

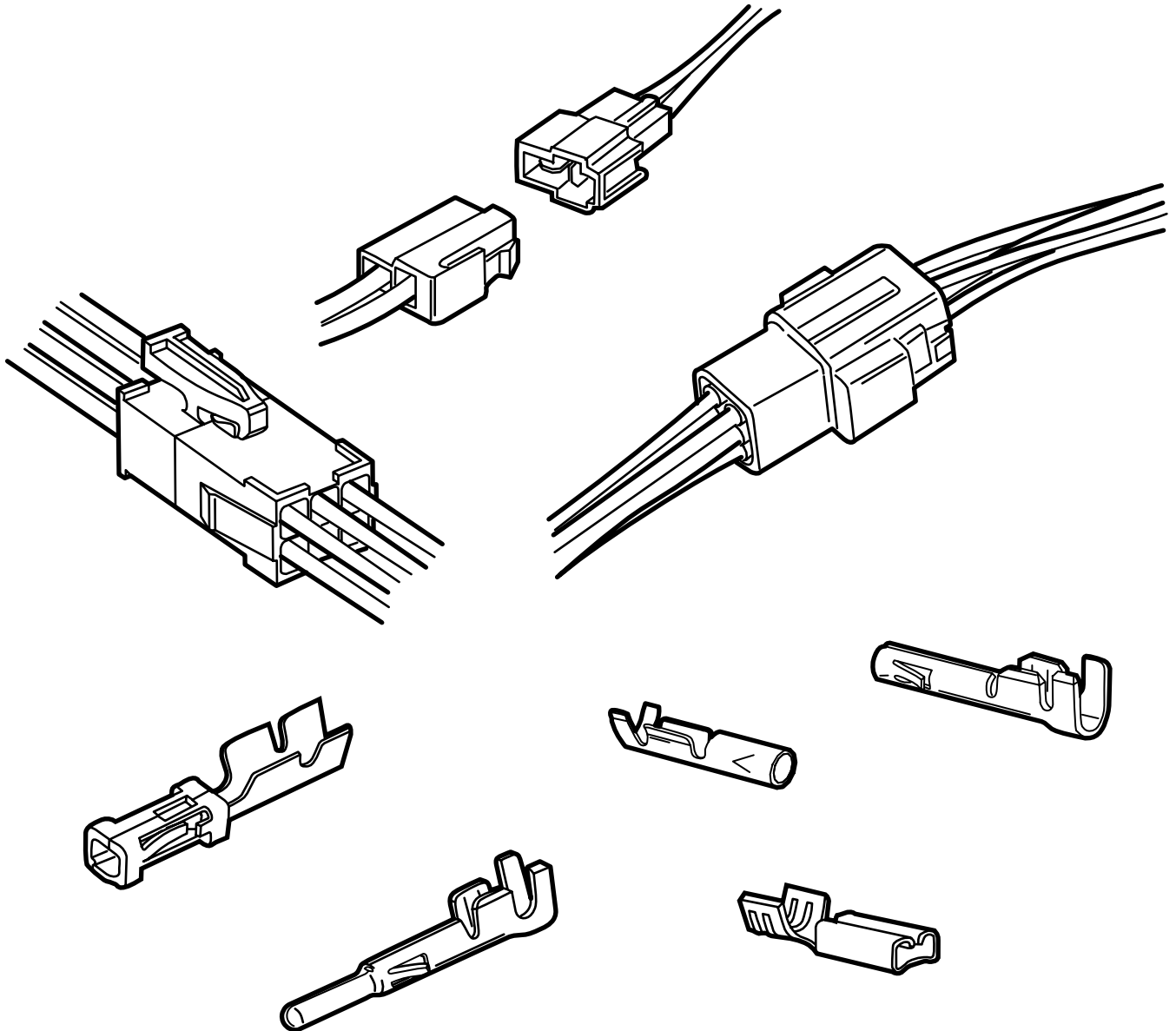


# ELECTRICAL CONNECTORS ALL PRODUCTS

RENEWAL PARTS

Supersedes: 50.20-RP1 (911)

