

Altivar[®] 61/71 Spare Parts Kits Required Documentation For Use with CD-ROM 8800EP0801 V3.0

Retain for future use.

Introduction

This bulletin provides basic safety precautions and lists the documentation required for installing Altivar[®] 61 (ATV61) and Altivar[®] 71 (ATV71) spare parts kits. Read and understand all of the instructions in this bulletin and in the other referenced documents before installing the kits. Read "Before You Begin" on page 3 before performing any procedure with the drive.

Required Documentation

To find the documentation required for installing your spare parts kit:

1. Locate the catalog number of your kit in column 1 of Table 1 beginning on page 7.
2. Locate the catalog number of your drive in column 2 of Table 1.
3. Read across to column 3 for the number of the document required for installing the kit in your drive. Locate the document on CD-ROM 8800EP0801 and read it before attempting to install the kit.

The documentation listed in Table 1 is provided on the accompanying CD-ROM. Compare the version number of the CD-ROM to the version number in the title of this bulletin to ensure that they match. If the version numbers do not match, you may not have the correct documentation to install the spare parts kit. Contact your Schneider Electric representative for a replacement CD.

Related Documentation

NOTE: All documentation referenced in this bulletin is provided with the drive or on the CD-ROM included with the spare parts kits. You can also download the documentation from the Technical Library at www.schneider-electric.us.

For complete drive installation instructions, refer to the following documents:

- *Altivar[®] 61 Installation Manual 0.5 to 100 HP*, module no. 1760643.
- *Supplementary Instructions to ATV61 Variable Speed Drives Installation Manual—Low Horsepower*, document no. 30072-452-63.
- *Altivar[®] 61 Installation Manual 75 to 900 HP*, module no. 1760655.
- *Supplementary Instructions to ATV61 Variable Speed Drives Installation Manual—High Horsepower and ATV61 Programming Manual*, document no. 30072-452-49.
- *Altivar[®] 71 Installation Manual 0.5 to 100 HP*, module no. 1755843.
- *Altivar[®] 71 Installation Manual 75 to 700 HP*, module no. 1755849.
- *Altivar[®] 71 Drive Controllers Errata to Bulletin atv71e_installation_manual_en_v3*, document no. 30072-452-25.

Qualified Personnel

For the protection of personnel and equipment, a qualified person must perform the procedures detailed in this instruction bulletin. A qualified person is one who has skills and knowledge related to the construction and operation of this electrical equipment and the installation, and has received safety training to recognize and avoid the hazards involved. Refer to the most current release of NFPA 70E[®], "Standard for Electrical Safety in the Workplace," for safety training requirements.

In addition, the person must be:




- Able to read, interpret, and follow the instructions and precautions in this instruction bulletin and the other documentation referenced.
- Able to use the required tools listed in this instruction bulletin in a safe and correct manner.

Hazard Categories and Special Symbols

The following symbols and special messages may appear in this document or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

A lightning bolt or ANSI man symbol in a “Danger” or “Warning” safety label on the equipment indicates an electrical hazard which, as indicated below, can or will result in personal injury if the instructions are not followed.

The exclamation point symbol in a safety message in a manual indicates potential personal injury hazards. Obey all safety messages introduced by this symbol to avoid possible injury or death.

Symbol	Name
	Lightning Bolt
	ANSI Man
	Exclamation Point

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **will result in** death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

CAUTION

CAUTION, used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, **can result in** property damage.

Product Support

For support and assistance, contact the Product Support Group. The Product Support Group is staffed Monday through Friday from 8:00 am until 6:00 pm Eastern time to assist with product selection, start-up, and diagnosis of product or application problems. Emergency phone support is available 24 hours a day, 365 days a year.

Toll free: 888-SquareD (888-778-2733)
E-Mail: drive.products
Fax: 919-217-6508

Before You Begin

Read and follow these precautions before performing any procedure with this drive.

The word “drive” as used in this bulletin refers to the controller portion of the adjustable speed drive as defined in the National Electrical Code (NEC).

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Read and understand this manual before installing or operating the Altivar 61 or 71 drive. Installation, adjustment, repair, and maintenance must be performed by qualified personnel.
- The user is responsible for compliance with all international and national electrical code requirements with respect to grounding of all equipment.
- Many parts of this drive, including the printed circuit boards, operate at the line voltage. **DO NOT TOUCH.** Use only electrically insulated tools.
- **DO NOT** touch unshielded components or terminal strip screw connections with voltage present.
- **DO NOT** short across terminals PA/+ and PC/- or across the DC bus capacitors.
- Before servicing the drive:
 - Disconnect all power, including external control power that may be present.
 - Place a “DO NOT TURN ON” label on all power disconnects.
 - Lock all power disconnects in the open position.
 - **WAIT 15 MINUTES** to allow the DC bus capacitors to discharge. Then follow the “Bus Voltage Measurement Procedure” on page 5 to verify that the DC voltage is less than 42 V. The drive LED is not an indicator of the absence of DC bus voltage.
- Install and close all covers before applying power or starting and stopping the drive.

Failure to follow these instructions will result in death or serious injury.

Receiving, Handling, and Storage

Electrostatic Precautions

⚠ CAUTION

STATIC SENSITIVE COMPONENTS

Circuit boards and option cards can be damaged by static electricity. Observe the electrostatic precautions below when handling controller circuit boards or testing components.

Failure to follow these instructions can result in injury or equipment damage.

Observe the following precautions for handling static-sensitive components:

- Keep static-producing material such as plastic, upholstery, and carpeting out of the immediate work area.
- Store static-sensitive components in protective packaging when it is not installed in the drive.
- When handling static-sensitive components, wear a conductive wrist strap connected to the card through a minimum of 1 megohm resistance.
- Avoid touching exposed conductors and component leads with skin or clothing.

Inspecting the Spare Part Kits

After receiving the ATV61/ATV71 spare part kits:

- Ensure that the catalog number printed on the kit label is the same as that on the packing slip and corresponding purchase order. Contact your Schneider Electric representative if there are any errors.
- Remove the kit from its packaging and inspect it for damage. If any damage is found, notify the carrier and your Schneider Electric representative.
- To store the kit, replace any static-sensitive parts in their protective packaging and store them at -25 to +70 °C (-13 to +158 °F).

⚠ WARNING

DAMAGED PACKAGING

If the drive packaging appears damaged, it can be dangerous to open or handle it.

