



Home Generator Systems

Illustrated Parts List

MODEL
076031-0

Not for
Reproduction

45,000 Watt
Liquid Cooled
Home Generator System

Manual Part No. 315028

Revision A

Rev. Date: 4/14/2011

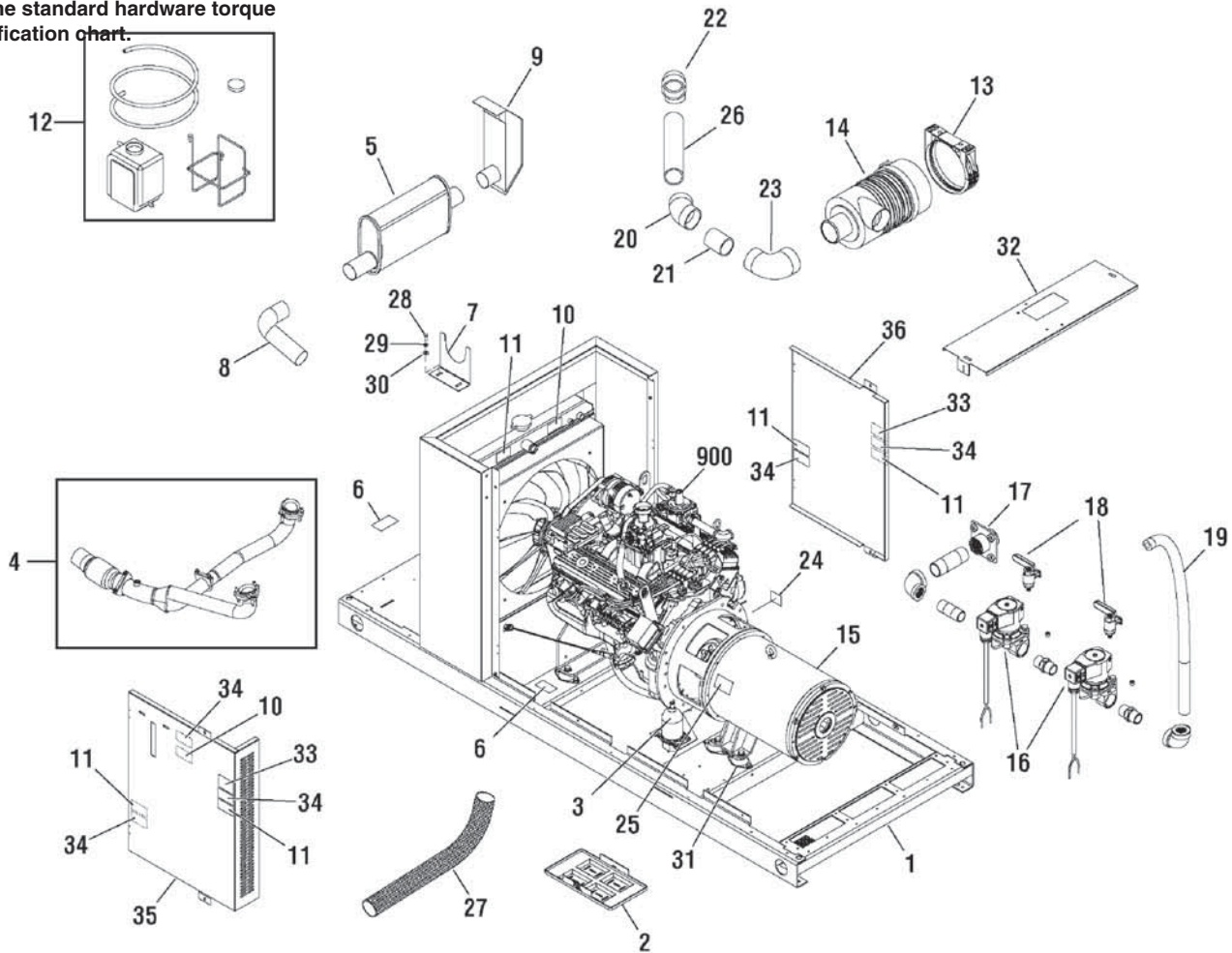
Not for
Reproduction

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Torque Specification Chart	Inside Back Cover

Main Unit

312954

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	313453GS	BASE	17	AA310518GS	COUPLER
2	205623GS	TRAY, Battery	18	312788GS	VALVE, Ball
3	206119GS	HEATER	19	310810GS	HOSE, Fuel
4	312096GS	KIT, Exhaust	20	313106GS	ELBOW
5	310582GS	MUFFLER	21	312696GS	TUBE
6	205398GS	DECAL	22	206598GS	ADAPTER
7	310600GS	BRACKET, Muffler	23	206539GS	ELBOW
8	311971GS	TUBE, Exhaust	24	186649GS	DECAL
9	311354GS	DIFFUSER	25	205401GS	DECAL
10	205396GS	DECAL	26	312890GS	TUBE
11	205399GS	DECAL	27	206985GS	INSULATION
12	205226GS	BOTTLE, Overflow	28	----	* CAPSCREW, Hex Head, 1/4-20 x 3/4
13	204868GS	CLAMP	29	----	* WASHER, Lock, 1/4-M6
14	204275GS	FILTER, Air	30	----	* WASHER, Flat, 1/4
--	207576GS	FILTER, Cartridge	31	204653GS	MOUNT, Vibration
15	312591GS	ALTERNATOR	--	----	* CAPSCREW, Hex Head, 1/2-13 x 3
16	314281GS	VALVE, Fuel			

Footnotes

* Items without part numbers are common fasteners and are available at your local hardware store.

** Contact Engine Manufacturer

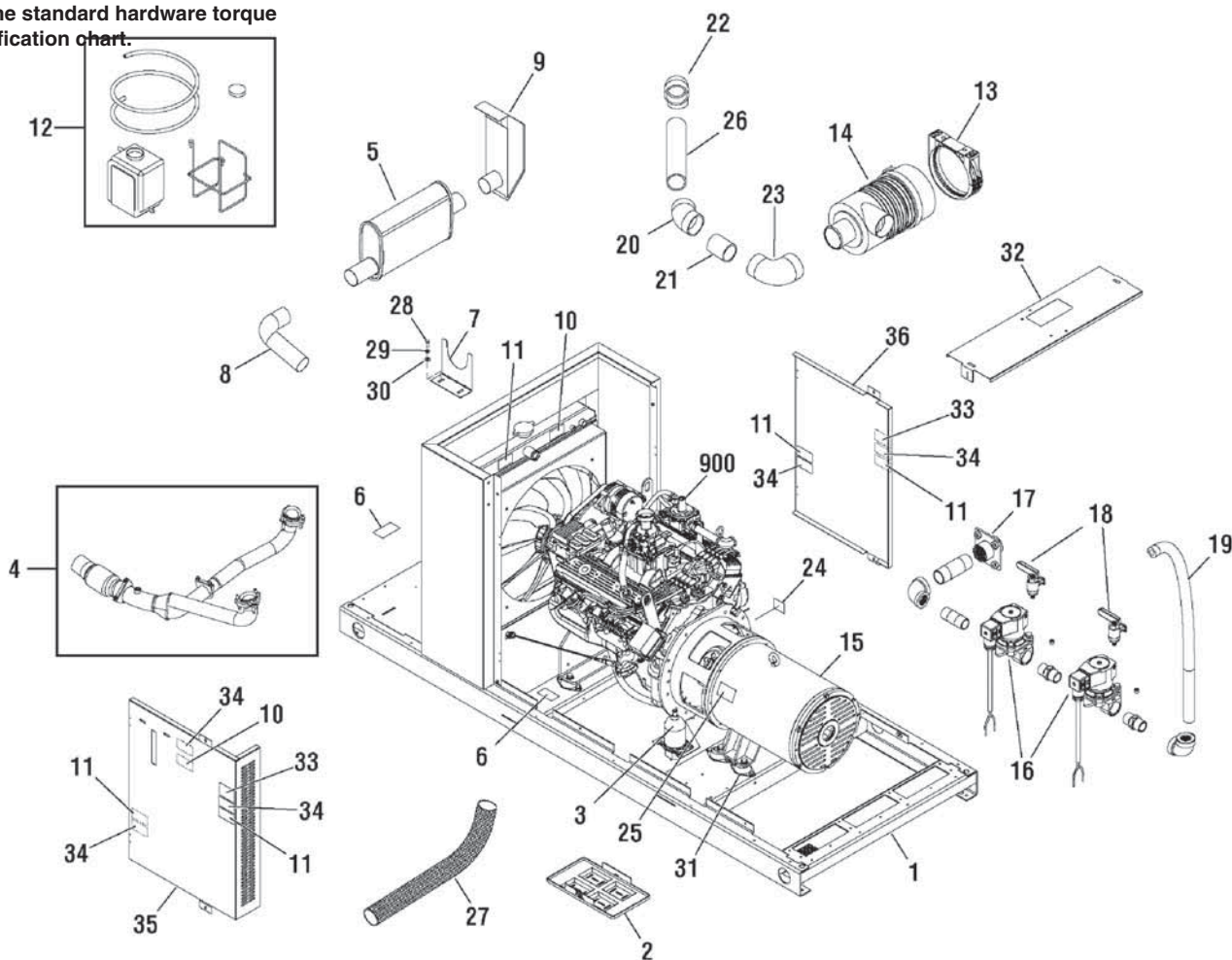
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Main Unit

312954

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
--	----	* WASHER, 1/2	--	205622GS	KIT, Hardware, Battery (Not Illustrated)
--	----	* NUT, 1/2-13	--	208350GS	PAINT, Spray, GE Silver (Optional Accessory, Not Included)
32	B209900GS	BRACKET	--	203417GS	PAINT, Spray, Charcoal (Optional Accessory, Not Included)
33	205392GS	DECAL	--	187315GS	DECAL, Do Not Lift (Optional Accessory, Not Included)
34	205398GS	DECAL	--	6168	KIT, Maintenance (Optional Accessory, Not Included)
35	314302GS	PANEL			
36	314301GS	PANEL			
900	----	** ENGINE			
--	314984GS	KIT, Manual ACC (Not Illustrated)			
--	312898GS	MANUAL, Operator (Not Illustrated)			
--	312050GS	MANUAL, Install (Not Illustrated)			
--	208538GS	DECAL, Warning Spark (Not Illustrated)			
--	206532GS	KIT, LED Remote (Not Illustrated)			
--	205206GS	HOSE, Flex (Not Illustrated)			
--	206944GS	HOSE, Drain (Not Illustrated)			
--	208346GS	PAINT, Touch Up, GE Silver (Not Illustrated)			
--	203374GS	PAINT, Touch Up, Charcoal (Not Illustrated)			

Footnotes

* Items without part numbers are common fasteners and are available at your local hardware store.

