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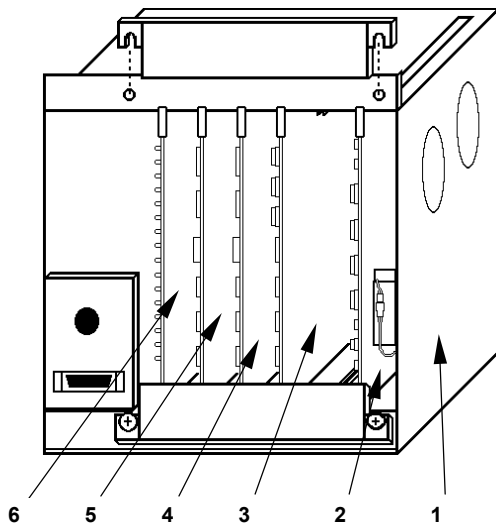
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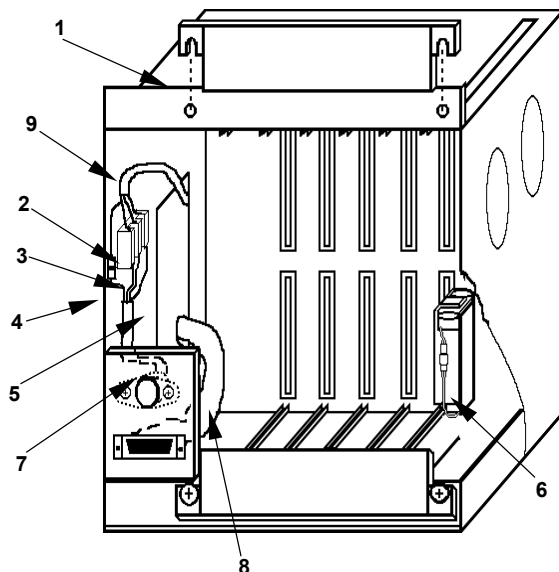
**MAIN CONTROL ASSEMBLY COMPONENTS**

Figure 7-1 Ref. No.	Name	Quantity Required	Part Number
1	Card Cage Assembly	1	1-42632-01
2	Main CPU Board	1	1-42633-04
3	Liquid Surface Detection Board	1	1-42634-03
4	Pulse Motor Controller Board #1(For X, Y, Z, and Sample Syringe Motors)	1	1-42635-01
5	Pulse Motor Controller Board #2(For Diluent Syringe Motor)	1	1-42636-01
6	Sensor I/F and ADC Board	1	1-42637-01

*Figure 7-1. Main Control Assembly*

## CARD CAGE ASSEMBLY COMPONENTS

Figure 7-2 Ref. No.	Name	Quantity Required	Part Number
1	PCB Holder Assembly	2	1-42638-01
2	Fuse: F1 (5VDC, 1A)	1	See Note
3	Fuse: F2 (-12VDC, 0.5A)	1	See Note
4	Fuse: F3 (+12VDC, 0.5A)	1	See Note
5	Motherboard	1	
6	Ni-Cad Battery	1	1-42644-01
7	F-Link Power Connecting Cable 2	1	1-42640-01
8	Internal RS-232 Connecting Cable	1	1-42642-01
9	F-Link Power Connecting Cable	1	1-42642-01

**Note:****All Fuses Come In A Kit.****Refer to the next page for a description of fuses in kits.***Figure 7-2. Card Cage Assembly*

**100/120VAC USA FUSE KIT**  
**(Part No. 1-42660-02)**

Fuse Type	Qty
0.5A	5
1.0A	5
2.0A	5
4.0A	5
5.0A	5
6.25A	5
Fuse Cap	1

**220/240VAC INTERNATIONAL FUSE KIT**  
**(Part No. 1-42661-01)**

Fuse Type	Qty
0.5A	5
1.0A	5
2.0A	5
3.15A	5
4.0A	5
5.0A	5
Fuse Cap	1

## PUMP ASSEMBLY COMPONENTS

Figure 7-3 Ref. No.	Name	Quantity Required	Part Number
1	Pump Unit	1	1-42623-01
2	Pressure Sensor Board	1	1-42624-01
3	Sample Syringe Origin Sensor Assembly	1	1-42674-01
4	Diluent Syringe Origin Sensor Assembly	1	1-42675-01
5	Internal Tip Jamming Signal Cable	1	1-42627-01
6	Internal Pump Origin Position Signal Cable	1	1-42755-01
7	Valve Drive Cable	1	1-42628-01
8	Diluent Syringe Block	1	1-42864-01
9	Sample Syringe Block	1	1-42863-01

