Service Parts

Residential/Commercial Generator Sets



Models:

14RCA/RCAL
18RCA/RCAL
20RCA/RCAL

KOHLER® Generators

TP-7094 4/26d

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Introduction

This manual lists service replacement parts for 14RCA/L, 18RCA/L, and 20RCA/L generator sets.

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This manual includes the following main sections:

Table of Contents. Lists the sections of the manual.

Introduction (and other information sections). Contains introductory material about part numbers, illustrations, and hardware.

Specification Number Index. Lists the generator set specs and groups.

Group Parts Lists. List the part numbers of parts in the groups.

Kit Sections. List modules and accessories and their parts.

Appendices. Include Abbreviations, Common Hardware Application Guidelines, General Torque Specifications, Common Hardware Identification, and Common Hardware List.

Numbering System Significance

This manual uses the following numbering systems:

Specification Number. The product identification number located on the generator set nameplate. Specification numbers break down into groups.

Group Number. A unique number representing a parts group needed to assemble a generator set function. For example, Group 101 is the Air Intake group.

Variation or Module Number. A group might have several variations. Each variation performs the same function with different parts lists. For example, a 50 Hz generator alternator and a 60 Hz generator alternator both perform the same function; however, with different parts. Each difference requires a group variation or module number.

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

Illustrations

Illustrations (or exploded-view drawings) best representing the widest range of variations accompany most groups in this manual. Illustrations do not depict all details and may not show all parts. Do not use illustrations for assembly or disassembly.

How to Find Part Numbers

Use the following steps to locate a service replacement part.

1. Locate the generator set nameplate to **identify the generator set spec number**.
2. Locate a second generator set nameplate listing accessories to **identify installed modules**. On some models the accessory nameplate is mounted inside the generator junction box.
3. **Turn to the Specification Number Index**. The first column lists the generator set spec numbers. The headings identify the groups of parts that make up the generator set.
4. **Identify the group** most likely to include the service part number.
5. **Find the group variation number** at the intersection of the spec number row and the group column. Note the variation number.
6. **Page forward to locate the group** identified in step 4 or find the appropriate page in the Table of Contents.
7. **Find the part on the illustration** and note the item number of the part or **find the part description in the parts list**.
8. Select **the part number that corresponds to your group variation**. The first column lists the illustration item number. Find the variation identified in the Specification Number Index or the module number found on the generator set nameplate in the appropriate column on the right side of the parts list table. Find the quantity used at the intersection of the item number row and the variation column. A blank space at the intersection means the variation/module does not use that part number.

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.

Engine Specification Number Index

Group Description	Engine Part Number/Model	
	PS-CH740-3345 14RCA/L	PS-CH1000-3031 18/20RCA/RCAL
Crankshaft	1-24-67	1-62-12
Crankcase	2-24-372	2-62-24
Lubrication	3-24-1091	3-62-79
Cylinder Head/Breather	4-24-936	4-62-23
Ignition/Charging	5-24-1263	5-62-71
Blower Housing	6-24-772	6-62-42
Starting	7-24-5	7-62-1
Fuel System	8-24-855	8-62-20
Engine Controls	9-24-513	9-62-45
Air Intake	10-24-658	10-62-62
Exhaust	11-24-3	11-62-9
Engine Decals	12-24-1216	12-62-53

Generator Specification Number Index

	Variation				
	Specification Number				
	14RCA-QS	14RCA-QS1	14RCA-QS2	14RCA-QS3	14RCA-QS4
	14RCA-BASE00	14RCA-BASE01	14RCA-BASE02	14RCA-BASE03	14RCA-BASE04
Group Description	**GM103106- GA2**	**GM103106- GA2**	**GM103106- GA2**	**GM103106- GA2**	**GM103106- GA2**
Literature	701-187-93-SA	701-187-93-SA	701-187-93-SA	701-187-93-SA	701-187-93-SA
Exhaust and Mounting	GM101733-MA2	GM101733-MA2	GM101733-MA2	GM101733-MA2	GM101733-MA2
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1
Enclosure	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS
Controller and Mounting	GM101738-MA1	GM101738-MA1	GM101738-MA1	GM101738-MA1	GM101738-MA1
LCB Module	GM101739-MA2	GM101739-MA2	GM101739-MA4	GM101739-MA4	GM101739-MA6
Fuel System	GM101740-MA2	GM101740-MA2	GM101740-MA2	GM101740-MA2	GM101740-MA2
Customer Connection	GM101741-MA1	GM101741-MA1	GM101741-MA2	GM101741-MA2	GM101741-MA2
Alternator and Mounting	GM102806-MA3	GM102806-MA3	GM102806-MA4	GM102806-MA4	GM102806-MA4
Engine Group	GM101732-GR2	GM101732-GR2	GM101732-GR2	GM101732-GR2	GM101732-GR2
Decal Group	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1
Harness Group	GM103189-GR1	GM103189-GR1	GM103189-GR1	GM103189-GR1	GM103189-GR1

	Variation				
	Specification Number				
	14RCA-QS5	14RCA-QS6	14RCA-QS7	14RCA-QS8	14RCA-QS9
	14RCA-BASE05	14RCA-BASE06	14RCA-BASE07	14RCA-BASE08	14RCA-BASE09
Group Description	**GM114254- GA2**	**GM114254- GA2**	**GM114254- GA2**	**GM114254- GA2**	**GM114254- GA2**
Literature	701-187-93-SA	701-187-93-SA	701-187-93-SA	701-187-93-SA	701-187-93-SA
Exhaust and Mounting	GM101733-MA2	GM101733-MA2	GM101733-MA2	GM101733-MA2	GM101733-MA2
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1
Enclosure	GM114531-MA1-CAMO	GM114531-MA1-CAS	GM114531-MA1-CAS	GM114531-MA1-CAS	GM114531-MA1-CAS
Controller and Mounting	GM114247-MA1	GM114247-MA1	GM114247-MA1	GM114247-MA1	GM114247-MA1
LCB Module	GM101739-MA2	GM101739-MA2	GM101739-MA2	GM101739-MA4	GM101739-MA4
Fuel System	GM114166-MA2	GM114166-MA2	GM114166-MA2	GM114166-MA2	GM114166-MA2
Customer Connection	GM101741-MA1	GM101741-MA1	GM101741-MA2	GM101741-MA2	GM101741-MA2
Alternator and Mounting	GM102806-MA3	GM102806-MA3	GM102806-MA3	GM102806-MA4	GM102806-MA4
Engine Group	GM101732-GR2	GM101732-GR2	GM101732-GR2	GM101732-GR2	GM101732-GR2
Decal Group	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1
Harness Group	GM114255-GR1	GM114255-GR1	GM114255-GR1	GM114255-GR1	GM114255-GR1

	Variation	
	Specification Number	
	14RCA-QS10	14RCA-QS611
	14RCA-BASE10	14RCA-BASE11
Group Description	**GM114254- GA2**	**GM114254- GA2**
Literature	701-187-93-SA	701-187-93-SA
Exhaust and Mounting	GM101733-MA2	GM101733-MA2
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1
Enclosure	GM114531-MA1-CTRY	GM114531-MA1-LAND
Controller and Mounting	GM114247-MA1	GM114247-MA1
LCB Module	GM101739-MA2	GM101739-MA2
Fuel System	GM114166-MA2	GM114166-MA2
Customer Connection	GM101741-MA1	GM101741-MA1
Alternator and Mounting	GM102806-MA3	GM102806-MA3
Engine Group	GM101732-GR2	GM101732-GR2
Decal Group	GM102922-GR1	GM102922-GR1
Harness Group	GM114255-GR1	GM114255-GR1

Generator Specification Number Index

	Variation
	Specification Number
	18RCA-BASE01
Group Description	**GM114254- GA3**
Literature	701-187-99-SA
Exhaust and Mounting	GM101733-MA1
Skid and Mounting	GM101734-MA1-CAS
Bulkhead	GM101736-MA1
Enclosure	GM114531-MA1-CAS
Controller and Mounting	GM114247-MA1
LCB Module	GM101739-MA10
Fuel System	GM114166-MA1
Customer Connection	GM101741-MA1
Alternator and Mounting	GM102806-MA1
Engine Group	GM101732-GR1
Decal Group	GM102922-GR1
Harness Group	GM114255-GR1

	Variation				
	Specification Number				
	20RCA-QS	20RCA-QS1	20RCA-QS2	20RCA-QS3	20RCA-QS4
	20RCA-BASE00	20RCA-BASE01	20RCA-BASE02	20RCA-BASE03	20RCA-BASE04
Group Description	**GM103106- GA1**	**GM103106- GA1**	**GM103106- GA1**	**GM103106- GA1**	**GM103106- GA1**
Literature	701-187-95-SA	701-187-95-SA	701-187-95-SA	701-187-95-SA	701-187-95-SA
Exhaust and Mounting	GM101733-MA1	GM101733-MA1	GM101733-MA1	GM101733-MA1	GM101733-MA1
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1
Enclosure	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS	GM101737-MA1-CAS
Controller and Mounting	GM101738-MA1	GM101738-MA1	GM101738-MA1	GM101738-MA1	GM101738-MA1
LCB Module	GM101739-MA1	GM101739-MA1	GM101739-MA3	GM101739-MA5	GM101739-MA7
Fuel System	GM101740-MA1	GM101740-MA1	GM101740-MA1	GM101740-MA1	GM101740-MA1
Customer Connection	GM101741-MA1	GM101741-MA1	GM101741-MA2	GM101741-MA2	GM101741-MA2
Alternator and Mounting	GM102806-MA1	GM102806-MA1	GM102806-MA2	GM102806-MA2	GM102806-MA2
Engine Group	GM101732-GR1	GM101732-GR1	GM101732-GR1	GM101732-GR1	GM101732-GR1
Decal Group	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1
Harness Group	GM103189-GR1	GM103189-GR1	GM103189-GR1	GM103189-GR1	GM103189-GR1

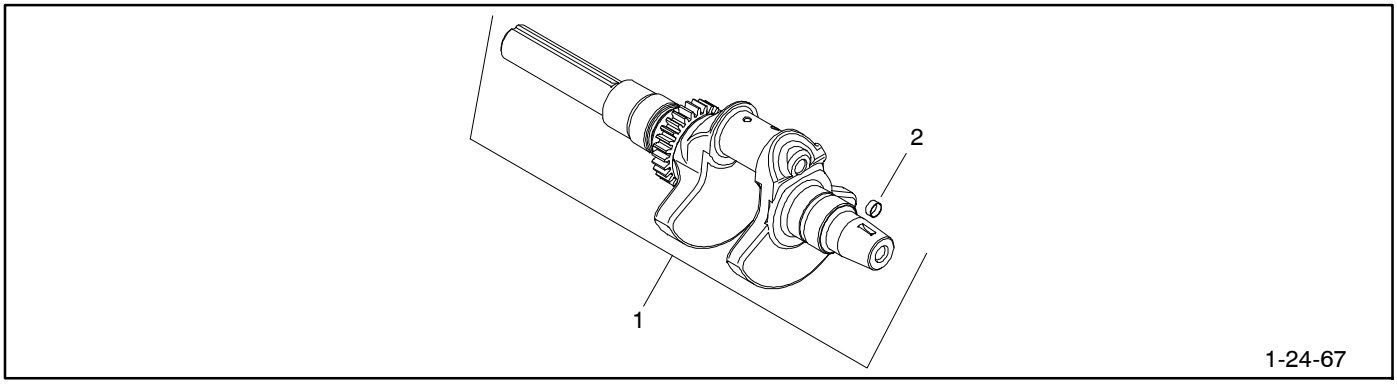
	Variation				
	Specification Number				
	20RCA-QS5	20RCA-QS6	20RCA-QS7	20RCA-QS8	20RCA-QS9
	20RCA-BASE05	20RCA-BASE06	20RCA-BASE07	20RCA-BASE08	20RCA-BASE09
Group Description	**GM114254- GA1**	**GM114254- GA1**	**GM114254- GA1**	**GM114254- GA1**	**GM114254- GA1**
Literature	701-187-95-SA	701-187-95-SA	701-187-95-SA	701-187-95-SA	701-187-95-SA
Exhaust and Mounting	GM101733-MA1	GM101733-MA1	GM101733-MA1	GM101733-MA1	GM101733-MA1
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1	GM101736-MA1
Enclosure	GM114531-MA1-CAMO	GM114531-MA1-CAS	GM114531-MA1-CAS	GM114531-MA1-CAS	GM114531-MA1-CAS
Controller and Mounting	GM114247-MA1	GM114247-MA1	GM114247-MA1	GM114247-MA1	GM114247-MA1
LCB Module	GM101739-MA1	GM101739-MA1	GM101739-MA3	GM101739-MA5	GM101739-MA7
Fuel System	GM114166-MA1	GM114166-MA1	GM114166-MA1	GM114166-MA1	GM114166-MA1
Customer Connection	GM101741-MA1	GM101741-MA1	GM101741-MA2	GM101741-MA2	GM101741-MA2
Alternator and Mounting	GM102806-MA1	GM102806-MA1	GM102806-MA2	GM102806-MA2	GM102806-MA2
Engine Group	GM101732-GR1	GM101732-GR1	GM101732-GR1	GM101732-GR1	GM101732-GR1
Decal Group	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1	GM102922-GR1
Harness Group	GM114255-GR1	GM114255-GR1	GM114255-GR1	GM114255-GR1	GM114255-GR1

Generator Specification Number Index

	Variation	
	Specification Number	
	20RCA-QS10	20RCA-QS611
	20RCA-BASE10	20RCA-BASE11
Group Description	**GM114254- GA1**	**GM114254- GA1**
Literature	701-187-95-SA	701-187-95-SA
Exhaust and Mounting	GM101733-MA1	GM101733-MA1
Skid and Mounting	GM101734-MA1-CAS	GM101734-MA1-CAS
Bulkhead	GM101736-MA1	GM101736-MA1
Enclosure	GM114531-MA1-CTRY	GM114531-MA1-LAND
Controller and Mounting	GM114247-MA1	GM114247-MA1
LCB Module	GM101739-MA1	GM101739-MA1
Fuel System	GM114166-MA1	GM114166-MA1
Customer Connection	GM101741-MA1	GM101741-MA1
Alternator and Mounting	GM102806-MA1	GM102806-MA1
Engine Group	GM101732-GR1	GM101732-GR1
Decal Group	GM102922-GR1	GM102922-GR1
Harness Group	GM114255-GR1	GM114255-GR1

Group 1: Crankshaft

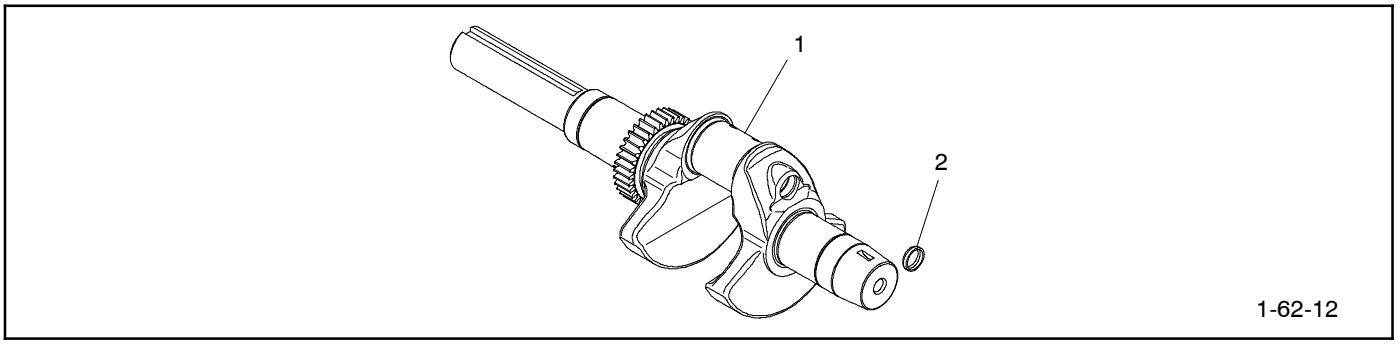
14RCA/L



1-24-67

Item	Part Number	Description	Quantity
1	24 014 183-S	Crankshaft assembly	1
2	52 139 09-S	Plug, cap	1

20RCA/L

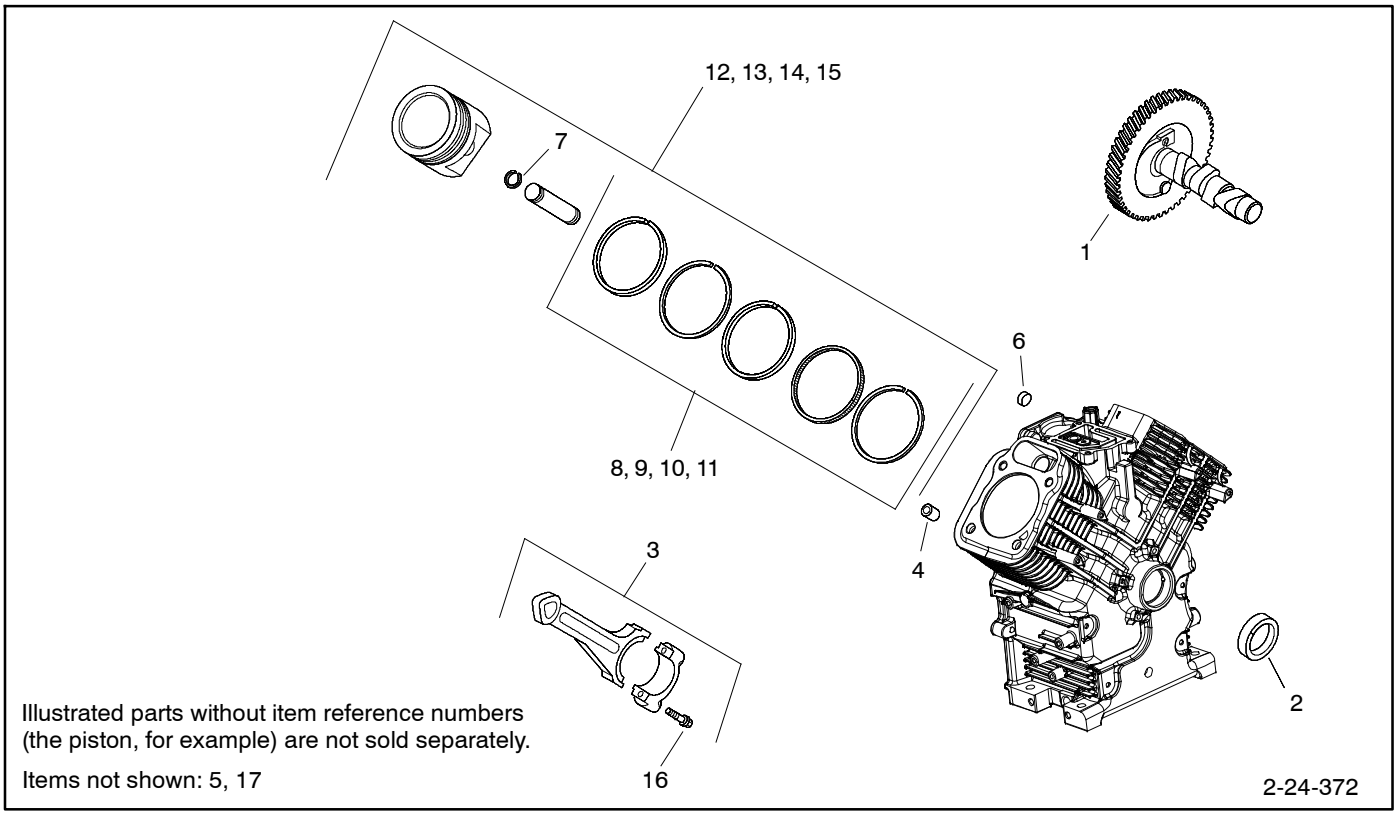


1-62-12

Item	Part Number	Description	Quantity
1	62 014 123-S	Crankshaft, Finished	1
2	25 139 27-S	Plug, cup	1

Group 2: Crankcase

14RCA/L

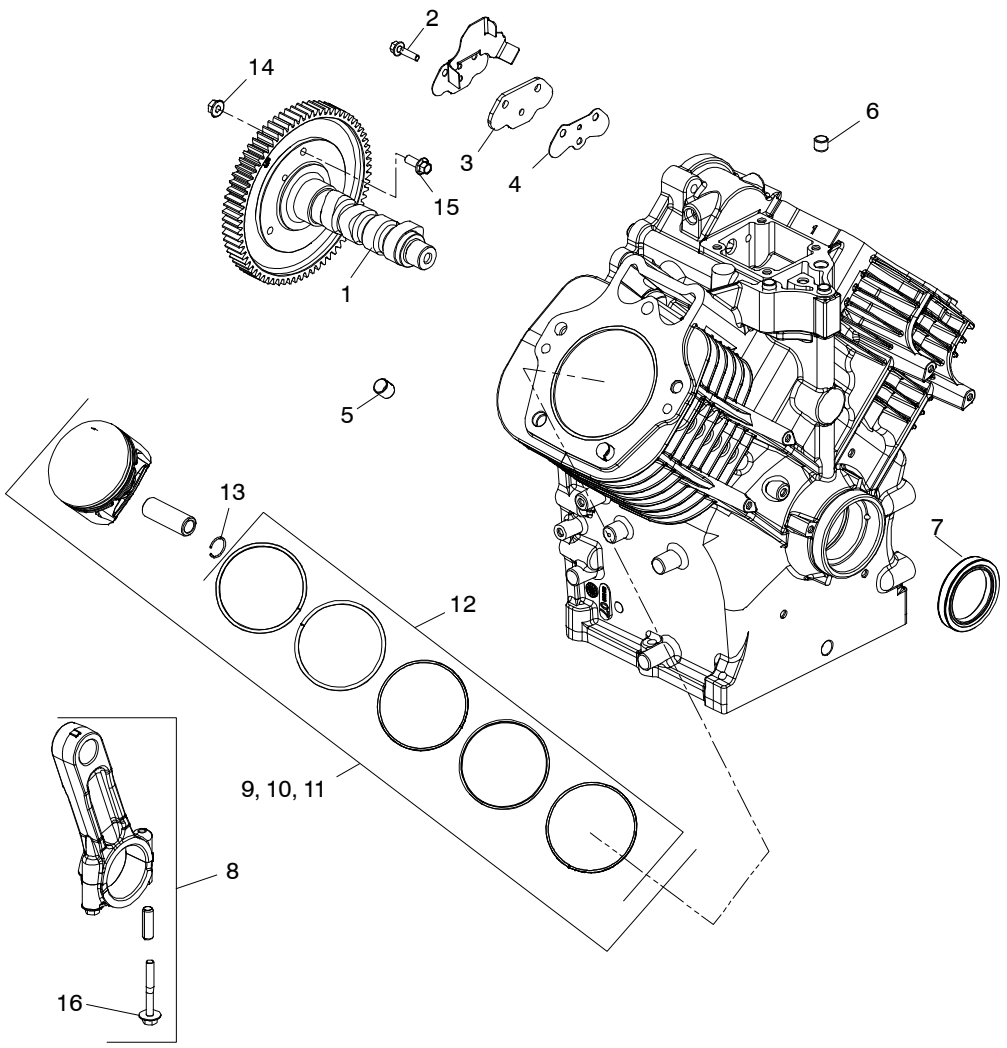


2-24-372

Item	Part Number	Description	Quantity
1	24 012 18- S	Kit, Camshaft	1
2	24 032 19- S	Seal, Oil (Helix Lip)	1
3	25 067 04- S	Rod, Assembly Connecting	2
4	24 380 16- S	Pin, Locating	6
5	25 139 28- S	Plug, Cup	1
6	52 139 09- S	Plug, Cup	1
7	24 018 01- S	Retainer, Piston Pin	4
8	25 108 01- S	Ring Set (Std) Style B- 1.2 mm TP Ring Thick	2
9	25 108 02- S	Ring Sets (+0.08)	2
10	25 108 03- S	Ring Set (.25) Style B- 1.2 mm TP Ring Thick	2
11	25 108 04- S	Ring Set (.50) Style B- 1.2 mm TP Ring Thick	2
12	25 874 13- S	Piston Kit, 725cc (Std)	2
13	25 874 15- S	Piston Kit, 725cc (+0.08)	2
14	25 874 16- S	Piston Kit, 725cc (+0.25)	2
15	25 874 17- S	Piston Kit 725cc (+0.50)	2
16	25 086 452- S	Kit, Rod Bolts- (#25086677S)	2
17	25 158 18- S	Bushing, Reducing	1

Group 2: Crankcase

20RCA/L



Illustrated parts without item reference numbers (the piston, for example) are not sold separately.

