

 YORK®	Unit Mounted Medium Voltage Solid State Starter	
Renewal Parts	Supersedes: 160.00-RP7 (608)	Form 160.00-RP7 (921)

**Medium Voltage 4160 V and 2300 V, 60 Hz and 3300 V, 50 Hz
Solid State Starters for YK Chiller Applications**

CURRENT-GUARD® STARTER



Issue Date:
September 10, 2021



Important

Read before proceeding

General safety guidelines

This equipment is a relatively complicated apparatus. During installation, operation, maintenance or service, individuals may be exposed to certain components or conditions including, but not limited to: refrigerants, oils, materials under pressure, rotating components, and both high and low voltage. Each of these items has the potential, if misused or handled improperly, to cause bodily injury or death. It is the obligation and responsibility of operating/service personnel to identify and recognize these inherent hazards, protect themselves, and proceed safely in completing their tasks. Failure to comply with any of these requirements could result in serious damage to the equipment and the property in which it is situated, as well as severe

personal injury or death to themselves and people at the site.

This document is intended for use by owner-authorized operating/service personnel. It is expected that this individual possesses independent training that will enable them to perform their assigned tasks properly and safely. It is essential that, prior to performing any task on this equipment, this individual shall have read and understood this document and any referenced materials. This individual shall also be familiar with and comply with all applicable governmental standards and regulations pertaining to the task in question.



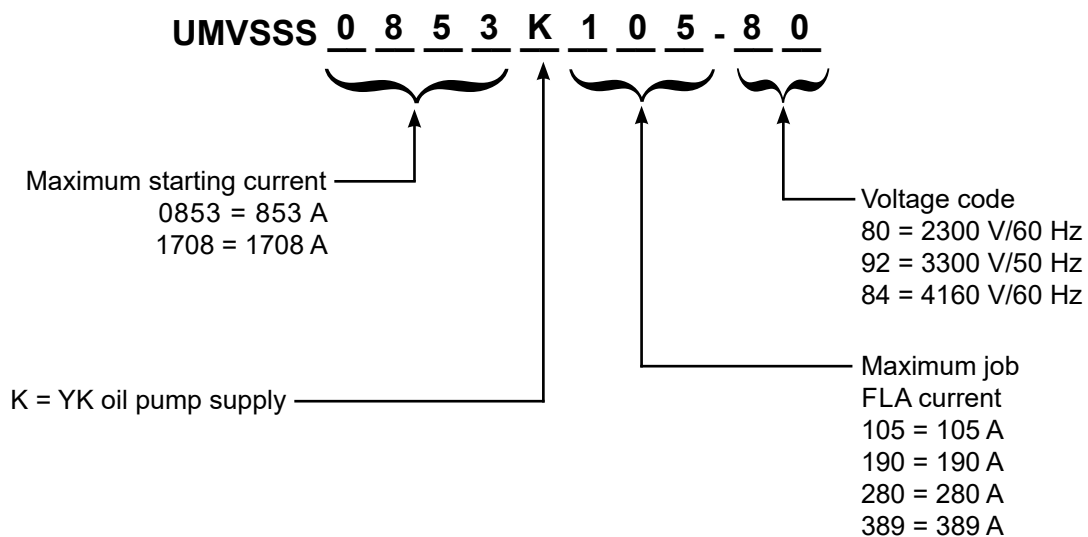
External wiring, unless specified as an optional connection in the manufacturer's product line, is NOT to be connected inside the equipment cabinet. Devices such as relays, switches, transducers and controls may NOT be installed inside the unit. NO external wiring is allowed to be run through the unit. All wiring must be in accordance with Johnson Controls published specifications and must be performed ONLY by qualified Johnson Controls personnel. Johnson Controls will not be responsible for damages/problems resulting from improper connections to the controls or application of improper control signals. Failure to follow this will void the manufacturer's warranty and cause serious damage to property or injury to persons.

