Oil, Grease, and Gear Boxes

For Type AK/AKR Low-voltage Power Circuit Breakers

393A991P1 OIL

For use in gear boxes of all motor-operated Type AK circuit breakers.

393A991P2 SILICONE OIL

For use only in obsolete, oil-displacement type, time-delay undervoltage devices on Type AK circuit breakers. It is **not** suitable for overcurrent trip devices of these breakers—see note below.

NOTE: Oil is not furnished for Type EC overcurrent trip devices of Type AK air circuit breakers because these devices are sealed at the factory. If device does not operate properly it should be replaced or repaired by a local Service Shop or Installation and Service Engineering unit.

193A1751P1 LUBRICATING GREASE

A specially formulated grease for high contact pressures and high temperatures. It is recommended for lubricating primary disconnects of drawout power circuit breakers.

Individual instruction books cover the lubrication of parts and call for this lubricant where required.

This lubricant, which is identified as D50HD38, supersedes D50H15 and D50H47 lubricants.

PRICING INFORMATION

Material Number	Quantity	List Price, GO-129A	Approx Shipping Wt
393A991P1 Oil	4 oz bottle	$ 4.20 each	1 lb
393A991P2 Oil	1/4 oz bottle	15.00 each	1 lb
193A1751P1	1 oz tube	★30.00 each	4 oz

HOW TO ORDER

Order by material number and specify quantity.

GEAR BOXES

175L316 and 177L362 gear boxes are no longer manufactured for AK-50, 75, 100 breakers. A modification of the AKR design electrical closing assembly is available to replace these units. The replacement unit will include a new closing motor. Select replacement for 175L316 G1 or G2 gear box from Column 1. Replacements for 177L362 G2 should be selected from Columns 1 to 4, for G3 select from Columns 5 to 8.

REPLACEMENT KIT CAT. NO. 343L761 (Select Group Number Below)*

Column		Conventional Close Type				Quick Close Type			
		1	2	3	4	5	6	7	8
Volts	Hertz	AK-1-50, 75, 100 AK-2-50, 75, 100 AK-3-50, 75, 100 Includes AKU	AK-2A-50 AK-3A-50 Includes AKU	AKT-2A-50 AKT-3A-50	AK-2A-75, 100 AK-3A-75, 100	AK-2-50, 75, 100 AK-3-50, 75, 100 Includes AKU	AK-2A-50 AK-3A-50 Includes AKU	AKT-2A-50 AKT-3A-50	AK-2A-75, 100 AK-3A-75, 100
48	DC	G37	G49	G61	G37	G28	G49	G61	G37
125	DC	G38	G50	G62	G38	G29	G50	G62	G38
250	DC	G39	G51	G63	G39	G30	G51	G63	G39
120	60	G40	G52	G64	G40	G31	G52	G64	G40
208	60	G44	G56	G68	G44	G34	G56	G68	G44
240	60	G43	G55	G67	G43	G34	G55	G67	G43
120	50	G41	G53	G65	G41	G32	G53	G65	G41
208	50	G46	G58	G70	G46	G35	G58	G70	G46
240	50	G45	G57	G69	G45	G35	G57	G69	G45

* List Price for Cat. No. 343L761___ Replacement Kit is **$3000 each, GO-129A.**

DISTRIBUTION EQUIPMENT PRODUCTS—REPLACEMENT PARTS

Magnetic Current Tripping Devices, Types EC and ED

For Type AK Low-voltage Power Circuit Breakers

GENERAL

Listed in Table 1 are replacement magnetic overcurrent trip devices (Type EC) and reverse current devices (Type ED) for AK/AKR type breakers. **For customers who may wish to convert existing breakers having 50/60-Hertz magnetic trips to modern solid state type electronic trip, refer to handbook Sections 7692 and 7696 which lists SST conversion kits for Type AK-2 & 3 circuit breakers.** This listing includes many obsolete numbers, however the actual device that is furnished as a replacement may be identified by a number other than the one that is ordered. These numbers do not provide all the information needed to supply replacement units. All or part of the supplemental information listed in Table 2 will be required on the order.

PRICING INFORMATION

Locate number of device to be replaced in Table 1. Price of each replacement trip is listed in right-hand column. Note that there is usually one device on each breaker pole so that a replacement of all devices on a breaker will normally require one device per breaker pole. Where the number of the device is not known, the following are prices for ***standard*** EC-1, EC-1B and EC-2A devices.

Device Description	For Breaker Types	
	AK-1-15, 25, 50 AK-2-15, 25, 50	AK-2-75, 100
Standard selective tripping device (Short time delay element alone or combined with long time delay and/or instantaneous trip	**Type EC-1 $1155 each list, GO-129A**	**Type EC-1B $1495 each list, GO-129A**
Standard non selective device (Instantaneous or combined long time delay and instantaneous elements)	**Type EC-2A 975 each list, GO-129A**	**Type EC-1B 1320 each list, GO-129A**

Some non-standard devices for which these prices would not apply would be higher than normal instantaneous setting (non-selective trip above 15X, selective trip above 30X), CT type trip units, built in alarm switches, frequencies other than 50 and 60 Hertz or dc, and special applications that require special tests or calibration. **If prices are not found in Table 1, consult factory.**

HOW TO ORDER

To order a device similar to an existing unit. Locate the number of the device in Table 1 and determine from this table what additional information in Table 2 is required with the order.