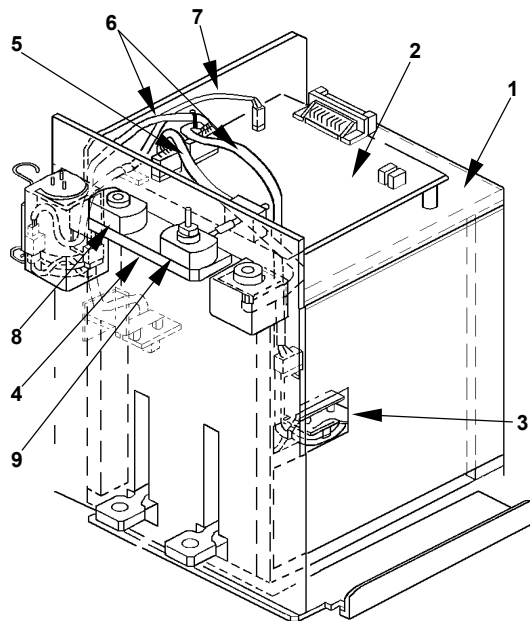


Figure 7-3. Pump Assembly

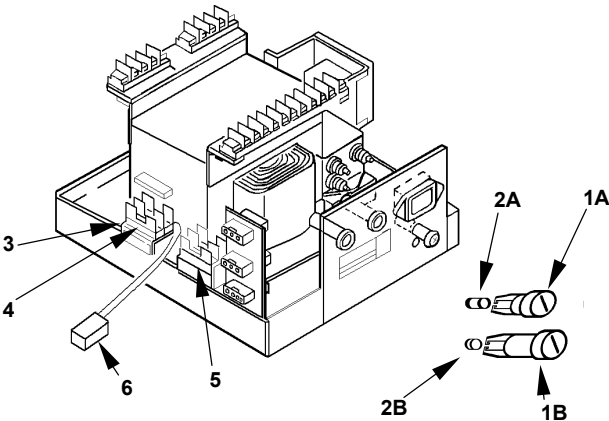


Figure 7-4. AC Power Supply Assembly

AC POWER SUPPLY COMPONENTS

Figure 7-4 Ref. No.	Name	Quantity Required	Part Number
1A	Cap - Main Fuse (For 100/120VAC)	2	See Note
1B	Cap - Main Fuse (For 220/240VAC)	2	See Note
2A	Main Fuse For 100/120VAC	2	See Note
2B	Main Fuse For 220/240VAC	2	See Note
3	Fuse: F3 (100VAC, 4A)	1	See Note
4	Fuse: F4 (100VAC, 5A)	1	See Note
5	Fuse: F5, F6 (14VAC/2A)	1	See Note
6	Internal Main Frame Fan Cable	1	1-42708-01

**Note:**  
All Fuses come in a Kit.  
Refer to **page 7-5** for a description of fuses in kit.

DC POWER SUPPLY COMPONENTS

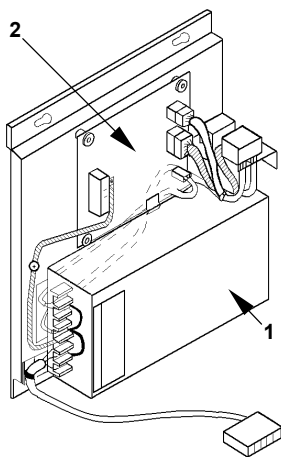


Figure 7-5 Ref. No.	Name	Quantity Required	Part Number
1	Switching Power Supply	1	1-42646-01
2	Power Failure Detection Board	1	1-42647-01

Figure 7-5. DC Power Supply Assembly



PULSE MOTOR DRIVER ASSEMBLY AND COVER COMPONENTS

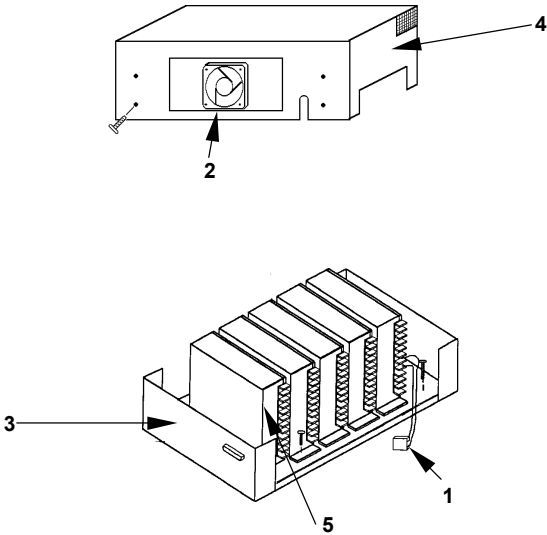


Figure 7-6. Pulse Motor Driver Assembly and Cover

Figure 7-6 Ref. No.	Name	Quantity Required	Part Number
1	Pulse Motor Driver Fan Cable	1	1-42692-01
2	Pulse Motor Driver Assembly Fan	1	1-42625-01
3	Pulse Motor Driver Assembly (Does Not Include Cover)	1	1-42648-01
4	Pulse Motor Driver Assembly Cover	1	1-42662-01
5	Pulse Motor Driver Module	1	1-73436-01

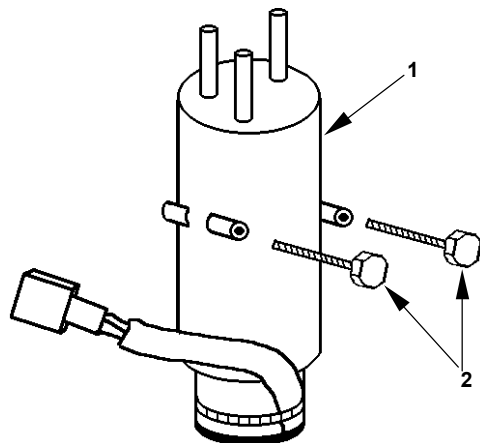
*Figure 7-7. Valve Assembly***VALVE ASSEMBLY COMPONENTS**

Figure 7-7 Ref. No.	Name	Quantity Required	Part Number
1	Electromagnetic Valve (With Cap)	1	1-42629-01
2	Bolts	2	Included With Above

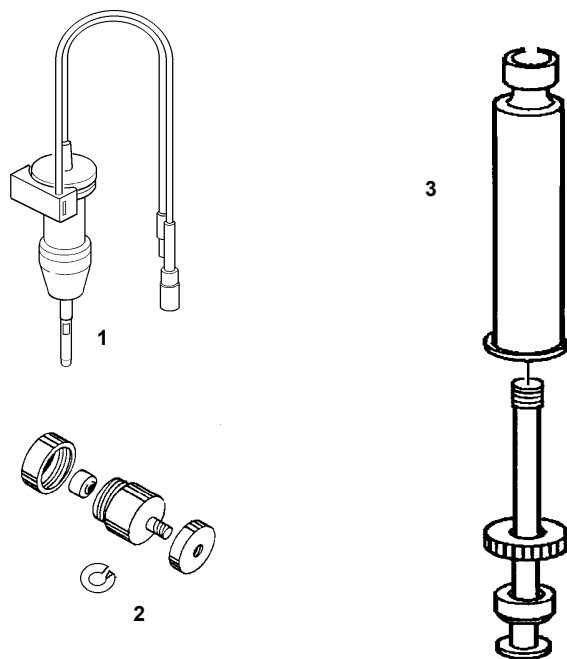
**SAMPLING KIT COMPONENTS**

Figure 7-8 Ref. No.	Name	Quantity Required	Part Number
1 - 3	Sample Syringe Kit (500 µL)	1	3A46-32 See Note
1	Sample Nozzle Head Assembly	1	1-42650-02
2	Sample Syringe Fixture Set	1	1-42651-02
3	Pre-Lubed Sample Syringe (500 µL)	1	03A46-32