This instruction lists the renewal parts of the YORK Unit Mounted Medium Voltage Solid State Starter (UMV-SSS). Qualification in this case requires that the individual hold a certificate, proving satisfactory completion of formal training on proper procedures and safety requirements for working on equipment in the medium voltage (600 VAC to 7500 VAC) class. The qualified individual furthermore is to be knowledgeable of, and adhere to, all safe work practices as required by NEC, OSHA, and NFPA70e. Because available fault current is determined largely due to sizing of the upstream transformers, wiring, and protective devices - available fault current and arc-flash hazard levels must be determined by personnel responsible for the electrical systems within the facility where this product is installed. Proper personal protective equipment (PPE) is to be utilized where and when required. This entire publication is to be read thoroughly before servicing this product. Proper lock-out and tag-out procedures are mandatory!



Under no circumstances should any live testing be performed with the main cabinet doors open, exposing medium voltage components! Only the low-voltage access door is permitted to be open during live testing or operation of the unit. The energized safe approach distance for this product is to be determined by NFPA70e. Non-qualified personnel are not to be present within this boundary during energizing, de-energizing, or energized testing (even with cabinet doors closed) on this starter!

Unit model number nomenclature



Unit model reference chart

Model number	Max. FLA	Max. LRA	45% LRA	CT 1, 2, 3	FU 1, 2, 3	Power stack assembly P/N		
						2300 VAC	3300 VAC	4160 VAC
UMVSSS0853K105-V V	105	1896	0853	150:5	9R, *V	031-02866-000		031-02867-000
UMVSSS0853K190-V V	190	1896	0853	250:5	12R, *V	031-02866-000		031-02867-000
UMVSSS0853K280-V V	280	1896	0853	400:5	18R, *V	031-02866-000		031-02867-000
UMVSSS0853K389-V V	389	1896	0853	400:5	24R, *V	031-02866-000		031-02867-000
UMVSSS1708K389-V V	389	3796	1708	400:5	24R, *V	031-02868-000		031-02869-000

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Figure 1 - Medium Voltage solid state starter – front view, exterior

LD13585

Table 1 - Exterior components

Item	Description	YORK P/N
1	Disconnect handle assembly, UMV SSS, 400 amps	024 36141 000
2	Viewing window	031 02594 000