Example 1—Qty (1) 177L226DAG13, Type EC-1B device, 2000 amperes, 60-Hertz instantaneous trip range 6 to 12X, set at 12X, short time delay range 4 to 10X for mounting on center pole.

To order a set of devices to increase or decrease the current rating of a breaker. Specify information as described for replacement device above and specify: "except replacement units to be increased to ___ ampere rating" and identify breaker frame size.

Example 2—Qty (3) type EC-2A devices similar to 549D497G1, 500-ampere, 60-Hertz, Characteristic 1B-3, instantaneous trip range 6 to 12X set at 8X except increase rating to 600 amperes for use on AK-2-25.

To order devices similar to those originally supplied with a breaker where only the serial number is available. Specify quantity of devices and give serial number of breaker.

Example 3—Qty (3) overcurrent trip devices for use on AK-1-50-8 serial number 104A6527-211.

Note: Add additional two weeks to shipping schedule when ordered by serial number to allow for procurement of documents from inaccessable files.

Some parts listed in Section 7605 will have "P" or "G" as the final letter of the catalog number. This indicates that all parts or groups of that particular catalog number have the same price.

TABLE 1—Ordering Information

Device Catalog Number	Type	Supplemental Ordering Information needed—See Table 2 for item	Replacement Device Type	List Price, GO-129A	Device Catalog Number	Type	Supplemental Ordering Information needed—See Table 2 for item	Replacement Device Type	List Price, GO-129A
6319453G1	EC-1	A,B,C,E,F	EC-1	$1155	176L189G2	EC-1A	A,B,C,D,E,G	EC-1B	$1495
6319453G3	EC-1	A,B,C,E,J	EC-2A①	975	176L189G3	EC-1A	A,B,C,D,E,F,G	EC-1B	1495
6319453G5	EC-1	A,B,C,E,F,J	EC-1	1155	176L189G4	EC-1A	A,B,C,F,G	EC-1B	1495
6319453G7	EC-1	A,B,E,J	EC-2①	975	176L189G5	EC-1A	A,B,D,G	EC-1B	1320
6319453G9	EC-1	A,B,D,J	EC-2A①	975	176L189G6	EC-1A	A,B,D,E,G	EC-1B	1320
6319453G11	EC-1	A,B,C,F	EC-1	1155	176L189G7	EC-1A	A,B,C,F,G	EC-1B	1495
6319453G13	EC-1	A,B,C,F	EC-1	1155	177L205G1	EC-1	C,E,F	EC-1	1395
6319453G21	EC-1	A,B,C,E,F	EC-1	1155	177L205G2	EC-1	C,F	EC-1	1395
6319453G23	EC-1	A,B,C,E,J	EC-2A①	975	177L206G1	EC-2	D	EC-2A	1085
6319453G25	EC-1	A,B,C,E,F,J	EC-1	1155	177L206G2	EC-2	C,E	EC-2A	1085
6319453G27	EC-1	A,B,E,J	EC-2①	975	177L206G3	EC-2	D,E	EC-2	1085
6319453G29	EC-1	A,B,D,J	EC-2A①	975	177L206G4	EC-2A	D	EC-2A	1085
6319453G31	EC-1	A,B,C,F	EC-1	1155	177L206G5	EC-2A	C,D,E	EC-2A	1085
6319453G33	EC-1	A,B,C,F	EC-1	1155	177L226DAG1	EC-1B	A,B,G	EC-1B	1320
6319457G1	ED-1	A,H	ED-1	2589	177L226DAG3	EC-1B	A,B,D,E,G	EC-1B	1320
6423539G1	EC-1	A,B,C,E	EC-1	1085	177L226DAG4	EC-1B	A,B,D,E,G	EC-1B	1320
175L326G	EC-1	Obsolete			177L226DAG5	EC-1B	A,B,D,E,G	EC-1B	1320
175L376G1	EC-2	A,B,D,J	EC-2A①	975	177L226DAG12	EC-1B	A,B,D,E,F,G	EC-1B	1495
175L376G2	EC-2	A,B,C,E,J	EC-2A①	975	177L226DAG13	EC-1B	A,B,D,E,F,G	EC-1B	1495
175L376G3	EC-2	A,B,E	EC-2	975	177L226DAG14	EC-1B	A,B,D,E,F,G	EC-1B	1495
175L376G11	EC-2	A,B,D,J	EC-2A①	975	177L226DAG15	EC-1B	A,B,D,E,F,G	EC-1B	1495
175L376G12	EC-2	A,B,C,E,J	EC-2A①	975	177L226DAG16	EC-1B	A,B,D,E,F,G	EC-1B	1495
175L376G13	EC-2	A,B,E	EC-2	975	177L226DAG17	EC-1B	A,B,D,E,F,G	EC-1B	1495
176L189G1	EC-1A	A,B,C,D,E,F,G	EC-1B	1495	177L226DAG18	EC-1B	A,B,D,E,F,G	EC-1B	1495

① Replacement device not available for use on AK-1-15/25 if breaker equipped with bell alarm device.