**Note:**  
Sample Syringe Kit Includes Everything In Reference  
Numbers 1 - 3.

*Figure 7-8. Sampling Kit*

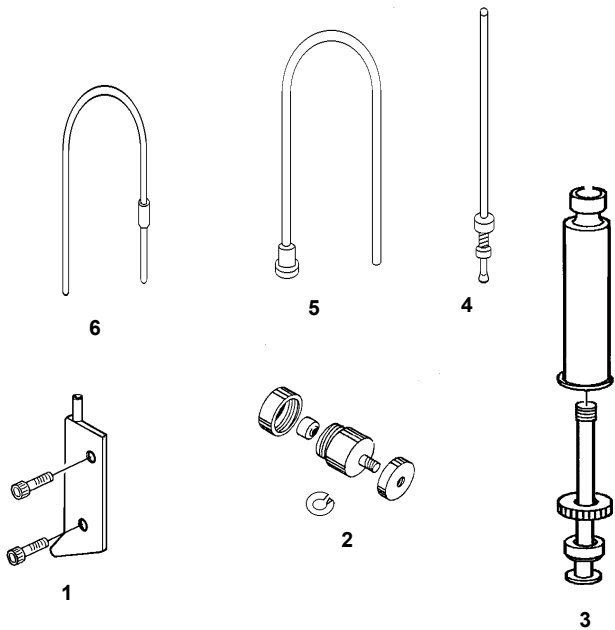


Figure 7-9. Dilution Kit

DILUTION KIT COMPONENTS

Figure 7-9 Ref. No.	Name	Quantity Required	Part Number
1 - 6	Diluent Syringe Kit (2500 µL)	1	3A46-33 See Note
1	Diluent Nozzle Holder	1	1-42654-01
2	Diluent Syringe Fixture Set	1	1-42655-02
3	Diluent Syringe (2500 µL)	1	03A46-33
4	Valve Connection Tubing Assembly	1	1-42657-01
5	Diluent Suction Tubing Assembly	1	1-42658-01
6	Diluent Delivery Tubing Assembly	1	1-42656-01

**Note:**  
Diluent Syringe Kit includes everything shown in Reference  
Numbers 1 - 6.

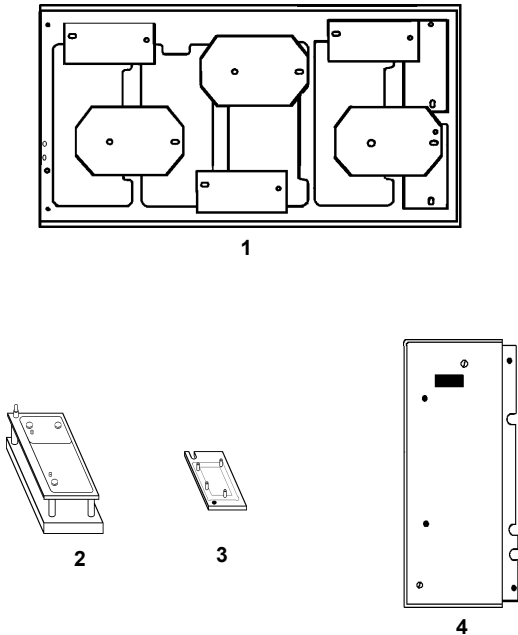


Figure 7-10. Tray Platforms and Adapters

TRAY PLATFORMS AND ADAPTER COMPONENTS

Figure 7-10 Ref. No.	Name	Quantity Required	Part Number
1 - 3*	Accessory Kit (USA Only)	1	03A46-11
1 - 3*	Accessory Kit (International)	1	03A46-10
1	FPC Pipetting Platform	1	03A46-58
2	Abbott Tray Platform	5	03A46-51
3	Microtiter Adapter	1	03A46-50
4	Platen Extension	1	03A46-12

\* not shown

## TIP BIN AND RACKS COMPONENTS

Figure 7-11 Ref. No.	Name	Quantity Required	Part Number
1	Tip Bin (Box and Cover)	1	03A46-31
1A	Tip Bin Box	1	
1B	Tip Bin Cover	1	
2	Diluent Source Single Bottle Rack	1	
3	Diluent Bottle Rack	1	
4	Diluent Bottle Adapter	1	
5	Tip Rack	1	03A46-52
6	Control Bottle Rack	1	03A46-14

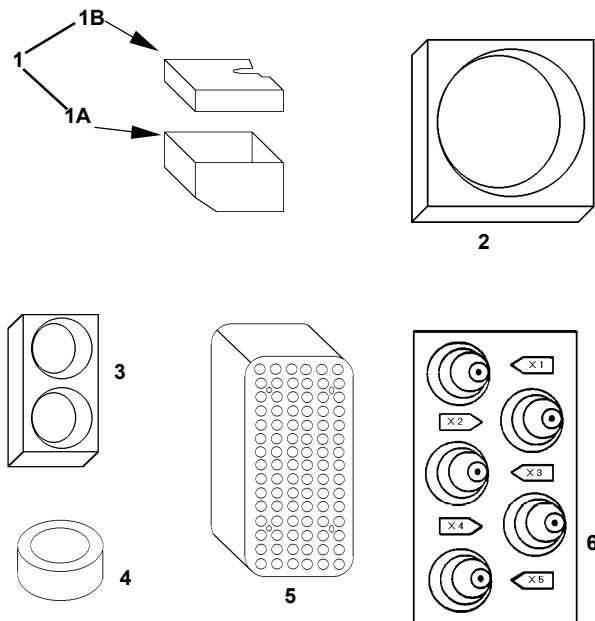


Figure 7-11. Tip Bin and Racks

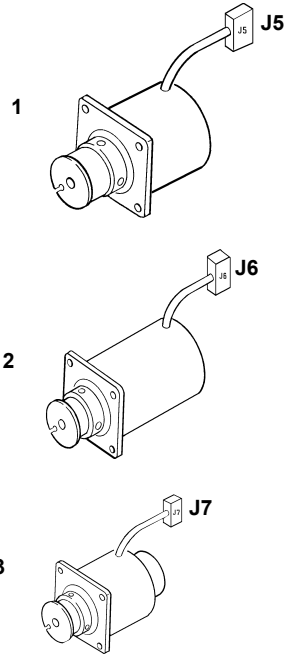


Figure 7-12. X, Y, and Z-Axis Motor Assemblies

X, Y, AND Z-AXIS MOTOR ASSEMBLIES

Figure 7-12 Ref. No.	Name	Quantity Required	Part Number
1	X-Axis Pulse Motor Assembly	1	1-42668-01
2	Y-Axis Pulse Motor Assembly	1	1-42669-01
3	Z-Axis Pulse Motor Assembly	1	1-42670-01