** Contact Engine Manufacturer

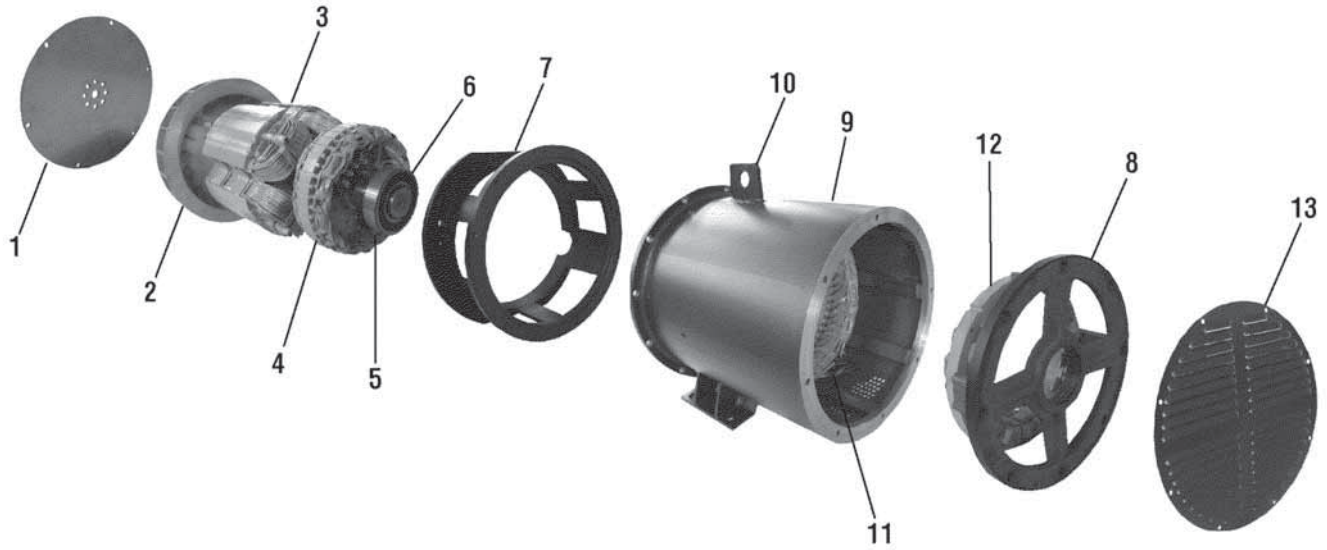
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Alternator

312591

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	DISC, Coupling			
2	----	FAN			
3	----	ROTOR			
4	315054GS	EXCITER, Rotor			
5	315057GS	RECTIFIER ASSEMBLY RING			
6	315056GS	BEARING			
7	----	HOUSING, Bell			
8	----	BEARING SUPPORT			
9	----	HOUSING, Generator			
10	----	LIFTING EYE			
11	----	STATOR			
12	315055GS	EXCITER, Stator			
13	----	COVER			

Footnotes

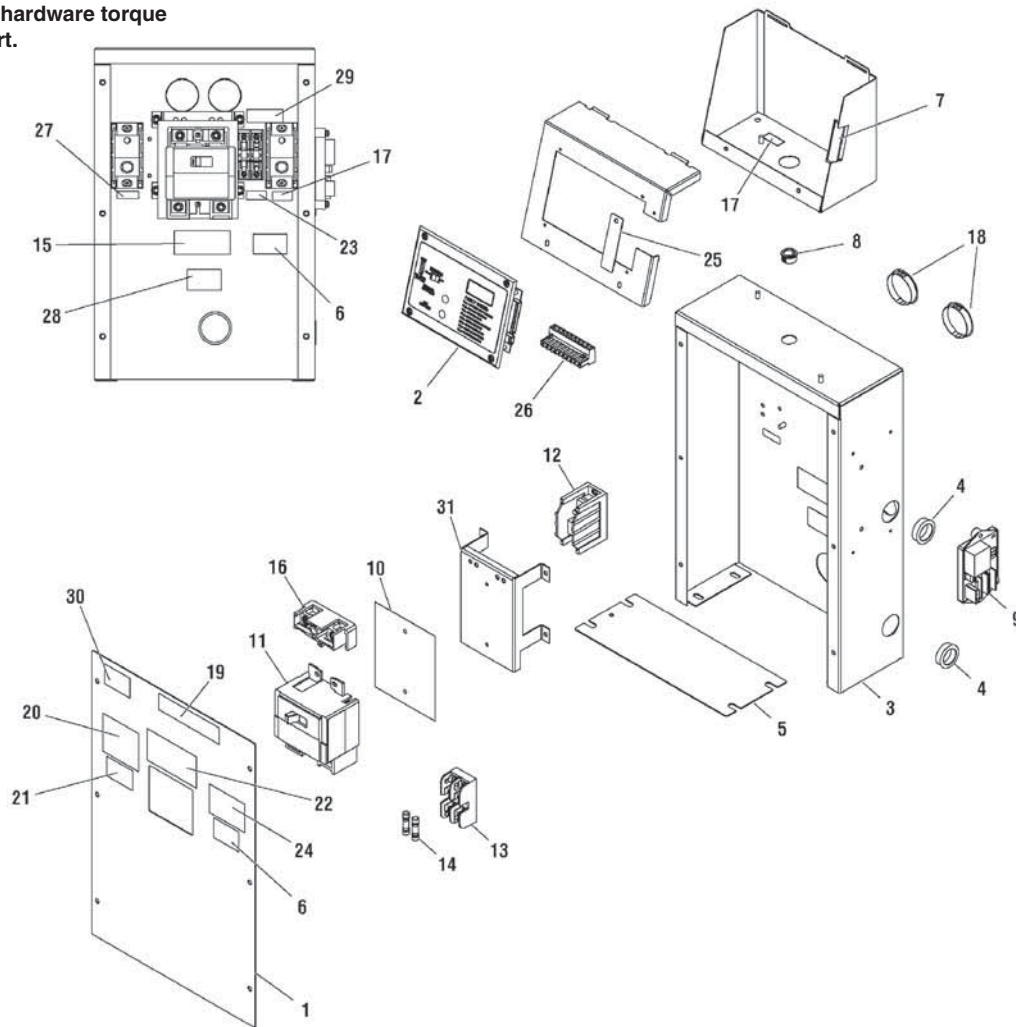
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Control Panel

314962

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	B209903GS PANEL, Access	17	B4986AGS DECAL
2	311350GS CONTROL PANEL	18	310656GS PLUG, Hole
--	198573GS FUSE	19	B5082AGS DECAL
3	B207515GS BOX, Control Panel	20	205392GS DECAL
4	186173GS BUSHING, Snap	21	205394GS DECAL
5	B209876GS PANEL	22	193297GS DECAL
6	205395GS DECAL	23	192597GS DECAL
7	198549GS DECAL	24	205393GS DECAL
8	186582GS BUSHING, Snap	25	B310533GS COVER
9	209856GS REGULATOR, Voltage	26	198516GS CONNECTOR, 10 Pin
10	204519GS INSULATION	27	209048GS DECAL
11	209069GS CIRCUIT BREAKER	28	207242GS DECAL
12	312612GS TERMINAL	29	205115GS DECAL
13	192151GS FUSE, Holder	30	207241GS DECAL
14	205110GS FUSE	31	B310469GS BRACKET
15	198550GS DECAL		
16	204530GS LUG		

Footnotes

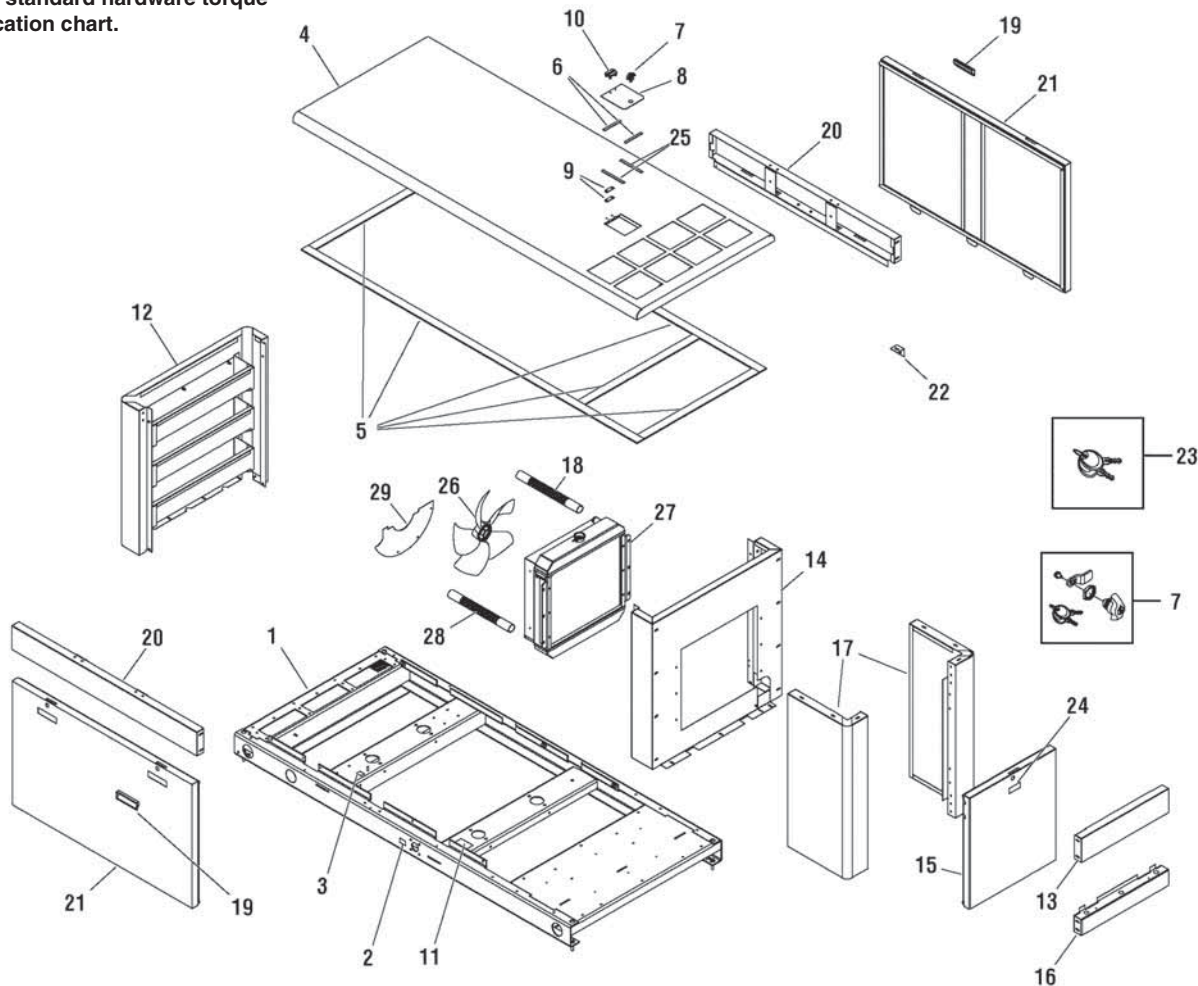
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Enclosure