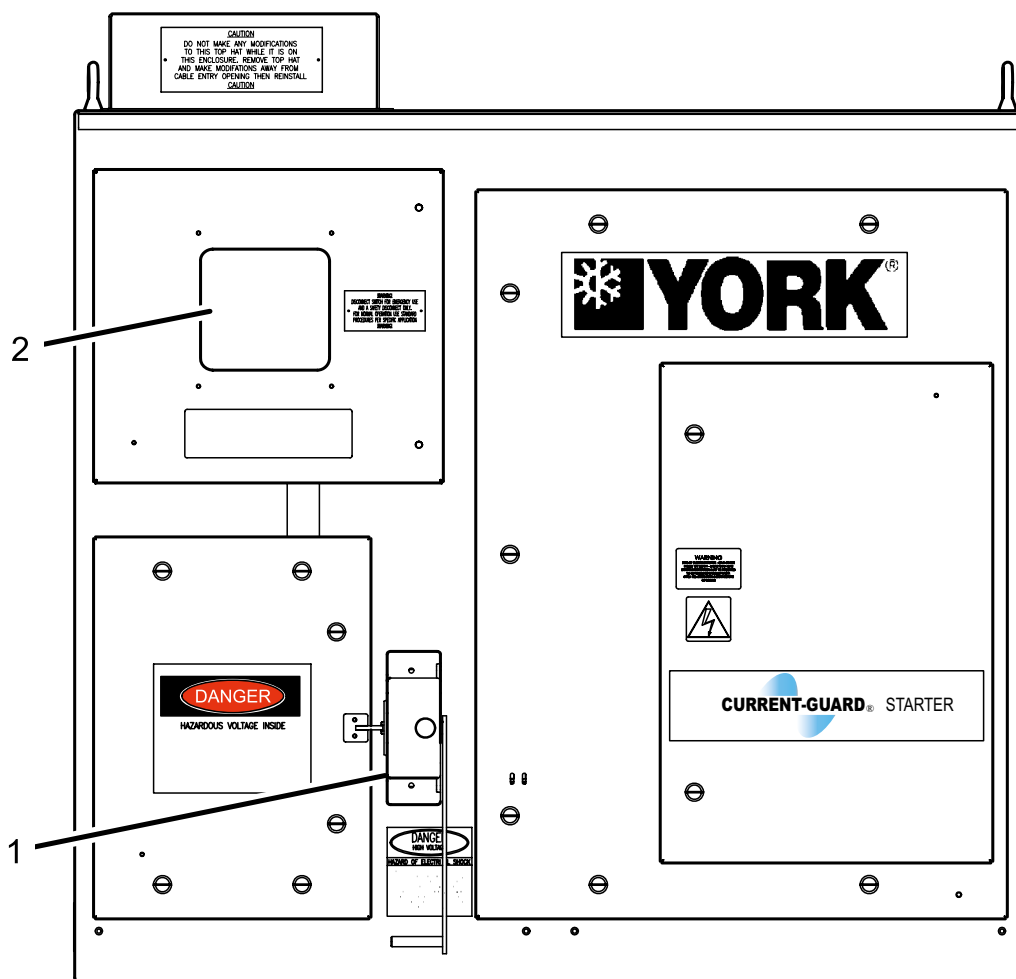


Figure 2 - Exterior components

LD13609

Table 2 - Incoming power compartment

Item	Description	YORK P/N
1	Disconnect switch, UMV SSS, 5KV, 400 amps	024 36142 000
2	Buss termination, UMV SSS, incoming	025 42103 000
3	Auxiliary switch, disconnect	024 36143 000

* Items are NOT shown.