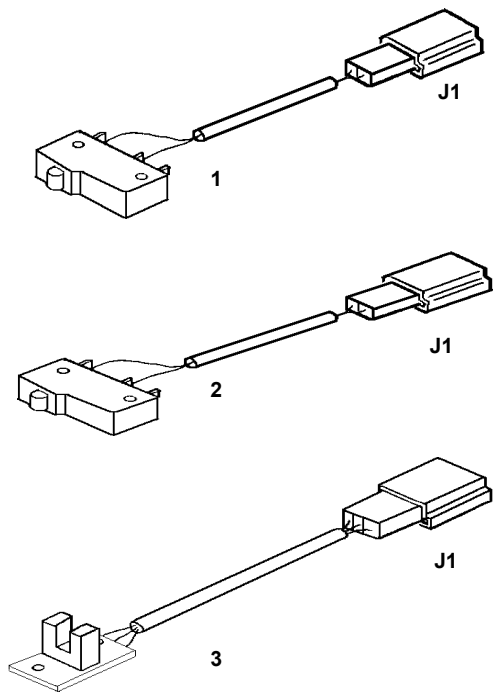
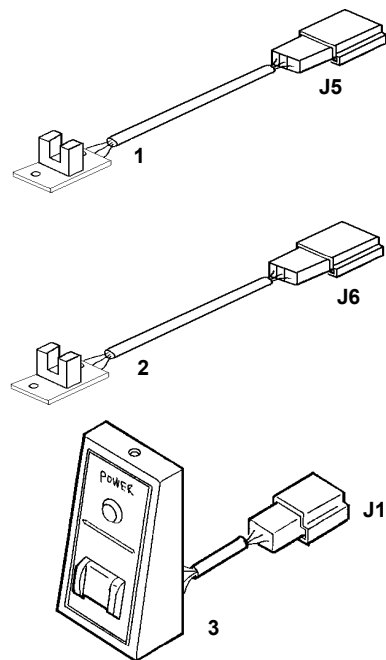


Figure 7-13. X, Y, and Z Origin Sensor and Switch Assemblies

X, Y, AND Z ORIGIN SENSOR AND SWITCH ASSEMBLY COMPONENTS

Figure 7-13 Ref. No.	Name	Quantity Required	Part Number
1	X-Axis Origin Switch Assembly	1	1-42671-01
2	Y-Axis Origin Switch Assembly	1	1-42672-01
3	Z-Axis Origin Switch Assembly	1	1-42673-01





**SAMPLE/DILUENT ORIGIN SENSORS AND PAUSE SWITCH COMPONENTS**

Figure 7-14 Ref. No.	Name	Quantity Required	Part Number
1	Sample Syringe Origin Sensor Assembly	1	1-42674-01
2	Diluent Syringe Origin Sensor Assembly	1	1-42675-01
3	Pause Switch and Power Lamp Assembly	1	1-42676-01

Figure 7-14. Sample/Diluent Origin Sensors and Pause Switch

TUBING HOLDERS/FAN SET COMPONENTS

Figure 7-15 Ref. No.	Name	Quantity Required	Part Number
1	Z-Axis Tubing Holder	1	1-42684-01
2	Middle Upper Section Tubing Holder	1	1-42685-01
3	Convex Base Set	10	1-42686-01
4	Fan Set		1-42625-01

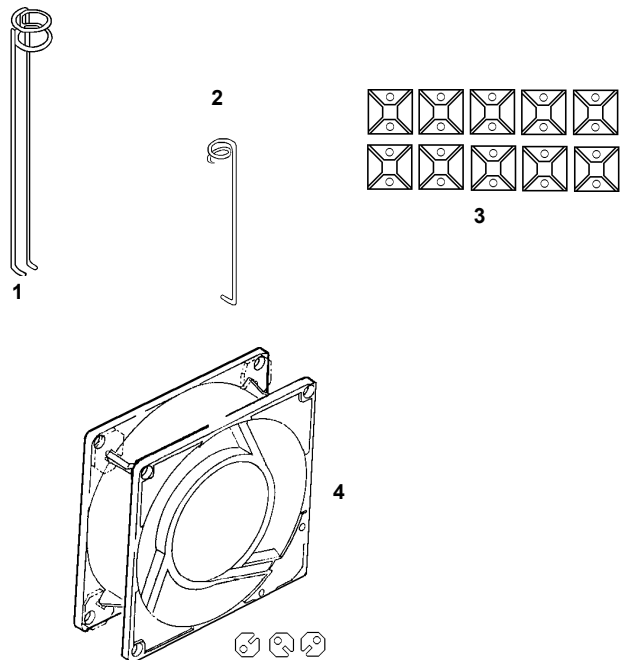


Figure 7-15. Tubing Holders/Fan Set

CONTROL UNIT ASSEMBLY INTERNAL CABLE COMPONENTS

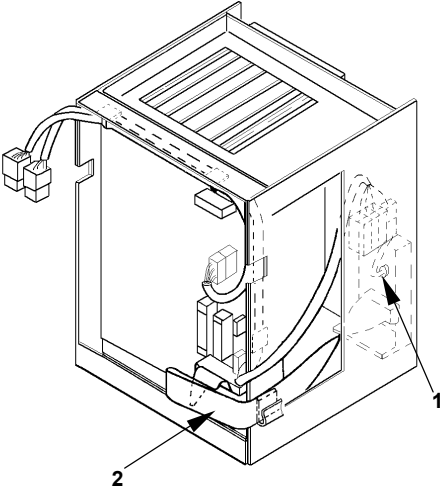


Figure 7-16 Ref. No.	Name	Quantity Required	Part Number
1	F-Link Power Connecting Cable # 2 (From Main Control Assembly Fuse Block To Pipettor F-Link Power Port)	1	1-42641-01
2	Internal RS-232 Connecting Cable (From Main Control Assembly J6 To Pipettor RS-232 Port)	1	1-42642-01

