

Service Parts



Automatic Transfer Switches

Models:

SCT/SCP/SBT/SBP
SDP/SMP
SDT/SMT

Power Switching Device:
Open- and Programmed-Transition
30 to 4000 Amperes

Electrical Controls:
DXPower 1000

Table of Contents

Introduction	3
Nameplate	3
Model Designation Key	3
Numbering System Significance	3
Finding Part Numbers	3
Enclosure, Door, Logic, and Neutral Assembly Service Parts	3
Contactor Assembly Service Parts	4
Accessories	4
Leads	4
Hardware References	4
Transfer Switch Model Designation Key	5
Enclosures	
30-800 Amp, NEMA 1 and 3R	6
30-800 Amp, NEMA 12, 4, 4X	8
1000-1200 Amp and 1600 Amp Front-Mounted, NEMA 1	16
1200 Amp and 1600-2000 Amp Front-Mounted, NEMA 3R	18
1600-4000 Amp, NEMA 1	20
1600-4000 Amp, NEMA 3R	22
Bypass Isolation	24
Door, NEMA 1 and 3R	26
Logic	28
Transformers and Field Connection Block	30
Neutral Assembly	
30-400 Amp	32
600-1000 Amp	33
1200-4000 Amp	34
Contactor, Model SCT and SNT	
30-104 Amp	36
230 Amp	340
Contactor, Model SCP and SCT	
150-400 Amp (2-, 3-pole SCP)	42
225, 260, 400 Amp (SCT)	42
150-400 Amp (4-pole SCP)	46
600-1200 Amp (SCT)	46
1600-3000 Amp	50
4000 Amp	52
Contactor, Model SDT and SMT	
40-225 Amp	54
260-600 Amp	56
Contactor, Model SDP and SMP	
100-400 Amp	58
600 Amp	62
Literature	66
Accessories	66
Appendix A Abbreviations	73
Appendix B Common Hardware Application Guidelines	75
Appendix C General Torque Specifications	76
Appendix D Common Hardware Identification	77
Appendix E Common Hardware List	78

Introduction

This manual lists service parts for Model SCT/SCP/SBT/SBP/SDP/SMP/SDT/SMT automatic transfer switches with DXPower 1000™ electrical controls.

Information in this publication represents data available at the time of print. The manufacturer of DDC/MTU Power Generation products reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

Illustrations, photos, or exploded-view drawings accompany most groups in this catalog. The illustrations do not depict all details and may not show all parts. Do not use the illustrations for assembly or disassembly instructions.

The following sections provide instructions to help identify the transfer switch and locate service parts within this manual.

Nameplate

A nameplate attached to the controller cover on the inside of the enclosure door includes a model designation, a serial number, ratings, and other information about the transfer switch. See Figure 1.

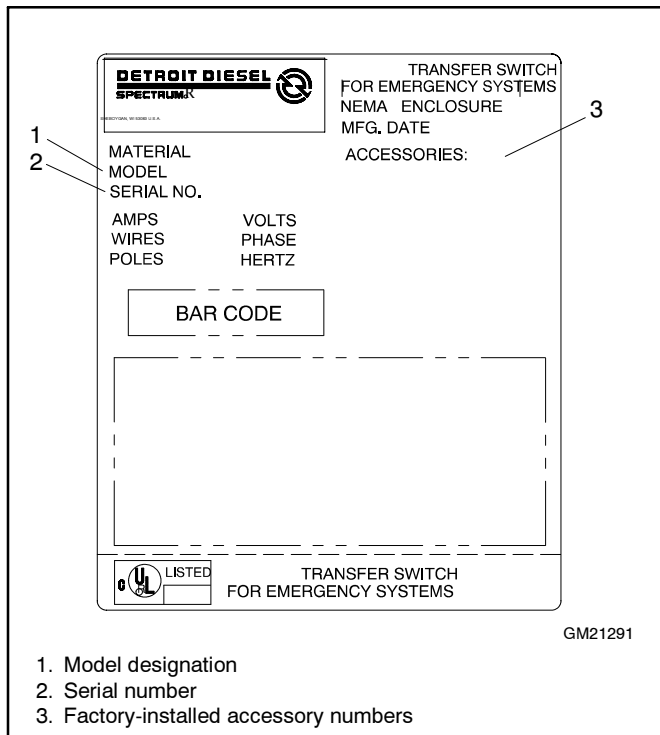


Figure 1 Typical Transfer Switch Nameplate

Model Designation Key

Copy the model designation into the spaces in Figure 2 on page 5 and use the accompanying chart to interpret the model designation.

Numbering System Significance

This manual uses the following numbering systems:

Model Designation. Defines the transfer switch characteristics and ratings as explained in the chart in Figure 2 on page 5 .

Module Number. A unique number representing a parts group needed to assemble a transfer switch function.

Part Number. The part number identifies an assembly, subassembly, component, or accessory kit.

Finding Part Numbers

Parts are listed by major assembly groups or accessory part numbers. Use the following sections to locate and identify transfer switch service parts.

Enclosure, Door, Logic, and Neutral Assembly Service Parts

1. **Find the section for the assembly group that contains the part.** Use the Table of Contents at the beginning of this manual to find the major assembly groups, if necessary.
2. **Locate the part in the illustration** and note the item number or find the part description in the parts list table.
3. **Find the corresponding item number in the parts list table** to determine the part number and quantity used. Find the quantity used at the intersection of the item number row and the module part number column. A blank space at the intersection means the module does not use that part number.

Some part numbers vary according to transfer switch characteristics or ratings. When there are multiple possibilities for parts, use the following steps to determine the module number.

1. **Locate the transfer switch model designation** on the nameplate and record the characters in the boxes on the bottom of the page.

2. **Look for the Module Number Key.** The first columns list the designations. The last column lists the module number.
3. Match the characters from the model designation to the line with the matching elements and read across to the last column **to find the module number.**
4. Locate the parts list table and select **the part number that corresponds to your module number.**

Contactor Assembly Service Parts

This manual lists the part numbers of common contactor service items. Serviceable items without part numbers in the parts lists are available by contacting your supplier of DDC/MTU parts.

1. **Locate the transfer switch model designation, serial number, and contactor serial number** on the nameplates and record the numbers in the boxes on the bottom of the page.
2. **Locate the part in the illustration** and note the item number or find the part description in the parts list table.
3. **Convey the information to your supplier** of DDC/MTU parts.

Accessories

Accessory parts lists are arranged alphabetically by the accessory description.

Determine the accessory number from the transfer switch nameplate.

Leads

Fabricate replacement leads using the same type of wire as the old leads. Add terminals and lead markers at each end of the new lead.

Hardware References

Many common hardware items do not appear in parts manuals or will appear as common hardware entries. A common hardware entry lists the size of the hardware. For example, an item that appears as "Hardware, 3/8-16" in the text means that the piece is 3/8-16 size. Obtain common hardware locally or, if contacting the factory, use the Common Hardware List in the appendix to identify the common hardware part number and specifications. See Common Hardware Application Guidelines in the appendix for mating hardware instructions.

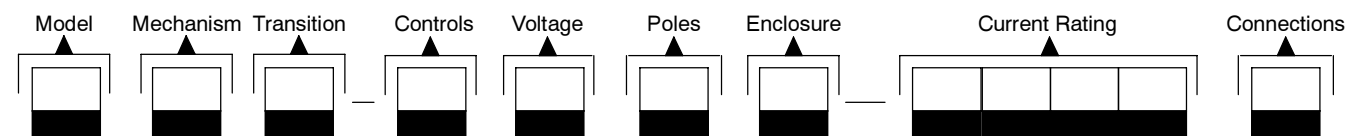
Some hardware items require a specific size or some other characteristic. In that case, use the part number listed in the text.

When replacing hardware, do not substitute inferior grade hardware. Replacement hardware grade should be equal to or better than the grade of the manufacturer's original hardware. Use the Common Hardware List in the appendix to identify the common hardware hardness.

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Transfer Switch Model Designation Key

Record the transfer switch model designation in the boxes below. The transfer switch model designation defines characteristics and ratings as indicated in the accompanying chart.



DDC/MTU Power Generation Model Designation Key

This chart translates the DDC/MTU Power Generation transfer switch model designation system. The sample model designation shown is for a Model S automatic transfer switch that uses an open-transition contactor with DXPower 1000™ electrical controls rated at 220 volts, 2 poles, 3 wires, and solid neutral in a NEMA type 3R enclosure with a current rating of 400 amperes. Not all possible combinations are available.

SAMPLE MODEL DESIGNATION

SCT-ADNC-0400 S

Model

S: Model S automatic transfer switch

Mechanism

C: Automatic
N: Non-automatic
D: Series-Rated, Automatic
B: Bypass isolation
M: Series-Rated, Non-Automatic

Transition

T: Open-Transition
P: Programmed-Transition

Electrical Controls

A: DXPower 1000™ (Digital Logic Transfer Switch Controls)

Voltage/Frequency

C: 208 Volts/60 Hz	G: 380 Volts/50 Hz	K: 440 Volts/60 Hz
D: 220 Volts/50 Hz	H: 400 Volts/50 Hz	M: 480 Volts/60 Hz
F: 240 Volts/60 Hz	J: 416 Volts/50 Hz	N: 600 Volts/60 Hz

Number of Poles/Wires

N: 2-pole, 3-wire, solid neutral	W: 4-pole, 4-wire, overlapping neutral
T: 3-pole, 4-wire, solid neutral	Z: 3-pole, 4-wire, integral solid neutral
V: 4-pole, 4-wire, switched neutral	

Enclosure

A: NEMA type 1*	C: NEMA type 3R†	F: NEMA 4X†
B: NEMA type 12†	D: NEMA 4†	G: Open unit

* Standard on 30-4000 A models

† Available to order on 30-800 A models. For larger units, consult factory for availability.

Current Rating: Numbers indicate the current rating of the switch in amperes:

0030	0225	0800	2000
0070	0260	1000	2600
0104	0400	1200	3000
0150	0600	1600	4000

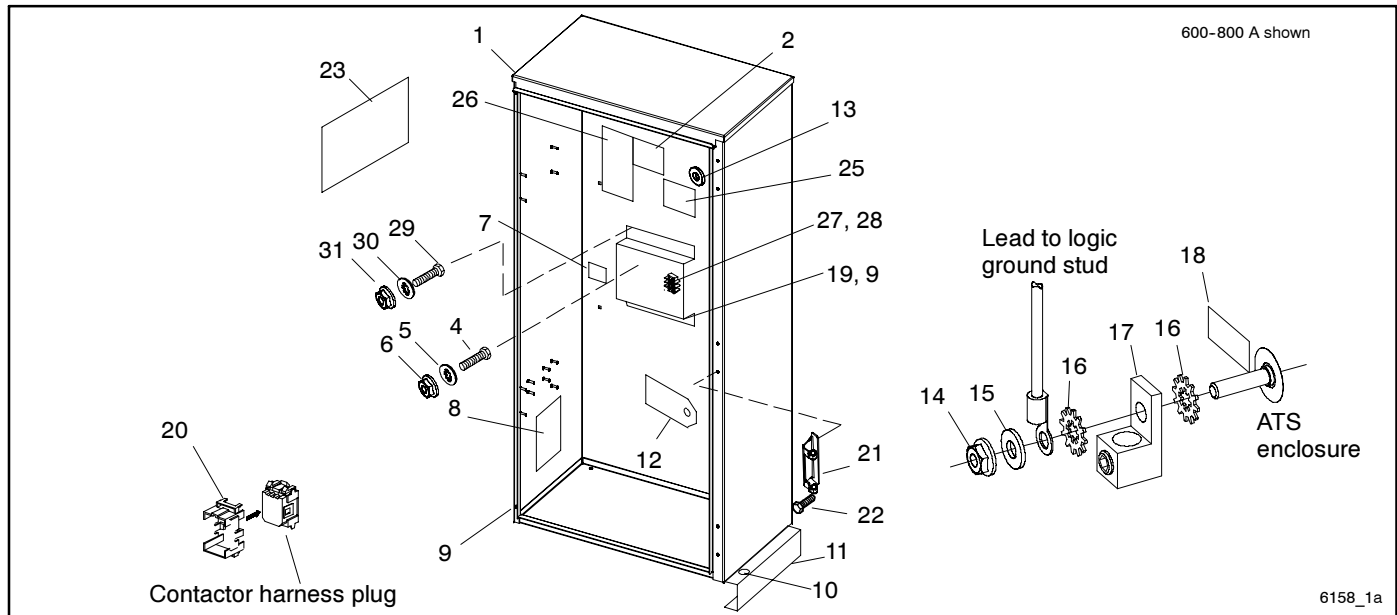
Power Connections

S: Standard
F: Front bus (available on 1600 and 2000 A models only)

Figure 2 Transfer Switch Model Designation

Enclosures, 30-800 Amp

NEMA 1 and 3R



Item	Part Number	Description	Quantity						
			Module						
			GM21066-KA1	GM21066-KA2	GM33092-KA1	GM21067-KA1	GM29500-KA1	GM29499-KA1	GM29900-KA1
1	GM20159	Enclosure, ATS small, 30-150 A	1	1			1		
1	GM20160	Enclosure, ATS medium, 225-400 A			1	1	1	1	1
2	294414	Decal, notice cover transfer switch	1	1	1	1	1	1	1
4	295023	Bolt, 1/4-20 x 3 in.				4			
4	295008	Bolt, 1/4-20 x 1 in.			4		4		
4	X-6224-17	Bolt, 1/2-13 x 2.25 in.						3	
4	X-125-3	Bolt, hex head							3
5	295009	Retainer			4	4	4		
5	295010	Retainer						3	
5	320829	Insert, threaded, 5/16-18 in.							3
5	X-25-40	Washer, plain, .281 ID x .625 in. OD			4	4	4		
6	X-6210-2	Nut, flange spirallock, 1/4-20	4	4	4	4	4	3	
7	GM22492	Decal, engine start terminals	1	1	1				
7	GM22493	Decal, engine start terminals				1			1
7	362113	Decal, engine start terminals					1	1	1
8	297556	Decal, torque	1	1	1	1	1	1	1
9	320828	Insert, threaded, 1/4-20 in.	2	2	2	2	2	2	2
12	See logic section	Tag, hang (before reconnecting plug)	1	1		1			
13	GM20990	Gasket	4	4	4	4	4	4	4
14	X-6210-2	Nut, flange spirallock, 1/4-20	1	1	1	1			1
15	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1	1	1			1
16	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2	2	2	2	2	2
17	X-6207-3	Lug, terminal, aluminum	1	1	1	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1	1	1	1
19	GM29981	Panel, contactor mtg.							1
20	321330	Boot, connector					1	1	
21	GM20572-1	Hinge, ATS enclosure	2	2	3	3	2	3	3
22	X-50-1	Screw, slotted pan head machine	4	4	6	6	4	6	6
23	GM22555	Decal, manual operating handle		1					
24	GM24703	Label, blank (not shown)			1	1		1	1
25	GM32650	Decal, ATS rating						1	
25	GM32651	Decal, ATS rating							1
26	GM32989	Decal, ATS connection						1	1
27	X-405-2	Terminal block						1	1
28	X-67-152	Screw, tapping						2	2
29	295008	Bolt, 1/4-20 x 1 in.						4	4
30	295009	Retainer						4	4
31	X-6210-2	X-6210-2						4	4

Enclosures, 30-800 Amp

NEMA 1 and 3R

Item	Part Number	Description	Quantity			
			Module Number			
			GM21068-KA1	GM29494-KA1	GM28762-KA1	GM29903-KA1
1	GM20161	Enclosure, ATS large, 600-800 A	1			
1	GM28761	Enclosure, ATS		1	1	
1	GM30114	Enclosure, ATS				1
2	294414	Decal, notice cover transfer switch	1	1	1	1
4	X-6224-2	Bolt, 3/8-16 x 1.5 in.	4			
4	295008	Bolt, 1/4-20 x 1 in.		4		
4	X-6224-16	Bolt, carriage			4	
4	X-127-17	Bolt, hex head				4
5	295025	Retainer	4			
5	295009	Retainer		4	4	
5	X-25-26	Washer, plain, .531 ID x 1.062 in. OD				4
6	X-6210-9	Nut, flange spirallock, 3/8-16	4			
6	X-6210-2	Nut, flange spirallock, 1/4-20 (contactor to mounting panel)			4	
6	320832	Insert, threaded, 1/2-13 in.				4
7	362113	Decal, engine start terminals				1
8	297556	Decal, torque	1	1	1	1
9	320828	Insert, threaded, 1/4-20 in.	2	2	2	2
10	320831	Insert, threaded, 3/8-16 in.	4	4	4	4
11	GM21120	Channel, base	2	2	2	2
12	See logic section	Tag, hang (before reconnecting plug)	1	1	1	1
14	X-6210-2	Nut, flange spirallock, 1/4-20	1		1	1
15	X-25-40	Washer, plain, .281 ID x .625 in. OD	1		1	1
16	X-22-12	Washer, lock, .262 ID x .743 in. OD	1	2	2	2
17	X-6207-3	Lug, terminal, aluminum	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1
19	GM29986	Panel, contactor mounting				1
19	GM29495	Panel, contactor mounting		1		
20	321330	Boot, connector		1		
21	GM20572-1	Hinge, ATS enclosure	3	3	3	3
22	X-50-1	Screw, slotted pan head machine	6	6	6	6
23	GM24703	Label, blank (not shown)	1	1	1	2
25	GM32651	Decal, ATS rating				1
26	GM32989	Decal, ATS connection				1
27	X-405-2	Terminal block				1
28	X-67-152	Screw, tapping				2
29	X-6224-5	Bolt, 3/8-16 x 1 in.				4
30	295025	Retainer				4
31	X-6210-9	X-6210-2				4

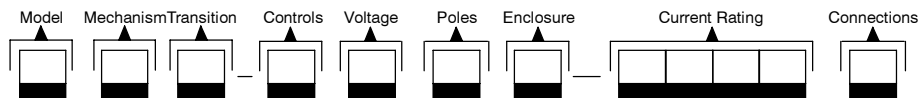
Enclosures, 30-800 Amp, NEMA 1 and 3R

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	C	T	A	all	N, T, V, W, Z	A, C	30-200	GM21066-KA1
S	C	T	A	all	N, T, V, W, Z	A, C	225, 260, 400	GM21067-KA1
S	C, N	T	A	N	N, T, V, W, Z	A, C	230	GM21067-KA1
S	C, N	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	A, C	230	GM33092-KA1
S	C, N	T, P	A	all	N, T, V, W, Z	A, C	600-1000	GM21068-KA1
S	C	P	A	all	V, W, Z	A, C	150-400	GM21068-KA1
S	C	P	A	all	N, T	A, C	150-400	GM28762-KA1
S	D, M	T	A	all	N, T, V	A, C	40-225	GM29500-KA1
S	D, M	T	A	all	N, T, V	A, C	260-400	GM29499-KA1
S	D, M	T	A	all	N, T, V	A, C	600	GM29494-KA1
S	N	T	A	all	N, T, V, W, Z	A	30-200	GM21066-KA2
S	D, M	P	A	all	N, T, V	A	100/200	GM29900-KA1
S	D, M	P	A	all	N, T, V	A	400	GM29902-KA1
S	D, M	P	A	all	N, T, V	A	600	GM29903-KA1

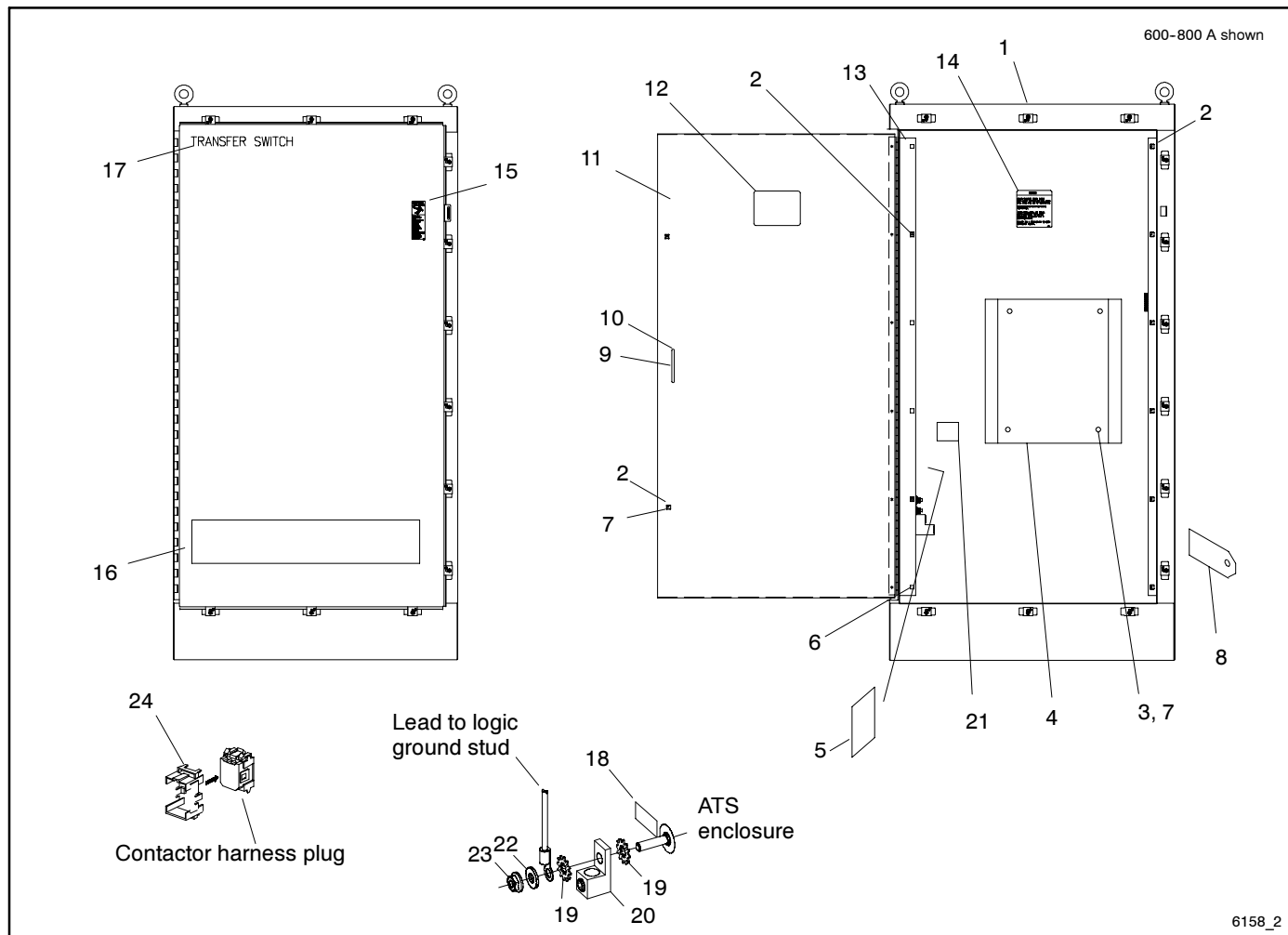
Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X

Item	Part Number	Description	Quantity						
			Module						
			GM22396-KA1S	GM22396-KA2S	GM22396-KA3S	GM29692-KA1S	GM29692-KA2S	GM29692-KA3S	GM33093-KA1S
1	GM21058	Enclosure, 30-150 A, NEMA 12	1						
1	GM21059	Enclosure, 30-150 A, NEMA 4		1		1			
1	GM21060	Enclosure, 30-150 A, NEMA 4X			1		1		
1	GM21063	Enclosure, 230 A, NEMA 4							1
1	GM21063	Enclosure, 230 A, NEMA 4X							1
1	GM21061	Enclosure, 230 A, NEMA 12							
2	X-6204-1	Retainer, nut	8	8	8	8	8	8	8
3	295023	Bolt, 1/4-20 x 3 in.							
4	GM33091	Panel, ATS mounting							1
5	297556	Decal, torque	1	1	1	1	1	1	1
6	X-791-2	Screw, slotted hex washer head	8	8	8	8	8	8	8
7	295009	Retainer	2	2	2	2	2	2	2
8	See logic section	Tag, hang (before reconnect. plug)	1	1	1	1	1	1	1
9	GM14177	Handle	1	1	1	1	1	1	1
10	X-50-6	Screw, slotted pan head machine	2	2	2	2	2	2	2
11	GM22392	Door	1	1	1	1	1		
11	GM22393	Door							1
12	297721	Decal, warning, more than one live circuit	1	1	1	1	1	1	1
13	GM22390	Rail, mounting	2	2	2	2	2		
13	GM22391	Rail, mounting							2
14	294414	Decal, notice cover transfer switch	1	1	1	1	1	1	1
15	362176	Decal, danger	1	1	1	1	1	1	1
16	GM23477-2	Decal, DDC/MTU logo	1	1	1	1	1	1	1
17	X-6303-3	Decal, Transfer Switch	1	1	1	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1	1	1	1
19	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2	2	2	2	2	2
20	X-6207-3	Lug, terminal, aluminum	1	1	1	1	1	1	1
21	GM22492	Decal, engine start terminals	1	1	1				1
21	GM22493	Decal, engine start terminals							1
21	362113	Decal, engine start terminals				1	1	1	
22	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1	1	1	1	1	
23	X-6210-2	Nut, flange spiralock, 1/4-20	1	1	1	1	1	1	
24	321330	Boot, connector				1	1	1	
25	GM24703	Label, blank (not shown)	1	1	1				1

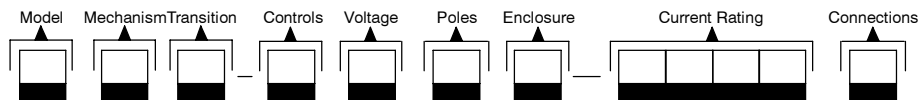
Enclosures, 30-800 Amp, NEMA 12, 4, 4X

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	C	T	A	all	N, T, V, W, Z	B	30-200	GM22396-KA1S
S	C	T	A	all	N, T, V, W, Z	D	30-200	GM22396-KA2S
S	C	T	A	all	N, T, V, W, Z	F	30-200	GM22396-KA3S
S	C	T	A	N	N, T, V, W, Z	B	230	GM22397-KA1S
S	C	T	A	N	N, T, V, W, Z	D	230	GM22397-KA2S
S	C	T	A	N	N, T, V, W, Z	F	230	GM22397-KA3S
S	D, M	T	A	all	N, T, V	D	40-225	GM29692-KA1S
S	D, M	T	A	all	N, T, V	F	40-225	GM29692-KA2S
S	D, M	T	A	all	N, T, V	B	40-225	GM29692-KA3S
S	C	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	D	230	GM33093-KA1S
S	C	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	F	230	GM33093-KA2S
S	C	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	B	230	GM33093-KA3S

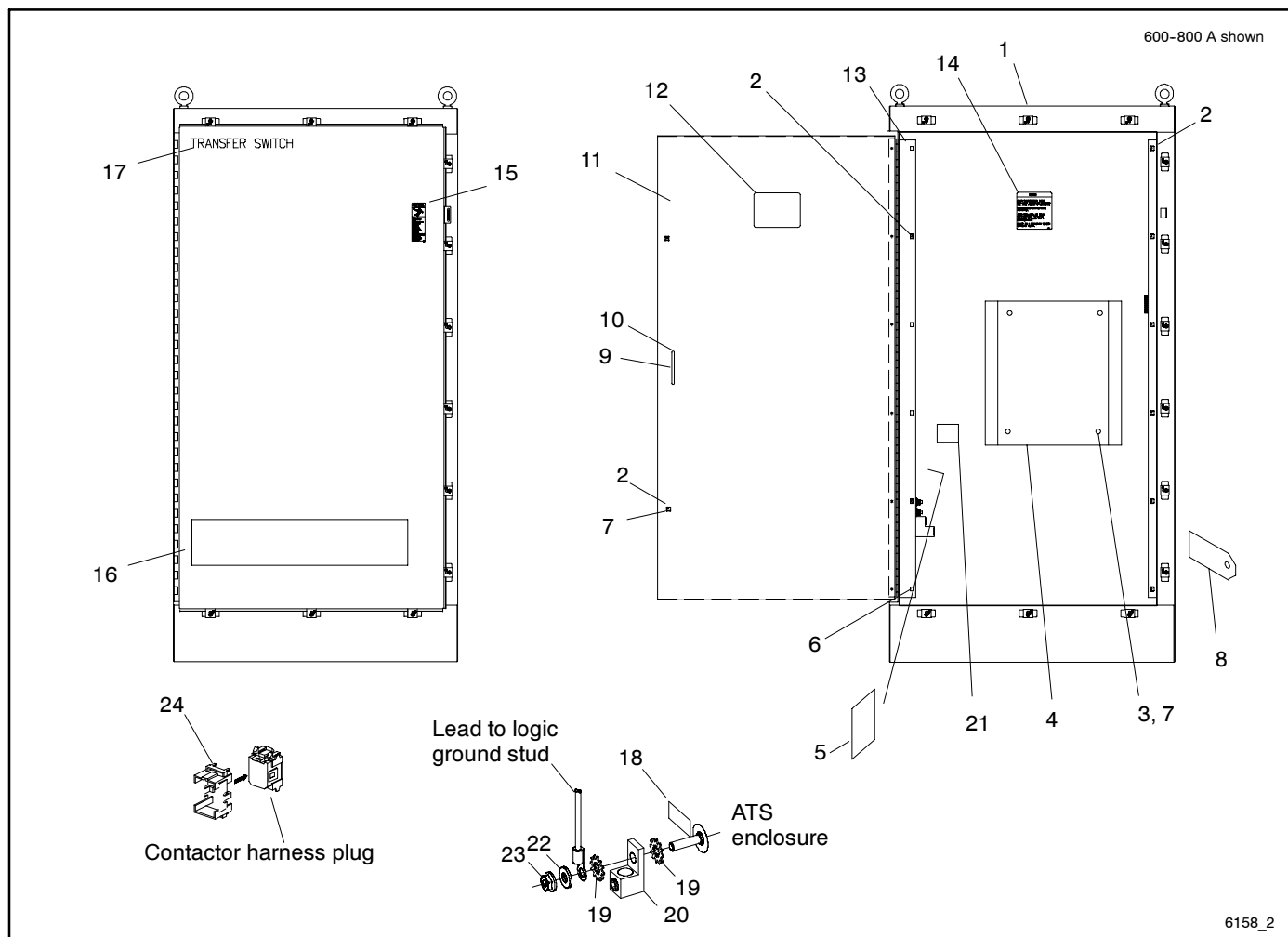
Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X, continued



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X, continued

Item	Part Number	Description	Quantity										
			Module										
			GM22397-KA1S	GM22397-KA2S	GM22397-KA3S	GM22706-KA1S	GM22706-KA2S	GM29693-KA1S	GM29693-KA2S	GM29693-KA3S	GM29694-KA1S	GM29694-KA2S	GM29694-KA3S
1	GM21062	Enclosure, 225-400 A, NEMA 4X			1			1	1				
1	GM21063	Enclosure, 225-400 A, NEMA 4		1				1					
1	GM21061	Enclosure, NEMA 12	1							1			
1	GM22720	Enclosure, NEMA 12				1							
1	GM22721	Enclosure, NEMA 4					1						
1	GM28833	Enclosure, NEMA 4									1		
1	GM28834	Enclosure, NEMA 4X										1	
1	GM28835	Enclosure, NEMA 12											1
2	X-6204-1	Retainer, nut	8	8	8	8	8	8	8	8	8	8	8
3	295023	Bolt, 1/4-20 x 3 in.	4	4	4								
3	295080	Bolt, 1/4-20 x 1 in.						4	4	4			
4	GM22399	Panel, ATS mounting	1	1	1			1	1	1			
4	GM29495	Plate, contactor mounting									1	1	1
5	297556	Decal, torque	1	1	1	1	1	1	1	1	1	1	1
6	X-791-2	Screw, slotted hex washer head	8	8	8	8	8	8	8	8	8	8	8
7	295009	Retainer	6	6	6	2	2	2	2	2	2	2	2
8	See logic section	Tag, hang (before reconnect. plug)	1	1	1	1	1	1	1	1			
9	GM14177	Handle	1	1	1	1	1	1	1	1	1	1	1
10	X-50-6	Screw, slotted pan head machine	2	2	2	2	2	2	2	2	2	2	2
11	GM22393	Door	1	1	1			1	1	1	1	1	1
11	GM22733	Door				1	1						
12	297721	Decal, warning, more than one live circuit	1	1	1	1	1	1	1	1	1	1	1
13	GM22391	Rail, mounting	2	2	2			2	2	2	2	2	2
13	GM22734	Rail, mounting				2	2						
14	294414	Decal, notice cover transfer switch	1	1	1	1	1	1	1	1	1	1	1
15	362176	Decal, danger	1	1	1	1	1	1	1	1	1	1	1
16	GM23477-5	Decal, DDC/MTU logo				1	1						
16	GM23477-2	Decal, DDC/MTU logo	1	1	1			1	1	1	1	1	1
17	X-6301-1	Decal, Transfer Switch				1	1						
17	X-6303-3	Decal, Transfer Switch	1	1	1			1	1	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1	1	1	1	1	1	1	1
19	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2	2	2	2	2	2	2	2	2	2
20	X-6207-3	Lug, terminal, aluminum	1	1	1	1	1	1	1	1	1	1	1
21	GM22493	Decal, engine start terminals	1	1	1								
21	362113	Decal, engine start terminals						1	1	1	1	1	1
22	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1	1	1	1	1	1	1	1	1	1
23	X-6210-2	Nut, flange spirallock, 1/4-20	1	1	1	1	1	1	1	1	1	1	1
24	321330	Boot, connector						1	1	1	1	1	1
25	GM24703	Label, blank (not shown)	1	1	1	1	1	1	1	1	1	1	1