2-62-24

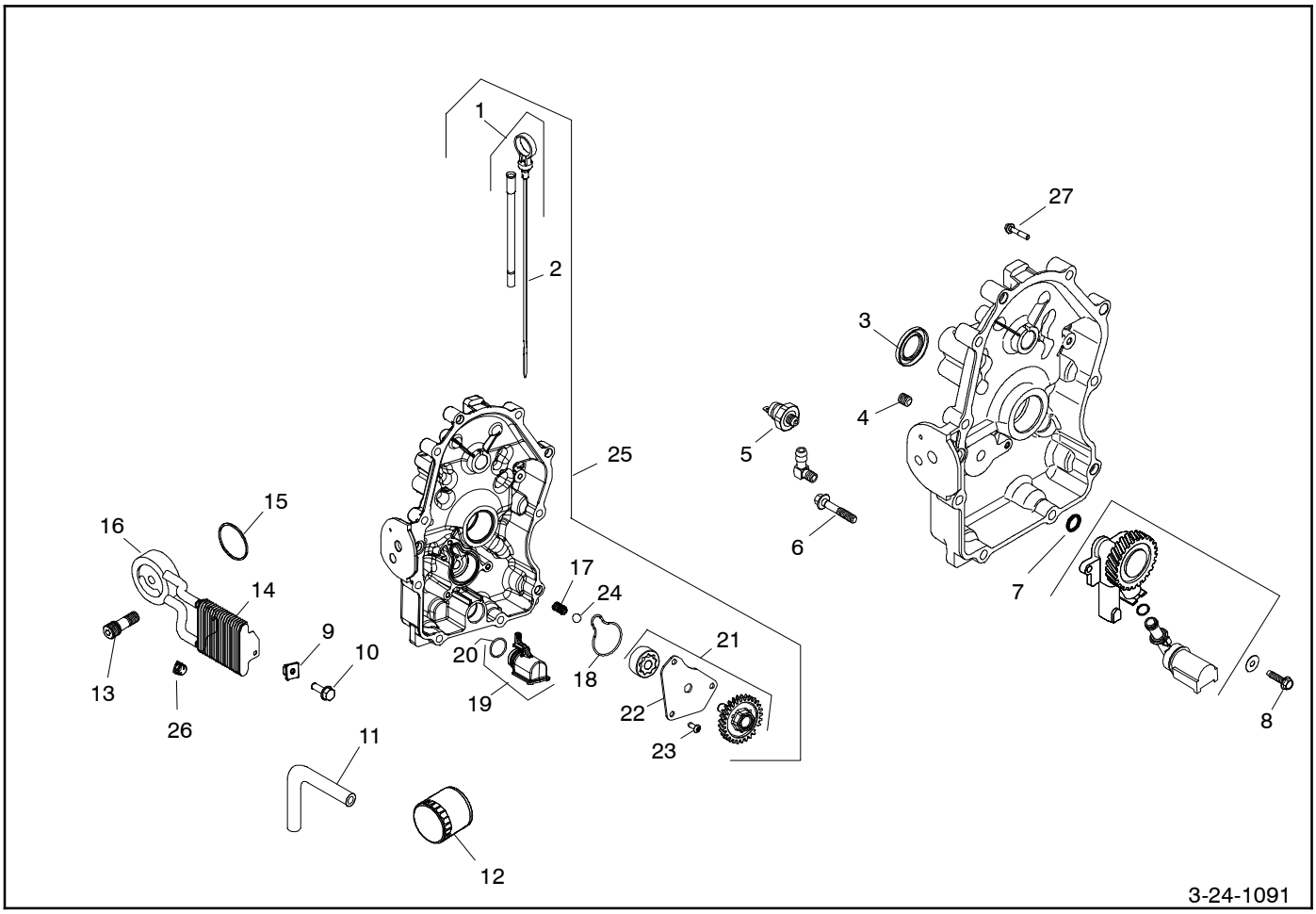
2-62-24

Item	Part Number	Description	Quantity
1	62 010 10- S	Kit, Camshaft- Use 62 010 13- S	1
2	M- 551020- S	Screw, Hvy Flg M5 x 0.8 x 20	3
3	62 096 29- S	Kit, Cover, Lifter Feed	1
4	62 041 24- S	Gasket, Lifter Feed Cover	1
5	24 380 16- S	Pin, Locating	6
6	15 380 01- S	Pin	3
7	GM114559- S	Kit, Oil Seal*	2
8	62 067 13- S	Connecting Rod Assembly	2
9	62 874 17- S	Kit, Piston (STD)	2
10	62 874 18- S	Kit, Piston (0.25 OS)	2
11	62 874 19- S	Kit, Piston (0.50 OD)	2
12	62 108 07- S	Ring, Set Piston (STD)	2
13	62 018 04- S	Retainer, Piston Pin	4
14	M- 641060- S	Nut, Flg M6 x 1.0	3
15	25 086 129- S	Screw,Hex Flnge	3
16	25 086 677- S	Kit, Rod Bolts	4

*Oil Seal Kit includes:
25 032 17- S, qty.1, Seal, Oil (Flywheel Side)
25 032 18- S, qty.1, Seal, Oil (PTO Side)

Group 3: Lubrication

14RCA/L



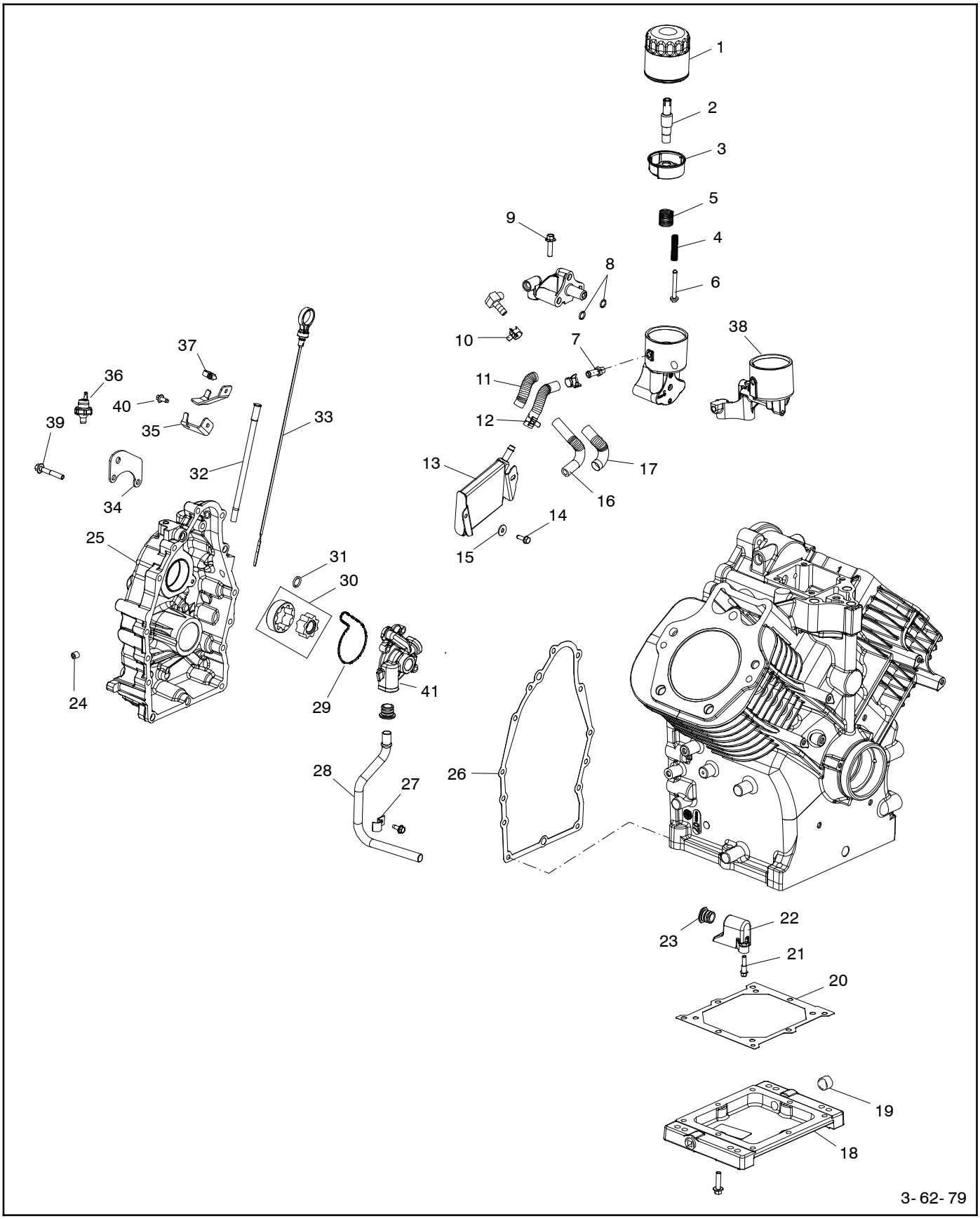
3-24-1091

Item	Part Number	Description	Quantity
1	24 755 121- S	Kit, Dipstick/Dipstick Tubes	1
2	24 038 18- S	Dipstick	1
3	25 032 06- S	Oil Seal	1
4	25 139 60- S	Plug, Ctsk Pipe 1/8 in.	1
5	52 099 08- S	Switch, Oil Pressure	1
6	24 086 17- S	Screw, Flg M8X1.25X45	9
7	24 153 08- S	O- Ring	1
8	25 086 401- S	Screw, Thread Forming	3
9	25 100 37- S	Nut, Plastic - Black	1
10	24 086 12- S	Screw, Tap M6 x 1.7 x 18	1
11	24 326 17- S	Kit, Hose 140 mm	2
12	12 050 01- S	Oil Filter	1
13	24 136 08- S	Nipple, Oil Filter	1
14	24 594 66- S	Cooler, Oil & Diverter Assembly	1
15	24 153 21- S	O- Ring, Oil Cooler	1
16	24 029 124- S	Adapter, Oil Filter	1
17	24 089 74- S	Spring, Compression	1
18	24 153 33- S	Seal, Oil Pump Cover	1
19	24 381 13- S	Pick- Up Assembly, Oil	1
20	24 153 34- S	O- Ring, Oil Pick- Up	1
21	24 393 70- S	Pump Assembly, Oil	1
22	24 096 151- S	Cover, Oil Pump	1
23	25 086 414- S	Screw, Button Head	3
24	25 194 03- S	Pressure Relief Ball	2
25	24 009 216- S	Closure Plate Assembly (Service)	1
26	24 237 16- S	Clamp, Hose Low Profile	4
27	25 086 317- S	Screw, Hex Flange	1
—	GM103159	Oil, Synthetic Quart 5W30 (not shown)	3

Notes

Group 3: Lubrication, continued

20RCA/L



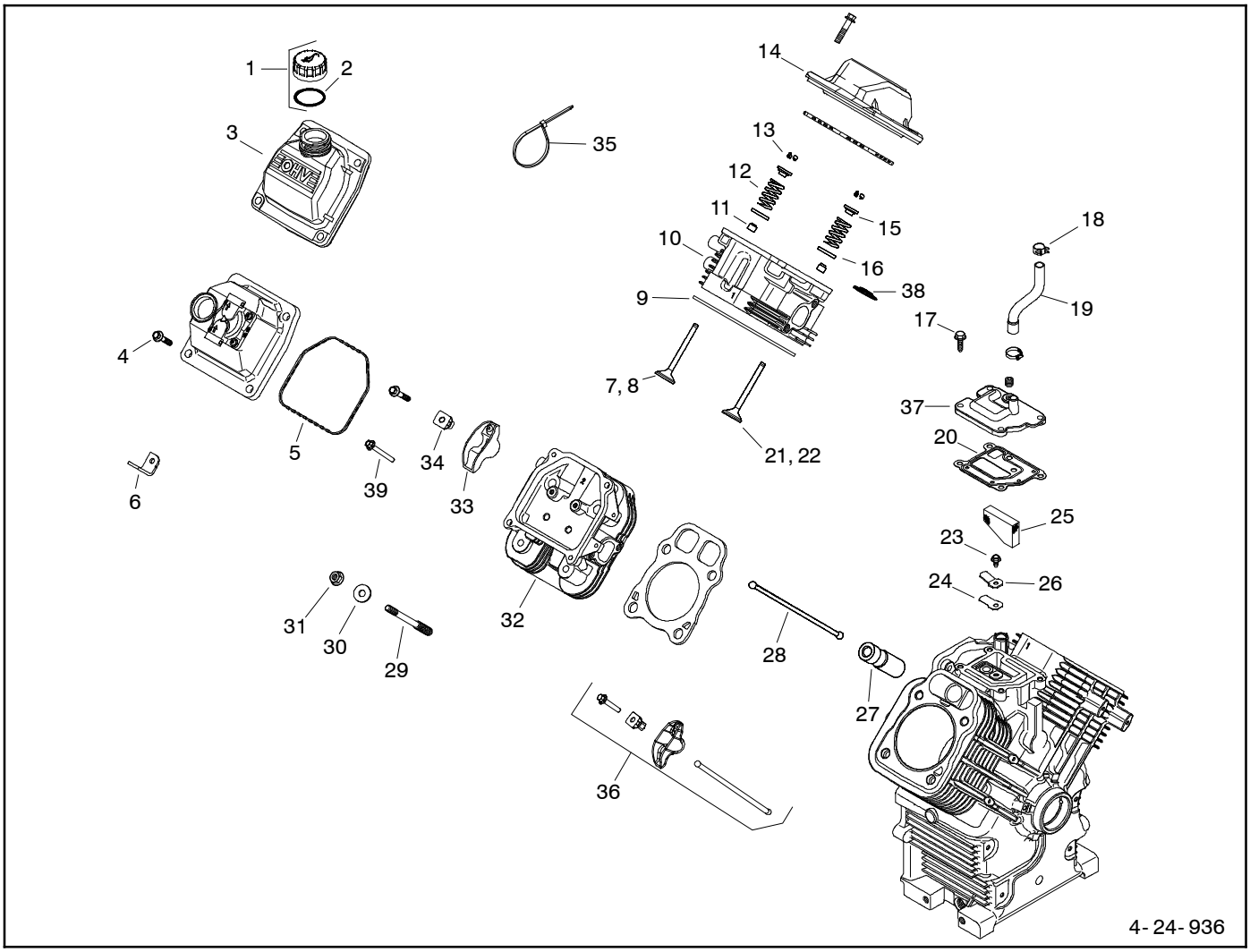
Group 3: Lubrication, continued

3-62-79

Item	Part Number	Description	Quantity
1	52 050 02-S	Oil Filter	1
2	62 136 05-S	Nipple, Oil Filter Assembly	1
3	62 109 02-S	Cup, Oil Filter Assembly	1
4	62 089 11-S	Spring, Oil Filter Valve	1
5	62 089 12-S	Spring, Oil Filter Cup	1
6	62 462 02-S	Valve, Oil Filter	1
7	25 294 16-S	Fitting, Barbed	1
8	24 153 01-S	O- Ring, Oil Pick- Up	3
9	M-851030-S	Screw, Flg M8X1.25X30	9
10	25 237 02-S	Clamp	4
11	25 431 16-S	Sleeve, Anti Abrasion- Use 25 431 12- S	1
12	62 326 10-S	Hose, Oil Return	1
13	62 594 05-S	Cooler, Oil Assembly	1
14	24 086 12-S	Screw, Tap M6x1.7x18	2
15	X-25-52-S	Washer, Flat 1/4 in.	2
16	62 326 06-S	Hose, Oil Supply	1
17	25 431 18-S	Sleeve, Anti Abrasion- Use 25 431 12- S	1
18	62 199 14-S	Oil Reservoir	1
19	25 158 19-S	Bushng, Redcr 1/2 in.- 1/8 in. NPT STL	1
20	62 041 22-S	Gasket, Oil Reservoir	1
21	32 086 01-S	Screw, Shd Thd Frm M6x.0x6.5	1
22	62 081 06-S	Housing, Oil Pick- Up Assembly	1
23	62 032 19-S	Seal, Pick- Up Tube	2
24	25 139 60-S	Plug, Ctsk Pipe 1/8 in.	2
25	62 009 35-S	Kit, Closure Plate	1
26	62 041 21-S	Gasket, Oil Pan	1
27	62 237 02-S	Clamp	1
28	62 123 05-S	Tube, Oil Pick- Up	1
29	62 153 04-S	O- Ring, Oil Pump Housing	1
30	62 393 01-S	Pump Assembly, Oil/Gerotor	1
31	24 153 08-S	O- Ring	1
32	62 123 15-S	Kit, Dipstick Tube	1
33	62 038 11-S	Dipstick, Lpac	1
34	62 445 04-S	Strap, Lifting	1
35	62 126 13-S	Bracket, Dipstick Tube	1
36	48 099 07-S	Switch, Oil Pressure	1
37	25 237 14-S	Clamp, Hose (KM)- Use 25 237 31- S	1
38	62 081 34-S	Kit, Oil Filter Housing	1
39	25 086 618-S	Screw, Hex Flange	14
40	25 086 404-S	Screw, Thread Forming	1
41	62 081 42-S	Housing, Oil Pump Machining	1
—	GM103159	Oil, Synthetic Quart 5W30 (not shown)	3

Group 4: Cylinder Head/Breather

14RCA/L

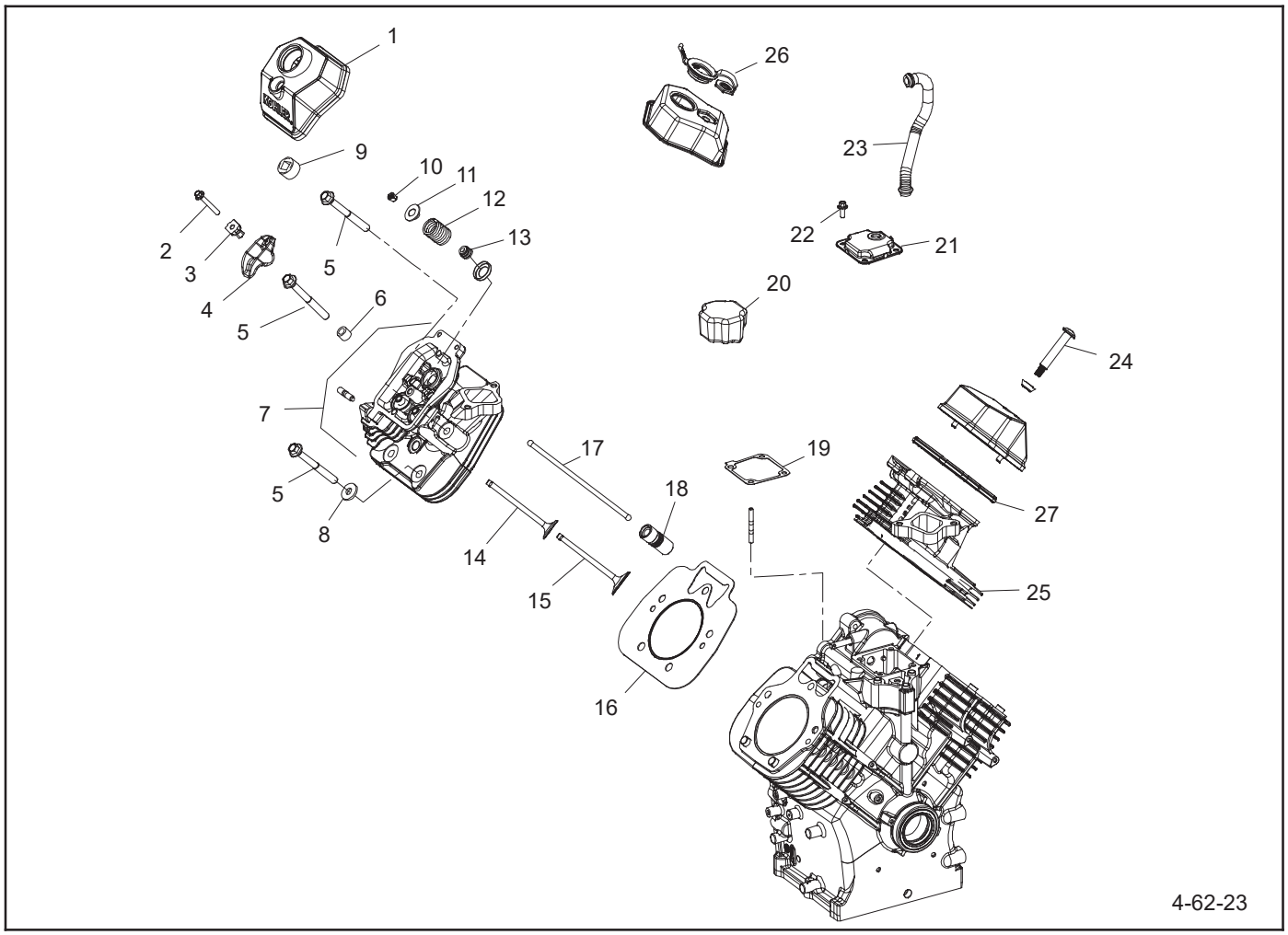


4-24-936

Item	Part Number	Description	Qty.
1	24 173 15-S	Kit, Cap and O-Ring	1
2	25 153 02-S	O-Ring, Dipstick	1
3	24 096 171-S	Cover, Rocker	1
4	M-651030-S	Screw, Flg M6 x 1.0 x 30	8
5	24 153 30-S	O-Ring (Yellow), Valve Co	2
6	25 445 02-S	Strap, Lifting	2
7	32 016 01-S	Valve, Exhaust	2
8	32 016 02-S	Valve, Exhaust (.25)	2
9	24 841 04-S	Kit, Gasket Cylinder Head	2
10	24 318 206-S	Kit, Cylinder Head (#1)	1
11	25 032 14-S	Seal, Valve Band	2
12	24 089 02-S	Spring, Valve	4
13	12 755 03-S	Kit, Retainer	8
14	24 096 172-S	Cover, Rocker	1
15	25 173 28-S	Cap, Valve Spring	4
16	235011-S	Retainer, Spring	4
17	25 086 758-S	Screw, Thread Forming	1
18	25 237 37-S	Spring Clamp, Hose	1
19	24 326 89-S	Kit, Breather Hose and Clamp	1
20	24 041 67-S	Gasket, Breather	1
21	24 017 01-S	Valve, Intake (Std)	2
22	24 017 02-S	Valve, Intake (.25)	2
23	M-545010-S	Screw, Flg Thd Frm M5 x .8 x 10	1
24	24 402 03-S	Reed, Breather	1
25	24 050 11-S	Filter, Breather	1
26	66 018 04-S	Retainer, Reed	1
27	25 351 10-S	Lifter Valve Hydraulic- Use 25 351 11-S	4
28	24 411 05-S	Rod, Push	4
29	24 072 09-S	Stud, M8 x 1.25	8
30	24 468 16-S	Washer, Flat 8.6 mm	8
31	24 100 10-S	Nut, Flg M8 x 1.25	8
32	24 318 207-S	Kit, Cylinder Head (#2)	1
33	25 186 01-S	Arm, Rocker	4
34	24 599 02-S	Pivot, Rocker Arm	4
35	25 454 05-S	Tie	1
36	24 755 66-S	Kit, Valve Train	4
37	24 096 163-S	Cover, Breather	1
38	24 018 05-S	Retainer, Valve Guide (KM)	4
39	25 086 764-S	Screw, Hex Flange	4

Group 4: Cylinder Head/Breather

20RCA/L

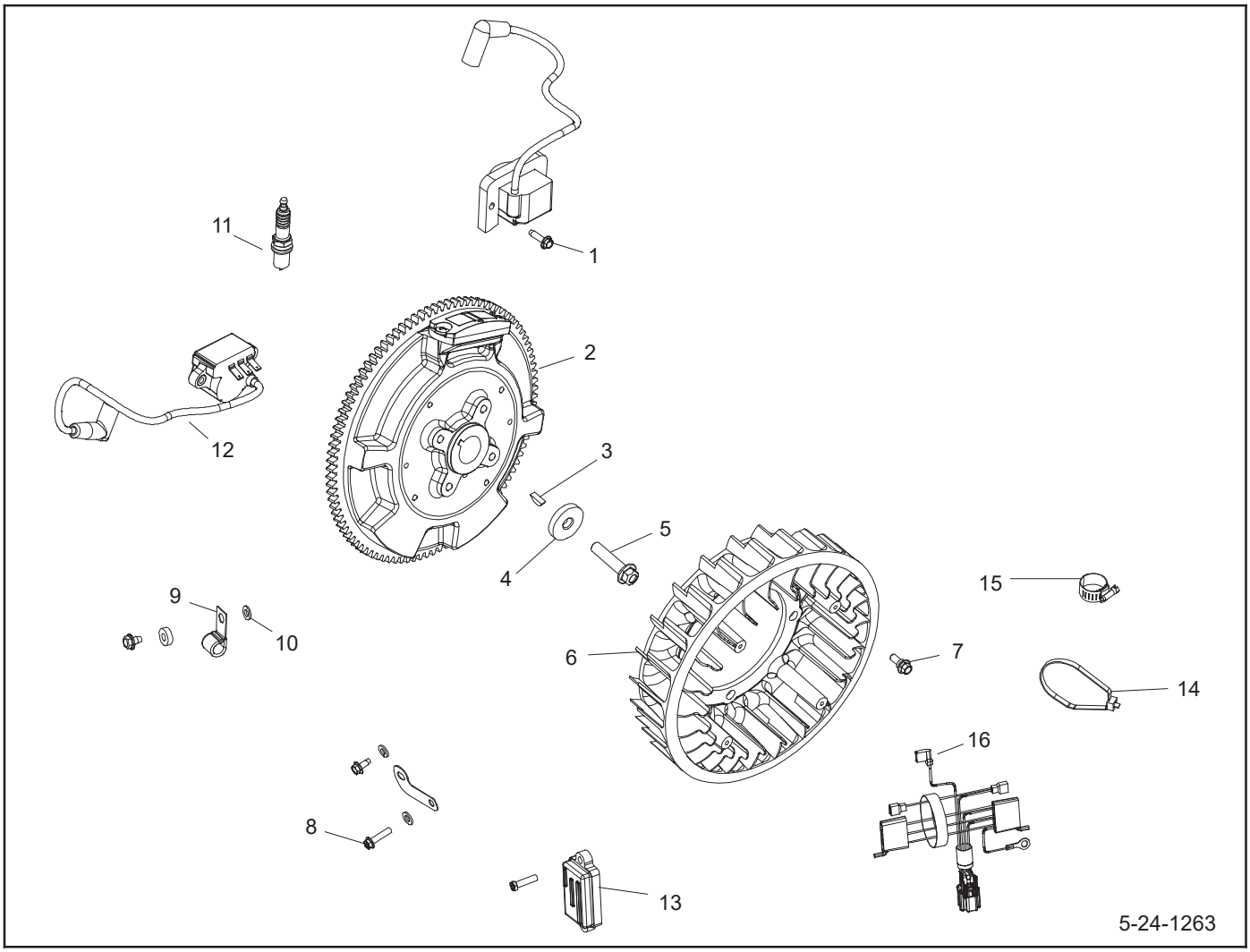


4-62-23

Item	Part Number	Description	Quantity
1	62 096 37- S	Kit, Valve Cover	2
2	32 086 04- S	Screw, Flg M6 x 1.0 x 45- Use 25 086 764- S	4
3	24 599 02- S	Pivot, Rocker Arm	4
4	25 186 01- S	Arm, Rocker	4
5	62 086 08- S	Screw, Flg M10 x 1.5 x 90	10
6	62 112 03- S	Spacer	2
7	62 318 30- S	Head Cylinder #2	1
8	12 468 05- S	Washer, Flat 13/32 in.	6
9	25 139 89- S	Plug, Pipe 3/4 NPTF Square	2
10	12 755 03- S	Kit, Retainer	8
11	25 173 28- S	Cap, Valve Spring	4
12	62 089 54- S	Spring, Valve	4
13	25 032 14- S	Seal, Valve Band	2
14	62 016 02- S	Valve, Exhaust	2
15	62 017 01- S	Valve, Intake	2
16	62 841 01- S	Kit, Cylinder Head Gasket	2
17	12 411 04- S	Rod, Push	4
18	25 351 10- S	Lifter, Valve Hydraulic- Use 25 351 11- S	4
19	62 041 27- S	Gasket, Breather	1
20	62 050 10- S	Filter, Breather	1
21	62 033 06- S	Kit, Breather Assembly	1
22	25 086 397- S	Screw, Thread Forming	4
23	62 326 29- S	Hose, Breather	1
24	25 086 410- S	Screw, Shoulder	2
25	62 318 28- S	Head Cylinder #1	1
26	62 313 08- S	Grommet, Oil Fill	2
27	25 597 07- S	RTV Silicone Sealant (used in place of gasket)	1