Failure to follow these instruction can result in death, serious injury, or equipment damage.

⚠ WARNING

DAMAGED EQUIPMENT

Do not install or operate any equipment that appears damaged.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Power Removal and Bus Voltage Measurement

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Read and understand the precautions in "Before You Begin" starting on page 3 before performing this procedure.

Failure to follow this instruction will result in death or serious injury.

The DC bus voltage can exceed 1,000 Vdc. Use a properly rated voltage-sensing device when performing this procedure. To measure the DC bus voltage:

1. Disconnect all power.
2. Wait 15 minutes to allow the DC bus to discharge.
3. Measure the voltage of the DC bus between the PA/+ and PC/- terminals to ensure that the voltage is less than 42 Vdc. These terminals are clearly labeled on each drive.
4. If the DC bus capacitors do not discharge completely, contact your local Schneider Electric representative. Do not repair or operate the drive.

⚠ CAUTION

IMPROPER DRIVE OPERATION

- If no power is applied to the drive for a long period, the performance of its electrolytic capacitors will be reduced.
- If the drive is not in active service, apply power to the drive every two years using the following procedure. Do not initially connect the drive directly to full line voltage. Without a motor connected to the drive, gradually increase the voltage using an adjustable AC source connected between drive terminals L1 and L2:
 - 25% of rated voltage for 30 minutes
 - 50% of rated voltage for 30 minutes
 - 75% of rated voltage for 30 minutes
 - 100% of rated voltage for at least 5 hours
- Check drive operation before placing the drive into service.

Failure to follow these instructions can result in injury or equipment damage.

Discharging Stored Energy in Capacitors

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- When the controller is damaged, voltage may remain on certain energy storage capacitors after de-energization of the controller and discharge of the main capacitor bank.
- Before working on or near assemblies containing energy storage capacitors, verify that the capacitor voltages are less than 42 Vdc.
- The following assemblies have energy-storing capacitors:
 - Filter board
 - Rectifier snubber board
 - Snubber capacitors
- Always check for the presence of voltage using a voltmeter set to the 1000 Vdc scale. When voltage is present, allow the voltmeter to discharge the capacitor's stored charge.

Failure to follow these instructions will result in death or serious injury.

Capacitors are used throughout the drives as energy storage devices. Some of the capacitors can store potentially lethal amounts of energy during normal controller operation.

When power is removed from an undamaged controller, the stored energy in these capacitors is automatically discharged to nonhazardous levels. However, the discharge mechanisms in a damaged controller may not be operating properly, and stored energy may be present on printed circuit boards.

Do not touch traces on printed circuit boards, such as the filter board and rectifier snubber board, unless you have first checked for voltage with a voltmeter!

To discharge capacitors on assemblies, use a voltmeter set to the 1000 Vdc scale. It will take approximately 6.6 minutes for a 10 megohm input impedance voltmeter to discharge a 10 microfarad capacitor from 700 V to less than 42 V. It will take approximately 40 seconds for a 1 megohm input impedance voltmeter to discharge a 10 microfarad capacitor from 700 V to less than 50 V.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Do not use a voltmeter to discharge stored energy on the DC bus capacitors.
- If the energy on the DC bus capacitors remains greater than 42 Vdc after 15 minutes, contact Product Support.

Failure to follow these instructions will result in death or serious injury.

Reference Table

See page 31 for footnotes to Table 1.

Table 1: Kit Contents and Required Documentation

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX4A1103	Control front cover with 4x7 Segments	1	Front cover assembly	All ATV61/ATV71	All ATV61/ATV71	30072-453-01
VX4A1104	Control terminal board kit	1 2 1 1	Terminal PCBA Insulated jumpers Terminal PCBA lower cap Terminal PCBA upper cap	All ATV61/ATV71	All ATV61/ATV71	30072-452-06
VX4A1106	Filter board	1	Filter board	6	ATV61HD18M3X ATV61HD22M3X ATV71HD18M3X ATV71HD22M3X	30072-452-72
VX4A1107	Filter board	1	Filter board	6	ATV61HD22N4 ATV71HD22N4	30072-452-72
VX4A1108	Filter board	1	Filter board	7A	ATV61HD30N4 ATV61HD37N4 ATV71HD30N4 ATV71HD37N4	30072-452-73
VX4A1109	Filter board	1	Filter board	7B	ATV61HD30M3X ATV61HD37M3X ATV61HD45M3X ATV71HD30M3X ATV71HD37M3X ATV71HD45M3X	30072-452-74
VX4A1110	Filter board	1	Filter board	8	ATV61HD45N4 ATV61HD55N4 ATV61HD75N4 ATV71HD45N4 ATV71HD55N4 ATV71HD75N4	30072-452-74
VX4A1113	Filter board	1	Filter board	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VX4A1114	Filter board	1	Filter board	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VX4A1115	Filter board	1	Filter board	13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
VX4A1116	Filter board	1	Filter board	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
		1	Filter board	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VX4A1117	Filter board	1	Filter board	14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX4A1118	Filter board	1	Filter board	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
VX4A1200	SCR ¹ Snubber Board	1	SCR snubber board	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
				VX4A61100Y	ATV61 Control board kit, <90 kW	1

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX4A61101Y	ATV61 Control board kit, ≥ 90 kW	1	Spring, 5 mm x 14 mm	9, 10, 11, 12, 13, 14, 15	ATV61HD75M3X HD90N4, HD55M3X HC11N4, HC13N4 HD90M3X HC16N4 HC22N4, HC25N4 HC31N4, HC40N4 HC50N4, HC63N4 HC11Y, HC13Y HC16Y, HC20Y HC25Y, HC31Y HC40Y, HC50Y HC63Y HC80Y	30072-451-86
		9	Screws, M3 x 8, thread forming			
		1	Motor control PCBA			
		1	Interface PCBA			
		1	Application/interface PCBA cable			
		1	Application PCBA insulate sheet			
		1	Flat washer, M4			
		1	Screw, captive washer, M4 x 20			
		1	Control ground bar			
		1	Terminal PCBA lower cap			
		1	Control support			
		1	Display support			
		1	Control trap			
		1	Terminal PCBA upper cap			
		1	Keyboard			
		1	Application PCBA			
		1	Display PCBA			
		1	Terminal PCBA			
		1	Application PCBA / motor control			
		1	Spacing assembly			
		1	Control trap label kit			
		1	Option LED label			
		1	Brand marking label			
		1	Relay label			
		1	AI label			
		1	LI label			
		1	Control switch label			
		1	Modbus label			