Form 50.20-RP1 (718)



LD08685

Issue Date:  
July 11, 2018

# IMPORTANT!

## READ BEFORE PROCEEDING!

### GENERAL SAFETY GUIDELINES

This equipment is a relatively complicated apparatus. During rigging, installation, operation, maintenance, or service, individuals may be exposed to certain components or conditions including, but not limited to: heavy objects, refrigerants, 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 rigging, installation, and 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 rigging, installation, and operating/service personnel. It is expected that these individuals possess 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 the on-product labels, this document and any referenced materials. This individual shall also be familiar with and comply with all applicable industry and governmental standards and regulations pertaining to the task in question.

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## SAFETY SYMBOLS

The following symbols are used in this document to alert the reader to specific situations:



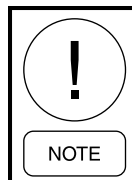
*Indicates a possible hazardous situation which will result in death or serious injury if proper care is not taken.*



*Identifies a hazard which could lead to damage to the machine, damage to other equipment and/or environmental pollution if proper care is not taken or instructions and are not followed.*



*Indicates a potentially hazardous situation which will result in possible injuries or damage to equipment if proper care is not taken.*



*Highlights additional information useful to the technician in completing the work being performed properly.*



*External wiring, unless specified as an optional connection in the manufacturer's product line, is not to be connected inside the control cabinet. Devices such as relays, switches, transducers and controls and any external wiring must not be installed inside the micro panel. All wiring must be in accordance with Johnson Controls' published specifications and must be performed only by a qualified electrician. Johnson Controls will NOT be responsible for damage/problems resulting from improper connections to the controls or application of improper control signals. Failure to follow this warning will void the manufacturer's warranty and cause serious damage to property or personal injury.*

## CHANGEABILITY OF THIS DOCUMENT

In complying with Johnson Controls' policy for continuous product improvement, the information contained in this document is subject to change without notice. Johnson Controls makes no commitment to update or provide current information automatically to the manual or product owner. Updated manuals, if applicable, can be obtained by contacting the nearest Johnson Controls Service office or accessing the Johnson Controls QuickLIT website at <http://cgproducts.johnsoncontrols.com>.

It is the responsibility of rigging, lifting, and operating/service personnel to verify the applicability of these documents to the equipment. If there is any question

regarding the applicability of these documents, rigging, lifting, and operating/service personnel should verify whether the equipment has been modified and if current literature is available from the owner of the equipment prior to performing any work on the chiller.

### CHANGE BARS

Revisions made to this document are indicated with a line along the left or right hand column in the area the revision was made. These revisions are to technical information and any other changes in spelling, grammar or formatting are not included.