Group 5: Ignition/Charging

14RCA/L



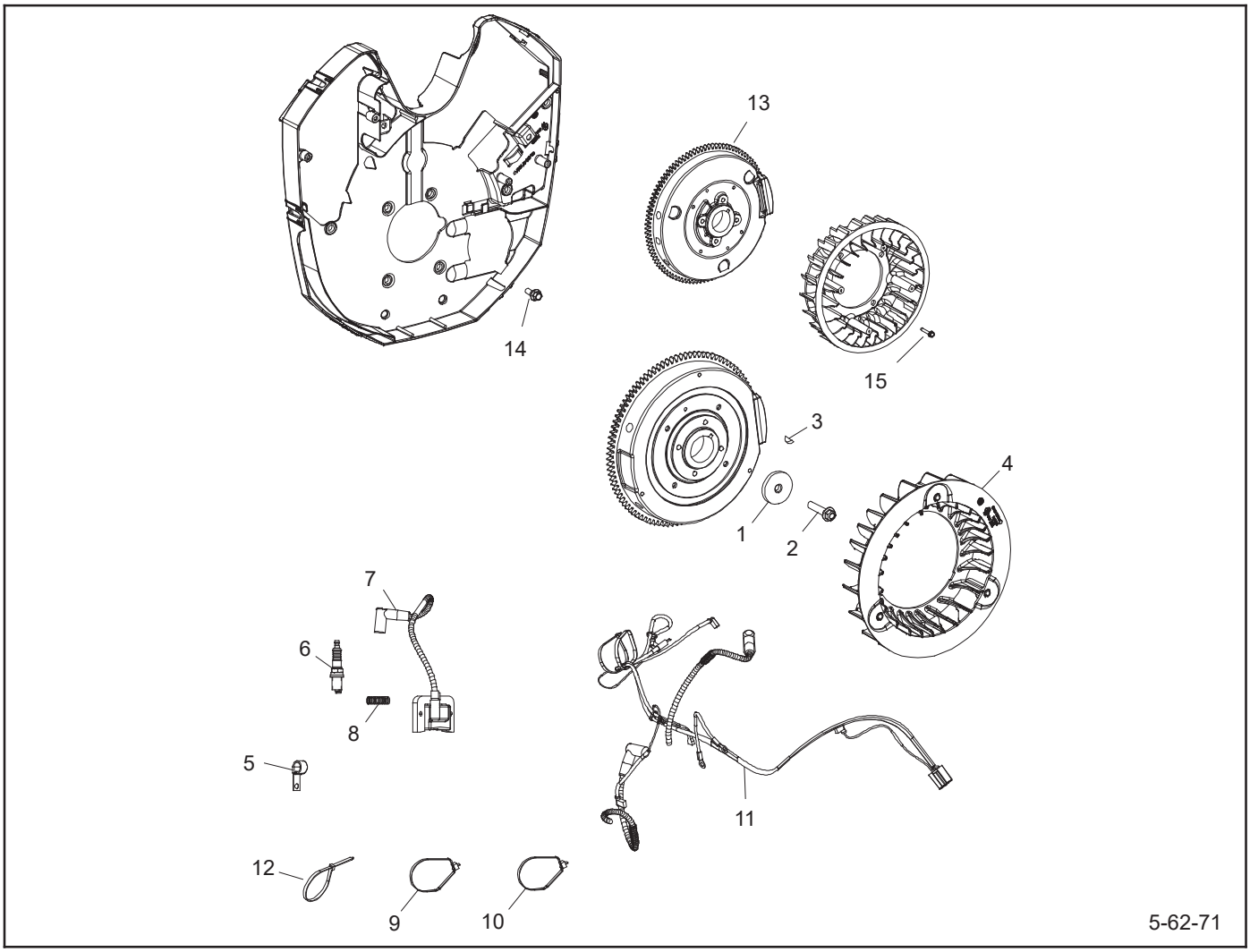
5-24-1263

Item	Part Number	Description	Quantity
1	25 086 472-S	Screw, Thread Forming	4
2	24 025 58-S	Flywheel Assembly (LW)	1
3	X-42-15-S	Key, 3/16 in. x 5/8 in.	1
4	12 468 03-S	Washer, Flat 13/32 in.	1
5	12 086 14-S	Screw, Flg M10 x 1.5 x 45- Use 25 086 361- S	1
6	24 157 11-S	Fan- Use 24 755 253- S	1
7	25 086 47-S	Bolt, Shoulder	4
8	25 086 157-S	Screw, Hex Flange Hi- Lo	2
9	235173-S	Clip, Cable	1
10	X-25-63-S	Washer, Flat 1/4 in. (O.D. 1/2 in.)	2
11	25 132 14-S	Spark Plug, Rfi	2
12	24 584 116-S	Module Spark Advance (Dsai) Assembly	2
13	25 096 04-S	Cover	1
14	25 454 07-S	Tie	2
15	25 237 32-S	Clamp, Hose	1
16	24 176 147-S	Harness, Wiring Assembly Atlas 13 Res	1

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Group 5: Ignition/Charging

20RCA/L

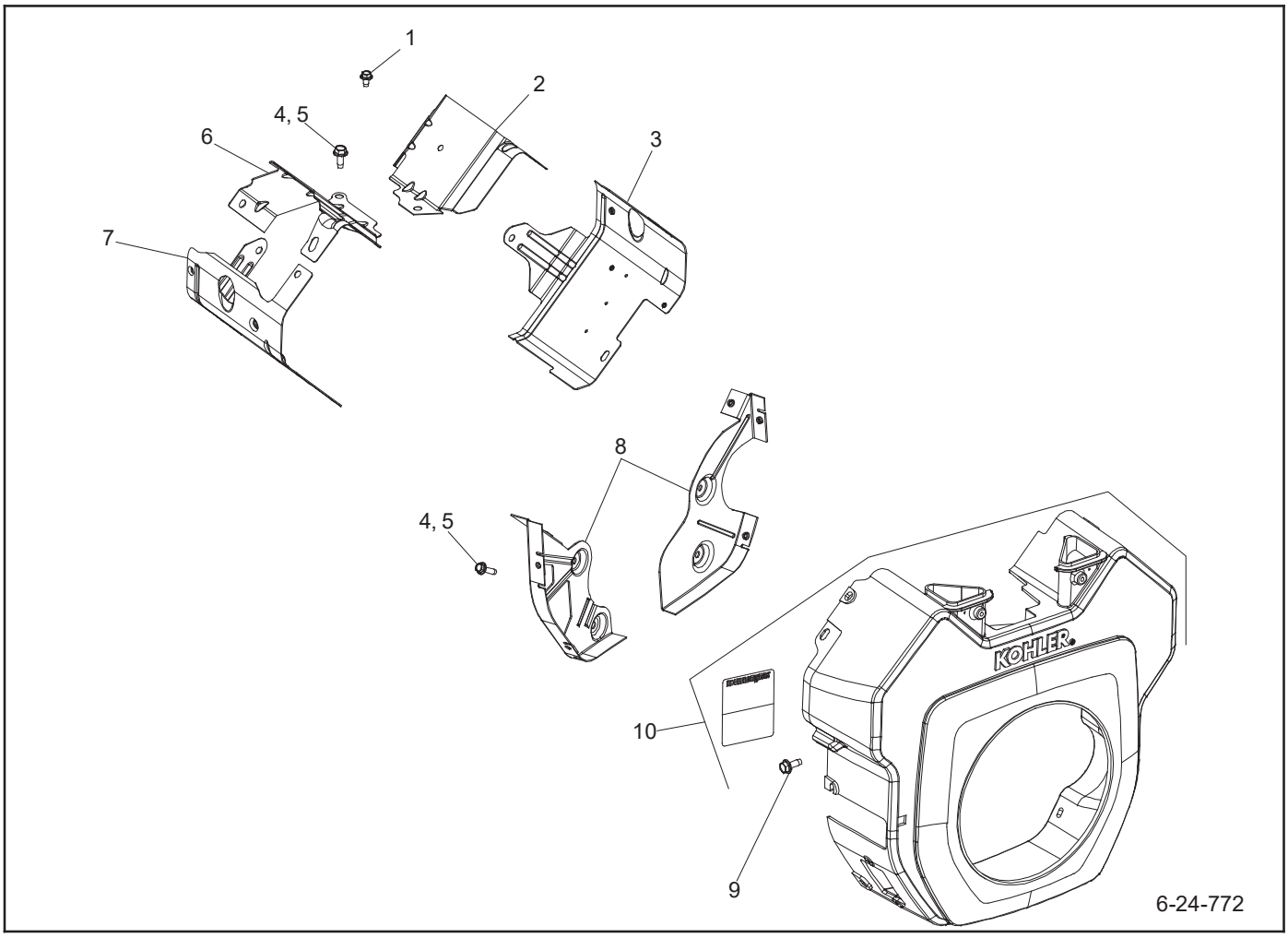


5-62-71

Item	Part Number	Description	Quantity
1	62 468 01- S	Washer, Flat 13/32 in.	1
2	12 086 14- S	Screw, Flg M10X1.5X45- Use 25 086 361- S	1
3	X-42-15-S	Key, 3/16 in. x 5/8 in.	1
4	62 157 04-S	Fan	1
5	25 154 04-S	Clip, Cable	1
6	62 132 04-S	Plug, Spark	2
7	62 584 04-S	Module, Ignition	2
8	62 431 02-S	Sleeve, Corrugated	2
9	12 454 03-S	Tie, Cable	1
10	25 454 07-S	Tie	2
11	62 176 02-S	Harness, Wiring	1
12	25 454 05-S	Tie	1
13	62 025 20-S	Flywheel Assembly	1
14	25 086 47-S	Bolt, Shoulder	4
15	25 086 656-S	Screw, Thread Throwing	4

Group 6: Blower Housing

14RCA/L

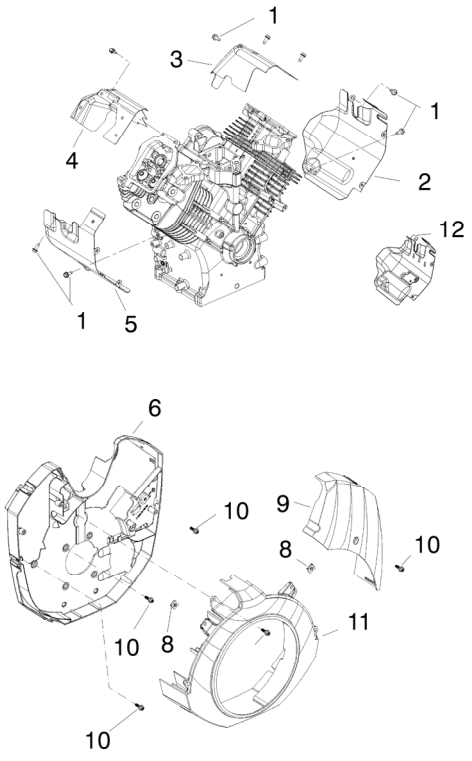


6-24-772

Item	Part Number	Description	Quantity
1	25 086 400-S	Screw, Thread Forming	2
2	24 063 114-S	Baffle, Valley #1 Cylinder	1
3	24 063 85-S	Kit, Cyl Baffel #1 Side	1
4	25 086 396-S	Screw, Thread Forming	2
5	25 086 397-S	Screw, Thread Forming	10
6	24 063 94-S	Baffle, Valley #2 Cylinder	1
7	24 063 88-S	Baffle, Left Barrel	1
8	24 146 59-S	Kit, Backing Plate	1
9	25 086 398-S	Screw, Thread Forming	4
10	24 027 548-S	Kit, Blower Housing	1

Group 6: Blower Housing

20RCA/L



Item not show: 7

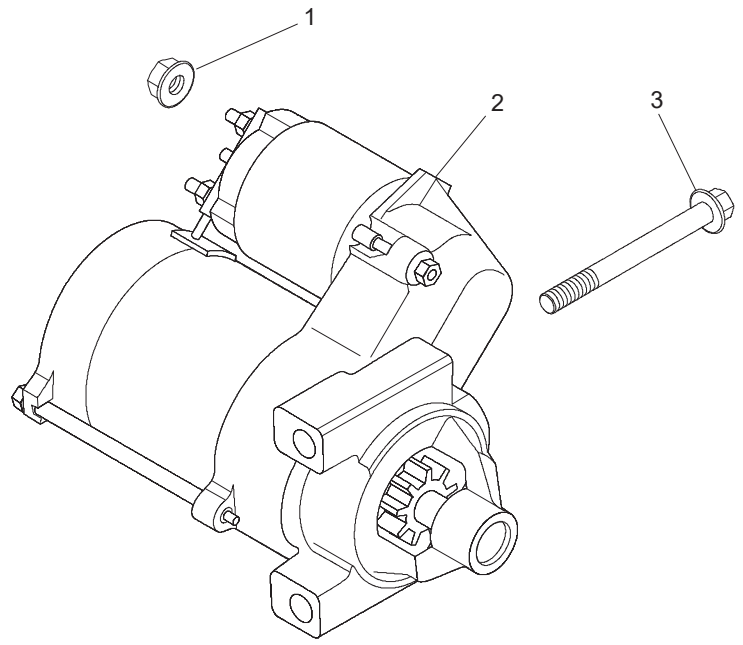
6-62-42

6-62-42

Item	Part Number	Description	Quantity
1	25 086 397-S	Screw, Thread Forming	10
2	62 063 31-S	Baffle, Barrel (#1 Cyl)- Use 62 063 48- S	1
3	62 063 37-S	Baffle, Valley #1 Cylinder	1
4	62 063 38-S	Baffle, Valley #2 Cyl- Use 62 063 40- S	1
5	62 063 32-S	Baffle, Barrel (#2 Cyl)	1
6	62 424 15-S	Shroud, Backing- Use 62 424 19- S	1
7	62 424 19-S	Shroud And Clip Assembly	1
8	25 154 37-S	Clip, Baffle Mounting	12
9	62 424 31-S	Shroud, #1 Cylinder	1
10	62 086 10-S	Screw, Shd Thd Frm	18
11	62 027 24-S	Kit, Blower Housing	1
12	62 424 32-S	Shroud, #2 Cylinder	1

Group 7: Starting

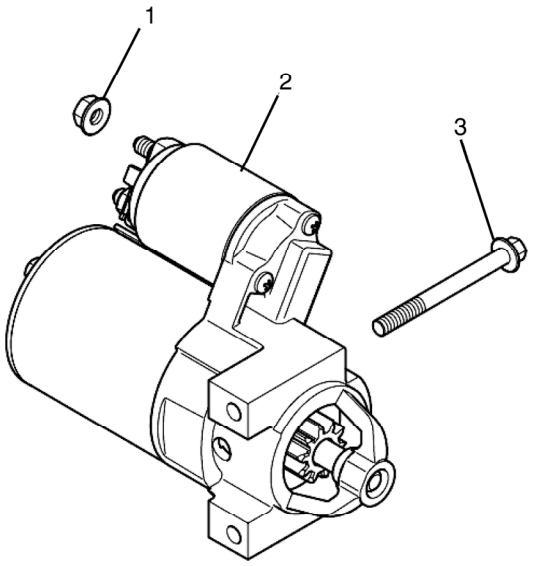
14RCA/L



7-24-5

7-24-5

Item	Part Number	Description	Quantity
1	M-841080-S	Nut, Flg M8X1.25	1
2	25 098 21-S	Starter, Solenoid Shift	1
3	M-851080-S	Screw, Flg M8 x 1.25 x 80	2



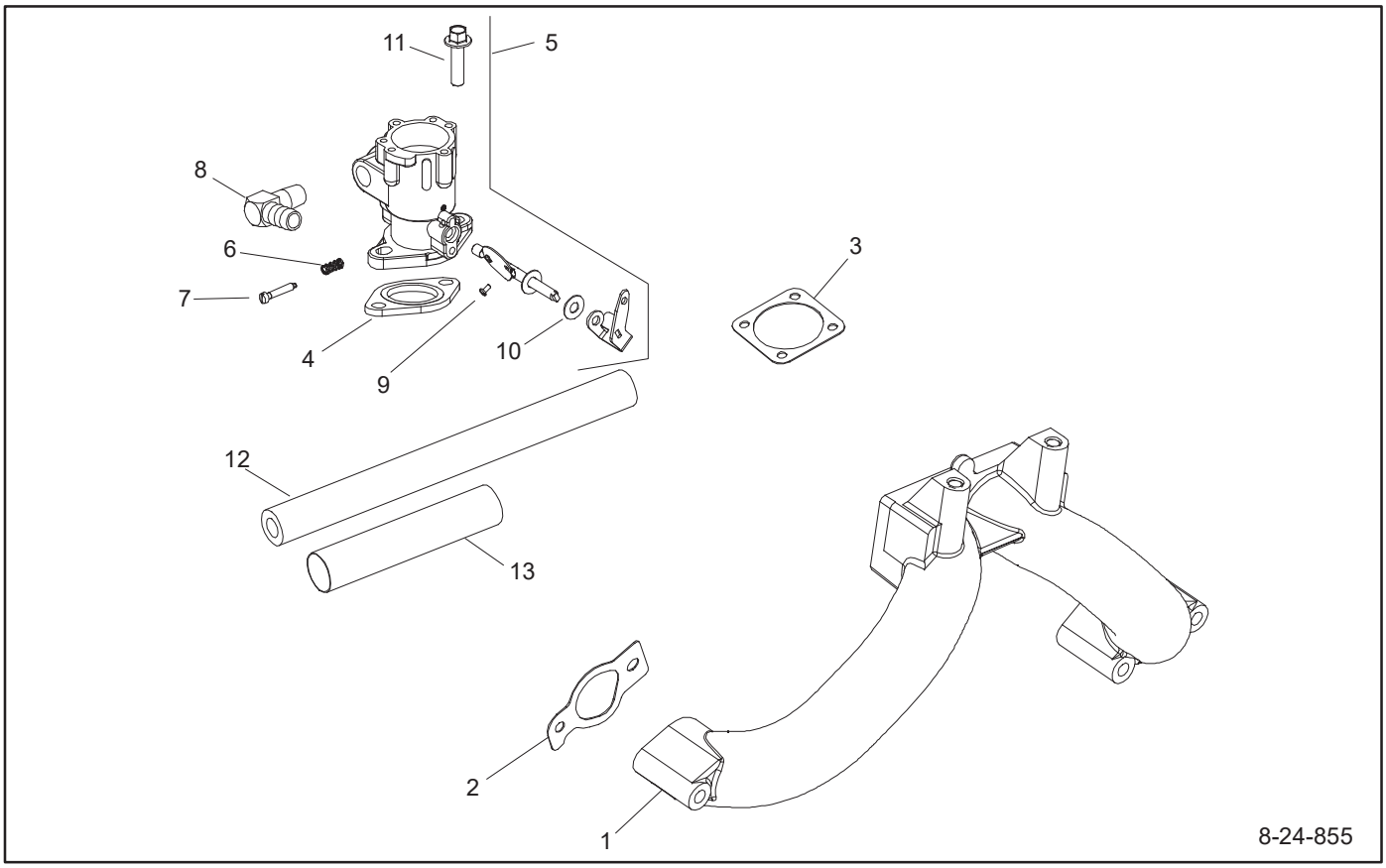
7-62-1

7-6-1

Item	Part Number	Description	Quantity
1	M-841080-S	Nut, flg, M8 x 1.25	1
2	25 098 21-S	Starter, solenoid shift	1
3	M-851080-S	Screw, flg, M8 x 1.25 x 80	2

Group 8: Fuel System

14RCA/L

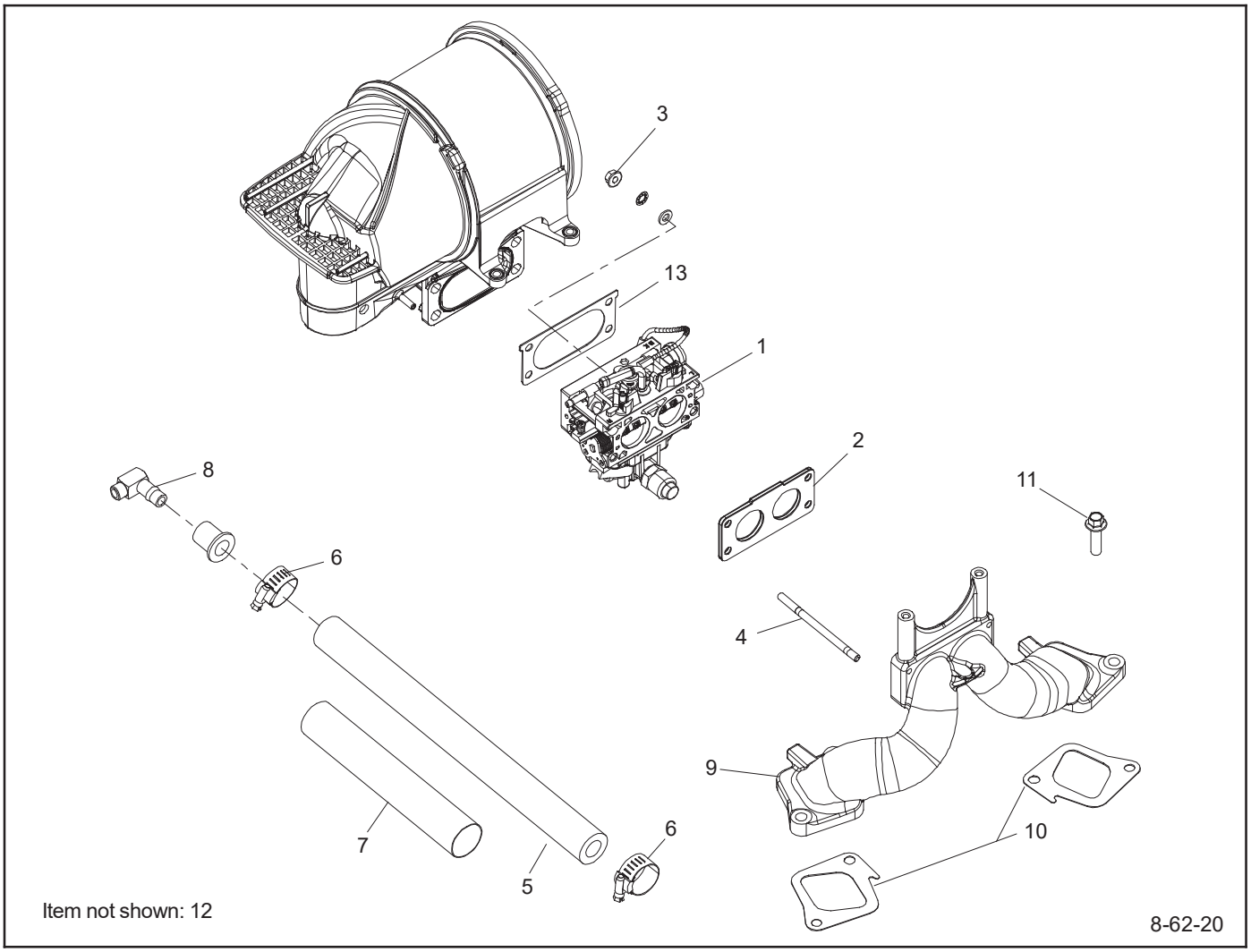


8-24-855

Item	Part Number	Description	Quantity
1	24 164 18-S	Manifold, Intake	1
2	24 041 01-S	Gasket, Intake Manifold- Use 24 041 79- S	2
3	277093-S	Gasket, Air Cleaner	2
4	24 041 26-S	Gasket, Carburetor	1
5	24 853 49-S	Kit, Carburetor W/Gaskets	1
6	232555-S	Spring	1
7	232556-S	Screw, Special	1
8	24 294 23-S	Fitting - Discontinued	1
9	46 086 04-S	Screw	2
10	X-25-8-S	Washer	1
11	M-851030-S	Screw, Flg M8 x 1.25 x 30	2
12	24 353 40-S	Line, LP Fuel (29 in.)	1
13	25 431 19-S	Sleeve, Anti- Abrasion 203 mm Inst.	1