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number
VX4A71100Y	ATV71 control board kit, <90 kW	1	Screw, captive washer, M4 x 8	2, 3, 4, 5A, 5B, 6, 7A, 7B, 8	ATV71H037M3, H075M3, H075N4 HU15M3, HU15N4 HU22N4, HU22M3 HU30M3, HU30N4 HU40M3, HU40N4 HU55M3, HU55N4 HU75N4, HD11N4 HU75M3, HD11M3X HD15M3X HD15N4 HD18N4, HD18M3X HD22M3X, HD22N4 HU22Y, HU30Y HU40Y, HU55Y HU75Y, HD11Y HD15Y, HD18Y HD22Y, HD30Y HD30N4, HD37N4 HD30M3X HD37M3X HD45M3X HD45N4 HD55N4, HD75N4 HD37Y, HD45Y HD55Y, HD75Y HD90Y
		1	Screw, captive washer, M4 x 10		
		4	Screws with washers, M3 x 8		
		1	Spring, 5 mm x 14 mm		
		9	Screws, M3 x 8, thread forming		
		1	Application PCBA insulate sheet		
		1	Flat washer, M4		
		1	Screw, M4 x 20		
		1	Control ground bar		
		1	Terminal PCBA lower cap		
		1	Control support		
		1	Display support		
		1	Terminal PCBA upper cap		
		1	Keyboard		
		1	Application PCBA		
		1	Motor control PCBA		
		1	Display PCBA		
		1	Terminal PCBA		
		1	Application PCBA / motor control		
		1	Option LED label		
		1	Brand marking label		
		1	Relay label		
		1	AI label		
		1	LI label		
		1	Control switch label		
		1	Modbus label		
		1	Motor control insulate sheet		

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number
VX4A71101Y	ATV71 control board kit, >=90 kW	1	Spring, 5 mm x 14 mm	9, 10, 11, 12, 13, 14, 15	ATV71HC11N4, HD75M3X, HD55M3X, HD90N4 HC13N4, HC16N4 HC11Y, HC13Y HC16Y, HC20Y HC20N4, HC28N4 HC25N4, HC25Y HC31Y, HC40Y HC50N4, HC31N4 HC40N4, HC50Y HC63Y
		9	Screws, M3 x 8, thread forming		
		1	Motor control PCBA		
		1	Interface PCBA		
		1	Application/interface PCBA cable		
		1	Application PCBA insulate sheet		
		1	Flat washer, M4		
		1	Screw, captive washer, M4 x 20		
		1	Control ground bar		
		1	Terminal PCBA lower cap		
		1	Control support		
		1	Display support		
		1	Control trap		
		1	Terminal PCBA upper cap		
		1	Keyboard		
		1	Application PCBA		
		1	Display PCBA		
		1	Terminal PCBA		
		1	Application PCBA / motor control		
		1	Spacing assembly		
		1	Control trap label kit		
		1	Option LED label		
		1	Brand marking label		
1	Relay Label				
1	AI label				
1	LI label				
1	Control switch label				
1	Modbus label				
VX5A1200	Gate driver board	1 6	Gate driver PCBA Plastic supports	11	ATV61HC16N4 ATV71HC13N4 30072-452-78
VX5A1201	Gate driver board	1 2	Gate driver PCBA Cable clamps	12	ATV71HC16N4 ATV61HC22N4 30072-452-79
		1 2	Gate driver PCBA Cable clamps	13	ATV61HC25N4 ATV71HC20N4 30072-452-80
VX5A1202	Gate driver board	1 2	Gate driver PCBA Cable clamps	13	ATV61HC31N4 ATV71HC25N4 ATV71HC28N4 30072-452-80
VX5A1203	Gate driver board	1 7	Gate driver PCBA Cable clamps	14A	ATV61HC40N4 ATV71HC31N4 30072-452-81
		1 7	Gate driver PCBA Cable clamps	14B	ATV61HC50N4 ATV71HC40N4 30072-452-98
VX5A1204	Gate driver board	1 8	Gate driver PCBA Cable clamps	15	ATV61HC63N4 ATV71HC50N4 30072-452-82

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX5A1300	Soft charge board	1 4 4 4	Soft charge board Mounting standoffs, 8/18/BM4/SNAP4 Mounting standoffs, 8/22.2/BM4/SNAP4 Mounting standoffs	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
				10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
				11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VX5A1400	Fan control board	1	Fan control board	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
				11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VX5A1HC1113	Power board	1	Power board	10	ATV61HC13N4 ATV71HC11N4	30072-452-77
VX5A1HC1316	Power board	1 5 4	Power board PCBA mounting standoffs Cable clamps	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VX5A1HC1622	Power board	1 5 4	Power board PCBA mounting standoffs Cable clamps	12	ATV71HC16N4 ATV61HC22N4	30072-452-79

Table 1: Kit Contents and Required Documentation *(continued)*

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:	
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX5A1HC2025	Power board	1 5 5	Power board PCBA mounting standoffs Cable clamps	13	ATV61HC25N4 ATV71HC20N4	30072-452-80
VX5A1HC2531	Power board	1 5 5	Power board PCBA mounting standoffs Cable clamps	13	ATV71HC25N4 ATV61HC31N4	
VX5A1HC3140	Power board	1 7 1	Power board PCBA mounting standoffs Cable clamp	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
VX5A1HC4050	Power board	1 8 1	Power board PCBA mounting standoffs Cable clamp	14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
VX5A1HC5063	Power board	1 8 1	Power board PCBA mounting standoffs Cable clamp	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VX5A1HD18M3X	Power board	5 4 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power supply cable	6	ATV61HD18M3X ATV71HD18M3X	30072-452-72
VX5A1HD22M3X	Power board	5 4 1 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power supply cable Power insulate sheet	6	ATV61HD22M3X ATV71HD22M3X	30072-452-72
VX5A1HD22N4	Power board	5 4 1 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power supply cable Power insulate sheet	6	ATV61HD22N4 ATV71HD22N4	30072-452-72
VX5A1HD30M3X	Power board	6 3 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power insulate sheet	7B	ATV61HD30M3X ATV71HD30M3X	30072-452-74
VX5A1HD37M3X	Power board	6 3 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power insulate sheet	7B	ATV61HD37M3X ATV71HD37M3X	30072-452-74
VX5A1HD37N4	Power board	6 3 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power insulate sheet	7A	ATV61HD37N4 ATV71HD37N4	30072-452-73
VX5A1HD45M3X	Power board	6 3 1 1 1	Lock spacers Screws, M4 x 10 Power board Fan control cable Power insulate sheet	7B	ATV61HD45M3X ATV71HD45M3X	30072-452-74
VX5A1HD5575	Power board	1	Power board	9	ATV61HD55M3X ATV71HD55M3X	30072-452-75