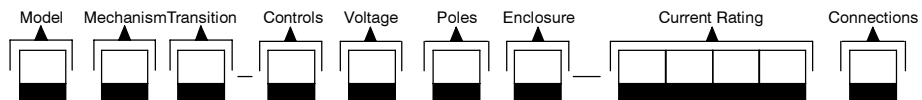
Enclosures, 30-800 Amp, NEMA 12, 4, 4X

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	C	T	A	all	N, T, V, W, Z	B	225, 260, 400	GM22397-KA1S
S	C	T	A	all	N, T, V, W, Z	D	225, 260, 400	GM22397-KA2S
S	C	T	A	all	N, T, V, W, Z	F	225, 260, 400	GM22397-KA3S
S	C	T, P	A	all	N, T, V, W, Z	B	600-1000	GM22706-KA1S
S	C	T, P	A	all	N, T, V, W, Z	D	600-1000	GM22706-KA2S
S	C	P	A	all	V, W, Z	B	150-400	GM22706-KA1S
S	C	P	A	all	V, W, Z	D	150-400	GM22706-KA2S
S	D, M	T	A	all	N, T, V	D	260-400	GM29693-KA1S
S	D, M	T	A	all	N, T, V	F	260-400	GM29693-KA2S
S	D, M	T	A	all	N, T, V	B	260-400	GM29693-KA3S
S	D, M	T	A	all	N, T, V	D	600	GM29694-KA1S
S	D, M	T	A	all	N, T, V	F	600	GM29694-KA2S
S	D, M	T	A	all	N, T, V	B	600	GM29694-KA3S

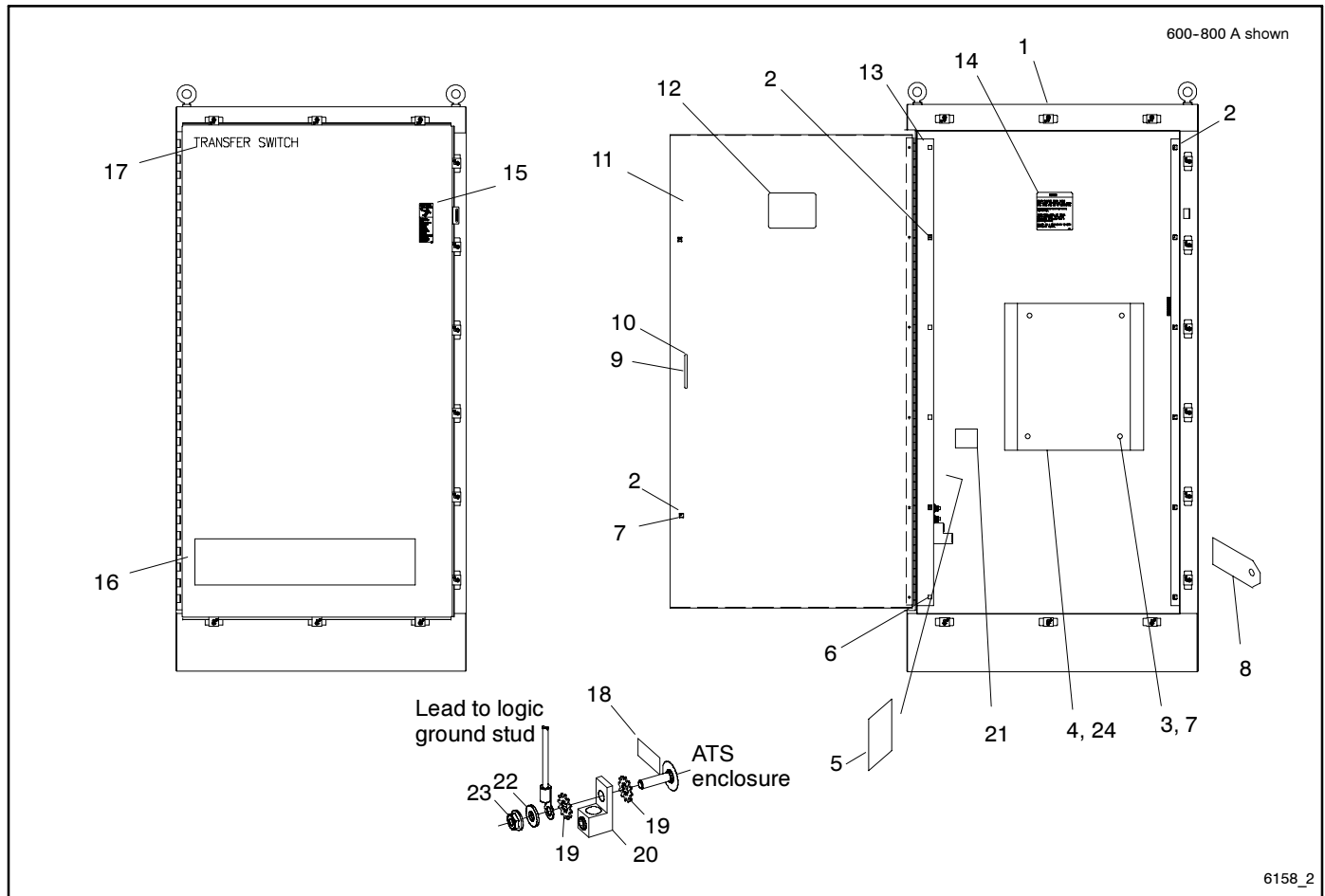
Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X, continued



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X, continued

Item	Part Number	Description	Quantity			
			Module Number			
			GM22706-KA3S	GM28836-KA1S	GM28836-KA2S	GM28836-KA3S
1	GM22721	Enclosure, NEMA 4X	1			
1	GM33862	Enclosure, NEMA 12		1		
1	GM33860	Enclosure, NEMA 4			1	
1	GM33861	Enclosure, NEMA 4X				1
2	X-6204-1	Retainer, nut	8	8	8	8
5	297556	Decal, torque	1	1	1	1
6	X-791-2	Screw, slotted hex washer head	8	8	8	8
7	295009	Retainer	2	2	2	2
8	See logic section	Tag, hang (before reconnect. plug)	1			
9	GM14177	Handle	1	1	1	1
10	X-50-6	Screw, slotted pan head machine	2	2	2	2
11	GM22733	Door	1			
11	GM33114	Door		1	1	1
12	297721	Decal, warning	1	1	1	1
13	GM22734	Rail, mounting	2			
13	GM33116	Rail, mounting		2	2	2
14	294414	Decal, notice cover transfer switch	1	1	1	1
15	362176	Decal, danger	1	1	1	1
16	GM23477-5	Decal, DDC/MTU logo	1			
16	GM23477-2	Decal, DDC/MTU logo		1	1	1
17	X-6303-3	Decal, Transfer Switch	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1
19	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2	2	2
20	X-6207-3	Lug, terminal, aluminum	1	1	1	1
22	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1	1	1
23	X-6210-2	Nut, flange spirallock, 1/4-20	1	1	1	1
25	GM24703	Label, blank (not shown)	1	1	1	1

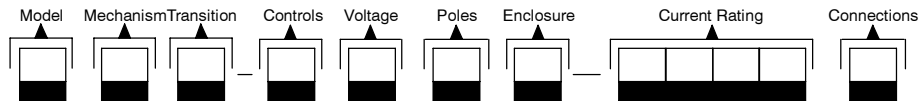
Enclosures, 30-800 Amp, NEMA 12, 4, 4X

Module Number Key

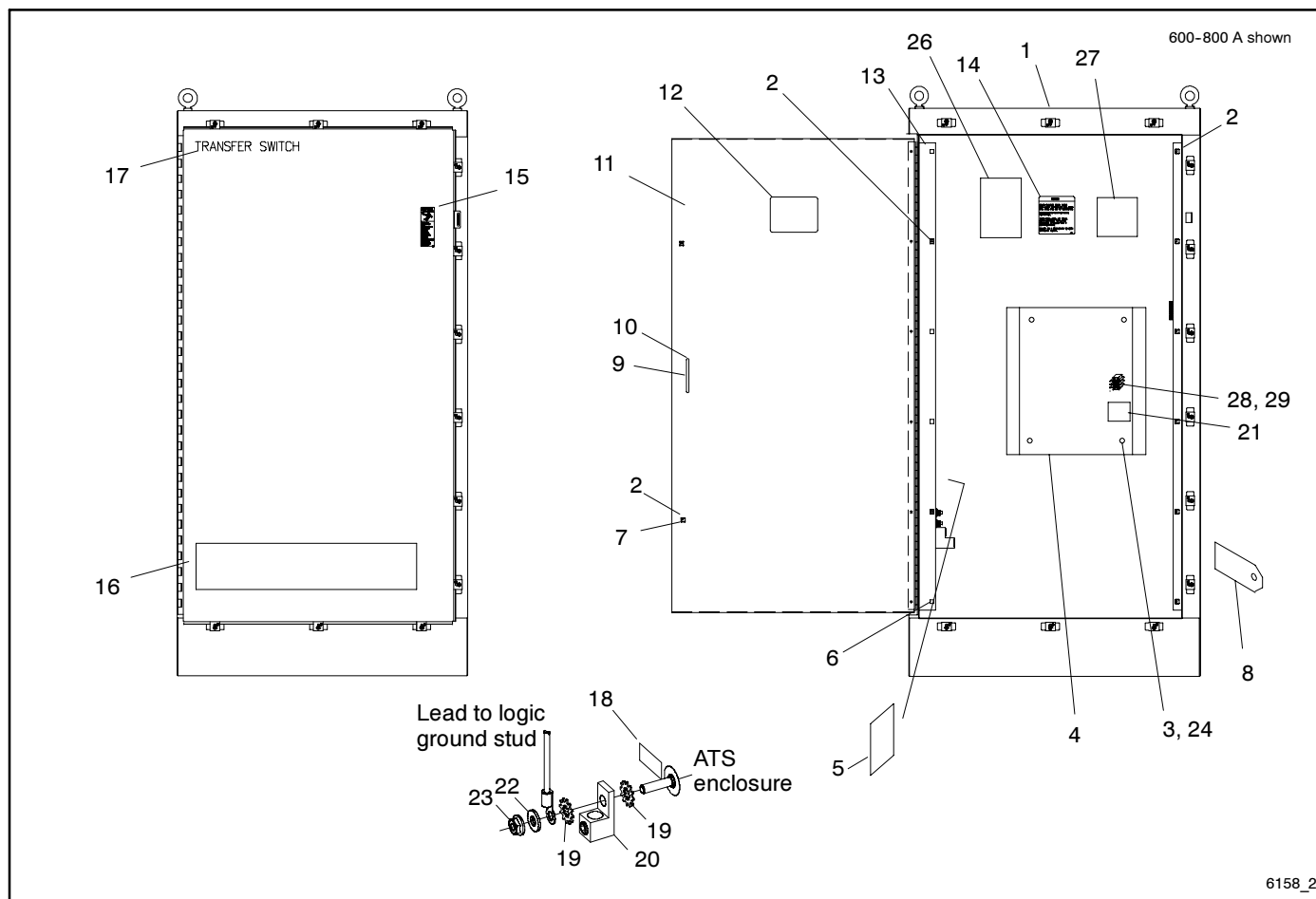
Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T	A	all	N, T, V, W, Z	B	30-200	S	GM22396-KA1S
S	C	T	A	all	N, T, V, W, Z	D	30-200	S	GM22396-KA2S
S	C	T	A	all	N, T, V, W, Z	F	30-200	S	GM22396-KA3S
S	D, M	T	A	all	N, T, V	D	40-225	S	GM29692-KA1S
S		T	A	all	N, T, V	F	40-225	S	GM29692-KA2S
S		T	A	all	N, T, V	B	40-225	S	GM29692-KA3S
S		T	A	all	N, T, V, W, Z	B	225-400	S	GM22397-KA1S
S	C	T	A	all	N, T, V, W, Z	D	225-400	S	GM22397-KA2S
S	C	T	A	all	N, T, V, W, Z	F	225-400	S	GM22397-KA3S
S	C	T, P	A	all	N, T, V, W, Z	B	600-1000	S	GM22706-KA1S
S	C	T, P	A	all	N, T, V, W, Z	D	600-1000	S	GM22706-KA2S
S	C	T, P	A	all	N, T, V, W, Z	F	600-1000	S	GM22706-KA3S
S	C	P	A	all	V, W, Z	B	150-400	S	GM22706-KA1S
S	C	P	A	all	V, W, Z	D	150-400	S	GM22706-KA2S
S	C	P	A	all	V, W, Z	F	150-400	S	GM22706-KA3S
S	C	P	A	all	N, T	B	150-400	S	GM28836-KA1S
S	C	P	A	all	N, T	D	150-400	S	GM28836-KA2S
S	C	P	A	all	N, T	F	150-400	S	GM28836-KA3S
S	D, M	T	A	all	N, T, V	D	260-400	S	GM29693-KA1S
S		T	A	all	N, T, V	F	260-400	S	GM29693-KA2S
S		T	A	all	N, T, V	B	260-400	S	GM29693-KA3S
S	D, M	T	A	all	N, T, V	D	600	S	GM29694-KA1S
S	D, M	T	A	all	N, T, V	F	600	S	GM29694-KA2S
S	D, M	T	A	all	N, T, V	B	600	S	GM29694-KA3S

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



NEMA 12, 4, 4X, continued



Enclosures, 30-800 Amp, continued

NEMA 12, 4, 4X, continued

Item	Part Number	Description	Quantity								
			Module								
			GM30082-KA1S	GM30082-KA2S	GM30082-KA3S	GM30083-KA1S	GM30083-KA2S	GM30083-KA3S	GM30084-KA1S	GM30084-KA2S	GM30084-KA3S
1	GM21062	Enclosure, 225-400 A, NEMA 4X		1			1				
1	GM21063	Enclosure, 225-400 A, NEMA 4	1			1					
1	GM21061	Enclosure, NEMA 12			1			1			
1	GM32549	Enclosure, NEMA 4							1		
1	GM32550	Enclosure, NEMA 4X								1	
1	GM32551	Enclosure, NEMA 12									1
2	X-6204-1	Retainer, nut	8	8	8	8	8	8	8	8	8
3	X-6224-17	Bolt, 1/4-20 x 3 in.	3	3	3						
3	X-125-3	Bolt, hex cap				3	3	3			
3	X-129-17	Bolt, hex cap							4	4	4
4	GM29986	Plate, contactor mounting							1	1	1
4	GM30535	Plate, contactor mounting	1	1	1	1	1	1			
5	297556	Decal, torque	1	1	1	1	1	1	1	1	1
6	X-791-2	Screw, slotted hex washer head	2	2	2	2	2	2	2	2	2
7	295009	Retainer	2	2	2	2	2	2	2	2	2
8	See logic section	Tag, hang (before reconnect. plug)	1	1	1	1	1	1	1	1	1
9	GM14177	Handle	1	1	1	1	1	1	1	1	1
10	X-50-6	Screw, slotted pan head machine	2	2	2	2	2	2	2	2	2
11	GM22393	Door, ATS inner	1	1	1	1	1	1			
11	GM33114	Door, ATS inner							1	1	1
12	297721	Decal, warning, more than one live circuit	1	1	1	1	1	1	1	1	1
13	GM22391	Rail, mounting	2	2	2	2	2	2			
13	GM33116	Rail, mounting							2	2	2
14	294414	Decal, notice cover transfer switch	1	1	1	1	1	1	1	1	1
15	362176	Decal, danger	1	1	1	1	1	1	1	1	1
16	GM23477-2	Decal, DDC/MTU	1	1	1	1	1	1	1	1	1
17	X-6303-3	Decal, transfer switch, DDC/MTU	1	1	1	1	1	1	1	1	1
18	344295	Decal, equipment ground	1	1	1	1	1	1	1	1	1
19	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2	2	2	2	2	2	2	2
20	X-6207-3	Lug, terminal, aluminum	1	1	1	1	1	1	1	1	1
21	362113	Decal, engine start terminals	1	1	1	1	1	1	1	1	1
22	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1	1	1	1	1	1	1	1
23	X-6210-2	Nut, flange spiralock, 1/4-20	1	1	1	1	1	1	1	1	1
24	295010	Retainer	3	3	3						
24	320829	Insert, threaded, 5/16-18 in.				3	3	3			
24	320832	Insert, threaded, 1/2-13 in.							4	4	4
25	GM24703	Label, blank (not shown)	1	1	1	1	1	1	1	1	1
26	GM32650	Decal, ATS rating	1	1	1						
26	GM32651	Decal, ATS rating				1	1	1	1	1	1
27	GM32989	Decal, ATS connection	1	1	1	1	1	1	1	1	1
28	X-405-2	Terminal strip	1	1	1	1	1	1	1	1	1
29	X-67-152	Screw, tapping	2	2	2	2	2	2	2	2	2

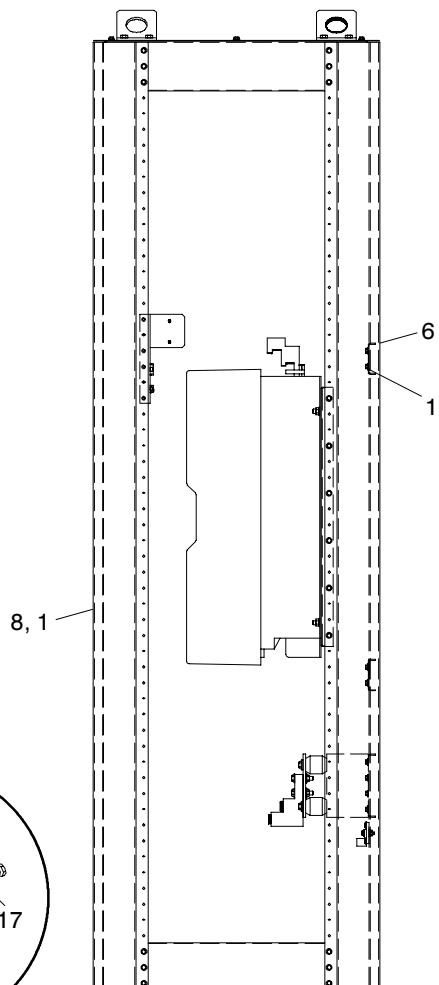
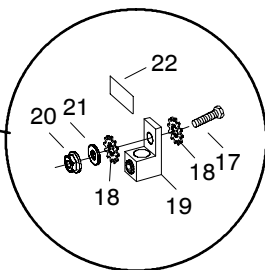
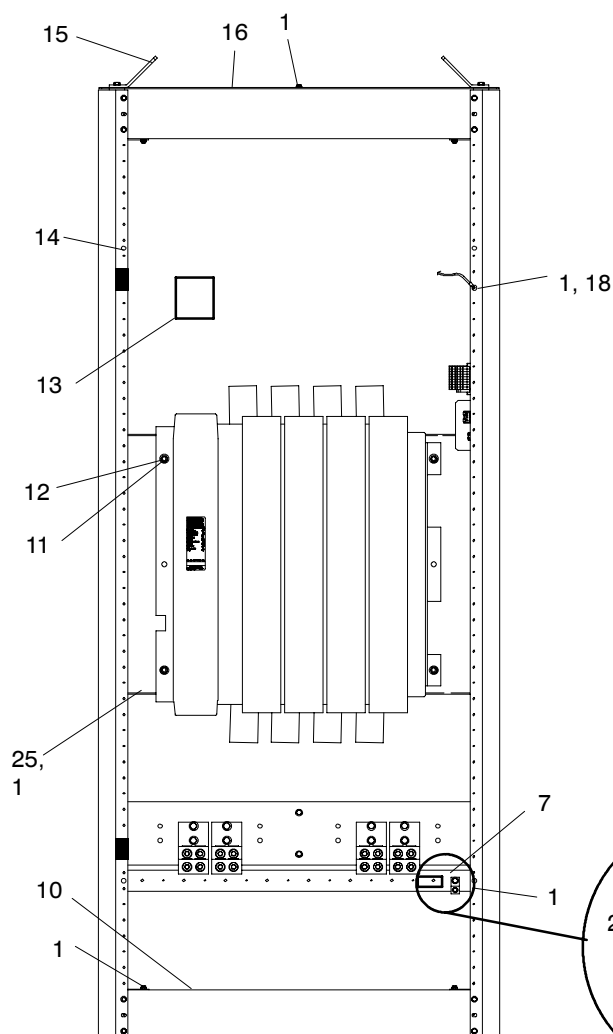
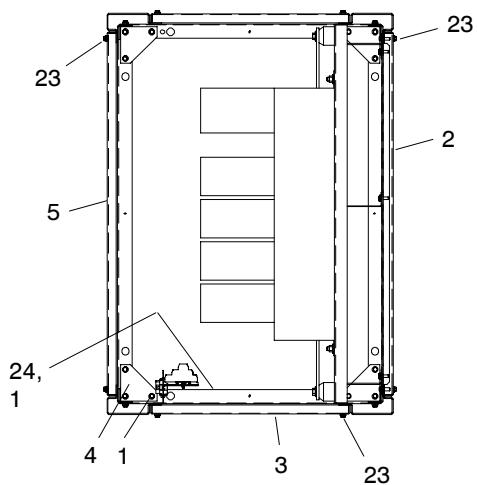
Enclosures, 30-800 Amp, NEMA 12, 4, 4X

Module Number Key

Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	D, M	P	A	all	N, T, V	B	100/200	S	GM30082-KA1S
S	D, M	P	A	all	N, T, V	D	100/200	S	GM30082-KA2S
S	D, M	P	A	all	N, T, V	F	100/200	S	GM30082-KA3S
S	D, M	P	A	all	N, T, V	B	400	S	GM30083-KA1S
S	D, M	P	A	all	N, T, V	D	400	S	GM30083-KA2S
S	D, M	P	A	all	N, T, V	F	400	S	GM30083-KA3S
S	D, M	P	A	all	N, T, V	B	600	S	GM30084-KA1S
S	D, M	P	A	all	N, T, V	D	600	S	GM30084-KA2S
S	D, M	P	A	all	N, T, V	F	600	S	GM30084-KA3S

Enclosures, 1000-1200 Amp and 1600 Amp Front-Mounted NEMA 1

1000 A Shown



6158_3

Enclosures, 1000-1200 A and 1600 Amp Front-Mounted

NEMA 1

Item	Part Number	Description	Quantity	
			Module Number	
			GM21072-KA1	GM21298-KA1
1	X-67-114	Screw, hex washer, thread-forming	152	152
2	GM14052	Panel, back	3	3
3	GM14050	Panel, side	2	2
4	GM12568	Bracket, corner	8	8
5	GM20949	Panel, front	2	2
6	GM14049	Channel, back closure	2	2
7	GM14057	Bus, ground	1	1
8	GM12561	Channel, corner	4	4
10	GM14044	Channel, top and bottom	4	4
11	X-6210-9	Nut, flange spirallock, 3/8-16	4	4
12	X-25-37	Washer, plain, .406 ID x .812 in. OD	4	4
13	294414	Decal, notice cover transfer switch	1	1
14	320828	Insert, threaded, 1/4-20 in.	2	2
15	GM12595	Bracket, lifting	4	4
16	GM14039	Panel, top	1	1
17	X-465-8	Bolt hex cap	1	
17	X-6238-4	Bolt, hex cap		1
18	X-22-12	Washer, lock, .262 ID x .743 in. OD	6	5
19	X-6207-5	Lug, terminal, aluminum		1
19	X-6207-7	Lug, terminal, aluminum	1	
20	X-6210-2	Nut, flange spirallock, 1/4-20	1	
20	X-83-7	Nut, hex, 3/8-16, zinc		1
21	X-25-118	Washer, plain, .406 ID x 1 in. OD		2
21	X-6086-6	Washer, spring, .39 ID x .81 in. OD		1
22	344295	Decal, equipment ground	1	1
23	X-67-148	Screw, hex washer, thread-forming	44	44
24	GM14046	Channel, top and bottom	4	4
25	GM20951	Panel, contactor mounting	1	
25	GM21319	Panel, contactor mounting		1
26	GM24703	Label, blank (not shown)	1	1

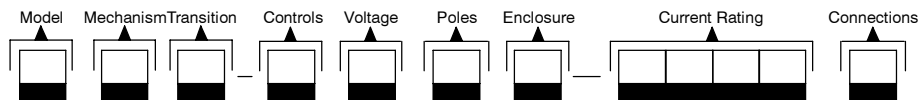
Enclosures, 1000-1200 Amp and 1600 Amp Front-Mounted

Module Number Key

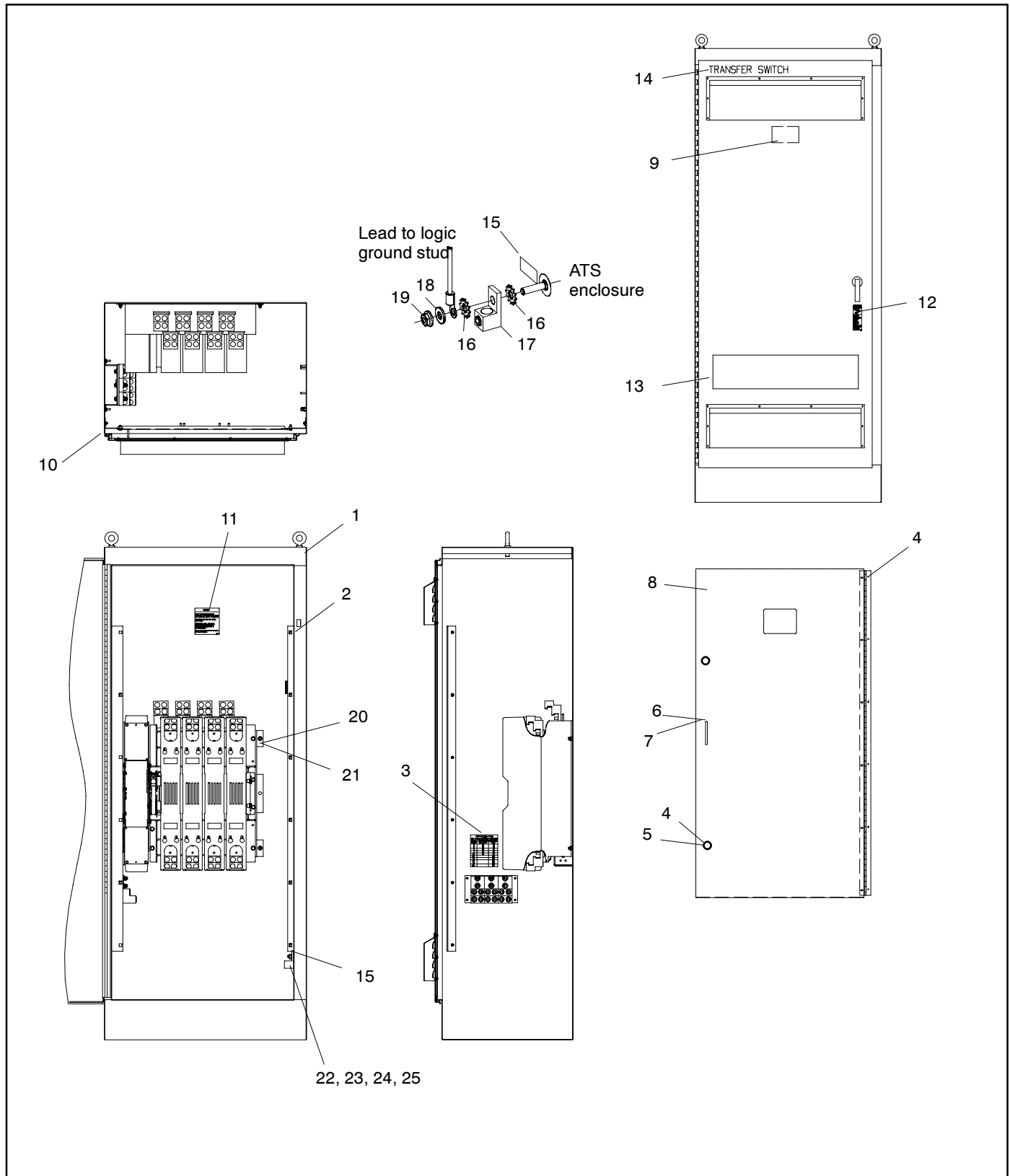
Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T, P	A	all	N, T, V, W, Z	A	1200	S	GM21072-KA1
S	C	T, P	A	all	N, T, V, W, Z	C	1200	S	GM28660-KA1
S	C	T, P	A	all	N, T, V, W, Z	A	1600-2000	F	GM21298-KA1

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Enclosures, 1200 Amp and 1600-2000 Front-Mounted NEMA 3R



Enclosures, 1200 Amp and 1600-2000 Front-Mounted

NEMA 3R

Item	Part Number	Description	Quantity	
			Module Number	
			GM28660-KA1S	GM29786-KA1S
1	GM28657	Enclosure, NEMA 3R	1	
2	GM29797	Enclosure, NEMA 3R		1
2	X-6204-1	Retainer, nut	8	8
3	297556	Decal, torque	1	1
4	X-791-2	Screw, slotted hex washer head	8	8
5	295009	Retainer	2	2
6	GM14177	Handle	1	1
7	X-50-6	Screw, slotted pan head machine	2	2
8	GM22733	Door	1	
8	GM31240	Door		1
9	297721	Decal, warning	1	1
10	GM22734	Rail, mounting	2	
10	GM31242	Rail, mounting		2
11	294414	Decal, notice cover transfer switch	1	1
12	362176	Decal, danger	1	1
13	GM23477-5	Decal, DDC/MTU logo	1	1
14	X-6303-1	Decal, Transfer Switch	1	1
15	344295	Decal, equipment ground	1	2
16	X-22-12	Washer, lock, .262 ID x .743 in. OD	2	2
17	X-6207-3	Lug, terminal, aluminum	1	1
18	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1
19	X-6210-2	Nut, flange spiralock, 1/4-20	1	1
20	X-25-37	Washer	4	6
21	X-6210-9	Nut, flange spiralock, 3/8-16	4	6
22	X-6207-5	Lug, terminal, aluminum		1
23	X-25-118	Washer, plain, .406 ID x 1 in.		1
24	X-6086-6	Washer, spring, .39 ID x .81 in. OD		1
25	X-83-7	Nut, hex, 3/8-16, zinc		1

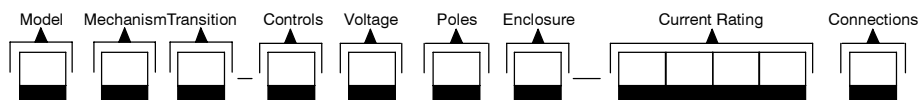
Enclosures, 1000-1200 A and 1600 Amp Front-Mounted

Module Number Key

Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T, P	A	all	N, T, V, W, Z	A	1200	S	GM21072-KA1
S	C	T, P	A	all	N, T, V, W, Z	C	1200	S	GM28660-KA1S
S	C	T, P	A	all	N, T, V, W, Z	A	1600-2000	F	GM21298-KA1
S	C	T, P	A	all	N, T, V, W, Z	C	1600-2000	F	GM29786-KA1S

Please refer to instructions on page 3 for an explanation of how to use this table.