Figure 7-16. Control Unit Assembly Internal Cables

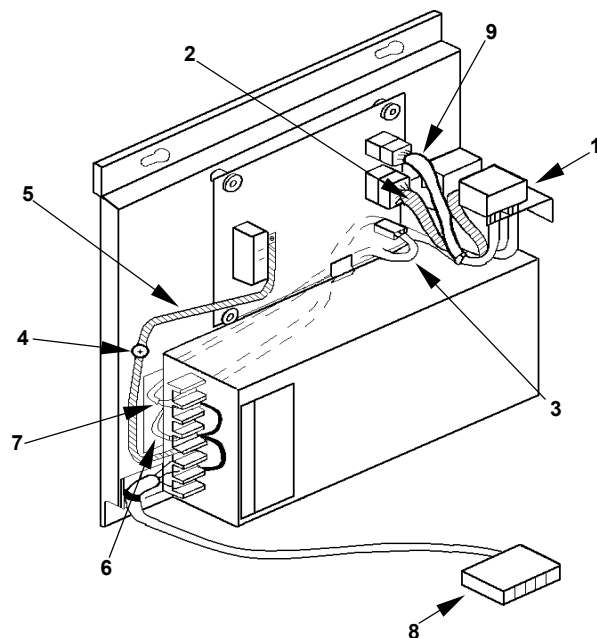


Figure 7-17. DC Power Supply Internal Cables

### DC POWER SUPPLY ASSEMBLY INTERNAL CABLES

Figure 7-17 Ref. No.	Name	Quantity Required	Part Number
1	Switching Power Supply Cable	1	1-42646-01
2	Power Failure Detection Board Cable	1	1-42647-01
3	Internal Low Voltage Supply Cable	1	1-42698-01
4	Internal F-Link Power Connecting Cable	1	1-42710-01
5	Internal +5VDC Supply Cable	1	1-42711-01
6	Internal Frame Ground Wire	1	1-42712-01
7	Internal Frame Ground Wire	1	1-42713-01
8	Internal Frame Ground Wire	2	1-42714-01
9	14V Power Supply Cable	1	1-42699-01

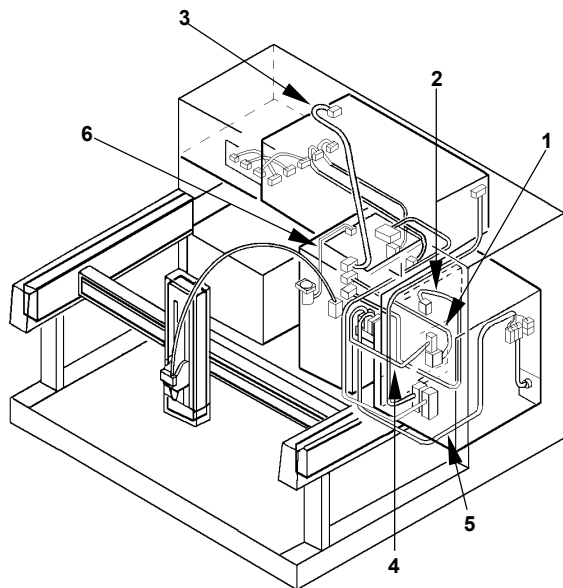


Figure 7-19. Power Supply And Valve Drive Cables

## POWER SUPPLY AND VALVE DRIVE CABLES

Fig. 7-19 Ref. No.	Name	Quantity Required	Part Number
1	100VAC Supply Cable # 1 (From AC Power Supply Assembly J2 To DC Power Supply Assembly Switching Power Supply)	1	1-42698-01
2	14VAC Supply Cable (From AC Power Supply Assembly J3 To DC Power Supply Assembly Power Fail Board J4)	1	1-42699-01
3	100VAC Supply Cable # 2 (From AC Power Supply Assembly J4 To Pulse Motor Driver Assembly J1)	1	1-42700-01
4	DC Power Supply Cable (From DC Power Supply Assembly J5 To Main Control Assembly Motherboard J1)	1	1-42701-01
5	F-Link Power Connecting Cable # 1 (From DC Power Supply Assembly J6 To Main Control Assembly Fuse Block)	1	1-42640-01
6	Valve Drive Cable (From Pressure Sensor Board J1 To Valve Assembly J8)	1	1-42628-01

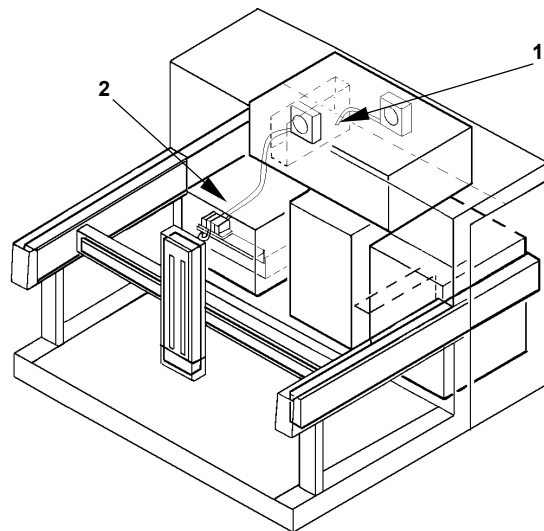


Figure 7-20. Fan Cables

## FAN CABLES

Figure 7-20 Ref. No.	Name	Quantity Required	Part Number
1	Pulse Motor Driver Fan Cable (from Pulse Motor Driver Assembly to Pulse Motor Driver Assembly Fan)	1	1-42692-01
2	Internal Main Frame Fan Cable (from AC Power Supply to Main Frame Fan)	1	1-42708-01