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VX5A1HD7590	Power board	1	Power board	9	ATV61HD75M3X	30072-452-75
				10	ATV61HD90M3X ATV71HD75M3X	30072-452-77
VX5A1HD9011	Power board	1	Power board	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-75
VX5A71HC13N4	Measuring board	1 5 7	Measuring board PCBA mounting standoffs Cable clamps	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VX5A71HC28N4	Power board	1 5 5	Power board PCBA mounting standoffs Cable clamps	13	ATV71HC28N4	30072-452-80
VX5IM2145M1271	Power board and power IGBT ² modules	3 1 1	IGBT 1200 V, 220 A modules Power board 30 kW, 480 V Thermal compound	7A	ATV61HD30N4 ATV71HD30N4	30072-452-73
VX5IM2200M1271	Power board and power IGBT modules	3 1 1	IGBT 1200 V, 300 A modules Power board 45 kW, 480 V Thermal compound	8	ATV61HD45N4 ATV71HD45N4	30072-452-74
VX5IM2300M1271	Power board and power IGBT modules	3 1 1	IGBT 1200 V, 300 A modules Power board Thermal compound	8	ATV61HD55N4 ATV71HD55N4	30072-452-74
VX5IM2400M1271	Power board and power IGBT modules	3 1 1	IGBT 1200 V, 400 A modules Power board 75 kW, 480 V Thermal compound	8	ATV61HD75N4 ATV71HD75N4	30072-452-74
VY1A1105	Current sensor	3	Motor current sensors, 314 A	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
				10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VY1A1107	Current sensor	1	Motor current sensor, 366 A	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VY1A1108	Current sensor	1	Motor current sensor, 622 A	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
VY1A1109	Current sensor	1	Motor current sensor, 1188 A	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VY1A1202	Plastic parts	1 1 1 2 1 1	IP4X top cover Wiring trap cover Power trap cover Side caps Top cap Danger label	2	ATV61H075M3 ATV61HU15M3 ATV61H075N4 ATV61HU15N4 ATV61HU22N4 ATV71H075M3 ATV71HU15M3 ATV71H037M3 ATV71H075N4 ATV71HU15N4 ATV71HU22N4	30072-453-27
VY1A1203	Plastic parts	1 1 1 2 1 1 1 1	Front cap Wiring trap cover Power trap cover Side caps Top cap IP4X top cover Danger label	3	ATV61HU22M3 ATV61HU30M3 ATV61HU40M3 ATV61HU30N4 ATV61HU40N4 ATV71HU22M3 ATV71HU30M3 ATV71HU40M3 ATV71HU30N4 ATV71HU40N4	30072-453-27
VY1A1204	Plastic parts	1 1 1 1 1 2 1	Top cap IP4X top cover Front cap Wiring trap cover Power trap cover Side caps Danger label	4	ATV61HU55M3 ATV61HU55N4 ATV61HU75N4 ATV71HU55M3 ATV71HU55N4 ATV71HU75N4	30072-453-27
VY1A1205	Plastic parts	1 1 1 1 1 1 2 1	Top cap IP4X top cover Front cap Wiring trap cover Power trap cover Side caps Danger label	5B	ATV61HD11M3X ATV61HD15M3X ATV61HD15N4 ATV61HD18N4 ATV71HD11M3X ATV71HD15M3X ATV71HD15N4 ATV71HD18N4	30072-453-27
VY1A1210	Front cover and I/O terminal cover	1	Front cover assembly	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
VY1A1211	Front cover and I/O terminal cover	1	Front cover assembly	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VY1A1212	Front cover assembly	1	Front cover assembly	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VY1A1213	Front cover assembly	1	Front cover assembly	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VY1A1214	Front cover assembly	1	Front cover assembly	13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VY1A1215	Plastic parts kit	1 1 1 2 1 1 1	IP4X top cover Front cap Power trap cover Side caps Top cap Wiring trap cover Danger label	5A	ATV61HU75M3 ATV61HD11N4 ATV71HU75M3 ATV71HD11N4	30072-453-27
VY1A1216	Front cover assembly	1	Front cover assembly	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
VY1A1217	Front cover assembly	1	Front cover assembly	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VY1A1401	Plastic parts kit	1 1 1 1 1 1 1 1 1 1	EMC tray Conduit tray Power terminal shield Soft charge board tray Fan control board plate DC reactor terminal shield Filter board shield Labels size 11 Danger label	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VY1A1402	Plastic parts kit	1 1 1 1 1 1 1	EMC tray Conduit tray Power terminal shield SCR snubber board shield Filter board shield IT jumper warning label Danger label	12	ATV61HC22N4 ATV71HC16N4	30072-452-79
VY1A1403	Plastic parts kit	1 1 1 1 1 1 1	EMC tray Conduit tray Power terminal shield SCR assembly shield Filter board shield IT jumper warning label Danger label	13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
VY1A1404	EMC tray and power terminal shield	1 1	Control channel box Terminal cover with lid	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
VY1A1405	EMC tray and power terminal shield	1 1	Control channel box Terminal cover with lid	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77