312957

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	313453GS BASE	18	313211GS HOSE, Radiator
2	186643GS DECAL	19	186049GS HANDLE
3	B4986AGS DECAL	20	207048GS RAIL, Support
4	312051GS ROOF	21	207032GS DOOR
5	205368GS SEAL	22	B310486GS BRACKET
6	207758GS SEAL	23	207652GS KEY, Latch
7	204700GS KIT, Latch	24	205398GS DECAL
8	AF310482GS COVER	25	197316GS SEAL
9	AF310477GS PLATE, Cover	26	312710GS FAN
10	205225GS HINGE	27	312322GS RADIATOR
11	205126GS DECAL	--	314566GS CAP, Radiator
12	207044GS BULKHEAD, Alternator	--	314551GS VALVE, Drain
13	207045GS RAIL, Support	28	313210GS HOSE, Radiator
14	314913GS BULKHEAD, Engine	29	B310532GS COVER
15	314900GS DOOR	--	207730GS SEAL (Cut to Fit) (Not Illustrated)
16	207030GS RAIL, Support		
17	207047GS CORNER		

Footnotes

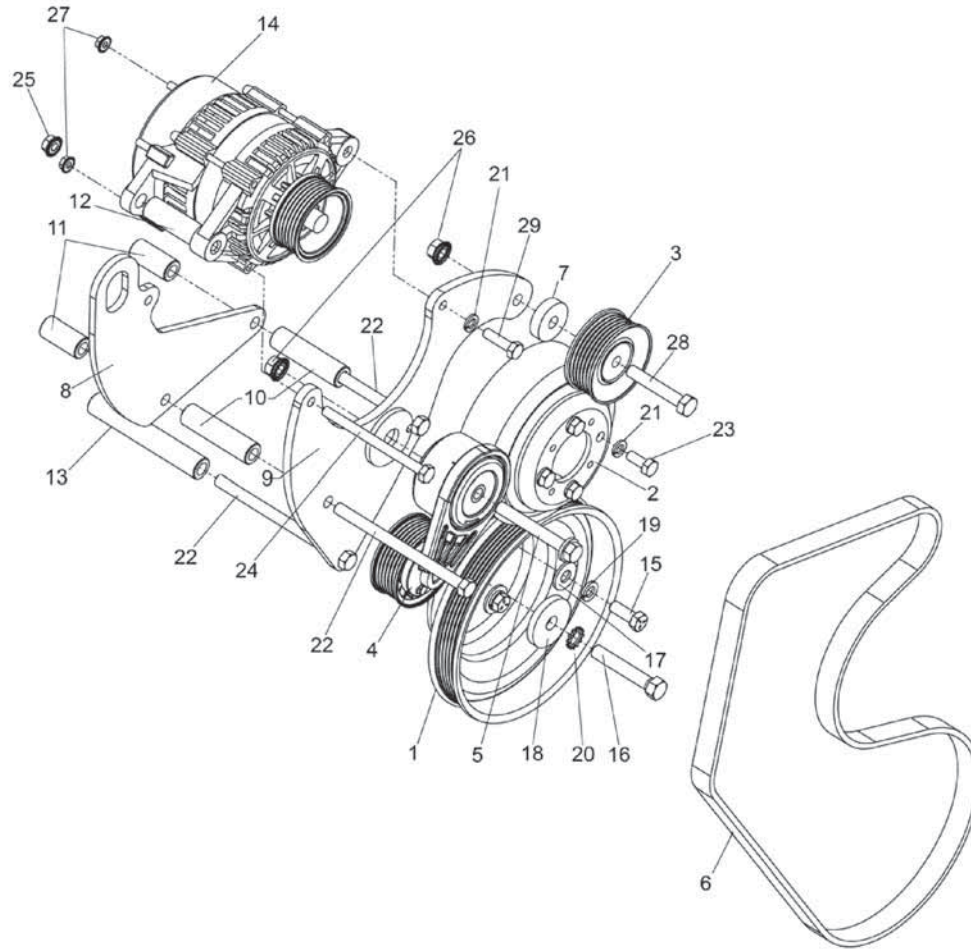
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Alternator, Pulleys & Belt

312594alt

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	PULLEY, Crankshaft	18	----	WASHER
2	----	PULLEY, Water Pump	19	----	WASHER
3	314343GS	PULLEY, Idler	20	----	WASHER
4	314344GS	BELT, Tensioner	21	----	WASHER
5	----	BOLT	22	----	BOLT
6	314304GS	BELT	23	----	BOLT
7	----	SPACER	24	----	BOLT
8	----	PLATE	25	----	NUT
9	----	BRACKET	26	----	NUT
10	----	SPACER	27	----	NUT
11	----	SPACER	28	----	BOLT
12	----	SPACER	29	----	BOLT
13	----	SPACER			
14	314303GS	ALTERNATOR			
15	----	SCREW			
16	----	BOLT			
17	----	WASHER			

Footnotes

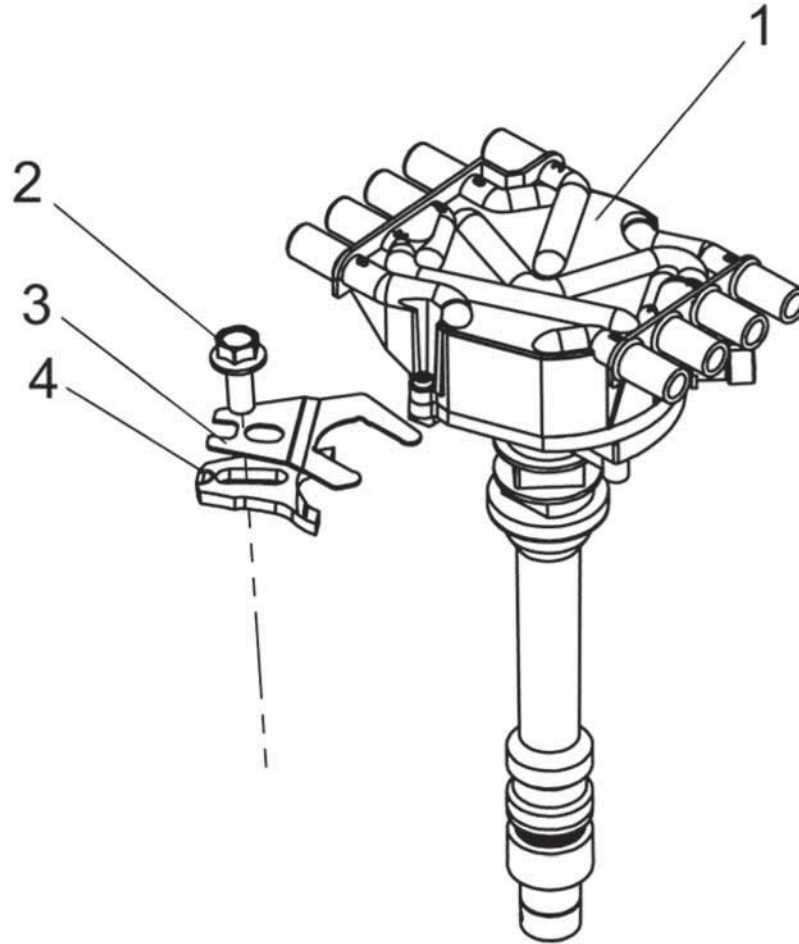
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Distributor

312594dis

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	DISTRIBUTOR ASSEMBLY			
2	----	SCREW			
3	----	BRACKET			
4	----	CLAMP			
--	314298GS	CAP, Distributor			
--	314203GS	ROTOR, Distributor			

Footnotes

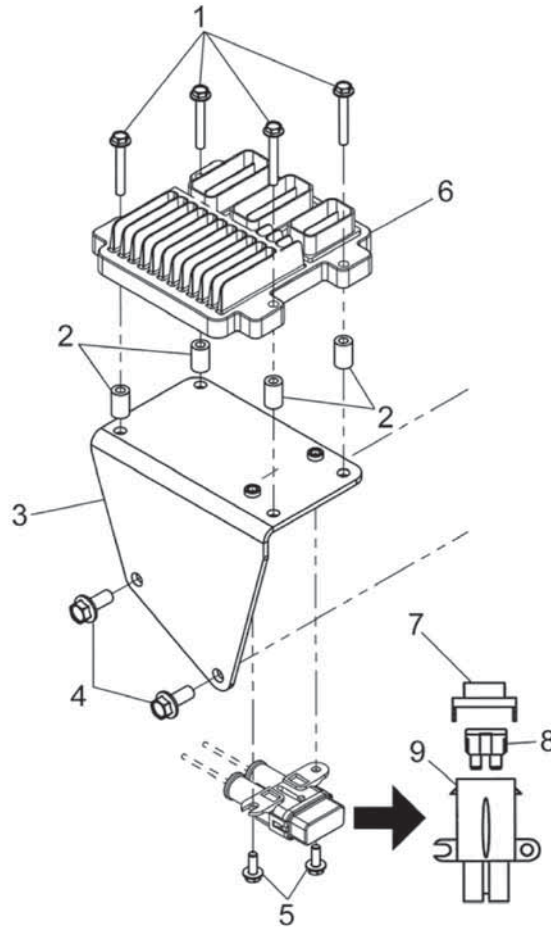
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Engine Control Module & Bracket

312594ecm

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	SCREW		
2	SPACER		
3	BRACKET		
4	SCREW		
5	SCREW		
6	314295GS ECM, MEFI 5		
7	COVER		
8	314162GS FUSE		
9	HOLDER, Fuse		

