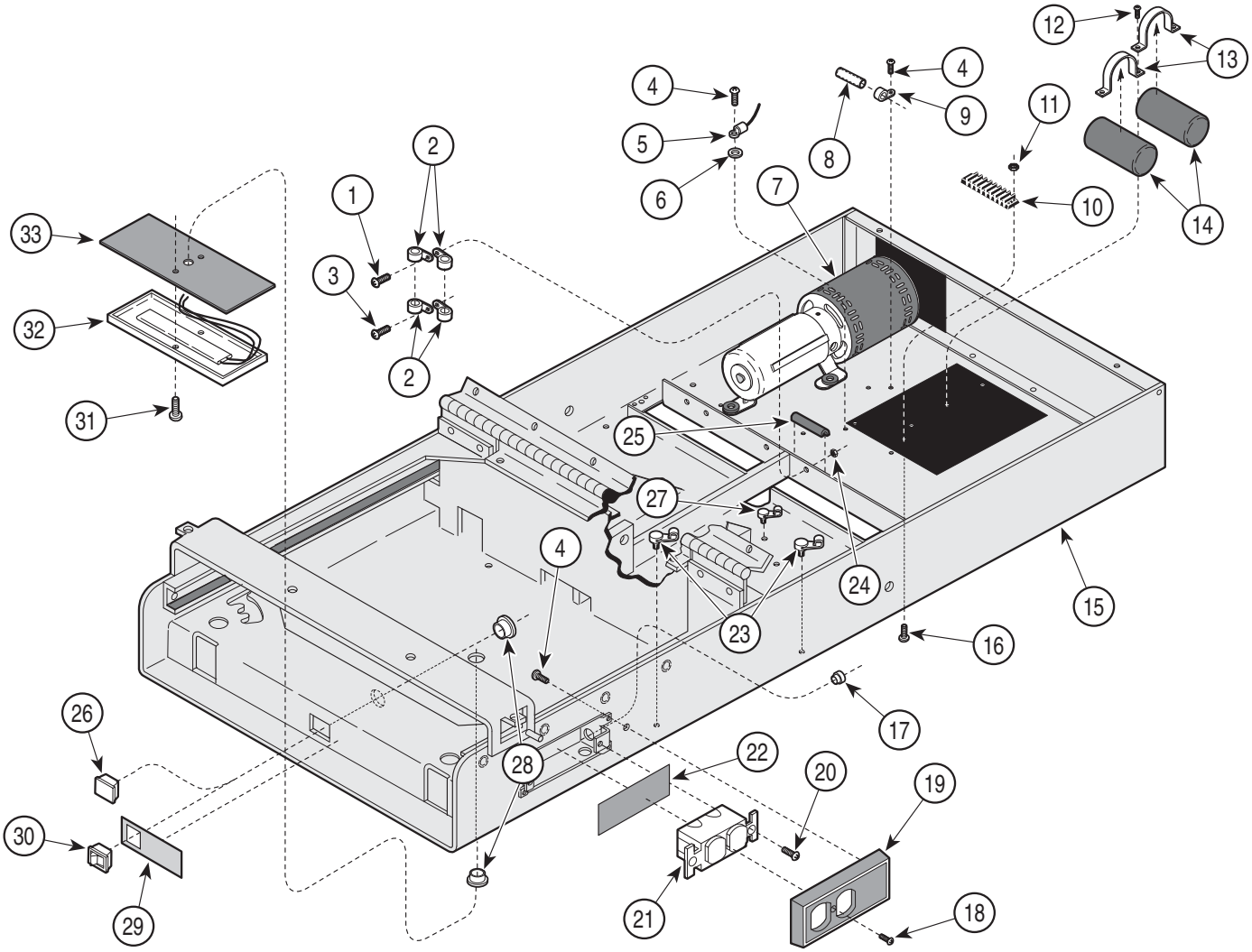
Electrical Components



MA358800

Used On Units With Serial Number GW1161, GX1044, JJ1130, JK1005 thru Present
Used On Units With Serial Number V2200 thru Present

Item	Part No.	Description	Qty.
1	040-0010-01	Screw	1
2	015-0017-00	Cable Tie	4
3	040-0010-07	Screw	1
4	040-0010-47	Screw	6
5		Jumper Wire (Refer to "Wiring Diagram" [Section 5] Elsewhere)	Ref
6	045-0001-31	Lockwasher	3
7		Motor / Pump Kit (Refer to "Hydraulic System" Elsewhere)	Ref
8	053-0128-00	Vinyl Sleeve (Sold by the inch)	1.5
9	015-0001-00	Wire Clip	1
10	015-0009-00	Terminal Board	1
	015-0022-01	Jumper (Not Shown)	2
11	041-0006-01	Nut	2
12	040-0010-04	Screw	3
13		Capacitor Clamp	2
14	002-0638-00	Capacitor Kit	2
15		Upper Wrap Weldment (Refer to "Upper Wrap Components" Elsewhere)	Ref
16	040-0006-07	Screw	2
17	053-0068-07	Snap Bushing	1
18	040-0006-23	Screw	1
19	053-0836-00	Receptacle Cover	1
20	040-0006-13	Screw	2
21	015-0083-01	Duplex Receptacle	1
22	053-0092-00	Fishpaper Insulator	1
23	015-0007-04	Wrap-N-Tap Clamp	2
24	041-0010-00	Nut	1
25	016-0140-02	Trim Lock	1
26	053-0350-02	Plug (Units Without Heater Only)	1
27	015-0007-00	Wrap-N-Tap Clamp (Units With Heater)	3
28	053-0068-00	Snap Bushing	2
29	061-0219-00	Label (Units With Heater)	1
30	015-0650-00	Heater Switch (Units With Heater)	1
31	040-0010-35	Screw (Units With Heater)	2
32	002-0554-00	Heater Assembly Kit- 60 Watt (Includes Items 32 and 34) (Units w/ Heaters Only [Refer to "Wiring Diagram {Section 5} for Wire Numbers])	1
33	053-0362-00	Heat Shield (Units With Heater)	1

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SECTION VI
PARTS LIST

COMMENTS

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(SERVICE PARTS ONLY)

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- **USE FOR NON-WARRANTY FAX ORDERS ONLY. WARRANTY ORDERS MUST BE TELEPHONED IN (1-800-MIDMARK).**

ATTENTION: SERVICE DEPARTMENT FAX#: 877-249-1793

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NAME: _____ **SHIP TO:** _____

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CITY, ST.: _____

CONTACT: _____

PHONE: _____

☐ **NON-EMERGENCY ORDER - TO SHIP WITHIN 72 HOURS IF PART(S) IN STOCK.**

☐ **EMERGENCY ORDER - TO SHIP WITHIN 24 HOURS IF PART(S) IN STOCK (IF ORDER IS RECEIVED BEFORE 1:00 P.M. E.S.T).**

SEND NOTIFICATION IF PARTS ARE NOT AVAILABLE TO SHIP WITHIN 24 HOURS VIA E-MAIL OR FAX TO: _____

METHOD OF SHIPMENT **OTHER** _____

UPS	FED EX
☐ NEXT DAY A.M.	☐ NEXT DAY A.M.
☐ NEXT DAY P.M.	☐ NEXT DAY P.M.
☐ 2ND DAY	☐ 2ND DAY
☐ GROUND	☐ ECONOMY

QTY.	PART #	DESCRIPTION (SPECIFY COLOR OF ITEM IF APPLICABLE)	COLOR CODE	PRICE/PER
			TOTAL COST: $	

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