Table 1: Kit Contents and Required Documentation *(continued)*

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:	
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VY1A1406	Plastic parts kit	4	Bus bar brackets	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
		6	Insulation tubes for bus bar brackets			
		1	Rectifier shield			
		1	Conduit tray			
		1	Right terminal shield			
		1	Left terminal shield			
		1	EMC tray			
		1	Motor control board insulator	14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
		1	Brake board insulator			
		1	Power board insulator			
		1	Bus plate shield			
		1	IT jumper warning label			
		1	Danger label			
VY1A1407	Plastic parts kit	4	Bus bar brackets	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
		6	Insulation tubes for bus bar brackets			
		1	Rectifier shield			
		1	Conduit tray			
		1	Right terminal shield			
		1	Left terminal shield			
		1	EMC tray			
		1	Motor control board insulator			
		1	Brake board insulator			
		1	Power board insulator			
		1	Bus plate shield			
		1	IT jumper warning label			
		1	Danger label			
VY1ADC1110	Capacitor assembly	1	4-capacitor assembly	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-75
VY1ADC1111	Capacitor assembly	1	6-capacitor assembly	10	ATV61HC13N4 ATV71HC11N4	30072-452-77
VY1ADC1112	Capacitors	6 6	Capacitors Gaskets	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				13	ATV61HC31N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VY1ADC1113	Capacitors	8 8	Capacitors, 5200 µF / 400 V Gaskets	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VY1ADC1114	Capacitors	6 6	Capacitors, 3600 µF / 400 V Gaskets	13	ATV61HC25N4 ATV71HC20N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
VY1ADC1115	Capacitor assembly	1	3-capacitor assembly	9	ATV61HD75M3X ATV61HD55M3X ATV71HD55M3X	30072-452-75
VY1ADC1116	Capacitor assembly	1	4-capacitor assembly	10	ATV61HD90M3X ATV71HD75M3X	30072-452-77

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VY1ADV1105	Screw kit	1	Set of screws, bolts, and nuts used in the drive	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
VY1ADV1106	Screw kit	1	Set of screws, bolts, and nuts used in the drive	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VY1ADV1107	Screw kit	1	Set of screws, bolts, and nuts used in the drive	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VY1ADV1108	Screw kit	1	Set of screws, bolts, and nuts used in the drive	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VY1ADV1109	Screw kit	1	Set of screws, bolts, and nuts used in the drive	13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
VY1ADV1110	Screw kit	1	Set of screws, bolts, and nuts used in the drive	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
VY1ADV1111	Screw kit	1	Set of screws, bolts, and nuts used in the drive	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VZ3DM1600M1671	Diode module	1	Diode module, 600A, 1600V Thermal compound	13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VZ3F1110	Dynamic braking kit	1	Braking control PCBA	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VZ3F1113	Dynamic braking kit	1	Brake board	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
6	PCB standoffs					

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3G1102	Temperature sensor wire	1	Temperature sensor	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
				10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VZ3G1104	Temperature sensor wire	2	Temperature sensors	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VZ3IM1145M1271	Braking IGBT module	1 1	IGBT module, 1200 V, 175 A Thermal compound	7A	ATV61HD30N4 ATV61HD37N4 ATV71HD30N4 ATV71HD37N4	30072-452-73
VZ3IM1195M0671	Braking IGBT module	1 1	IGBT module, 600 V, 250 A Thermal compound	7B	ATV61HD30M3X ATV71HD30M3X	30072-452-74
VZ3IM1300M0671	Braking IGBT module	1 1	IGBT module, 600 V, 400 A Thermal compound	7B	ATV61HD37M3X ATV61HD45M3X ATV71HD37M3X ATV71HD45M3X	30072-452-74
VZ3IM1300M1271	Braking IGBT module	1 1	IGBT module, 1200 V, 345 A Thermal compound	8	ATV61HD45N4 ATV61HD55N4 ATV61HD75N4 ATV71HD45N4 ATV71HD55N4 ATV71HD75N4	30072-452-74
VZ3IM1400M1271	Power IGBT module	1 1	IGBT module, 1200 V, 400 A Thermal compound	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-75
				10	ATV61HC13N4 ATV61HC11N4	30072-452-77
VZ3IM1402M1271	Power IGBT module	1 1	IGBT module, 1200 V, 400 A Thermal compound	12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV71HC20N4	30072-452-80

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3IM1600M0671	Power and braking IGBT module	1	IGBT module, 1200 V, 400 A Thermal compound	9	ATV61HD75M3X ATV61HD55M3X ATV71HD55M3X	30072-452-75
		1		10	ATV61HD90M3X ATV71HD75M3X	30072-452-77
VZ3IM1600M1271	Power IGBT module	1 1	IGBT module, 1200 V, 600 A Thermal compound	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VZ3IM1602M1271	Power IGBT module	2 1	IGBT modules, 1200 V, 600 A Thermal compound	13	ATV61HC31N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
VZ3IM1603M1271	Power IGBT module	3	IGBT modules, 1200 V, 600 A Thermal compound	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
		2		14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
VZ3IM1604M1271	Power IGBT module	4 2	IGBT modules, 1200 V, 600 A Thermal compound	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VZ3IM2195M1271	Power IGBT modules	3 1	IGBT modules, 1200 V, 220 A Thermal compound	7A	ATV61HD37N4 ATV71HD37N4	30072-452-73
VZ3IM2201M1271	Power IGBT modules	3 1	IGBT modules, 600 V, 200 A Thermal compound	7B	ATV61HD30M3X ATV71HD30M3X	30072-452-74
VZ3IM2301M1271	Power IGBT modules	3 1	IGBT modules, 600 V, 300 A Thermal compound	7B	ATV61HD37M3X ATV71HD37M3X	30072-452-74
VZ3IM2401M1271	Power IGBT modules	3 1	IGBT modules, 600 V, 400 A Thermal compound	7B	ATV61HD45M3X ATV71HD45M3X	30072-452-74
VZ3N1205	Power terminal block	1 1 1 1 1	Power terminal DC warning label Motor warning label Input warning label (240 V) Input warning label (480 V)	5B	ATV61HD11M3X ATV61HD15M3X ATV61HD15N4 ATV61HD18N4 ATV71HD11M3X ATV71HD15M3X ATV71HD15N4 ATV71HD18N4	30072-453-27
VZ3N1206	Power terminal block	1 1 1 1 1 1 1	Bottom power terminal block Top power terminal block DC warning label A#1 DC warning label A#2 Motor warning label Input warning label (240 V) Input warning label (480 V)	6	ATV61HD18M3X ATV61HD22M3X ATV71HD18M3X ATV71HD22M3X ATV61HD22N4 ATV71HD22N4	30072-452-72
VZ3N1207	Power terminal block	1 1 1 1 1	Bottom power terminal block Top power terminal block DC warning label A#1 DC warning label A#2 Motor warning label Input warning label	7A	ATV61HD30N4 ATV61HD37N4 ATV71HD30N4 ATV71HD37N4	30072-452-73
VZ3N1301	Wire kit ³	1 1 1 1 1 1 1 1 1	Brake cable DCCT cable LR cable Charge LED Fan control cable DR cable Fan supply cable PSU cable SCR cable	6	ATV61HD18M3X ATV61HD22M3X ATV71HD18M3X ATV71HD22M3X	30072-452-72