Footnotes

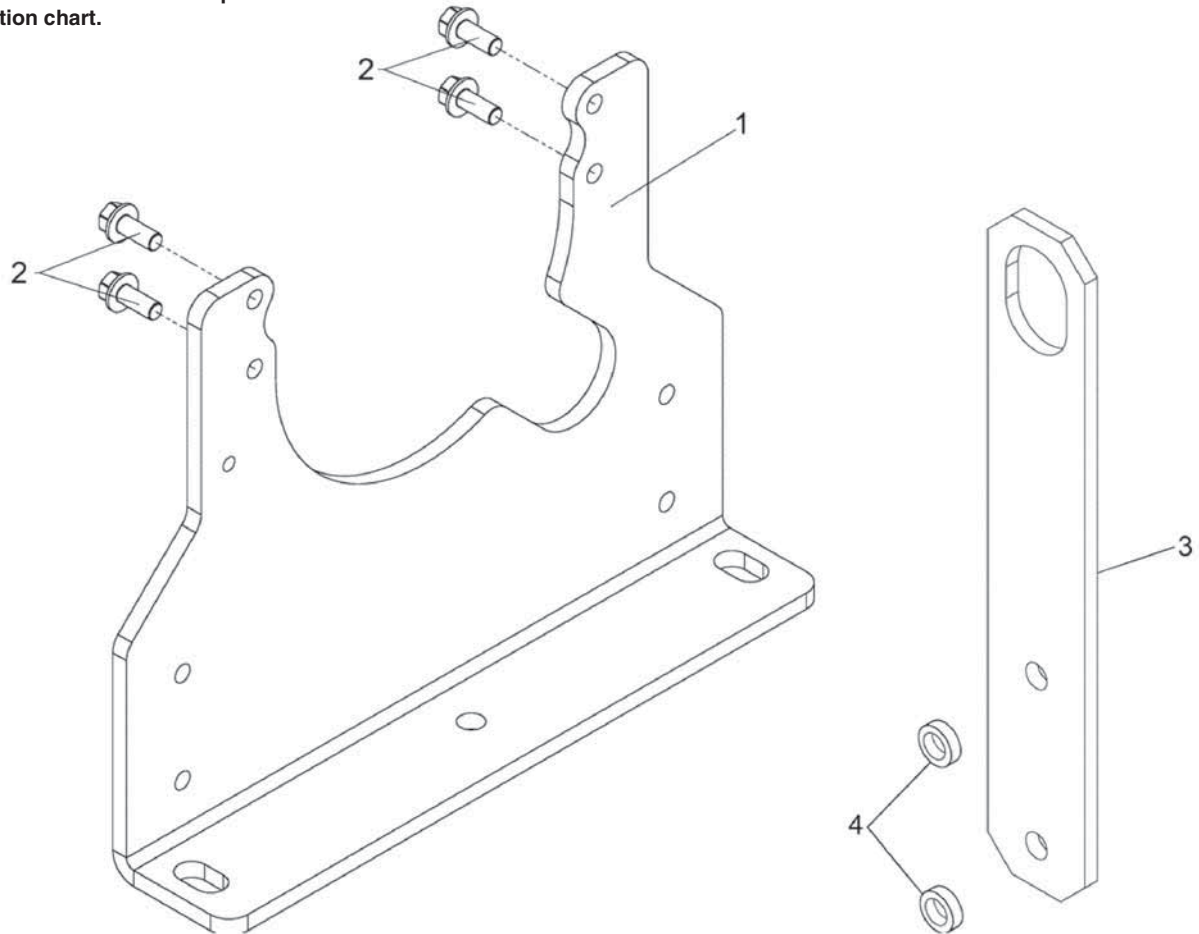
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Engine Mount & Hangar

312594hngr

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	BRACKET		
2	SCREW		
3	BRACKET		
4	SPACER		

Footnotes

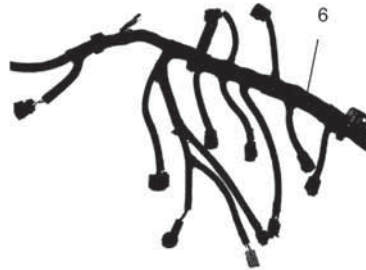
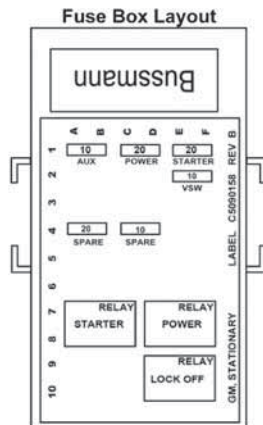
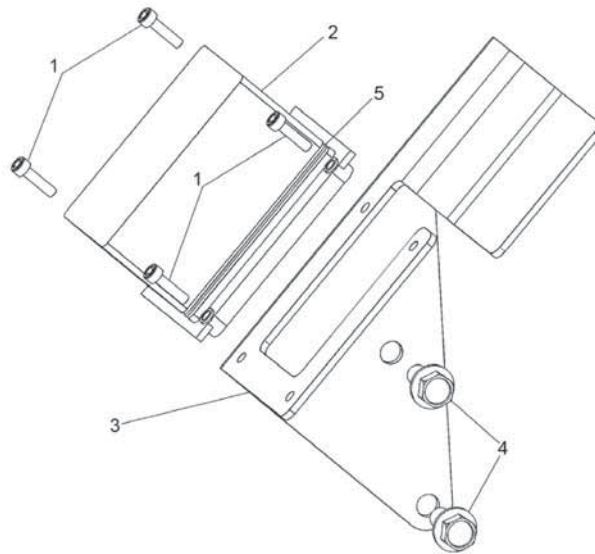
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Harness, Fuse Box & Bracket

312594fsbx

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	SCREW		
2	COVER, Fuse Box		
3	BRACKET		
4	BOLT		
5	SEAL		
6	314294GS HARNESS, Wire		

Footnotes

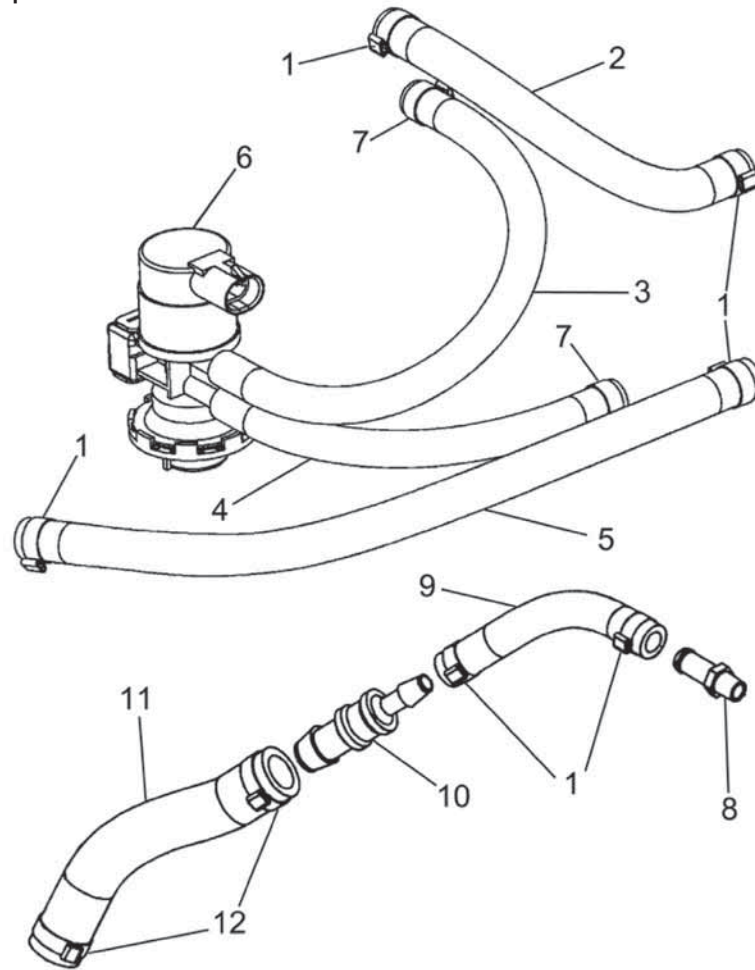
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Hose Assemblies

312594hse

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	314104GS	CLAMP	
2	314282GS	HOSE	
3	314283GS	HOSE	
4	314284GS	HOSE	
5	314285GS	HOSE	
6	314111GS	VALVE	
7	314288GS	CLAMP	
8	----	FITTING	
9	314286GS	HOSE	
10	----	ADAPTER	
11	314287GS	HOSE	
12	314129GS	CLAMP	

Footnotes

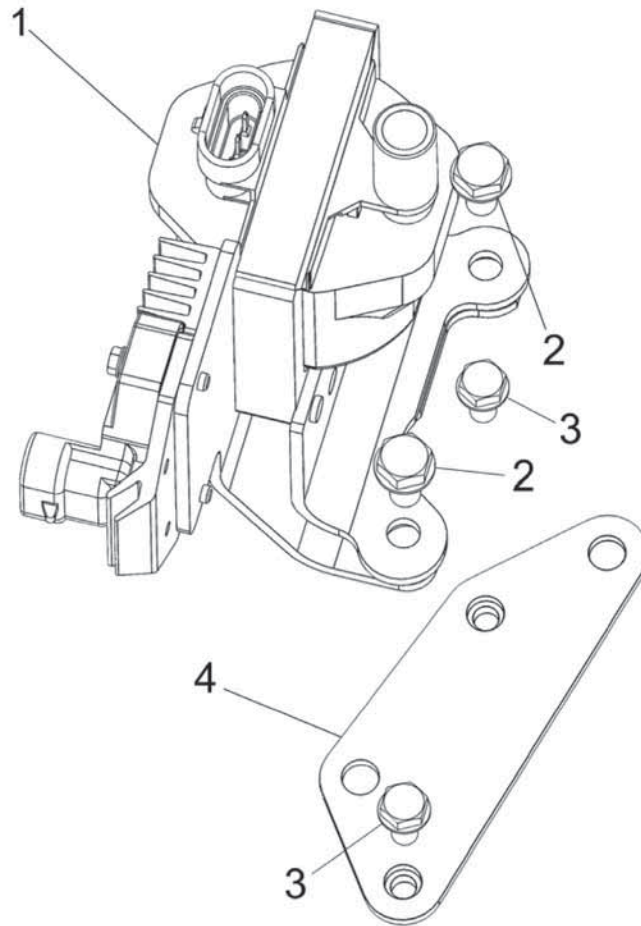
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Ignition Coil

312594ign

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	314296GS	IGNITION COIL			
2	----	SCREW			
3	----	BOLT			
4	----	BRACKET			