Group 8: Fuel System

20RCA/L

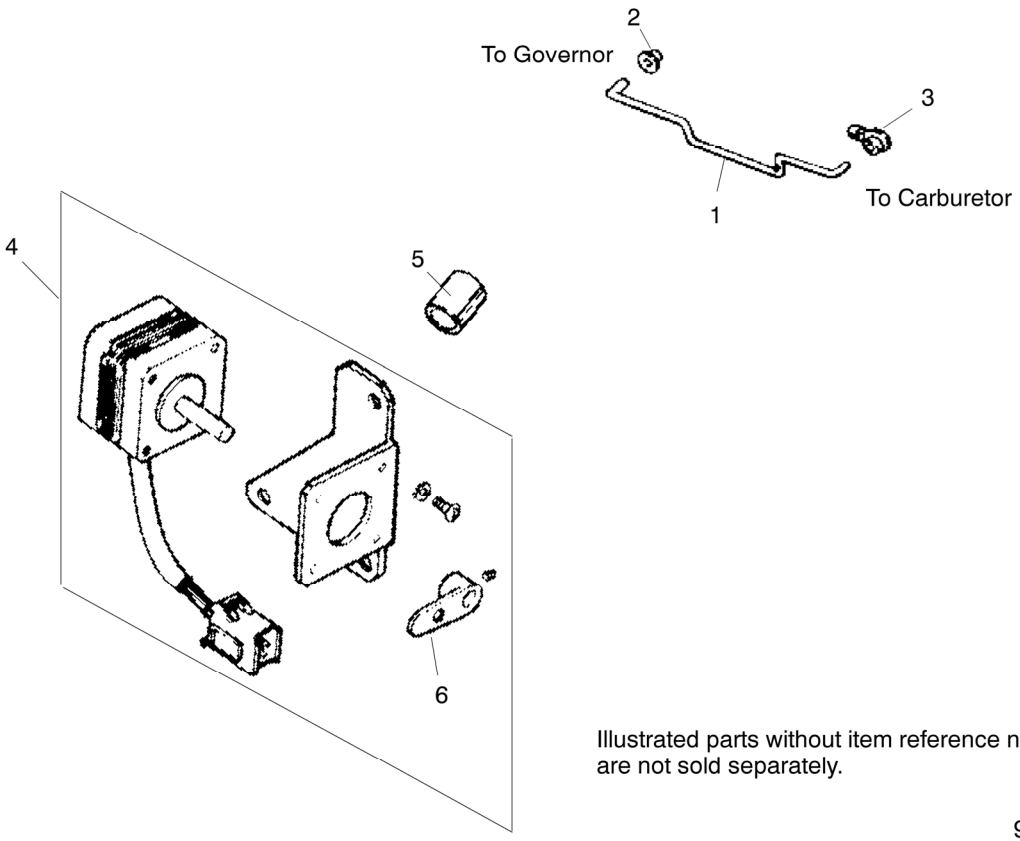


8-62-20

Item	Part Number	Description	Quantity
1	62 853 43-S	Kit, Carburetor	1
2	24 041 81-S	Gasket, Carburetor	1
3	M- 641060-S	Nut, Flg M6 x 1.0	4
4	25 072 26-S	Stud	4
5	25 353 40-S	Line, LP Fuel	1
6	25 237 12-S	Clamp, Hose- Use 25 237 32- S	1
7	25 431 19-S	Sleeve, Anti- Abrasion 203 mm Inst.	1
8	62 294 11-S	Fitting, Fuel	1
9	62 164 22-S	Kit, Intake Manifold	1
10	62 041 13-S	Gasket, Intake Manifold	2
11	M- 851030-S	Screw, Flg M8 x 1.25 x 30	4
12	25 155 38-S	Connector, Hose	1
13	62 041 29-S	Gasket, Air Cleaner Elbow	1

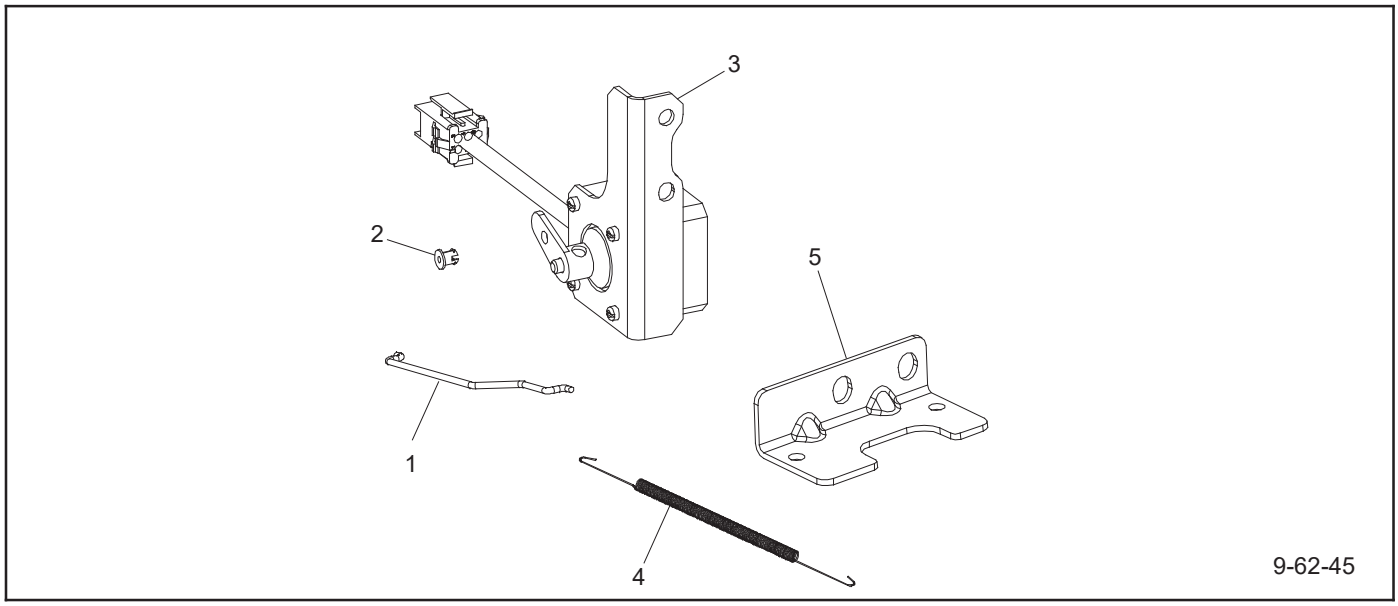
Group 9: Engine Controls

14RCA/L



9-24-513

Item	Part Number	Description	Quantity Variation 513
1	24 079 09-S	Linkage, throttle	1
2	25 158 08-S	Bushing, linkage	1
3	25 158 11-S	Bushing, throttle linkage	1
4	GM97176	Governor assembly	1
5	25 112 09-S	Spacer	3
6	358359	Coupling, stepper motor	1

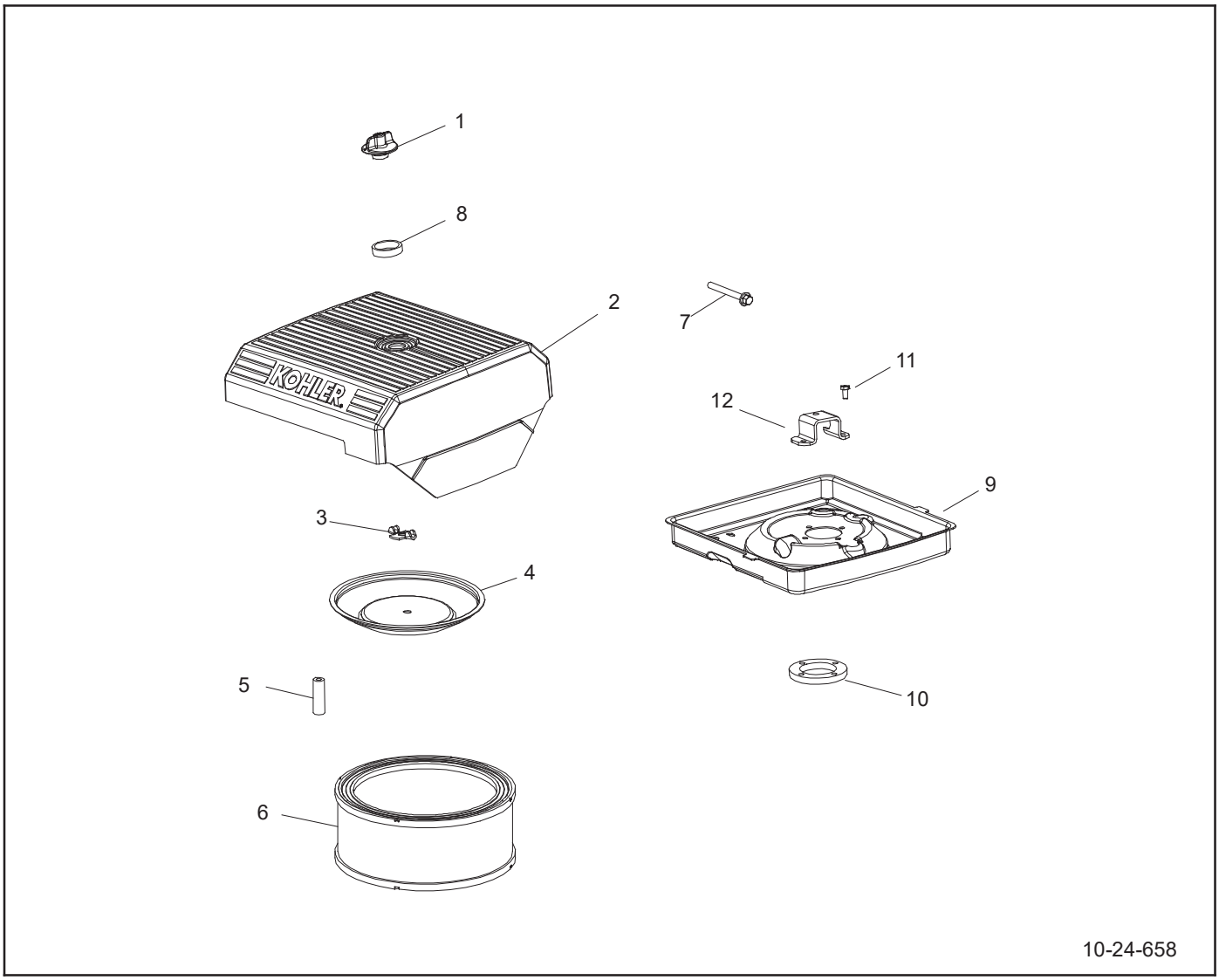


9-62-45

Item	Part Number	Description	Quantity
1	62 079 16-S	Linkage, throttle	1
2	25 158 08-S	Bushing, linkage retaining	2
3	GM81265	Governor, Assembly Electronic	1
4	62 089 45-S	Spring, linkage	1
5	62 126 66-S	Bracket, lifting	1

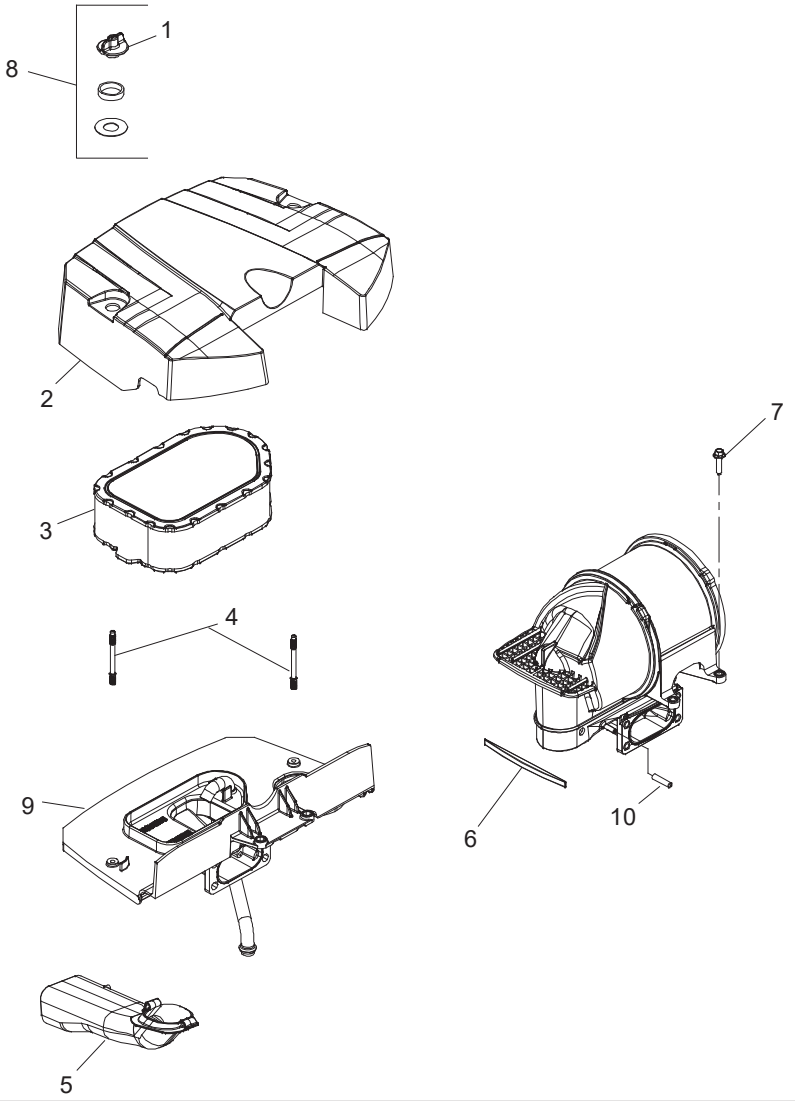
Group 10: Air Intake

14RCA/L



10-24-658

Item	Part Number	Description	Quantity
1	25 341 07-S	Knob, Cover Air Cleaner Cover	1
2	24 096 173-S	Cover, Air Cleaner	1
3	12 100 01-S	Nut, Wing	1
4	24 096 01-S	Cover, Inner Air Cleaner	1
5	230046-S	Seal Breather	1
6	24 083 09-S	Element, Air Filter	1
7	25 086 84-S	Screw, Flg M6 x 1.0 x 55	4
8	24 153 20-S	O- Ring	1
9	24 094 29-S	Base, Air Cleaner	1
10	24 112 21-S	Spacer, Air Cleaner	1
11	25 086 48-S	Screw, Hd 10- 32 x 3/4 in.	4
12	24 126 74-S	Bracket, Air Cleaner	1



10-62-62

Item	Part Number	Description	Quantity
1	25 341 04-S	Knob, Cover	2
2	62 096 45-S	Cover, A/C Trident Vo	1
3	62 083 04-S	Element, Air Filter (LPAC)	1
4	20 072 04-S	Stud, Air Cleaner Base	2
5	62 123 41-S	Tube, Air Intake	1
6	62 263 04-S	Damper, Foam	1
7	25 086 124-S	Screw, Flg M6 x 1.0 x 25	2
8	54 755 01-S	Kit, Knob W/Seal	2
9	62 094 47-S	Base, Air Cleaner	1
10	25 173 34-S	Cap, Masking	1

Group 11: Engine Exhaust

14-20RCA/L



11-24-3
11-62-9

11-24-3, 11-62-9

Item	Part Number	Description	Quantity
1	25 072 04-S	Stud, exhaust	4

Group 12: Engine Decals

14- 20RCA/L

Decals are not illustrated.

12-24-1216
12-62-53

12-24-1216

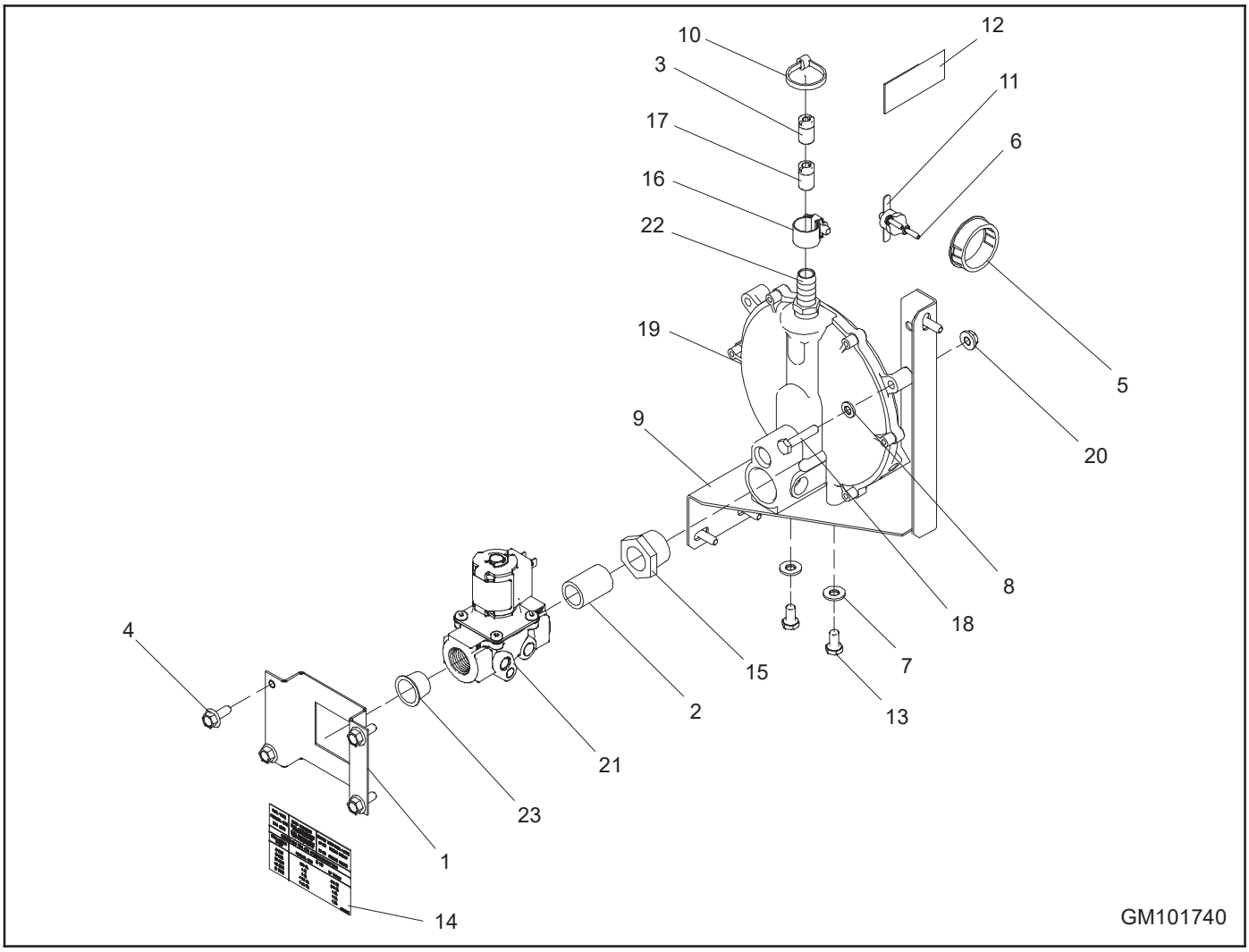
Item	Part Number	Description	Quantity
1	25 113 79-S	Label, clear lamination	1
2	25 113 93-S	Decal, USA	1
3	19 113 32-S	Decal, synthetic oil	1

12-62-53

Item	Part Number	Description	Quantity
1	25 113 79-S	Label, clear lamination	2
2	25 113 50-S	Decal, Powered by Kohler-white	1

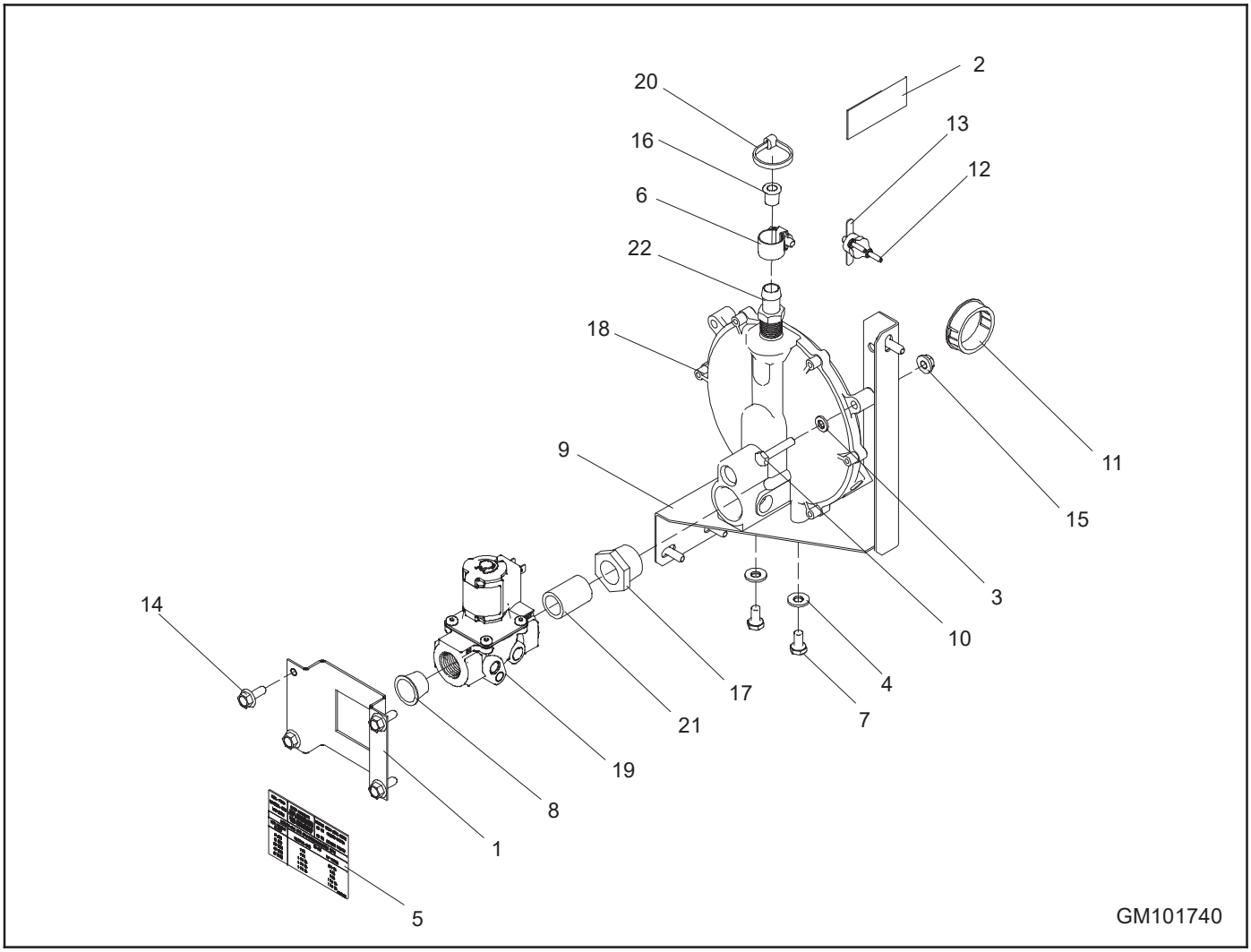
Fuel System

14RCA/L



GM101740-MA2

Item	Part Number	Description	Quantity
1	GM94805	Plate, Gas Solenoid Retainer	1
2	X-209-2	Pipe (1/2 in. NPT x 1.19 in.)	1
3	24 337 65	Jet, LP Fuel	1
4	GM78761-1	Screw, Sheetmetal	7
5	X-634-28	Bushing	1
6	X-67-152	Screw, Tapping	2
7	X-25-40	Washer, Plain, .281 ID x .625 in. OD	2
8	M125A-06-80	Washer, Plain (Exp)	1
9	GM104797	Bracket, Fuel Regulator MTG	1
10	X-468-2	Cable Tie	1
11	GM92505	Thermostat, 250°F	1
12	GM47407	Decal, Fuel Type	1
13	X-465-6	Bolt, Hex Cap (1/4- 20 x ½ in.) GR5	2
14	GM103361	Decal, Fuel Type	1
15	X-202-63	Bushing, Reducing (1/2 x ¾ in. NPT)	1
16	X-426-12	Clamp, Hose, .69/1.25 in.	1
17	24 337 66	Jet, NG Fuel	1
18	M933-06030-60	Screw, Hex Cap M6 x 30	1
19	A-227531	Regulator, Gas	1
20	M6923-06-80	Nut, Hex 6 mm	1
21	GM85084	Valve, Gas Shut Off	1
22	24 294 29-S	Fitting, Straight, LPG/NG	1
23	X-519-7	Plug, Cap	1