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<b>Connectors for Micropanel Control Panel</b>					
<b>Board</b>	<b>Board</b>	<b>Position</b>	<b>Circuits</b>	<b>Plug Housing p/n</b>	<b>Pin p/n</b>
Microboard	031-01065-XXX	J3	2	025-19667-000 or 025-21136-000	025-19674-000
Microboard	031-01065-XXX	J4	12	025-21196-000	025-27232-000
Microboard	031-01065-XXX	J8	4	025-21138-000	025-19674-000
Microboard	031-01065-XXX	J10	3	025-21137-000	025-19674-000
Microboard	031-01065-XXX	J17	15	025-28385-000	025-28386-000
Microboard	031-01065-XXX	J19	12	025-28384-000	025-28386-000
Microboard	031-01065-XXX	J20	4	025-28959-000	025-28386-000
Microboard	031-01065-XXX	J21	9	025-28383-000	025-28386-000
Microboard	031-01065-XXX	J22	6	025-28382-000	025-28386-000
Microboard	031-01065-XXX	J23	4	025-28959-000	025-28386-000
Microboard	031-01065-XXX	J24	6	025-28382-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J1	2	025-29130-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J3	2	025-29130-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J4	6	025-28382-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J5	4	025-28959-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J6	3	025-29185-000	025-28386-000
I/O Exp. Board	031-01301-XXX	J7	2	025-21136-000	025-19674-000
I/O Exp. Board	031-01301-XXX	J8	6	025-28382-000	025-28386-000
Power Supply	031-01080-XXX	J1	3	025-21137-000	025-32506-000
Power Supply	031-01080-XXX	J2	4	025-21138-000	025-19674-000
Power Supply	031-01080-XXX	J3	2	025-21136-000	025-32506-000
Power Supply	031-01080-XXX	J4	3	025-21137-000	025-19674-000
Power Supply	031-01080-XXX	J5	2	025-21136-000	025-19674-000
Power Supply	031-01080-XXX	J6	2	025-29130-000	025-28386-000
Level Control		J1	2	025-29130-000	025-28386-000
Level Control		J2	3	025-29185-000	025-28386-000
Level Control		J3	4	025-28959-000	025-28386-000
CM-2		J1	2	025-19667-000	025-22215-000
CM-2		J2	4	025-21417-000	025-22215-000
CM-2		J3	2	025-19667-000	025-22215-000
Relay Output		J2	2	025-19667-000	025-19674-000
Digital Input		J2	3	025-21137-000	025-19674-000
Start/Stop Reset		J11		571-01199-201	571-01791-201
Dangling Door Connector	Connector	Door	9	025-21192-000	
Dangling Door Connector	Pin	Door	9	025-22214-000	
Dangling Door Connector	Mate	Door	9	025-21191-000	
Dangling Door Connector	Socket	Door	9	025-22215-000	
Logic Board	031-00936-XXX	J1	8	025-28388-000	025-27232-000
Logic Board	-----	J4	12	025-28387-000	025-19674-000

<b>Connectors for OptiView Panels</b>					
<b>Board</b>	<b>Board p/n</b>	<b>Position</b>	<b>Circuits</b>	<b>Plug p/n</b>	<b>Pin p/n</b>
Microboard	031-01730-000 031-02430-XXX	J1	8	025-34144-000	025-34145-000
Microboard	031-01730-000 031-02430-XXX	J7	24	025-34533-000	025-28386-000
Microboard	031-01730-000 031-02430-XXX	J8	22	025-34117-000	025-28386-000
Microboard	031-01730-000 031-02430-XXX	J9	20	025-34116-000	025-28386-000
Microboard	031-01730-000 031-02430-XXX	J15	6	025-28382-000	025-28386-000
Microboard	031-01730-000 031-02430-XXX	J20	3	025-29185-000	025-28386-000
Microboard	031-01730-000 031-02430-XXX	J21	4	025-28959-000	025-28386-000
CM-2 Board	031-00947-000	J1	2	025-21136-000	025-19674-000
CM-2 Board	031-00947-000	J2	4	025-21417-000	025-22215-000
CM-2 Board	031-00947-000	J3	2	025-19667-000	025-19674-000
I/O Board	031-01743-000	J2	2	025-29130-000	025-28386-000
ACC Board	031-01782-000	J3	4	025-21138-000	025-19674-000
ACC Board	031-01782-000	J4	3	025-29185-000	025-28386-000
ACC Board	031-01782-000	J6	2	025-19667-000	025-19674-000
ACC Board	031-01782-000	J8	4	025-28959-000	025-28386-000
ACC Board	031-01782-000	J9	6	025-28382-000	025-28386-000
ACC Board	031-01782-000	J10	4	025-28959-000	025-28386-000
Hot Gas By-Pass		P1-P8	6	025-37816-000	Screw
Hot Gas By-Pass		P9	16	025-34143-000	025-28386-000
Hot Gas By-Pass		P10	8	025-37816-001	Screw
Digital I/O		P1-P6	6	025-37816-000	Screw
Digital I/O		P7 & P8	16	025-34143-000	025-28386-000
Terminal Block 7	Beige Feed Through Block				025-33290-000