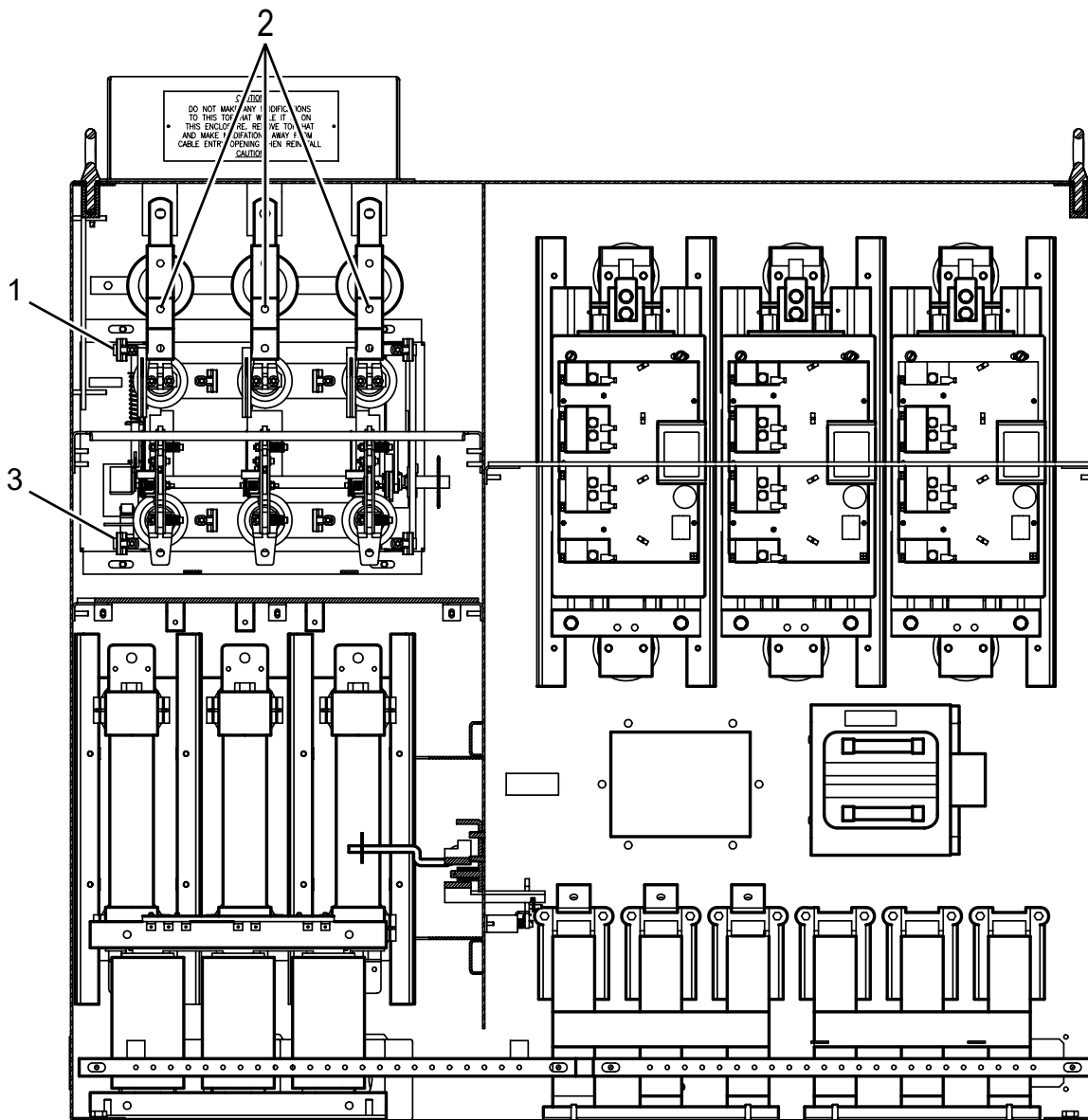


Figure 3 - Incoming power compartment

LD13707

Table 3 - Low voltage compartment

Item	Description	YORK P/N
1	Logic control board, MX3	031 02873 000
2	Test switch, UMV SSS	031 02617 000
3	Test plug, 115 VAC, 15A	031 02618 000