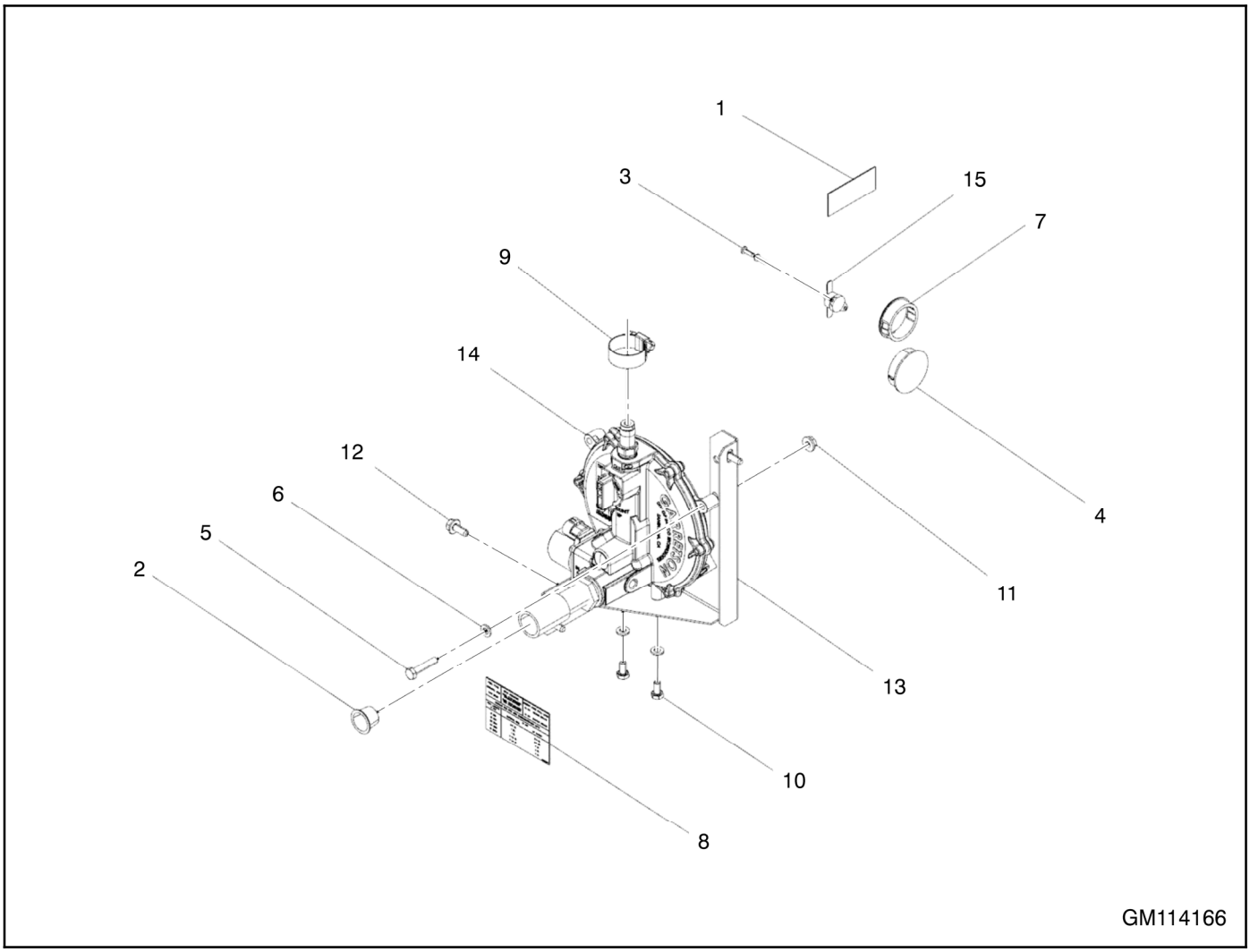


GM101740-MA1

Item	Part Number	Description	Quantity
1	GM94805	Plate, Gas Solenoid Retainer	1
2	GM103359	Decal, Fuel Type	1
3	M125A-06-80	Washer, Plain	1
4	X-25-40	Washer, Plain, .281 ID x .625 in. OD	2
5	GM103360	Decal, Fuel Type	1
6	X-426-12	Clamp, Hose, .69/1.25 in.	1
7	X-465-6	Bolt, Hex Cap (1/4- 20 x ½ in.) GR 5	2
8	X-519-7	Plug, Cap	1
9	GM104797	Bracket, Fuel Regulator Mtg	1
10	M933-06030-60	Screw, Hex Cap M6 x 30	1
11	X-634-28	Bushing	1
12	X-67-152	Screw, Tapping	2
13	GM92505	Thermostat, 250°F	1
14	GM78761-1	Screw, Sheetmetal	7
15	M6923-06-80	Nut, Hex 6 mm	1
16	62 294 06	Fitting, Restrictor	1
17	X-202-63	Bushing, Reducing (1/2 x ¾ in. NPT)	1
18	GM102602	Regulator, Gas	1
19	GM85084	Valve, Gas Shut Off	1
20	X-468-2	Cable Tie	1
21	X-209-2	Pipe (1/2 in. NPT x 1.19 in.)	1
22	25 294 21	Fitting, Straight	1

Fuel System, continued

14- 20 RCA/L

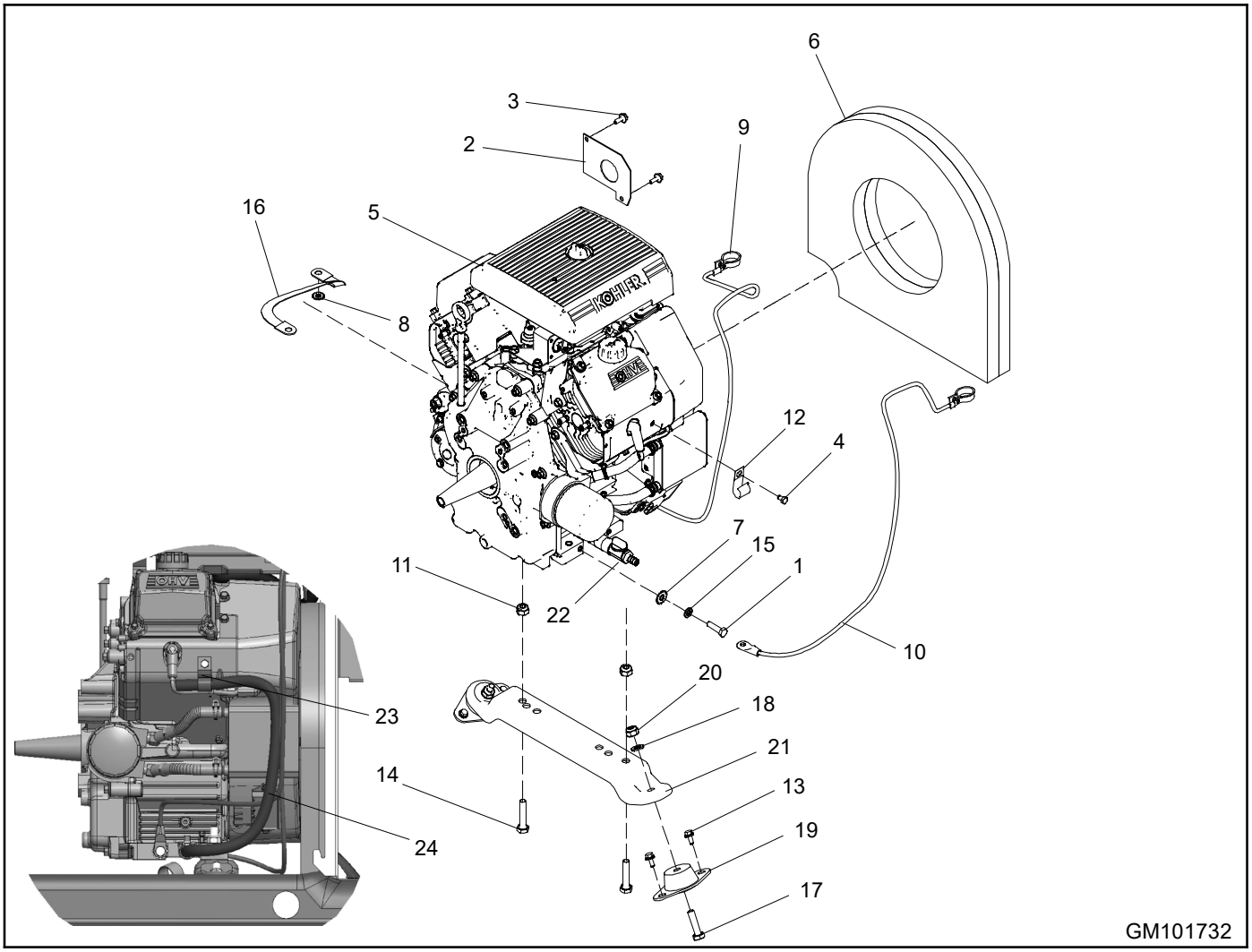


GM114166-MA1/-MA2

Item	Part Number	Description	Quantity GM114166 -MA1	-MA2
1	GM47407	Decal, Fuel Type		1
1	GM103359	Decal, Fuel Type	1	
2	X-519-7	Plug, Cap	1	1
3	X-67-152	Screw, Tapping	2	2
4	X-301-45	Plug, Button		1
5	M933-06030-60	Screw, Hex Cap M6 x 30	1	1
6	M125A-06-80	Washer, Plain	3	3
7	X-634-28	Bushing	1	1
8	GM103360	Decal, Fuel Type	1	
8	GM103361	Decal, Fuel Type		1
9	X-426-12	Clamp, Hose, .69/1.25 in.	1	1
10	M933-06012-60	Screw, Hex Cap M6 x 12	2	2
11	M6923-06-80	Nut, Hex 6 mm	1	1
12	GM78761-1	Screw, Sheetmetal	3	3
13	GM104797	Bracket, Fuel Regulator MTG	1	1
14	GM114165- 1	Fuel System Subassy, 20kW LP and 18kW NG	1	
14	GM114165- 2	Fuel System Subassy, 14kW LP and 12kW NG		1
15	GM92505	Thermostat, 250°F	1	1

Engine Group

14RCA/L

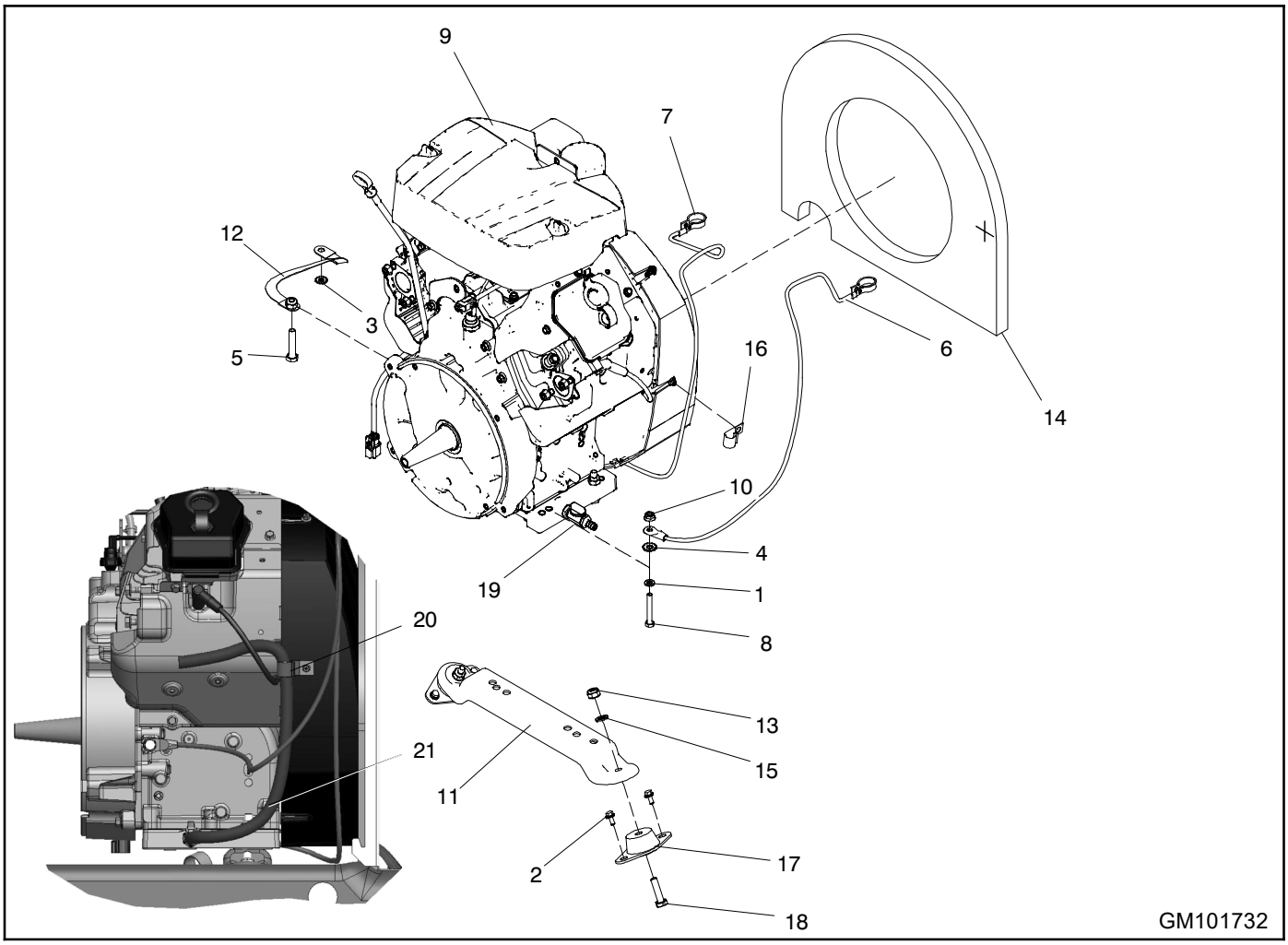


GM101732-GR2

Item	Part Number	Description	Quantity
1	M933-08030-60	Screw, Hex Cap M8 x 30	1
2	GM104683	Plate, Fuel Line Access	1
3	GM78761-1	Screw, Sheetmetal	2
4	M933-06010-60	Screw, Hex Cap M6 x 10	1
5	PS-CH740-3345	Engine, Kohler, CH740	1
6	GM105521	Foam, Seal, Air Intake 14 RCA	2
7	X-22-16	Washer, Lock .326 ID x .883 in. OD	1
8	X-22-12	Washer, Lock .262 ID x .743 in. OD	1
9	X-545-281	Cable, Battery	1
10	X-545-282	Cable, Battery	1
11	M982-10-80	Nut, Hex Elastic Stop	2
12	X-6084-1	Clip, J	1
13	M6921-06014-60	Screw, Hex Cap Flange	4
14	M933-10050-60	Screw, Hex Cap M10 x 50	2
15	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	1
16	GM50449	Strap, Ground	1
17	M931-10040-60	Screw, Hex Cap M10 x 40	2
18	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	1
19	GM75548	VIbromount	2
20	M982-10-80	Nut, Hex Elastic Stop	2
21	GM102166	Foot, Mounting	1
22	359653	Valve, Oil Drain (3/8- 18 npt)	1
23	X-426-9	Clamp, hose, 0.25/0.70 in.	1
24	X-612-28	Hose	1

Engine Group

20RCA/L



GM101732-GR1

Item	Part Number	Description	Quantity
1	M125A-08-80	Washer, Plain 8.4 ID x 16.0 OD	1
2	M6921-06014-60	Screw, Hex Cap Flange	4
3	X-22-12	Washer, Lock .262 ID x .743 in. OD	1
4	X-22-16	Washer, Lock .326 ID x .883 in. OD	1
5	M933-10050-60	Screw, Hex Cap M10 x 50	2
6	X-545-282	Cable, Battery	1
7	X-545-281	Cable, Battery	1
8	M931-08055-60	Screw, Hex Cap M8 x 55	1
9	PS-CH1000-3031	Engine, Kohler, CH1000	1
10	M6923-08-80	Nut, Hex 8 mm	1
11	GM102166	Foot, Mounting	1
12	GM50449	Strap, Ground	1
13	M982-10-80	Nut, Hex Elastic Stop	4
14	GM105520	Foam, Seal, Air Intake 20 RCA	1
15	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2
16	X-6084-1	Clip, J	1
17	GM75548	Vibromount	2
18	M931-10040-60	Screw, Hex Cap M10 x 40	2
19	359653	Valve, Oil Drain (3/8- 18 npt)	2
20	X-426-9	Clamp, hose, 0.25/0.70 in.	1
21	X-612-28	Hose	1

Decal Group

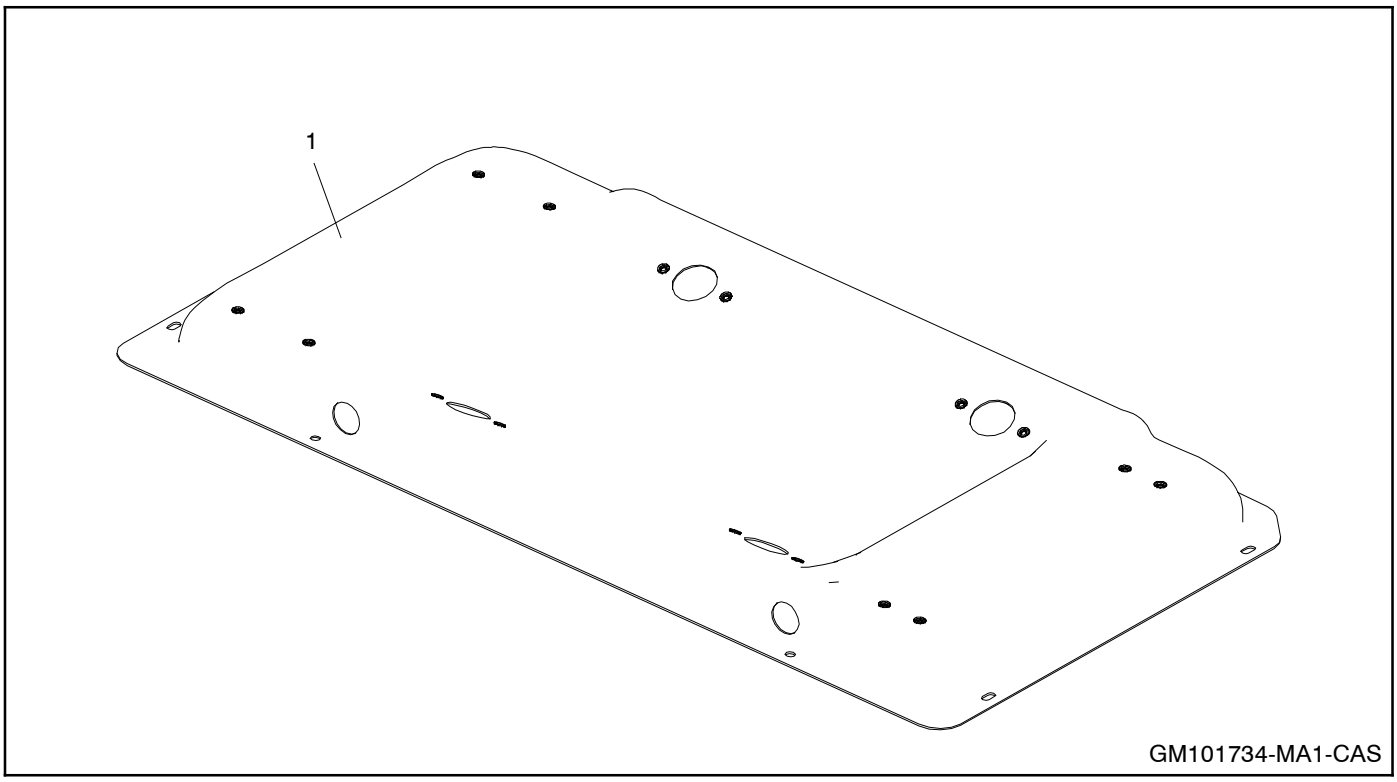
Decals are not illustrated.

GM102922-GR1

Item	Part Number	Description	Quantity
1	249808	Decal, Warning Rotating Parts	1
2	249809	Decal, Caution Hot Engine	2
3	255882	Decal, Caution Stdby SVC Connect	1
4	257438	Decal, Danger Moving Rotor	1
5	294520	Decal, Danger, High Voltage	1
6	GM103651	Decal, No Bond to Neutral	1
7	GM106120	Decal, Warning	1
8	GM13680	Nameplate, Overlay 500 per Roll	1
9	GM15299	Decal, Rainproof Enclosure	1
10	GM29924	Decal, Notice, Fuel Connection	1
11	GM53084	Decal, Power Breaker	1
12	GM60175	Decal, Warning Non GFCI outlet	1
13	GM75579	Decal, Kohler logo	1
14	GM81760	Decal, Kohler - RDC2/DC2/VSC	1