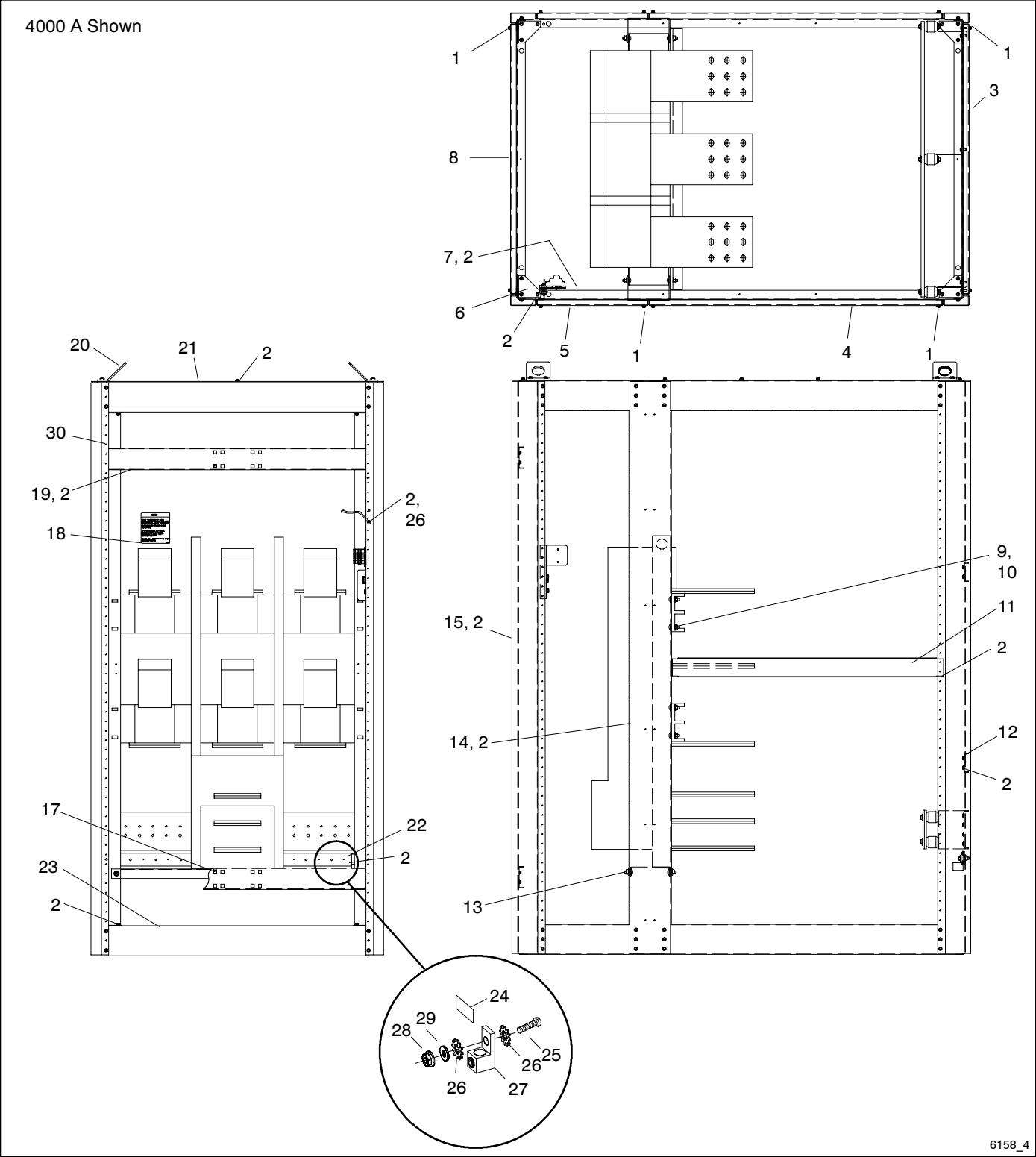
Model Designation



Enclosures, 1600-4000 Amp

NEMA 1

4000 A Shown



6158_4

Enclosures, 1600-4000 Amp

NEMA 1

Item	Part Number	Description	Quantity		
			Module Number		
			GM21073-KA1	GM21074-KA1	GM21075-KA1
1	X-67-148	Screw, hex washer, thread-forming	68	68	68
2	X-67-114	Screw, hex washer, thread-forming	176	165	184
3	GM14052	Panel, back	3	3	
3	GM12581	Panel, back			3
4	GM12574	Panel, side, back	4		
4	GM14050	Panel, side		2	
4	GM12575	Panel, side, back			4
5	GM12573	Panel, side, front	2	2	
5	GM21017	Panel, side			2
6	GM12568	Bracket, corner	8	8	8
7	GM21014	Channel, top and bottom, side	4		
7	GM14045	Channel, top and bottom		4	
7	GM21021	Channel, top and bottom, side			4
8	GM20949	Panel, front	2	2	
8	GM20996	Panel, front			2
9	X-6224-3	Bolt, 3/8-16 x .75 in.			8
10	X-6210-9	Nut, flange spirallock, 3/8-16			8
11	GM21016	Channel, back closure	2		
11	GM21023	Channel, back closure			2
12	GM14049	Channel, back closure	2	2	
12	GM12578	Channel, back closure			2
13	GM21022	Channel, spreader			1
14	GM20952	Channel, contactor mounting	2	2	
14	GM21018	Channel, contactor mtg.			2
15	GM12561	Channel, corner	4	4	4
17	X-6204-1	Retainer, nut			2
18	294414	Decal, notice cover transfer switch	1	1	1
19	GM21034	Channel, door closure			2
20	GM12595	Bracket, lifting	4	4	4
21	GM14041	Panel, top	1		
21	GM14040	Panel, top		1	
21	GM14042	Panel, top			1
22	GM14057	Bus, ground	1	1	
22	GM21024	Bus, ground			1
23	GM14044	Channel, top and bottom	4	4	
23	GM12567	Channel, top and bottom, front/back			4
24	344295	Decal, equipment ground	1	1	1
25	X-6238-4	Bolt, hex cap	1	1	1
26	X-22-12	Washer, lock, .262 ID x .743 in. OD	5	5	5
27	X-6207-5	Lug, terminal, aluminum	1	1	1
28	X-83-7	Nut, hex, 3/8-16, zinc	1	1	
29	X-25-118	Washer, plain, .406 ID x 1 in. OD	2	2	2
29	X-6086-6	Washer, spring, .39 ID x .81 in. OD	1	1	1
30	320828	Insert, threaded, 1/4-20 in.	2	2	2
31	GM24703	Label, blank (not shown)	1	1	1

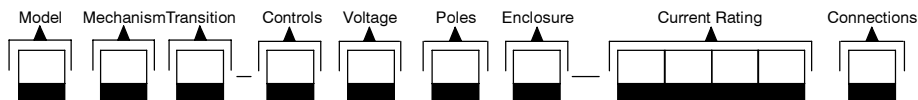
Enclosures, 1600-4000 Amp

Module Number Key

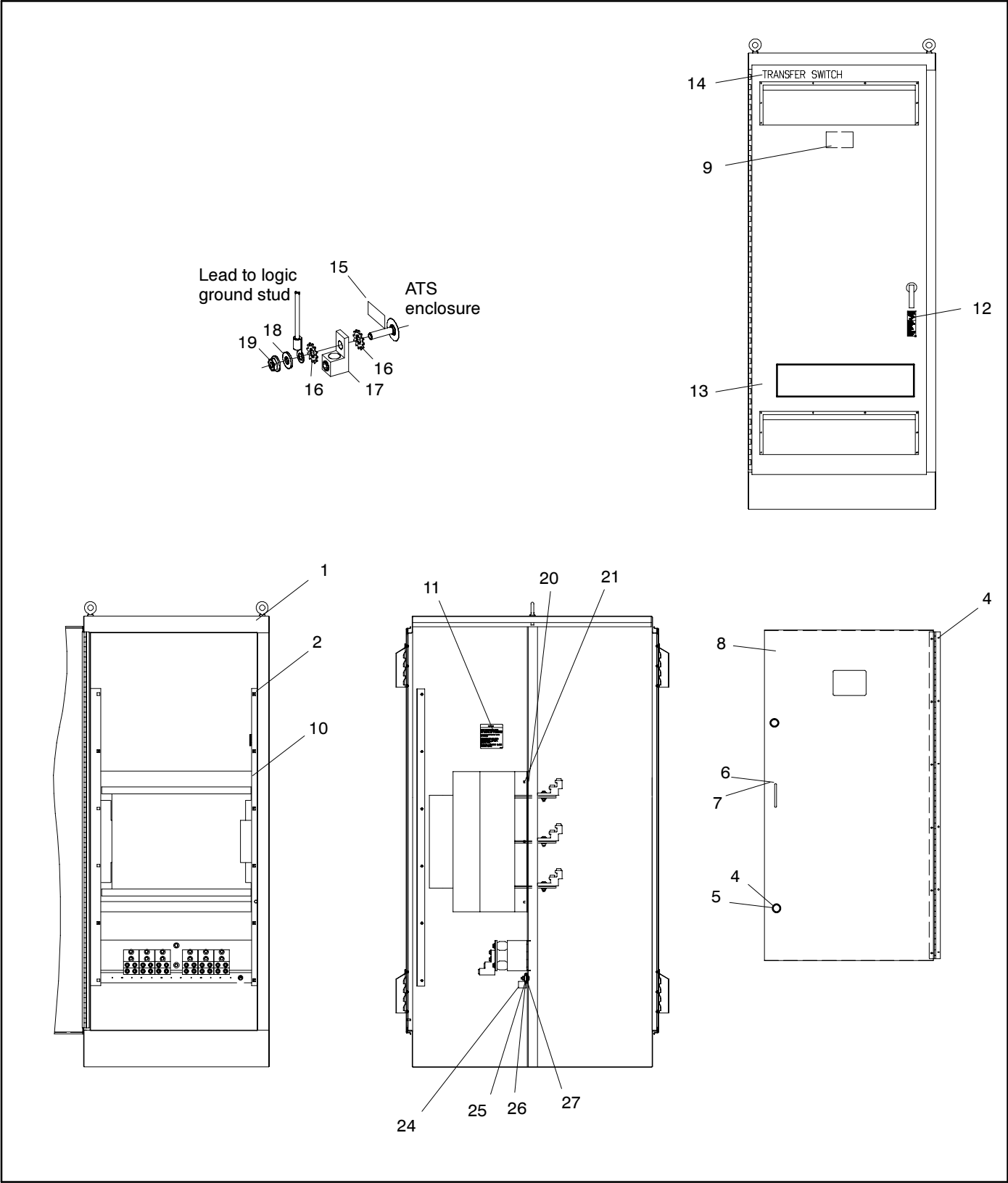
Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T, P	A	all	N, T, V, W, Z	A	1600-2000	S	GM21073-KA1
S	C	T, P	A	all	N, T, V, W, Z	C	1600-2000	S	GM28661-KA1
S	C	T, P	A	all	N, T, V, W, Z	A	2600-3000	S	GM21074-KA1
S	C	T, P	A	all	N, T, V, W, Z	C	2600-3000	S	GM28662-KA1
S	C	T, P	A	all	N, T, V, W, Z	A	4000	S	GM21075-KA1

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Enclosures, 1600-3000 Amp
NEMA 3R



Enclosures, 1600-3000 Amp

NEMA 3R

Item	Part Number	Description	Quantity	
			Module Number	
			GM28661-KA1S	GM28662-KA1S
1	GM28658	Enclosure, NEMA 3R	1	
1	GM28659	Enclosure, NEMA 3R		1
2	X-6204-1	Retainer, nut	8	8
3	297556	Decal, torque (not shown)	1	1
4	X-791-2	Screw, slotted hex washer head	8	8
5	295009	Retainer	2	2
6	GM14177	Handle	1	1
7	X-50-6	Screw, slotted pan head machine	2	2
8	GM22733	Door	1	1
9	297721	Decal, warning	1	1
10	GM22734	Rail, mounting	2	2
11	294414	Decal, notice cover transfer switch	1	1
12	362176	Decal, danger	1	1
13	GM23477-5	Decal, DDC/MTU logo	1	1
14	X-6303-1	Decal, Transfer Switch	1	1
15	344295	Decal, equipment ground	1	1
16	X-22-12	Washer, lock, .262 ID x .743 in. OD	6	6
17	X-6207-3	Lug, terminal, aluminum	1	1
18	X-25-40	Washer, plain, .281 ID x .625 in. OD	1	1
19	X-6210-2	Nut, flange spiralock, 1/4-20	1	1
20	X-25-37	Washer	6	6
21	X-6210-9	Nut, flange spiralock, 3/8-16	6	6
22	GM14057	Bus, ground	1	1
23	X-67-144	Screw, hex washer, thread-forming	4	4
24	X-6207-5	Lug, terminal, aluminum	1	1
25	X-83-7	Nut, hex, 3/8-16	1	1
26	X-25-118	Washer, plain, .406 ID x 1 in. OD	2	2
27	X-6086-6	Washer, spring, .39 ID x .81 OD	1	1

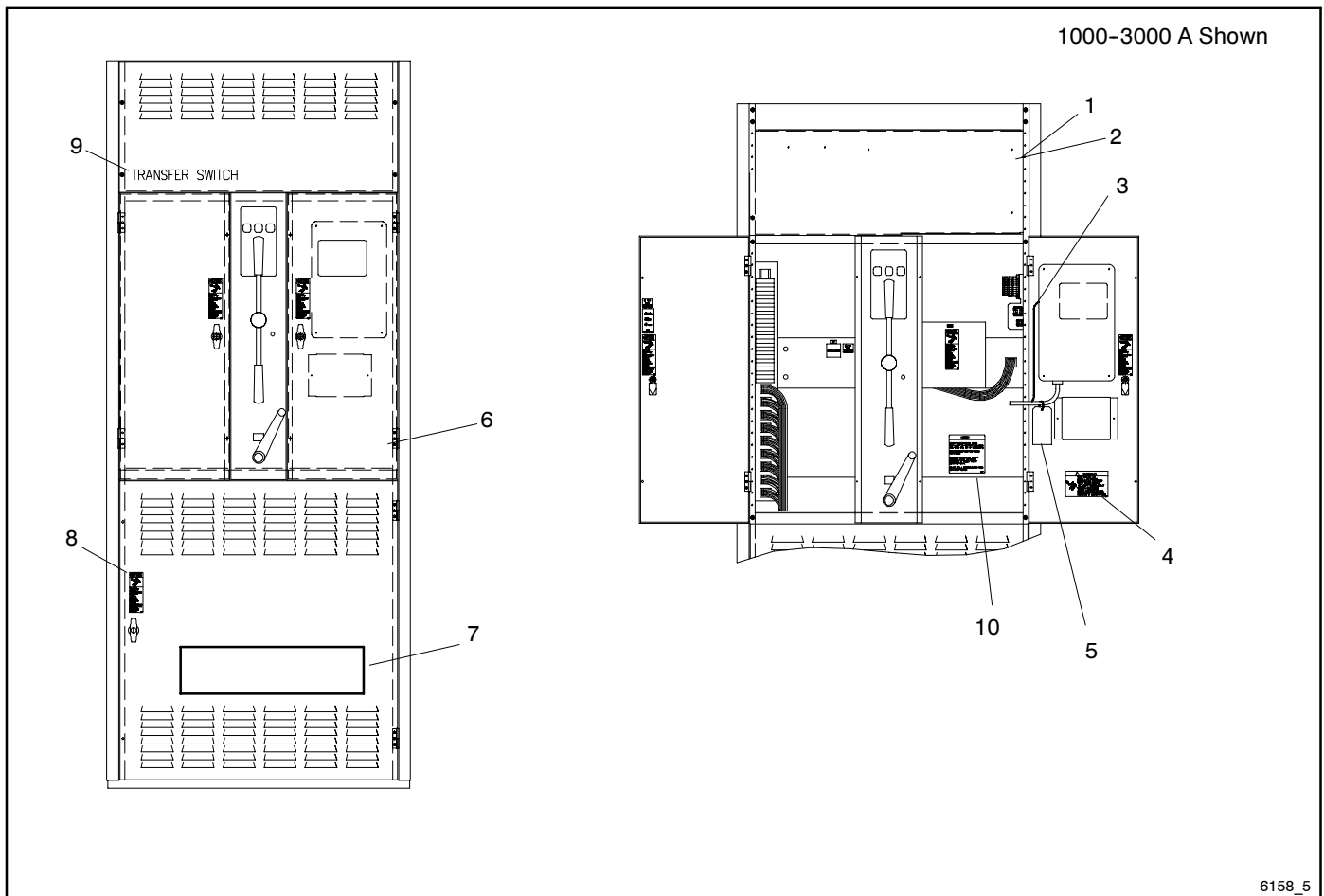
Enclosures, 1600-4000 Amp

Module Number Key

Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T, P	A	all	N, T, V, W, Z	A	1600-2000	S	GM21073-KA1S
S	C	T, P	A	all	N, T, V, W, Z	C	1600-2000	S	GM28661-KA1S
S	C	T, P	A	all	N, T, V, W, Z	A	2600-3000	S	GM21074-KA1S
S	C	T, P	A	all	N, T, V, W, Z	C	2600-3000	S	GM28662-KA1S
S	C	T, P	A	all	N, T, V, W, Z	A	4000	S	GM21075-KA1S

Please refer to instructions on page 3 for an explanation of how to use this table.

Enclosures, Bypass Isolation



Enclosures, Bypass Isolation

Item	Part Number	Description	Quantity
			Module Number GM22373-KA1S
1	GM21365	Pan, mounting	1
2	X-67-114	Screw, hex washer, thread-forming	6
3	GM23503	Harness, bypass	1
4	297721	Decal, warning	1
5	See logic section	Tag, hang (before reconnecting plug)	1
6	GM21045	Door, left bypass switch	1
6	GM21046	Door, right bypass switch	1
7	GM23477-5	Decal, DDC/MTU logo	1
8	362176	Decal, danger	2
9	X-6303-1	Decal, Transfer Switch	1
10	294414	Decal, notice cover transfer switch	1
11	GM24703	Label, blank	1

Item	Part Number	Description	Quantity			
			Module Number			
			GM22536-KA1S	GM22537-KA1S	GM22538-KA1S	GM22540-KA1S
3	GM23503	Harness, bypass	1	1	1	1
4	297721	Decal, warning	1	1	1	1
5	See logic section	Tag, hang (before reconnect. plug)	1	1	1	1
6	GM21051	Door, bypass switch	1			
6	GM21050	Door, bypass switch		1		
6	GM21054	Door, bypass switch			1	
6	GM21053	Door, bypass switch				1
7	GM23477-3	Decal, DDC/MTU logo	1	1	1	
7	GM23477-5	Decal, DDC/MTU logo				1
8	362176	Decal, danger	1	1	2	2
9	X-6303-1	Decal, Transfer Switch	1	1	1	1
10	294414	Decal, notice cover transfer switch	1	1	1	1
11	GM24703	Label, blank (not shown)	1	1	1	1

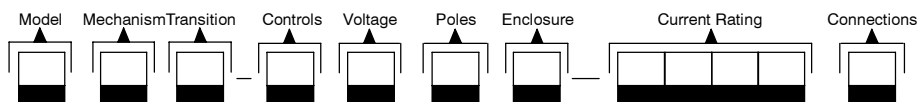
Enclosures, Bypass Isolation

Module Number Key

Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	B	P	A	all	N, T, V, W, Z	A	150-400	S	GM22536-KA1S
S	B	T	A	all	N, T, V, W, Z	A	150-400	S	GM22537-KA1S
S	B	T, P	A	all	N, T, V, W, Z	A	600-800	S	GM22538-KA1S
S	B	T, P	A	all	N, T, V, W, Z	A	1000-3000	S	GM22373-KA1S
S	B	T, P	A	all	N, T, V, W, Z	A	4000	S	GM22540-KA1S

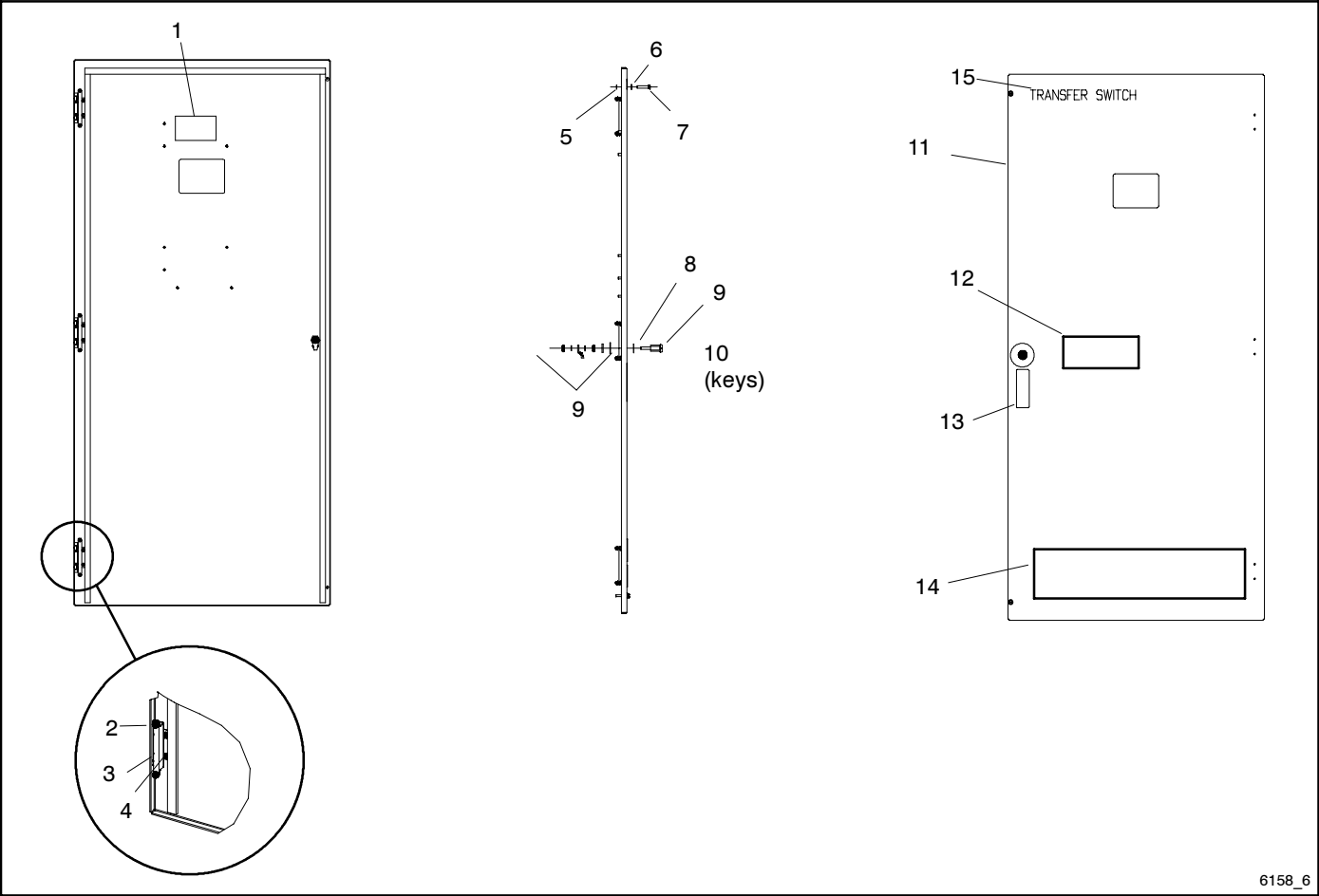
Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Door

NEMA 1 and 3R



6158_6

Item	Part Number	Description	Quantity	
			Module Number	
			GM21076-KA1S	GM21077-KA1S
1	297721	Decal, warning	1	1
2	295098	Screw, flat countersunk, head machine	16	32
3	GM20572	Hinge, ATS enclosure	4	
3	297600	Hinge, split	4	4
3	297601	Hinge, split, left		4
5	295009	Retainer	2	2
7	X-791-3	Screw, slotted hex washer head, machine	2	
7	X-791-2	Screw, slotted hex washer head, machine		2
9	GM20885	Latch, compression, T-handle, locking	1	1
11	GM12602	Door, enclosure, left		1
11	GM14047	Door, enclosure, right		1
11	GM20950	Door, enclosure	1	
13	362176	Decal, danger	1	1

Door

NEMA 1 and 3R

Item	Part Number	Description	Quantity						
			Module						
			GM21069-KA1S	GM21069-KA2S	GM21292-KA1S	GM21292-KA2S	GM21293-KA1S	GM21293-KA2S	GM28764-KA1S
1	297721	Decal, warning	1	1	1	1	1	1	1
2	X-50-1	Screw, slotted pan head machine	4	4	3	3	6	6	6
3	GM20572	Hinge, ATS enclosure	2	2	6	6	3	3	3
4	X-22-9	Washer, lock, .20 ID x .373 in. OD	4	4	6	6	6	6	6
4	X-70-3	Nut, hex machine screw, 10-32	4	4	2	2	6	6	6
5	295009	Retainer	2	2	2	2	2	2	2
6	X-25-40	Washer, plain, .281 ID x .625 in. OD	2	2	2	2	2	2	2
7	X-791-3	Screw, slotted hex washer head, machine	2	2	1	1	2	2	2
8	GM20575	Gasket, compression latch	1	1	1	1	1	1	1
9	GM20573	Latch, compression	1	1	2	2	1	1	1
10	GM20574	Key, compression latch	2	2	1	1	2	1	2
11	GM20166	Door, enclosure, 600-800 A					1	1	
11	GM28763	Door, enclosure							1
11	GM20162	Door, 30-200 A, NEMA 1	1						
11	GM20163	Door, 30-200 A, NEMA 3R		1					
11	GM20164	Door, 225-400 A			1				
11	GM20165	Door, 225-400 A				1			
13	362176	Decal, danger	1	1	1	1	1	1	1
14	GM23477-5	Decal, DDC/MTU logo					1	1	
14	GM23477-1	Decal, DDC/MTU logo	1	1	1	1			
14	GM23477-2	Decal, DDC/MTU logo							1
15	X-6303-1	Decal, transfer switch					1	1	
15	X-6303-3	Decal, transfer switch	1	1	1	1	1	1	1
16	GM22555	Decal, manual operating handle						1	

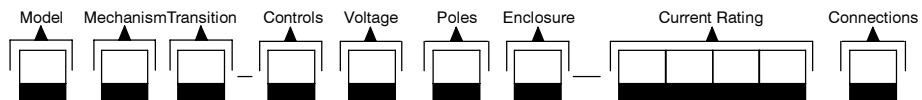
Door, NEMA1 and 3R

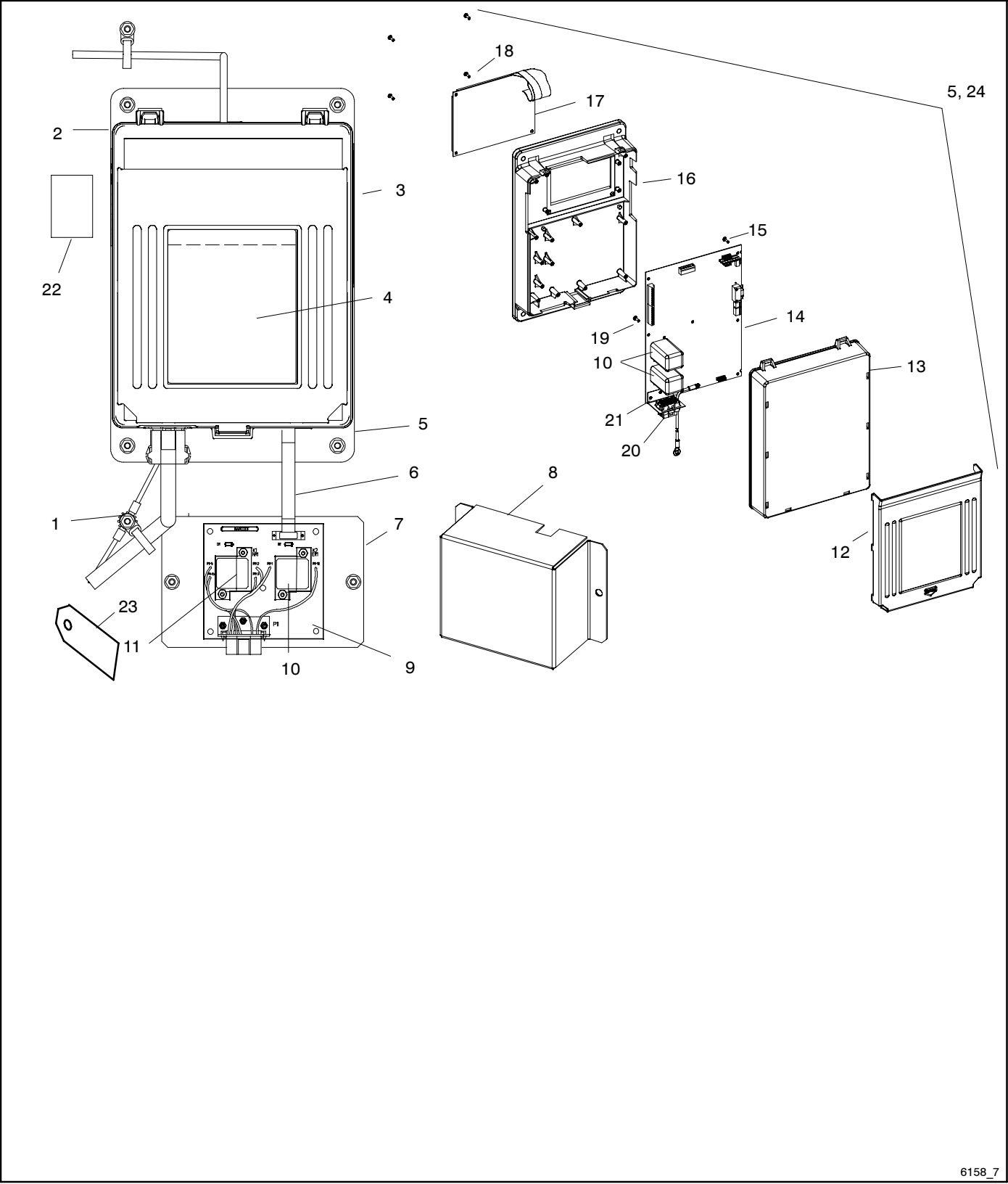
Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	C	T	A	all	N, T, V, W, Z	A	30-200	GM21069-KA1S
S	C	T	A	all	N, T, V, W, Z	C	30-200	GM21069-KA2S
S	C	T	A	all	N, T, V, W, Z	A	225, 260, 400	GM21292-KA1S
S	C	T	A	all	N, T, V, W, Z	C	225, 260, 400	GM21292-KA2S
S	C	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	A	230	GM21069-KA1S
S	C	T	A	C, D, F, G, H, J, K, M	N, T, V, W, Z	C	230	GM21069-KA2S
S	C	T	A	N	N, T, V, W, Z	A	230	GM21292-KA1S
S	C	T	A	N	N, T, V, W, Z	C	230	GM21292-KA2S
S	C	T, P	A	all	N, T, V, W, Z	A, C	600-1000	GM21293-KA1S
S	C	T	A	all	N, T, V, W, Z	A	600-1000	GM21293-KA2S
S	C	P	A	all	N, T	A, C	150-400	GM28764-KA1S
S	C	T, P	A	all	N, T, V, W, Z	A	1200-3000	GM21076-KA1S
S	C	T, P	A	all	N, T, V, W, Z	A	4000	GM21077-KA1S
S	D, M	T	A	all	N, T, V	A, C	600	GM28764-KA1S
S	D, M	P	A	all	N, T	A, C	100-600	GM28764-KA1S
S	D, M	P	A	all	V	A, C	100-400	GM21293-KA1S