Table 1: Kit Contents and Required Documentation *(continued)*

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:	
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3N1302	Wire kit ³	1 1 1 1 1 1 1 1 1 1	Brake cable DCCT cable LR cable Charge LED Fan control cable DR cable Fan supply cable PSU cable SCR cable	6	ATV61HD22N4 ATV71HD22N4	30072-452-72
VZ3N1307	Wire kit ³	1 3 1 1 1 1 1 1 1 1 1	Fan supply cable IGBT cables PSU cable SCR cable LR cable Charge LED DCCT cable Brake cable Fan control cable DR cable	7A	ATV61HD30N4 ATV61HD37N4 ATV71HD30N4 ATV71HD37N4	30072-452-73
VZ3N1310	Wire kit ³	1 3 1 1 1 1 1 1 1 1 1	Fan supply cable IGBT cables SCR cable DCCT cable LR cable Charge LED PSU cable Brake cable Fan control cable DR cable	7B	ATV61HD30M3X ATV61HD37M3X ATV61HD45M3X ATV71HD30M3X ATV71HD37M3X ATV71HD45M3X	30072-452-74
VZ3N1313	Wire kit ³	1 1 1 1 1 1 1 1 1 1 1	Fan supply cable IGBT cables SCR cable DCCT cable LR cable Charge LED PSU cable Brake cable Fan control cable DR cable	8	ATV61HD45N4 ATV61HD55N4 ATV61HD75N4 ATV71HD45N4 ATV71HD55N4 ATV71HD75N4	30072-452-74

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3N1316	Wire kit ³	1	Flat cable A1:X3-A4:X31 1 Cable A2:X81-A4:X81 1 Cable A1:X8-A2:X82 1 Cable A4:X21/22/23-A1:X5 1 SCR 1 gate cable (CNL1G) 1 SCR 2 gate cable (CNL2G) 1 SCR 3 gate cable (CNL3G) 1 Cable RFS board X1 (Green) 1 Cable RFS board X4 (Red) 1 Cable RFS board X5 (Black) 1 Cable UD0-A2 X50(Blue) 1 Cable UD0-A4 X51 (Blue) 1 Cable UD(+)-A2:UD+1 Red 1 Cable A30:X1/2/3-A7:X1 1 Cable A30:X11/12/13-A2:X7 1 Cable A2:X10 -A31:X10/X11 1 Cable A6:CN2A-A1:X30/A2:X20 1 Cable A1:X31-A6:CN7A 1 Cable T1,T2,T3-A1:X11 1 Cable A1:X21-X31 (internal fan) 1 Cable A7:X2-A1:X14 1 Cable A1:X6 1 Flat cable A10:X3-A3:X3 1 Flat cable A1:X4-A10:X4 1 Flat cable A1:X2-A2:X2 1 Cable X3-A7:X4 1 DBB A20 X6 (Red)	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VZ3N1317	Wire kit ³	1	Flat cable A3:X32-A4:X31 1 Flat cable A4:X32-A5:X31-A1:X3 1 Flat cable A1:X8-A3:X81 2 Flat cables A3/A4:X82-A4/A5:X81 1 SCR 1 gate cable (CNL1G) 1 SCR 2 gate cable (CNL2G) 1 SCR 3 gate cable (CNL3G) 1 Cable A3/A4/A5:X2-A1:X5 3 Cables RFS board 2 Cables UD0-A1/A5 2 Cables UD0-A3/A4/A5 1 Cable A1:X21-X31 1 Cable A30-A1/A7 1 Cable A7:X2-A1:X14 1 Cable A1:X30-A6:CN2A 1 Cable A1:X31-A6:CN7A 1 Cable T1/T2/T3-A1:X11 1 Cable A1:X6 1 Flat cable A10:X3-A3:X3 1 Flat cable A1:X4-A10:X4 1 Flat cable A1:X2-A2:X2 1 Cable X3-A7:X4 1 Connector, fan feed through	12	ATV71HC16N4 ATV61HC22N4	30072-452-79

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3N1318	Wire Kit ³	1	Flat cable A3:X32-A4:X31	13	ATV61HC31N4 ATV61HC25N4 ATV71HC25N4 ATV71HC28N4 ATV71HC20N4	30072-452-80
		1	Flat cable A4:X32 -A5:X31-A1:X3			
		1	Flat cable A3:X82-A4:X81-A1:X8			
		1	Flat cable A4:X82-A5:X81			
		1	Cable A3/A4/A5:X2-A1:X5			
		1	SCR 1 gate cable (CNL1G)			
		1	SCR 2 gate cable (CNL2G)			
		1	SCR 3 gate cable (CNL3G)			
		1	Cable RFS board			
		2	Cables UD0-A1/ A5			
		2	Cables UD0 A3/A4/A5			
		1	Cable BU-preparation			
		1	Cable A1:X21/X22-X31/X32			
		1	Cable loom A30-A1/A7			
		1	Cable A31:X10/X11-A1			
		1	Cable T1,T2,T3-A1:X11			
		1	Cable X10-X11-X12			
		1	Cable UD0			
		1	Cable A7:X2-A1:X14			
		1	Cable A1:X30-A6:CN2A			
		1	Cable A1:X31-A6:CN7A			
		1	Cable A1:X6			
		1	Flat cable A10:X3-A2:X3			
1	Flat cable A1:X4-A10:X4					
1	Flat cable A1:X2-A2:X2					
1	Cable X3-A7:X4					
2	Connectors, fan feed through					

Table 1: Kit Contents and Required Documentation *(continued)*

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number
VZ3N1324	Wire kit ³	1	Relay connector	10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X
		1	Charge LED cable w/ LED		
		1	Wire power for motor control board (CNX2)		
		1	IGBT U gate cable (CNU)		
		1	IGBT X gate cable (CNX)		
		1	IGBT V gate cable (CNV)		
		1	IGBT Y gate cable (CNY)		
		1	IGBT W gate cable (CNW)		
		1	IGBT Z gate cable (CNZ)		
		1	Thyristor R gate cable (blue wire with 2 connectors)		
		1	Braking IGBT (CNPB)		
		1	SCR1 gate cable (CNL1G)		
		1	SCR2 gate cable (CNL2G)		
		1	SCR3 gate cable (CNL3G)		
		1	Cable red sleeve (CN7)		
		1	Line sense (CN5)		
		1	SCR control cable (CN2)		
		1	Jumper (CNX5-CN6)		
		1	Bus sense (CN6)		
		1	Current sense (red)		
		1	Current sense (white)		
		1	Current sense (blue)		
		1	Internal fan cable (CN12)		
		1	Internal fan cable (INT)		
		1	Internal fan cable (EXT)		
		1	Control module cable, 26 position (CNX1)		
		1	PA power cable (red)		
		1	PB power cable (white)		
		1	Braking IGBT cable (white) (TAB1)		
		1	Snubber cap cable, 400 V		
		1	CN13 X2 cable		