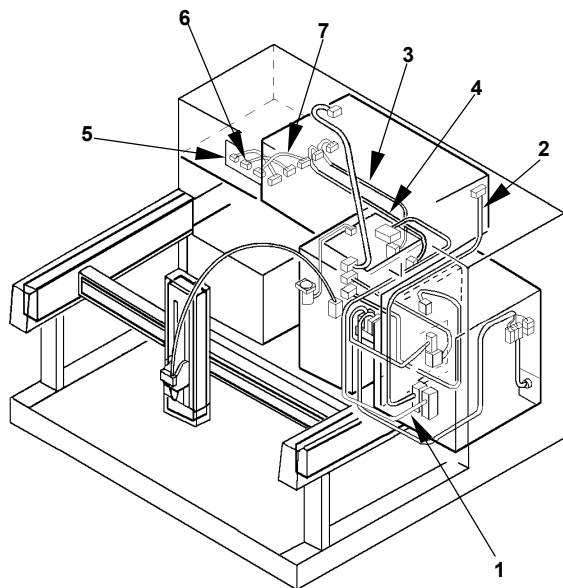


Figure 7-21. Signal Cables

## SIGNAL CABLES

Figure 7-21 Ref. No.	Name	Quantity Required	Part Number
1	Pump Assembly Cable (From Main Control Assembly Motherboard J2 To Pressure Sensor Board J3)	1	1-42702-01
2	Pulse Motor Driver Assembly Control Cable (From Main Control Assembly Motherboard J3 To Pulse Motor Driver Assembly J7)	1	1-42703-01
3	Diluent Syringe Drive Cable (From Pulse Motor Driver Assembly J6 To Pump Assembly Diluent Pump Drive Motor J10)	1	1-42691-01
4	Sample Syringe Drive Cable (From Pulse Motor Driver Assembly J2 To X-Axis Drive Motor)	1	1-42690-01
5	X-Axis Drive Cable (From Pulse Motor Driver Assembly J2 To X-Axis Drive Motor)	1	1-42687-01
6	Y-Axis Drive Cable (From Pulse Motor Driver Assembly J3 To Y-Axis Drive Motor)	1	1-42688-01
7	Z-Axis Drive Cable (From Pulse Motor Driver Assembly J4 To Z-Axis Drive Motor)	1	1-42689-01

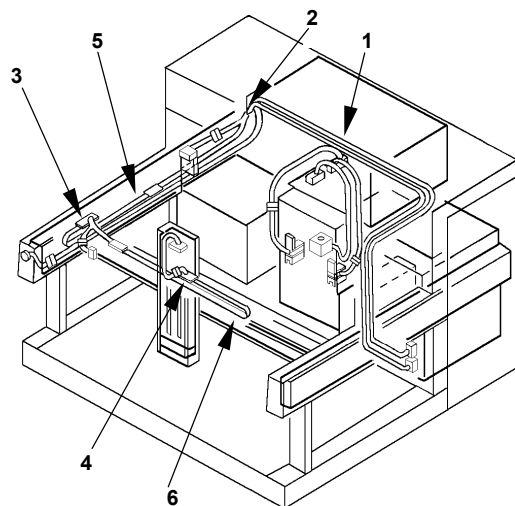


Figure 7-22. Signal Cables

## SIGNAL CABLES

Figure 7-22 Ref. No.	Name	Quantity Required	Part Number
1	Pause Switch And Power Lamp Cable (From Pause Switch And Power Lamp Assembly J1 To Main Control Assembly Motherboard J4)	1	1-42704-01
2	XoYoZo Sensing Signal Cable (From Y-Axis Origin Switch Assembly And Y-Axis Film Cable To Main Control Assembly Motherboard J5)	1	1-42695-01
3	XoZo Sensing Signal Cable (From X-Axis Origin Switch Assembly And X-Axis Film Cable To X-Axis Film Cable)	1	1-42693-01
4	Zo Sensing Signal Cable (From Z-Axis Origin Switch Assembly To XoZo Sensing Signal Cable UN2)	1	1-42697-01
5	Y-Axis Film Cable (From XoYoZo Sensing Signal Cable UN3 To XoZo Sensing Signal Cable UN2)	1	1-42696-01
6	X-Axis Film Cable (From XoZo Sensing Signal Cable UN1 To Zo Sensing Signal Cable UN4)	1	1-42694-01



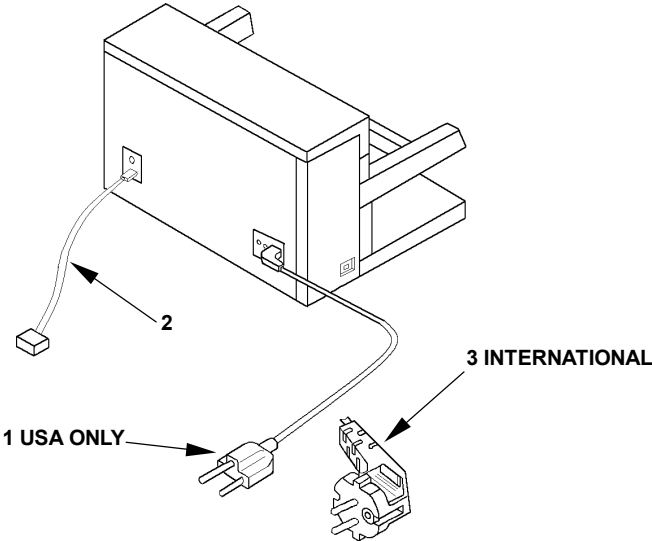


Figure 7-23. Power Cords and RS-232 Cable

POWER CORDS AND RS-232 CABLE

Figure 7-23 Ref. No.	Name	Quantity Required	Part Number
1	Power Cord For 100/120VAC (From Power Connector To AC Receptacle)	1	1-42716-01 <b>USA ONLY</b>
2	RS-232 Conversion Cable (From Pipettor RS-232 Connector To Digiboard™ Cable)	1	1-42715-01
3	Power Cord For 220/240VAC (From Power Connector To AC Receptacle)	1	1-42717-01 <b>INTER- NATIONAL</b>