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation





6158_7

Item	Part Number	Description	Quantity								
			Module								
			GM21079-MA1	GM21079-MA2	GM21079-MA3	GM21079-MA4	GM21079-MA5	GM21079-MA6	GM21079-MA7	GM21079-MA8	GM21079-MA9
1	X-22-12	Washer, lock, .262 ID x .743 in. OD	1	1	1	1	1	1	1	1	1
2	GM22366	Decal, terminal switch	1	1	1	1	1	1	1	1	1
3	GM22365	Decal, DIP switch	1	1	1	1	1	1	1	1	1
4	GM21291	Decal, nameplate	1	1	1	1	1	1	1	1	1
5	GM21364	Logic assembly (void, use GM32320)	1	1	1						
5	GM28287	Logic assembly, 600 V (void, use GM32320 and remove transformer)				1	1	1			
5	GM32320	Logic assembly							1	1	1
6	352291	Multiconductor cable, ribbon		1			1			1	
6	GM21340	Ribbon cable assembly			1			1			1
7	GM21392	Cover, PT		1	1		1	1		1	1
8	GM21391	Plate, mounting			1			1		1	1
9	GM21268	PCB assembly, PTIB-T340		1	1		1	1		1	1
10	295253	Relay, 10 A	2	4	4	2	4	4	2	2	2
11	269972	Clip, relay		2	2		2	2			
12	GM21358	Holder, literature	1	1	1	1	1	1	1	1	1
13	GM21357	Cover, logic	1	1	1	1	1	1	1	1	1
14	GM22516-A	PCB assembly	1	1	1	1	1	1			
14	GM22516-B	PCB assembly							1	1	1
15	GM23307	Screw, plastic tapping	9	9	9	9	9	9	9	9	9
16	GM21356	Carrier, logic	1	1	1	1	1	1	1	1	1
17	GM21107	Decal, membrane switch	1	1	1	1	1	1	1	1	1
18	GM21374	Screw, plastic tapping	4	4	4	4	4	4	4	4	4
19	GM23312	Screw, plastic tapping	4	4	4	4	4	4	4	4	4
20	GM21320	Harness, T340 board to contactor	1	1	1	1	1	1	1	1	1
21	294635	Bracket, mounting	1	1	1	1	1	1	1	1	1
22	GM23620	Decal (controller I/O assignments)	1	1	1	1	1	1	1	1	1
23	297949	Tag, hang (before reconnecting plug)	1	1	1	1	1	1	1	1	1
24	GM24749	Logic service kit (includes items 2, 3, 5)	1	1	1				1	1	1

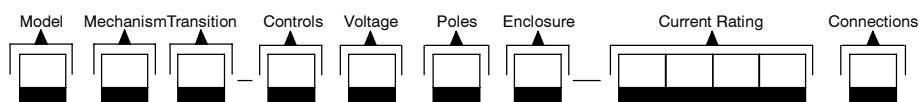
Logic

Module Number Key

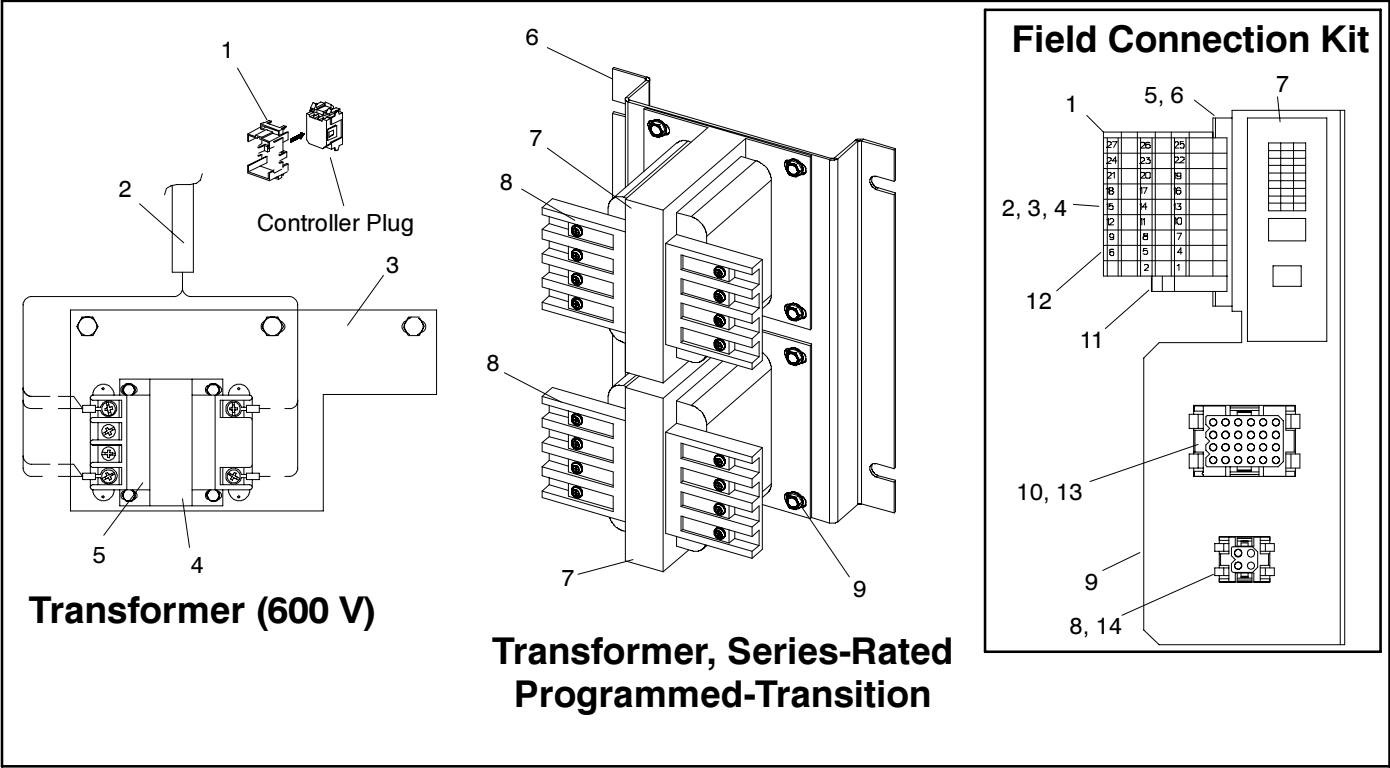
Model Designation Code							Module Number
Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
T	A	all except N	all	all	all	S	GM21079-MA1
P	A	all except N	all	all	all	S	GM21079-MA2
T, P	A	all except N	all	all	1600-2000	F	GM21079-MA3
T	A	N	all	all	all	S	GM21079-MA4
P	A	N	all	all	all	S	GM21079-MA5
T, P	A	N	all	all	1600-2000	F	GM21079-MA6
T	A	all	all	all	all	S	GM21079-MA7
P	A	all	all	all	all	S	GM21079-MA8
P	A	all	all	all	all	F	GM21079-MA9

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Transformers and Field Connection Block



Field Connection Block

Item	Part Number	Description	Quantity
			Module Number GM21311-KA1
1	GM21315	End section	1
2	GM22883	Strip, marker (1-10)	1
3	GM22884	Strip, marker (11-20)	1
4	GM22885	Strip, marker (21-30)	1
5	GM21339	Rail, DIN	1
6	X-67-113	Screw, hex washer, thread-forming	2
7	GM22491	Decal	1
8	GM21312	Connector, 4-position	1
9	GM21338	Bracket, field connection kit	1
10	295145	Connector, 24-position	1
11	321025	Stop, end	1
12	GM21313	Block, terminal	9
13	GM21317	Harness	1
14	GM21318	Harness	1

Transformers and Field Connection Block

Transformer (600 V)

Item	Part Number	Description	Quantity
			Module Number GM26859-KA1
1	321330	Boot, connector	1
2	GM26857	Harness, wiring	1
3	GM26858	Panel, mounting	1
4	GM26855	Transformer	1
5	GM26856	Guard, terminal	1

Transformer, Series-Rated Programmed-Transition

Item	Part Number	Description	Quantity							
			Module							
			GM29904-KA1	GM29904-KA2	GM29904-KA3	GM29904-KA4	GM29904-KA5	GM29904-KA6	GM29904-KA7	GM29904-KA8
6	GM30000	Bracket, transformer mounting	1	1	1	1	1	1	1	1
7	GM29213	Transformer (480 V primary, 240 V secondary)	2							
7	GM29214	Transformer (480 V primary, 240 V secondary)		2						
7	GM29215	Transformer (480 V primary, 240 V secondary)			2					
7	GM29216	Transformer (480 V primary, 240 V secondary)				2				
7	GM29217	Transformer (380 V primary, 240 V secondary)					2			
7	GM29218	Transformer (380 V primary, 240 V secondary)						2		
7	GM29219	Transformer (380 V primary, 240 V secondary)							2	
7	GM29220	Transformer (380 V primary, 240 V secondary)								2
8	GM26856	Guard, terminal	2				2			
8	GM29221	Guard, terminal		2	2	2	2	2	2	2
9	X-67-113	Screw, hex washer, thread-forming	8	8	8	8	8	8	8	8

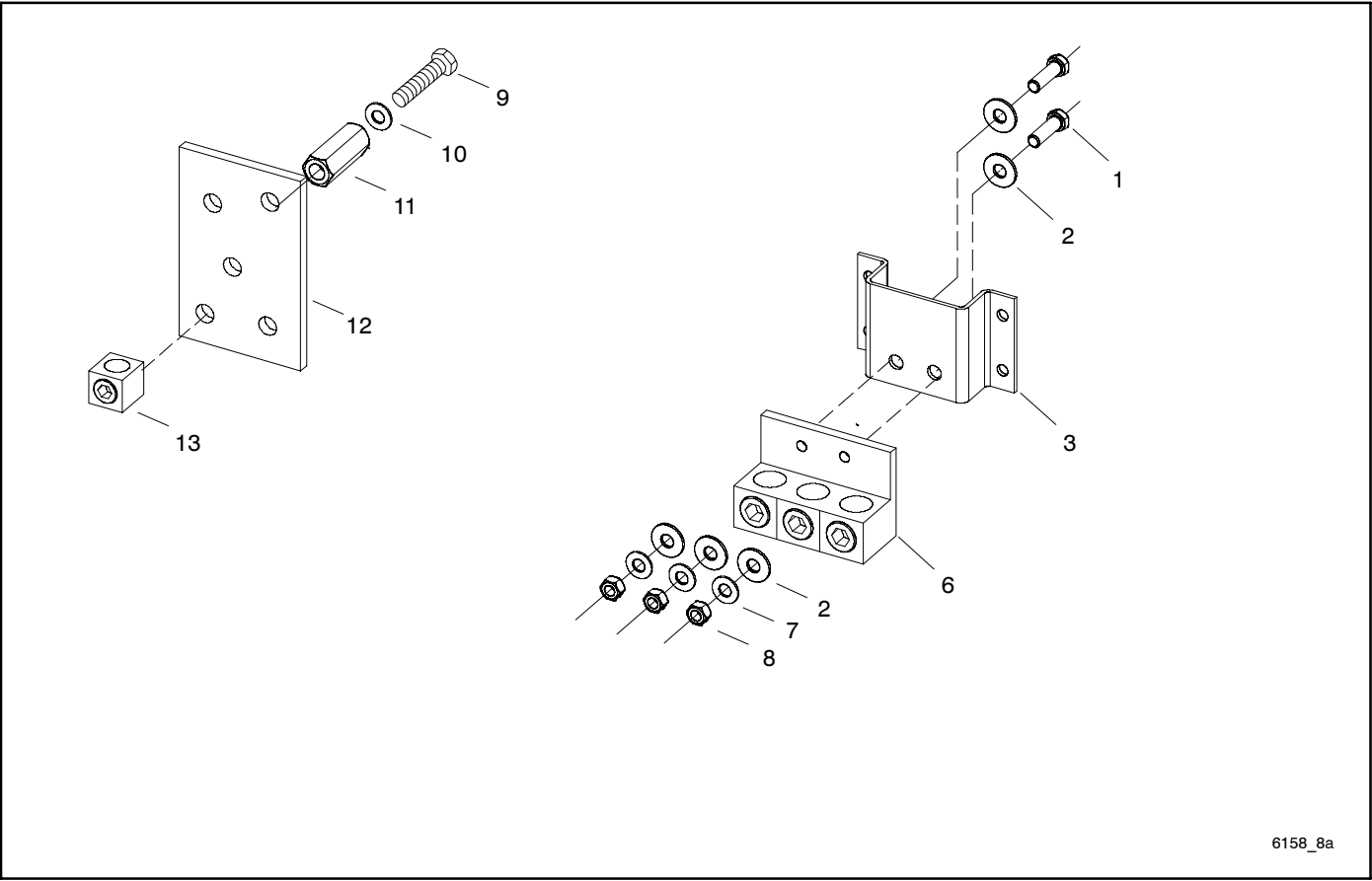
Field Connection Block and Transformers

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	C	T	A	all	all	all	600-4000	GM21311-KA1
S	C	P	A	all	all	all	150-4000	GM21311-KA1
S	B	T, P	A	all	all	all	150-4000	GM21311-KA1
S	B, C, N	T, P	A	N	all	all	all	GM26859-KA1
S	D, M	P	A	K, M	N, T	all	100	GM29904-KA1
S	D, M	P	A	K, M	V	all	100	GM29904-KA2
S	D, M	P	A	K, M	N, T	all	200/400	GM29904-KA2
S	D, M	P	A	K, M	V	all	200	GM29904-KA3
S	D, M	P	A	K, M	V	all	400	GM29904-KA4
S	D, M	P	A	K, M	N, T, V	all	600	GM29904-KA4
S	D, M	P	A	G, H, J	N, T	all	100	GM29904-KA5
S	D, M	P	A	G, H, J	V	all	100	GM29904-KA6
S	D, M	P	A	G, H, J	N, T	all	200/400	GM29904-KA6
S	D, M	P	A	G, H, J	V	all	200	GM29904-KA7
S	D, M	P	A	G, H, J	V	all	400	GM29904-KA8
S	D, M	P	A	G, H, J	N, T, V	all	600	GM29904-KA8

Please refer to instructions on page 3 for an explanation of how to use this table.

Neutral Assembly, 30-400 Amp



6158_8a

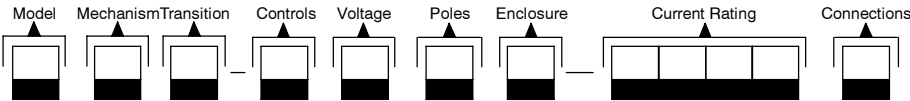
Item	Part Number	Description	Quantity		
			Module Number		
			GM21070-KA1	GM21071-KA1	GM26317-KA1
1	X-6238-4	Bolt, hex cap	2	2	
2	X-25-118	Washer, plain, .406 ID x 1 in. OD	4	4	
3	GM20991	Bracket, neutral mounting, 30-400 A	1		
3	GM25826	Bracket, neutral mounting 225-400 A		1	
6	X-6207-12	Lug, terminal	1		
6	X-6207-14	Lug, terminal, aluminum		1	
7	X-6086-6	Washer, spring, .39 ID x .81 in. OD	2	2	
8	X-83-7	Nut, hex, 3/8-16, zinc	2	2	
9	X-465-6	Bolt, hex cap			7
10	X-6086-16	Washer, spring, .281 ID x .875 OD			7
11	X-6128-30	Standoff, insulator, 1/4-20 x 1 in.			2
12	GM28294	Bus, neutral			1
13	297712	Lug, terminal			3

Neutral Assembly, 30-400 Amp
Module Number Key

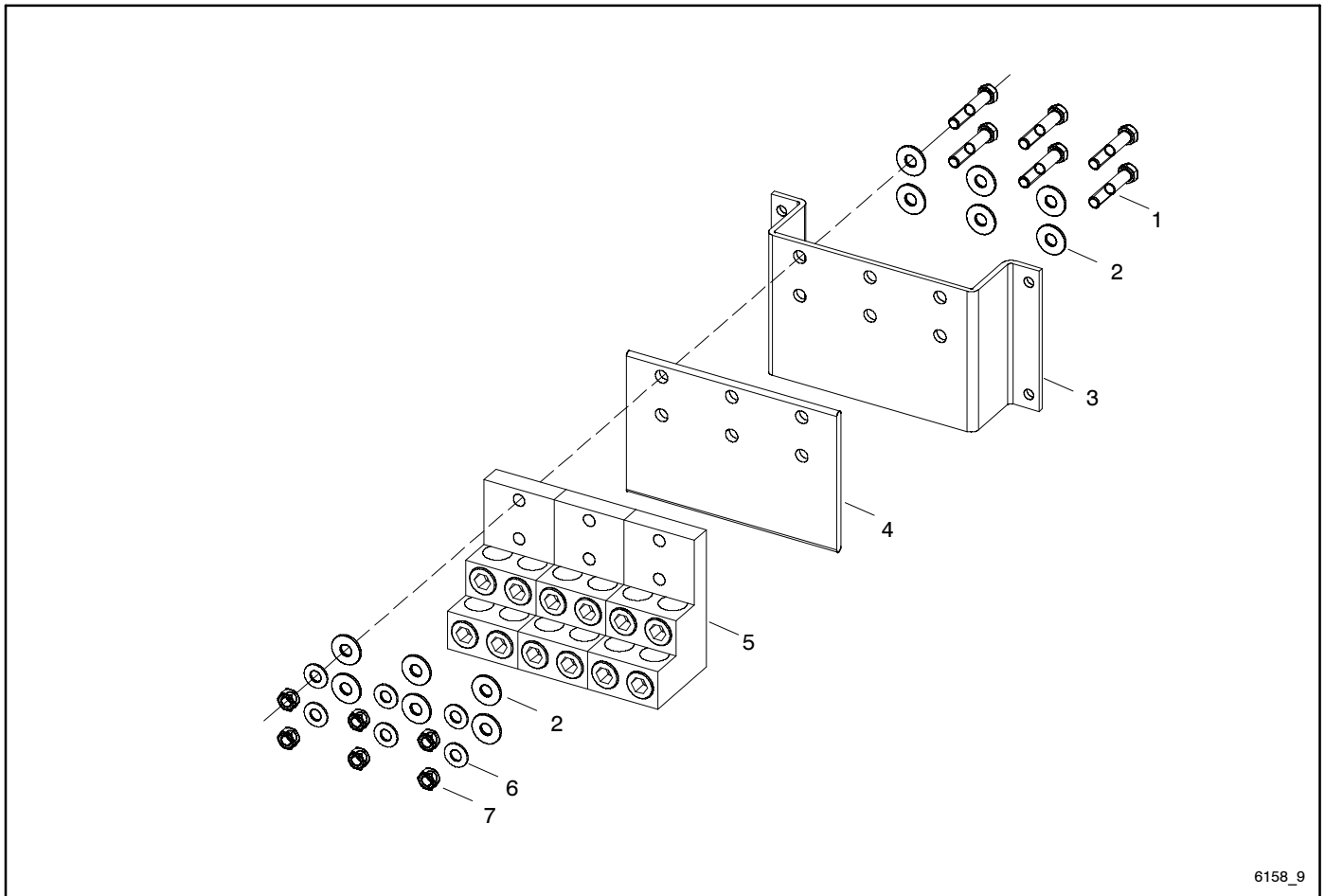
Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C	T	A	all	all	all	30-200	S	GM26317-KA1
S	C	P	A	all	all	all	225-400	S	GM21071-KA1
S	D, M	T	A	all	all	all	40-225	S	GM21070-KA1

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Neutral Assembly, 600-1000 Amp



6158_9

Item	Part Number	Description	Quantity	
			Module Number	
			GM21294-KA1	GM29496-KA1
1	X-6238-6	Bolt, hex cap	6	4
2	X-25-118	Washer, plain, .406 ID x 1 in. OD	12	8
3	GM20992	Bracket, neutral mounting	1	1
4	GM21010	Bus, neutral, 600-1200 A	1	1
5	297582	Lug, terminal, aluminum	3	
5	295296	Lug, terminal, aluminum		2
6	X-6086-6	Washer, spring, .39 ID x .81 in. OD	6	4
7	X-83-7	Nut, hex, 3/8-16, zinc	6	4

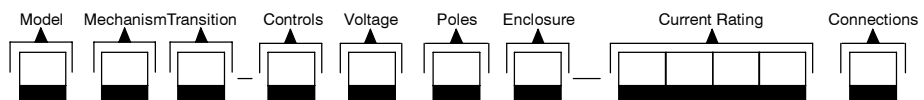
Neutral Assembly, 600-1000 Amp

Module Number Key

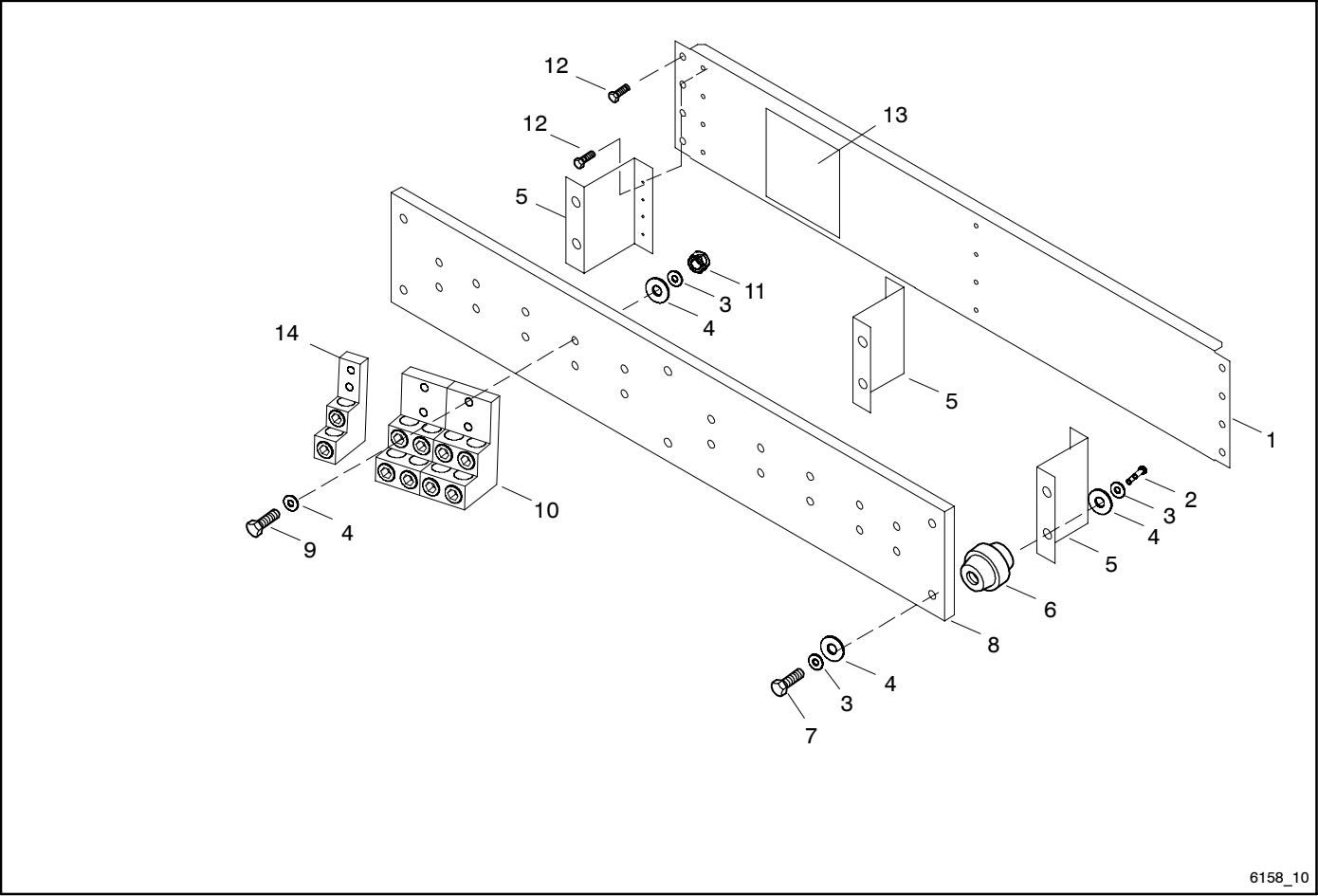
Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	C, B, N	T, P	A	all	all	all	600-1000	S	GM21294-KA1
S	D, M	T	A	all	all	all	600	S	GM29496-KA1

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Neutral Assembly, 1200-4000 Amp



6158_10

Neutral Assembly, 1200-4000 Amp

Item	Part Number	Description	Quantity		
			Module Number		
			GM21078-KA1	GM21078-KA2	GM21078-KA3
1	GM12588	Channel, neutral support			1
1	GM14054	Channel, neutral support			1
2	X-6238-10	Bolt, hex cap	1	1	1
3	X-6086-6	Washer, spring, .39 ID x .81 in. OD	6	6	6
4	X-25-118	Washer, plain, .406 ID x 1 in. OD	12	12	12
5	GM12589	Bracket, neutral bus support	12	12	12
6	X-6128-29	Standoff insulator, 3/8-16 x 2 in.	3	3	3
7	X-6238-11	Bolt, hex cap	6	6	6
7	X-6238-4	Bolt, hex cap	6	6	6
7	X-6238-5	Bolt, hex cap		6	
8	GM14055	Bus, neutral			6
8	GM20995	Bus, neutral	1	2	
12	X-67-114	Screw, hex washer, thread-forming			2
13	297556	Decal, torque	18	18	18
			1	1	1

Item	Part Number	Description	Quantity		
			Module Number		
			GM21565-KA1	GM21565-KA2	GM21565-KA3
1	GM14054	Channel, neutral support	1	1	1
2	X-6238-10	Bolt, hex cap	6	6	6
3	X-6086-6	Washer, spring, .39 ID x .81 in. OD	20	24	32
4	X-25-118	Washer, plain, .406 ID x 1 in. OD	28	36	52
5	GM12589	Bracket, neutral bus support	3	3	3
6	X-6128-29	Standoff insulator, 3/8-16 x 2 in.	6	6	6
7	X-6238-11	Bolt, hex cap	6		
7	X-6238-4	Bolt, hex cap		6	6
8	GM21310	Bus, neutral	1	2	2
9	X-6238-1	Bolt, hex cap	8		
9	X-6238-6	Bolt, hex cap		12	12
10	297605	Lug, terminal, aluminum	4	6	8
11	X-83-7	Nut, hex, 3/8-16, zinc	8	12	20
12	X-67-114	Screw, hex washer, thread-forming	18	18	18
13	297556	Decal, torque	1	1	1
14	353354	Lug, terminal			2

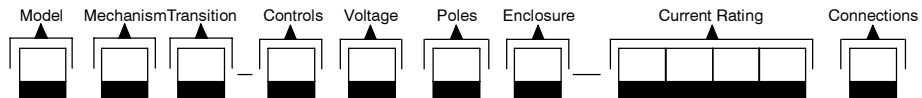
Neutral Assembly, 1000-4000 Amp

Module Number Key

Model Designation Code									Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections	
S	all	T, P	A	all	all	all	1200	S	GM21565-KA1
S	all	T, P	A	all	all	all	1600-2000	S, F	GM21565-KA2
S	all	T, P	A	all	all	all	2600-3000	S	GM21565-KA3
S	all	T, P	A	all	all	all	4000	S	GM21078-KA3

Please refer to instructions on page 3 for an explanation of how to use this table.

Model Designation



Contactor, Model SCT & SNT 30-200 Amp

30-104 Amp Shown P/N GM23274

14 Contactor Assembly

6158_11

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model

Mechanism

Transition

Controls

Voltage

Poles

Enclosure

Current Rating

Connections

Contactor, Model SCT & SNT

30-200 Amp

Item	Part Number	Description
1	See chart below	Coil kit
2	*	Yoke, 30-104 A
2	*	L-bracket, 150 A
3	294544	Rectifier (snubber no longer required because of improved rectifier)
4	*	Retainer, core tube
5	*	Core
6	*	Ring, spacer
7	*	Handle, manual operating
8	GM24251	Switch, miniature
9	*	Harness, contactor
10	GM24239	Contacts, coil control
11	*	Chute, arc
12	GM24252	Contact, auxiliary
13	GM24237	Lubrication kit, coil core tube
14	See chart below	Contactor assembly

This table lists coil kit and contactor part numbers. **Know the contactor part number before servicing contactors.** Effective December 9, 2002, the 30-104 amp frame size changed. As a result, 30-104 amp coil kits are NOT interchangeable between contactor numbers. See the previous page for the location of the contactor part number.

30-104 Amp Contactor and Coil Kit Replacement Part Numbers						
Poles/Wires Code(s)	Poles/Wires	Voltage Codes(s)	Voltage	Part Number		
				Contactor Assembly	Coil Kit	Service Contactor
N	2	C	208	GM23266 GM26237	GM24254 GM24276	GM26237 —
		D, F	220-240	GM23267 GM26238	GM24256 GM24277	GM26238 —
		G, H, J	380-416	GM23268 GM26239	GM24257 GM24278	GM26239 —
		K, M	440-480	GM23269 GM26240	GM24258 GM24279	GM26240 —
		N	600	GM23270 GM26241	GM24260 GM24280	GM26241 —
T	3/4 solid neutral	C	208	GM23271 GM26242	GM24255 GM24281	GM26242 —
		D, F	220-240	GM23272 GM26243	GM24256 GM24282	GM26243 —
		G, H, J	380-416	GM23273 GM26244	GM24257 GM24283	GM26244 —
		K, M	440-480	GM23274 GM26245	GM24253 GM24284	GM26245 —
		N	600	GM23275 GM26246	GM24259 GM24285	GM26246 —
V	4/4 switched neutral	C	208	GM23276 GM26247	GM24255 GM24281	GM26247 —
		D, F	220-240	GM23277 GM26248	GM24256 GM24282	GM26248 —
		G, H, J	380-416	GM23278 GM26249	GM24257 GM24283	GM26249 —
		K, M	440-480	GM23279 GM26250	GM24253 GM24284	GM26250 —
		N	600	GM23280 GM26251	GM24259 GM24285	GM26251 —
W	4/4 overlapping neutral	C	208	GM23281 GM26252	GM24255 GM24281	GM26252 —
		D, F	220-240	GM23282 GM26253	GM24256 GM24282	GM26253 —
		G, H, J	380-416	GM23283 GM26254	GM24257 GM24283	GM26254 —
		K, M	440-480	GM23284 GM26255	GM24253 GM24284	GM26255 —
		N	600	GM23285 GM26256	GM24259 GM24285	GM26256 —

Contactor, Model SCT & SNT 30-200 Amp

30-104 Amp Shown P/N GM23274

14 Contactor Assembly

6158_11

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model

Mechanism

Transition

Controls

Voltage

Poles

Enclosure

Current Rating

Connections

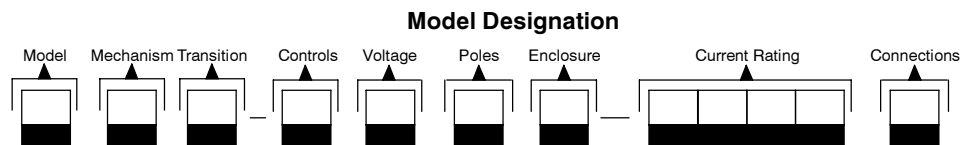
Contactor, Model SCT & SNT

30-200 Amp

150-200 Amp Contactor and Coil Kit Replacement Part Numbers							
Amps	Poles/Wires Code(s)	Poles/Wires	Voltage Codes(s)	Voltage	Part Number		
					Contactor Assembly	Coil Kit	Service Contactor
150	N	2	C	208	GM17900 GM26257	GM24276 GM24276	GM26257 —
			D, F	220-240	GM17901 GM26258	GM24277 GM24277	GM26258 —
			G, H, J	380-416	GM17902 GM26259	GM24278 GM24278	GM26259 —
			K, M	440-480	GM17903 GM26260	GM24279 GM24279	GM26260 —
			N	600	GM17904 GM26261	GM24280 GM24280	GM26261 —
150	T	3/4 solid neutral	C	208	GM17906 GM26262	GM24281 GM24281	GM26262 —
			D, F	220-240	GM17907 GM26263	GM24282 GM24282	GM26263 —
			G, H, J	380-416	GM17908 GM26264	GM24283 GM24283	GM26264 —
			K, M	440-480	GM17909 GM26265	GM24284 GM24284	GM26265 —
			N	600	GM17910 GM26266	GM24285 GM24285	GM26266 —
150	V	4/4 switched neutral	C	208	GM17912 GM26272	GM24281 GM24281	GM26272 —
			D, F	220-240	GM17913 GM26273	GM24282 GM24282	GM26273 —
			G, H, J	380-416	GM17914 GM26274	GM24283 GM24283	GM26274 —
			K, M	440-480	GM17915 GM26275	GM24284 GM24284	GM26275 —
			N	600	GM17916 GM26276	GM24285 GM24285	GM26276 —
150	W	4/4 overlapping neutral	C	208	GM19098 GM26282	GM24281 GM24281	GM26282 —
			D, F	220-240	GM19099 GM26283	GM24282 GM24282	GM26283 —
			G, H, J	380-416	GM19100 GM26284	GM24283 GM24283	GM26284 —
			K, M	440-480	GM19101 GM26285	GM24284 GM24284	GM26285 —
			N	600	GM19102 GM26286	GM24285 GM24285	GM26286 —
200	N	2	C	208	GM24694 GM26287	GM24276 GM24276	GM26287 —
			D, F	220-240	GM24695 GM26288	GM24277 GM24277	GM26288 —
			G, H, J	380-416	GM32226 GM32228	GM24278 GM24279	— —
			K, M	440-480	GM24696 GM26289	GM24281 GM24281	GM26289 —
200	T	3/4 solid neutral	C	208	GM24697 GM26290	GM24282 GM24282	GM26290 —
			D, F	220-240	GM32227 GM32229	GM24283 GM24284	— —
			G, H, J	380-416	GM32228 GM32230	GM24284 GM24285	— —
			K, M	440-480	GM32229 GM32231	GM24285 GM24286	— —
200	W	4/4 overlapping neutral	C	208	GM32232 GM32375	GM24286 GM24287	— —
			D, F	220-240	GM32233 GM32376	GM24287 GM24288	— —
			G, H, J	380-416	GM32234 GM32377	GM24288 GM24289	— —
			K, M	440-480	GM32235 GM32378	GM24289 GM24290	— —