Footnotes

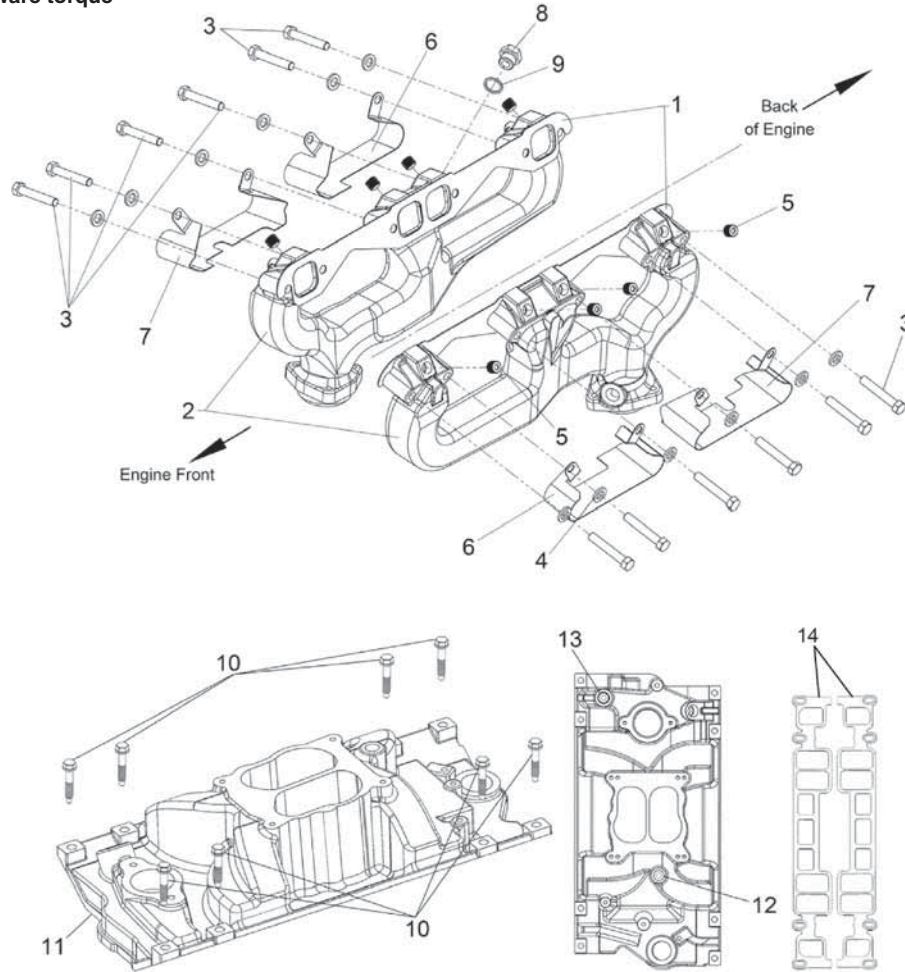
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Manifold

312594man

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	GASKET			
2	----	MANIFOLD			
3	----	BOLT			
4	----	WASHER			
5	----	PLUG			
6	----	SHIELD			
7	----	SHEILD			
8	----	PLUG			
9	----	GASKET			
10	----	BOLT			
11	----	MANIFOLD, Intake			
12	----	PLUG			
13	----	PLUG			
14	----	GASKET			

Footnotes

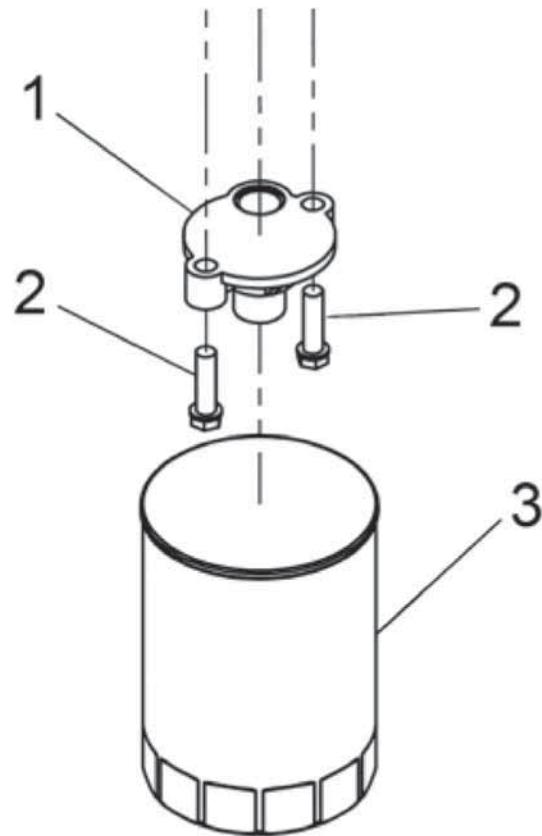
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Oil Filter & Adapter

312594fltr

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	314345GS	ADAPTER	
2	----	BOLT	
3	----	FILTER	

Footnotes

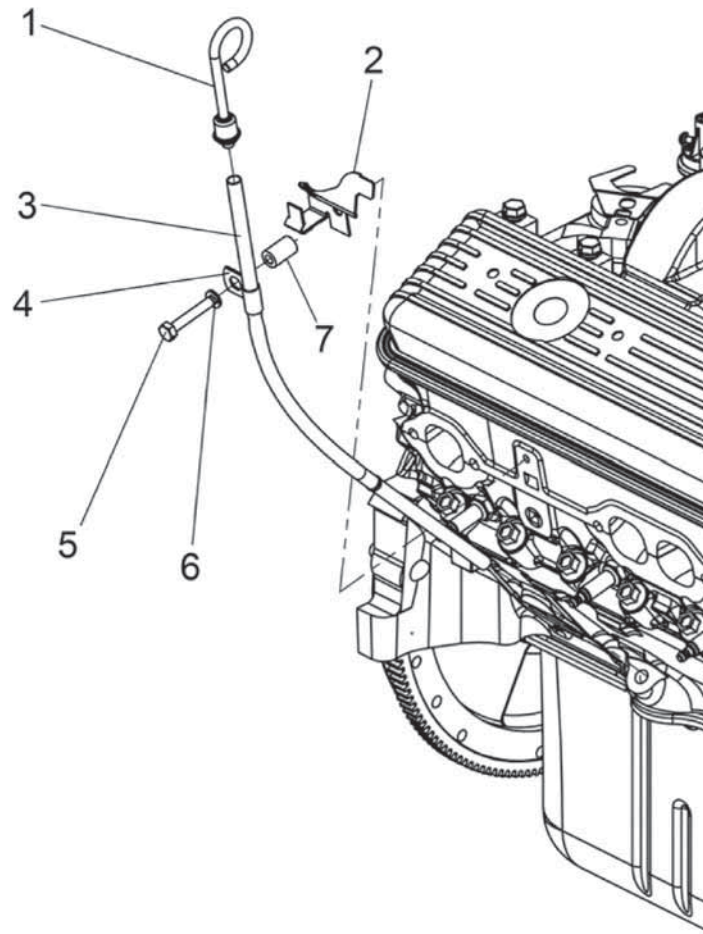
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Oil Level Gauge

3125941v1

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	314308GS	DIPSTICK	
2	----	BRACKET	
3	314309GS	BRACKET	
4	----	CLAMP	
5	----	BOLT	
6	----	WASHER	
7	----	SPACER	

Footnotes

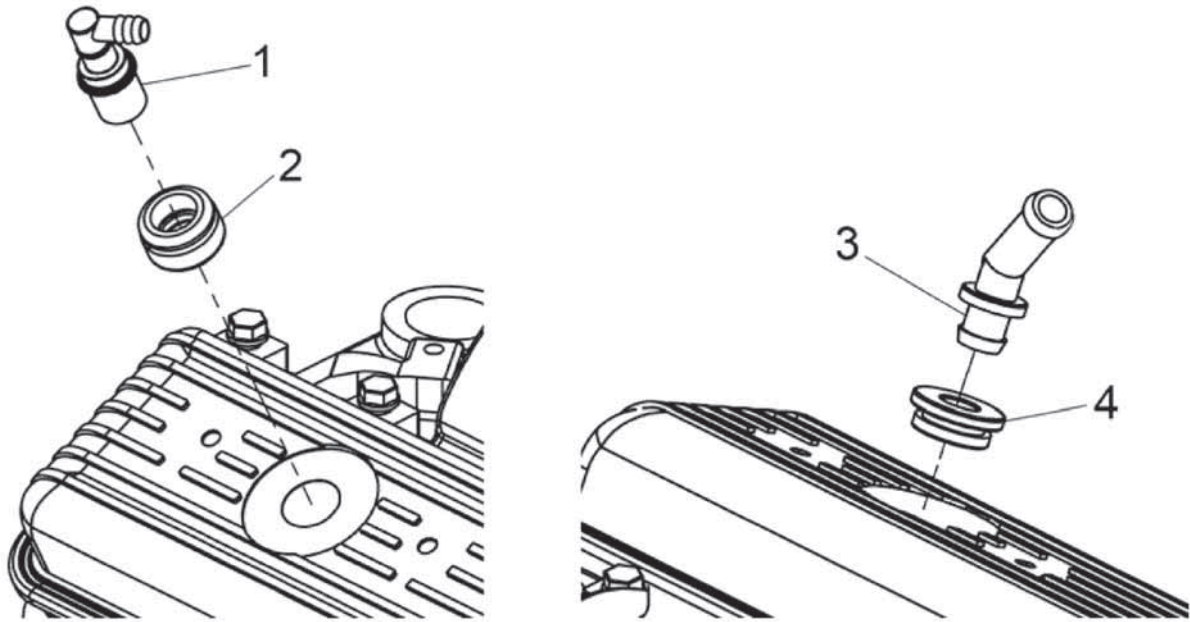
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - PCV, Crankcase Valve & Elbows

312594pcv

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	314293GS	PCV			
2	----	GROMMET			
3	----	VENT, Elbow			
4	----	GROMMET			