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3N1333	Wire kit ³	1	Cable A30-A70-A1	14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
		1	Cable SCB-V31/33/35			
1	Cable L1,L2,L3-A31					
1	Cable A30-A70-A71					
1	Cable A70-A71-X3					
1	Cable A1:X7-A30/A40					
1	Cable SCB-V31/33/35					
1	Cable L1,L2,L3-A31,A32					
2	Cable UD(+)-A31:X4					
1	Cable UD(+)-A32:X11					
2	Cable UD(-)-A31:X5					
1	Cable A5:X62-A41:X10					
1	Cable A70/A71-X11,X12,X13					
1	Flat Cable A10:X3-A3:X3					
1	Flat Cable A1:X4-A10:X4					
1	Flat Cable A4:X82-A5:X81					
1	Flat Cable A1:X8-A4:X81-A3:X82					
2	Flat Cable A4:X31-A3:X32	14B	ATV61HC50N4 ATV71HC40N4	30072-452-98		
1	Flat Cable A1:X3-A5:X31					
2	Cable UD0 connectors					
1	Cable UD0-A1:UD0					
1	Cable UD0-A4:X52					
2	Cable gate drive UD0 connectors					
1	Cable A5:X53-test connector					
1	Cable motor voltage measurement A1:X5					
1	Cable A1:X30-A6:CN2A					
1	Cable A1:X31-A6:CN7A					
1	Cable A1:X30-A6:CN2A					
1	Cable A1:X31-A6:CN7A					
1	Cable A1:X21/X22-X30,31,32					
2	Flat Cable A1:X2-A2:X2					

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:			2—Identify Your Drive:		3—Locate and Read Document:	
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3N1334	Wire kit ³	1	Cable A30-A70-A71	15	ATV61HC63N4 ATV71HC50N4	30072-452-82
		1	Cable A70-A71-X3			
		1	Cable A1:X7-A30/A40			
		1	Cable SCB-V31/33/35			
		1	Cable L1,L2,L3-A31,A32			
		3	Cable UD(+)-A31/A32:X4-A32:X11			
		2	Cable UD(-)-A31:X5			
		1	Cable A5:X62-A41:X10			
		1	Cable A70/A71-X11-X14			
		1	Flat cable A10:X3-A3:X3			
		1	Flat cable A1:X4-A10:X4			
		1	Flat cable A4:X82-A5:X81			
		1	Flat cable A4:X81-A1:X8-A3:X82			
		2	Flat cable A4:X31-A3:X32			
		1	Flat cable A1:X3-A5:X31			
		2	Cable UD0 connectors			
		1	Cable UD0-A1:UD0			
		1	Cable UD0-A4:X52			
		2	Cable gate drive UD0 connectors			
		1	Cable A5:X53-test connector			
		1	Cable motor voltage measurement			
		1	Cable A1:X30-A60:CN2A			
		1	Cable A1:X31-A6:CN7A			
		1	Cable A1:X30-A6:CN2A			
		1	Cable A1:X31-A6:CN7A			
		1	Cable A1:X21/X22-X30-33			
		1	Flat cable A1:X2-A2:X2			
		2	Cable A7:X2-A1:X14			
		1	Cable A1:X6			
		1	Cable T1/T2/T3-A1:X11			
VZ3S1910	Snubber capacitor kit	1	Snubber board	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-75
		1	Negative DC link bus bar			
		1	Positive DC link bus bar			
		3	Snubber capacitors (1200 V-0.47 µF)			
		2	Hexagonal metal supports, M4, 20 mm length			
		2	Torx® screws w/ captive washers, M4 x 10			
		1	Wire			
VZ3S1911	Snubber capacitor kit	1	Snubber board	9	ATV61HD75M3X ATV61HD55M3X ATV71HD55M3X	30072-452-75
		3	Capacitors	10	ATV61HD90M3X ATV71HD75M3X	30072-452-77
		1	Snubber capacitor (1200 V-0.47 µF)			
		1	Plastic nylon tie			

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3S1912	Snubber capacitor kit	1 1 1 3 2 2 1	Snubber board Link N thyristor Link P thyristor Snubber capacitors (1200 V-0.47 µF) Hexagonal metal supports, M4, 20 mm length Torx screws w/ captive washers, M4 x 10 Wire	10	ATV61HC13N4 ATV71HC11N4	30072-452-77
VZ3TD1057M1671	SCR modules	3 1	Thyristor/diode modules, 1600 V, 55 A Thermal compound	7A	ATV61HD30N4 ATV71HD30N4	30072-452-73
VZ3TD1072M1671	SCR modules	3	Thyristor/diode modules, 1600 V, 72 A Thermal compound	7A	ATV61HD37N4 ATV71HD37N4	30072-452-73
		1		8	ATV61HD45N4 ATV71HD45N4	30072-452-74
VZ3TD1092M1671	SCR modules	3	Thyristor/diode modules, 1600 V, 92 A Thermal compound	7B	ATV61HD30M3X ATV71HD30M3X	30072-452-74
		1		8	ATV61HD55N4 ATV71HD55N4	30072-452-74
VZ3TD1132M1671	SCR modules	3	Thyristor/diode modules, 1600 V, 132 A Thermal compound	7B	ATV61HD37M3X ATV71HD37M3X	30072-452-74
		1		8	ATV61HD75N4 ATV71HD75N4	30072-452-74
VZ3TD1162M1671	SCR modules	3 1	Thyristor/diode modules, 1600 V, 162 A Thermal compound	7B	ATV61HD45M3X ATV71HD45M3X	30072-452-74
VZ3TD1250M1671	SCR module	1 1	Thyristor/diode module, 1600 V, 250 A Thermal compound	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-75
VZ3TD1285M1671	SCR module	1	Thyristor/diode module, 1600 V, 285 A Thermal compound	10	ATV61HC13N4 ATV71HC11N4	30072-452-77
		1		11	ATV61HC16N4 ATV71HC13N4	30072-452-78
VZ3TD1330M1601	SCR module	1	Thyristor/diode module, 1200 V, 330 A Thermal compound	9	ATV61HD75M3X ATV61HD55M3X ATV71HD55M3X	30072-452-75
		1		10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
		1		12	ATV71HC16N4 ATV61HC22N4	30072-452-79
VZ3TM1400M0671	Braking IGBT module	1 1	IGBT module, 600 V, 400 A Thermal compound	9	ATV61HD75M3X ATV61HD55M3X ATV71HD55M3X	30072-452-75
VZ3TM1400M1271	Braking IGBT module	1	IGBT module, 1200 V, 400 A Thermal compound	9	ATV61HD90N4 ATV61HC11N4 ATV71HD90N4	30072-452-77
		1		10	ATV61HC13N4 ATV71HC11N4	30072-452-77