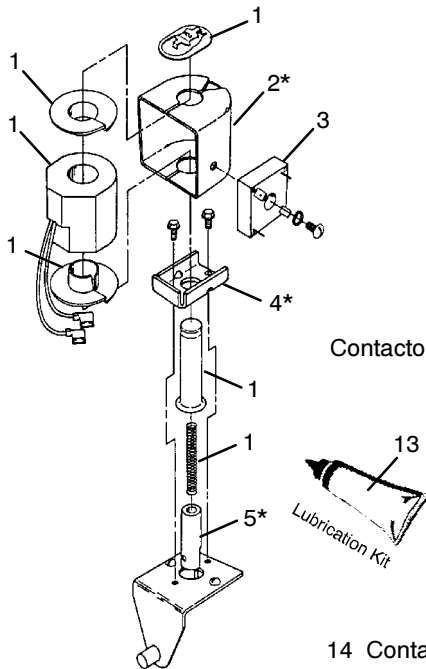
* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number



230 Amp

30-104 Amp Shown P/N GM23274

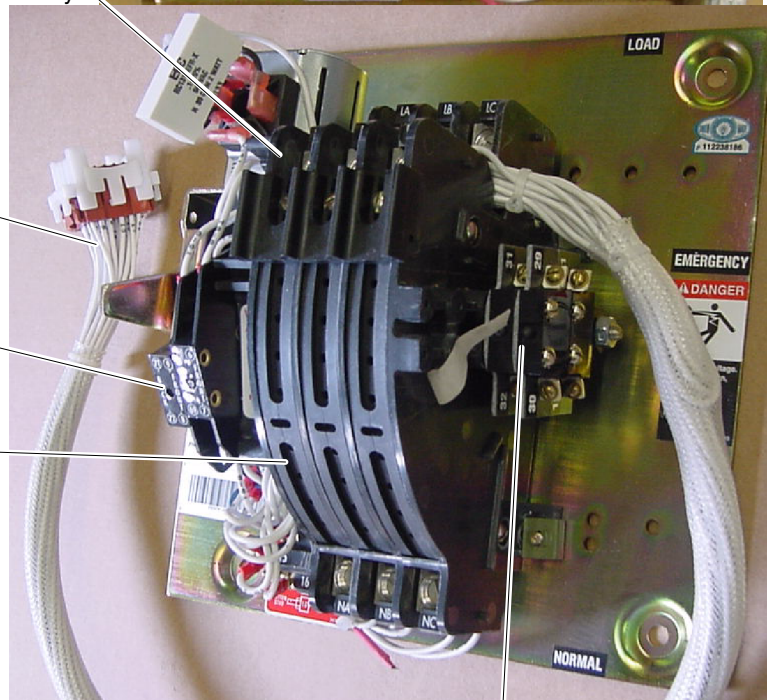
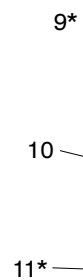
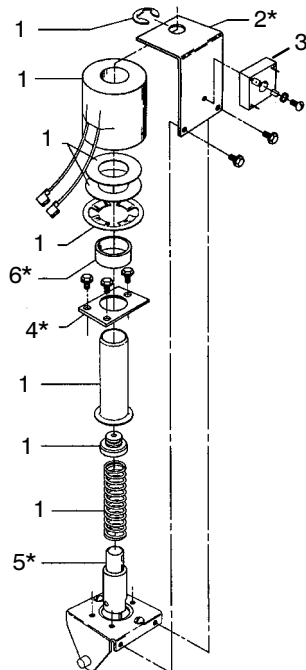
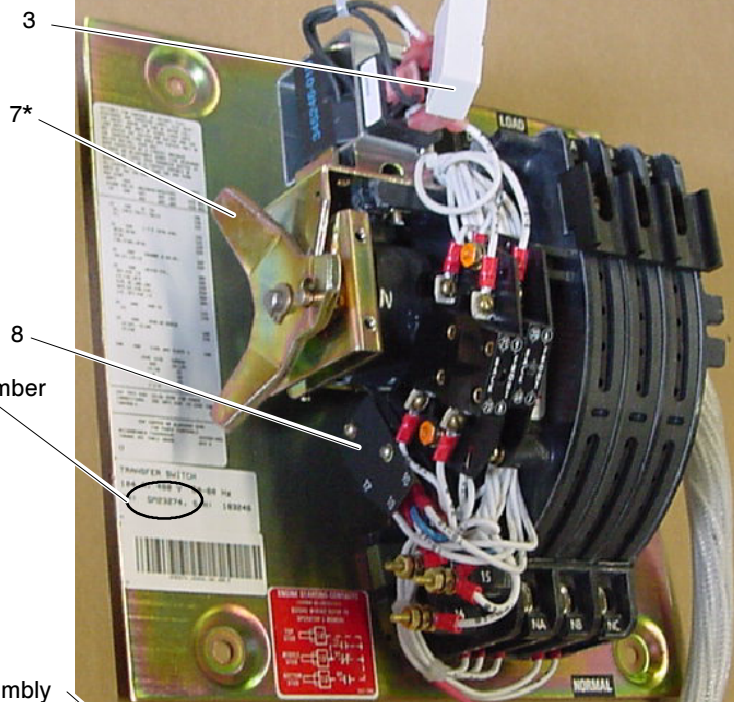


Contactor Part Number



Lubrication Kit 13

14 Contactor Assembly



12*

6158 11

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model Designation

Contactor, Model SCT & SNT

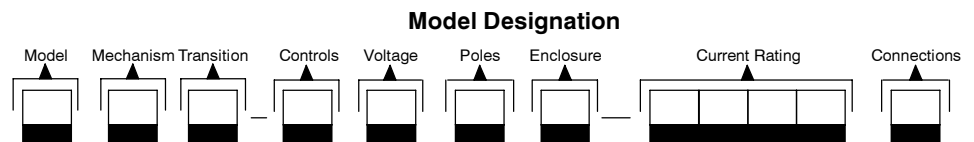
230 Amp

Item	Part Number	Description
1	See chart below	Coil kit
2	*	Yoke, 30-104 A
2	*	L-bracket, 150 A
3	294544	Rectifier (snubber no longer required because of improved rectifier)
4	*	Retainer, core tube
5	*	Core
6	*	Ring, spacer
7	*	Handle, manual operating
8	GM24251	Switch, miniature
9	*	Harness, contactor
10	GM24239	Contacts, coil control
11	*	Chute, arc
12	GM24252	Contact, auxiliary
13	GM24237	Lubrication kit, coil core tube
14	See chart below	Contactor assembly

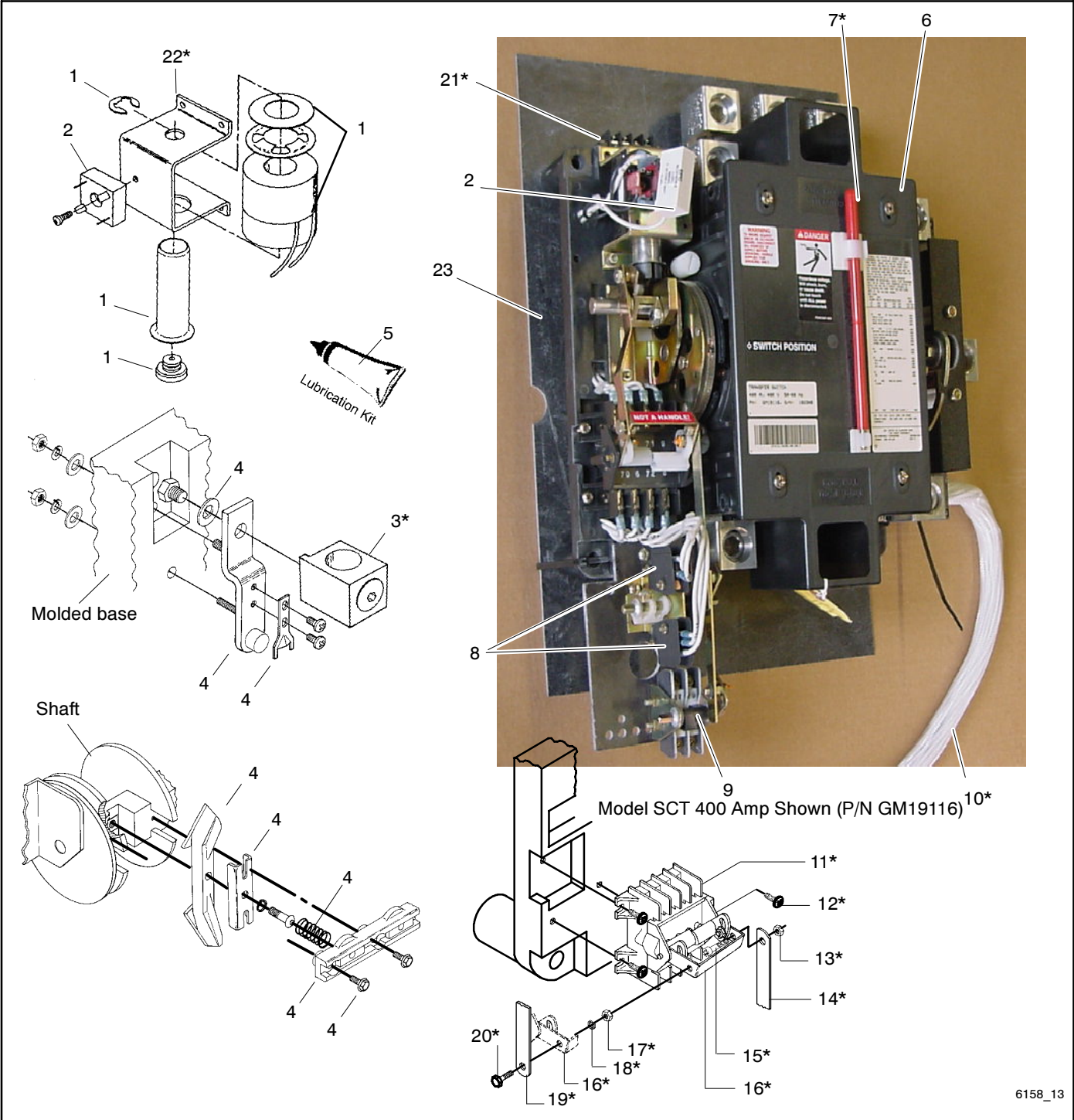
230 Amp Contactor and Coil Kit Replacement Part Numbers							
Transition	Amps	Poles/Wires Code	Poles/Wires	Voltage Code(s)	Voltage	Contact Part Number	Coil Kit Part Number
T	230	N	2	C	208	GM32263	GM24276
		N	2	D, F	220-240	GM32264	GM24277
		N	2	G, H, J	380-416	GM32265	GM24278
		N	2	K, M	440-480	GM32266	GM24279
		T	3	C	208	GM32268	GM24281
		T	3	D, F	220-240	GM32269	GM24282
		T	3	G, H, J	380-416	GM32270	GM24283
		T	3	K, M	440-480	GM32271	GM24284
		V	4/4 switched neutral	C	208	GM32278	GM24281
		V	4/4 switched neutral	D, F	220-240	GM32279	GM24282
		V	4/4 switched neutral	G, H, J	380-416	GM32280	GM24283
		V	4/4 switched neutral	K, M	440-480	GM32281	GM24284
		W	4/4 overlapping neutral	C	208	GM32259	GM24281
		W	4/4 overlapping neutral	D, F	220-240	GM32260	GM24282
		W	4/4 overlapping neutral	G, H, J	380-416	GM32261	GM24283
		W	4/4 overlapping neutral	K, M	440-480	GM32262	GM24284

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number



Contactor, Model SCP & SCT **150-400 Amp (2-, 3-pole SCP)** **225, 260, 400 Amp (SCT)**



Transfer Switch Serial Number

Contactor Serial Number

Model

Mechanism Transition

Controls

Voltage

Poles

Enclosure

Current Rating

Connections

Contactor, Model SCP & SCT

150-400 Amp (2-, 3-pole SCP)

225, 230 (600 V), 260, 400 Amp (SCT)

Item	Part Number	Description
1	See chart	Coil kit
2	294544	Rectifier (snubber no longer required because of improved rectifier)
3	*	Lug
4	See chart	Contact kit
5	GM24237	Lubrication kit, coil core tube
6	GM24240	Barrier
7	*	Handle, manual operating
8	321992	Switch, miniature
9	GM24250	Contact, auxiliary
10	*	Harness, contactor
11	*	Contacts, coil control
12	*	Screw, Phillips self-tapping
13	*	Locknut, #10-32
14	*	Link, lower drive
15	*	Screw, #10-32 Allen head
16	*	Bracket, drive
17	*	Nut, hex
18	*	Washer, lock
19	*	Link, upper drive
20	*	Screw, #10-32 shoulder screw
21	*	Terminal, engine start
22	*	Frame
23	See next page	Contactor assembly

Item 1, Coil Kit

Transition	Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
P, T	C	208	N	2	225, 260, 400	GM24261
P, T	D, F	220-240	N	2	225, 260, 400	GM24262
P, T	G, H, J	380-416	N	2	225, 260, 400	GM24263
P, T	M	460-480	N	2	225, 260, 400	GM24264
P, T	N	600	N	2	225, 230, 260, 400	GM24265
P, T	C	208	T	3	225, 260, 400	GM24266
P, T	D, F	220-240	T	3	225, 260, 400	GM24267
P, T	G, H, J	380-416	T	3	225, 260, 400	GM24268
P, T	M	460-480	T	3	225, 260, 400	GM24269
P, T	N	600	T	3	225, 230, 260, 400	GM24270
T	C	208	V, W	4	225, 260, 400	GM24271
T	D, F	220-240	V, W	4	225, 260, 400	GM24272
T	G, H, J	380-416	V, W	4	225, 260, 400	GM24273
T	M	460-480	V, W	4	225, 260, 400	GM24274
T	N	600	V, W	4	225, 260, 400	GM24275

Item 4, Contact Kit

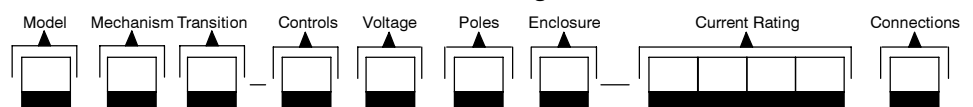
Poles/Wires Code	Poles/Wires	Amps	Part Number
N	2	225/260	GM24241
T	3	225/260	GM24242
N	2	400	GM24243
T	3	400	GM24244

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model Designation

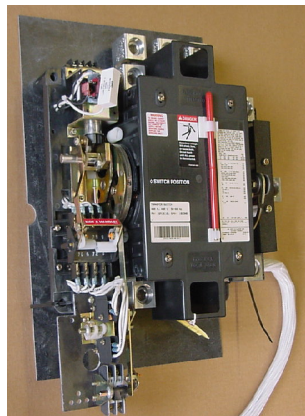


Contactor, Model SCP & SCT

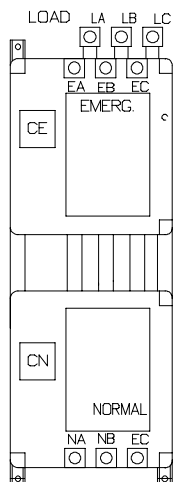
150-400 Amp (2-, 3-pole SCP)

225, 230 (600 V), 260, 400 Amp (SCT)

Item 23 Contactor Assembly



Model SCT
225, 230 (600 V), 260, 400 Amp



Model SCP
150-400 Amp (2-, 3-pole)

Use this table to identify the switch's contactor part number.

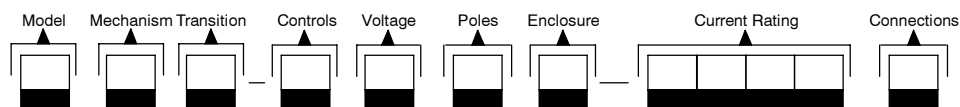
Contactor Part Numbers						
Transition	Amps	Poles/Wires Code	Poles/Wires	Voltage Code(s)	Voltage	Part Number
P	150	N	2	C	208	GM17899
		N	2	D, F	220-240	GM17905
		N	2	G, H, J	380-416	GM17911
		N	2	K, M	440-480	GM17917
		N	2	N	600	GM17923
		T	3	C	208	GM17929
		T	3	D, F	220-240	GM17935
		T	3	G, H, J	380-416	GM17941
		T	3	K, M	440-480	GM17947
		T	3	N	600	GM17953
P	225	N	2	C	208	GM22587
		N	2	D, F	220-240	GM22588
		N	2	G, H, J	380-416	GM22589
		N	2	K, M	440-480	GM22590
		N	2	N	600	GM22591
		T	3	C	208	GM22592
		T	3	D, F	220-240	GM22593
		T	3	G, H, J	380-416	GM22594
		T	3	K, M	440-480	GM22595
		T	3	N	600	GM22596
P	260	N	2	C	208	GM18079
		N	2	D, F	220-240	GM18085
		N	2	G, H, J	380-416	GM18091
		N	2	K, M	440-480	GM18098
		N	2	N	600	GM18099
		T	3	C	208	GM18100
		T	3	D, F	220-240	GM18101
		T	3	G, H, J	380-416	GM18102
		T	3	K, M	440-480	GM18103
		T	3	N	600	GM18104
P	400	N	2	C	208	GM18110
		N	2	D, F	220-240	GM19111
		N	2	G, H, J	380-416	GM18112
		N	2	K, M	440-480	GM18113
		N	2	N	600	GM18114
		T	3	C	208	GM18115
		T	3	D, F	220-240	GM18116
		T	3	G, H, J	380-416	GM18117
		T	3	K, M	440-480	GM18118
		T	3	N	600	GM18119

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model Designation



Contactor, Model SCP & SCT

150-400 Amp (2-, 3-pole SCP)

225, 230 (600 V), 260, 400 Amp (SCT)

Use this table to identify the switch's contactor part number.

Contactor Part Numbers						
Transition	Amps	Poles/Wires Code	Poles/Wires	Voltage Code(s)	Voltage	Part Number
T	225	N	2	C	208	GM22567
		N	2	D, F	220-240	GM22568
		N	2	G, H, J	380-416	GM22569
		N	2	K, M	440-480	GM22570
		N	2	N	600	GM22571
		T	3	C	208	GM22572
		T	3	D, F	220-240	GM22573
		T	3	G, H, J	380-416	GM22574
		T	3	K, M	440-480	GM22575
		T	3	N	600	GM22576
		V	4/4 switched neutral	C	208	GM22582
		V	4/4 switched neutral	D, F	220-240	GM22583
		V	4/4 switched neutral	G, H, J	380-416	GM22584
		V	4/4 switched neutral	K, M	440-480	GM22585
		V	4/4 switched neutral	N	600	GM22586
		W	4/4 overlapping neutral	C	208	GM22563
		W	4/4 overlapping neutral	D, F	220-240	GM22564
		W	4/4 overlapping neutral	G, H, J	380-416	GM22565
		W	4/4 overlapping neutral	K, M	440-480	GM22566
		W	4/4 overlapping neutral	N	600	GM22682
T	230	N	2	N	600	GM17940
		T	3	N	600	GM17946
		W	4/4 overlapping neutral	N	600	GM19112
T	260	N	2	C	208	GM17936
		N	2	D, F	220-240	GM17937
		N	2	G, H, J	380-416	GM17938
		N	2	K, M	440-480	GM17939
		N	2	N	600	GM17940
		T	3	C	208	GM17942
		T	3	D, F	220-240	GM17943
		T	3	G, H, J	380-416	GM17944
		T	3	K, M	440-480	GM17945
		T	3	N	600	GM17946
		W	4/4 overlapping neutral	C	208	GM19108
		W	4/4 overlapping neutral	D, F	220-240	GM19109
		W	4/4 overlapping neutral	G, H, J	380-416	GM19110
		W	4/4 overlapping neutral	K, M	440-480	GM19111
		W	4/4 overlapping neutral	N	600	GM19112
T	400	N	2	C	208	GM17954
		N	2	D, F	220-240	GM17955
		N	2	G, H, J	380-416	GM17956
		N	2	K, M	440-480	GM17957
		N	2	N	600	GM17958
		T	3	C	208	GM17960
		T	3	D, F	220-240	GM17961
		T	3	G, H, J	380-416	GM17962
		T	3	K, M	440-480	GM17963
		T	3	N	600	GM17964
		W	4/4 overlapping neutral	C	208	GM19113
		W	4/4 overlapping neutral	D, F	220-240	GM19114
		W	4/4 overlapping neutral	G, H, J	380-416	GM19115
		W	4/4 overlapping neutral	K, M	440-480	GM19116
		W	4/4 overlapping neutral	N	600	GM19117

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number

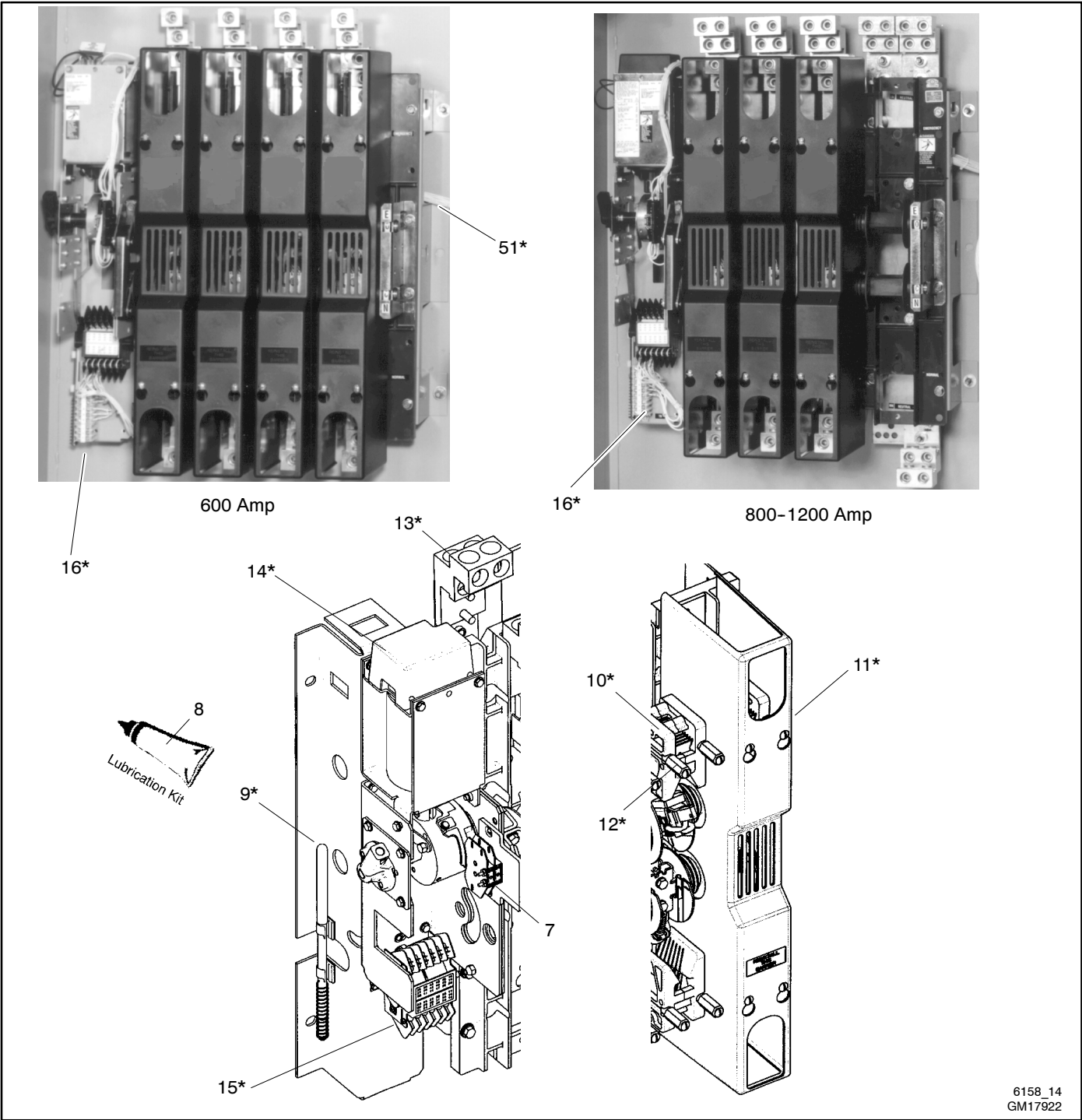
Model Designation

Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Contactor, Model SCP & SCT

150-400 Amp (4-pole SCP)

600-1200 Amp (SCT)



6158_14
GM17922

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number

Model Designation								
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Contactor, Model SCP & SCT

150-400 Amp (4-pole SCP)

600-1200 Amp (SCT)

Item	Part Number	Description	Item	Part Number	Description
1	See chart	Coil kit	28	*	Insulator, shaft
2	See chart	Solenoid assembly (includes coil kit)	29	*	Washer, flat
3	GM24312	Contact, movable arcing	30	*	Washer, disc
4	GM24313	Contact assembly, movable arcing and main	31	*	Nut, hex
5	GM24314	Contact kit, stationary arcing	32	*	Screw, 1/4-20 x 3/8 in.
6	GM24311	Contact assembly, stationary	33	*	Contact, arcing
7	GM24320	Contact, coil control	34	*	Nut, hex
8	GM24237	Lubrication kit	35	*	Washer, disc
9	*	Handle, manual operating	36	*	Washer, flat
10	*	Chute, arc	37	*	Plate, terminal
11	*	Barrier	38	*	Bracket, arc chute mounting
12	*	Nut, insulator	39	*	Block, contact
13	*	Lug	40	*	Pin, clevis
14	*	Cover, rectifier	41	*	Screw, drive link
15	*	Switch, miniature	42	294544	Rectifier (snubber no longer required because of improved rectifier)
16	*	Terminal, engine start	43	*	Bracket, solenoid retaining
17	*	Screw, shunt	44	*	Frame, solenoid
18	*	Bracket, spring	45	*	Screw, rectifier cover
19	*	Retainer, spring	46	*	Cover, rectifier
20	*	Spring, arcing contact	47	*	Screw, mounting
21	*	Pin, pivot	48	*	Screw, contact mounting
22	*	Pin, cotter	49	*	Washer, lock
23	*	Contact assembly, movable arcing contact	50	*	Washer, flat
24	*	Cover, contact	51	*	Harness, contactor
25	*	Bolt, hex head			
26	*	Washer, lock			
27	*	Clamp, shaft			

Item 1, Coil Kit

Transition	Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
P	C	208	V, W, Z	4	150-400	GM24306
P	D, F	220-240	V, W, Z	4	150-400	GM24307
P	G, H, J	380-416	V, W, Z	4	150-400	GM24308
P	M	460-480	V, W, Z	4	150-400	GM24309
P	N	600	V, W, Z	4	150-400	GM24310
P, T	C	208	N, T, V	2, 3, 4	600-1200	GM24306
P, T	D, F	220-240	N, T, V	2, 3, 4	600-1200	GM24307
P, T	G, H, J	380-416	N, T, V	2, 3, 4	600-1200	GM24308
P, T	M	460-480	N, T, V	2, 3, 4	600-1200	GM24309
P, T	N	600	N, T, V	2, 3, 4	600-1200	GM24310

Item 2, Solenoid Assembly (Includes Coil Kit)

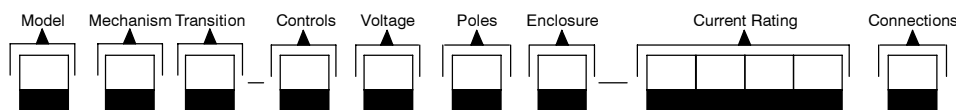
Transition	Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
P	C	208	V, W, Z	4	150-400	GM24315
P	D, F	220-240	V, W, Z	4	150-400	GM24316
P	G, H, J	380-416	V, W, Z	4	150-400	GM24317
P	M	460-480	V, W, Z	4	150-400	GM24318
P	N	600	V, W, Z	4	150-400	GM24319
P, T	C	208	N, T, V	2, 3, 4	600-1200	GM24315
P, T	D, F	220-240	N, T, V	2, 3, 4	600-1200	GM24316
P, T	G, H, J	380-416	N, T, V	2, 3, 4	600-1200	GM24317
P, T	M	460-480	N, T, V	2, 3, 4	600-1200	GM24318
P, T	N	600	N, T, V	2, 3, 4	600-1200	GM24319

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

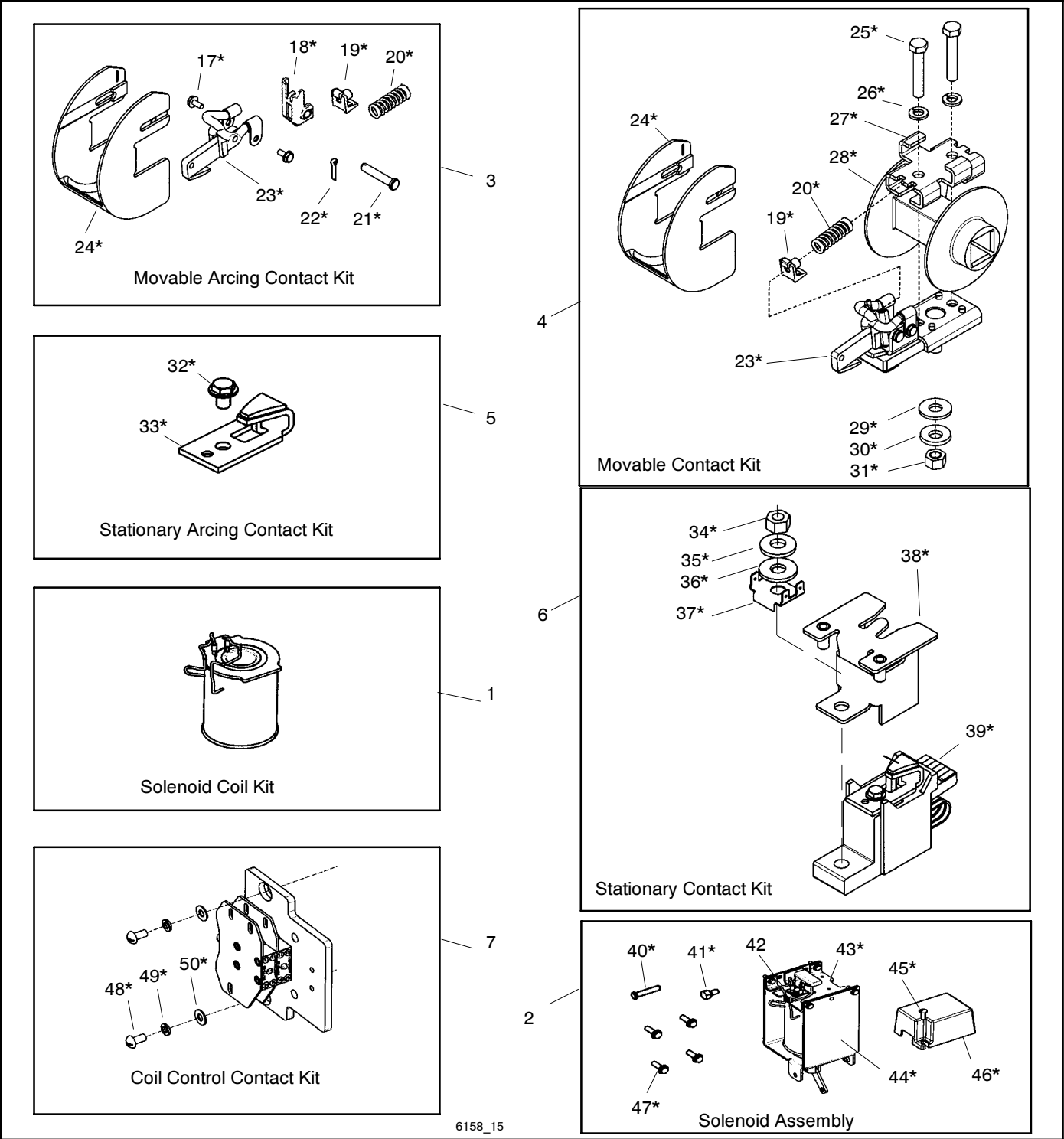
Transfer Switch Serial Number

Contactor Serial Number

Model Designation



Contactor, Model SCP & SCT **150-400 Amp (4-pole SCP)** **600-1200 Amp (SCT)**



* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number	Model Designation								
Contactor Serial Number	Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Contactor, Model SCP & SCT