<b>Proximity Probe to OptiView Panel</b>					
Proximity Probe		P8			025-28386-000
Proximity Probe		J31-1		025-27974-000	025-18443-000
Proximity Probe Complete Assembly (includes 21' of cable)					025-35900-000
Proximity Probe, Female Mil Connector Only Attached to 21' of Cable					025-35148-000
Proximity Probe, With Male Mil Connector Only					025-34584-000

<b>Harnesses for OptiView Panels</b>					
Power Supply		J32	8	025-34557-000	025-34563-000
Power Supply		P30	12	025-28384-000	025-28386-000
Power Supply		P2	13	025-34504-000	025-25157-000
Aux		J30	12	025-34147-000	025-30999-000
Aux		P32	8	025-34144-000	025-34145-000
Aux		P31	2	025-19667-000	025-19674-000
Door Connr.		J10	6	025-19670-000	025-22215-000
Door Connr.		P10	6	025-20963-000	025-22214-000

<b>Connectors for VSD Starters</b>					
<b>Board</b>	<b>Board p/n</b>	<b>Position</b>	<b>Circuits</b>	<b>Plug housing p/n</b>	<b>Pin p/n</b>
Logic Board	031-01433-000	J1	12	025-28384-000	025-28386-000
Logic Board	031-01433-000	J2	9	025-28383-000	025-28386-000
Logic Board	031-01433-000	J3	3	025-19671-000	025-19673-000
Logic Board	031-01433-000	J5	3	025-21137-000	025-19674-000
Logic Board	031-01433-000	J6	5	025-32565-000	025-19673-000
Logic Board	031-01433-000	J12	6	025-19670-000	025-19673-000
Filter Logic Board	031-01632-XXX	J3	9	025-28383-000	025-28386-000
Filter Logic Board	031-01632-XXX	J4	3	025-19671-000	025-19673-000
Filter Logic Board	031-01632-XXX	J5	6	025-32566-000	025-20990-000
Filter Logic Board	031-01632-XXX	J6	2	025-29130-000	025-28386-000
Filter Logic Board	031-01632-XXX	J13	3	025-29185-000	025-28386-000
VSD Logic Board	031-02077-000	J1	12	025-28384-000	025-28386-000
VSD Logic Board	031-02077-000	J2	9	025-28383-000	025-28386-000
VSD Logic Board	031-02077-000	J3	3	025-19671-000	025-22214-000
VSD Logic Board	031-02077-000	J5	3	025-19671-000	025-22214-000
VSD Logic Board	031-02077-000	J6	5	025-32565-000	025-22214-000
VSD Logic Board	031-02077-000	J8	7	025-32511-000	n/a
VSD Logic Board	031-02077-000	J9	7	025-32511-000	n/a
VSD Logic Board	031-02077-000	J10	7	025-32511-000	n/a
VSD Logic Board	031-02077-000	J11	3	025-31743-000	n/a
VSD Logic Board	031-02077-000	J12	6	025-32566-000	025-20533-000
Bus Isolator Board	031-01624-000	J1	3	025-19671-000	025-20533-000
Bus Isolator Board	031-01624-000	J2	3	025-19671-000	025-22214-000
SCR Trigger Board	031-02060-000	J1	2	025-27974-000	025-19674-000
SCR Trigger Board	031-02060-000	J2	2	025-27974-000	025-19674-000
SCR Trigger Board	031-02060-000	J3	2	025-27974-000	025-19674-000
SCR Trigger Board	031-02060-000	J4	6	025-28382-000	025-28386-000
SCR Trigger Board	031-02060-000	J5	2	025-29130-000	025-28386-000
SCR Trigger Board	031-02060-000	J6	2	025-29130-000	025-28386-000
SCR Trigger Board	031-02060-000	J7	8	025-34144-000	025-34563-000
Filter Logic Board	031-01632-XXX	J2	9	025-31744-000	n/a
Filter Logic Board	031-01632-XXX	J3	12	025-28384-000	025-28386-000
Filter Logic Board	031-01632-XXX	J4	3	025-19671-000	025-20533-000
Filter Logic Board	031-01632-XXX	J5	8	025-28388-000	025-22214-000
Filter Logic Board	031-01632-XXX	J6	2	025-29130-000	025-28386-000
Filter Logic Board	031-01632-XXX	J8	4	025-32512-000	n/a
Line Isolator Board	031-02022-000	J1	3	025-19671-000	025-20533-000
Line Isolator Board	031-02022-000	J2	4	025-21417-000	025-22214-000