Skid

14- 20RCA/L

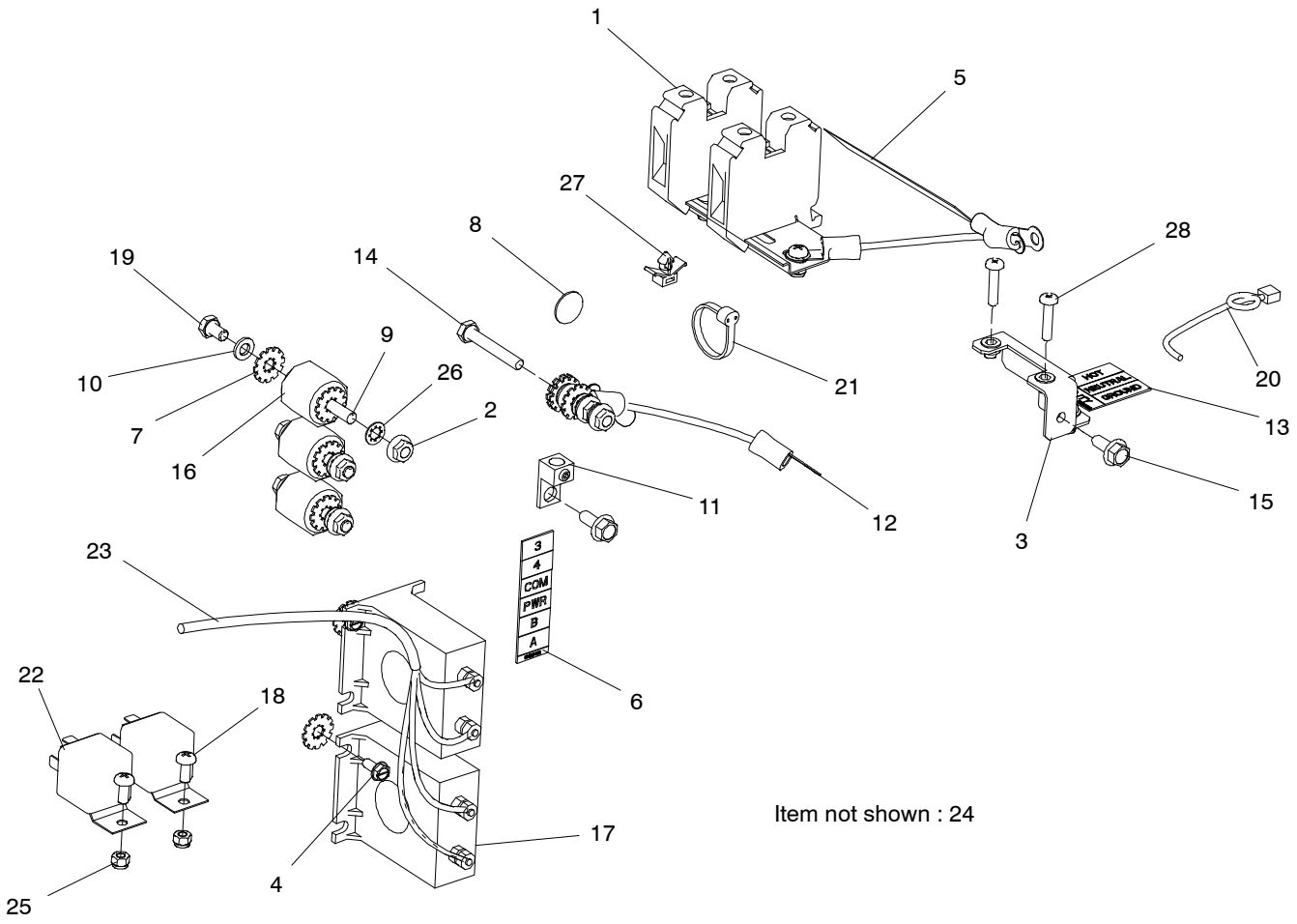


GM101734-MA1-CAS

Item	Part Number	Description	Quantity
1	GM102551-S-CAS	Base, Enclosure, RCA	1

Customer Connection

14- 20RCA/L



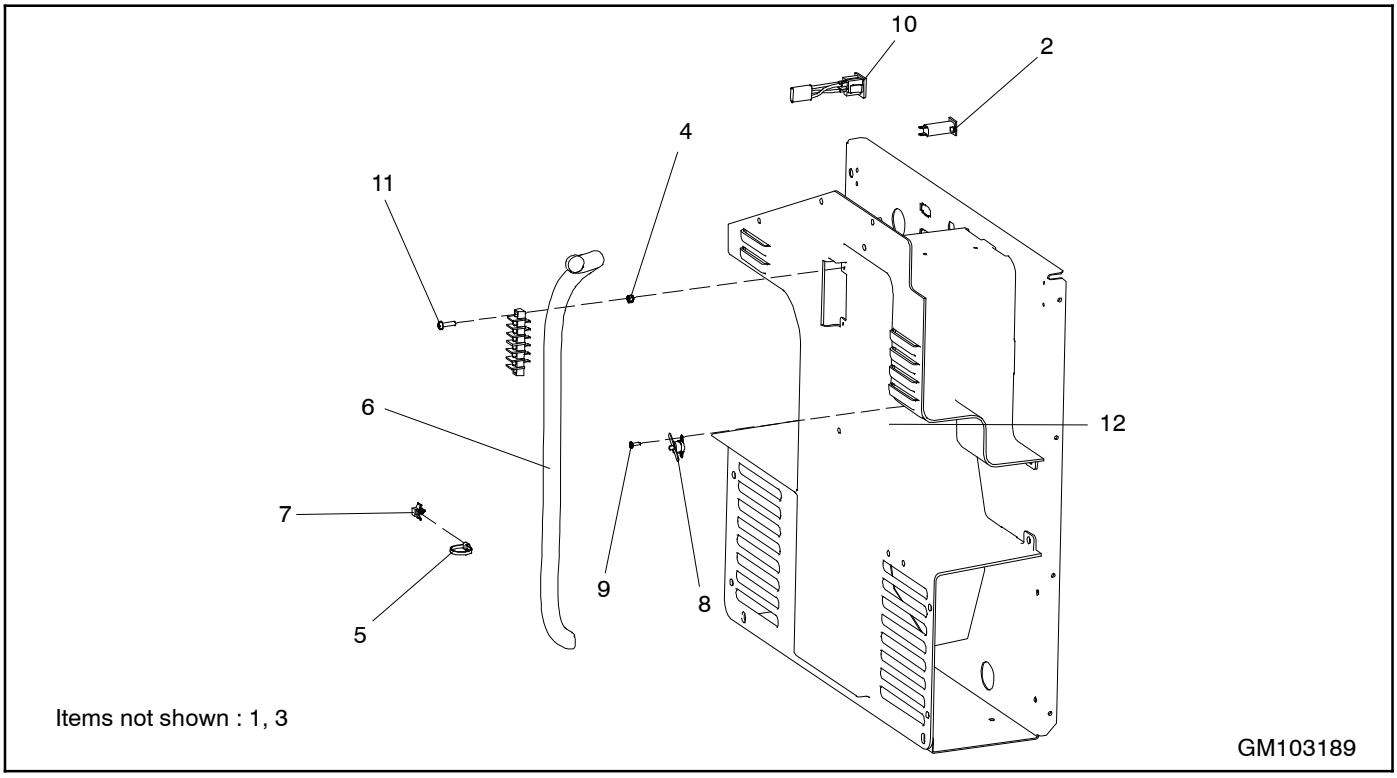
GM101741

GM101741-MA1, -MA2

Item	Part Number	Description	Quantity GM101741-MA1	Quantity GM101741-MA2
1	GM106507	Terminal Block Assembly	1	1
2	M6923-06-83	Nut, Hex		6
3	GM102869-S	Bracket, Terminal Block	1	1
4	X-67-156	Screw, Tapping		4
5	GM84987	Decal, Terminal Block		1
6	GM88490	Decal, Customer Connection	1	1
6	GM88491	Decal, Terminal Block	1	
7	X-22-12	Washer, Lock .262 ID x .743 in. OD	5	13
8	345211	Decal, Ground	1	1
9	X-6054-23	Stud	1	3
10	M125A-06-80	Washer, Plain	1	3
11	X-6207-1	Lug, Terminal, Aluminum	1	1
12	LK-1015-1515	Lead, Ground	2	2
13	GM85263	Decal, Utility Connection	1	1
14	M933-06040-60	Screw, Hex Cap M6 x 40	1	1
15	GM78761-1	Screw, Sheetmetal	2	2
16	X-6128-35	Insulator, Standoff	1	3
17	GM16251	Transformer, Current 150A: 3 Vac		2
18	M7985A-05012-20	Screw, Pan Head Mach.	5	5
19	M933-06010-60	Screw, Hex Cap M6 x 10	1	3
20	357477	Cable, Patch, 3 Ft. RJ- 45	1	1
21	X-468-2	Cable Tie	1	1
22	GM49746	Relay, 12 VDC	2	2
23	GM85198	Harness, Wiring Current Transformer		1
24	GM93298	Diagram, Wiring 14- 20 KW RES	1	1
25	M982-05-60	Nut, Hex Elastic Stop, 5 mm	5	5
26	X-22-11	Washer, Lock .262 ID x .469 OD	5	9
27	361567	Base, Tie Wrap Snapin	1	1
28	X-50-12	Screw, Machine	2	2

Harness Group

14- 20RCA/L

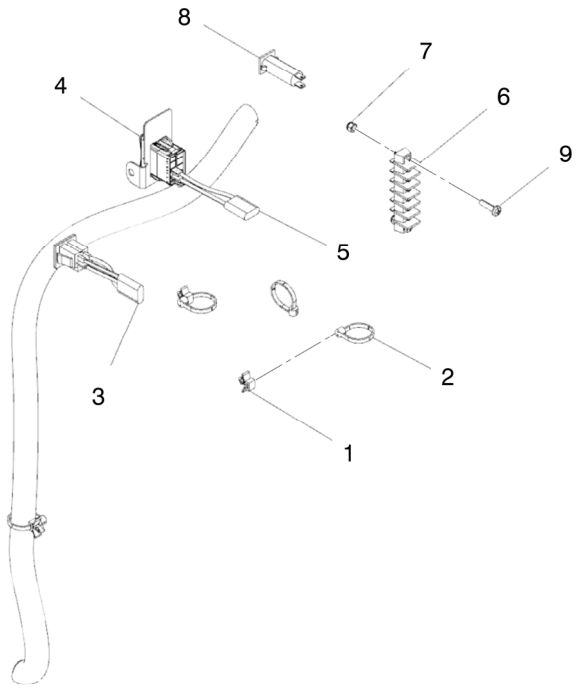


GM103189-GR1

Item	Part Number	Description	Quantity
1	GM102647	Diagram, Wiring 14- 20 RCA	1
2	GM63134	Breaker, Circuit (20A.)	1
3	ADV-8956	Diagram, Schematic 14- 20 KW RCA	1
4	M982-05-60	Nut, Hex Elastic Stop, 5 mm	2
5	X-468-2	Cable Tie	2
6	GM102673	Harness, Engine, 14- 20 KW RCA	1
7	361567	Base, Tie Wrap Snapin	2
8	GM92505	Thermostat, 250°F	1
9	X-67-152	Screw, Tapping	2
10	GM104201	Harness, Pigtail Customer Connection	1
11	M7985A-05020-20	Screw, Pan Head Machine	2
12	-	Reference part	-

Harness Group

14- 20RCA/L



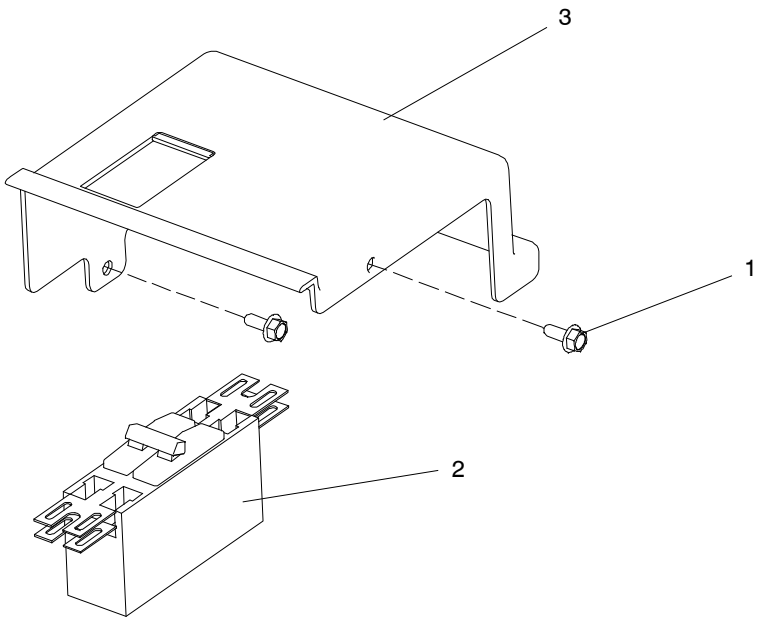
GM114255

GM114255-GR1

Item	Part Number	Description	Quantity
1	361567	Base, Tie Wrap Snapin	3
2	X-468-2	Cable Tie	4
3	GM104201	Harness, Pigtail Customer Connection	1
4	GM111084	Switch, Engine Shutdown	1
5	GM111085	Harness, Engine Shutdown	1
6	GM115454	Harness, Engine 14- 20 kW RCA	1
7	M982-05-60	Nut, Hex Elastic Stop, 5 mm	2
8	GM63134	Breaker, Circuit (20A.)	1
9	M7985A-05020-20	Screw, Pan Head Machine	2

Circuit Breaker

14- 20RCA/L



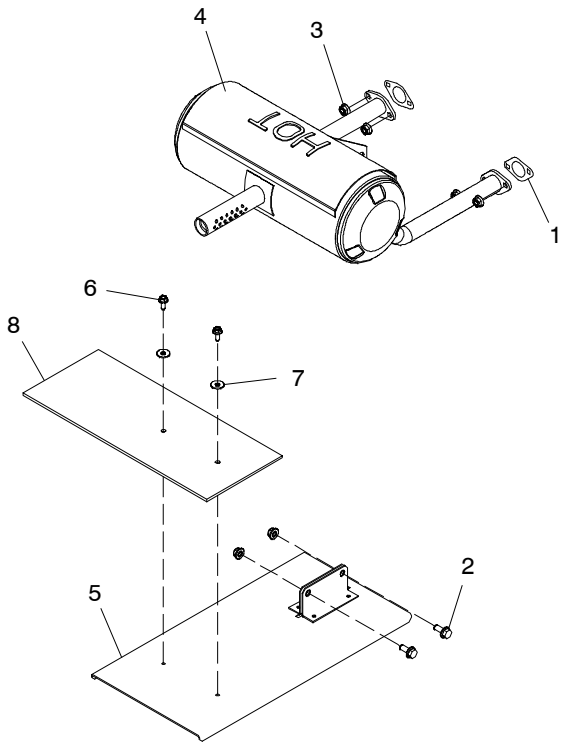
GM101739

GM101739-MA1, -MA2, -MA3, -MA4, -MA5, -MA6, -MA7, -MA10

Item	Part Number	Description	Quantity GM101739 -MA1	-MA2	-MA3	-MA4	-MA5	-MA6	-MA7	-MA10
1	GM78761-1	Screw, Sheetmetal	2	2	2	2	2	2	2	2
2	GM22482	Breaker, Circuit (100A)	1							
2	GM75545	Breaker, Circuit (70A)		1						
2	GM95142	Circuit Breaker, 70A, 240V, 3 Pole			1					
2	GM90754	Circuit Breaker, 50A, 240V, 3 Pole				1				
2	GM95143	Circuit Breaker, 60A, 240V, 3 Pole					1			
2	GM95161	Circuit Breaker, 25A, 480V, 3 Pole						1		
2	GM95162	Circuit Breaker, 30A, 480V, 3 Pole							1	
2	GM24462	Circuit Breaker, 80A								1
3	GM102836	Panel, Customer Conn (Molded)	1	1						1
3	GM104000-1	Panel, Customer Conn			1		1			
3	GM105154-2	Panel, Customer Conn				1				
3	GM104000-3	Panel, Customer Conn						1	1	

Exhaust and Mounting

14- 20RCA/L



Item not shown: 9

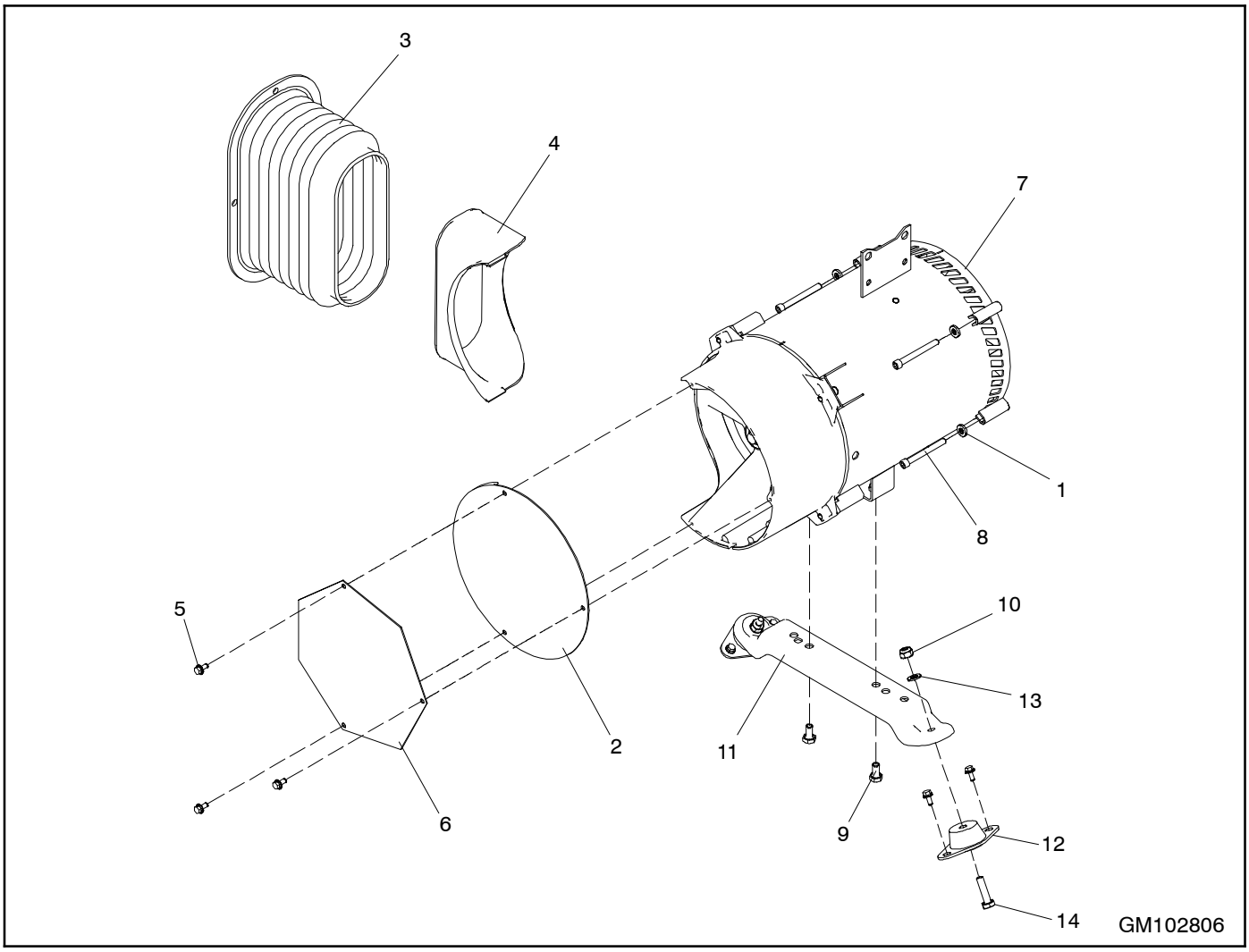
GM101733

GM101733-MA1, -MA2

Item	Part Number	Description	Quantity GM101733 -MA1	Quantity GM101733 -MA2
1	62-041-14	Gasket, Exhaust	2	
1	24-041-49	Gasket, Exhaust (not shown)		2
2	M6921-08020-60	Screw, Hex Flange M8 x 20	2	2
3	M6923-08-80	Nut, Hex 8 mm	6	6
4	GM107009	Silencer, Exhaust (20RCA)	1	
4	GM107012	Silencer, Exhaust (14RCA)		1
5	GM102848	Heat Shield, Exhaust	1	1
6	GM78761-1	Screw, Sheetmetal	2	2
7	X-25-130	Washer, Plain, .255 ID X .812 in. OD	2	2
8	GM103683	Compressed Foam Panel, Exhaust	1	1
9	24-605-07	Liner, Exhaust port (not shown)		2

Alternator and Mounting

14- 20RCA/L

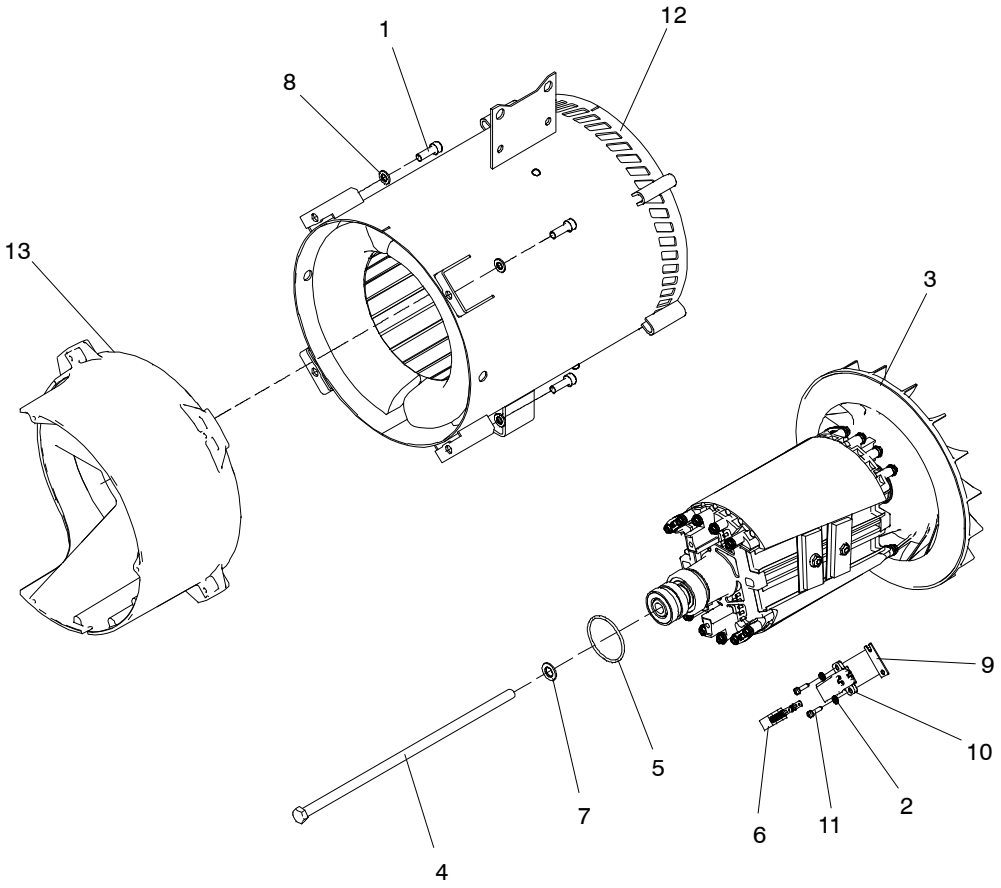


GM102806-MA1, -MA2, -MA3, -MA4

Item	Part Number	Description	Quantity GM102806 -MA1	-MA2	-MA3	-MA4
1	X-801-4	Washer, Hardened, .328 ID x .719 in. OD	4	4	4	4
2	GM102998	Cover, Duct	1	1	1	1
3	GM105503	Bellows, Alternator	1	1	1	1
4	GM103026	Cover, Duct Intake	1	1	1	1
5	M6921-06014-60	Screw, Hex Cap Flange	7	7	7	7
6	GM104023	Plate, Alt. Cap Reinforcement	1	1	1	1
7	GC102994-1	Alternator Assy, 20 KW, 1 PH	1			
7	GC102994-2	Alternator Assy, 20 KW, 3 PH		1		
7	GC102994-3	Alternator Assy, 14 KW, 1 PH			1	
7	GC102994-4	Alternator Assy, 14 KW, 3 PH				1
8	M912-08080-92	Screw, Socket Head Cap	4	4	4	4
9	M933-10020-60	Screw, Hex Cap M10 x 20	2	2	2	2
10	M982-10-80	Nut, Hex Elastic Stop	2	2	2	2
11	GM102166	Foot, Mounting	1	1	1	1
12	GM75725	Vibromount	2	2	2	2
13	M125A-10-80	Washer, Plain 10.5 ID x 20.0 OD	2	2	2	2
14	M931-10040-60	Screw, Hex Cap M10 x 40	2	2	2	2

Alternator and Mounting

14- 20RCA/L

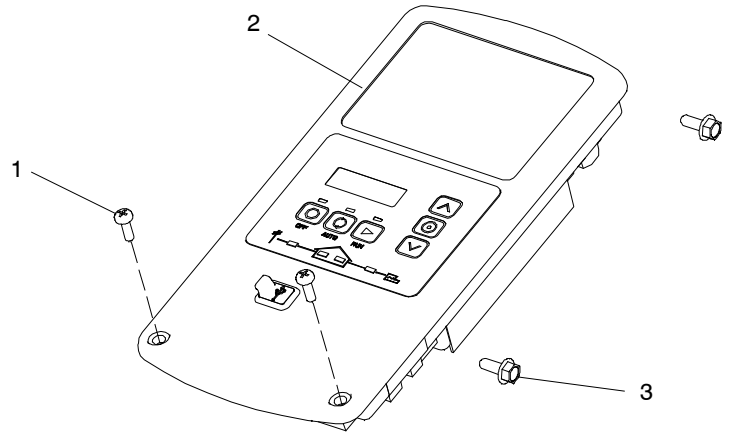


GM102994-1, -2, -3, -4

Item	Part Number	Description	Quantity GC102994 -1	-2	-3	-4
1	M912-08025-60	Screw, Socket head cap	4	4	4	4
2	M125A-04-80	Washer, Plain	2	2	2	2
3	GC103373	Rotor assembly	1	1		
3	GC103372	Rotor assembly			1	1
4	GM62982	Bolt, Armature thru	1	1	1	1
5	256466	O-ring (2.050 in.)	1	1	1	1
6	GM80981	Brush	2	2	2	2
7	X-801-18	Washer, Hardened	1	1	1	1
8	M125A-08-80	Washer, Plain 8.4 ID x 16 OD	4	4	4	4
9	GM62996	Shim, Brush holder	1	1	1	1
10	GM80982	Holder, Brush	1	1	1	1
11	M912-04016-60	Screw, Socket head cap	2	2	2	2
12	GC102818	Stator Assembly, 20RCA 1 Ph, 7.12 in.	1			
12	GC102911	Stator Assembly, 20RCA 3 Ph, 7.12 in.		1		
12	GC102909	Stator Assembly, 14RCA 1 Ph, 5.33 in.			1	
12	GC102908	Stator Assembly, 14RCA 3 Ph, 5.33 in.				1
13	GM102816	Assy, Bracket, End, Duct	1	1	1	1

Controller

14- 20RCA/L

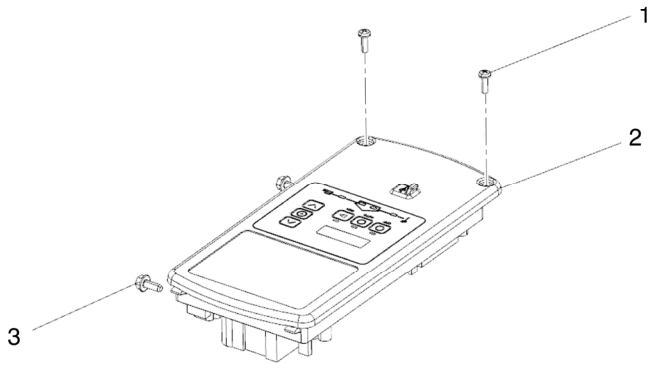


GM101738

GM101738-MA1

Item	Part Number	Description	Quantity
1	GM78761-1	Screw, Sheetmetal	2
2	GM92089	Controller Assy, RDC2, Resi- LC Distrib	1
3	M7985A-05016-20	Screw, Pan Head Machine	2

14- 20RCA/L



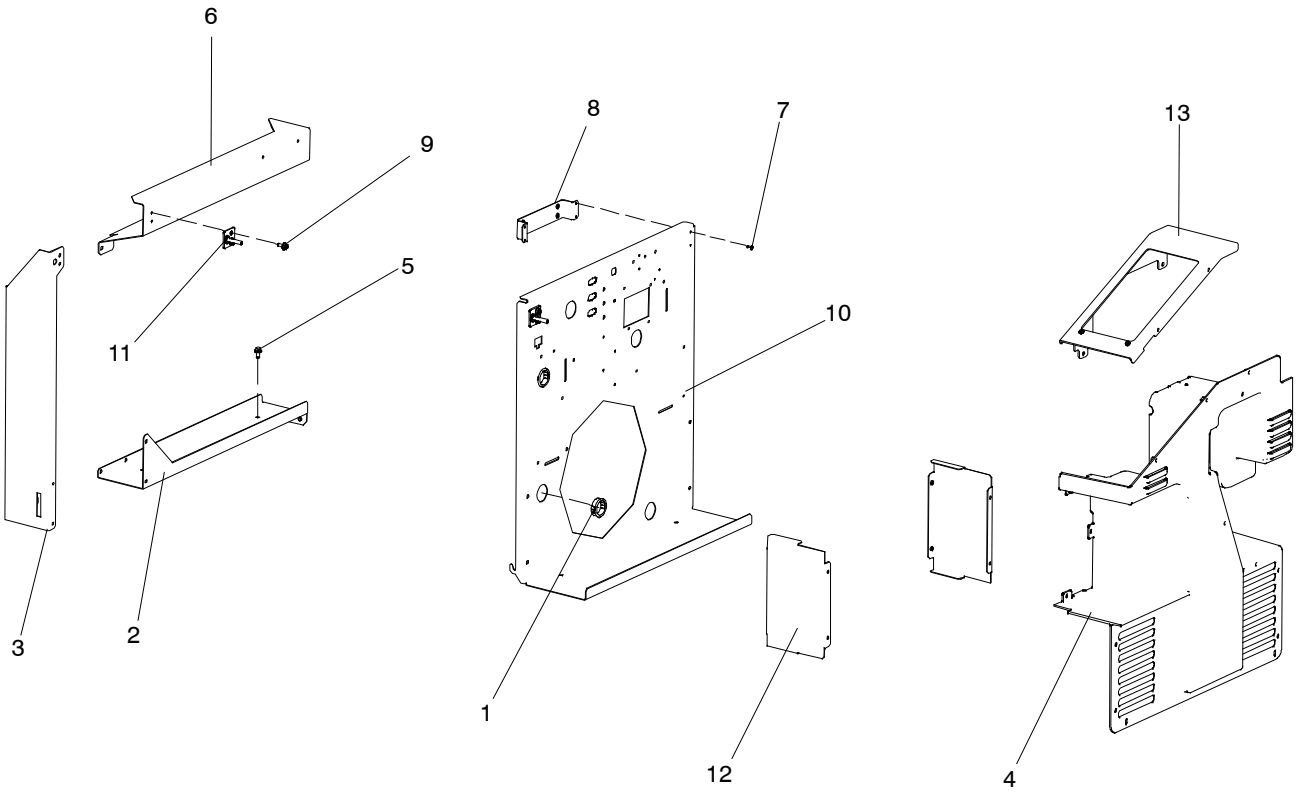
GM114247

GM114247-MA1

Item	Part Number	Description	Quantity
1	M7985A-05016-20	Screw, Pan Head Machine	2
2	GM89864-4	Controller Assy, Distributor RDC2 Ver 5	1
3	GM78761-1	Screw, Sheetmetal	2