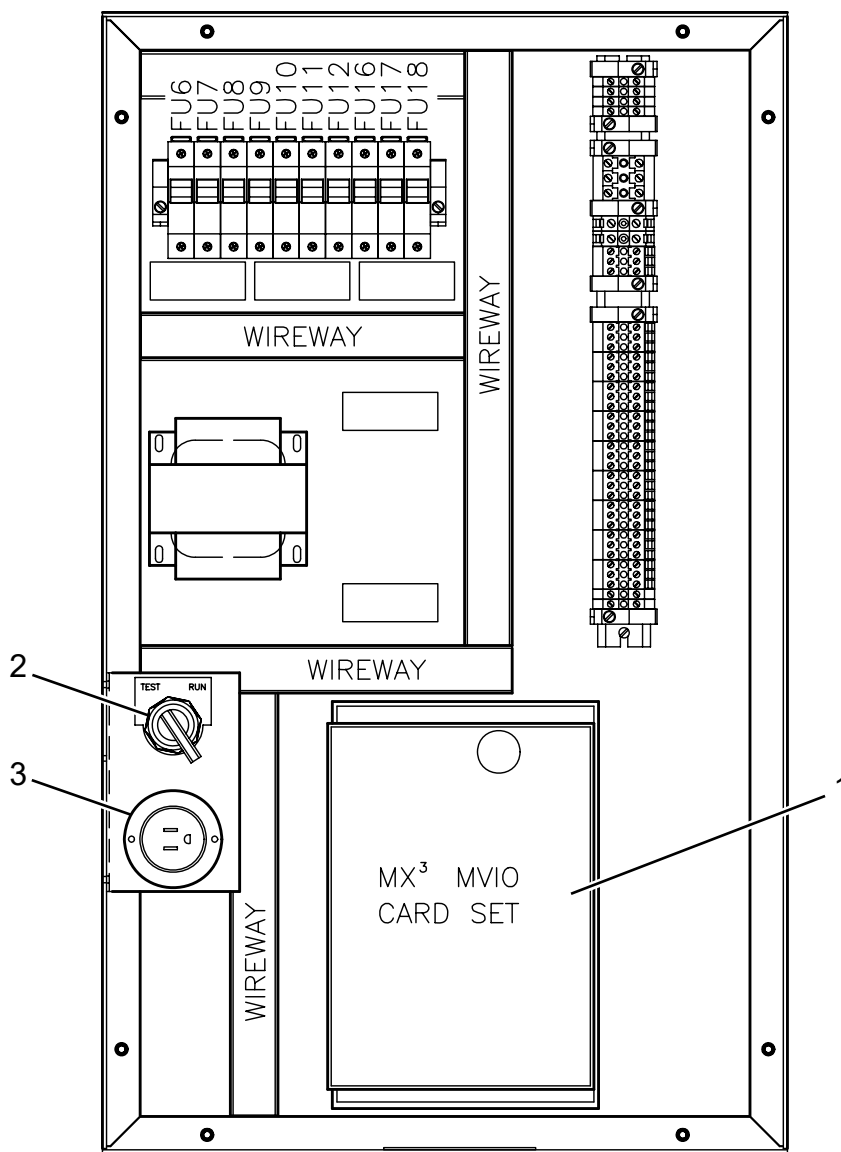


Figure 4 - Low voltage compartment

LD13708

Table 4 - Medium voltage compartment

Item	Description	YORK P/N
1	Gate driver board, MD-5/7.2KV	031 02575 000
2	Power stack assembly (2.3KV / 3.3KV, 208 amps)	031 02866 000
2	Power stack assembly (5KV, 208 amps)	031 02867 000
2	Power stack assembly (2.3KV / 3.3KV, 415 amps)	031 02868 000
2	Power stack assembly (5KV / 550 amps)	031 02869 000
3	Vacuum contactor (5KV, 400 Amps)	024 36144 000
4	Control transformer, 2KVA, 2.3 KV: 120V / 60Hz	025 42104 000
4	Control transformer, 2KVA, 3.3 KV: 120V / 50Hz	025 42105 000
4	Control transformer, 3KVA, 2.3 KV: 120V / 60Hz	025 42106 000
4	Control transformer, 3KVA, 2300V-120V, 60Hz, 1ph	031 02619 000
4	Control, transformer, 3KVA, 3300V-120V, 50Hz, 1ph	031 02620 000
4	Control transformer, 3KVA, 4160V-120V, 60Hz, 1ph	031 02586 000
5	3-phase transformer, 3KVA, 2.3KV: 460V / 60Hz	025 42107 000
5	3-phase transformer, 3KVA, 3.3KV: 400V / 50Hz	025 42108 000
5	3-phase transformer, 3KVA, 4160KV: 400V / 60Hz	025 42109 000
6	Current transformer, ratio 250:5	025 42110 000
6	Current transformer, ratio 400:5	025 42111 000
7	Fuse clip assembly, type-R, 1-phase	031 02591 000
8	Buss termination, UMV SSS	025 42112 000

Notes:

See Unit model reference chart on page 3 for correct power stack assembly.