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3TM1425M1671	SCR module	1	SCR module, 425 A, 1600 V Thermal compound	13	ATV61HC25N4 ATV71HC20N4	30072-452-80
		1		14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
VZ3TM1600M1671	SCR module	1	SCR module, 600 A, 1200 V Thermal compound	13	ATV61HC31N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
		1		14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
		1		15	ATV61HC63N4 ATV71HC50N4	30072-452-82
VZ3V1203	Fan kit	1	Fan support Fan, 50x50x10 mm, 24 Vdc, IP21	2	ATV61H075M3 ATV61HU15M3 ATV61H075N4 ATV61HU15N4 ATV61HU22N4 ATV71H075M3 ATV71HU15M3 ATV71H037M3 ATV71H075N4 ATV71HU15N4 ATV71HU22N4	30072-452-08
VZ3V1204	Fan kit	1	Fan support Fan, 60x60x25 mm, 24 Vdc, IP55	4	ATV61HU55M3 ATV61HU55N4 ATV61HU75N4 ATV71HU55M3 ATV71HU55N4 ATV71HU75N4	30072-452-09
VZ3V1205	Fan kit	1	Fan support Fan assembled, 80x38 mm	5B	ATV61HD11M3X ATV61HD15M3X ATV61HD15N4 ATV61HD18N4 ATV71HD11M3X ATV71HD15M3X ATV71HD15N4 ATV71HD18N4	30072-452-09
VZ3V1206	Fan kit	2	Fans, 92x92x38 mm, 24 Vdc IP55	7A	ATV61HD30N4 ATV61HD37N4 ATV71HD30N4 ATV71HD37N4	30072-452-10
		2	Fan supports			
		4	Screws with washers, M4x16			
VZ3V1207	Fan kit	4	Screws with washers, M4x16	7B	ATV61HD30M3X ATV61HD37M3X ATV61HD45M3X ATV71HD30M3X ATV71HD37M3X ATV71HD45M3X	30072-452-10
		1	Fan support			
		2	Fans, 92x92x38 mm, 24 Vdc, IP55			
VZ3V1208	Fan kit	4	Screws with washers, M4x16	8	ATV61HD45N4 ATV61HD75N4 ATV71HD45N4 ATV71HD55N4 ATV71HD75N4	30072-452-10
		1	Fan support			
		2	Fans, IP55			

Table 1: Kit Contents and Required Documentation (continued)

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3V1209	Fan kit	1 2	Fan Support Fans, 60x60x25 mm, 24 Vdc, IP55	3	ATV61HU22M3 ATV61HU30M3 ATV61HU40M3 ATV61HU30N4 ATV61HU40N4 ATV71HU22M3 ATV71HU30M3 ATV71HU40M3 ATV71HU30N4 ATV71HU40N4	30072-452-08
VZ3V1210	Fan kit	1 1 1	Fan support Fan, 60x25 mm Fan, 80x38 mm	5A	ATV61HU75M3 ATV61HD11N4 ATV71HU75M3 ATV71HD11N4	30072-452-09
VZ3V1211	Fan kit	2 1 1	Screws with washers, M4X16 Fan support Fan, 92x92x38 mm, 24 Vdc, IP55	6	ATV61HD18M3X ATV61HD22M3X ATV61HD22N4 ATV71HD18M3X ATV71HD22M3X ATV71HD22N4	30072-452-10
VZ3V1212	Heatsink fan kit	1	Blower, 400 V	10	ATV61HC13N4 ATV71HC11N4	30072-452-48
				11	ATV61HC16N4 ATV71HC13N4	
				12	ATV61HC22N4 ATV71HC16N4	
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	
				14A	ATV61HC40N4 ATV71HC31N4	
				14B	ATV61HC50N4 ATV71HC40N4	
				15	ATV61HC63N4 ATV71HC50N4	
VZ3V1213	Internal fan	1	Fan, 24 Vdc	11	ATV61HC16N4 ATV71HC13N4	30072-452-78
				12	ATV71HC16N4 ATV61HC22N4	30072-452-79
				13	ATV61HC25N4 ATV61HC31N4 ATV71HC20N4 ATV71HC25N4 ATV71HC28N4	30072-452-80
				14A	ATV61HC40N4 ATV71HC31N4	30072-452-81
				14B	ATV61HC50N4 ATV71HC40N4	30072-452-98
				15	ATV61HC63N4 ATV71HC50N4	30072-452-82

Table 1: Kit Contents and Required Documentation *(continued)*

1—Identify Your Spare Parts Kit:				2—Identify Your Drive:		3—Locate and Read Document:
Kit Catalog Number	Description	Qty	Kit Contents	Frame Size	Catalog Number	
VZ3V1214	Internal fan	1 1	Fan, 80x80 Finger guard	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-75
				10	ATV61HC13N4 ATV61HD90M3X ATV71HC11N4 ATV71HD75M3X	30072-452-77
VZ3V1215	Fan kit	3 1 6	Fans, 92x92 Fan Support Screws with captive washers, M4x10	9	ATV61HD75M3X ATV61HD90N4 ATV61HD55M3X ATV61HC11N4 ATV71HD90N4 ATV71HD55M3X	30072-452-11
VZ3V1216	Heatsink fan kit	1	Blower, 200 V	10	ATV61HD90M3X ATV71HD75M3X	30072-452-48

¹ SCR: Silicon controlled rectifier

² IGBT: Insulated-gate bipolar transistor

³ Letter designations in the wire kit contents correspond to component and terminal designations on the wiring diagrams in the associated document.

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