Footnotes

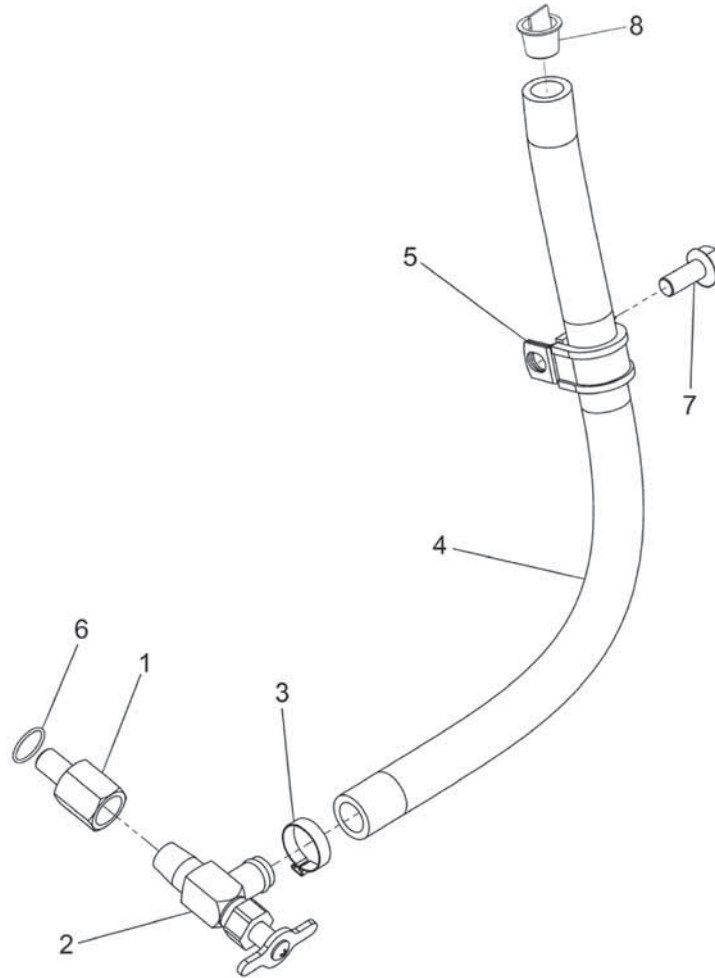
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Remote Oil Drain

312594odr

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	314133GS	ADAPTER			
2	314310GS	VALVE			
3	314129GS	CLAMP			
4	314311GS	HOSE			
5	----	CLAMP			
6	----	O-RING			
7	----	SCREW			
8	314132GS	CAP			

Footnotes

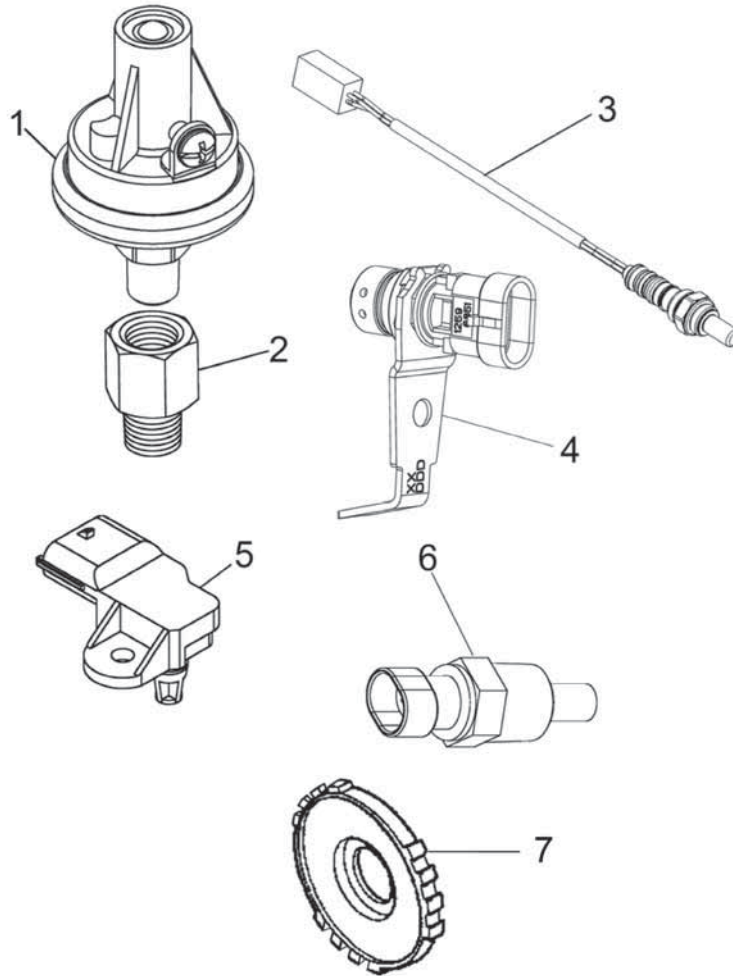
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Sensors

312594sen

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	314125GS	SWITCH, Oil Pressure			
2	----	FITTING			
3	314122GS	SENSOR, HEGO			
4	----	SENSOR, Crankshaft-CRANKSHAF			
5	----	SENSOR, Temp			
6	314299GS	SENSOR, Temp Coolant			
7	----	RELUCTOR WHEEL			

Footnotes

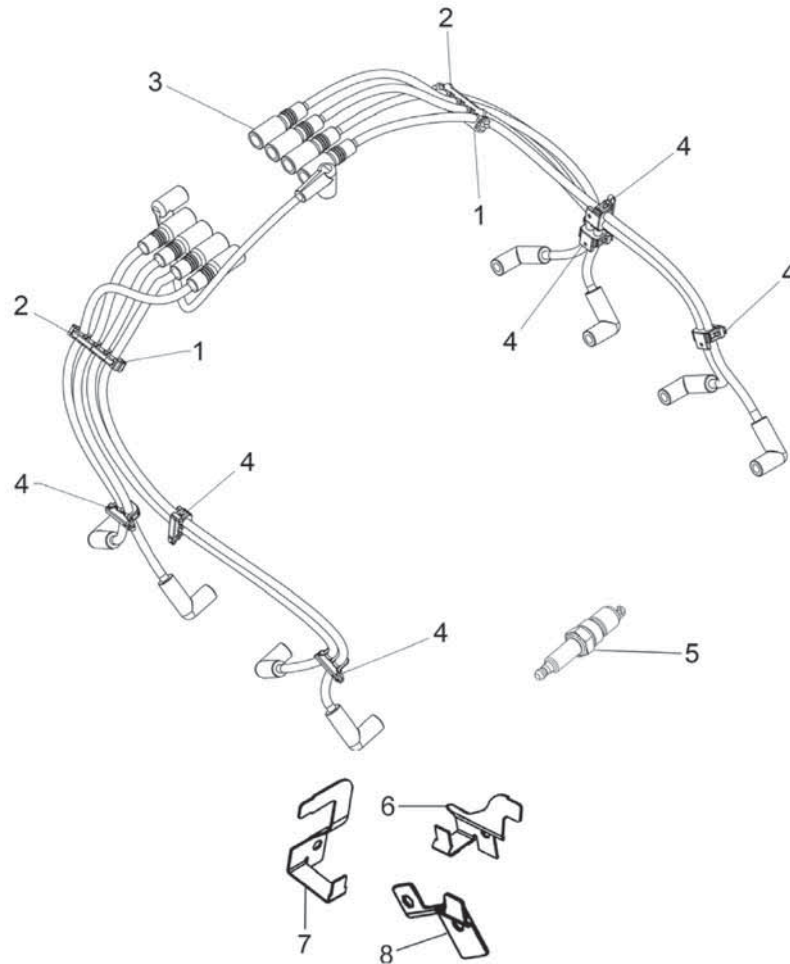
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - SparkPlug Wires

312594spg

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	COVER, Cable Clip		
2	SEPARATOR		
3	314297GS WIRE SET		
4	SEPARATOR		
5	SPARK PLUG		
6	BRACKET		
7	BRACKET		
8	BRACKET		

Footnotes

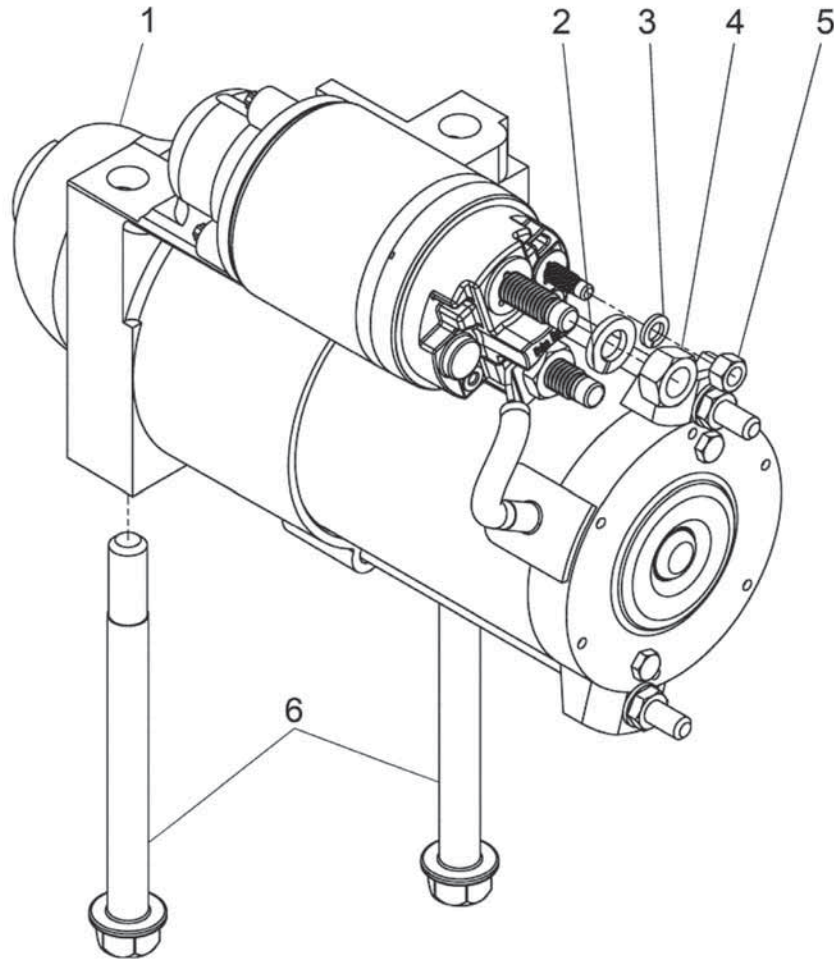
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Starter

312594str

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	314140GS STARTER		
2	----- WASHER		
3	----- WASHER		
4	----- NUT		
5	----- NUT		
6	----- BOLT		