150-400 Amp (4-pole SCP)

600-1200 Amp (SCT)

Item	Part Number	Description
1	See chart	Coil kit
2	See chart	Solenoid assembly (includes coil kit)
3	GM24312	Contact, movable arcing
4	GM24313	Contact assembly, movable arcing and main
5	GM24314	Contact kit, stationary arcing
6	GM24311	Contact assembly, stationary
7	GM24320	Contact, coil control
8	GM24237	Lubrication kit
9	*	Handle, manual operating
10	*	Chute, arc
11	*	Barrier
12	*	Nut, insulator
13	*	Lug
14	*	Cover, rectifier
15	*	Switch, miniature
16	*	Terminal, engine start
17	*	Screw, shunt
18	*	Bracket, spring
19	*	Retainer, spring
20	*	Spring, arcing contact
21	*	Pin, pivot
22	*	Pin, cotter
23	*	Contact assembly, movable arcing contact
24	*	Cover, contact
25	*	Bolt, hex head
26	*	Washer, lock
27	*	Clamp, shaft

Item	Part Number	Description
28	*	Insulator, shaft
29	*	Washer, flat
30	*	Washer, disc
31	*	Nut, hex
32	*	Screw, 1/4-20 x 3/8 in.
33	*	Contact, arcing
34	*	Nut, hex
35	*	Washer, disc
36	*	Washer, flat
37	*	Plate, terminal
38	*	Bracket, arc chute mounting
39	*	Block, contact
40	*	Pin, clevis
41	*	Screw, drive link
42	294544	Rectifier (snubber no longer required because of improved rectifier)
43	*	Bracket, solenoid retaining
44	*	Frame, solenoid
45	*	Screw, rectifier cover
46	*	Cover, rectifier
47	*	Screw, mounting
48	*	Screw, contact mounting
49	*	Washer, lock
50	*	Washer, flat
51	*	Harness, contactor

Item 1, Coil Kit

Transition	Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
P	C	208	V, W, Z	4	150-400	GM24306
P	D, F	220-240	V, W, Z	4	150-400	GM24307
P	G, H, J	380-416	V, W, Z	4	150-400	GM24308
P	M	460-480	V, W, Z	4	150-400	GM24309
P	N	600	V, W, Z	4	150-400	GM24310
P, T	C	208	N, T, V	2, 3, 4	600-1200	GM24306
P, T	D, F	220-240	N, T, V	2, 3, 4	600-1200	GM24307
P, T	G, H, J	380-416	N, T, V	2, 3, 4	600-1200	GM24308
P, T	M	460-480	N, T, V	2, 3, 4	600-1200	GM24309
P, T	N	600	N, T, V	2, 3, 4	600-1200	GM24310

Item 2, Solenoid Assembly (Includes Coil Kit)

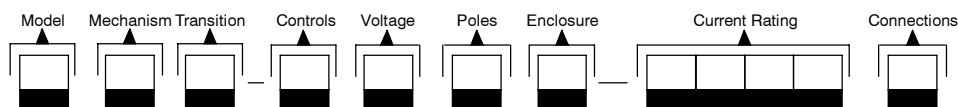
Transition	Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
P	C	208	V, W, Z	4	150-400	GM24315
P	D, F	220-240	V, W, Z	4	150-400	GM24316
P	G, H, J	380-416	V, W, Z	4	150-400	GM24317
P	M	460-480	V, W, Z	4	150-400	GM24318
P	N	600	V, W, Z	4	150-400	GM24319
P, T	C	208	N, T, V	2, 3, 4	600-1200	GM24315
P, T	D, F	220-240	N, T, V	2, 3, 4	600-1200	GM24316
P, T	G, H, J	380-416	N, T, V	2, 3, 4	600-1200	GM24317
P, T	M	460-480	N, T, V	2, 3, 4	600-1200	GM24318
P, T	N	600	N, T, V	2, 3, 4	600-1200	GM24319

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

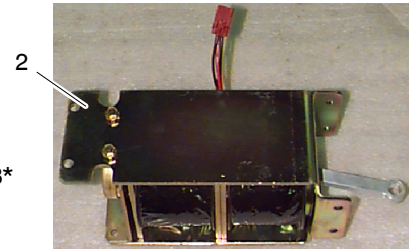
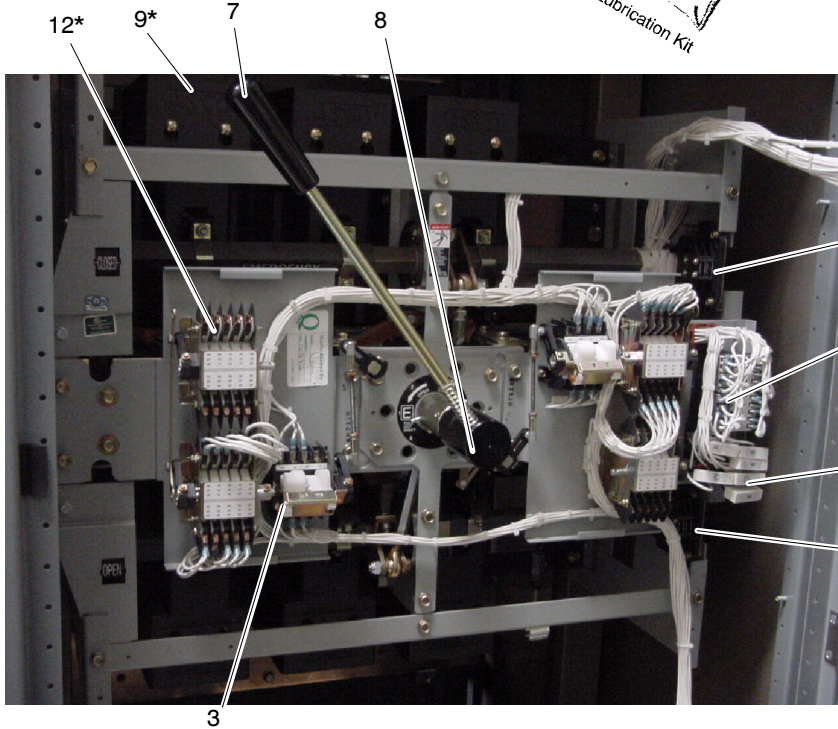
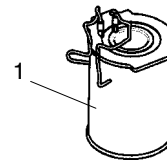
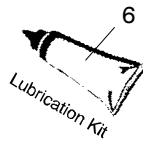
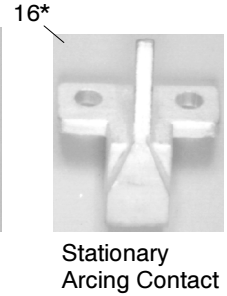
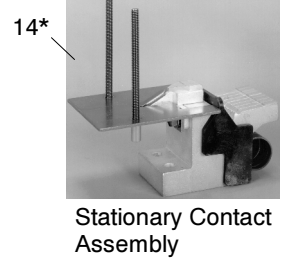
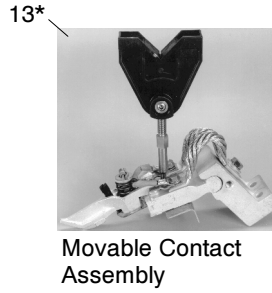
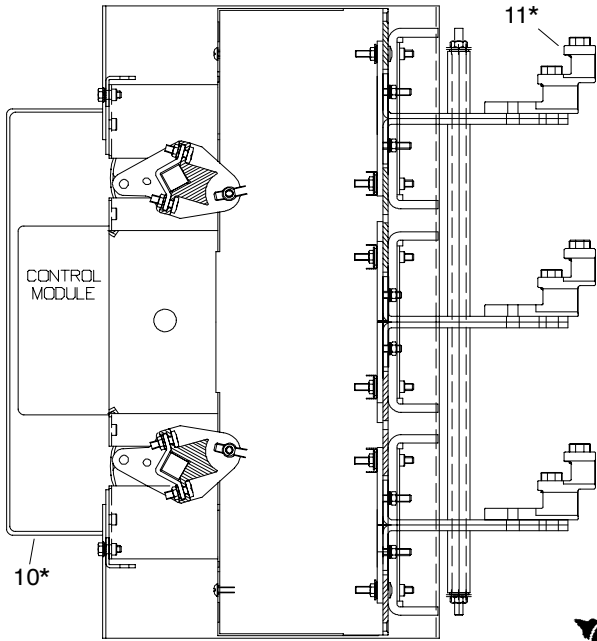
Contactor Serial Number

Model Designation

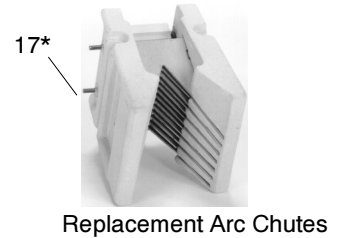


Contactor, Model SCP & SCT 1600-3000 Amp

P/N GM20394 1600 Amp Shown



Solenoid Assembly
(includes entire solenoid with
frame, coils, core tube, core
spring, core and link)



Replacement Arc Chutes

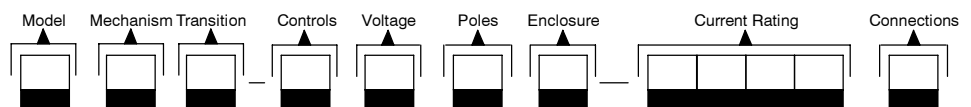
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* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

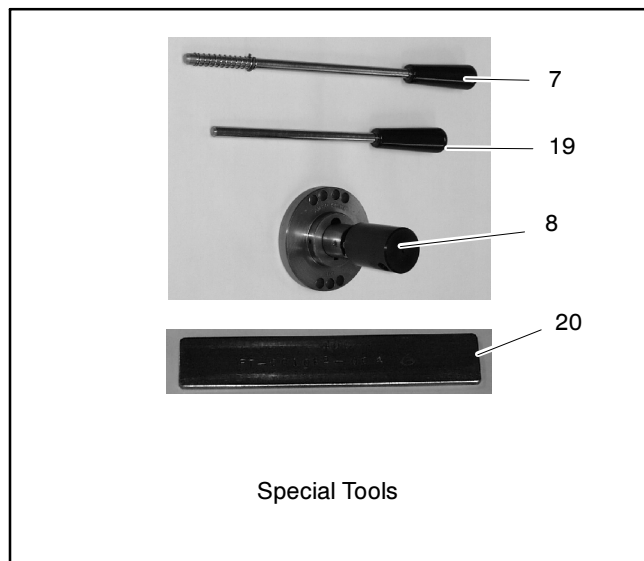
Contactor Serial Number

Model Designation



Contactor, Model SCP & SCT

1600-3000 Amp



Item	Part Number	Description
1	See chart	Coil kit
2	See chart	Solenoid assembly
3	GM24245	Contact, coil control
4	GM24300	Module, control
5	See chart	Relay, control module (SER, ERR)
6	GM24237	Lubrication kit
7	GM25404	Handle, maintenance
8	GM25406	Hub, adjusting
9	*	Barrier
10	*	Cover
11	*	Lug
12	*	Switch, miniature
13	*	Contact assembly, movable
14	*	Contact assembly, stationary
15	*	Contact, movable arcing
16	*	Contact, stationary arcing
17	*	Chute, arc
18	*	Contacts, auxiliary
19	GM25405	Pin, adjusting
20	GM25407	Sim gauge, main contact

Item 1, Coil Kit

Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
C	208	N, T, V	2, 3, 4	1600-2000	GM24301
D, F	220-240	N, T, V	2, 3, 4	1600-2000	GM24302
G, H, J	380-416	N, T, V	2, 3, 4	1600-2000	GM24303
M	460-480	N, T, V	2, 3, 4	1600-2000	GM24304
N	600	N, T, V	2, 3, 4	1600-2000	GM24305

Item 2, Solenoid Assembly

Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
C	208	N, T, V	2, 3, 4	1600-2000	GM24290
D, F	220-240	N, T, V	2, 3, 4	1600-2000	GM24291
G, H, J	380-416	N, T, V	2, 3, 4	1600-2000	GM24292
M	460-480	N, T, V	2, 3, 4	1600-2000	GM24293
N	600	N, T, V	2, 3, 4	1600-2000	GM24294

Item 5, Control Module Relay

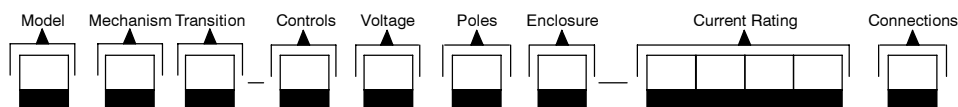
Voltage Code (s)	Voltage	Part Number
C	208	GM24295
D, F	220-240	GM24296
G, H, J	380-416	GM24297
M	460-480	GM24298
N	600	GM24299

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

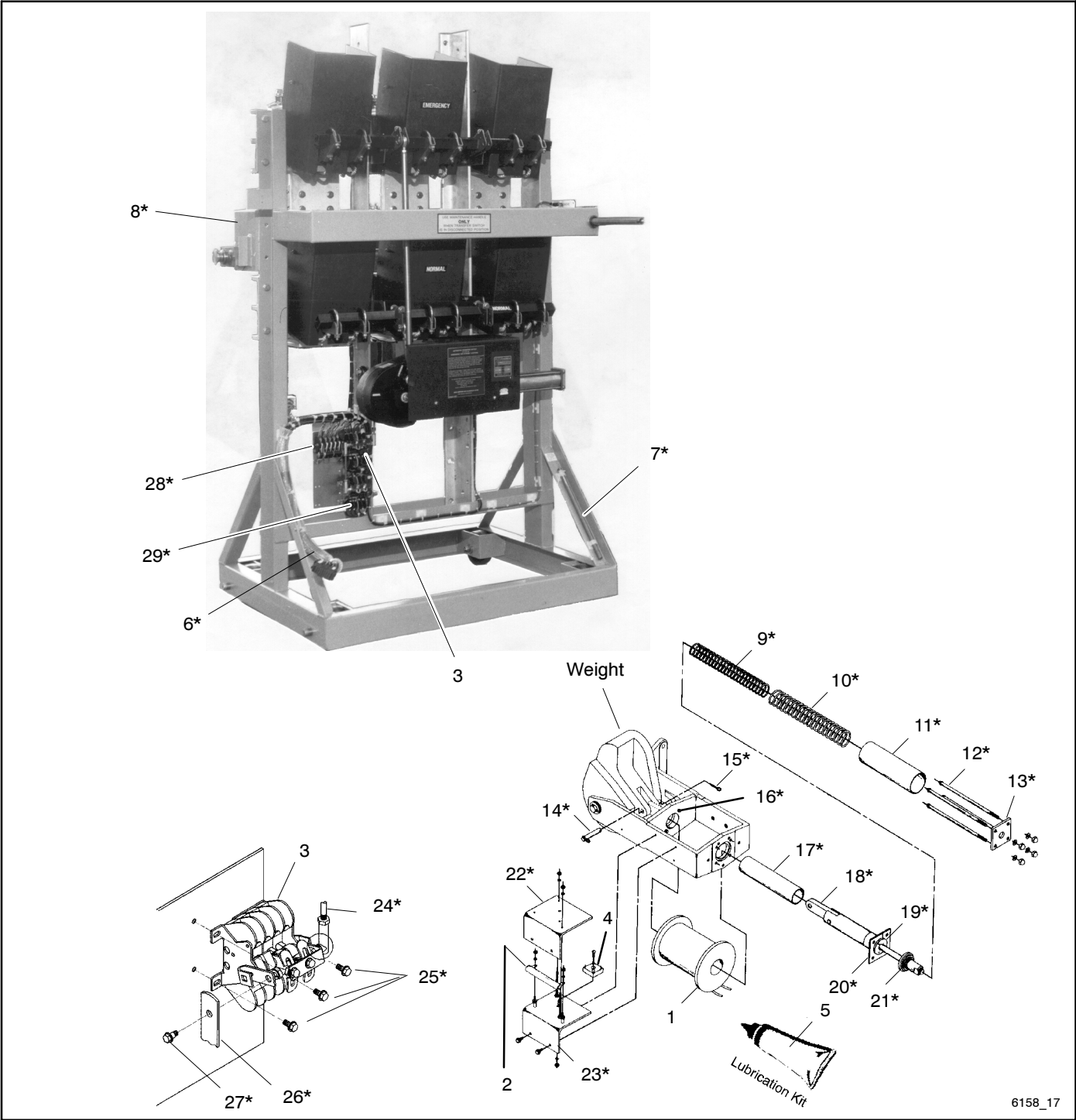
Transfer Switch Serial Number

Contactor Serial Number

Model Designation



Contactor, Model SCP & SCT 4000 Amp



* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number	Model Designation								
Contactor Serial Number	Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Contactor, Model SCP & SCT

4000 Amp

Item	Part Number	Description
1	See chart	Coil kit
2	See chart	Resistor
3	GM24238	Contact, coil control
4	294544	Rectifier (snubber no longer required because of improved rectifier)
5	GM24237	Lubrication kit
6	*	Harness, contactor
7	*	Handle, manual operating
8	*	Lug
9	*	Spring, inside
10	*	Spring, outside
11	*	Tube, spring
12	*	Rod
13	*	Plate, retaining
14	*	Pin, pivot
15	*	Pin, cotter
16	*	Screw, coil clamping
17	*	Tube, core
18	*	Stem, core and link assembly
19	*	Washer, leather
20	*	Plate, cover
21	*	Stop, core
22	*	Cover, rectifier
23	*	Panel, rectifier mounting
24	*	Link, upper drive
25	*	Screw, mounting
26	*	Link, lower drive
27	*	Screw, #10-32 shoulder
28	*	Miniature switches
29	*	Auxiliary contacts

Item 1, Coil Kit

Voltage Code(s)	Voltage	Poles/Wires Code	Poles/Wires	Amps	Part Number
C	208	T, V	3 & 4	4000	GM24288
D, F	220-240	T, V	3 & 4	4000	GM24286
G, H, J	380-416	T, V	3 & 4	4000	GM24289
M	460-480	T, V	3 & 4	4000	GM24287

Item 2, Resistor

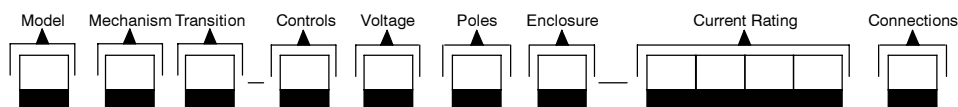
Voltage Code(s)	Voltage	Part Number
C	208	GM24249
D, F	220-240	GM24246
G, H, J	380-416	GM24247
M	460-480	GM24248

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

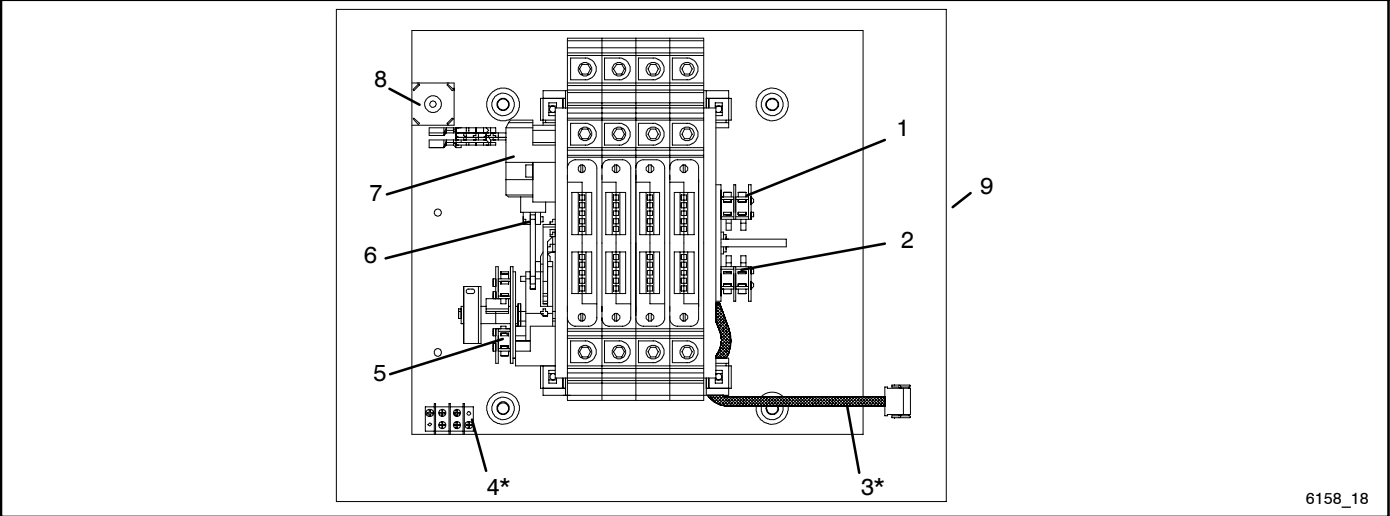
Contactor Serial Number

Model Designation



Contactor, Model SDT & SMT

40-225 Amp



6158_18

Item	Part Number	Description
1	GM25434	Auxiliary contacts
2	GM25434	Auxiliary contacts
3	*	Wiring harness
4	*	Terminal block, engine start
5	GM25434	Switch, coil cutout
6	GM32387	Solenoid plunger and link
7	See chart	Solenoid
8	See chart	Rectifier
9	See chart	Contactor assembly

Items 7 and 8, Solenoid and Rectifier			
Voltage Code(s)	Voltage	Part Number	
		Item 7, Solenoid	Item 8, Rectifier
C, D	208/220	362087	GM32388
F	240	362135	GM32388
G, H, J	380/400/416	362089	321781
K, M	440/480	362090	321781

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model Designation

Model

Mechanism Transition

Controls

Voltage

Poles

Enclosure

Current Rating

Connections

Contactor, Model SDT & SMT

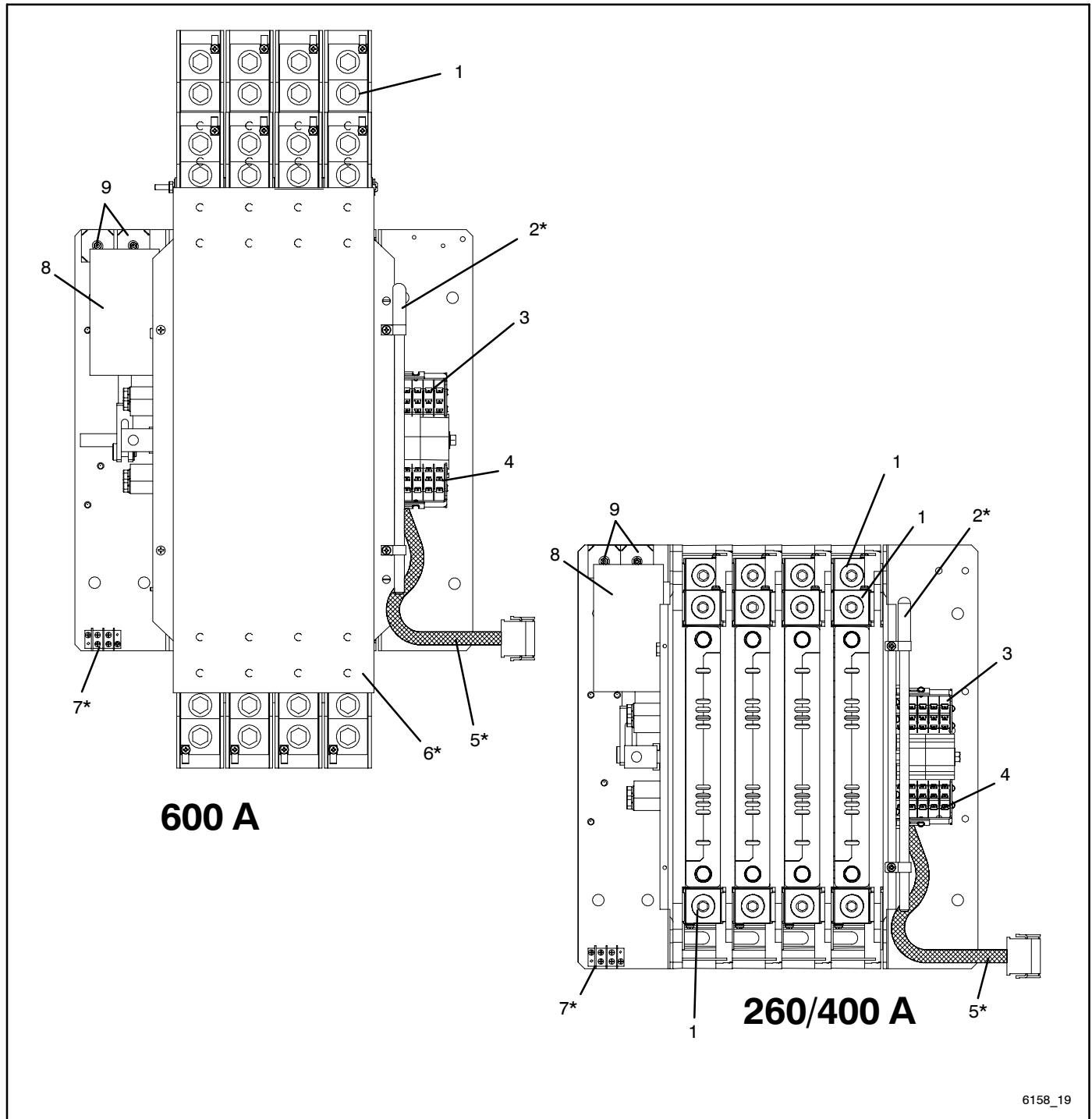
40-225 Amp

Use this table to identify the switch's contactor part number.

Item 9, Contactor Assembly			
Amps	Poles/Wires Code	Voltage Code	Part Number
40	N	C	GM30267
		D, F	GM30268
		G, H, J	GM30269
		K, M	GM30270
	T	C	GM30271
		D, F	GM30272
		G, H, J	GM30273
		K, M	GM30274
	V	C	GM30275
		D, F	GM30276
		G, H, J	GM30277
		K, M	GM30278
80	N	C	GM30279
		D, F	GM30280
		G, H, J	GM30281
		K, M	GM30282
	T	C	GM30283
		D, F	GM30284
		G, H, J	GM30285
		K, M	GM30286
	V	C	GM30287
		D, F	GM30288
		G, H, J	GM30289
		K, M	GM30290
100	N	C	GM30291
		D, F	GM30292
		G, H, J	GM30293
		K, M	GM30294
	T	C	GM30295
		D, F	GM30296
		G, H, J	GM30297
		K, M	GM30298
	V	C	GM30299
		D, F	GM30300
		G, H, J	GM30301
		K, M	GM30302

Item 9, Contactor Assembly			
Amps	Poles/Wires Code	Voltage Code	Part Number
150	N	C	GM30303
		D, F	GM30304
		G, H, J	GM30305
		K, M	GM30306
	T	C	GM30307
		D, F	GM30308
		G, H, J	GM30309
		K, M	GM30310
	V	C	GM30311
		D, F	GM30312
		G, H, J	GM30313
		K, M	GM30314
200	N	C	GM30315
		D, F	GM30316
		G, H, J	GM30317
		K, M	GM30318
	T	C	GM30684
		D, F	GM30685
		G	GM30686
		K, M	GM30687
	V	C	GM30688
		D, F	GM30689
		G, H, J	GM30690
		K, M	GM30691
225	N	C	GM28989
		D, F	GM28990
		G, H, J	GM28991
		K, M	GM28992
	T	C	GM28993
		D, F	GM28994
		G, H, J	GM28995
		K, M	GM28996
	V	C	GM28997
		D, F	GM28998
		G, H, J	GM28999
		K, M	GM29000

Contactor, Model SDT & SMT 260-600 Amp



* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number

Contactor Serial Number

Model Designation

Model Mechanism Transition Controls Voltage Poles Enclosure Current Rating Connections

Contactor, Model SDT & SMT

260-600 Amp

Item	Part Number	Description
1	GM32389	Lug, cable connection, 260/400 A
1	321744	Lug, cable connection, 600 A
2	*	Handle
3	GM25434	Switch, coil cutout
4	GM25434	Auxiliary contacts
5	*	Wiring harness
6	*	Barrier
7	*	Terminal block, engine start
8	See chart	Solenoid
9	321781	Rectifier
10	See chart	Contactor assembly

Item 8, Solenoid

Voltage	Voltage Code(s)	Part Number
		Item 8, Solenoid
208/220/240	C, D, F	GM32390
380/416	G, H, J	GM32391
440/480	K, M	GM32392

Use this table to identify the switch's contactor part number.

Item 9, Contactor Assembly

Amps	Poles/Wires Code	Voltage Code	Part Number
260	N	C	GM29001
		D, F	GM29002
		G, H, J	GM29003
		K, M	GM29004
	T	C	GM29005
		D, F	GM29006
		G, H, J	GM29007
		K, M	GM29008
	V	C	GM29009
		D, F	GM29010
		G, H, J	GM29011
		K, M	GM29012
400	N	C	GM29013
		D, F	GM29014
		G, H, J	GM29015
		K, M	GM29016
	T	C	GM29017
		D, F	GM29018
		G, H, J	GM29019
		K, M	GM29020
	V	C	GM29021
		D, F	GM29022
		G, H, J	GM29023
		K, M	GM29024

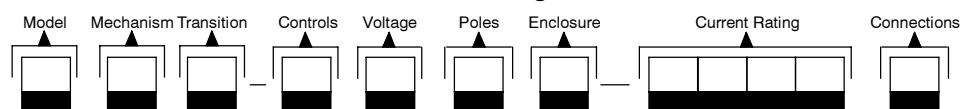
Item 9, Contactor Assembly

Amps	Poles/Wires Code	Voltage Code	Part Number
600	N	C	GM29025
		D, F	GM29026
		G, H, J	GM29027
		K, M	GM29028
	T	C	GM29029
		D, F	GM29030
		G, H, J	GM29031
		K, M	GM29032
	V	C	GM29033
		D, F	GM29034
		G, H, J	GM29035
		K, M	GM29036

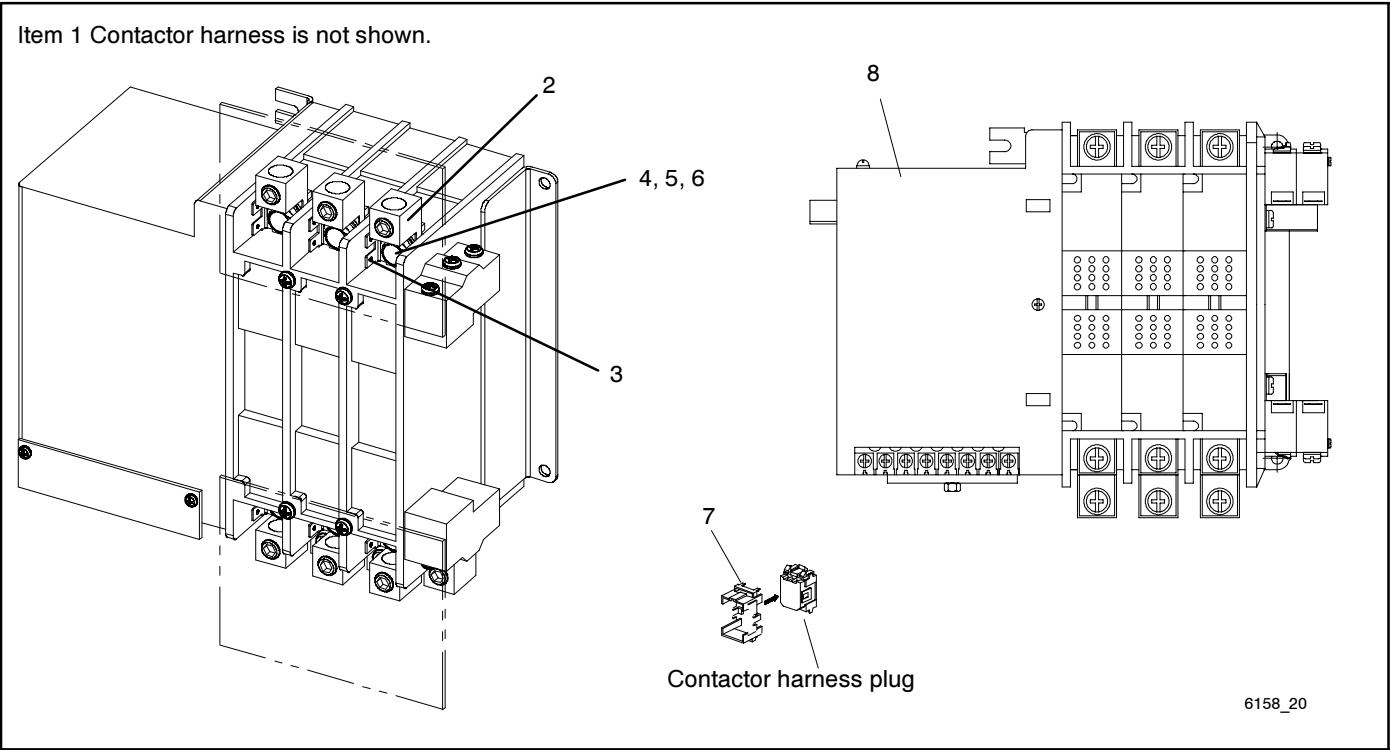
* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number

Model Designation



Contactor, Model SDP & SMP 100-400 Amp



Model SDP & SMP Contactors

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	D, M	P	A	C, D, F	N	all	100	GM30222-KA1
S	D, M	P	A	C, D, F	T	all	100	GM30222-KA2
S	D, M	P	A	C, D, F	V	all	100	GM30222-KA3
S	D, M	P	A	C, D, F	N	all	200	GM30222-KA4
S	D, M	P	A	C, D, F	T	all	200	GM30222-KA5
S	D, M	P	A	C, D, F	V	all	200	GM30222-KA6
S	D, M	P	A	G, J, K, M	N	all	100	GM30222-KA7
S	D, M	P	A	G, J, K, M	T	all	100	GM30222-KA8
S	D, M	P	A	G, J, K, M	V	all	100	GM30222-KA9
S	D, M	P	A	G, J, K, M	N	all	200	GM30222-KA10
S	D, M	P	A	G, J, K, M	T	all	200	GM30222-KA11
S	D, M	P	A	G, J, K, M	V	all	200	GM30222-KA12
S	D, M	P	A	C, D, F	N	all	400	GM30223-KA1
S	D, M	P	A	C, D, F	T	all	400	GM30223-KA2
S	D, M	P	A	C, D, F	V	all	400	GM30223-KA3
S	D, M	P	A	G, J, K, M	N	all	400	GM30223-KA4
S	D, M	P	A	G, J, K, M	T	all	400	GM30223-KA5
S	D, M	P	A	G, J, K, M	V	all	400	GM30223-KA6

Please refer to instructions on page 3 for an explanation of how to use this table.