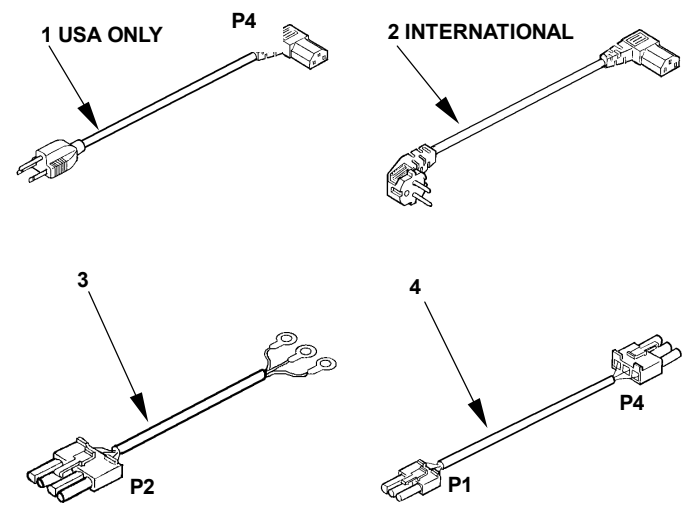


Figure 7-24. Power Cords

POWER CORDS

Figure 7-24 Ref. No.	Name	Quantity Require	Part Number
1	Power Cord For 100/120VAC	1	1-42716-01 <b>USA ONLY</b>
2	Power Cord For 220/240VAC	1	1-42717-01 <b>INTER- NATIONAL</b>
3	100VAC Supply Cable #1	1	1-42698-01
4	100VAC Supply Cable #2	1	1-42700-01

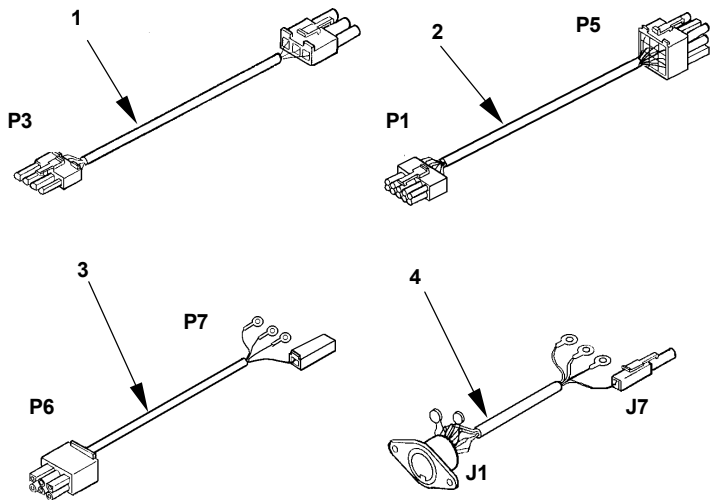
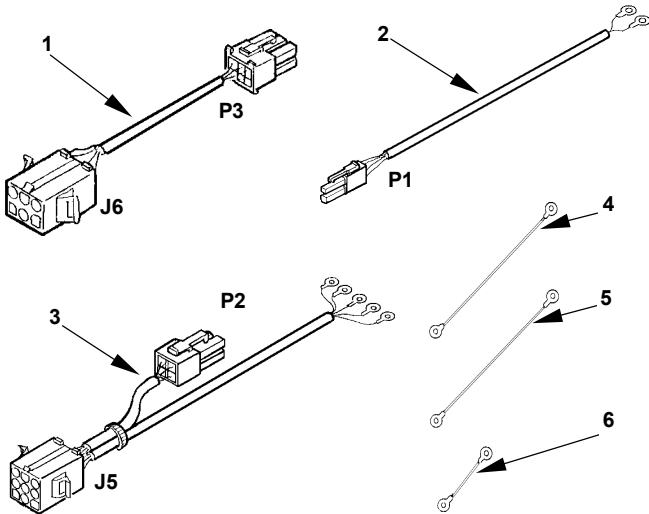


Figure 7-25. Low Voltage Power Cables

LOW VOLTAGE POWER CABLES

Figure 7-25 Ref. No.	Name	Quantity Required	Part Number
1	14VAC Supply Cable	1	1-42699-01
2	DC Power Supply Cable	1	1-42701-01
3	F-Link Power Connecting Cable #1	1	1-42640-01
4	F-Link Power Connecting Cable #2	1	1-42641-01



**LOW VOLTAGE POWER CABLES AND AC SELECT WIRES**

Figure 7-26 Ref. No.	Name	Quantity Required	Part Number
1	Internal F-Link Power Connecting Cable	2	1-42710-01
2	Internal +5VDC Supply Cable	1	1-42710-01
3	Internal DC Power Supply Cable	1	1-42701-01
4	AC Voltage Select Wire #1 (Blue)	1	1-42705-01
5	AC Voltage Select Wire #2 (Brown - Long)	1	1-42706-01
6	AC Voltage Select Wire #3 (Brown - Short)	1	1-42707-01

Figure 7-26. Low Voltage Power Cables and AC Select Wires

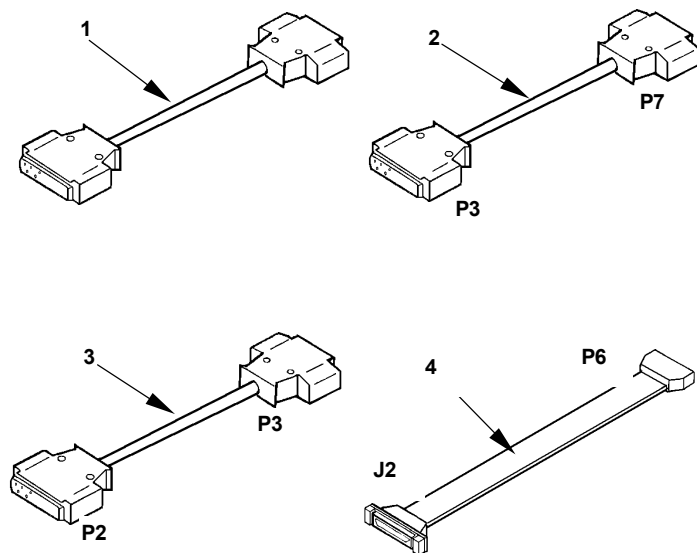


Figure 7-27. Communication Signal Cables

## COMMUNICATION SIGNAL CABLES

Figure 7-27 Ref. No.	Name	Quantity Required	Part Number
1	RS-232 Conversion Cable	1	1-42715-01
2	Pulse Motor Driver Assembly Control Cable	1	1-42703-01
3	Pump Assembly Cable	1	1-42702-01
4	Internal RS-232 Connecting Cable	1	1-42642-01

X, Y, Z-AXIS, AND VALVE DRIVE CABLES

Figure 7-28 Ref. No.	Name	Quantity Required	Part Number
1	X-Axis Drive Cable	1	1-42687-01
2	Y-Axis Drive Cable	1	1-42688-01
3	Z-Axis Drive Cable	1	1-42689-01
4	Valve Drive Cable	1	1-42628-01