Footnotes

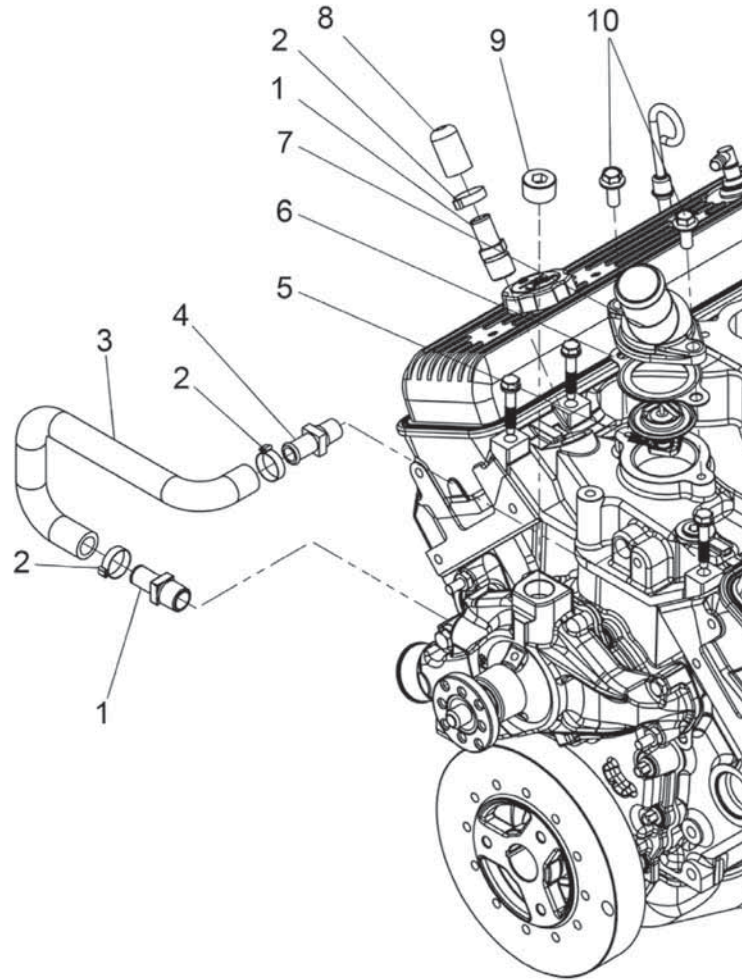
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Thermostat & Hose

312594thr

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	FITTING			
2	----	CLAMP			
3	314291GS	HOSE			
4	----	FITTING			
5	314289GS	THERMOSTAT			
6	314091GS	GASKET			
7	----	HOUSING, Thermostat			
8	----	CAP			
9	----	FITTING			
10	----	BOLT			

Footnotes

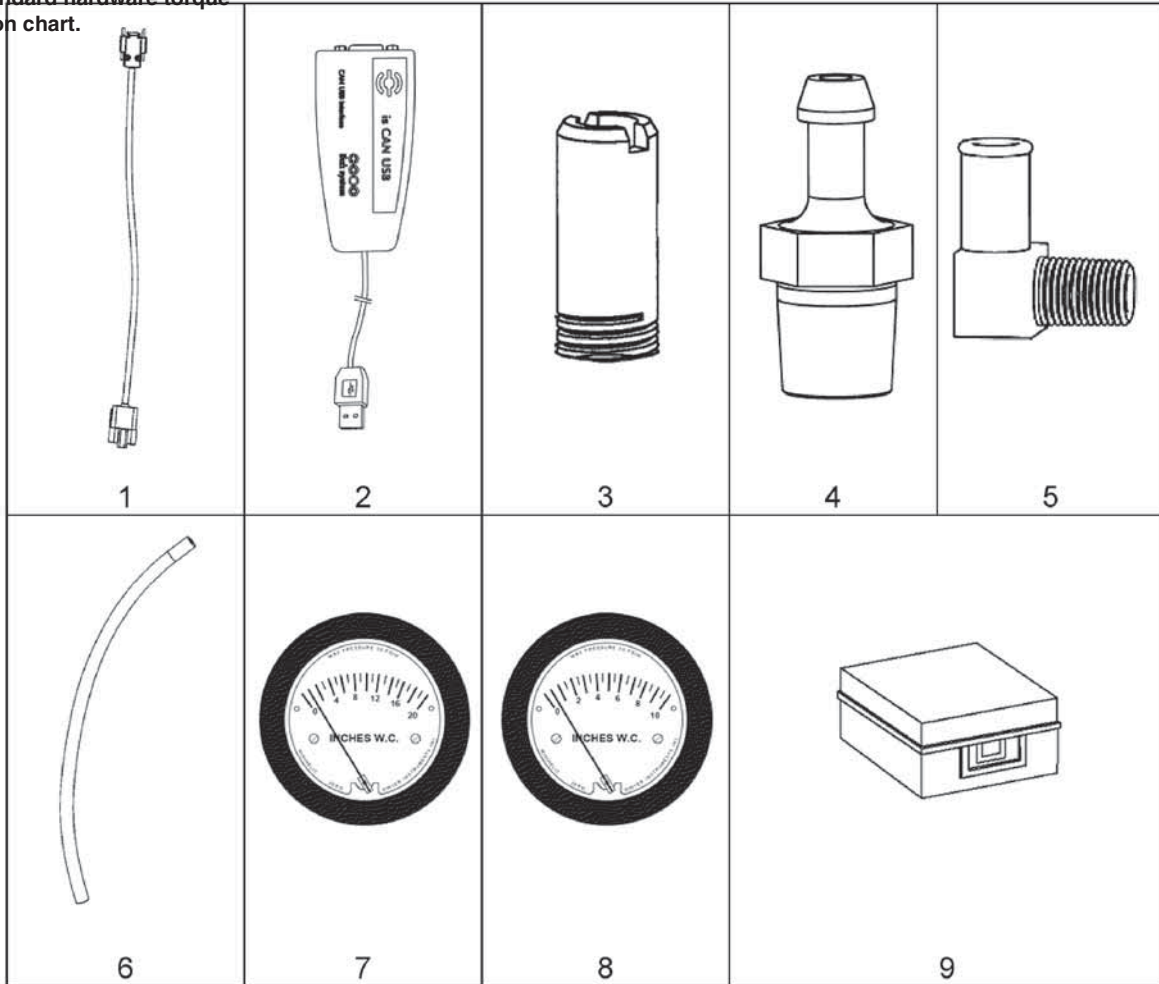
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Tool Kit & Accessories

30LToolKit

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	100111	WIRE HARNESS	
2	100112	ASM	
3	----	FITTING	
4	----	FITTING	
5	----	FITTING	
6	----	HOSE	
7	----	TEST KIT, Gauge	
8	----	TEST KIT, Gauge	
9	----	CASE, Plastic	

Footnotes

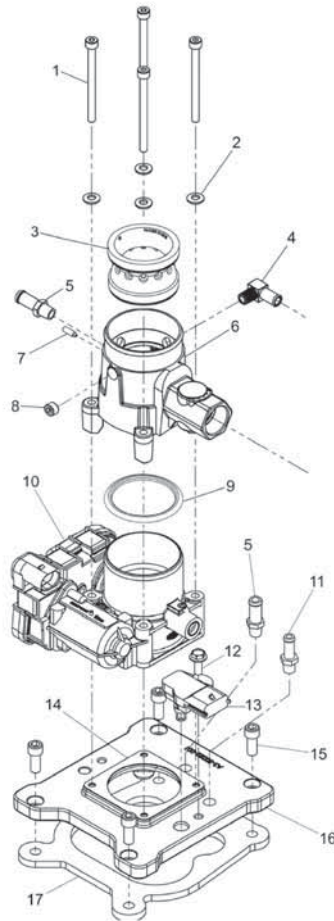
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Ventri & Throttle

312594ven

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	SCREW			
2	----	WASHER			
3	314276GS	VENTURI			
4	314089GS	FITTING			
5	313916GS	FITTING			
6	----	ADAPTER			
7	314088GS	SCREW			
8	314087GS	PLUG			
9	314277GS	GASKET			
10	----	THROTTLE BODY			
11	----	FITTING			
12	----	SCREW			
13	314107GS	SENSOR			
14	313921GS	GASKET			
15	----	BOLT			
16	314278GS	ADAPTER			
17	314279GS	GASKET			

Footnotes

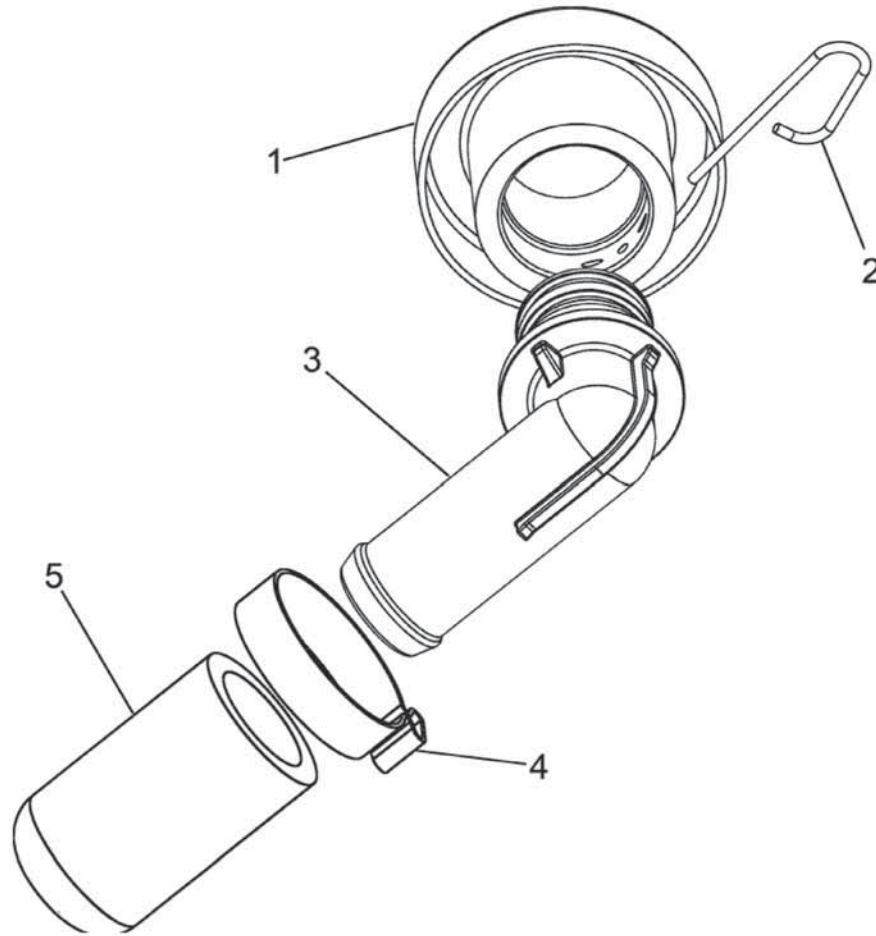
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Water Port

312594wpt

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	314145GS	ADAPTER	
2	314146GS	CLIP, Retaining	
3	314292GS	FITTING	
4	----	CLAMP	
5	----	CAP	