<b>Solid State Starters</b>					
<b>Board</b>	<b>Board p/n</b>	<b>Position</b>	<b>Circuits</b>	<b>Plug housing p/n</b>	<b>Pin p/n</b>
Logic/trigger	031-02001-XXX	J1	12	025-28384-000	025-28386-000
Logic/trigger	031-02001-XXX	J2 thru J4	2	-	025-19674-000
Logic/trigger	031-02001-XXX	J5 and J12	2	025-19672-000	025-20533-000
Logic/trigger	031-02001-XXX	J6 thru J11	2	025-21136-000	025-19674-000
Logic/trigger	031-00925-XXX	J1	12	-----	-----
Logic/trigger	031-00925-XXX	J2 thru J4	2	-----	-----
Logic/trigger	031-00925-XXX	J5 and J13	2	-----	-----
Logic/trigger	031-00925-XXX	J6 thru J11	2	-----	-----
Logic/trigger	031-00925-XXX	J12	4	-----	-----

<b>System Electrical Connections</b>		
<b>Application / location</b>	<b>Description</b>	<b>Part Number</b>
Shielded cable at sensor end	Two pin housing for temperature thermistors	025-28951-000
	Three pin housing for pressure transducers	025-28954-000
	Rubber collars to fit over wire insulation	025-28950-000
	Contact receptacles (metal terminals)	025-28952-000
Thermistor	Two pin housing for sensor end (supplied with thermistor)	025-28948-000
	Rubber collars to fit over wire insulation (supplied with thermistor)	025-28950-000
	Contact tabs (supplied with thermistor)	025-28949-000
	Alternate harness end connector assembly (old style thermistors)	025-29150-002
Transducer	Three pin housing for transducer (supplied with transducer)	025-28953-000
	Rubber collars to fit over wire insulation (supplied with transducer)	025-28950-000
	Contact tabs (metal terminals) (supplied with transducer)	025-28949-000
	Alternate harness end connector assembly (old style transducers)	025-29150-001

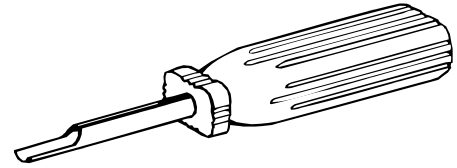
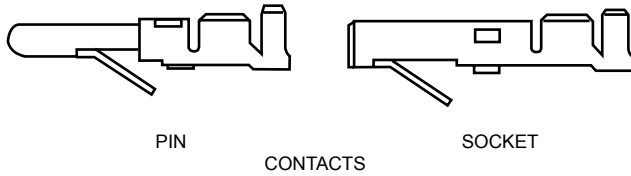
<b>Miscellaneous</b>	
2-conductor shielded cable*, gray cable with foil shield & drain wire 20 AWG - for thermistors	025-28701-002
3-conductor shielded cable*, gray cable with foil shield & drain wire 20 AWG - for transducers	025-28701-003
Insulated spring spade terminal for shielded cable drain wire connection to panel	025-19407-000
Insulated spring spade terminal AWG 16 - 14	025-18732-000
Un-insulated straight push-on connection terminal with insulation support clamp	025-06874-000
Copper ferrule splice cap for electrical connections	025-10372-000
Nylon electrical insulator for use with copper ferrule splice cap	025-10371-000
DIN plug for solenoid valve with suppressor	025-37876-000
DIN plug for solenoid valve without suppressor	025-34047-000
Diode Bridge	031-00210-000
Surge suppressor .250 VAC, 0.1 MFD, 100 ohm	031-00808-000
Varistor, metal oxide (MOV) 30 volt, 1.4 joules	031-01722-100
Varistor, metal oxide (MOV) 56 volt, 2.0 joules	031-00556-000
Varistor, metal oxide (MOV) 230 volt, 35 joules	031-01349-000
VSD SCR Trigger Board (031-01472-00X) J1 thru J3, Housing 025-19667-000	025-27974-000
VSD SCR Trigger Board (031-01472-00X) J4, Housing 025-19667-000	025-19673-000
VSD SCR Trigger Board (031-01472-00X) J5, Housing 025-19667-000	025-19673-000