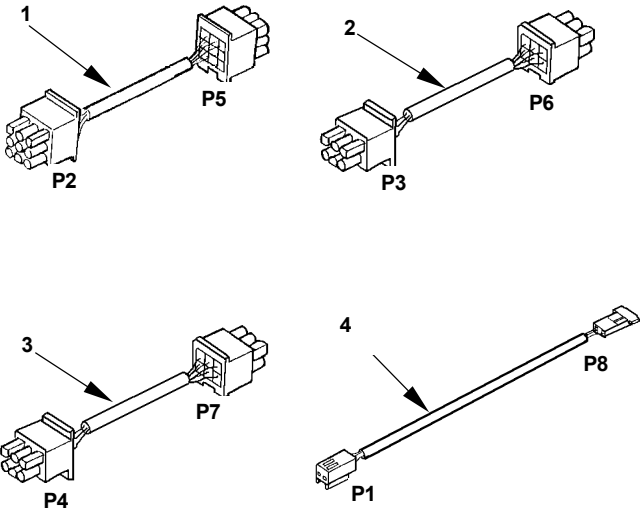


Figure 7-28. X, Y, Z-Axis, and Valve Drive Cables

SYRINGE AND FAN CABLES

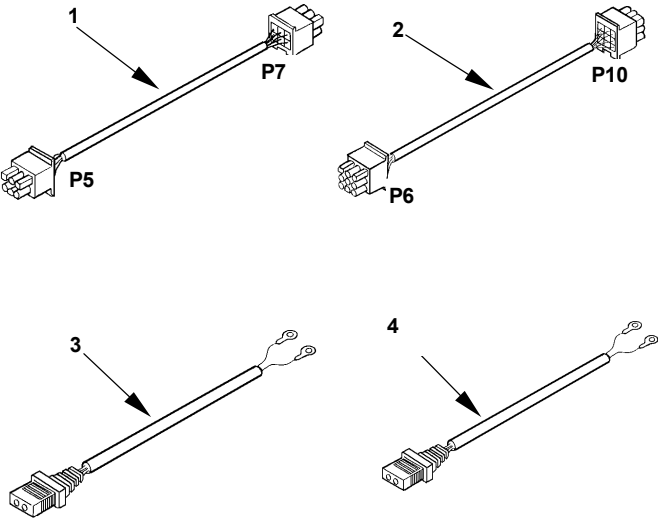


Figure 7-29. Syringe and Fan Cables

Figure 7-29 Ref. No.	Name	Quantity Required	Part Number
1	Sample Syringe Drive Cable	1	1-42690-01
2	Diluent Syringe Drive Cable	1	1-42691-01
3	Pulse Motor Driver Fan Cable	1	1-42692-01
4	Internal Main Frame Fan Cable	1	1-42708-01

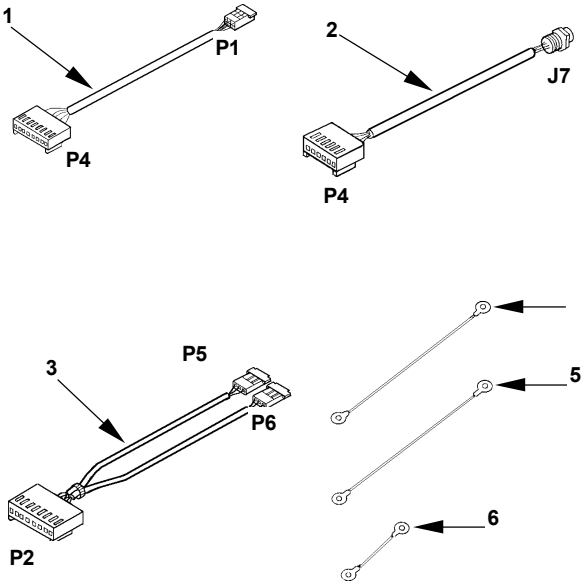


Figure 7-30. Internal Signal Cables and Frame Ground Wires

INTERNAL SIGNAL CABLES AND FRAME GROUND WIRES

Figure 7-30 Ref. No.	Name	Quantity Required	Part Number
1	Pause Switch And Power Lamp Cable	1	1-42704-01
2	Internal Tip Jamming Signal Cable	1	1-42627-01
3	Internal Pump Origin Position Signal Cable	1	1-42702-01
4	Internal Frame Ground Wire #1 (Green/Yellow)	1	1-42712-01
5	Internal Frame Ground Wire #2 (Green/Yellow)	1	1-42713-01
6	Internal Frame Ground Wire #3 (Black)	1	1-42714-01



FILM AND SENSOR CABLES

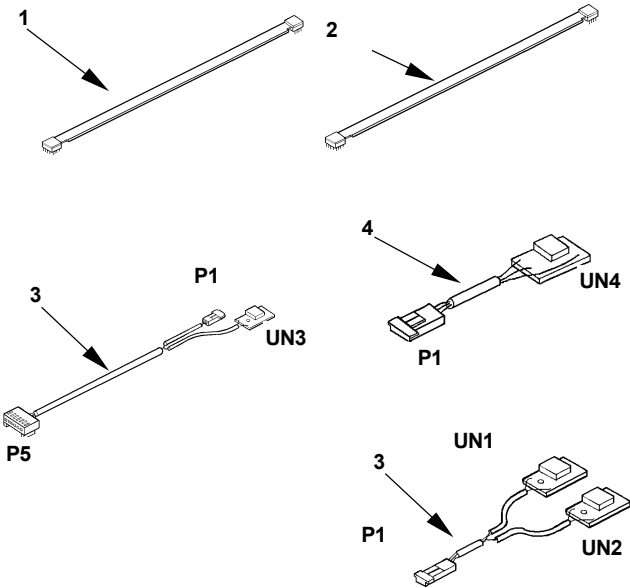


Figure 7-31. Film and Sensor Cables

Figure 7-31 Ref. No.	Name	Quantity Required	Part Number
1	X-Axis Film Cable	1	1-42694-01
2	Y-Axis Film Cable	1	1-42696-01
3	XoYoZo-Sensing Signal Cable	1	1-42695-01
4	Zo Sensing Signal Cable	1	1-42697-01
5	XoZo Sensing Signal Cable	1	1-42693-01

### Notes