Footnotes

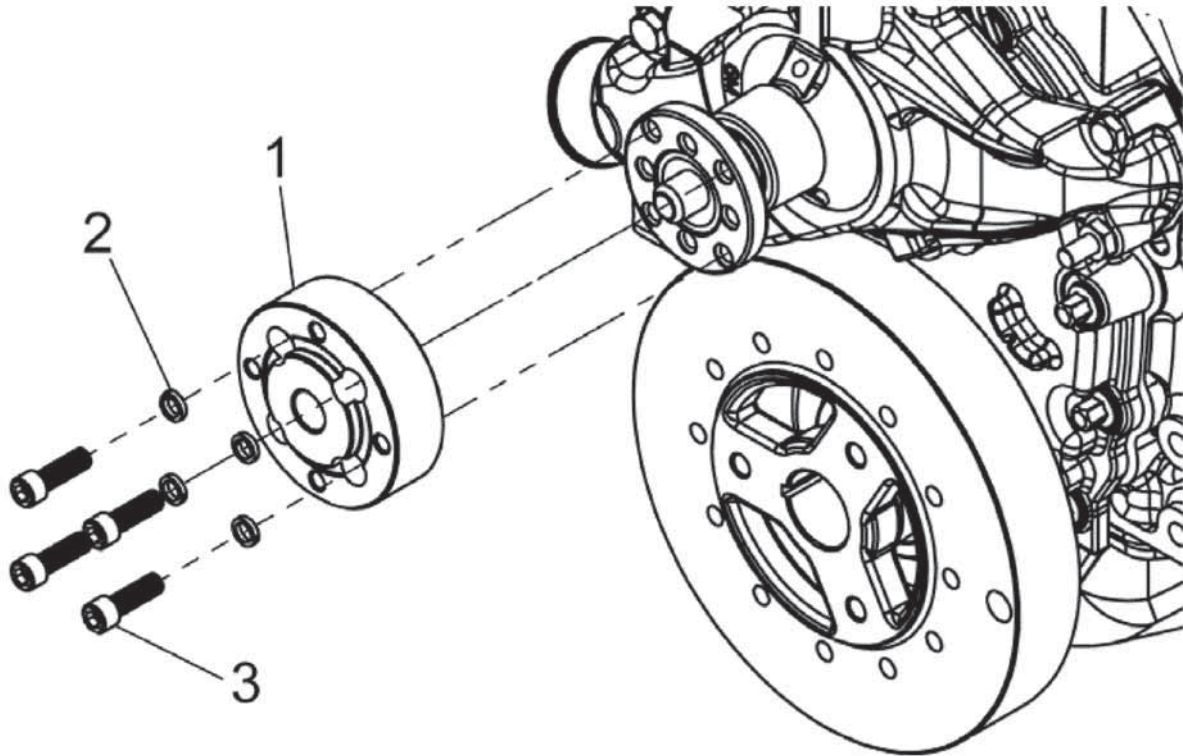
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Water Pump Adapter

312594adpt

NOTE: Unless noted otherwise,
use the standard hardware torque
specification chart.



REF. PART NO.	DESCRIPTION	REF. PART NO.	DESCRIPTION
1	ADAPTER		
2	WASHER		
3	SCREW		

Footnotes

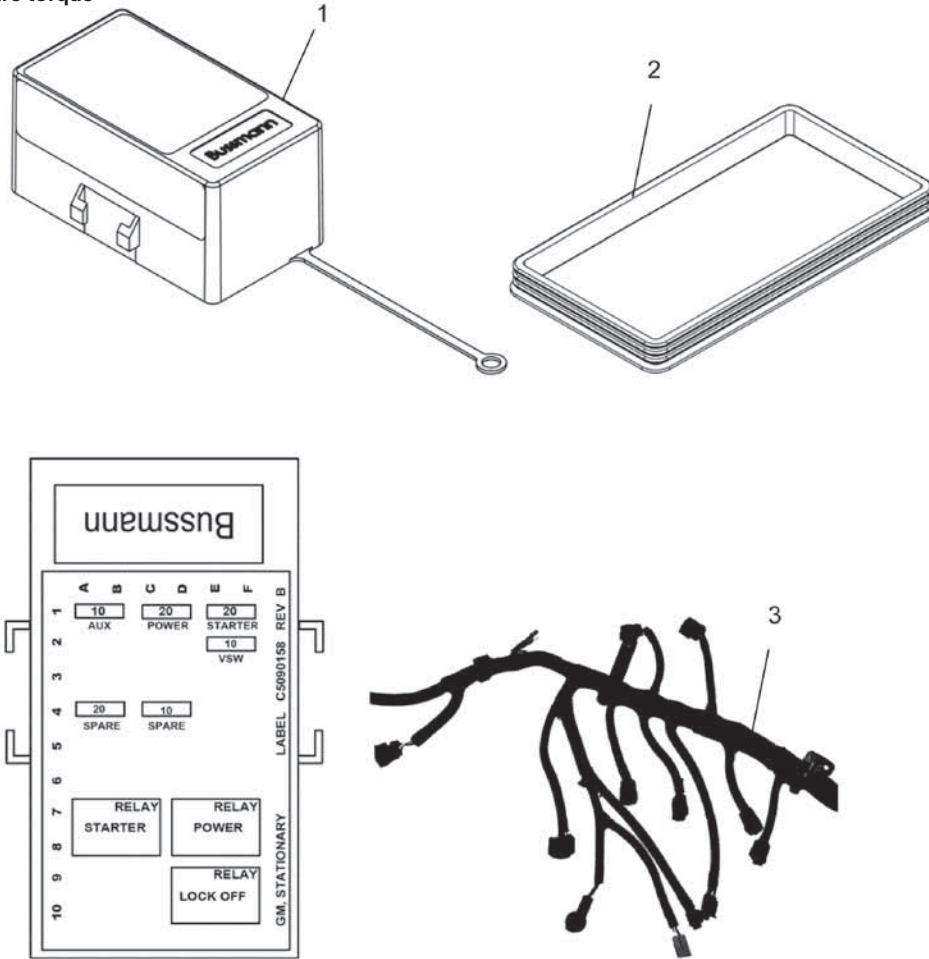
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Engine - Impco 50L - Wire Harness & Fuse Box

312594wh

NOTE: Unless noted otherwise, use the standard hardware torque specification chart.



REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1	----	COVER			
2	----	SEAL, Fuse Box			
3	----	HARNES, Wire Genset			

Footnotes

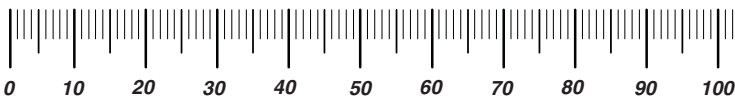
The above parts group applies to the following Mfg. Nos.:

076031-0 - 45,000 Watt BSPP Home Generator System

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	5.6		8.8		10.9		12.9	
	Class 5.6		Class 8.8		Class 10.9		Class 12.9	
Size Of Hardware	in/lbs		in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.
M3	5.88	.56	13.44	1.28	19.2	1.80	22.92	2.15
M4	13.44	1.28	30.72	2.90	43.44	4.10	52.56	4.95
M5	26.4	2.50	60.96	5.75	5.97	8.10	7.15	9.7
M6	44.64	4.3	7.3	9.9	10.3	14	12.1	16.5
M7	5.2	7.1	12.1	16.5	16.9	23	19.9	27
M8	7.7	10.5	17.7	24	25	34	29	40
M10	15	21	35	48	50	67	59	81
M12	26	36	61	83	86.2	117	103	140
M14	42	58	101	132	136	185	162	220
M16	64	88	147	200	210	285	250	340
M18	89	121	202	275	287	390	346	470
M20	126	171	290	390	405	550	486	660
M22	169	230	390	530	559	745	656	890
M24	217	295	497	375	708	960	840	1140
M27	320	435	733	995	1032	1400	1239	1680
M30	435	590	995	1350	1401	1900	1681	2280
M33	590	800	1349	1830	1902	2580	2278	3090
M36	759	1030	1740	2360	2441	3310	2935	3980
M39	988	1340	2249	3050	3163	4290	3798	5150

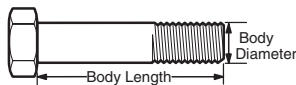
The guides and ruler furnished below are designed to help you select the appropriate hardware.



Nut, M8

Thread Diameter (mm)
Inside Diameter (in)
Threads per inch

Nut, 1/2-16



Screw, M8- 1.25 x 25

Thread Diameter (mm)
Body Diameter
Distance between threads (mm)
Threads per inch
Body Length (mm)
Body Length (in)

Screw, 1/2- 16 x 2



Standard Hardware Sizing

When a washer or nut is identified as 1/2" (M8), this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch (8mm metric thread diameter); if a second number is present it represents the *threads per inch* (distance between threads).

When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (1.25 thread diameter). The final number is the body length of the bolt or screw, 2 inches (50mm).

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	No Marks		SAE Grade 5		SAE Grade 8	
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.0
5/16-18	11	15.0	17	23.1	25	34.0
5/16-24	12	16.3	19	25.8	29	34.0
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.0
7/16-14	30	40.8	50	68.0	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.0	75	102.0	110	149.6
1/2-20	55	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.0
9/16-18	75	102.0	120	163.2	170	231.2
5/8-11	90	122.4	150	204.0	220	299.2
5/8-18	100	136	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.0
3/4-16	180	244.8	300	408.0	420	571.2
7/8-9	140	190.4	400	544.0	600	816.0
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,244.0
1-12	240	326.4	640	870.4	1,000	1,360.0

NOTES

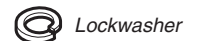
- These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
- Recommended seating torque values for locknuts:
 - for prevailing torque locknuts - use 65% of grade 5 torques.
 - for flange whizlock nuts and screws - use 135% of grade 5 torques.
- Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Common Hardware Types

Hex Head Capscrew

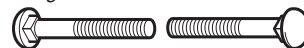


Washer



Lockwasher

Carriage Bolt



Hex Nut

Wrench & Fastener Size Guide

1/4" Bolt or Nut Wrench—7/16"	5/16" Bolt or Nut Wrench—1/2"	3/8" Bolt or Nut Wrench—9/16"	7/16" Bolt or Nut Wrench (Bolt)—5/8" Wrench (Nut)—11/16"	1/2" Bolt or Nut Wrench—3/4"
M6 Bolt or Nut Wrench—10mm	M8 Bolt or Nut Wrench—13mm	M10 Bolt or Nut Wrench—17mm	M12 Bolt or Nut Wrench—19mm	M14 Bolt or Nut Wrench—22mm



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