\* Specify Required Cable Length in Feet When Ordering

<b>Crimping Tools</b>		
<b>Tool</b>	<b>Manufacturer</b>	<b>Part number</b>
Mini-Loc Crimping Tool	Tyco	91522-1 D 0409 022
Com. Mate-n-Loc	Tyco	91504-1 G 1104 065
Universal	Tyco	91500-1 K 0209 069

## Application & Extraction Hand Tools

029-22962-000



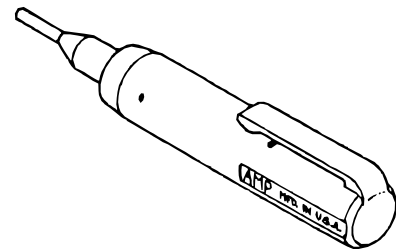
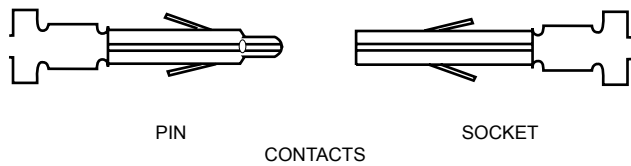
Use to extract metal pins and sockets from plastic housings of (Commercial Mate-N-Lok)

YORK Part No: **025-28952-000**

Description: Commercial Mate-N-Lok Removal Tool

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## Non - YORK Application & Extraction Hand Tools

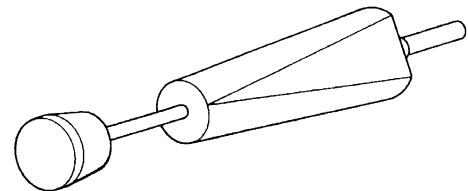
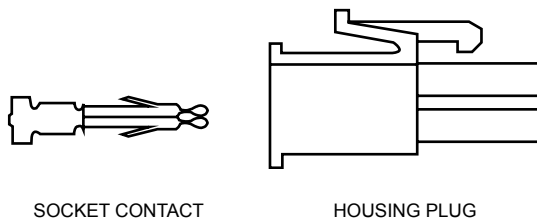


Use to extract metal pins and sockets from plastic housings of (Commercial Mate-N-Lok)

YORK Part No: **521-18453-000**

Description: Universal Mate-N-Lok Removal Tool

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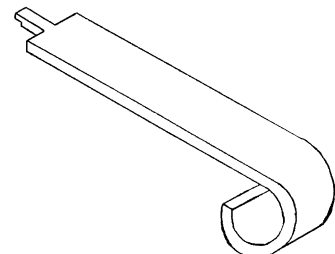
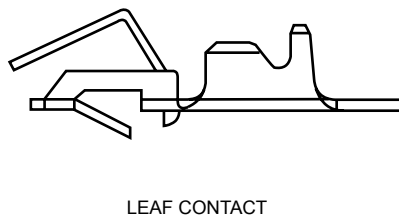


Use to extract metal pins and sockets from plastic housings of (Commercial Mate-N-Lok)

YORK Part No: **521-18454-000**

Description: Mini-Universal Mate-N-Lok Removal Tool

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Use to extract metal pins and sockets from plastic housings of (Commercial Mate-N-Lok)

YORK Part No: **521-18456-000**

Description: Bifurcated Leaf Contact Removal Tool



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