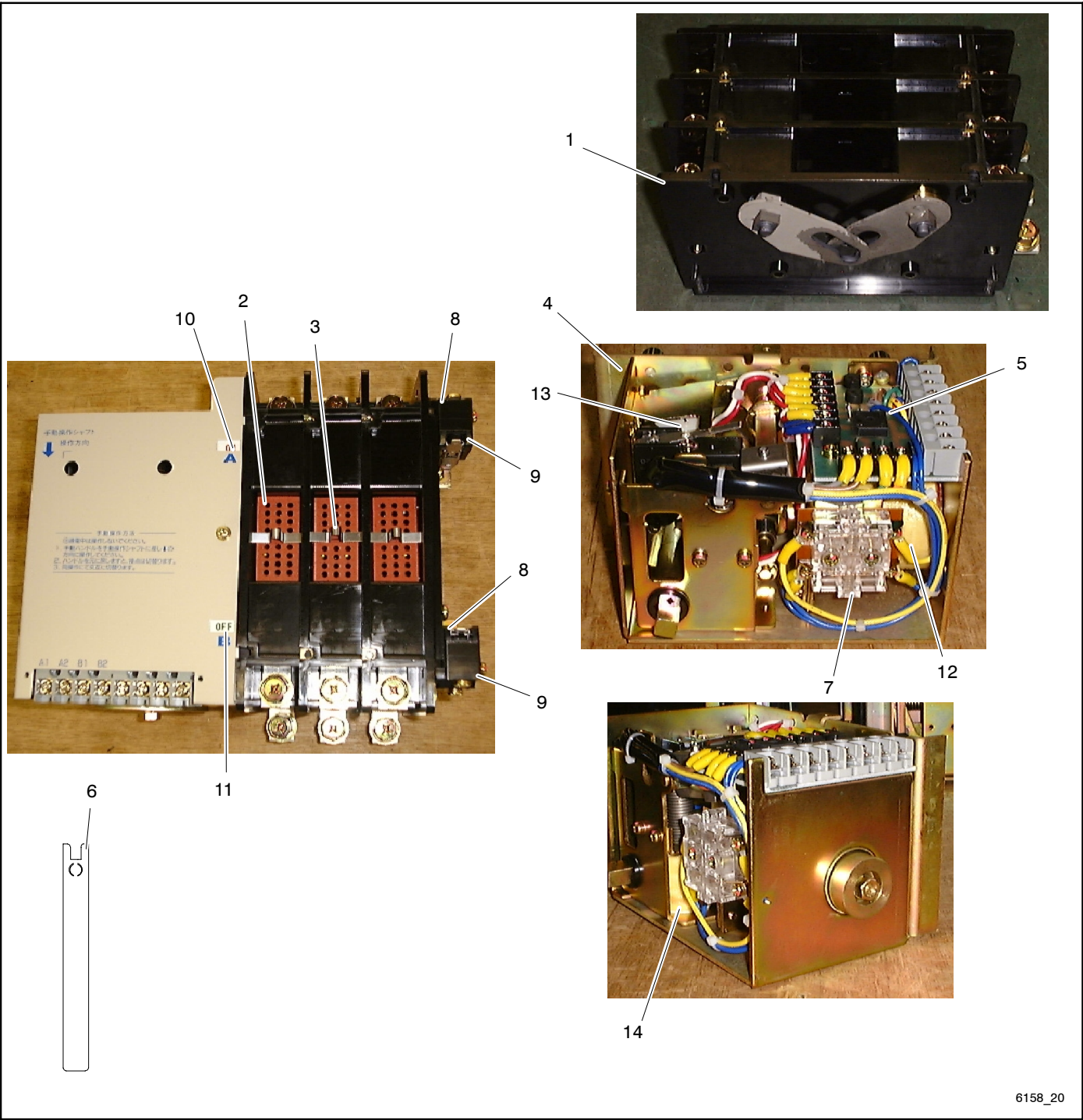
Contactor, Model SDP & SMP

100-400 Amp

100-200-Amp Modules												
Item	Part Number	Description	Quantity									
			Module									
			GM30222-KA1	GM30222-KA2	GM30222-KA3	GM30222-KA4	GM30222-KA5	GM30222-KA6	GM30222-KA7	GM30222-KA8	GM30222-KA9	GM30222-KA10
1	GM29448	Harness, contactor	1	1	1							
1	GM29449	Harness, contactor				1	1	1				
1	GM32466	Harness, contactor							1	1	1	
1	GM32465	Harness, contactor										1
2	X-6207-6	Lug, terminal, aluminum	6	9	12				6	9	12	1
2	GM28413	Lug, terminal				6	9	12				6
3	GM31854	Terminal, ATS lug sensing	6	9	12				6	9	12	9
3	GM31855	Terminal, ATS lug sensing				6	9	12				6
4	X-25-20	Washer, plain, .312 ID x .75 OD	6	9	12				6	9	12	9
4	X-25-18	Washer, plain, .391 ID x .875 in. OD				12	18	24				12
5	X-6086-24	Washer, spring	6	9	12				6	9	12	18
5	X-6086-25	Washer, spring				6	9	12				6
6	X-465-2	Bolt, hex cap	6	9	12				6	9	12	9
6	X-125-5	Bolt, hex cap				6	9	12				6
6	X-82-6	Bolt, hex cap				6	9	12				6
7	321330	Boot, connector	2	2	2	2	2	2	2	2	2	2
8	GM29048	Contactor, PT, series, 100 A. 2 P	1						1			
8	GM29050	Contactor, PT, series, 100 A. 3 P		1						1		
8	GM29052	Contactor, PT, series, 100 A. 4 P			1						1	
8	GM29049	Contactor, PT, series, 200 A. 2 P				1						1
8	GM29051	Contactor, PT, series, 200 A. 3 P					1					1
8	GM29053	Contactor, PT, series, 200 A. 4 P						1				1
See page 60 for contactor components												

400-Amp Modules								
			Quantity					
			Module					
			GM30223-KA1	GM30223-KA2	GM30223-KA3	GM30223-KA4	GM30223-KA5	GM30223-KA6
Item	Part Number	Description						
1	GM29450	Harness, contactor	1	1	1			
1	GM32467	Harness, contactor				1	1	1
2	X-6207-9	Lug, terminal, aluminum	6	9	12	6	9	12
3	GM31855	Terminal, ATS lug sensing	6	9	12	6	9	12
4	X-25-118	Washer, plain, .406 ID x 1 in. OD	12	18	24	12	18	24
5	X-6086-24	Washer, spring, .39 ID x .81 in. OD	6	9	12	6	9	12
6	X-6238-4	Bolt, hex cap	6	9	12	6	9	12
6	X-83-7	Nut, hex, 3/8-16, zinc	6	9	12	6	9	12
7	321330	Boot, connector	2	2	2	2	2	2
8	GM29054	Contactor, PT, series, 400 A. 2 P	1			1		
8	GM29055	Contactor, PT, series, 400 A. 3 P		1			1	
8	GM29056	Contactor, PT, series, 400 A. 4 P			1			1
		See page 60 for contactor components						

Contactor, Model SDP & SMP 100-400 Amp Contactor Components



6158_20

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number

Model Designation								
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Contactor, Model SDP & SMP

100-400 Amp Contactor Components

Item	Part Number	Description
1	*	Current-carrying unit (without arc chutes)
2	GM32477	Chute, arc, 100 A
2	GM32478	Chute, arc, 200 A
2	GM32479	Chute, arc, 400 A
3	GM32480	Clip, spring, 100 A
3	GM32481	Clip, spring, 200 A
3	GM32482	Clip, spring, 400 A
4	*	Mechanical unit
5	*	Circuit board (bridge rectifier)
6	GM32475	Handle, manual
7	GM32483	Switch, control
8	GM32484	Barrier, aux contact
9	GM32485	Switch, auxiliary
10	GM32486	Indicator, ON-OFF (A)
11	GM32487	Indicator, ON-OFF (B)
12	See chart	Coil, closing
13	GM32496	Coil, select
14	GM32498	Coil, trip, 100/200 A
14	GM32499	Coil, trip, 400 A

Item 12, Closing Coil

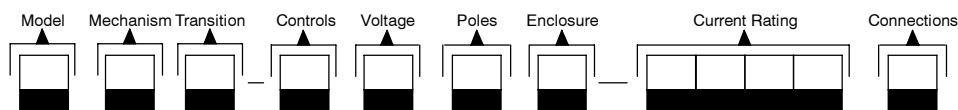
Poles/Wires Code	Poles/Wires	Amps	Part Number
N, T	2, 3	100	GM32488
V	4	100	GM32489
N, T	2, 3	200	GM32489
V	4	200	GM32490
N, T	2, 3	400	GM32491
V	4	400	GM32492

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

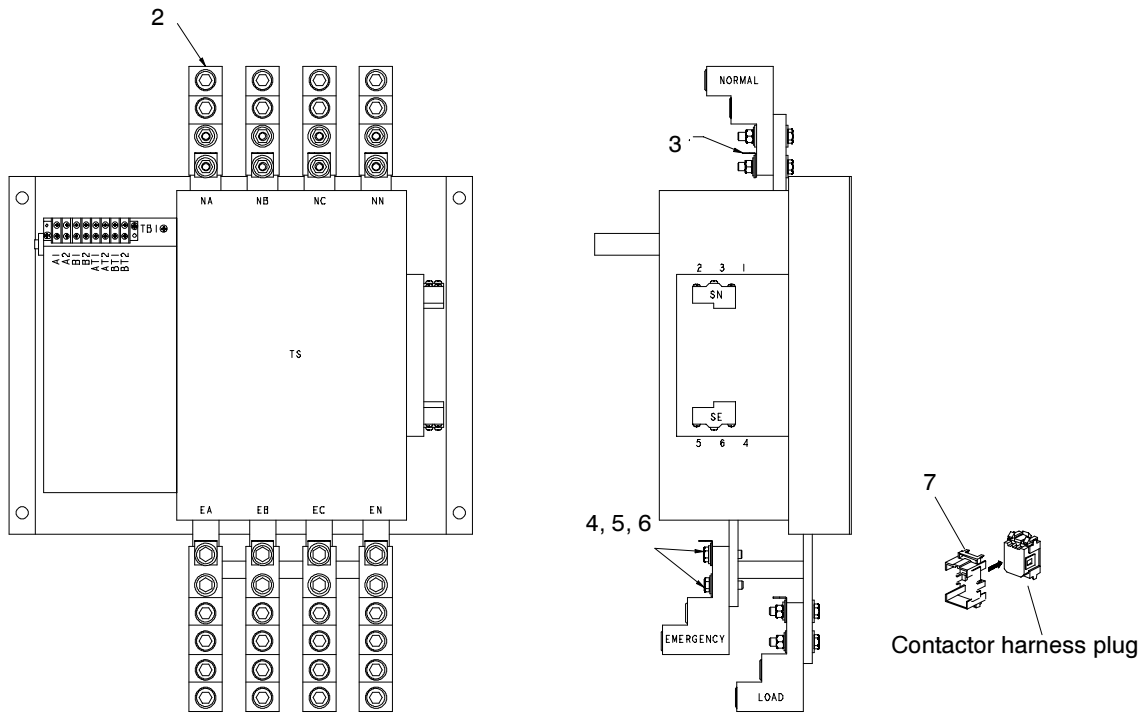
Transfer Switch Serial Number

Contactor Serial Number

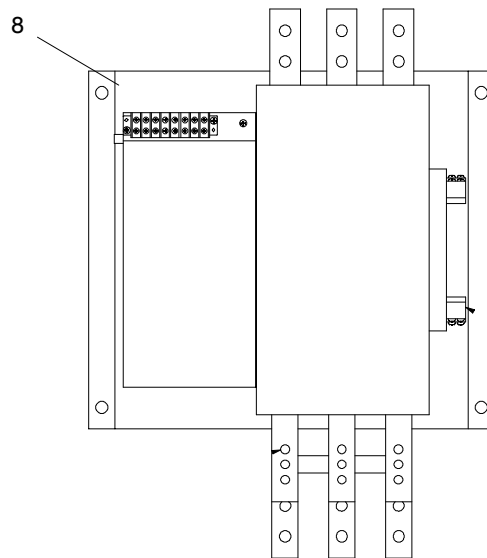
Model Designation



Contactor, Model SDP & SMP 600 Amp



Item 1 Contactor harness is not shown.



Contactor, Model SDP & SMP

600 Amp

Item	Part Number	Description	Quantity					
			Module					
			GM30224-KA1	GM30224-KA2	GM30224-KA3	GM30224-KA4	GM30224-KA5	GM30224-KA6
1	GM29451	Harness, contactor	1	1	1			
1	GM32464	Harness, contactor				1	1	1
2	297981	Lug, terminal, aluminum	6	9	12	6	9	12
3	GM31855	Terminal, ATS lug sensing	6	9	12	6	9	12
4	X-25-118	Washer, plain, .406 ID x 1 in. OD	20	30	40	20	30	40
5	X-6086-6	Washer, spring	12	18	24	12	18	24
6	X-6238-17	Bolt, hex cap (normal lugs)	4	6	8	4	6	8
6	X-6238-5	Bolt, hex cap (emergency lugs)	4	6	8	4	6	8
6	X-6238-6	Bolt, hex cap (load lugs)	4	6	8	4	6	8
6	X-83-7	Nut, hex, 3/8-16, zinc (normal and load lugs)	8	12	16	8	12	16
7	321330	Boot, connector	2	2	2	2	2	2
8	GM29057	Contactor, PT, series, 600 A. 2 P	1			1		
8	GM29058	Contactor, PT, series, 600 A. 3 P		1			1	
8	GM29060	Contactor, PT, series, 600 A. 4 P			1			1

Model SDP & SMP 600 Amp Contactors

Module Number Key

Model Designation Code								Module Number
Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	
S	D, M	P	A	C, D, F	N	all	600	GM30224-KA1
S	D, M	P	A	C, D, F	T	all	600	GM30224-KA2
S	D, M	P	A	C, D, F	V	all	600	GM30224-KA3
S	D, M	P	A	G, J, K, M	N	all	600	GM30224-KA4
S	D, M	P	A	G, J, K, M	T	all	600	GM30224-KA5
S	D, M	P	A	G, J, K, M	V	all	600	GM30224-KA6

Please refer to instructions on page 3 for an explanation of how to use this table.

Contactor, Model SDP & SMP 600 Amp Contactor Components

Item 11 Terminal Cover is not shown.

6158_20

Transfer Switch Serial Number

Contactor Serial Number

Model

Mechanism

Transition

Controls

Voltage

Poles

Enclosure

Current Rating

Connections

Model Designation

64

MP-6158 11/05

Contactor, Model SDP & SMP

600 Amp Contactor Components

Item	Part Number	Description
1	GM32471	Chute, arc, 600 A
2	*	Mechanical unit
3	*	Circuit board (bridge rectifier)
4	GM32476	Handle, manual
5	GM32483	Switch, control
6	GM32484	Barrier, aux contact
7	GM32485	Switch, auxiliary
8	GM32494	Coil, closing, 2-pole, 3-pole
8	GM32495	Coil, closing, 4-pole
9	GM32497	Coil, select
10	GM32500	Coil, trip
11	GM32472	Cover, terminal, 2-pole
11	GM32473	Cover, terminal, 3-pole
11	GM32474	Cover, terminal, 4-pole
12	*	Contact, fixed A-side
13	*	Contact, fixed B-side
14	*	Contact, moving A-side
15	*	Contact, moving B-side

* Serviceable items without part numbers are available by recording the serial numbers and model designation below and contacting your supplier of DDC/MTU Power Generation parts. See Introduction for more instructions.

Transfer Switch Serial Number
Contactor Serial Number

Model Designation

Model	Mechanism	Transition	Controls	Voltage	Poles	Enclosure	Current Rating	Connections

Literature

Qty.	Description	Part Number
1	Warranty, 1-year limited	MP-5373
1	O/I/M Model SCT/SCP ATS	MP-6126
1	S/M ATS	MP-6127
1	P/C Model SCT/SCP/SBT/SBP/SDP/SMP ATS	MP-6158
1	O/I/M Model SDT/SMT/SDP/SMP	MP-6225

Accessories

Annunciator Kits

Kits: GM28938-KP1, GM28938-KP1S, GM29905-KP1, and GM29905-KP1S						
Qty.	Description	Common Parts	Unique Parts			
			GM28938-KP1	GM28938-KP1S	GM29905-KP1	GM29905-KP1S
1	Annunciator	GM31026				
1	Battery, annunciator	GM31562				
1	Decal, touch screen overlay		GM29618	GM29619	GM29618	GM29619
1	Enclosure, annunciator		GM28885	GM28885		
1	Decal, danger	362176				
1	Connector, plug	GM23792				
4	Bracket, mtg	GM29233				
1	Panel, mtg		GM29524	GM29524		
1	Power supply	GM29525				
1	Decal	GM29542				
4	Screw, slotted pan head machine		X-50-73	X-50-73		
1	Panel, annunciator				GM30040	GM30040
1	Installation Instructions	TT-1343				

Battery Charger Kits, 30-800 A

Kits: GM22498-KP1 to GM22498-KP4						
Qty.	Description	Common Parts	Unique Parts			
			208 V GM22498-KP1	240 V GM22498-KP2	480 V GM22498-KP3	600 V GM22498-KP4
1	Battery charger	GM22502				
1	Harness, wiring		GM22530	GM22532	GM22531	GM22529
2	Jumper lead	SWJ-1004-1414				
1	Terminal, 1/4 in. eyelet, 16-22 gauge	X-283-9				
2	Terminal, 3/16 in. pushon, 16-22 ga.	X-431-48				
2	Terminal, 3/8 in. eyelet, 16-22 gauge	X-283-21				
2	Terminal, 3/8 in. eyelet, 16-14 gauge	X-283-3				
2	Terminal, #10 eyelet, 10-12 gauge	X-283-11				
1	Screw, 1/4-20 x 3/4 in. thread forming	X-67-114				
4	Nut, 1/4-20	X-6210-2				
1	Lockwasher, 1/4 in. internal/external	X-22-12				
1	Installation Instructions	TT-1320				

Accessories

Battery Charger Kits, 1000-4000 A

Kits: GM22498-KP5 to GM22498-KP8						
Qty.	Description	Common Parts	Unique Parts			
			208 V GM22498-KP5	240 V GM22498-KP6	480 V GM22498-KP7	600 V GM22498-KP8
1	Battery charger	GM22502				
1	Harness, wiring		GM22530	GM22532	GM22531	GM22529
1	Panel, mounting	GM22398				
2	Jumper lead	SWJ-1004-1414				
1	Terminal, 1/4 in. eyelet, 16-22 gauge	X-283-9				
2	Terminal, 3/16 in. pushon, 16-22 ga.	X-431-48				
2	Terminal, 3/8 in. eyelet, 16-22 gauge	X-283-21				
2	Terminal, 3/8 in. eyelet, 16-14 gauge	X-283-3				
2	Terminal, #10 eyelet, 10-12 gauge	X-283-11				
5	Screw, 1/4-20 x 3/4 in. thread forming	X-67-114				
4	Nut, 1/4-20	X-6210-2				
1	Lockwasher, 1/4 in. internal/external	X-22-12				
1	Installation Instructions	TT-1320				

Chicago Alarm Accessory Kit

GM26313-KP1

Qty.	Description	Part Number
1	Installation Instructions	TT-1342
1	Alarm assembly, ATS (includes the following)	GM26313
1	Relay, 120 VAC, 10 A	269958
1	Terminal block, 6-position	295314
1	Fuse holder, inline	322557
1	Block, contact	GM20928
1	Operator, red	GM26166
1	Operator, amber	GM26167
2	Light module	GM26168
2	Bulb, 120V	GM26169
1	Horn, alarm A.C. vibrating	GM26312
1	Switch, pushbutton	GM28444
1	Decal, alarm contacts	GM28446
1	Decal, ATS alarm	GM28447
1	Enclosure	GM28448
1	Panel, mounting	GM28449
1	Bracket, mounting	GM28550
1	Terminal block	X-405-2
1	Strap, holddown	X-6124-5
1	Harness, wiring Chicago alarm	GM30444
1	Fuse, 3 A, 250 V	243273

Device Modem Kit, 60 Hz

GM29509-KP1

Qty.	Description	Part Number
1	Modem	294987
1	Null modem	GM29363
1	Connector	GM29364
1	Installation Instructions	TT-1349

Accessories, continued

Device Modem Kit, 50 Hz

GM29509-KP2

Qty.	Description	Part Number
1	Modem	353071
1	Null modem	GM29363
1	Connector	GM29364
1	Installation Instructions	TT-1349

Input/Output Module

GM21359-KA1(KP1)

Qty.	Description	Part Number
1	Circuit board assembly	GM21115-A
2	Module, PC mounting	GM21332
8	Pin, PC mounting	GM21333
2	Screw, cross recess, sheet metal	X-67-143
1	Installation Instructions	TT-1316

Input/Output Module Mounting

3 Foot Cable

GM21360-KA1(KP1)

Qty.	Description	Part Number
1	Pan, accessory mounting	GM21330
1	Rail, DIN	GM21328
1	Cover, I/O module	GM21334
1	Harness, I/O module	GM21341-1
1	Washer, lock, .262 ID x .743 in. OD	X-22-12
4	Nut, 10-32	X-6210-1
5	Nut, 1/4-20	X-6210-2
1	Installation Instructions	TT-1316

Battery Option Board

GM26139-KA1(KP1)

Qty.	Description	Part Number
1	Circuit board assembly	GM24168
3	Module, PC mounting	GM21332
8	Pin, PC mounting	GM21333
2	Screw, cross recess, sheet metal	X-67-143
1	Installation inductions	TT-1340
1	Diagram, wiring	GM28627

Line To Neutral Voltage Monitoring

Module, 30-800 Amp

GM23425-KA1(KP1)

Qty.	Description	Part Number
1	Tool, pin extractor	241918
3	Base, cable tie	298776
3	Tie, cable	X-468-1
3	Terminal, 3/8 in. eyelet	X-283-21
3	Lead, 66 in.	SWN-1866-19200
1	Installation Instructions	TT-1328

Accessories, continued

Line To Neutral Voltage Monitoring Module, 1000-4000 Amp

GM23425-KA2(KP2)

Qty.	Description	Part Number
1	Tool, pin extractor	241918
3	Base, cable tie	298776
3	Tie, cable	X-468-1
3	Terminal, 3/8 in. eyelet	X-283-21
3	Lead, 120 in.	SWN-18120-19200
1	Installation Instructions	TT-1328

Load Shed Module

GM23469-KA1

Qty.	Description	Part Number
3	Contactor	353390
1	Relay	GM13641
1	Transformer	GM23491
1	Bracket, mounting	GM23492
1	Socket	X-6124-4
1	Strap, holddown	X-6124-5
4	Fuse holder, 30 A, 600 V	X-6129-16
2	Fuse, 5 A, 250 V	X-6134-14
2	Fuse, 2 A, 600 V	X-6135-3
1	Rail, din	GM23502
8	Screw, hex washer, thread-forming	X-67-113
1	Installation Instructions	TT-1330

Monitor III Software

GM41141-KP1S

Qty.	Description	Part Number
1	Cable, DB9M,DB9F, null modem	GM16657
1	USB interface	GM29225
1	Software, Windows Monitor III	GM41098
1	O/M Monitor III Software	MP-6347
1	TT Converters & Connections, Monitor III	TT-1405
1	Resistor, 121 Ohm	X-6058-27

Monitor III Software w/Modem

GM41141-KP2S

Qty.	Description	Part Number
1	Cable, DB9M,DB25M, AT modem	GM16658
1	Isolator, optical	GM17837
1	USB interface	GM29225
1	Connector, null modem	GM29363
1	Connector	GM29364
1	Converter, RS232/RS485	GM41096
1	Software, Windows Monitor III	GM41098
1	Modem, device	GM41115
1	O/M Monitor III Software	MP-6347
1	TT Converters & Connections, Monitor III	TT-1405
1	Resistor, 121 Ohm	X-6058-27

PC to External Modem Kit, 60 Hz

GM29508-KP1

Qty.	Description	Part Number
1	Connector	294988
1	Cable	GM29362
1	Modem	294986
1	Installation Instructions	TT-1349

Accessories, continued

PC to External Modem Kit, 50 Hz

GM29508-KP2

Qty.	Description	Part Number
1	Connector	294988
1	Cable	GM29362
1	Modem	353072
1	Installation Instructions	TT-1349

Preferred-Source Selector Switch

GM20933-KP1(KA1)

Qty.	Description	Part Number
1	Switch assembly, 2-position	GM20927
2	Key, switch assembly (included with GM20927)	—
1	Contact assembly (1 NO contact)	GM20928
1	Terminal block, 2-position	GM20930
1	Decal, preferred source	GM21287
1	Harness, 9-pin ribbon (used with GM20932-KA1)	GM10945
1	Installation Instructions	TT-1317

Programmable Input/Output Module

GM23159-KA1(KP1)

Qty.	Description	Part Number
1	I/O circuit board	GM21115-A
3	Module, PC mounting	GM21332
8	Pin, PC mounting	GM21333
2	Screw, sheet metal	X-67-143
1	Installation Instructions	TT-1316

RS232 Connector

GM23010-KA1(KP1)

Qty.	Description	Part Number
1	Harness, 9-pin ribbon	GM10945

Setup Software

GM23174-KP1S

Qty.	Description	Part Number
1	Cable, DB9M/DB9F, Null Modem	GM16657
1	Software, Windows DXPower	GM23178
1	O/M DXPower setup program	MP-6135

Supervised Transfer Control Switch (for automatic operation)

GM20932-KA1(KP1)

Qty.	Description	Part Number
1	Switch assembly, 3-position	GM20926
2	Key, switch assembly (included with GM20926)	—
1	Contact assembly (1 NO/1 NC contacts)	GM20929
1	Connector, plug, 3-position	GM11496
1	Decal, supervised transfer control	GM21286
1	Harness, 9-pin ribbon (used with GM20933-KA1)	GM10945
1	Installation Instructions	TT-1318

Supervised Transfer Control Switch (for non-automatic operation)

GM23173-KA1

Qty.	Description	Part Number
1	Switch assembly, 3-position	GM20926
2	Key, switch assembly (included with GM20926)	—
1	Contact assembly (1 NO/1 NC contacts)	GM20929
1	Connector, plug, 3-position	GM11496
1	Decal, supervised transfer control	GM21286

1	DXPower Surveyor Software CD	GM29227
1	Operation/Installation Manual Surveyor Software	MP-6214

Accessories, continued

Surveyor, USB

GM29223-KP1S

Qty.	Description	Part Number
1	USB interface	GM29225
1	Converter, RS232 to RS485	GM29361

Surveyor, Parallel

GM29223-KP2S

Qty.	Description	Part Number
1	Parallel interface	GM29224
1	DXPower Surveyor Software CD	GM29227
1	Converter, RS232 to RS485	GM29361
1	Operation/Installation Manual Surveyor Software	MP-6214

User Interface Covers with Padlock

Qty.	Description	Common Parts	Unique Parts				
			30-800 A			1000-4000 A	
			GM22703-KA1	GM22703-KA2	GM22703-KA5	GM22703-KA3	GM22703-KA4
—	Bracket, padlock		GM20576 (2)	GM20576 (2)	GM20576 (2)	GM20576 (1)	GM20576 (1)
1	Cover, security		GM22504		GM22504	GM22504	
1	Cover, security (with window)			GM22505			GM22505
1	Bracket, latch	GM22533					
1	Latch, compression (key operated)	GM22534					
2	Key, compression latch	GM20574					
6	Nut, 10-32	X-6210-1					
1	Installation Instructions	TT-1319					

Notes

Appendix A Abbreviations

The following list contains abbreviations that may appear in this publication.