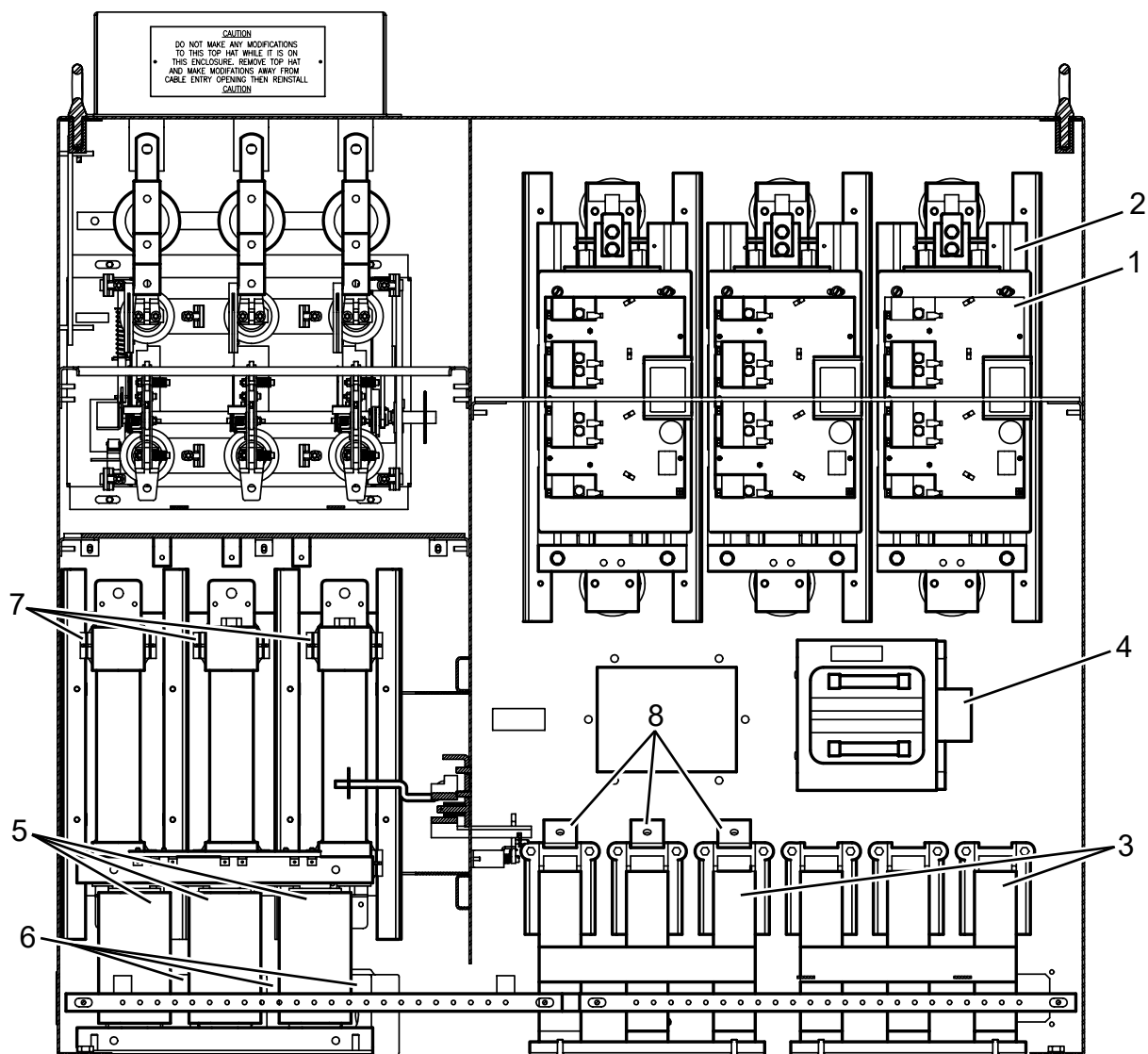


Figure 5 - Medium voltage compartment

LD13610

Table 5 - Fuses

Item	Description	YORK P/N
1A	Fuse, type 9R, 2.3Kv	031 02603 000
1A	Fuse, type 12R, 2.3Kv	031 02604 000
1B	Fuse, type 18R, 2.3Kv	031 02605 000
1B	Fuse, type 24R, 2.3Kv	031 02606 000
1A	Fuse, type 9R, 3.3/5Kv	031 02610 000
1A	Fuse, type 12R 3.3/5Kv	031 02611 000
1B	Fuse, type 18R 3.3/5Kv	031 02612 000
1B	Fuse type 24R, 3.3/5Kv	031 02613 000
2	Fuse type 2E, 4.8Kv (FU13-FU15)	031 02614 000
2	Fuse, type 3E, 4.8Kv (FU4-FU5)	031 02615 000
3	Fuse, cartridge, 10 amp 500V (FU6)	025 27971 000
4	Fuse, cartridge, 5 amp 500V (FU7)	025 27922 000
5	Fuse, cartridge, 15 amp 500V (FU8)	025 25584 000
6	Fuse, cartridge, 20 amp 500V (FU9)	025 28967 000
7	Fuse, cartridge, 7 amp 500V (FU10-FU12)	025 25515 000
8	Fuse, cartridge, 2 amp 500V (FU16-FU18)	025 42396 000

Notes:

See *Unit model reference chart on page 3* for correct R-type fuses.

Make sure that you have all the fuse(s) information available when ordering replacements.

Table 6 - Accessories

Item	Description	YORK P/N
1	Kit, MVSSS heater, space, 250 watts, 120 VAC	031 02739 000
1A	Heater, MVSSS space, 250 watts, 250 VAC	031 02740 000
1B	Thermostat, MVSSS heater	031 02741 000
2	Kit, motor space heater control	025 24164 000

Note:

Accessories are NOT shown.