Bulkhead

14-20RCA/L



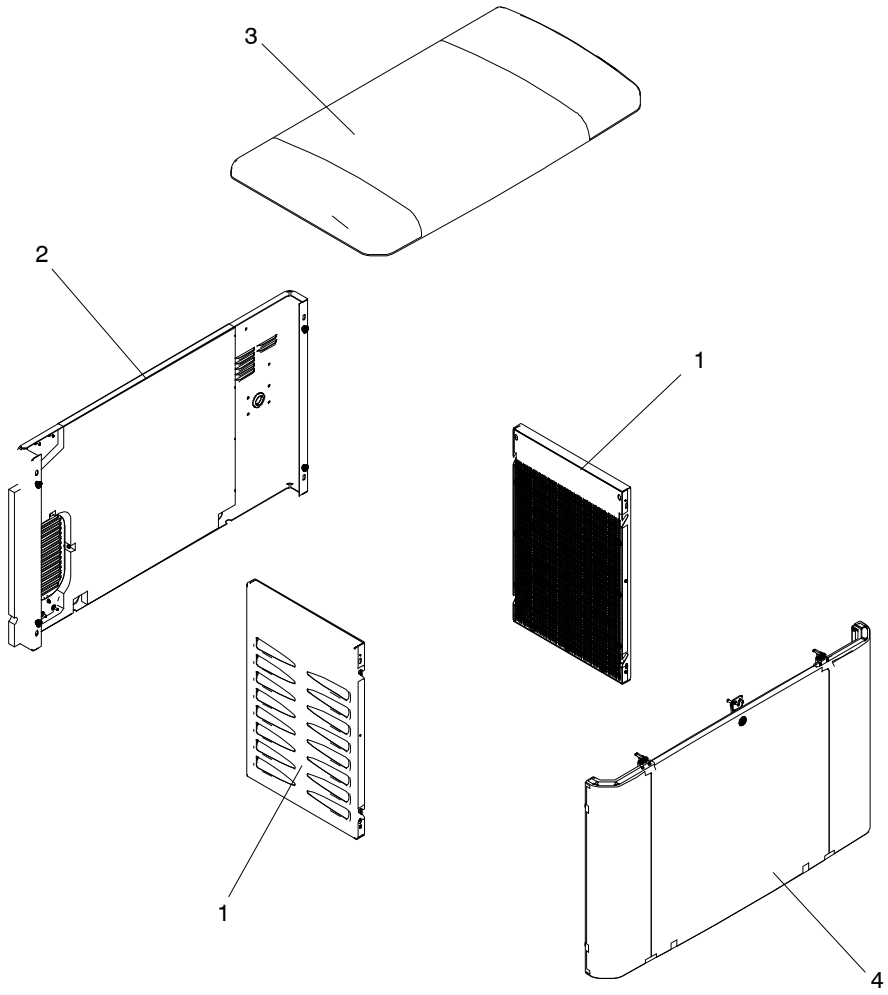
GM101736

GM101736-MA1

Item	Part Number	Description	Quantity
1	X-634-28	Bushing	2
2	GM104236	Panel, Base	1
3	GM104237	Panel, Vertical, Right	1
4	GM105515	Air Duct, Bulkhead (Molded)	1
5	M6921-06014-60	Screw, Hex Cap Flange	8
6	GM104235	Heat Shield	1
7	X-781-5	Rivet, Pop, .125 in.	4
8	GM102555	Hinge, Mounting Bracket	1
9	GM78761-1	Screw, Sheetmetal	28
10	GM102552	Panel, Bulkhead, Front	1
11	GM102559	Striker, Latch	2
12	GM103902	Panel, Battery Support	2
13	GM102554-S	Panel, Controller (Molded)	1

Enclosure

14- 20RCA/L

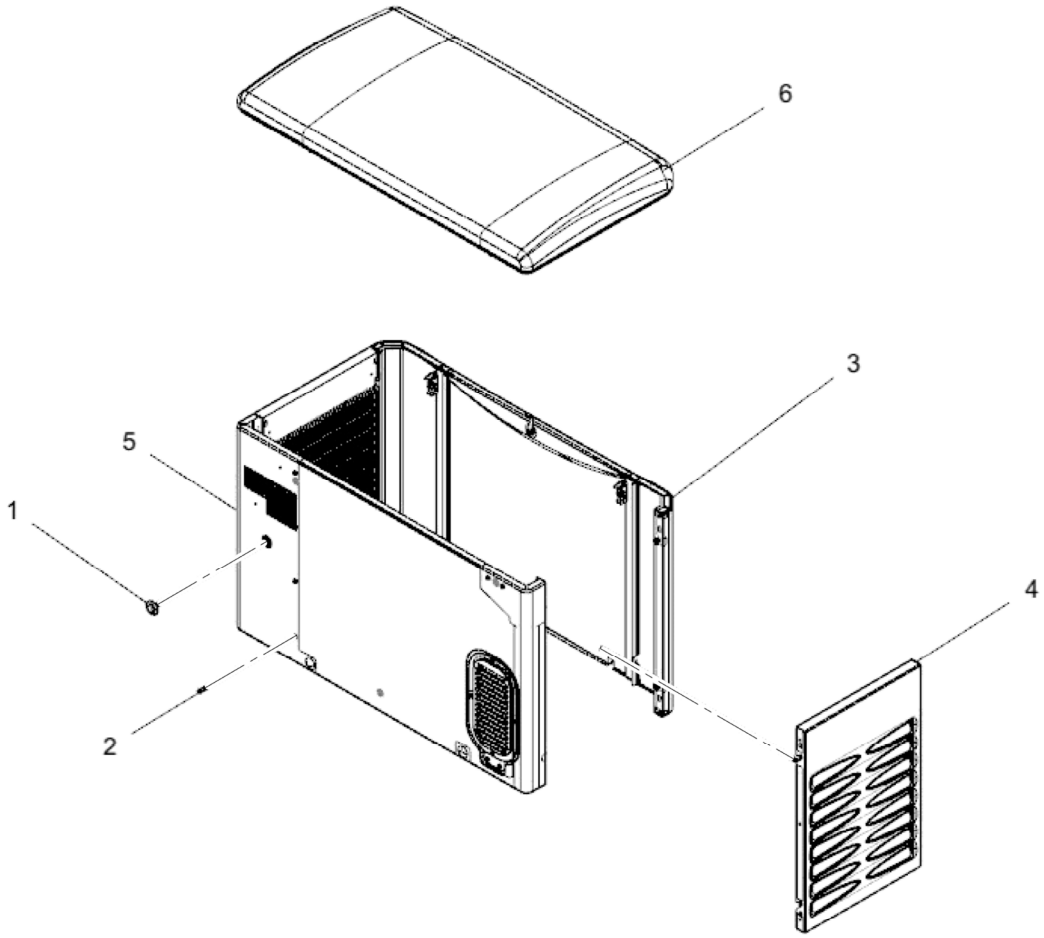


GM101737-MA1-CAS

Item	Part Number	Description	Quantity
1	GM113815-S-CAS	Panel, Louver	2
2	GM102563-1-S-CAS	Left Wall Assy	1
3	GM102548-1-S-CAS	Assy, Roof Panel	1
4	GM102566-1-S-CAS	Panel Assy, Right	1

Enclosure, continued

14- 20RCA/L



GM114531

GM114531-MA1-CAS/-CAMO/-CTRY/-LAND

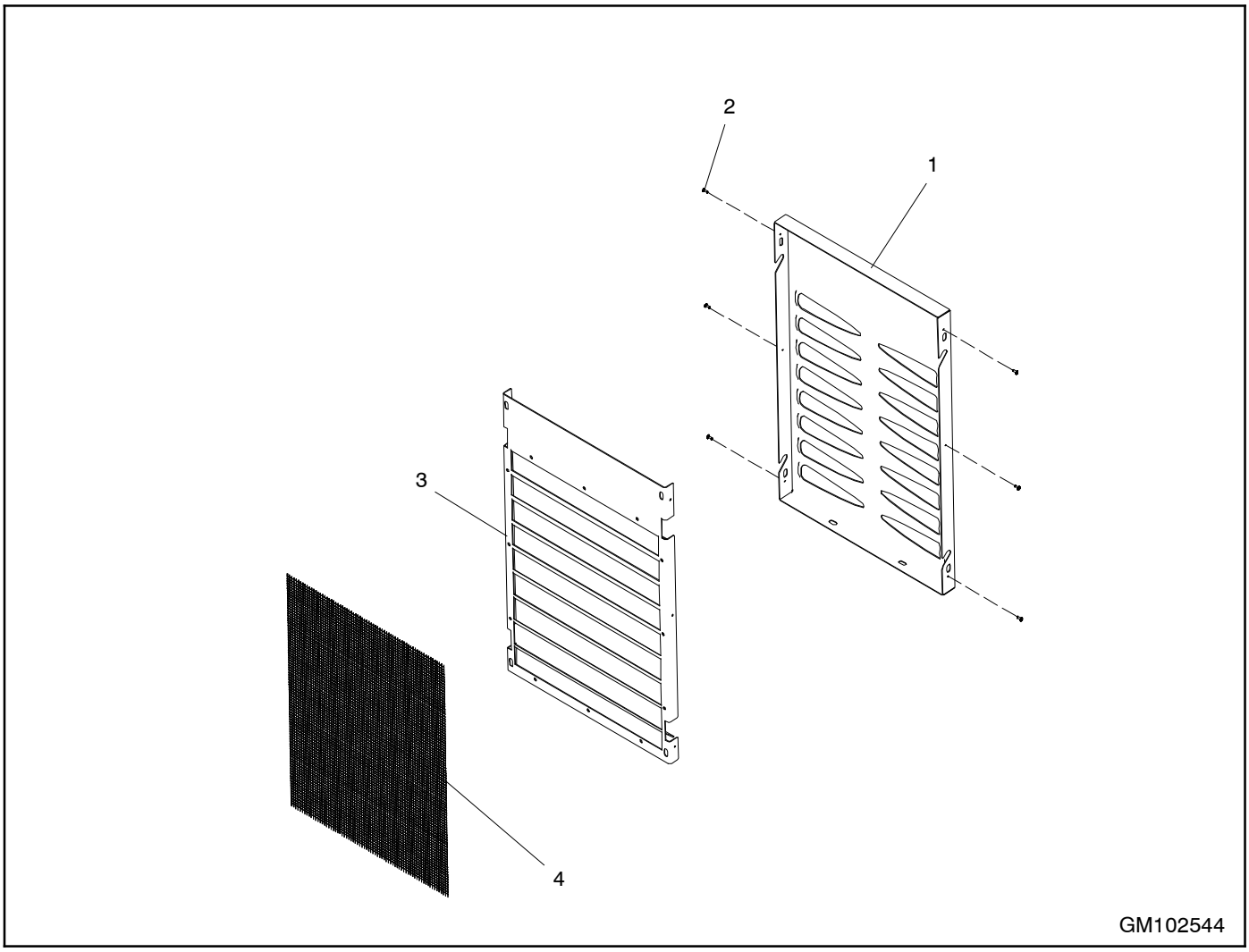
Item	Part Number	Description	Quantity
1	X-284-3	Grommet, Round	1
2	GM78761-1	Screw, Sheetmetal	12
3	GM102566-1-S-**	Panel Assy, Right	1
4	GM113815-S-**	Panel, Louwer	2
5	GM114529-S-**	Left Wall Assy	1
6	GM102548-1-S-**	Assy, Roof Panel	1

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

	Color Dependant Parts	
Kit No.	Part Number Suffix	Part Number Example (item 3)
GM114531-MA1-CAS	-CAS	GM102566-1-S-CAS
GM114531-MA1-CAMO	-CAMO	GM102566-1-S-CAMO
GM114531-MA1-CTRY	-CTRY	GM102566-1-S-CTRY
GM114531-MA1-LAND	-LAND	GM102566-1-S-LAND

Enclosure, continued

14- 20RCA/L



GM113815-S-**

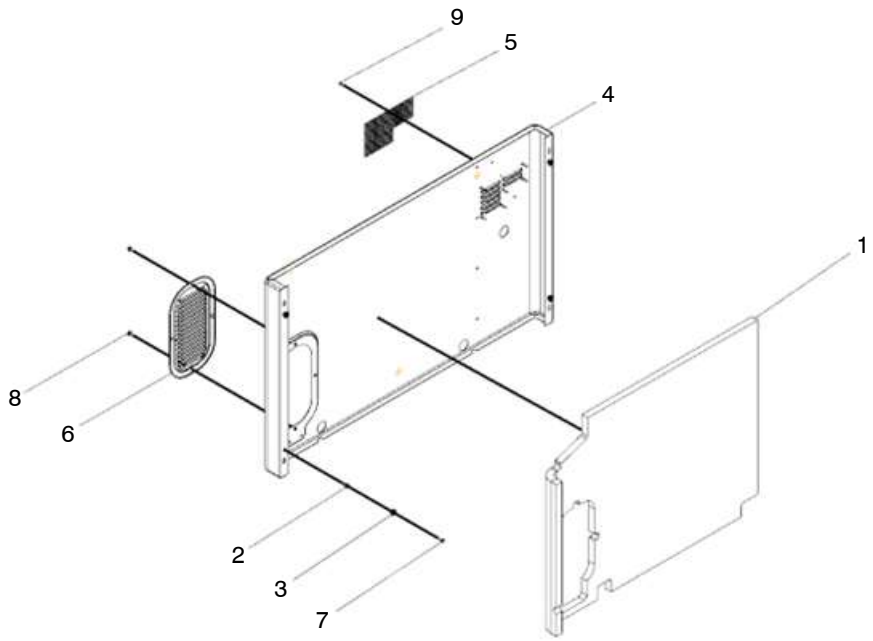
Item	Part Number	Description	Quantity
1	GM102546-**	Panel, Louver outer	1
2	X-781-5	Rivet, Pop, 1.25 in.	6
3	GM113824-BLK	Panel, Louver inner	1
4	GM102874	Mesh, Rodent screen	1

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

	Color Dependant Parts	
Kit No.	Part Number Suffix	Part Number Example (item 1)
GM114531-MA1-CAS	-CAS	GM102546-CAS
GM114531-MA1-CAMO	-CAMO	GM102546-CAMO
GM114531-MA1-CTRY	-CTRY	GM102546-CTRY
GM114531-MA1-LAND	-LAND	GM102546-LAND

Enclosure, continued

14- 20RCA/L



GM102563-1-S-CAS

GM102563-1-S-CAS

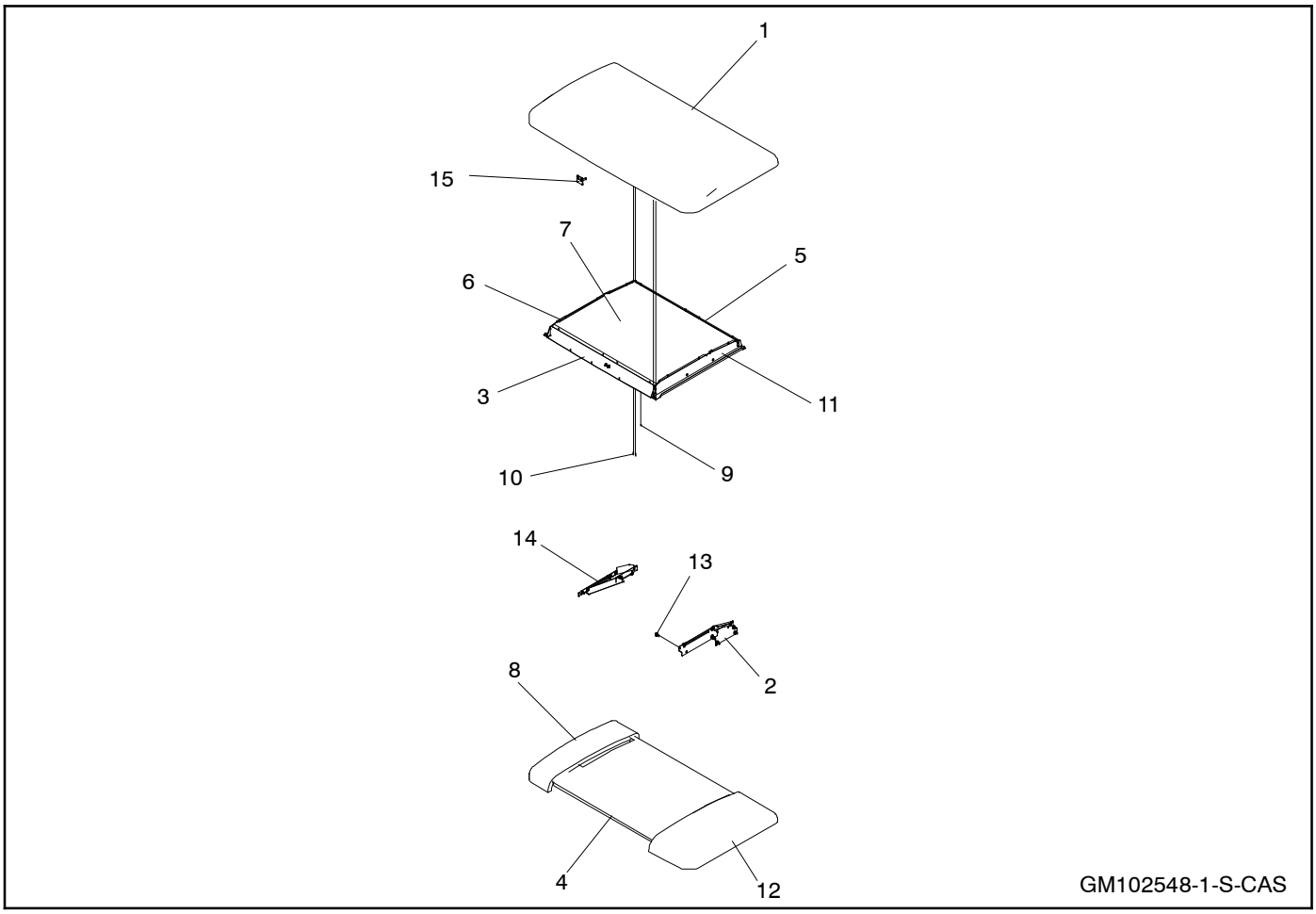
Item	Part Number	Description	Quantity	
			GM102563-1-S-CAS	GM114529-1-**
1	GM114052	Foam, Left wall	1	1
2	GM11040-7	Insert, Threaded (M6 x 1.0 hex)	4	4
3	GM103067	Bushing, Panel hanging (Molded)	4	4
4	-	Panel, Left	1	
4	-	Panel, Left		1
5	GM115938	Mesh, Rodent screen		1
6	GM103844- **	Louwer panel, Bellow	1	1
7	M7985-06020-20	Screw, Pan head machine	4	4
8	GM78761-1	Screw, Sheetmetal	4	4
9	X-781-24	Rivet, Pop, .187		5

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

Kit No.	Color Dependant Parts	
	Part Number Suffix	Part No. Example (item 6)
GM114531-MA1-CAS	-CAS	GM103844-CAS
GM114531-MA1-CAMO	-CAMO	GM103844-CAMO
GM114531-MA1-CTRY	-CTRY	GM103844-CTRY
GM114531-MA1-LAND	-LAND	GM103844-LAND

Enclosure, continued

14- 20RCA/L



GM102548-1-S-**

Item	Part Number	Description	Quantity
1	-	Roof, Enclosure	1
2	GM103787-1	Hinge, Front	1
3	-	Plate, Latch	1
4	GM105191	Foam, Roof	1
5	-	Roof, Bracket offset	1
6	-	Panel, Roof hinge mtg.	1
7	-	Roof, Bracket offset	1
8	GM104716	Foam, Roof Controller	1
9	X-781-5	Rivet, Pop, .125 in.	28
10	X-6032-3	Rivet, Pop, .125 in.	8
11	-	Panel, Roof hinge mtg, Exhaust	1
12	GM104714	Foam, Roof, Controller	1
13	GM78761-1	Screw, Sheetmetal	10
14	GM103787-2	Hinge, Rear	1
15	-	Striker, Latch	1

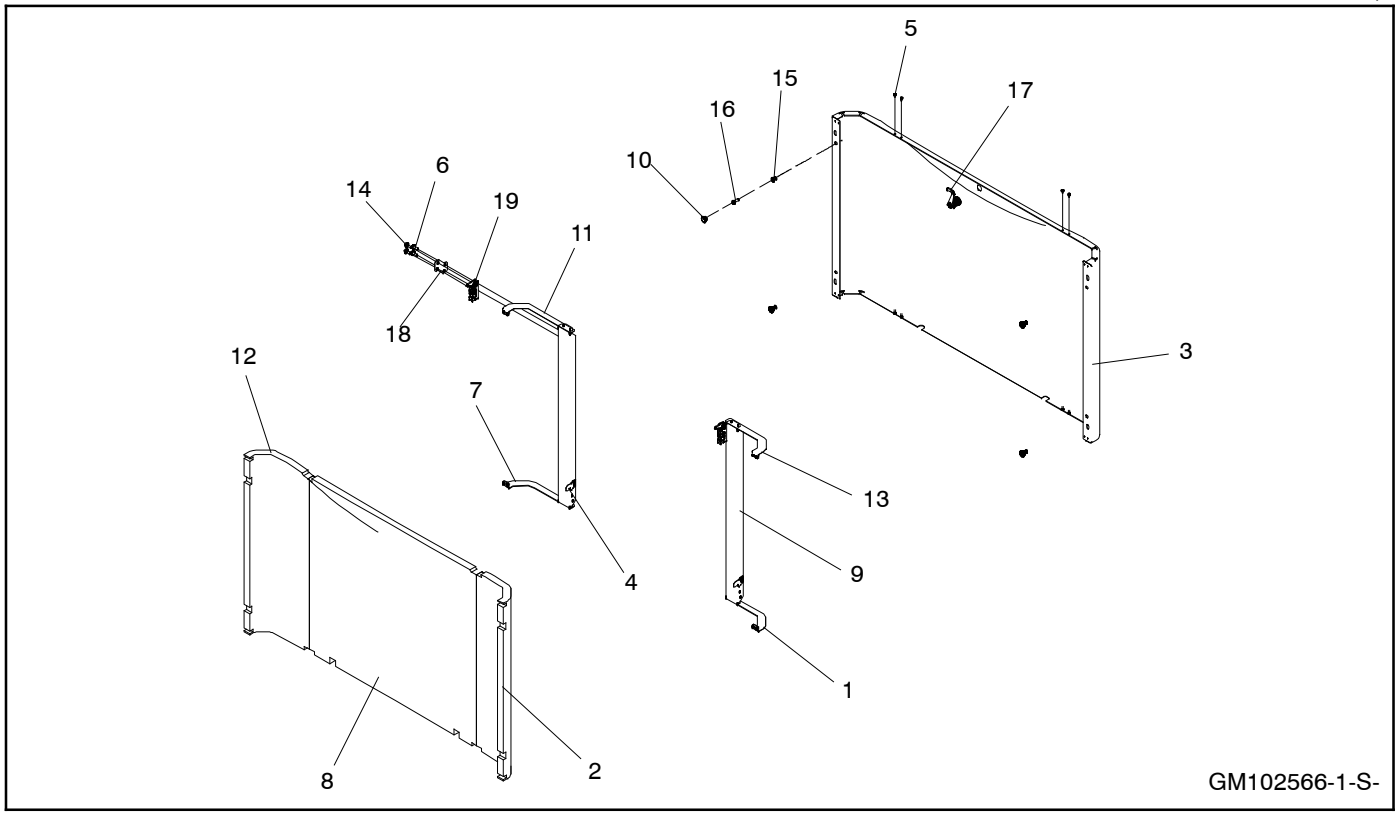
- Order assembly part.

** Use the Kit number and chart below to identify the color suffix. Add a suffix to this color dependant part number before ordering.