A, amp	ampere	cfm	cubic feet per minute	ext.	external
ABDC	after bottom dead center	CG	center of gravity	F	Fahrenheit, female
AC	alternating current	CID	cubic inch displacement	fglass.	fiberglass
A/D	analog to digital	CL	centerline	FHM	flat head machine (screw)
ADC	analog to digital converter	cm	centimeter	fl. oz.	fluid ounce
adj.	adjust, adjustment	CMOS	complementary metal oxide substrate (semiconductor)	flex.	flexible
ADV	advertising dimensional drawing	cogen.	cogeneration	freq.	frequency
AHWT	anticipatory high water temperature	com	communications (port)	FS	full scale
AISI	American Iron and Steel Institute	coml	commercial	ft.	foot, feet
ALOP	anticipatory low oil pressure	Coml/Rec	Commercial/Recreational	ft. lb.	foot pounds (torque)
alt.	alternator	conn.	connection	ft./min.	feet per minute
Al	aluminum	cont.	continued	g	gram
ANSI	American National Standards Institute (formerly American Standards Association, ASA)	CPVC	chlorinated polyvinyl chloride	ga.	gauge (meters, wire size)
AO	anticipatory only	crit.	critical	gal.	gallon
API	American Petroleum Institute	CRT	cathode ray tube	gen.	generator
approx.	approximate, approximately	CSA	Canadian Standards Association	genset	generator set
AR	as required, as requested	CT	current transformer	GFI	ground fault interrupter
AS	as supplied, as stated, as suggested	Cu	copper	GND, ⊕	ground
ASE	American Society of Engineers	cu. in.	cubic inch	gov.	governor
ASME	American Society of Mechanical Engineers	cw.	clockwise	gph	gallons per hour
assy.	assembly	CWC	city water-cooled	gpm	gallons per minute
ASTM	American Society for Testing Materials	cyl.	cylinder	gr.	grade, gross
ATDC	after top dead center	D/A	digital to analog	GRD	equipment ground
ATS	automatic transfer switch	DAC	digital to analog converter	gr. wt.	gross weight
auto.	automatic	dB	decibel	H x W x D	height by width by depth
aux.	auxiliary	dBA	decibel (A weighted)	HC	hex cap
A/V	audiovisual	DC	direct current	HCHT	high cylinder head temperature
avg.	average	DCR	direct current resistance	HD	heavy duty
AVR	automatic voltage regulator	deg., °	degree	HET	high exhaust temperature, high engine temperature
AWG	American Wire Gauge	dept.	department	hex	hexagon
AWM	appliance wiring material	dia.	diameter	Hg	mercury (element)
bat.	battery	DI/EO	dual inlet/end outlet	HH	hex head
BBDC	before bottom dead center	DIN	Deutsches Institut für Normung e. V. (also Deutsche Industrie Normenausschuss)	HHC	hex head cap
BC	battery charger, battery charging	DIP	dual inline package	HP	horsepower
BCA	battery charging alternator	DPDT	double-pole, double-throw	hr.	hour
BCI	Battery Council International	DPST	double-pole, single-throw	HS	heat shrink
BDC	before dead center	DS	disconnect switch	hsg.	housing
BHP	brake horsepower	DVR	digital voltage regulator	HVAC	heating, ventilation, and air conditioning
blk.	black (paint color), block (engine)	E, emer.	emergency (power source)	HWT	high water temperature
blk. htr.	block heater	EDI	electronic data interchange	Hz	hertz (cycles per second)
BMEP	brake mean effective pressure	EFR	emergency frequency relay	IC	integrated circuit
bps	bits per second	e.g.	for example (<i>exempli gratia</i>)	ID	inside diameter, identification
br.	brass	EG	electronic governor	IEC	International Electrotechnical Commission
BTDC	before top dead center	EGSA	Electrical Generating Systems Association	IEEE	Institute of Electrical and Electronics Engineers
Btu	British thermal unit	EIA	Electronic Industries Association	IMS	improved motor starting
Btu/min.	British thermal units per minute	EI/EO	end inlet/end outlet	in.	inch
C	Celsius, centigrade	EMI	electromagnetic interference	in. H ₂ O	inches of water
cal.	calorie	emiss.	emission	in. Hg	inches of mercury
CARB	California Air Resources Board	eng.	engine	in. lb.	inch pounds
CB	circuit breaker	EPA	Environmental Protection Agency	Inc.	incorporated
cc	cubic centimeter	EPS	emergency power system	ind.	industrial
CCA	cold cranking amps	ER	emergency relay	int.	internal
ccw.	counterclockwise	ES	engineering special, engineered special	int./ext.	internal/external
CEC	Canadian Electrical Code	ESD	electrostatic discharge	I/O	input/output
cert.	certificate, certification, certified	est.	estimated	IP	iron pipe
cfh	cubic feet per hour	E-Stop	emergency stop	ISO	International Organization for Standardization
		etc.	et cetera (and so forth)	J	joule
		exh.	exhaust	JIS	Japanese Industry Standard
				k	kilo (1000)
				K	kelvin

kA	kiloampere	MTBO	mean time between overhauls	rly.	relay
KB	kilobyte (2 ¹⁰ bytes)	mtg.	mounting	rms	root mean square
kg	kilogram	MW	megawatt	rnd.	round
kg/cm ²	kilograms per square centimeter	mW	milliwatt	ROM	read only memory
kgm	kilogram-meter	μF	microfarad	rot.	rotate, rotating
kg/m ³	kilograms per cubic meter	N, norm.	normal (power source)	rpm	revolutions per minute
kHz	kilohertz	NA	not available, not applicable	RS	right side
kJ	kilojoule	nat. gas	natural gas	RTV	room temperature vulcanization
km	kilometer	NBS	National Bureau of Standards	SAE	Society of Automotive Engineers
kOhm, kΩ	kilo-ohm	NC	normally closed	scfm	standard cubic feet per minute
kPa	kilopascal	NEC	National Electrical Code	SCR	silicon controlled rectifier
kph	kilometers per hour	NEMA	National Electrical Manufacturers Association	s, sec.	second
kV	kilovolt	NFPA	National Fire Protection Association	SI	<i>Système international d'unités</i> , International System of Units
kVA	kilovolt ampere	Nm	newton meter	SI/EO	side in/end out
kVAR	kilovolt ampere reactive	NO	normally open	sil.	silencer
kW	kilowatt	no., nos.	number, numbers	SN	serial number
kWh	kilowatt-hour	NPS	National Pipe, Straight	SPDT	single-pole, double-throw
kWm	kilowatt mechanical	NPSC	National Pipe, Straight-coupling	SPST	single-pole, single-throw
L	liter	NPT	National Standard taper pipe thread per general use	spec, specs	specification(s)
LAN	local area network	NPTF	National Pipe, Taper-Fine	sq.	square
L x W x H	length by width by height	NR	not required, normal relay	sq. cm	square centimeter
lb.	pound, pounds	ns	nanosecond	sq. in.	square inch
lbm/ft ³	pounds mass per cubic feet	OC	overcrank	SS	stainless steel
LCB	line circuit breaker	OD	outside diameter	std.	standard
LCD	liquid crystal display	OEM	original equipment manufacturer	stl.	steel
ld. shd.	load shed	OF	overfrequency	tach.	tachometer
LED	light emitting diode	opt.	option, optional	TD	time delay
Lph	liters per hour	OS	oversize, overspeed	TDC	top dead center
Lpm	liters per minute	OSHA	Occupational Safety and Health Administration	TDEC	time delay engine cooldown
LOP	low oil pressure	OV	overvoltage	TDEN	time delay emergency to normal
LP	liquefied petroleum	oz.	ounce	TDES	time delay engine start
LPG	liquefied petroleum gas	p., pp.	page, pages	TDNE	time delay normal to emergency
LS	left side	PC	personal computer	TDOE	time delay off to emergency
L _{wa}	sound power level, A weighted	PCB	printed circuit board	TDON	time delay off to normal
LWL	low water level	pF	picofarad	temp.	temperature
LWT	low water temperature	PF	power factor	term.	terminal
m	meter, milli (1/1000)	ph., ∅	phase	TIF	telephone influence factor
M	mega (10 ⁶ when used with SI units), male	PHC	Phillips head crimplite (screw)	TIR	total indicator reading
m ³	cubic meter	PHH	Phillips hex head (screw)	tol.	tolerance
m ³ /min.	cubic meters per minute	PHM	pan head machine (screw)	turbo.	turbocharger
mA	milliampere	PLC	programmable logic control	typ.	typical (same in multiple locations)
man.	manual	PMG	permanent-magnet generator	UF	underfrequency
max.	maximum	pot	potentiometer, potential	UHF	ultrahigh frequency
MB	megabyte (2 ²⁰ bytes)	ppm	parts per million	UL	Underwriter's Laboratories, Inc.
MCM	one thousand circular mils	PROM	programmable read-only memory	UNC	unified coarse thread (was NC)
MCCB	molded-case circuit breaker	psi	pounds per square inch	UNF	unified fine thread (was NF)
meggar	megohmmeter	pt.	pint	univ.	universal
MHz	megahertz	PTC	positive temperature coefficient	US	undersize, underspeed
mi.	mile	PTO	power takeoff	UV	ultraviolet, undervoltage
mil	one one-thousandth of an inch	PVC	polyvinyl chloride	V	volt
min.	minimum, minute	qt.	quart, quarts	VAC	volts alternating current
misc.	miscellaneous	qty.	quantity	VAR	voltampere reactive
MJ	megajoule	R	replacement (emergency) power source	VDC	volts direct current
mJ	millijoule	rad.	radiator, radius	VFD	vacuum fluorescent display
mm	millimeter	RAM	random access memory	VGA	video graphics adapter
mOhm, mΩ	milliohm	RDO	relay driver output	VHF	very high frequency
MOhm, MΩ	megohm	ref.	reference	W	watt
MOV	metal oxide varistor	rem.	remote	WCR	withstand and closing rating
MPa	megapascal	Res/Coml	Residential/Commercial	w/	with
mpg	miles per gallon	RFI	radio frequency interference	w/o	without
mph	miles per hour	RH	round head	wt.	weight
MS	military standard	RHM	round head machine (screw)	xfmr	transformer
m/sec.	meters per second				
MTBF	mean time between failure				

Appendix B Common Hardware Application Guidelines

Use the information below and on the following pages to identify proper fastening techniques when no specific reference for reassembly is made.

Bolt/Screw Length: When bolt/screw length is not given, use Figure 1 as a guide. As a general rule, a minimum length of one thread beyond the nut and a maximum length of 1/2 the bolt/screw diameter beyond the nut is the preferred method.

Washers and Nuts: Use split lock washers as a bolt locking device where specified. Use SAE flat washers with whiz nuts, spirallock nuts, or standard nuts and preloading (torque) of the bolt in all other applications.

See Appendix C, General Torque Specifications, and other torque specifications in the service literature.

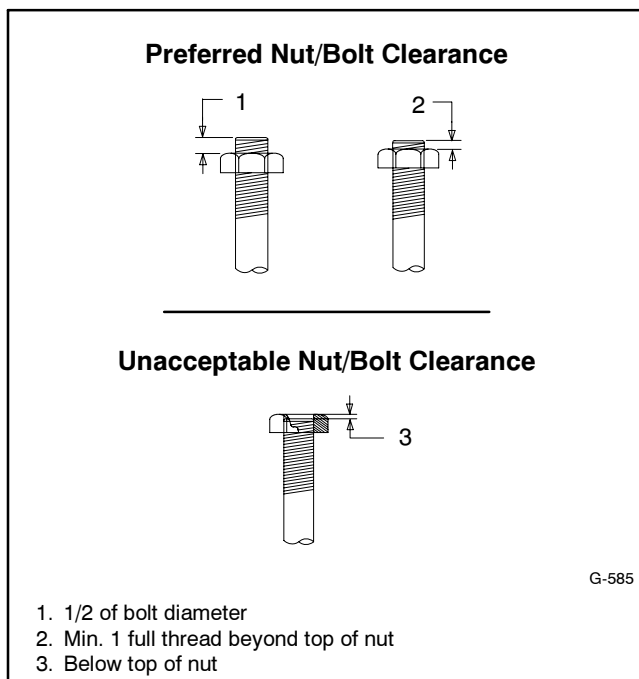


Figure 1 Acceptable Bolt Lengths

Steps for common hardware application:

1. Determine entry hole type: round or slotted.
2. Determine exit hole type: fixed female thread (weld nut), round, or slotted.

For round and slotted exit holes, determine if hardware is greater than 1/2 inch in diameter, or 1/2 inch in diameter or less. Hardware that is *greater than 1/2 inch* in diameter takes a standard nut and SAE washer. Hardware *1/2 inch or less* in diameter can take a properly torqued whiz nut or spirallock nut. See Figure 2.

3. Follow these SAE washer rules after determining exit hole type:
 - a. Always use a washer between hardware and a slot.
 - b. Always use a washer under a nut (see 2 above for exception).
 - c. Use a washer under a bolt when the female thread is fixed (weld nut).
4. Refer to Figure 2, which depicts the preceding hardware configuration possibilities.

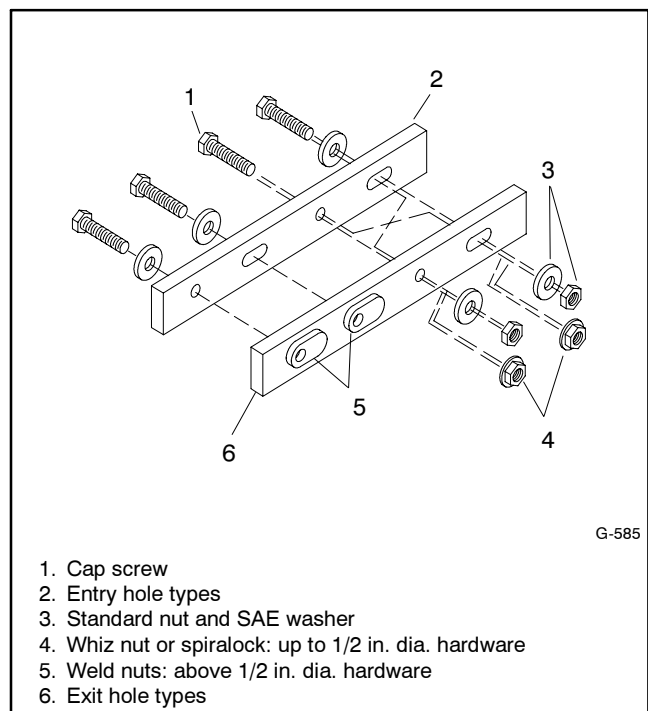


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

American Standard Fasteners Torque Specifications					
Size	Torque Measurement	Assembled into Cast Iron or Steel			Assembled into Aluminum Grade 2 or 5
		Grade 2	Grade 5	Grade 8	
8-32	Nm (in. lb.)	1.8 (16)	2.3 (20)	—	See Note 3
10-24	Nm (in. lb.)	2.9 (26)	3.6 (32)	—	
10-32	Nm (in. lb.)	2.9 (26)	3.6 (32)	—	
1/4-20	Nm (in. lb.)	6.8 (60)	10.8 (96)	14.9 (132)	
1/4-28	Nm (in. lb.)	8.1 (72)	12.2 (108)	16.3 (144)	
5/16-18	Nm (in. lb.)	13.6 (120)	21.7 (192)	29.8 (264)	
5/16-24	Nm (in. lb.)	14.9 (132)	23.1 (204)	32.5 (288)	
3/8-16	Nm (ft. lb.)	24.0 (18)	38.0 (28)	53.0 (39)	
3/8-24	Nm (ft. lb.)	27.0 (20)	42.0 (31)	60.0 (44)	
7/16-14	Nm (ft. lb.)	39.0 (29)	60.0 (44)	85.0 (63)	
7/16-20	Nm (ft. lb.)	43.0 (32)	68.0 (50)	95.0 (70)	
1/2-13	Nm (ft. lb.)	60.0 (44)	92.0 (68)	130.0 (96)	
1/2-20	Nm (ft. lb.)	66.0 (49)	103.0 (76)	146.0 (108)	
9/16-12	Nm (ft. lb.)	81.0 (60)	133.0 (98)	187.0 (138)	
9/16-18	Nm (ft. lb.)	91.0 (67)	148.0 (109)	209.0 (154)	
5/8-11	Nm (ft. lb.)	113.0 (83)	183.0 (135)	259.0 (191)	
5/8-18	Nm (ft. lb.)	128.0 (94)	208.0 (153)	293.0 (216)	
3/4-10	Nm (ft. lb.)	199.0 (147)	325.0 (240)	458.0 (338)	
3/4-16	Nm (ft. lb.)	222.0 (164)	363.0 (268)	513.0 (378)	
1-8	Nm (ft. lb.)	259.0 (191)	721.0 (532)	1109.0 (818)	
1-12	Nm (ft. lb.)	283.0 (209)	789.0 (582)	1214.0 (895)	

Metric Fasteners Torque Specifications, Measured in Nm (ft. lb.)				
Size (mm)	Assembled into Cast Iron or Steel			Assembled into Aluminum Grade 5.8 or 8.8
	Grade 5.8	Grade 8.8	Grade 10.9	
M6 x 1.00	6.2 (4.6)	9.5 (7)	13.6 (10)	See Note 3
M8 x 1.25	15.0 (11)	23.0 (17)	33.0 (24)	
M8 x 1.00	16.0 (11)	24.0 (18)	34.0 (25)	
M10 x 1.50	30.0 (22)	45.0 (34)	65.0 (48)	
M10 x 1.25	31.0 (23)	47.0 (35)	68.0 (50)	
M12 x 1.75	53.0 (39)	80.0 (59)	115.0 (85)	
M12 x 1.50	56.0 (41)	85.0 (63)	122.0 (90)	
M14 x 2.00	83.0 (61)	126.0 (93)	180.0 (133)	
M14 x 1.50	87.0 (64)	133.0 (98)	190.0 (140)	
M16 x 2.00	127.0 (94)	194.0 (143)	278.0 (205)	
M16 x 1.50	132.0 (97)	201.0 (148)	287.0 (212)	
M18 x 2.50	179.0 (132)	273.0 (201)	390.0 (288)	
M18 x 1.50	189.0 (140)	289.0 (213)	413.0 (305)	

Notes:

1. Do not use these values when the torque values are specified on the assembly drawing.
2. These values are based on new plates threads. Increase values by 15% if non-plated threads are used.
3. Hardware threaded into aluminum must have two diameters of thread engagement or may require 30% or more reduction in the torque.
4. Torques are calculated as equivalent stress loading to American hardware and approximately a preload of 90% of yield strength and friction coefficient of 0.125.

Appendix D Common Hardware Identification

Screw/Bolts/Studs	
Head Styles	
Hex Head or Machine Head	
Hex Head or Machine Head with Washer	
Flat Head (FHM)	
Round Head (RHM)	
Pan Head	
Hex Socket Head Cap or Allen™ Head Cap	
Hex Socket Head or Allen™ Head Shoulder Bolt	
Sheet Metal Screw	
Stud	
Drive Styles	
Hex	
Hex and Slotted	
Phillips®	
Slotted	
Hex Socket	

Nuts	
Nut Styles	
Hex Head	
Lock or Elastic	
Square	
Cap or Acorn	
Wing	
Washers	
Washer Styles	
Plain	
Split Lock or Spring	
Spring or Wave	
External Tooth Lock	
Internal Tooth Lock	
Internal-External Tooth Lock	

Hardness Grades	
American Standard	
Grade 2	
Grade 5	
Grade 8	
Grade 8/9 (Hex Socket Head)	
Metric	
Number stamped on hardware; 5.8 shown	

Allen™ head screw is a trademark of Holo-Krome Co.

Phillips® screw is a registered trademark of Phillips Screw Company.

Sample Dimensions

American Standard (Screws, Bolts, Studs, and Nuts)

1/4-20 x 1
 ——— Length In Inches (Screws and Bolts)
 ——— Threads Per Inch
 ——— Major Thread Diameter In Fractional Inches Or Screw Number Size

Metric (Screws, Bolts, Studs, and Nuts)

M8-1.25 x 20
 ——— Length In Millimeters (Screws and Bolts)
 ——— Distance Between Threads In Millimeters
 ——— Major Thread Diameter In Millimeters

Plain Washers

9/32 x 5/8 x 1/16
 ——— Thickness
 ——— External Dimension
 ——— Internal Dimension

Lock Washers

5/8
 ——— Internal Dimension

Appendix E Common Hardware List

The Common Hardware List lists part numbers and dimensions for common hardware items.

American Standard

[illegible]

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Part No. Dimensions Hex Head Bolts (Partial Thread)

M931-05055-60	M5-0.80 x 55
M931-06040-60	M6-1.00 x 40
M931-06055-60	M6-1.00 x 55
M931-06060-60	M6-1.00 x 60
M931-06060-SS	M6-1.00 x 60
M931-06070-60	M6-1.00 x 70
M931-06070-SS	M6-1.00 x 70
M931-06075-60	M6-1.00 x 75
M931-06090-60	M6-1.00 x 90
M931-06145-60	M6-1.00 x 145
M931-06150-60	M6-1.00 x 150
M931-08035-60	M8-1.25 x 35
M931-08040-60	M8-1.25 x 40
M931-08045-60	M8-1.25 x 45
M931-08050-60	M8-1.25 x 50
M931-08055-60	M8-1.25 x 55
M931-08055-82	M8-1.25 x 55*
M931-08060-60	M8-1.25 x 60
M931-08070-60	M8-1.25 x 70
M931-08070-82	M8-1.25 x 70*
M931-08075-60	M8-1.25 x 75
M931-08080-60	M8-1.25 x 80
M931-08090-60	M8-1.25 x 90
M931-08095-60	M8-1.25 x 95
M931-08100-60	M8-1.25 x 100
M931-08110-60	M8-1.25 x 110
M931-08120-60	M8-1.25 x 120
M931-08130-60	M8-1.25 x 130
M931-08140-60	M8-1.25 x 140
M931-08150-60	M8-1.25 x 150
M931-08200-60	M8-1.25 x 200
M931-10040-82	M10-1.25 x 40*
M931-10040-60	M10-1.50 x 40
M931-10045-60	M10-1.50 x 45
M931-10050-60	M10-1.50 x 50
M931-10050-82	M10-1.25 x 50*
M931-10055-60	M10-1.50 x 55
M931-10060-60	M10-1.50 x 60
M931-10065-60	M10-1.50 x 65
M931-10070-60	M10-1.50 x 70
M931-10080-60	M10-1.50 x 80
M931-10080-82	M10-1.25 x 80*
M931-10090-60	M10-1.50 x 90
M931-10090-82	M10-1.50 x 90*
M931-10100-60	M10-1.50 x 100
M931-10110-60	M10-1.50 x 110
M931-10120-60	M10-1.50 x 120
M931-10130-60	M10-1.50 x 130
M931-10140-60	M10-1.50 x 140
M931-10180-60	M10-1.50 x 180
M931-10235-60	M10-1.50 x 235
M931-10260-60	M10-1.50 x 260
M960-10330-60	M10-1.25 x 330
M931-12045-60	M12-1.75 x 45
M960-12050-60	M12-1.25 x 50
M960-12050-82	M12-1.25 x 50*
M931-12050-60	M12-1.75 x 50
M931-12050-82	M12-1.75 x 50*
M931-12055-60	M12-1.75 x 55
M931-12060-60	M12-1.75 x 60
M931-12060-82	M12-1.75 x 60*
M931-12065-60	M12-1.75 x 65
M931-12075-60	M12-1.75 x 75
M931-12080-60	M12-1.75 x 80
M931-12090-60	M12-1.75 x 90
M931-12100-60	M12-1.75 x 100
M931-12110-60	M12-1.75 x 110

Part No. Dimensions Hex Head Bolts (Partial Thread), continued

M960-16090-60	M16-1.50 x 90
M931-16090-60	M16-2.00 x 90
M931-16100-60	M16-2.00 x 100
M931-16100-82	M16-2.00 x 100*
M931-16120-60	M16-2.00 x 120
M931-16150-60	M16-2.00 x 150
M931-20065-60	M20-2.50 x 65
M931-20090-60	M20-2.50 x 90
M931-20100-60	M20-2.50 x 100
M931-20120-60	M20-2.50 x 120
M931-20140-60	M20-2.50 x 140
M931-20160-60	M20-2.50 x 160
M931-22090-60	M22-2.50 x 90
M931-22120-60	M22-2.50 x 120
M931-22160-60	M22-2.50 x 160
M931-24090-60	M24-3.00 x 90
M931-24120-60	M24-3.00 x 120
M931-24160-60	M24-3.00 x 160
M931-24200-60	M24-3.00 x 200

Hex Head Bolts (Full Thread)

M933-04006-60	M4-0.70 x 6
M933-05030-60	M5-0.80 x 30
M933-05035-60	M5-0.80 x 35
M933-05050-60	M5-0.80 x 50
M933-06010-60	M6-1.00 x 10
M933-06012-60	M6-1.00 x 12
M933-06014-60	M6-1.00 x 14
M933-06016-60	M6-1.00 x 16
M933-06020-60	M6-1.00 x 20
M933-06025-60	M6-1.00 x 25
M933-06030-60	M6-1.00 x 30
M933-06040-60	M6-1.00 x 40
M933-06050-60	M6-1.00 x 50
M933-07025-60	M7-1.00 x 25
M933-08010-60	M8-1.25 x 10
M933-08012-60	M8-1.25 x 12
M933-08016-60	M8-1.25 x 16
M933-08020-60	M8-1.25 x 20
M933-08025-60	M8-1.25 x 25
M933-08030-60	M8-1.25 x 30
M933-08030-82	M8-1.25 x 30*
M933-10012-60	M10-1.50 x 12
M961-10020-60	M10-1.25 x 20
M933-10020-60	M10-1.50 x 20
M933-10025-60	M10-1.50 x 25
M961-10025-60	M10-1.25 x 25
M933-10025-82	M10-1.50 x 25*
M961-10030-60	M10-1.25 x 30
M933-10030-60	M10-1.50 x 30
M933-10030-82	M10-1.50 x 30*
M961-10035-60	M10-1.25 x 35
M933-10035-60	M10-1.50 x 35
M933-10035-82	M10-1.50 x 35*
M961-10040-60	M10-1.25 x 40

Part No. Dimensions Hex Head Bolts (Full Thread), continued

M933-12016-60	M12-1.75 x 16
M933-12020-60	M12-1.75 x 20
M961-12020-60F	M12-1.50 x 20
M933-12025-60	M12-1.75 x 25
M933-12025-82	M12-1.75 x 25*
M961-12030-60	M12-1.25 x 30
M933-12030-82	M12-1.75 x 30*
M961-12030-82F	M12-1.50 x 30*
M933-12030-60	M12-1.75 x 30
M933-12035-60	M12-1.75 x 35
M961-12040-82	M12-1.25 x 40*
M933-12040-60	M12-1.75 x 40
M933-12040-82	M12-1.75 x 40*
M961-14025-60	M14-1.50 x 25
M933-14025-60	M14-2.00 x 25
M961-14050-82	M14-1.50 x 50*
M961-16025-60	M16-1.50 x 25
M933-16025-60	M16-2.00 x 25
M961-16030-82	M16-1.50 x 30*
M933-16030-82	M16-2.00 x 30*
M933-16035-60	M16-2.00 x 35
M961-16040-60	M16-1.50 x 40
M933-16040-60	M16-2.00 x 40
M961-16045-82	M16-1.50 x 45*
M933-16045-82	M16-2.00 x 45*
M933-16050-60	M16-2.00 x 50
M933-16050-82	M16-2.00 x 50*
M933-16060-60	M16-2.00 x 60
M933-16070-60	M16-2.00 x 70
M933-18035-60	M18-2.50 x 35
M933-18050-60	M18-2.50 x 50
M933-18060-60	M18-2.50 x 60
M933-20050-60	M20-2.50 x 50
M933-20055-60	M20-2.50 x 55
M933-24060-60	M24-3.00 x 60
M933-24065-60	M24-3.00 x 65
M933-24070-60	M24-3.00 x 70

Pan Head Machine Screws

M7985A-03010-20	M3-0.50 x 10
M7985A-03012-20	M3-0.50 x 12
M7985A-04010-20	M4-0.70 x 10
M7985A-04016-20	M4-0.70 x 16
M7985A-04020-20	M4-0.70 x 20
M7985A-04050-20	M4-0.70 x 50
M7985A-04100-20	M4-0.70 x 100
M7985A-05010-20	M5-0.80 x 10
M7985A-05012-20	M5-0.80 x 12
M7985A-05016-20	M5-0.80 x 16
M7985A-05020-20	M5-0.80 x 20
M7985A-05025-20	M5-0.80 x 25
M7985A-05030-20	M5-0.80 x 30
M7985A-05080-20	M5-0.80 x 80
M7985A-05100-20	M5-0.80 x 100
M7985A-06100-20	M6-1.00 x 100

Flat Head Machine Screws

M965A-04012-SS	M4-0.70 x 12
M965A-05012-SS	M5-0.80 x 12
M965A-05016-20	M5-0.80 x 16
M965A-06012-20	M6-1.00 x 12

* This metric hex bolt's hardness is grade 10.9.

Metric, continued

Part No.	Dimensions	Type
Hex Nuts		
M934-03-50	M3-0.50	Standard
M934-04-50	M4-0.70	Standard
M934-04-B	M4-0.70	Brass
M934-05-50	M5-0.80	Standard
M934-06-60	M6-1.00	Standard
M934-06-64	M6-1.00	Std. (green)
M6923-06-80	M6-1.00	Spiralock
M982-06-80	M6-1.00	Elastic Stop
M934-08-60	M8-1.25	Standard
M6923-08-80	M8-1.25	Spiralock
M982-08-80	M8-1.25	Elastic Stop
M934-10-60	M10-1.50	Standard
M934-10-60F	M10-1.25	Standard
M6923-10-80	M10-1.50	Spiralock
M6923-10-62	M10-1.50	Spiralock†
M982-10-80	M10-1.50	Elastic Stop
M934-12-60	M12-1.75	Standard
M934-12-60F	M12-1.25	Standard
M6923-12-80	M12-1.75	Spiralock
M982-12-80	M12-1.75	Elastic Stop
M982-14-60	M14-2.00	Elastic Stop
M6923-16-80	M16-2.00	Spiralock
M982-16-80	M16-2.00	Elastic Stop
M934-18-80	M18-2.5	Standard
M982-18-60	M18-2.50	Elastic Stop
M934-20-80	M20-2.50	Standard
M982-20-80	M20-2.50	Elastic Stop
M934-22-60	M22-2.50	Standard
M934-24-80	M24-3.00	Standard
M982-24-60	M24-3.00	Elastic Stop
M934-30-80	M30-3.50	Standard

Washers

Part No.	ID	OD	Thick.	Bolt/ Screw
M125A-03-80	3.2	7.0	0.5	M3
M125A-04-80	4.3	9.0	0.8	M4
M125A-05-80	5.3	10.0	1.0	M5
M125A-06-80	6.4	12.0	1.6	M6
M125A-08-80	8.4	16.0	1.6	M8
M125A-10-80	10.5	20.0	2.0	M10
M125A-12-80	13.0	24.0	2.5	M12
M125A-14-80	15.0	28.0	2.5	M14
M125A-16-80	17.0	30.0	3.0	M16
M125A-18-80	19.0	34.0	3.0	M18
M125A-20-80	21.0	37.0	3.0	M20
M125A-24-80	25.0	44.0	4.0	M24

† This metric hex nut's hardness is grade 8.

Index

Listed below are part numbers and page numbers of modules listed in this manual. *Italicized numbers* refer to the page numbers on which modules appear.

GM21066-KA1, 6, 7	GM21565-KA1, 35	GM29692-KA3, 9, 13
GM21066-KA2, 6, 7	GM21565-KA2, 35	GM29693-KA1, 11, 13
GM21067-KA1, 6, 7	GM21565-KA3, 35	GM29693-KA2, 11, 13
GM21068-KA1, 7	GM22373-KA1, 25	GM29693-KA3, 11, 13
GM21069-KA1, 27	GM22396-KA1, 9, 13	GM29694-KA1, 11, 13
GM21069-KA2, 27	GM22396-KA2, 9, 13	GM29694-KA2, 11, 13
GM21070-KA1, 32	GM22396-KA3, 9, 13	GM29694-KA3, 11, 13
GM21071-KA1, 32	GM22397-KA1, 9, 11, 13	GM29786-KA1, 19
GM21072-KA1, 17, 19	GM22397-KA2, 9, 11, 13	GM29900-KA1, 6, 7
GM21073-KA1, 21, 23	GM22397-KA3, 9, 11, 13	GM29902-KA1, 6, 7
GM21074-KA1, 21, 23	GM22536-KA1, 25	GM29903-KA1, 7
GM21075-KA1, 21, 23	GM22537-KA1, 25	GM29904-KA1, 31
GM21076-KA1, 26, 27	GM22538-KA1, 25	GM29904-KA2, 31
GM21077-KA1, 26, 27	GM22540-KA1, 25	GM29904-KA3, 31
GM21078-KA1, 35	GM22706-KA1, 11, 13	GM29904-KA4, 31
GM21078-KA2, 35	GM22706-KA2, 11, 13	GM29904-KA5, 31
GM21078-KA3, 35	GM22706-KA3, 13	GM29904-KA6, 31
GM21079-MA1, 29	GM26317-KA1, 32	GM29904-KA7, 31
GM21079-MA2, 29	GM26859-KA1, 31	GM29904-KA8, 31
GM21079-MA3, 29	GM28660-KA1, 17, 19	GM30082-KA1, 15
GM21079-MA4, 29	GM28661-KA1, 21, 23	GM30082-KA2, 15
GM21079-MA5, 29	GM28662-KA1, 21, 23	GM30082-KA3, 15
GM21079-MA6, 29	GM28762-KA1, 7	GM30083-KA1, 15
GM21079-MA7, 29	GM28764-KA1, 27	GM30083-KA2, 15
GM21079-MA8, 29	GM28836-KA1, 13	GM30083-KA3, 15
GM21079-MA9, 29	GM28836-KA2, 13	GM30084-KA1, 15
GM21292-KA1, 27	GM28836-KA3, 13	GM30084-KA2, 15
GM21292-KA2, 27	GM29494-KA1, 7	GM30084-KA3, 15
GM21293-KA1, 27	GM29496-KA1, 33	GM33092-KA1, 6, 7
GM21293-KA2, 27	GM29499-KA1, 6, 7	GM33093-KA1, 9
GM21294-KA1, 33	GM29500-KA1, 6, 7	GM33093-KA2, 9
GM21298-KA1, 17, 19	GM29692-KA1, 9, 13	GM33093-KA3, 9
GM21311-KA1, 30, 31	GM29692-KA2, 9, 13	

Notes



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