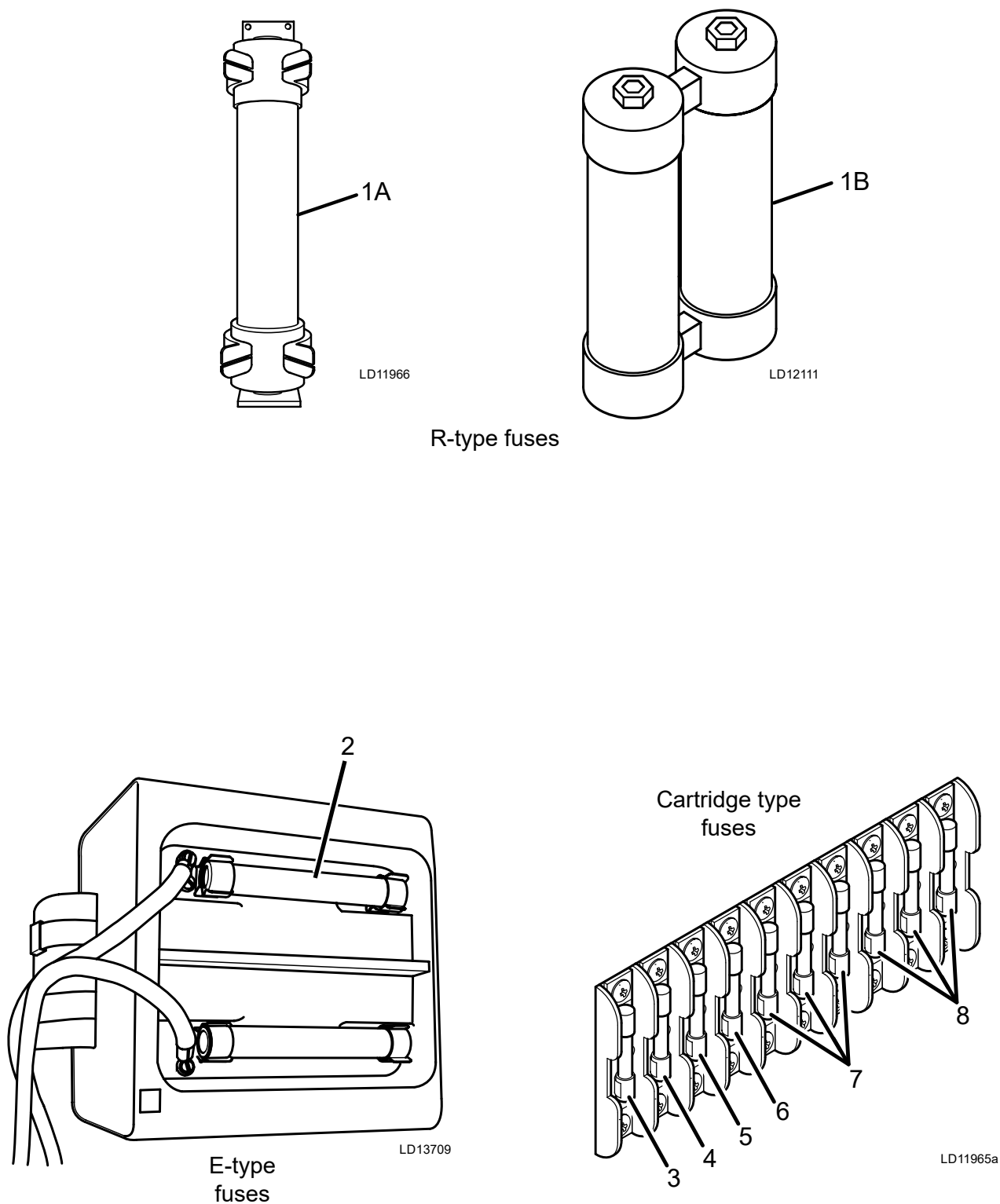


Figure 6 - Fuses



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