	Color Dependant Parts	
Kit No.	Part Number Suffix	Assy. Part No. Example
GM114531-MA1-CAS	-CAS	GM102548-1-S-CAS
GM114531-MA1-CAMO	-CAMO	GM102548-1-S-CAMO
GM114531-MA1-CTRY	-CTRY	GM102548-1-S-CTRY
GM114531-MA1-LAND	-LAND	GM102548-1-S-LAND

Enclosure, continued

14- 20RCA/L



GM102566-1-S-**

Item	Part Number	Description	Quantity
1	GM102503	Bracket, Enclosure reinforcement	1
2	GM105842	Foam, Front panel	1
3	-	Panel, right	1
4	GM104264	Plate, Locating, Door panel	2
5	X-781-5	Rivet, Pop, .125 in.	20
6	GM78761-1	Screw, Sheetmetal	4
7	GM102505	Bracket, Enclosure reinforcement	1
8	GM104245	Foam, Panel, Front	1
9	GM102508	Brace, Door panel upright	2
10	GM103067	Bushing, Panel hanging (Molded)	4
11	GM102501	Bracket, Enclosure reinforcement	1
12	GM105843	Foam, Front panel	1
13	GM102497	Bracket, Enclosure reinforcement	1
14	M6921-06016-60	Screw, Hex flnge M6 x 16 mm flly thrd js500	4
15	GM11040-7	Insert, Threaded (M6 x 1.0 hex)	4
16	M7985A-06020-20	Screw, Pan head machine	4
17	GM93995	Latch assy (Tumbler, tool, hooked cam)	1
18	GM102509	Bracket, Latch	2
19	GM102567	Latch assembly	2

- Order assembly part.

** Use the Kit number and chart below to identify the color suffix.
Add a suffix to this color dependant part number before ordering.

	Color Dependant Parts	
Kit No.	Part Number Suffix	Assy. Part No. Example
GM114531-MA1-CAS	-CAS	GM102566-1-S-CAS
GM114531-MA1-CAMO	-CAMO	GM102566-1-S-CAMO
GM114531-MA1-CTRY	-CTRY	GM102566-1-S-CTRY
GM114531-MA1-LAND	-LAND	GM102566-1-S-LAND

Literature

Item	Part Number	Description	Quantity		
			701-187-93-SA	701-187-95-SA	701-187-99-SA
1	GM75735	Plug, Button	2	2	2
2	GM85417	Decal, Attention	1	2	2
3	TP- 6884	Warranty, CARB/EPA Emissions, SORE	1		
4	TP- 6885	Warranty, CARB/EPA Emissions, LSI		1	1
5	TP- 7004	Warranty, Off- grid Res, CANADA	1		
6	TP- 7091	I/M 14/20RCA/L Res/Coml	1	1	
7	TP- 7092	O/M 14/20RCA/L Res/Coml	1	1	
8	TP- 7157	Warranty, Off- grid Res, Canada	1		
9	TP- 7219	Warranty, Resi Non- Standby, US	1	1	1
10	TP- 7220	Warranty Resi Comprehensive 5 year Can.	1	1	1
11	TP- 7221	Warranty Resi Comprehensive 1 year ROW	1	1	1
12	TP- 7238	I/M, Supplement Registrtn, RDC2 Res/Coml	1	1	1

Kit Parts List

Qty.	Description	Part No.
Battery, 1/12V, 500CCA, Wet		**GM75513-KP1**
1	Battery (Wet)	GM106374
Flex Fuel Line		**GM95496-KA1**
1	Line, Flex Fuel	GM95497
1	Cable tie	X-468-1
Decal, NFPA 37, Reduced Setback		**GM94691-KA1**
1	Dwg, Decals, Air Cooled	GM102922
1	Dwg Assy, Decal	GM88356
1	Dwg, Assy Decals	GM90793
1	Decal, Intertek	GM92200
CSA Approval, Air- Cooled RES		**GM66716-KA1**
1	Dwg, Decals, Air Cooled	GM102922
1	Nameplate, CSA	GM66715
1	Dwg, Assy CSA Decal Placement	GM66716
1	Dwg, Assy VSG Decal Group	GM83805
1	Dwg, Assy Decals	GM84090
1	Dwg Assy, Decal	GM88356
1	Dwg, Assy Decals	GM90793
Decal, UL2200/cUL Genset Listing		**GM20747-KA3**
1	Decal, Unbalanced Load	GM20172
1	Dwg, Assy, Decals	GM60801
1	Dwg, Assy Decals	GM84090
1	Decal, Utility Interaction	GM87288
1	Dwg Assy, Decal	GM88356
1	Dwg, Assy Decals	GM90793
1	UL 2200 Fuel System Leak Test	T- 443

Notes

Appendix A Abbreviations

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

A, amp	ampere
ABDC	after bottom dead center
AC	alternating current
A/D	analog to digital
ADC	advanced digital control; analog to digital converter
adj.	adjust, adjustment
ADV	advertising dimensional drawing
Ah	amp-hour
AHWT	anticipatory high water temperature
AISI	American Iron and Steel Institute
ALOP	anticipatory low oil pressure
alt.	alternator
Al	aluminum
ANSI	American National Standards Institute (formerly American Standards Association, ASA)
AO	anticipatory only
APDC	Air Pollution Control District
API	American Petroleum Institute
approx.	approximate, approximately
AQMD	Air Quality Management District
AR	as required, as requested
AS	as supplied, as stated, as suggested
ASE	American Society of Engineers
ASME	American Society of Mechanical Engineers
assy.	assembly
ASTM	American Society for Testing Materials
ATDC	after top dead center
ATS	automatic transfer switch
auto.	automatic
aux.	auxiliary
avg.	average
AVR	automatic voltage regulator
AWG	American Wire Gauge
AWM	appliance wiring material
bat.	battery
BBDC	before bottom dead center
BC	battery charger, battery charging
BCA	battery charging alternator
BCI	Battery Council International
BDC	before dead center
BHP	brake horsepower
blk.	black (paint color), block (engine)
blk. htr.	block heater
BMEP	brake mean effective pressure
bps	bits per second
br.	brass
BTDC	before top dead center
Btu	British thermal unit
Btu/min.	British thermal units per minute
C	Celsius, centigrade
cal.	calorie
CAN	controller area network
CARB	California Air Resources Board
CB	circuit breaker
cc	cubic centimeter
CCA	cold cranking amps
ccw.	counterclockwise
CEC	Canadian Electrical Code
cert.	certificate, certification, certified
cfh	cubic feet per hour
cfm	cubic feet per minute
CG	center of gravity
CID	cubic inch displacement
CL	centerline
cm	centimeter
CMOS	complementary metal oxide substrate (semiconductor)
cogen.	cogeneration
com	communications (port)
coml	commercial
Coml/Rec	Commercial/Recreational
conn.	connection
cont.	continued
CPVC	chlorinated polyvinyl chloride
crit.	critical
CRT	cathode ray tube
CSA	Canadian Standards Association
CT	current transformer
Cu	copper
cUL	Canadian Underwriter's Laboratories
CUL	Canadian Underwriter's Laboratories
cu. in.	cubic inch
cw.	clockwise
CWC	city water-cooled
cyl.	cylinder
D/A	digital to analog
DAC	digital to analog converter
dB	decibel
dB(A)	decibel (A weighted)
DC	direct current
DCR	direct current resistance
deg., °	degree
dept.	department
DFMEA	Design Failure Mode and Effects Analysis
dia.	diameter
DI/EO	dual inlet/end outlet
DIN	Deutsches Institut fur Normung e. V. (also Deutsche Industrie Normenausschuss)
DIP	dual inline package
DPDT	double-pole, double-throw
DPST	double-pole, single-throw
DS	disconnect switch
DVR	digital voltage regulator
E, emer.	emergency (power source)
ECM	electronic control module, engine control module
EDI	electronic data interchange
EFR	emergency frequency relay
e.g.	for example (*exempli gratia)*
EG	electronic governor
EGSA	Electrical Generating Systems Association
EIA	Electronic Industries Association
EI/EO	end inlet/end outlet
EMI	electromagnetic interference
emiss.	emission
eng.	engine
EPA	Environmental Protection Agency
EPS	emergency power system
ER	emergency relay
ES	engineering special, engineered special
ESD	electrostatic discharge
est.	estimated
E-Stop	emergency stop
etc.	et cetera (and so forth)
exh.	exhaust
ext.	external
F	Fahrenheit, female
fglass.	fiberglass
FHM	flat head machine (screw)
fl. oz.	fluid ounce
flex.	flexible
freq.	frequency
FS	full scale
ft.	foot, feet
ft. lb.	foot pounds (torque)
ft./min.	feet per minute
ftp	file transfer protocol
g	gram
ga.	gauge (meters, wire size)
gal.	gallon
gen.	generator
genset	generator set
GFI	ground fault interrupter
GND, ⏚	ground
gov.	governor
gph	gallons per hour
gpm	gallons per minute
gr.	grade, gross
GRD	equipment ground
gr. wt.	gross weight
H x W x D	height by width by depth
HC	hex cap
HCHT	high cylinder head temperature
HD	heavy duty
HET	high exhaust temp., high engine temp.
hex	hexagon
Hg	mercury (element)
HH	hex head
HHC	hex head cap
HP	horsepower
hr.	hour
HS	heat shrink
hsg.	housing
HVAC	heating, ventilation, and air conditioning
HWT	high water temperature
Hz	hertz (cycles per second)
IC	integrated circuit
ID	inside diameter, identification
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IMS	improved motor starting
in.	inch
in. H_2O	inches of water
in. Hg	inches of mercury
in. lb.	inch pounds
Inc.	incorporated
ind.	industrial
int.	internal
int./ext.	internal/external
I/O	input/output
IP	iron pipe
ISO	International Organization for Standardization
J	joule
JIS	Japanese Industry Standard

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

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, spiralock 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.

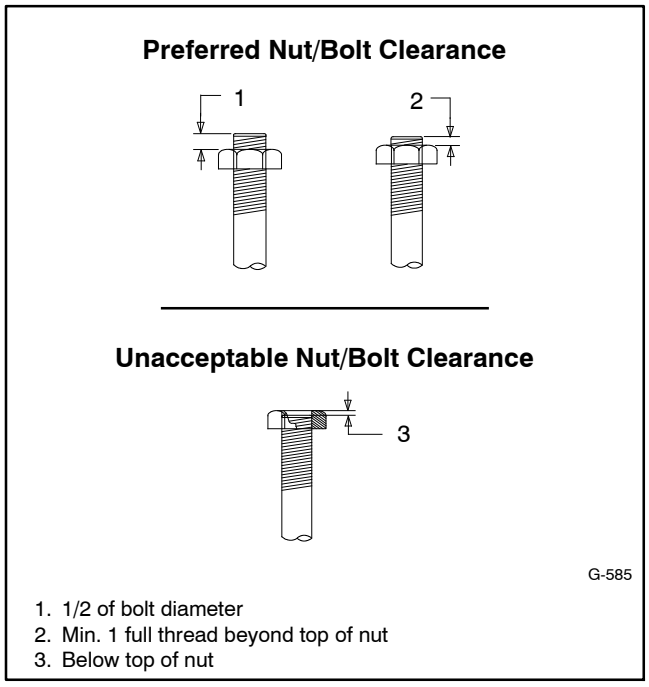


Figure 1 Acceptable Bolt Lengths

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 spiralock 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.

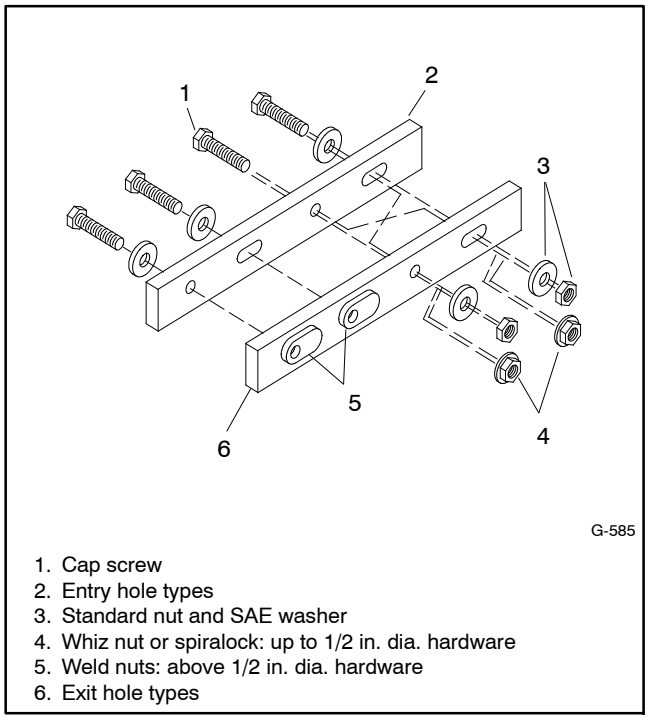


Figure 2 Acceptable Hardware Combinations

Appendix C General Torque Specifications

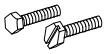
American Standard Fasteners Torque Specifications													
	Assembled into Cast Iron or Steel												Assembled into Aluminum
Size	Grade 2			Grade 5			Grade 8						
8-32	2.0	Nm	(18 in. lb.)	3.1	Nm	(27 in. lb.)	-						
10-24	3.2	Nm	(28 in. lb.)	4.9	Nm	(43 in. lb.)	-						
10-32	3.6	Nm	(32 in. lb.)	5.5	Nm	(49 in. lb.)	-						
12-24	5.0	Nm	(44 in. lb.)	7.7	Nm	(68 in. lb.)	-						
1/4-20	7.6	Nm	(67 in. lb.)	11.6	Nm	(103 in. lb.)	16.5	Nm	(146 in. lb.)				
1/4-28	8.6	Nm	(76 in. lb.)	13.2	Nm	(117 in. lb.)	18.8	Nm	(166 in. lb.)				
5/16-18	15.5	Nm	(137 in. lb.)	24.0	Nm	(212 in. lb.)	33.9	Nm	(300 in. lb.)				
5/16-24	17.1	Nm	(151 in. lb.)	26.4	Nm	(234 in. lb.)	40	Nm	(28 ft. lb.)				
3/8-16	27	Nm	(243 in. lb.)	42	Nm	(31 ft. lb.)	60	Nm	(44 ft. lb.)				
3/8-24	31	Nm	(274 in. lb.)	47	Nm	(35 ft. lb.)	68	Nm	(50 ft. lb.)				
7/16-14	43	Nm	(32 ft. lb.)	68	Nm	(50 ft. lb.)	96	Nm	(71 ft. lb.)				See Note 3
7/16-20	49	Nm	(36 ft. lb.)	76	Nm	(56 ft. lb.)	107	Nm	(79 ft. lb.)				
1/2-13	66	Nm	(49 ft. lb.)	103	Nm	(76 ft. lb.)	146	Nm	(108 ft. lb.)				
1/2-20	75	Nm	(55 ft. lb.)	117	Nm	(86 ft. lb.)	164	Nm	(121 ft. lb.)				
9/16-12	96	Nm	(71 ft. lb.)	149	Nm	(110 ft. lb.)	210	Nm	(155 ft. lb.)				
9/16-18	107	Nm	(79 ft. lb.)	165	Nm	(122 ft. lb.)	235	Nm	(173 ft. lb.)				
5/8-11	133	Nm	(98 ft. lb.)	206	Nm	(152 ft. lb.)	290	Nm	(214 ft. lb.)				
5/8-18	150	Nm	(111 ft. lb.)	232	Nm	(171 ft. lb.)	328	Nm	(242 ft. lb.)				
3/4-10	-			365	Nm	(269 ft. lb.)	515	Nm	(380 ft. lb.)				
3/4-16	-			405	Nm	(299 ft. lb.)	572	Nm	(422 ft. lb.)				
1-8	-			881	Nm	(650 ft. lb.)	1245	Nm	(918 ft. lb.)				
1-12	-			961	Nm	(709 ft. lb.)	1357	Nm	(1001 ft. lb.)				

Metric Fasteners Torque Specifications, Measured in Nm (ft. lb.)									
	Assembled into Cast Iron or Steel								Assembled into Aluminum
Size (mm)	Grade 5.8		Grade 8.8		Grade 10.9		Grade 12.9		
Mxxx-04xxx-xx	1.9	(1.4)	2.9	(2.1)	4.3	(3.2)	4.3	(3.2)	See Note 3
Mxxx-05xxx-xx	3.8	(2.8)	5.8	(4.3)	8.5	(6.3)	8.5	(6.3)	
Mxxx-06xxx-xx	6.5	(4.8)	10.4	(7.7)	14.7	(11)	17.6	(13)	
Mxxx-08xxx-xx	16	(12)	25	(17)	36	(26)	43	(31)	
Mxxx-08xxx-xxF	17	(13)	27	(20)	38	(28)	46	(34)	
Mxxx-10xxx-xx	31	(23)	50	(37)	70	(52)	85	(62)	
Mxxx-10xxx-xxF	33	(24)	53	(39)	74	(55)	89	(66)	
Mxxx-12xxx-xx	55	(40)	87	(64)	123	(91)	147	(109)	
Mxxx-12xxx-xxF	60	(44)	95	(70)	134	(99)	161	(119)	
Mxxx-14xxx-xx	87	(64)	135	(103)	196	(145)	236	(174)	
Mxxx-14xxx-xxF	94	(69)	151	(111)	212	(156)	254	(188)	
Mxxx-16xxx-xx	135	(100)	217	(160)	305	(225)	365	(270)	
Mxxx-16xxx-xxF	145	(107)	231	(171)	325	(240)	390	(288)	
Mxxx-18xxx-xx	187	(138)	299	(221)	421	(310)	505	(373)	
Mxxx-18xxx-xxF	210	(155)	336	(248)	473	(349)	567	(419)	
Mxxx-20xxx-xx	264	(195)	423	(312)	595	(439)	714	(526)	
Mxxx-20xxx-xxF	293	(216)	469	(346)	660	(487)	792	(584)	
Mxxx-22xxx-xx	360	(266)	576	(425)	811	(598)	973	(718)	
Mxxx-22xxx-xxF	396	(292)	633	(467)	890	(657)	1068	(788)	
Mxxx-24xxx-xx	457	(337)	731	(539)	1028	(758)	1233	(910)	
Mxxx-24xxx-xxF	498	(367)	797	(588)	1121	(827)	1345	(992)	
Mxxx-27xxx-xx	-		1072	(790)	1507	(1112)	1809	(1334)	
Mxxx-27xxx-xxF	-		1156	(853)	1626	(1199)	1952	(1439)	
Mxxx-30xxx-xx	-		1453	(1072)	2043	(1507)	2452	(1809)	

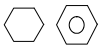
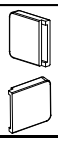
Notes:

1. The torque values above are general guidelines. Always use the torque values specified in the service manuals and/or assembly drawings when they differ from the above torque values.
2. The torque values above are based on new plated threads. Increase torque values by 15% if non-plated threads are used.
3. At minimum, hardware threaded into aluminum must have two diameters of thread engagement. Hardware threaded into steel and cast iron must have 1.25 diameters of thread.
4. Torque values are calculated as equivalent stress loading on American hardware with an approximate preload of 75% of proof strength and a friction coefficient of 0.2.

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	
Hose Clamp Covers	
Black, EPDM rubber used on worm gear clamps	

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

Notes

Appendix E Common Hardware List

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

American Standard

Part No.	Dimensions
Hex Head Bolts (Grade 5)	
X-465-17	1/4-20 x .38
X-465-6	1/4-20 x .50
X-465-2	1/4-20 x .62
X-465-16	1/4-20 x .75
X-465-18	1/4-20 x .88
X-465-7	1/4-20 x 1.00
X-465-8	1/4-20 x 1.25
X-465-9	1/4-20 x 1.50
X-465-10	1/4-20 x 1.75
X-465-11	1/4-20 x 2.00
X-465-12	1/4-20 x 2.25
X-465-14	1/4-20 x 2.75
X-465-21	1/4-20 x 5.00
X-465-25	1/4-28 x .38
X-465-20	1/4-28 x 1.00
X-125-33	5/16-18 x .50
X-125-23	5/16-18 x .62
X-125-3	5/16-18 x .75
X-125-31	5/16-18 x .88
X-125-5	5/16-18 x 1.00
X-125-24	5/16-18 x 1.25
X-125-34	5/16-18 x 1.50
X-125-25	5/16-18 x 1.75
X-125-26	5/16-18 x 2.00
230578	5/16-18 x 2.25
X-125-29	5/16-18 x 2.50
X-125-27	5/16-18 x 2.75
X-125-28	5/16-18 x 3.00
X-125-22	5/16-18 x 4.50
X-125-32	5/16-18 x 5.00
X-125-35	5/16-18 x 5.50
X-125-36	5/16-18 x 6.00
X-125-40	5/16-18 x 6.50
X-125-43	5/16-24 x 1.75
X-125-44	5/16-24 x 2.50
X-125-30	5/16-24 x .75
X-125-39	5/16-24 x 2.00
X-125-38	5/16-24 x 2.75
X-6238-2	3/8-16 x .62
X-6238-10	3/8-16 x .75
X-6238-3	3/8-16 x .88
X-6238-11	3/8-16 x 1.00
X-6238-4	3/8-16 x 1.25
X-6238-5	3/8-16 x 1.50
X-6238-1	3/8-16 x 1.75
X-6238-6	3/8-16 x 2.00
X-6238-17	3/8-16 x 2.25
X-6238-7	3/8-16 x 2.50
X-6238-8	3/8-16 x 2.75
X-6238-9	3/8-16 x 3.00
X-6238-19	3/8-16 x 3.25
X-6238-12	3/8-16 x 3.50
X-6238-20	3/8-16 x 3.75
X-6238-13	3/8-16 x 4.50
X-6238-18	3/8-16 x 5.50
X-6238-25	3/8-16 x 6.50

Part No.	Dimensions
Hex Head Bolts, cont.	
X-6238-14	3/8-24 x .75
X-6238-16	3/8-24 x 1.25
X-6238-21	3/8-24 x 4.00
X-6238-22	3/8-24 x 4.50
X-6024-5	7/16-14 x .75
X-6024-2	7/16-14 x 1.00
X-6024-8	7/16-14 x 1.25
X-6024-3	7/16-14 x 1.50
X-6024-4	7/16-14 x 2.00
X-6024-11	7/16-14 x 2.75
X-6024-12	7/16-14 x 6.50
X-129-15	1/2-13 x .75
X-129-17	1/2-13 x 1.00
X-129-18	1/2-13 x 1.25
X-129-19	1/2-13 x 1.50
X-129-20	1/2-13 x 1.75
X-129-21	1/2-13 x 2.00
X-129-22	1/2-13 x 2.25
X-129-23	1/2-13 x 2.50
X-129-24	1/2-13 x 2.75
X-129-25	1/2-13 x 3.00
X-129-27	1/2-13 x 3.50
X-129-29	1/2-13 x 4.00
X-129-30	1/2-13 x 4.50
X-463-9	1/2-13 x 5.50
X-129-44	1/2-13 x 6.00
X-129-51	1/2-20 x .75
X-129-45	1/2-20 x 1.25
X-129-52	1/2-20 x 1.50
X-6021-3	5/8-11 x 1.00
X-6021-4	5/8-11 x 1.25
X-6021-2	5/8-11 x 1.50
X-6021-1	5/8-11 x 1.75
273049	5/8-11 x 2.00
X-6021-5	5/8-11 x 2.25
X-6021-6	5/8-11 x 2.50
X-6021-7	5/8-11 x 2.75
X-6021-12	5/8-11 x 3.75
X-6021-11	5/8-11 x 4.50
X-6021-10	5/8-11 x 6.00
X-6021-9	5/8-18 x 2.50
X-6239-1	3/4-10 x 1.00
X-6239-8	3/4-10 x 1.25
X-6239-2	3/4-10 x 1.50
X-6239-3	3/4-10 x 2.00
X-6239-4	3/4-10 x 2.50
X-6239-5	3/4-10 x 3.00
X-6239-6	3/4-10 x 3.50
X-792-1	1-8 x 2.25
X-792-5	1-8 x 3.00
X-792-8	1-8 x 5.00

Part No.	Dimensions	Type
Hex Nuts		
X-6009-1	1-8	Standard
X-6210-3	6-32	Whiz
X-6210-4	8-32	Whiz
X-6210-5	10-24	Whiz
X-6210-1	10-32	Whiz
X-6210-2	1/4-20	Spiralock
X-6210-6	1/4-28	Spiralock
X-6210-7	5/16-18	Spiralock
X-6210-8	5/16-24	Spiralock
X-6210-9	3/8-16	Spiralock
X-6210-10	3/8-24	Spiralock
X-6210-11	7/16-14	Spiralock
X-6210-12	1/2-13	Spiralock
X-6210-15	7/16-20	Spiralock
X-6210-14	1/2-20	Spiralock
X-85-3	5/8-11	Standard
X-88-12	3/4-10	Standard
X-89-2	1/2-20	Standard

Washers

Part No.	ID	OD	Thick.	Bolt/ Screw
X-25-46	.125	.250	.022	#4
X-25-9	.156	.375	.049	#6
X-25-48	.188	.438	.049	#8
X-25-36	.219	.500	.049	#10
X-25-40	.281	.625	.065	1/4
X-25-85	.344	.687	.065	5/16
X-25-37	.406	.812	.065	3/8
X-25-34	.469	.922	.065	7/16
X-25-26	.531	1.062	.095	1/2
X-25-15	.656	1.312	.095	5/8
X-25-29	.812	1.469	.134	3/4
X-25-127	1.062	2.000	.134	1

Hose Clamp Covers

Part No.	Clamp Size
GM102674-1	13 mm (1/2 in.)
GM102674-2	8 mm (5/16 in.)

Metric

Hex head bolts are hardness grade 8.8 unless noted.

Hex Head Bolts (Partial Thread)

Part No.	Dimensions
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

Hex Head Bolts (Partial Thread), continued

Part No.	Dimensions
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)

Part No.	Dimensions
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

Hex Head Bolts (Full Thread), continued

Part No.	Dimensions
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.

Notes

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12-62-53, *31*
12-24-1216, *31*
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